

Acousmodules

"Effects" Series - Fast Help

2022 / march

<http://acousmodules.free.fr>

note for Mac users:

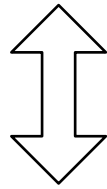
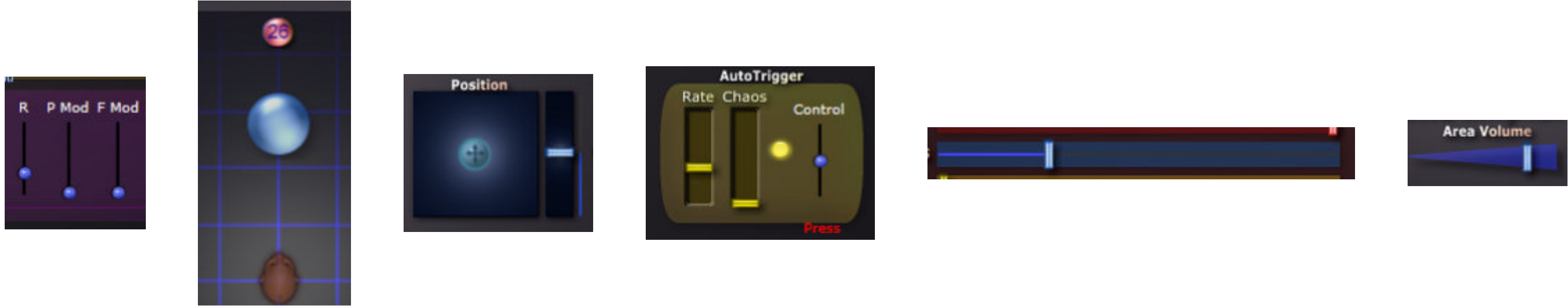
due to the delay in 3rd party compilation modules, a number of plugins are still in an older version and will not have some features and can present a slightly different interface than those which are described in this document

Most of the Acousmodules plugins share some common graphics and user interface elements.
Some are obvious, others are less ...
But this means that once you are familiarized with a few plugins you can become very fluent with all of them!

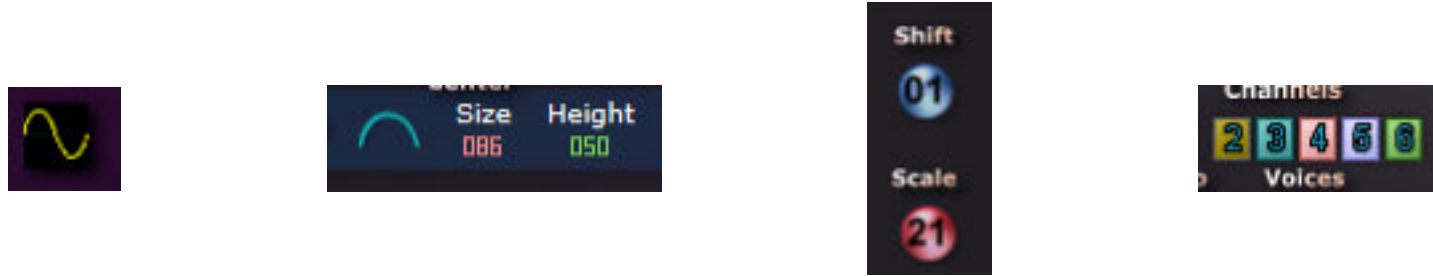


all sliders, sliding datas, XY pads:
hold Ctrl/Cmd while dragging to get fine values

also, in general Right Click to MIDI Learn / UnLearn

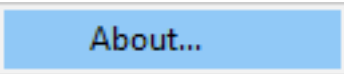


sliding datas, waveforms, curves:
press and drag the mouse upward/downward
to change the values



patch system:

- pick and drag a cable from one input to an output or the contrary
- hold Alt/ to pick and change a connection or to remove it
- in some plugins it can be difficult to pick a cable when several are connected to the same plug, in this case right-click on the cable and select "Remove"



versioning: the plugins don't use versions numbers but their build date: right click on the background to show it

A number of plugins can share the same features.
These ones will then not be described in the dedicated pages.
Please see also the **Guide** and **Resources** pages on the **Acousmodules'** site.

common features 1: the spatial layout

- Plugins:
- AnimaGrains
 - DiffuseVerb
 - Distances
 - Focus series
 - MassGrains
 - MassModeler
 - SpaceBrush
 - SpatHaas
 - SpectraMass
 - SpectraShaper
 - Zone series

(Top View) place the numbered output symbols according to the loudspeakers spatial positions:
it has not to be rigouros: the more they are equally spaced the better may be the result.
The same for the right hand Front View (the horizontal positions are reflected from the master Top View)

Active mode: the little buttons activate and show the outputs
Colour mode: they switch the colour for each output (green, blue, red).
The colours have no effect but can help to identify the height layers or other preferences.

symbolic position of the input(s),
the real effect depends on its
proximity to the surrounding
output points and to
their Area settings

(Front View) the view is compressed vertically
but the distances are always based on a square,
the thin coloured horizontal lines can help to
place the points considering that the vertical
density of speakers is generally lower than
in the horizontal plane

outputs activation or colour selection

increase or reduce each output Area
to compensate for graphical distances
differences or to obtain special effects.
In general it is recommended to try to
organize first the points in an equidistant
manner before eventually changing
these values

periphonic layouts center compensation,
its purpose is to spread the inputs energy
on the surrounding points to fill :
Height: the vertical value of the center
Width: 100% means the full layout diameter
Level: how much gain is applied when the
source goes to the center

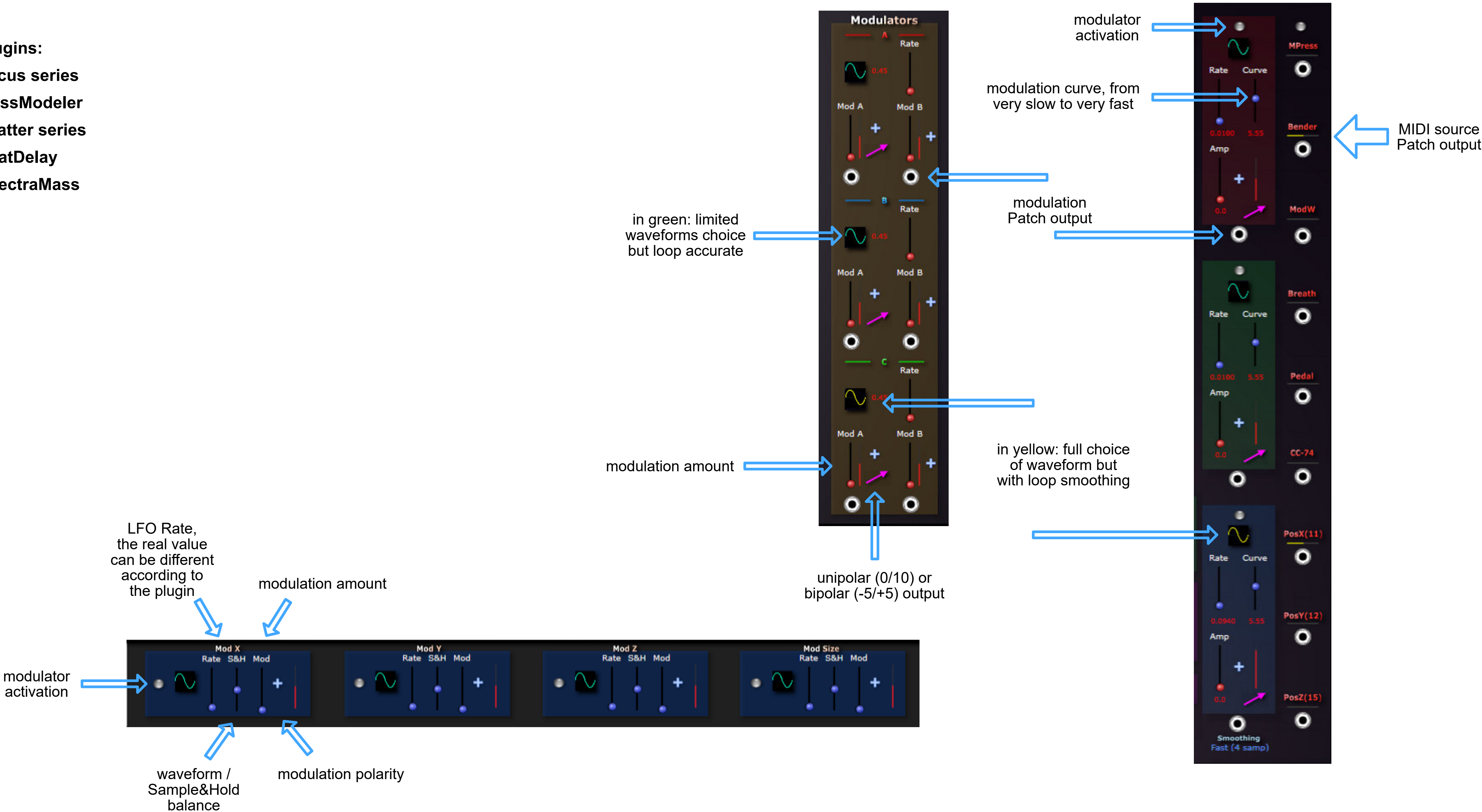
output Areas main setting:
change the Area size for all
the outputs at once

Areas shape:
how progressive
the areas are
overlapping (or not),
the recomanded value
for a standard "pan law"
is about the 2/3

performance option during automations:
None: use less CPU but may produce clicks
Fast: good balance, but clicks are possible
Smooth: no clicks risk but more CPU is used
and possible buffers problems can arise in some
hosts when a lot of channels are involved

common features 2: the Modulators and the Patch System

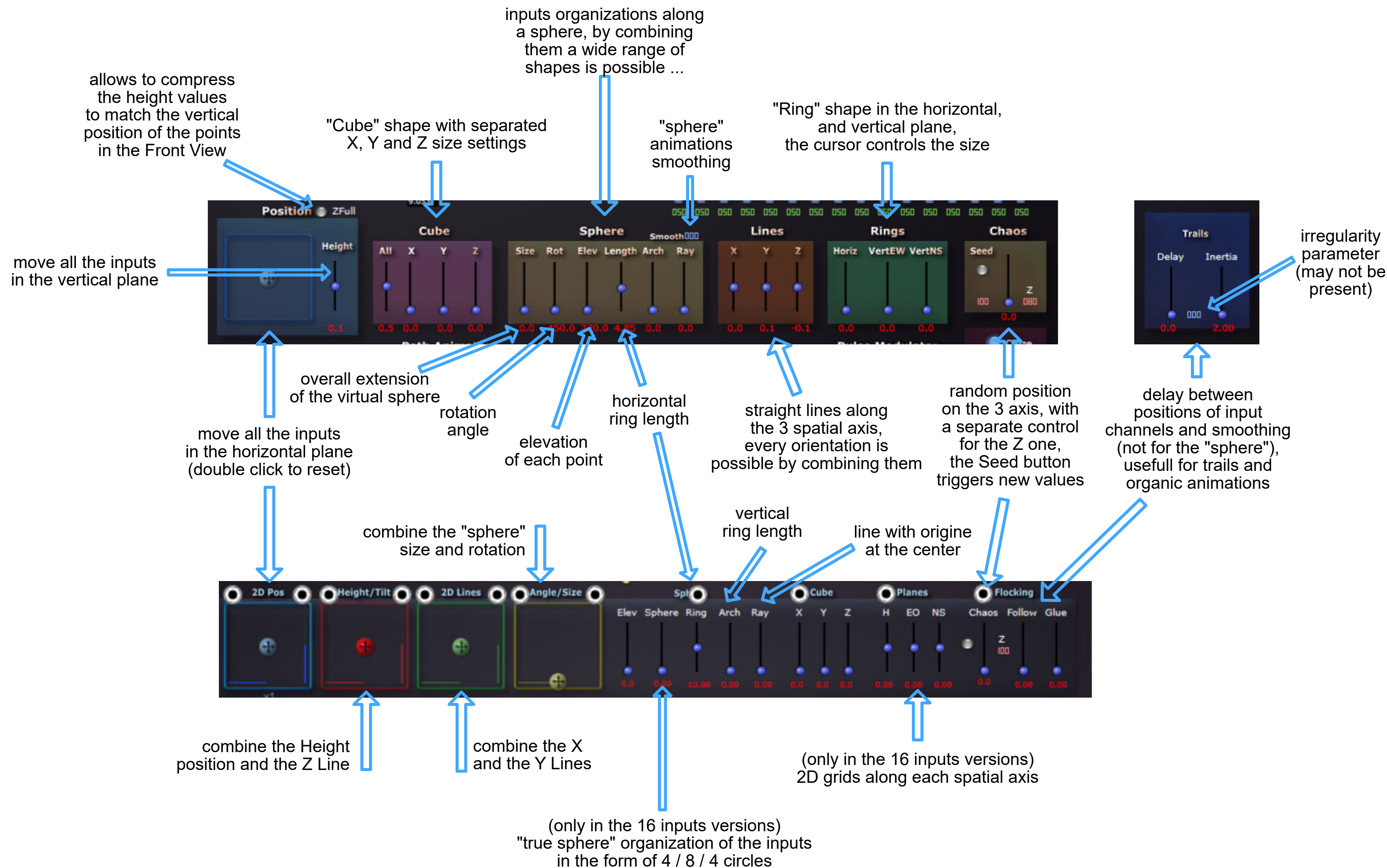
- Plugins:
- Focus series
 - MassModeler
 - Scatter series
 - SpatDelay
 - SpectraMass



common features 3: multichannel Groups and Shapes

purpose: process 8 or 16 inputs together according to "Shapes" that can be freely distorted, mixed and modulated, work best with 2D or 3D meshed networks or grids speakers arrangements

Plugins:
AnimaGrains
MassModeler
SpatDelay
SpectraShaper



spatial configurations import / export

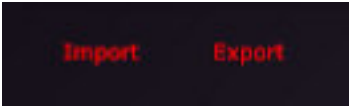
purpose: exchange the speakers (or the inputs) arrangements between plugins that use the same spatialization method and view

Since the begining of 2022 most of the plugins that are based on a symbolic space view can import and export their channels arrangement.

Even if the settings which are specific to each plugin remain of course to be edited, this can result in a great gain of time ...

The files are simple text that can be eventually edited by hand, but the plugins and apps "SpaceEditor" are more appropriated ...

It may also be possible later to convert them and to import such configurations datas from and to spatialization softwares and plugins (already tested and working with GRMTools Spaces plugins).



There are three files formats:

- "Spat" type: two views "Top" and "Front", 36 (+18) and 64 channels versions
 - include: the channels X,Y,Z coordinates and the channels activations
 - does not include: channels Area values, channels colors
- "Layers" type: one Top view associated with 3 or 4 Height Layers (48 or 64 channels)
 - include: the channels X, Y coordinates for each Layer, the channels mappings
 - does not include: channels Area values, Layers Areas, Layers activations
- "Spaced" type: one false perspective view (mainly effects and utilities, 64 channels)
 - include: the channels visual position and the channels activations

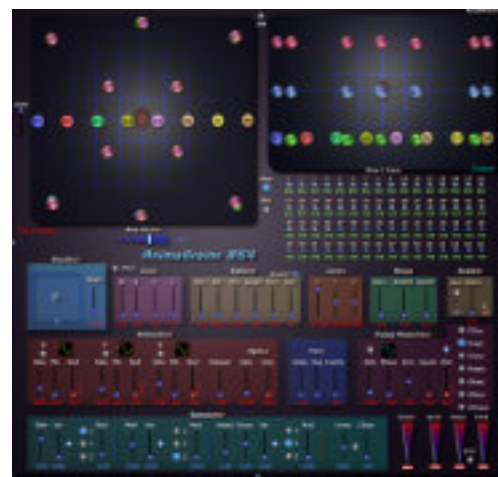
The proper file extension is automatically selected in the OS file browser.

You can use the SpaceEditor 36-64 plugin (or application for Windows) to convert the files between these two formats, thus making actually 96 plugins able to exchange their spatial configurations!

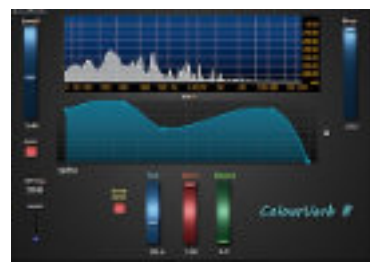
Please note that the following pages may not yet include the view and the description of the Import/Export buttons.

Compatibility list (blue = spatialization, green = effects, red = samplers, purple = synth, brown = utilities, in *italics* the plugins that don't support it yet):

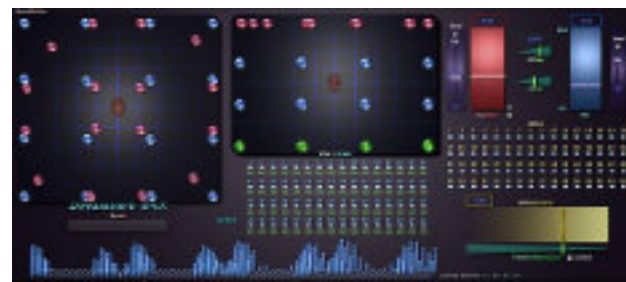
am36	am64	amI3	am3d
AggregaSynth	AnimaPlayer 864	AnimaSpat 48L	SpacedAnalyzer 64
AnimaPlayer 836	AnimaSampler 864	AnimaSpat 848L	SpacedBass 60.4
AnimaSpat 836	AnimaSpat 864	AnimaPlayer 848	SpacedConvert 64
AnimaSynth 836	AnimaSpat 3D64	MassLayers 848	SpacedFilter 64
BrushSampler 18	AnimaSynth 864	SpaceConverter 3L	SpacedGain 64
ConcatPlayer 1636	BrushPlayer 464	SpatLayers 248, 264, 848	SpacedRoute-R
Distances 36	BrushSampler 64	SpatSampler 64L	SpacedRoute-S
FocusDelay 36	ConcatPlayer 1664	SpatStrument 48L	SpacedTest 64
FocusFilter 36	ConcatSampler 1664	SpatSynth 48L	SpacedView 64
FocusMass 36	DiffuseVerb 64		
FocusPlayer 36	Distances 64		
FocusRing 36	FocusDelay 64		
FocusSynth 36	FocusFilter 64		
FocusVerb 36	FocusGrains 64		
FocusVox 36	FocusMass 64		
MassModeler 1636	FocusPitch 64		
MassSynth 1636	FocusPlayer 64		
Room 3610	FocusRing 64		
SampleModeler 1636	FocusShifter 64		
ScaleMass 2436, 3236	FocusSynth 64		
SpaceBrush 18	FocusVerb 64		
SpaceConverter 36	MassGrains 1664		
SpaceEditor 36	MassModeler 1664		
Spat3D 218	MassSampler 1664		
Spat3D 236	MassSynth 1664		
Spat3D 836	MorphPlayer 864		
SpatDelay 1636	MorphSampler 864		
SpatHaas 136	MPESampler 64		
SpatMass 818	MPESpat 864		
SpatMass 1636	OctoMass 864		
SpatSteps 36	OctoMorph 64		
SpatStrument 18	PathSampler 64		
SpectraMass 36	Room 64		
SpectraShaper 1636	RoomSampler 64		
ZyliaMass 1936	SampleModeler 1664		
	ScaleMass 864, 1664, 3264		
	ScaleSampler 864		
	SpaceBrush 264		
	SpaceEditor 64		
	Spat3D 264, 864, 1664		
	SpatDelay 1664		
	SpatMass 864, 1664		
	SpatPath 64		
	SpatSteps 64		
	SpatStrument 64		
	SpatSynth3D 64		
	SpectraMass 1664		
	SpectraShaper 1664		
	StretchSampler 1664		
	VaporSampler 864		
	ZyliaMass 1964		
	ZoneDelay 64		
	ZoneFilter 64		
	ZonePitch 64		
	ZoneShaper 64		
	ZoneVerb 64		



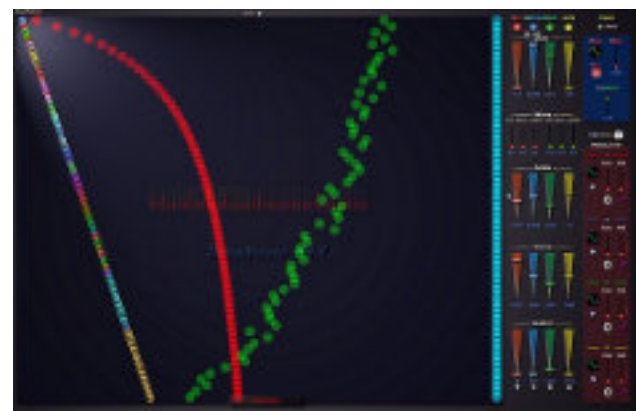
[AnimaGrains](#)



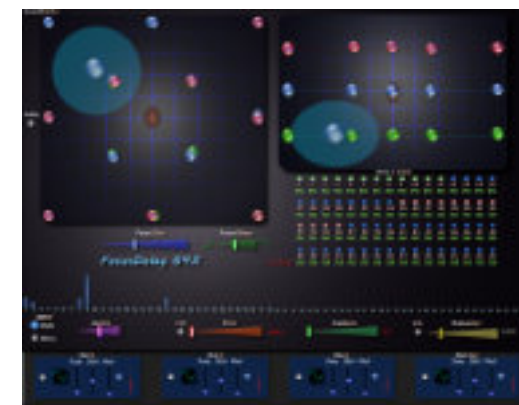
[ColourVerb](#)



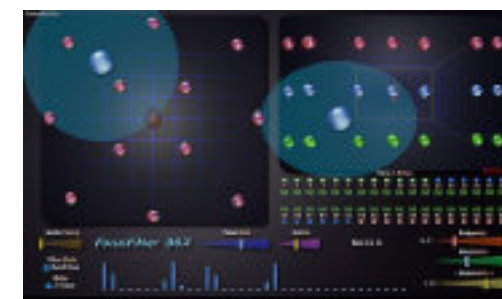
[DiffuseVerb](#)



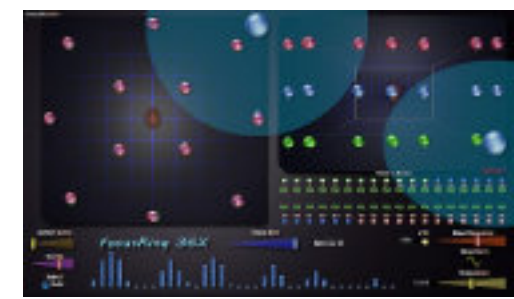
[DynaMover](#)



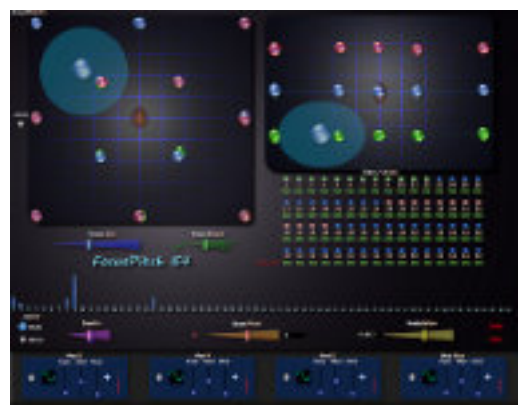
[FocusDelay](#)



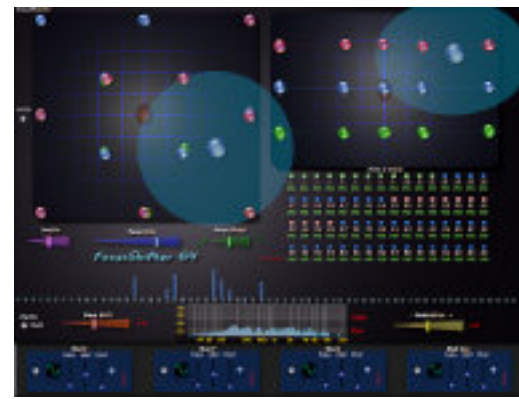
[FocusFilter](#)



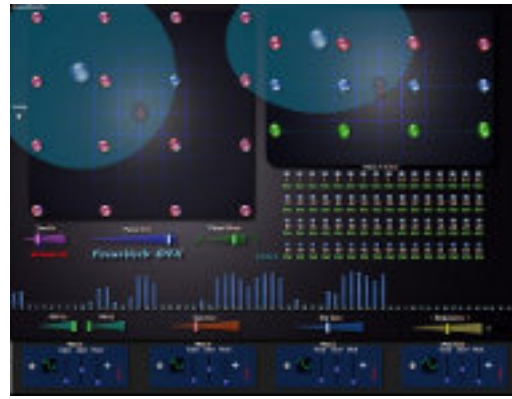
[FocusRing](#)



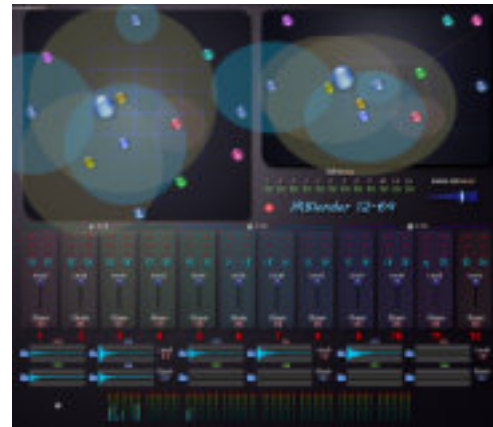
[FocusPitch](#)



[FocusShifter](#)



[FocusVerb](#)



[IRBlender](#)



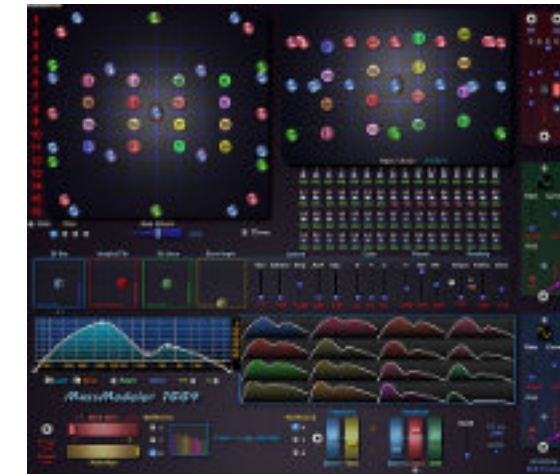
[IRVerb](#)



[KaleidoCutter](#)



[KaleidoTone](#)



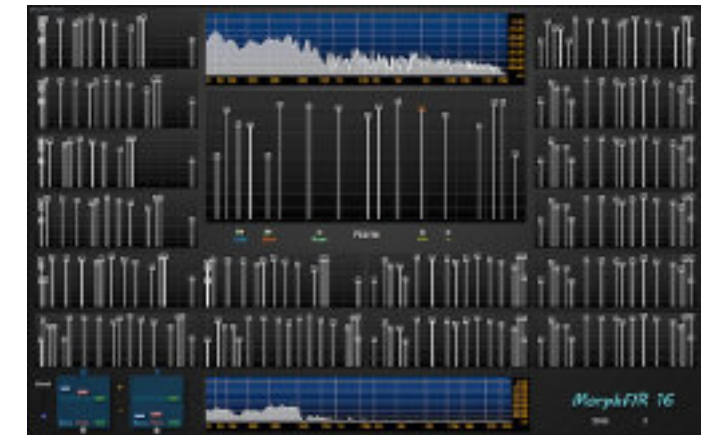
[MassModeler](#)



[MiniDeco](#)



[MiniRez](#)



