3.1 Maximum Voltage:

- Pb (lead acid): 2.4V/Cell
- NiMH: 1.4V/Cell
- LiFePO: 3.6V/Cell

To determine the maximum number of cells (S) you may use with each controller, divide the rated volt by the cell voltage:

\[ S = \frac{V_{\text{rated}}}{V_{\text{cell}}} \]

For example, if you have a 26V LiPo battery and want to use it with an ATLAS ESC, you would calculate:

\[ S = \frac{26}{3.6} = 7.22 \]

Therefore, you can use 6S LiPo with this ESC.

3.2 Type of Power Circuit:

- (Switching Battery Eliminator Circuit) – This type allows full power regulation and has no limitations, but requires an external controller (BEC). If you need to run more servos, disconnect the RED – BLACK – wires. NEVER reverse polarity here, as your ESC will be damaged and not covered by warranty in this case. Be sure to use the correct polarity on the ESC, with visual feedback of the process, if using indoors or in the shade is best. Note that direct sunlight may interfere, so program your ESC as pictured.

4.0 GENERAL SETUP NOTES

- Leave the switch across to IRS.

5.0 **FIRMWARE UPDATE**

- To perform a firmware update, insert the microSD card into the card reader and follow the instructions on the card.

6.0 INITIAL SETUP WITH TRANSMITTER

- Connect ESC 3-pin connector to Receiver’s correct channel (see additional info at end of manual)
- Connect Motor to Controller
- Connect ESC to Battery (see additional info at end of manual)
- Turn on Transmitter - Set Throttle Stick to “ZERO” (lowest setting) and hold for 3 seconds. If a signal is later regained the user will have thru power to the motor. The ESC will also stop the connection to ESC. Always keep the aircraft restrained and clear of people when the ESC is powered.

7.0 FLIGHT CONNECTION SEQUENCE

- Connect ESC 3-pin connector to Receiver’s correct channel (see additional info at end of manual)
- Connect Motor to Controller
- Connect ESC to Battery (see additional info at end of manual)
- Turn on Transmitter - Set Throttle Stick to “ZERO” (lowest setting) within 10 seconds. After few seconds you will hear 2 beeps come from the motor. For OPTO ESC only, connect receiver battery pack to receiver (see additional info at end of manual)
- Move throttle to ZERO position (minimum) within 10 seconds. If your ESC now be armed after you have set the minimum throttle. Move throttle stick is anywhere higher then zero throttle when the main battery is connected, you may reset the ESC by moving throttle stick to Zero position for a second, then throttle up only as required. However, the Hyperion Emeter II can also program any function on the card you must follow the following procedure:

**A** - To Receiver

1. Move your helicopter or model into a large, open area with at least 20 feet of clearance between other people.
2. To determine the direction of the motor, switch connection of any two wires, then check which way it turns. Never change connection to ESC, with visual feedback of the process, if using indoors or in the shade is best. Note that direct sunlight may interfere, so program your ESC as pictured.

1. Connect ESC 3-pin connector to Receiver’s correct channel (see additional info at end of manual)
2. Connect Motor to Controller
3. Connect ESC to Battery (see additional info at end of manual)
4. Turn on Transmitter - Set Throttle Stick to “ZERO” (lowest setting) within 10 seconds. After few seconds you will hear 2 beeps come from the motor. For OPTO ESC only, connect receiver battery pack to receiver (see additional info at end of manual)
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**A** - To Receiver

1. Move your helicopter or model into a large, open area with at least 20 feet of clearance between other people.
2. To determine the direction of the motor, switch connection of any two wires, then check which way it turns. Never change connection to ESC, with visual feedback of the process, if using indoors or in the shade is best. Note that direct sunlight may interfere, so program your ESC as pictured.
For example, to set Low Voltage Cut (LVC) of 9.5V: Press "0" Press "9" Press "5" then "ENTER" If successful, your LVC should now be at 9.5V. To change your LVC, repeat the above sequence. If you exceed the time limit no program will occur. Use caution when programming LVC.

Using the IR Transmitter:
Press the ENTER button Values COP: [230] AIR: [230] SS [230] SB TIM MAT BRK LVC LVC

- Soft Start: 20 ms, 40 ms, 60 ms
- Medium, 80 ms
- Hard, 100 ms

Using the Governor:

10.1 Programming the Governor:
- Governor can maintain rpm as tight as 5rpm in hover, and 25rpm during over-amp protection, LED will flash red rapidly
- Governor Limit Warning: If governor reaches 100% throttle, a beep warning tone will be heard. To reset throttle must be put into idle position.

Governor system, and motor driver firmware. The Emeter is also the easiest and fastest way to analyze ESC performance. The Emeter II's complex maths and fast processor speeds can be downloaded, saved, and viewed on the Emeter. In fact, we couldn't have made the ATLAS ESC so good without it! The super-steady and accurate phase correlation makes the ATLAS ESC the best choice for any helicopter. When the head speed is too high go back into your throttle curve and reduce throttle or if too low increase your throttle curve (Emeter II) to see if you are achieving the desired head speed.

Motor Acceleration Delay. Most often needed with large motors.

10.2 Radio Setup:
- Governor can maintain rpm as tight as 5rpm in hover, and 25rpm during over-amp protection, LED will flash red rapidly
- Governor Limit Warning: If governor reaches 100% throttle, a beep warning tone will be heard. To reset throttle must be put into idle position.

Concerning your battery: It is the same % of throttle across the entire range. E.g. for a 3S battery, you have a 12-second time window. If you attempt an autorotation, once you have switched your throttle hold switch you have a 12-second time window. If you feel that the head speed is too high go back into your throttle curve and reduce throttle or if too low increase your throttle curve (Emeter II) to see if you are achieving the desired head speed.

10.3 Startup Procedure:
- Governor can maintain rpm as tight as 5rpm in hover, and 25rpm during over-amp protection, LED will flash red rapidly
- Governor Limit Warning: If governor reaches 100% throttle, a beep warning tone will be heard. To reset throttle must be put into idle position.

Concerning your battery: It is the same % of throttle across the entire range. E.g. for a 3S battery, you have a 12-second time window. If you attempt an autorotation, once you have switched your throttle hold switch you have a 12-second time window. If you feel that the head speed is too high go back into your throttle curve and reduce throttle or if too low increase your throttle curve (Emeter II) to see if you are achieving the desired head speed.

Concerning your battery: It is the same % of throttle across the entire range. E.g. for a 3S battery, you have a 12-second time window. If you attempt an autorotation, once you have switched your throttle hold switch you have a 12-second time window. If you feel that the head speed is too high go back into your throttle curve and reduce throttle or if too low increase your throttle curve (Emeter II) to see if you are achieving the desired head speed.