
EMAX
Multirotor 4IN1 esc
Easy to replace power board,
control board, UBEC board.
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25A*4 / 30A*4 Product Features
Simonk
Upgraded from SimonK firmware
Based on and upgraded from SimonK firmware, EMAX Multi rotor 4IN1 ESC programme is specifically designed for multi rotor crafts, which greatly optimizes multi rotor crafts performance

EMAX User Instruction for 4IN1

Product Features

1、Based on and upgraded from SimonK firmware, EMAX multirotor 4IN1 ESC programme is specifically designed for multirotor crafts, which greatly optimizes multirotor crafts performance.
2、Integrated 4 ESCs, and only one set of power supply input wire is needed.
3、BEC board, control board, power board are separated, and motor wire sockets are not soldered, which make it easy to dismantle the ESC. And you can change any board if any of them go wrong.
4、You can obtain a drive current of 4×25A or 4×30A by changing the power board.
5、4 in 1 design makes multirotor assembly no longer complicated, no longer a mess, and all applications stay in order!
6、Low-voltage protection, over-heat protection, and self-check functions.
7、Throttle range can be set to be compatible with different receivers.
8、High efficiency UBEC, only one set of BEC voltage output wire.
9、Max speed: 210,000 rpm for 2-pole, 70,000 rpm for 6-pole, 35,000 rpm for 12-pole.

Product specification

Item	Max. Continuous Current	Burst current	BEC type	BEC output	Li-xx Battery (cell)	Dimension(mm) L*W*H	Weight (g) wires Included	Programmable
25A*4-UBEC	25A*4	30A*4	Switch mode	5V/3A	2-4	67.5*64.4*17	130g	Yes

Instructions

1、Normal Startup procedures

Move throttle stick to the bottom position and then switch	Connect battery pack to ESC	The long "beep" sound should be emitted , means the bottom point of	Seversal "beep" tones should be emitted to present the amount of	When self-test is finished, a "♪ 1 2 3" tune	Move throttle stick upwards

2、**Throttle range setting procedures** (when change a transmitter, throttle range setting is recommended. Throttle range can be set separately for each ESC, or set 4 ESCs at once by using a concentrator. When applied to a multirotor, throttle range can be set by flight control) 。

Move throttle stick to the top position and then switch on	Connect battery pack to ESC	Two "beep" sounds should be emitted, means the top point of throttle range has been	Move throttle stick to the bottom position (within 2s), a long "beep" sound should be emitted , means the bottom point of	Seversal "beep" tones should be emitted to present the amount of	When self-test is finished, a "♪ 1 2 3" tune should be emitted, Move throttle stick upwards to go

If the throttle stick is neither at the bottom position nor the top position after powered on, it will constantly make "beep" sounds.

If you hold the throttle stick on top position for more than 2 seconds after the top point of throttle range has been confirmed and saved, you will be led to transmitter programming mode

Programmable parameters

1、Timing Advance: There are 5 options: Low: 0°, Mid-low: 8°, **Middle:15°**, Mid-high:23° and High:30°. The default is Mid (15 degree). Low advance timing is recommended for high inductance and low KV motors. High advance timing is recommended for low inductance and high KV outrunner motors. For some high KV motors, if it vibrates while rotating in high speed, the High timing mode is recommended.
2、Start Mode: There are 13 options: 0.03, 0.05, 0.06, 0.09, 0.13, 0.19, 0.25, 0.38, 0.50, **0.75**, 1.00, 1.25, 1.50. The default is 0.75. Please choose the start mode according to the load placed on the motor.
3、Throttle Curve Mode: 4 options: **Off**, Low, Mid, High.The default is Off.
4、Control frequency: 2 options: **8KHz** and 22KHz. The default is 8K. (the frequency to drive the motor)