



# Manual

## MegaReverb for PowerCore

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# INTRODUCTION

The unique algorithms are based on years of ongoing research and the core technology of the TC Electronic M5000 hi-end studio processor. With even better diffusion, denser tails and more realistic room impressions than ever before, MegaReverb provides the ultimate plug-in reverb solution for PowerCore.

Before we go into details, here are some basic methods for operating MegaReverb.

## Group/Ungroup

To group the controls (e. g. Decay Time in the Reverb) press the [Shift] key and move the mouse up/down.

## Reset

To reset a control to its default value hold the [Option] key and click on the control.

## Fine Trim

To use the Fine Trim Mode hold the [Command] key while moving the mouse.

## Active Displays

All the displays are active. That means you can click/hold with the mouse on the display and move the mouse left/right or up/down to change a parameter.

## Numerical Input

Double-click on a control to enter a numerical value. Confirm your input by pressing [Return].

# LEVEL CONTROLS

## Meters

Click on the PPM Meters to get your peak hold options.



The "CLIP" text will turn red if Internal DSP Overload has occurred.

Click on the clip indication to get your "hold" options.

# GENERAL INFORMATION

## GETTING STARTED

### Scroll Wheel Support

If you are using a host application that supports this feature, all parameters support scrolling on both Windows XP and Mac OS X. Simply place the mouse over a parameter value field and use the Scroll Wheel to increment/decrement the associated parameter-value.

### Key Commands

In most host applications, Plug-Ins support keyboard commands for certain functions. The following key commands are available for all Plug-In parameters.

#### Key Commands in Mac OS

Reset To Default = [Alt]

#### Key Commands In Windows

Reset To Default = [Shift] & [Control]

## DSP USAGE

For each open instance of the MegaReverb on PowerCore devices (X8, FireWire, Compact, Express, mkII, Unplugged), the following DSP usage applies:

### @44.1 kHz:

mono 8%  
stereo 14%

### @48 kHz:

mono 9%  
stereo 15%

### @88.2 kHz:

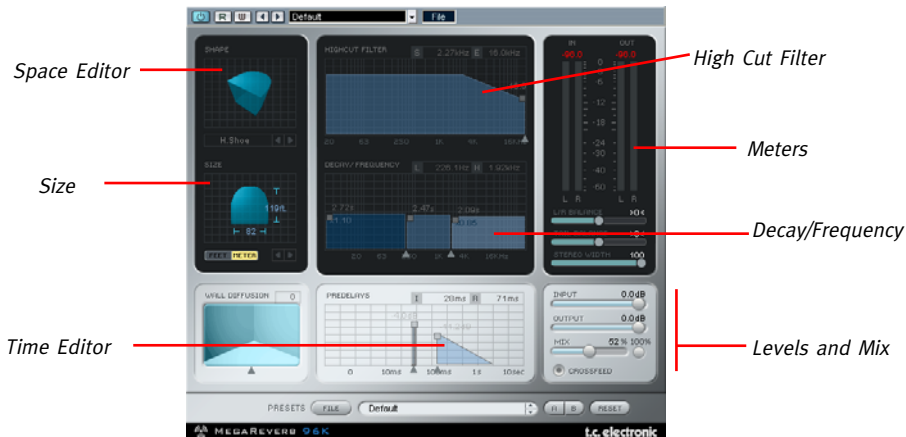
mono 17%  
stereo 28%

### @96 kHz:

mono 19%  
stereo 31%

## OVERVIEW

The MegaReverb algorithm mainly consists of these functional blocks:

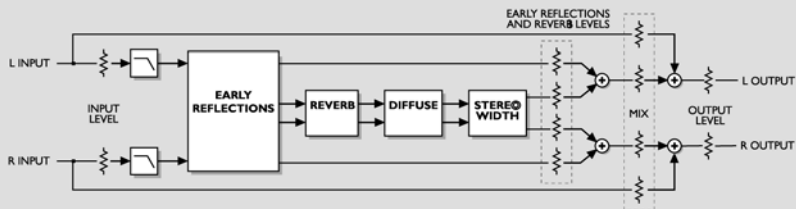


The MEGAREVERB algorithm is a very comprehensive and high-quality reverb algorithm. At first glance, you might feel you have to re-learn the reverb-design process. Just keep in mind that the intuitive nature of MEGAREVERB actually makes it much easier to use than „normal“ oldfashioned reverbs.

