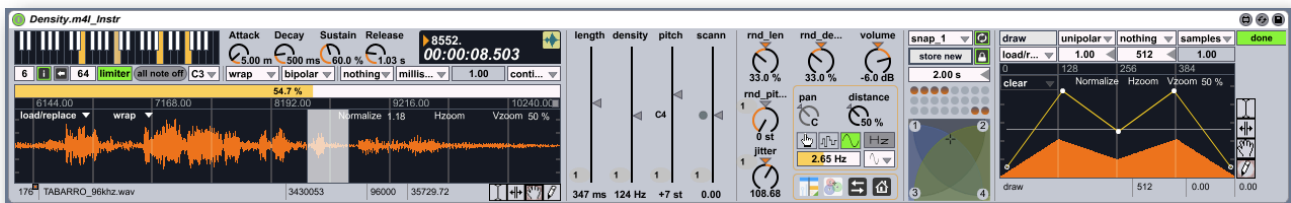


**Density.m4l (instr and fx)**  
**Ableton Live Integration Granular Synthesis Devices**  
 Alessandro Petrolati  
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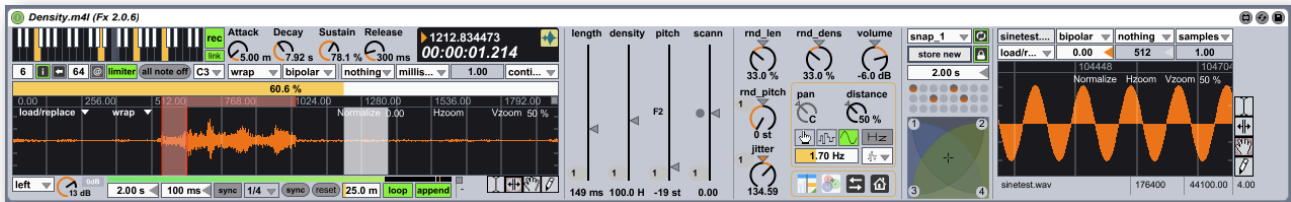
**DensityM4L** Granular Synthesis plugins for Ableton Live. **DensityM4L** Instrument and **DensityM4L** FX, implements respectively a polyphonic **sound file granulator** (wav, aiff or mp3) and a polyphonic **live-buffer granulator**. **DensityM4L** is a new real-time software designed especially for LIVE asynchronous granular synthesis and sound file granulation, a genuine granular playground able to generate a wide range of usual and not so usual effects: time/pitch shifting, time/pitch jittering, intricate textures, grain fountain/pulverizer, recording and manipulation of buffers, complex scrub pad exploration, dynamic envelope shape drawing and many more.

Besides the basic tools, even more advanced tools are available to control the grains!  
 You have smooth transitions (interpolation) between global presets (snapshots), you can navigate with hyperVectorial pads or/and sequence your snaps using the "snap rhythm improviser" which provides an unique & powerful way to generate incredible sound phrases.  
 All is packed in an optimized visually sharp interface, easy to use and access when fast improvising live or lazy composing in a studio.

