Acousmodules

Spatialization Series - Fast Help

2022 / march

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!
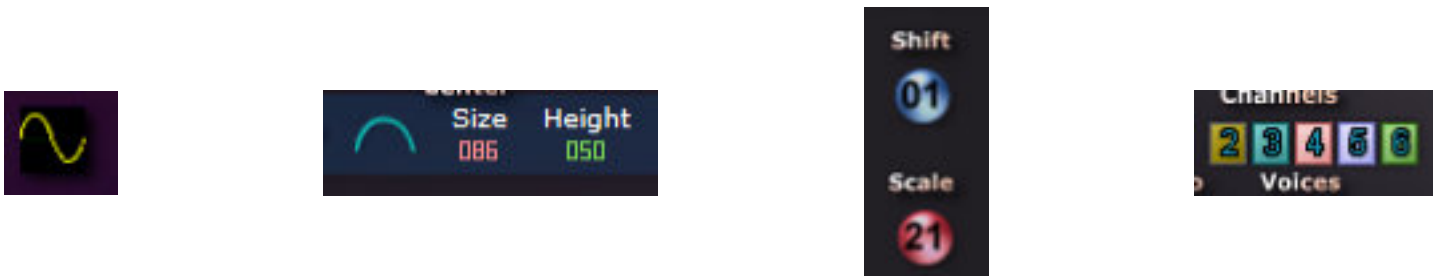
all sliders, sliding datas, XY pads:

hold Ctrl/Cmd while draging to get fine values

also, in general Right Click to MIDI Learn / UnLearn
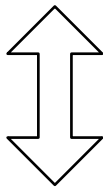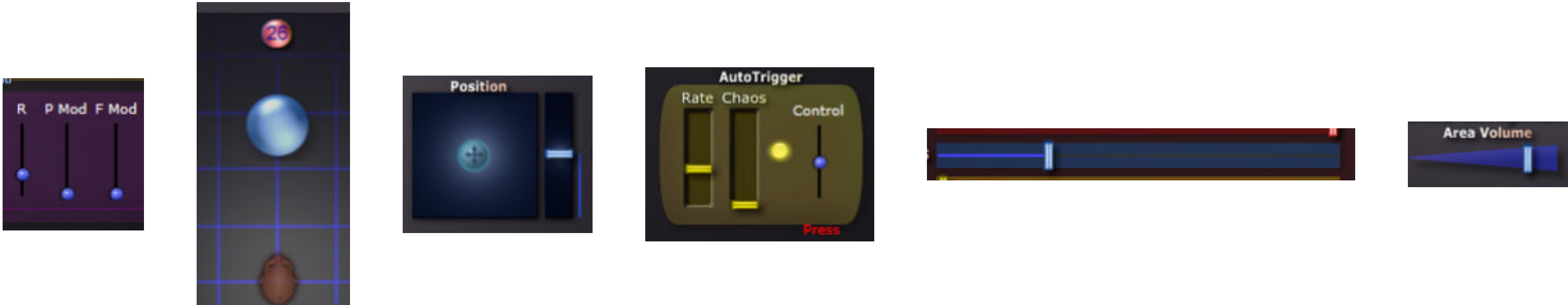
sliding datas, waveforms, curves:

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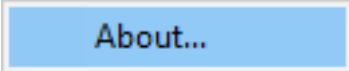
versioning: the plugins don't use versions numbers but their build date: right click on the background to show it

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.

Smoothing Fast (4 samp)

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 1: the "3D" spatial layout

Plugins:

AnimaSpat3D

FocusMass

MassLayers

MultiMass

OctoMass

OctoMorph

ScaleMass

SpaceScaler

SpaceXplorer

Spat3D

SpatMass

SpatPath

SpatSteps

TetraMass

ZyliaMass

(Top View) place the numbered output symbols
according to the loudspeakers spatial positions,
it has not to be rigouros: the more they are visually
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.

(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

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

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,
the resulting levels are
NOT compensated

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

shows the levels values for each output according to the position of the first input,
it can help to adjust the graphic distance between the outputs and the Area settings

BrushSampler 64

Center Comp
Height Width Level

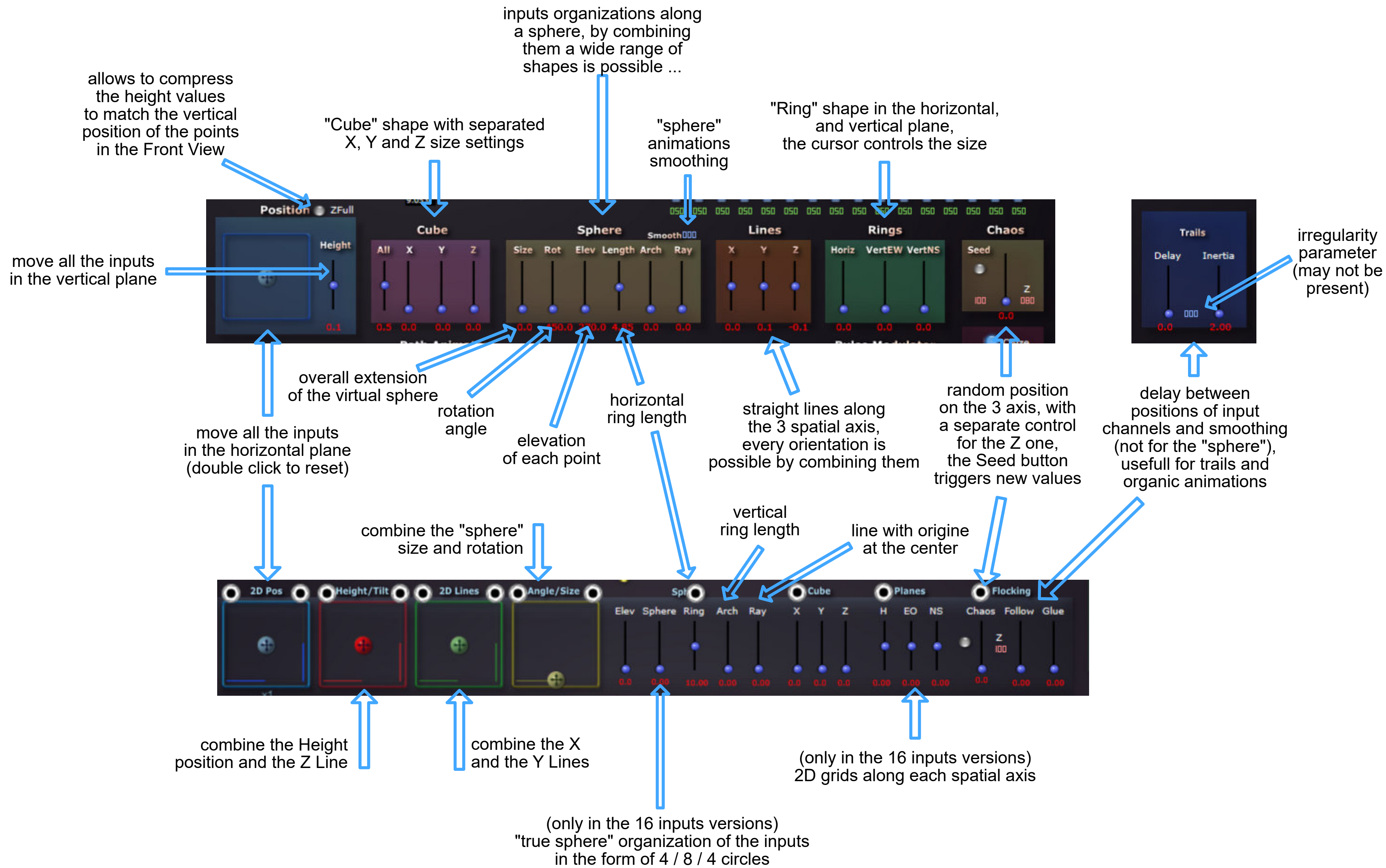Area Volume

Shape

Colour View / Areas

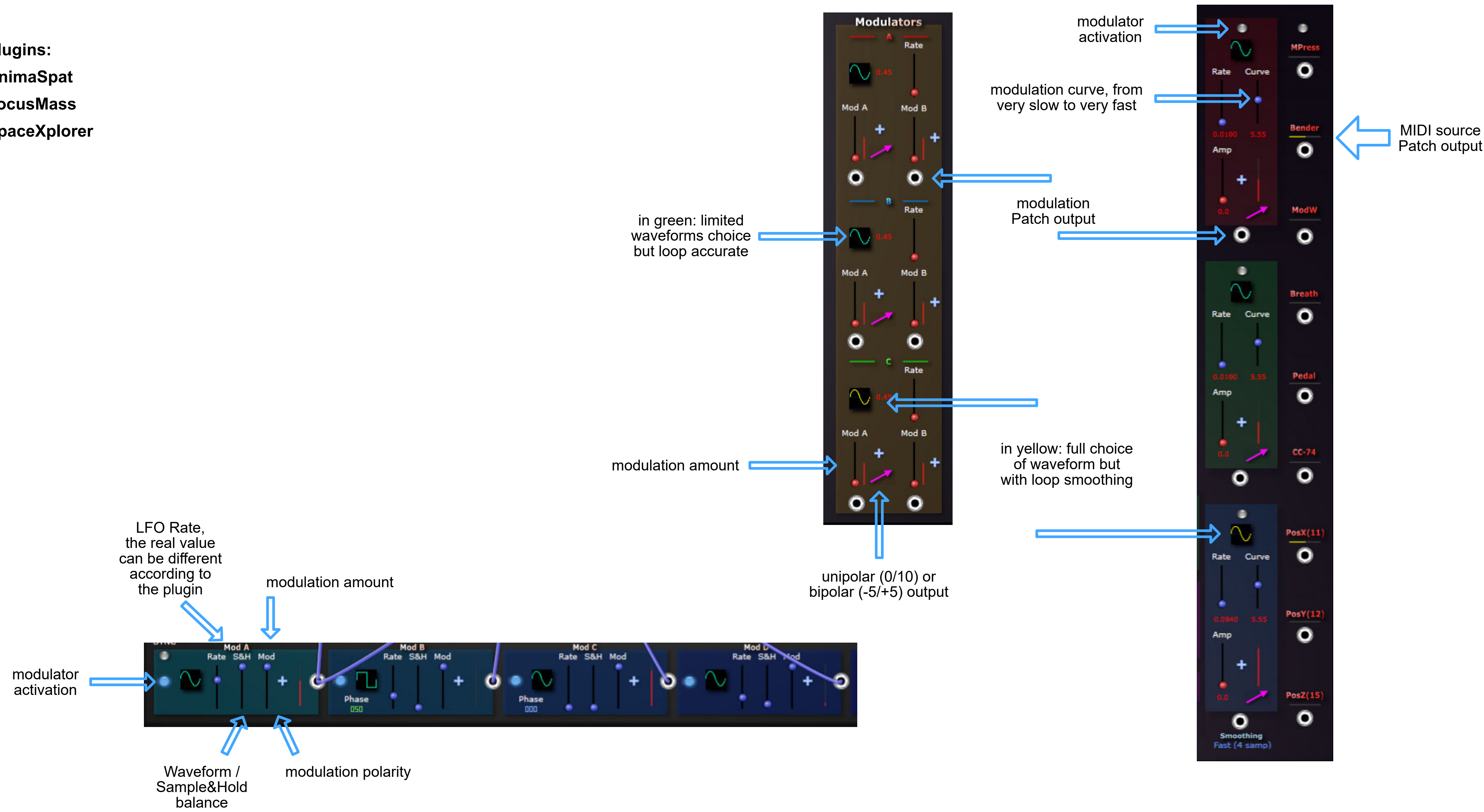# common features 2: multichannel Groups and Shapes

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:

AnimaSpat3D

AnimaSpat L

MassLayers

MultiMass

OctoMass

SpaceXplorer

SpatMass

ZyliaMass

inputs organizations along a sphere, by combining them a wide range of shapes is possible ...

allows to compress the height values to match the vertical position of the points in the Front View

"Cube" shape with separated X, Y and Z size settings

"sphere" animations smoothing

"Ring" shape in the horizontal, and vertical plane, the cursor controls the size

irregularity parameter (may not be present)

move all the inputs in the vertical plane

overall extension of the virtual sphere

rotation angle

elevation of each point

horizontal ring length

straight lines along the 3 spatial axis, every orientation is possible by combining them

random position on the 3 axis, with a separate control for the Z one, the Seed button triggers new values

delay between positions of input channels and smoothing (not for the "sphere"), usefull for trails and organic animations

move all the inputs in the horizontal plane (double click to reset)

vertical ring length

line with origine at the center

combine the "sphere" size and rotation

combine the Height position and the Z Line

combine the X and the Y Lines

(only in the 16 inputs versions) "true sphere" organization of the inputs in the form of 4 / 8 / 4 circles

(only in the 16 inputs versions) 2D grids along each spatial axis

common features 3: the Modulators and the Patch System

Plugins:
AnimaSpat
FocusMass
SpaceXplorer

modulator activation

modulation curve, from very slow to very fast

MIDI source
Patch output

in green: limited waveforms choice but loop accurate

modulation Patch output

modulation amount

in yellow: full choice of waveform but with loop smoothing

unipolar (0/10) or bipolar (-5/+5) output

LFO Rate, the real value can be different according to the plugin

modulation amount

modulator activation

Waveform / Sample&Hold balance

modulation polarity

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).

Import   Export
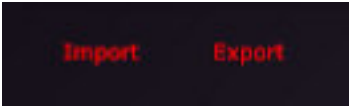
There are three files formats:

- "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	aml3	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
FocussMass 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		
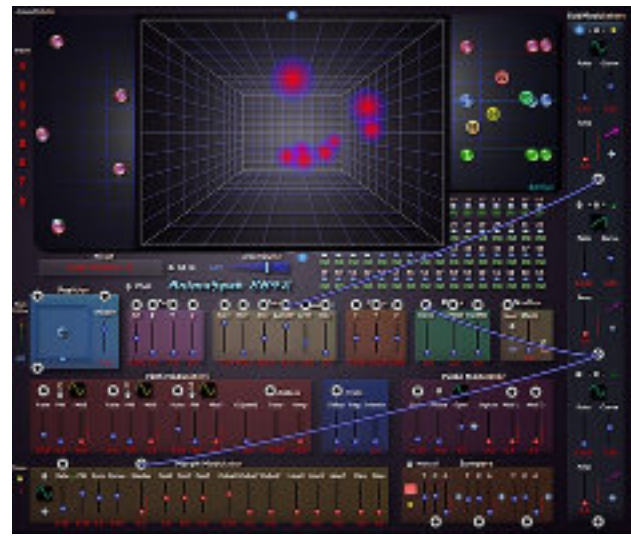
AnimaSpat
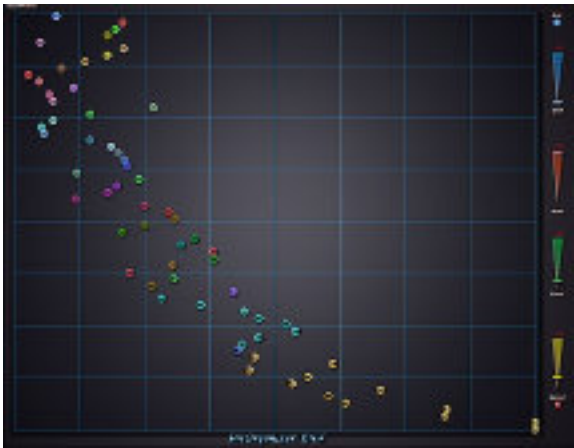
DisOrganizer
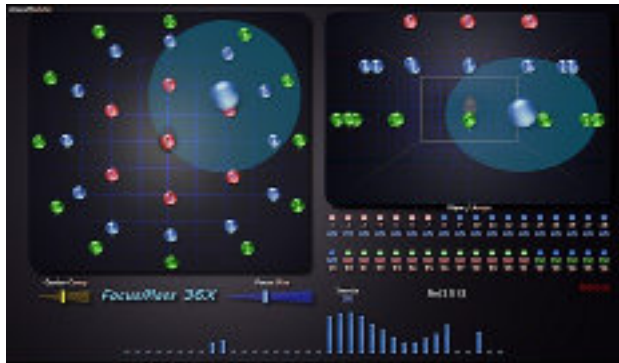
FocusMass

KaleidoMass
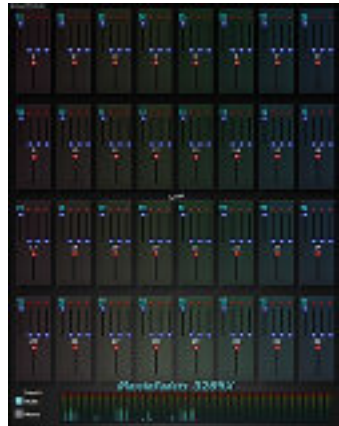
MassInFaders
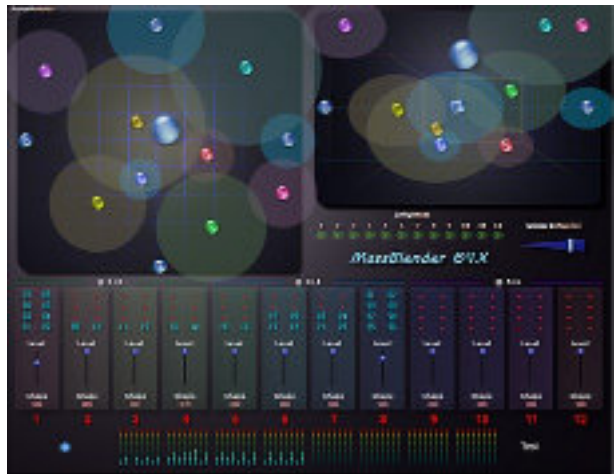
MassBlender

MassLayers
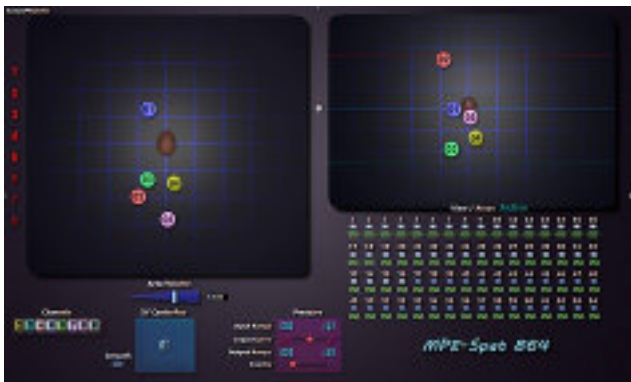
MPESpat
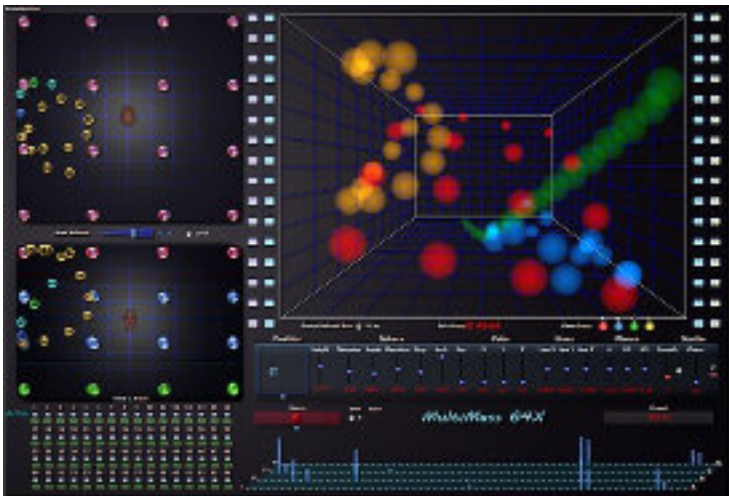
MultiMass
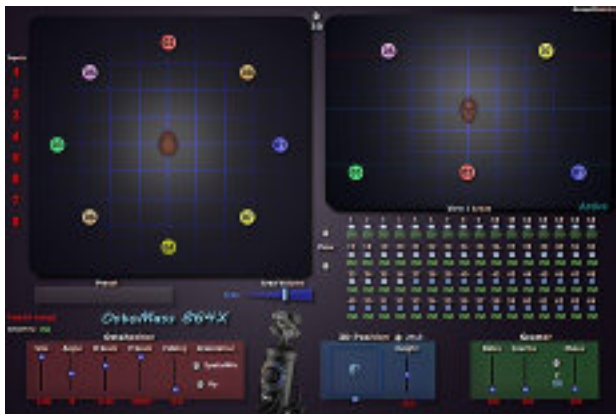
OctoMass
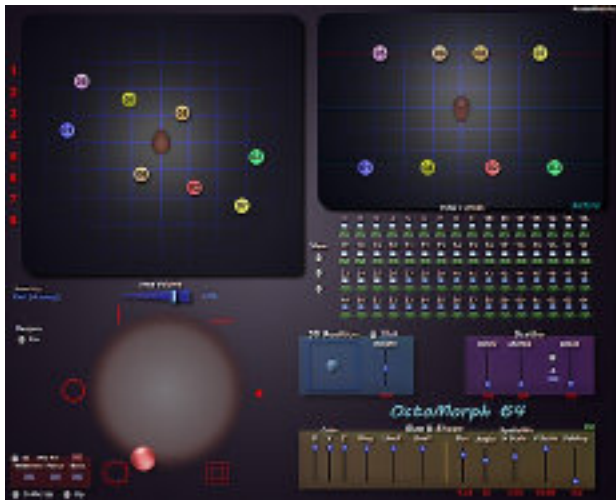
OctoMorph

