

For Deliverable 2, your team will be soldering the Pi Protection Hat. All the parts are included in your hardware kit. At least two team members should work on this at a time. This will take approximately 2-4 hours to complete, so be sure to plan your time accordingly.

Instructions:

1. Have your partner bend the resistors and diodes as you solder to make the process more efficient.
2. Solder the diodes first, ensuring the lines on the diodes match the lines on the silkscreen. There is one 5V zener, and the rest are 3V3 diodes. Use wire cutters to clip the leads very short.
3. Solder the resistors. All the resistors are 220 ohms. Use wire cutters to clip the leads very short.
4. Solder the standoffs, fuse holders and LEDs. The green standoff is for ground, red is 5V, and black is 3V3.
5. Be very careful and intentional when soldering the headers. Be sure the female header has the plastic portion on the underside of the board. The long side of the male pins must go on top of the board. Solder these last to prevent melting the plastic portions when soldering the other components. Be sure the header faces flat against the board by soldering one corner and the opposing corner on the other side. Then, solder each of the leads.