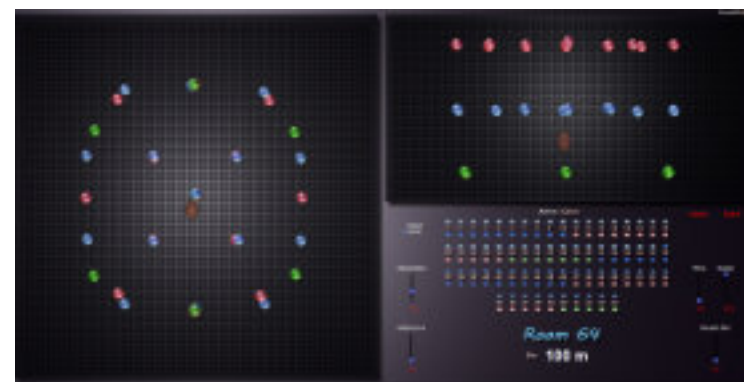
[MorphFIR](#)



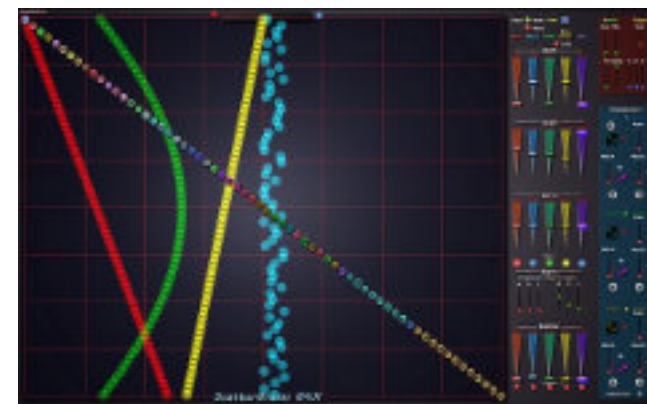
[QuadDelay](#)



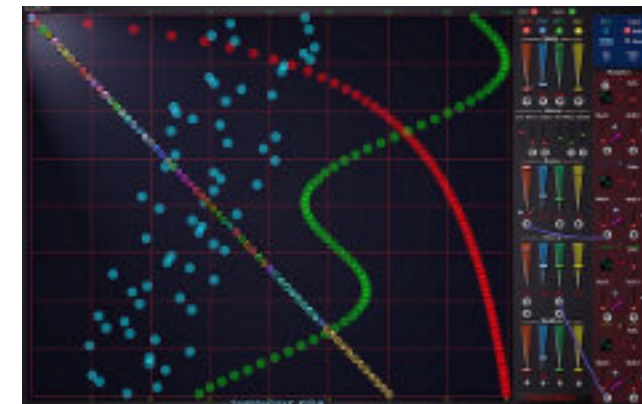
[Pitch'nFilter](#)



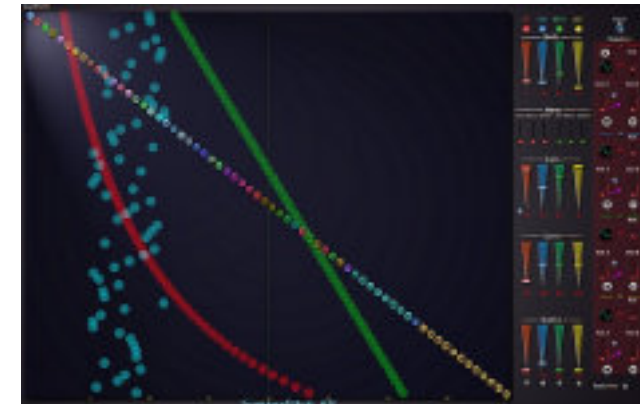
[Room 64](#)



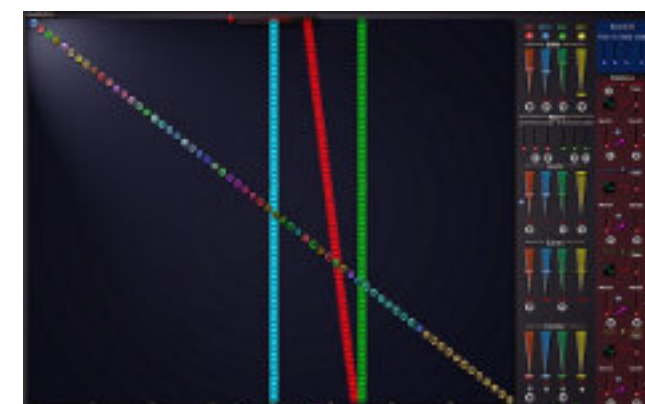
[ScatterGrains](#)



[Scatterizer](#)



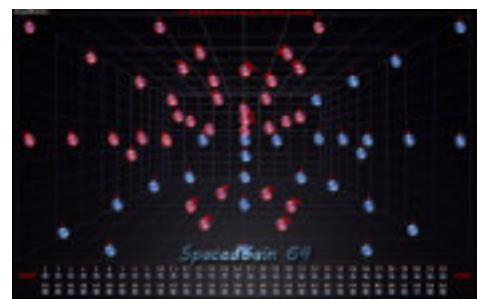
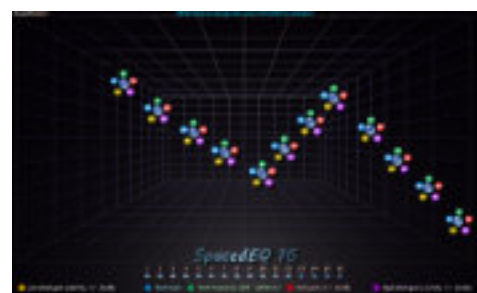
[ScatterPitch](#)



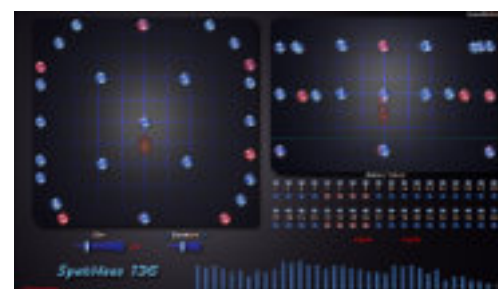
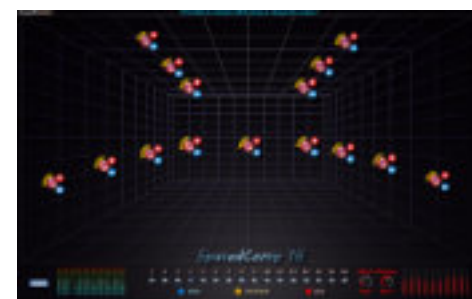
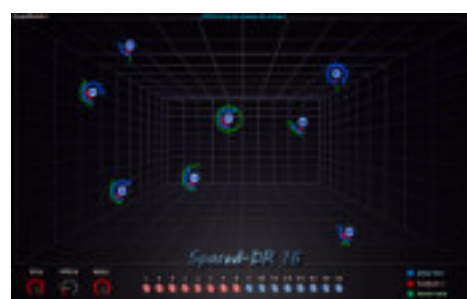
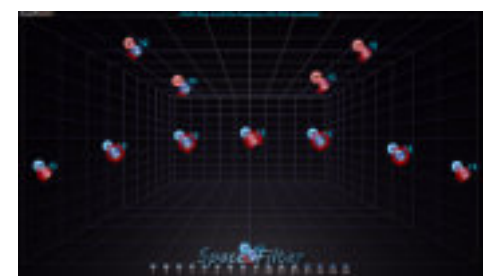
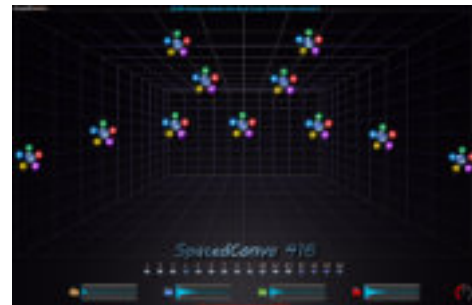
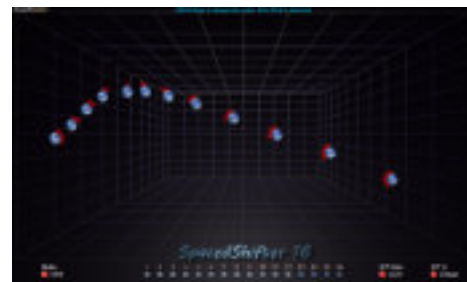
[ScatterVerb](#)



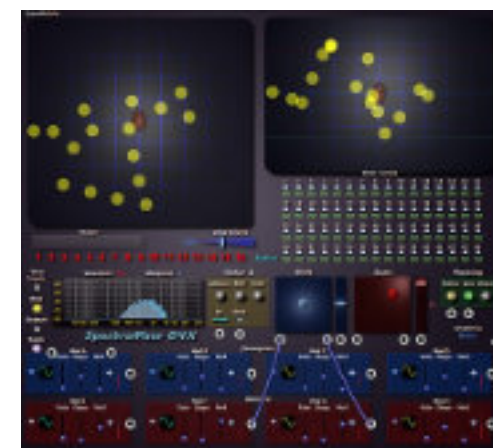
[SpaceBrush](#)



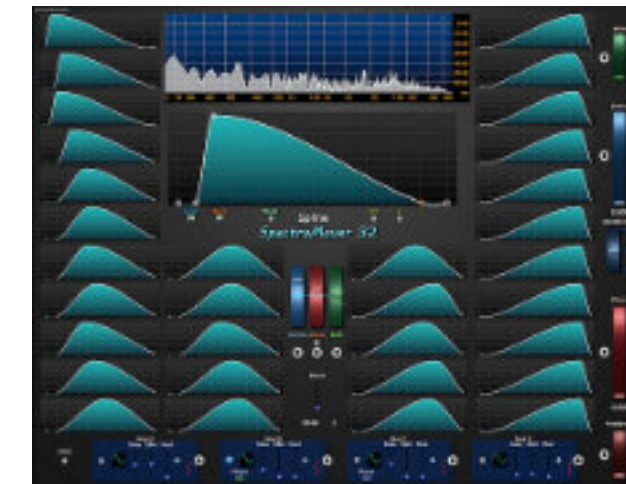
[Spaced series](#)



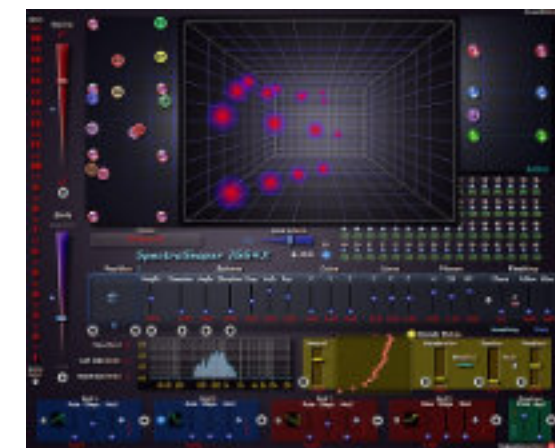
[SpatHaas](#)



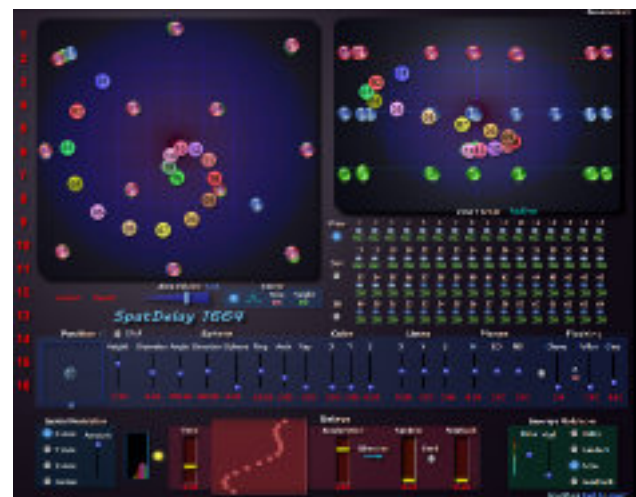
[SpectraMass](#)



[SpectraMover](#)



[SpectraShaper](#)



[SpatDelay](#)



[SpectraSplitter](#)



[Subtractor](#)



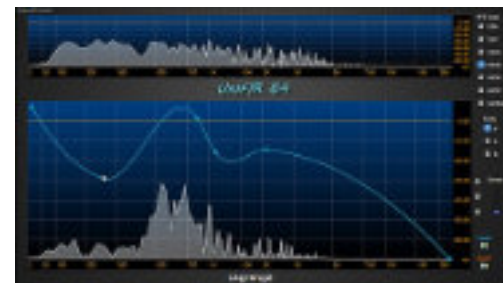
[TouchFilter](#)



[TouchShifter](#)



[UniComp](#)



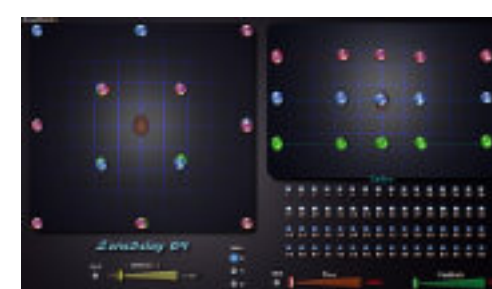
[UniFIR](#)



[UniGain](#)



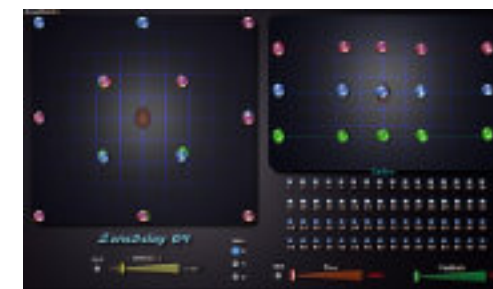
[UniRing](#)



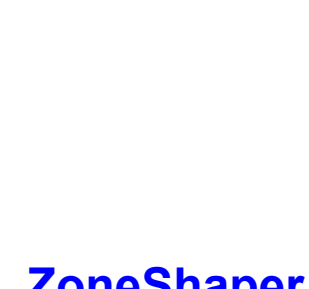
[ZoneDelay](#)



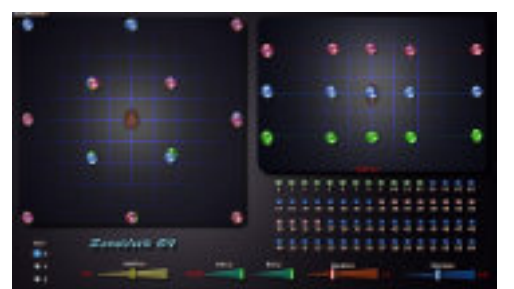
[ZoneFilter](#)



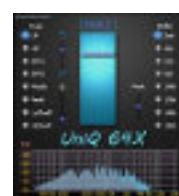
[ZonePitch](#)



[ZoneShaper](#)



[ZoneVerb](#)



[UniQ](#)



[UniVerb](#)

AnimaGrains 864

effects: Granular
inputs: 1
outputs: 1 > 64
spatial: 3D
OS: Win/Mac

see page 3



XYZ Random position generator, its values are added to the others

Global Speed factor for the X, Y, Z LFOs

set of LFOs dedicated to continuous trajectories independently on the three spatial axis

see page 5



X modulation Waveform

activation of the X modulator

X modulation Rate

X modulation amount

Grains Rate base and Variations amount

spatial modulation source and amount

Grains Pitch base and Variations amount

Grains Shape

Variations sources: Linear or Random

linear organization of the Delay times following the channels numbers

Delay factor
global Inertia / spatial smoothing applied to the raw XYZ positions

LFO dedicated to pulsating movements of special Shapes parameters

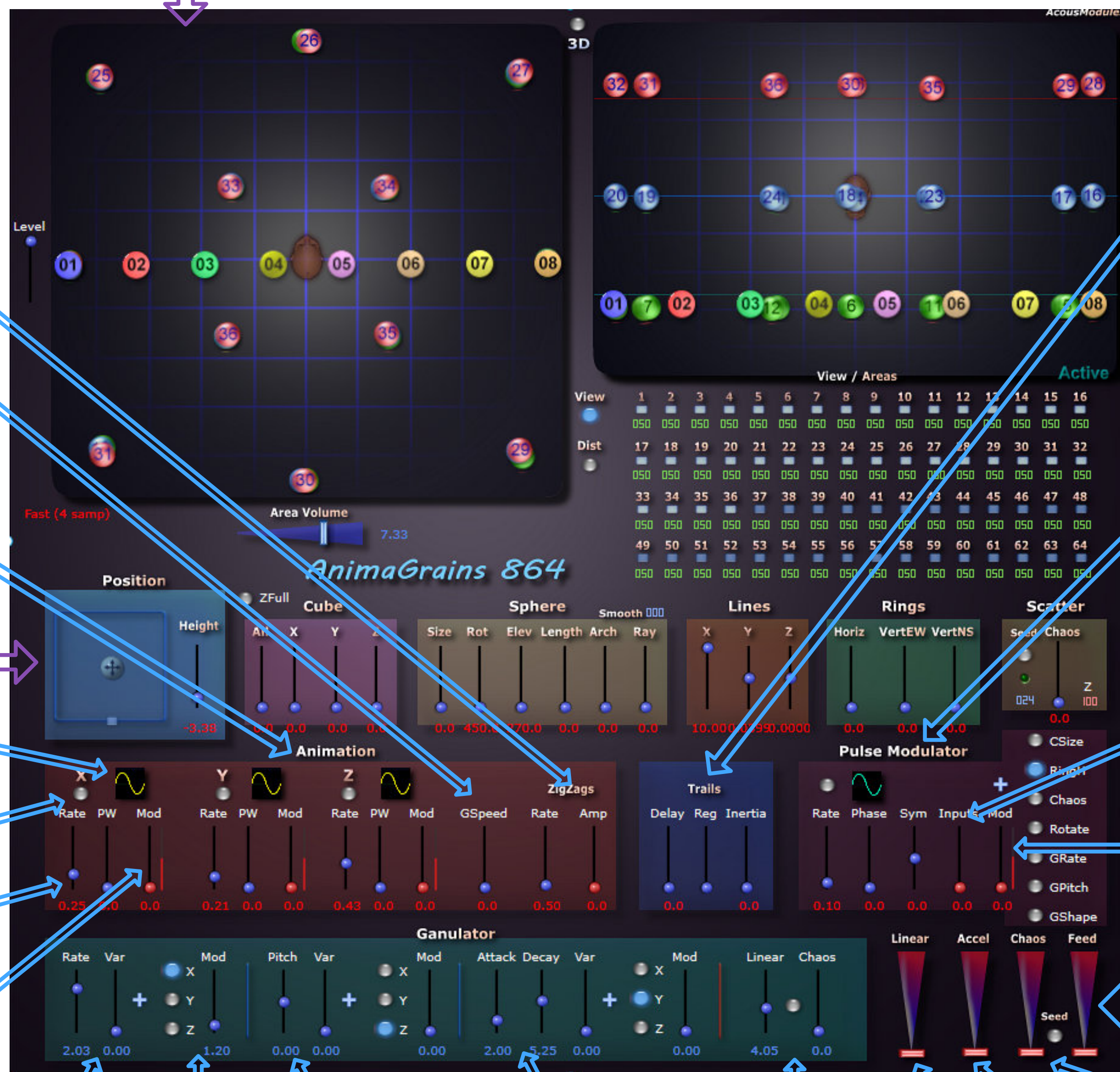
use the samples peak envelope to change the output amplitude

LFO modulation amplitude

multi-delay and resonator
applies on the 64 outputs

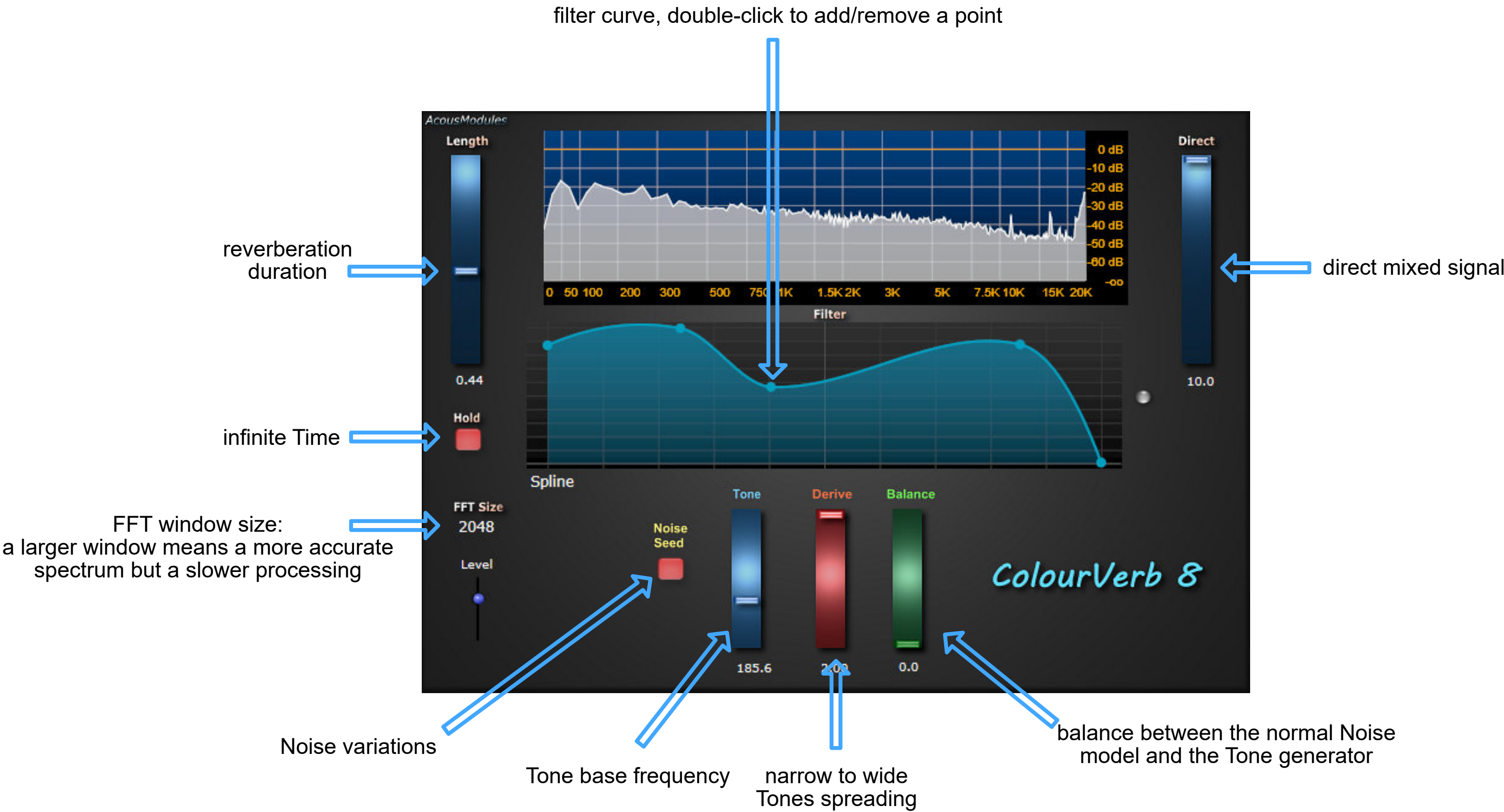
random Delays

acceleration or slow-down



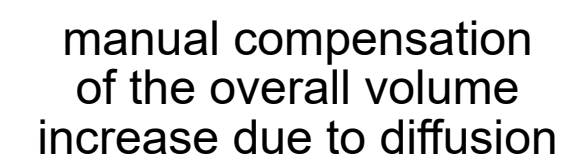
ColourVerb 8 & 64

effects: reverberation
inputs: 8 / 64
outputs: 8 / 64
spatial: direct
OS: Win



effects: reverberation
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win

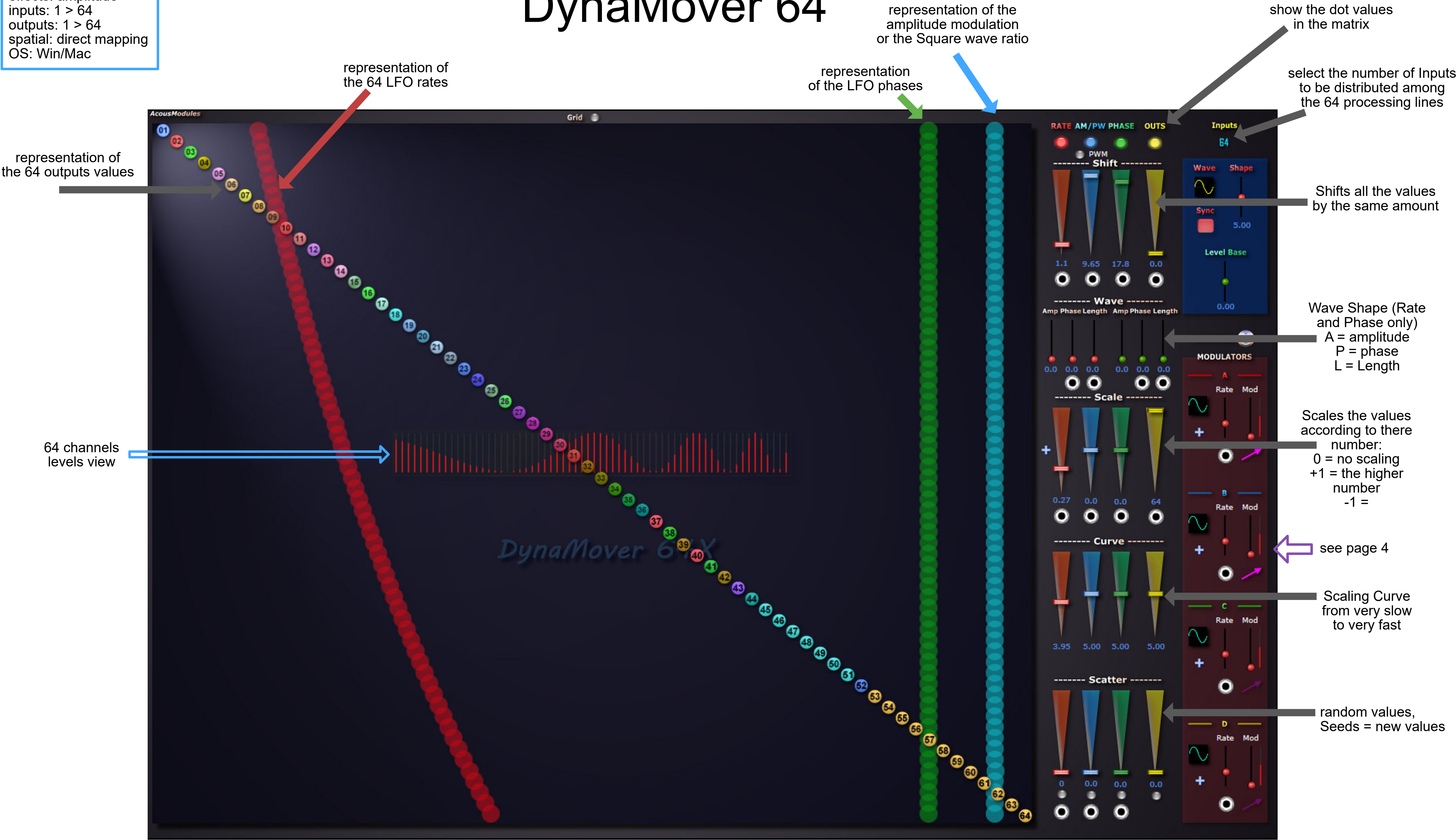
see page 3 



- automatic gain compensation (not very accurate)

effects: amplitude
inputs: 1 > 64
outputs: 1 > 64
spatial: direct mapping
OS: Win/Mac

