

BIRCH

ELECTRIC BICYCLE

User Manual

Read Carefully Before Use
Keep for Future Reference

CONTACT US

Thank you for choosing our products! If you have any questions or comments, contact us at support@birchhunters.com and we'll resolve your issue ASAP!

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code.



BIRCH

Safety First

When used as instructed, this e-bike is safe for you and other traffic participants. For more **Safety Information**, see **Pages 33–38**.

Disclaimer

Read this disclaimer carefully **BEFORE** assembly, use, and maintenance.

1. As-Is

This Birch product is sold 'as is' and without any express or implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

2. Product Modifications

Any modifications or alterations to Birch products void any warranties and may result in damage or injury. Birch is not liable for any damages resulting from such modifications or alterations.

3. Compliance with Laws

Customers shall be liable for ensuring that the use of Birch products complies with all applicable laws and regulations in their respective jurisdictions. Birch assumes no responsibility for any violations of laws or regulations resulting from the use of Birch products.

4. Correct Use

Always use Birch products only as directed in the accompanying manuals. Failure to follow instructions may result in injury or damage.

Always ensure the assembly, operation, maintenance, or repair of Birch products is carried out by a competent person.

Always make necessary maintenance throughout Birch products' lifecycles. You have the liability to keep the products workable as intended.

Always wear appropriate protective gear when handling issues that pose potential safety hazards.

5. Third-Party Products

Birch is not be liable for any damages or losses resulting from the use of third-party products in conjunction with our products. Customers shall refer to the third-party's guidelines and/or warranties (if any) for any third-party products used.

6. Limitation of Liability

Birch is not be liable for any direct, indirect, punitive, incidental, special, or consequential damages to property or life, whatsoever arising out of or connected with the use or misuse of Birch products. In no event shall Birch's liability exceed the value of the products sold.

This disclaimer states the entire obligation of Birch with respect to the products. If any part of this disclaimer is determined to be void, invalid, unenforceable, or illegal, including but not limited to the warranty disclaimers, liability disclaimers, and liability limitations set forth above, the invalid or unenforceable provision will be deemed superseded by a valid and enforceable provision that most closely matches the intent of the original provision and the remainder of the agreement shall remain in full force and effect.

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1. Product Diagram

1.1 Overview



1.2 Package List

Important

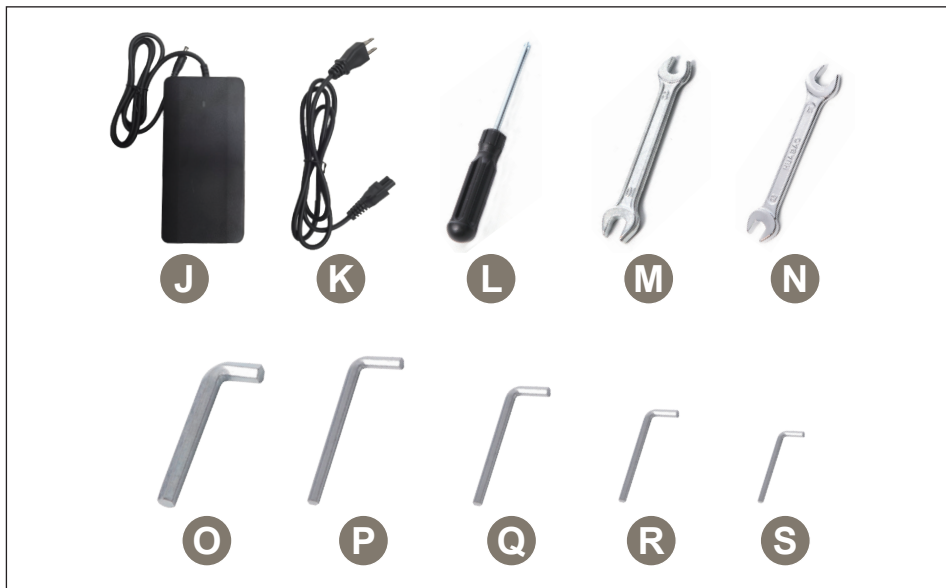
- Upon receiving your new e-bike, carefully unpack all these items and check that nothing is missing or has been damaged in transit.
- If necessary, ask your local dealer or contractor for identical supplements or replacements.
- Storing your original packaging through the warranty period will speed returns if any are needed.

