

Leonard Solomon's Extraordinary Machines

An Impact Soundworks Instrument
for Kontakt Player 6.7.1+
Instrument Version 1.0.0

Product Manual

Introduction

This library is—in a word—*extraordinary*.

An unconventional collection of tonal and atonal instruments conceived and built by one truly unique man: **Leonard Solomon's Extraordinary Machines**. The stars of the show are his one-of-a-kind musical inventions like the Bellowphone (*a wind and percussion multi-instrument*), Bottle Organ (*a twist on the inimitable carnival organ*), and Oomphalapompatronium (*...just keep reading*); his take on more familiar instruments round out the collection.

Leonard Solomon's Extraordinary Machines is especially well-suited for lighthearted and whimsical tracks, specific sound design applications, and outside-the-box inspiration. We hope these fanciful creations will push your creativity in all-new directions.

— *The Team at Impact Soundworks*

About Leonard Solomon

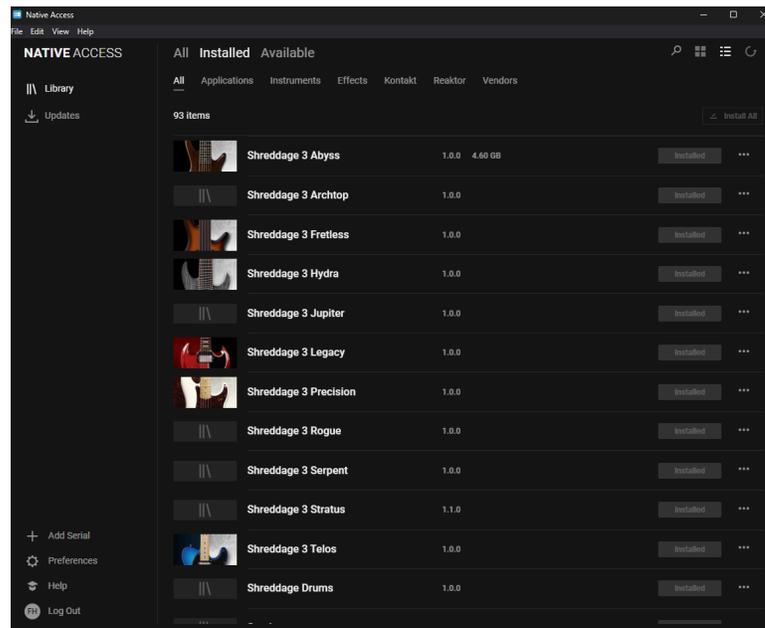
Classically trained musician, inventor, and one-man-orchestra Leonard Solomon has a mind like no other. Starting with the Majestic Bellowphone in 1983, he's been delighting audiences on the street, in acclaimed concert halls, and on national television with his extraordinary machines. Through this sample library, we hope to preserve his legacy and share the charm and whimsy of his creations with fellow musicians.

Leonard Solomon studied guitar and early music at Antioch College, spent time as a guitarist in a country-rock band, and then worked for a decade as a professional cabinet maker. All these experiences influenced his career constructing and performing on one-of-a-kind instruments for audiences of all sizes.

Leonard and his unusual creations have been featured as a performer in PBS' Lonesome Pine Specials' One-Man Band Extravaganza; in the nationally broadcasted "A Taste of Passover" and "A Taste of Chanukah" in Jordan Hall, Boston; at festivals in both Singapore and Japan; and at King Richard's Faire in Massachusetts.

Installation

1. Download and install the Native Instruments [Kontakt Player](#), which will also install an auxiliary Kontakt library management software called [Native Access 2](#):



- If your Native Access looks like the above (light or dark mode), you have Native Access 2.
- If it does **not**, you have Native Access 1; please visit the link above to [download and install Native Access 2](#).
- Finally, continue installation via the instructions below.

2. Next, install the [Pulse Downloader](#).*
3. Once Pulse is installed, open it and enter your **Leonard Solomon's Extraordinary Machines** product code, which is also its serial number (e.g., A1B2C-3D4E5-F6G7H-8I0J1-K2L3M). Follow the instructions to download and install the library. (If you wish to move the library to an external drive [for example], then do this before moving on to step 4, below.)
4. Open Native Access 2, click 'Add a Serial', and input that same product code to activate the library.
5. Once Native Access 2 has activated your library, click 'View Products Not Installed'.
6. Find **Leonard Solomon's Extraordinary Machines** in this list and click the 'Add Library' button to the right.
7. Select the folder where Pulse downloaded the library (or, if you moved it in step 3, the folder where it currently resides). *This completes the installation process!*

* Pulse is a cross-platform desktop app that lets you download and install your libraries with blazing speed! You'll need to create a Pulse account, but once you do, you can access your purchases from any developers using Pulse, anytime, from any computer.

Library Content

From the masterfully-crafted Bellowphone to the mind-bending Oomphalapompatronium, Leonard Solomon's unique musical instruments create sounds to fascinate audiences, inspire creators, and challenge the status quo:

Bellowphone (See a YouTube demonstration [here](#))

Constructed in Len's basement woodshop, the Bellowphone is a multi-instrument comprised of many individual wind and percussion instruments activated by a foot pump (the eponymous *bellow*). The Bellowphone is chiefly made out of found and salvaged materials, including metal pipes, cardboard tubes, springs, coat-hanger wire, sheet-metal from a toaster, vacuum-cleaner pieces, tin cans, and plumbing parts. The rest of the Bellowphone's components—playground balls, funnels, screws, kazoo, and nose-flute!—were purchased from local hardware and sports equipment stores.

