

# How to optimize your green russian BigMuff's hardware and bypass

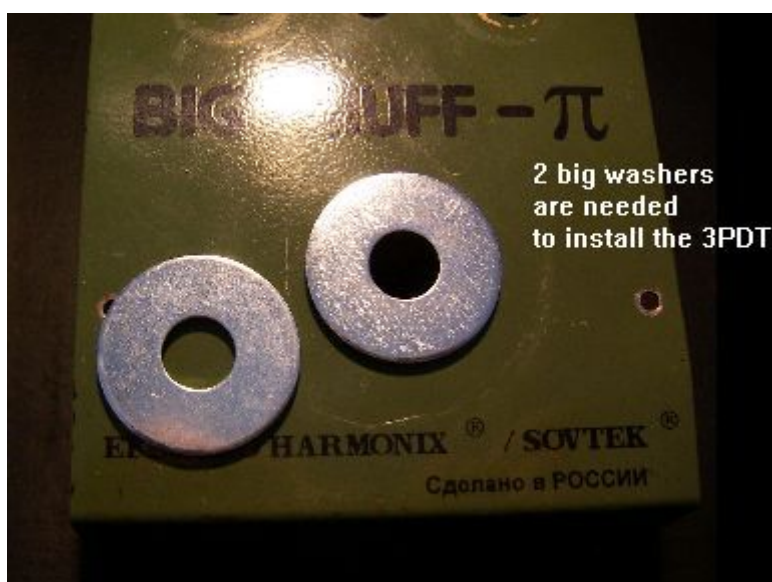
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This is a photo workshop about optimizing your green BigMuff's (aka „civil war Muff“) hardware components and adding 'true bypass' to the circuit, based on the manual from [singlecoil.com](http://www.singlecoil.com) ([http://www.singlecoil.com/docs/russian\\_muff.pdf](http://www.singlecoil.com/docs/russian_muff.pdf)).

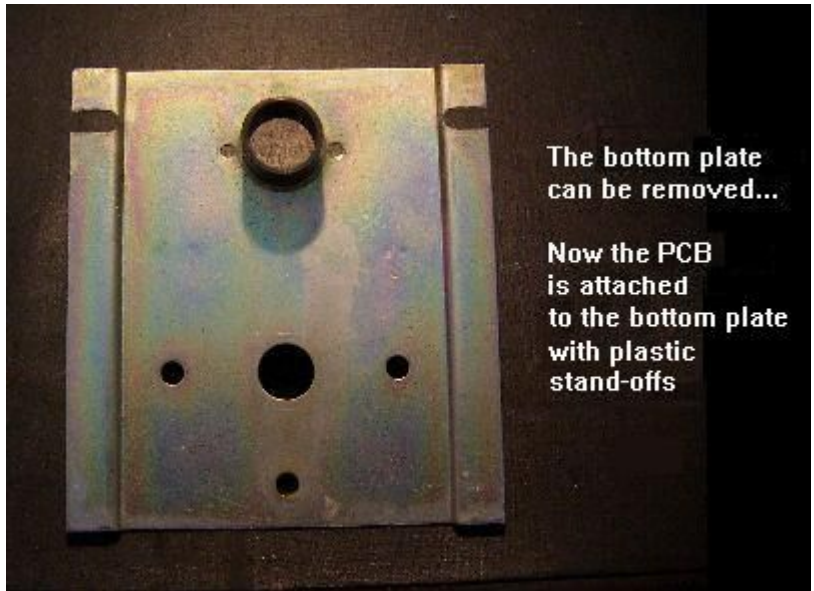
What we do in this workshop:

- replacing the standard switch with a 3PDT switch
- replacing the standard pots with Alpha pots
- replacing the standard jacks with Rean jacks
- installing a DC jack
- replacing the cheap battery clip with a quality clip
- replacing the complete wiring with silver wiring
- isolating the ground of the enclosure with foam rubber
- mounting the PCB to the bottom plate with plastic stand-offs
- installing a chromed LED bezel
- installing a bigger, fancy colored LED

