

Installing a “dying battery pot” in a pedal

Some pedals actually sound good when their batteries are running low. Moody Sounds has a pedal that simulates this effect on other pedals, it is called “Dying Battery Simulator kit”. It is a very simple construction, just a potentiometer that adjusts the voltage that powers the main circuit, nothing more. You connect you adapter plug to the DB simulator and you connect another wire between the DB simulator and the power jack on the main pedal. Now you can adjust the voltage that the main pedal is run on. This document describes how you can build in a DB pot in any pedal.

1. Find out where the circuit’s positive terminal is on the PCB. Normally this is the place where a wire between the current jack and the PCB enters the PCB. Often the pedal builder used a red wire to indicate that “this is the positive terminal”. To do the modification described below, you will have to find this wire!
2. Drill a hole for the new potentiometer. If you are using a 16mm Alpha potentiometer from moodysounds.com use a 7mm drill (predrill with a 3mm drill if you want extra accuracy). You can use a 25k linear pot as a DB pot.
3. Break off the small tag next to the main shaft with a small pliers. The tag comes off easily if it is twisted lightly to the side. Alternatively, drill an extra hole, next to the hole for the shaft, and fit the small tag in there. You decide!
4. Position the pot in the hole and tighten the nut.
5. The wire mentioned in step 1, remove it from the PCB and solder it on one of pins (not the middle one) on the DB pot. Ok, there are two more pins, which one shall it go on? If you want “the battery to be dead” when the DB pot is turned to the right, put it on pin 1 on the DB pot (see image 1 for denotations). If you want it to be dead when turned left, put it on pin 3.
6. Connect a wire between the pot’s middle pin (pin 2) and the place on the PCB the first wire was removed from.
7. Connect a wire between the unsoldered pin on the DB pot and the circuit’s ground. If you are uncertain where the circuit ground is, use any of the tele jack’s ground solder lugs, 99% this will be fine.

The Dying Battery Simulator kit has a 3.9 k resistor instead of a wire here. Using a resistor instead of a wire in step 7 will make the DB pot not cover 0V and voltages just above 0V. In most cases (?) it is not interesting to see what a pedal is like when powered with 0V. So if you don’t want the DB pot to cover 0V and voltages just above, put a resistor instead of a wire here.

Finally, here is how you add a DB pot in a Moody Boost or a Moody Fuzz. Steps 1 to 4, just as above.

- 5’. Remove the orange wire from hole 3 on the PCB and connect it to pin 1 on P3.
- 6’. Connect a red wire between the middle pin on the new pot (“P3”) and hole 3 on the PCB.
- 7’. Connect a 3.9k resistor between pin 3 on P3 and the ground pin on the input jack.



Image 1. A potentiometer has three pins and we give them numbers 1,2 and 3.

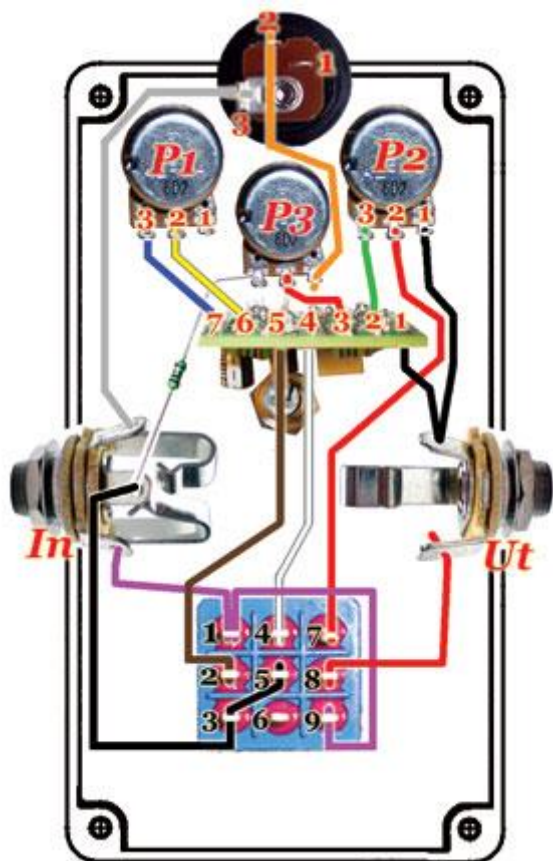


Image 2. Drill a hole for the new pot and mount it. It is very simple to do the Dying Battery mod wiring, just remove the orange wire from hole 3, put in on pin 1 on the new pot. Connect a new wire between the middle pin of the pot and hole 3 on the PCB. Ground pin #3 on P3 (through a resistor if desired).