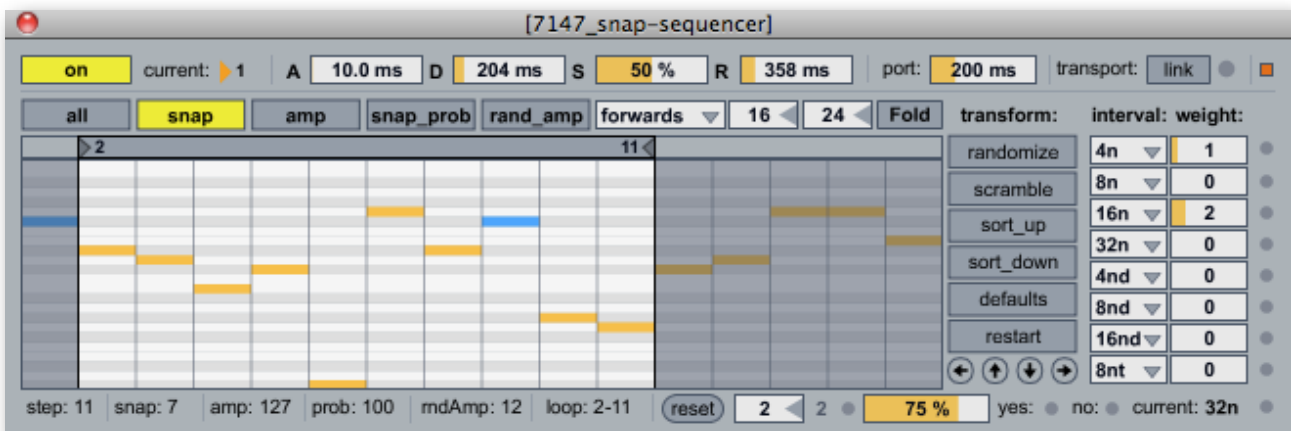
### Density.m4l Instrument



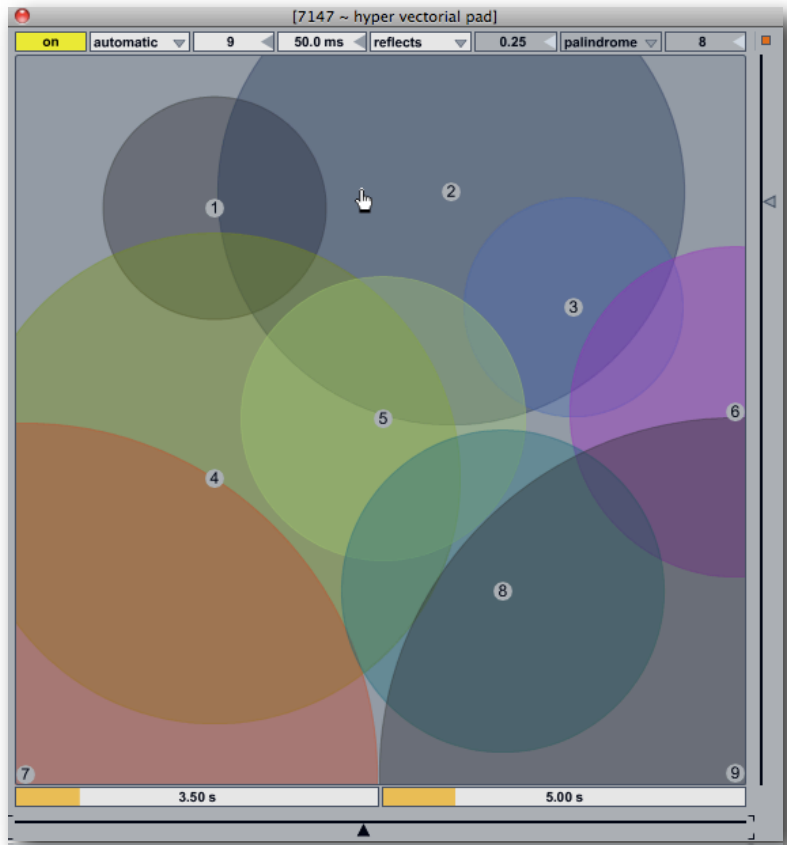
### Density.m4l Fx



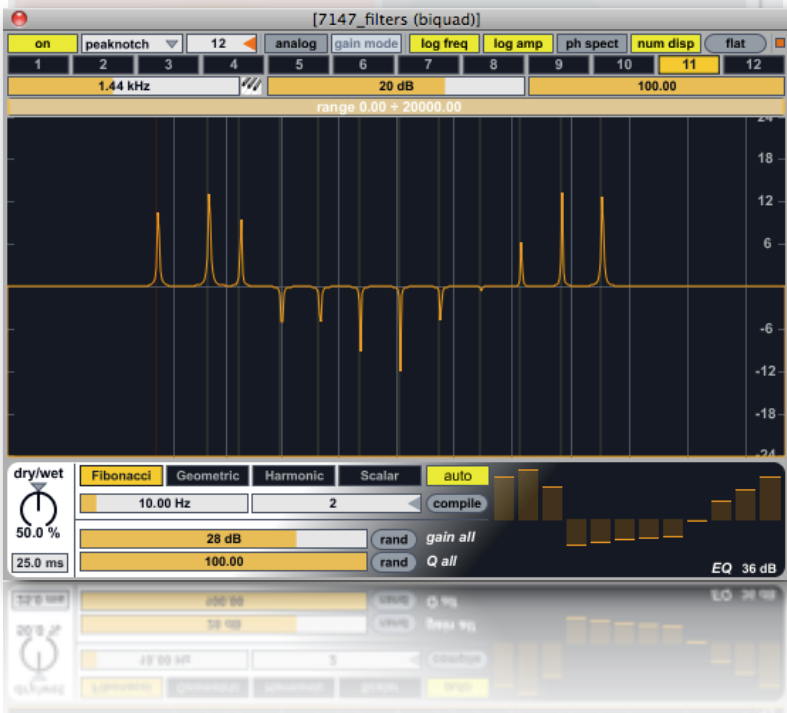
### Snapshots sequencer



### Hyper Vectorial Pad (2D nodes)



### ape.Filter Equalizer



ver. 2.0.6 (april 2011)

