

# R-SAMPLE FACTOR OPERATION MANUAL



BY SYNTHESCIENCE



## R-Sample Factor Operation Manual

First of all congratulations and thank you for choosing the R-Sample Factor bit depth and sample reduction module by Synthescience. We hope that you'll find this a useful plugin for your processing needs. To get the best from its features, please take some time to read this manual as it provides vital information about the plugins performance.

The Synthescience Team.

### 1. Introduction

The R-Sample Factor is a combined Sample Rate and Bit depth reduction plugin. It's not at all a sound enhancement processor but rather the opposite. It is aimed at recapturing the essence from the old days of the early digital sound processing units and it does it well indeed. So if at times you happen to find your sound to be too polished and want throw some "grain and grit" into the sonic equation just wire it up into the R-Sample Factor plugin and sit back cause your about to enjoy (literally..) the comeback of the primitive digital sound era.

The R-Sample Factor can be used either in Stereo or Mono tracks, but if you use it on a Mono track, select input mode to ST-ST (if you select ST-M the input sound is likely to drop out by half)

The R-Sample Factor is fully automatable and has the ability to store 128 presets. It ships with a few already pre programmed ones that will show what its all about and may be the starting point to your individual creations.

**Installation procedure:** Unzip the file, then copy the DLL's into your VstPlugins folder.

## 2. Front Panel controls



The controllers in the R-Sample Factor may be operated in three different ways:

**Circular type controls** – The grey knobs like Sample rate, Bit depth and Blend.

**Toggle controls** – Smooth – On/Off, S-Rate – On/Off, B-Depth – On/Off, Invert switch, Inp-Mode and Process – On/Off

**Click controls** (only active while clicked) – The effects nameplate which shows additional information about the plugin (like plugin version and credits)

### Description of controls



**Sample Rate** – Adjusts the sample rate between 100 to 18000Hz (or 0.1 to 18 KHz). Higher sample rate values allows better sound definition while lower values introduces further degradation to the input signal until it merely resembles the original and sometimes altering it beyond recognition. Notice that even at the maximum sample rate allowed the signal is already modified at start and some sonic artefacts like a slightly metallic ringing tone is introduced. This is due to the fact that normally in our day's computers works with sample rates of about 44.1 KHz, 48 KHz and superior and the maximum sample rate allowed for this plugin is 18 KHz. (When the S-Rate switch is on)



**Smooth** – The Smooth switch filters out some of the high frequency artifacts that are present when the Sample Rate stage or Bit Depth stage is on, therefore “smoothing” out the sound. Turn it on if you find the output sound to be too harsh or leave it off if you like it as it is.



**Bit Depth** – Selectable from 2 bits to 16 bits. This selector lets you tune to the desired bit depth range at will, just remember the lower the bit depth is set, the more messed up the sound comes up. The Bit Depth stage can be turned on or off in the B-Depth switch.

## Description of controls (continued)



**S-Rate switch** – Turns the Sample Rate stage on or off.



**B-Depth switch** – Turns the Bit Depth stage on or off.



**Invert switch** – Inverts the phase from the signal processed by the Sample Rate and the Bit Depth stage, allowing for more sound sculpting options, especially if you combine it with the Blend knob at middle values or less.



**Blend** – The Blend knob allows the mixing of the dry signal with the processed signal, ranging from Dry (only the input signal is outputted) to Eff (only the processed signal is outputted) and everything in between.



**Inp-Mode** – The Inp-Mode or Input Mode allows for two distinct choices of routing the input signal, St-St (Stereo to Stereo) and St-M (Stereo to Mono).

Stereo to Stereo allows for an independent routing of the left and right input signals inside the plugins internal architecture where each audio stream (left and right respectively) is processed separated from one another, keeping the stereo impression even if the ammount of Bit Depth reduction or Sample Rate reduction is high.

Stereo to Mono combines both signals from the left and right channel into one, that way eliminating any stereo impression of the input signals but contributing to a more Lo-Fi sort of sound.



**Process** – The process switch allows for switching the effect on or off (bypass mode).

**(About Box)** - By clicking and holding the mouse arrow over the effect nameplate reveals additional information about the plugin (like plugin version and credits)

### 3. Midi Controllers

*(There is a total of 9 different midi controllers assigned to the R-Sample Factor plugin as shown in the below box.)*

<b>R-Sample Factor Midi Controller List</b>
---

<b>10 Sample rate (0.1 to 18KHz)</b>
<b>11 Smooth</b>
<b>12 Bit depth (2 to 16 bits)</b>
<b>13 Sample Rate stage on/off</b>
<b>14 Bit Depth stage on/off</b>
<b>15 Invert switch</b>
<b>16 Blend</b>
<b>17 Input Mode (stereo to stereo or stereo to mono)</b>
<b>18 Process (On - Off)</b>

## **4. Credits and Acknowledgement**

Manual by Synthescience

Graphics and Programming by Synthescience

Synthescience products are developed with SynthEdit development system

By Jeff McClintock.

Vst Plugin Technology by Steinberg Media Technologies AG.