DynaMover 64



effects: Delay
inputs: 1 / 36 / 64
outputs: 36 / 64
spatial: direct
OS: Win/Mac

FocusDelay 36 & 64

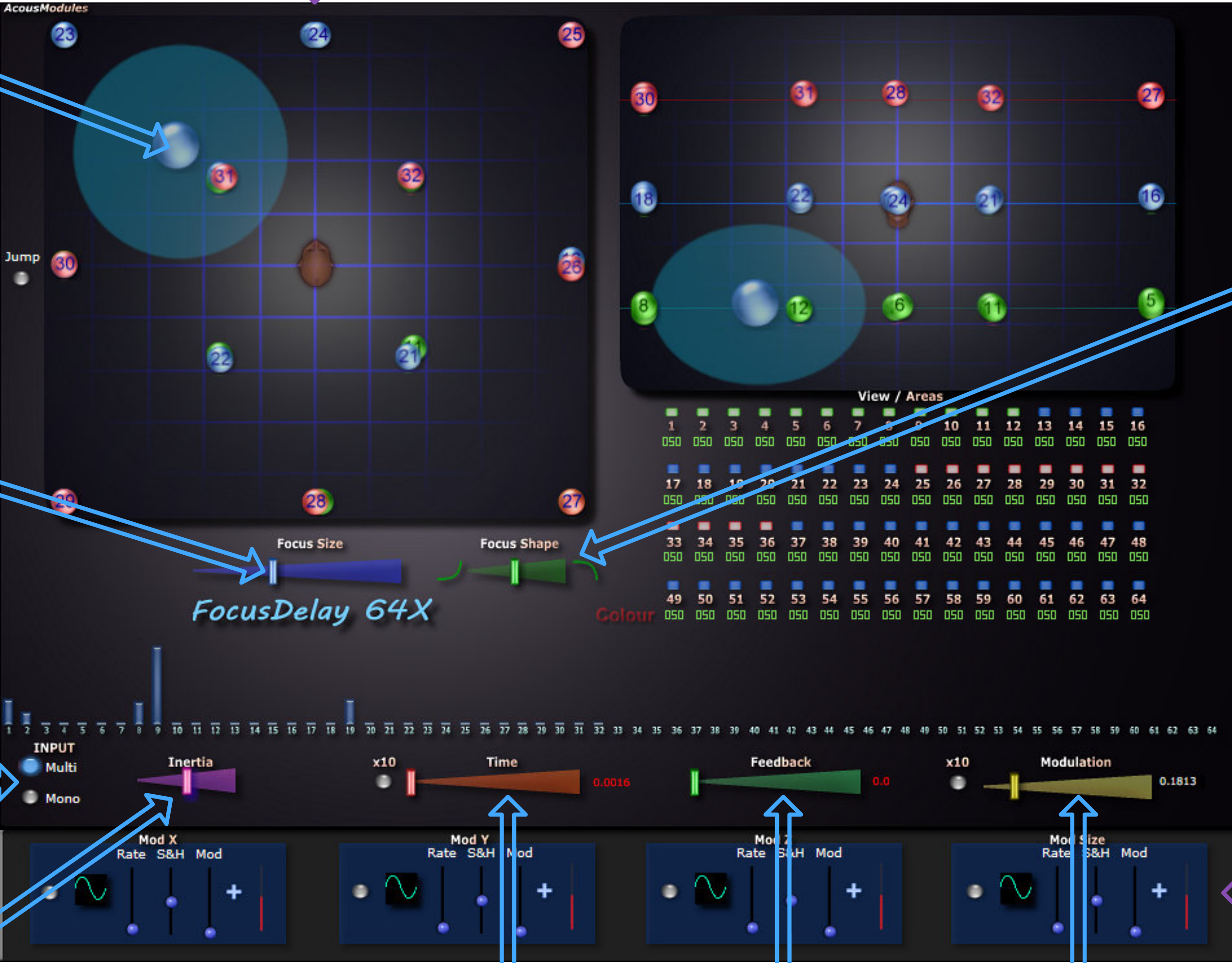
see page 3

center position of the "focus" area,
its size determines the spatial range
of the modulated values, the effect
being at the maximum at its center
and null outside

extension of the Focus Area
in the 3 dimensions, determines
the number of channels that
are modified

in Mono mode the input
is duplicated on all the channels

movements
smoothing



how the modulation values are distributed between
the center and the circumference of the focus sphere

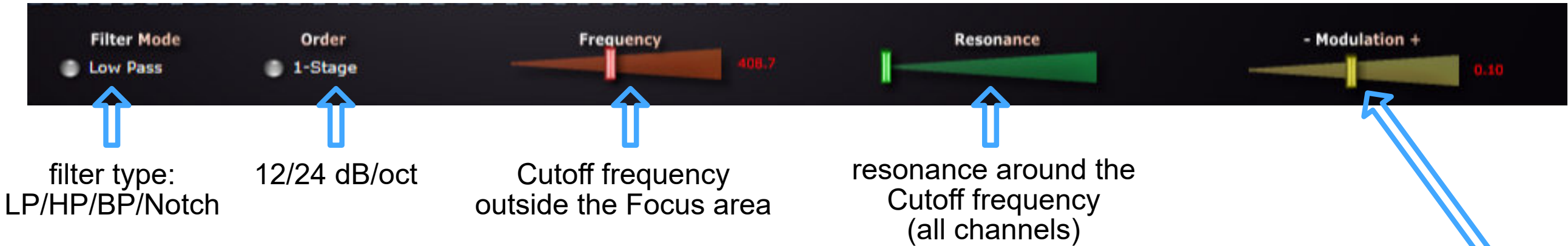
see page 4

base Delay Time
(outside the Focus area)

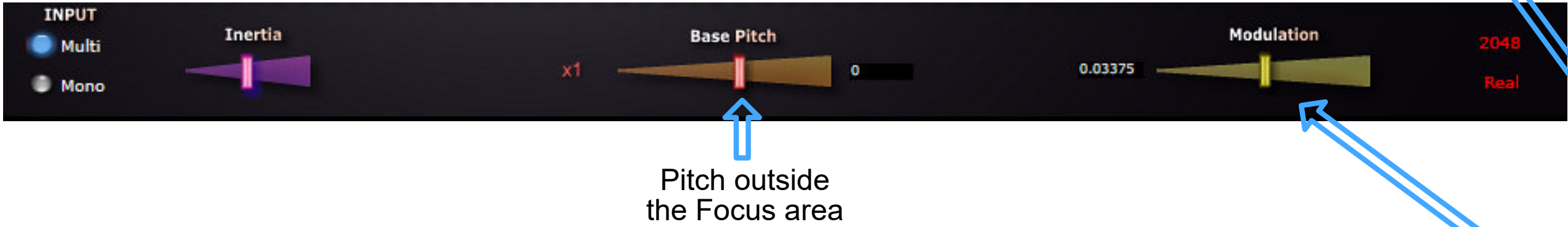
Delay Feedback
(all channels)

Delay increase from
outside of the Focus area
to its center

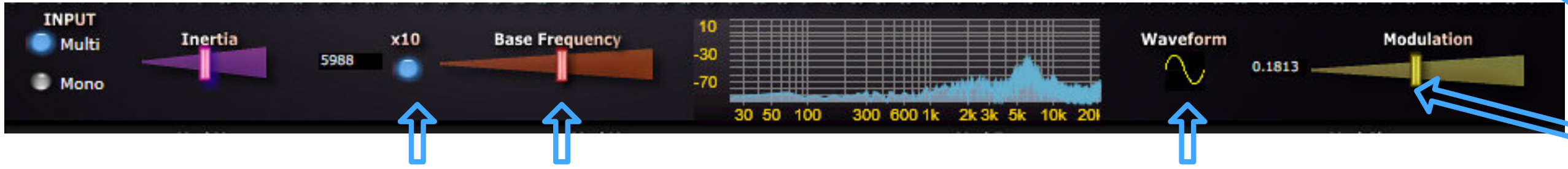
FocusFilter



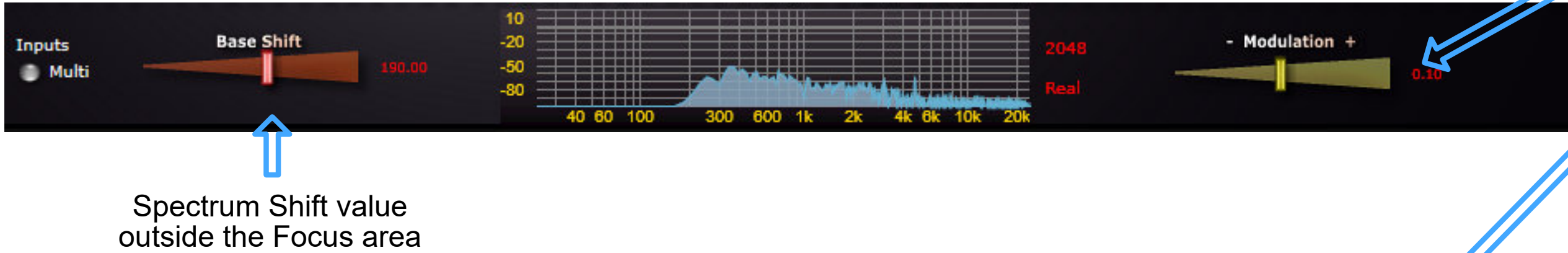
FocusPitch



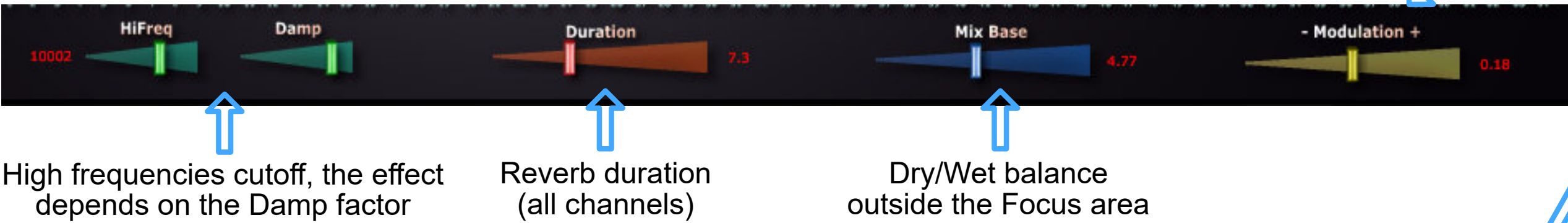
FocusGrains



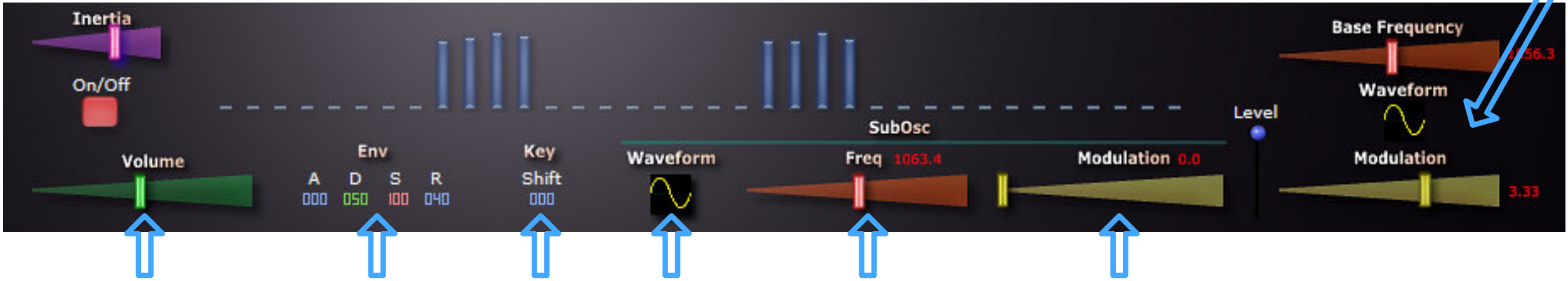
FocusShifter



FocusVerb



FocusVox

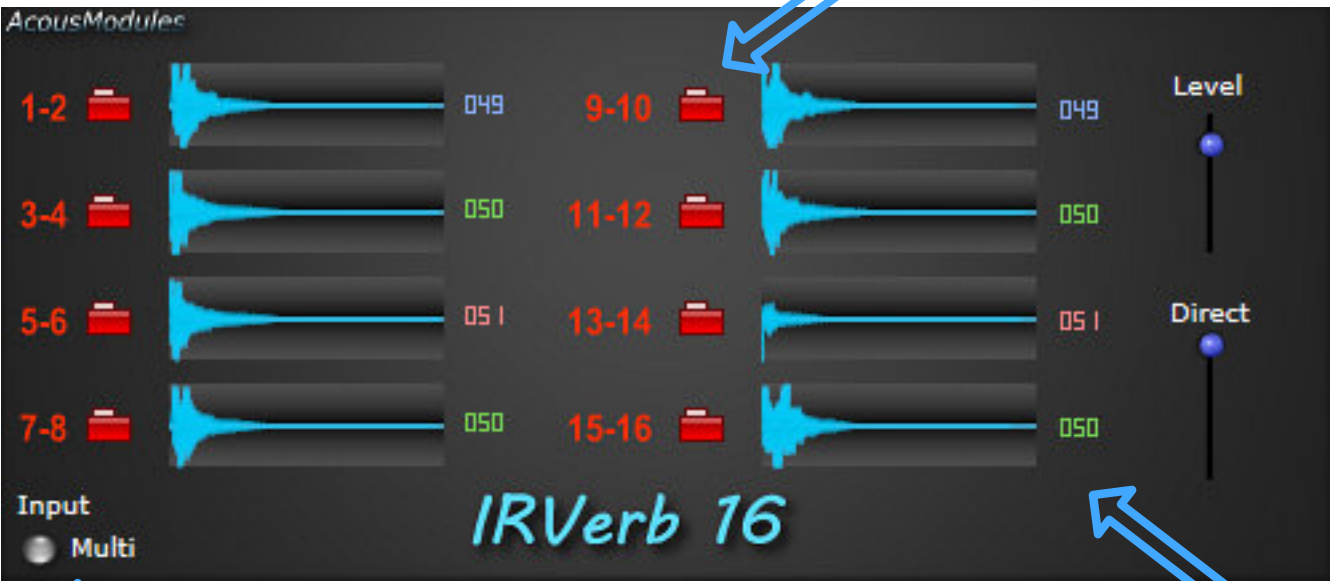


amplitude of the modulation inside the Focus area, if + and - it is bipolar

IRVerb 16 & 32

effects: Convolution
Reverberation
inputs: 8 / 32
outputs: 8 / 32
spatial: direct
OS: Win

load a stereo IR file in
the channel slot



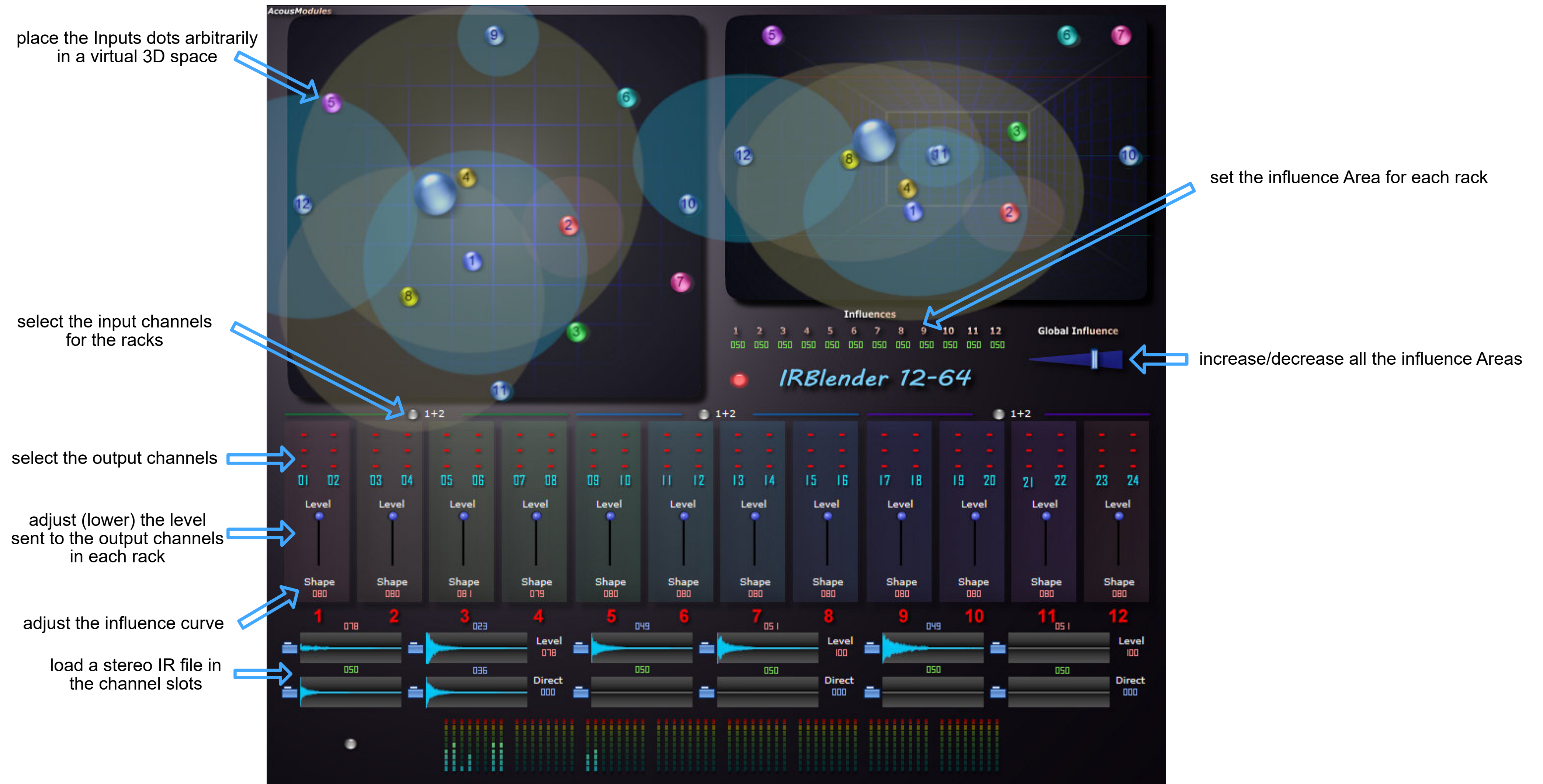
Multi: the Input channels are sent to
the corresponding IR processors
Mono: the first Input is duplicated



IR level,
"50" means no change

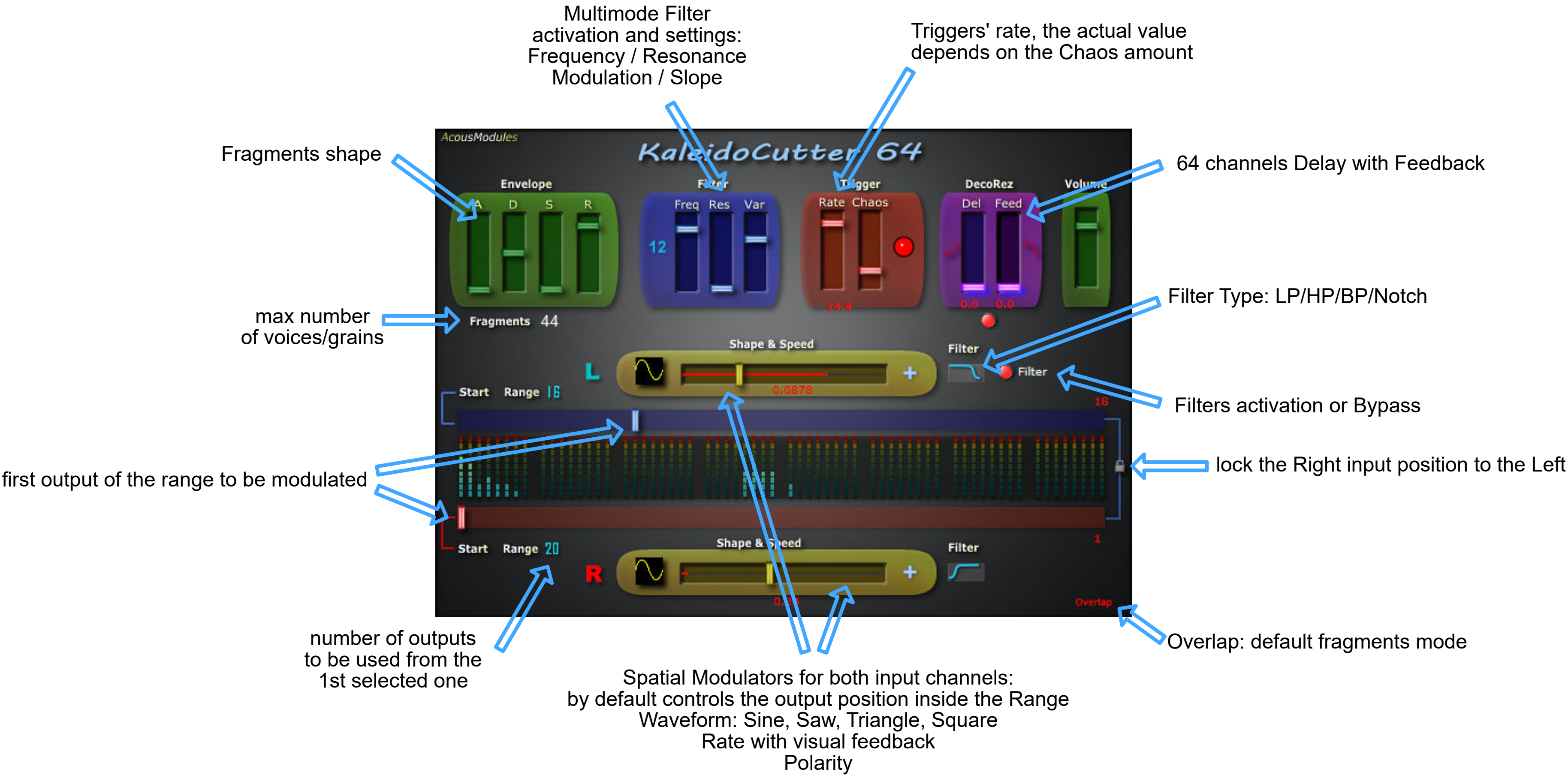
effects: Convolution
Reverberation
inputs: 6
outputs: 64
spatial: direct
OS: Win

IRBlender 12-64



KaleidoCutter 64

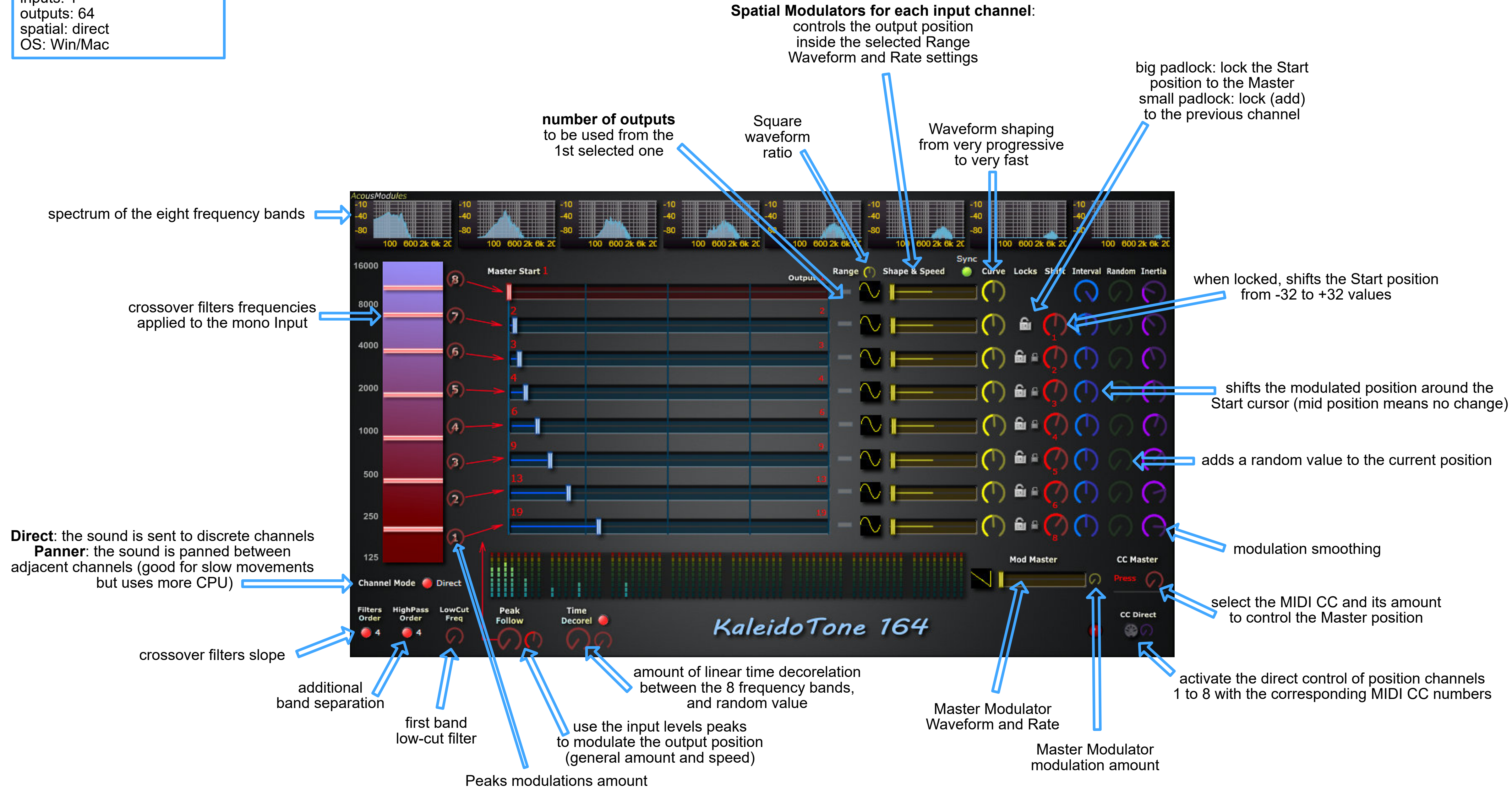
effects: Amplitude
inputs: 2
outputs: 64
spatial: direct
OS: Win/Mac



KaleidoTone 164

purpose: split a mono input into 8 frequency bands, then

effects: Filter + Spatialization
inputs: 1
outputs: 64
spatial: direct
OS: Win/Mac



MassModeler 1636 & 1664

effects: FFT Filter
+ Spatialization
inputs: 16
outputs: 36 / 64
spatial: 3D
OS: Win

see page 3

Height setting (not reported in the Front View) 0 means Bottom, 100 means Top

Size setting, 100 means the full space diameter

Shape setting from very sharp to very wide

activate the Top and Front views of the Center area

see page 5

master Shaper editor:
double-click to Add
or Remove a point,
up to 6 points can be
animated

Load/Save the spectral curve
to a file that can be exchanged with
other plugins

interpolation curve shape:
Linear, Spline or Lagrange,
the None option means
"no interpolation", thus provides
isolated sinus that can be
usefull for resonant effects,
plus horizontal and vertical mirrors

Pitch shifting interval
from -2 to +2 octaves (x1)
or up to 4 octaves (x2)

FFT parameters for the
Pitch shifting processor

pitch modulation
amplitude, positive
or negative

select the Pitch Shifting
modulation source:
X, Y, Z axis or Center position

graphic view of
the 16 Pitch
shifts values

select the FM
modulation source:
X, Y, Z axis or
Center position

spatial modulation
of the FM frequency

in Mix mode the FM
output is added to the
Pitch Shifter, in FM
mode it replaces it,
so if the FM Amp is
"0" you get no sound