Bottle Organ (See a YouTube demonstration [here](#))

Hand-made latex ball bellows connected to a series of pitched bottles suspended in a custom wood frame make up this one-of-a-kind creation. The Bottle Organ boasts soft, round organ tones reminiscent of carnival games and world fair music.

Callioforte (See a YouTube demonstration [here](#))

Two and a half octaves of chromatic pipe whistle tones that evoke medieval and airy high tones; the perfect instrument for soft melodies and whimsical hooks.

Kazoo

The kazoo is a core piece of the Leonard Solomon sound. We made sure to capture Len's favorite as a solo instrument to provide the most versatility and usability for producers in need of quirky melodic beds and melodies. In this digital age, it also works wonders when highly processed and used as a sound design source.

Miscellaneous (For example, see a YouTube demonstration [here](#))

Leonard Solomon's house is a veritable museum of his hand-made musical instruments and sound making creations. Our Miscellaneous patch includes a small suite of found-sounds pulled straight from the walls, shelves and cabinets of Leonard's extraordinary home: Pneumatic Cymbal, Cuckoo Machine, Small Horn, Laughing Horn, and Warbler Whistle.

Oomphalapompatronium (See a YouTube demonstration [here](#))

A crown jewel in the Leonard Solomon collection of oddities, the Oomphalapompatronium (*Oom-Fah-Lah-Pom-Pah-Troh-Nee-Um*) is made from a wheel, pottery, tin cans, and water bottles. In place of a keyboard, this incredible invention features a button board. A radial ball pump is used to automatically fill the air reservoir, which in turn powers a robust horn section that delivers a wonderful cacophony of extraordinary musical tones.

Sound Design Atonal

A large suite of designed atonal soundbeds, effects, oddities and noises to add texture, depth and ear candy onto your tracks. This patch is the glue that fills in spaces and takes ordinary musical compositions to the next level of unique and compelling.

Sound Design Tonal

A collection of found sounds and single-capture tones from Len's massive collection of noise makers, heavily processed and sound designed for use as effects, sound beds, and musical textures. Sound sources include Baritone Bottle, Brain Razor, Cup Flute, Oompha Synth, Gargantuan Kazoo, and Clown Nose Chord.

Tonal Horns

A set of horn blasts and phrases from four of Len's unique horns: Big Horn, Lurch Horn, Hunting Horn, and Drone Horn.

User Interface

Tab 1: Main

The Main page is the central hub of **Leonard Solomon's Extraordinary Machines**. From here, each component of each instrument's NKI can be manipulated and edited in granular detail.

Bellowphone



There are three main columns:

Left Column

Animated Instrument Diagram

Len Solomon's Bellowphone is one-of-a-kind, and seeing its layout should help you to better intuit its respective functions. When a sample from a specific element of the Bellowphone is activated, the corresponding part of the diagram will be highlighted. *This is one of our favorite parts of **Leonard Solomon's Extraordinary Machines**—it's almost hypnotic to watch!*

Center Column

Each of the elements of Bellowphone can be manipulated and edited in granular detail with the controls in this column:

Element Selector Menu

Selects the individual element.

Reset Button

If changes have been made from the default, original values of an individual Bellowphone element, clicking this button quickly resets all controls to the default.

NB: To reset a single control to its default value, $\text{⌘}+\text{click}$ (Mac)/ $\text{^}+\text{click}$ (PC) that control.

Instrument

Controls the basic playback attributes of the selected element:

- Vol** Controls the element's output gain.
- Pan** Controls the element's position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the element's pitch.
- Tuned** Controls the degree to which the element conforms to 'correct' 12-Tone Equal Temperament.

Equalizer

Controls the basic EQ curve of the selected element:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Envelope

Controls the basic ADSR amp envelope of the selected element:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Bellowphone NKI:

Microphones

Close This fader controls the output gain of the mono Close mic perspective.

Stereo Pair This fader controls the output gain of the Stereo Pair mic perspective.

Speaker This icon mutes or unmutes its respective mic perspective.

Output This dropdown menu selects the output channel(s) of the respective mic perspective.

