

Charging and Safety Instructions for Demon DL3800 Lithium Polymer 3800 mAh 7.4 Volt Battery Pack



The DL3800 LiPo packs like most other, for RC Car Racing is built as a 2S1P. (2 cells in series). This gives a total nominal voltage of 7.4 volts. The 1C rating is 5 (amps).

Maximum continuous discharge is 35C (133amps).

Hard cased for rough handling and safety.

Size: 21mm thick, 46mm wide, 137mm long. Weight: 234gm.

Charging LiPo batteries, specifically the Demon DL3800

You must use a Charger specifically made for LiPo charging. (You cannot use a NiMH charger).

DEMON DLC5000 Charger is recommended.

Note: The battery when new has about 50% charge in it, so first charge will take less time.

1. Set the charger's output voltage to match the nominal rated voltage of the entire LiPo battery pack, ie 2S or 7.4volt (or 3.7volt per cell) Or on some chargers set the final voltage between 8.44 volt to 8.50 volt (8.56volt maximum)
2. Connect the charger to the 4mm sockets. Make sure the red lead is plugged to + (positive) and black to - (negative).
Connect the LiPo balance lead, if fitted to the 2S position on the Charger, if it has one.
3. Set the charger's output current to no greater than the "1C" rating of the battery. The Demon DL3800 has a 1C rating of 5 so set to no more than 5 amps MAX. (It will take about 1 hour to charge from near flat at 5 amps)
4. If your charger has a temperature probe. Set the charger's maximum battery temperature to no more than 45°C
Note: Temperature charging alone cannot be used with LiPo batteries.
5. Do not continue to run the battery when it is nearly flat (ie: vehicle starts to slow) as the battery may be damaged. Use a speed control with LiPo safety cutoff. Or purchase an ad-on unit that works with your current speed controller to cut off power when the LiPo drops 6 volts.
6. If you run the LiPo flat so that the charger will not start, it can usually be revived by charging at 2 amps on a NiMH charger for about 1 minute until the voltage recovers to 7 volt. Then try on the LiPo charger again.
7. After a race the battery can be charged immediately without any loss of performance. (It is not necessary to discharge).
8. It is not necessary to discharge LiPo batteries, (there is no benefit from cycling or charging from flat) and they should never be taken below 6 volts. But if you want optimize it, it is best to use a balancer discharger. This has a 2mm jack and is supplied with an adapter that allows connection to a standard style balance charger. This will discharge each of the 2 internal cells separately. Some chargers may also use the 3 wire terminal for monitoring during charge. (It is possible to charge through the 3 wire connector, but at 1 amp max.)
Note: Small 3 pin connector has Black and red wires to 7.4volt, and the centre blue wire is the 3.7volt centre tap).

Additional Notes:

- For storage it is recommended to charge the cell to approx 50% of their capacity. There is no loss of performance charging the day before a race.
- If your charger will not charge the battery the first time, run it in a car for a few minutes to stabilize the voltage.
- Do not try re-peaking a fully charged LiPo as it will not increase the performance, and may cause the battery to be damaged. If you are unsure if you left the pack fully charged do not charge but rather run the pack for several minutes and then charge.
- In very cold conditions (Winter outdoors 0 deg C) the batteries will perform better if warmed to 20 deg C on a warming tray during charge before racing.
- The balance lead is not essential, since after 50+ charges the cells will still be matched very tightly (As Tested).
- If possible balance charge to check both cells are still the same capacity.
- If you change the Deans connector to tubes, be careful not to short them together.
- The Lipo batteries do not get hot after charging or after racing. Do not try and overheat them.
- If the battery begins to swell due to overcharging by a faulty charger, stop charging and run battery.