

empress effects Compressor MKII Digital Interference User Manual

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COMPRESSOR MKII

USER MANUAL



empresseffects

Further Information

On our website (www.empresseffects.com) you will find lots of further information and details on the following points:

Download

This manual is also available as a PDF file for you to download.

Keyword Search





Use the search function in the electronic version of this manual to find your topics of interest quickly.

Customer Support

If you have any problems with the device our Customer Support team will gladly assist you.

Symbols and Signal Words

Signal Word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning Signs	Type of Danger
	General warning sign
	Electricity Hazard
	Hot Surface
	Sudden Loud Noises

Intended Use

This pedal is designed for enhancing guitar tones in live performances and studio recordings. Use as outlined in the user manual. The manufacturer is not liable for damages resulting from improper use or use under non-recommended conditions.

Safety



DANGER! Danger for children

Dispose of plastic bags and packaging properly to keep them out of reach of babies and young children to prevent choking hazards. Ensure children don't detach small parts like knobs to avoid choking. Never leave children unattended with electrical devices.



DANGER! Electrical shock

Risk of electrical shock from exposed wires or damaged components. Inspect pedals for damage before use. If damaged, stop use and seek professional repair.



DANGER! Power Supply Issues

Use the right voltage and current for your pedal's power supply to prevent damage and safety risks. Check the power supply's condition, and for multiple pedals, opt for a dedicated supply to avoid overloading by daisy-chaining.

**CAUTION! Overheating**

Avoid overheating. Do not stack pedals or place in confined spaces. If a pedal overheats, stop using and let it cool.

**CAUTION! Tripping Hazard / Pedal Placement**

Prevent tripping: Secure cables and place pedals firmly to avoid slips and falls.

**CAUTION! Volume Spikes**

Beware of volume spikes and unexpected sounds when adjusting pedal settings

**NOTICE! Allergies or Sensitivities**

Allergy Alert: Some pedal materials, like adhesives and coatings, may cause reactions. Stop use and seek medical advice if needed.

**NOTICE! Fire Hazard**

Keep away from direct heat and open flames.

Introduction

When we released our original Compressor back in 2011, it quickly became a favourite among guitar and bass players alike who were searching for something more than the typical oversimplified controls found on most compressor pedals. Now, based on our users' valuable feedback, we've taken everything great about our original Compressor and made it even better.

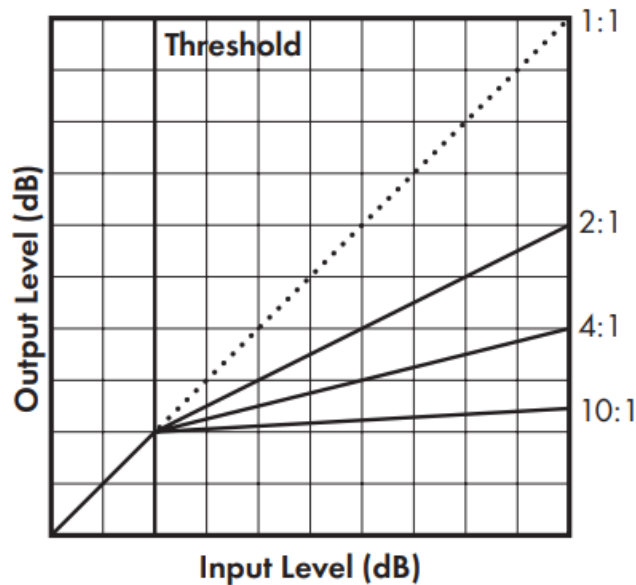
On top of the full range of features and controls normally only seen in high end studio equipment, such as input and gain reduction metering, independent attack and release controls, a mix knob for parallel compression, and an external sidechain insert, we've now added a 'tilt' tone eq control, and a selectable sidechain high pass filter built into the Compressor's detection circuit. Oh, and the whole package is now half the size. Who doesn't love a small package?!

We hope the Compressor MKII becomes a favourite of yours as well, and sincerely thank you for choosing Empress Effects.

– Steve Bragg



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 of any signal over the threshold.

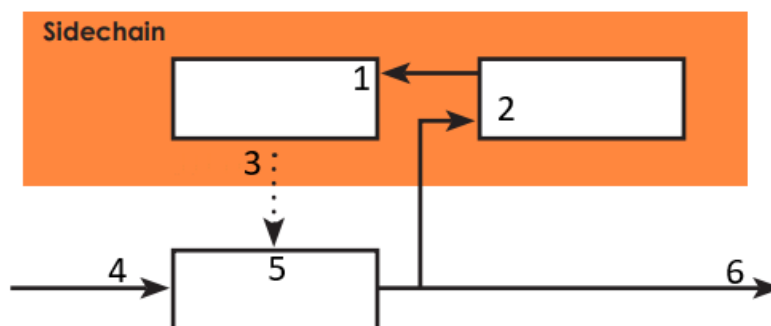


The **ratio** determines how much gain reduction will be applied to the signal once it crosses above the threshold. At a 4:1 ratio, for every 4dB of input signal above the threshold, there will be 1dB of output signal. A 10:1 ratio would output 1dB for every 10dB of input signal, etc.

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

Sidechain

The **sidechain** is the Compressor's level detection circuitry. Based on the signal sent to it, it will determine how much gain reduction is applied. Typically that signal is a copy of the input signal, taken from some point in the audio path. In our case it's taken after the gain reduction has occurred, which is known as 'feedback' style compression. It can be very useful to alter the sidechain signal in order to tailor how the compressor reacts.



1. Level Detection & Control Circuit
2. Sidechain Insert
3. Control Signal
4. Pedal Input
5. Gain Reduction Device
6. Pedal Output

Sidechain High Pass Filter

The **Sidechain HPF** (high pass filter) switch can be engaged to avoid triggering the compression with high energy notes in the lowest octave, which helps avoid over-compressing and keeps the low frequencies sounding full while still controlling errant high notes that pop out.

