Acousmodules

Synthesis Series - Fast Help

2022 / march

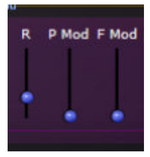
http://acousmodules.free.fr

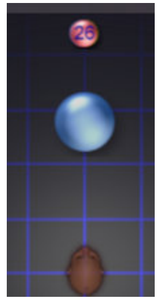
note for Mac users:
due to the delay in 3rd party compilation modules, a number of plugins are still in an older version and
will not have some features and can present a slightly different interface than those which are described in this document

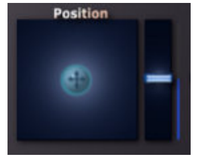
Most of the Acousmodules plugins share some common graphics and user interface elements.
Some are obvious, others are less ...
But this means that once you are familiarized with a few plugins you can become very fluent with all of them!

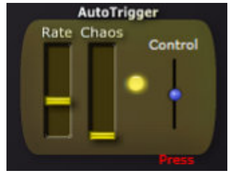
all sliders, sliding datas, XY pads:
<u>hold Ctrl/Cmd</u> while draging to get fine values

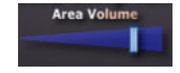
also, in general <u>Right Click to MIDI Learn</u> / UnLearn

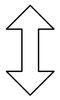




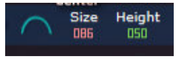


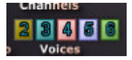




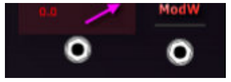


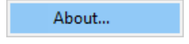
sliding datas, waveforms, curves:
<u>press and drag the mouse</u> upward/downward
to change the values





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
- <u>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"</u>



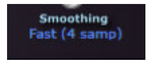


versioning: the plugins don't use versions numbers but their build date: right click on the background to show it

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.



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

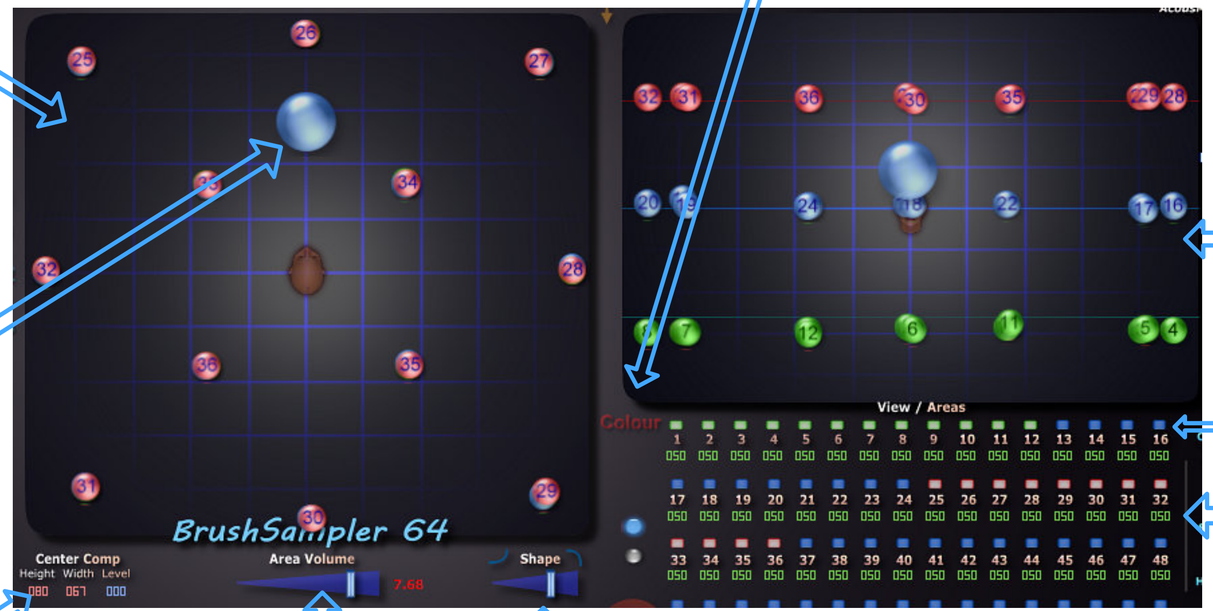
common features 1: the "3D" spatial layout

Plugins:

Aggregasynth
AnimaSynth
FocusSynth
MassSynth
MPESynth
SpatSynth
SynthXplorer
+
SpatStrument

(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 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

common features 2: the "random synth" section

Plugins:

Aggregasynth

BlenderSynth

MassSynth

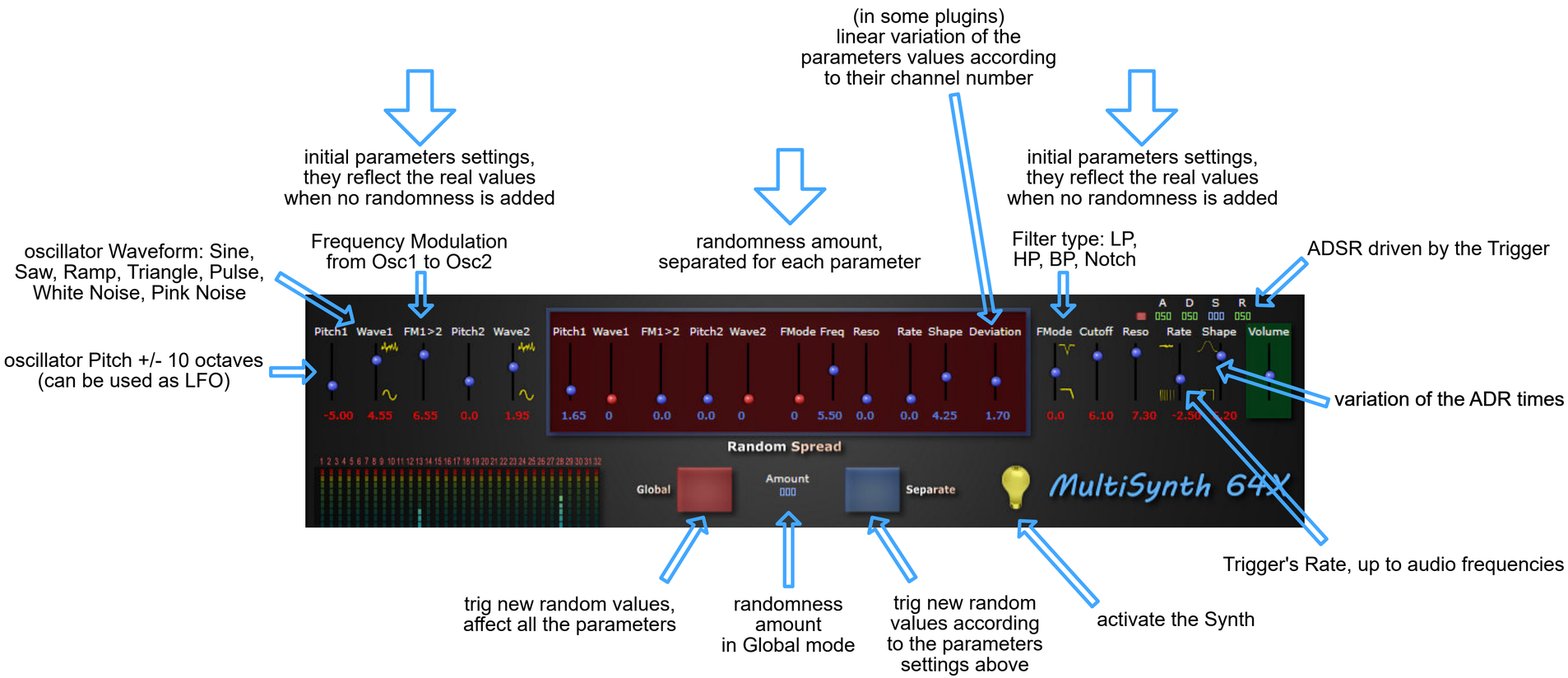
MPESynth

MultiSynth

ScatterSynth

SynthXplorer

UniSynth



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

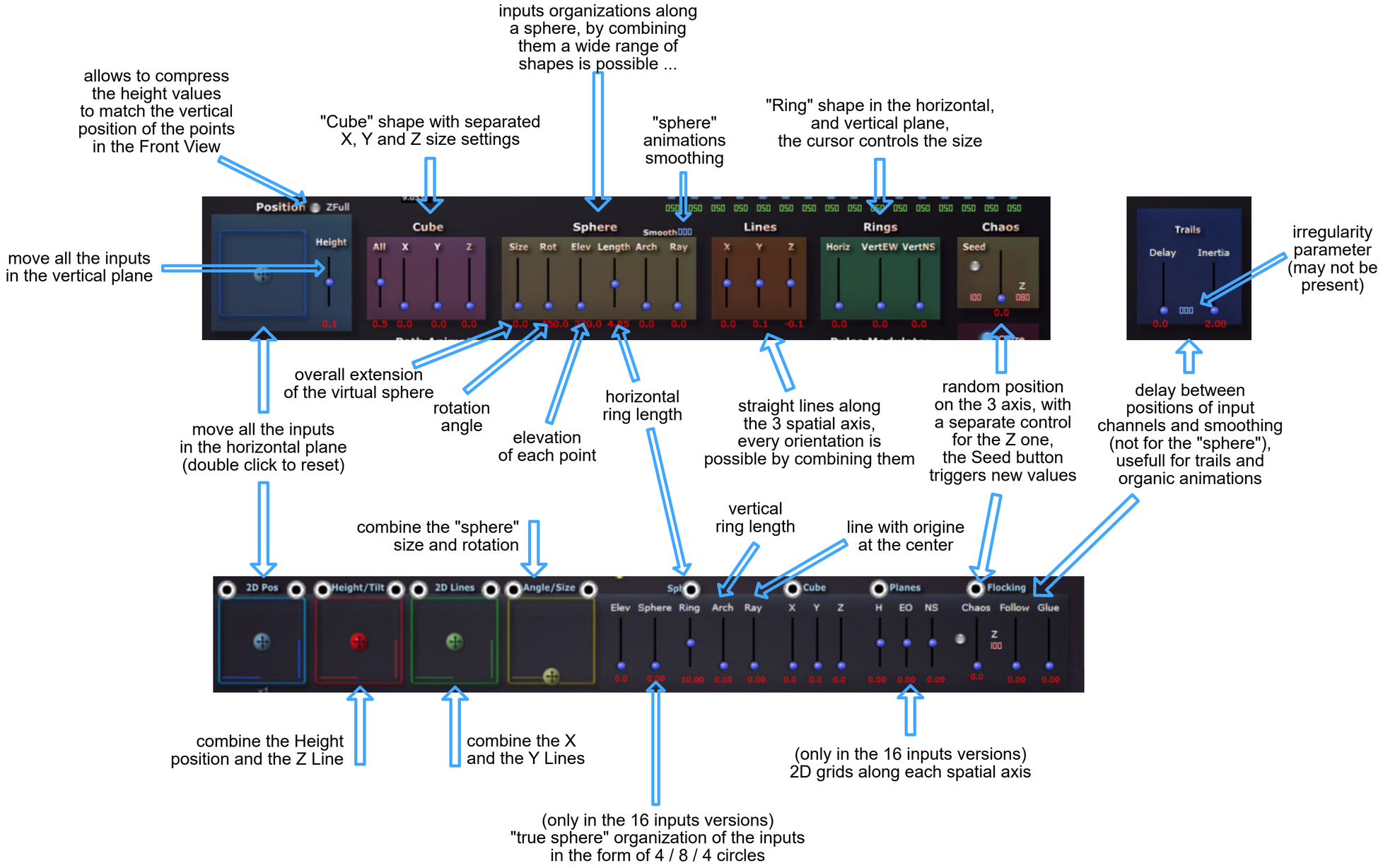
Plugins:

AggregaSynth

AnimaSynth

MassSynth

SynthXplorer



common features 4: the Delay / Resonator

Plugins:

AnimaSynth

BlenderSynth

KaleidoSynth

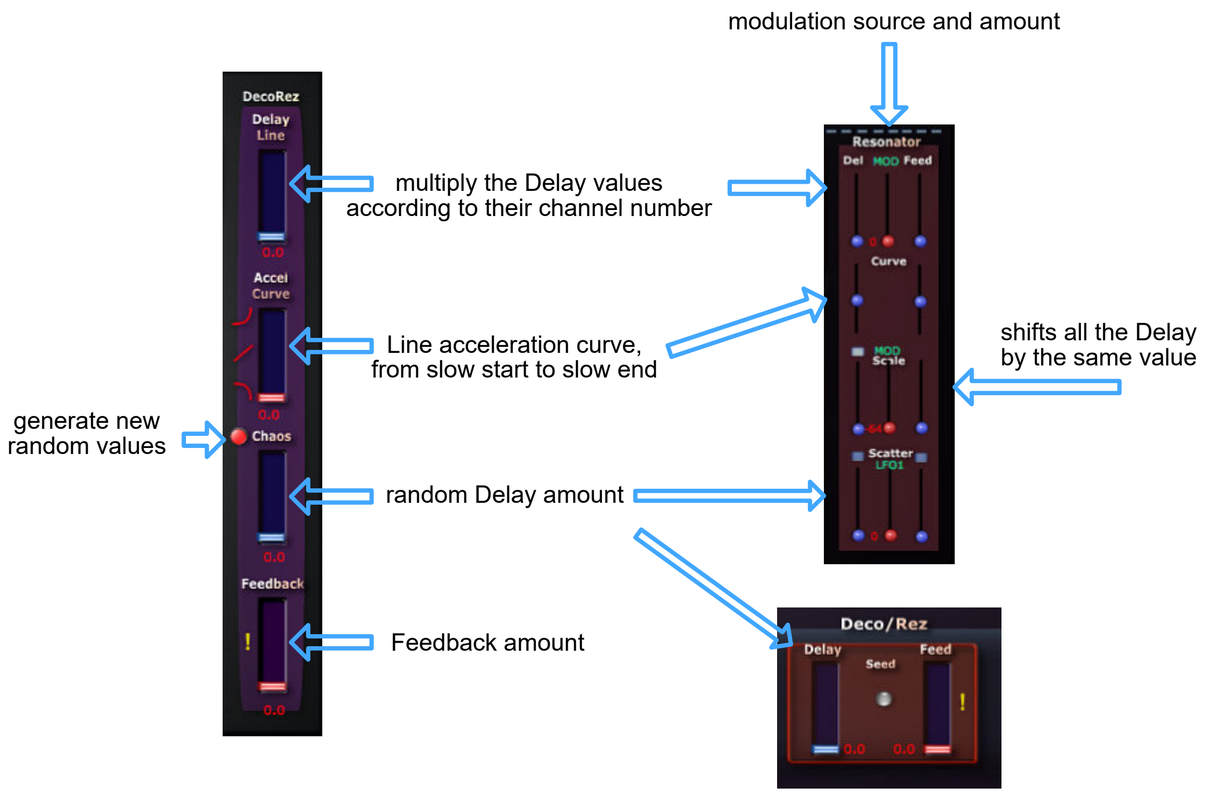
MassSynth

MultiSynth

SpatSynth

SynthXplorer

UniSynth



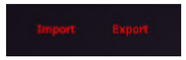
purpose: time decorelations, chorus and flanger like effects, and all sorts of multichannel harmonic trails and resonances

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.

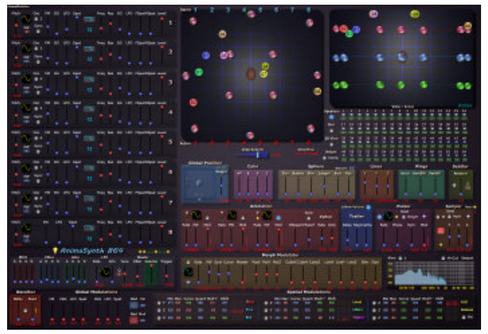
You can use the SpaceEditor 36-64 plugin (or application for Windows) to convert the files between these two formats, thus making actually 96 plugins able to exchange their spatial configurations!

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):

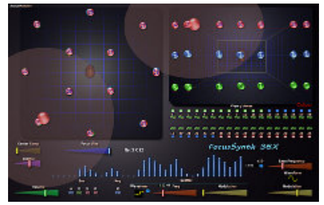
am36	am64	aml3	am3d
AggregaSynth	AnimaPlayer 864	AnimaSpat 48L	SpacedAnalyzer 64
AnimaPlayer 836	AnimaSampler 864	AnimaSpat 848L	SpacedBass 60.4
AnimaSpat 836	AnimaSpat 864	AnimaPlayer 848	SpacedConvert 64
AnimaSynth 836	AnimaSpat 3D64	MassLayers 848	SpacedFilter 64
BrushSampler 18	AnimaSynth 864	SpaceConverter 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		