ScaleLine
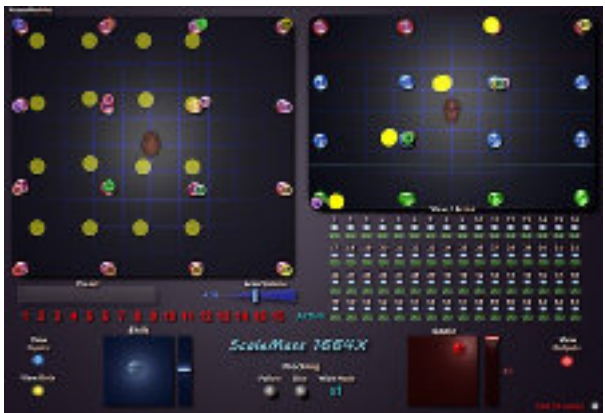
ScaleMass

SpaceRotator

SpaceShifter
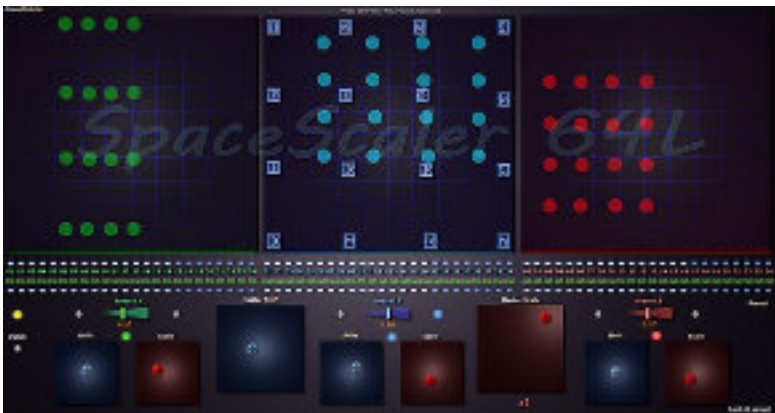
SpaceScaler

SpaceXPlorer
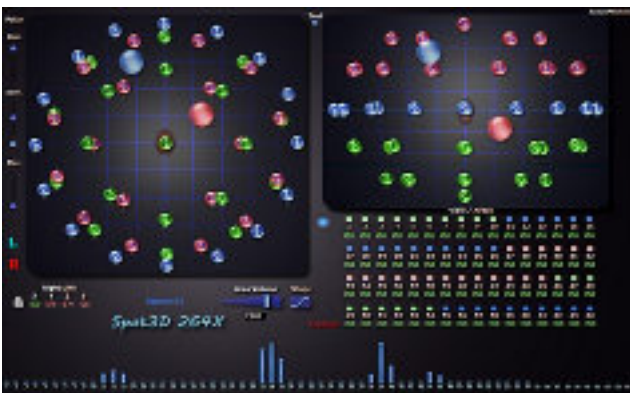
Spat3D

SpatKeys
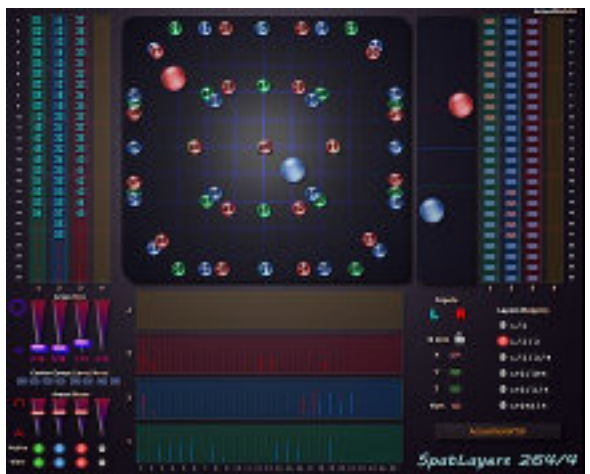
SpatLayers

SpatLine

SpatMass
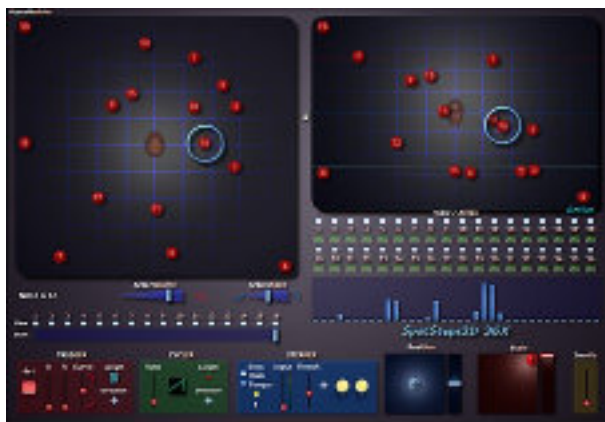
SpatSteps
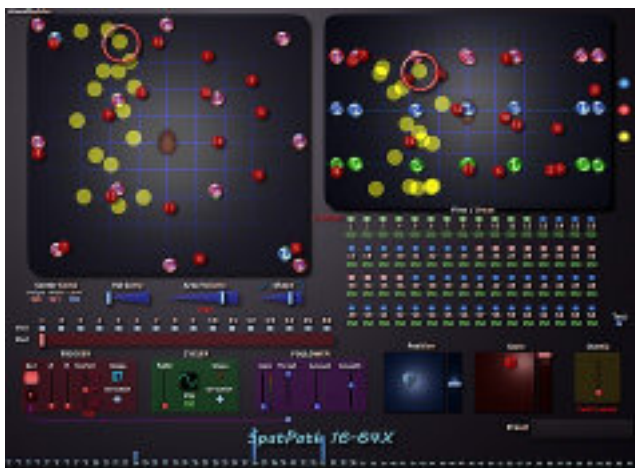
SpatTouch

SweetSpat

TetraMass

SpatPath
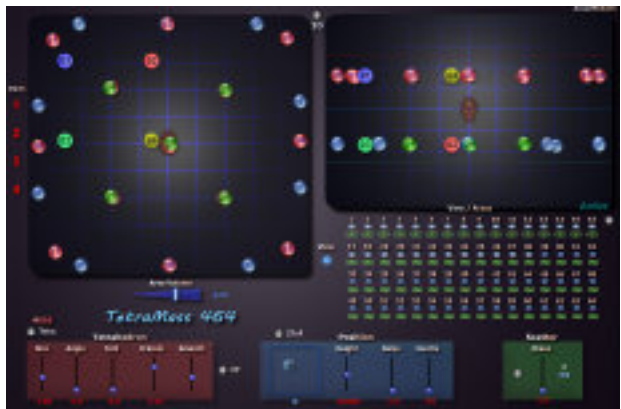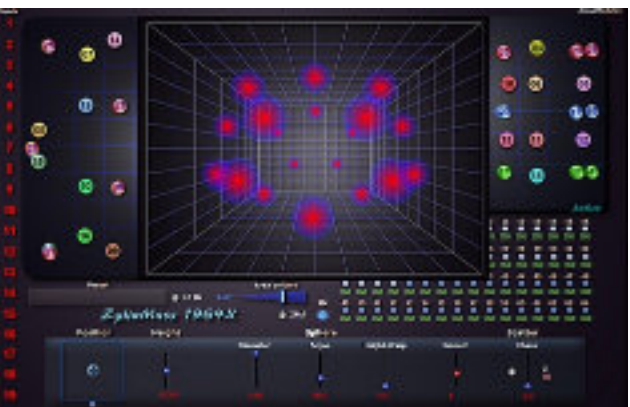
ZyliaMass

"spat" series

they process separately a few inputs

Spat3D 218, 236, 264 & 280

purpose:
place and spread a mono/
stereo sound inside an up
to 64 channels
bi or tridimensional
loudspeakers space,
animate its position and
its size in the host

AcousModules

L
R

View / Areas

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
050	050	050	050	050	050	050	050	035	035	035	035	050	050	050	050	050	050

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
050	050	035	035	035	035	050	050	050	050	050	050	050	050	035	050	035	036

Active
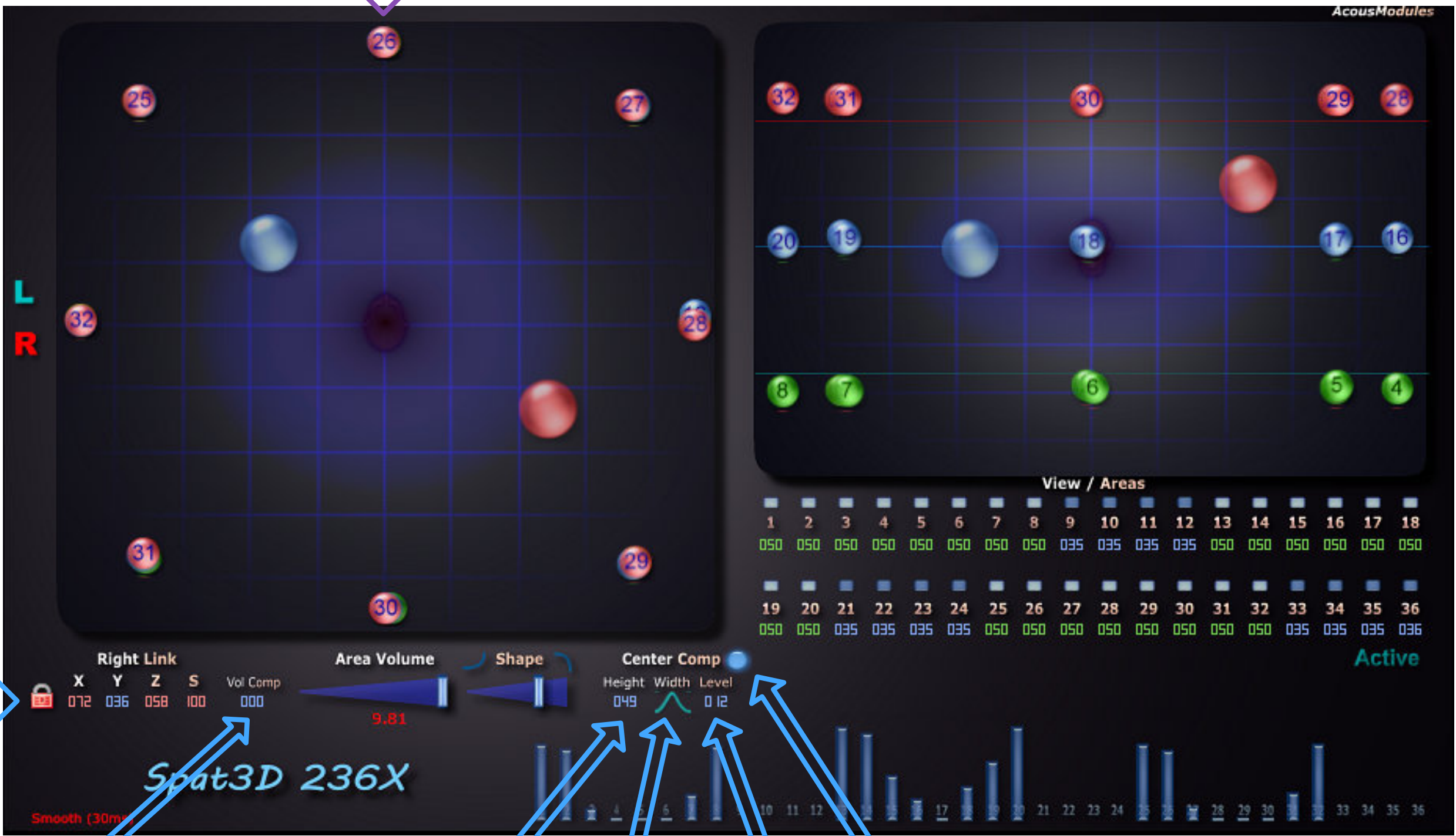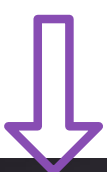
stereo input links, the Right one follows the Left one:
XYZ shifting, "50" means the same value
S = Symmetry, "100" means normel, "0" inverted

Right Link

X	Y	Z	S	Vol Comp
072	036	058	100	000

Area Volume

9.81

Shape

Center Comp

Height Width Level
049   012

Spat3D 236X

Smooth (30ms)

decrease the overall
volume when the Area
Volume is increased
ti simulate a constant
power or energy panner
or other effects ...

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

Size setting,
100 means the
full space diameter

amount of the signal
that is send to the
surrounding speakers
to create a phantom
spatial mass inside a
perichonic speaker layout

activate the Top and Front
visualization of the Center area

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050

Act
Col
Cent
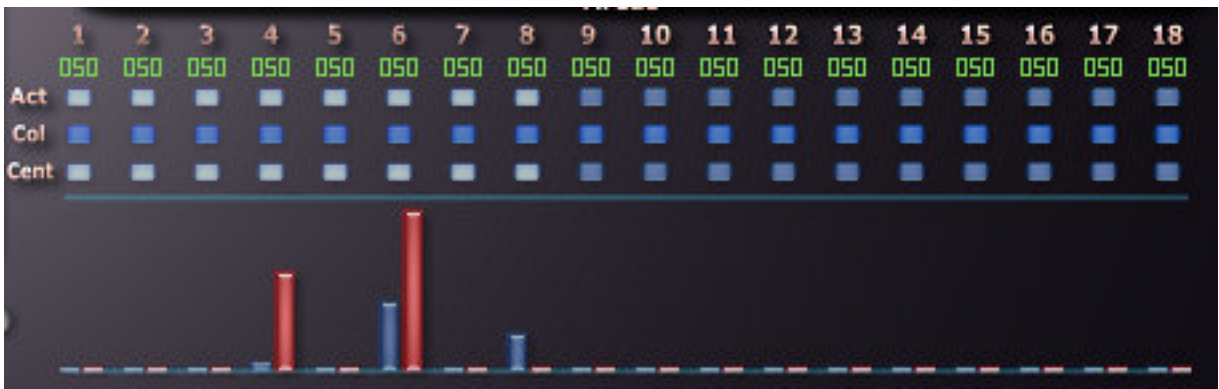
in the 218 version both Left and Right distance/levels values are visible

Spat3D 836 / 864 / 1664

each Input has to be placed separately
(and eventually automated)

select the inputs to show/activate
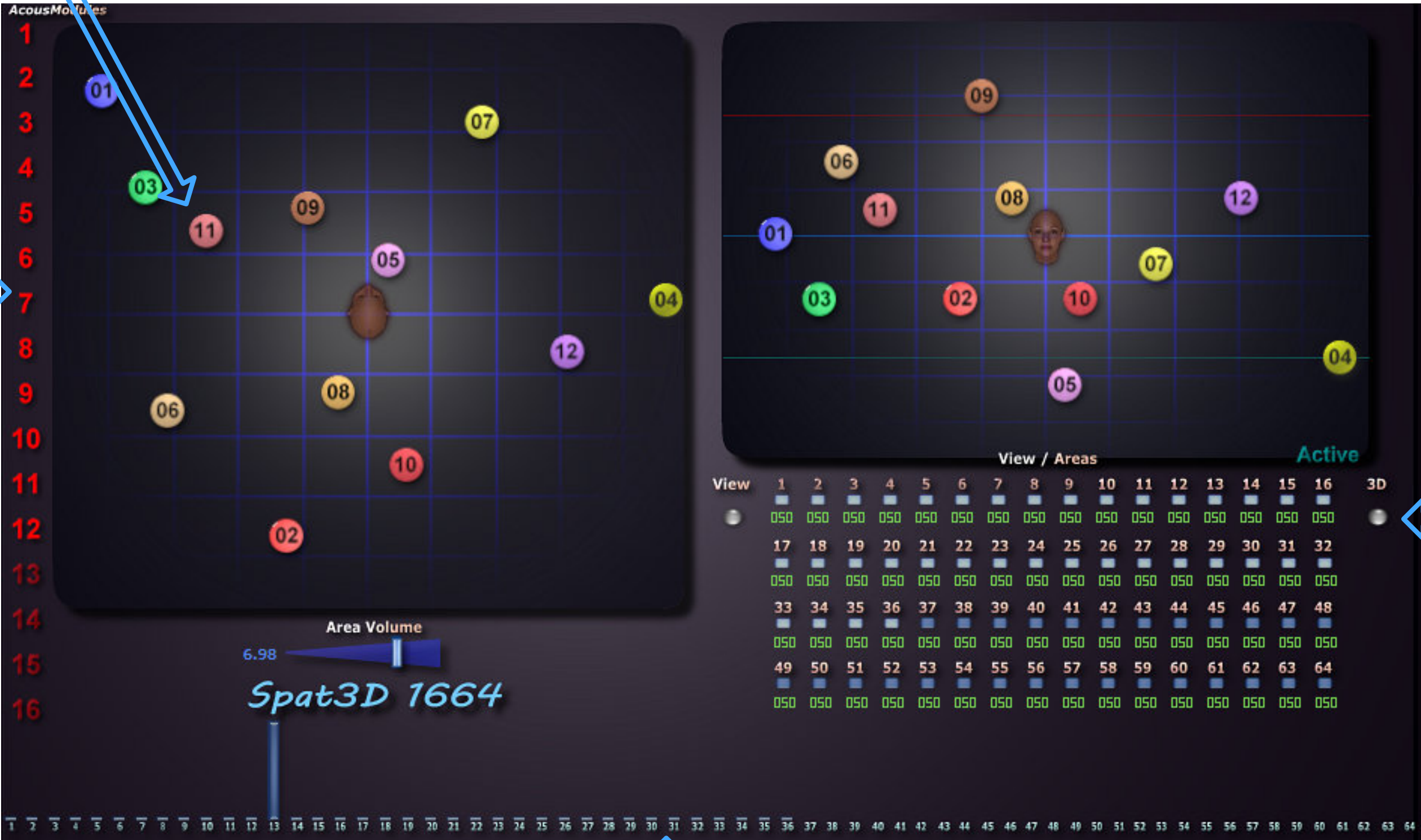
show the perspective view

shows only the level / distance values for the 1st input,
once the Area settings adjusted for it it will work the
same for the other Inputs

SpatLayers 248-3 & 264-4

purpose:
place and spread a mono/
stereo sound inside a
tridimensional
loudspeakers space
organized as up to
four height layers,
animate its position and
its size in the host

horizontal position
of the two inputs

the coloured areas represent
the Center Areas and Shape

select the output channels
to be place in each Layer

elevation position of the two
inputs relative to the Layers

output channels Areas fine setting,
look at the left hand columns for
the channel's number correspondence

Area size and Shape
for each Layer

No Center Compensation
(periphonic layouts)
Shape and Amount

inputs link: the Right one will follow the Left one
according to the XYZ percentage and the Symmetry
(Sym = 0 means inverse)

choose how the 3 or 4 Layers are
dispatched or grouped in height,
the "+" sign means that the channels
are added to the same height level
giving more horizontal points

visualization of the distance
values and levels for each
input and Layer

AcousModules

Active

View

Channel Select

Areas Adjust

Areas Size

4.39   3.60   2.93

Areas Shape

Center Comp (Area/Level)

SpatLayers 248-3

Master
Area

2.18

Inputs

L

R

R Link

X   074
Y   050
Z   075

Sym 100

Layers Mapping
1 / 2
1 / 2 / 3
1+2 / 3
1 / 2+3

Layers Mapping
1 / 2
1 / 2 / 3
1 / 2 / 3 / 4
1+2 / 3+4
1+2 / 3 / 4
1+2+3 / 4

Smooth (30ms)

