RF-120 ESC LED Status & Programming Mode Descriptions

LED Status Indicator	
GREEN SOLID	Neutral Throttle
GREEN & RED SOLID	Full Throttle
RED SOLID	Full Brake
GREEN BLINKING	Blinky mode (zero timing, zero boost)
GREEN & RED BLINKING	Sensor cable error
NO LED	Power ON with no signal from receiver
RED FLASHING	Incorrectly wired motor (A/B/C)

Use Boost and Turbo with extreme caution. Only make small adjustments at a time. Use a temp gun and make sure the motor does not exceed 160^0 Fahrenheit / 71^0 Celsius.

Function	Description
Operation Mode	Includes “Forward/Brake,” “Forward/Reverse,” and “Forward/Brake/Reverse” modes. **Recommended Settings:** Racing: Forward/Brake Play: Forward/Brake/Reverse
Initial Brake	The motor’s initial brake percentage when applying brakes. The higher the value the harder the brake will engage initially. **Recommended Settings:** If using drag brake set to Drag Brake.
Drag Brake	The amount of brake force that the ESC applies to the motor while coasting. **Recommended Setting:** Off-road Mod: 10-15% Off-Road Stock: 5-10% On-Road Mod: 15-20% On-Road Stock: 0-5%
Brake Strength	The maximum amount of brake the ESC can apply. Increase for stronger brakes, decrease for softer braking feel.
Voltage Cut Off	Helps prevent over-discharging of LiPo batteries, which may lead to battery failure. **Recommended Setting:** 3.2V/cell
Punch Profile	The punch feel of the throttle between the neutral position on the transmitter and the switch point. Note: lower settings will tend to lower motor temperature. **Recommended Setting:** Stock Classes: 12 Modified Off-Road: 1-5

Function	Description
	Modified On-Road: 3-8
Neutral Dead Band	Some radios may require wider dead band setting to avoid engaging brakes at neutral. Lower settings will provide more immediate throttle response.
Boost Timing	Timing to the motor when the start RPM is reached. The higher the boost, the motor power to the motor but also the more heat is generated.
Boost RPM	The RPM that the timing boost begins to engage. The lower the value the more punch, the higher the value the smoother the power delivery.
Boost ACC	Controls the boost slope. The higher the value the more quickly the timing boost will ramp up throughout the RPM range.
Turbo Timing	Usually used to add timing once the motor has already reached maximum RPM on the tracks longer straights. The higher the value, the motor power the motor will have at top speed giving more speed.
Turbo Slope	Controls how fast the ramp up the timing. A higher value will ramp the timi quickly giving a more punched feel and a lower value will smooth the delivery.
Turbo Delay	The delay time to start the turbo timing once the activation method is achieved.
Reverse Speed	Controls the maximum power delivered to the motor in reverse. The higher the value the faster the vehicle will be in reverse. **Recommended Setting:** 25%
Drive Frequency	Frequency the power FETs pulse at during part throttle application. A lower frequency setting will give a more aggressive throttle feel while higher frequencies will provide smoother part throttle feel. **Note:** setting the drive frequency to high values may increase ESC heat. **Recommended Setting:** Stock Classes: 2kHz Modified Off-Road: 16kHz Modified On-Road: 8kHz
Brake Frequency	Frequency the brake FETs pulse at during brake application. A lower frequency setting will give a more progressive braking feel while higher frequencies will provide more initial brake bite. **Recommended Setting:** This is dependant on many factors and should be adjusted to suit personal needs.
Temperature Set	When ESC reaches selected temperature it will reduce power to protect the ESC from failure. **Recommended Setting:** 176F / 80C
Reverse Rotation	Allows the motor rotation to be set in reverse for vehicles that require that feature.
Restore Default	Reset all setting to factory default