



Scorpion Power System

www.scorpionsystem.com

Scorpion
User Guide for
Scorpion Backup Guard II v1.1



USER GUIDE

Thank you for choosing Scorpion Backup Guard II. Please read this user's manual carefully before you use the product.

Safety Notice

Scorpion and its re-sellers are not responsible for your use of this product, or any damage or injuries you may have caused or sustained from the usage.

- Charge Li-Po battery only on fireproof surface
- Do not exceed 3C charge rate
- Always monitor charging from start to finish
- Never short-circuit
- Never expose to fire or water
- Keep away from children and pets
- This is not a toy.

Limited Warranty

This limited warranty is twelve (12) months on electronic components from the date of original purchase. This limited warranty applies only to manufacturing defects and does not apply to any improper installation, unauthorized repair, alteration, or modification of this product.

Included in the Bag

1 x Scorpion Backup Guard II (Power Board)

Features and Specifications

- Used as a stand-by power backup unit for hobby aircraft control systems (Receiver, Gyro, Servo ... etc.)
- Light weight: 10 grams (exclude battery)
- Dimension: 44 mm x 25.2 mm x 10.5 mm
- Li-Po requirement: 2S/7.4V, 500mAh - 1000mAh
- Output: DC 5V/10Amp Continuous Current
- Charging Plug: JST-XHR

How does Scorpion Backup Guard II work?

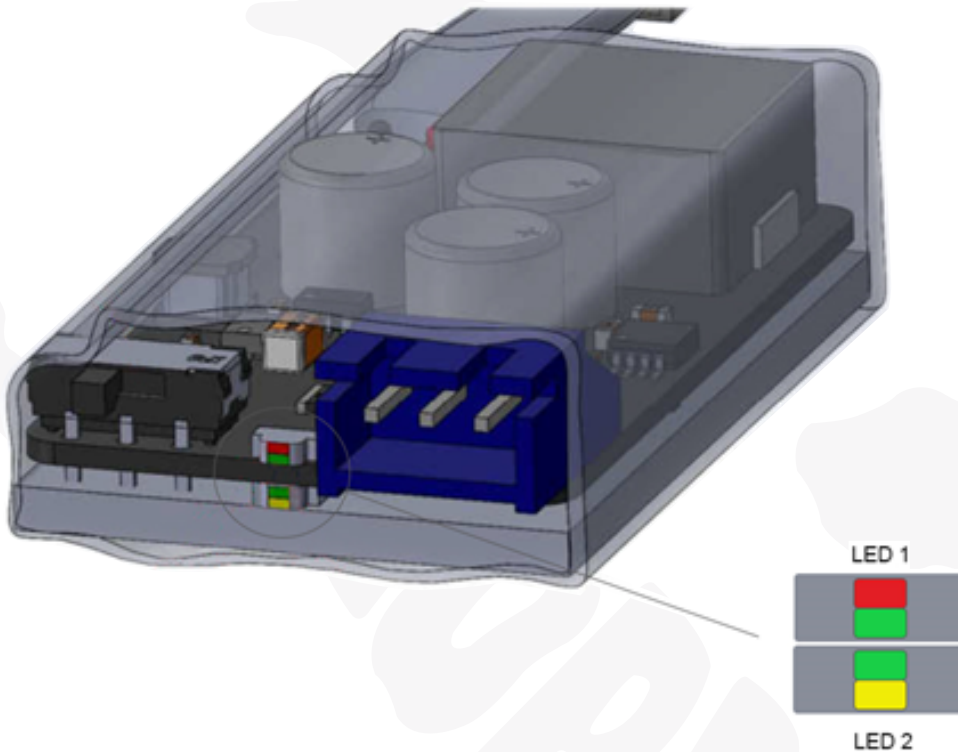
When activated, the Scorpion Backup Guard II monitors whether that the BEC output voltage on the helicopter or airplane is 5.5V or higher. If the Scorpion Backup Guard II detects a BEC failure has occurs, it will take over and continue to power the radio system thus allow time for you to land your helicopter or airplane safely.



USER GUIDE

LED Indicator Lights

There are two sets of LED indicator lights on Scorpion Back Guard II.



The colors of the LED lights indicate the status/condition of Scorpion Backup Guard II. To operate, the switch of Scorpion Backup Guard II has to be ON.

LED Light # / Color	Status / Condition	Control systems are powered by:
LED 1 – RED	Supplying Mode . 2S Battery is supplying power to control devices . Your BEC maybe at risk or have failed.	2S Li-Po battery
LED 1 – GREEN	Stand-by Monitoring Mode. 2S Li-Po battery is charged.	BEC
LED 2 – GREEN	2S Li-Po battery is fully charged . Charging process by the BEC is completed .	BEC
LED 2 – YELLOW	2S Li-Po battery is being charged by the BEC.	BEC



USER GUIDE

Connect your Scorpion Backup Guard II

Connect the DC 5V Output connector to an empty socket on the receiver. If all the sockets are being used, use a Y-harness wire to connect to any servo output socket.



Warning:

DO NOT plug the Scorpion Backup Guard II's DC 5V Output connector into the S-Bus channel port. This will drain the Backup Guard II battery without charging.

DO NOT plug the Scorpion Backup Guard II's DC 5V Output connector to any socket that is NOT recommended by receiver or gyro manufacturer (e.g, telemetry). Please refer to your receiver and gyro instruction manual for details.

Using your Scorpion Backup Guard II

Charge up the 2S Li-Po battery using proper Li-Po charger*. Connect the 2S Li-Po battery to the JST-XHR connector on the Scorpion Backup Guard II. Check and make sure the DC 5V Output connector is securely connected to the receiver/gyro.

* Although you can connect the 2S Li-Po battery to the Scorpion Backup Guard II and let the main battery charge it when operating, charging time may be lengthy and depends on the status on the 2S Li-Po battery. The charging rate is 0.5A.

Power-up sequence:

Main Battery ON >> Scorpion Backup Guard II ON

Power-down sequence:

Scorpion Backup Guard II OFF >> Main Battery OFF

Power off Scorpion Backup Guard II first then you can power off the BEC system or ESC after flight. Always turn Scorpion Backup Guard II ON last, and turn OFF first, to identify whether your BEC is functioning properly.

Maintenance for your Scorpion Backup Guard II

Because of the DC 5V is a one-way output, whenever the main power unit output voltage is higher than DC 5.5V, the Scorpion Backup Guard II will not be drained by the power consumption of the radio system.

For maintenance, perform routine checks on the balance and health of the 2S Li-Po battery.

If you are not planning to use the Scorpion Backup Guard II for a long period of time, please disconnect the 2S Li-Po battery and safe keeping the battery's charge level at 50% charged. Remember to charge up the 2S Li-Po battery to 8.4v before you use it.

