

Nathaniel SYR09

Nathaniel SYR09 Electric Bicycle User Manual

Model: SYR09

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your Nathaniel SYR09 Electric Bicycle. Please read this manual thoroughly before your first ride and keep it for future reference. Understanding the features and functions of your e-bike will ensure a safe and enjoyable riding experience.

2. SAFETY INFORMATION

Your safety is paramount. Always adhere to local traffic laws and regulations. Wear a helmet and appropriate safety gear. Perform a pre-ride inspection before each use.

- **Helmet Use:** Always wear a certified bicycle helmet.
- **Pre-Ride Check:** Before each ride, inspect tires for proper inflation and damage, check brake function, ensure all quick releases are secure, and verify battery charge level.
- **Traffic Laws:** Obey all local traffic laws, signs, and signals. Ride predictably and signal turns.
- **Weather Conditions:** Exercise caution when riding in wet conditions, low light, or adverse weather. Reduce speed and increase braking distance.
- **Weight Limit:** Do not exceed the maximum weight capacity specified for the bicycle.
- **Children:** This e-bike is designed for adult use. Do not allow children to operate it.

3. PRODUCT OVERVIEW

The Nathaniel SYR09 is an all-terrain electric bicycle featuring a robust aluminum alloy frame, dual motors, and 26x4.0 inch fat tires. It is equipped with a 48V 20Ah detachable battery and a full suspension system for enhanced comfort and performance across various terrains.



Figure 3.1: Nathaniel SYR09 Electric Bicycle, showcasing its overall design and fat tires.

Key Features:

- **Frame:** Lightweight aluminum alloy frame designed to reduce vibrations.
- **Tires:** 26 x 4.0 inch wide integrated tread tires provide strong grip and stability on various surfaces.
- **Battery:** Removable 48V 20Ah lithium battery with anti-theft protection, overcharge, over-discharge, overcurrent, short-circuit, and overheat protection. Supports direct charging on the bike or separate charging.
- **Motor:** Dual 48V high-speed brushless motors with a star gear design for low energy consumption, quiet operation, and improved torque and energy efficiency.
- **Display:** 3.5-inch full-color LCD screen providing real-time vehicle status, fault indications, speed, battery life, and customizable password for security.
- **Shock Absorbers:** Dual front and rear shock absorbers. The front fork features lockable dual shock absorption, and the rear shock absorber allows rebound speed adjustment for a smooth ride on diverse terrains.
- **Drive Modes:** Dual drive modes allow simultaneous or independent operation of front and rear motors, offering flexibility for various riding conditions.
- **Gears:** 7-speed transmission system for precise shifting.
- **Brakes:** Hydraulic oil disc brakes for superior stopping power.

Dual-motor Drive



Figure 3.2: Illustration of the dual-motor drive system on the Nathaniel SYR09 Electric Bicycle.

48V 20Ah Detachable Battery



Figure 3.3: The 48V 20Ah detachable battery of the Nathaniel SYR09, highlighting its comprehensive protection features.

4. SETUP

Upon receiving your Nathaniel SYR09 Electric Bicycle, some assembly and initial preparation are required before your first ride.

4.1 Unpacking and Initial Assembly

Carefully remove all components from the packaging. The bicycle may require attachment of the front wheel, handlebars, pedals, seat post, and any included accessories such as fenders, rear rack, and cup holder. Use the provided installation tools for assembly.

Give gifts after following the store



Lock



Pump



Fender



Installation tools



Rear rack



Cup holder

Some gifts have been installed, while others require self installation. Gifts cannot be specified, and pictures are for reference only

Figure 4.1: Accessories included with the Nathaniel SYR09 Electric Bicycle, some requiring self-installation.

4.2 Battery Installation and Initial Charge

1. Ensure the battery is securely installed in the frame. Use the provided key to lock it in place for security.
2. Before the first ride, fully charge the battery. Connect the charger to a standard power outlet and then to the bicycle's charging port. The battery can be charged while installed on the bike or removed for separate charging.
3. Monitor the charging indicator on the charger or display. Disconnect the charger once the battery is fully charged to prevent overcharging.

4.3 Tire Inflation

Inflate the 26x4.0 inch fat tires to the recommended pressure indicated on the tire sidewall. Proper tire pressure is crucial for safety, performance, and battery range.

5. OPERATING INSTRUCTIONS

Familiarize yourself with the controls and functions of your Nathaniel SYR09 Electric Bicycle before riding.

5.1 Powering On/Off and Display Functions

1. **Power On:** Press and hold the power button on the 3.5-inch LCD display to turn on the e-bike system.
2. **Display Information:** The LCD screen shows speed, battery level, riding mode, distance traveled, and provides real-time fault indications.
3. **Password Protection:** The display supports a customizable password for added security. Refer to the detailed display manual for setting and managing the password.
4. **Power Off:** Press and hold the power button again to turn off the system.