SpatLayers 848

purpose:
place and spread an up to eight channels sound or up to eight mono sounds inside a tridimensional loudspeakers space organized as up to three height layers, animate the positions and the sizes in the host

horizontal position of the eight Inputs

elevation position of the eight Inputs relative to the Layers

select the output channels to be place in each Layer

output channels Areas fine setting, look at the left hand columns for the channel's number correspondence

Area Size for each Layer, defines how much the level will vary according to the distance between the input and the output points

choose how the 3 Layers are dispatched or grouped in height, the "+" sign means that the channels are added to the same height level giving more horizontal points

visualization of the inverse distance values and levels for each input and Layer (can be hidden)

Area Shape for each Layer, defines how the level vary

select the inputs to show/activate

SweetSpat L4 & L6

purpose:
place and spread a mono sound inside a periphonic loudspeakers space organized as up to six height layers, with distance simulation, animate its position with the integrated gestures recorder

a larger Focus will spread the sound among the Layers

up to 6 Layers can be used

fixed number of outputs channels that constitute the circles

shift the starting degree to the left (the origin is 12H by default)

Azimut = position on the circumference
Radius = Layers
(elevation or concentric circles)

first channel number of the circle series

select the number of Layers to be calculated

Red is Offset Angle 0° to -90°

Blue is 1st Output series

select and active the MIDI CC control of the spatial position

use a combination of a LP filter and a reverberation to simulate the attenuation distance in the Radius axis

XY values scaling (-100% to +100% from Bottom/Left to Top/Right),
- Top/Right means original
- center position means 0 output (no more move)
- Bottom/Left means invert

graphic visualization of the spatial values

records and replays the spatialization gestures

view of the recorded curves with graphic Start and End Loop settings

shifts the XY recorded values according to the ball position (+/- 100 %), center position means "no shift"

SweetSpat LE

purpose:
place and spread a mono
sound inside a
normalized periphonic
loudspeakers space, with
distance simulation,
animate its position
with the integrated
gestures recorder

select and active the
MIDI CC control of the
spatial position

AcousModules

LOW   SweetSpat LE   HIGH

DI1 DI2

Azimut 325.5   Center/Elevation 58.6

Azimut = position on the circumference
Radius = Height

symbolic position of the outputs,
it has not to be exactly the same
as the loudspeakers' positions
(not editable)

Outputs
- Quad
- 5.0
- 7.0 A
- 7.0 B
- Octo A
- Octo B
- Auro 9.0
- Bed 7.0.4
- Auro 13.0
- Dome 16
- 17.0

select the spatial format,
according to variations
in these formats interpretation
it may be necessary to
change the channel mapping
in the plugin's connexions
with the host

**Distance
Simulation**
Bypass
Radius Filter

Length Damp

035

use a combination of a LP filter and a
reverberation to simulate the attenuation
distance in the Radius axis

05 I

Gesture
REC   Alt

PLAY   XFade
         032

Speed Start 0.0   10.0 End   Shift   Scale

0.0

5.0   5.0   4.9   5.0

graphic visualization
of the spatial values

records and replays
the spatialization gestures

view of the recorded curves
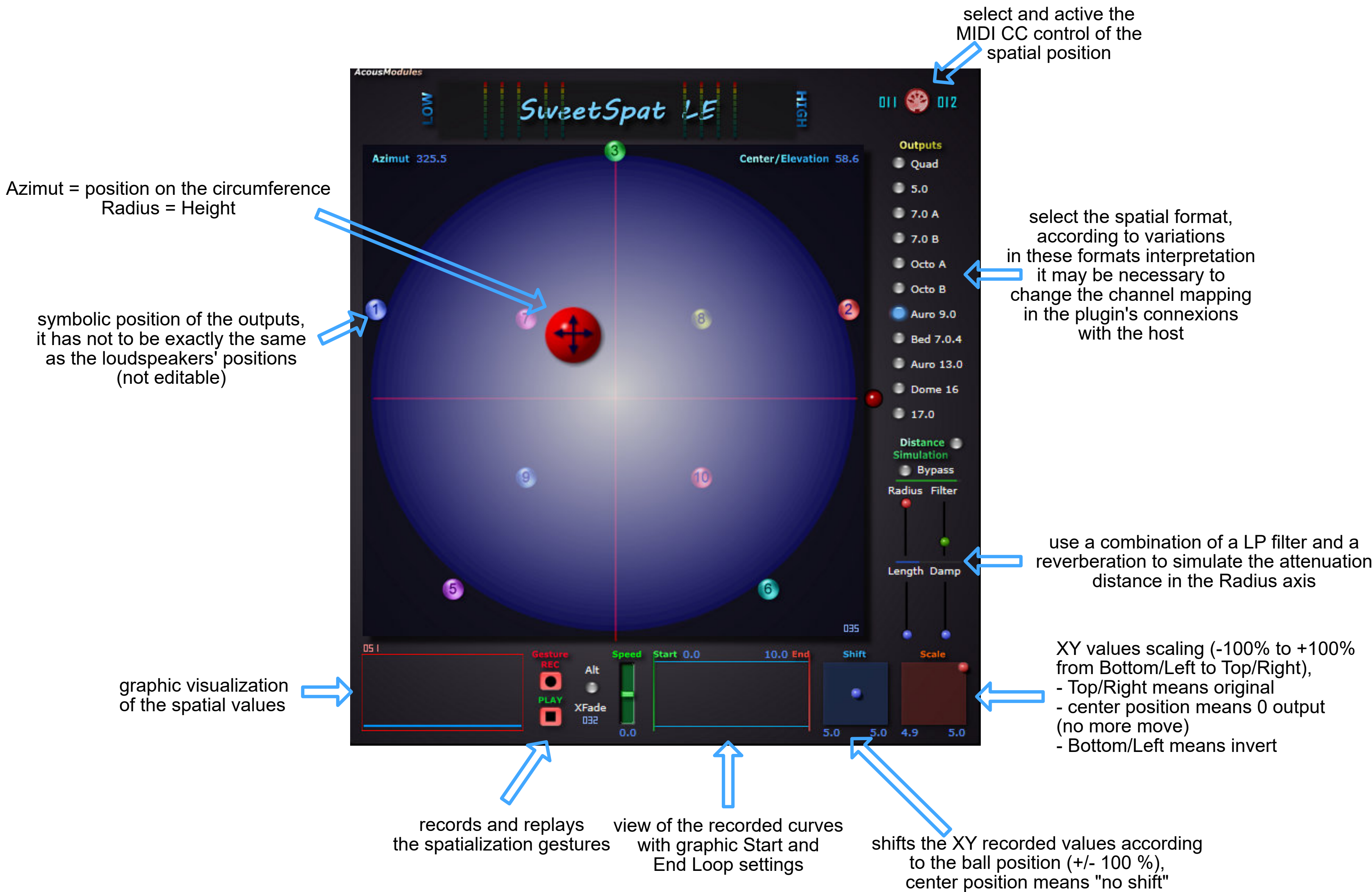with graphic Start and
End Loop settings

XY values scaling (-100% to +100%
from Bottom/Left to Top/Right),
- Top/Right means original
- center position means 0 output
(no more move)
- Bottom/Left means invert

shifts the XY recorded values according
to the ball position (+/- 100 %),
center position means "no shift"

"mass" series

they process more than two inputs as a group

purpose:
place and organize an up to eight channels sound inside an up to 64 channels tridimensional loudspeakers space, animate and automate the transformations of its spatial shape in the host

SpatMass 818, 836 & 864

see page 3

select the inputs to show/activate

see page 4
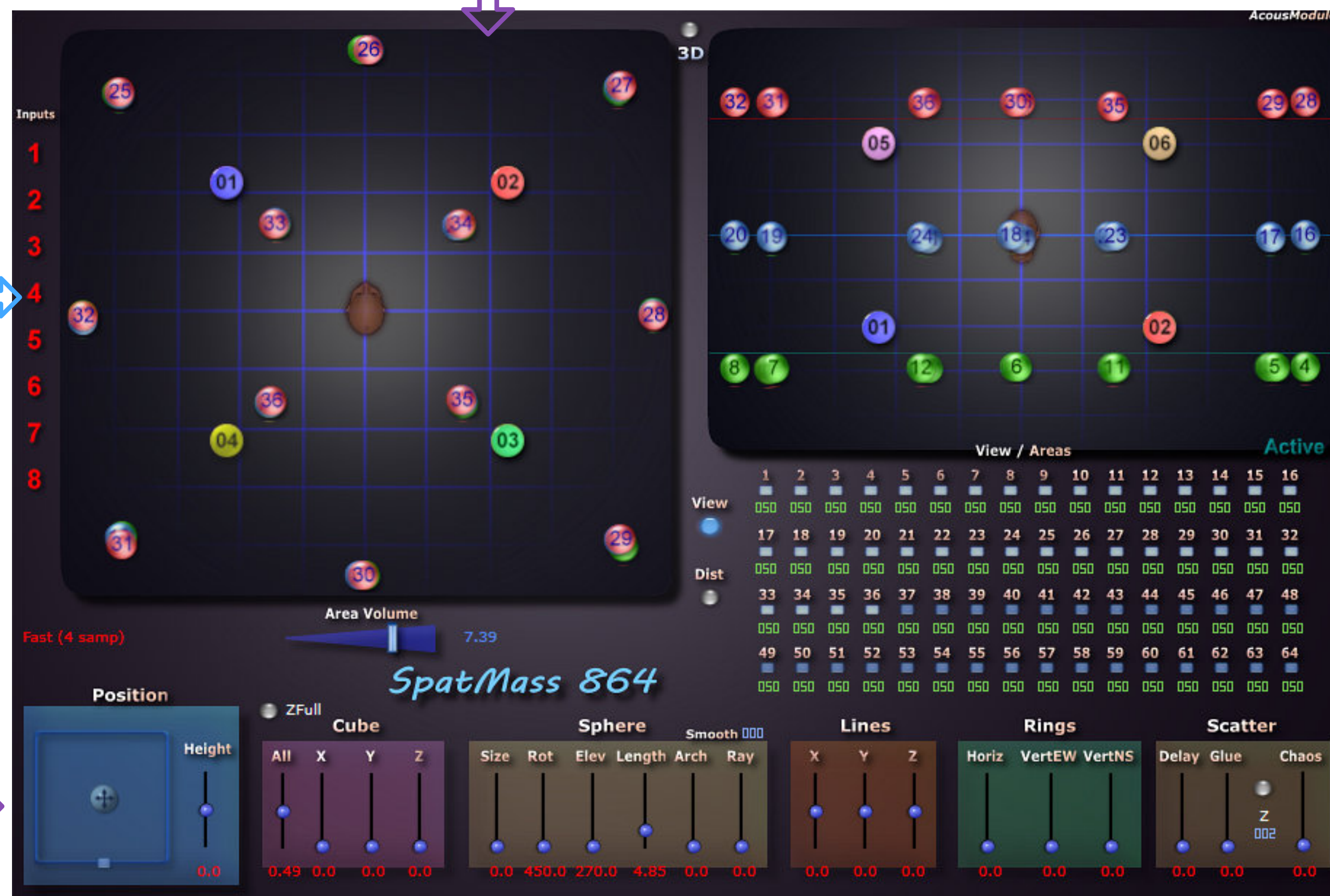
(only in the 818 version)
choose what channel will be mixed in the n°18

use channel 18 as a virtual speaker
to simulate a diffusion point at the center
(must be placed manually)

SpatMass 1636 & 1664

show/hide the Router/Mixer view

unused output channels send the signal to the nearest speaker(s)

adjust the level of the phantom signal to be mixed with the direct one
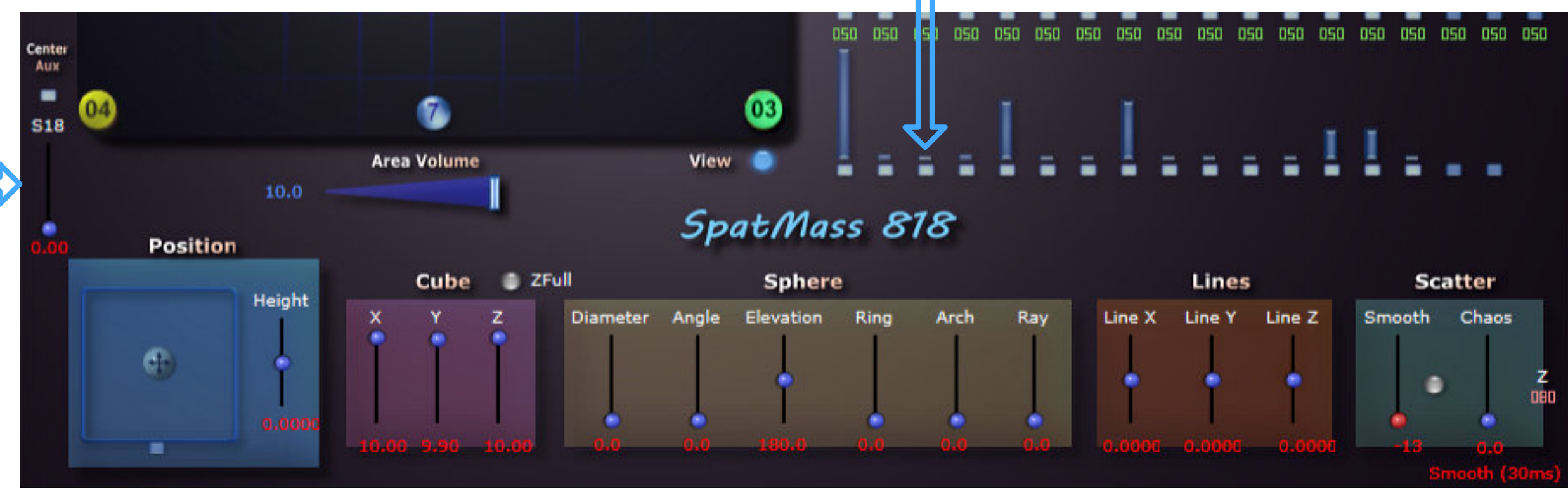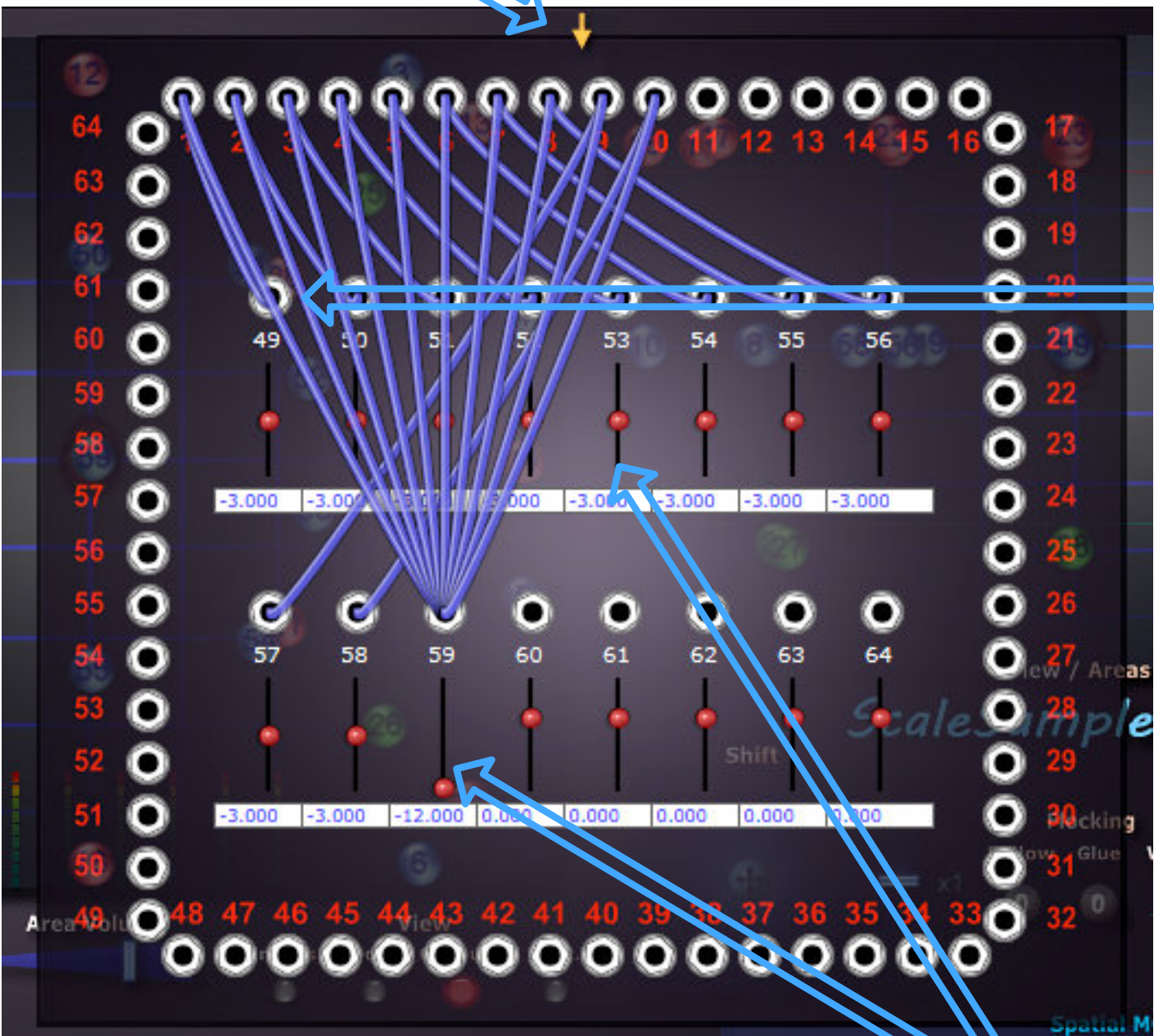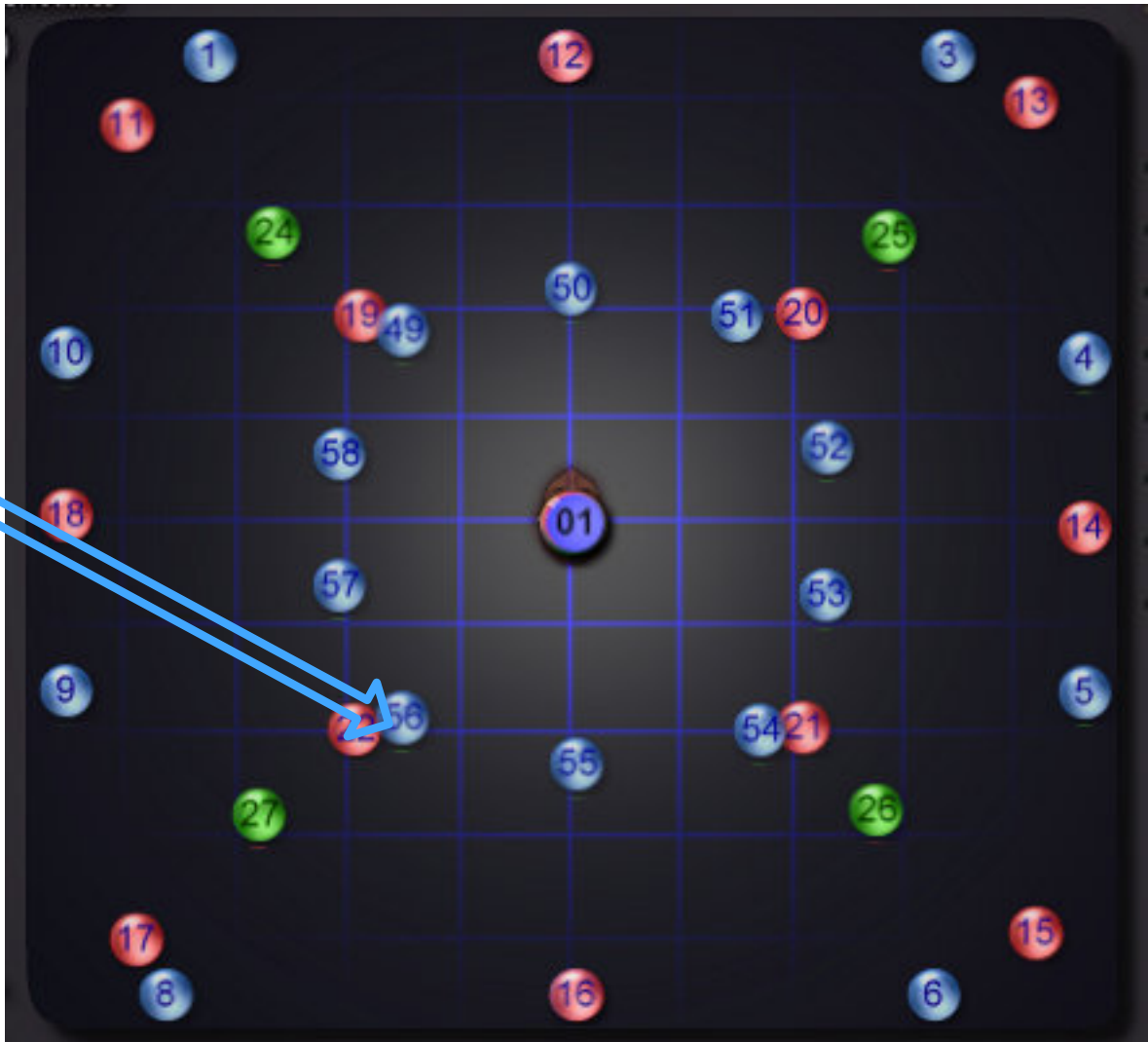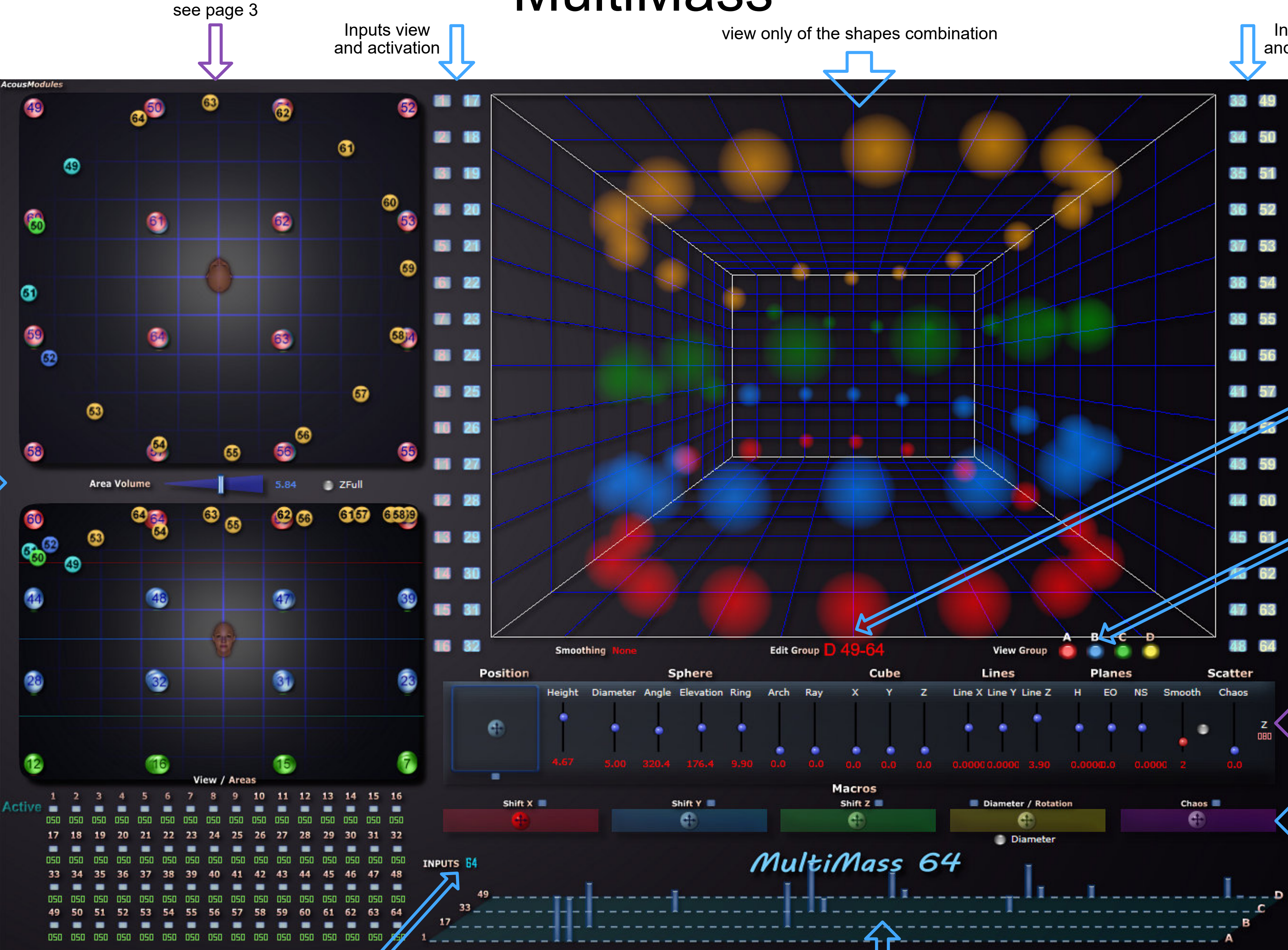
MultiMass

