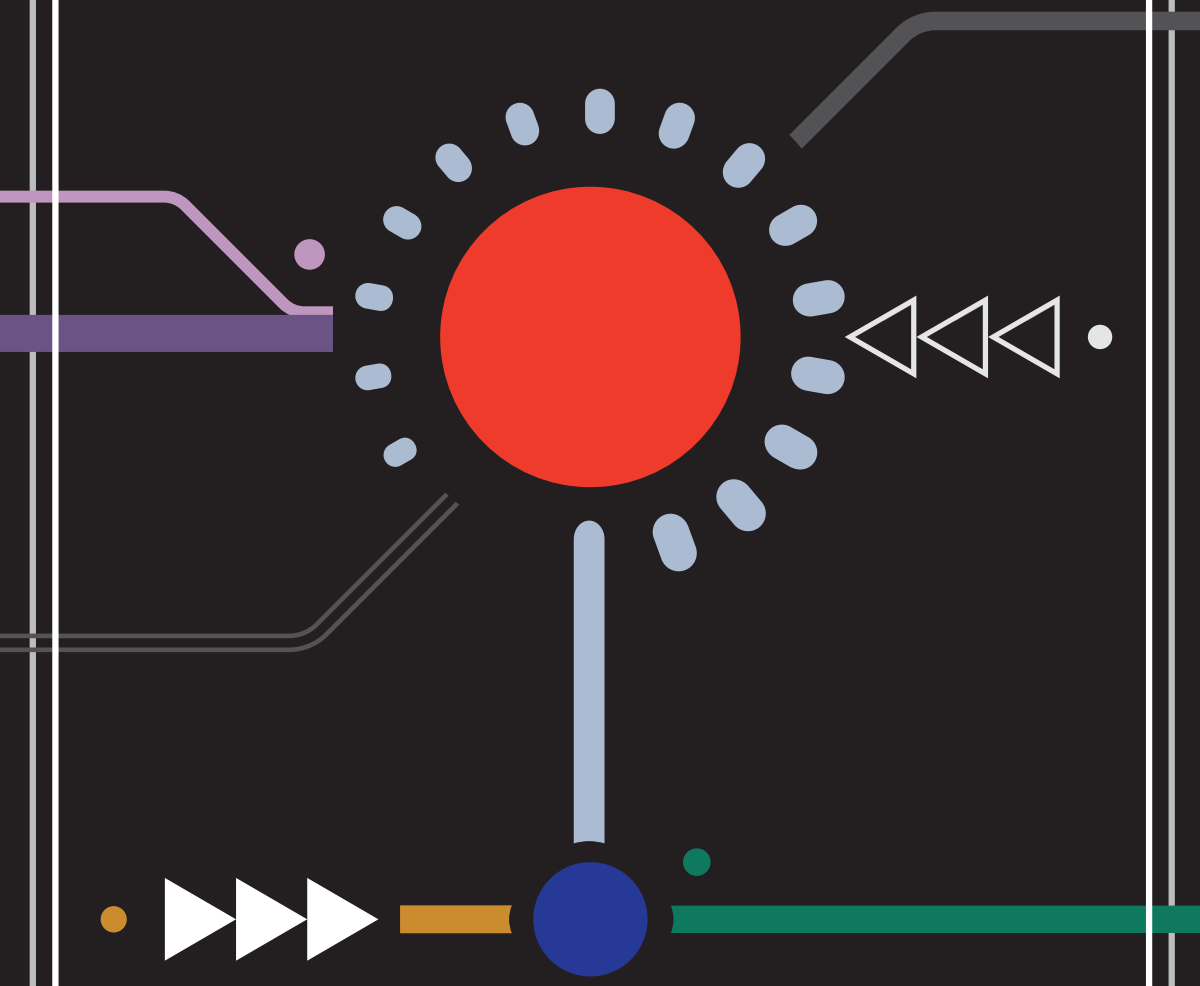
empress effects



buffer
buffer+

User Manual

Contents

Introduction

The Empress Buffer and Buffer+ were designed to protect the fidelity of your guitar signal and provide a complete I/O interface for your pedalboard.

A high impedance guitar signal can lose power and brightness over long cable runs. Our buffers eliminate this signal loss and preserve your tone. These pedals also consolidate the connectivity of your pedalboard, making setup quick and easy.

The Buffer+ adds an input gain switch, variable input loading, noise filtering, footswitchable boost, and a silent tuning mode for maximum flexibility.

