



## whoosh v.1.5.2 owners manual

Document Version: 5.0

Product Version: 1.5.2

### System Requirements:

- macOS 10.12, 10.13, 10.14 or 10.15 (latest update), i5
- 
- Windows 7, Windows 8, or Windows 10 (latest Service Pack), Intel Core i5 or equivalent CPU, 4 GB RAM
- You need the Free Reaktor 6.3.2 Player or
- Full version Reaktor 6.3.2
- Internet connection is needed to register WHOOSH via Native Access.
- SUPPORTED INTERFACES:  
  
Mac OS X (64-bit only): Stand-alone, VST, AU, AAX  
Windows (32/64-bit): Stand-alone, VST, AAX
- Free Reaktor 6.3.2 Player or Full version Reaktor 6.3.2

### Credits:

Product Idea: Tilman Hahn

Product Design: Tilman Hahn & Dietrich Pank

Product built by: Dietrich Pank

Gui Design: Benjamin Diez

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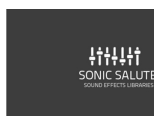
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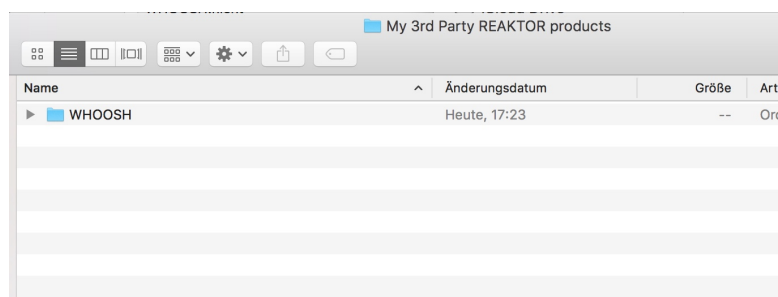
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## 1 Setting Up WHOOSH:

1. Install REAKTOR or REAKTOR PLAYER version 6.2 or higher.
2. Move the downloaded WHOOSH.zip to a meaningful folder on your hard drive. It is important not to move the folder after this step. We suggest to create a dedicated folder to place all your third party REAKTOR products. In our example we have created a folder named "My Third Party Reaktor Products" in the following location and have moved the product's zip folder to it:  
Mac: Macintosh HD > Users > Shared > My Reaktor Third Party Products  
Windows: C: > Users > Public > Documents > Public Documents > My Reaktor Third Party Products
4. Unzip the downloaded file. This will create a new folder containing your third party REAKTOR product.



