

ELEC1100

Supplementary Notes for Project

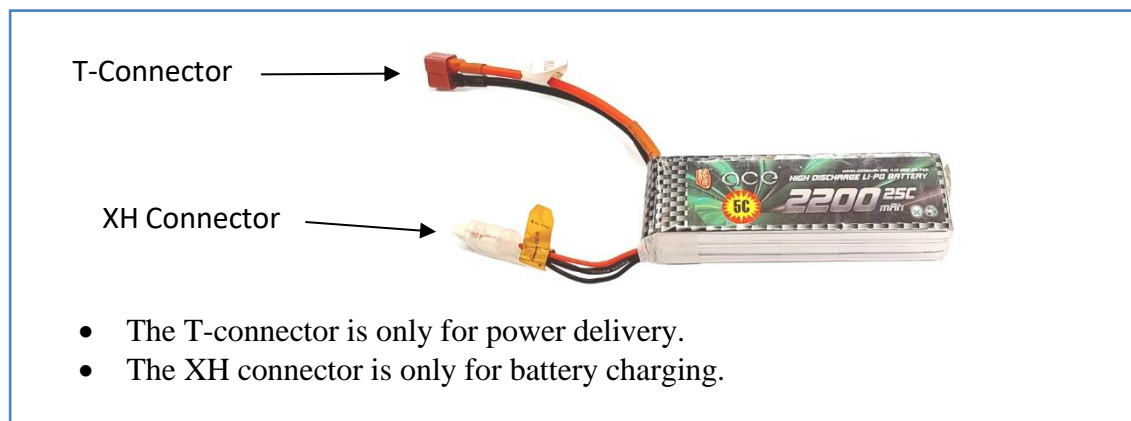
Contents

I.	Using battery and its accessories	2
A.	Battery	2
B.	Battery Charger	2
C.	Battery Monitor	4
D.	Using Battery with Breadboard	5
II.	Using LED with Line Sensor	6

I. Using battery and its accessories

A. Battery

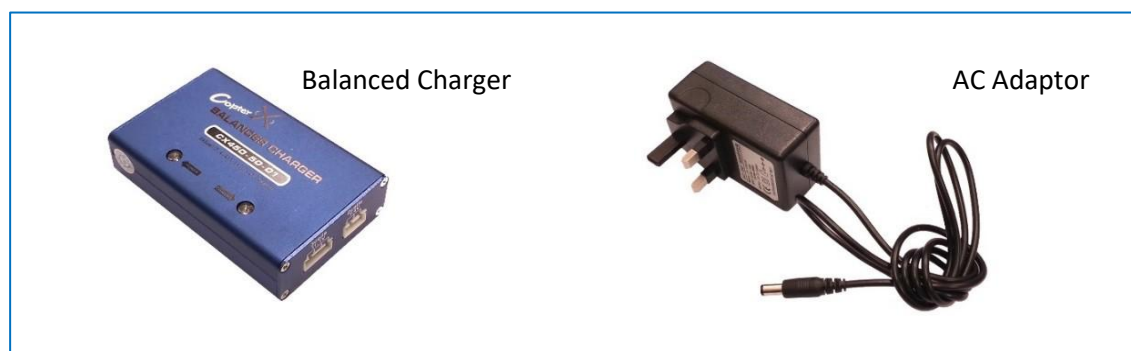
Under normal conditions, after the battery pack is fully charged, the total output voltage is about 12V ~ 12.6V.



WARNING

DO NOT short any of the two terminals of connectors.
Otherwise, the battery would explode.

B. Battery Charger



Charging Steps

- Connect the balanced charger to power socket using the given AC adaptor. The power LED (red) lights up. The charger LED should remain unlit.



- b) Connect the battery pack to the “3cells” port. Pay attention to the orientation of XH connector of the battery when inserting to the port.



WARNING

Incorrect insertion will damage the XH connector and the balance port. If the red power LED does not light, **DO NOT CONNECT** the battery to the charger. Otherwise the charge would be damaged.

- c) If the battery is correctly connected to the charger, the charger LED (green) lights up. This indicates the battery pack is being charged.



- d) When the battery pack is fully charged, the charger LED goes off.



- e) Disconnect the battery pack from the charger.



