Manual

for PowerCore CL

POWERCORE

t.c. electronic

SUPPORT AND CONTACT DETAILS

TC SUPPORT INTERACTIVE

The TC Support Interactive website www.tcsupport.tc is designed as an online support and information center. At the site you can find answers to specific questions regarding TC software and hardware. All known issues are stored in a database searchable by product, category, keywords, or phrases. Under the section "My Stuff" you can login to check the status of your questions, download materials such as product manuals, software updates and new presets.

This site has been specifically designed to meet the needs of our users. We constantly update the database and you will find the site to be a huge resource of information. Browse through Q&A's and discover new aspects of your TC product.

If you can't find an answer online, you have the option of submitting a question to our technical support staff who will then reply to you by e-mail. The TC Support Team is on constant alert to help you in any way they can.

Contact Details:
Alternatively, you may contact the TC Electronic distributor in your area, or write to:

| TC ELECTRONIC A/S	USA:
Customer Support	TC Electronic, Inc.
Sindalsvej 34	5706 Corsa Avenue, Suite 107
Risskov DK-8240	Westlake Village, CA 91362
Denmark	

www.tcelectronic.com

TABLE OF CONTENTS

INTRODUCTION

TC POWER CORE CL

TC PowerCoreCL provides extremely powerful and flexible dynamics processing tools for use on single tracks as well as in mastering situations. Based on a classic transistor studio compressor-limiter, TC PowerCoreCL is an extremely efficient Plug-In, with a clean sound that can be used for all of your dynamics needs. From subtle compression to hard maximizing, TC PowerCoreCL is the tool to get your dynamics and levels right!

Signal Flow
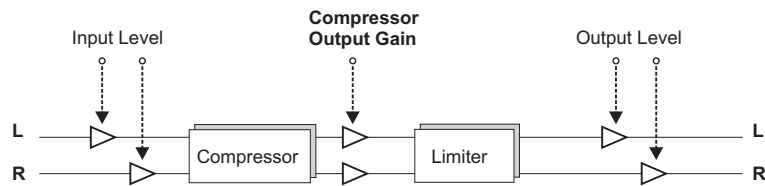
GETTING STARTED

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	Key Commands In Windows
Reset To Default = [Alt]	Reset To Default = [Shift] & [Control]

DSP USAGE

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

@44. 1 kHz:	@48 kHz:	@88. 2 kHz:	@96 kHz:
mono 8%	mono 9%	mono 17%	mono 19%
stereo 14%	stereo 15%	stereo 29%	stereo 31%

Compressor section

Limiter section

Mix Control

Output Level

Meters

Input levels

Output gain

SideChain section

Preset handling

OPERATING METHODS

To adjust the value of a control, click on the knob or the numerical display and move the mouse in the directions that are indicated by the mouse cursor. To reset a control to its default value, hold the [Option] key and click on the control. Double-clicking on a value field will bring up a dialog for numeric entry.

METERING

Clip Indicator

With more than three consecutive clips the number above the meter will turn RED indicating that clipping has occurred. To release this condition; click on the number.

Meters

The LED meters indicate PPM values. With its fast rise time and relatively slow fallback time, PPM metering is excellent for reading fast, transient sounds and will allow much better detection of clips compared to RMS metering.

In/Out Switch

Switches Meter indication between input and output signal (only in stereo mode).

Peak Hold Options

Click on the meter to get a pop-up with Peak Hold options – you can select between infinite peak hold and a hold time of 6 seconds.

Gain Reduction Meter

In the Compressor section, there is an accurate gain reduction meter. The further down the series of LEDs the meter moves, the more gain you are losing by the compression process.

Limiting Meter

In the Limiter section, there is a limiting meter. This LED Meter gives feedback of the applied limiting. The more LEDs that light up, the more limiting is applied to the signal.

COMPRESSOR PARAMETERS

Compressor - The button enables and disables the compressor section. The section is displayed in blue when active, and grayed out when disabled.

Threshold - Sets the level threshold at which the compressor starts working (0 dB to -40 dB).

Ratio - Sets the amount of the compression ratio (1.0:1 to infinite).

Attack - Compression attack time setting in milliseconds (0.2 ms to 50 ms).

Release - Compression release time setting in milliseconds (10 ms to 1.0 second).