5. Launch Native Access.

6. Click Add a serial:



7. Add the serial you received in your delivery mail after purchasing WHOOSH and click the ADD SERIAL button:



8. Click the BROWSE button:

9. Navigate to the product's folder, select the folder WHOOSH and click Open.

10. Click INSTALL to install your third party REAKTOR product.

11. You will get a notification indicating the installation process is finished. You can now close Native Access.

12. Open REAKTOR. The third party product now appears in the Player section of the REAKTOR Browser.

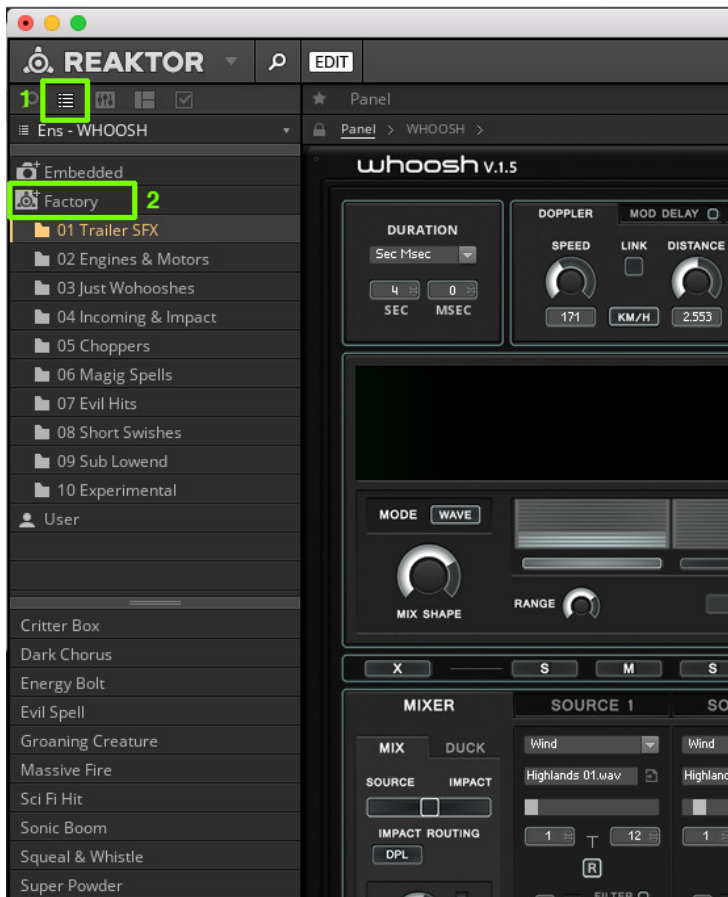


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## 2 What's new in this Version?

### 2.1 100 Presets

#### The Preset Browser:



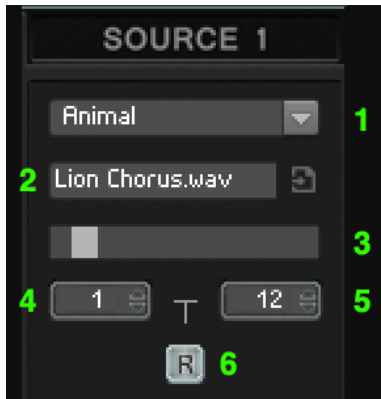
1. Click the Preset browser.

2. Double click the Factory symbol to get access to the 100 categorized WHOOSH presets.

## 2.2 Completely overhauled sample management

**WHOOSH** now offers a workflow to handle the expanded factory library and your custom sample material in one place.

### The Source Sample Browser:



1. Choose between one of the 12 available Categories or the four User Banks. Each Category is filled with 12 samples.

2. Displays the name of the currently selected sample

3. Sample select slider selects the sample. When the start and end positions of (4.) are set to 0 to 12 you have the possibility to select any sample from the currently selected category. The range size would be 12 in this case.

4. Start sample range selector: Defines the start position of the range and defines the effective range for the sample select slider (3).

5. End sample range selector: Defines the end position of the range and defines the effective range for the sample select slider (3).

6. Randomize button. Randomizes the sample select slider after each doppler pass.

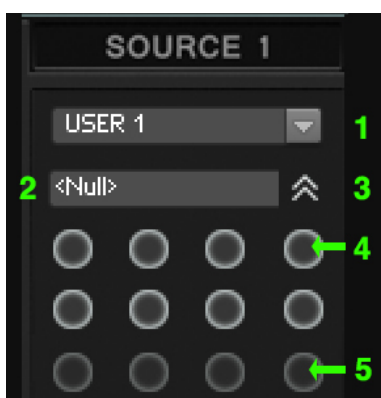
### The Source Sample Browser User Banks:



1. Choose between one of the four User Banks. Each User Bank can store up to 12 samples.

2. Displays the name of the currently selected sample of the selected User Bank.

3. Click here to open or close the Drag & Drop panel where you can easily import your custom user samples.



1. Choose between one of the four User Banks. Each User Bank can store up to 12 samples.

2. Displays the name of the currently selected sample of the selected User Bank.

3. Click here to open or close the Drag & Drop panel where you can easily import your custom user samples.

4. Drag & Drop your Samples on to one of the 12 circles. If the circle is glowing it stores a sample. You can overwrite

samples by simply dragging and dropping different samples on to the slots. A User Bank can store up to 12 user banks maximum.

