Purple Power Electronic Speed Controller Users Manual

Specifications

Part Number	Continuous Amps	BEC (Max)	LiPo (No. of cells)	NiCd/NiMh (No. of cells)	Weight (g)
PP-DESC11AU	11 Amps	2 Amps	2 - 3	6 - 10	6g
PP-DESC22AU	22 Amps	2 Amps	2 - 3	6 - 10	16g
PP-DESC33AU	33 Amps	3 Amps	2 - 4	6 - 12	22g
PP-DESC40AU	40 Amps	3 Amps	2 - 4	6 - 12	36g
PP-DESC60A	60 Amps	No	2 - 6	6 - 16	34g
PP-DESC60AU	60 Amps	3 Amps	2 - 4	6 - 12	36g
PP-DESC70A	70 Amps	No	2 - 6	6 - 16	43g
PP-DESC100A	100 Amps	No	2 - 6	6 - 16	45g
PP-DESC100AHV	100 Amps	No	3-10	8 - 30	320g

Features

1. Easy setting / Easy operation.
2. Safe start-up – The motor will not start regardless of the throttle position.
3. Automatic power cut-off – When the motor is stopped or when the radio signal has been lost for more the 3 seconds.
4. High rate of switching (PWM Pulse Width Modulation) 8 kHz
5. Over voltage protected. The ESC will not start if the voltage is greater then 18V (except for the OPTO versions)
6. Low voltage cut-off 3.0V/2.7V (selectable) for Lithium-ion/Lithium Polymer or 0.9V/0.7V (selectable) for Ni-Cd/Ni-Mh batteries.
7. Selectable timing modes
   - Low Timing – Providing high efficiency for 2,4 and 6 pole motors
   - High Timing – For high speed motors (6 poles or more) and outrunner motors.
8. Selectable cut offs – hard cut off or soft cut off

Factory Default Settings

1. Brake off
2. Timing – High (suitable for Outrunners and most other motors)
3. Throttle curve – Linear
4. Battery type – Lithium-Ion/Lithium-Polymer
5. Cut off voltage – 2.7V for Li-xx battery
6. Cut off type – Soft

Normal Start Up

1. Make sure the motor is connected to the ESC and the ESC is connected to your receiver.
2. Switch on your transmitter.
3. Set the throttle stick to the lowest position.
4. Connect the main power pack to the ESC or for ESC without BEC's switch on power to the receiver.
5. You should then hear either 1 single beep (brake is on) or 2 single beeps (brake is off). If you do not hear any beeps, disconnect the battery, wait for 5 seconds and connect again.
6. Five seconds later you should hear 5 single beeps (low timing mode) or 5 double beeps (high timing mode)
7. The ESC is now ready for flight.

Programming the ESC via the Transmitter

To set brake on or off (Note: factory default setting is off)

1. Switch on the transmitter and move the throttle stick to the highest position.
2. Connect the main power pack to the ESC or for ESC without BEC's switch on power to the receiver.
3. You should hear 4 beeps.
4. Swiftly move the throttle stick to the lowest position.
5. You will then hear either 1 beep to indicate that the brake is on or 2 beeps to indicate that the brake is off.
6. You should hear 5 single beeps indicate that the timing is low or 5 double beeps to indicate that the timing is set to high (for outrunners and most other motors.

If you want to change the brake mode again, disconnect the motor battery pack and then repeat the procedure.

To set the motor timing mode to high or low (Note: factory default setting is high)

7. Switch on the transmitter and move the throttle stick to the highest position.
8. Connect the main power pack to the ESC or for ESC without BEC's switch on power to the receiver.
9. You should hear 4 beeps.
10. Wait 5 seconds, you should then hear 5 single beeps (low timing) or 5 double beeps (high timing)
11. Swiftly move the throttle stick to the lowest position.
12. You will then hear either 1 beep to indicate that the brake is on or 2 beeps to indicate that the brake is off.
13. You should hear 5 single beeps indicate that the timing is low or 5 double beeps to indicate that the timing is set to high (for outrunners and most other motors.

If you want to change the timing mode again, disconnect the motor battery pack and then repeat the procedure.

Programming the ESC Using the 'Advance plus' Programming Card

1. Place the six black jumpers in the required positions.
2. Plug JR (servo type) connector (part of ESC) in to the position 'controller' on Prog-Card (top right side of Prog-Card).
3. Connect the motor to the ESC.
4. Connect the power pack to the ESC.
5. For ESC with BEC, 1 beep will be heard, which means your setting has been saved.
6. For ESC without BEC. 1 beep will be heard after, connecting a 4.8V (receiver pack) to the position 'external power for OPTO' (top right side of Prog-Card)
7. Disconnect the power pack or receiver pack.
8. Disconnect the Advance plus Prog-Card.
9. Plug the JR (servo type) connector (part of ESC) back into the throttle channel on the receiver.