

ARRMA ARA390264

ARRMA BLX120 Brushless 4S ESC Instruction Manual

Model: ARA390264 | Brand: ARRMA

1. SAFETY INFORMATION

Please read the **ENTIRE** instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property, and cause serious injury.

This is a sophisticated hobby product. 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 other property. This product is not intended for use by children.

Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. This manual contains instructions for safety, operation, and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

2. PRODUCT OVERVIEW

The ARRMA BLX120 120A waterproof Electronic Speed Controller (ESC) is designed to provide consistent power control for your RC vehicle. It is compatible with 3S and 4S LiPo battery configurations.

Key Features:

- 120A continuous current capability.
- Waterproof design for all-weather operation.
- Equipped with super-reliable EC5 connectors.
- Built-in cooling fan for reduced heat during intense use.
- Over-voltage protection.
- Two-stage LiPo cut-off for enhanced cell management.
- Fitted with 12AWG high-quality wires.
- Integrated 6V BEC (Battery Eliminator Circuit) unit.
- Three-mode throttle profile: Forward/Reverse/Brake.



Figure 2.1: The ARRMA BLX120 Brushless 4S ESC, showing its main body, cooling fan, and attached power switch.

3. WHAT'S IN THE BOX

Upon opening the product packaging, verify that all components are present and undamaged. The package should contain:

- 1 x BLX120 Brushless 4S ESC
- 1 x Loop Connector

4. SETUP

Follow these steps to properly install and connect your BLX120 ESC into your RC vehicle:

1. **Mounting the ESC:** Securely mount the BLX120 ESC in your vehicle's chassis using appropriate mounting tape or screws. Ensure it is in a location that allows for adequate airflow to the cooling fan.
2. **Motor Connection:** Connect the three motor wires from the ESC to your brushless motor. The BLX120 uses 4mm bullet connectors. Ensure the connections are firm and correct for proper motor rotation. If the motor spins in the wrong direction, swap any two of the three motor wires.
3. **Receiver Connection:** Plug the ESC's receiver wire (typically a single servo-style connector) into the throttle channel (usually channel 2) of your RC receiver.
4. **Battery Connection:** Connect your 3S or 4S LiPo battery to the ESC's EC5 battery connectors. The BLX120 is equipped with two EC5 connectors for battery input. Ensure correct polarity.
5. **Power Switch:** Mount the power switch in an accessible location on your vehicle.
6. **Initial Calibration (if required by your radio system):** Most ESCs require a one-time calibration with your radio transmitter to set the neutral, full throttle, and full brake points. Refer to your radio system's manual for specific calibration procedures.

5. OPERATING INSTRUCTIONS

The BLX120 ESC offers a versatile throttle profile and built-in protections for reliable operation:

- **Throttle Profile:** The ESC supports a three-mode throttle profile: Forward, Reverse, and Brake. This allows for precise control of your vehicle's movement.
- **LiPo Cut-Off:** The two-stage LiPo cut-off feature protects your LiPo batteries from over-discharge, which can cause permanent damage. The ESC will reduce power or cut off completely when the battery voltage drops below a safe level (3.4V per cell).
- **Cooling Fan:** The integrated cooling fan automatically activates to dissipate heat from the ESC during operation, especially under heavy loads, maintaining optimal performance and longevity.
- **Over-Voltage Protection:** The ESC is designed with over-voltage protection, activating if the input voltage exceeds 17.2V, safeguarding the unit from electrical damage.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your BLX120 ESC:

- **Cleaning:** After each use, especially in dusty or wet conditions, gently clean the ESC to remove dirt, dust, and moisture. Use a soft brush or compressed air. Avoid using solvents or harsh chemicals.
- **Connection Check:** Periodically inspect all electrical connections (battery, motor, receiver) for signs of wear, corrosion, or looseness. Ensure EC5 connectors are clean and securely seated.
- **Cooling Fan:** Ensure the cooling fan is free from obstructions and spins freely. Clean any debris that may accumulate on or around the fan blades.
- **Wire Inspection:** Check the 12AWG wires for any nicks, cuts, or exposed insulation. Repair or replace damaged wires immediately to prevent short circuits.
- **Storage:** When not in use, store the ESC in a dry, cool place away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

If you encounter issues with your BLX120 ESC, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
ESC blinks red and does not respond.	Low battery voltage (LiPo cut-off activated) or calibration issue.	Charge your battery. Re-calibrate the ESC with your radio transmitter. Check battery connections.
Motor does not spin or stutters.	Loose motor connections, incorrect motor wiring, or motor damage.	Check all three motor wire connections. Ensure they are firmly seated. If motor direction is wrong, swap any two motor wires. Inspect motor for damage.
ESC overheats and shuts down.	Excessive load, insufficient cooling, or incorrect gearing.	Reduce load on the vehicle. Ensure cooling fan is clear and functioning. Check motor and ESC temperatures. Adjust gearing if necessary.
No power to the receiver/servos.	BEC failure or loose receiver connection.	Check the ESC's receiver wire connection to the receiver. Ensure the ESC is powered on. If the issue persists, the BEC may be faulty.

If you are unable to resolve an issue using the troubleshooting guide, please contact ARRMA customer support for further assistance.

