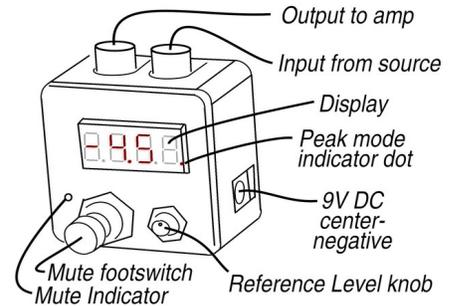


## Mini-Voltage Unit Meter Pedal

### Mini-VUMP

By JoyeMusic.com



#### – Quickstart –

- ◆ Use a **9VDC**, center-negative, 5.5mm plug.
- ◆ **Footswitch:** Mutes signal. The green LED indicates you are muted.
- ◆ **Reference level knob:** Vary baseline level where you want it. For example, set a clean guitar strum to -10 dB. You might set the volume on your overdrive pedal so the display reads -4 dB on a typical use.
- ◆ **Display** shows -25 dB to +6.0 dB and holds the max value for about 1.6 seconds. Signals over +5.0 dB flash, indicating that the signal may have clipped. Stay under +6.0 dB. [MiniVUMP-Manual-Download-v2.doc, 5/14/21]

#### WARNINGS:

- > This product contains chemicals known in the state of California to cause cancer and birth defects or other reproductive harm. For more information: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)
- > Opening the device may expose one to hazards such as electrical shock, allergens, toxic materials, and the like.
- > This device is not a toy for children.
- > Do not submerge or allow liquids to enter the device. Liquid ingress voids the warranty.
- > Do not expose to temperature extremes. Temperature may affect the calibration or operation.
- > Clean with a dry or damp cloth only.

#### INTRODUCTION

The Mini-Voltage Unit Meter Pedal (“Mini-VUMP”) is a guitar pedal-style level indication meter. This unit reads out signal level in the traditional “deci-Bel” (dB) scale. Since sound levels span many decades of pressure intensity, it is convenient to express the level in the logarithmic dB scale. An increase of 6 dB sounds about twice as loud as the reference sound level.

The intended use for this device is to be the last “pedal” in a chain of pedals connected to an electronics instrument such as an electric guitar or bass guitar. It provides a convenient, local measure of your signal level just before going to the amp or a sound board. If you are on stage between songs, you can mute yourself and check the levels using this pedal before going live. You can also precisely equalize the volume settings of your pedals using this device.

If you prefer, you can even calibrate the unit using an external meter so that it reads in true dBV (0 dBv = 1 volts RMS) or dBu (0 dBu = 0.775 volts RMS). Decibel levels can be calculated as follows:

$$dB = 20 \log_{10} \frac{V}{V_0}$$

where  $V$  is the signal level in volts RMS. And  $V_0$  is the reference voltage level in volts RMS. For example,

- if  $V_0 = 1$  VRMS, and  $V = 2$  VRMS, then the signal is **+6 dB**.
- if  $V_0 = 1$  VRMS, and  $V = 0.1$  VRMS, then the signal is **-20 dB**.
- if  $V_0 = 0.1$  VRMS, and  $V = 0.1$  VRMS, then the signal is **0.0 dB**.

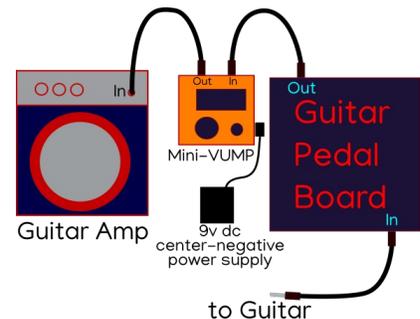
Vary reference level to set the 0 dB reference arbitrarily by the Reference Level knob.

The Mini-VUMP also features peak- or average-metering modes (accessible via internal switch), since some prefer to know the peak signal level in order to avoid clipping, while others prefer an average metering in order to gauge the subjective volume level.

#### OPERATING INSTRUCTIONS

Referring to the figure below:

- ◆ Plug the source (guitar or pedal board output) into the “**IN**” jack on the top of the Mini-VUMP. Plug the amplifier or soundboard into the “**OUT**” jack.
- ◆ **Power jack:** Use only with a center-negative 5.5 mm power plug. The unit is designed to operate from 9V DC, center-negative, but will accommodate a range of 7V up to 16V without sustaining damage. This unit is designed to be compatible with most modern guitar pedals, which run on 9V DC, center-negative. On power-up, all decimal dots blink briefly to show the unit is powered.
- ◆ The **Footswitch** mutes the guitar signal, and turns on the aqua-green colored LED to indicate that you are “Go” for testing your signal level without sending any signal to the amp or soundboard. If the Internal Selector Switch #1 is in the “Off” position, the Footswitch also turns the display on (when muted) or off (when not muted). See instructions below for how to change the internal selector switches.
- ◆ The **display** indicates the highest level achieved in the last half-second, and holds that high value for about 1.6 seconds, unless a new, higher signal is detected. The display flashes at or above +5.5 dB to indicate clipping is near. The