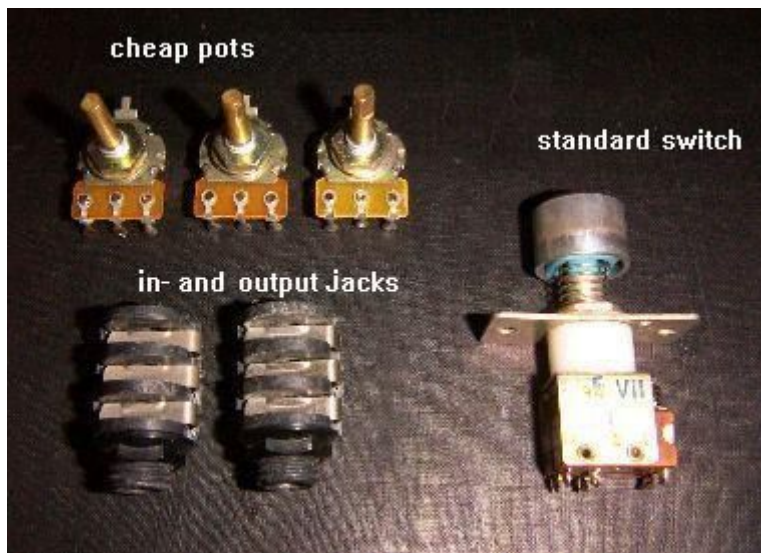
To install the new switch for true bypass, you need two big washers as you can see on the following image:



The bottom plate holding the switch, pots, LED and the PCB can be removed and is no longer necessary after reinstalling the new parts.



This is the old hardware that will be swapped:



**This is the cheap battery clip and wiring which will be replaced too:**



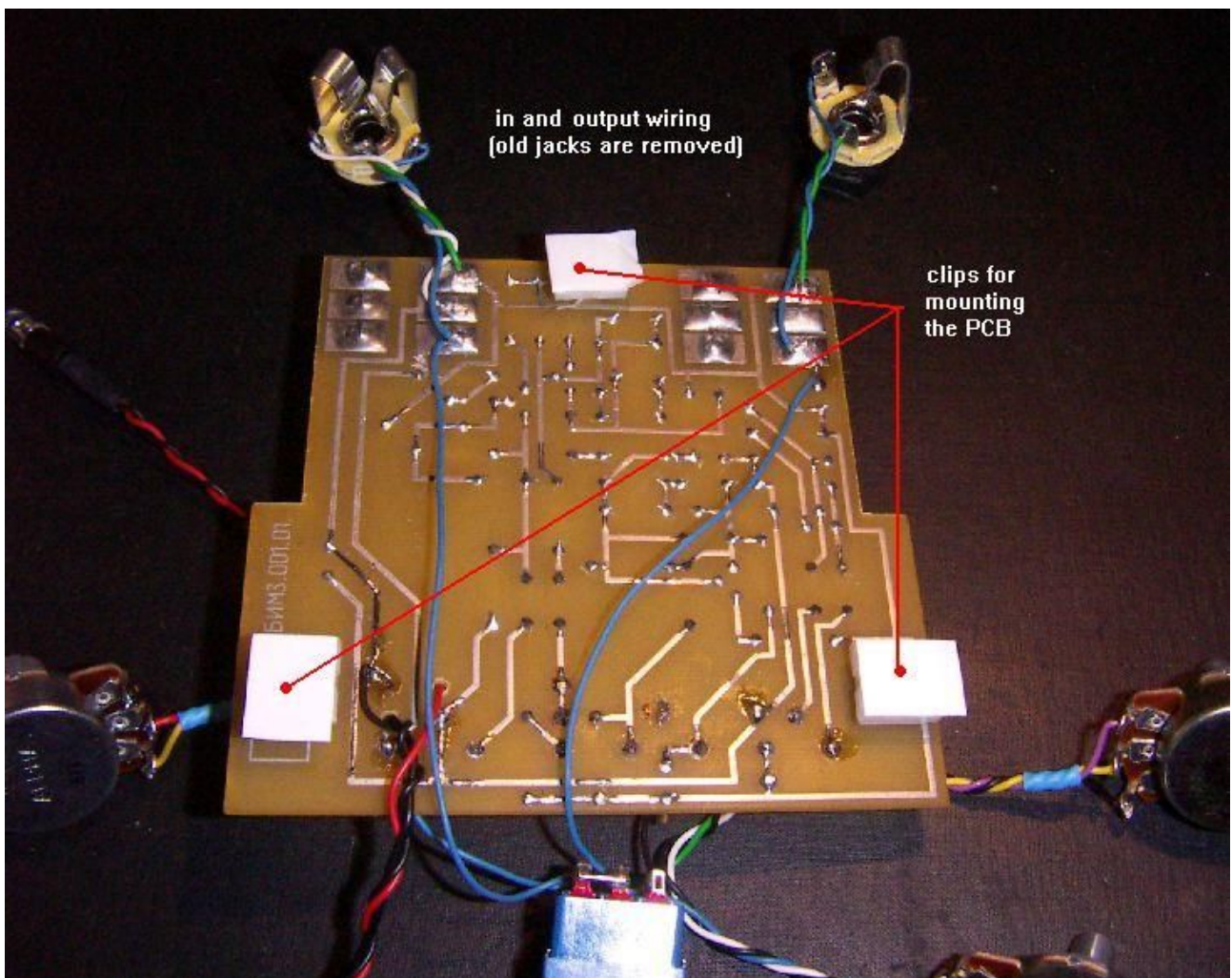
**This is the small red standard LED and its plastic holder which will be replaced too:**



