

Programming Card User's Manual

SUNRISE MODEL PRO

Thank you for purchasing SunRise products! This programming card(or Prog-Card) is designed specially for the series of Brushless Electronics Speed Controller(for short BESC or ESC) model Pro. It is very easy to set all the parameters by the Prog-card. The setting of ESC becomes very simple because of no need to put the throttle stick up and down according to the sounds of ESC. Besides, the Prog-Card with small size is convenient to take and be fit for flight in the open air.

- **Operation of Prog-Card**

- Plug the six jumpers to the required position(For OPTO ESC (without Battery Eliminator Circuit),connect a battery of 4-6V to the ESC).
- Plug JR connector to the corresponding position in the Prog-Card(orange wire-signal, brown wire-cathode(-), red wire-anode(+)).
- Connect the motor to the ESC .
- Connect the power to the ESC.
- You will hear one “beep”, that means the setting is saved.
- Disconnect the power pack to ESC.

- **Operation of parameter assistant by Prog-Card**

- **Brake Type:**

Brake — No: Off

Brake — Medium: The brake is on and its middle effect is fit for gear drivers.

Brake — Hard: The intensity of brake becomes much higher.

- **Timing Mode:**

Timing — Automatic: automatic timing (recommended for all types of motors)

Timing — High: hard timing (recommended for more than 10 poles motors and outrunners motors)

Timing — Low: soft timing (recommended for motors of 2-8 poles motors and inrunner motors)

Note: When the timing mode is saved, please adjust the motor on the ground before the flight.

- **Acceleration:**

Acceleration — High: fast acceleration or deceleration of motor

Acceleration — Medium: acceleration or deceleration in middle speed

Acceleration — Soft: slow acceleration or deceleration

- **Battery type:**

Battery Type — Ni-XX: Ni-Cd & Ni-MH

Battery Type — Li-XX: Li-ion & Li-polymer

Battery Type — Li-Fe

- **Cut-off Voltage** — Cut-off Voltage of ESC

Cut-off Voltage — High: high cut-off voltage of battery type you selected

Cut-off Voltage — Medium: middle cut-off voltage of battery type you selected

Cut-off Voltage — Low: low cut-off voltage of battery type you selected

Cut-off Voltage mode	Li-ion & Li-polymer	Ni-Cd & Ni-MH	Li-Fe
High	3.2V	0.9V	2.8V
Medium	3.0V	0.8V	2.5V
Low	2.8V	0.6V	2.2V

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- **Cut-off Mode**

Cut-off Mode — Hard: the motor is fully off immediately as the voltage drops to the cut-off voltage(Be suitable for Glide models).

Cut-off Mode — Slow down: the motor turns off slowly by the power reduction of ESC.

- **Direction of motor rotation**

The direction of rotation of motor can be achieved by exchanging any two of three connecting wires between ESC and motor. If you don't want to change the wires between the ESC and motor, you can set the ESC to change the direction of rotation. If the direction of rotation is needed, when the jumper connector is put into the position, the ESC only receives the change of direction of motor rotation but the other changes from the Prog-Card. Continuously "beep" will be heard until the power pack will be cut off. When the direction of rotation is changed, please plug the jumper connector to the former position.