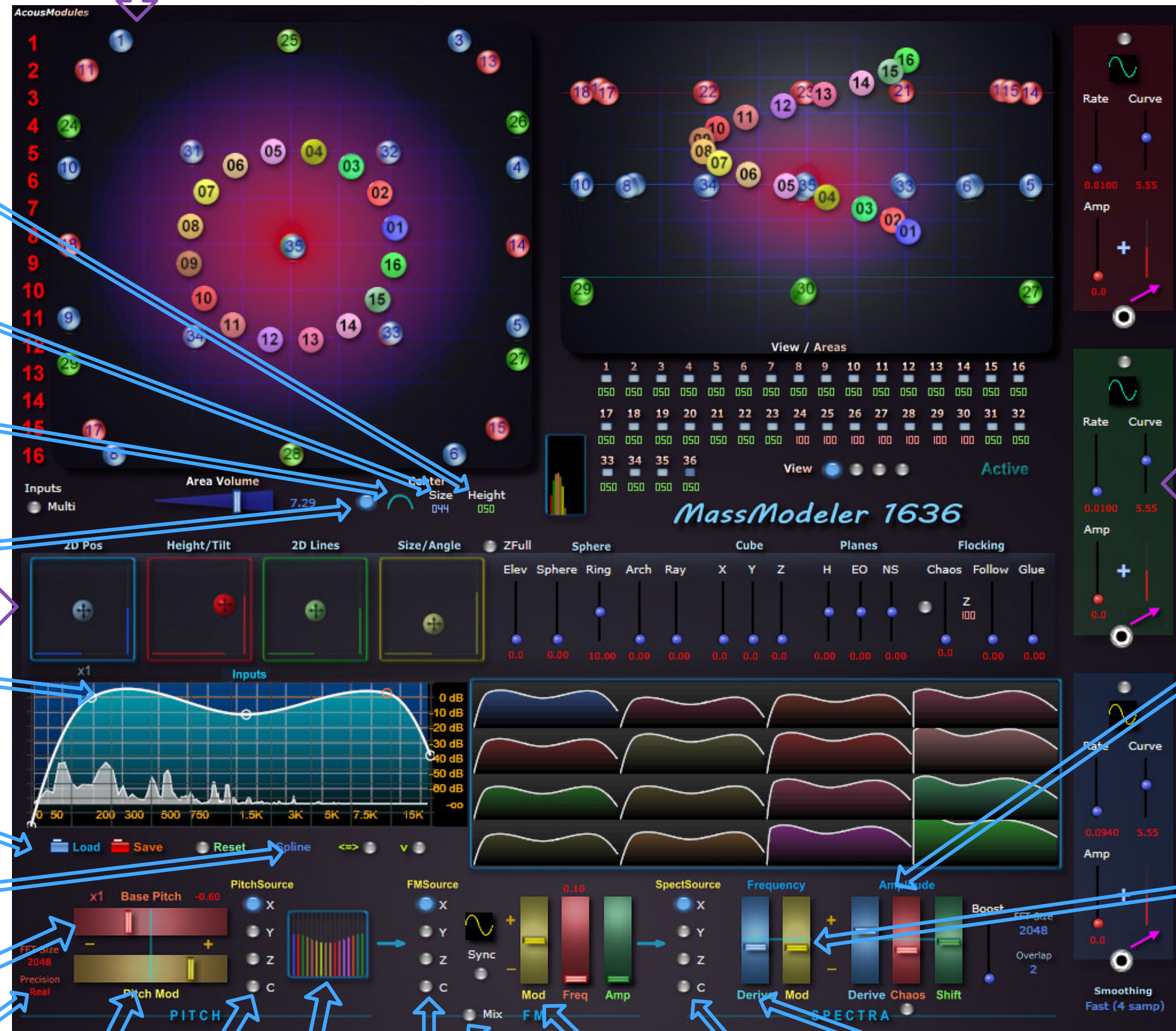
select the SPECTRA
modulation source:
X, Y, Z axis or
Center position

moves each channels' shape points in
the frequency domain according to its number:
the lower to the left and the higher to the right

see page 4

Derive: moves each channels' shape points
in the amplitude domain according to its number:
the lower to the bottom and the higher to the top
Chaos: random shifting, **Shift:** linear shifting

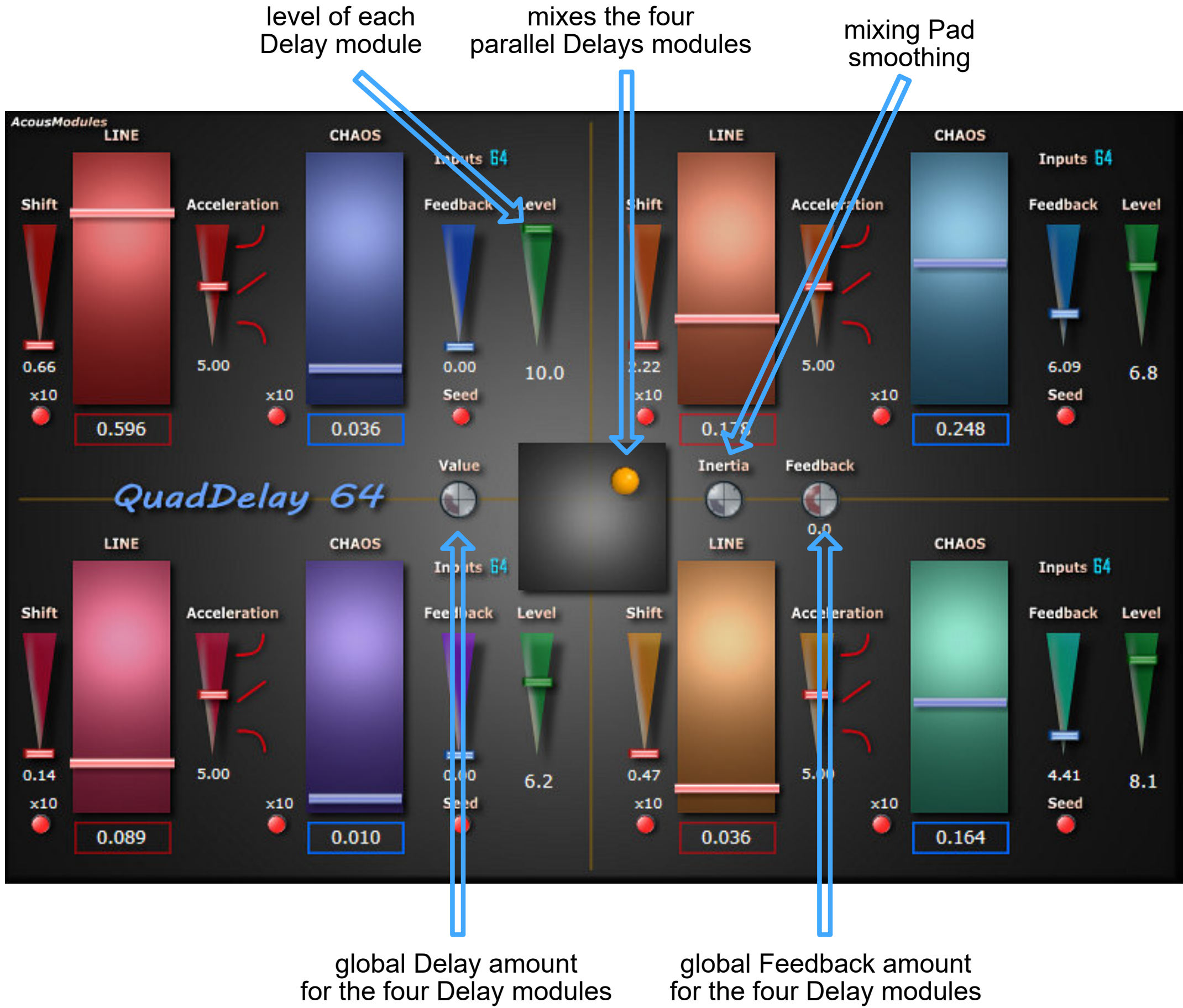
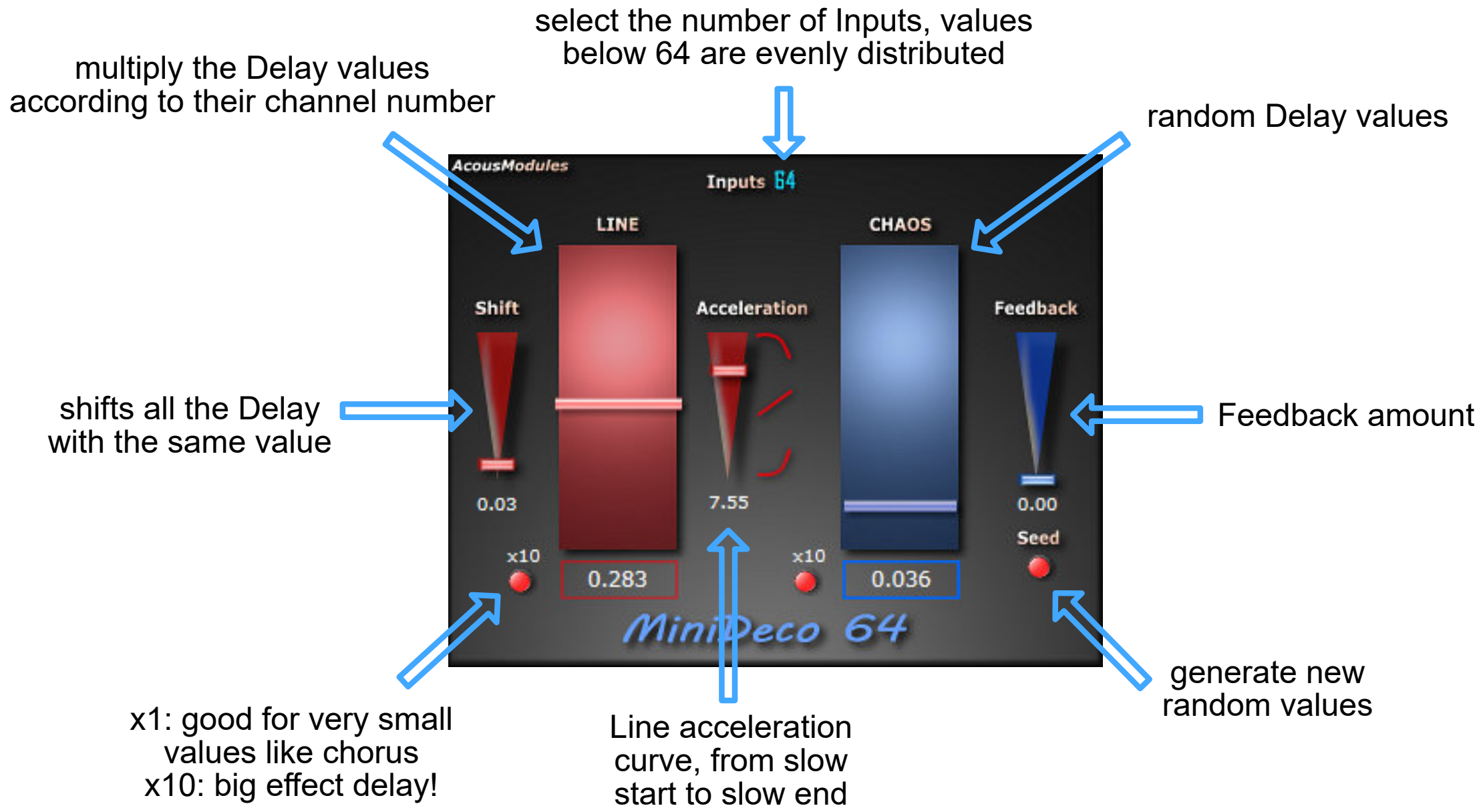
spatial modulation
of the shapers
points frequency



MiniDeco

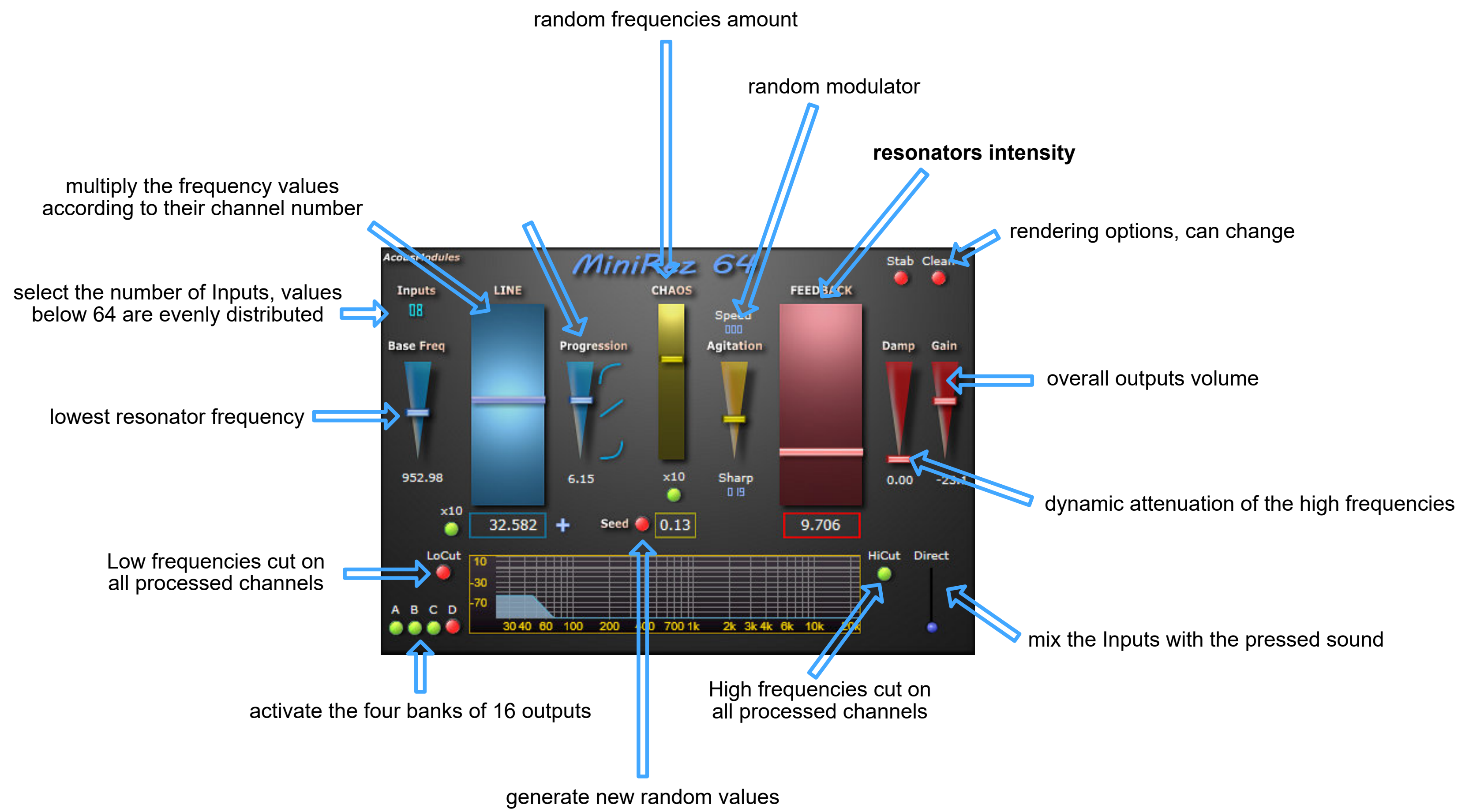
effects: Delay
inputs: 1 > 64
outputs: 64
spatial: direct
OS: Win/Mac

QuadDelay



effects: Resonator
inputs: 1 > 64
outputs: 64
spatial: direct
OS: Win/Mac

MiniRez



effects: FFT Filter
inputs: 16
outputs: 16
spatial: direct
OS: Win

MorphFIR 16

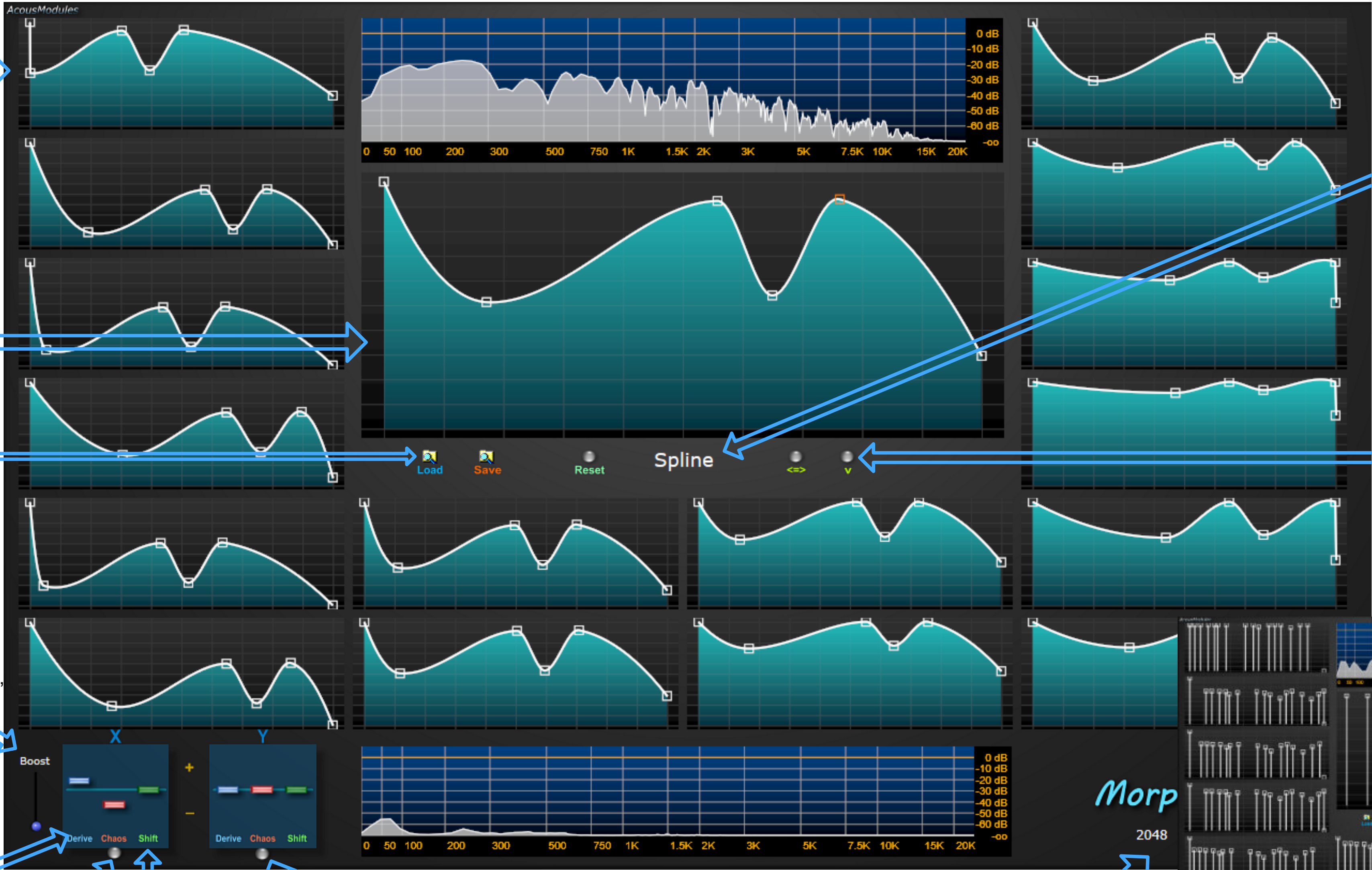
view of the 16 transformed spectral shapes (editable, but edition is lost when the spectral controls change)

master filter curve, double-click to add or remove a point, up to 16 can be animated

the curve can be saved to disk and shared with other plugins

to compensate for the loss of energy when no interpolation is selected, attention: high levels can be generated!

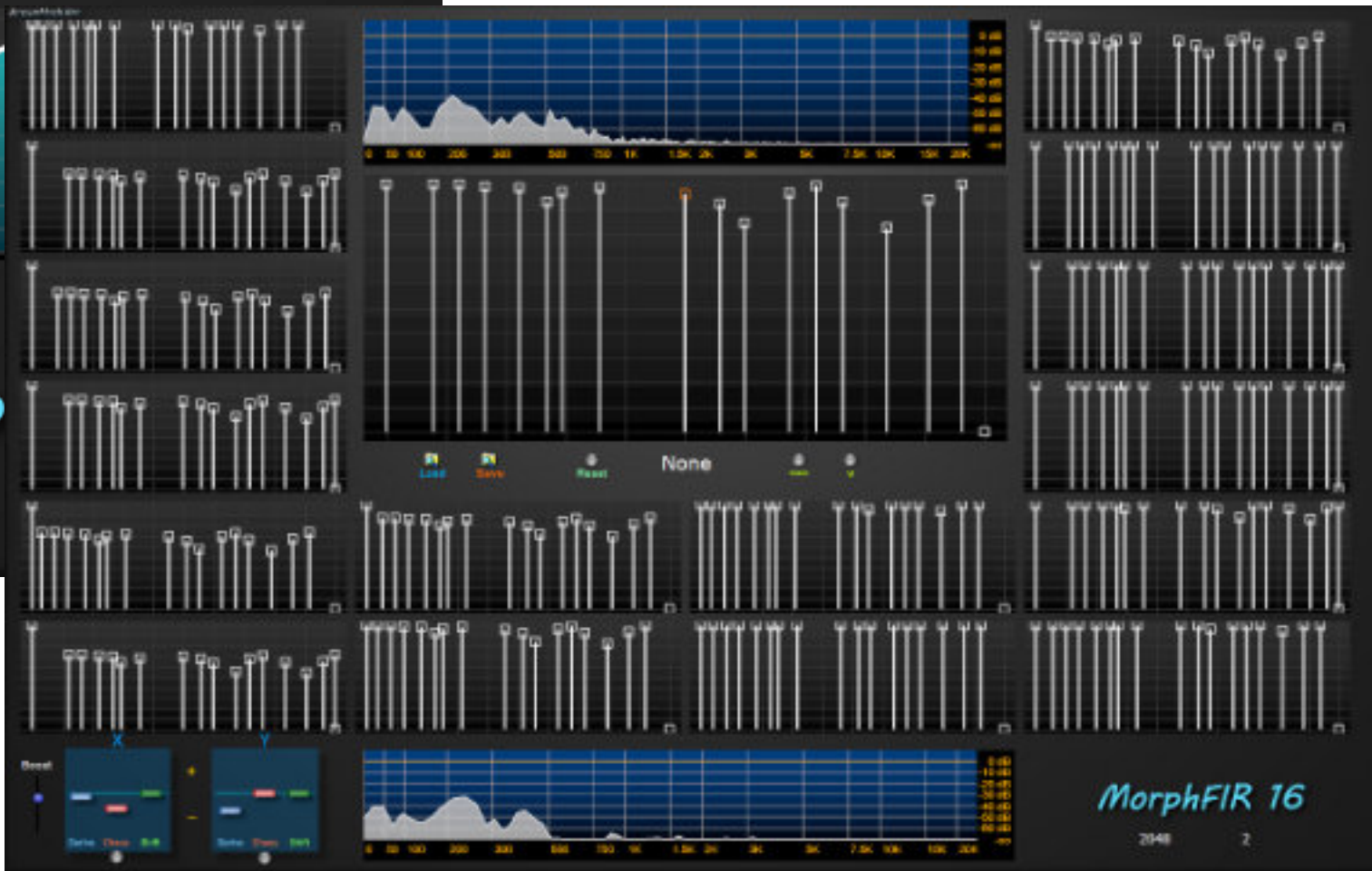
moves each channel shape points according to its number: the lower to the left and the higher to the right



interpolation curve shape: Linear, Spline or Lagrange, the None option means "no interpolation", thus provides isolated sinus that can be usefull for resonant effects

horizontal and vertical mirror

FFT parameters: window size and overlap, a larger window means a more accurate spectrum but a slower processing



Pitch'nFilter 64

effects: FFT Filter and
Pitch/Frequency Shifter
inputs: 64
outputs: 64
spatial: direct
OS: Win

Pitch mode = the sound's spectrum
is preserved (but lot of CPU
may be necessary)
Frequency mode = new interesting
spectrums may happen
(but extreme low and high end
frequencies may arise!)

MIDI messages shaping

Pitch/Frequency value when
there is no modulation

x1 = Pitch +/- 2 oct, Frequency +/- 1000 Hz
x2 = Pitch +/- 4 oct, Frequency +/- 2000 Hz

maximum shifting amount
in octave or in Hz

Integer: faster
Real: better / slower

FFT window size:
low value = fast / average
high value = slow / precise

active the Pitch/Frequency Shifter

processing order: Shifter then Filter

active the Filter

filter type:
LP/HP/BP/Notch

filter slope:
12/24 dB/oct

Cutoff Frequency value
when there is no modulation

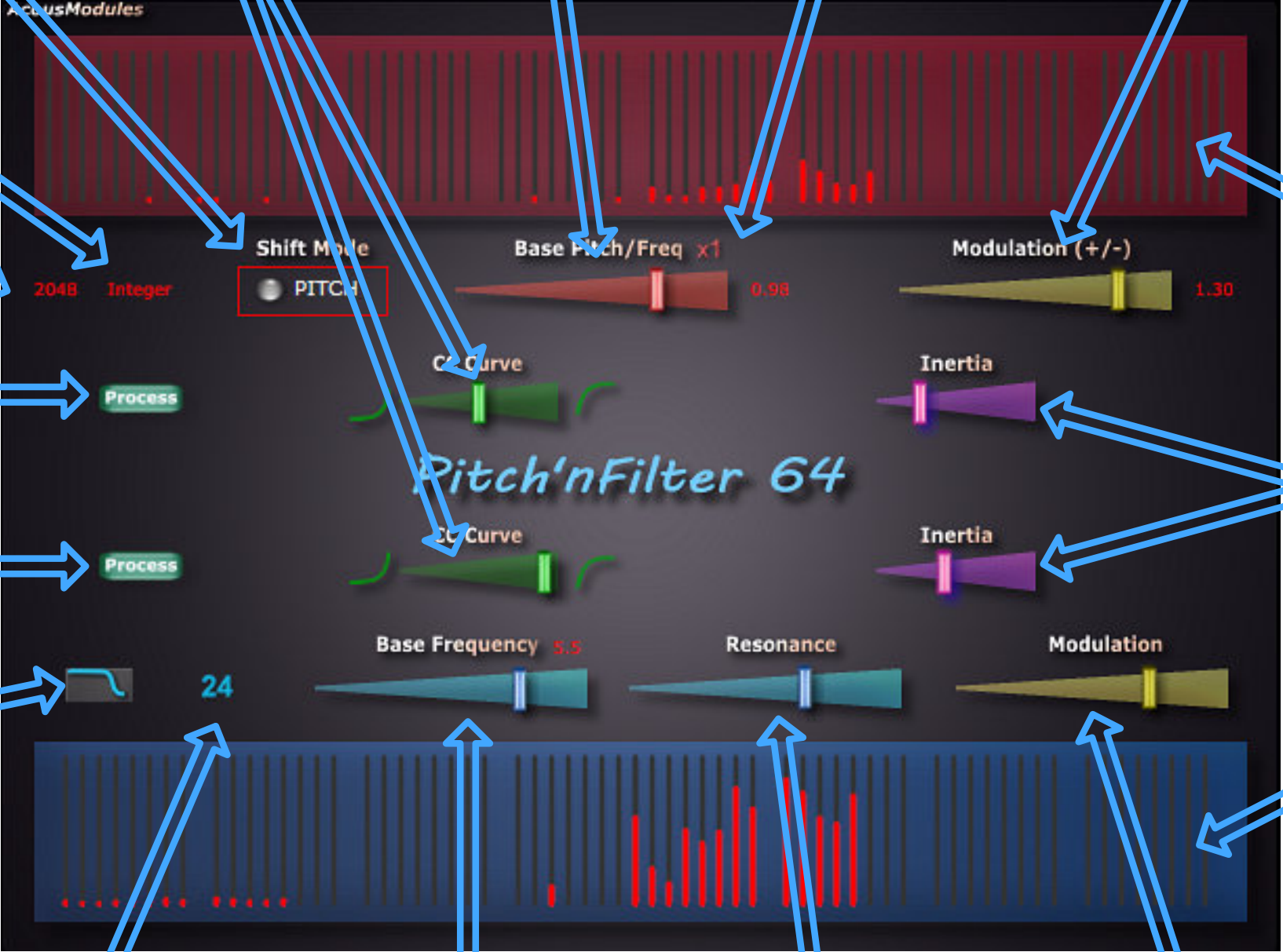
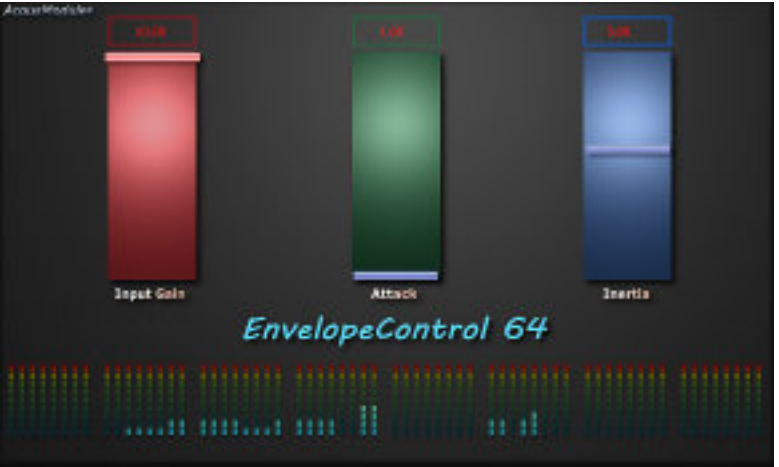
Resonance factor
at the Cutoff Frequency,
may produce high levels!