Output - Output Gain of the Compression stage (-10 dB to +30 dB)

Hard Knee/Soft Knee - Switches the compressor between Hardknee and Softknee compression.

LIMITER PARAMETERS

Limiter - Limiter - The button enables and disables the limiter section. The section is displayed in yellow when active, and grayed out when disabled.

Threshold - Sets the limiter's threshold in decibels (dB) (0 dB to -12 dB).

Release - The limiter's release time setting in milliseconds (10ms to 1 second).

SoftSat On/Off - This switch enables and disables SoftSat. SoftSat creates that warm analog sound associated with classic studio equipment.

SoftSat - Sets the amount of saturation in decibels (dB) (-6 dB to +3 dB).

Soft Clip - When the Soft Clip LED becomes active, soft clipping has been engaged in the limiter. When a digital signal begins to clip, the wave form becomes square. Soft clipping rounds off the edges of the clipped wave form, making the sound easier to listen to.

Ceiling - The ceiling parameter sets the absolute max output for the Limiter.

THE COMPRESSION PROCESS

The compressor is used to smoothen level jumps or level differences in your recording as well as making a track subjectively louder.

First, set the threshold and ratio to achieve the desired result without sounding unnatural. If the level of your signal exceeds the threshold, the compressor kicks in and will compress all of the signal above the threshold level using the defined ratio. For settings with a high threshold you will usually adjust lower ratio settings, and vice versa. A fast attack time will result in cutting your signal's peaks, which might result in drastic sound changes. Slower attack times can make the sound more natural and the dynamics processing smoother. The release time should be set to longer values to avoid level jumps and "pumping" of your signal.

The "Soft Knee" switch will activate the Soft Knee curve, which gives you a softer and more gradual transition into compression. This may produce better, "softer" sounding results when you are processing critical material with extreme settings (such as very low thresholds and/or high ratios). The output level of the compressor stage is controlled by the output knob.
Setting the output to more extreme values can drive the compressor, altering the sonic qualities of the effect similar to that classic transistor studio compressor.

THE LIMITING PROCESS

The limiting process fixes levels in a recording to an absolute maximum. When mastering for digital media such as CDs, you want to use as much of the available dynamic range as possible without clipping. Just one clip could make it impossible to produce a commercial CD from your recording – and digital distortion, which is inevitable once you pass o dB and move into clipping, doesn't sound all that nice in the first place!
The limiter section of the TC PowerCoreCL makes sure that you get the maximum gain from your material, without ever running into the danger of digital clipping!

Setting up is easy: The threshold controls the maximum gain of your track. The lower your threshold setting, the stronger the applied limiting. SoftSat should be engaged to create a warmer tone to the signal.

Example: If you set the threshold to -3 dB, no level will exceed -3 dB. However, your material might be lower in volume than -3 dB.

Here is a helpful suggestion: you can drive your recording into stronger limiting by increasing the output of the compressor stage, which is the input of the limiter. That way you will amplify the signal and further maximize the subjective loudness of your track! The release time setting depends mostly on the number of peaks you must limit. If you have a few short peaks, you can set the limiter to faster release times. If you have to limit many peaks, a better suggestion would be to set the limiter to slower release times, to avoid unwanted level jumps such as "pumping".

EXT. SIDECHAINER

Introduction

Sidechaining in audio production refers to using the dynamic content of one track to control the processing of an effect inserted on another track. Applications for sidechaining are numerous. The TC SideChainer plug-in is included with the PowerCore package and is used in conjunction with a number of plug-ins, one of these being the PowerCore CL.
By using the TC SideChainer plug-in with PowerCore CL when mixing, you are able to create both "ducking compression" as well as de-ess processing.
Please refer to the SideChainer plug-in manual on the CD for additional information and usage of the SideChainer plug-in.

SIDECHAINER PARAMETERS

On

For the PowerCore CL to respond to an instance of the SideChainer plug-in press "ON" and select the relevant SideChainer instance from the drop-down menu.

Amount

The Amount parameter determines how responsive the PowerCore CL should be to the dynamic content on the selected sidechain.
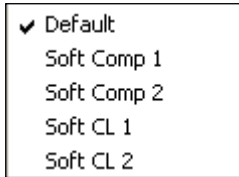
Introduction

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.

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.

NOTE: 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.

NOTE: A folder will not appear in the Preset File Menu unless it has at least one preset inside!