purpose:
place and organize an up to 64 channels sound or a combination of four up to 16 channels sounds inside a tridimensional loudspeakers space, animate and automate the transformations of its spatial shapes in the host
(but slowly ...)

see page 3

Inputs view and activation

view only of the shapes combination

Inputs view and activation

AcousModules

Area Volume   5.84   ZFull

edition zone for the speakers and Shapes view for the selected group

View / Areas

choose what Group to edit

select the Groups to be viewed

Smoothing None   Edit Group D 49-64   View Group   A B C D

Position	Height	Diameter	Angle	Elevation	Ring	Arch	Ray	X	Y	Z	Line X	Line Y	Line Z	H	EO	NS	Smooth	Chaos	Z
	Sphere							Cube			Lines			Planes			Scatter		
4.67	5.00	320.4	176.4	9.90		0.0	0.0	0.0	0.0	0.0	0.0000	0.0000	3.90	0.0000	0.0	0.0000	2	0.0	

see page 4, the visible settings correspond to the selected Group

Macros

Shift X   Shift Y   Shift Z   Diameter / Rotation   Chaos

Diameter

change all the values at once for all the Groups: can very CPU intensive!

MultiMass 64

INPUTS 64

Active   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
050 050 050 050 050 050 050 050 050 050 050 050 050 050 050 050
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
050 050 050 050 050 050 050 050 050 050 050 050 050 050 050 050
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
050 050 050 050 050 050 050 050 050 050 050 050 050 050 050 050
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
050 050 050 050 050 050 050 050 050 050 050 050 050 050 050 050

select the number of inputs,
"64" means that they match the processed channels
"1" means that the first one is duplicated on 64,
other values will more or less be evenly distributed

to help for the Area settings, shows only
the first of each 16 channels group

purpose:
place and organize an up
to eight channels sound
inside a tridimensional
loudspeakers space
organized as up to four
height layers,
animate and automate the
transformations of its
spatial shape in the host

MassLayers 848

horizontal position
of the Inputs

the coloured areas represent
the Center Areas and Shape

elevation position of the
Inputs relative to the Layers

select the output channels
to be place in each Layer

output channels Areas fine setting,
look at the left hand columns for
the channel's number correspondence

Area Size for each Layer,
defines how much the level will
vary according to the distance
between the input and
the output points

choose how the 3 Layers are
dispatched or grouped in height,
the "+" sign means that the channels
are added to the same height level
giving more horizontal points

No Center Compensation
Shape and Amount

Area Shape for each Layer,
defines how the level vary

see page 4

visualization of the distance
values and levels for each
Input and Layer (can be hidden)

AcousModules

3D View

Active
View

Areas Size
5.30 5.30 5.30

Center Comp (Area/Level)
072 061 067

Areas Shape

Master
Area
0.00

Inputs
1 2
3 4
5 6
7 8

Layers Mapping
1 / 2
1 / 2 / 3
1+2 / 3
1 / 2+3

None

Position   Sphere   Lines   Flocking

Height	Diameter	Angle	Elevation	Ring	Arch	Ray	Line X	Line Y	Line Z	Chaos	Follow	Glue
-2.90	3.25	0.0	0.0	8.9	11.4	8.00	0.0199	0.0199	-9.60	0.0	0.00	0.00

Z

ScaleMass 864, 1664, 2436, 3264

purpose:
place and organize freely an up to 8 / 16 / 2 / 32 channels sound (or combination of lesser channels ones) inside a tridimensional loudspeakers space, animate and automate the transformations of its spatial shape in the host

AcousModules

AcousModules
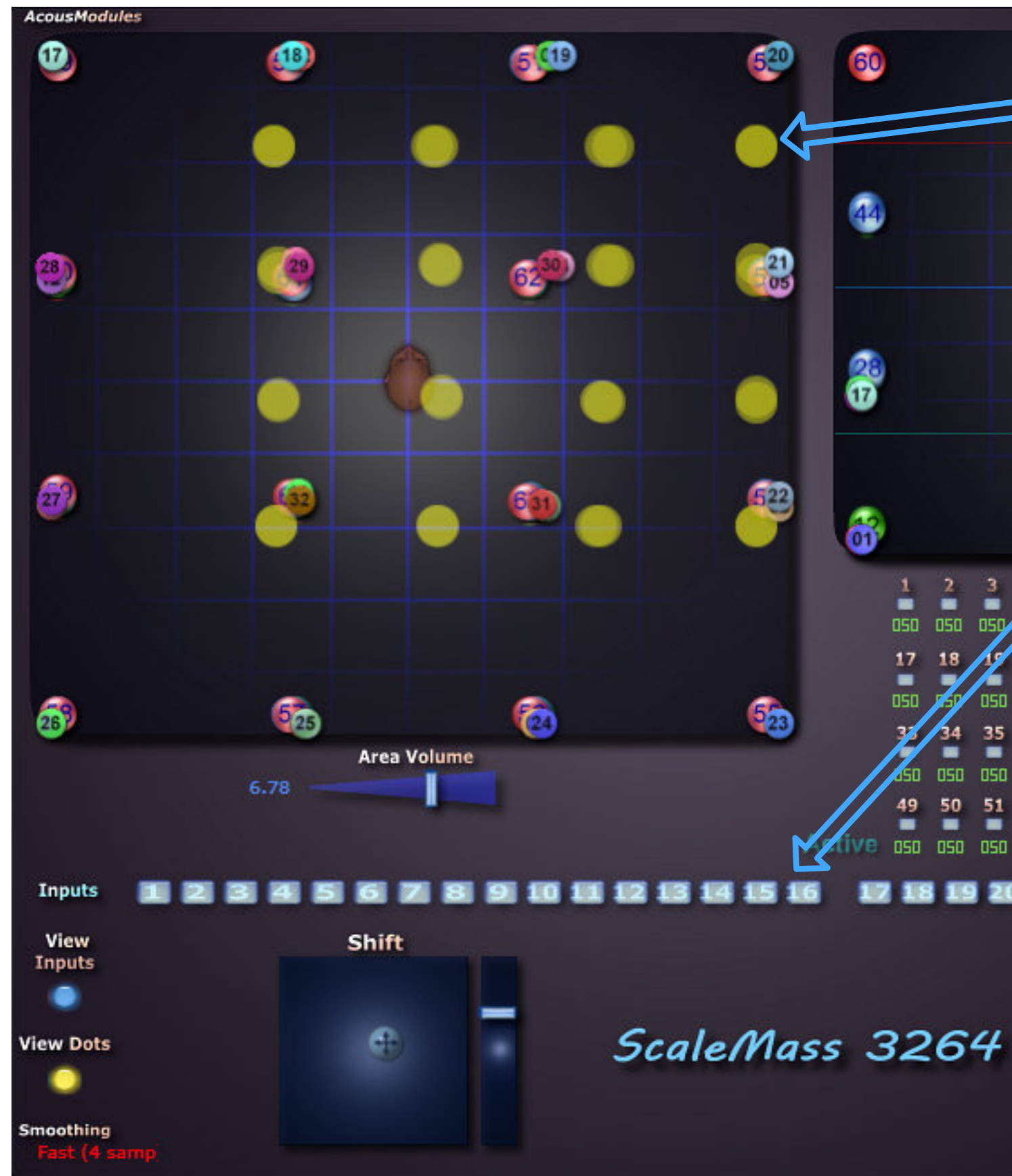
the blue (or yellow) dots represent the points of the real Shape according to the Position and Scale transformations

Show/Active the selected Inputs

the small numbered color dots represent the Shape that has to be set manually, one by one

Inputs

View Inputs

View Dots

Smoothing
Fast (4 samp

Shift

ScaleMass 3264

Area Volume
6.78

Active

60 Hz

Flocking

Scatter   Glue

Position

Scaling

x1

ScaleMass 864

View / Areas

Active

Area Volume
7.965

Smoothing
Smooth (30m

**Scatter = delay amount between inputs when moving
Glue = smoothing/inertia amount**

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

MPESpat 864

purpose:
use an MPE compatible gesture controller to move and animate an up to 5 channels sound inside a tridimensional loudspeakers space

Pressure special settings:
- input Min / Max values to adapt the controller's sensitivity
- curve, from very progressive to very fast
- output Min / Max values to limit the elevation range
- inertia to smooth the values changes when moving
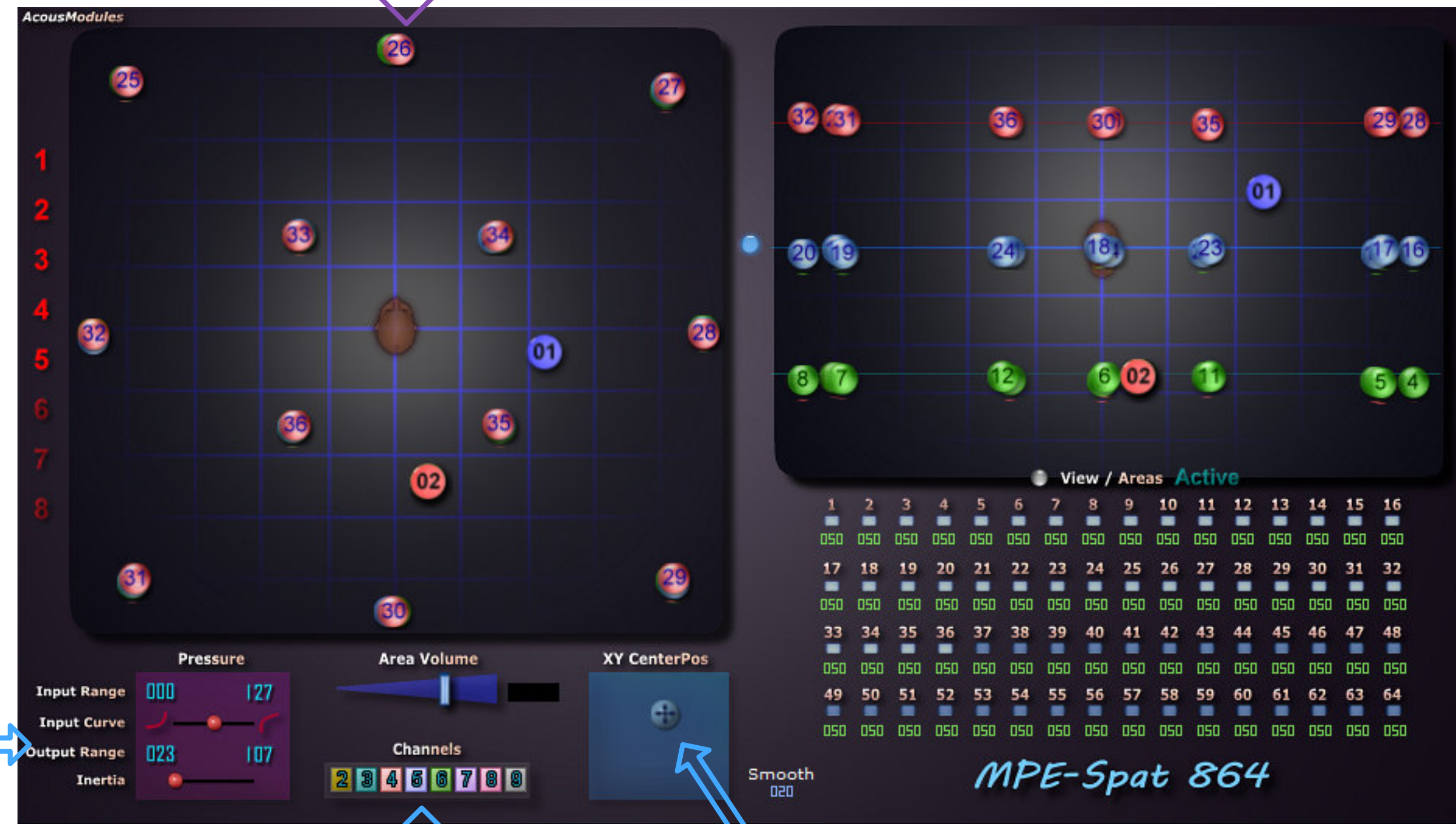
MPE voice's MIDI channels, normally in following order from number 2 but can be different to combine several plugins

shifts all the Inputs positions horizontaly with a smoothing/intertia factor

MassBlender

purpose:
**mix up to three stereo
sounds in an up to 64
channels virtual space**

place the Inputs dots arbitrarily
in a virtual 3D space

set the influence Area for each rack

increase/decrease all the influence Areas

select the input channels
for the racks

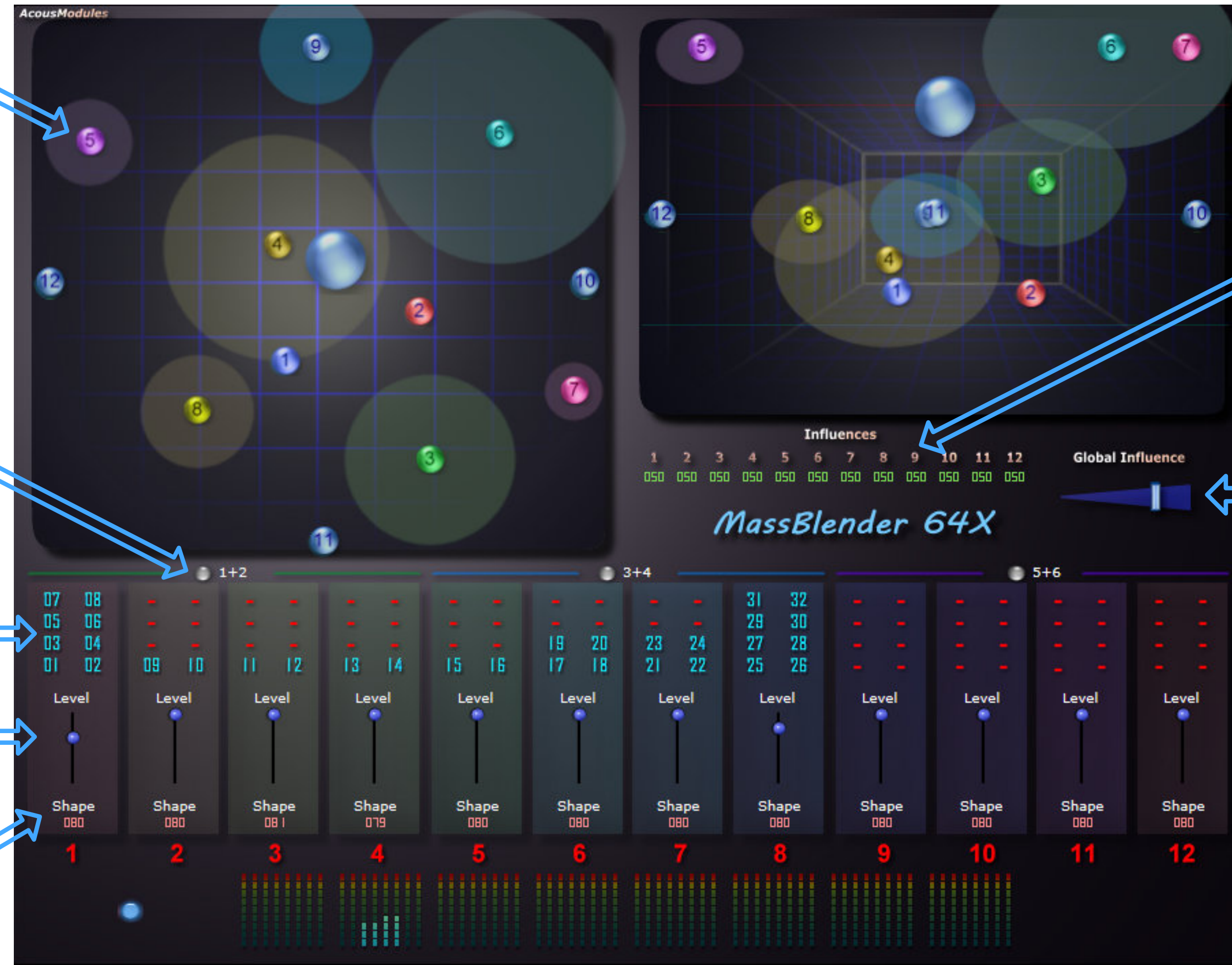select the output channels

adjust (lower) the level
sent to the output channels
in each rack

adjust the influence curve

AcousModules

Influences

1	2	3	4	5	6	7	8	9	10	11	12
050	050	050	050	050	050	050	050	050	050	050	050

Global Influence

MassBlender 64X

1+2   3+4   5+6

07	08									31	32												
05	06									29	30												
03	04							19	20	23	24	27	28										
01	02	09	10	11	12	13	14	15	16	17	18	21	22	25	26								

| Level | Level | Level | Level | Level | Level | Level | Level | Level | Level | Level | Level |

| Shape | Shape | Shape | Shape | Shape | Shape | Shape | Shape | Shape | Shape | Shape | Shape |
| 080 | 080 | 081 | 079 | 080 | 080 | 080 | 080 | 080 | 080 | 080 | 080 |

| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |

animations series

they integrate a modulation system to make the sound moving ...

