

Speed Controller Programming Instructions

For High Voltage Full options 50A/70A/80A/100A/125A/200A

- 1.2 ⤴ For (4S-8S) ESC 70A
- Ni-MH / Ni-CD Auto Cell Count - 0.8V/Cell Cutoff Voltage
- — 1 Short + 1 Long
 - — 1 Short + 2 Long
 - — 1 Short + 3 Long
 - — 1 Short + 4 Long
 - — 1 Short + 5 Long
 - — 1 Short + 6 Long
- 1.3 ⤴ For (6S-10s) ESC 80A-HV/100A/125A-HV-10S/200A-10S
- Ni-MH / Ni-CD Auto Cell Count - 0.8V/Cell Cutoff Voltage
- Cell Type and Number of Cells
- — 1 Short + 1 Long
 - — 1 Short + 2 Long
 - — 1 Short + 3 Long
 - — 1 Short + 4 Long
 - — 1 Short + 5 Long
 - — 1 Short + 6 Long
- Cell Type and Number of Cells
- 10S Li-Po (37V) – 30V Cutoff Voltage
 - 9S Li-Po (33.3V) – 27V Cutoff Voltage
 - 8S Li-Po (29.6V) – 24V Cutoff Voltage
 - 7S Li-Po (25.9V) – 21V Cutoff Voltage
 - 6S Li-Po (22.2V) – 18V Cutoff Voltage
 - 5S Li-Po (18.5V) – 15V Cutoff Voltage
 - 4S Li-Po (14.8V) – 12V Cutoff Voltage
- 1.4 ⤴ For (8S-12s) ESC 125A-12S/200A-12S
- Ni-MH / Ni-CD Auto Cell Count - 0.8V/Cell Cutoff Voltage
- Cell Type and Number of Cells
- — 1 Short + 1 Long
 - — 1 Short + 2 Long
 - — 1 Short + 3 Long
 - — 1 Short + 4 Long
 - — 1 Short + 5 Long
 - — 1 Short + 6 Long
- Cell Type and Number of Cells
- 12S Li-Po (45.4V) – 36V Cutoff Voltage
 - 11S Li-Po (41.7V) – 33V Cutoff Voltage
 - 10S Li-Po (37V) – 30V Cutoff Voltage
 - 9S Li-Po (33.3V) – 27V Cutoff Voltage
 - 8S Li-Po (29.6V) – 24V Cutoff Voltage
2. Throttle Setting ⤴
- — 2 Short + 1 Long
 - — 2 Short + 2 Long
 - — 2 Short + 3 Long
 - — 2 Short + 4 Long
- 3.1 Brake Setting (For normal Aircraft) ⤴
- — 3 Short + 1 Long
 - — 3 Short + 2 Long
 - — 3 Short + 3 Long
 - — 3 Short + 4 Long
- 3.2 Throttle Type (For Helicopter) ⤴
- — 3 Short + 1 Long
 - — 3 Short + 2 Long
 - — 3 Short + 3 Long
 - — 3 Short + 4 Long
4. Direction and Cutoff Type ⤴
- — 4 Short + 1 Long
 - — 4 Short + 2 Long
 - — 4 Short + 3 Long
 - — 4 Short + 4 Long
5. Timing Mode Setting ⤴
- — 5 Short + 1 Long 1°
 - — 5 Short + 2 Long 7°
 - — 5 Short + 3 Long 15°
 - — 5 Short + 4 Long 30°
6. Pulse Width Modulation (PWM) Setting ⤴
- — 6 Short + 1 Long 8KHz
 - — 6 Short + 2 Long 16KHz
- * is Default Setting

Auto Throttle Range *

- 1.1ms to 1.8ms
- Hard start*
- Soft start

No Brake

Soft Brake*

Medium Brake

Hard Brake

Normal *

Governor Mode with 2-4 poles motors

Governor Mode with 6-10 poles motors

Governor Mode with 12-14 poles motors

Clockwise Rotation *

Counterclockwise Rotation

Soft Cutoff

Hard Cutoff*

For 2-4 Pole In-runner Motors *

For 6-8 Pole Motors

For 10-14 Pole Out-runner Motors

For 10-14 Pole High-RPM Out-runner Motors

For low RPM and low pole count motors *

For most out runner motors

Speed Controller Programming Instructions For High Voltage Full options 50A/70A/80A/100A/125A/200A

Phrases 1 --- Enter programming Mode

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 full throttle position (full up). Please Note: Most Futaba transmitters have the throttle channel reversed by default.
3. Connect your battery and the controller will initialize with a musical tone.

Phrases 2 --- Programming

After 3 seconds, the controller 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 ♪—

Option 1 --- Cell Type and No. of Cells

Music Tone + 2 Beeps ♪—

Option 2 --- Throttle Setting

Music Tone + 3 Beeps ♪—

Option 3 --- Brake Setting / Throttle type (for Heli)

Music Tone + 4 Beeps ♪—

Option 4 --- Direction and Cutoff Type

Music Tone + 5 Beeps ♪—

Option 5 --- Timing Mode

Music Tone + 6 Beeps ♪—

Option 6 --- Pulse Width Modulation (PWM) Setting

Step 1 --- Starting, Enter Sub-options.

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 controller 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

To 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 --- Complete programming and save options

Setup all the parameters you need to change. When complete, move the throttle stick to the lowest (Down) Position. The controller will save all options and re-initialize in normal running mode so you can start your motor.

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

1.1	♪— For (2S-7S)-ESC 50A/80-LV/125A-LV	<u>Cell Type and Number of Cells</u>
• —	1 Short + 1 Long	Ni-MH / Ni-CD Auto Cell Count - 0.8V / Cell Cutoff Voltage
• —	1 Short + 2 Long	7S Li-Po (25.9V) – 21V Cutoff Voltage
• —	1 Short + 3 Long	6S Li-Po (22.2V) – 18V Cutoff Voltage
• —	1 Short + 4 Long	5S Li-Po (18.5V) – 15V Cutoff Voltage
• —	1 Short + 5 Long	4S Li-Po (14.8V) – 12V Cutoff Voltage
• —	1 Short + 6 Long	3S Li-Po (11.1V) – 9V Cutoff Voltage
• —	1 Short + 7 Long	2S Li-Po (7.4V) – 6V Cutoff Voltage