maximum Cutoff shifting
amount (in octaves)

slow down of the
MIDI messages
for smoother
evolutions

visualisation of the MIDI CC values;
it uses the controller numbers 1 to 64
and cannot be modified

this plugin is mainly intended to be used
with the EnvelopeControl 64 MIDI plugin

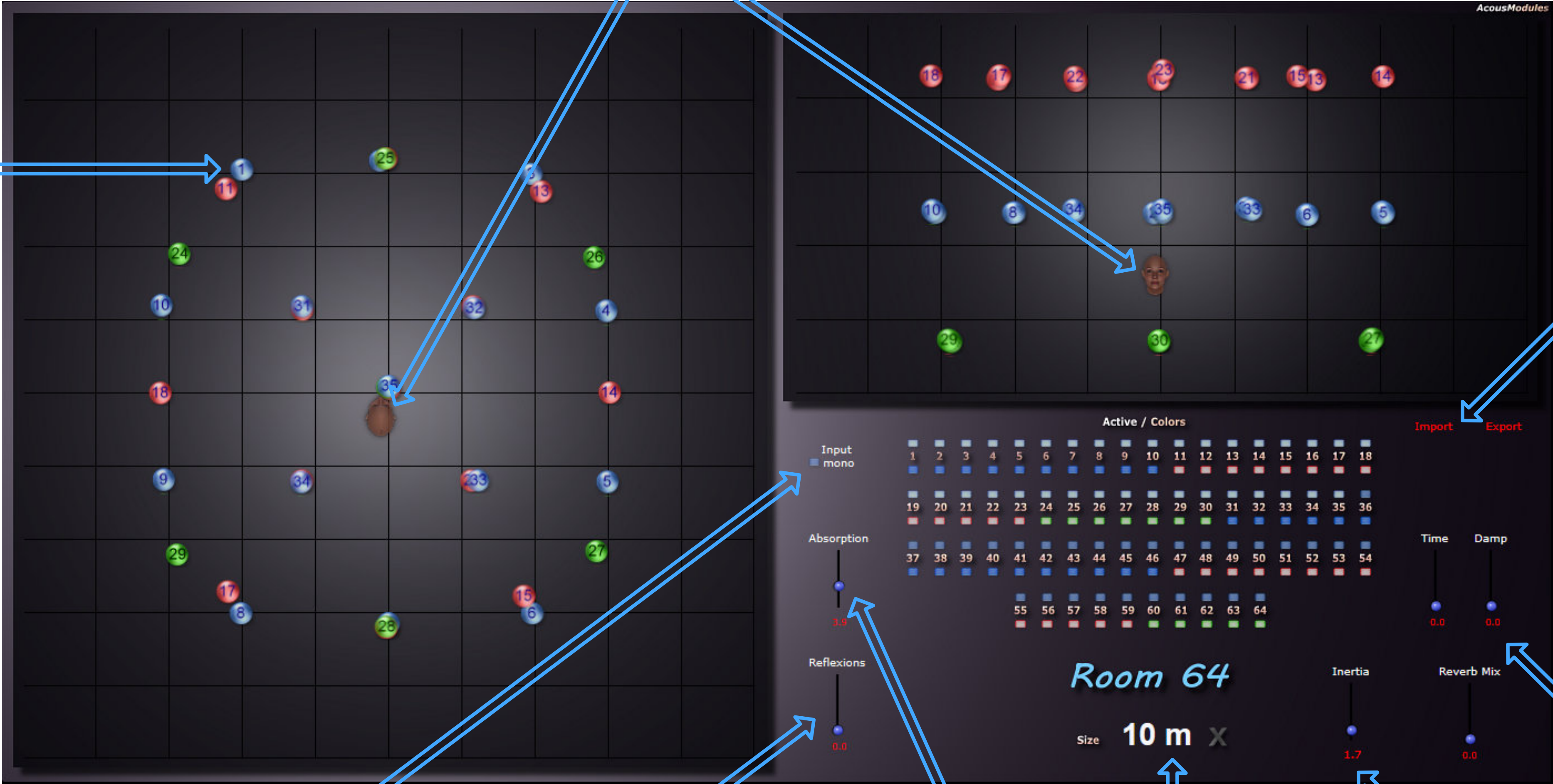


Room 64

effects: Delay + Filter
inputs: 1/64
outputs: 64
spatial: 3D
OS: Win

the position of the "listener" determines the relative delay values of every channel
and, depending on the room size, can simulates the sound's origine in space

speaker or sound's channel
position, proportionnal to
their real ones or to get
a special effect, their distance
to the "listener" is used to
calculate the delays, the filters
and the reverberations values



Load and Save a spatial
configuration file
in the *.am64 format

in Mono Input mode it can
behave like a delay based
spatialization tool
(see the *SpatHaas* plugin)

delay feedback

LowPass filter cutoff
according to the distance,
can improve the localization

the cube space width
that is used to calculate
the delays values; press "X"
to multiply the size by 10

to produce slow delay
variations resulting as
pitch shifting / doppler
effect when moving
the "listener"

hall reverberation
parameters, the
channels Mix values
depends on the distance

ScatterGrains 64

representation of the
initial Delay values
(before the Trigger)

representation of the
Trigger Rate OR
the Phase shifting

representation of the
grains Shape values

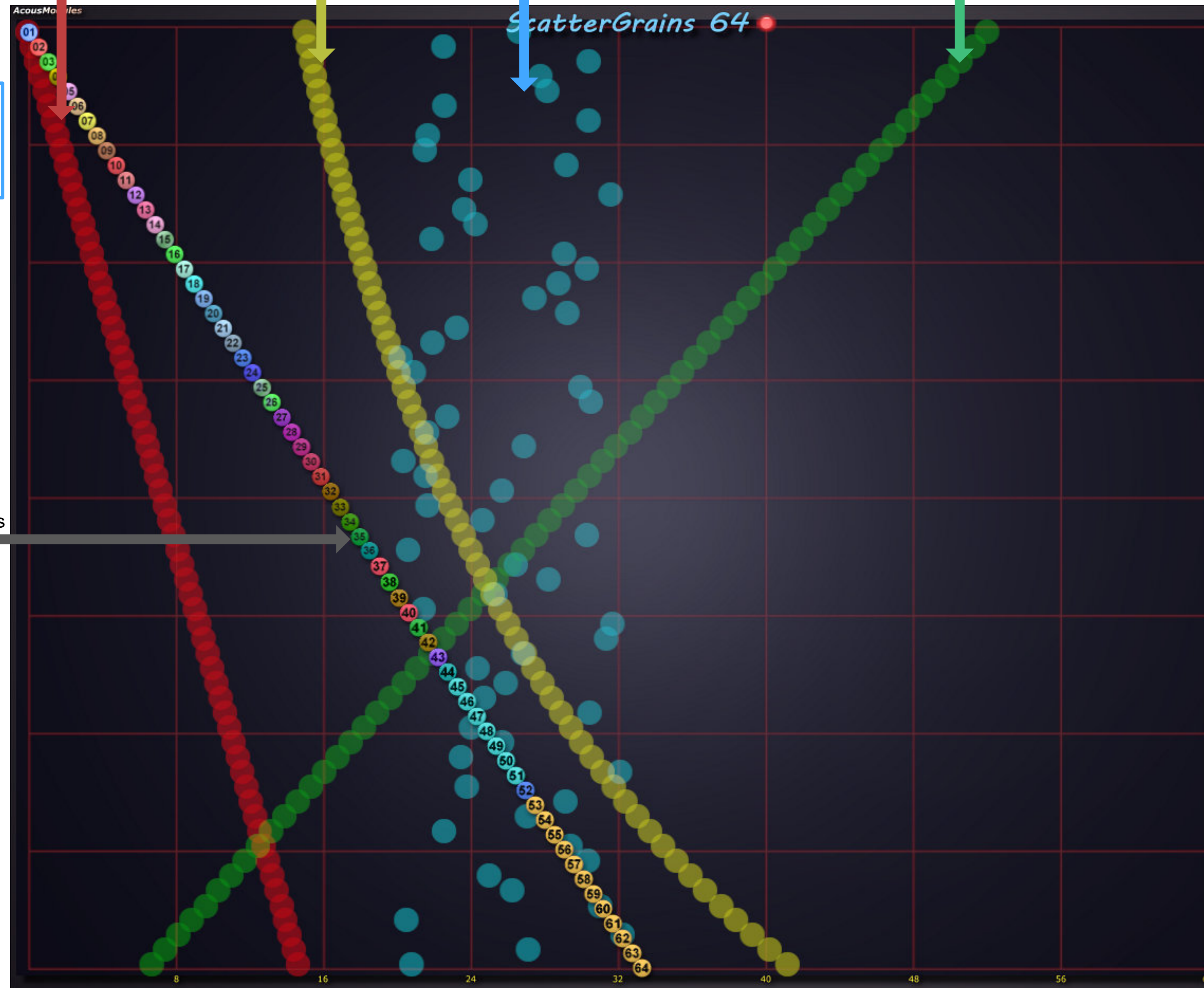
representation of the
Reverb Mix values

select the number of
Inputs, they are
more or less evenly
distributed among the
64 processing lines

Sync/Resync
the Trigger
Phases

Reverberation settings:
Size = duration
Mix = base Dry/Wet value
Hi/Damp = high freq attenuation

effects: Delay + Reverb
inputs: 1 > 64
outputs: 1 > 64
spatial: direct mapping
OS: Win



representation of
the 64 outputs values



Grains Rate
and Shape
(ADSR)

Shifts all the values
by the same amount

Scales the values
according to there
number:
0 = no scaling
+1 = the higher
number
-1 =

Scaling Curve
from very slow
to very fast

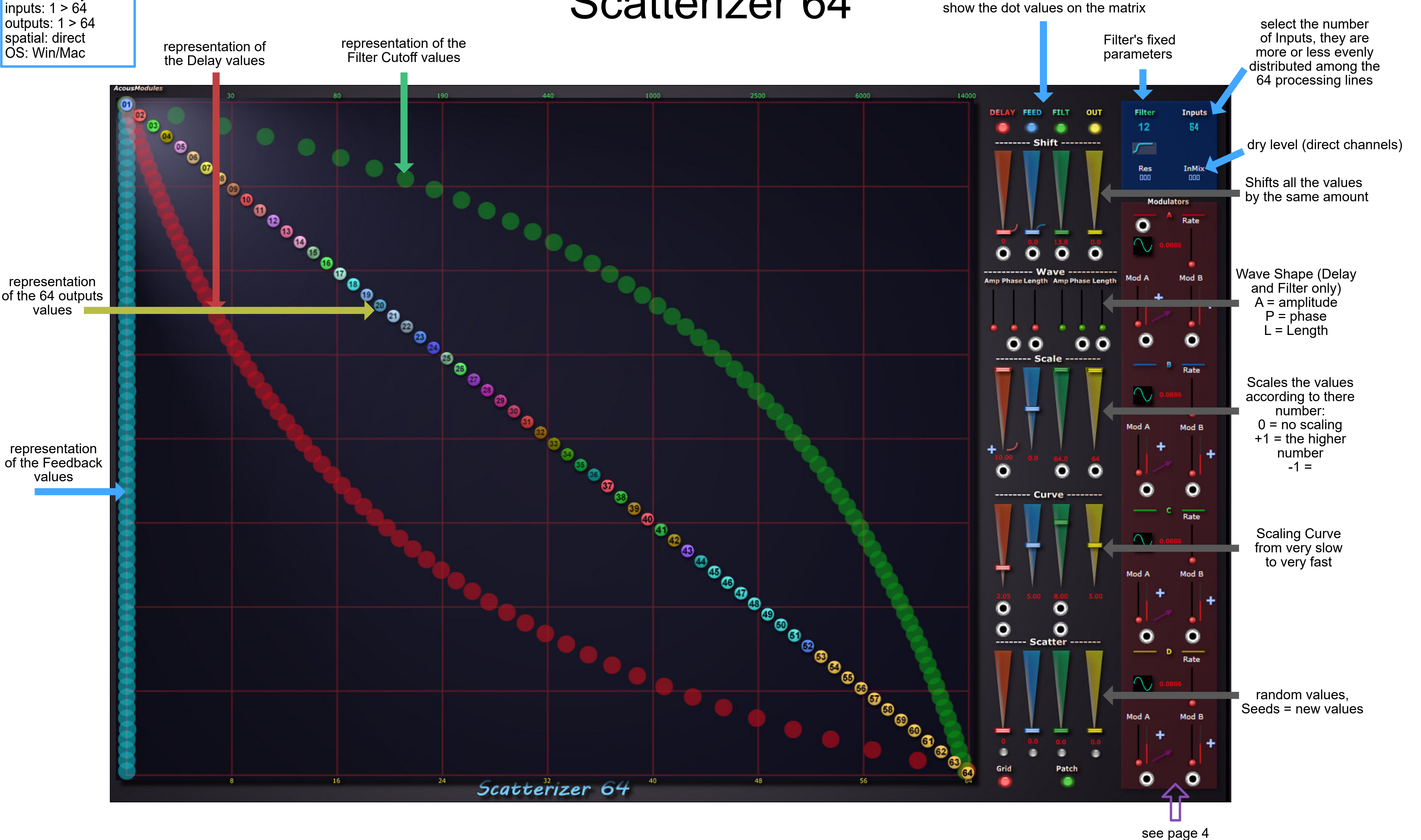
Wave Shape (Delay
and Rev Mix only)
A = amplitude
P = phase
L = Length

random values,
Seeds = new values

↑ see page 4

effects: Delay+Filter
inputs: 1 > 64
outputs: 1 > 64
spatial: direct
OS: Win/Mac

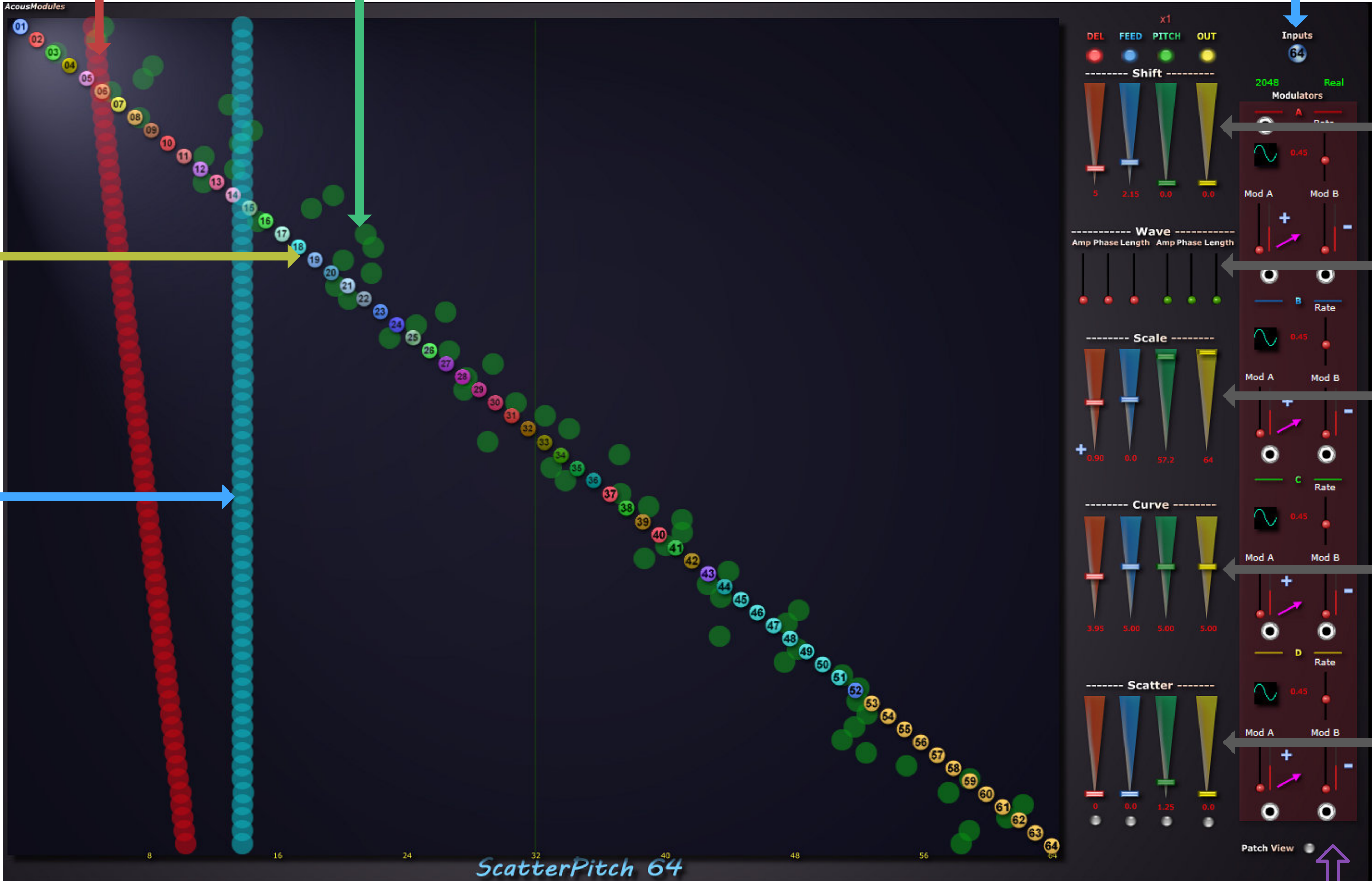
Scatterizer 64



effects: FFT Pitch Shifting
inputs: 1 > 64
outputs: 1 > 64
spatial: direct
OS: Win

ScatterPitch 64 (FP)

select the number of Inputs, they are more or less evenly distributed among the 64 processing lines

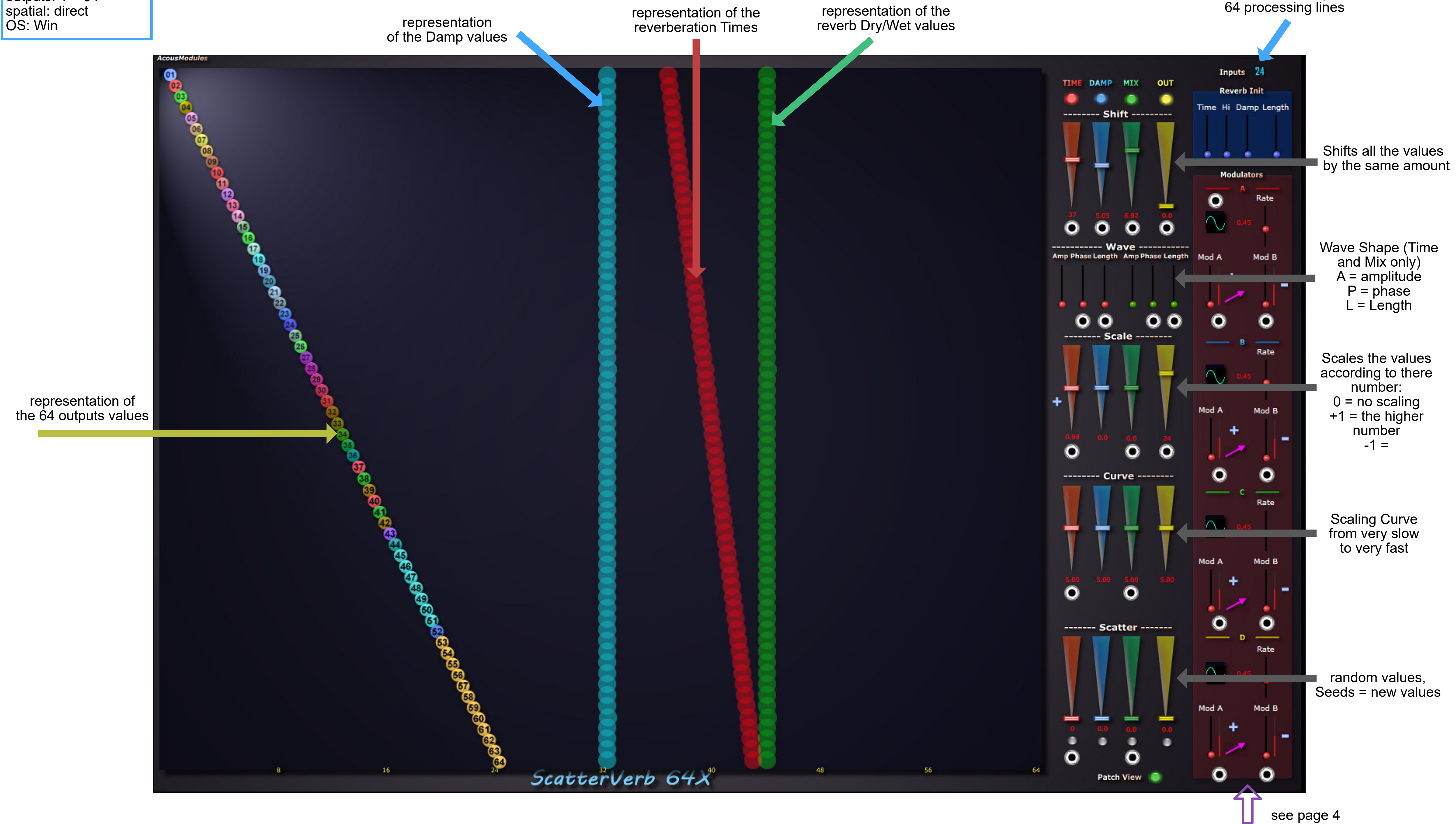


see page 4

note: the FP version has exactly the same interface and features but uses a Formant Preserving algorithm (Elena Design) which need a lot more CPU power and is only suited for tonal material

effects: Reverberation
inputs: 1 > 64
outputs: 1 > 64
spatial: direct
OS: Win

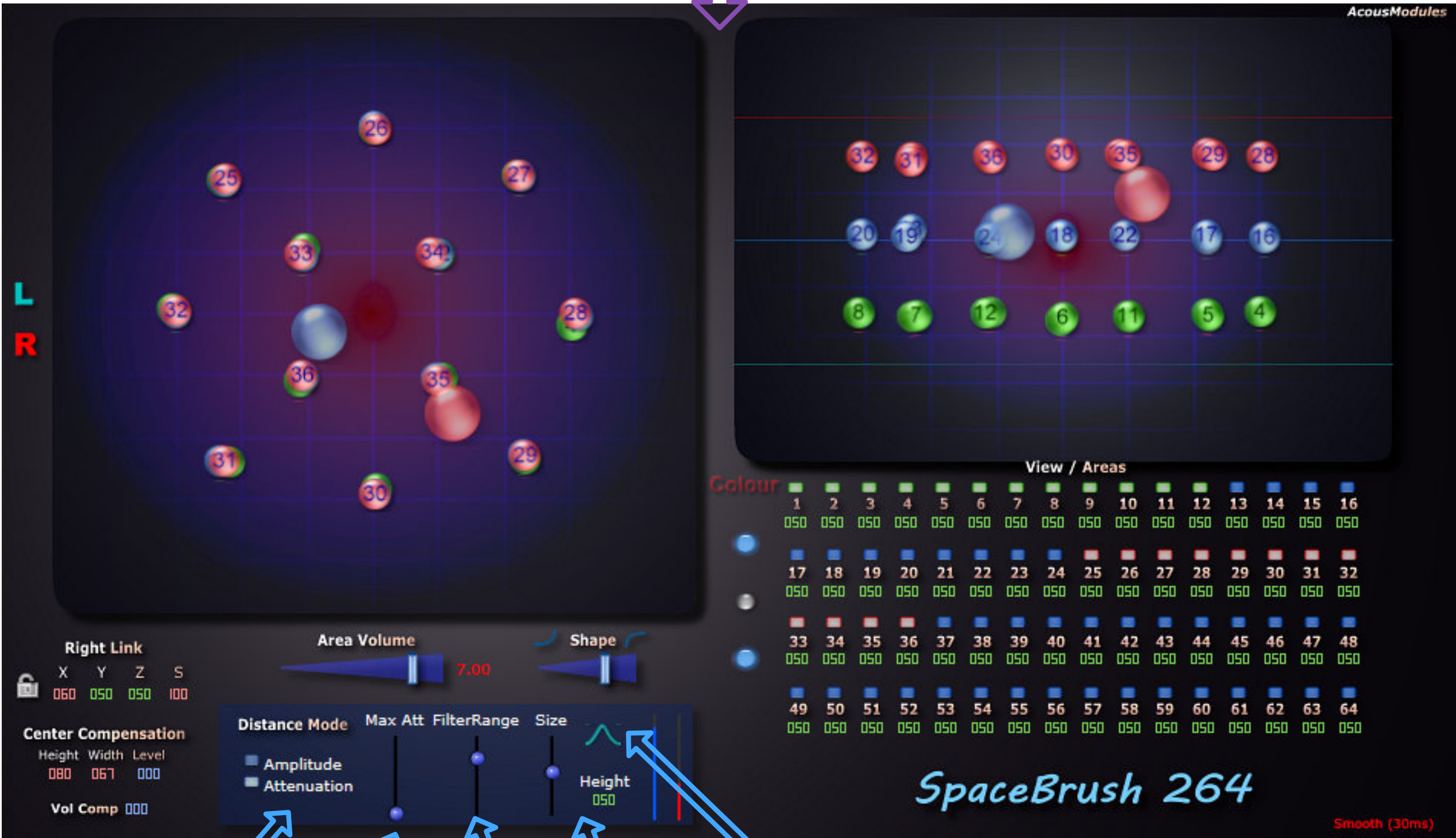
ScatterVerb 64



SpaceBrush 218 & 264

effects: Spatialization
+ Filter
inputs: 2
outputs: < 64
spatial: 3D
OS: Win/Mac

see page 3



Amplitude: normal mode
in the spatialization plugins
Attenuation: use the distance value
with a LowPass filter

how much the amplitude
will decrease when going
outside the Center Area

how much the high frequencies
will be attenuated when going
outside the Center Area

attenuation shape in the Center Area
Center Area size and height

effects: Dynamic Compression
inputs: 16
outputs: 16
spatial: direct
OS: Win/Mac

SpacedComp 16

place the channels points according to the corresponding speakers/sounds' channels positions in space if they are fixed, otherwise put them as you want ...
(it is only visual, no spatial processing is involved)

Ctrl/Cmd+Click to activate,
otherwise the effect is bypassed

Shift+Drag to adjust the Threshold
(from 0 to -30 dB)

Shift+Drag to adjust the Gain
(from 0 to +24 dB)