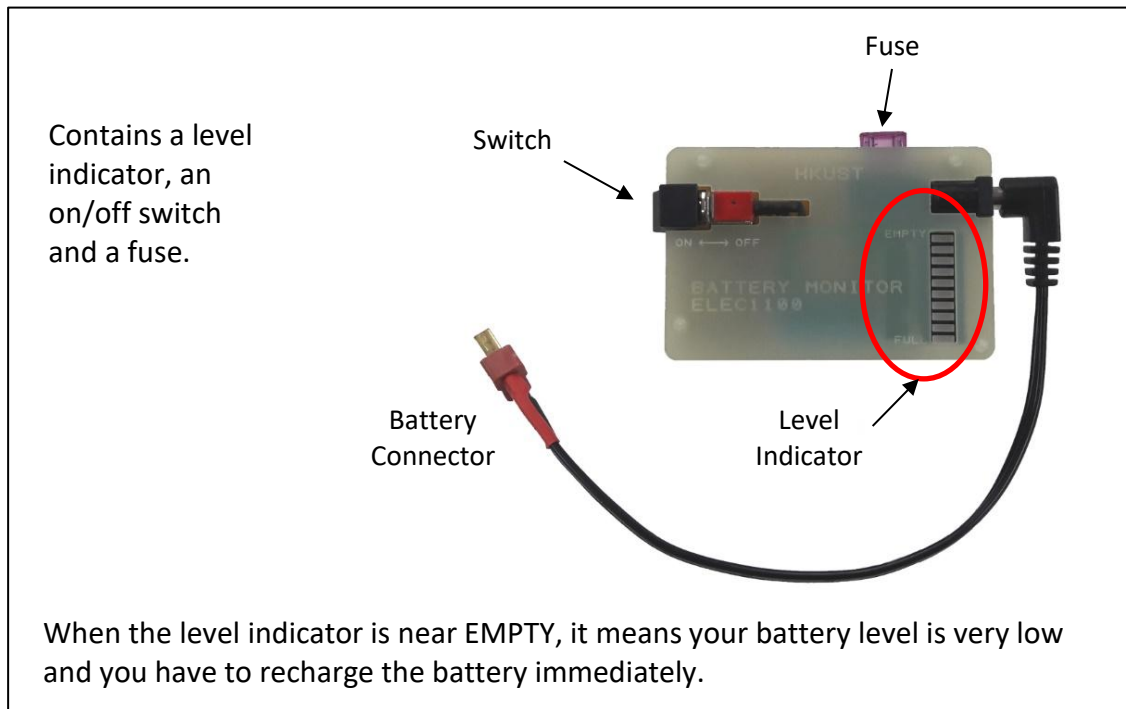
- f) Disconnect the AC adaptor from power socket.

NOTICE

It takes more than 8 hours to fully charge a low energy level battery.
And, DO NOT charge the battery without supervision.

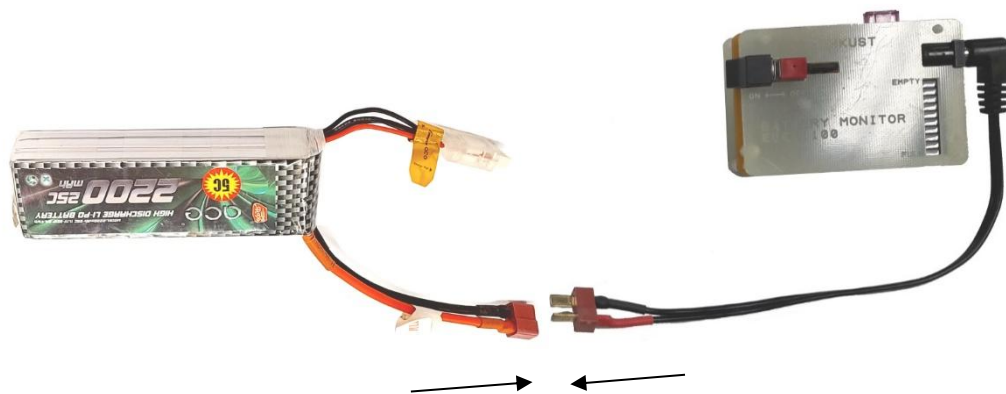
C. Battery Monitor

There are two types of battery monitor distributed.

