

I don't fly electric-powered models, but for a long time now I have been aware of reports concerning the amazing characteristics of Lithium-Polymer batteries, usually known as Li-Po packs. However, with a turbine power system I don't necessarily have to worry about every last gramme in my models, and in any case I had read that I would either need a new charger, or have the old one converted – if possible. As a result, I've managed to steer clear of Li-Po batteries so far.

This all changed with the JetPower 2004 Fair. During one of my many wanderings through the Fair tent Emmerich Deutsch waved me over and asked if I had a few minutes to spare. With a friendly grin he pulled out a black box from under the counter and pressed it into my hand.

»This contains the Li-Po batteries for my PowerBoxes – and you can only get such things from me – nowhere else!« He tapped the black box meaningfully on the table: »Perfectly safe, and dead easy to use!«

»What about the charger?« was my first question.

»You don't need one; you can charge the batteries directly using a mains PSU«, said Emmerich, and he gazed at me expectantly.

Now, of course I wanted to know more, so I was glad to study the information: these Li-Po batteries were specifically developed for Deutsch PowerBox receiver power supplies in collaboration with Ionity AG, a company based in Kamenz, near Dresden. Ionity cells are manufactured in Germany, and are certificated and guaranteed to the ISO 9000 standard. An IC-controlled electronic safety circuit and an SMT temperature sensor, embedded on a circuit board between the two battery cells, manage the entire charge process by monitoring voltage and time; the charge process therefore requires no more than a simple mains PSU.

The battery case has a glass fibre content of 20% and protects the delicate battery reliably from external influences and mechanical stress. The case itself features a supplementary partition between the compartment containing the charge and monitor electronics, and the space for the Li-Po cells. This measure also provides protection against damp and escaped fuel. A special mounting frame has also been developed for the battery, featuring four cleverly positioned mounting points which enable the user to attach the frame even to an uneven surface. The battery itself simply clicks into the mounting frame, and is equally easy to remove again. At one end of the case is the connecting lead, the charge socket and two LEDs: a red one (charge process running) and a green one (charge process completed).



The two batteries with the associated mains PSU for charging (picture at top of right-hand page). Next to the red dot can be seen the silver-coloured heat-sink for the charger electronics. When the battery is connected to the mains PSU, the red LED adjacent to the charge plug glows to indicate that charging is taking place (picture above).

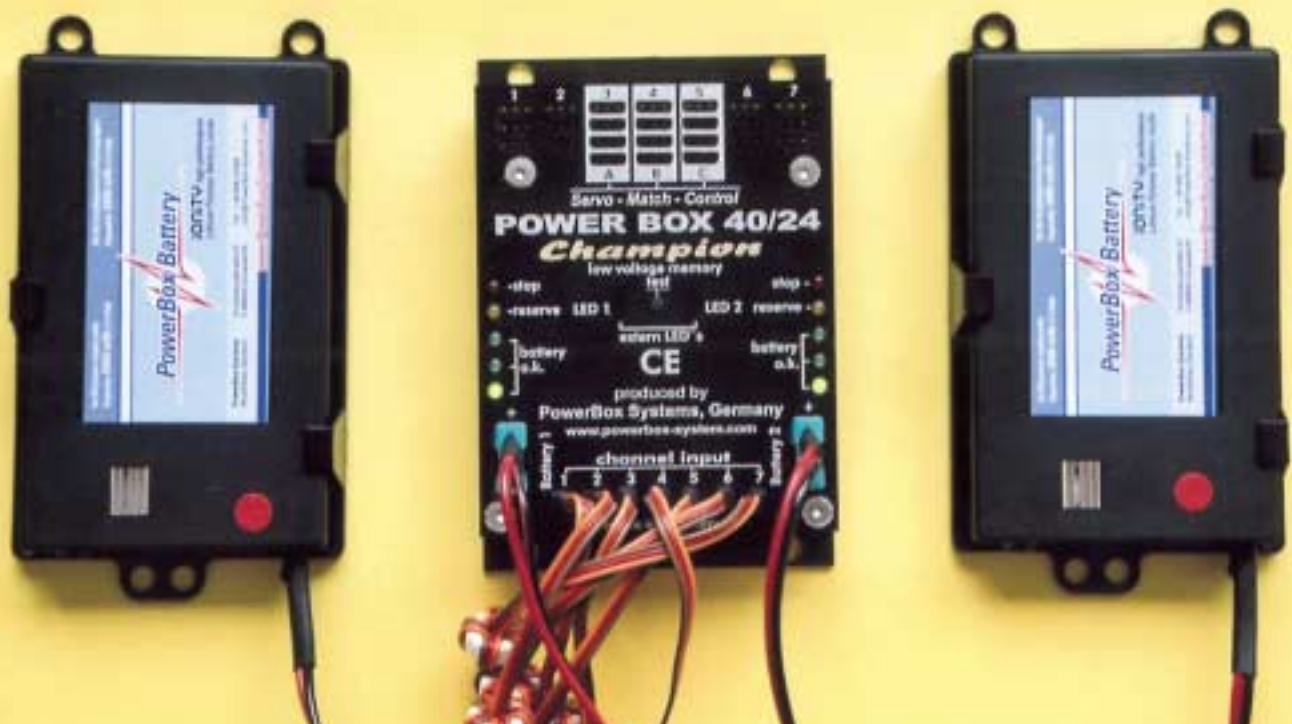
So much for the information which I picked up in the tent at the JetPower Fair. Before he said goodbye, Emmerich Deutsch advised me to send him my PowerBox Champion so that he could convert it to handle the Li-Po batteries. So – if you want to convert your existing PowerBox to Li-Po packs – Emmerich Deutsch can do it!

One week later and my battery backer was returned, together with two Li-Po packs with mounting frames and a mains PSU for charging.

The next step was to connect the batteries to the mains PSU, but not before I had weighed them. The weight of one Li-Po complete with mounting frame is 170 grammes, without the mounting frame 155 grammes (for a capacity of 2800 mAh!). My »old« four-cell Ni-Cd receiver battery weighs 240 grammes. The batteries were then connected to the mains PSU: the red LEDs lit up, and the charge process began. After about half an hour the green LED was glowing on one battery, indicating that the

PowerBox Battery 2800

from Modellbau Deutsch





charge process was completed. The second battery took a little longer.

And that was really all there was to it. It is completely unnecessary to monitor the charge process, and the batteries really can be left connected to the mains PSU as long as you like until they are next required. I am convinced, and my worries about handling the amazing new Li-Po packs have evaporated completely. I am now also the proud owner of the new battery technology, and I know that I can now burn my way through loads of kerosene for a whole weekend without even having to think about topping up the receiver battery. ■

The complete PowerBox system from Deutsch. Centre row: on the left the mounting frame for the Li-Po battery, next to it the battery, in the centre the PowerBox Champion, then the second battery in its mounting frame, and at far right the programming unit for the servo inputs.



Specification

Capacity	2800 mAh / 7.40 Volts
Final charge voltage	8.40 Volts
End of discharge, no-load conditions	5.80 Volts
End of discharge under load (receiver and servos)	6.20 Volts
Temperature range, charge / discharge	0 to 60°C
Dimensions	107 x 65 x 15 mm (L x W x H)
Weight, excl. mounting frame	155 g
Weight of mounting frame	15 g
Price	Battery € 119.80, frame € 10
Manufacturer / supplier	PowerBox Systems, D-86609 Donauwoerth
Internet	www.akuweichen.de