



## **Thanks for choosing DA Australia Lithium Battery Packs for your plane.**

Built for high performance, extreme reliability and durability. Specifically for use in Giant Scale Gas RC Aircraft where vibration is a concern. Our battery packs are proudly assembled right here in Australia using genuine Samsung cells, the best quality cells we could find for the job.

It's important to look after your packs correctly, to keep them in best condition for a long service life. Please take the time to read and understand the following info.

### **CHARGE BEFORE FIRST USE:**

Our batteries ship with minimal voltage, straight from the cell manufacturer. On average this is 3.5-3.6v per cell, so the 2S pack would read around 7.0-7.2v. From a general usage perspective *you could consider this current state of charge to be about 5%*, and you should never push a lithium battery below this voltage. Taking the pack below this voltage can damage the pack. Even if you're only setting up a model on the bench, charge the packs first!

### **PREPARE FOR CHARGING**

Your pack will have at least 2 leads attached, and no balance lead. As these cells share similar chemistry to a soft cell LiPo, we charge them as a 2S LiPo, via the Black/Yellow lead marked "Charge Only". This lead is connected to a Charge Safety Protection Circuit built into the battery, to substantially increase safety during the charge.

The other lead on the pack is wired directly to the cells for maximum reliability in flight, there is no protection on this lead and it must only be used for powering your plane, never for charging. If you have 2x batteries connected to your Receiver or a PowerBox or similar power distribution unit, it is important to unplug at least one pack completely before charging. Even if there are switches in line, these packs could share a common ground through the electronics and confuse your charger. This could cause damage to the connected components or packs. ALWAYS isolate each pack before charging.

### **CHARGER SETTINGS:**

**Set your charger program to LiPo Charge and select 7.4v (2S).**

**Set your charging current to 1.25amps**

Do not choose Lilon settings as the charge will cut off before the battery is fully charged.  
Do not choose LiPo Balance program as your charger will go looking for a balance lead.  
Do not charge at a higher charging current than recommended above.

## **STORAGE:**

Think of the charge state of a lithium battery like an elastic band. At full charge state it is stressed, and at completely depleted it is stressed, but in a mid-charge level state it's relaxed and able to be safely stored for a long period of time.

Most good quality chargers will have a LiPo Storage function, which will bring the pack voltage down to a good mid level of about 3.85v per cell. If you don't plan to use your packs for longer than a couple of weeks, we recommend bringing the cells up to this storage state with your charger.

For long term storage, always unplug all packs from on board electronics. Most electronic switches and devices have a slight parasitic drain even when everything is switched off. Over a few weeks or months, this will be enough to completely drain and damage your packs.

## **TROUBLESHOOTING**

It is possible that at some stage the Charge Safety Protection Circuit will get tripped. This could happen for a number of reasons, for example reverse polarity connection, short, or over current. If the voltage across the Black/Yellow charge lead reads 0v, you have probably tripped the protection circuit and it will need to be reset before you can charge the pack again.

### **To reset the Protection Circuit.**

We need to apply a small amount of current in the correct polarity to the Black/Yellow lead. As your charger will go looking for voltage before initiating any LiPo charge setting, we need to *briefly apply power* on a more simple charge program such as NiCAD or NiMH.

IT IS CRITICAL THAT YOU DON'T CONTINUE CHARGING ON THIS SETTING. 3-5 seconds of power applied on this setting should be more than enough to reset the Protection Circuit, and you should then end the charge, confirm you have voltage reading across the Black/Yellow lead and then charge as normal on LiPo Charge setting.

If you have drained the battery pack far too low and LiPo Charge can no longer be initiated by your charger, i.e. the voltage across the Black/Yellow lead reads below 6v, you can attempt to save it by applying NiCAD or NiMH charge setting for a short amount of time, You will need to constantly monitor it, and end the charge as soon as you get the voltage of the pack up above the 6v required to initiate LiPo Charge program.

**NEVER LEAVE YOUR CHARGER UNATTENDED WHILE CHARGING ON THIS SETTING.**