

PARTS IS PARTS: Bantam E-Station BC8HP Charger Review

● by Nick Martin

The BC8HP charger is an update to Bantam's already popular BC8 model. In short, Bantam has kept all the good features, increased the power rating, and improved the ergonomics. The main feature is in the HP part of the name—a power increase from 150 to 280 watts and a maximum charge current of 12 amps. This will definitely interest builders in the larger weight classes or users of the latest 5C charge rate Lipo packs.

Compared to the Original BC8

The new charger has the same dimensions of the BC6 and BC8 models. The backlit LCD screen is virtually identical, but looks smaller due to the garish yellow front panel—see Photo 1. The buttons are now

sealed and labeled better than earlier models.

The cabling is vastly improved over previous models—the charging and balancing outputs are now both on the righthand side, which is far more convenient. The connectors are labeled better than before, but could still be improved.

In the Box

The BC8HP package comes with the charger, software CD, USB adapter, USB cable, battery cable, and manual. Some sites list the USB adaptor as an extra, so check when ordering. The manual is well written and jinglish free—most users will be up and running in 10 minutes. The box is also supposed to include a LiPo balancing adaptor—some shops include a standard model with Thunderpower connectors while

others let you pick your own model—see Photo 2.

Capabilities

The BC8HP will charge almost any battery chemistry: up to eight Lithium Polymer, Lithium-Ion, or A123 cells; up to 27 NiMH or NiCd cells; and lead acid batteries up to 36V. Don't underestimate this last feature! Fast charging a dead car battery has gotten me out of trouble several times!

Keep in mind that the maximum rating of 280 watts and Ohm's law limit your maximum charge current at higher voltages—after about 22 volts, the charger will not be able to supply the full 12 amps. To get an idea of your top charging current, divide 280 by your pack voltage. I found that in practice, the current never quite reaches this value, so take off about 10%.

The LiPo balancing works very well. After a charge, my packs are usually balanced to below the resolution of my multimeter, and you can monitor individual cell voltages on the display while charging.

Experts and tinkerers can use the included software and USB adaptor to analyze their packs. The PC program graphs the voltage, current, capacity, and temperature curves. It also shows the individual voltage of each cell in the Lithium battery pack.

The USB connection uses an annoying and somewhat delicate adaptor—take care not to break the shrink-wrap coating!

PHOTO 1. The charger front panel.



The LiPo balancing adaptors come in many configurations and should cover virtually any brand of battery on the market. Bantam also makes multi pack adaptors that allow you to charge two or three smaller packs in series which makes the charger very versatile.

Operating the Charger

Power supply: The charger will accept from 11 to 18 volts, and it is suggested that you use a power supply capable of at least 15 volts and 35 amps to avoid thermal shutdown or slower than expected charging. The fan will kick in even at low charging currents and the heatsink can get quite warm, so be sure to allow plenty of ventilation.

Closest Competitors

In this price range, the Triton 2EQ and the Thunder Power TP1010C have similar features and are worth looking at. The Triton charger's main selling point is a built-in AC power supply it can charge and balance up to 6S Lithium packs and up to eight amps. It has a power rating of 120 watts. Its interface is possibly the best in the business and it is a great choice for builders wanting a single all-in-one



PHOTO 2. The charger and its main accessories.

charger for smaller bots.

The TP1010C charger's best feature is the high cell count it can charge up to 10 Lithium cells and up to 10 amps with a total capacity of 220 watts. The interface is similar to the Bantam units and this charger is only let down by the absence of internal balancing. This would be a leading choice for builders still using NiMH or Nicad batteries.

Summary

This is a well made and capable charger for larger packs. The quality is somewhere between cheap Hobby King chargers and the expensive

European models my other Bantam chargers have lasted for years and this new model should too.

Expect to pay around \$195 for the basic charger. Balancing adaptors are \$12 to \$15, depending on the model. **SV**

Sources

- RC Accessory
www.rcaccessory.com/BC8HP.aspx
They are direct importers and service the Bantam chargers.
- The Robot Marketplace
www.robotcombat.com/products/0-BAN-BC8HP.html

EVENTS

Completed Events

Completed Events:
May 10 - June 1

Maker Faire Bot Gauntlet was presented by California Insect Bots in San Mateo, CA, on May 22nd and 23rd.



HORD Spring 2010 presented by Ohio Robot Club in Brecksville, OH, on May 15th. **SV**

