# 4-24-15: Communication problems and ESC Fault (2013 X8)

**Problem Summary**

* Light Crash
* Communication loss between pixhawk and odroid over FTDI cable during flights with controller
* Switched to usb connection between Odroid and Pixhawk; FTDI cable removed
* Still had connection issues
* Start to smell electrical fires and stopped testing

**Debug and Solution**

* Ground line on BEC input is totally melted
* XT60 connection from output of Power module to the 2” extension for the BEC is stuck together so much that it was destroyed while taking it apart. Showed signs of being overheated
* The above hardware pieces were fixed, then the quad was flown for about 30 seconds.
* One ESC was severely overheated, too hot to touch. This ESC became hot almost instantly once the battery was plugged in even without spinning the motors.
* ESC was replaced and connection issues retested.

**Connection Summary between Odroid and Pixhawk using ROS**

* No full connection with FTDI cable in Telem1 or Telem2 ports, but a heartbeat could be received when using Telem2 port.
* Full connection worked when using the USB cable.

**Conclusion**

* Since the X8+ is able to connect from Odroid to Pixhawk using FTDI through Telem2, I believe that this FTDI cable was damaged during a crash and the best solution would be to fix the FTDI cable and connect through the Telem2 port.
* Using USB to connect was not working earlier in this project, but it does work now. This could be due to using a different Baud rate than we were using at the start of the project.