



‘The Emperor can now deliver a full 500 W per channel simultaneously!’



FUSION EMPEROR L712B PRO II

Mark Danek evaluates this twin 500 Watt Charger/Discharger from Logic RC

MEET THE NEW BOSS...

The Fusion Emperor L712B Pro II has a rather grand name, which indicates its position at the top of Logic RC’s charger range. As such, I’d expect a level of power, flexibility and sophistication not found in lesser chargers. In this article, I’ll be looking at the features on offer to see if Logic RC’s Emperor is truly worthy of the title.

THE EMPEROR’S NEW CLOTHES?

RCMW regulars may remember a favourable review of the original L702B Pro Emperor and wonder what’s new. Well, externally the new Emperor looks identical (so no new clothes then) but this Emperor has been working out! The changes are all internal, with power-handling upgrades and control firmware changes combining to give a significant boost in out-

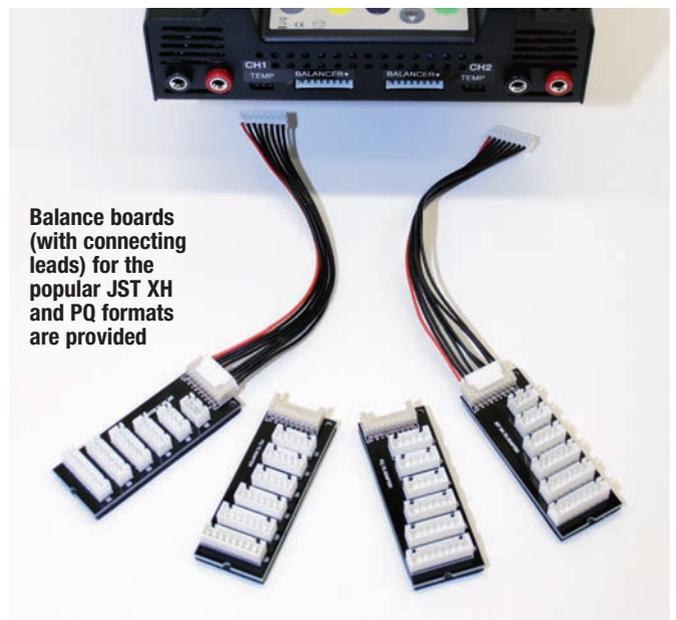
put power. In addition, USB PC logging is now a mature and useful feature.

OPEN THE BOX

An attractively illustrated box safely holds... the charger itself, a manual, a selection of LiPo 7S balance boards (JST XH and PQ) plus a pair of heavy-duty croc-clips with gold-plated 4 mm sockets for the input leads allowing the use of a car battery in the field. No charging leads are supplied, as batteries requiring this charger’s performance will also need high-power connectors so that choice is left to the battery owner.



A well-designed unit with all the charging-related connections on the front, and good buttons make for a pleasant user experience



Balance boards (with connecting leads) for the popular JST XH and PQ formats are provided



Optional components; the temperature sensor is both inexpensive and indispensable, get a pair; if you have a computer you may already have a decent mini-USB lead

CLASSY CHASSIS

Taking a closer look at the charger reveals a practical-looking device (our Emperor is not a fashion victim), and the black metal case is sturdy and feels satisfyingly substantial.

The front of the case provides battery charging connections; each channel comprising of: 4 mm charging lead sockets, 7S balance lead connector (JST EH) and temperature sensor port – all nicely out of the way of the controls. Cooling slots are also present around the front, allowing plenty of air to be drawn through the length of the case.

The rear of the case houses three temperature-controlled fans, which allow the Emperor to keep its cool when discharging up to 100 W of battery power. The fans shut off when not required to prevent unnecessary noise, wear and tear. The rear is also the exit point for the power input cables as well as providing a mini-USB port, which allows the charger to communicate with a PC.

The top of the case provides a lovely crisp, backlit LCD display that is conveniently tilted towards the user. In use, the LCD is split into... top half (for channel 1), and bottom half (for channel 2).

Below the LCD is a panel containing six buttons beneath a plastic membrane clearly printed with the functions provided. One button is used to change between channels 1 and 2, and the remaining five are used to move around the menu structure and to select and edit items. The buttons proved to be nicely tactile and pleasant to use.

TWICE THE PUNCH!

The Emperor has two identical charging outputs and the power-handling increase applies to both. Though the former Emperor was no slouch with 300 W output per channel, the latest Emperor can now deliver a full 500 W per channel simultaneously!

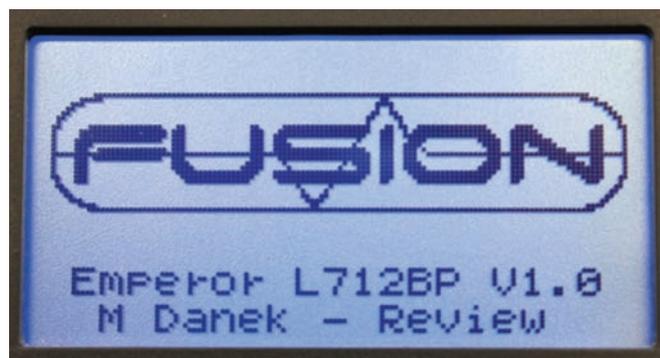
Clearly, this power output allows the Emperor to take advantage of the latest 5C charge-rate LiPo packs. I was keen to witness this performance at first hand so I obtained some of Logic RC's 35C 4200 mAh and 25C 5000 mAh Fusion Storm LiPo packs, both of which can be charged at up to 5C.

A HEALTHY APPETITE

This punchy power-delivery has a knock-on effect though (you can only get out what you put in), and the input power requirement has gone up from 600 W to around 1 kW. This means that, to get the full benefit of the power upgrade, you



The Emperor, seen here with Logic RC's own Fusion (voltage and current adjustable) PSUs. Either of these will allow 5C charging of suitable LiPos though, as the cell count increases, only the larger unit can provide the voltage required



Firing up the Emperor briefly presents the initialisation screen. Bottom line can be customised by the owner to show who this valuable piece of kit belongs to



All set up and ready to go; the Emperor equipped with balancing boards and temperature sensors and powered by the Fusion 600W PSU. The PSU's 15 V upper limit won't allow these large 4200 mAh LiPos to be charged at 5C but manages a credible rate of just over 2C