Sidechain connector jack

The **sidechain connector jack** on the back of the pedal allows you to alter the sidechain signal by inserting an external device, such as an EQ. You can also have an external audio source trigger the compression by sending audio in through the ring of the sidechain jack.

The sidechain connector accepts a 1/8" TRS plug: Tip = send, Ring = return, Sleeve = ground.

Parallel Compression

The **mix** knob on the Compressor MKII allows for parallel compression. Parallel compression is achieved by blending a compressed audio signal with the uncompressed version of itself. It opens up a ton 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 uncompressed 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!

Controls at a Glance



1. **input:** Sets the level entering the compressor circuit. Higher levels result in more compression.
2. **attack:** Controls how quickly the compressor will reduce the gain when an incoming signal exceeds the threshold. Attack time increases as you turn the knob clockwise. **Range:** 50µs – 50ms
3. **mix:** Controls the level between the dry signal and the wet (compressed) signal. All the way clockwise is 100%

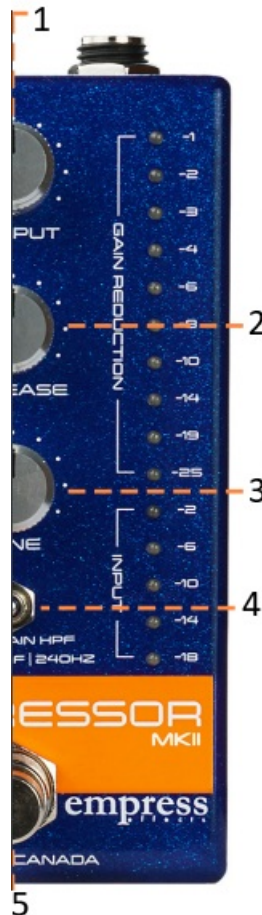
wet signal and all the way counterclockwise is 100% dry signal. Blending in the dry signal brings back the dynamics that can be lost during compression. This technique of parallel compression allows for added sustain without losing the life associated with an uncompressed signal.

4. **ratio:** Determines how aggressive the gain reduction is.

2:1 – Good for gentle gain control. Very transparent.

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

10:1 – Heavy compression. Close to limiting.



1. **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.
2. **release:** Controls how quickly the compressor returns to its initial level. Release time increases as you turn the knob clockwise. **Range:** 50ms – 1s
3. **tone:** A 'tilt' style tone control centered at 500Hz. Turning clockwise will boost treble and cut bass. Conversely, turning counter-clockwise will cut treble and boost bass.
4. **sidechain hpf:** a high pass filter that cuts low frequencies going to the gain reduction control circuit. Helps to avoid excess compression, especially on bass.
5. **bypass footswitch:** Turns the compressor on and off.

Setting the Bypass State on Startup

To change whether the Compressor starts up in the engaged or bypassed state, hold down the stompswitch while powering on the Compressor. The first red gain reduction led will flash to let you know you are in the advanced configuration mode. Press the stompswitch to toggle between states:

gain reduction led 1 = bypassed at startup
gain reduction led 2 = engaged at startup

When finished, press and hold the stomp switch for 2 seconds to confirm and save your selection, and exit advanced configuration.

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 gain reduction meter shows 8dB of gain reduction when playing your loudest.



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



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



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



Powering the Compressor MKII

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

Please note: The Empress Compressor MKII 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.

Regulatory Compliance Information

FCC (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party in the USA

Americas Compliance Consulting LLC dba iCertifi
 1001 SW Disk Drive, Ste 250
 Bend, Oregon 97702 USA
 FCC sDoC@icertifi.com
icertifi.com

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

ICES-003 (Canada)

CAN ICES-003(B) / NMB-003(B)

CE (European Union)

This declaration of conformity is issued under the sole responsibility of Empress Effects Inc- 105-62 Steacie Dr, Kanata Ontario K2K 2A9. The device identified on the front page of this manual is in conformity with the requirements of the European Union's Electromagnetic Compatibility Directive 2014/30/EU, in accordance with the following harmonized standards:

- EN 55032:2015/A11:2020 - Electromagnetic compatibility of multimedia equipment – Emission Requirements
- EN 61000-3-2:2014 - Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
- EN 61000-3-3:2013 - Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
- EN 55035:2017/A11:2020 - Electromagnetic compatibility of multimedia equipment – Immunity Requirements



Name: Colin King

Title: Design Engineer

Company: Empress Effects Inc

Date: August 19, 2023

Location: 105-62 Steacie Dr, Kanata Ontario K2K 2A9



WEEE (2012/19/EU)

This product must not be disposed of with regular household waste. In compliance with WEEE regulations, please take this product to a designated collection facility or return to the supplier for proper recycling. Comply with local laws and regulations for disposal. Contact your local authority or support@empresseffects.com for specific information.




Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling. Ensure that plastic bags, packaging, etc. are properly disposed of. Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.



Specifications

Input Impedance:	1M Ω
Output Impedance:	2.2k Ω
Frequency Response (-3dB):	20Hz – 20kHz
Distortion:	<0.1%
Noise:	-101dB
Headroom:	+15dBu
Input Voltage:	9V DC +  -
Required Current:	100mA
Power Input Connector:	2.1mm Barrel Connector
Height:	2.5"
Length:	4.8"
Width:	2.6"
Weight:	1lb

Manual v02

Documents / Resources

	empress effects Compressor MKII Digital Interference [pdf] User Manual Compressor MKII Digital Interference, Compressor MKII, Digital Interference, Interference
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References

- [icertifi.com](https://www.icertifi.com)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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