5. This is an example of a circle not glowing so it does not store a sample.

**If you Right click into the sample slot area you get to the Sample Slot Delete Menu:**



1. Select here if you want to delete an individual Sample Slot you have right clicked before.

2. Select here if you want to delete all Sample Slots.

3. Select here to Cancel.

**Note: User Sample Banks will be stored with the preset files. So if desired and as long as you keep the sample path you had during dragging and dropping you will be able to have individual 4 user banks for every preset you save.**

**The sample management for the Impact Samplers works like the the sample management for the Source Samplers. However they provide different categories and samples suited for impact designing needs.**

## 2.3 Improved Midi functionality



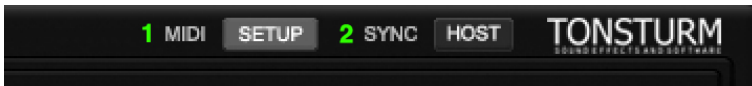
- Timecode 24: Set the Master Duration in Seconds and Frames (For 24FPS projects)

- Timecode 25: Set the Master Duration in Seconds and Frames (For 25FPS projects)

- Sec Msec: Set the Master Duration in Seconds and Milliseconds

- Beat Sync: Tightly synchronizes the instrument to the Hosts Beat Grid.

## 2.4 Improved Midi functionality



1. Shows and hides the WHOOSH Midi Setup.

2. Toggles between Host and Midi Mode

### Host Mode:



1. RUN: Starts the instrument. Can also be enabled by pressing space bar or starting the Host sequencer. Midi functionality also operates in Host Mode.

2. Toggles between Loop and Single playback



## Midi Mode:



**1** Switches between gate and toggle mode. In gate mode whoosh runs as long as the run key is pressed and stops when key is released. In toggle mode whoosh runs when key is pressed and stops when the same key is pressed a second time.

**2** Manual mode makes it possible to map a controller to the doppler position. The big manual button has to be enabled on the front panel. If you Midi learned a controller you can manually drive through the whoosh engine! Or simply use the mouse and scrub through the scope display.

**3** Let's you midid learn a key to manually fire up the impact sampler when ever you wish.

To operate WHOOSH properly with an Midi controller you first have to check if the default Midi assignments work for your controller or set them up customized to your preferred device:

**Open the Midi Setup via the Setup knob at the top of the interface:**



## Midi Setup Panel:



The colored fields indicate which Midi Note Number is assigned to which function of WHOOSH. You can Mouse Click into any of the fields to assign a midi note number or controller. The yellow field RUN makes WHOOSH start and stop. The four blue colored fields correspond to the mixer positions of the wave mixer. If you midi learn the individual keys it is possible to manually control the wave mixer positions. Sending a note value to one of these functions will make WHOOSH start from the selected Wave Mixer position. Sending a Note Value to the read IMPACT function will allow you to trigger the impact sampler manually. Midi learning your Modulation Wheel or any other Midi controller to the MANUAL function will enable you to manually swipe through the WHOOSH path and directly perform whooshes and pass by effects.

### 3 Introduction & Signal Flow

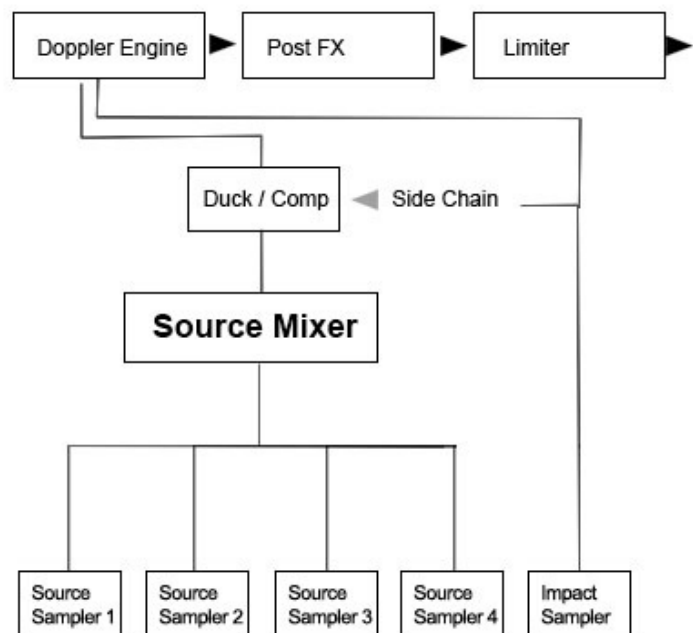
#### 3.1 What is Whoosh?