AggregaSynth



AnimaSynth

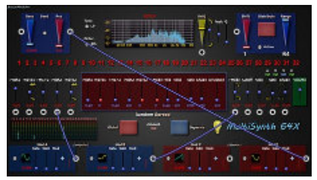
BlenderSynth



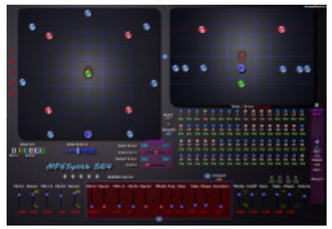
FocusSynth

KaleidoSynth

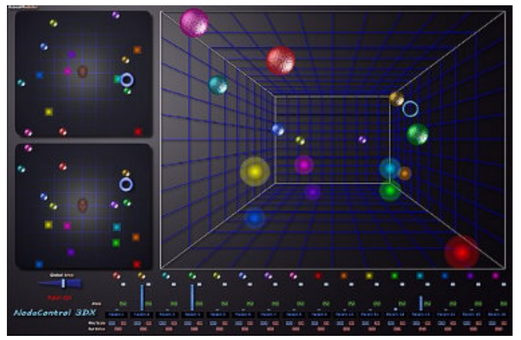
MassSynth



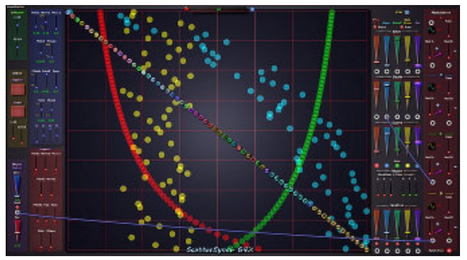
MultiSynth



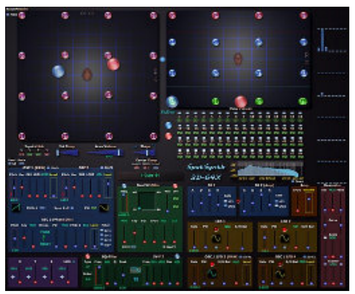
MPESynth



NodeSynth



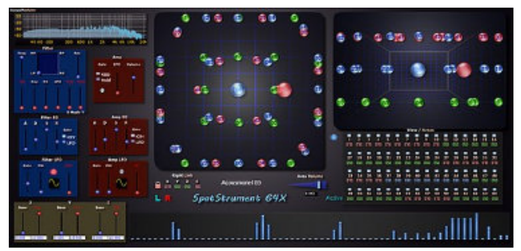
ScatterSynth



SpatSynth

SynthXplorer

UniSynth



SpatStruments

AggregaSynth 24-36

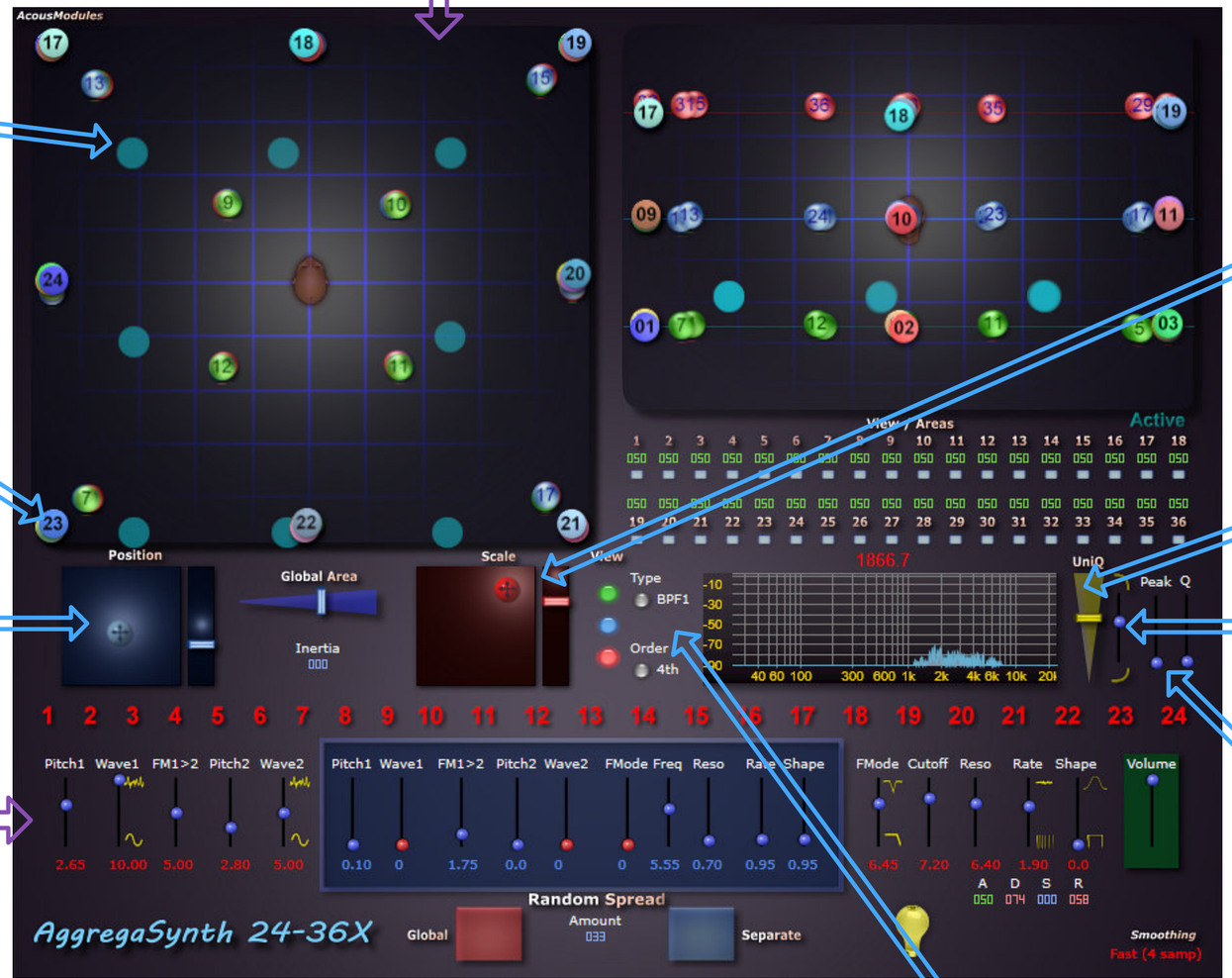
see page 3

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

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

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

see page 4



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

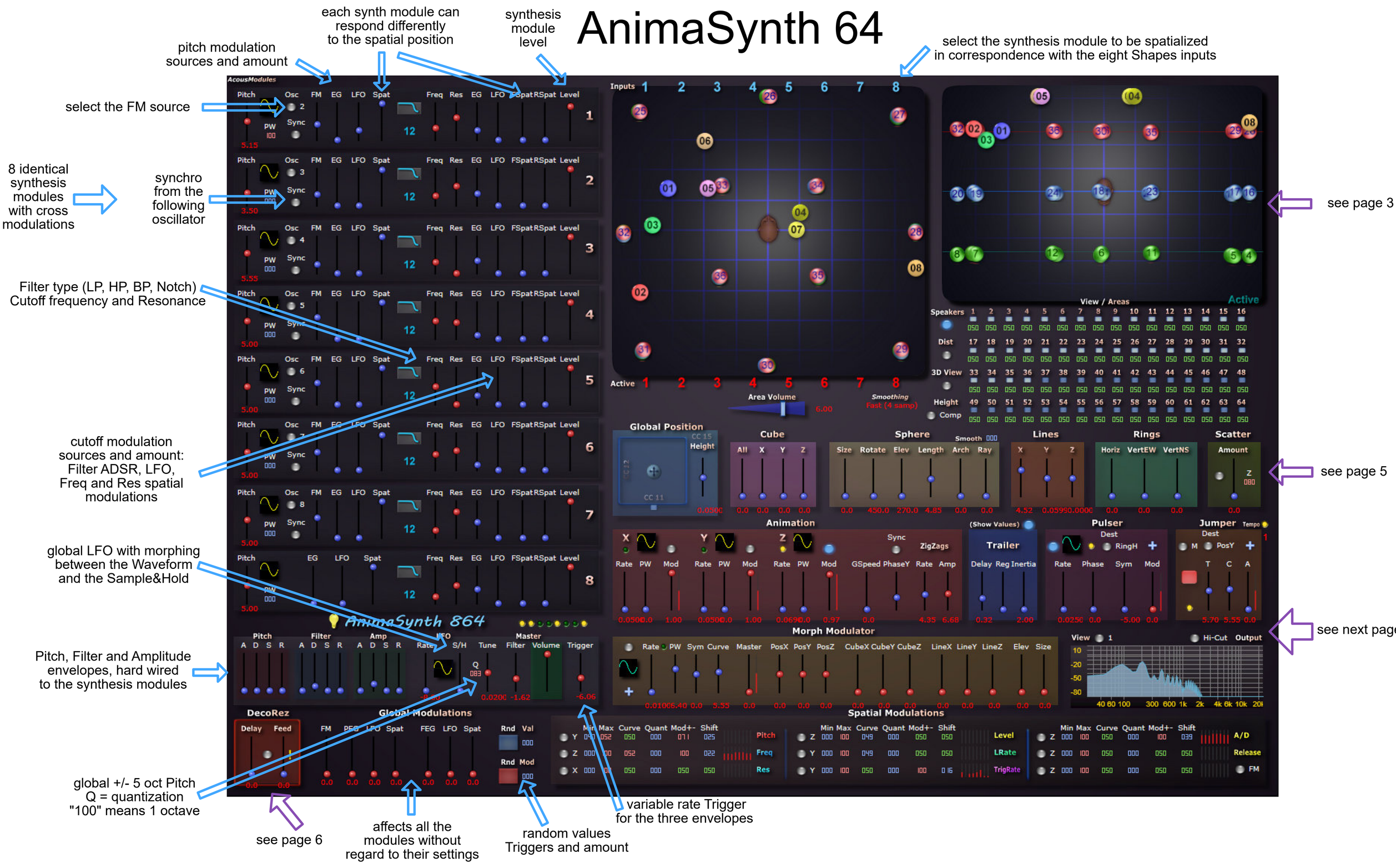
24 channels EQ

fader curve, to make it more precise in the Low or the High end

Peak setting for the Peak type

select the Filter type and the Filter slope, from 12 db/oct to 96/dB/oct (approximatively)

