

REEDY POWER

SC600-BL2

OWNER'S MANUAL

#27018

INTRODUCTION

Congratulations on your purchase of the Reedy SC600-BL2 Brushless Electronic Speed Control (ESC). The latest electronics technology along with the design and engineering experience that is responsible for 30 World Championship titles has been incorporated into its design.

The Reedy SC600-BL2 Brushless ESC is fully programmable to extract maximum performance and waterproof for improved durability. Its robust design installs in most 1/10 vehicles including buggies, stadium trucks, 2wd/4wd short course trucks, monster trucks and touring cars. When paired with Reedy sensorless brushless motors, a potent combination of power and efficiency is created resulting in quick acceleration, high top speeds, generous run times, and more fun!

Please read the following instructions before installing and operating your ESC.

FEATURES

- Programmable performance functions
- LiPo cell auto-detection
- Fully proportional brakes
- Durable case with aluminum heat sink
- Pre-wired cooling fan
- Waterproof
- Heavy duty silicone wires
- Low-resistance T-plug connector
- 3.5mm motor connectors

SPECIFICATIONS

	SC600-BL2
Cells	2-3S LiPo
Suggested Applications	1/10 buggy, truck, touring car
Continuous Current	60A
Brakes	Proportional
Motor Limit	2S Lipo 6000kV / 3S LiPo 3500kV
Reversible	Yes, F/B and F/B/R modes
Low Voltage Cutoff	Yes w/Cell Auto-Detect
Dimensions (mm)	38.5 x 36.9 x 19.5
Weight (g)	98.2
Power Wires	13-Gauge Silicone
Programming Method	SET Button, LED Programmer
Connector	Battery/T-plug, Motor/3.5mm sockets

SAFETY PRECAUTIONS AND WARNINGS

This product is a sophisticated hobby product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or property. This product is not intended to be used by children without direct adult supervision. It is essential to read and follow all instructions and warnings found in this manual prior to installation, set up, and use, for the product to operate properly and to avoid damage or injury.

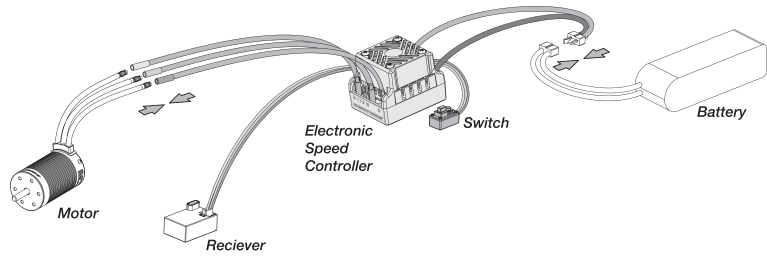
WARNINGS

- **Never** let children use this product without the strict supervision of an adult.
- **Always** power ON your transmitter before the ESC and power OFF the ESC before the transmitter.
- **Never** leave the ESC unattended while powered ON.
- **Always** double-check that wires and connections are well insulated before connecting the ESC to the battery.
- **Never** apply reverse voltage. The ESC will be permanently damaged.
- **Always** remove the cooling fan from ESC before exposing the vehicle to water.
- **Never** allow the external temperature of the ESC to exceed 90°C/194°F. Higher temperatures may destroy the ESC and motor.
- **Always** use caution when handling your ESC as it may become extremely hot during use.
- **Always** unplug the battery and stop using the ESC if it begins to act abnormally.
- **Always** unplug the battery from the ESC when the vehicle is not in use. The ESC will continue to consume current even if the ESC is turned off which will completely discharge the battery resulting in permanent damage to the battery.

IMPORTANT ESCs that display evidence of reverse voltage, failure to unplug the battery after use, or internal/external modifications to wiring are not covered under warranty.

INSTALLATION

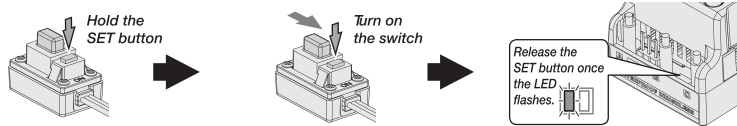
- Mount your ESC and switch securely using high quality double-sided tape.
- Install your ESC in a position that allows easy access to all connectors.
- Plug the ESC's receiver wire into the receiver (refer to radio manufacturer's manual)
- Connect the three motor leads exiting the ESC to the three leads exiting your motor. If the motor runs backwards when giving it forward throttle, reverse any two motor leads. The motor will now run the desired direction.
- Plug the battery into the ESC, noting + and - connection to prevent reverse polarity.
- Always power ON your transmitter before the ESC and power OFF the ESC before the transmitter.



