

**Suggestions for Electrical Components to Minimize Damage
to Computers/Laptops and Cell Phones for Outbounds
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Laptops: Process for Laptops:

- 1 - Check what the AC standard for their respective country is. Voltage and frequency (Hz)
- 2 - Check their current power adapter for their laptop for fine print specifying INPUT Voltage range, and AC frequency (Hz)
- 3 - If their adapter falls within range of their country's standards, check what the plug type is and purchase a generic plug adapter (very cheap, starting at 7-8\$usd)

As a general rule, most laptops have voltage regulators but look at each laptop's power adapter and read the fine print. Ordinarily the adapters are rated for somewhere around 110V - 250V AC (which covers most countries), and then converting it to somewhere around 12V DC for the laptop to use. The fine print on the adapter should tell you what voltage ranges it handles and whether it can handle 50/60hz. Notice the two lines above my thumb on my adapter below. I could use this in most countries. Below the picture I have added a link to a country AC standards list.



<http://www.powerstream.com/cv.htm>

Cell Phones: Process for cellphones:

(Cellphones are more difficult to use the same process as laptops because they don't always list the power requirements on the adapter)

- 1 - Check power requirements for your country
- 2 - Purchase USB adapter that can handle those requirements (you can provide some examples)
- 3 - If plug shape is different make sure you also have purchased a plug adapter

Note: Most cell phones nowadays use Charger cables with a USB adapter on at least one end. Suggestion is to purchase a USB charger that definitely can handle these variations.

Example: <http://www.amazon.com/gp/aw/d/B00CF8Q162>