



compressor



user manual

Introduction

Compression is a tool used on pretty much every recording you will ever hear, yet this extremely useful and versatile tool is often overlooked by guitar players as part of their rig.

Other compressor pedals are often limited by oversimplified controls and heavily colored sounds. We have created a truly transparent compressor, complete with all the controls found in the studio. The result is a tool that allows for a wide range of sounds from subtly adding sustain to getting the “quack” that country players love.

We’ve also included a mix knob to blend in the dry signal for an even more transparent sound and a gain reduction meter so you know what the compressor is doing at all times.

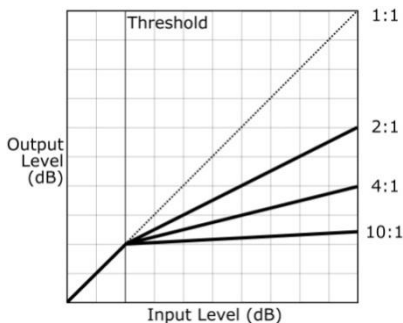
To help you get the most out of this product, we’ve put some brief instructional videos on our website: www.empresseffects.com

Enjoy,

Steve Bragg

The Basics of Compression

Compression can add consistency and sustain to your playing or it can be used to add note definition and other effects. It essentially narrows the difference between high and low audio levels by reducing the gain to any signal over the threshold.



The **ratio** determines how much gain reduction will be applied to the signal once it crosses the threshold. At a 4:1 ratio, for every 4dB of input signal above the threshold, there will be 1dB of output signal. A 10:1 ratio would output 1dB for every 10dB of input signal, etc.

Attack controls how quickly the gain reduction will begin after a signal has crossed the threshold. **Release** controls how long it takes for the compressor to return to its initial level after the signal drops below the threshold.

Quickstart



Added Control: Here's a good starting point for adding consistency and sustain to your playing while retaining dynamics. Adjust the input level so the “gr” meter shows 8dB of gain reduction when playing your loudest.



Chicken Pickin’: Here's one for a nice compressed country sound. Adjust the input for 10dB of gain reduction when playing your loudest.



Transparent Compression: The 2:1 ratio is very transparent. This will give you nice dynamic control to level out your playing. It won't really sound compressed as much as just sweeter overall.



Limiters: This setting will eat up your pick attacks and create a smoother sound. You'll also get lots of sustain out of this.

Controls a

ratio: determines how aggressive the gain reduction is.

2:1 - good for gentle gain control and smoothing out uneven playing. Very transparent.

4:1 - a great general purpose setting. Still transparent but offers a large range of compression.

10:1 - close to limiting. Good for achieving the highly compressed country sound and adding a lot of sustain for soloing.

input: sets the level entering the compressor circuit. Higher levels will result in more compression.

attack: controls how quickly the compressor will react to an incoming signal. Attack time increases as you turn the knob clockwise. **Range:** 50us - 50ms

sidechain: used to alter the signal going to the gain reduction control circuit. It accepts a 1/4" TRS plug: Tip = send, Ring = return, Sleeve = ground.

release: controls how quickly the compressor returns to its initial level. Release time increases as you turn the knob clockwise. **Range:** 50ms - 1s

Power: + - 9V
tip 2.1mm jack. 100



at a Glance

V - 18V DC negative
mA or greater



meter: red LEDs indicate gain reduction (gr). Gain reduction values are marked over each LED.

green LEDs indicate input volume.

when "both" is selected, overlapping gain reduction and input LEDs will appear yellow.

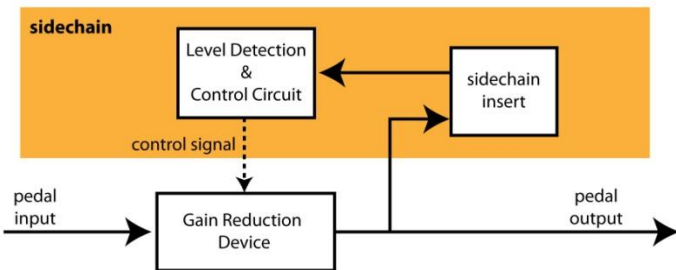
output: sets the output level. This will not affect the amount of compression. Can be used to make up gain lost in compression or as a boost for soloing.

mix: controls the level between the dry signal and the wet (compressed) signal. All the way clockwise is 100% wet signal and all the way counterclockwise is 100% dry signal. Blending in the dry signal brings back the dynamics that can be lost during compression. This technique of parallel compression allows for added sustain without losing the life associated with an un-compressed signal.

bypass stomp switch: when the LED is shining, the compressor effect is applied to the signal. When off, the compressor is being bypassed (true bypass).

Sidechain

The sidechain connector on the compressor is a loop that lets you alter the signal going to the gain reduction control circuit. It accepts a ¼" TRS plug: Tip = send, Ring = return, Sleeve= ground.



Using a high pass filter in the sidechain on bass can be useful in order to avoid triggering the compressor with high energy notes in the lowest octave. You can also have an external audio source control the compressor by connecting it to the ring of the sidechain insert jack using an insert cable.

Using the Meter

The compressor has a 10 segment LED meter that shows input gain, gain reduction or both.

Red LEDs indicate gain reduction. Gain reduction values are marked over each LED. Green LEDs indicate input volume. When “both” is selected, overlapping gain reduction and input LEDs will appear yellow.

Parallel Compression

The mix knob on the compressor allows for parallel compression. Parallel compression is basically blending a compressed audio signal with the uncompressed version of itself. It opens up tons of possibilities. A great use of parallel compression is to really squash the compressed signal (so it sounds way too over-compressed), then use the mix knob to blend in some of the un-compressed signal. The result is very natural sounding, but feels a lot more exciting, with more sustain and retaining a good attack. Try experimenting with it!

Powering the Compressor

Go to www.empresseffects.com/power for a full list of compatible power supplies.

Please Note: The Empress Compressor requires at least 100mA of current to function properly. Any power supply rated at 9V DC, supplying negative tip polarity (+  -) and at least 100mA of current should work.

Popular options are the Boss PSA-120S or PSA-240. Another excellent option is the Voodoo Lab Pedal Power 2+.

Legal Stuff

FCC Compliance

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help.*

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules

Specifications

Input Impedance:	1M Ω
Output Impedance:	2.2k Ω
Frequency Response (-3dB):	40Hz – 35kHz
Distortion:	<0.1%
Noise:	-101dB
Input Voltage:	9VDC-18VDC +  -
Required Current:	100mA
Power Input Connector:	2.1mm Barrel Connector
Height (enclosure only):	1.5"
Height (including controls):	2"
Length:	3.5"
Width:	4.5"
Weight:	1lbs