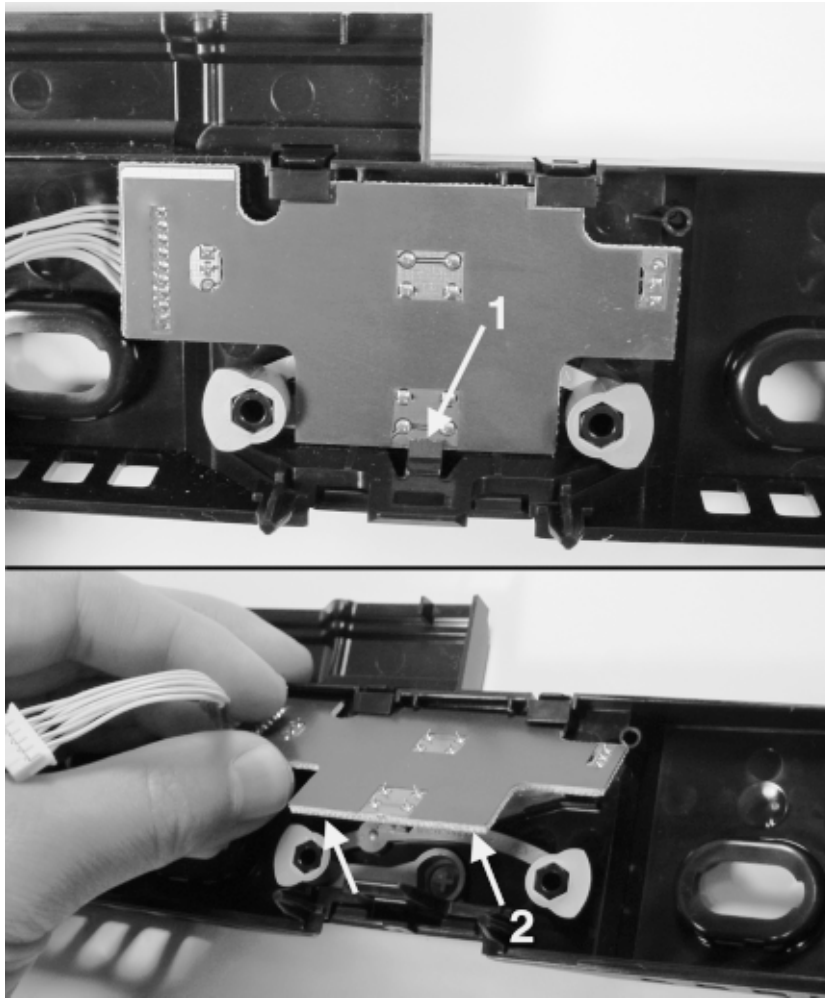

Figure 3-6:
Lift the printed circuit assembly out of the front panel. 1 - push down on the friction lock tab, using a screwdriver if necessary; 2 - lift the assembly out of the front panel.

Installing the Blue LED

Now that the circuit card assembly has been removed, it is time to install the blue LED. This will require some soldering, so plug your soldering iron in and let it heat up. Keep in mind that it is important to use a soldering iron with a fine tip and to use soldering iron tip cleaner to condition the tip before using it. See Appendix A, "Where To get Your Hacking Gear", if you need any of these items; you can equip yourself for just a little more than the cost of a video game.

Remove both of the existing LEDs with a flush-cutting wire cutter. Preserve as much of the metal legs coming out of the LEDs as possible. You will use these metal legs to attach your blue LED later on. Figure 3-7 illustrates how the circuit board should look when you are finished.