5.2 Riding Modes and Dual Motor Operation

The SYR09 offers multiple riding modes and flexible motor control:

- **Pedal Assist Mode:** The motor provides assistance as you pedal. Adjust the assist level via the display controls.
- **Throttle Mode:** Use the throttle to engage the motor without pedaling.
- **Dual Drive Modes:** You can select to use the front motor, the rear motor, or both simultaneously. This allows for optimized power delivery based on terrain and riding preference. Consult the display controls for switching between these drive options.

5.3 Gear Shifting and Braking

- **Gear Shifting:** Use the 7-speed shifter to change gears according to terrain and desired pedaling effort. Shift smoothly to avoid strain on the drivetrain.
- **Braking:** The hydraulic disc brakes provide strong and reliable stopping power. Apply both front and rear brakes simultaneously for controlled deceleration. Avoid sudden, hard braking, especially at high speeds or on loose surfaces.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your Nathaniel SYR09 Electric Bicycle.

6.1 Battery Care

- **Charging:** Charge the battery regularly, even if not in use, to maintain its health. Avoid completely draining the battery.
- **Storage:** Store the battery in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, charge it to 50-70% every few months.
- **Cleaning:** Keep battery contacts clean and dry.

6.2 Tire and Wheel Maintenance

- **Tire Pressure:** Check tire pressure before each ride and inflate to the recommended PSI.
- **Tire Condition:** Inspect tires for cuts, punctures, or excessive wear. Replace worn tires promptly.
- **Wheel Trueness:** Periodically check wheels for trueness and spoke tension.

6.3 Brake System

- **Brake Pad Wear:** Regularly inspect brake pads for wear. Replace them before they are completely worn down.
- **Brake Fluid:** For hydraulic disc brakes, check brake fluid levels and bleed the system if necessary. This should ideally be done by a qualified bicycle mechanic.
- **Brake Levers:** Ensure brake levers operate smoothly and return to their original position.

6.4 Drivetrain and Suspension

- **Chain Lubrication:** Keep the chain clean and lubricated for smooth shifting and to prevent wear.
- **Suspension:** Periodically check the front and rear suspension components for proper function and adjust as needed. Ensure the lockable front fork operates correctly.

6.5 General Cleaning

Clean your e-bike regularly with a damp cloth and mild soap. Avoid using high-pressure washers directly on electrical components, bearings, or seals.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Nathaniel SYR09 Electric Bicycle.

Problem	Possible Cause	Solution
E-bike does not power on.	Battery not charged, battery not properly installed, loose electrical connection, power button issue.	Check battery charge, ensure battery is securely locked, inspect connections, try pressing power button firmly.
Motor not assisting.	Low battery, pedal assist level set to zero, brake levers engaged, motor connection issue.	Charge battery, increase pedal assist level on display, ensure brake levers are fully released, check motor cable connections.
Short battery range.	Under-inflated tires, riding in high assist modes, frequent stops/starts, cold weather, battery degradation.	Inflate tires to correct pressure, use lower assist modes, ride smoothly, store battery properly, consider battery replacement if significantly degraded.
Brakes feel weak or noisy.	Worn brake pads, contaminated rotors, air in hydraulic lines (for hydraulic brakes), loose caliper.	Inspect and replace brake pads, clean rotors, bleed hydraulic brakes (professional service recommended), tighten caliper bolts.
Display shows an error code.	Specific system fault.	Refer to the detailed display manual for error code meanings and solutions. If unable to resolve, contact customer support.

For issues not listed here or if solutions do not resolve the problem, please contact Nathaniel customer support.

8. SPECIFICATIONS

Detailed technical specifications for the Nathaniel SYR09 Electric Bicycle.

Feature	Specification
Model Number	SYR09
Frame Material	Aluminum Alloy
Motor Type	Dual High-Speed Brushless Motors (48V)
Battery	48V 20Ah Removable Lithium Battery
Tire Size	26 x 4.0 inches Fat Tires
Brake Type	Hydraulic Disc Brakes
Gears	7-Speed Transmission
Suspension	Full Suspension (Lockable Front Fork, Adjustable Rear Shock)
Display	3.5-inch Full-Color LCD
Suitable Cycling Height	163-200 cm
Bike Weight (including battery)	38.5 kg
Bicycle Length	196 cm
Bicycle Height	114 cm
Seat Height (min/max)	82 cm / 94 cm
Included Components	Fender, Cup Holder, Pump, Rear Rack, Lock

Adjustable soft tail
Max speed 55km/h



Figure 8.1: Nathaniel SYR09 Electric Bicycle, highlighting its adjustable soft tail suspension and maximum speed capability.

Product size

Suitable for cycling height: 163-200cm

Bike weight(including battery): 38.5kg



Figure 8.2: Product size diagram for the Nathaniel SYR09 Electric Bicycle, showing key dimensions.

9. WARRANTY AND SUPPORT

For warranty information, specific terms and conditions, or technical support, please refer to the documentation provided with your purchase or contact Nathaniel customer service directly. Keep your proof of purchase for warranty claims.

You can typically find support contact information on the manufacturer's official website or through the retailer where the product was purchased.