AnimaSynth 64



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

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

LFO Waveform

LFO Rate

phase ratio of the square wave

Global Speed factor for the X, Y, Z LFOs

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

shifting in the waveform position

modulation symmetry, "0" means equipolar

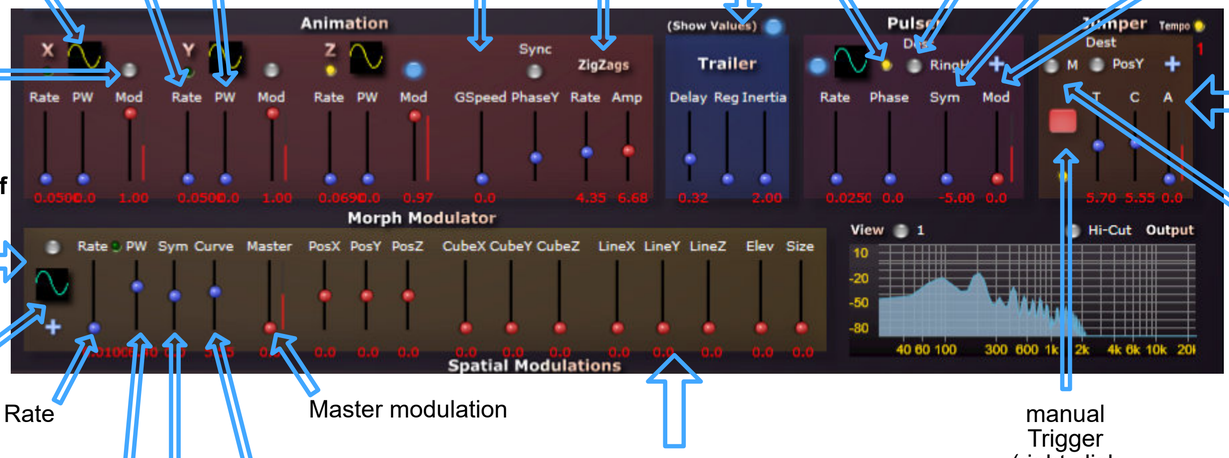
LFO modulation amplitude

LFO activation

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

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

select the Tigger source:
Manual or host Tempo



LFO Waveform and Polarity

LFO Rate

Pulse wave ratio

modulation symmetry, "0" means equipolar

Master modulation

from very progressive to very fast

destinations modulation amounts

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

limit the spatial range

non linear shaping

increase or decrease all the values

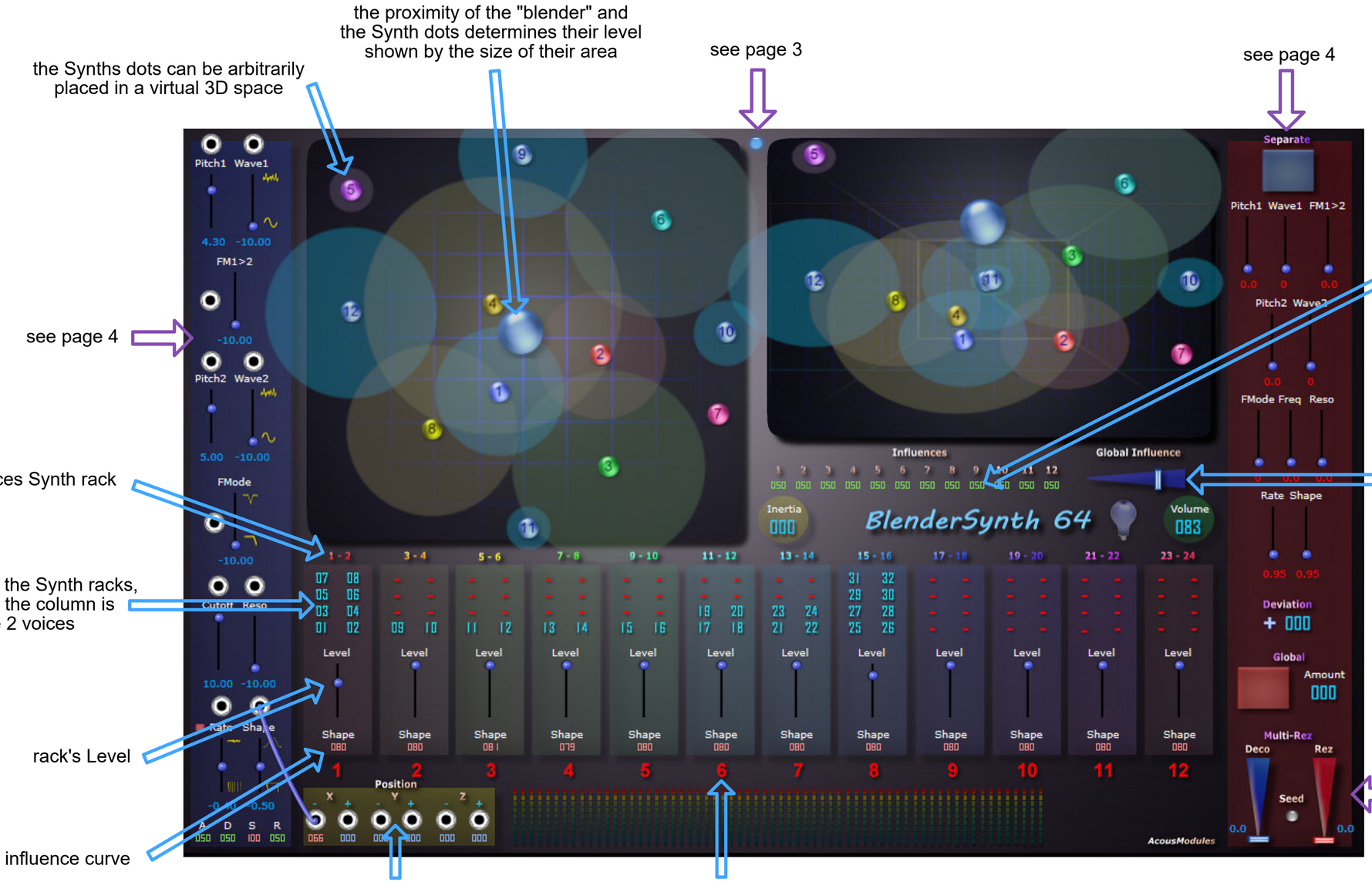
select the spatial axis as modulation source

modulation quantization

modulation amount (bipolar)

