80A Brushless ESC Manual

Thanks for purchasing 'Core-S' series ESC for boat。High power system for RC model be very dangerous so please read this manual carefully. In that we have no control over the correct use,installation, application, or maintenance of our products. Any claims arising from the operating, failure of malfunctioning etc. will be denied. We assume no liability for personal injury, consequential damages resulting from our product or our workmanship. As far as is legally permitted, the obligation to compensation is limited to the invoice amount of the affected product.

Features:

1．'Forward only' and 'Forward/Backward' running mode。
2．Multi Timing selected, compatible with all kinds of sensorless brushless motor.。
3．Stall protection，Over-heat protection，Signal lost protection and Low voltage protection。
4．Connect PC software programming and online update with LCD programming card or USBLINk

Function Description: (bold is the factory default)

●Running mode：Single direction/**Bidiection**
●Timing：Very Low/Low/**medium**/High/Highest
In general, the low timing can adapt to more motors. However, because the motor structure is very different, please try each timing to get a satisfactory driving effect. In order to improve the speed, the angle can be set as high timing, but the motor has a fast heating
●Start acceleration: super soft start/soft/**medium** /Hight/Highest
This is the acceleration of the motor step. If the value is too large, the discharge capacity of the battery will not keep up, and the motor will stutter
●Low Voltage CutOff Threshold：Off/3.0V/3.1V/**3. 2V**/3.3V/3.4V
When the battery type is lipo, the battery regulation automatically calculates the number of Lipo. For example, if 8s is used and the cut-off voltage is set to 3.0V/C, the voltage limit: 3.0 * 8 = 24.0V.
●Motor Rotation：**Forward**/Reverse
In most cases, the motor forward / reverse is usually achieved by exchanging any two motor lines. When the motor wire welded on ESC, the motor change the setting value on ESC to Commutationed
●.Frenqucy Type:**High**/Low/Damped Light
Multi pole and high RPM motor, using high frequency, the motor runs faster and smoother, but it has loss on the switch and heating of ESC。
●Forward/Backward speed percentage：20%/40%/60%/80%/**100%**

Throttle Range Calibration (Only for versions that can be programmed via the remote control)

1：Using Hand-Style transmitter(Running mode is **Bidirection**)
Turn on the remote control to push the throttle to the full throttle position, power on the ESC, hear the "Beep-Beep" two tone of the motor. Release the throttle of the remote control to the neutral position within the "Beep-Beep" four times , You will hear a special confirmation sound from the motor, indicating that the throttle stroke has been set and saved.
2：Using Flat-Style transmitter:
Turn on the remote control to push the throttle to the full throttle position, power on the ESC, hear the "Beep-Beep" two tone of the motor, within the "Beep-Beep" four times ,if Running mode is Bidirtion， let the stick return to the neutral position。If Runing mode is only Forward，let the stick return to lowest position，A special confirmation sound isheared, indicating that the throttle stroke has been set and saved

Remote Control Programming

(Only for versions that can be programmed via the remote control)

Program ESC with transmitter 4 Steps
1. Enter Programming mode
2. Selected the setting item
3. Selected the parameter value of the setting item
4. Exit after off power

1.Enter Programming mode
1).Push the stick to full position
2).Power on the ESC
3).Enter the parameters programming mode after "Beep-Beep" four times

2.Selected the Setting Item
After entering the Programming eight different sound heared Repeat the Beep in the following order,when you hear a tone,let the stick back to the lowest position,then you hear the special tone,indicate to selected the setting item

Beep	Runing mode	1 short tone
Beep Beep	Motor Rotation	2 short tone
Beep Beep Beep	Forward Speed	3 short tone
Beep Beep Beep Beep	Backward Speed	4 short tone
Beep-	Motor Timing	1 long tone
Beep-Beep	Step Acceleartion	1 long 1 short
Beep-Beep Beep	Cut Off threshold	1 long 2 short
Beep-Beep Beep Beep	Frenqucy Type	1 long 3 short

3.Select Parameter value:
The motor Beep repeatly.push the stick to full throttle position after hear A tone. You select the parameter value corresponding to the tone, then a special prompt tone is heard, indicating that the parameter has been saved. (at this time, if you do not want to set other options, directly power off and exit the programming mode: if you want to set other options, keep stick at full throttle position,you will go back to step#2 and you select the other item)

Item	Beep	Beep Beep	Beep. Beep Beep	Beep Beep Beep Beep	Beep—	Beep—Beep
	1 short	2 short	3 short	4 short	1 long	1 long 1 short
Running Mode	Forward	Bidirtion				
Motor Rotation	Normal	Reserve				
Forward Speed	20%	40%	60%	80%	100%	
Backward Speed	20%	40%	605	80%	100%	
Motor Timing	Lowest	Low	Medium	High	Highest	
Start Acceleration	Softest	Soft	Medium	High	Highest	
Cut-off Voltage throld	No Protect	3.0V/C	3.1V/C	3.2V/C	3.3V/C	3.4V/C
Frenqucy Type	High	Low				

4.Exit Program mode

Programming example(Forward only changed into Bidirtion)

.Power on the transmitter,pull the stick to the full position of the throttle,Power on,enter the programming mode after four tiem. "Beep-Beep" tones → .The motor begin to Beep,let the stick back to the lowest position after A"Beep" ,enter to parameters selection → Parameters Selection;
In any one of the four consecutive "Beep Beep", push the stick to the full throttle position. You power off ESC after the motor makes a special sound Call tone. The operation mode has been set to two-way

Trouble Shooting

After power on,motor does not work,no sound	The connection between battery and ESC is no correct	Check the Power connection, Replace the connector
After power on,motor beep-beep continously	Input voltage is too high	Check the voltage of the battery pack
The boat cannot run backward	The ESC is not set to Bidirtion,or the ESC cannot recognize the neutral point of the throttle	Check Running mode and Calibrate the throttle range again
The motor suddenly speeds down even if at full throttle position	The ESC enter the low voltage or over heat protection	Replace the battery or stop the boat for several minutes to cool
The motor cannot start uo but jibber only	Wire connection is incorrect or ESC's mosfet burned	Check the connector of wire Replace the mosfet
The motor runs in the opposite direction	The connection should be changed between ESC and motor	Swap any two wire connections between ESC and motor