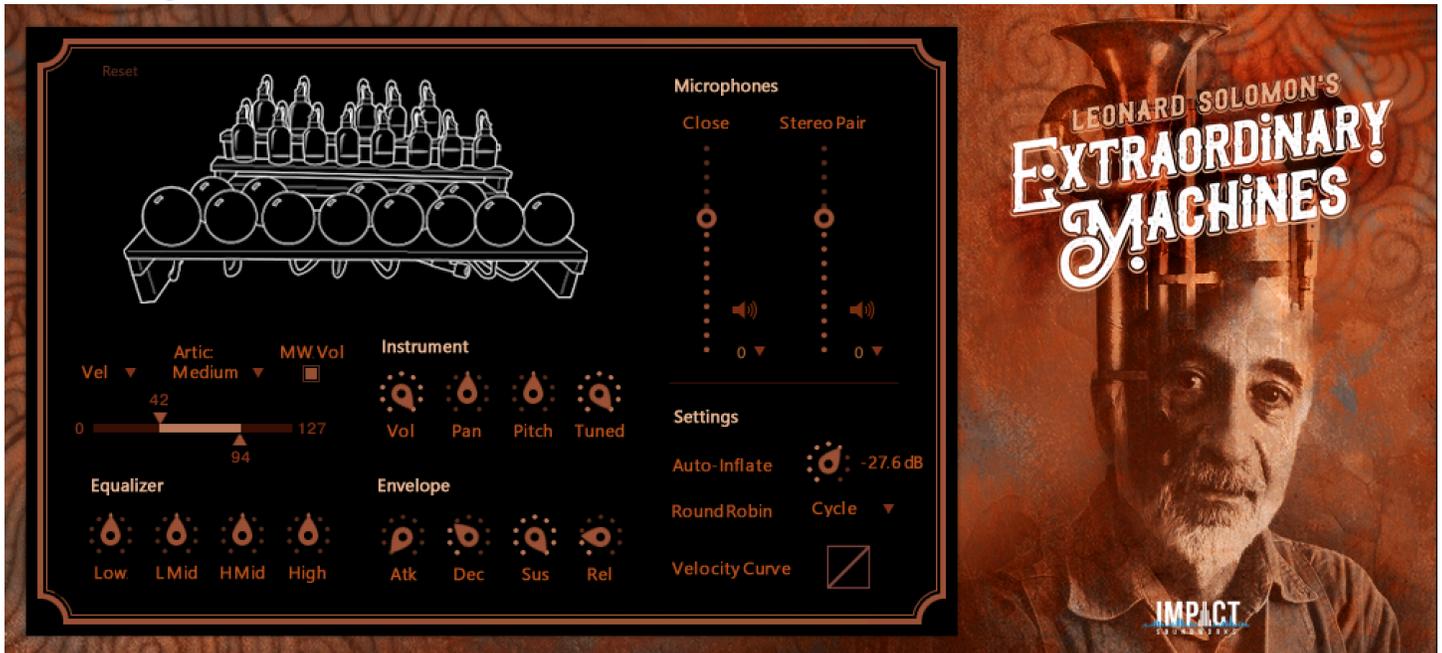
Settings

Round Robin This dropdown menu selects the style of Round Robin used in Bellowphone:

- Robin** → Random: RR proceeds in a 'random' order.
- Cycle: RR proceeds in a repeating, sequential order.
- Off: RR is disabled.

Velocity Curve Click+drag this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Bottle Organ



Like Bellowphone, there are three main columns, but the first two are half-height to make room for the horizontality of the...

Animated Instrument Diagram

Len Solomon's Bottle Organ is one-of-a-kind, and seeing its layout should help you to better intuit its respective functions. When a sample from a specific element of the Bottle Organ is activated, the corresponding part of the diagram will be highlighted. *This is one of our favorite parts of **Leonard Solomon's Extraordinary Machines**—it's almost hypnotic to watch!*

Reset Button

If changes have been made from the default, original values of Bottle Organ, clicking this button quickly resets all controls to the default.

NB: To reset a single control to its default value, $\text{⌘}+\text{click}$ (Mac)/ $\text{^}+\text{click}$ (PC) that control.

Left Column

Articulation Selection Dropdown Menu

Controls how 'articulations' (performed sample lengths) of Bottle Organ are selected. This changes the view of this section of the column as follows:

Vel

This sets articulation selection to incoming MIDI Velocity.



Artic This dropdown menu sets the articulation selection to be edited.

MW Vol When selected, this button sets **CC1** to control output gain for all articulations.

Value Slider This sets the minimum and maximum Velocities to trigger the selected articulation. Shows the currently-triggered articulation.

NB: This also affects the minimum and/or maximum Velocities of the adjacent regions.

CC

This sets articulation selection to incoming MIDI CC.



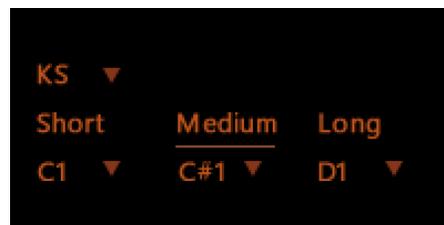
Artic This dropdown menu sets the articulation selection to be edited.

CC This dropdown menu sets the MIDI CC that will select the articulation.

Value Slider This sets the minimum and maximum CC values to trigger the selected articulation.
NB: *This also affects the minimum and/or maximum values of the adjacent regions.*

KS

This sets articulation selection to incoming MIDI Keyswitch.



Short This dropdown menu sets the keyswitch that selects the Short articulation.

Medium This dropdown menu sets the keyswitch that selects the Medium articulation.

Long This dropdown menu sets the keyswitch that selects the Long articulation.

Equalizer

Controls the basic EQ curve of Bottle Organ:

Low Controls the relative Low boost/cut, centered around 155 Hz.

LMid Controls the relative Low-Mid boost/cut, centered around 707 Hz.

HMid Controls the relative High-Mid boost/cut, centered around 2000 Hz.

High Controls the relative High boost/cut, centered around 5700 Hz.

Center Column

Instrument

Controls the basic playback attributes of Bottle Organ:

- Vol** Controls the output gain.
- Pan** Controls the position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the pitch.
- Tuned** Controls the degree to which Bottle Organ's samples conform to 'correct' 12-Tone Equal Temperament.