- polyphonic granulation, now you can play Density.m4l from master keyboard polyphonically
- polyphonic keyboard triggers
- keyboard octave transposition
- ADSR (Attack Decay Sustain Release) note envelope
- add limiter amplitude signal

ver. 2.0.5 (april 2011)

- transport link bug fix when Hot-Swap device
- HV\_pad save last X Y position in device
- Snap\_sequencer save last step count in device
- new OSC I/O support
- new ape.Filter independent device
- FILTER now is an independent device
- FILTER improved and refined
- FILTER enabled for transitions
- new micropad 2D-nodes

ver. 2.0.4 (april 2011)

- Snap\_sequencer save last step count in device
- new **OSC** I/O support

ver 2.0.2 features: (march 2011)

- transport link bug fix when Hot-Swap device
- HV\_pad save last X Y position in device

ver 2.0 (march 2011)

- new GUI look
- new dialog-box windows, does not stop audio
- new tool bar quick functions access
- new HV\_pad 2D nodes parameters interpolation
- add HV\_pad jitter exploration
- add HV\_pad in "reflects", "jitter" and "drunk" now you can interact with the pad
- HV\_pad on/off monitor bar in main HV\_Pad window
- new Parameters rescale, multiply/divide (/4 /2 x2 x3 x4)
- panning now update correctly value when you select manual
- panning removed auto update knob when automatic or random
- snap-seq add global transport enable/disable trigger
- FILTER add filters types select
- FILTER add cutoff, gain and Q/S fine controller
- FILTER dry/wet knob
- FILTER dynamic filter allocation, until 24
- FILTER auto generate filter bands: Harmonic, Geometric, Scalar and Fibonacci
- FILTER frequency zoom in/out
- New detailed user manual online

- WAVEPAD new scan mode wrap/mirror/once
- WAVEPAD new out-of-range mode: loop
- WAVEPAD out-of-range mode: none (now can be disabled)
- WAVEPAD SR Size Rescale bug fixed, now you can load and play correctly any sound file
- SNAP-SEQ step jump bug fixed
- SNAP-SEQ add portamento transition
- SNAP-SEQ some gui adjustments

#### 1.1.5 features

- add windowing multi files samples support (until 6)
- add additive multislidiers (csound gen10 like)
- additive mutisliders transitions, save presets in the device
- snapshots clear when init device, bug fixed
- windowing "draw defaults all", now reset shape correctly
- windowing "draw", refined gui
- save/reload correctly the windowing shape
- reseall, now does not clear all snapshots
- some bugs fixed

#### 1.0.0 features

- instrument and fx Ableton Live devices integration
- dynamic wave-pad scrub,
- wrap-around selection,
- crop, normalize draw, etc...
- grid quantize: zero-crossing, bpm, phase and samples
- fine scanning explorations
- envelope/windowing manage up to 12 pre-generated shape (prototypes)
- envelope/windowing loading and manage one sound-files (aiff,wav, mp3)
- instrument save sound file loaded in device preset
- dynamic envelope buffer load/save, normalize, crop, resize length etc...
- snapshots (presets) memory: up to 24
- fast buttons snapshots store/recall
- clients manage: include/exclude widgets from transitions
- micro-pad interpolating between four snapshots
- HV\_pad (i.e. hyper vectorial pad), 9 snapshots pad (4 pad near), and auto-explorer (spiral, dunk, reflects) engine
- Snapshots sequencer rhythms improviser unit snapshots list,
- Ableton Tempo synchronize triggers shorts key,
- fully managing save/load/hot-swap as a normal Ableton Device
- drag and drop support: stream/windowing wave-pads (audio files)
- panning rotation: manual, cycle, random

#### ==== Requirements ====

IMPORTANT: DensityM4L requires Live 8.1 (better 8.2.2 or higher) and Max For Live. Details about Max For Live can be found at [Ableton.com](http://Ableton.com). DensityM4L plugins will only work in Ableton (not in the MaxMSP application).

Mac OS X, Microsoft Windows XP/7

QuickTime for the MPEG support

[www.densitygs.com](http://www.densitygs.com)