THROTTLE CALIBRATION

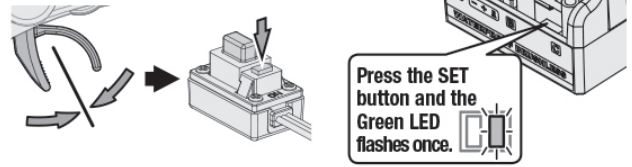
Each time you install a new ESC, a new transmitter, or after changing the neutral position, ATV or EPA parameters on your radio, the throttle range must be re-calibrated. The ESC will not work properly until it has been calibrated. ESCs that came installed in an RTR vehicle have already been calibrated and are ready to use.

1. Set your radio's throttle and brake EPA/ATV to 100% and your throttle trim to neutral, and then turn on your transmitter.
2. Press and hold the SET button while powering ON the ESC. When the LED begins to flash and the motor beeps, release the SET button immediately. If the SET button is not released within three seconds, the ESC will enter Programming Mode and the process must be started again.

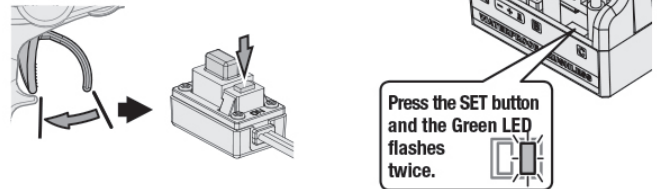


3. With the throttle trigger at neutral, press the SET button to save the neutral position verified by one flash of the LED and one motor beep.
4. Move the throttle trigger to the full throttle position and press the SET button to save the full throttle position verified by two flashes of the LED and two motor beeps.
5. Move the throttle trigger to the maximum brake position and press the SET button to save the maximum brake position verified by three flashes of the LED and three motor beeps.
6. Return the throttle trigger to the neutral position. The ESC will automatically exit the calibration procedure and the ESC is ready to use.

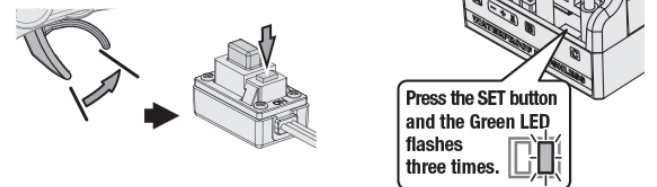
Move the throttle trigger to the neutral position and press the SET button.



Move the throttle trigger to the end position of forward and press the SET button.



Move the throttle trigger to the end position of backward and press the SET button.



PROGRAMMABLE ITEMS

	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7	Value 8
1. Running Mode	For/Brk	For/Brk/Rev*	-	-	-	-	-	-
2. Drag Brake Force	0%*	5%	10%	15%	20%	25%	30%	40%
3. Low Voltage Cutoff	-	-	-	-	-	3.4V/cell*	-	-
4. Punch Control	Level 1	Level 2	Level 3*	Level 4	-	-	-	-
5. Max Brake Force	25%	50%	75%*	100%	-	-	-	-

*Default setting

1. Running Mode

Option 1: Forward/Brake – Reverse is disabled leaving only forward and brake functions typical for competition use.

Option 2: Forward/Brake/Reverse – Reverse is enabled. To use reverse, push the trigger to the full brake position. When the vehicle is at a standstill, return the trigger to neutral, and then push the trigger towards brakes to move the vehicle in reverse.

2. Drag Brake Force

Drag Brake is the automatic braking force generated by the motor when the throttle trigger is returned to neutral position. Drag brake will create heat so select the minimum value necessary.

3. Low Voltage Cutoff

Use to prevent excessive discharge of lithium batteries which can damage them permanently. The ESC monitors battery voltage continuously. If the voltage falls below the 3.4V/cell threshold, power output will be reduced. After a few seconds, power is completely cut off. This setting is not adjustable.

4. Punch Control

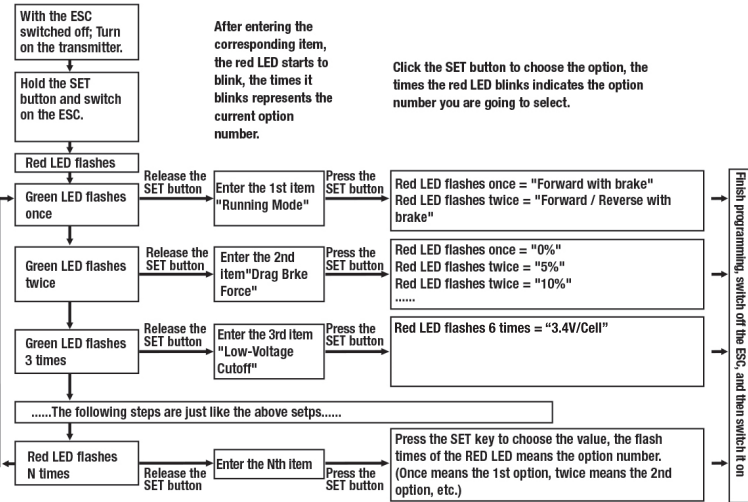
Change throttle response depending on the vehicle be used and the surface being driven on. The lower this value, the slower the response. The higher this value, the faster the response. Determining the best setting results in better vehicle control when power is applied.

