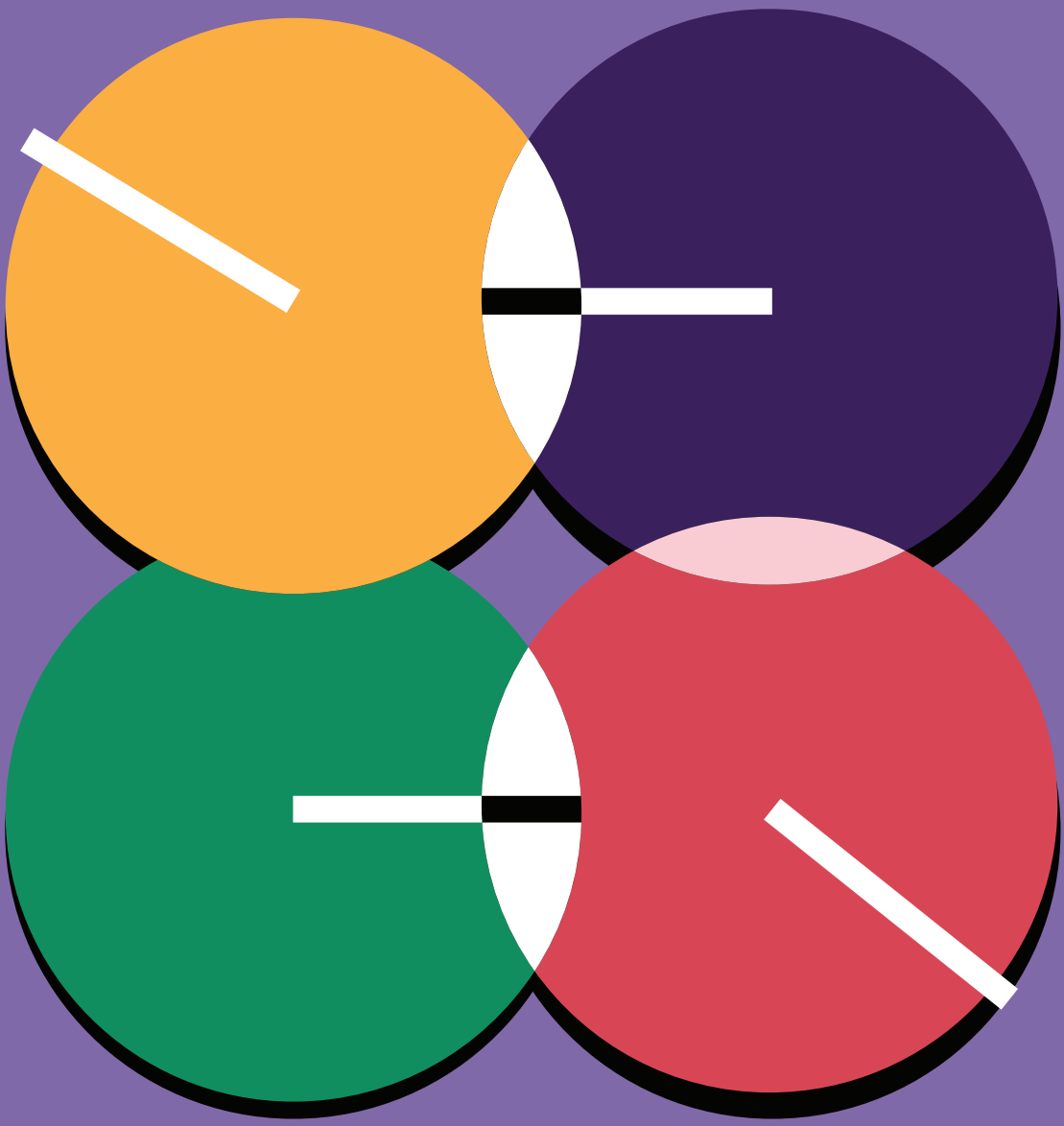
empress effects



para eq mkII

Bass

User Manual

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.

Contents

Introduction

When we released the ParaEq MKII Deluxe, it became a go-to tool for musicians who needed powerful, precise tone shaping. But after talking to bassists using ParaEqs both live and in the studio, we saw room to refine and optimize it for low-end instruments.