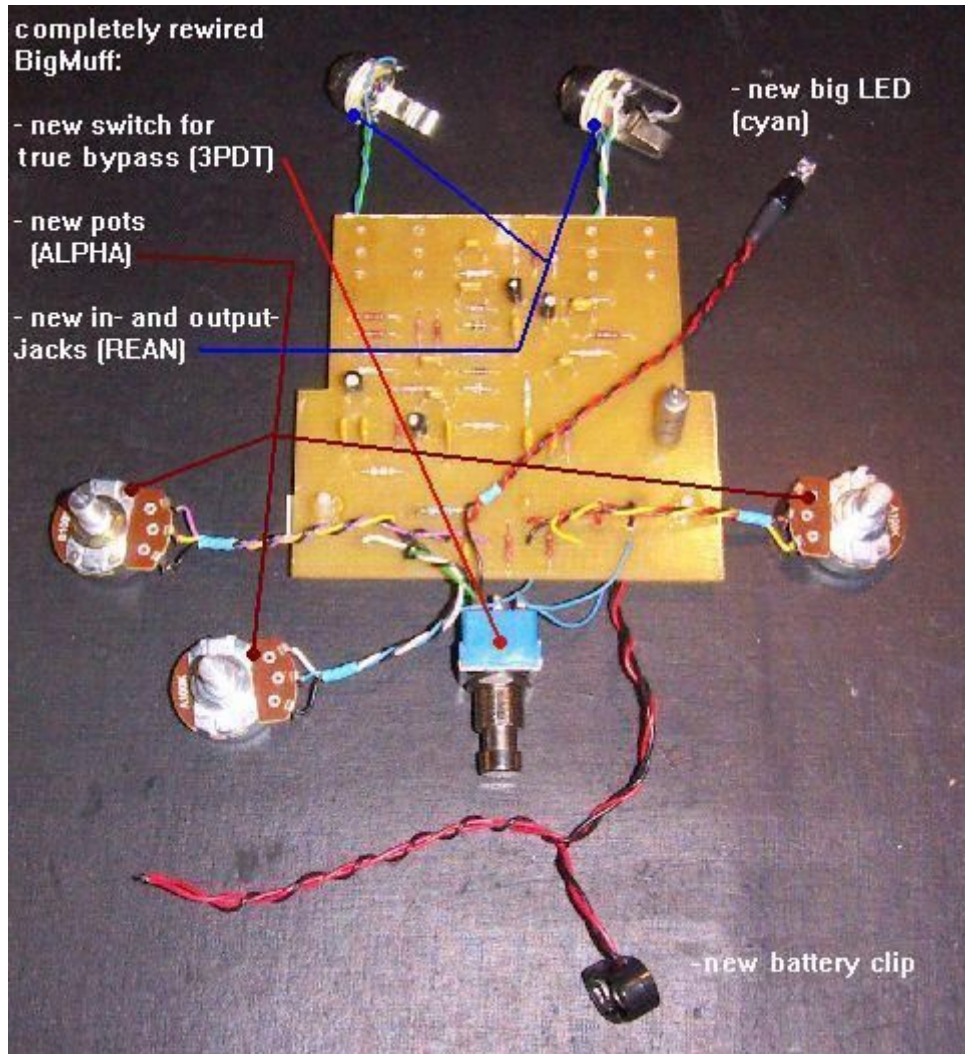
**The new pots from the „Alpha“ company:**