graphic view of the 8 modulations values

BlenderSynth 64



FocusSynth 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

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

can be used as a LFO or for FM sound

select Manual Gate or Keyboard

amplitude ADSR with Times Key control

LFO activation

Waveform / Sample&Hold balance

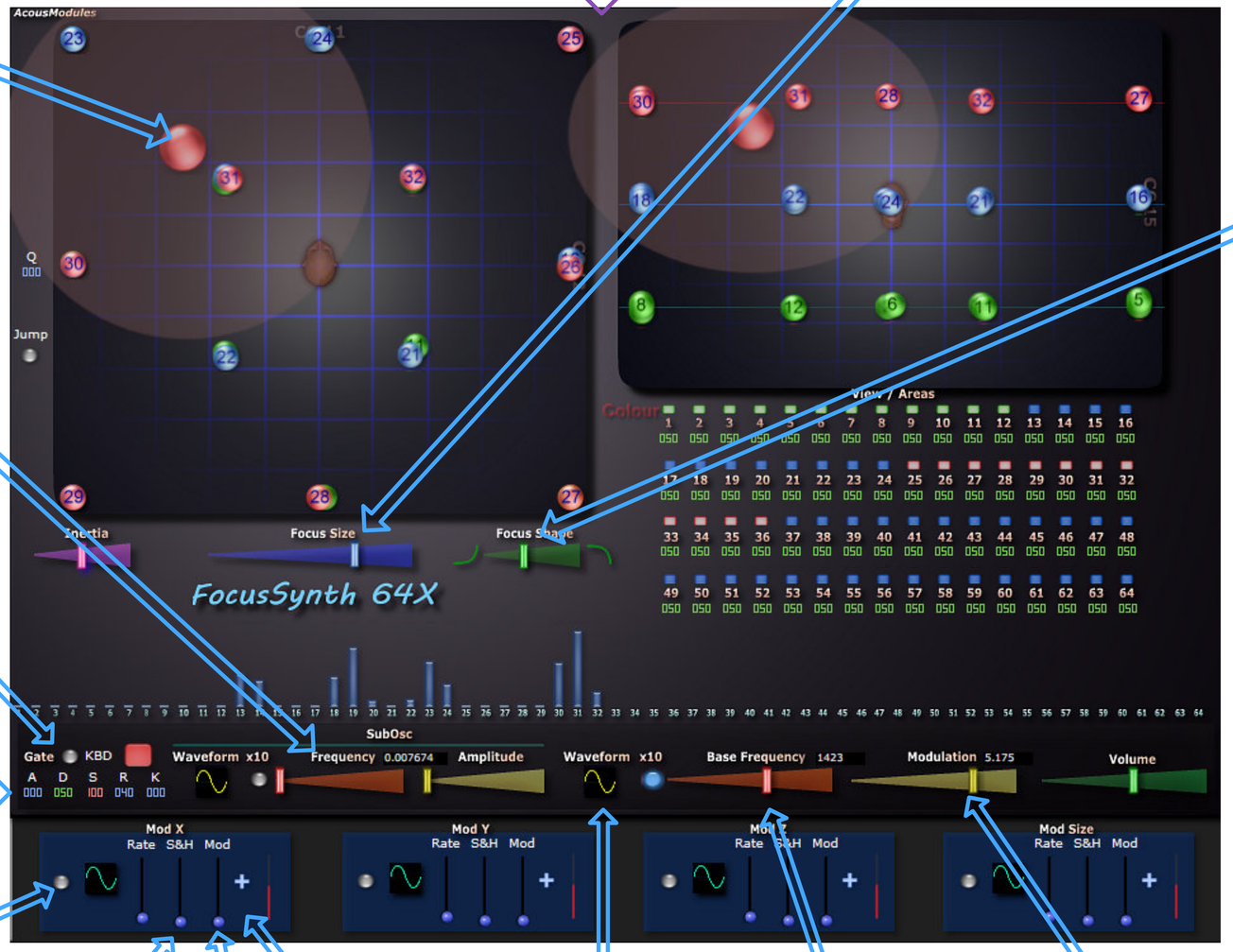
modulation amount

modulation polarity

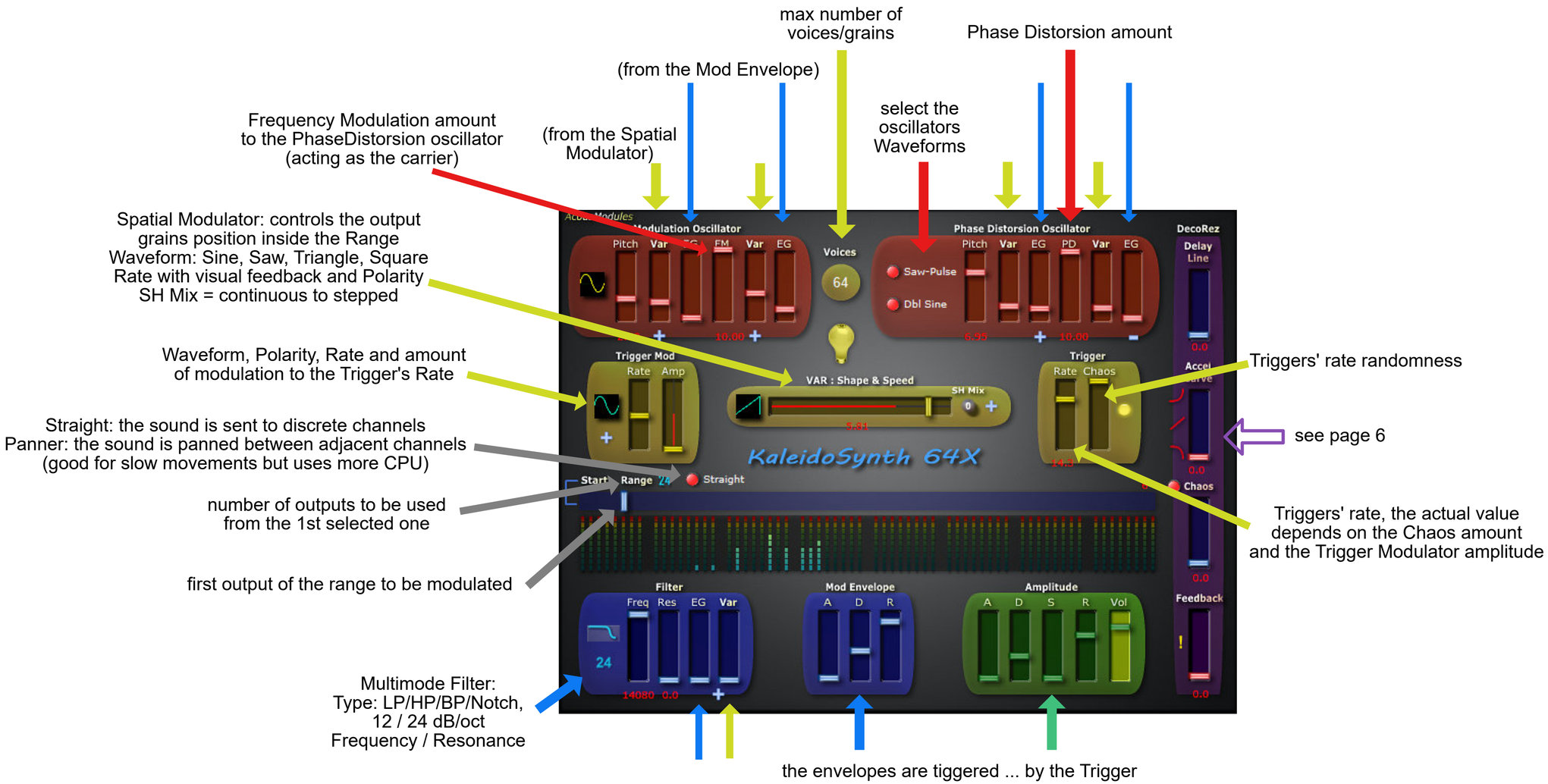
oscillators' Waveform

oscillators' frequency outside the Focus Area

frequency amount control from the Focus Area



KaleidoSynth 64 & 128



MassSynth 1636 & 1664

see page 3

see page 5

see page 4

select the spatial axis to modulate the synthesis parameters

Spatial Shapes Modulators activation

amount and polarity of the Spatial Modulations

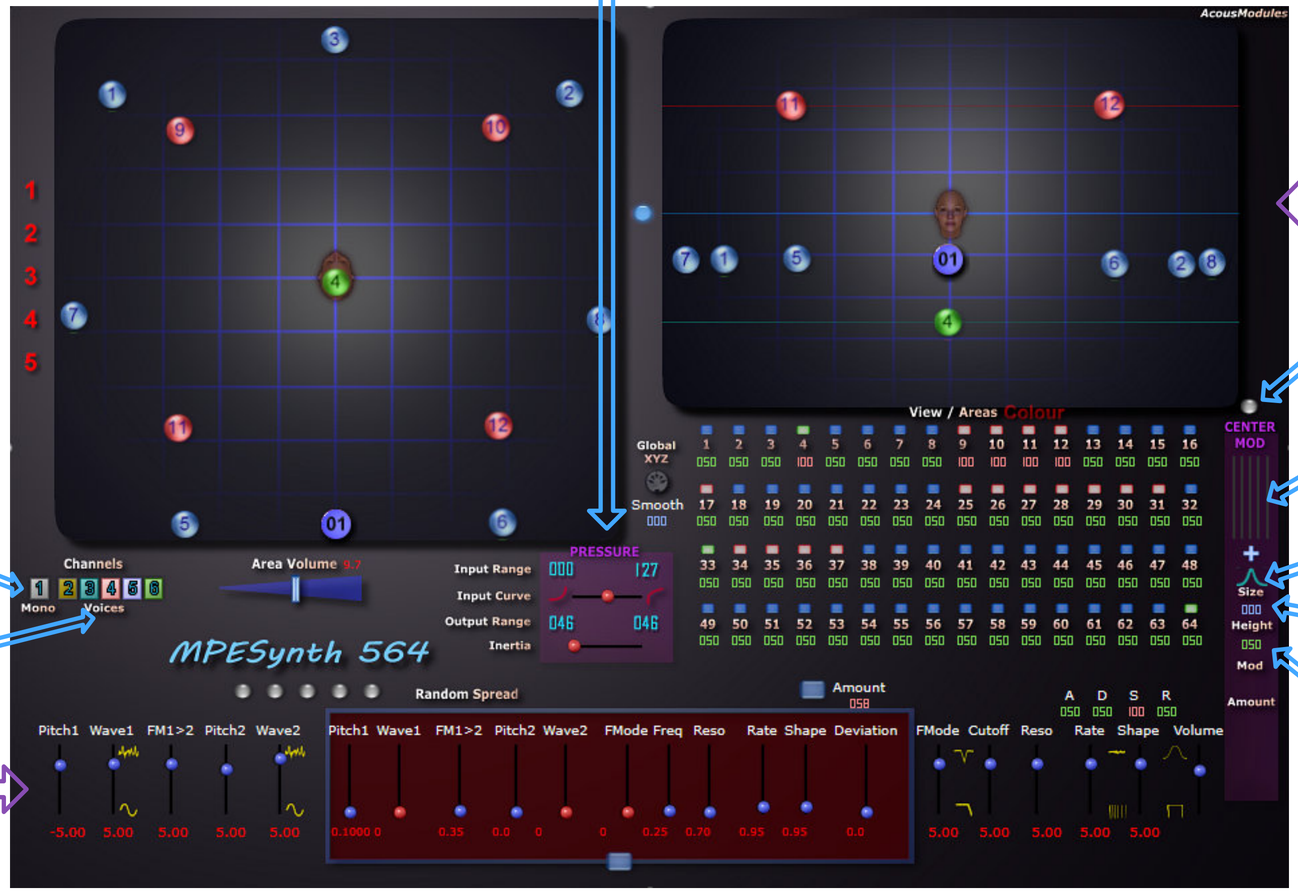
Square wave ratio

balance of the bipolar modulation

see page 6

MPESynth 564

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



see page 3

activate the Top and Front views of the Center area

graphic view of the five channels modulation value

Shape setting from very sharp to very wide

