HowlHaunter's Workshop

http://home.comcast.net/~pumpkin1000/props/elim.htm

Battery Eliminators

The big advantage of the battery eliminator is it can be switched on and off with a 120VAC timer to switch your gadget on and off. You never have to go around all the various gadgets and flip a switch to control the batteries. Very nice on a cold rainy Halloween night! This is big convenience...and of course, you never have to buy a bunch of batteries for that gadget again. An eliminator draws such little power, your electricity bill will certainly not suffer much.

We're all familiar with these eliminators. You plug them into a 120VAC socket and they convert 120VAC into 3,4,6,9, 12 volt DC...with usually a tiny amount of current provided (usually less than 1 amp).

Some of these have a small switch to pick between the different voltages. If you are any sort of electronics hobbyist, you can build your own with a small transformer that takes the voltage from 120VAC to say 12 VAC...then you hook on a bridge rectifier to filter the sine wave, a big capacitor, and then run it directly off the capacitor...or run it through a 7812, 7805 Voltage regulator chip. All of this stuff is readily available at Radio Shack...and is cheap even at their prices. If none of this made any sense to you, then just buy an eliminator of the proper voltage and save the build time.

I typically buy these eliminators at a surplus electronics store for like 3 bucks a piece (no need to take the time to build one). Or look in your junk drawer at home--you probably have several of these (cell phone chargers..yep, they can be reused for this purpose). Recycle them! You just have to look on the plug in unit itself to see what it puts out. Say that you want to replace a 9 Volt battery with a 9 volt battery eliminator. Just be sure you find a 9 volt eliminator that is labeled for OUTPUT 9VDC, 500 ma. (9 Volt DC, 500 milliamp current). It could put out as little as 200ma current...it's OK.

You DO NOT want to see OUTPUT 9VAC, 500ma. This mean this unit will put out AC voltage...and it will damage or make your little DC gadget act really goofy! Batteries are DC devices and the eliminator needs to put out DC voltage! You can probably be OK to drive a device that needs 3 AA batteries (4.5 VDC) with a 6 VDC eliminator, but just test it out first. Follow the proper polarities! Usually a battery powered device has a red wire for positive going to the + side of the battery and a black wire to the - side...somewhere in the little device box. You may have to do some opening of the device box carefully to get at those terminals/wires...and then you'll connect the proper wires from the battery eliminator to those. Use speaker wire to connect your device to the battery eliminator if you want to have some distance between them (again, we're talking LOW currents here). If you are powering something will a big current draw, use bigger gauge wire.

Battery eliminators usually have a plug on the end that you can snip off (with power off!)...and then you can use your voltmeter / multimeter to determine which wire is + and -.

Sometimes, if I have some other electronics to control a gadget, I'll cut open the eliminator with my Dremel cutoff wheel (usually if you carefully cut through the plastic around the seam of the eliminator, you won't damage parts inside). Then, I'll pack the eliminator in the same project box with the other stuff.