



Features:

Operating voltage:

With BEC 6-18 Cells or 2S-5S LIPO's.

Without BEC 6-20 Cells or 2S-6S LIPO's.

Max Current:

100A continuous/120A burst.

BEC: 5 volts 2Amp (max)

Auto-setup, Failsafe, Led Monitor, LIPO Low Voltage

Auto cut-off function.

AS 18-100 Setup Procedure.

WARNING!

Please read all of this guide before attempting to set up the controller. And ensure that the controller is set up for the correct type of battery pack

Reverse polarity connection of the battery or connecting the battery to the motor (blue and yellow) leads will result in damage to the controller and will void the warranty.

Any delays in moving the throttle stick, when required, may result in the procedure having to be repeated.

Set Up Procedure for NIMH or NICAD Cell Operation:

1. Set the transmitter throttle stick to "zero".
2. Connect the AS speed controller to the receiver throttle channel and switch on your transmitter.
3. Taking care to observe the correct polarity, connect the battery (minimum of 6 and a maximum of 18 cells with BEC, or a maximum of 20 cells without BEC) to the controller battery leads.
4. **Within 3 seconds after connecting the battery** to the speed controller, press the programming button (located directly below the LED).
5. The LED will change to **red**.
6. Quickly move the throttle stick to the "full throttle" position and hold it in this position until the LED changes to **red+green**.
7. Return the throttle stick to the zero or motor off position.
8. Both the **red+green** LED's will extinguish and the speed controller will beep once to indicate that the throttle and stick positions have been stored.

2 seconds after the **red+green** LED's extinguish in sequence 8 above (or the next time you connect the battery without setting up the controller), the **green** LED will illuminate.

A further 3 seconds after the **green** LED illuminates, with the motor connected, the **motor** will emit 3 short beeps.

When the procedures 1 - 8 above have been carried out, the speed controller auto LIPO Low Voltage cut-off function is not enabled.

**The controller is now set up and ready to operate with NIMH or NICAD batteries.
Set Up Procedure for LIPO Operation:**

1. Set the transmitter throttle stick to "zero".
2. Connect the AS speed controller to the receiver throttle channel and switch on your transmitter.
3. Taking care to observe the correct polarity, connect a fully charged 2s-6s LIPO battery to the controller battery leads.
4. **Within 3 seconds after connecting the battery** to the speed controller, press the programming button (located directly below the LED).
5. The LED will change to **red**.
6. Quickly move the throttle stick to the "full throttle" position and hold it in this position until the LED changes from **red** only to **red+green**.
7. Return the throttle stick to the zero or motor off position.
8. Both the **red+green** LED's will extinguish and the speed controller will beep once to indicate that the throttle and stick positions have been stored.
9. To enable the LIPO low voltage auto-cut off function, the **throttle stick must now be moved** to the full throttle position **within 2 seconds** of procedure 8 above.
10. Both **red+green** LEDs will now illuminate, and the **motor** will now beep three times, indicating that the LIPO auto cut-off function **is enabled** both LED's will then extinguish.

2 seconds after the LED's extinguish and the 3 motor beeps in sequence 10 above, (or when you connect a battery without setting up the controller), the **red+green** LED's will flash and the controller will beep a corresponding number of times in accordance with number of LIPO cells connected. For example, a 4S LIPO will cause the LED's to flash 4 times and the controller to beep 4 times.

2 seconds after the LED flashes and controller beeps above, the **green** LED illuminates. **This indicates that the speed controller is now set up and ready to operate in LIPO mode and the LIPO low voltage auto cut-off function is enabled.**

Hints and Tips:

Programming is best carried out with the motor connected. This ensures that the controller's motor leads do not short out and that the motor's audible beeps can be heard while setting up the controller.

If the program button is pressed while operating the motor, or if more than three seconds have elapsed after the battery was connected, the controller will not enter programming mode.

After programming the controller, the new values will overwrite any previously stored settings and the controller will store the values even when a battery is not connected.

LIPO Operation:

The AS18-100 contains detection circuitry that recognises the number of LIPO cells connected to the controller. When a LIPO battery is connected, the controller reads the voltage of the battery, determines the number of cells and sets a corresponding low voltage cut-off value. To ensure the controller determines the correct number of cells and cut-off value, always connect a fully charged LIPO when setting up or operating the controller.

Ensure that when a LIPO battery is connected that the number of LED flashes and the number of beeps correspond correctly to the number of LIPO cells connected. If you are unsure un-plug and then re-connect the LIPO battery to the controller.

The low voltage cut-off is designed to prevent damage to LIPO cells due to over discharging. If the wrong number of LIPO cells are detected, the low voltage shutdown values will be incorrect. NEVER use or operate a model with the controller, when the number of cells have been incorrectly detected. **On delivery, the LIPO auto cut-off function is disabled.**

During operation, as the LIPO battery discharges to near the low voltage cut-off value set by the controller, the power to the motor will be reduced and the motor will run intermittently. This is the indication to tell you that the cells require re-charging and that you should bring your model in as soon as possible and switch off.

Start-up protection, motor beep acknowledgment:

In order to prevent accidental running of the motor when connecting the battery, the transmitter throttle stick must be in the zero or motor off position. If the transmitter throttle is not in the zero/motor off position, the controller will not operate (no LED's Lit or motor beeps). When this occurs simply move the throttle stick to the zero/motor off position. The controller will then return to normal operation.

Dual Circuit BEC:

In order to provide the user with a safe operating system, your controller provides two 5 volt 2amp BEC circuits that are short circuit and overload protected. In the event that one BEC shuts down due to short circuit or overheating, the other circuit will continue to supply the receiver and servos. The BEC can be used with up to 18 NIMH/NICAD cells or 5S LIPO's. The controller can also be operated without BEC, but when the BEC function is not required, the receiver lead's red wire must be disconnected or cut.

Autofailsafe:

During operation, the controller continuously monitors the receiver's signal output. If the radio signal is not detected by the controller it will enter failsafe mode. In failsafe mode the controller will shut off the motor and flash the LED's alternately. As soon as the signal is restored the controller will return to normal operation.

Recommendations:

In order to prevent interference, position the AS-18/100BEC at a sufficient distance from the receiver.

Do not overload the BEC circuits. Excessive loading on the BEC can lead to a reduced supply voltage for the receiver and will result in the controller overheating.

When operating the controller with 18 cells or 5S LIPO's, we recommend the use of one servo only.

Caution:

Before connecting the battery, make sure nothing could foul or be struck by the propeller.

The controller must not be used in situations where personal injury or damage to property may occur as a result.

Do not use unsealed, damaged or faulty batteries as this may result in the subsequent

malfunction of the controller

The speed controller must only be powered from batteries. Operating the controller on bench power supplies or an AC power supply will damage the unit and void your warranty.

Warranty:

In the event that your AS 18/100BEC fails or malfunctions as a result of workmanship or manufacturing processes, it is covered by a 24 months warranty.

This warranty does not cover wear and tear, crash damage, modifications, failure to carry out routine maintenance, installation in any model type other than model boats, or any damage as a result of improper use

This applies in particular, but not limited, to:

Operating the ESC on voltages outside the minimum or maximum number of cells, operating on excessive current values and operating outside the intended model range.

For questions or problems please contact us at:

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