**WHOOSH** is a sample based instrument designed to produce complex and unique whoosh and pass by sound effects. It enables you to precisely design the sound event of an object that passes by the listeners perspective. Different sound sources coming from individual sample playback engines are mixed into each other. This blend of sound sources is then processed by the doppler effect engine and additional post effects.

Whoosh comes with an extensive onboard library licensed from leading field recordists and covers all kind of categories from wind to fire, metal, water, engine and explosion effects. These „organic“ field recordings combined with the powerful sound effects engine of **WHOOSH** enable you to design a vast variety of impressive and beautiful sounding whoosh and pass by sound effects. The results reach from whistling wind to air ripping engine or completely over the top granular sci-fi effect whooshes.

#### 3.2 Signal Flow

**WHOOSH** has two main audio signal paths: 1.) The whoosh signal path, which is a mix of the four source samplers. 2.) The impact signal path coming from the impact sampler engine. The signals from the four source samplers go to the source mixer where the levels of the four channels are blended into each other. This blended sound mix from the source mixer is passed through a side chain ducking compressor and then routed to the doppler engine. The impact sampler path goes directly to the doppler engine and does not pass through the source mixer. The signal of the impact sampler also provides the key signal for the side chain input of the ducking compressor which is inserted between source mixer and doppler engine. The side chain compressor makes it possible to duck the the whoosh signal in volume. This results in short volume dip of the whoosh signal and allows the impacts to cut through - if desired. The source mixer and impact sampler signals are finally both processed by the doppler engine. After being processed by the doppler effect engine the signal goes through the following post effects: Mod Delay → Tremolo → Equalizer → Drive → Compressor → Brick Wall Limiter.



## 4 The Different Sections

### 4.1 The Source Sampler



There are four source samplers each sharing the same functionality. The source samplers provide the raw sounds which are blended into each other by the source mixer. The source players each provide 15 SFX categories containing 193 samples in total and 4 user banks. The source players each offer a master volume accompanied by a high & low - cut filter.

The samplers operate in two different playback modes: loop and grain. In both modes the user can select a playback range to define the start and end point of the looped sample range. Both modes offer the ability to change the playback direction via three different modes: forward, alternate and backward. When „loop“ playback mode is selected there is no connection to the master duration of the instrument and the sample is just constantly looped. In granular playback mode it is possible to synchronize the playback duration of the loop to the master instrument duration.



If sync is selected and set to 1, the selected sample loop range is synchronized to the master duration. The sync value can also be set to double triple or four times the speed. If HZ mode is selected, the grain playback operates in free run. This is useful if you want to have more unpredictable results or realize really slow or fast movements of the grain playback head. In loop and grain playback mode it is possible to control pitch and panorama. In grain mode there are a couple of more options. Here it is possible to control the grain density (Number of grains at a time) and the grain size. Further more it is possible to modulate the parameters grain size, position, pitch and pan with a jitter modulator.



## 4.2 The Impact Sampler



The impact sampler is divided into four individual impact players each sharing the same functionality. The players offer 17 different categories of impact samples containing 204 samples in total and 4 user banks. Each Category offers 12 samples. For the factory library we decided these 12 samples into pairs of three. So that the explosion category for example provides the following set of samples: Indoor A, Indoor B, Indoor C, Military A, Military B, Military C, With a Zap A, With a Zap B, With a Zap C, Gasoline A, Gasoline B, Gasoline C.

So there are four different impact effects provided and each is containing three variants. With the little „R“ Random button of each Impact sampler you can enable a random sample selection within the selected sample range. So if you select the lower range = 1 and the upper range = 3 the impact samplers offers a round robin playback between the three variations of the effect.

Each effect comes in three variations. After each pass the engine randomly selects one of the three sample variations. This way a series of impact does not sound exactly the same. It is possible to switch On/Off the round robin playback behavior with the random button for each impact sampler.