The Bass ParaEq takes everything players love about the Deluxe and tailors it for bass. With bass-optimized frequency ranges, a high-impedance input for piezo pickups, a dynamically-adjusted low shelf, and an auto-detecting balanced output, it's designed to give upright and electric bassists full control over their tone. The 27V internal operation ensures massive headroom, so your signal stays clear, dynamic, and noise-free no matter how hard you push it.

With the Bass ParaEq, your instrument will still sound like your instrument—just bigger, cleaner, and more defined than ever before.

- Ivan J. Plamondon
Senior Analog Designer

Q Controls

The Q setting controls the width of the frequency range affected by each EQ band, from broad and smooth to narrow and precise.

Narrow Q ( ): Knob fully clockwise. This setting is best for attacking problems. For example, if an acoustic instrument is feeding back, a narrow Q allows you to cut the offending frequency without affecting frequencies around it.

Medium Q ( ): Knob at 12 o'clock. This is great for general tone shaping. Most equalizers in instrument amplifiers are medium Q. Try this setting and cut in the 300Hz - 400Hz range if your amp sounds a little muddy, or boost in the 1kHz - 5kHz range to help your bass cut through a mix.

Wide Q ( ): Knob fully counter-clockwise. Wide settings are best for transparent changes to the signal. With a wide Q, boosting around 100Hz can add warmth and boosting in the 3kHz range can add definition, all while retaining your instrument's tone.

High-Pass and Low-Pass Filters

High-pass and low-pass filters are used to remove specific bands of frequencies from the sonic spectrum. These bands are determined by the filter shape and the cutoff frequency at which the filter is set.

High-Pass Filter(⌒): The high-pass filter attenuates frequencies below the cutoff frequency set by the knob, which ranges from 10Hz to 200Hz, by 12dB/octave.

Low-Pass Filter(⌒): The low-pass filter attenuates frequencies above the cutoff frequency set by the knob, which ranges from 215Hz to 22kHz, by 12dB/octave (yeah, that's right–**215Hz!**).

High-Impedance Input

We have added the option to enable a **high-impedance ("hi-Z")** 10MΩ input mode for instruments with high-impedance outputs (such as piezo-equipped instruments). This increases the low-end response of such instruments.

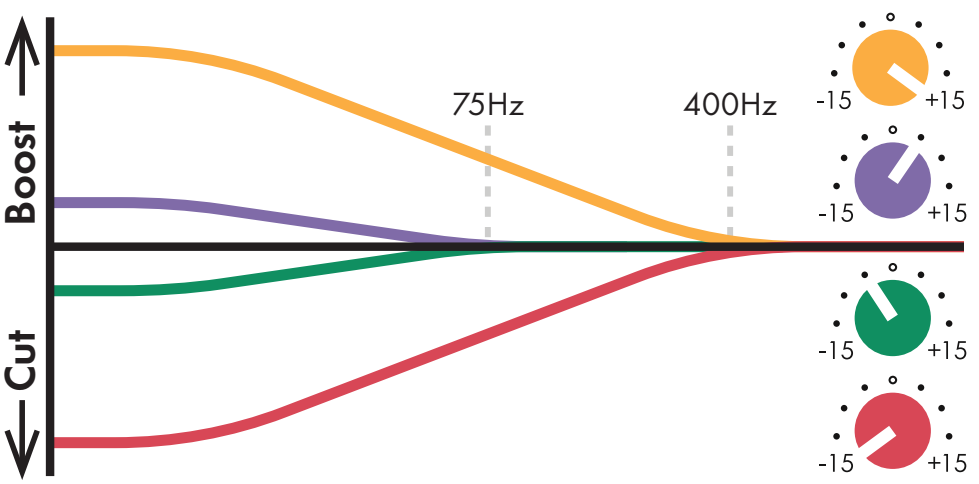
For all other sound sources, use the **1MΩ input mode** (enabled by default). This standard impedance works fine with most passive and active pickups, keyboards, and line-level signals.

View the Advanced Configuration section of this manual for instructions on changing the input mode.