Boost Mode

The Buffer+ can provide up to 30dB of clean boost. Set the desired level with the boost knob, and press the footswitch to activate. A blue LED will indicate that the boost is active. Press the footswitch again to deactivate.

Silent Tuning Mode

Press and hold the footswitch for 1 second to mute the amp out jack. A red LED will indicate that you are in silent tuning mode. Press the footswitch again to unmute the amp output and return to whichever boost state (on or off) the pedal was in before activating silent tuning.

Noise Filter

Set the toggle switch to little or lots to help reduce noise from pedals that are connected inside the loop, especially white noise or hiss generated by digital pedals.

When using high-gain pedals such as distortion in the loop, you might notice a change in high-frequency response. This is normal and can usually be corrected with some gentle EQ.

Input

This toggle switch lets you boost or pad the signal at the guitar in jack by 3dB. This can be useful for matching levels from different instruments, or for sending a hotter signal to your pedalboard for a better signal-to-noise radio. Set the switch to 0dB for unity gain.

Input Loading

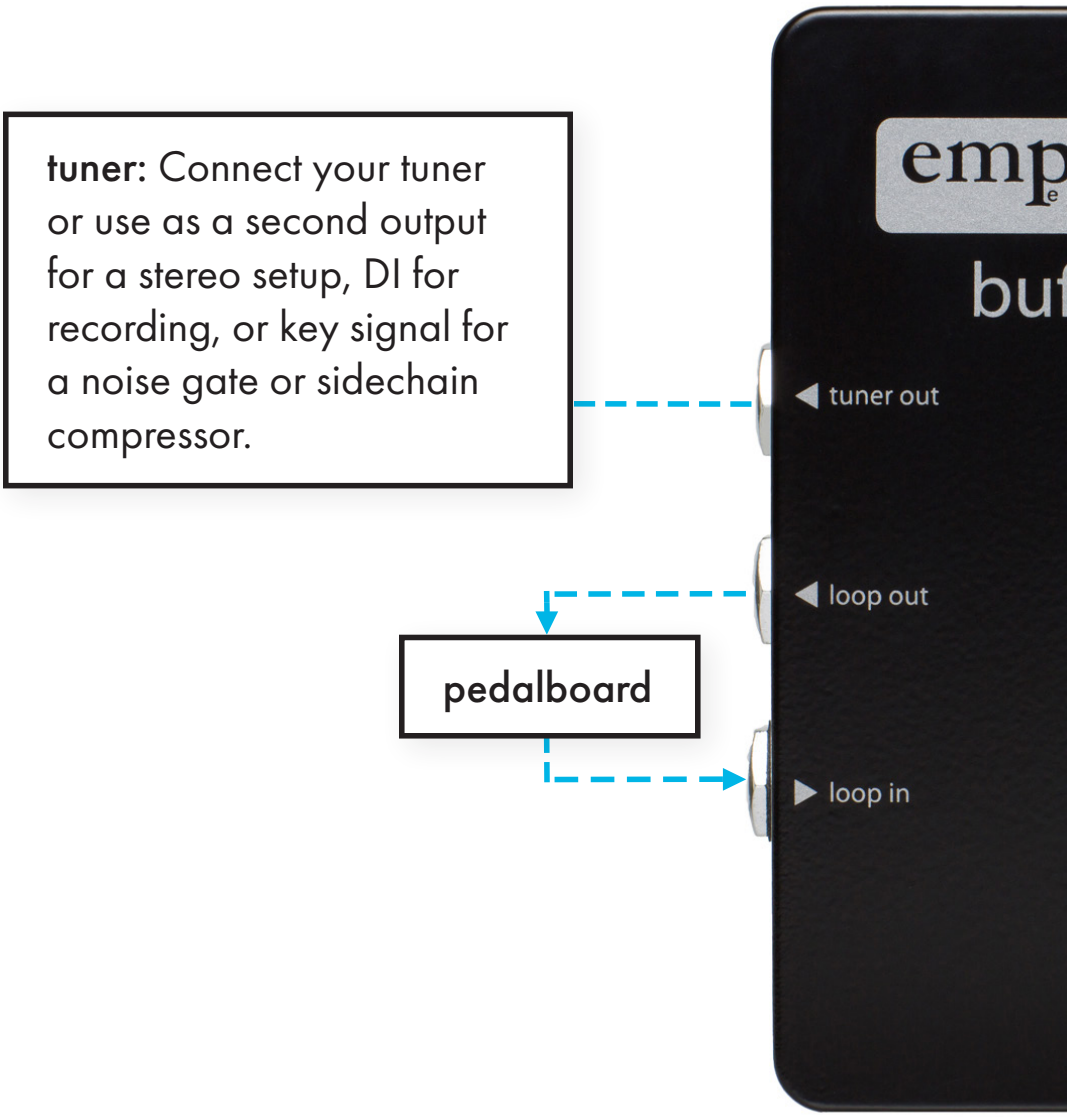
The main goal of a buffer is to prevent signal loss, but some high-frequency rolloff from a long cable run may sound pleasing. When this side-mounted knob is fully clockwise, the full frequency range of your guitar signal passes through. Turn the knob counter-clockwise to start loading down your guitar, changing the response of your pickups, and rolling off just the right amount of high frequencies.

