SUPPO™ Speed Controller Programming Instructions

Surface ESC

Features:
Voltage: 4.8V-15V, 4-12Nimh or 2-4Lipo;
Low internal resistance: 0.003MR(30A), 0.002MR (50A), 0.0007MR (100A)
Voltage protection 3.0V each cell of Lipo
Constant current: 30A, burst 50A
PWM: 8k/16k/32k
Support most brushless motor
Max RPM 30000 for 14poles motor
Water proof
BEC 5V/2A, burst 3S support digital servo
Proportional break
Reverse with proportional power

Throttle neutral position study

1. Connect your motor and receiver to the speed controller, but do not connect the battery yet.
2. Turn on your transmitter and move the throttle stick to the FORWARD MAX THROTTLE position (full up).
3. Connect your battery and you will hear the initial musical tones. If you hear motor BEEP BEEP, your need to Reverse the Throttle position to Max until you hear the musical tones.
4. Then release the throttle, wait for BEEP BEEP (Twice) to confirm neutral position.

Programming

• Phrases 1 Enter programming Mode

5. Connect your motor and receiver to the speed controller, but do not connect the battery yet.
6. Turn on your transmitter and move the throttle stick to the FORWAR MAX THROTTLE position (full up).
7. Connect your battery and you will hear the initial musical tone of programming mode.

• Phrases 2 Programming

After 3 seconds, the motor will start beeping a sequence of tones – a musical tone followed by one or more beeps. Each sequence represents a parameter that you can program and is repeated 3 times. The parameters are:

♪—	Music Tone + 1 Beep	Options 1. Brake Setting
♪— —	Music Tone + 2 Beeps	Options 2. Reverse Setting
♪— — —	Music Tone + 3 Beeps	Options 3. Acceleration
♪— — — —	Music Tone + 4 Beeps	Options 4.Battery type
♪— — — — —	Music Tone + 5 Beeps	Options 5. Timing Mode
♪— — — — — —	Music Tone + 6 Beeps	Option 6. PWM setting

Step 1. Starting, Enter Sub-optins. When you hear the sequence for the parameter you wish to program, move the throttle stick to the **Center Position to Enter Sub-options**.
The motor will then **start beeping a Morse code sequence** of short and long beeps representing the possible options you may choose for the selected parameter. See table 2 for a list of all programmable options. Each option sequence is repeated 3 times.

Step 2. Select and save, the select the option, move the **throttle stick** back to **the Full-up-position**., When you hear the sequence for the option you wish to select. The controller will then save the selected option, and **sound a long beep as a confirmation.** It then goes back to the beginning of the programming sequence (phrases 2).

Step 3. Exit to main manual and reload programming. When complete programming, move the throttle stick to the **Lowest (Down, reverse) Position**. The controller will exit to main manual and re-initialize in normal running mode. The system is ready to run.

The table below summarizes the various programming options for each parameter:

Option 1. Brake Setting ♪—	
• — 1 Short + 1 Long	Light Brake （start when throttle on reverse position）
• — — 1 Short + 2 Long	Soft Brake (start when throttle on neutral position)
• — — — 1 Short + 3 Long *	Medium Brake *
• — — — — 1 Short + 4 Long	Hard Brake
• — — — — —1 Short + 5 Long	**100% Brake**

Option 2.　Reverse　♪— —	
•• — 2 Short + 1 Long	No Reverse
•• — — 2 Short + 2 Long	Reverse with 25% Power
•• — — — 2 Short + 3 Long	Reverse with 50% Power
•• — — — — 2 Short + 4 Long	Reverse with 100% Power*

Option 3.　Accleration　♪— — —	
••• — 3 Short + 1 Long *	Soft acceleration *
••• — — 3 Short + 2 Long	Medium acceleration
••• — — — 3 Short + 3 Long	Hard acceleration

Option 4. Cell Type　♪— — — —	
•••• — 4 Short + 1 Long	NIMH/MICD * slow down on 75% of initial voltage (0.9v), cut-off at 70% of initial voltage (0.85v).
•••• — — 4 Short + 2 Long	LIPO, Slow down at 3.0v per cell LIPO, Cut-off at 2.9V per cell LIPO

Option 5. Timing Mode Setting ♪— — — — —	
••••• — 5 Short + 1 Long *	0º - For 2-4 Pole Inrunner Motors *
••••• — — 5 Short + 2 Long	3º - For 2-4 Pole Motors
••••• — — — 5 Short + 3 Long	7º- For 6-8 Pole Motors
••••• — — — — 5 Short + 4 Long	15º- For 6-8 Pole Motors
••••• — — — — — 5 Short + 5 Long	22º - For 10-14 Pole Motors

Option 6. Pulse Width Modulation(PWM) Setting ♪— — — — — —	Only Available for 50A above (50A, 70A, 100A) version
•••••• — 6 Short + 1 Long	8KHz *
•••••• — — 6 Short + 2 Long	16KHz
•••••• — — — 6 Short + 3 Long	32KHz

* is Default Setting