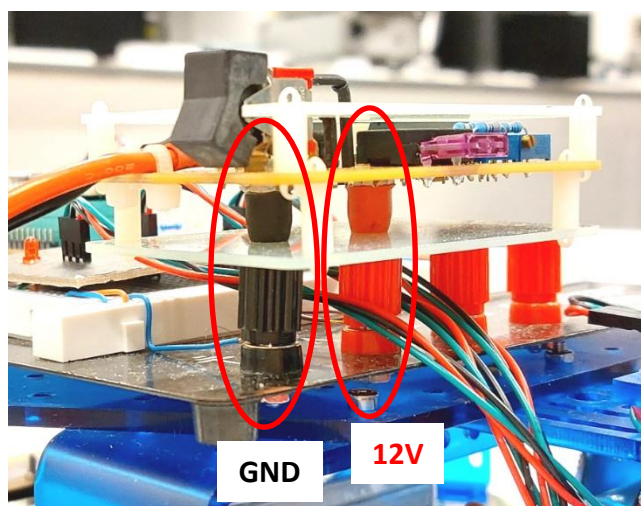


D. Using Battery with Breadboard

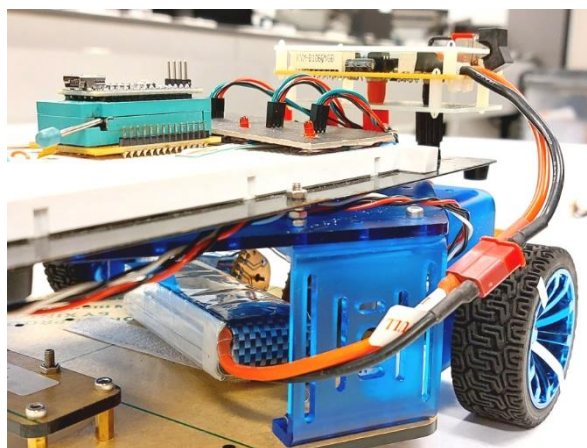
1. Connect the battery with the battery monitor. Be careful with orientation of the connectors.



2. Plug the battery monitor into the posts of breadboard.

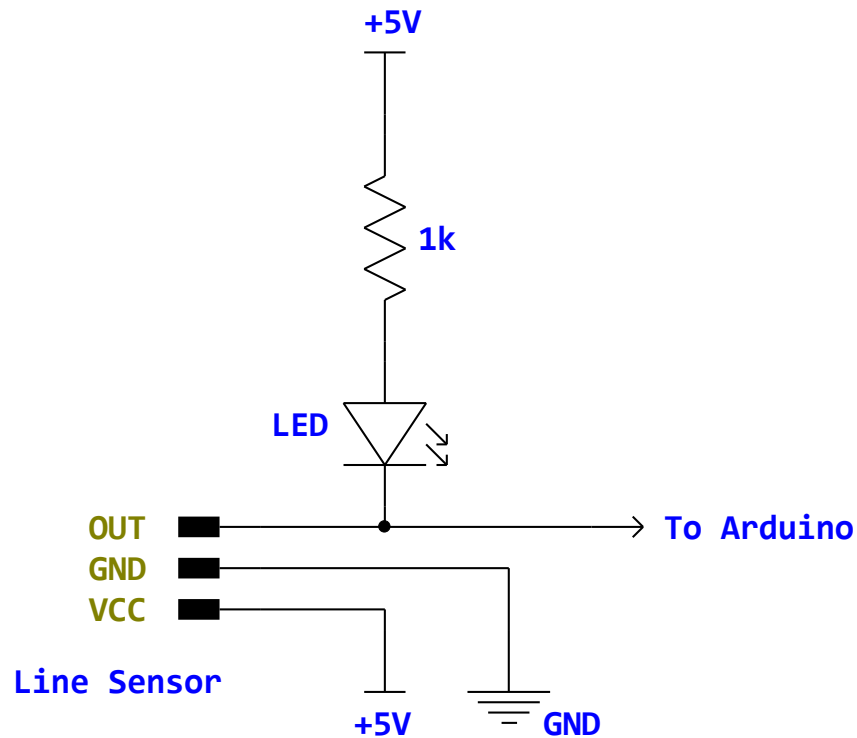


3. Place the battery inside the car body.



II. Using LED with Line Sensor

You may want to use LED for easy observation of the status of the line sensor if it is on the white strip. The connection diagram below shows how to connect LED to the line sensor output on breadboard.



- 1) When the sensor is on top of the white strip, the sensor output level is low, the LED turns on.
- 2) When the sensor is on top of dark portion, the sensor output is high, the LED turns off.

A resistor MUST be used in series with LED in any cases.