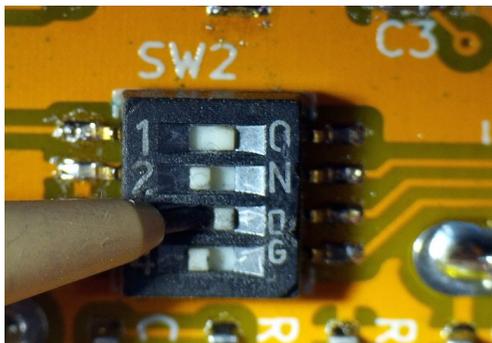
rightmost decimal dot is reserved for indicating that the unit is in Peak metering mode (see Internal Selector Switch section below).

◆ Turn the “**Reference Level**” knob to adjust the reference signal level. Some people like to adjust this so that the unit reads 0.0 dB on a typical strum. Others set a typical strum to -6 dB or -10 dB. Others may prefer to use the Reference knob to calibrate the meter to a 0.775 VRMS 1kHz sine wave standard so the meter reads in absolute voltage-units (dBU).

### INTERNAL SELECTOR SWITCHES

A selector switch inside the unit allows the user to change various settings as listed in the table below. The pedal is shipped with the defaults in **bold** lettering:

Switch Number	Switch OFF	Switch ON
1	Metering only when pedal is MUTED	<b>Always meter</b>
2**	Unit meters in <b>AVERAGE mode</b> <b>300ms response</b>	Unit meters in <b>PEAK</b> mode – Displays instant max value
3	<b>High input impedance</b>	Anti-pop filter ON, 100k output
4	<b>Gain boost OFF</b> , input >10mV RMS	15dB Gain boost ON, Input <10mV RMS



**\*\*NOTE:** When changing from Average metering mode to Peak metering mode, it is necessary to turn the unit off and then on again to “reboot”.

To change the micro-switch positions, remove the back panel and use a mechanical pencil, paperclip, tack, or toothpick. The figure above-right shows the 4-position micro-switch with switches #1 and #3 set to “ON”. The pencil lead is pushing switch #3 to the ON position by sliding it to the right.

### SPECIFICATIONS

**Nominal power supply voltage:** 9 VDC, center negative, 5.5mm OD 2.1mm ID plug.

**Power supply voltage usable range:**  
Approx. 7 to 16 VDC, center negative.

**Power consumption:** <0.4W

**Input impedance:** 5 Meg-Ohm (100kOhm with Switch #3 selected, anti-pop filter)

**Minimum signal number displayed:** -25dB

**Maximum signal number displayed:** +6.0 dB (flashes to indicate signal is equal to or greater than +6.0 dB)

**Minimum signal input triggering display:**  
0.5 mV RMS (Switch #4 set ON for high gain)

**Maximum input before damage:** 100VRMS

**Maximum input to read +5.5 dB:** 1 VRMS (Ref level knob fully CCW)

**Pedal size:** 2" x 2" x 1" (5cm x 5cm x 2.5cm)

**Weight:** 3.8 oz (108 g)

**Input/output jacks:** Mono ¼" plugs

**Environmental exposure rating:** IP52 (minor dust or minor drops of water are not expected to affect operation)

#### Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information

**Unique Identifier:** Mini-VUMP, ver 0  
**Responsible Party –U.S. Contact Information**  
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#### FCC Compliance Statement

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.

### WARRANTY

JoyeMusic warrants the Mini-VUMP device for a period of 1-year after the purchase date.

### LIMITATION OF LIABILITY AND WARRANTY

NO WARRANTIES OF DAMAGES TO CONNECTED EQUIPMENT OR CABLES. NO WARRANTIES IF UNSUITABLE VOLTAGE HAS BEEN APPLIED TO CONNECTORS OR IF THE DEVICE WAS EXPOSED TO LIQUIDS. JOYEMUSIC ONLY WARRANTS THE MINI-VUMP UNIT ITSELF. CONNECTING THE MINI-VUMP UNIT TO OTHER COMPONENTS SUCH AS GUITARS OR SYNTHESIZERS IS AT OWN RISK. IN NO EVENT WILL COLIN D. JOYE OR JOYEMUSIC BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR THE INABILITY TO USE THE MINI-VUMP UNIT EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN PARTICULAR, JOYEMUSIC IS NOT RESPONSIBLE FOR ANY COSTS INCLUDING BUT NOT LIMITED TO THOSE INCURRED AS A RESULT OF LOST PROFITS OR REVENUE, LOSS OF USE OF THE MINI-VUMP PRODUCT, LOSS OF DATA, THE COST OF SUBSTITUTING THE MINI-VUMP UNIT, OR ANY CLAIMS BY THIRD PARTIES.

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