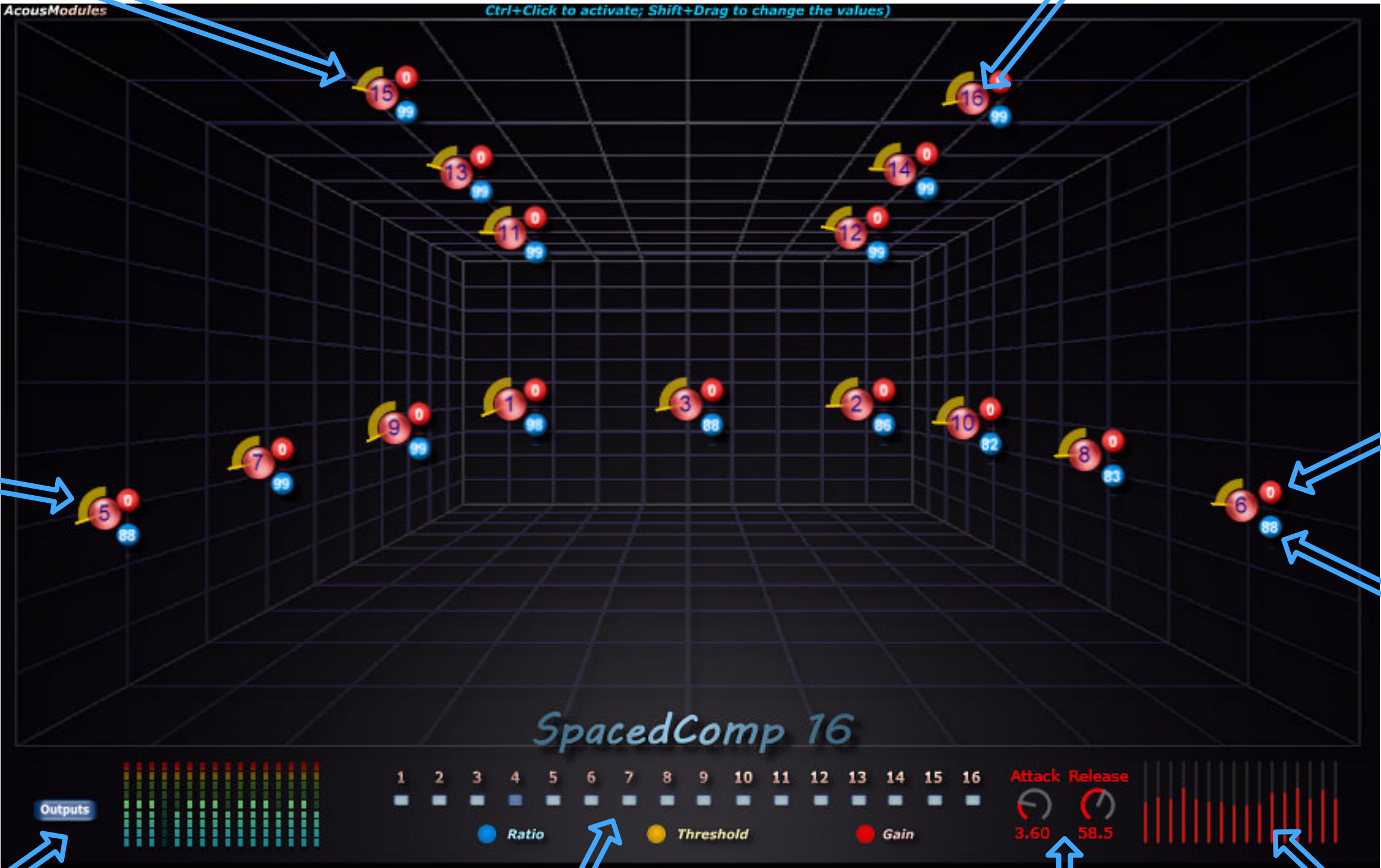
Shift+Drag to adjust the Ratio

show the Inputs or the Outputs peaks

select the channels to view

adjust the
compressor reactivity

view of the compression activity



SpacedConvo 16

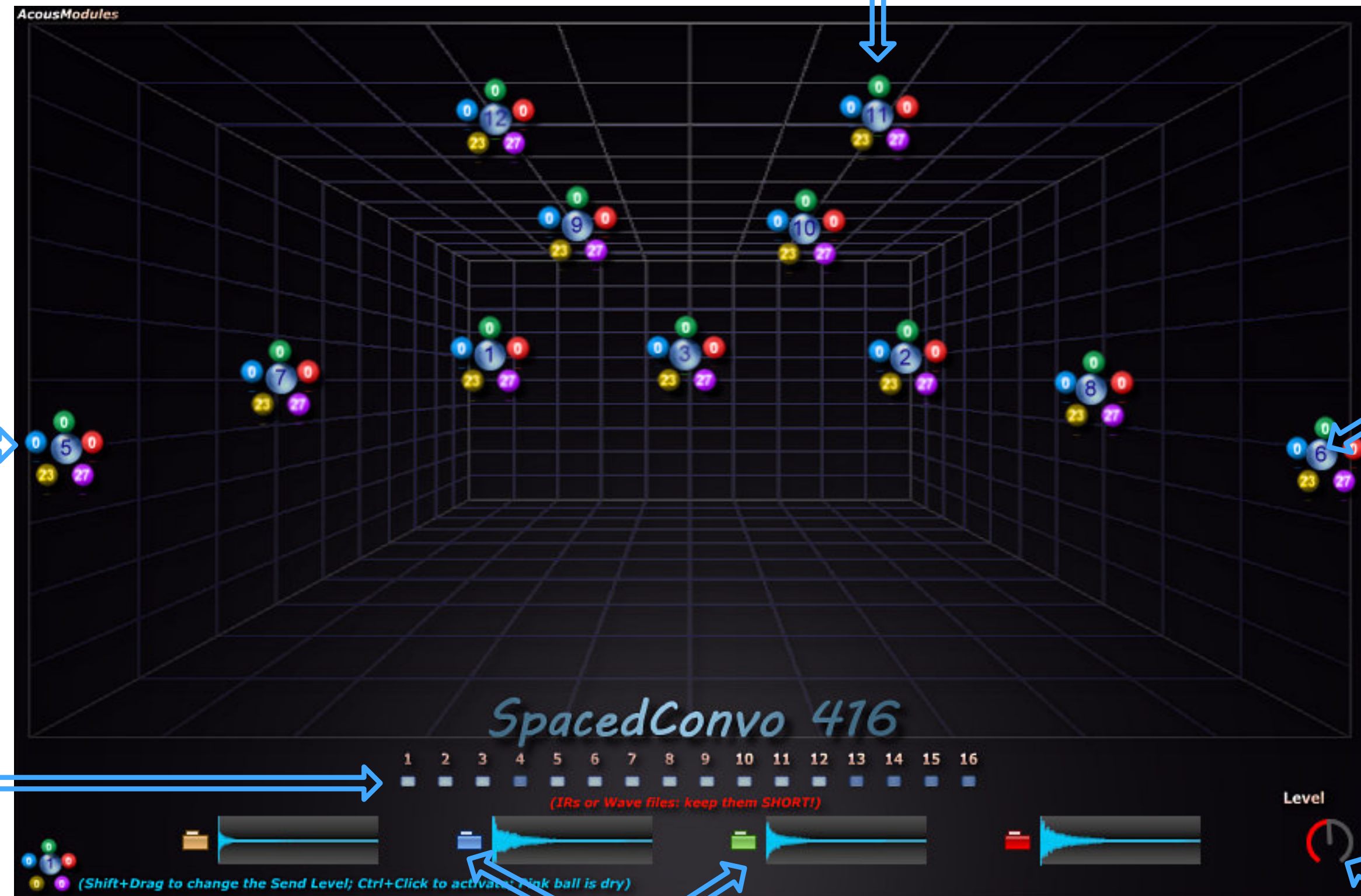
effects: Convolution
inputs: 16
outputs: 16
spatial: direct
OS: Win

place the channels points according to the corresponding
speakers/sounds' channels positions in space if they
are fixed, otherwise put them as you want ...
(it is only visual, no spatial processing is involved)

Yellow, Blue, Green and Red balls
= Send level to each Convo slot
Purple = direct signal level

Ctrl/Cmd+Click to activate,
otherwise the effect is bypassed

select the channels to view



load a mono (or stereo) IR file

effects: Delay + Reverberation
inputs: 16
outputs: 16
spatial: direct
OS: Win

Spaced-DR 16

Blue ring: Shift+Drag to adjust the Delay Time

Red ring: Shift+Drag to adjust the Delay Feedback

Green ring: Shift+Drag to adjust the Reverb send level

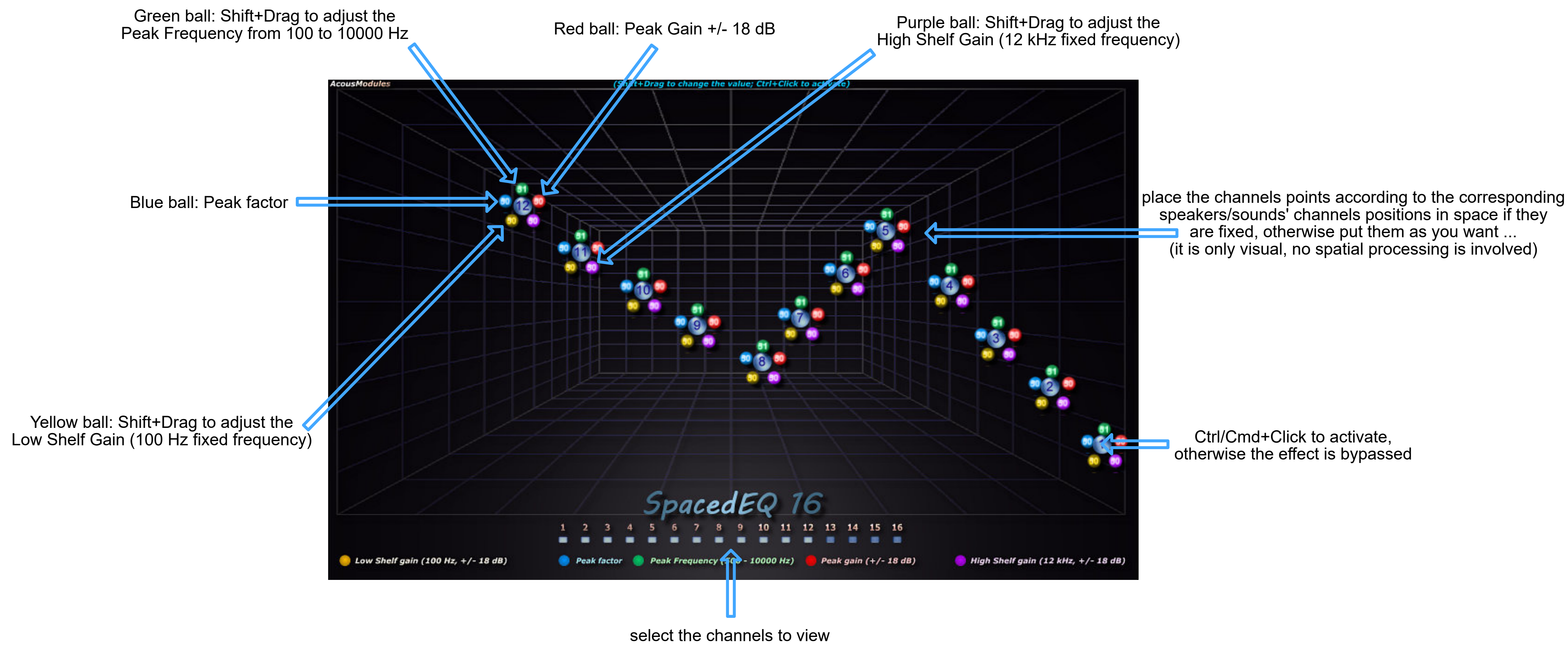
place the channels points according to the corresponding speakers/sounds' channels positions in space if they are fixed, otherwise put them as you want ...
(it is only visual, no spatial processing is involved)

Reverberation parameters

select the channels to view

effects: Filter
inputs: 16
outputs: 16
spatial: direct
OS: Win/Mac

SpacedEQ 16



effects: Filter
inputs: 16 / 64
outputs: 16 / 64
spatial: direct
OS: Win/Mac

SpacedFilter 16 & 64

Ctrl/Cmd+Click to select the Type: LowPass or HighPass

Ctrl/Cmd+Click to select the Slope: 12 or 24 dB/oct

place the channels points according to the corresponding speakers/sounds' channels positions in space if they are fixed, otherwise put them as you want ... (it is only visual, no spatial processing is involved)

Shift+Drag to adjust the Frequency 20 Hz / 20 kHz

Ctrl/Cmd+Click to activate, otherwise the effect is bypassed

64 channels version: Save (Load) a spatial configuration file in the *.am3d format

select the channels to view

The screenshot shows the SpacedFilter software interface. At the top, the title 'SpacedFilter' is displayed. Below it, a 3D grid represents the spatial configuration of 64 channels. Each channel is represented by a colored sphere (red for HP, blue for LP) with a number and a slope indicator (12 or 24 dB/oct). The grid is labeled 'AcousModules' at the top left. A bottom panel contains a list of channel numbers from 1 to 64, with a 'select the channels to view' label pointing to it. To the left of the list are 'Import' and 'Export' buttons. To the right is a '64 channels version: Save (Load) a spatial configuration file in the *.am3d format' label. Various annotations with arrows point to specific features: 'Ctrl/Cmd+Click to select the Type: LowPass or HighPass' points to a red HP sphere; 'Ctrl/Cmd+Click to select the Slope: 12 or 24 dB/oct' points to a blue LP sphere; 'place the channels points according to the corresponding speakers/sounds' channels positions in space if they are fixed, otherwise put them as you want ... (it is only visual, no spatial processing is involved)' points to a sphere; 'Shift+Drag to adjust the Frequency 20 Hz / 20 kHz' points to a sphere; 'Ctrl/Cmd+Click to activate, otherwise the effect is bypassed' points to a sphere; and '64 channels version: Save (Load) a spatial configuration file in the *.am3d format' points to the 'Export' button.

effects: Pitch/Frequency Shifting
inputs: 16
outputs: 16
spatial: direct
OS: Win

SpacedShifter 16

place the channels points according to the corresponding
speakers/sounds' channels positions in space if they
are fixed, otherwise put them as you want ...
(it is only visual, no spatial processing is involved)

The screenshot shows the SpacedShifter 16 interface. At the top, a title bar reads "AcousModules" and a subtitle says "(Shift+Drag to change the value; Ctrl+Click to activate)". The main area is a 3D grid with 16 numbered blue spheres (1-16) representing channels. A blue arrow points to sphere 1 with the text: "Shift+Drag to shift up to: to the left: -2oct / -1000 Hz to the right: +2oct / +1000 Hz". Another blue arrow points to sphere 9 with the text: "place the channels points according to the corresponding speakers/sounds' channels positions in space if they are fixed, otherwise put them as you want ... (it is only visual, no spatial processing is involved)". A third blue arrow points to sphere 12 with the text: "Ctrl/Cmd+Click to activate, otherwise the effect is bypassed". At the bottom, there is a control panel. A blue arrow points to the "Mode" dropdown (set to "Shift") with the text: "Pitch mode = the sound's spectrum is preserved (but more CPU is used) Shift (frequency) mode = new interesting spectrums may happen (but extreme low and high end frequencies may arise!)". Another blue arrow points to the channel selection row (1-16) with the text: "select the channels to view". A blue arrow points to the "FFT Size" dropdown (set to "1024") with the text: "FFT window size: low value = fast / average high value = slow / precise". A final blue arrow points to the "FFT Q" dropdown (set to "Integer") with the text: "Integer: faster Real: better / slower". The title "SpacedShifter 16" is displayed in a stylized font at the bottom center of the 3D grid.

Shift+Drag to shift up to:
to the left: -2oct / -1000 Hz
to the right: +2oct / +1000 Hz

Ctrl/Cmd+Click to activate,
otherwise the effect is bypassed

Pitch mode = the sound's spectrum
is preserved (but more CPU is used)
Shift (frequency) mode = new interesting
spectrums may happen
(but extreme low and high end
frequencies may arise!)

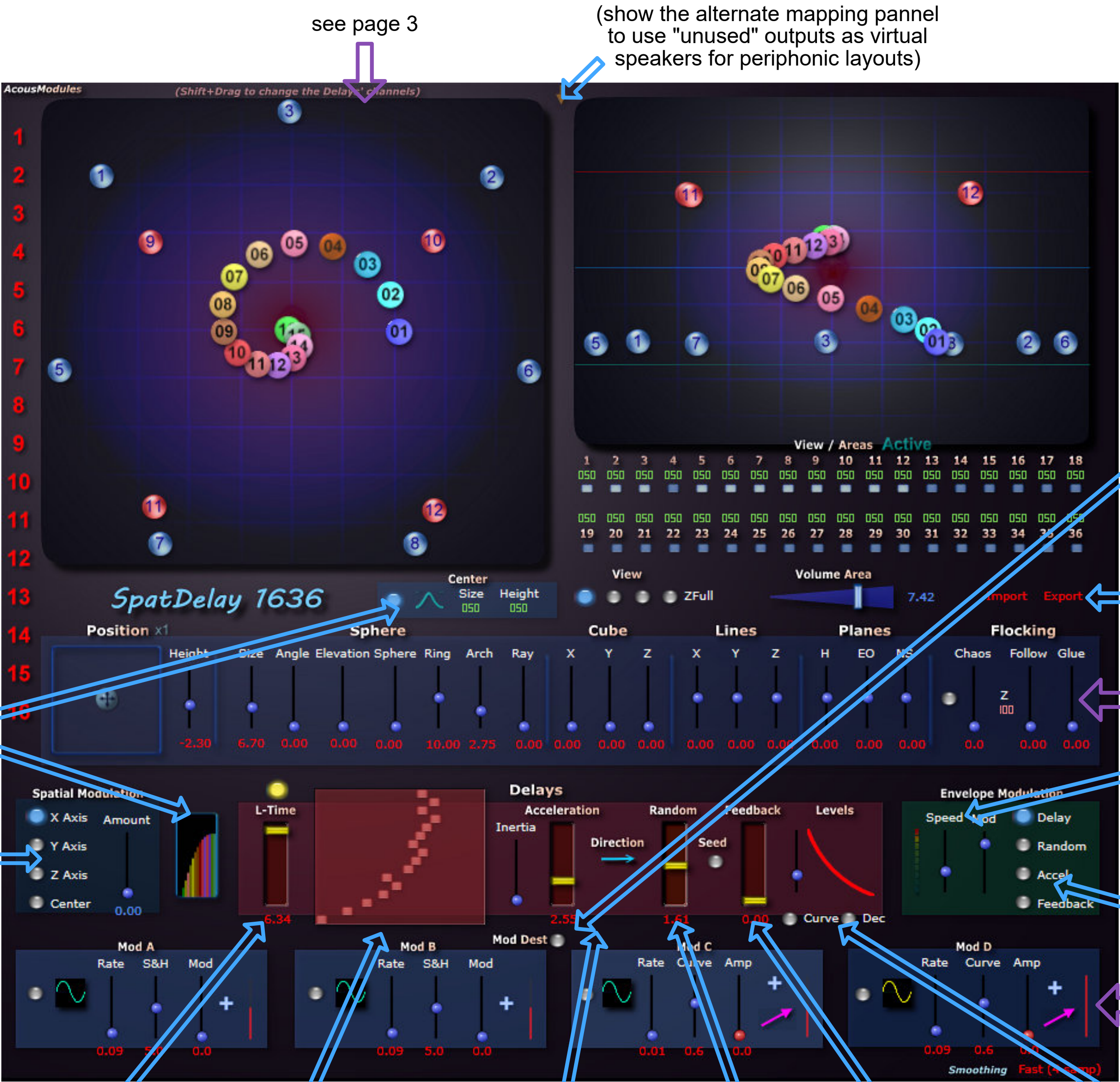
select the channels to view

FFT window size:
low value = fast / average
high value = slow / precise

Integer: faster
Real: better / slower

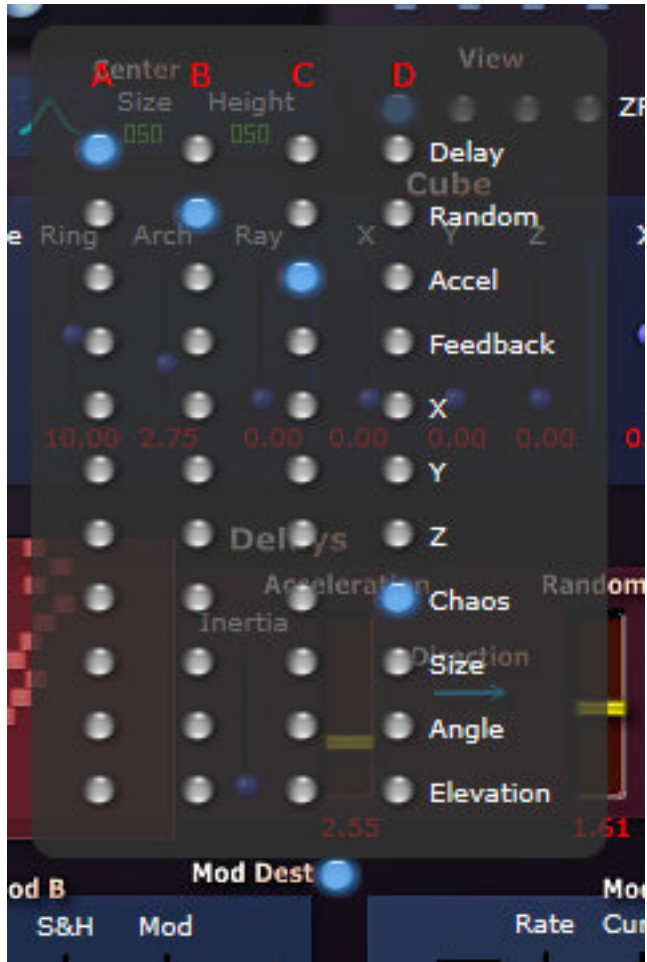
SpatDelay 1636 & 1664

effects: Delay
inputs: 1
outputs: 36/64
spatial: 3D
OS: Win/Mac



see page 3

(show the alternate mapping pannel
to use "unused" outputs as virtual
speakers for periphonic layouts)



open the popup to select
the destination choice
for each Modulator

Load and Save a spatial configuration
in the *.am36 or *.am64 file format

see page 5

Save (Load) a spatial configuration file
in the *.am36 or *.am64 format

select the parameter that will be
modulated by the Envelope Follower

see page 4 (only 1636 version)

the level of the 16 delays can be the same (Flat)
or follow a decreasing or an increasing Curve,

modulation values depending on
the distance from the Center

select the spatial source to
modulate the delay values

linear Delay times
from 1 to 16 (16 to 1
depending on Direction)

visualization of
the 16 delay times

Acceleration curve,
and Direction: from
channel 1 to 16 or
the contrary

amount of
delay times
randomness

Feedback value
for the 16 Delays

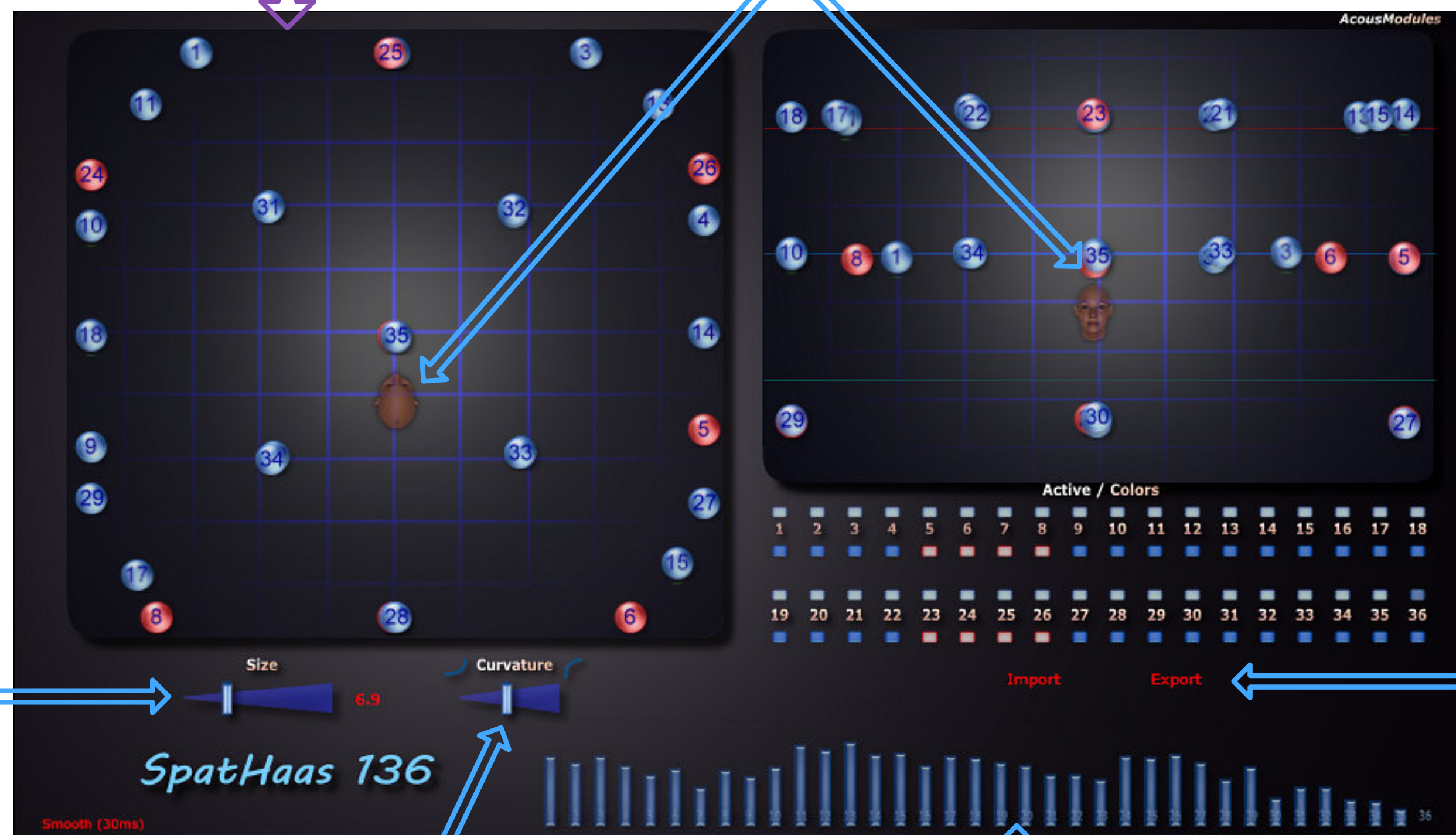
SpatHaas 136

effects: Delay
inputs: 1
outputs: 36
spatial: 3D
OS: Win/Mac

see page 3

the visual distance between each output point and the "listener" determines the output Delay values

global room size / maximum Delay time



middle value = linear / normal progression,
other values result in "curved" spaces that
may produce interesting effects ...