AnimaSpat 3D 64

purpose:
animate the position of a mono/stereo sound inside a tridimensional loudspeakers space with a combination of LFO modulators

see page 3

set of LFOs dedicated to continuous trajectories independantly in the three spatial axis

see page 5

move all the inputs in the horizontal and vertical planes

inputs organizations along a sphere

LFO Rate, Phase ratio of the square wave, modulation amount and Waveform

LFO activation on this axis

Global Speed factor for the X, Y, Z LFOs

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

simple AR envelope with acceleration curve

AnimaSpat 3D 48L

purpose:
animate the position of a mono/stereo sound inside a tridimensional loudspeakers space organized as up to three height layers with a combination of LFO modulators

see page 10

see page 5

move all the inputs in the horizontal and vertical planes

inputs organizations along a sphere

LFO Rate, Phase ratio of the square wave, modulation amount and Waveform

LFO activation on this axis

Global Speed factor for the X, Y, Z LFOs

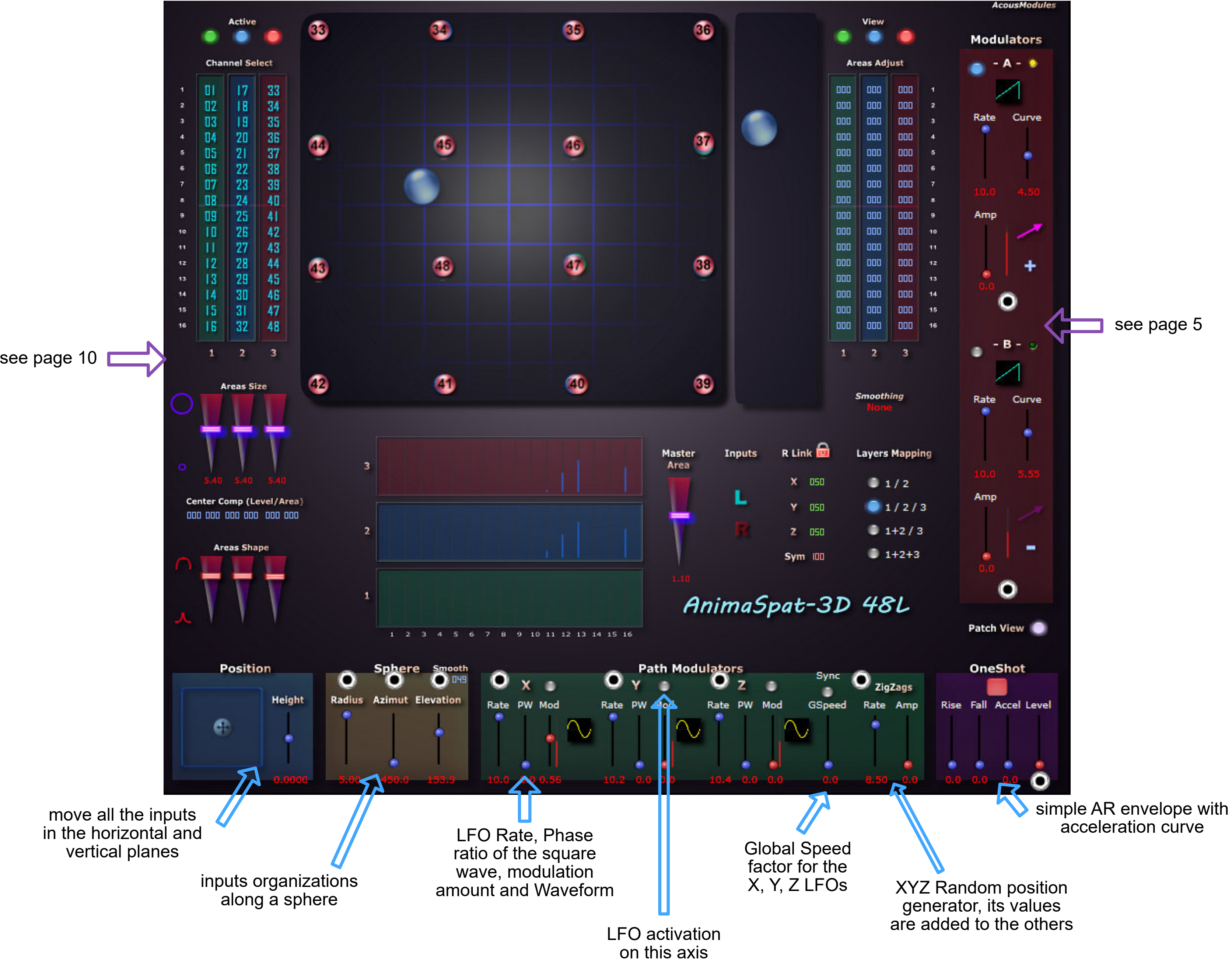XYZ Random position generator, its values are added to the others

simple AR envelope with acceleration curve

AnimaSpat 3D 836 & 864

purpose:
animate and transform the position and the spatial shape of an up to 8 channels sound inside a tridimensional loudspeakers space with a combination of LFO and other modulators

see page 3

see page 5

see page 4

see next page

AnimaSpat 836X

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

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

LFO dedicated to
pulsating movements
of special Shapes parameters

LFO Waveform

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

use the samples peak envelope
to change the output amplitude

LFO Rate

phase ratio
of the square
wave

Global Speed
factor for the
X, Y, Z LFOs

shifting
in the
waveform
position

modulation
symmetry,
"0" means
equipolar

LFO modulation amplitude

LFO activation

modulation destinations:
Cube SIze (all axis)
Horizontal Ring
Vertical Ring (EW oriented)
Vertical Ring (FB oriented)
Chaos amplitude
Sphere Rotation axis

LFO dedicated to the modulation of
other modulators and additionnal
direct spatial Shapes controls

Tempo rate view and duration selection

simple Attack/Release envelopes:
T = Time
C = Curve
A = Amplitude

LFO Waveform and Polarity

Master modulation

LFO Rate

manual
Trigger
(right click
to link to
a MIDI CC)

select the Tigger source:
Manual or host Tempo

Pulse wave ratio

destinations modulation amounts

from very progressive
to very fast

modulation symmetry,
"0" means equipolar

AnimaSpat 3D 848L

purpose:
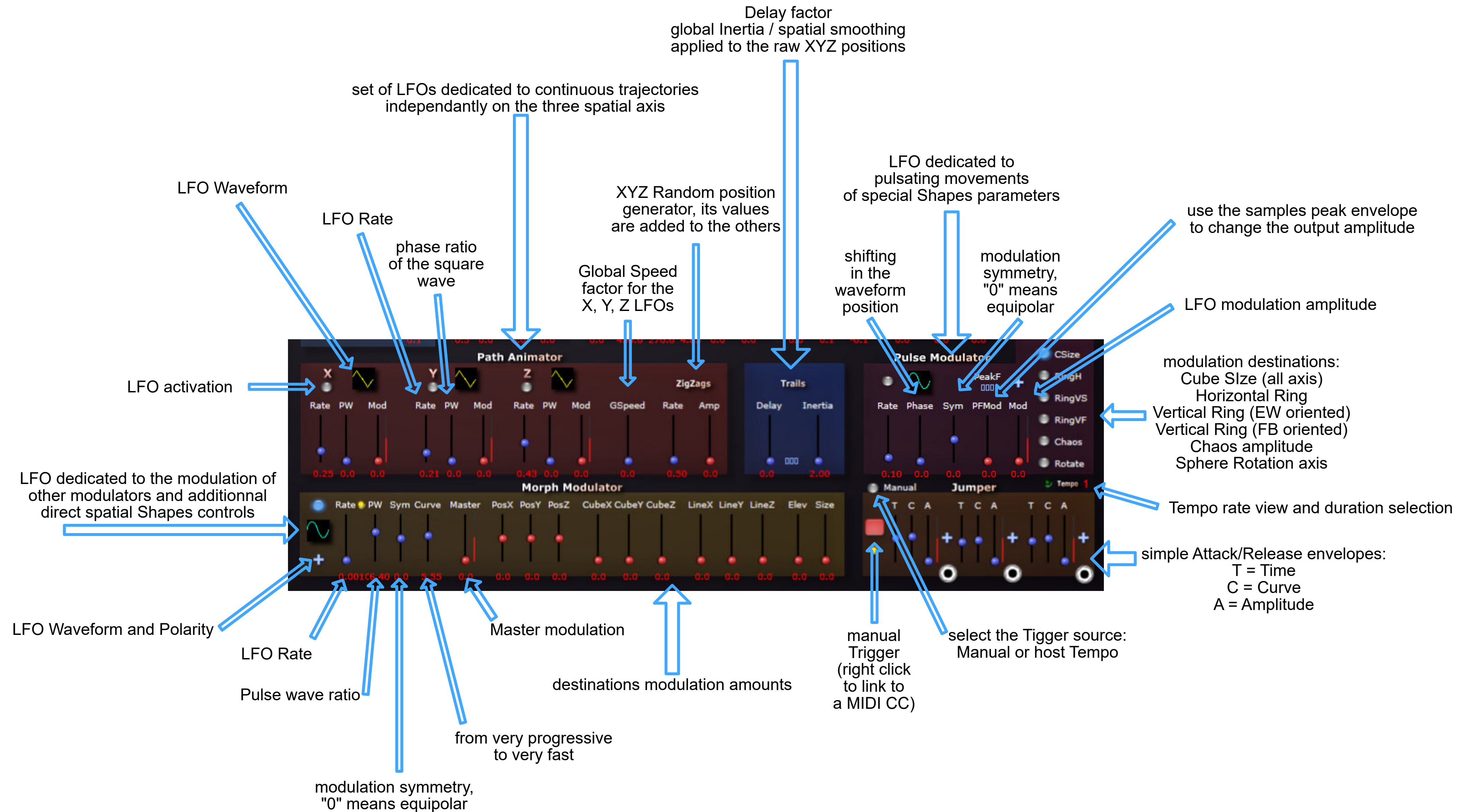**animate and transform the position and the spatial shape of an up to 8 channels sound inside a tridimensional loudspeakers space organized as up to three height layers with a combination of LFO and other modulators**

Channel Select

1	01	17	33
2	02	18	34
3	03	19	35
4	04	20	36
5	05	21	37
6	06	22	38
7	07	23	39
8	08	24	40
9	09	25	41
10	10	26	42
11	11	27	43
12	12	28	44
13	13	29	45
14	14	30	46
15	15	31	47
16	16	32	48
	1	2	3

see page 11

Areas Size

6.00 5.65 5.45

Position

Height
0.20

see page 4

Smoothing Fast (4 samp)

Center Comp (Level/Area)

Inputs 1 2 3 4 5 6 7 8

3D View
Dist. View
Patch View

Areas Adjust

Active
View

Master Area
0.0

Areas Shape

Layers Mapping
○ 1 / 2
● 1 / 2 / 3
○ 1+2 / 3
○ 1 / 2+3

AnimaSpat 848L

see page 5

SubModulators

- A -
Rate Curve
0.18 4.50
Amp
10.00

- B -
Rate Curve
0.0100 5.55
Amp
10.00

- C -
Rate Curve
0.0100 5.55
Amp
0.0

Cube
All X Y Z
0.0000 0.0 0.0 0.0

Sphere
Smooth
Size Rot Elev Length Arch Ray
4.05 351.0 180.0 10.00 0.0 0.0

Lines
X Y Z
0.0399 0.0399 10.00

Rings
Horiz VertEW VertNS
0.0 0.0 0.0

Scatter
Seed Chaos
Z
024 100
0.0

Path Modulators

X			Y			Z			ZigZags		
Rate	PW	Mod	Rate	PW	Mod	Rate	PW	Mod	GSpeed	Rate	Amp
0.25	0.0	0.0	0.21	0.0	0.0	0.43	0.0	0.0	0.0	0.50	0.0

Trails
Delay Reg Inertia
0.0 0.0 0.0

Pulse Modulator
Rate Phase Sym Inputs Mod 1 Mod 2
0.10 0.0

Morph Modulator

Rate	PW	Sym	Curve	Master	PosX	PosY	PosZ	CubeX	CubeY	CubeZ	LineX	LineY	LineZ	Elev	Size
0.14	6.40	0.0	5.55	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Jumpers
Manual
T C A   T C A   T C A

see previous page

KaleidoMass 864

purpose:
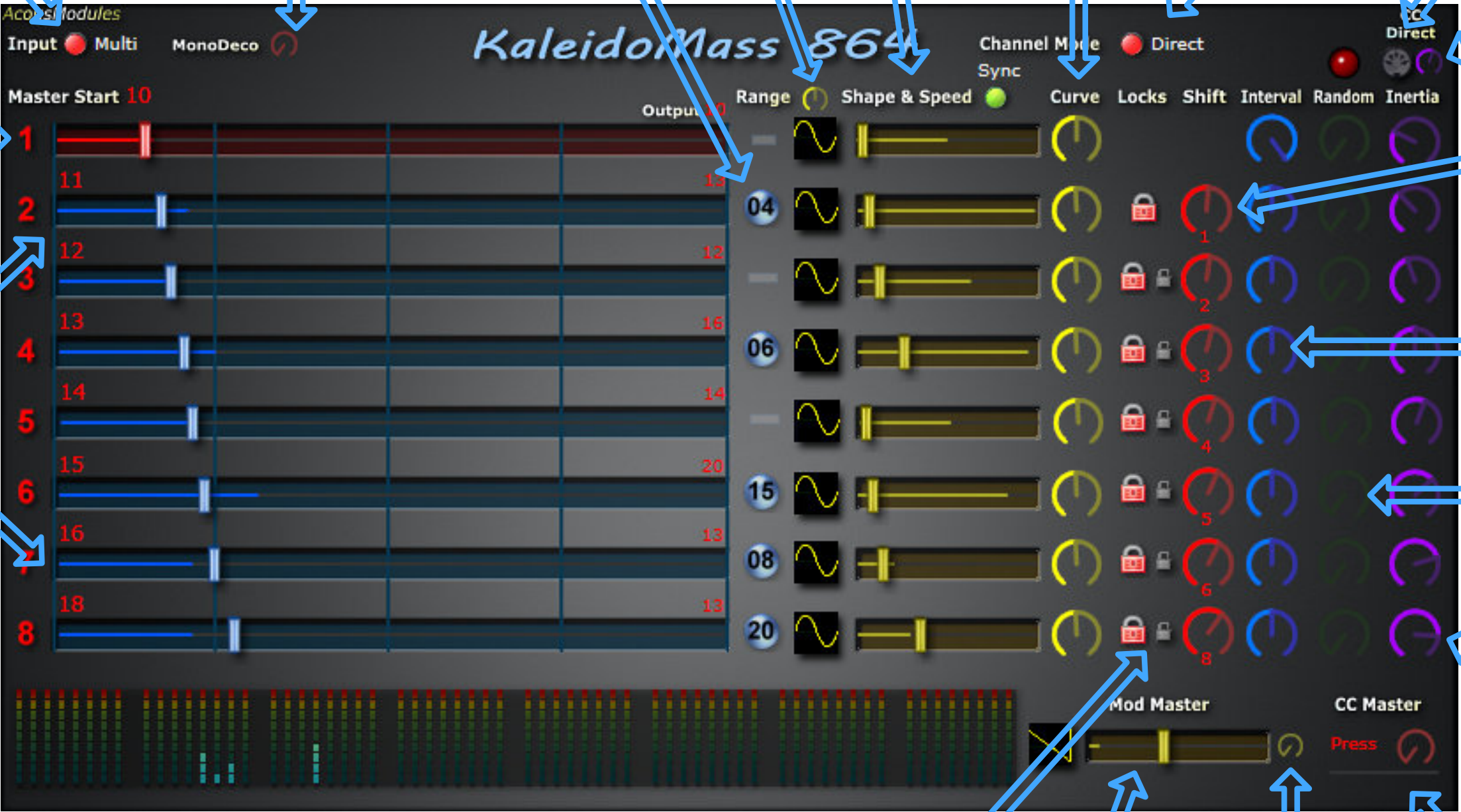animate the selection among 64 outputs of up to eight inputs according to independent or linked LFO modulators

Spatial Modulators for each input channel:
controls the output position inside the selected Range Waveform and Rate settings

time decorelation for Mono mode

Square waveform ratio

Waveform shaping from very progressive to very fast

Direct: the sound is sent to discrete channels
Panner: the sound is panned between adjacent channels (good for slow movements but uses more CPU)

Mono input: the 1st channel is duplicated on the 8 chains
Multi input: use the first 8 channels

number of outputs to be used from the 1st selected one

activate the direct control of position channels 1 to 8 with the corresponding MIDI CC numbers

overall Inertia

1st channel start position:
the cursor give the base position the line shows the actual position according to the Channel Modulator and the Master Modulator values

when locked, shifts the Start position from -32 to +32 values

other channels start position

shifts the modulated position around the Start cursor (mid position means no change)

adds a random value to the current position

modulation smoothing

big padlock: lock the Start position to the Master
small padlock: lock (add) to the previous channel
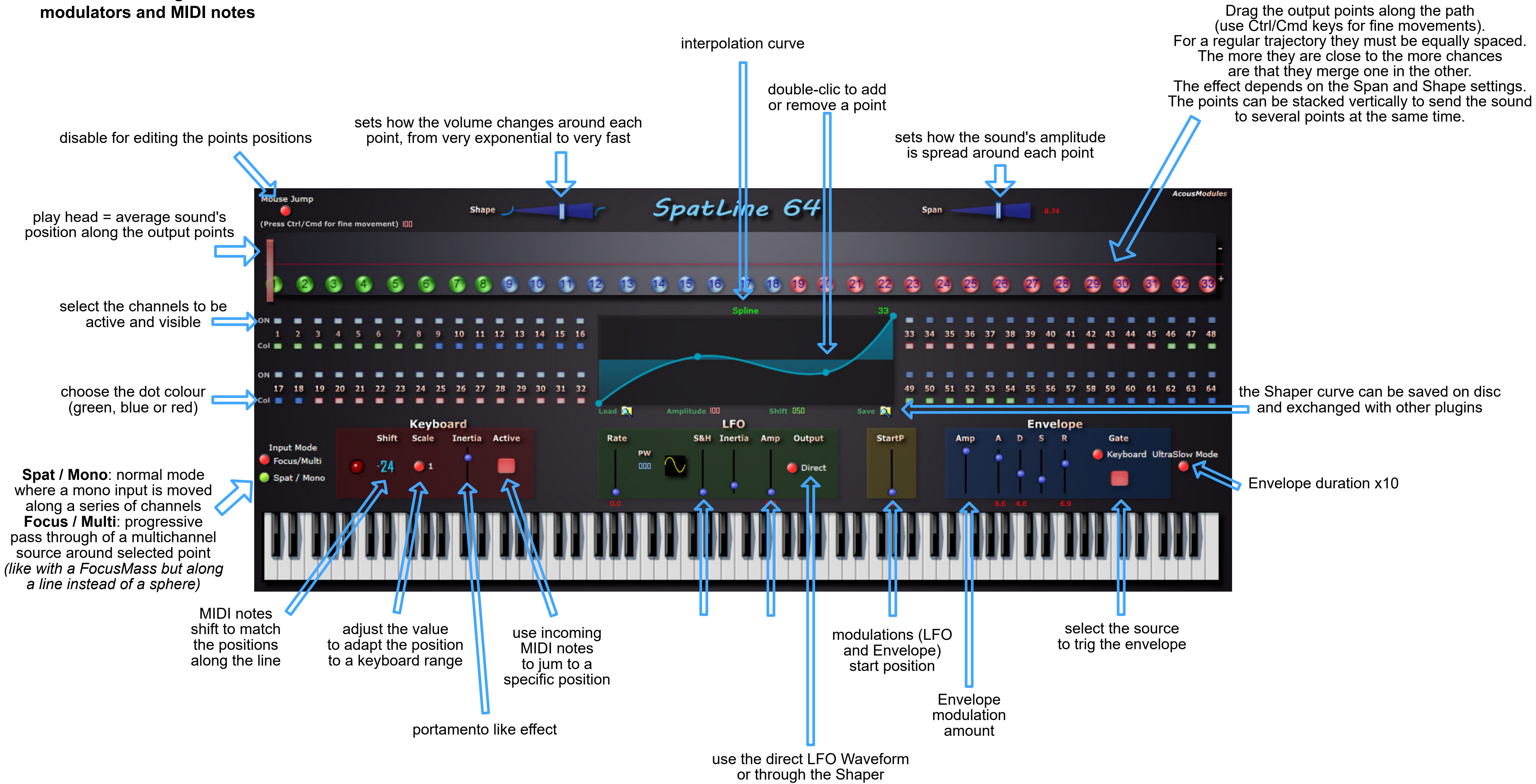
Master Modulator Waveform and Rate

