

## Re: 120 VDC

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.basics/2005-05/msg00173.html>

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  - *Date:* Sun, 08 May 2005 01:20:43 -0400
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Chris W wrote:

I was recently told that if rectify the 120VAC mains voltage and then add a capacitor to smooth out the wave, I will then have something around 167 VDC. Is this true? If it is true, what is the easiest way to get a smooth 120V DC voltage?

If you can find an 85 volt transformer, it would produce approximately 120 volts DC with a capacitor filter. It would also provide isolation from the mains, so that a connection to ground would not be hit with the full current the line could deliver. The 120 volts will not be very smooth, however. It will have ripple at twice the line frequency when loaded and will sag as the load current increases.

If you want a clean, accurate and stable 120 volts DC you will have to build or buy a regulated supply. For instance, here is one that is adjustable from zero to 120 volts DC, capable of supplying up to 1 ampere.

<http://shop.store.yahoo.com/webtronics/lowcosioubep.html>

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