The three big encoders at the top of the impact panel allow to adjust the position, pitch, and amplitude of all 4 impact players at once. Through the quadratic little spinner buttons under the encoders it is possible to select a random modulation amount for each of the three parameters. If the position parameter is modulated by an amount of randomness the playback position of the four impacts is randomized after each pass. It is important to

understand that the big encoders affect all four impact samplers equally but the random modulation produces four individual random values for each sampler to produce more interesting variations for each impact event. The selected range of randomness however is equal for all four impact players. It is also possible to change the position of the impacts individually. This can be done directly in the master waveform display.

Notice when you are repositioning the individual impacts manually the align knob becomes active. The align knob allows to realign all four impacts with one click. Repositioning the individual impact positions is only possible when you are in the impact edit mode.



### 4.3 The Mixer



The mixer gives you the possibility to change the category and sound selection for each sampler in one panel. Basic parameters like volume and the high & low cut filters are also provided.



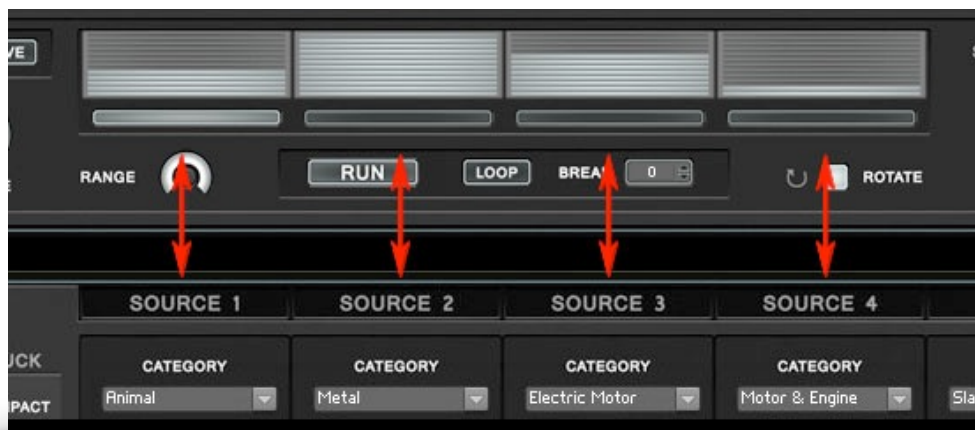
On the left side of the mixer section it is possible to cross fade between the source (whoosh)- and the impact- signal. In the impact routing section it is possible to change the impacts audio path, so that the impacts bypass the doppler engine. This is helpful if you want to just record the impacts clean and without any doppler effect or for designing incoming sound effects. An incoming explosion for example, where a whoosh is followed by a prominent impact explosion effect. So to hear the impacts clear as if you solo the impact sampler. If you enable the direct routing mode a second knob appears where you can decide if you want the impacts to be effected by the master volume fade or not.

The encoder labeled duck enables you to select how much the whoosh signal should be ducked by the impact signal. To the right of the encoder is a meter where you can see the amount of ducking. If you want to tweak the ducking settings in detail you can do this on



the sub menu „duck“. Here you have control about the attack and decay time. You can engage a high pass filter for the side chain signal and a pre delay (Look Ahead). On the bottom on the panel you can control the master fade. Adjusting the master fade is also possible in the main scope view display.

#### 4.4 The Source Mixer



The source mixer works like an automated crossfade mixer with four channels. The four volume meters correspond to the four source players underneath. The source mixer operates in two modes: Wave and random.



#### Wave Mode

In wave mode the whole source mixer operates synced to the master duration of the instrument. This means during each doppler pass the source mixer blends through all the outputs of the four source players. The volume modulation is shaped like a wave and is represented through the four wide LED style meters which correspond to the underlying source samplers. By selecting one of the four wide buttons under the meters one can



select from which source sampler position the wave modulation should start. If rotate mode is enabled the start point of the wave mixer will rotate to the next right position after each pass. 1,2,3,4, → 2,3,4,1 → 3,4,1,2 → 4,1,2,3 e.t.c

**Range:** Narrows or widens the wave modulation range. With the range fully engaged the wave modulation starts with all levels at zero. When range is lowered the modulation range is narrowed and the volume modulation does not start from zero anymore.

**Mix Shape:** Controls the overall shape of the wave modulation. The higher the wave shape the stronger the wave modulation is taking place at the center (peak) position or the narrower the wave. The lower the wave shape parameter the wider the wave modulation.

