

Manual for HiModel FLY Series Car ESCs (50A and 100A)

● IMPORTANT PRECAUTIONS:

- Please read the manual correctly before your operating.
- Do not connect oppositely the polarity between the battery pack and the Electronic Speed Controller(for short ESC).
Wrong connecting of polarity will damage the ESC.
- The working range of ESC do not exceed the corresponding voltage and current.
- Do not disassemble any electronic components of ESC, or else it will cause permanent damage or information losses.
- Do not allow any unqualified battery pack.
- Do not connect a degaussed motors.
- Do not use any substandard cable connector.
- Do not allow chemical agent and water onto the ESC.
- Do not take the battery away when the motor is rotating, or else it may cause high burst current to damage the ESC.
- The ESC should be in a position which allows good airflow and heat dissipation.
- Always disconnect the battery from the ESC when not in use.

● Features:

- Special design for car model, 4V-12V wide range of power supply voltage.
- It can be connected to a prog-box or computer through an USB wire so as to set the parameters of ESC conveniently.
- Cut-off voltage protection of per cell, can be changed by every 0.1V.
- Timing of motor ranges from 0° to 30°, can be changed by every degree.
- Three throttle curve in selection for differernt acceleration.
- Function of Reverse. The delay time of reverse can be set.
- Power Limit of Forward/ Reverse
- ABS Brake.
- Current limit: you have not to worry about over-load. If no limit, please operate it securely.
- Automatical detection the throttle route or can be set a fixed number by manual operation.
- When the signal loses for 3 seconds, the power will automatically be cut off.

● Functions:

1. REVERSE: **On/Off** for selection
2. CURRENT LIMIT: 20A, 30A,...100A, **NO Limit** for selection
3. Timing: can be adjusted from **0°** to 30°by every 1°.
4. FREQUENCY: **8KHz**, 16 KHz, 32 KHz for selection
5. ACCELERATION: Soft, **Common**, Hard for selection
6. ACCUMULATOR TYPE: NiCd/NiMh, Li-Ion/Li-Pol
7. NiCd/NiMH CUT-OFF voltage of per cell: **×0.05**, 0.4V, 0.5V, 0.6V, 0.7V, 0.8V, 0.9V, 1.0V. “×0.05” means that the Cut-off Voltage is 0.05 times less than the voltage you selected.
8. NUMBER OF CELLS: Li-ion /Li-Po, you can choose by yourself or **Automatic** detection for selection.
9. LiIo/Pol CUT-OFF Voltage of per cell: 2.0V, 2.1V, 2.2V, 2.3V, 2.4V, 2.5V, 2.6V, 2.7V, 2.8V, 2.9V, **3.0V**, 3.1V, 3.2V for selection
10. CUT-OFF TYPE: Soft Cut-off and **Hard Cut-off** for selelction
11. THROTTLE CURVER: Logarithmic, **Linear**, Exponential for selection
12. ABS Brake: **On/Off**
13. POWER LIMIT FOR.(Forward): **Off**, 75%, 50%, 25% for selection
14. POWER LIMIT REV.(Reverse): **Off**, 75%, 50%, 25% for selection
15. Delay time of start-up: **0.25S**, 0.5S, 0.75S, 1S, 1.5S, 2S, 3S, 5S for selection
16. FORWARD POINT: **Automatic**, 1.7ms, 1.8ms, 1.9ms, 2.0ms for selection
17. REVERSE POINT: **Automatic**, 1.0ms, 1.1ms, 1.2ms, 1.3ms for selection
18. TIMING MONITER: **On/OFF**. When you choose “on”, the approximate number of timing set can be observed when

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the motor starts up.

Note: All the above modes in red are Factory Default Setting.

Plug the JR connector into the throttle control channel of receiver.

- Switch “on” the transmitter and move the stick of throttle to the middle position (in the Forward/Reverse mode). Only in Forward mode, the throttle can be put in the lowest position.
- Connect the main power pack to ESC (pay attention to the polarity).
- The motor transmits a single or double beeps to confirm the correct connection. The ESC is ready to be operated and the motor can be switched on(ESC for Cars both in Forward/Reverse mode or Forward mode have Brake).
- A single beep announces the Forward mode, the double beep says that the brake is in the Forward/Reverse mode.
- If you didn’t hear the above “beep”, please disconnect the ESC to battery pack and check whether the JR connector is connected correctly to the throttle control channel of receiver, and whether the throttle stick is at the lowest position.
- The rotating direction of motor can be achieved by exchanging any two of three connecting wires between ESC and motor.
- **Option parameter assistant by transmitter**
 - The transmitter can only set one parameter of ESC at a time. If you want to set several parameters, please repeat the following procedures:
 - Plug the JR connector into the throttle control channel of receiver.
 - Switch “on” the transmitter and move the stick of throttle to the highest position.
 - Connect the main power pack to ESC (pay attention to the polarity).
 - Wait for 5 seconds, you will hear 4 beeps, that means it entered the programming mode.
 - And then you will hear 5 groups “♪” (a short beep), then 5 groups “♪♪”, then 5 groups “♪♪♪” and then 5 groups “♪♪♪♪”; and 5 groups “♪”, 5 groups “♪-(a long beep)♪”, 5 groups “♪♪”. And these sounds of groups will circulate continuously.
 - Each group of 5 sounds stands for a different parameter of ESC respectively.
 - You can put the throttle stick to the middle position during one group of 5 sounds, then the corresponding mode is saved.
 - Hear 1 “♪”(Forward mode) or “♪♪” (Forward/Reverse mode) , then you can exit the setting mode after saving the mode.
 - When the mode is saved, you can disconnect the ESC to the battery pack.
- **Forward mode and Forward/Reverse mode:** Hear the first “♪♪♪♪”, put the throttle stick to the middle position, the mode is changed from Forward mode into Forward/Reverse mode. If you want to change back, please repeat the above procedures, and vice versa.
- **Setting of timing:** Hear 5 groups “♪” or “♪♪” or “♪♪♪” or “♪♪♪♪” in the above circulation, put the throttle stick to the middle position.