8. TECHNICAL SPECIFICATIONS

Detailed specifications for the ARRMA BLX120 Brushless 4S ESC:

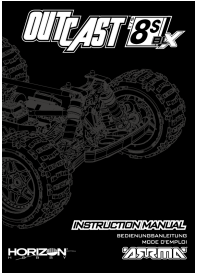




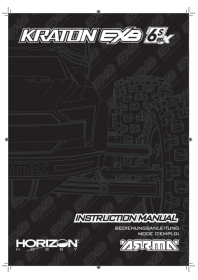
Specification	Value
Battery Usage	3S LiPo (11.1V) or 4S LiPo (14.8V)
Low Voltage Cut-Off (LVC)	3.4V per cell
Thermal Protection Temperature	125°C / 257°F
Over-Voltage Protection	Over 17.2V
BEC Voltage	6V
BEC Current	3A
ESC Length	43mm / 1.69"
ESC Height	34mm / 1.34"
ESC Width (Including hold-down tabs)	54.5mm / 2.15"
ESC Weight	150g / 5.3 oz
Receiver Wire Length	170mm / 6.70"
Battery Wire Length	225mm / 8.86"
Motor Wire Length (Including Connector)	200mm / 7.87"
Switch Length	21mm / 0.83"
Switch Width	13.3mm / 0.52"
Switch Height	16mm / 0.63"
Motor Bullet Connector Size	4mm / 0.16"
Wire Specifications	12AWG
ESC Battery Connector Type	2xEC5
Product Dimensions	5.5 x 3.5 x 2 inches
Item Weight	3.84 ounces

9. WARRANTY AND SUPPORT

For warranty information and technical support regarding your ARRMA BLX120 Brushless 4S ESC, please refer to the official ARRMA website or contact their customer service directly. It is important to retain your proof of purchase for any warranty claims.

You can find more information and contact details by visiting the official ARRMA store:[ARRMA Store on Amazon](#).

Related Documents - ARA390264

	<p>ARRMA Outcast 8S 1/5 Scale RC Monster Truck Instruction Manual</p> <p>This comprehensive instruction manual provides detailed information for the ARRMA Outcast 8S 1/5 scale RC monster truck. It covers safety precautions, operation, maintenance, troubleshooting, and warranty information, ensuring users can safely and effectively operate and maintain their vehicle.</p>
	<p>ARRMA 4x4 4S BLX Vehicle: Get Started Guide</p> <p>This guide provides essential information for getting started with your ARRMA 4x4 4S BLX vehicle, including what's included, safety precautions, and basic operation. Learn how to safely operate and maintain your high-performance RC vehicle.</p>
	<p>ARRMA Typhon GROM EX: Get Started Guide</p> <p>A comprehensive guide to getting started with the ARRMA Typhon GROM EX RC buggy, covering what's included, safety precautions, operation, and maintenance. Features Spektrum radio gear and LiPo battery.</p>
	<p>ARRMA GORGON™ 2WD RTR Monster Truck: Get Started Guide & Manual</p> <p>Comprehensive guide for the ARRMA GORGON™ 2WD RTR Monster Truck, covering setup, operation, safety precautions, wet conditions maintenance, battery charging, troubleshooting, and warranty information. Includes Spektrum™ radio gear and smart battery system.</p>
	<p>ARRMA BIG ROCK 223S BLX 1/10 Scale 4X4 Monster Truck RTR - High-Performance RC Vehicle</p> <p>Discover the ARRMA BIG ROCK 223S BLX, a 1/10 scale 4X4 brushless monster truck RTR. Experience thrilling speed up to 50+ mph, versatile 2S/3S power, and advanced features like Dynamic Stability Control. Perfect for bashers of all levels.</p>
	<p>ARRMA KRATON 6S EXB RTR User Manual: Setup, Operation, and Maintenance</p> <p>Comprehensive user manual for the ARRMA KRATON 6S EXB RTR remote control monster truck. Includes setup guide, operating instructions, maintenance schedule, troubleshooting, and warranty information.</p>

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James Ambrose Vergleichstabelle Arrma Nummer zu Horizonhobby BLX 3668 2400kV 4 POLE 4S

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SYSTEMS

Available May 2019

OUTCAST 4X4 4S BLX STUNT TRUCK: RTR

ARA102692

Big OUTCAST performance — 4S-capable brushless power and 50+ mph speed!



The OUTCAST™ 4X4 4S BLX joins the ARRMA® brushless lineup in the perfect middle ground between 6S BLX vehicles and all-out 6S BLX machines. It delivers affordable, no-holds-barred stunt performance for brushed bashers looking to upgrade and anyone who wants ARRMA® toughness and 50+ mph speed!

At home on trails, over muddy courses, and at skate parks and race tracks, the OUTCAST™ 4X4 4S BLX shares the low, lean look of its 6S BLX forerunner in a scaled-down size. Power comes from the ARRMA® 4S-capable BLX320 brushless system — which features a 2400kv brushless motor and ESC fitted with dual EC3™ connectors for using two 2S LiPo battery packs. Differential gears inside the front and rear gearboxes are made of durable metal.

Building from the successful 6S BLX platform, ARRMA® designers stretched the track width for the OUTCAST™ 4X4 4S BLX by widening the suspension and drive shafts. A center brace added along the length of the chassis provides maximum durability and can be removed in just four quick steps when it's time to perform maintenance. The molded 50mm lip bars should include top-loading springs and molded-in shock rod ends to prevent spring loss. The large, tough wheel hubs and durable 17mm wheel nuts hold standard 8.8" wheels, outfitted with low-profile BACKLIP tires. The wing and bumpers follow the look of the OUTCAST™ 6S BLX, with new wing and body mounts.

The ready-to-run package comes complete with a Spektrum™ 2712T 2.4GHz radio with SRX200 waterproof receiver and an ARRMA® AOS 13M metal gear servo. Add your choice of battery, charger, and "AA" transmitter batteries, and start making your own RC mark!

HORIZON

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Andrew Ziegler Big OUTCAST performance — 4S capable brushless power and 50At home on trails over muddy courses at skate parks race tracks the OUTCAST™ 4X4 BLX shares low lean look of its 6S forerunner in a 08 ARA102692 INFO E hobbytime ch index dispatch attachments getfile attachment id 13 |||

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