### MegaReverb Block diagram:

**MEGAREVERB has a very powerful reverb algorithm core. Take a look at the block diagram to get a better idea of the signal flow:**

#### MEGAREVERB Block Diagram:



### Mix Control



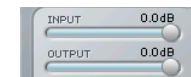
The MIX parameter sets the balance between the source signal and the processed signal. At 0%, you will only hear the source, while at 100% you will only hear the processed signal.

When you are using MegaReverb in a send/return configuration, you will usually want to select the “MIX = 100%” mode to bypass the Mix parameter and set it to 100% to bypass the dry signal.

### CrossFeed

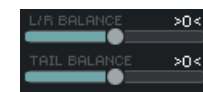
When Crossfeed is enabled, the left and right channels intermix their early reflections to increase the reverb density. When disabled, the two channels are processed separately, which is useful when for example mixing in Dolby Surround.

### Levels



Sets the I/O levels to and from the MegaReverb Plug-In.

### Reverb balance



**L/R Balance:** With this fader you can set the left/right balance of the initial Reflections.

**Tail Balance:** With this fader you can set the left/right balance of the Reverb Tail.

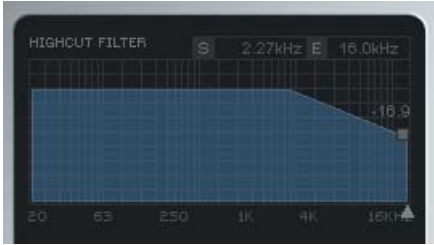
### Stereo Width



Stereo Width determines how “wide” the reverb should be: 0% is the same as mono, just as 100% is stereo. When Crossfeed is disabled, setting Stereo Width to 100% produces true stereo reverb.

## HIGH CUT FILTER

The input to MegaReverb algorithm is processed with a low pass filter which allows you to “roll off” the high frequencies of your reverb effect. In general, you will want to make your reverb effect a bit darker than the source signal, as it might otherwise sound unnatural or even unpleasant.



Sets the cut-off frequency for the algorithm's input filters. Use this to band-limit the early reflection and decay characteristics of the effect.

*There are two frequency values indicated above the display: The “S” value is the start frequency of the high cut filter, which is the lowest frequency influenced by the filter. The “E” value is the end value. This frequency is where you have reached the determined attenuation.*

*Defines how much the input to MegaReverb is damped in the high-frequency area. The scale of the filter is 6dB/octave.*

## SPACE EDITOR

The Space Editor defines the basic structure of the room. In natural reverberation, the early reflection happens within the first second of the response. This is where the sound is very clearly reflected by the walls and floors, and you can “feel” which type of room you are in. The second stage is the reverb process. Here the original sound is almost “lost” within millions of chain reflections – so that even two very different rooms often sound much alike. The early reflection is actually the part of the reverberation process that defines the room characteristics.

## SHAPE AND SIZE

By clicking on the “Shape” label above the display you will get a pop-up window where you can choose the shape directly.



Click the two arrowheads or click, hold and drag in left/right directions on the graph to select scaling factor for the room size. Scaling factor 1.0 is the original room factor.

Shape defines the basic room type and early reflection pattern.

Size sets the size of the room by scaling the early reflection pattern.

Selects readout in feet or meters.

The following shapes are available:



### Hall

Simulates the early reflection measured in the Boston Symphony Hall.



### Horseshoe

Incorporates some ideas from the design of the Musikvereinssaal in Austria.



### Prism

Has a pattern based on the conceptual “golden ratio” shoe box hall.



### Fan

Is based on the basic structure of the La Scala Concert Hall.



### Club

Is based on a regular small club room.



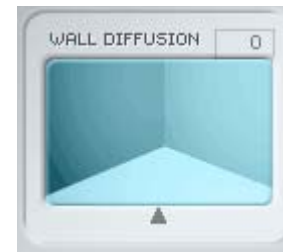
### Small

Simulates a small domestic room.



Always adjust the predelay according to the basic shape you have chosen. Small rooms with a long predelay, for example, sound very unusual.

## WALL DIFFUSION



Wall Diffusion determines how much coloration the walls add to the sound. This parameter is used to increase the reverb decay's density. A Diffusion of 0% determines a value related to the original sound character of the room settings (including decay). You can change the Diffusion with an offset of up to +/-50%.

