

Self-built uninterruptible power supply





Overview

What is a home uninterruptible power supply?

Even minor dips can cause major problems. This home uninterruptible power supply design provides a 12 V/5 A power supply for the Wi-Fi access point (and any other electronics) and an additional 6.5 V/1.5 A supply for a cordless telephone. This is enough to keep most laptops communicating with the outside world. Figure 1 shows the circuit.

How do you design a home uninterruptible power supply (UPS)?

Design a home uninterruptible power supply (UPS) by using a car battery as a backup power source. This is connected to a buck-boost converter that generates a stable 12 V/5 A supply to power the Wi-Fi router, as well as a 6.5 V/1.5 A buck converter to power a cordless telephone. The circuit in Figure 1 was designed out of necessity.

Do you need an uninterruptible power supply?

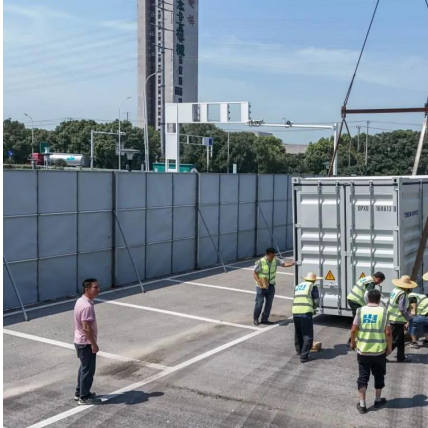
An uninterruptible power supply with elaborate features may not be critically required for the operation of even the sophisticated gadgets. A compromised design of an UPS system presented here may well suffice the needs. It also includes a built-in universal smart battery charger.

How does an uninterrupted power supply work?

Most uninterrupted power supplies sold for computers 'switch' power, running a small inverter when power is interrupted, then switching back to 'normal' power when it's back on. This one simply produces AC power with a continuous duty inverter and assumes some system (s) will charge the DC battery supply it requires faster than it consumes it.



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