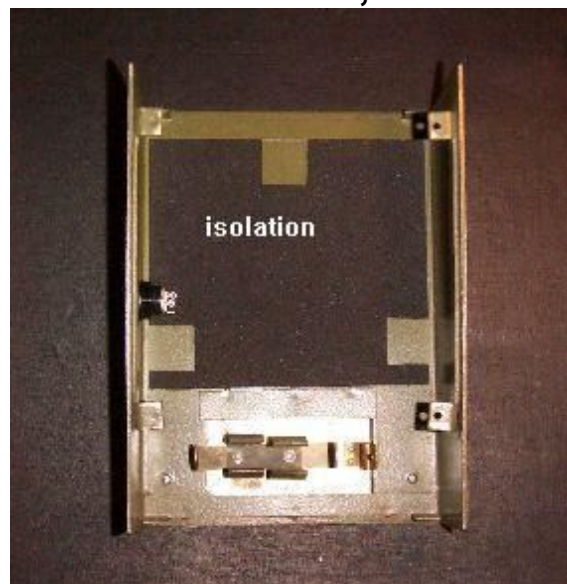
**The new in- and output jacks and the PCB plastic stand-offs:**



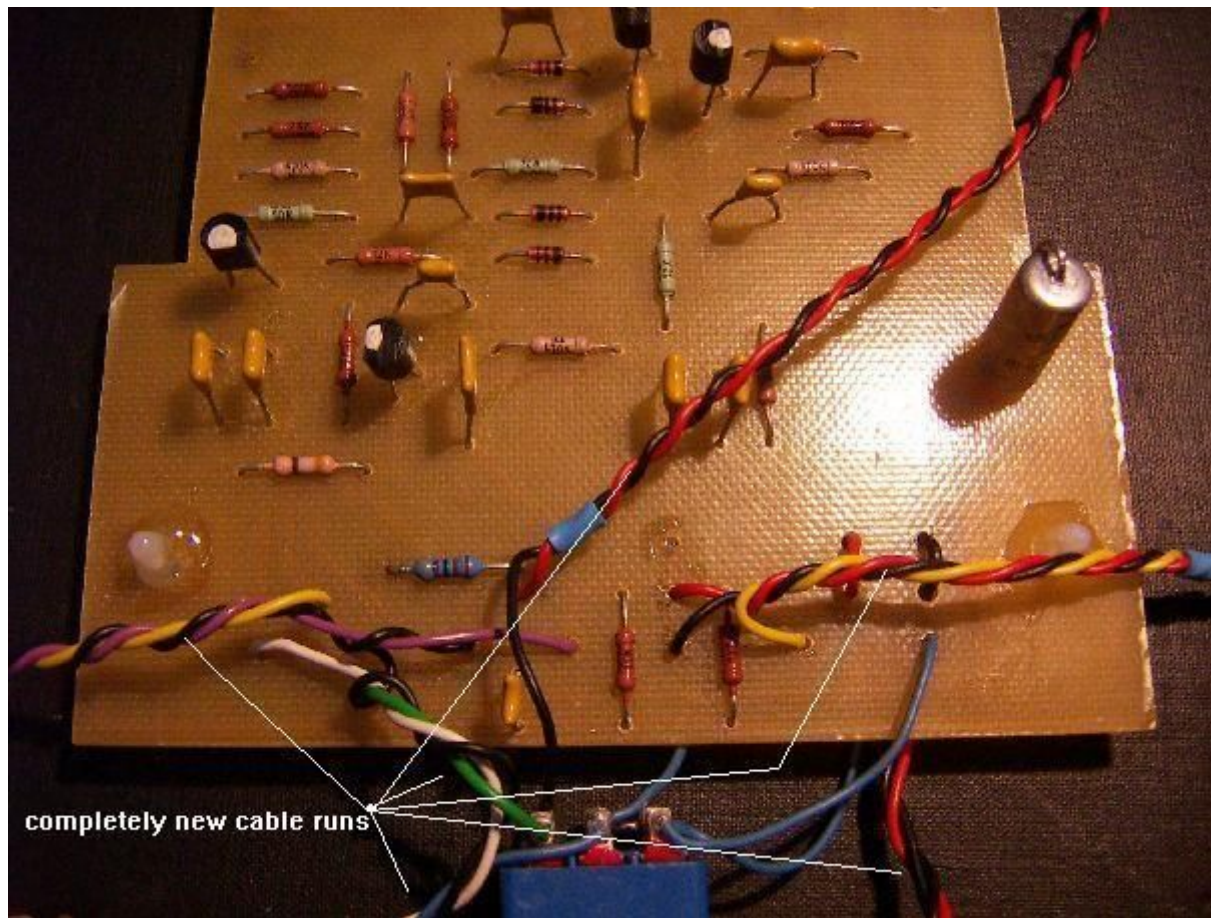
**After finishing the rewiring job everything is done:**