Size setting, 100 means the full space diameter

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

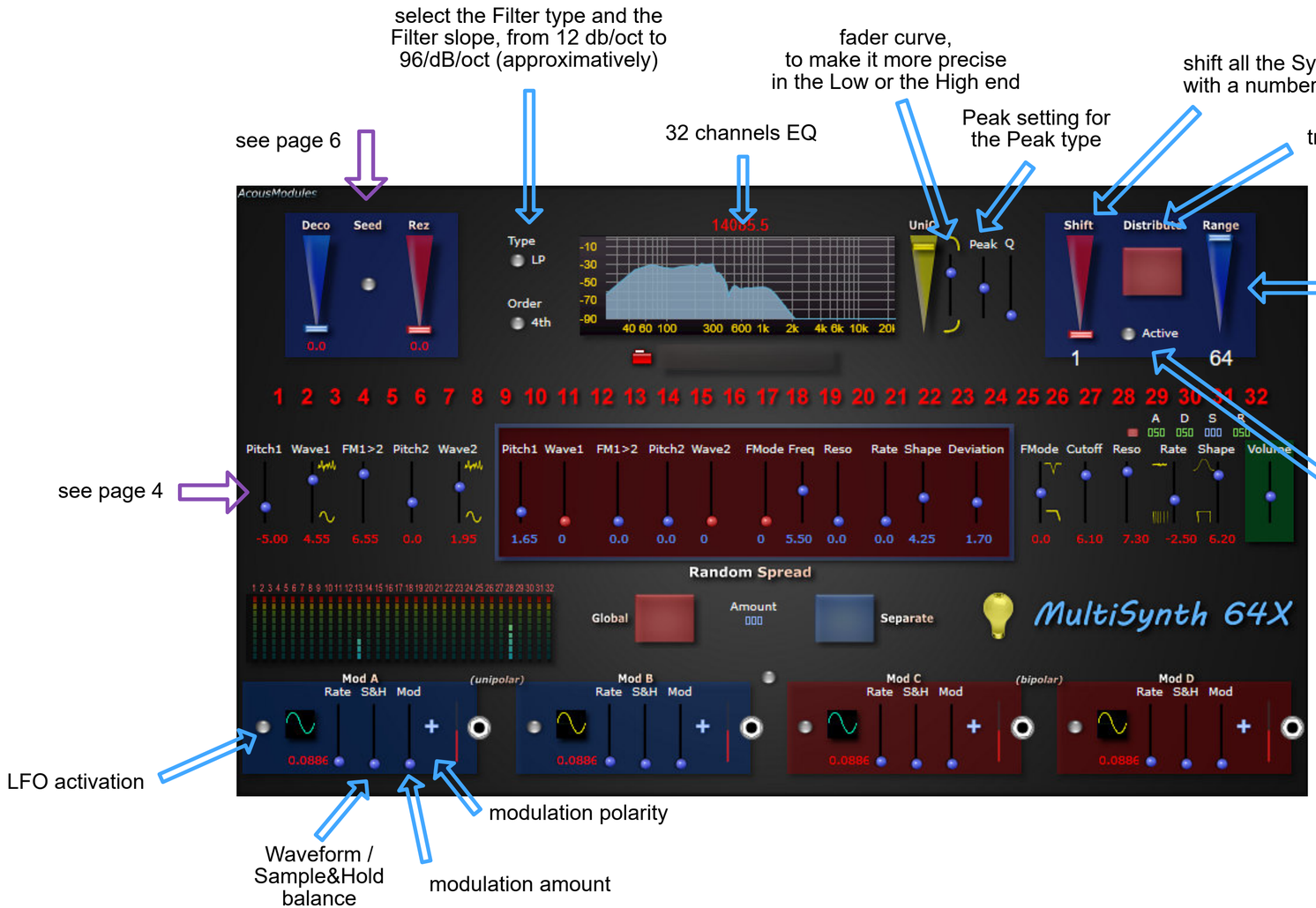
main MIDI channel for non MPE voices, it is generally set to 1 or 16 but a voice's channel can also used for these modulations

MPE voice's channels, normally in following order from number 2 but can be different to combine several plugins

see page 4

currently only available as Win32 VST2 version

MultiSynth 64



select the Filter type and the Filter slope, from 12 db/oct to 96/dB/oct (approximatively)

fader curve, to make it more precise in the Low or the High end

shift all the Synths outputs with a number of channels

see page 6

32 channels EQ

Peak setting for the Peak type

trig the random outputs distribution

the number of channels where the Synths outputs will be distributed

activate the channels distribution, otherwise the synths outputs are sent to the corresponding outputs numberschannels

see page 4

LFO activation

modulation polarity

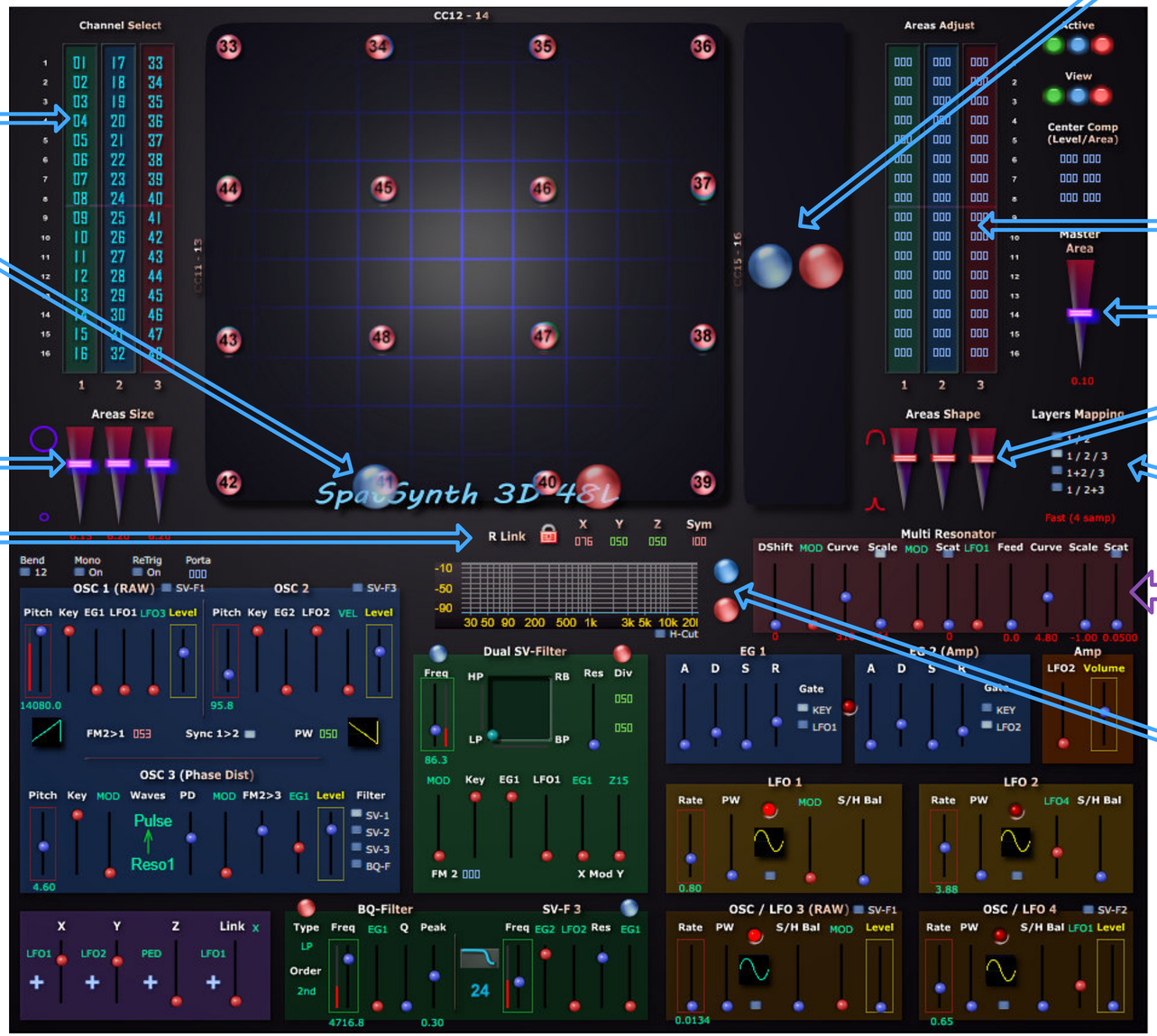
Waveform / Sample&Hold balance

modulation amount

NodeSynth One

soon ...