Timing mode 1: 5 groups “♪”----2°(recommended for 2 poles and common motors)

Timing mode 2: 5 groups “♪♪”----8°(recommended for 4 poles motors)

Timing mode 3: 5 groups “♪♪♪”----15°(recommended for 8 poles motors)

Timing mode 4: 5 groups “♪♪♪♪”----30°(recommended for more than 10 poles motors and outrunner motors)

- **Setting of Frequency:** Hear 5 groups “♪-” or 5 “♪-♪” or 5 “♪♪” in the above circulation, put the throttle stick to the middle position.

Frequency 1: 5 groups “♪-”----8kHz (For common setting, the lowest efficiency losse)

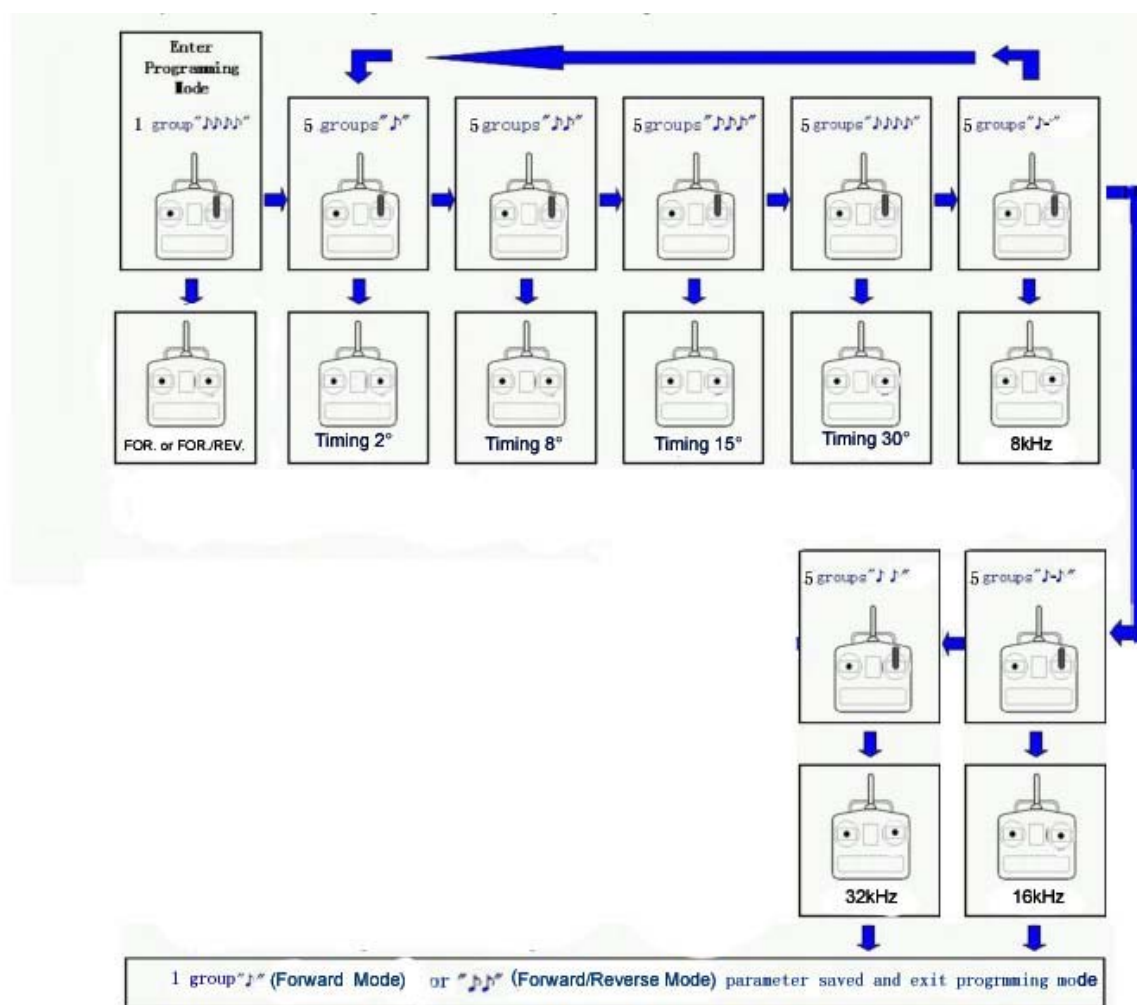
Frequency 2: 5 groups “♪-♪”----16kHz (recommended for the low “impedence” of motor)

Frequency 3: 5 groups “♪♪”----32kHz (recommended for the low electrical inductance of motor)

Note: when the timing of motor is saved, please adjust it on the ground before the flight.

【Digram for Option parameter assistant by transmitter】

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● Option parameter assistant by Prog-Box

- Connect ESC to motor.
- For the OPTO ESC, connect the Prog-Box to power pack of 4.8V-6V.
- Plug JR connector in a appropriate side to the matching position.
- Connect to the power pack to ESC what you have chosen.
- Choose the options you need according to the button of up/down/left/right in the LCD panel.
- You can hear one “beep” when each option is saved.
- Cut off the power pack when all the setting is saved, and the ESC can keep your setting.