visualization of the 36 delays values

SpectraMass 36 & 64

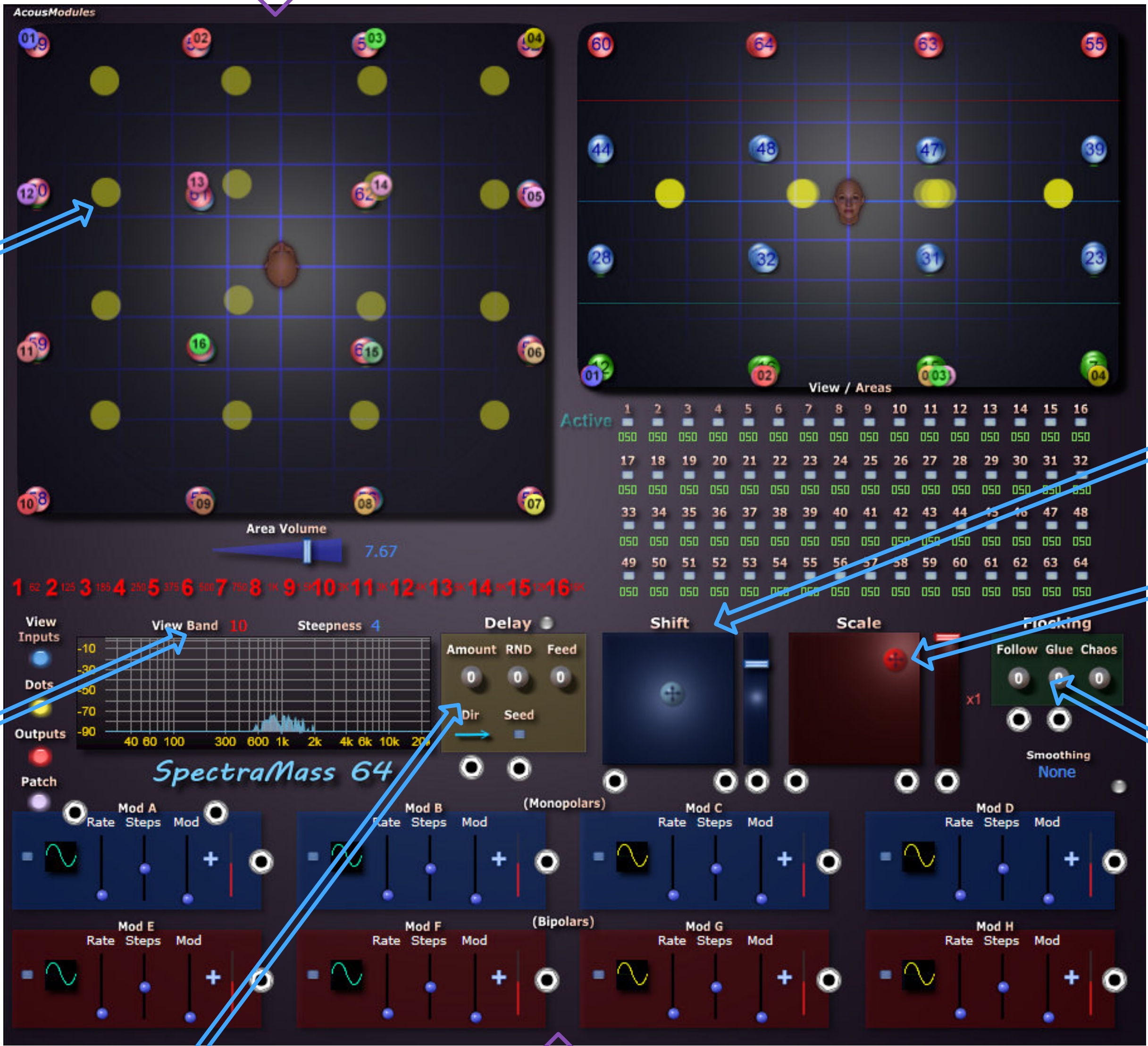
effects: Filter + Delay
+ Spatialization
inputs: 1
outputs: 64
spatial: 3D
OS: Win/Mac

see page 3

the yellow dots represent the points
of the real Shape according to the
Shift and the Scale transformations

activate the frequency bands
(fixed separation values)

select the frequency band to view



horizontal and vertical shift
of the whole Shape, the resulting
one is given by the yellow dots

horizontal and vertical scaling
of the whole Shape, bottom/left
reverses the Shape

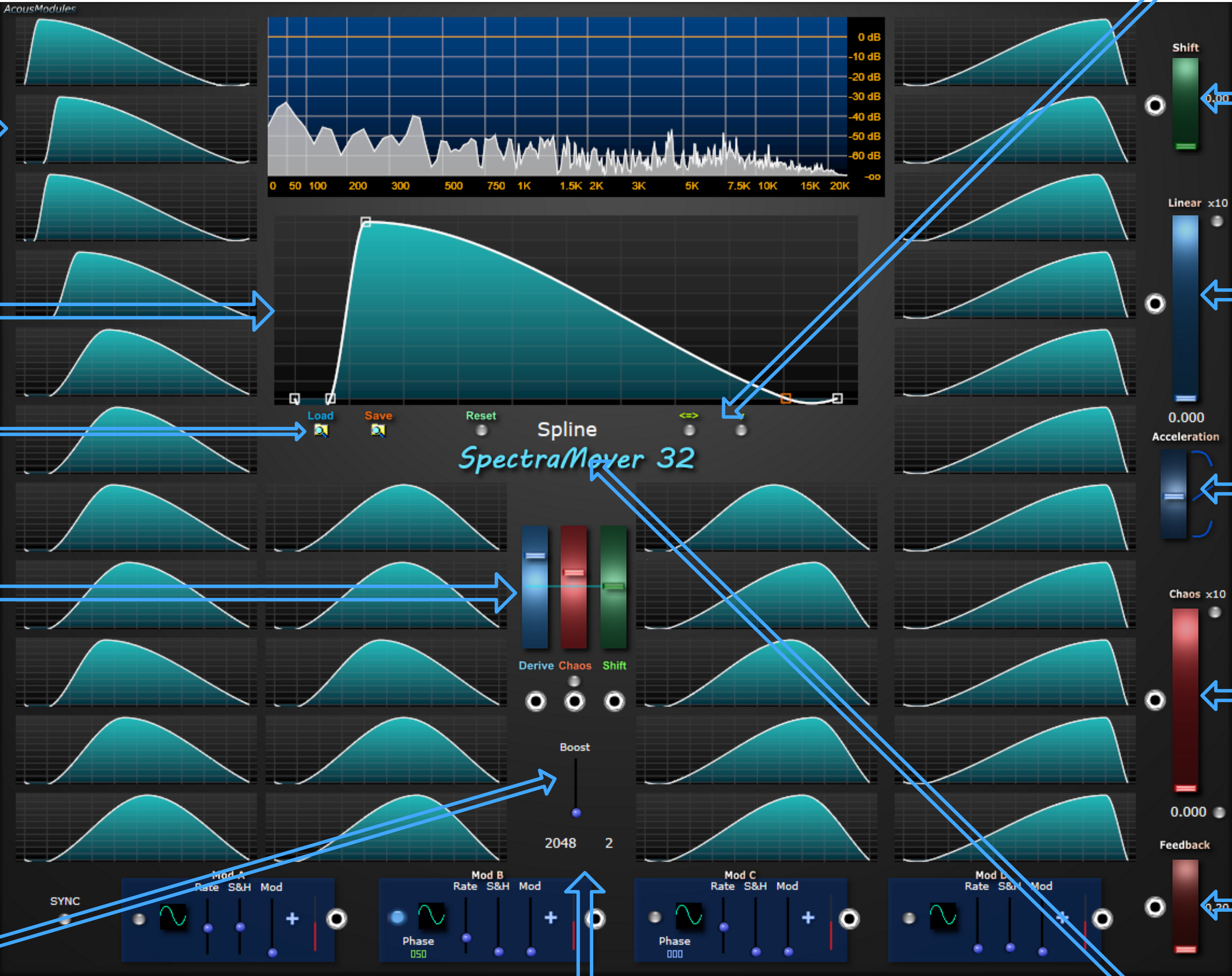
Follow = delay amount between
inputs when moving
Glue = smoothing/inertia amount
Chaos = random position amount

linear and random
Delay between the Bands
with Feedback

see page 4

SpectraMover 32

effects: FFT filter
inputs: 32
outputs: 32
spatial: direct
OS: Win



view of the 32 transformed spectral shapes (not editable)

edition zone of the master Spectral Shaper: double-click to add/remove a point, up to 5 points can be animated

the curve can be saved to disc and shared with other plugins

Derive: moves each channels' shape points in the frequency domain according to its number: the lower to the left and the higher to the right
Chaos: random shifting
Shift: linear shifting

to compensate for the loss of energy when no interpolation is selected, attention: high levels can be generated!

FFT parameters: window size and overlap, a larger window means a more accurate spectrum but a slower processing

interpolation curve shape: Linear, Spline or Lagrange, the None option means "no interpolation", thus provides isolated sinus that can be useful for resonant effects

horizontal and vertical mirror

shifts all the Delay with the same value

multiply the Delay values according to their channel number

Line acceleration curve, from slow start to slow end

random Delay amount

generate new random values

Feedback amount

effects: Filter + Delay
+ Spatialization
inputs: 1
outputs: 36 / 64
spatial: 3D
OS: Win/Mac

SpectraShaper 1636 & 1664

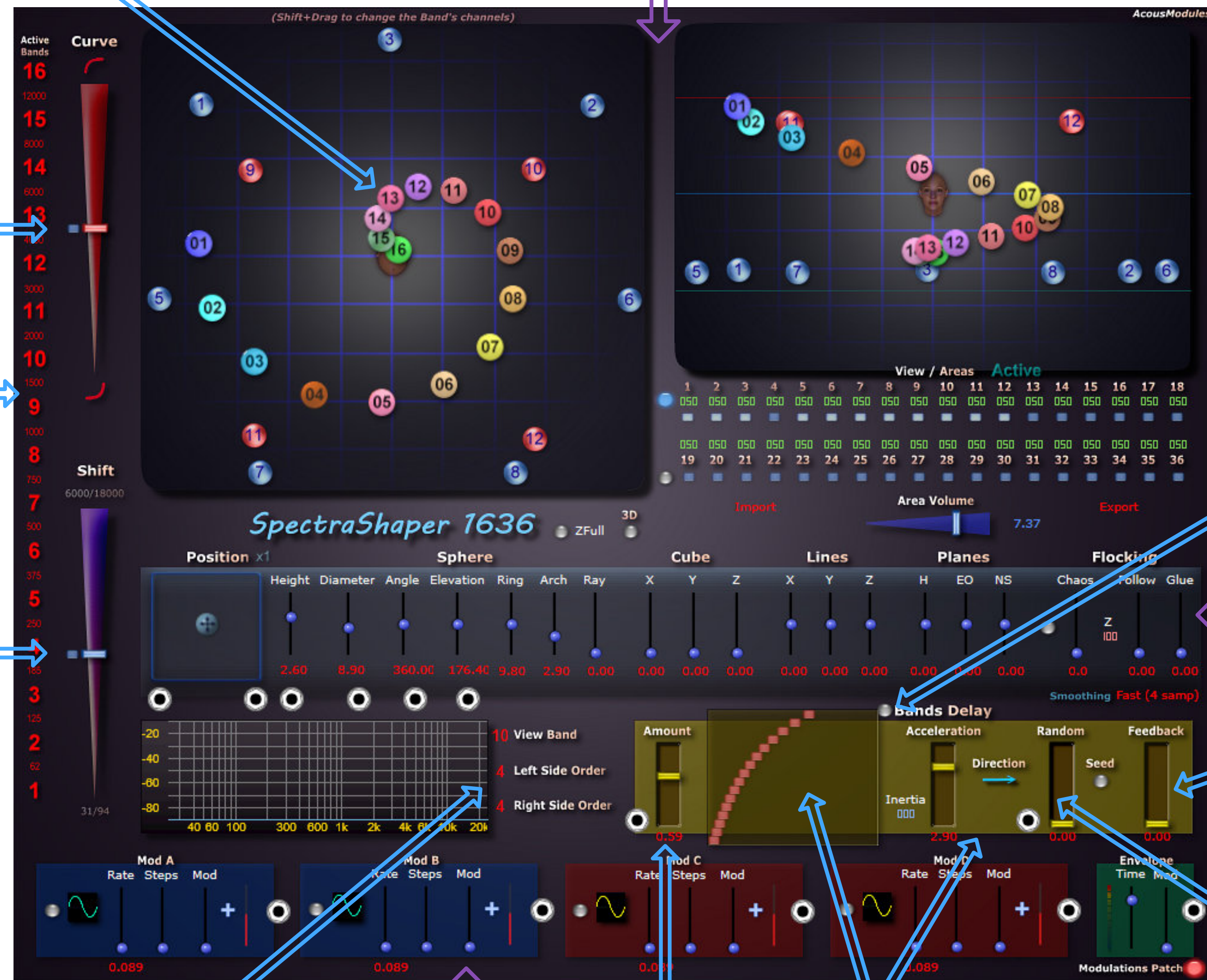
Shift+Drag to change the Band's channels

see page 3

adjust the crossover frequencies
in a non linear scale

activate the spectral Bands
(fixed based frequency values)

shift all the frequencies
in a linear manner



adjust the sharpness of the
frequency Bands

see page 4

global Delay
amount

Acceleration curve,
its Direction and
the visualization of
the corresponding delays

activate the Bands delays

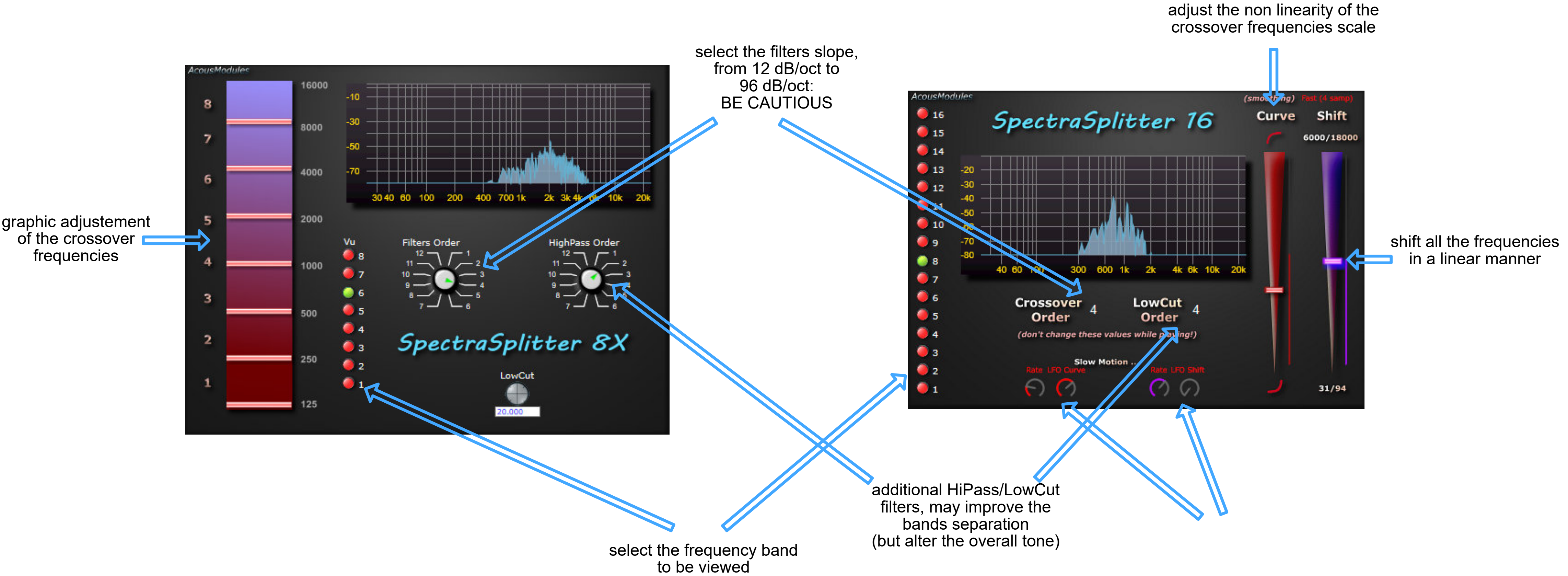
see page 5

Feedback (be cautious)

add a random value to the delays

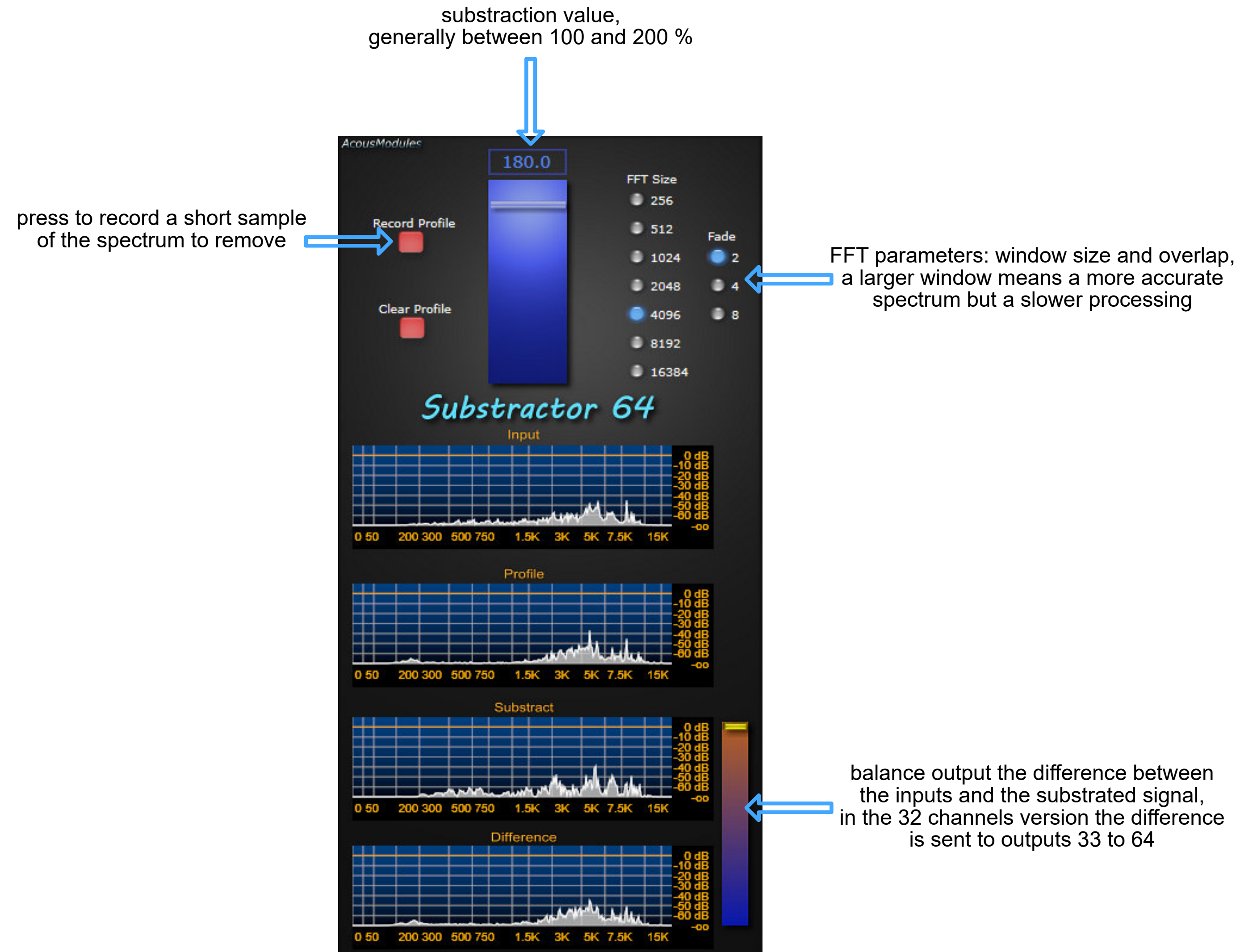
effects: frequency
bands separation
inputs: 1
outputs: 8 / 46
spatial: direct
OS: Win/Mac

SpectraSplitter 8 & 16



Subtractor 32 & 64

effects: Spectral Subtraction
inputs: 32 / 64
outputs: 64
spatial: direct
OS: Win



TouchFilter 64

effects: Filter
inputs: 64
outputs: 64
spatial: direct
OS: Win/Mac

MIDI Note selection for each output channel,
the Polyphonic Aftertouch message will be used,
if the keyboard/controller sends only Channel
Pressure it will have no effect at all!

select the Filter type

maximum input value
ideally rescaled to "127"

number of inputs, better "1" or "64",
other values are more or less
evenly distributed



select the Filter slope,
from 12 db/oct to 96/dB/oct
(approximately)

Peak setting for the Peak type

minimum input value
rescaled to "0"

Poly Aftertouch
messages shaping,
from very progressive
to very fast

controller smoothing
and slow motions

maximum modulation range,
can be positive or negative
according to the Filter type

TouchShifter 64

effects: Pitch/Frequency Shifting
inputs: 64
outputs: 64
spatial: direct
OS: Win

MIDI Note selection for each output channel
the Polyphonic Aftertouch message will be used

Integer: faster
Real: better / slower

FFT window size:
low value = fast / average
high value = slow / precise

base Pitch/Frequency,
in octaves or in Hz

x1 = Pitch +/- 2 oct, Frequency +/- 1000 Hz
x2 = Pitch +/- 4 oct, Frequency +/- 2000 Hz

Frequency/Pitch control
source and amount

maximum input value
ideally rescaled to "127"

number of inputs, better "1" or "64",
other values are more or less
evenly distributed

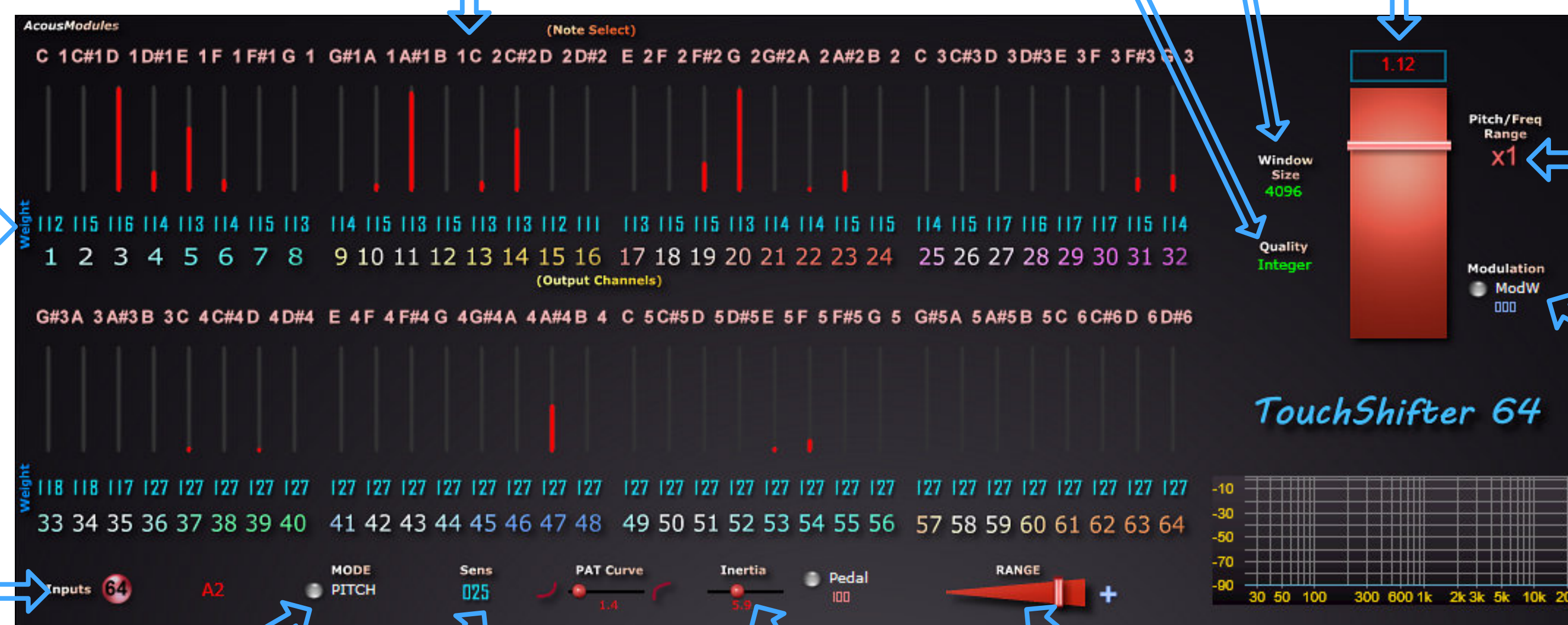
Pitch mode = the sound's spectrum
is preserved (but lot of CPU
may be necessary)
Frequency mode = new interesting
spectrums may happen
(but extreme low and high end
frequencies may arise!)

minimum input value
rescaled to "0"

Poly Aftertouch
messages shaping,
from very progressive
to very fast

controller smoothing
and slow motions

maximum modulation range,
can be positive or negative
according to the Filter type



UniComp

effects: Amplitude
inputs: < 64
outputs: < 64
spatial: direct
OS: Win/Mac

how fast the processor reacts to changes of amplitude

show the Inputs or the Outputs meters

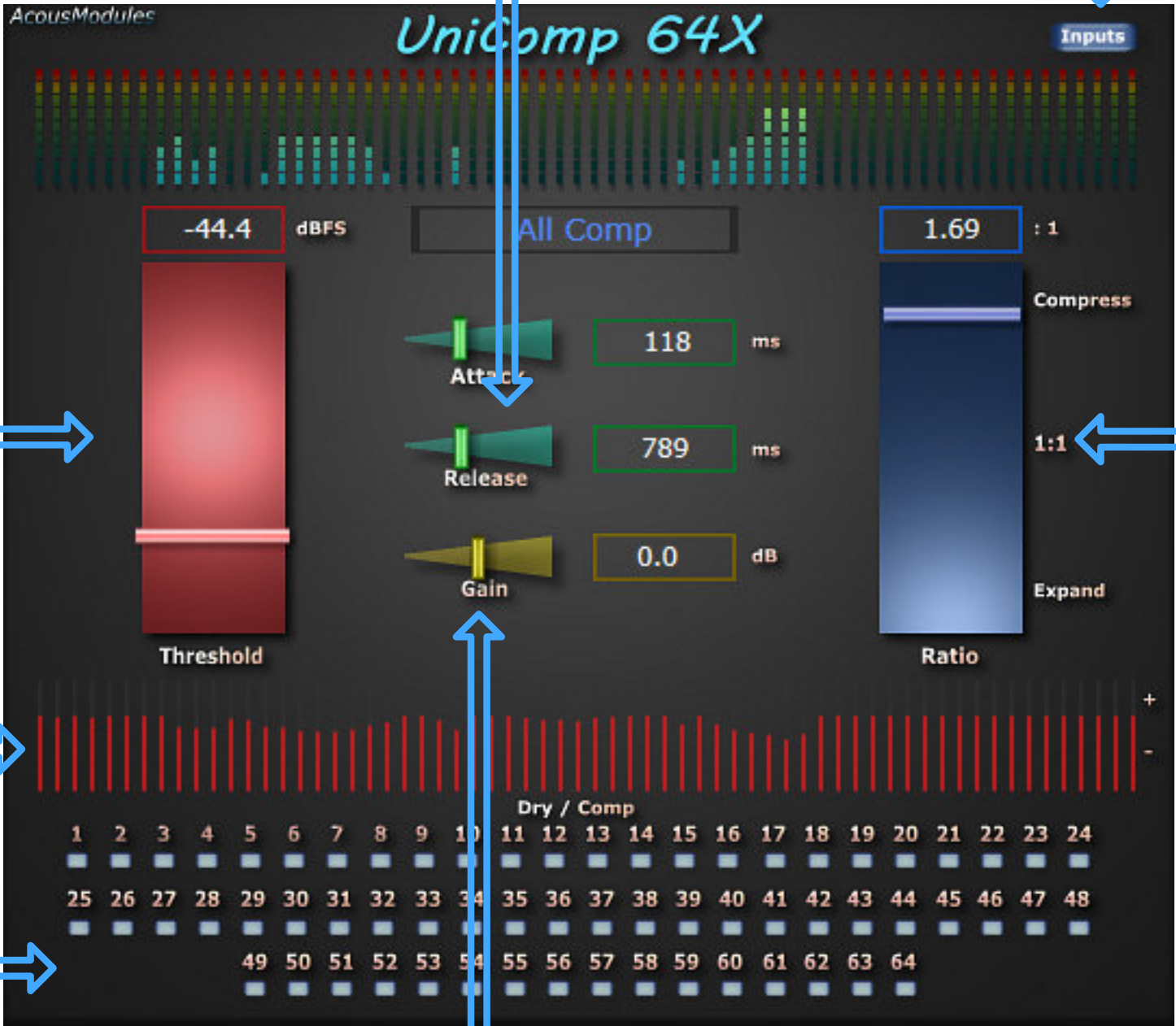
amplitude from which the dynamic
compression or the expansion will begin

visualization of the amplitude changes

select the Input channels to process

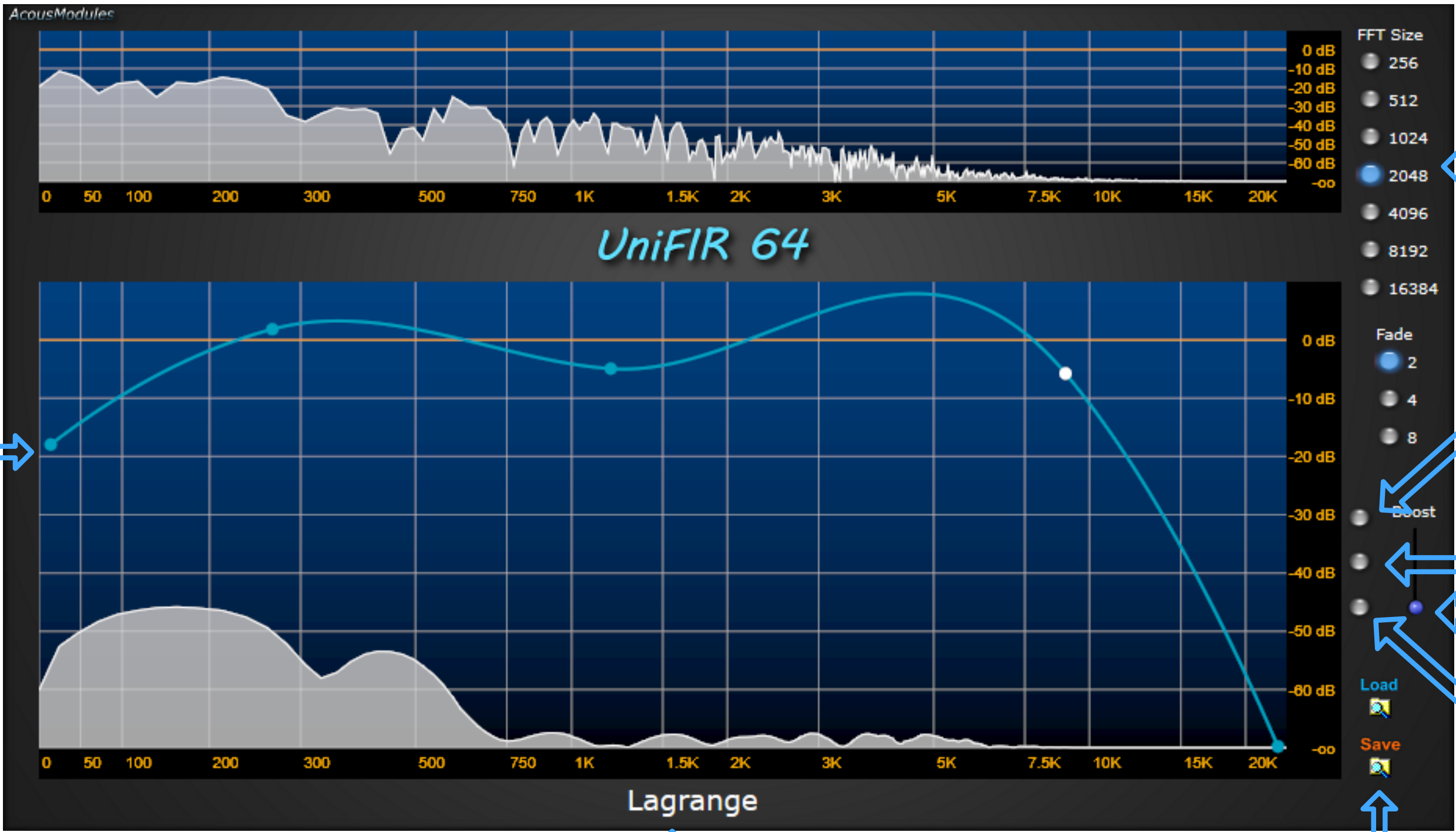
compression/expansion ratio

overall gain: be cautious!



