

THE GIGRIG.COM



VIRTUAL BATTERY MANUAL

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1. Introduction

The GigRig Virtual Battery is designed to deliver power the same way 9v batteries do and includes a sag control to emulate older carbon batteries. The Virtual Battery will deliver filtered, isolated 120mA, almost totally noise and hum free 9V DC power for guitar effects.

Virtual Batteries are designed to either emulate a Alkaline or Carbon battery. An Alkaline Battery provides a clean linear supply however a Carbon Battery reacts very differently. As you attempt to draw more current from a Carbon Battery it will drop its voltage slightly to 'keep up with demand'.

When you play particularly hard through a fuzz or wah (transients especially) this will cause the pedal to draw more current. When powered via a Modern Power Supply/Alkaline Battery this has no effect, but when being powered from a Carbon Battery the voltage will drop slightly according to the signals amplitude, this causes Compression/Saturation (within the pedal) that wouldn't normally occur (this is why many musicians insist on powering pedals from Carbon Batteries). Virtual batteries provide a cost effective and environmentally friendly solution.

The Virtual Batteries also feature a dial that 'blends' between an Alkaline or Carbon Battery allowing you to find the perfect combination of both.

VB-BC = Battery Clip connector

VB-DC = Centre Negative 2.1mm DC connector

2. Isolation

Isolation is achieved using a miniature toroidal transformer. This solves most hum and noise problems associated with many effects pedals and other guitar equipment.

3. Virtual Fuse

The Virtual Battery contains an output safety fuse. This fuse is designed to blow at continuous currents of over 300mA. However, being a virtual fuse, it will re-heal approximately 20 seconds after the load has been removed.

4. Virtual Internal Resistance

The Virtual Battery is designed with an internal resistance of 10 Ohms. Just like old carbon-zinc batteries the voltage will drop to 6.5V DC at a load of 250mA. The Virtual Battery is designed to emulate older carbon batteries as some effects pedals (such as vintage Fuzz & Wah pedals) can sound better when used with these older, higher internal resistance batteries.

5. Variable 'Sag' Voltage

The Virtual Battery also features a variable 'sag' control (a small user pre-set voltage control situated just above the Virtual Battery output lead). By using a small jeweller's flat-head screwdriver you can increase the internal resistance to emulate the 'dying battery' effect beloved by many Fuzz and other vintage pedal users. You can set it to your own preference.

6. Technical Specifications

General Specification Parameters:

Input Voltage: 9.0V +/- 10%

Output Voltage: +/- 5%

Isolation: 1000V

Isolation Resistance: 500Meg ohm

Usable Temperature Range: -10 to +50 Deg. C

Isolation Capacitance: 4.7nF

Short Circuit Protection: The short circuit current of the Virtual Battery is 300mA. After 20 seconds the Virtual Battery will shut down until the short is removed.

Reverse Input Voltage Protection: The input of the Virtual Battery is reversed voltage diode protected. (6 amps maximum for 50 seconds).

Safety: If the Virtual Battery shuts down your power supply, the DC 9V input is connected the wrong way round. Remove the Virtual Battery from your power supply immediately.

THE VIRTUAL BATTERY MUST USE A CENTRE NEGATIVE SUPPLY.

The Virtual Battery IS NOT a rechargeable battery. DO NOT ATTEMPT TO RE-CHARGE.

No Load Output: With 9V input, the output voltage under 'no-load' conditions is 9.5V +/- 10%.

No Load Quiescent Current and Virtual Leakage Current: 18mA.

Radio Frequency Emissions and Susceptibility: The Virtual Battery contains RF suppression and RF susceptibility avoidance components in compliance with CE marking regulations.

Physical Size: 40mm x 27.7mm x 17.8mm / 1.56 x 1.09 x 0.7 inches. It will fit most battery compartments.

7. Warranty

The GigRig warrants the product to be free from defects in material and workmanship for a period of 2 years from the original date of purchase.

If the product fails within the warranty period, The GigRig will repair or, at our discretion, replace the product and cover the cost of return shipping to the original purchaser. This warranty covers defects in manufacturing discovered while using this product as recommended by The GigRig. This warranty does not cover loss or theft, nor does the coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage, lightning, or natural disasters.

Damage caused by any of the above circumstances may result in a non-warranty repair fee. Legal: In the case of malfunction, the purchaser's sole recourse shall be repair or replacement, as described in the preceding paragraphs. The GigRig will not be held liable to any party for damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product.

In no event will The GigRig be liable for more than the amount of the purchase price, not to exceed the current retail price of the product. The GigRig disclaims any other warranties, express or implied. By using the product, the user accepts all terms herein.

Disposal: TheGigRig contains no batteries or Lead. Return the unit to TheGigRig Ltd for disposal or use standard disposal for electrical equipment recommended in your country. Do not dispose of electrical equipment in household waste!

TheGigRig is protected by copyright, moral rights, patent and design registration.

'GigRig' is a stylized trademark. No 2343300

Any individual or company found copying the functionality, look or feel, circuits, circuit function or software functions for commercial gain will be liable for legal action. Licenses may be granted to non-competing companies.

The GigRig and its Power supply are RoHs compliant.

Tested and compliant to EN 60950 safety standard.

The power supply is approved to all USA and European

Regulations including UL. See separate instructions supplied with the power supply

Manufacturer: The GigRig Ltd, Unit 15 Whitehill Industrial Pk, Royal Wootton Bassett, SN4 7DB

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Warning: For indoor use only. Keep away from water. Keep away from Children.