Master Modulator modulation amount

select the MIDI CC and its amount to control the Master position

SpatLine 64

purpose:
animate the position and the spread of a mono sound along a virtual line comprising up to 64 channels according to various modulators and MIDI notes

interpolation curve

double-clic to add or remove a point

Drag the output points along the path (use Ctrl/Cmd keys for fine movements). For a regular trajectory they must be equally spaced. The more they are close to the more chances are that they merge one in the other. The effect depends on the Span and Shape settings. The points can be stacked vertically to send the sound to several points at the same time.

sets how the volume changes around each point, from very exponential to very fast

sets how the sound's amplitude is spread around each point

disable for editing the points positions

play head = average sound's position along the output points

select the channels to be active and visible

choose the dot colour (green, blue or red)

Spat / Mono: normal mode where a mono input is moved along a series of channels
Focus / Multi: progressive pass through of a multichannel source around selected point
(like with a FocusMass but along a line instead of a sphere)

the Shaper curve can be saved on disc and exchanged with other plugins

MIDI notes shift to match the positions along the line

adjust the value to adapt the position to a keyboard range

use incoming MIDI notes to jum to a specific position

modulations (LFO and Envelope) start position

select the source to trig the envelope

Envelope duration x10

Envelope modulation amount

portamento like effect

use the direct LFO Waveform or through the Shaper

SpatSteps3D 36 & 64

purpose:
animate the position of a mono input along a series of discrete steps whose spatial organization can be transformed and triggered through various methods

see page 3

actual position of the sound along the path

the red dots represent the points that constitute the path

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

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

show the path points

jump the sound along the steps and default Start position

A/R Envelope:
(each press restart the Path at its current value)
- Steps: envelope amplitude in number of steps
- Curve: from very slow to very fast
- Direction: steps forward or backward

use a LFO to go through the Path with the usual parameters:
- Steps: LFO amplitude in number of steps
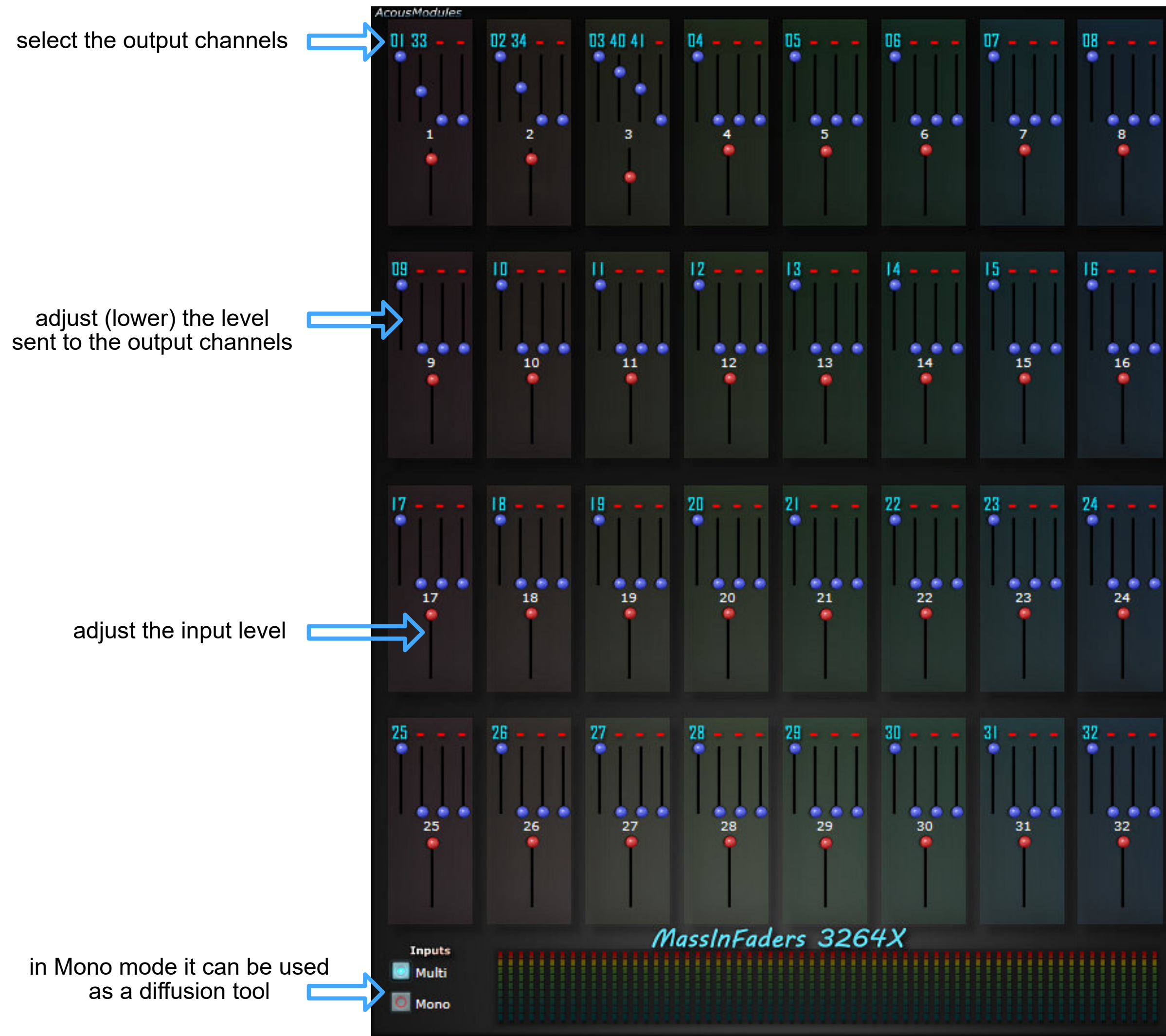- PW: Square waveform ratio

jump to the next or the previous Step according to
- the input Peaks
- the host Tempo (select the note value)
- the two buttons (can be linked to MIDI)
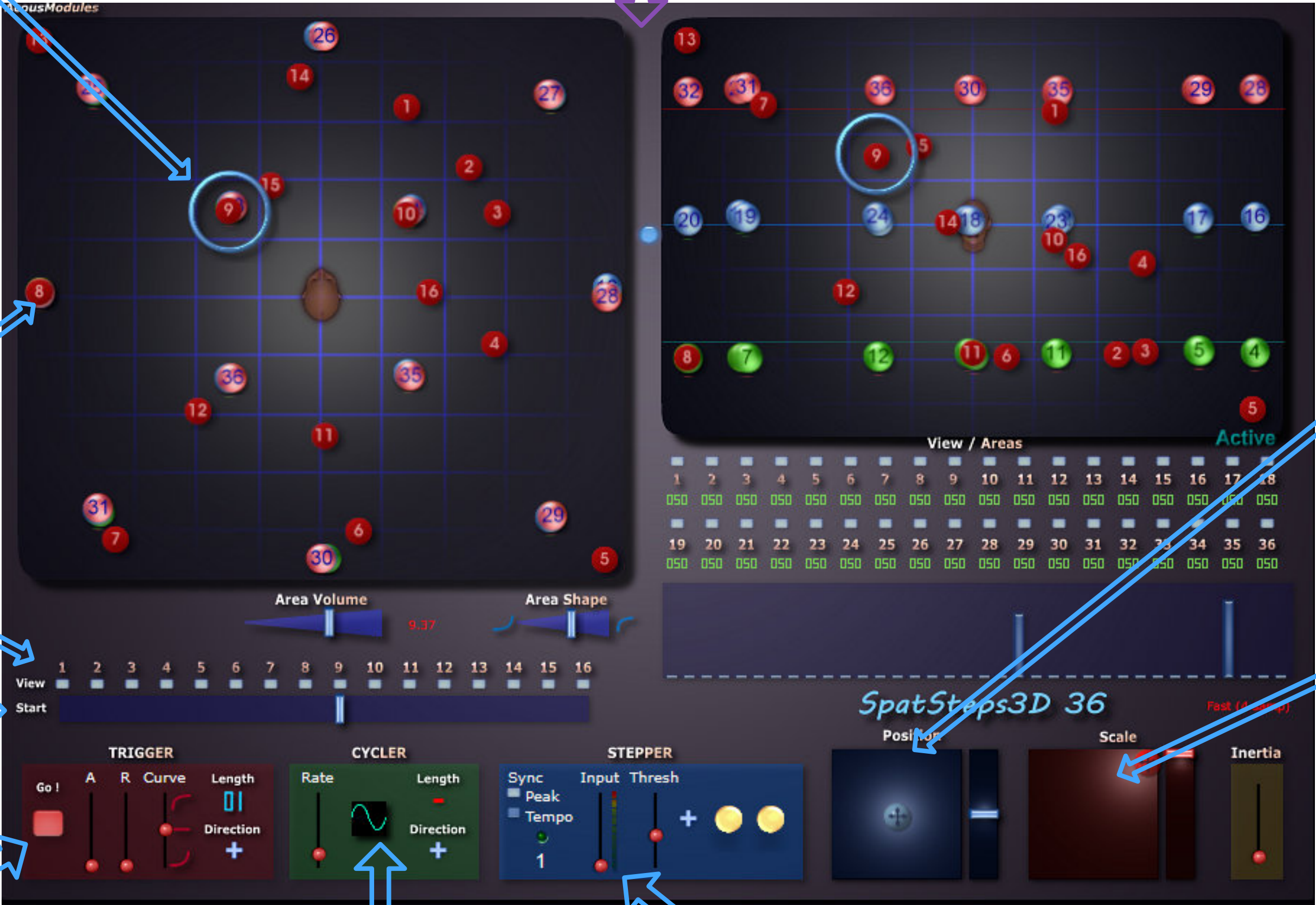
SpatPath 1664

purpose:
animate the position of a mono input along a path defined by up to 16 nodes whose spatial organization can be transformed and triggered through various methods

actual position of the sound along the path

the yellow dots represent the points the real path will follow according to the Position and Scale transformations

the red dots represent the points that constitute the path

show the path points

move the sound along the path and default Start position

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

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

use the Input peaks level to go through the Path

A/R Envelope:
(each press restart the Path at its current value)
- Steps: envelope amplitude in number of steps
- Curve: from very slow to very fast
- Direction: steps forward or backward

use a LFO to go through the Path with the usual parameters
- Steps: LFO amplitude in number of steps
- PW: Square waveform ratio
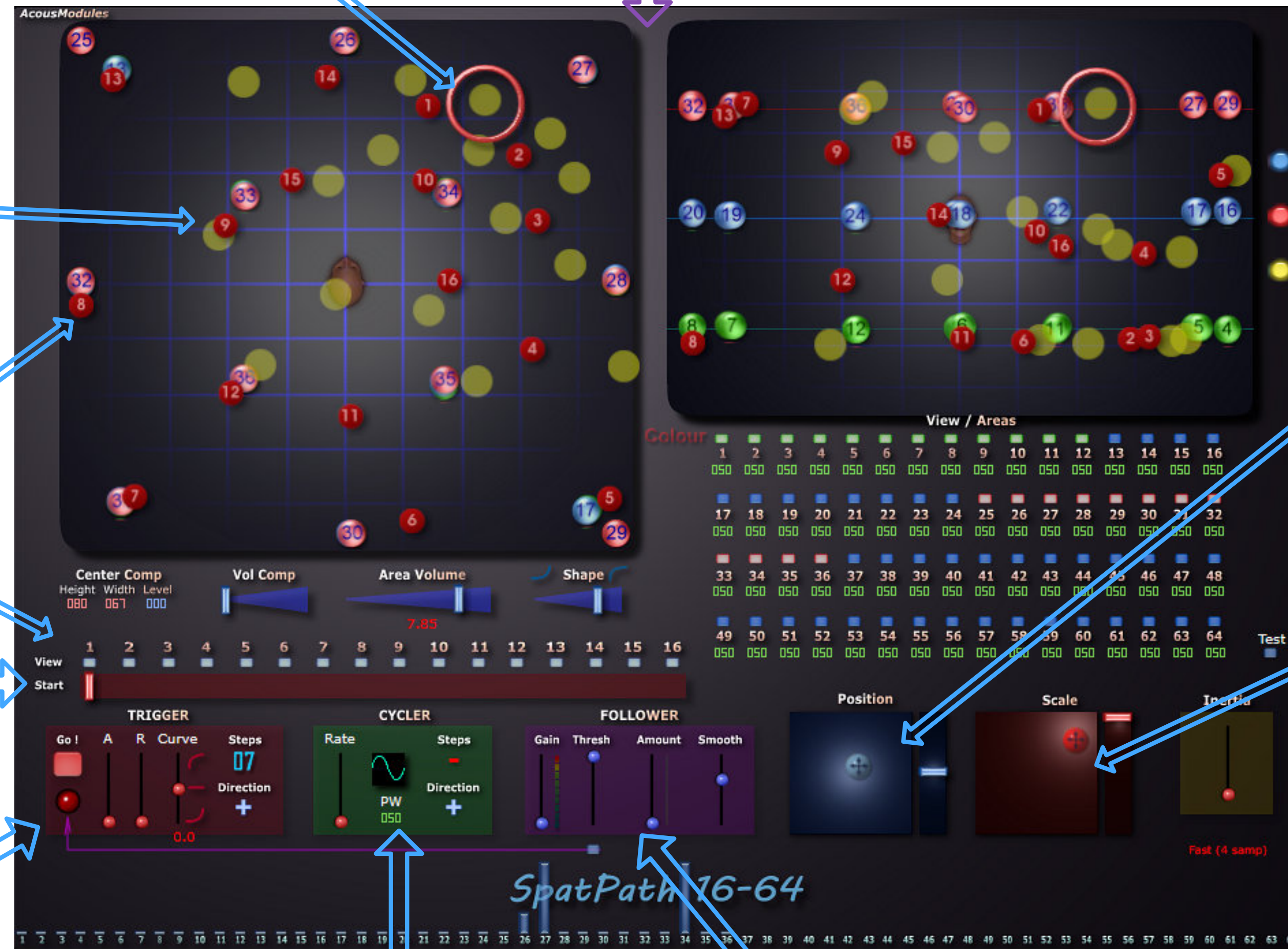
"levels" series

they process the space at an elementary level ...

MassInFaders 3264

**purpose:
distribute amplitude of
up to 32 inputs on series
of up to 4 outputs
among 64 with level
control**

select the output channels

adjust (lower) the level
sent to the output channels

**please note that there is (currently)
no indication of the level in dB:
it work only by the ears!**

adjust the input level

in Mono mode it can be used
as a diffusion tool

MassInFaders 3264X

Inputs
Multi
Mono

purpose:
animate the selection of an output among 64 of a mono input according to MIDI Notes including an arpeggiator, the "movements in space" can be recorded and edited as a traditional MIDI notes sequence

SpatKeys 64

MIDI Note selection for each output channel, the same note can be used for several outputs

the notes Velocity can control the envelope amplitude and Time

activate the Arpeggiator

amplitude envelope

Arpeggiator Rate and notes Length

envelope ADR time control, "0" means no change

select the MIDI message to control the Time + amount

select the MIDI message to control the Rate + amount

octave shift

Transposition (in semi-tones) select the MIDI message to control the Transposition + amount

Arpeggiator mode 1:
follows the order of the played notes or use the next Pattern
Pattern: Random / Up / Down / number of octaves shifting

SpatKeys 64

1 C 1	17 E 2	33 G#3	49 C#5
2 C#1	18 F 2	34 A 3	50 D 5
3 D 1	19 F#2	35 A#3	51 D#5
4 D#1	20 G 2	36 B 3	52 E 5
5 E 1	21 G#2	37 C 4	53 F 5
6 F 1	22 A 2	38 C#4	54 F#5
7 F#1	23 A#2	39 D 4	55 G 5
8 G 1	24 B 2	40 D#4	56 G#5
9 G#1	25 C 3	41 E 4	57 A 5
10 A 1	26 C#3	42 F 4	58 A#5
11 A#1	27 D 3	43 G 4	59 B 5
12 B 1	28 D#3	44 G#4	60 C 6
13 C 2	29 E 3	45 A 4	61 C#6
14 C#2	30 F 3	46 A#4	62 D 6
15 D 2	31 F#3	47 B 4	63 D#6
16 D#2	32 G 3	48 C 5	64 E 6