Envelope

Controls the basic ADSR amp envelope of Bottle Organ:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Bottle Organ NKI:

Microphones

- Close** This fader controls the output gain of the mono Close mic perspective.
- Stereo Pair** This fader controls the output gain of the Stereo Pair mic perspective.
- Speaker** This icon mutes or unmutes its respective mic perspective.
- Output** This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

- Auto-Inflate** This knob controls the gain of the auto-inflation noises.
- Round Robin** This dropdown menu selects the style of Round Robin used in Bottle Organ:
 - Random: RR proceeds in a 'random' order.
 - Cycle: RR proceeds in a repeating, sequential order.
 - Off: RR is disabled.

Velocity Curve Click+drag this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Callioforte



Like Bottle Organ, there are three main columns, but the first two are half-height to make room for the horizontality of the...

Animated Instrument Diagrams

Len Solomon's Callioforte is one-of-a-kind, and seeing its layout should help you to better intuit its respective functions. When a sample from a specific element of the Callioforte is activated, the corresponding part of the diagram will be highlighted. *This is one of our favorite parts of Leonard Solomon's Extraordinary Machines—it's almost hypnotic to watch!*

Left Column

Element Selector Menu

Selects the individual element:

- Pipes** Selects the main Callioforte pipes.
- Peepers** Selects the very high Callioforte pipes.
- Global** Selects all Callioforte pipes.

'Instrument' (*no label*)

Controls the basic playback attributes of Callioforte:

- Vol** Controls the output gain.
- Pan** Controls the position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the pitch.
- Tuned** Controls the degree to which Kazoo's samples conform to 'correct' 12-Tone Equal Temperament.

Equalizer

Controls the basic EQ curve of Calliforte:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Center Column

Key Noise

This knob controls the gain of the 'physical' key noises.

Envelope

Controls the basic ADSR amp envelope of Calliforte:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Callioforte NKI:

Microphones

Close This fader controls the output gain of the mono Close mic perspective.

Stereo Pair This fader controls the output gain of the Stereo Pair mic perspective.

Speaker This icon mutes or unmutes its respective mic perspective.

Output This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

Auto-Inflate This knob controls the gain of the auto-inflation noises.

Round Robin This dropdown menu selects the style of Round Robin used in Callioforte:

- Robin**
 - Random: RR proceeds in a 'random' order.
 - Cycle: RR proceeds in a repeating, sequential order.
 - Off: RR is disabled.

Velocity Curve Click+drag this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Kazoo



Like Callioforte, there are three main columns, with the first two being half-height to make room for the horizontality of the...

Animated Instrument Diagram

This lights up when Kazoo is being performed. *This is one of our favorite parts of Leonard Solomon's **Extraordinary Machines**—it's almost hypnotic to watch!*

Left Column

'Instrument' (*no label*)

Controls the basic playback attributes of Kazoo:

- Vol** Controls the output gain.
- Pan** Controls the position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the pitch.
- Tuned** Controls the degree to which Kazoo's samples conform to 'correct' 12-Tone Equal Temperament.

Equalizer

Controls the basic EQ curve of Kazoo:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Center Column

Envelope

Controls the basic ADSR amp envelope of Kazoo:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Kazoo NKI:

Microphones

Close This fader controls the output gain of the mono Close mic perspective.

Stereo Pair This fader controls the output gain of the Stereo Pair mic perspective.

Speaker This icon mutes or unmutes its respective mic perspective.

Output This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

Round Robin This dropdown menu selects the style of Round Robin used in Kazoo:

- Robin** → Random: RR proceeds in a 'random' order.
- Cycle: RR proceeds in a repeating, sequential order.
- Off: RR is disabled.

Velocity Curve **Click+drag** this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Mod to LPF When selected, this button sets **CC1** to control a Low Pass Filter (timbral brightness).

Miscellaneous



There are three main columns:

Left Column

Animated Instrument Diagrams

Len Solomon's Miscellaneous instruments are each one-of-a-kind, and seeing their layout should help you to better intuit their respective functions. When a sample from a specific instrument in this Miscellaneous collection is activated, the corresponding part of the diagram(s) will be highlighted. *This is one of our favorite parts of **Leonard Solomon's Extraordinary Machines**—it's almost hypnotic to watch!*

Center Column

Each of the elements of the Miscellaneous collection can be manipulated and edited in granular detail with the controls in this column:

Instrument Selector Menu

Selects the individual instrument.

Reset Button

If changes have been made from the default, original values of an individual Bellowphone element, clicking this button quickly resets all controls to the default.

NB: To reset a single control to its default value, ⌘+click (Mac)/^+click (PC) that control.

Instrument

Controls the basic playback attributes of the selected element:

- Vol** Controls the element's output gain.
- Pan** Controls the element's position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the element's pitch.

Equalizer

Controls the basic EQ curve of the selected element:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Envelope

Controls the basic ADSR amp envelope of the selected element:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Miscellaneous NKI:

Microphones

- Close** This fader controls the output gain of the mono Close mic perspective.
- Stereo Pair** This fader controls the output gain of the Stereo Pair mic perspective.
- Speaker** This icon mutes or unmutes its respective mic perspective.
- Output** This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

- Round Robin** This dropdown menu selects the style of Round Robin used in Miscellaneous:
 - Random: RR proceeds in a 'random' order.
 - Cycle: RR proceeds in a repeating, sequential order.
 - Off: RR is disabled.
- Velocity Curve** **Click+drag** this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Oomphalopompatronium



Like Bellowphone, there are three main columns:

Left Column

Animated Instrument Diagram

Len Solomon's Oomphalopompatronium is one-of-a-kind, and seeing its layout should help you to better intuit its respective functions. When a sample from a specific element of the Oomphalopompatronium is activated, the corresponding part of the diagram will be highlighted. *This is one of our favorite parts of Leonard Solomon's Extraordinary Machines—it's almost hypnotic to watch!*

Center Column

Each of the elements of Oomphalopompatronium can be manipulated and edited in granular detail with the controls in this column:

Element Selector Menu

Selects the individual element.

