

Portable adjustable power supply design





Overview

What is a PD adjustable DC power supply?

This project was created on 06/01/2025 and last updated 3 months ago. The PD Adjustable DC Power Supply is a compact, USB-C-powered device designed to provide adjustable voltage output like a traditional lab bench power supply, but using the USB Power Delivery (PD) 60W as power input.

What is an adjustable DC power supply?

An adjustable DC power supply is a mainstay of the electrical and electronics laboratory. It is indispensable in the prototyping of electronic circuits and extremely useful when examining the operation of DC systems. The handheld digital multimeter or DMM is also important.

What is an adjustable power supply circuit?

In this project, an adjustable power supply circuit is designed which inputs AC mains and provides 0 to 30V 2A DC Voltage as output. The power supply designed in this project is an adjustable linear regulated type so the output voltage of the circuit is constant and is varied mechanically with the help of a variable resistor.

What is an adjustable / programmable power supply?

Using an adjustable / programmable power supply allows digital or analog control of the power supply output by a control system for maximum versatility. The control system can control and monitor the power supply output voltage and current from virtually anywhere there is an Ethernet connection.



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[Design of a Portable Emergency DC Power Supply](#)

This article introduces the method and principle of applying a microcontroller control system to a portable emergency DC power supply, and proposes a method for a portable emergency DC ...

[The development of ARM-based portable and adaptable power supply](#)

Based on the design of the existing power supplies mentioned in the previous section, we propose a new design for an advanced configurable power source. The aim of the master's thesis is to ...



[M-user143/AC_to_DC_variable_portable_Power_supply_design](#)

A portable, variable DC power supply that converts 220V AC to an adjustable DC output (1.23V-12V) using transformer-based step-down, rectification, filtering, and a buck converter ...

[Design of Portable Multiple Outputs Adjustable DC Power Supply](#)

Abstract: Adjustable DC power supplies are essential tools in electronic laboratories, offering



precise control over voltage (CV mode) and current (CC mode) to meet ...



[Power Tips: How to Create an Adjustable Output Power ...](#)

The output voltage of a power supply is usually a fixed voltage, but sometimes it may be necessary to adjust that output voltage. For example, you may be able to reduce the ...

[Portable Very Precise Adjustable DC Power Supply + USB ...](#)

In this project, we are building a portable, precise, and versatile 12V to 1V adjustable DC power supply that can also charge USB devices. It features a high-current ...



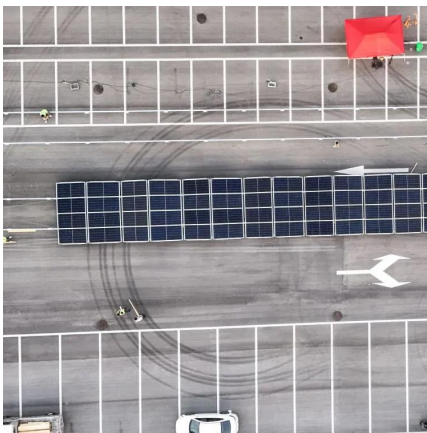
[The development of ARM-based portable and ...](#)

Based on the design of the existing power supplies mentioned in the previous section, we propose a new design for an advanced configurable power source. The aim of the master's thesis is to develop a comprehensive, ...



[\(PDF\) Design of a Portable Emergency DC Power Supply](#)

This adjustable portable emergency DC power supply not only has the advantages of small volume and low loss of switch mode power supply, but also has the advantages of small ...



[PD Adjustable DC Power Supply](#)

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 components. See here for more ...

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