Safe Capacitor Discharger

by C. Bond, 2009

Here is a drawing for a device which can be used to safely discharge the storage capacitor used by disposable flash cameras. These cameras are rich sources of components for the hobbyist, but harbor serious shock hazards due to the presence of a large storage capacitor. This capacitor, which holds energy for the flash, may carry a significant charge long after the camera has been set aside. The voltage is on the order of 300 volts.

The circuit consists of a single 15W incandescent lamp and a homebrew adapter made from a *Pink Pearl* eraser. It holds the connecting wires in a convenient orientation while insulating the user from any exposure to shock.

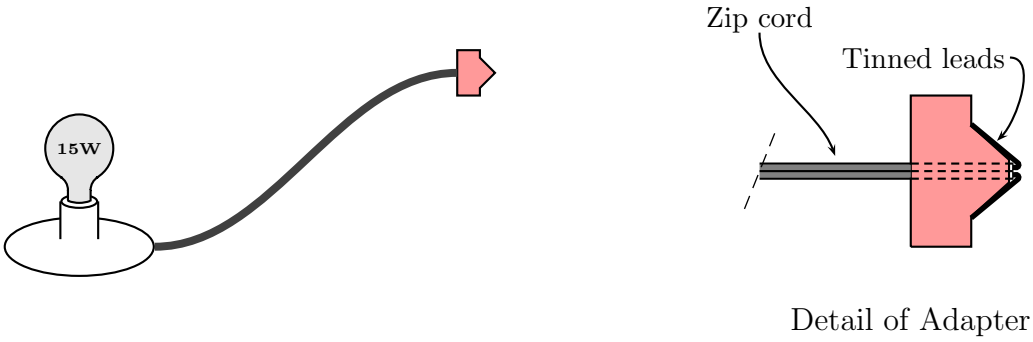

Figure 1: Safe Discharger

The first step in making the adapter is to drill a hole through the width of the eraser near the center of its length and thickness. Using an X-Acto knife, cut the the shape shown in the detail so the hole is properly oriented. Thread the zip cord through the hole and strip about 1/2 inch of insulation from each lead. Tin the exposed leads with solder and bend them to match the drawing. The ends of the leads can be stuck back into the eraser material to secure them.

To discharge the capacitor place the tip of the adapter between the capacitor leads. If the capacitor was charged you will see a brief flash from the light bulb. The capacitor is now completely discharged.