Reset Button

If changes have been made from the default, original values of an individual Oomphalopompatronium element, clicking this button quickly resets all controls to the default.

NB: To reset a single control to its default value, `⌘+click (Mac)/^+click (PC)` that control.

Instrument

Controls the basic playback attributes of the selected element:

- Vol** Controls the element's output gain.
- Pan** Controls the element's position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the element's pitch.
- Tuned** Controls the degree to which the element conforms to 'correct' 12-Tone Equal Temperament.

Equalizer

Controls the basic EQ curve of the selected element:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Envelope

Controls the basic ADSR amp envelope of the selected element:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Right Column

These settings are global to the full Oomphalapompatronium NKI:

Microphones

- Close** This fader controls the output gain of the mono Close mic perspective.
- Stereo Pair** This fader controls the output gain of the Stereo Pair mic perspective.
- Speaker** This icon mutes or unmutes its respective mic perspective.
- Output** This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

- Round Robin** This dropdown menu selects the style of Round Robin used in Oomphalapompatronium:
- Random: RR proceeds in a 'random' order.
 - Cycle: RR proceeds in a repeating, sequential order.
 - Off: RR is disabled.

Velocity Curve Click+drag this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Sound Design Atonal



The sound design NKIs feature controls chiefly laid out, not in columns, but in rows:

Top Row

Sound Title

These evocative titles should give you some idea of what the Atonal sound design element should, well, sound like.

Center Row

Controls global settings for the Atonal sound design elements.

Main Controls

Controls the basic playback attributes of any Atonal sound design element:

- Volume** Controls the element's output gain.
- Pitch** Controls the transposition of the element's pitch.
- Pan** Controls the element's position in the stereo field (amounts Left, Right, or Center).

Envelope

Controls the basic ADSR amp envelope:

- Attack** Controls Attack—*how long does the sample take to fade in?*
- Decay** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sustain** Controls Sustain—*what level does the sample primarily play back at?*
- Release** Controls Release—*how long does the sample take to fade to nothing after note off?*
- Depth** Controls the degree to which the ADSR envelope is applied to any Atonal sound design element.

Bottom Row

Controls specific settings for the selected Atonal sound design element.

Filter

Controls a Low Pass Filter applied to the selected Atonal sound design element:

- Cutoff** Controls the frequency of the LPF.
- Reso** Controls the degree of resonance of the LPF.

Offset (Time)

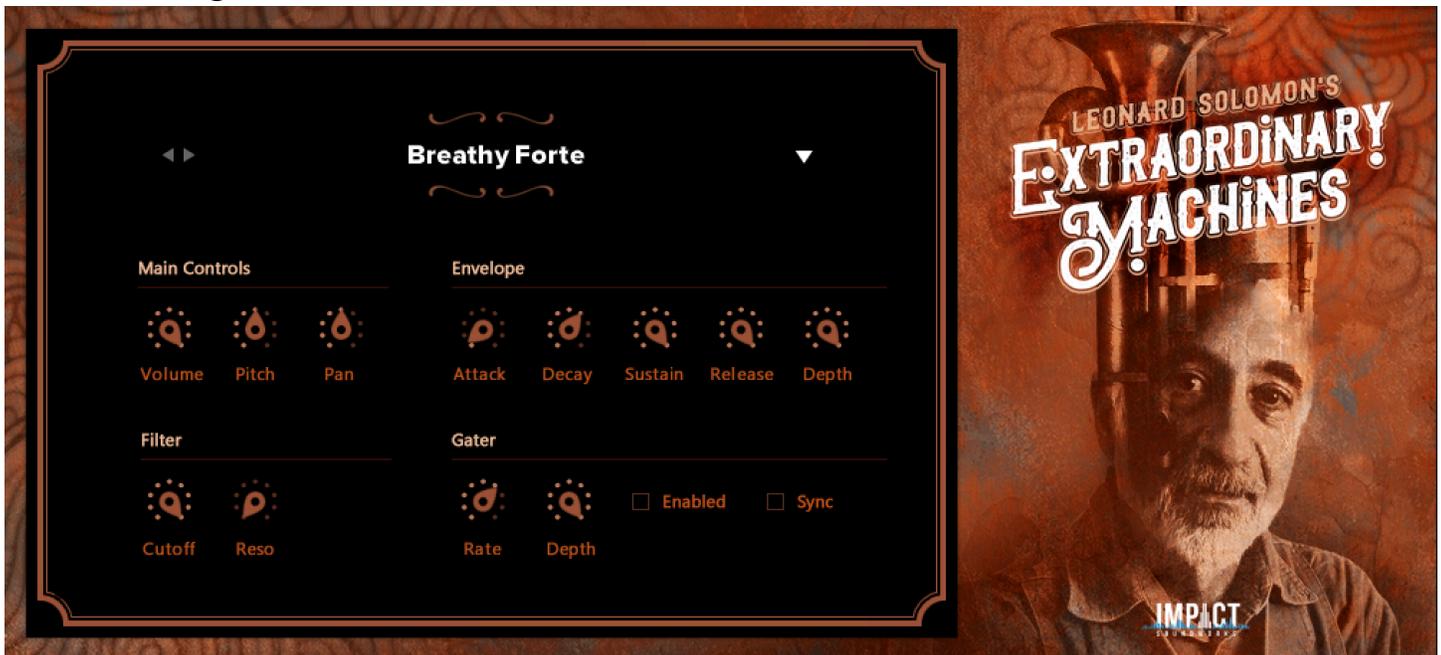
Controls how far into the selected Atonal sound design element sample that sample playback begins.

