



Multi-Disciplinary Senior Design Conference
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P12401/P12402 System Assembly Instructions Setup Guide

Multidisciplinary Senior Design

System Assembly

The systems assembly instructions guide contains all of the information required to completely assemble and interface the P12401 and P12402 projects together into a working unit.

Personnel Needed

- One (1) person

Assembly Time

- Less than 10 minutes

Parts and Assemblies Needed

- One (1) Pre-assembled P12401 Battery Enclosure (Inside 18 gallon tote)
- One (1) Pre-assembled P12402 Charging Dock Enclosure (Inside Clear Container)
- Up to Eight (8) 7.2V NiMH batteries

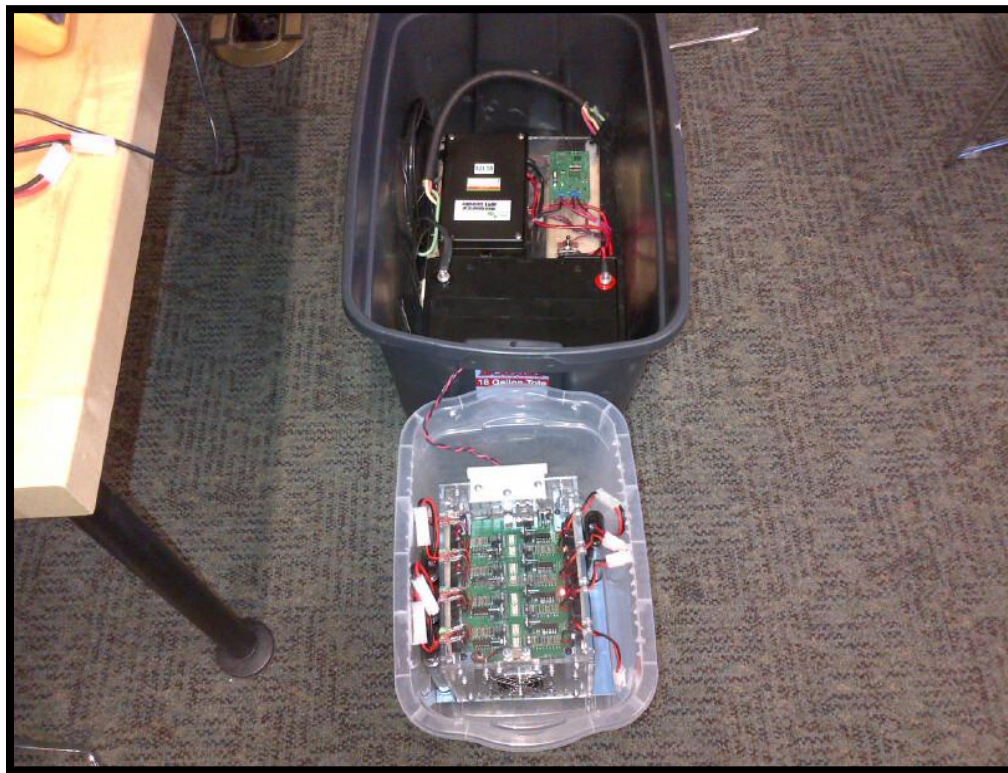


Figure 1 - Connected 12401/12402 System

Assembly Procedure

1. Begin by checking P12401 battery enclosure to see if the four pin electrical connector (red, yellow, green and grey colored wire) is currently connected to the wind turbine.
2. If the four pin electrical connector is connected to wind turbine, disconnect from turbine. The system should now appear as shown in Figure 2.



Figure 2 - Inside the P12401 Enclosure

3. Take the barrel connector from the P12402 enclosure and feed it through the designated hole, located on the side of the P12401 weatherproof enclosure, show by Figure 3.



Figure 3 - Inserting the Power Barrel Connector into the P12402 Enclosure

4. Prior to connecting any NiMH batteries to the P12402 Charging Dock, feed the barrel connector all the way through the side hole and plug the P12401 barrel connector into the P12402 charging dock power barrel port shown in Figure 4.