**Latitude:** (Inertia) of the wave modulation. The higher the latitude the more inert the modulation behaves. The lower the latitude the more direct the modulation.



### Random Mode:

In random mode the four volume levels are modulated randomly and the source mixer is not synced to the master duration / doppler path.

**Speed:** Controls the tempo of the random modulation.

**Contrast:** Controls the rate at which the random values do tend to more extreme positions. With a higher contrast the levels fluctuate more often between full and zero level.

**Smooth:** Smooths the random modulation. The modulation behaves more even.

**Normal:** Stands for normalize and causes a equalized randomization of all four channels. With normal activated the overall sum of the four levels is equaled.

At the bottom of the source mixer panel you find the master playback section:

**Run:** Starts the instrument.

**Loop / Single:** Selects between loop and one shot playback.

**Break:** Inserts a break time in ms between each doppler pass.

## 4.5 The Scope Display:



In the scope display it is possible to control the master fade. The master fade is an overall volume fade imposed on the whole doppler event. This ensures a smooth start and end modulation. The master fade becomes especially useful when the source mixer is operating in random mode, where the audio can be unpredictable.

## 5.1 The Doppler



The doppler engine simulates a range of natural dampening and doppler effects which occur when sound sources are passing by the listener.

**Speed:** The speed of the object that passes by.

**Distance:** The distance of the listener to the object.

**Link:** Links the distance control to the speed control. With link enabled the sound changes more evenly when changing the speed.

**Path:** Path the object travels in meters.



**Amount:** With the pitch and amp controls it is possible to increase or decrease the amount of pitch and amplitude modulation of the doppler effect.

**Damp:** There are three different damping modes: Peak A and Peak B both simulate dampening effects as they occur in nature. The signal is more muffled in the distance and the high Frequencies increase when the object approaches. The Up/Down mode is more like a high cut filter that opens up or closes when the object approaches and remains at the up or down position when the Object disappears.

**Pan:** Controls the amount of „Left to Right“ Panning. With the little arrow toggle. Panning direction can be switched to „Right to Left“.

### Doppler Speed Curve:



- Speed curve is an extended doppler function. It allows you to create a transition of the speed parameter.

- Setting the SYM parameter to the left makes the object approach faster and it is leaving the observer slower. This results in a longer tail at the end of the whoosh effect. When turning SYM to the right the object approaches slower and leaves the stage faster.

- The SHAPE parameter effects the curve of the transition from sharp to rounded.

## 5.2 Mod Delay



Mod Delay offers control over mix, feedback, left and right channel delay time. All the four parameters can be modulated by selecting one of the two LFO's. Which LFO can be selected in the number fields under the encoders. Add the desired modulation amount through click and drag in the little arrow spinner knobs. Special about the mod delay is that the delay time only goes up to 80 ms which is perfect for creating flanging, chorus and metallic delay effects.

### 5.3 Tremolo



Tremolo offers control over speed and mix. Both controls can be modulated via the two LFO's in the same way as the mod delay. It is also possible to choose between three different tremolo shapes.

### 5.4 Equalize



Equalize is a basic high and low shelf equalizer. You can select a specific low or high frequency value and increase or decrease it's gain.

### 5.5 Drive



You can select between drive and saturation mode. The big encoder allows you to dial in the drive effect. There is also some additional filtering offered. The additional drive effect may lead to an increased volume of the lower frequencies. The low cut filter could help balancing here. There is also a HiFi filter offered which lowers the midd range frequencies.

## 5.6 Compress



Compress is a basic compressor and offers control for compression, threshold, ratio, attack and release time.

## 5.7 Master Volume & Limiter



Controls the master output volume of the instrument. At the end of it's signal chain is a brick wall limiter indicated through the gain reduction meter. The limiter can operate in three different modes: Slow, Firm and Crisp. Crisp has an ultra short attack time and may lead to some additional digital distortion. This can be desired to get some extra crunchiness.

### Tutorials:

We also offer a couple of tutorials on our Vimeo channel. Combined with this manual you should be able to master making unique and powerful whoosh and pass by effects. <https://vimeo.com/tonsturm>