Gater

Controls a gater modulator on the selected Atonal sound design element playback:

- Rate** This knob controls the speed of the gating effect's oscillation on the selected Atonal sound design element..
- Depth** This knob controls the degree to which the gating effect is applied to the selected Atonal sound design element.
- Enabled** When enabled, this button likewise enables the Gater effect.
- Sync** When enabled, this button locks the Gater to the DAW tempo. *This transforms the Rate knob setting into a metric subdivision of the DAW's tempo.*

Sound Design Tonal



Like Sound Design Atonal, Sound Design Tonal is arranged, not in columns, but in rows:

Top Row

Previous/Next Selectors

These buttons allow the selection of the previous or next Tonal sound design element.

Sound Title

These evocative titles should give you some idea of what the Tonal sound design element should, well, sound like.

Element Dropdown Menu

Selects the individual Tonal sound design element.

Center Row

Controls global settings for the Tonal sound design elements.

Main Controls

Controls the basic playback attributes of any Atonal sound design element:

- Volume** Controls the element's output gain.
- Pitch** Controls the transposition of the element's pitch.
- Pan** Controls the element's position in the stereo field (amounts Left, Right, or Center).

Envelope

Controls the basic ADSR amp envelope:

- Attack** Controls Attack—*how long does the sample take to fade in?*
- Decay** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sustain** Controls Sustain—*what level does the sample primarily play back at?*
- Release** Controls Release—*how long does the sample take to fade to nothing after note off?*
- Depth** Controls the degree to which the ADSR envelope is applied to any Tonal sound design element.

Bottom Row

Controls specific settings for the selected Tonal sound design element.

Filter

Controls a Low Pass Filter applied to the selected Tonal sound design element:

- Cutoff** Controls the frequency of the LPF.
- Reso** Controls the degree of resonance of the LPF.

Gater

Controls a gater modulator on the selected Tonal sound design element playback:

- Rate** This knob controls the speed of the gating effect's oscillation on the selected Tonal sound design element..
- Depth** This knob controls the degree to which the gating effect is applied to the selected Tonal sound design element.
- Enabled** When enabled, this button likewise enables the Gater effect.
- Sync** When enabled, this button locks the Gater to the DAW tempo. *This transforms the Rate knob setting into a metric subdivision of the DAW's tempo.*

Tonal Horns



Like Oomphalapompatronium, there are three main columns:

Left Column

Animated Instrument Diagram

Len Solomon's Tonal Horns collection is one-of-a-kind, and seeing them in this layout should help you to better intuit each of their respective functions. When a sample from a specific instrument of the Tonal Horns collection is activated, the corresponding part of the diagram will be highlighted. *This is one of our favorite parts of Leonard Solomon's Extraordinary Machines—it's almost hypnotic to watch!*

Center Column

Each of the instruments of Tonal Horns can be manipulated and edited in granular detail with the controls in this column:

Instrument Selector Menu

Selects the individual instrument.

Reset Button

If changes have been made from the default, original values of an individual Tonal Horns instrument, clicking this button quickly resets all controls to the default.

NB: To reset a single control to its default value, $\text{⌘}+\text{click}$ (Mac)/ $\text{⌘}+\text{click}$ (PC) that control.

Instrument

Controls the basic playback attributes of the selected instrument:

- Vol** Controls the instrument's output gain.
- Pan** Controls the instrument's position in the stereo field (amounts Left, Right, or Center).
- Pitch** Controls the transposition of the instrument's pitch.
- Tuned** Controls the degree to which the instrument conforms to 'correct' 12-Tone Equal Temperament.

Equalizer

Controls the basic EQ curve of the selected instrument:

- Low** Controls the relative Low boost/cut, centered around 155 Hz.
- LMid** Controls the relative Low-Mid boost/cut, centered around 707 Hz.
- HMid** Controls the relative High-Mid boost/cut, centered around 2000 Hz.
- High** Controls the relative High boost/cut, centered around 5700 Hz.

Envelope

Controls the basic ADSR amp envelope of the selected element:

- Atk** Controls Attack—*how long does the sample take to fade in?*
- Dec** Controls Decay—*how long does the sample take to reach its Sustain level?*
- Sus** Controls Sustain—*what level does the sample primarily play back at?*
- Rel** Controls Release—*how long does the sample take to fade to nothing after note off?*

Articulation Selection Dropdown Menu

Controls how 'articulations' (performed sample lengths) of Tonal Horns are selected. This changes the view of this section of the column as follows:

Vel

This sets articulation selection to incoming MIDI Velocity.



Artic This dropdown menu sets the articulation selection to be edited.

MW Vol When selected, this button sets **CC1** to control output gain for all articulations.

Value Slider This sets the minimum and maximum Velocities to trigger the selected articulation. Shows the currently-triggered articulation.

NB: *This also affects the minimum and/or maximum Velocities of the adjacent region.*

CC

This sets articulation selection to incoming MIDI CC.