Alternate Use

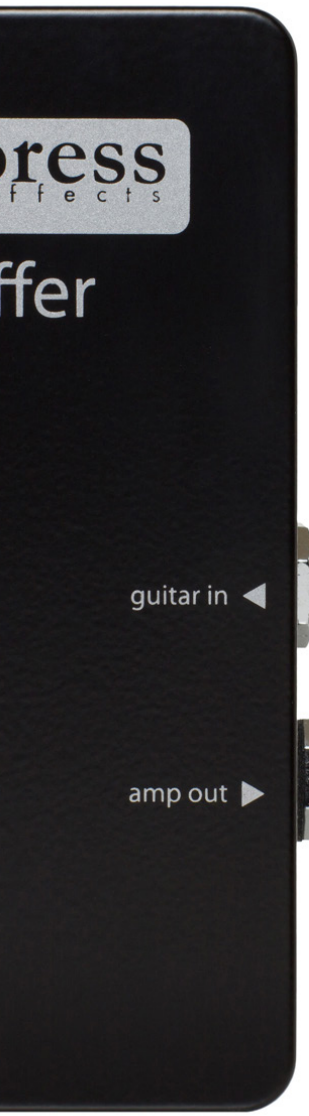
The Buffer and Buffer+ can also act as 1-in/3-out splitters. The input signal is normally routed to the loop out and tuner out. When nothing is connected to the loop in jack, the input signal will also be routed to the amp out jack.

This could be used to run multiple amps, or to record a separate dry signal when tracking to use for re-amping.

Please note that the grounds of each output are not isolated, so connecting to multiple destinations could cause a ground loop. Lifting the audio ground (not the power ground) on one of the connected devices should solve ground loop issues.


tuner: Connect your tuner or use as a second output for a stereo setup, DI for recording, or key signal for a noise gate or sidechain compressor.
pedalboard
tuner out
loop out
loop in

Glance - Buffer



guitar in: Plug your guitar in here. The high impedance input won't load down your pickups, so the full frequency range of your guitar can pass through.

amp out: This buffered output can drive a long cable run without signal loss.

Controls at a G

input: Boost or pad the signal from the guitar in jack by 3dB, or set to 0dB for unity gain.

tuner: Connect your tuner or use as a second output for a stereo setup, DI for recording, or key signal for a noise gate or sidechain compressor.

pedalboard

boost footswitch: Press to activate/deactivate the boost. Hold to mute the amp out jack for silent tuning.

lance - Buffer+

noise filter: Select the amount of filtering applied to pedals in the loop.

boost: Control how much gain is added (up to 30dB) when the boost is activated by the footswitch.

input loading: Control how much load is placed on your pickups. Turn counter-clockwise to roll off high frequencies.

guitar in: Plug your guitar in here. The high impedance input won't load down your pickups, so the full frequency range of your guitar can pass through.

amp out: This buffered output can drive a long cable run without signal loss.

Powering the Buffer & Buffer+

Go to www.empresseffects.com/power for list of power supplies we've tested.

Please note: The Buffer and Buffer+ require at least 80mA and 86mA of current to function properly, respectively. Any power supply rated at 9V DC supplying negative polarity and at least the minimum required 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.

Specifications

Input Impedance (Buffer):	1MΩ
Input Impedance (Buffer+):	10k - 1MΩ
Output Impedance:	510Ω
Frequency Response (-3dB):	5Hz - 40kHz
Input Voltage:	9V DC 
Required Current (Buffer):	80mA
Required Current (Buffer+):	86mA
Power Input Connector:	2.1mm Barrel Connector
Total Harmonic Distortion:	0.02%
Signal to Noise Ratio:	105.3dB
Headroom:	+9.4dBu
Height (Buffer):	1.25″
Height (Buffer+):	2″
Length:	4.5″
Width:	2.5″
Weight:	0.5lb