AC converter   **Full-wave
bridge rectifier**   **Capacitor**   **Load**

This is the basic circuit for converting an AC input to DC. The arrangement of four diodes is often depicted in a diamond shape; the circuit is the same. As each diode has a **forward voltage Vf** our DC output will be less than our AC input by at least *2Vf.* Schottky diodes have low forward voltages.

Our diodes also need to be able to handle at least the maximum *current* our converter may generate, and have a *reverse voltage* rated higher than our converter's open circuit voltage.

*(*If our converter has more than one phase (e.g. a 6 lead stepper motor) other circuits may be used; see the stepper rectification notes for more information.)

The capacitor can be any value as dictated by the needs of our project. For measuring the real-world power of our converter, we'll need a capacitor large enough that it takes a while to change it's voltage - more than, say 10 seconds - but not one so large that we get bored before we see a measurable input.

The load - shown here in TBD fashion - is whatever you want it to be. It may require additional voltage regulation as the capacitor's voltage will drop as it discharges. But for basic applications the load may be as simple as a switch, resistor and LED - in fact, that's exactly how the common "shake" flashlight is made.