



GermanSolarZA

# Portable power supply modification





## Overview

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What is the best portable power supply for college electrical engineering students?

The No Inductor power supply. This project utilizes PicoPD's previous work to prototype a bench power supply. Beside portable soldering iron, this should be one of the best portable tools for college electrical engineering students. This bench power supply is powered by USB-C PD 3.0/3.1 using their PPS capability.

What is SMPS power supply?

SMPS stands for switch mode power supply and it's the modern and most compact/efficient way of acquiring low voltage DC from mains AC source. However making an SMPS at home may not be as simple as making power supply units using traditional iron core transformers.

Does the bench power supply have a buck or boost converter?

This bench power supply is powered by USB-C PD 3.0/3.1 using their PPS capability. There is no buck or boost converter on the board as these component is already in your USB-C charger. We will explore how to implement constant voltage (CV) and constant current (CC), two modes that are featured in all of the standard bench power supplies.

Can I charge the power supply with a standard USB C/a charger?

So that I can charge the power supply anytime with a standard USB C/A charger. Overall the design is minimalist, looks good and carries 2S 18650 battery for the power backup. This project is sponsored by PCBWAY, China based PCB manufacturer having 10 years of experience in working with PCB related products.



## Portable power supply modification



[PD-Adjustable-DC-Power-Supply/README.md at main](#)

A DIY, USB PD powered, pocket sized adjustable DC / lab bench power supply for electronic makers I also made a pocket size reflow hotplate for automatically reflowing SMD ...

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[DIY: Adjustable Power Supply Modification](#)

This text is a modification guide for a power supply. To avoid damaging the original casing, an externally mounted method is used to connect the voltmeter and ammeter, which ...

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[How to Modify SMPS for Adjustable Current and Voltage ...](#)

What is SMPS SMPS stands for Switch-Mode-Power-Supply, which uses a high frequency ferrite based switching converter for converting the AC 220V to DC. The use of a ...

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[Mini Adjustable Power Supply : 7 Steps \(with Pictures\)](#)

Mini Adjustable Power Supply: When designing this power supply, my objective was to have it as portable as possible, so you can take it almost anywhere. One of the reasons I want it to be so

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[How to Modify SMPS for Adjustable Current ...](#)

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[DIY Portable Power Supply : 7 Steps](#)

#### DIY Portable Power Supply : 7 Steps

DIY Portable Power Supply: A power supply with battery charger, Booster circuit, Minimal design, Easy to use I/O and with different voltage output modes. Let's build

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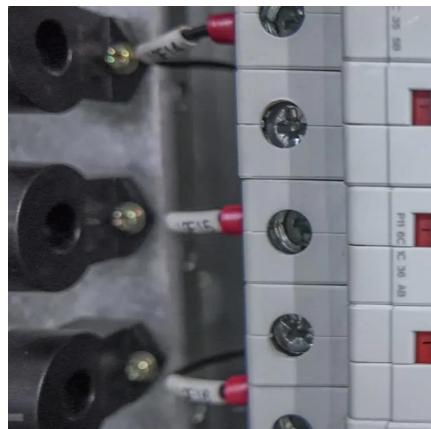
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[DIY Adjustable Power Supply Transformation Guide](#)

Transforming an old adjustable power supply made from a voltage regulator module and an OLED display header, with a non-functional fan, into a usable device involves ...

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**PocketPD**

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[How I Built a DIY Variable Power Supply \(and Why You ...](#)

Turning an old PC power supply into a fully adjustable electronics workhorse. For the past few weeks, I've been hinting at a big project I've been working on. Well... here it is: I ...

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