

Step 1: Wiring Connections

Step 2: Charger Set-up

Step 3: Charging Process

Step 1

Make these wiring connections:

- Thunder Power 1010C charger "INPUT" \leftrightarrow 11-15VDC power source
- 1010C "DATA" \leftarrow Data Link Cable \rightarrow Thunder Power 205V balancer "DATA"
- 1010C "OUTPUT" \leftarrow banana plug Charge Cable \rightarrow X-Pro battery
- X-Pro battery Balance Connector \leftrightarrow 205V "4-5CELL"

Step 2

Set-up the Thunder Power 1010C Charger:

1. "Sel" will be flashing. Press "ENT" (the red button).
2. "4" will be flashing, indicating it is set to charge a 4s battery. If this number is anything but 4, press "+" or "-" to make it 4. Press "ENT" (doing nothing will also advance the selection).
3. "8.00" should be flashing, indicating 8.00A charge rate. This is the maximum safe charge rate for the X-Pro's battery. "+" and "-" can modify the charge rate. Press "ENT" to finalize the settings.
4. The charger display should be

LiPo CHARGE
4CELL/S C=8.00A

If it isn't, press "ENT" to choose your selection, and "+" and "-" to modify the selection.

6. The charger is now ready to charge the X-Pro's battery. Hold "ENT" to begin the charge.

Step 3

The X-Pro's battery should now be charging. The charger will be showing the battery's voltage. 16.8V open circuit indicates fully charged, and 14.0V open circuit indicates fully discharged. During charge, the voltage will be between these two values. Lithium polymers are charged with a constant current, constant voltage algorithm, so the first phase of the charge will be constant current 8.00A, the second phase will be constant voltage 16.8V. The 1010 is also showing time elapsed, present charge current, and charge capacity elapsed. Charge time on a fully discharged battery will be about 55 minutes.

You don't need to do anything during this Step. When the charge is complete you can disconnect the charger and the balancer from the battery. The X-Pro is now ready to be flown.

To ensure a high cycle life from this lithium polymer battery, you should keep a log of your usage and the capacity put back into the battery. For instance, you fly the X-Pro for 5 minutes. You then charge it, and the charger puts in 3057mAh (this value is displayed on the charger's screen when the charge has finished). The X-Pro battery has a capacity of 6000mAh. The battery manufacturer recommends limiting discharge depth to 80% of capacity, which is 4800mAh. 5 minutes of flight only used 3057mAh, so next time you could try flying for 7 minutes and again record the capacity put back into the battery. Eventually you will find the flight time that safely nears 4800mAh, ensuring you achieve maximum battery cycle life *and* longest usage time.

Battery Log

Battery Cycle #	Flight Time (minutes)	Battery Capacity Used (mAh) [4800 maximum]	Usage Description
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2			
3			
4			
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