Figure 4 - Connecting the P12401 Power Barrel Connector into the P12402 Port

*Note: if batteries are plugged in prior to the power source being connected to the charging dock, the batteries will not register and will not charge. Be sure to remove any previously connected batteries.

5. Check to ensure the red LEDs on the P12402 Charging Dock have light up once the power barrel connector has been plugged into the port, as this indicates that the system is presently receiving power.
6. Place the depleted NiMH batteries to be charged onto the Velcro on the side of the CDPC (up to eight batteries can be accommodated).
7. Connect the male and female Tamiya connectors together to establish a connection between the system and the NiMH batteries (refer to Figure 5).
8. Within two seconds of a battery being connected, the Red LED should no longer light up, and a green LED should light up instead. The green LED will blink every two seconds as the battery is being charged.

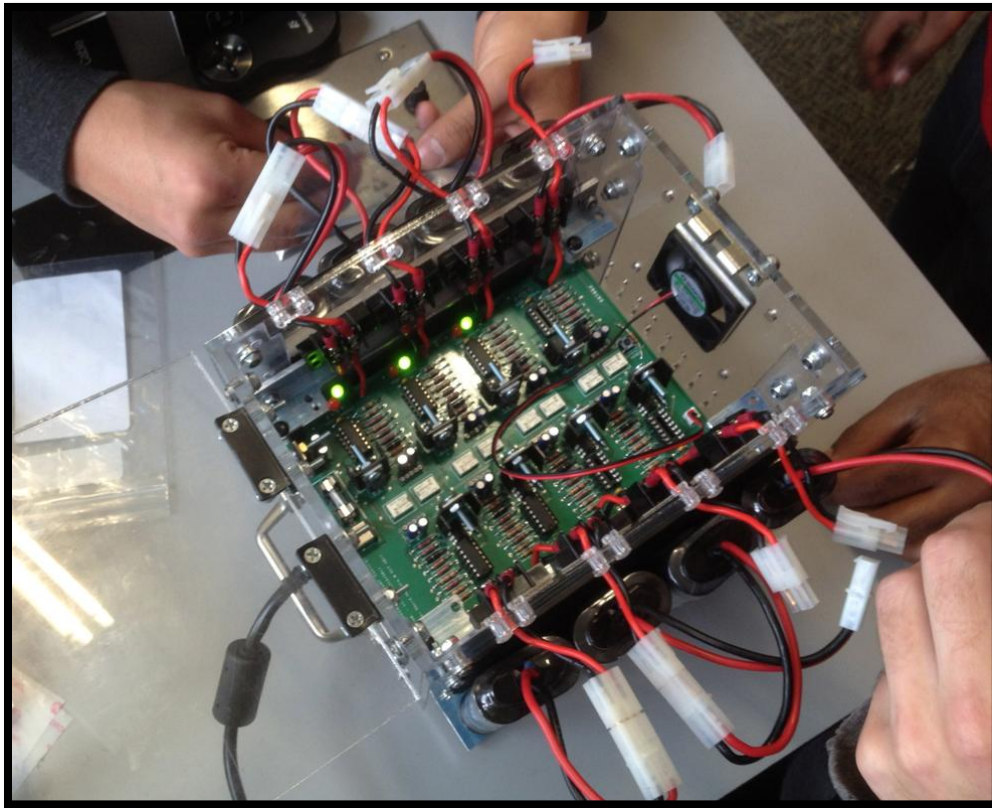


Figure 5 - Connecting the Tamiya Connectors

9. When the battery (-ies) becomes fully charged, the blinking green indicator LED will turn to a solid green light.

10. If a battery is non-function or dead, the red and green LEDs will both emit light within five minutes of being connected.
11. For any issues with assembly, or if there is troubleshooting that must be done to solve an issue with the assembly procedure, please refer to the P12401/P12402 System Test Plan.