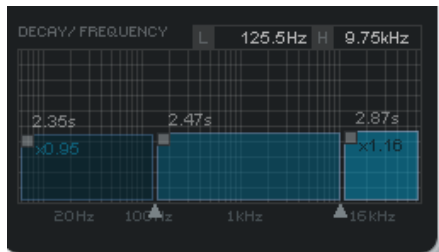
# MEGAREVERB

## TIME EDITOR

### Decays

The reverb decay is a long tail of reverberation that happens after the initial burst.

The Decay block receives its input from the early reflection. The decay time can be edited distinctly in 3 frequency ranges. The frequency-ranges can also be modified.



For each band you can set the decay time between 0.25 and 64 seconds. Use the Shift key to ungroup the decay times.

Low and High band also display the difference factor in relation to the Center band.

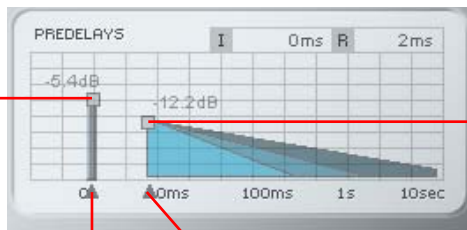
Sets the 2 crossover-points between the 3 frequency-ranges.

When designing your reverb, keep in mind that room acoustics lose their high frequency energy more easily over time. Setting the High Decay to a large amount of time will usually make the room sound more artificial.

### Pre Delays

The predelays determine the starting point for the actual reverb effect will begin.

Sets the level of the early reflections.



Sets the level of the reverb's decay curve.

Delays the early reflection starting point. The maximum delay is 160 ms.

Delays the reverb's decay curve starting point. Use this parameter to make the reverb more impressive. This can be set no later than 100 ms from the first predelay.

# PRESET HANDLING

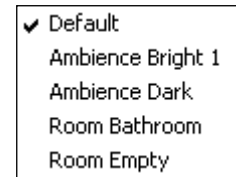
## Introduction

We recommend using the dedicated PowerCore file handling system that, apart from recall; store and compare facilities, allows for easy exchange of entire preset folders with other users, between Windows/Mac platforms and also between different host applications.



## File

Click "File" to open the File menu.



Load Preset: Select to load presets from the default preset location.

Save Preset: Select to save the preset in My Presets folder.

My Presets: Via "My Presets" you are able to load you own presets.



If you chose to store presets in other locations than the "My Preset" folder, these presets will not appear in the "My Preset" drop down menu. However, you can still navigate to, and load these presets via the Load Preset function.

## Preset name

This is the name of the preset.

## Up/down

The [Up]/[Down] arrow keys can be used to browse through all presets.

## A/B

With the A/B compare function you can easily compare different parameter settings when working with the plug-in.

When you start working with your preset, the A/B button is grayed out. This state indicates that the settings in both memory locations A and B are identical - so there is actually nothing to compare.

# PRESET HANDLING

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As soon as you touch one of the parameters, the memory location “A” will be active. All parameter changes will be applied to memory location “A”. If you switch to memory location “B”, you go back to the starting point, and all further changes will now be applied to memory location “B”.

Every time you press the A/B button, you will toggle between these two memory locations.



*The A/B memory locations are temporary settings only! Saving a preset, will save the currently selected memory location only. The setting of the other (hidden) memory location will not be saved!*

## Reset

Press “Reset” to clear memories A/B and return to the originally recalled preset.

## DEFAULT PRESET LOCATIONS

The following locations will describe where you can find the presets, which are stored in a folder unique to each plug-in:

### Mac OS X preset paths:

#### Factory presets:

⟨Macintosh HD⟩/Library/Application Support/TC Electronic/⟨plug-in name⟩/Presets/

#### User presets:

/Users/⟨user name⟩/Library/Application Support/TC Electronic/⟨plug-in name⟩/Presets/

### Windows preset paths:

#### Factory presets:

C:\Program Files\TC Electronic\⟨plug-in name⟩\Presets

#### User presets:

C:\Documents and Settings\⟨your user name⟩\My Documents\TC Electronic\⟨plug-in name⟩\Presets

- To delete a preset file, simply move it to the “Trash” or “Recycle bin”.
- To create a new sub-folder that appears in the plug-in menu, simply create a new folder in the plug-in folder that resides in the PRESETS folder of the plug-ins default preset location.



*A folder will not appear in the Preset File menu unless it has at least one preset inside!*