Envelope
Time X A D S R VAmp VTime

Arpeggiator
Trans Play/Pattern Rate Length
Random
1

Press

Pedal   CC74

Octave

SpatTouch A & C

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

purpose:
animate the amplitude of up to 64 inputs on up to 64 outputs according to the pressure carried out on a tactile control surface

maximum values of the incoming message, they are automatically rescaled to the full control range

number of inputs, better "1" or "64", other values are more or less evenly distributed
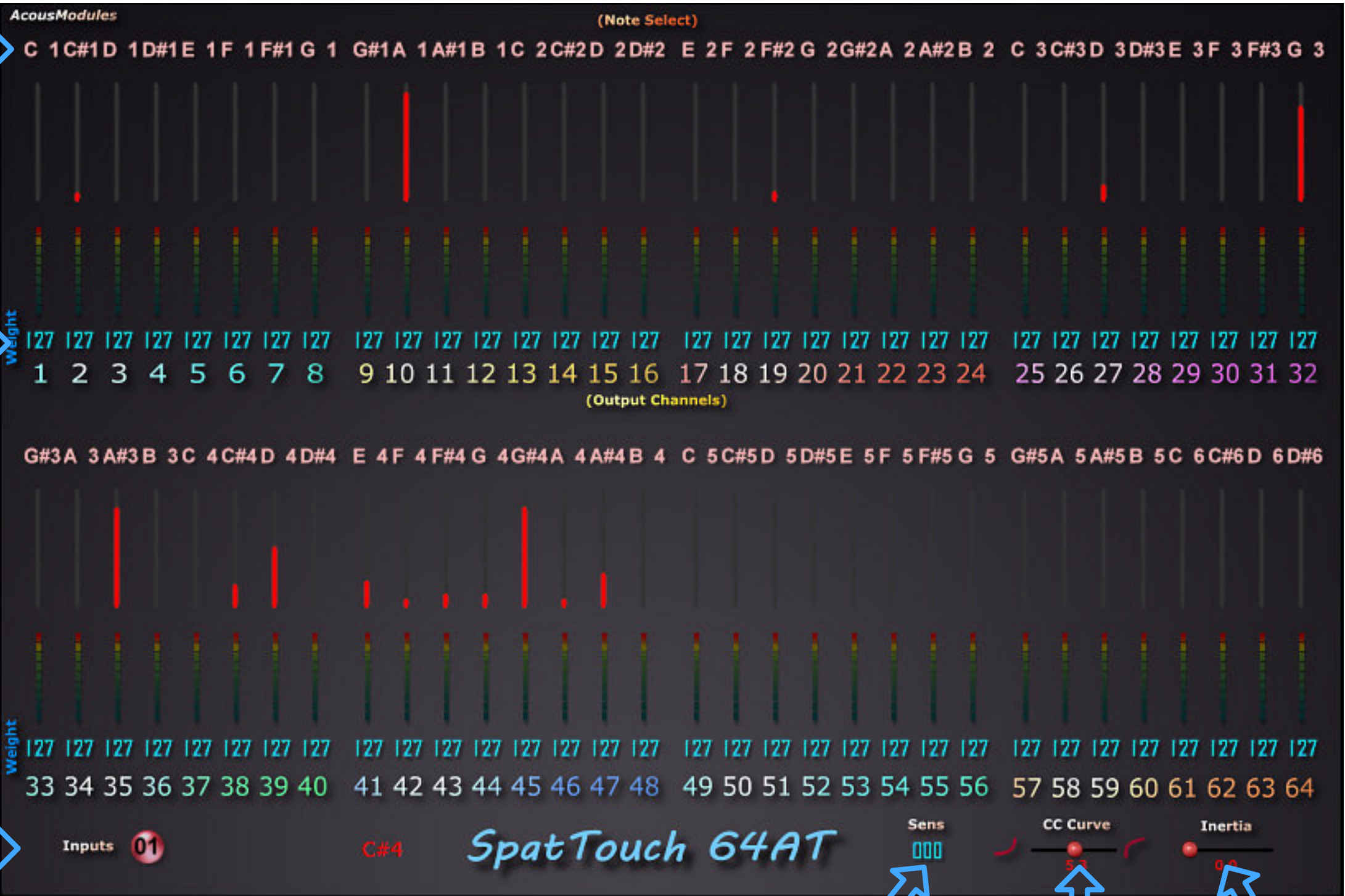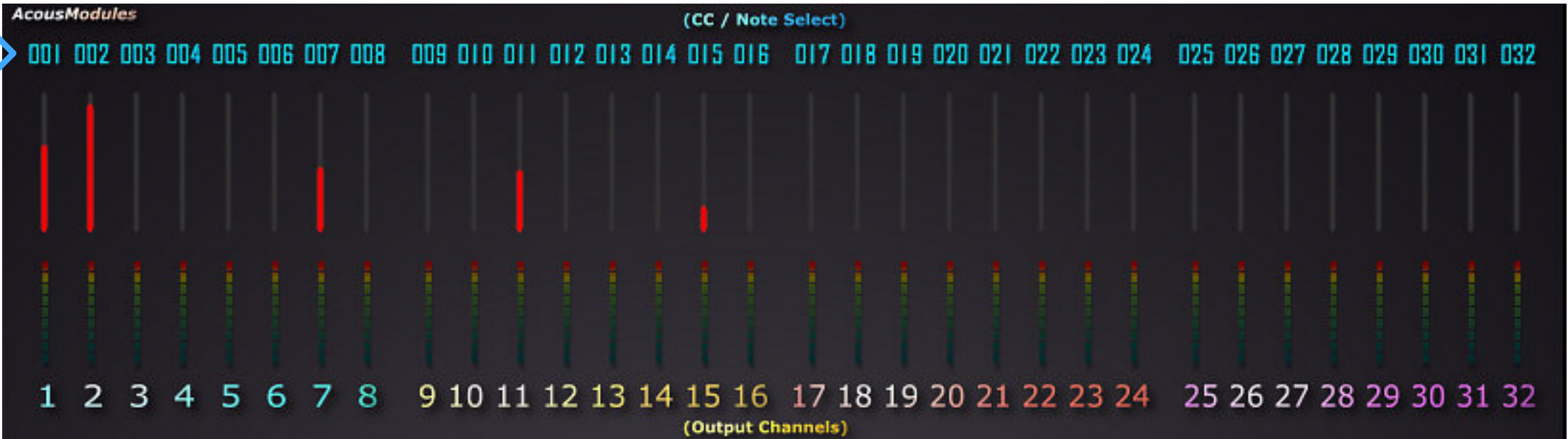
minimum values of the incoming message, they are automatically rescaled to the full control range

controller smoothing and slow motions

Poly Aftertouch or CC messages shaping, from very progressive to very fast

MIDI CC selection for each output channel

others

well ...

FocusMass 36 & 64

purpose:
**change and animate the amplitude of an up to 64 channels sound or space according to the size and shape of a spherical area**

center position of the "focus" area, its size determines the spatial range of the amplitude variations

"+" = maximum amplitude in the center of the Focus sphere and silence outside
"-" = produces the contrary (silence at the center of the sphere)

how the amplitude is distributed between the center and the circumference of the focus sphere

percentage of the output amplitude compensation for periphonic spaces
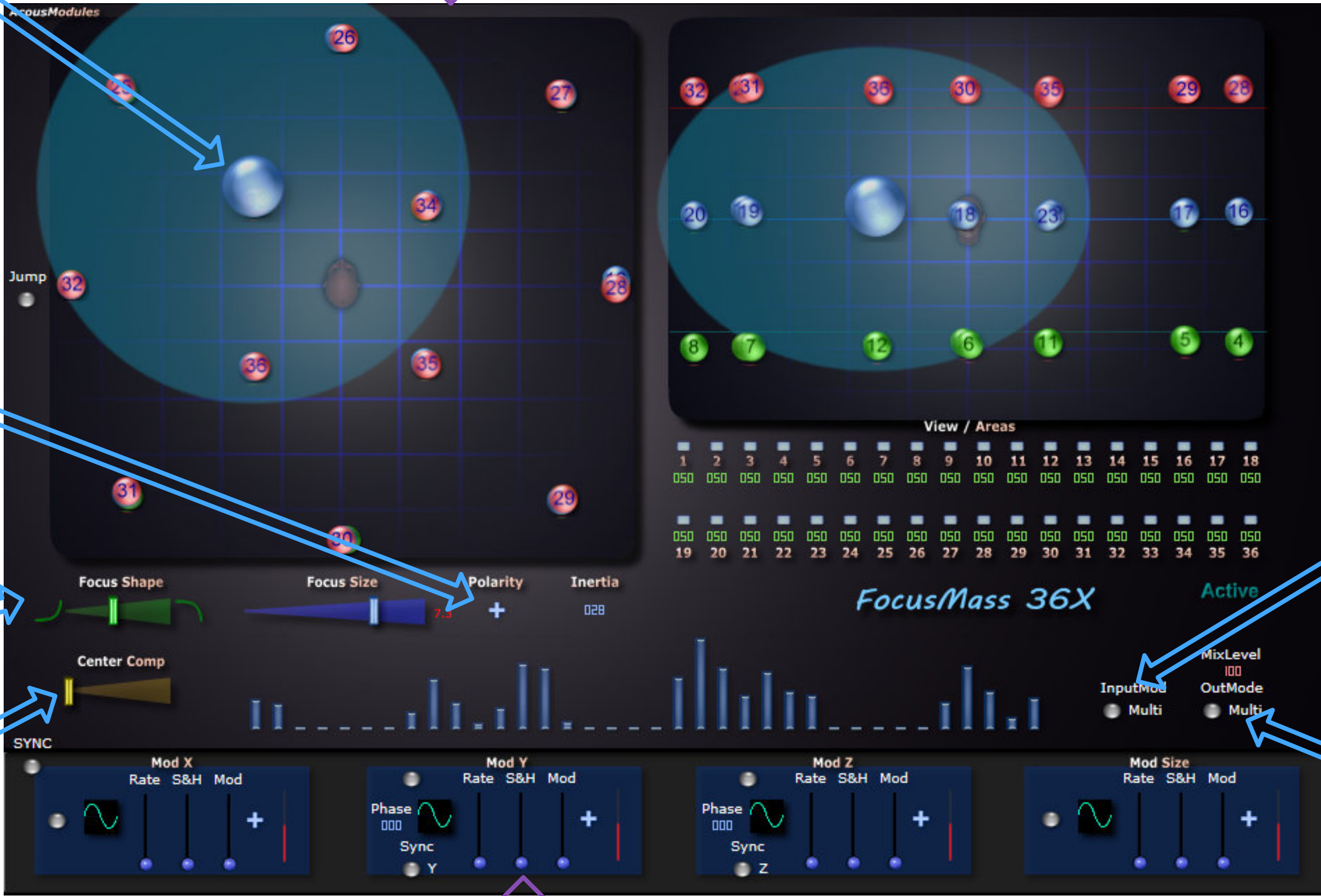
normal mode "Multi", but can be used like a spatialization tool with a mono Input

normal mode "Multi", but can be used like a "mixing" tool with a mono Output

FocusModules

Jump

26
25
27
34
32
28
32
31
35
30
35
29
28
20 19 18 23 17 16
8 7 12 6 11 5 4
31
30
29
36
35

View / Areas

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050

Focus Shape   Focus Size   Polarity   Inertia
+   028

Center Comp

FocusMass 36X   Active

MixLevel
100
InputMod   OutMode
Multi   Multi

SYNC

Mod X	Mod Y	Mod Z	Mod Size
Rate S&H Mod	Rate S&H Mod	Rate S&H Mod	Rate S&H Mod

Phase
000
Sync
Y

Phase
000
Sync
Z

SpaceXplorer 328 & 3216

moves all the balls at once

the small dots represent the inputs,
they can be placed arbitrary

see page 3

the numbered balls represent
the "microphones" that are
sent to the plugin's outputs

see page 4

see page 5

purpose:
select/mix up to 32 inputs
into a 8 or 16 channels
spatial shape according to
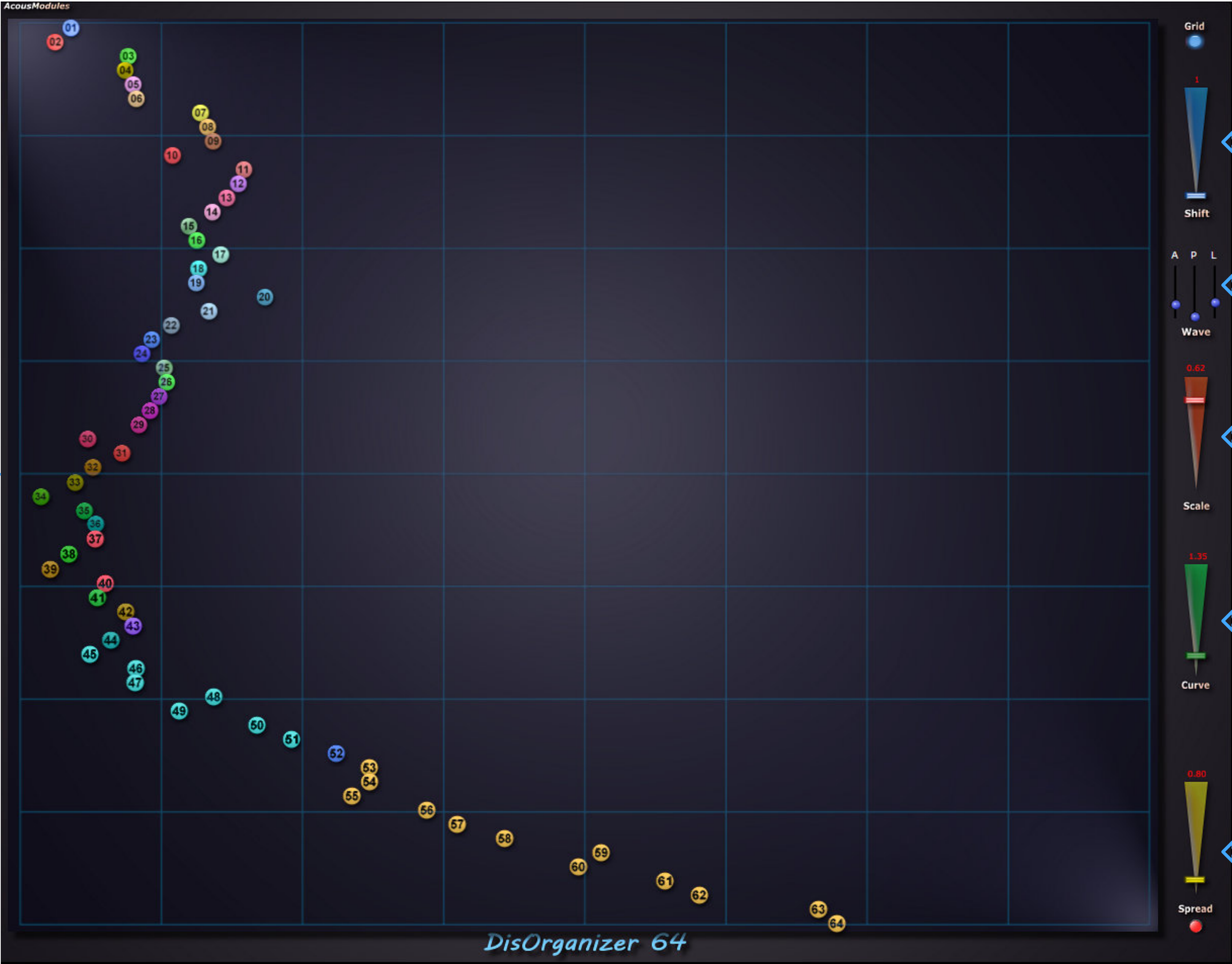**their spatial organization**
and movements

DisOrganizer

AcousModules
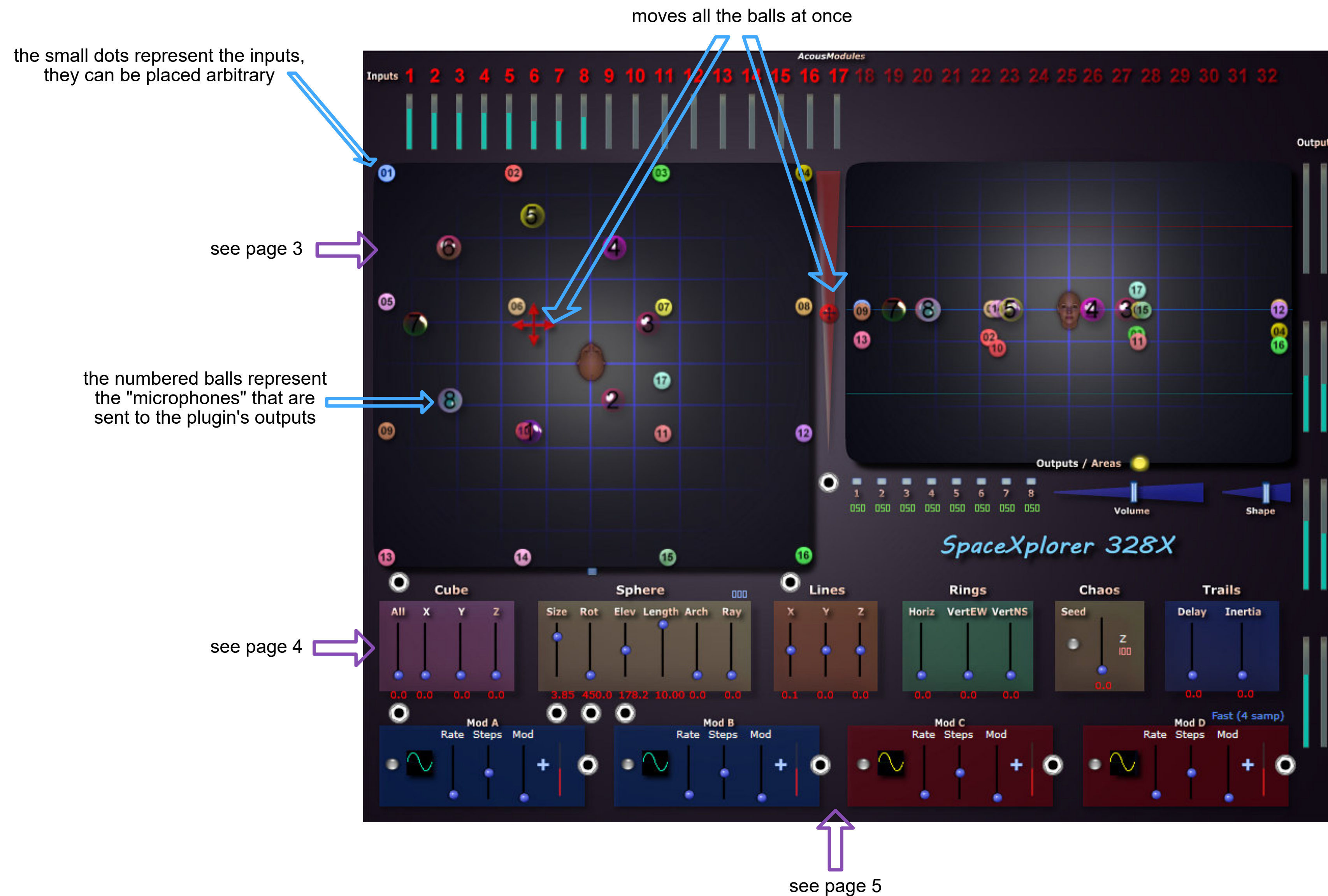
purpose:
change globally the channels mapping of up to 64 inputs into 64 outputs according a few and simple transformation macros

visualization of the channels mapping

DisOrganizer 64

Grid

move all the channels forward

Shift

A P L

the position follow a free curve:
A = amplitude
P = phase
L = level

Wave

0.62

compress or extend the output channels values

Scale

1.35

scaling curve, from very progressive to very fast

Curve

0.80

random output channel

Spread

ScaleLine 1864 & 6418

(see also the ScaleLine 64 in the Utilities section)

purpose:
distribute a series of inputs along a virtual line by means of compression, expansion and organization global commands

sets how the volume changes around each point, from very exponential to very fast

sets how the sound's amplitude is spread around each point
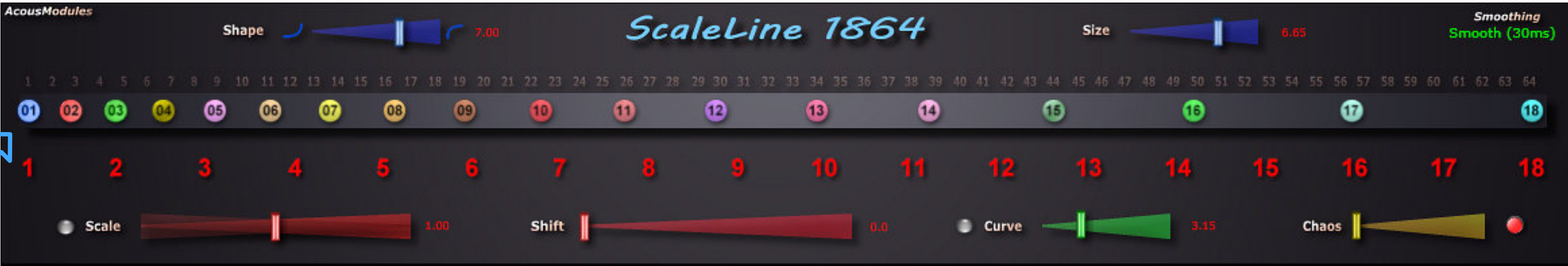
Drag the Input points along the path
(use Ctrl/Cmd keys for fine movements).
The grey numbers indicate the Outputs.
The more they are close to the more chances
are that they merge one in the other.
The effect depends on the Size and Shape settings.
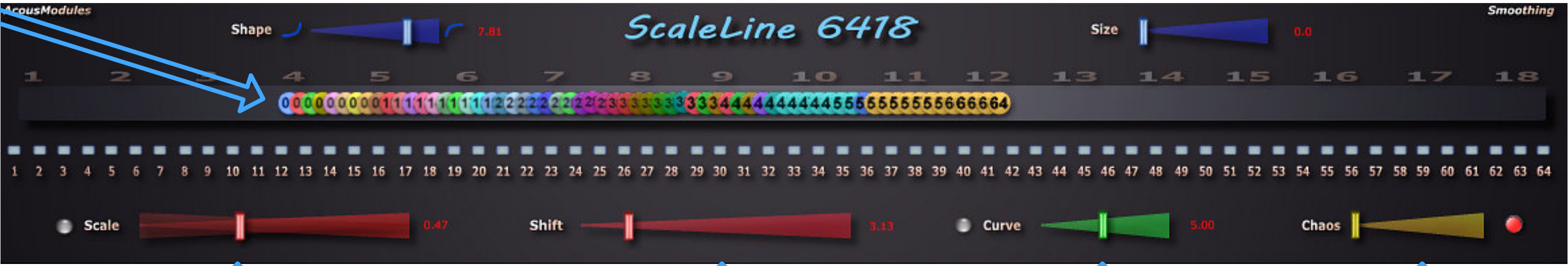
compress, expand or invert the Inputs positions