**The bottom plate of the enclosure, isolated with foam rubber:**



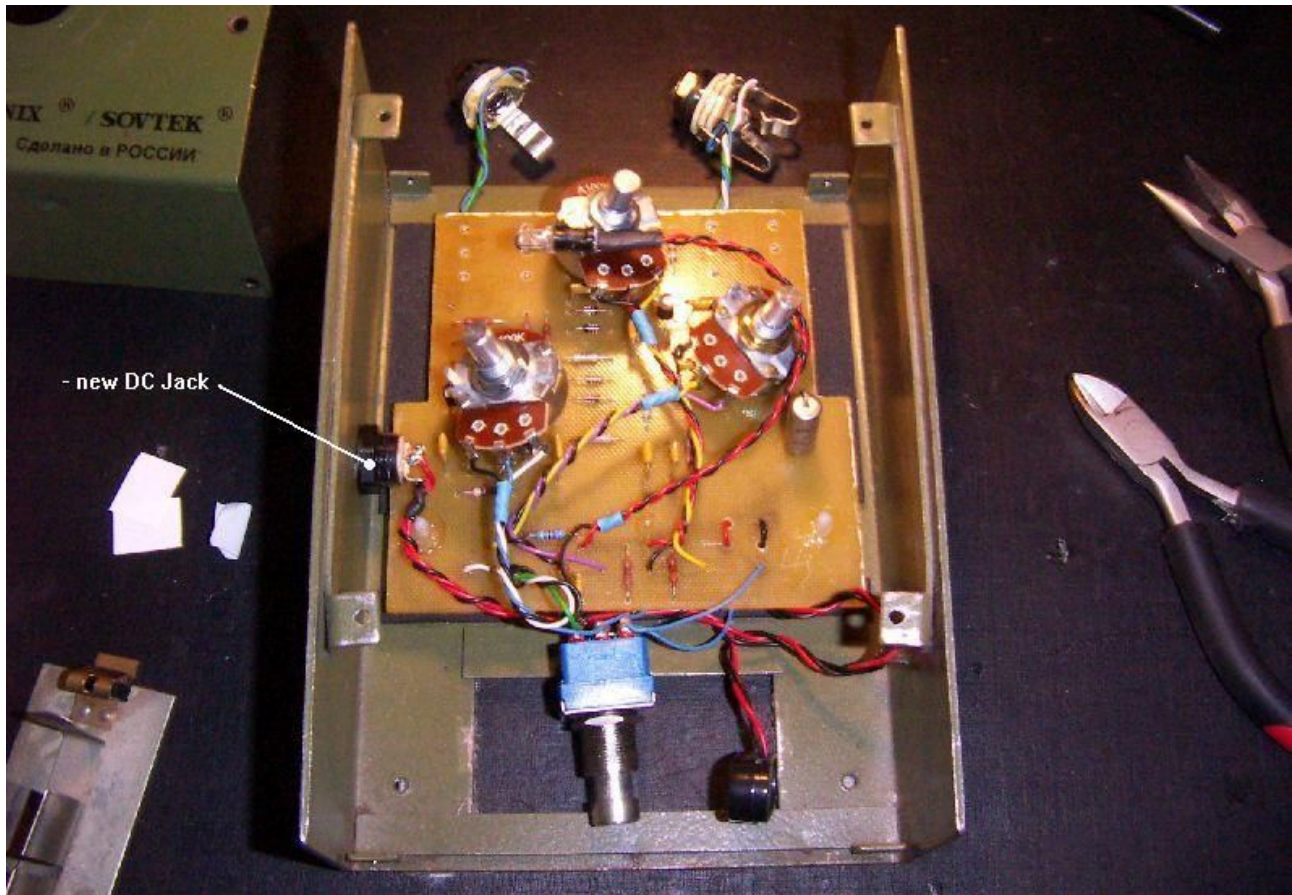
**A detailed view at the PCB:**



**Please take care of the length of your wires before soldering, they could be shorten easily, but extending is more difficult ;-)**

**After you have installed all the hardware you will have the correct placement of the in- and output jacks a la Boss, Ibanez ect. (output = left / input= right)**

Now the PCB is attached to the bottom plate with plastic stand-offs and I mounted the DC jack on the left side of the enclosure:



Mounting the pots and the switch is a little bit tricky but you only have to do it once ;-)

