

Reconstruction of old batteries into adjustable power supply

What happened during the reconstruction of a battery system?

Among other things, the reconstruction included: replacement of existing batteries with the new ones, as well as the corresponding battery protection cabinets; replacement of existing rectifiers' cabinets and installation of the new ones; replacement of the rectifiers' distribution board, as well as the main distribution board.

Why was the reconstruction of the power supply system necessary?

To meet requirements of the new configuration, new loads and new regulations the substantial reconstruction of all power supply systems was necessary. The reconstruction allowed bringing the power supply quality and reliability of all critical loads of the power plant to the higher level corresponding to the facility significance.

Can a 12V battery charger repurpose a standard ATX power supply?

ICT equipment is usually replaced at regular intervals, usually before the equipment has failed, opening up the opportunity of providing a second-life through repurposing. In this paper we investigate the technical feasibility of repurposing the standard ATX power supply found in many desktop computers into a 12V battery charger.

What is a reconfigurable battery pack?

In a reconfigurable battery pack, the connections among cells can be changed during operation to form different configurations. This can lead a battery, a passive two-terminal device, to a smart battery that can reconfigure itself according to the requirement to enhance operational performance.

Can waste computer power supplies be repurposed into 12V battery chargers?

This paper will demonstrate the technical feasibility of repurposing waste computer power supplies into 12V lead-acid battery chargers suitable for deployment in developing nations where access to battery charging facilities is sometimes limited but 12V batteries are more readily available.

Can a reconfigurable battery pack improve power conversion efficiency in portable devices?

A reconfigurable battery pack for improving power conversion efficiency in portable devices. In 7th International Caribbean Conference on Devices, Circuits and Systems (ICDCS'08). IEEE, 1--6. Aiguo Xu, Shaojun Xie, and Xiaobao Liu. 2009. Dynamic voltage equalization for series-connected ultracapacitors in EV/HEV applications.

In this paper we investigate the technical feasibility of repurposing the standard ATX power supply found in many desktop computers into a 12V battery charger. We provide an overview of the ...

The mismatch between the voltages of the power supply and the battery may cause significant charging inefficiency. In this paper, we use reconfigurable batteries to solve this voltage mismatch problem. We

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develop algorithms to dynamically decide the battery connections, to both minimize the voltage mismatch and maintain SOC balancing among ...

Microcontroller Based Adjustable Voltage Automatic Battery Charger. The Power Supply Unit supplies power to the whole system, its power source is from a

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6 ???· While lithium-ion batteries (LIBs) have pushed the progression of electric vehicles (EVs) as a viable commercial option, they introduce their own set of issues regarding sustainable development. This paper investigates how using end-of-life LIBs in stationary applications can bring us closer to meeting the sustainable development goals (SDGs) highlighted by the ...

We present a novel highly stable modular multilevel powertrain design with a variable dc-bus voltage, active inner battery energy flow control, and reduced filter size. The underlying ...

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Mobile phones are power hungry beasts and once the battery starts to lose the ability to charge fully, you start to notice the phone needs more charging. Using an old phone battery will probably mean it won't hold a full charge but even at 80% capacity the battery will still be able to do most things you want it to. 3. Li-ion batteries are ...

To solve this problem, a reconfigurable equalization circuit with an additional power supply is proposed. By replacing the cell with the additional power supply, the purpose of stabilizing the voltage of the battery pack is achieved.

If a power supply fails, the failed power supply can be cut off and the redundant power supply can be put into use through the reconstruction of the matrix switch. Using more switches not only increases the redundancy of ...

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Power supply capability (PSC) is a significant index to evaluate the operation state of distribution systems. The PSC is similar to total transfer capability (TTC) of transmission system.

It's a device that allows you to adjust the output voltage and current according to your needs. In this DIY guide, we will be building an Adjustable Power Supply DIY with the help of two 2n3055 transistors, one LM317 Regulator IC, one BD139 transistor, and few other components. The advantages of building your Adjustable Power Supply are ...

With a typical adjustable DC power supply, I can set the current (typically a mode called I-Set) to provide a fixed current by controlling the voltage. (within the limits of the supply) When testin... Skip to main content. Stack Exchange Network. Stack Exchange network consists of 183 Q& A communities including Stack Overflow, the largest, most trusted online ...

Bench power supplies can sometimes be frustratingly expensive and also kind of limited. If you're enterprising and creative, though, you can create your own bench supply with tons of features...

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