Shelving Filters

Shelving filters are used to boost or attenuate a specific band of frequencies from the sonic spectrum. The filter shape and amount of boost/attenuation determines the filter's frequency response. The Bass ParaEq shelving filters are gentle and musical-sounding Baxandall filters.

Low Shelf Filter(⊃—): A modified Baxandall filter designed for musical and responsive bass control. Unlike a standard shelving EQ, the break frequency dynamically shifts as you boost or cut. This means that larger adjustments affect a wider range of low frequencies. For example, at 1 o'clock, the filter targets lows below 75Hz, while fully clockwise (max boost), it extends up to 400Hz (see the graph below for reference). This allows for natural, balanced low-end adjustments without introducing unwanted muddiness.



High Shelf Filter(—⊂): Traditional fixed-frequency

Baxandall filter with a gentle slope that boosts or attenuates frequencies above 1kHz by up to 15dB, depending on the knob position.

Frequency Region Descriptions

Here are some frequency descriptions that should be helpful when using the Bass ParaEq to achieve a specific result. For frequency descriptions for other instruments, visit **empresseffects.com/eq**

Electric & Upright Bass

<40Hz: Sub-bass rumble. Roll off with a high-pass filter (HPF) to clean up the low-end of your mix.

40Hz – 80Hz: Fundamental low-end. Boost for warmth and fullness, cut to avoid excessive boominess and make space for the kick drum.

250Hz – 500Hz (electric bass): Muddy region. Boost for fullness and warmth, cut for definition.

500Hz – 800Hz (upright bass): Definition and articulation. Boost for woodiness, cut to reduce boxiness.

800Hz – 1kHz (electric bass): Honky region. Boost to add growl and help separate from other instruments, cut to reduce nasal tones and clean up your sound.

1kHz – 3kHz: Overtones and presence. Boost to

cut through a mix, cut to reduce bite and blend with the band.

3kHz – 5kHz: String noise and finger attack (picks accentuate this area). Boost for clarity and to add a metallic sound, cut to soften percussive sounds.

>5kHz: Air and sparkle. Boost for more harmonics, roll off with a low-pass filter to smooth your whole sound and give space to vocals and cymbals.

low freq, mid freq, high freq: Selects the center frequencies around which you'd like to boost or cut for each band.

gain: Determines the amount of boost or cut applied to frequency band. At the 12:00 setting, there is no boost or cut applied. The range of cut or boost available for each frequency band is -15dB to +15dB.

(⌒) Sets the cutoff frequency of the high-pass filter.

(⊃) Sets the gain/attenuation of the low shelf filter.

(⊂) Sets the gain/attenuation of the high shelf filter.

(⌒) Sets the cutoff frequency of the low-pass filter.

boost: Controls the output level. It is a clean boost, perfect for providing gain before an effects chain to minimize noise or to overdrive the input of a tube amp. The available boost ranges from 0dB to +30dB and is toggled on/off with the boost footswitch.

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t a Glance

low q, mid q, high q: The Q knobs determine the range of frequencies affected by the equalizer on each band.

Wide Q (⌒) will affect a wide range of frequencies around the selected frequency. Q ≈ 1 affects about 1.5 octaves.

Medium Q (∩) will affect some frequencies around the selected frequency. This is a good place to start for overall tone shaping. Q ≈ 2.5 affects about 2/3 octave.

Narrow Q (Λ) will only affect a very narrow range of frequencies around the selected frequency. Q≈ 4 affects about 1/3 octave.

bypass footswitch: When the LED is on, the Bass ParaEq effect is applied to the signal. When off, the effect is bypassed. The Bass ParaEq operates in buffered bypass.

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Balanced Output Detection

The Bass ParaEq automatically detects the presence of a balanced connection and will configure the output accordingly (such as a TRS cable connected between the output of the Bass ParaEq and an audio device with a balanced input). When in balanced output mode, +6dB is applied to the output signal. If no balanced connection is detected, the Bass ParaEq will default to a standard unbalanced output.

Auto-detection occurs at startup or when a cable is inserted into the output of the Bass ParaEq, indicated by the **hi-Z LED** flashing during the auto-detection process. The LED will remain ON for balanced output and OFF for unbalanced.

