

# Re: Big capacitors

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- *From:* Nick <[me@xxxxxxxxxxxx](mailto:me@xxxxxxxxxxxx)>
  - *Date:* Wed, 08 Feb 2006 11:33:06 +0000
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Dave Platt wrote:

In article <43e8dfd3\$0\$64357\$892e7fe2@xx>, Nick <[me@xxxxxxxxxxxx](mailto:me@xxxxxxxxxxxx)> wrote:

I need them to keep an ADSL modem alive during mains brownout conditions. Tried a cheap UPS but it didn't stop the brownouts reaching the modem and latching the firmware/hardware.

So rather than spend £400 on a true UPS, I thought I'd try a big capacitor and a relay (to stop the capacitor shorting the supply) on the low voltage side of the wall wart.

Depending on the modem's voltage and current requirements, you might find it easier and cheaper to use a lead-acid "gel cell" battery. Use a wall wart which can be adjusted to "float" the battery at its preferred long-term standby voltage, while providing adequate power to the modem.

A lot of consumer-electronics devices of that sort will take DC voltages over a fairly wide range, and regulate down to 5 volts internally. A "12-volt" 2 amp-hour gel cell floating at 13.5 volts, running an ADSL modem drawing less than an ampere, would provide lots of ride-through time.

Agreed. I had thought about making a true UPS from scratch with a SLA or NiCd batteries that could trickle charge 24/7.

Don't think I have the time to develop it though, and to do so would be insane given that the modem only cost £20!

True UPS off the shelf are serious money – see above.

Nick

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