Artic This dropdown menu sets the articulation selection to be edited.

CC This dropdown menu sets the MIDI CC that will select the articulation.

Value Slider This sets the minimum and maximum CC values to trigger the selected articulation.

NB: *This also affects the minimum and/or maximum values of the adjacent region.*

KS

This sets articulation selection to incoming MIDI Keyswitch.



Long This dropdown menu sets the keyswitch that selects the Long articulation.

Short This dropdown menu sets the keyswitch that selects the Short articulation.

Right Column

These settings are global to the full Tonal Horns NKI:

Microphones

Close This fader controls the output gain of the mono Close mic perspective.

Stereo Pair This fader controls the output gain of the Stereo Pair mic perspective.

Speaker This icon mutes or unmutes its respective mic perspective.

Output This dropdown menu selects the output channel(s) of the respective mic perspective.

Settings

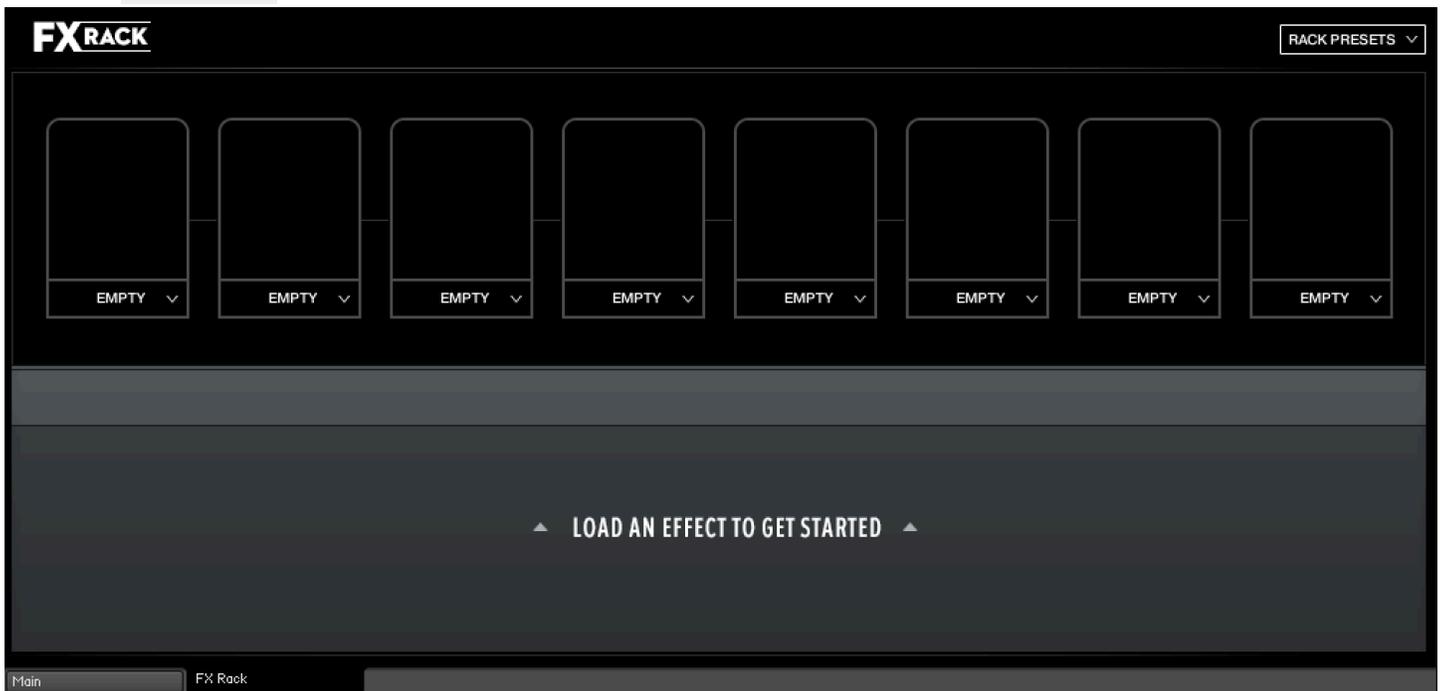
Auto-Inflate This knob controls the gain of the auto-inflation noises.

Round Robin This dropdown menu selects the style of Round Robin used in Tonal Horns:

- Random: RR proceeds in a 'random' order.
- Cycle: RR proceeds in a repeating, sequential order.
- Off: RR is disabled.

Velocity Curve Click+drag this icon to change the response curve transformation (input-to-output) of the input MIDI velocities.

Tab 2: FX Rack



Leonard Solomon's Extraordinary Machines features a custom FX Rack module for extending sound design and mix capabilities.

How does it work?

The eight **FX Slots** on the top side of the GUI are for **Inserts**. These **Inserts** apply to the full output of the instrument. You can select from over 25 beautiful effects! Some particularly useful ones for **Leonard Solomon's Extraordinary Machines** include **Analog EQ**, **Solid G Comp**, **Choral**, **Distortion**, **Rotator**, **Galois Reverb**, **Plate Reverb**, and **Cabinet**.

