Speed Controller Programming Instructions
For ESC with simple options
(TurboJet 80A ESC)

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 Number of Cells
♬ - -	Music Tone + 2 Beeps	Option 2 Throttle Setting
♬ - - -	Music Tone + 3 Beeps	Option 3. Brake Setting / Throttletype (for Helicopters)
♬ - - - -	Music Tone + 4 Beeps	Option 4 Direction and Cutoff Type
♬ - - - - -	Music Tone + 5 Beeps	Option 5 Timing Mode

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 confirmation***. Then it 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 normal running mode so you can start your motor.

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

1. Cell Type and Number of Cells ♫ -	
* - 1 Short + 1 Long	NiCd Auto Cell Count-0.8V/Cell CutOffVoltage
* - - 1 Short + 2 Long	7S Li-Po (25.9V) 21 V CutoffVoltage
* - - - 1 Short + 3 Long	6S Li-Po (22.2V) 18V CutoffVoltage
* - - - - 1 Short + 4 Long	5S Li·Po (18.5V) 15V CutoffVoltage
* - - - - - 1 Short + 5 Long	4S Li-Po (14.8V) 12V CutoffVoltage
* - - - - - - 1 Short + 6 Long	3S Li-Po(11,1V) 9V CutoffVoltage
* - - - - - - - 1 Short + 7 Long	2S Li-Po (7.4V) 8V CutoffVoltage

2. Throttle Setting ♫ - -	
* * - 2 Short + 1 Long	Auto Throttle Range *)
* * - - 2 Short + 2 Long	1,1ms to 1,8ms
* * - - - 2 Short + 3 Long	Hard start *)
* * - - - - 2 Short + 4 Long	Soft start

3. Brake Setting (For normal Aircraft) ♫ - - -	
* * * - 3 Short + 1 Long	No Brake
* * * - - 3 Short + 2 Long	Soft Brake *)
* * * - - - 3 Short + 3 Long	Medium Brake
* * * - - - - 3 Short + 4 Long	Hard Brake

4. Direction and CutoffType ♫ - - - -	
* * * * - 4 Short + 1 Long	Clockwise Rotation *)
* * * * - - 4 Short + 2 Long	Counterclockwise Rotation
* * * * - - - 4 Short + 3 Long	Soft Cutoff
* * * * - - - - 4 Short + 4 Long	Hard Cutoff *)

5. Timing Mode Setting ♫ - - - - -	
* * * * * - 5 Short + 1 Long	1° - for 2-4 Pole Inrunner Motors *)
* * * * * - - 5 Short + 2 Long	7° - for 6-8 Pole Motors
* * * * * - - - 5 Short + 3 Long	15° - for 10-14 Pole Outrunner Motors
* * * * * - - - - 5 Short + 4 Long	30° - for 10-14 Pole High-RPM Outrunner Motors

6. PulseWidthModulation (PWM) Setting ♫- - - - - -	
* * * * * * - 6 Short + 1 Long	For low RPM and low pole count motors *)
* * * * * * - - 6 Short + 2 Long	For most Outrunner Motors

*) *is default setting*