SpatSynth 3D 48L



elevation position of the two 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

horizontal position of the two inputs

Area Shape for each Layer

Area size for each Layer

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

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

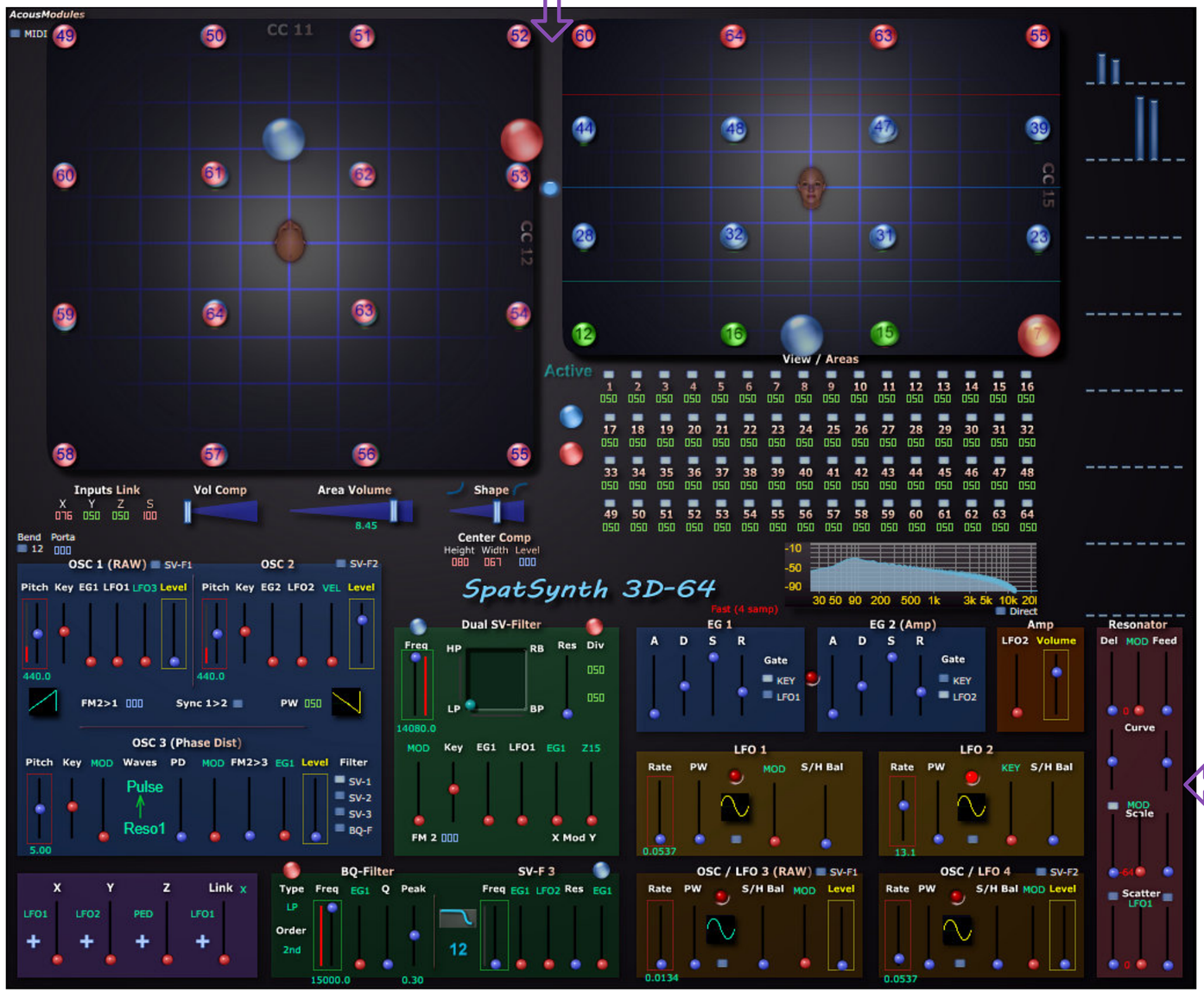
see page 6

activate the synth channels

see page 20

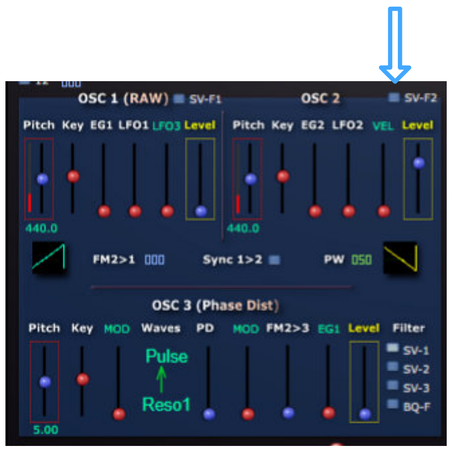
SpatSynth 3D32 & 3D-64

see page 3

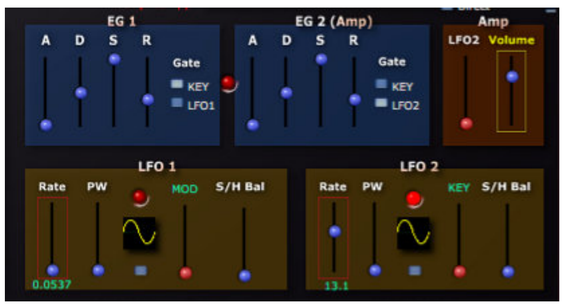


see page 6

see next page



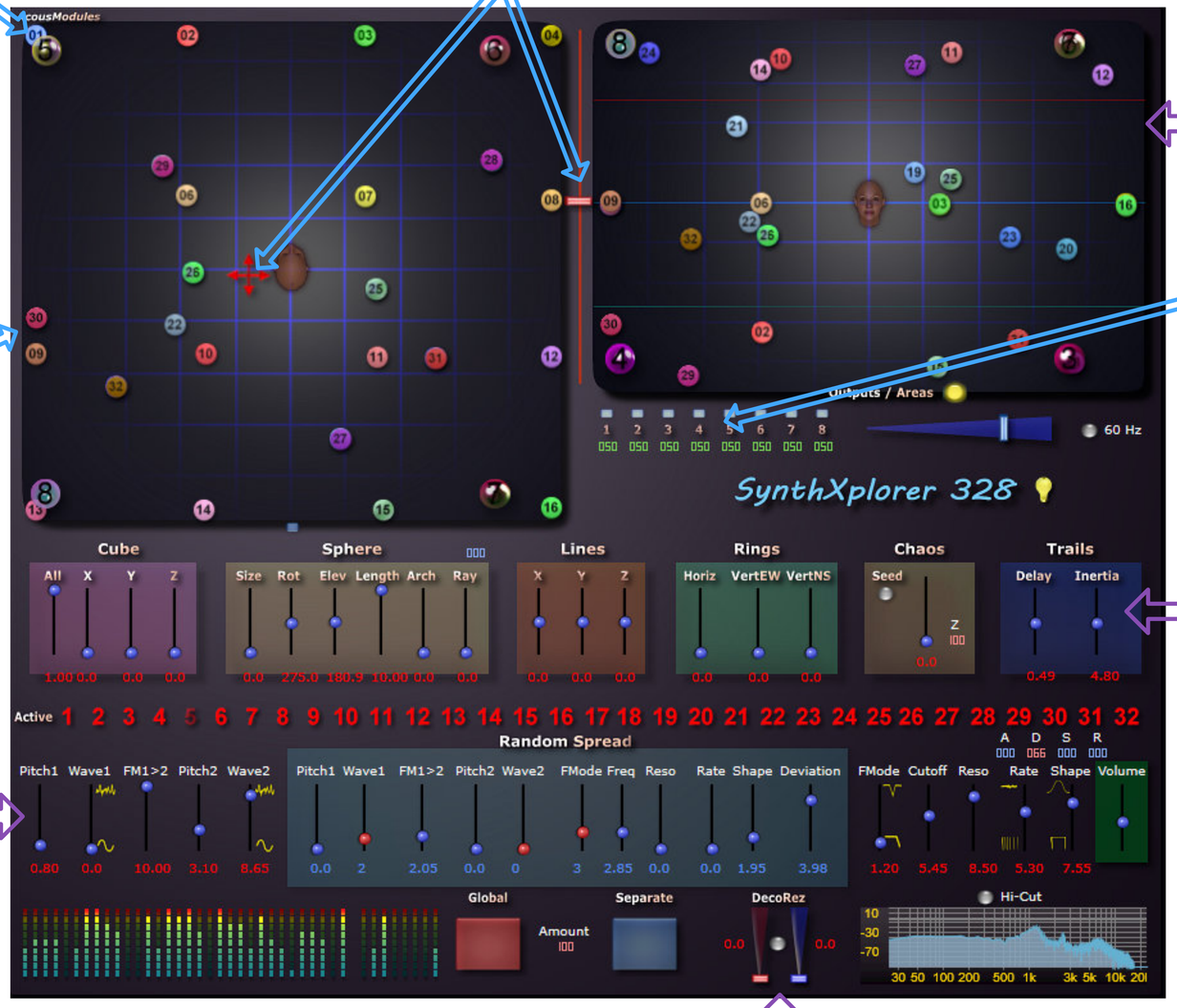
to be continued ...