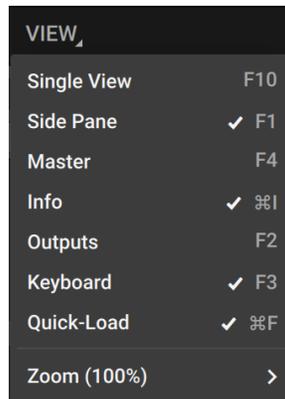
Setup & Tweaking

Tips for Getting the Most out of the User Interface

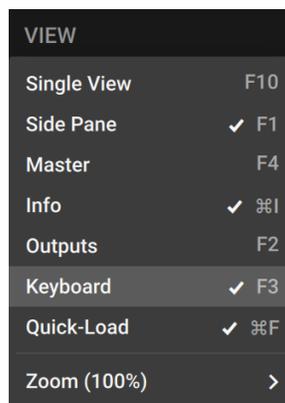
→ Almost all controls can be MIDI-learned by (1) right-clicking the UI and (2) selecting 'MIDI Learn'. You will then need to move the control of your choice (*i.e.*, fader, knob, *et al.*) on your MIDI control surface or in your DAW to establish the link.

Pro tip: Once you MIDI-learn something, you should save your modified version of that NKI so you won't have to do it again!

→ You can view Help Text by hovering over controls in the **Leonard Solomon's Extraordinary Machines** UI. The Help Text will appear at the bottom-left of the Kontakt UI plug-in window. You can go to the Panels drop-down menu by clicking the **VIEW** tab at the top-right of the plug-in window and ensure 'Info' has been checked:



→ The colorful Kontakt virtual keyboard, seen in our videos, is a Kontakt feature and not specific to **Leonard Solomon's Extraordinary Machines**. To enable the virtual keyboard, simply press **F3** on your computer (*not* MIDI!) keyboard. Alternatively, you can go to the Panels drop-down menu by clicking the **VIEW** tab at the top-right of the plug-in window and ensure 'Keyboard' is checked:



→ **Leonard Solomon's Extraordinary Machines** is fully NKS Compatible and features quite a few existing host-automatable controls. If you have a Complete Kontrol keyboard or use the Complete Kontrol application, you will be able to benefit from this functionality!

Credits & Acknowledgements

Executive Producer: Dickie Chapin

Sound Design: Michael Sciabbarrasi

Sample Editing: Christian Yoder

Mapping: Dickie Chapin, David Smith

Programming: Mario Krušelj, David Smith

User Interface & Graphic Design: Dickie Chapin, David Smith

Marketing: Lauren Liebowitz

User Manual: Kent Kercher

Quality Assurance: Fredrik Häthén

...And a special thanks to our Beta Team!

Troubleshooting

Having trouble with **Leonard Solomon's Extraordinary Machines**? Use it in a project you want to tell us about? Drop us a line via our [Contact](#) page (but be sure to read the [FAQ](#) first!)

Copyright & License Agreement

License Agreement

The following license is granted non-exclusively to all purchasers of our products. This version (updated 20 December 2022) supersedes any prior printed or digital versions of our license.

Overview

All sound recordings, performances, scripting and/or code contained in this product is the intellectual property of Impact Soundworks LLC ('ISW') unless otherwise noted, and remains the property of ISW after the product is purchased. When purchasing an ISW product, you are purchasing a non-exclusive license to use, edit, perform, or otherwise utilize the contained recordings, performances, scripting and/or code for commercial and non-commercial purposes as defined below.

Authorized Users

Depending on the type of customer and usage scenario, authorized users of this license will vary.

ALL purchases fall into category A or B:

A. Individual Purchase

This license is extended to customers who are purchasing as the primary user of the product, OR are purchasing on the behalf of another primary user (i.e. as a gift). The licensee (primary user) MAY install the product on as many computer systems as they have access to. However, ONLY the licensee may use the product. **No other users are authorized.**

B. Corporate/Academic/Institutional Purchase

This license is extended to customers who are purchasing for a multi-user setting, such as a shared studio, networked workstation, computer lab, etc. In this case, the licensee is the institution and not any one user. In contrast with individual purchases, an institutional license applies to ONE computer / workstation. All users of that workstation who belong to the purchasing institution (licensee) shall be considered 'authorized users'. However, at no point may multiple authorized users access one license simultaneously. Multiple licenses must be purchased if the product is to be used by multiple users simultaneously.

Scope of License (Virtual Instruments, Sample Libraries)

The licensee is entitled to the use and unlimited editing of the Product within the scope of music production, performance, recording, and composition. This includes both non-commercial and commercial usage of all types, including, but not limited to, film scores, television scores, music libraries, video game soundtracks, digital and physical music releases, albums, compilations, etc.

The licensee is entitled to distribute, sub-license, sell, stream, edit, monetize, or otherwise utilize **any music** created with the Product.

Exceptions to this scope are listed below.

The licensee **MAY NOT** use the Product in the production of any other sample library or virtual instrument products.

The licensee **MAY NOT sell** *individual sounds* from the Product in any audio marketplace (e.g. stock audio websites, sound effect libraries, etc.)

For clarity: The licensee **MAY** use sounds from the Product to create individual sound effects (SFX) for use in film, TV, advertising, and video games. The limitation is strictly on **selling** *individual sounds* in a marketplace, SFX library, or similar.

Ownership, Resale and Transfer

Redistributing, reselling, electronically transmitting, uploading, sharing, or renting the Product in any way, shape, or form is prohibited by law. The licensee may create a physical backup copy of any digitally purchased and downloaded Product. This backup copy is subject to the same limitations as the original copy of the Product, and may not be transferred to any other individual for any reason.

Copyright © 2024 Impact Soundworks, LLC. All Rights Reserved.