airtek eco Series Electronic Speed Controllers - 10, 20,30,35 & 40amp

Covering models: AKE/ESCECO/10, AKE/ESCECO/20, AKE/ESCECO/30, AKE/ESCECO/40

Thank you for purchasing an Airtek 'Eco' Brushless Motor Electronic Speed Controller. This has been manufactured to the highest standards, and when used within the specifications should provide a long and trouble free service life.

Your ESC wires are provided bare ended for you to solder your own connectors. We recommend that you use good quality 3.5mm gold bullet connectors for the 3 motor wires (female end to the ESC) and a Deans type 'T' Connector for the battery connection (male end to the ESC). Please ensure you solder the battery connection for correct polarity, i.e red for +, black for - and that all connections are isolated by heat shrink tube. (all these items are available from www.airtekhobbies.com).

The 'eco' series provide all the basic functions most modellers desire, and as there is no programming card available must be programmed from the transmitter. Connect the ESC to your receiver and motor. The universal plug fits into the throttle channel of your receiver, the 'T' connector to your lipo (but ONLY when you are ready to test/fly) and the three motor wires connect to your motor. Note: you can connect any ESC wire to any of the three motor wires. However if you find that the motor runs in reverse simply swap any two wires over. For Futaba systems the throttle channel should be set to REV.

Programming Instructions

1 Switch on your transmitter, move the throttle stick to the highest position.

2 Switch on the power to the ESC (or connect your battery to the ESC if you don't have a switch installed) - you should hear the following sounds (if there is no sound after a long low 'BEEP', check the REV setting of the throttle channel on your transmitter.

'BEEP' 'BEEP' - denotes the Lipo protection (cut-off setting)

'BEEP' 'BEEP'   'BEEP' 'BEEP' - denotes NIMH/NICD auto-protection (cut-off setting)

'BEEP' 'BEEP' 'BEEP'   'BEEP' 'BEEP' 'BEEP' denotes brake setting

'BEEP' 'BEEP' 'BEEP' 'BEEP'   'BEEP' 'BEEP' 'BEEP' 'BEEP' denotes reset to factory setting.

All these Beeps will loop if you don't make an operation request

To set a function

When you want to set any function swiftly move the throttle stick to the lowest position when you hear the first 'BEEP' (i.e. to set the lipo protection, when you hear the first 'BEEP' of the series of two, move the throttle stick to the lowest position - lipo protection will then be enabled). The motor will emit a sharp 'BEEP' to confirm.

If you then want to set other features, promptly move the throttle stick to the highest position and then you can programme another feature.

The two pre-set cut-off options for Lipo batteries are 6v and 9v. The lipos do not have to be fully charged to set this feature.

The cut off setting for Ni-Mh batteries is calculated based of cell number, the voltage per cell is 0.8v. To avoid a miscalculation the batteries must be fully charges when setting up the Ni-Mh cut-off. The ESC will then calculate the cut of based on 70% of the voltage when the batteries are not fully charged.

Brake Setting - by default your ESC is set up at no brake. You may, however wish to set the brake, particularly if you are using a folding propeller. The brake can be disabled at anytime by reprogramming the ESC.

* When set up a long 'BEEP' at startup denotes that the Lipo protection mode is enabled, 'BEEP', 'BEEP', 'BEEP' denotes NiMh protection mode is enabled.

Specifications

• Cells: 4-12 Nixx or 2-3 cell Lipo (4 cell if BEC is disabled)

• BEC (Battery Eliminator Circuit) output - 10amp ESC 2A at 5v, 20amp ESC 2A at 5v (peak 3A), 30,35 & 40amp ESC 3A at 5v (2s lipo will support 4-5 micro servos, 3s lipo 3-4 micro servos.

• Auto detection of Cells and type of batteries

• Safe Start - will not start if throttle is in the wrong position

• Over temperature protection - the ESC will stop working if the temperature exceeds 110º

• Lost signal protection: The ESC will stop when control signal is lost for over 1 second.

For a full range of accessories to compliment your ESC, please visit www.airtekhobbies.com
We hope you enjoy your product - Happy Landings!

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