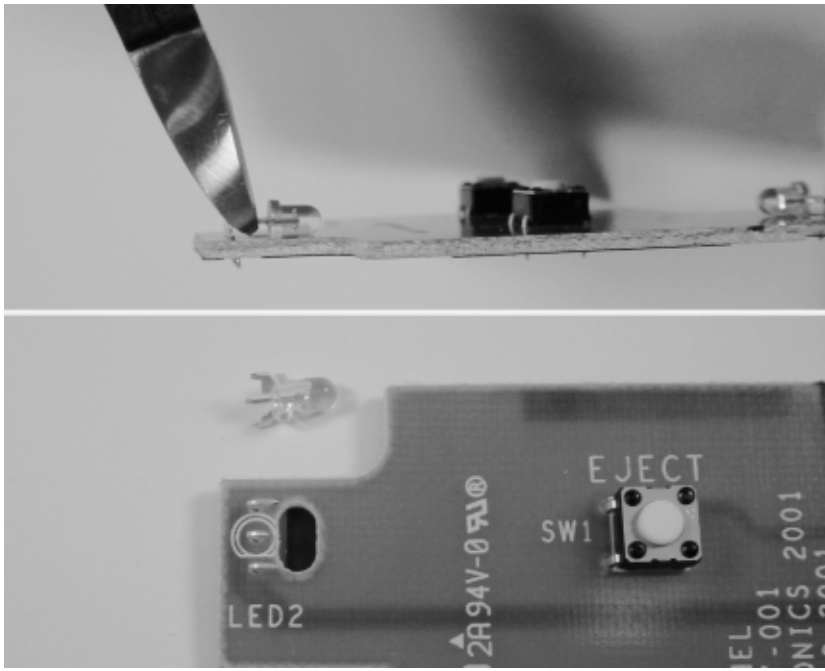

Figure 3-7:
Cut the existing LEDs off of the circuit card assembly. Top - cut the LED as close to the case as possible; Bottom - the LED removed. Remove both LEDs with this procedure.

To assist with soldering, tape the circuit board down to a flat surface with a piece of masking tape, so that the board does not move. Position the blue LEDs so that their legs touch the metal stubs of the old LEDs on the circuit board assembly. Figure 3-8 shows how to identify the polarity of an LED and their proper orientation on the circuit card assembly. See the sidebar on an Anatomy of an LED if you feel unsure about how to identify the polarity of an LED. Tape the lens portion of the LEDs in place with masking tape so they do not roll around while you solder them. You will need to bend or cut the legs of the LED that will be installed on the right hand side of the board because the yellow wire connector will be in the way.

Warning

Pay careful attention to an LED's polarity. If you install an LED backwards, no light will be emitted. See the sidebar on the Anatomy of an LED if you are unsure how to identify the polarity of an LED.

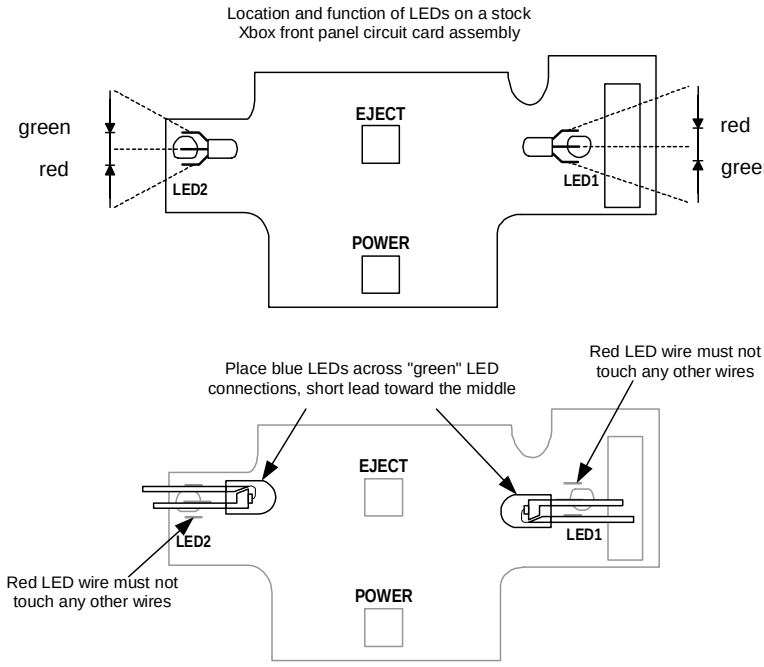

Figure 3-8:
Placement of the blue LEDs on the front panel circuit board assembly. Note the anti-symmetry of the LED colors on each side of the circuit board.

Figure 3-8 also illustrates the polarity and function of the stock Xbox LEDs. Adventurous readers are encouraged to improvise and install multiple LEDs or surface-mount LED packages to try and get more colors and functionality. It is possible to install LEDs that are slightly larger than the T-1 package used in the Xbox by first sanding down the edges of the LED.

Once you have double-checked the LED polarities and verified that the short lead on both LEDs is abutting the remains of the original LED's center lead, solder the LEDs in place. Figure 3-10 shows the LEDs being soldered in place. If you have never soldered before, you may find it helpful to read Appendix B, "Soldering Techniques" before proceeding.

Before using the soldering iron, melt a little bit of solder wire to verify that the tip is sufficiently hot. The solder wire should melt instantly if the tip is hot enough. If the soldering iron is too cold, you will not be able to form a good joint and you run the risk of damaging the circuit board.

Hold the hot iron tip against the blue LED's lead and push the lead into the metal stub on the circuit card assembly. While the lead is heated, apply a touch of solder wire to the point where the blue LED lead meets the metal stub. The molten solder's surface tension should cause the solder to wet the