

BatShare Deluxe

by  **Smart-Fly**

Features:

- ◆ Input voltage range of 5.5V to 8.4V
- ◆ 13 Amps/Side Continuous Current
- ◆ 50 Amps/Side Peak Current (< 10 sec)
- ◆ Very Low Voltage Drop: < 0.400V @ 13 Amps Each Side
- ◆ Input "ON" LED Per Side
- ◆ XT-60 or Deans UltraPlug Versions
- ◆ Failsafe Switch Compatible
- ◆ System Panel Compatible
- ◆ "Power On" LED Connection (Requires LED With Series Resistor)
- ◆ Charge Port For Each Battery

Quest Engineering & Development, Inc. 6125 South Ash Avenue, Suite B-8, Tempe, AZ 85283
Phone: (480) 460-2652 Web: www.Smart-Fly.com E-mail: Info@Smart-Fly.com

Introduction

The Smart-Fly *BatShare Deluxe* enables you to use two battery packs to provide redundant power to your airborne system. With the *BatShare Deluxe*, your plane can tolerate a single failure (open-circuit, short-circuit, low voltage) in either battery pack or the battery wiring without losing power to the radio system. The Smart-Fly *BatShare Deluxe* continually monitors both battery packs' voltage. If the packs are equal in voltage it will draw from both packs. If one pack's voltage is higher it will draw from that pack until they equalize. If one pack loses a cell or shorts the *BatShare Deluxe* will disable that pack and draw from the good pack.

We recommend both packs have the same capacity and are the same age. In practice, with two good packs, the *BatShare Deluxe* draws power from both packs, adding their capacities. So with two 2600mAH packs you have 5200mAH flying time.

Connections

You can use the *BatShare Deluxe* with our Failsafe Switch, System Panel or standard switches. We highly recommend using the Failsafe Switch or System Panel to alleviate extra connectors and switch contact voltage losses. The two system batteries plug into the two input connectors, XT-60 or Deans UltraPlug males. On the output you will need adapters that go from XT-60 or Deans UltraPlug males to standard R/C connectors.

Technical Specifications

- ◆ Input Voltage Range: 5.5V to 8.4V
- ◆ Battery Compatibility
 - ◆ 5S, 6S NiMH/NiCd
 - ◆ 2S LiFe (A123)
 - ◆ 2S Li-ion/Li-poly
- ◆ Continuous Current: 13 amps per side
- ◆ Peak Current: 50 amps per side for less than 10 seconds
- ◆ Voltage Drop: Less than 0.400 volts at 13 amps per side
- ◆ Input to Output Resistance: < 0.036 ohms @ 13A, 5.5V
< 0.023 ohms @ 13A, 8.4V
- ◆ Charge Current: < 3 amps per side
- ◆ Failsafe Switch Input: Signal shorted to ground turns unit off

We do not supply adapters with the *BatShare Deluxe* because the number of connectors recommended changes based on the plane's weight, the type of servos and the number of servos plugged into the receiver. Digital servos require more power connections than analog servos because they draw higher peak currents when moving and holding. For a 50cc plane with 6 servos you might be able to get away with 2 power connections to the receiver. For a 120cc plane used for 3D you will probably need at least 4 power connections for 6 or 8 servos. For a 150cc or larger plane you would probably need 6 to 8 power connections if you use one receiver. If you split the plane using two receivers then each receiver should have 3 to 4 power connections to hold your receiver bus voltage up during demanding flight maneuvers.

The Failsafe Switch (stand-alone or System Panel) plugs into the "Sw" input. If using the System Panel the charge leads would plug into the two charge ports and the LED would plug into the LED port. Note, the LED port is not current limited, it requires the LED have a series resistor to limit the LED current.

CAUTION: The *BatShare Deluxe* will not equalize load current between two regulators. If you were to put two regulators on the output of the two batteries and run the outputs of the two regulators into the *BatShare Deluxe* and then to the receiver, one battery will drain faster than the other due to the regulators' inability to share current equally.