

# REFLEX+ V3.0



## VST AMBIENCE GENERATOR

**REFLEX+ V3** is a delay algorithm based echo/reverb unit. It is capable of generating huge spaces as well as modulated echoes and reverbs through a cascade of regenerating delays and thus is an ideal tool for big ambient reverbs. Beside common and expanded mono/stereo and cross delays **REFLEX+** provides everlasting reverbs as well as special modulation effects which will enrich all kind of sources to an inimitable ambient sound cloud.

### Features:

- **Short reflections up to endless reverberation**
- **Time/Pan/Filter/Level modulation**
- **7 Filter modes**
- **7 Delay/Reverb algorithms**
- **2 independent effect slots (REFLEX lines)**

## **MAIN CONTROLS:**

### **KNOBS/FADERS:**

- GAIN(\*):** Input level (-30dB - +12dB). If the input is split (see Button „SPLIT“) and REFLEX line 2 is selected this control only affects the dry input signal for Reflex Line 2 and not the amount of fed Reflex Line 1 output.
- SIZE\*:** Overall delay time factor of the predefined delay times (10%-100%).  
In all Delay Time Modes this parameter relates to the selected Size Mode (see PopUp „MODE“!)
- LEVEL\*:** Output level of the selected REFLEX line.
- MIX:** Cross-fade between dry & wet signal (100%dry - 100%wet).
- PAN\*:** Panorama of the selected REFLEX line.
- LP/CF\*:** In Filter Type 6db/18db lo/hi pass (see Right Display PopUp “FILTER TYPE”): Hicut (0% - 100%).  
Any other Filter Type: Cutoff Frequency (51Hz – 20kHz) of the selected filter.
- HP/Q\*:** In Filter Type 6dB/18dB Lo/Hi pass: Locut (0% - 100%).  
Any other Filter Type: Q/Resonance (0% - 100%) of the selected filter.
- DECAY\*:** The feedback amount of regenerating delay loops (0% - 100%).
- SPRD\*:** Spread amount of filters cutoff frequency (0% - 100%).  
Moving to the left side decreases CF on the left and increases CF on the right.  
Moving to the right side decreases CF on the right and increases CF on the left.

*Note: All \* parameters are adjustable individually for REFLEX line 1 and 2.*

### **BUTTONS:**

- SELECT:** Select controls for REFLEX line 1 (blue knob rings), and REFLEX line 2 (white knob rings).  
Pushing the button or clicking the LEDs jumps between the FX slots
- SOLO:** Solos the actual selected REFLEX line. Useful for easy checking the different signals.
- SPLIT:** Split input routing. Input gain of the dry signal can be set individually for Reflex Line 1 and 2.
- KILL:** Mutes the output and clears the delay buffers. Use it for stopping long feedbacks or unwanted sound artefacts.

### **POP UP/SELECTOR:**

- MODE (SIZE):** That PopUp/Selector holds different parameters depending on the selected REFLEX line and TimeMode:


REFLEX line 1/Time Mode “REFLEX”: NA (No option available)

REFLEX line 1/Time Mode “DELAY”:

- “ $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{4}{4}$ ”: The overall Size Time. Size knob on 100% is equal to the selected amount of quarters.
- *STRAIGHT, DOTTED, TRIPLET*: Size knob sets synced times from  $\frac{1}{32}$  –  $\frac{1}{1}$  of the selected note value.
- MSECONDS: Size knob range is in milliseconds from 10 – 1000.



REFLEX line 2/Time Mode "REFLEX": NA (No option available)  
REFLEX line 2/Time Mode "DELAY":

-  Latency correction. If enabled REFLEX line 2 reverb, fed by line 1 delay output starts without additional delay. With latency correction the line 2 reverbs stays in sync to the REFLEX line 1 delay size

## **LFO CONTROLS:**

### **KNOBS:**

**RATE:** Frequency of the selected LFO. This parameter relates to the selected LFO Sync Mode (see PopUp „Mode“):

Sync Mode "Hz":  
Frequency of the Delay TIME LFO (0.01Hz - 1 kHz) all other LFOs (0.02Hz - 20 Hz).