UniFIR 64

effects: FFT filter
inputs: 64
outputs: 64
spatial: direct
OS: Win



FFT parameters: window size and overlap, a larger window means a more accurate spectrum but a slower processing

double-click to add or remove a point

horizontal mirror

Reset

amplitude gain, can be usefull when the interpolation curve is "None"

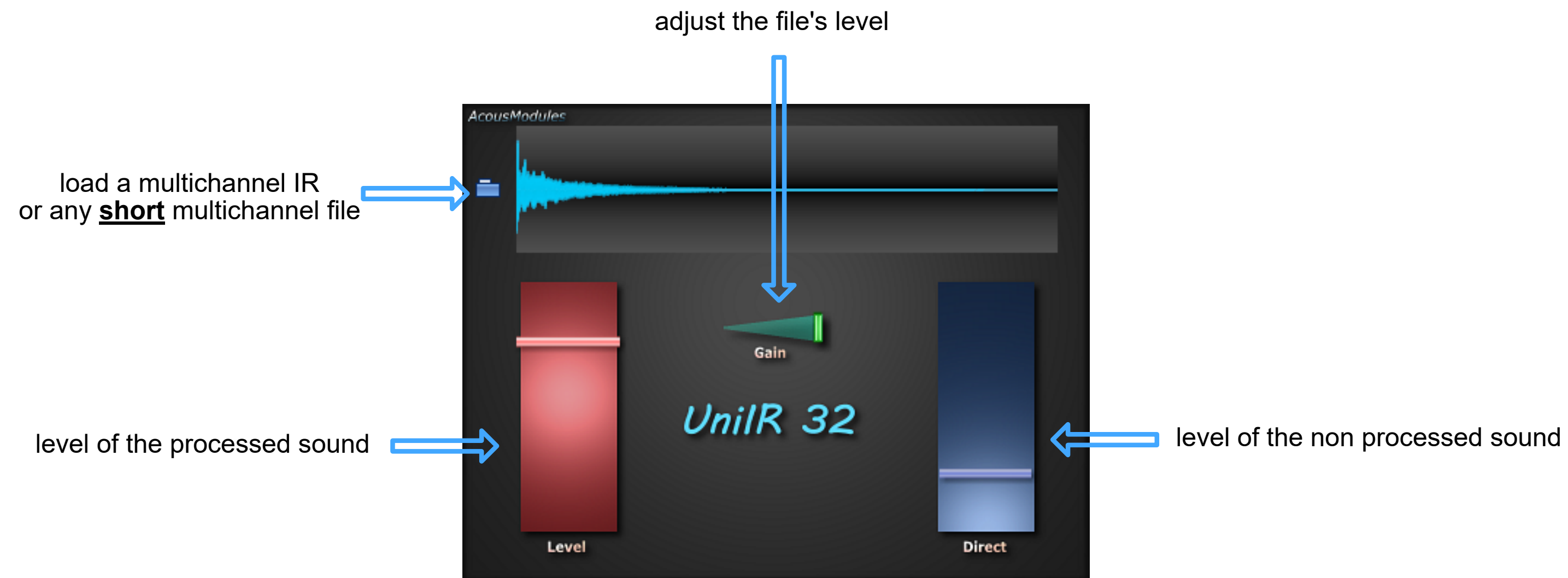
vertical mirror

interpolation curve shape: Linear, Spline or Lagrange, the None option means "no interpolation", thus provides isolated sinus that can be usefull for resonant effects

the curve can be saved to disk and shared with other plugins

UnIR 32

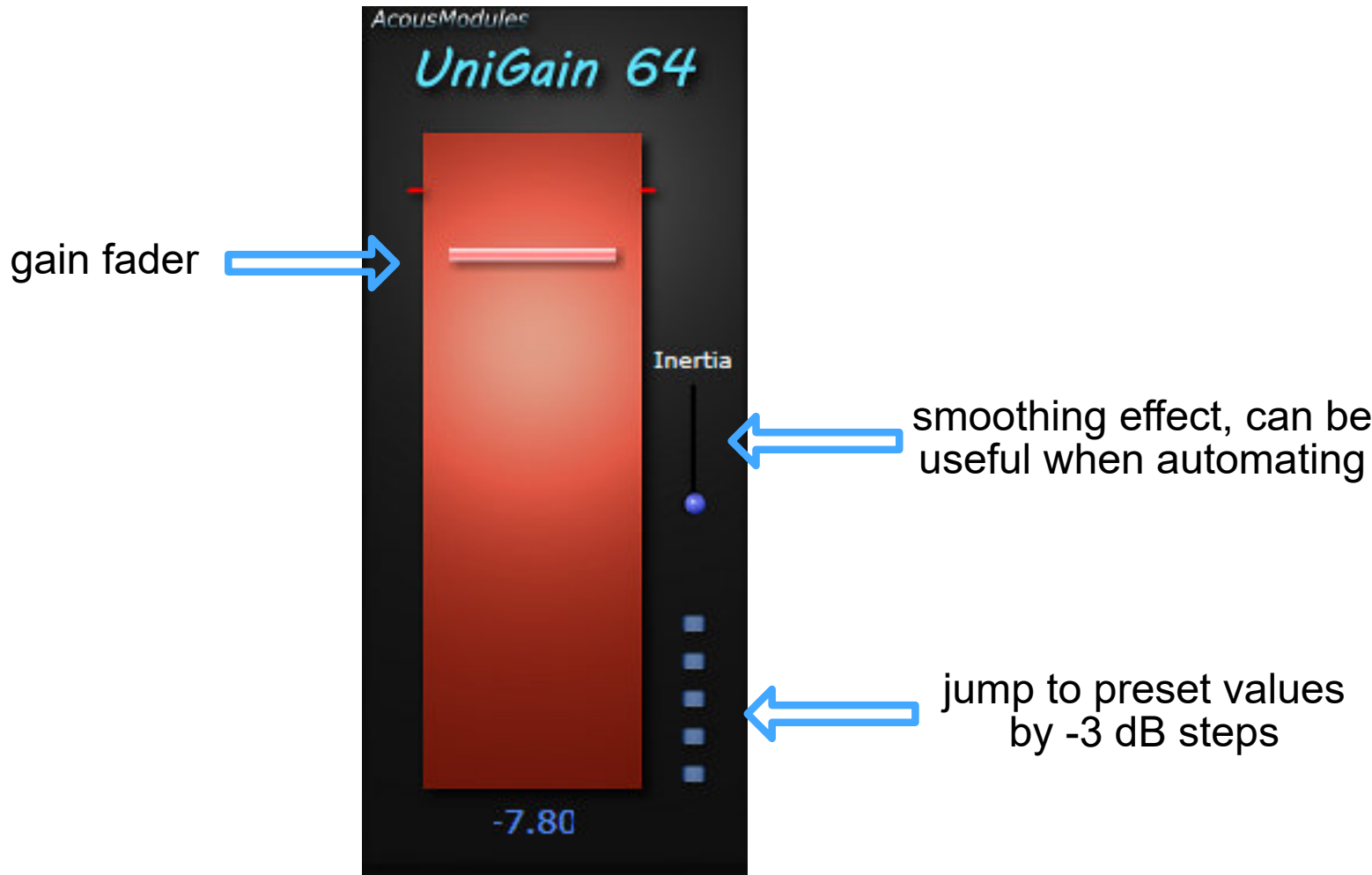
effects: Convolution
inputs: 32
outputs: 32
spatial: direct
OS: Win



(more to come later ...)

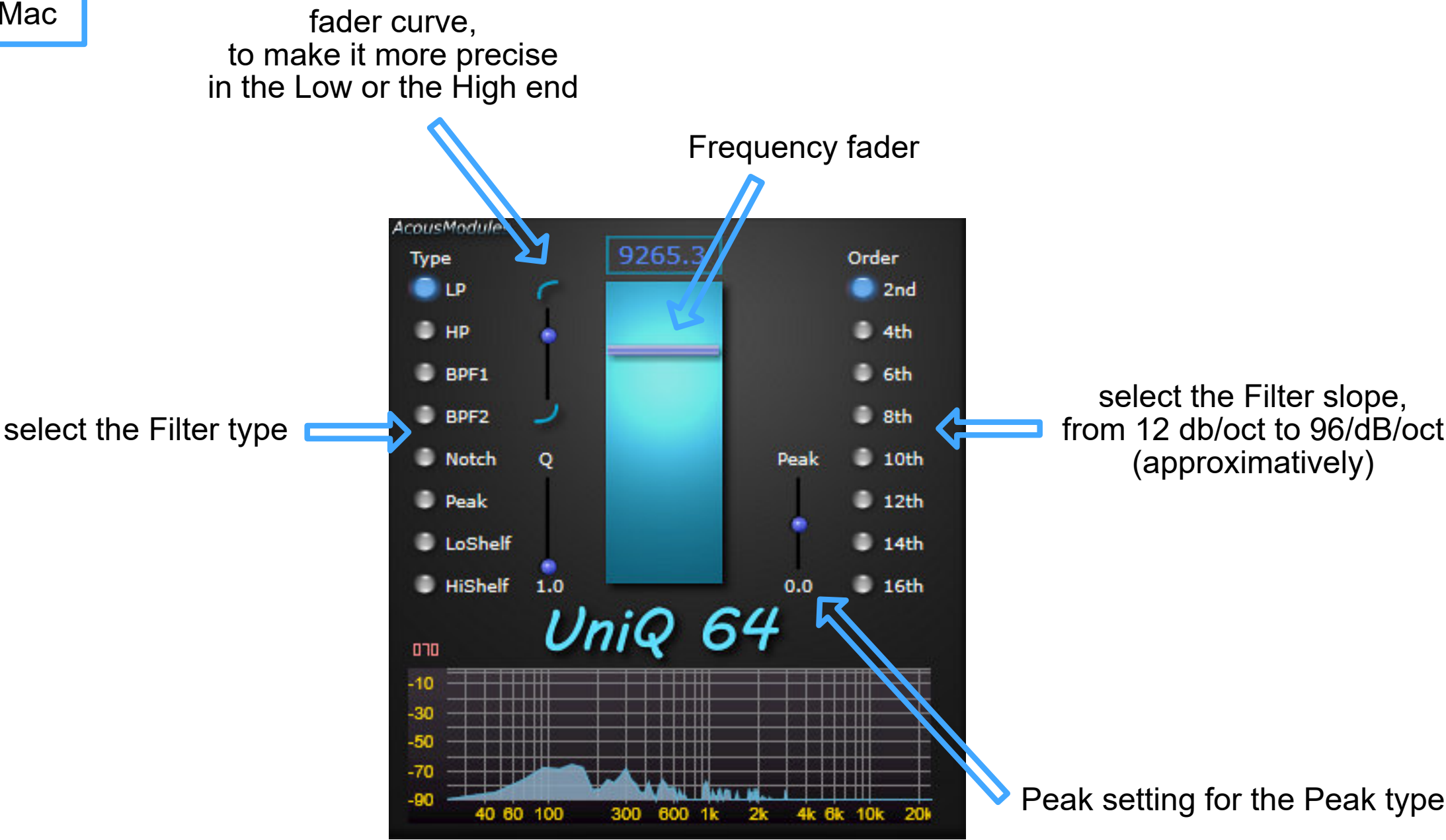
UniGain

effects: Amplitude
inputs: 64
outputs: 64
spatial: direct
OS: Win/Mac



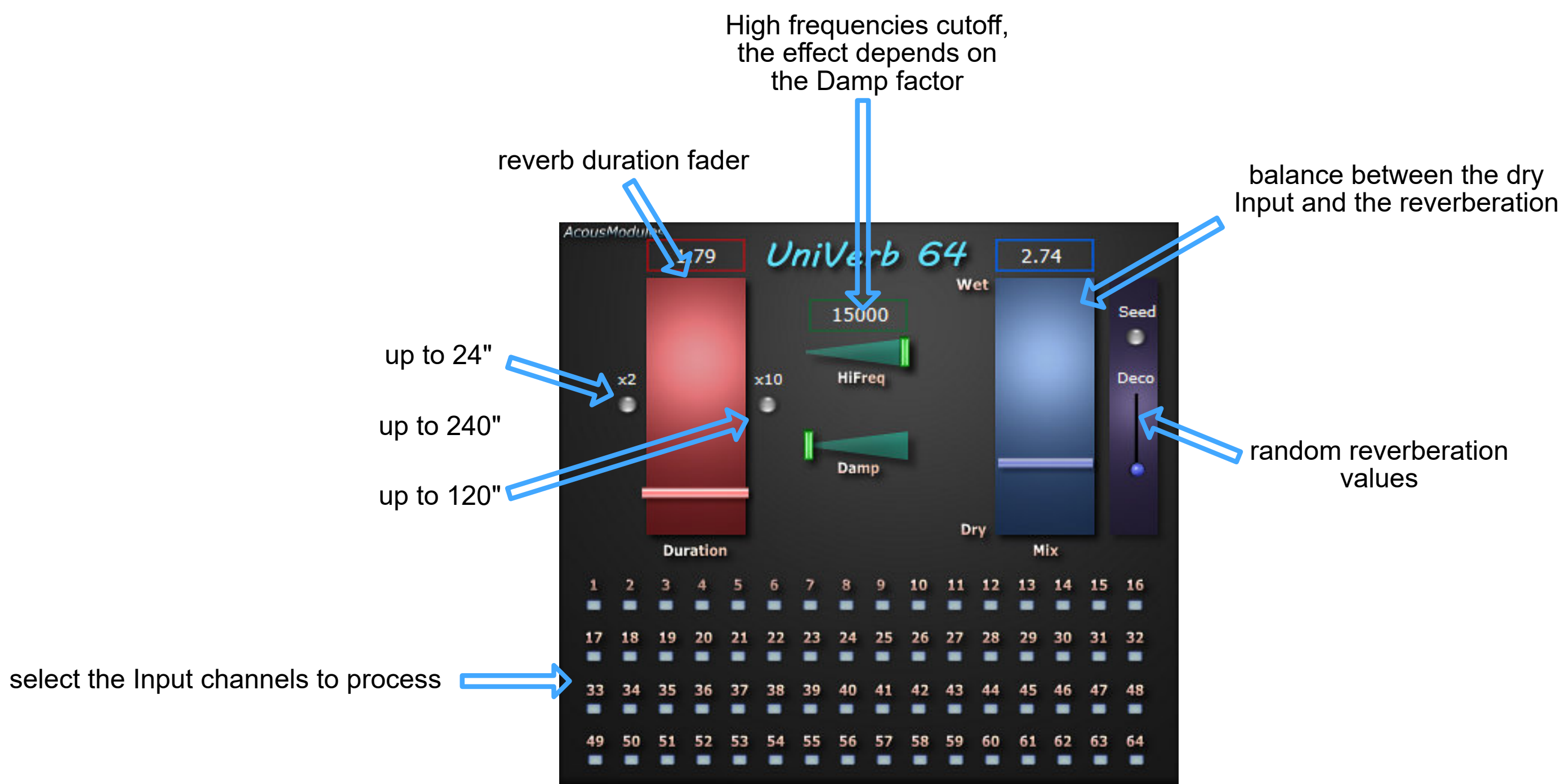
UniQ

effects: Filter
inputs: 64
outputs: 64
spatial: direct
OS: Win/Mac



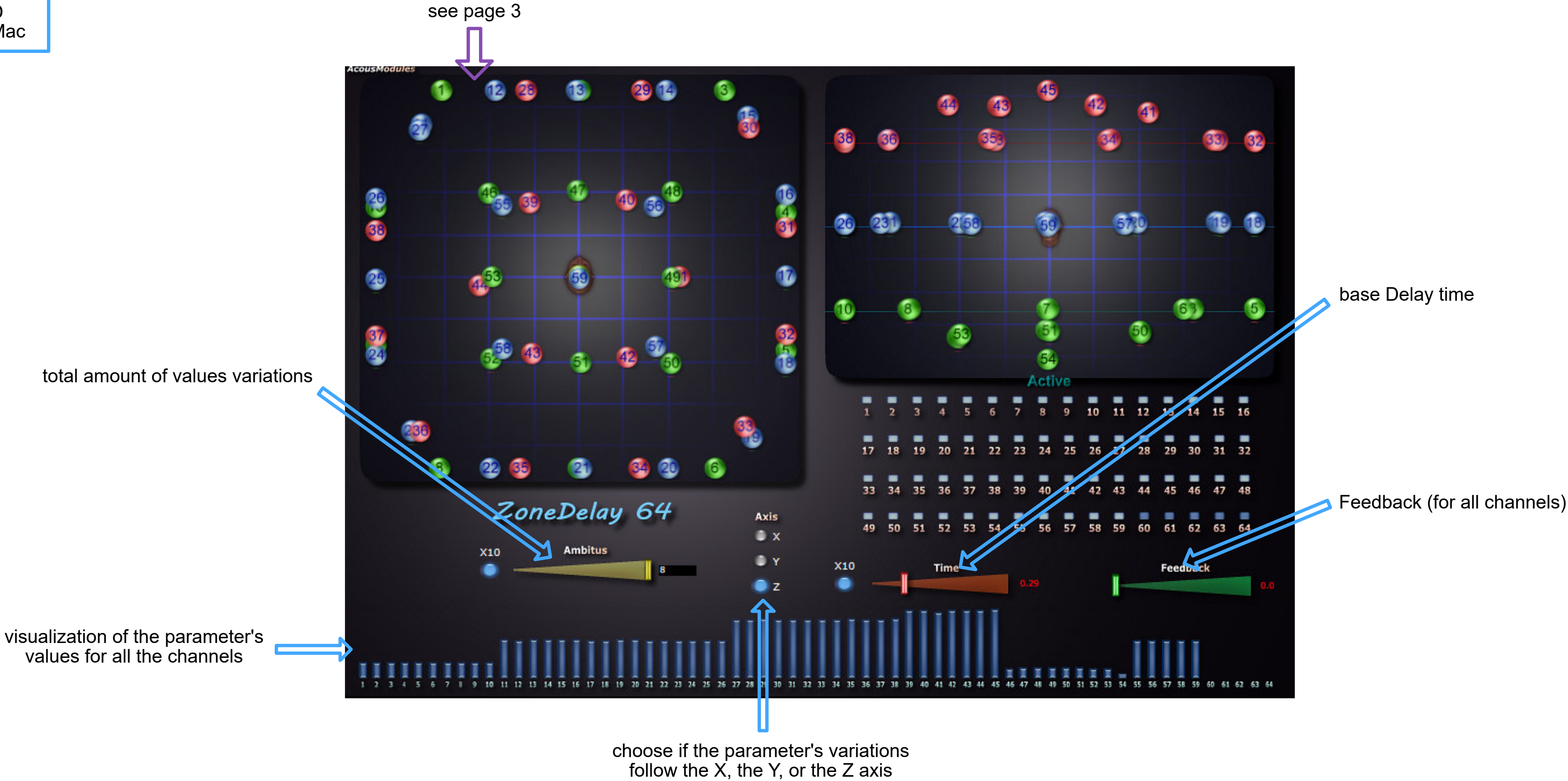
UniVerb

effects: reverberation
inputs: < 64
outputs: < 64
spatial: direct
OS: Win

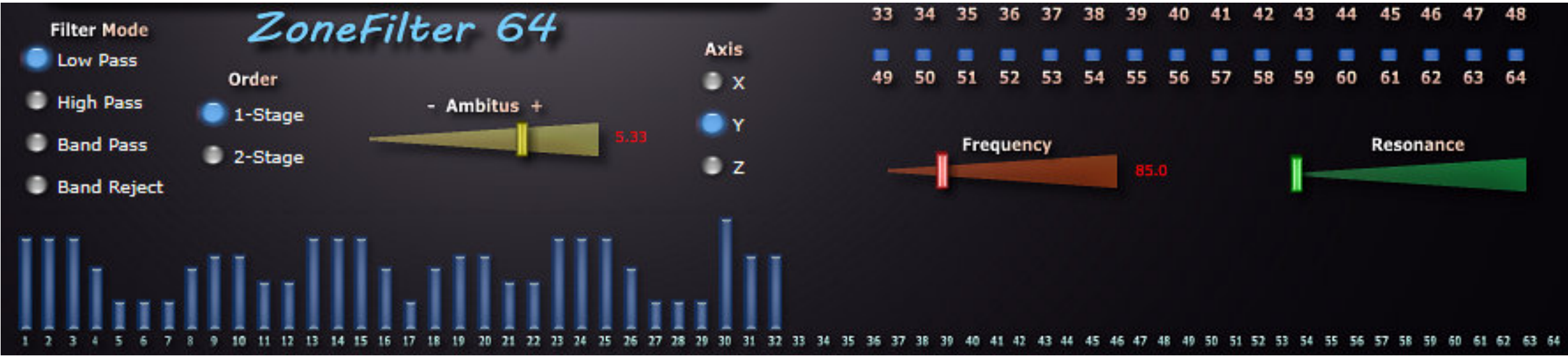


ZoneDelay

effects: Delay
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win/Mac

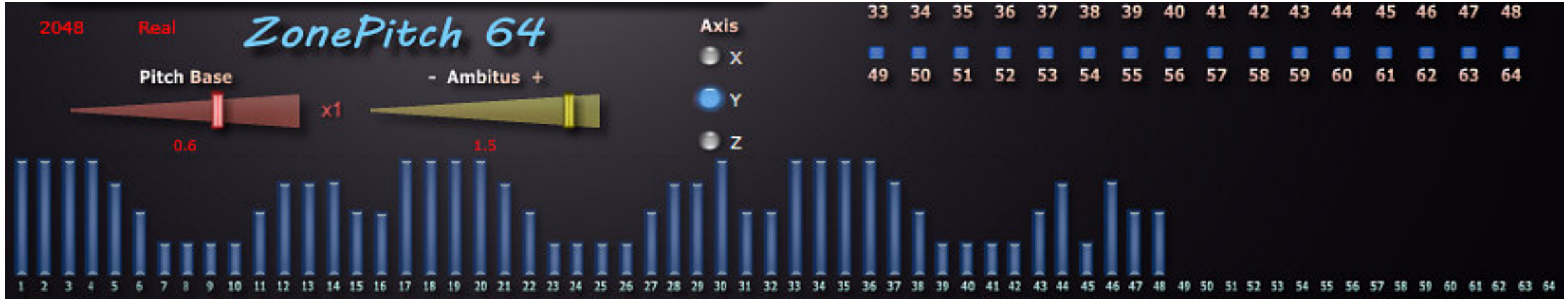


ZoneFilter



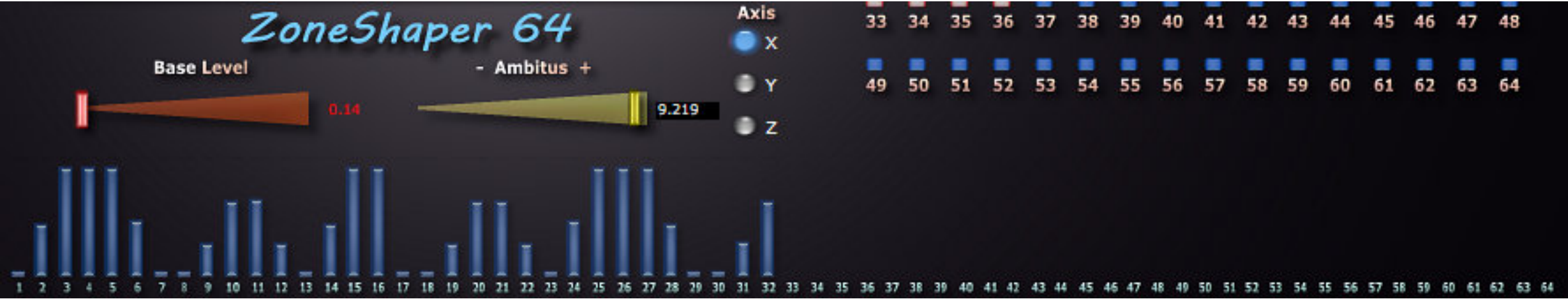
effects: filter
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win/Mac

ZonePitch



effects: pitch shifting
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win

ZoneShaper



effects: amplitude
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win/Mac

ZoneVerb



effects:reverberation
inputs: < 64
outputs: < 64
spatial: 3D
OS: Win