



Manual

TC Chorus•Delay for PowerCore

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SUPPORT AND CONTACT DETAILS	2
TABLE OF CONTENTS	3
INTRODUCTION	4
GENERAL INFORMATION	5
GENERIC CONTROLS	6
CHORUS DELAY	7
PRESET HANDLING	11

INTRODUCTION

Chorus•Delay provides the trademark TC Electronic chorus sound. It recreates the 1210 Spatial Expander with its unique modulation images like Chorus, Flanging and Slap Delay with very flexible routing and filtering facilities. Of course you can adjust the modulation speed in BPM.

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 TC Chorus•Delay on PowerCore devices (X8, FireWire, Compact, Express, mkII, Unplugged), the following DSP usage applies:

@44.1 kHz:

mono 20%
stereo 20%

@48 kHz:

mono 22%
stereo 22%

@88.2 kHz:

mono 41%
stereo 41%

@96 kHz:

mono 45%
stereo 45%

GENERIC CONTROLS

Before we go into details, here are some basic methods for operating TC CHORUS/DELAY.

Group/Ungroup

To group controls, 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].

CHORUS DELAY

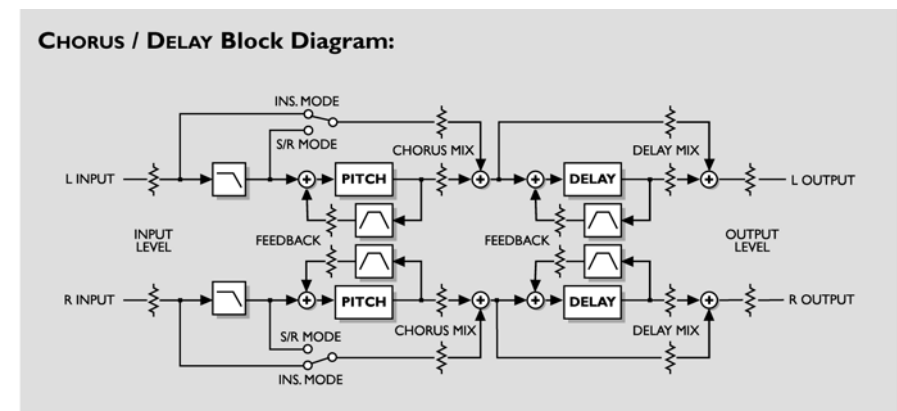
Understanding the Chorus•Delay Algorithm

In order to help you understand the Chorus•Delay algorithm, we have grouped the parameters in sections:



The CHORUS™ algorithm is a very powerful modulation algorithm. It incorporates a delay line, a comprehensive LFO section and two individual feedback filters allowing you to produce some very interesting feedback effects ranging from simple chorusing to sparkle in outer space!

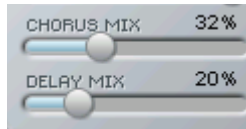
Chorus•Delay Block Diagram:



CHORUS DELAY

MIX

Delay Mix sets the amount of delay that is mixed into the CHORUS effect.



CHORUS Mix sets the balance between the source signal and the pitching effect. To produce the chorusing effect, this parameter should be set somewhere in between, because the CHORUS works by interacting with the source signal.

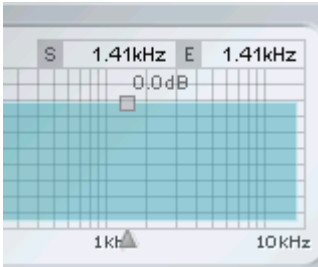


In the Send/Return configuration, it is usually not intended to hear the direct signal.

HIGH CUT FILTER

The input to the CHORUS algorithm is processed with a low pass filter which allows you to limit the high frequency content of your chorus effect.

For super-smooth results, you will want to make your chorus effect slightly darker than the source signal, as high-pitched chorus can sometimes sound unnatural or even unpleasant.



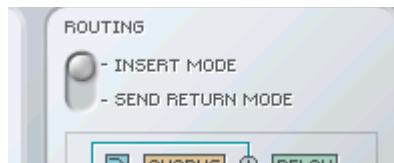
There are two frequency values indicated above the display: The “S” value is the start frequency of the high cut filter, which is the lowest frequency influenced by the filter. The “E” value is the end value. This frequency is where you have reached the determined attenuation.

Defines how much the input to the CHORUS is damped in the high-frequency area which is set with the frequency-slider. The scale of the filter is 6 dB/octave.

Sets the cut-off frequency for the algorithm’s input filters. Use this to band-limit the CHORUS and Delay.

ROUTING

The routing options allow you to change the behavior of the High Cut Filter



CHORUS DELAY

Insert Mode

The direct signal is not filtered, since the direct signal must be heard through the CHORUS.

Send/Return Mode

The filter is applied to the direct signal, since the unprocessed direct signal is already present in the mix.

CHORUS

The CHORUS section of CHORUS determines the stereo pitching effect.

“CHORUS” is created by delaying and then modulating the signal with a low frequency oscillator (LFO) that sweeps the delay back and forth. This produces the rich doubling effect. To make the effect even stronger, you can use the feedback feature to feed already chorused signal back into the CHORUS once more!

Sets the amount of Feedback

Phase-inverts the Feedback loop

Sets the Speed of the LFO that modulates the Delay time.

Sets the maximum amplitude of the LFO.

When enabled, Golden Curve forces you to maintain a steady relationship between Speed and Depth.

Marks the frequency range that is fed back to the input of the CHORUS. Group the high- and low-cut-off frequencies by holding the [Shift] key.

LFO Phase determines the relationship between the left and right channels. At 0°, the channels follow each other; while at 180° their modulations are completely contrary.

Basic Delay time. The LFO actually makes this parameter shuttle up and down.

MODULATION GRAPH

The graph in the upper left corner visualizes the relationship between Speed and Depth. Increasing the Depth will increase the amplitudes in the graph, while increasing the Speed parameter will reduce the spin around time in the graph.

Delay

Short delay times and higher feedback rates are used for flanging effects, while longer delay times and smaller feedback levels are typical for chorusing effects.

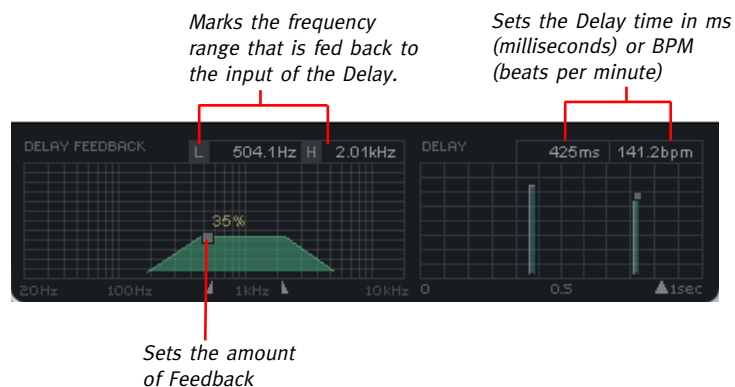
Golden Curve

This feature helps you retain the intensity of your chorus-effect while you alter the Speed and Depth. Increasing one of these two parameters will decrease the other accordingly.

DELAY

CHORUS' delay features a mono delay line which is placed after the CHORUS in the signal path.

The Delay time can be varied from 0 to 500 milliseconds. The Delay graph shows a visual representation of how the consequent repetitions are spread in time and level.



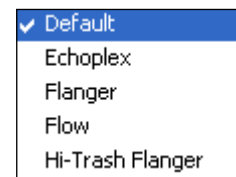
Introduction

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.

PRESET HANDLING

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.

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

Click “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!