move all the Inputs (linear)

apply a slow/fast shape along the positions (they become non linear)

random Input positions

SpaceRotator

compatible spatial layouts:
one or two circles/squares on 1 to 4 levels,
larger one from 6 to 12 channels

sets how the volume changes around each
point, from very exponential to very fast

select the
number of channels
from 6 to 12
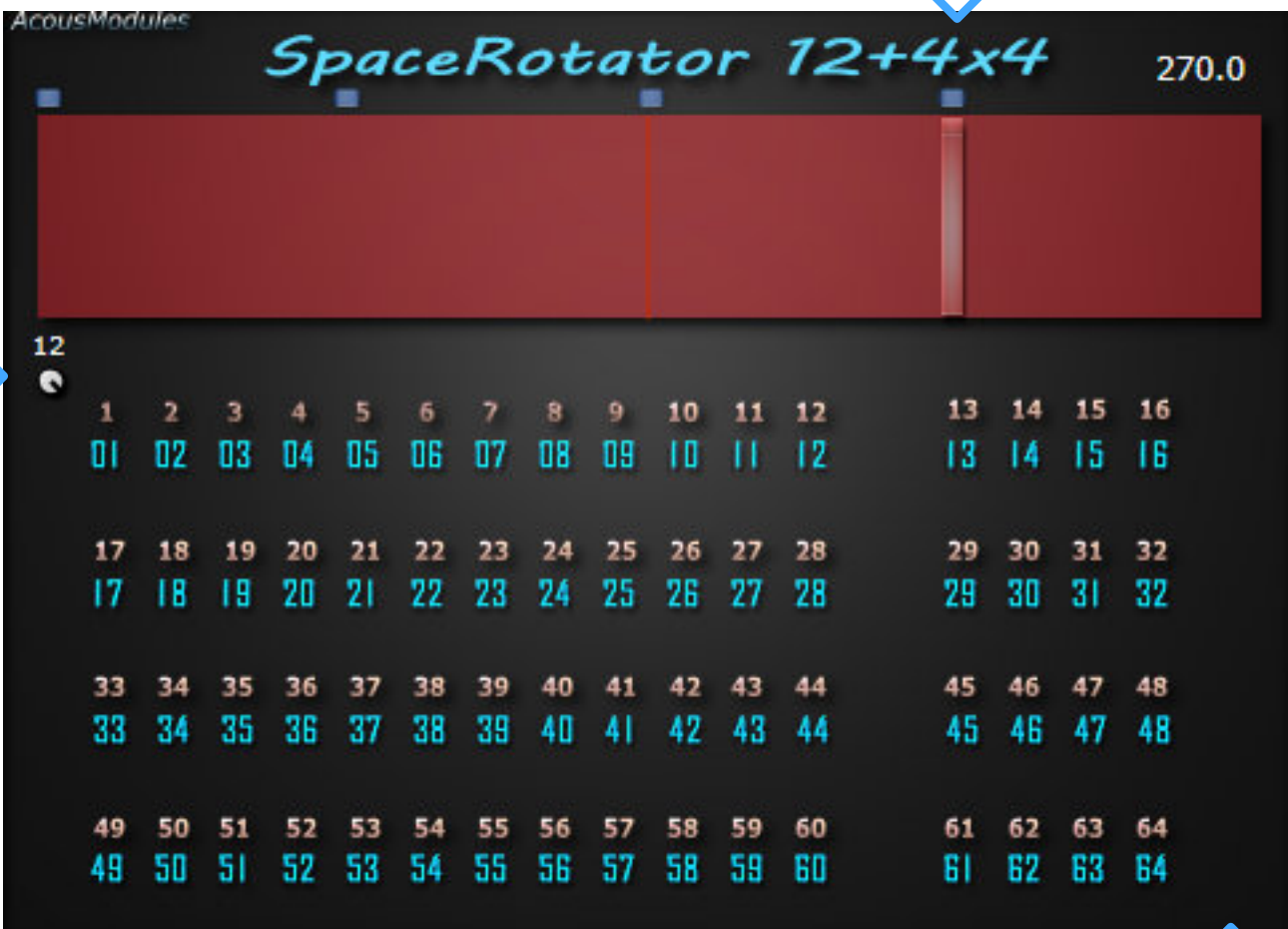
channels mapping,
for both Inputs and Outputs

purpose:
rotate or shift an entire space of
up to 64 channels who must
respect some organizational
constraints of the tridimensional
loudspeakers space (must be
symmetrical)

SpaceShifter

compatible spatial layouts:
up to 4 raws in 4 layers

shifts (compress) all the inputs from
one side to the other one
or bottom to top according to
the speakers channels mapping

select the number of channels
on each row from 2 to 4
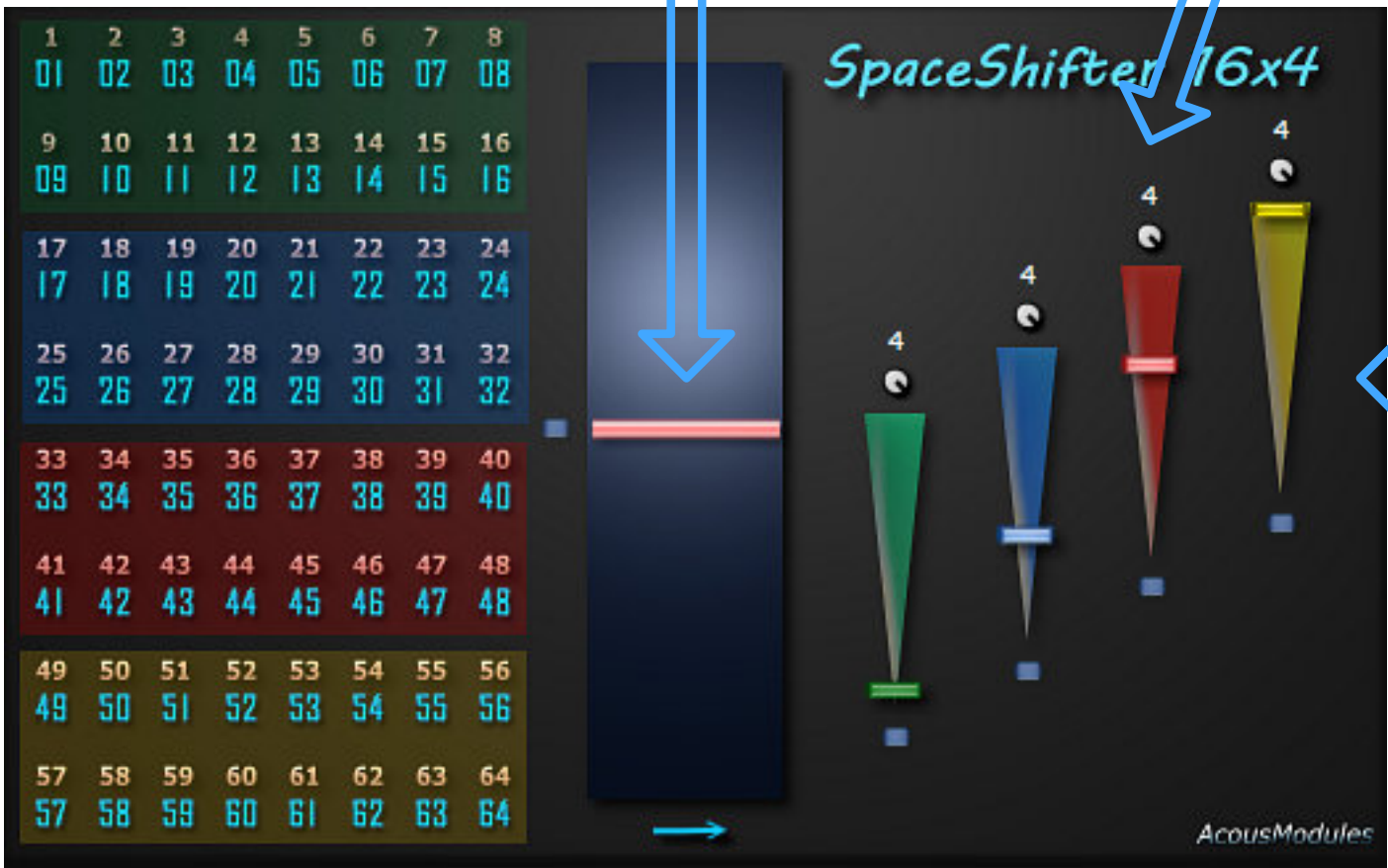
vertical shifting of each Layer

SpaceScaler 64

the green, blue and red dots
represent the points
of the "real" Shape
according to the Shift
and Scale transformations
of the original ones

the numbered squares
represent the speakers
positions on each Layer

the small numbered
dots represent the
Shape that has to be
set manually, one by one
for each Layer

AcousModules

(Press Ctrl/Cmd for precise position)

see page 3

select the Inputs

output Areas fine setting

select the Outputs

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Areas L1   Master Shift   Areas L2   Master Scale   Areas L3   Preset

3.38   5.30   x1   4.48   None

Patch   Shift   Scale   Shift   Scale   Shift   Scale

show the Patch screen
to connect the physical
Inputs and Outputs to
the Layers objects

see next page

horizontal shift of the original
Shape for the current Layer,
the resulting one is given
by the coloured dots

horizontal scaling
of the original Shape
for the current Layer,
bottom/left reverses the Shape

shift all the points
on the three Layers

scale all the points
on the three Layers,
x2 allows to push
them aside

purpose:
change the scale and the position
of up to 24 inputs freely
distributed in up to 3 height layers

connect the plugin's Inputs to the Layers Inputs   connect the Layers Outputs to the plugin's Outputs
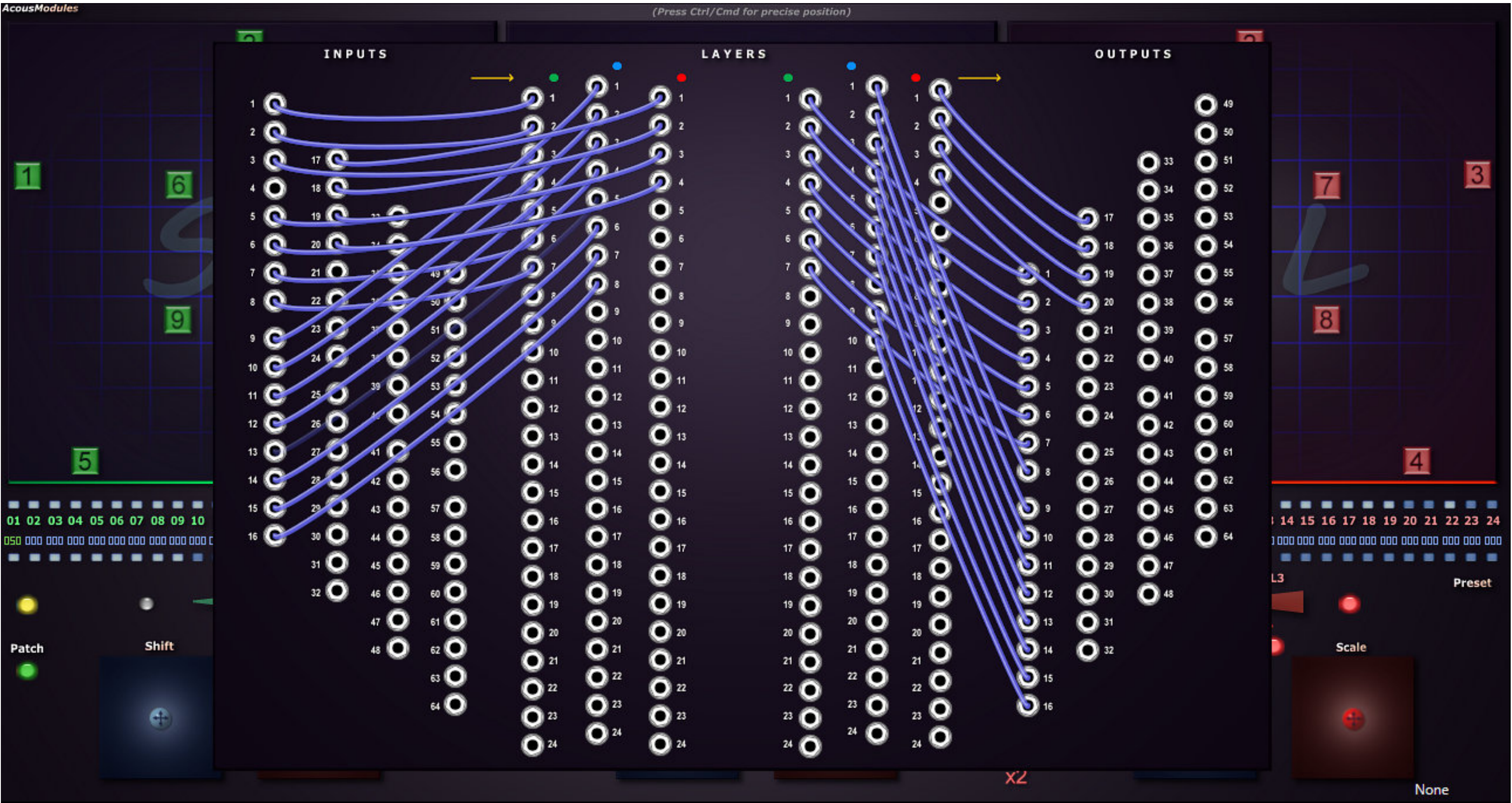
spatial microphones

variations on the SpatMass plugin dedicated to multichannel microphones

TetraMass 464

purpose:
place and transform a 4 channels sound organized as a tetrahedron commonly found in "1st order ambisonics" microphones inside an up to 64 channels tridimensional loudspeakers space;
works best for close up recordings!

see page 3

Import/Export a spatial configuration in .am64 file format

Tetra = normal mode
3.1 = pyramid based

distance between the 4 channels

horizontal rotation (azimut)

special vertical foldback effect

vertical scaling

move the 4 channels' sound in the horizontal plane and the elevation

delay when moving between the positions of input channels and smoothing

random position amount

OctoMass 864

purpose:
place and transform an 8 channels sound organized as a shape found in "2nd order ambisonics" microphones inside an up to 64 channels tridimensional loudspeakers space

bass boost

variable phase shifting to enhance the spatial impression ...

distance between the 8 channels

horizontal rotation (azimut)

horizontal and vertical scaling

special vertical foldback effect

Up or Side microphone orientation

choose between SpatialMic and Octomic capsules arrangement

OctoMorph 64

purpose:
place and transform an 8 channels
sound organized as basic shapes
including from "2nd order
ambisonics" microphones inside
an up to 64 channels
tridimensional loudspeakers space

AcousModules

View / Areas

Active

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

View

| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |

| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |

Smoothing
Fast (4 samp)

Area Volume   7.96

Linear

3D Position   ZFull   Height   Scatter   Delay   Inertia   Chaos   Z

-0.1

0.0   0.0   0.0

OctoMorph 64

special sound parameters
for the 8 channels
microphones

microphone orientation

S-Mic Up   Up

variable phase shifting
to enhance the spatial
impression ...

M   Mic FX
Wideness Focus Bass

bass boost

Size & Shape

Cube   SpatialMic
X Y Z Ring LineX LineY LineZ   Size Angle H Scale V Scale Folding

4.03 27 2.70 10.00 0.0

special shape parameters
according to 8 channels
microphones such as the
Voyage Audio SpatialMic
and the Octomic

2D shapes morphing

click on the small
buttons to jump
to the shape

simplified version
of the mass shapes
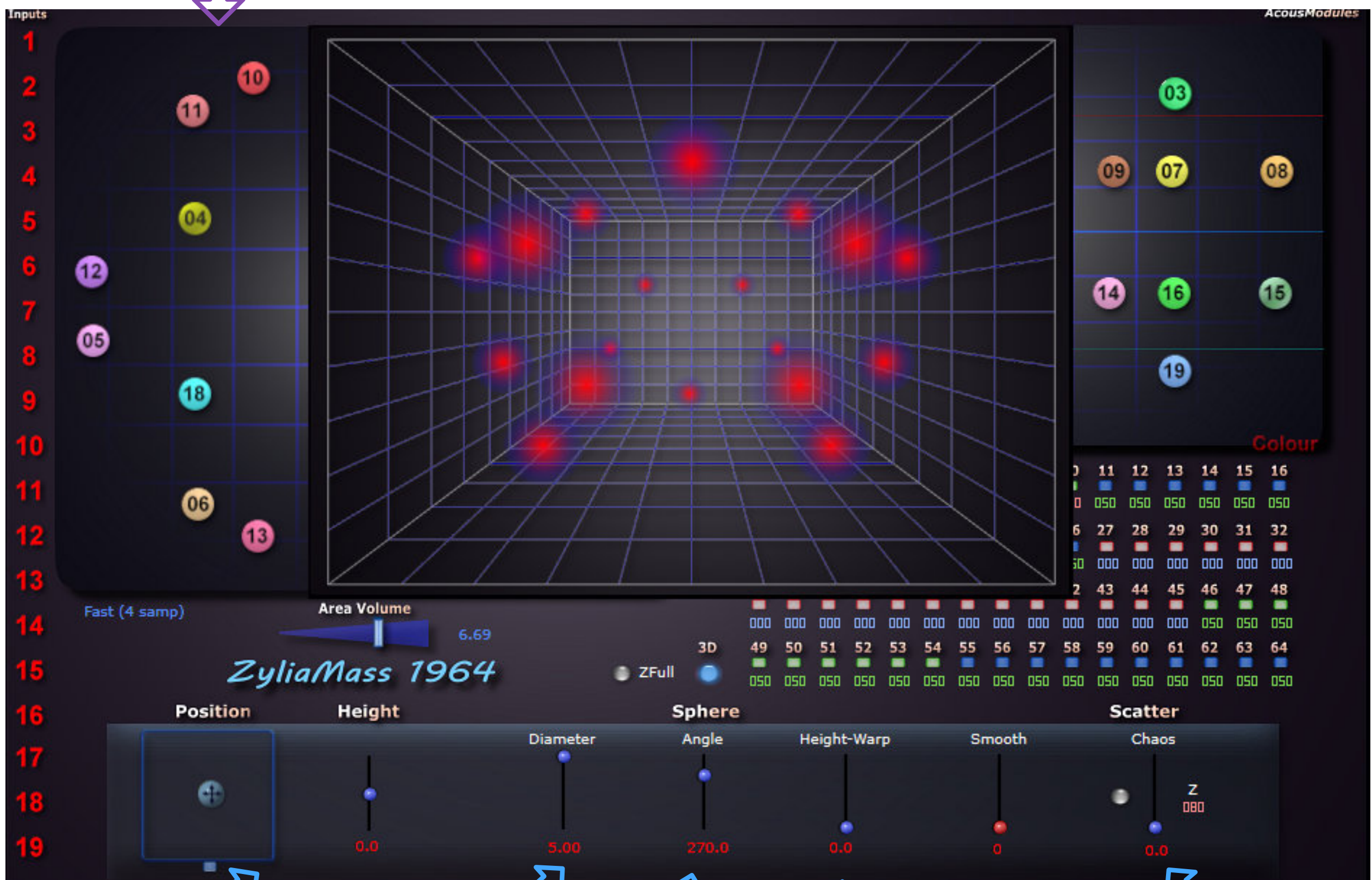
ZyliaMass 1964

purpose:
place and transform a 19 channels sound according to the spatial organization of the Zylia microphone inside an up to 64 channels tridimensional loudspeakers space;
works best for close up recordings!

see page 3

move the 4 channels' sound in the horizontal plane and the elevation

distance between the 19 channels

horizontal rotation (azimut)

special vertical foldback effect

delay when moving between the positions of input channels