5. Max. Brake Force

Adjust the percentage of available braking power when full brake is applied. Higher values will shorten increase brake strength but can be hard on the vehicle's gears. Only use as much as necessary to stop the vehicle in a safe fashion.

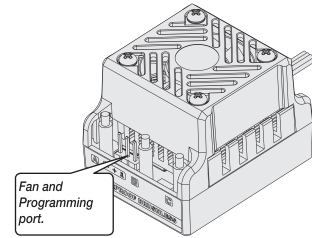
ESC PROGRAMMING

1. Using the SET Button



2. Using BL2 Programmer

The BL2 Programmer connects to the ESC via the fan port. While noting the proper polarity, first plug the included 3-pin cable into the programmer. Then connect the other end to the ESC fan port. Power ON the ESC and after a few seconds, the current ESC settings will be displayed. Use the "ITEM" button to scroll through the settings and use the "VALUE" button to change the setting. Once all selections have been made, press the "OK" button to save the new setting(s).



PROTECTION FUNCTIONS

LiPo Low Voltage Cutoff Protection

If the voltage of the LiPo battery falls below the minimum threshold for more than two seconds, the ESC will cut off the output power and the LED will blink red.

Thermal Protection

If the temperature of the ESC exceeds the maximum threshold for more than five seconds, the ESC will cut off the output power and the LED will flash green.

Throttle Signal Loss Protection

If the throttle signal is lost for more than 0.2 seconds, the ESC will cut off the output power.

ALERTS

Abnormal Input Voltage

If the input voltage is below the normal range when powered ON, the ESC will emit a "beep-beep-" tone and flashing LED.

Abnormal Throttle Signal

When the ESC does not detect a normal throttle signal, the LED will flash quickly.

WARRANTY

Your Reedy Electronic Speed Control is warranted to the original purchaser for 30 days from the date of purchase, verified by the sales receipt, against defects in material and workmanship. Product that has been mishandled, abused, used incorrectly, used for an application other than intended or damaged by the user is not covered under warranty. Associated Electrics Inc. is not liable for any loss or damage, whether direct or indirect, incidental or consequential, or from any special situation, arising from the use, misuse, or abuse of this product.

TROUBLESHOOTING

Problem	Cause	Solution
After powering ON the ESC, the motor does not work, and no sound is emitted	The connections between battery pack and ESC are incorrect	Check the power connections Replace the connectors
After powering ON the ESC, the motor does not work but emits a "beep-beep" and flashing LED alert tone at one second intervals	Input voltage is too high or too low	Check the voltage of the battery pack
After powering ON the ESC, the motor does not work but emits a "beep" alert tone at one second intervals and the red LED is illuminated	Abnormal throttle signal	Be sure the transmitter is working properly and that the batteries are charged Check the receiver plug connection
After powering ON the ESC, the motor does not work and the red LED blinks very quickly	The neutral point of the throttle channel has changed	Re-calibrate the throttle range of the ESC Adjust the throttle trim to change the neutral point
The motor runs in the opposite direction	The wire connections between the ESC and the motor need to be changed	Swap any two wire connections between the ESC and the motor
The motor suddenly stops running while driving the vehicle	The throttle signal from the transmitter has been lost	Be sure the transmitter is working properly and that the batteries are charged
	The ESC has entered Low Voltage Protection mode	Be sure that the ESC is plugged into the receiver correctly
	The ESC has entered Thermal Protection mode	Re-charge the battery/install a fully charged battery Allow the ESC to cool down
Intermittent operation or random stopping/starting	Poor connections	Verify that the battery pack, receiver, and motor connections are correct
	Strong electromagnetic interference	Move to another area to operate the vehicle or wait until the interference has subsided
The BL2 Programmer displays three short lines (---) when connected to the ESC	Connected to RX cable instead of fan port	Connect the BL2 Programmer to the fan port.
ESC calibration cannot be completed	Poor throttle signal	Check the RX cable receiver connection



Associated Electrics, Inc. declares that this product complies with the essential requirements and other relevant provisions of the European directive 2014/30/EU.



The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product's end of life. Do not dispose of these products as unsorted municipal waste.



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