



Fredenstein
Professional Audio

**Artistic
Leveler**

Operating Manual

Fredenstein Artistic Leveler

The Artistic Leveler is a single channel opto compressor with multi-channel link capability in the 500 series form factor. If used in Fredenstein Bento 6 or Bento 10 racks, an external side-chain input is available through the Bento's Aux input connector.

The Leveler features rotary controls for Input Gain, Release Time, Compression Ratio, Make-up Gain and Wet-Dry Mixing (parallel compression). The Attack Time can be set in three steps, as well as the side-chain low cut filter. The side-chain can be fed externally by activating the SC Input switch. The LED bar-graph meter indicates the gain reduction in the range of 1dB to 16dB. Its punchy and detailed sound is generated by three major components:

- 1) Fredenstein's proprietary Reverse-Mancini opto architecture
- 2) our advanced OPA2 discrete Audio Operational Amplifier
- 3) the American made vintage style steel core output transformer

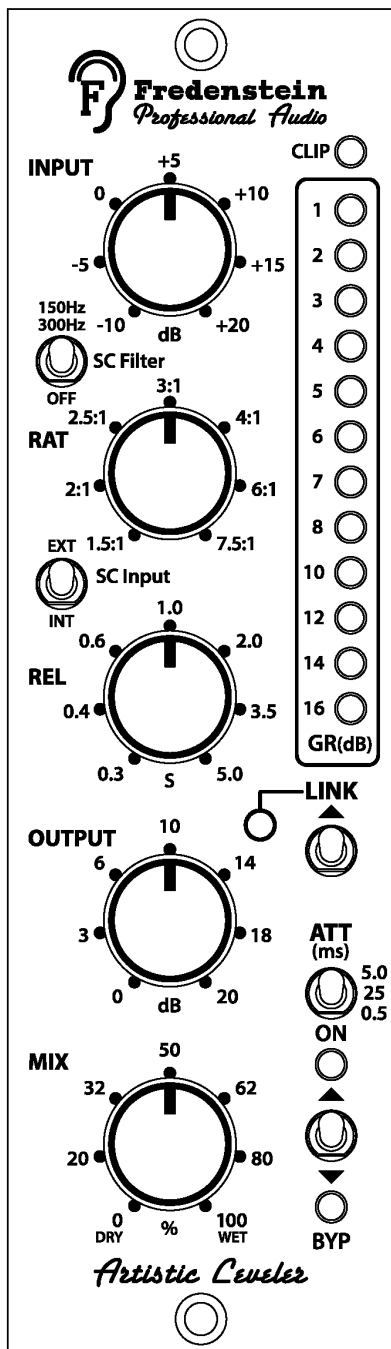
As all Fredenstein products, the Artistic Leveler is designed by a German-American team and manufactured in Taiwan.

Installation:

Please power down your rack or box first, before inserting the Artistic Leveler. Since the Artistic Leveler uses the link interconnect in the box or rack, it cannot coexist with any other third-party modules using the same link interconnect (PIN 6 on the edge connector). If you are using a Fredenstein Bento box, please turn off the compressor link switches to any third party module(s), only turn on the link switches between Artistic Leveler modules.

Other third party equipment not using the link interconnect, such as most Mic-Pres and EQs etc, can be used simultaneously with the Artistic Comp in any enclosure. The power requirements are very light at maximum of +/-16V, +/-75mA and should not overload any enclosure.

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Rotary Controls:

- INPUT : Sets the line level gain in the range of -10 dB to +20 dB
- RAT : Sets the compression ratio in the range of 2:1 to 7.5:1
- REL : Sets the release time of the compressor from 0.3s to 5s
- OUTPUT : Make-up gain control in the range of 0 dB to +20 dB
- MIX : Output Mixer between the compressed (wet) and uncompressed (dry) signals

Switches:

- SC Filter : Selects the low cut filter in the side-chain.
lower position: off
middle position: 300Hz
upper position: 150Hz
- SC Input : Position INT: Normal operation
EXT: Enables the external side-chain input when used in Bento 6 or 10 racks through the AUX input connector
- LINK : Multi-channel synchronization for two or more Artistic comp modules. All channels will have identical gain reduction to avoid shifts in the balance
- ATT : Compressor Attack Time
lower position: 0.5 ms
middle position: 25 ms
upper position: 5 ms
- ON/BYP : in upper ON position, the compressor is active, in the lower BYP (BYPASS) position or if the rack is powered down, a relay connects the output directly to the input, the gain reduction meter will still show the depth of compression

Indicators:

- CLIP LED : Lit when the output level reaches +24dBu (2db before clipping)
- GR (Gain Reduction) : Shows actual gain reduction in the range of 1db to 8db in one db steps and 2dB for 8dB to 16dB

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Detailed Description:

Like most opto compressors, the Fredenstein Artistic Leveler features a fixed threshold. The compression depth is controlled by changing the input gain. Increasing the input gain will cause the Leveler to apply an increased gain reduction. The output level control is used to make up for the gain reduction. The maximum compressor output gain is +20 dB.

The ATTACK TIME switch and RELEASE TIME control define how fast the compressor reacts and how fast it falls back after the signal is lower than the threshold. The perfect values are depending on the program material and the desired sound..

The COMP RATIO control sets the relationship between input and output level for signals above the threshold and can be varied from 2:1 to 7.5:1.

Additionally, so called dry/wet mixes can be performed (parallel compression). The dry signal (uncompressed) and the wet signal (compressed) can be mix together in any relationship to achieve special sounds. The Wet-Dry control of the Artistic Leveler dramatically boosts the versatility of the device. If you put the Wet-Dry control fully counter clockwise, only the compressed signal is present at the output, if turned fully clockwise only the unprocessed input signal reaches the output. Another sound shaping tool is the three position side-chain low cut filter. If switched to 150 or 300Hz, it prevents low frequency signals below the selected value from being processed by the compressor. If the external side-chain input is used, the dynamics of the signal can be controlled by another source, which allows for more creative sounds.

Technical Data:

Frequency Response :	20 Hz – 20,000 Hz, +/- 1dB
Make-up Gain :	+ 20 dB
Distortion :	< 0.05%, no compression
Noise :	< -86 dB, no make-up gain (+4dBu reference)
Input Impedance :	> 5000 Ohms
Max. Input Level :	+ 26dBu
Output Impedance :	600 Ohms
Max. Output Level :	+ 26 dBu
Clip Indicator :	+ 24 dBu
Input Gain Range :	-10 dB to +20 dB
Side-chain Filter :	150 or 300 Hz (switchable)
Attack Time :	0.5, 5, and 25 ms (switchable)
Release Time :	70ms to 2.5s
Compression Ratio :	2:1 to 7.5:1
Power Consumption :	+/-16V < +/- 75mA (~2W)

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