Sync Mode "*STRAIGHT, DOTTED, TRIPLET*":  
Rate knob sets synced times from 4/1 – 1/16 of the selected note value.

**DEPTH:** Modulation depth of the corresponding LFO (0% - 100%).

### **BUTTONS:**

**SELECT:** Select LFO controls and displays for Time(**yellow**), Pan(**blue**), Filter(**red**) and Level(**green**).  
Pushing the button steps through LFOs. Clicking the LEDs directly brings up the selected LFO.

### **POP UPS:**

**MODE (top):** Sync Mode of the selected LFO (HZ, STRAIGHT, DOTTED, TRIPLET).  
"HZ": LFO is free running.  
" STRAIGHT, DOTTED, TRIPLET": LFO is synced to the host tempo (see LFO-Knob "RATE").

**MODE (bottom):** Polarity of the LFO output:  
NORM: Bipolar output (-1 to +1) similar to the selected waveform.  
INV: Bipolar output (-1 to +1) similar to the inverted selected waveform.  
POS: Positive output (0 to +1) similar to the selected waveform.  
NEG: Negative output (0 to -1) similar to the selected waveform.

**TARGET (top):** LFO Wave: Time LFO provides 4 waveforms (ALTERNATE, SINUS, RAMP UP, RAMP DOWN).  
All other LFOs provide 5 waveforms (ALTERNATE, SINUS, RAMP UP, RAMP DOWN, PULSE).

„SIN, RAMP, INVRAMP, PULSE“ are straight shapes suitable for low frequency modulations as well as for FM modulations with audio range frequency. „Alternate“ produces a sinus like chaotic wave.  
Preferred for non static low frequency modulations. In this state the LFO rate also affects the level of the LFO.

**TARGET (bot)** Dependent on the selected LFO this PopUp provides the following targets:  
*Time/Pan/Filter LFOs:*

- OFF: LFO is switched off.
- RF1: LFO only affects Reflex line 1.
- RF2: LFO only affects Reflex line 2.
- RF1 + 2: LFO affects Reflex line 1 and 2.
- RF1 + 2 X: LFO affects Reflex line 1 and 2. RF2 receives the inverted LFO output.

*Filter LFO additionally:*

- RF1 X: LFO affects only Reflex line 1. Left side receives the regular LFO output. Right side receives the inverted LFO output.
- RF2 X: LFO affects only Reflex line 2. Left side receives the regular LFO output. Right side receives the inverted LFO output.

*Level LFO:*

- OFF: LFO is switched off.
- RF1 OUT(IN): LFO only affects Reflex line 1 output (input).
- RF2 OUT(IN): LFO only affects Reflex line 2 output (input).
- RF1 + 2 OUT(IN): LFO affects Reflex line 1 and 2 output (input).
- RF1 + 2 X OUT(IN): LFO affects Reflex line 1 and 2 output (input). RF2 receives the inverted LFO output.

*Note: Pressing the shift button while turning a knob changes its sensitivity and can be used for fine adjustments.  
A double click on a knob resets its parameter to the default value!*

### ***RIGHT DISPLAY POPUPS:***

**TIME MODE:** 7 delay/reverb algorithms (Reflex I/II, Delay I-III, X-Delay I/II) for Reflex line 1.  
Reflex Line 2 is set to a fixed algorithm.