Note: Auto-detection only activates on startup or when a cable is inserted into the output of the Bass ParaEq. If a TRS cable is plugged into the Bass ParaEq first and then into an audio device with an unbalanced input, the output will stay in balanced mode until the next power cycle. This won't affect your tone, and the LED will update after restarting.

Changing Startup State

The EQ and boost functions can be set independently to be active or bypassed when the pedal starts. To switch the startup state, press and hold the respective footswitch when power is applied to the pedal.

Advanced Configuration

These options let you adjust the input impedance and boost behavior of your Bass ParaEq.

To enter advanced configuration, hold both footswitches on power-up. The boost and bypass LEDs will flash to confirm entry.

Modifying the advanced configuration:

To toggle between standard and high-impedance inputs, use the bypass footswitch. The bypass and hi-Z LEDs will display which mode you are in:

Bypass & hi-Z LEDs off = 1MΩ input enabled (default)
Bypass & hi-Z LEDs on = hi-Z 10MΩ input enabled

To toggle between normal bypass mode and independent bypass mode, use the boost footswitch. With independent mode you can apply boost without having the equalization engaged. This makes it almost like having a separate EQ and boost pedal, each with their own bypass switch.

Boost LED off = normal (default)
Boost LED on = independent

To exit, hold both footswitches again. The LEDs will flash to confirm changes.

Note: Changes to input impedance or bypass mode only take effect after exiting advanced configuration.

Sting-Slap

The perfect slap bass tone has scooped mids, and powerful lows and highs. This setting uses the LPF and HPF to keep your sound from being too bright or boomy.

Bass Growl

Pushes upper mids and highs to stand out in a mix, while keeping hiss and boominess out of the equation.

Passive Punch

Round, warm tone for taming active pickups. Despite all the low-end being added, the HPF ensures that the kick drum can still cut through.

Pick-Like

Make your fingers sound like picks! Will push tube amps into a pleasant overdrive, beefing up your tone.

Buttery Bass

Cut out highs and high mids while maintaining low end and enough mids to still bite. The result is smooth and consistently buttery.

Doom Bass

Heavily boosted lows create a sub bass, accented with an upper-mid boost for a tight sound and fuzzy sustain.

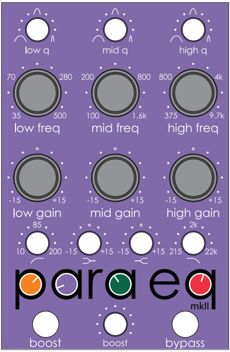
Gnarly Bass Synth

Tame the piercing frequencies from the cranked resonant filter so it sounds less sharp. Bass boost really fattens up the low end.

Mellow Pick

Perfect for pick players who want more warmth. Lets the bass' low fundamentals shine while removing mud and lessening some pick attack.

My Settings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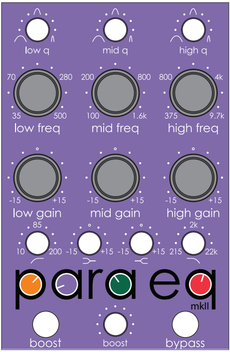
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Powering the Bass ParaEq

The Bass ParaEq requires at least 300mA of current to function properly. Any power supply rated at 9V DC with center-negative polarity (+—◉— -) and at least 300mA of current should work.

Visit www.empresseffects.com/power for instructions on how to ensure your power supply works for your pedal.

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:

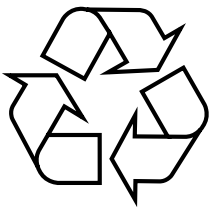
- EN 55032:2015/A11:2020 – Electromagnetic compatibility of multimedia equipment - Emission Requirements
- EN 61000-3-2:2014 – Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
- EN 61000-3-3:2013 – Electromagnetic 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:	1MΩ or 10MΩ
Output Impedance:	100Ω
Bypass Mode:	Buffered Bypass
Frequency Response:	14Hz - 22kHz
Total Harmonic Distortion:	< 0.1%
Noise:	< -107dBu
Headroom:	+30dBu
Input Voltage:	9VDC Center-Negative
Required Current:	300mA
Power Input Connector:	2.1mm Barrel Connector
Height:	2.5″
Length:	4.8″
Width:	2.6″
Weight:	1lb