SynthXplorer 328

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

moves all the balls at once



see page 3

the small dots represent the synth modules they can be placed arbitrarily

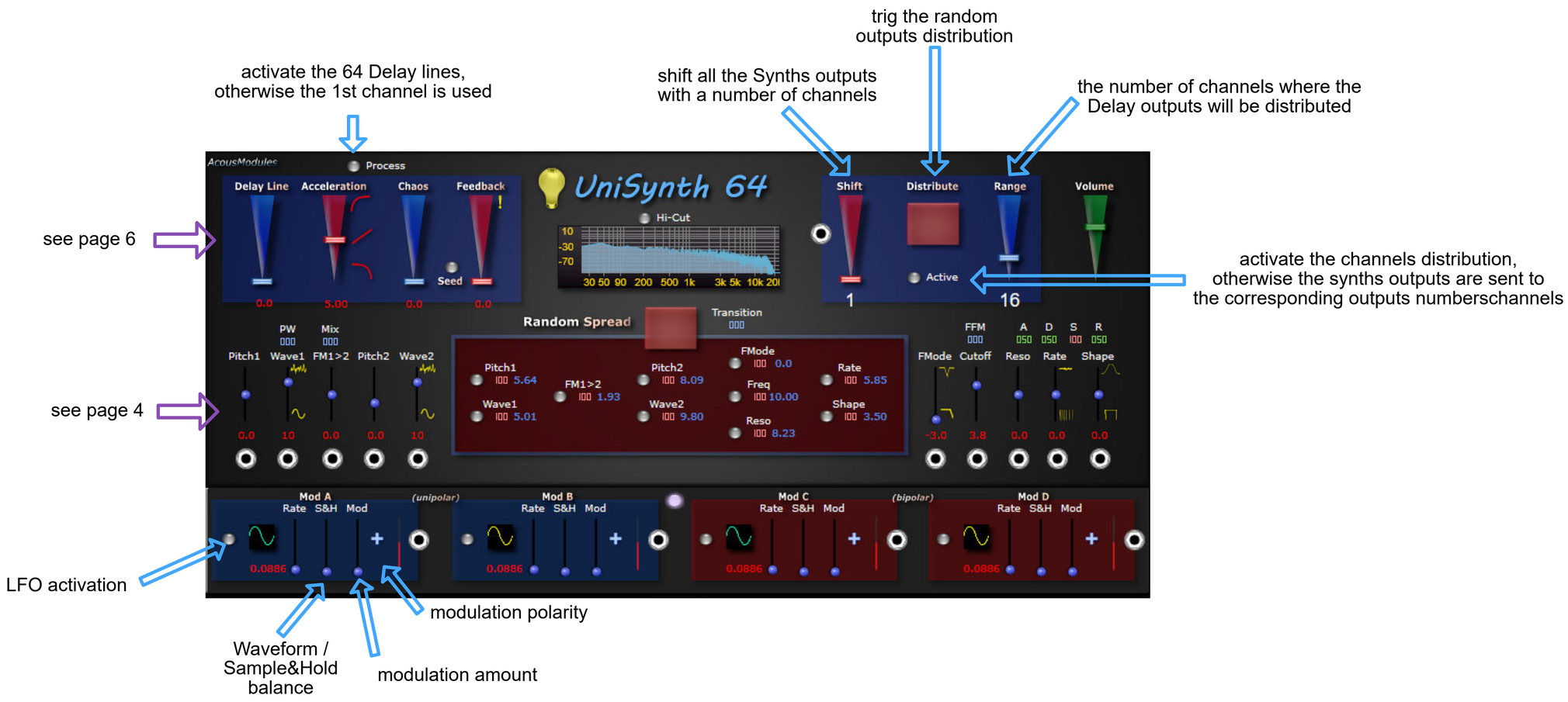
select the outputs and adjust their Area

see page 5

see page 4

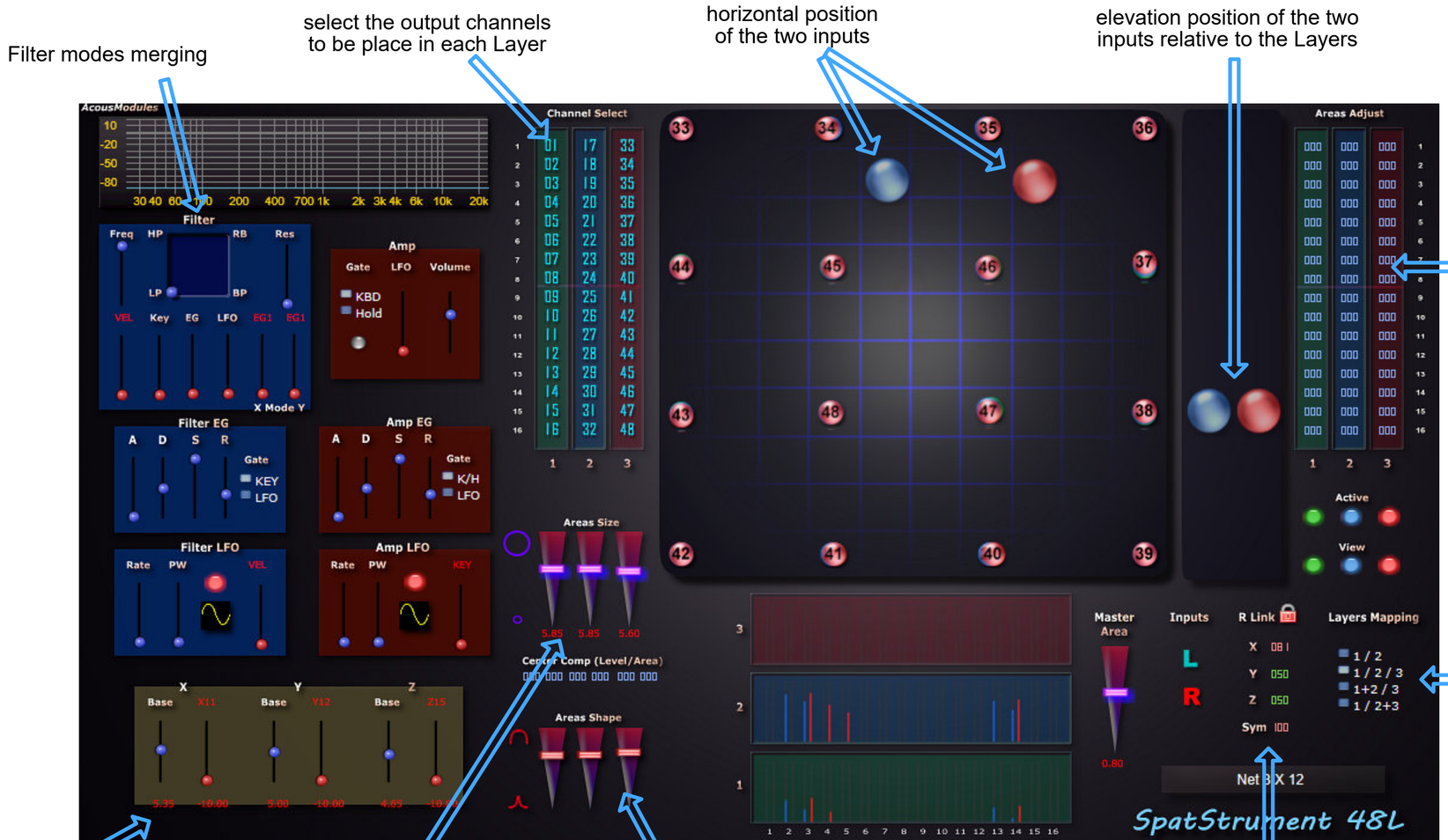
see page 6

UniSynth 64


activate the 64 Delay lines, otherwise the 1st channel is used
shift all the Synths outputs with a number of channels
trig the random outputs distribution
the number of channels where the Delay outputs will be distributed
see page 6
activate the channels distribution, otherwise the synths outputs are sent to the corresponding outputs numberschannels
see page 4
LFO activation
Waveform / Sample&Hold balance
modulation amount
modulation polarity
AcousModules
Process
UniSynth 64
Delay Line
Acceleration
Chaos
Feedback
Seed
Hi-Cut
Shift
Distribute
Range
Volume
Active
Random Spread
Transition
PW
Mix
Pitch1
Wave1
FM1>2
Pitch2
Wave2
FMode
Cutoff
Reso
Rate
Shape
Freq
A
D
S
R
Mod A
Mod B
Mod C
Mod D
(unipolar)
(bipolar)
S&H
Mod

the *SpatStruments* don't produce any sound,
they are intended to add spatial modulations
to mono/stereo hardware or software
synthesizers and samplers while sharing
at least the notes triggering and some MIDI controls

SpatStrument 48L



SpatStrument 218 & 264

see page 3