AD 480
ACOUSTICS DESIGNER

Manual

AD 480 Reverb RE

Version 1.0
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This guide will be updated regularly as the software itself is further improved and developed.

Check for updates and other information at

www.fiedler-audio.com

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1. Preface

The AD 480 Reverb RE is a professional reverberation effect for Propellerheads Reason and Reason Essentials. Enhance and enrich your recordings and live sound with the perfect sonic texture of your choice. The AD 480 Reverb RE is capable of simulating a virtually unlimited number of acoustic spaces of all sizes. Powerful filters shape the sonic color of the reverb and the unique "cross feed" function enables you to control the directional behavior of the reverb according to the panorama angle of the input signal. The user interface is designed for quick and comfortable access to all parameters.

2. Signal Flow

The AD 480 Reverb has one stereo input and 3 stereo outputs. The mixed output provides the wet and the dry signals mixed by the "mix" fader. The wet output gives you the wet signal and the dry out gives you the dry signal. The "mix" fader has no influence on the volumes of the dry output and the wet output.

The input signal is first delayed by "predelay" and then fed into the reverb algorithm.

Additionally the input signal can be fed channel swapped into the reverb algorithm, attenuated by "cross feed" and delayed by "cross delay", after "predelay" as well.

A peak meter with four columns shows the the input level before processing as well as the levels on the three stereo outputs right after the processing stage.

3. Front Panel

The front panel is five units high. Both the folded and the unfolded panel contain the patch display showing the currently loaded preset, the buttons to manage the presets and the 4-column peak meter.

The first column of the peakmeter shows the level at the input of the AD 480 Reverb RE, before any processing takes place. The second column shows the level at the mixed output, the third column shows the level at the wet output and the fourth column shows the level at the dry output.

The following list describes the parameters on the unfolded front panel.

- IN BYPASS: All audio at the reverbs input is muted. The reverb tail fades out naturally and the dry signal part remains audible.

- OUT BYPASS: The wet signal part is muted, but the reverb algorithm still processes incoming audio. The dry signal part remains audible.

Faders:

- "size": This parameter adjusts the first reflection pattern of the virtual space and by this its perceived size. When adjusting all buffers get flushed to prevent unpleasant noise.

- "rev.lng": This adjusts how hard the spaces boundaries (e.g. walls) reflect the sound. The higher the value the harder the reflection which results in a longer reverberation time depending also on „size".

- "dim": This parameter determines the spatial dimensions of the reverb without influencing its first reflection pattern. At this parameters maximum the reverb algorithm is identical to that of the AD 480 Reverb for iOS.

- "predelay": Delay of the input signal before entering the reverb in milli seconds .

- "cross fd": Since the reverberation algorithm of the AD 480 Reverb RE consists of two separate mono reverberation units, it can be used as two mono reverbs by feeding different signals to the left and the right input.
  However, if you want a consistent stereo reverb for parts of the stereo input signal which are not at the center of the the panorama you can use "cross feed" to adjust the amount of how much of the input is fed channel swapped into the reverb (AFTER the delay determined by "predelay"). If this parameter is at its maximum (1.0) you are feeding L+R to both mono reverb units.

- "cross dl": With this parameter you can add a delay to the signal routed by "cross fd" in milli seconds. By using this parameter you can fine tune the AD 480 Reverb REs behaviour for signals coming from different directions.

- "dry dist": This adds a delay to the dry signal and softly filters its high frequency content. With this parameter you can practically move the dry signal further into the room. The actual delay time depends on "size" as well. The added delay time is compensated inside the reverb algorithm to prevent uncontrollable delay.

- "spread": This parameter adjusts the relative volumes of Mid/Side in the reverb signal. A value of 0 makes the reverb mono, 0.5 is full stereo and higher values lower the Mid part of the signal to be used for special effects.

- "hi dmp f": Frequency of the dampening filter for high frequencies. This filter is cumulative which means that the high frequencies are more dampened the closer you get to the end of the reverb tail.

- "hi dmp l": Amount of high frequency dampening. A value of 0 means no dampening and the lower the value the higher the dampening.

- "lo dmp f": Frequency of the dampening filter for low frequencies. This filter is cumulative which means that the low frequencies are more dampened the closer you get to the end of the reverb tail.

- "lo dmp l": Amount of low frequency dampening. A value of 0 means no dampening and the lower the value the higher the dampening.

- "high cut": This parameter represents the frequency of the high cut filter for the entire wet signal part. This filter is not cumulative.

- "low cut": This parameter represents the frequency of the low cut filter for the entire wet signal part. This filter is not cumulative.

Knobs:

- "mix": This parameter determines the mix levels of the dry and wet signals on the mixed stereo output.

- "out volume": The global output volume of the all outputs. This is the only parameter not saved in presets.

Buttons:

- "dry distance": This button switches on and off the dry distance delay. It gives you the possibility to A/B check the setting of the "dry dist" fader.

- "cross feed": This button lets you switch on and off the entire cross feed function.

- "cross phase L": By switching this on the phase of the signal from the right channel which is fed into the left reverberation unit by the cross feed function is inverted.

- "cross phase R": By switching this on the phase of the signal from the left channel which is fed into the right reverberation unit by the cross feed function is inverted.

4. Back Panel

On the right side you see the stereo audio input and the three stereo audio outputs, which can be routed freely. In case you have a mono signal and you want to feed it to the reverb, you need to use the Spider Audio Merger & Splitter or a similar device.

There are 20 CV-inputs, all bipolar. Those with black trim knobs are continuous parameters and the trim knobs adjust the modulation amount as usual.

The inputs with white trim knobs "modulate" functions represented by buttons on the front. The white knobs add an offset to the signal at the respective CV-input. If the sum of both is greater than zero, the button is "pressed", otherwise not.

The inputs with red trim knobs are continuous parameters where modulation could cause strong artifacts under certain circumstances due to the fact that they technically represent delay times. The red trim pots behave in the same way as the black ones.