Battery Charging Instructions

1. Hooking up the battery
   a. Connect the female Deans connector on the battery to the Male Deans connector on the charging station. The connectors are polarized and require some force to connect.
   b. Set the battery down on the cradle.
   c. Connect the white four pin connector on the battery to the appropriate socket on the charger. This connector is also polarized and will only fit in the appropriate slot.

2. Setting up The Charger
   a. Turn on the ATX if it is not already on. If you turn it off during a charging cycle you will mess up someone else’s charging cycle.
   b. The screen on the charger should show the following:

   ![Screen 1]

   c. If it does not click on the Type button. This should in normal circumstances get you back to the LiFe charge screen
      i. If you are still not on the right screen continue hitting type until you get to the screen below.

   ![Screen 2]

      ii. Then press the start key once.
      iii. If you can not find this screen ask one of the teaching staff for help.
   d. Press and hold the start button until it beeps once.
   e. The screen should briefly show a message about battery checking and then blink between

   ![Screen 3]

   f. **VERY IMPORTANT:** If this screen does not show one of the above messages you have managed to hook up the battery incorrectly. Continuing to charge from this position can irreversibly wreck the battery. Hit the Type button and start over again. If you can’t get to this screen at all contact the teaching staff.
   g. If you see the correct message hit the start button and the battery will start charging.

3. During the Charging Process
   a. While charging the screen will show a status screen similar to the one below with charging statistics

   ![Screen 4]
4. Charging Complete
   a. When the charging is complete the charger will beep and blink the Li3S with FULL.
   b. Disconnect the small white connector first followed by the Deans connector. Be careful with the Deans connector as they require a fair deal of force to disconnect. Always grab on to the Deans connector itself, never the wire.
   c. Hit the Type button to reset the charger for the next person.
   d. If no batteries are charging feel free to turn off the ATX.

Image Appendix

Male Deans Connector          Female Deans Connector

Female White Connector       Male White Socket
General Notes on Battery Hygiene

These are LiFe batteries, and have a nice high current and voltage capability, however they must be treated with some care or they will be ruined.

First off, DO NOT keep running your code, once you have seen the low-battery warning on the serial stream. This is the easiest way to kill the batteries (and you are buying us a new one). Go recharge the battery immediately.

The batteries do not like to get hot, so if the battery is warm to the touch, let it cool down first (20 min) then put it on the charger.

The chargers take a while to recharge the batteries, so plan ahead and make sure that you can do other testing (for instance on the umbilical) while your battery is recharging.

Each team will be assigned a battery, don’t steal each other’s batteries or trade them without going through the teaching staff.