

Re: Electrical Safety

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- *From:* Nobody <nobody@xxxxxxxxxxxx>
 - *Date:* Tue, 14 Aug 2007 15:27:56 +0100
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On Mon, 13 Aug 2007 18:01:30 -0700, phaeton wrote:

As I start to get into building line-driven power supplies and such, where should I start REALLY being careful? 40V? 60V? 110V? I realize that current is what does the damage, but you don't have it without voltage. (I also realize that other factors will factor).

What is the realistic neighborhood of where I shouldn't be grabbing wires and/or switching out caps or resistors in a live circuit?

Bear in mind that it isn't just a case of being directly harmed by the electricity itself. Even 50V can give you enough of a "surprise" that you reflexively pull your arm away and ram a soldering iron into your face or send a tank of FeCl₃/NaOH/etc flying.

The physics and shop teacher in HS talked about 110 AC Line current like it would knock you dead instantly. An electrician that was installing a 208v-->480v step up transformer said "110 won't hurt you at all. It's just enough to scare you a little bit".

I'm not about to strip a power cord and bite down on it, obviously, but he's not the first to say 'I've been bit by 110 a bunch of times. It's no big deal'..

I've been bit by 240 a bunch of times (in the UK, where 240V is 240V above ground, not +/-120V). At least one of those was the "bad" case: right hand on the live, left hand resting on the grounded chassis. Mind you, that was when I was 16-17, young and healthy; the consequences might be a bit more serious these days.