- **REFLEX I:** Short early reflections followed by a dense reverb (known from the *Reflex free* plug in).
- **REFLEX II:** Early reflections followed by a late dense reverb.
- **DELAY I:** Host tempo synced delays followed by a dense reverb. Size of 100% on a ¼ note reference equals to a ¼ note on the main right delay and a dotted ¼ note on the left delay.
- **DELAY II:** Host tempo synced delays followed by a dense reverb. Size of 100% on a ¼ note reference equals to a ¼ note on the main right delay and a ¼ plus 1/16 note on the left delay.
- **DELAY III:** Host tempo synced delays followed by a dense reverb. Size of 100% on a ¼ note reference equals to a ¼ note on main left and right delay with a slight offset on the left.
- **X-DELAY I:** Host tempo synced Cross – delays. Size of 100% on a ¼ note reference equals to a ¼ note which alternates from left to right...
- **X-DELAY II:** Host tempo synced Cross – delays. Size of 100% on a ¼ note reference equals to a ¼ note on the right vs a 1/8 note on the left.



**OUT SWAP:** Swaps the left and right output to the opposite side (L - R, R - L).


**RF2 INPUT:** Input for the 2<sup>nd</sup> REFLEX line (OFF, IN, RF1, RF1M+IN, RF1ST+IN):

- **OFF:** Reflex line 2 is switched off.
- **IN:** Dry input signal (same as Reflex line 1 input).
- **RF1:** Output of Reflex Line 1 (always fetched pre output level).
- **RF1M+IN:** Mono output of Reflex Line 1 left/right signal and dry input.
- **RF1ST+IN:** Stereo output of Reflex Line 1 feed to stereo input and dry input.


**FILTER ROUTE:** This parameter sets the “hook points” of the filters for each Reflex Line individually.  
Line 1 (left): ([Link], IN+FB, FEEDBACK, OUTPUT, INPUT, OUTPUT>RF2):

- **IN+FB:** All delay signals are filtered.
- **FB:** The initial delay repetition is unfiltered and only the delay feedback signal is filtered.
- **OUT:** The delay output is filtered after the Reflex Line 2 feed.
- **IN:** The delay input is filtered.
- **OUT>2:** The delay output is filtered prior the Reflex Line2 feed..

Line 2 (right): (LINK, FEEDBACK, OUTPUT, INPUT):

-  Line 2 is linked to the Reflex Line 1 setting.
- **FB, OUT, IN:** see Reflex Line 1

**FILTER TYPE:** Individual Filter Type for each Reflex Line (Line 1 left, Line 2 right)  
([LINK], 6db HP/LP, 18db HP/LP, 24db LP, 24db HP, 24db BP, 24db NOTCH, 24db PEAK):

-  (Reflex Line 2 only): Line 2 is linked to the Reflex Line 1 setting.
- **6db HP/LP:** These are the HiPass and LoPass filters from REFLEX+ V1/2 with a 6db slope.
- **18db HP/LP:** Same HiPass and LoPass filters from with a 18db slope.
- **24db LP:** A LoPass filter with a slope of 24db and resonance.
- **24db HP:** A HiPass filter with a slope of 24db and resonance.
- **24db BP:** A BandPass filter with a slope of 24db and resonance.
- **24db NOTCH:** A Notch filter with a slope of 24db and Q factor.
- **24db PEAK:** A Peak filter with a slope of 24db and resonance. Acts like EQ with positive gain.

### **MASTER PARAMETER DISPLAY:**

- Left: (**REGISTER Display**) - Opens the license key edit box in the center area. After pasting the license key you have to confirm your input by pressing „**SET**“. If REFLEX+ is registered the actual version number is shown.
- Center: (**Parameter Display**) - shows „DEMO MODE“ until REFLEX+ is registered with a valid license key. If registered the actual selected knob value is shown here.
- Right: (**Preset Display**) - Select presets from the Pop Up Menu or by stepping with the arrow buttons. Clicking on the preset name opens the Pop Up. If REFLEX+ is registered the „**Save**“ button is visible. Presets are saved in the user preset folder within the default REFLEX+ Preset folder.

### **STW AUDIO LOGO:**

Clicking the „**STW audio**“ logo launches a link to the stw-audio homepage.

Have fun!