Main Parts

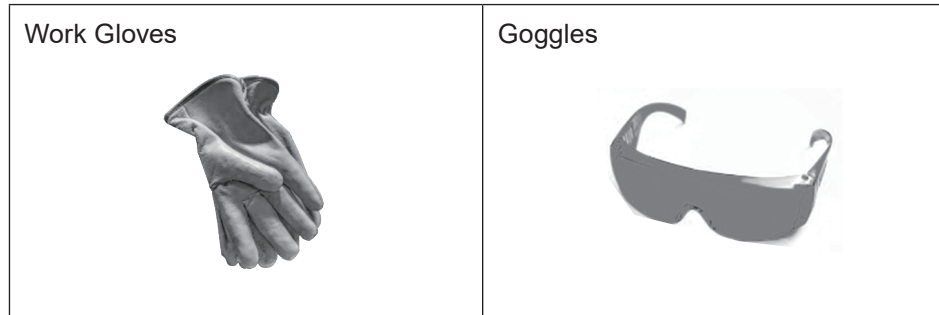


Item	Name	Qty.
A	Front Light	1
B	Locking Plates with M5 Phillips Bolts and Nuts	2
C	Front Rack	1
D	Locking Plates with M6 Phillips Bolts and Nuts	2
E	Handlebars with Gear Shifter and Control & Display Panels	1
F	Saddle	1
G	Main Frame with Battery, Chain, and Motorized Wheels	1
H	Left Pedal (L)	1
I	Right Pedal (R)	1

Tools



Not Included but Helpful



Item	Name	Qty.
J	Charger	1
K	AC Cord	1
L	Phillips Screwdriver	1
M	13×15 mm Wrench	1
N	8×10 mm Wrench	1
O	6 mm Hex Wrench	1
P	5 mm Hex Wrench	1
Q	4 mm Hex Wrench	1
R	3 mm Hex Wrench	1
S	2.5 mm Hex Wrench	1

2. Specifications

Motors	Type		Brushless		
	Power		750 W (x2)		
	Weatherproof Rating		IPX5		
	Drive Modes	Default	Rear		
Other		Front, Dual, Auto-Switch			
Display Panel	Screen Type		Liquid Crystal Display (LCD)		
	Default Auto Shutoff		5-min. Idleness		
	Weatherproof Rating		IPX6		
Lighting Weatherproof Rating		IPX5			
Battery	Type		48 V, Lithium, Rechargeable		
	Weatherproof Rating		IPX5		
	Operational Temp.		-4 to 140 (°F)	-20 to 60 (°C)	
	Charging Temp.		32 to 113 (°F)	0 to 45 (°C)	
	Storage	Temp.	<3 Months	-4 to 113 (°F)	-20 to 45 (°C)
			≥3 Months	-4 to 77 (°F)	-20 to 25 (°C)
Humidity		25–50 (%)			
Charger	Input		110–240 (V) AC, 50/60 (Hz), 3 A		
	Output		54.6 V DC, 3 A		
Weight Capacity	Front Rack		33 lb.	15 kg	
	Rear Rack		110 lb.	50 kg	
	Total		395 lb.	180 kg	
Rider Height Range		5.3–6.2 (ft.)	160–190 (cm)		
Max. Speed		20 mph ⁽¹⁾	32 km/h ⁽¹⁾		
Max. Travel	Throttle Control		35 mi. ⁽²⁾	56 km ⁽²⁾	
	PAS Control		60 mi. ⁽²⁾	96 km ⁽²⁾	
Tires	Pressure		30 psi	2 bar (200 kPa)	
	Type		26×4.0 (in.)		

- (1) Based on unloaded wheel rotation at full power without friction.
True maximum speed will vary according to variables such as battery strength and load but should remain ± 1 mph of the preset value.
- (2) Based on a 165 lb. or 75 kg load at full power and full legal speed on actual roads.

3. Assembly

Warning

To ensure optimal safety, be sure to fulfill the following conditions during assembly.

- **ONLY** assemble this e-bike following **ALL** instructions in this section.
Improper assembly could result in damage to this e-bike, personal injury, and riding accidents.
- Keep your work area clean and well-lit.
Cluttered or dark areas invite accidents.
- Wear hand and eye protection to prevent accidents.
Work gloves and goggles (not included) are strongly recommended.
*If necessary, ask one or more persons for assistance **BUT** remember to have everyone wear equivalent personal protective equipment.*
- **DO NOT** allow children or pets to play with **ANY** e-bike parts, tools, or packaging materials.
Provide constant supervision or restrict access to your work area as needed.
- Make sure the display panel has been turned off **BEFORE** starting your work.
For best results, remove the battery from the main frame.
- To maintain the stability during assembly, use the kickstand or a bike stand (**not included**) to hold the main frame in its upright position.

Important

To see these instructions in video form, go to our **YouTube** channel **BirchHunters** and search for “**CBE-H2**”.

Alternatively, scan this QR code.



3.1 Signal Wires

Parts

E



Handlebars

G



Main Frame

1



- Locate the color-banded wires from the handlebars (E) and the main frame (G).
- Match them with wires that have identically colored bands.

2







Connect these wires, pushing each set into place.

Note: Reserve the two red-banded wires for the front light.

3.2 Front Rack

Parts and Tools

<p>C</p>  <p>Front Rack</p>	<p>D</p>  <p>Locking Plates with M6 Phillips Bolts & Nuts</p>
<p>L</p>  <p>Phillips Screwdriver</p>	<p>N</p>  <p>8x10 mm Wrench</p>

Steps



Fit the mounting brackets of the front rack (**C**) onto the suspension fork of the main frame (**G**) as shown.

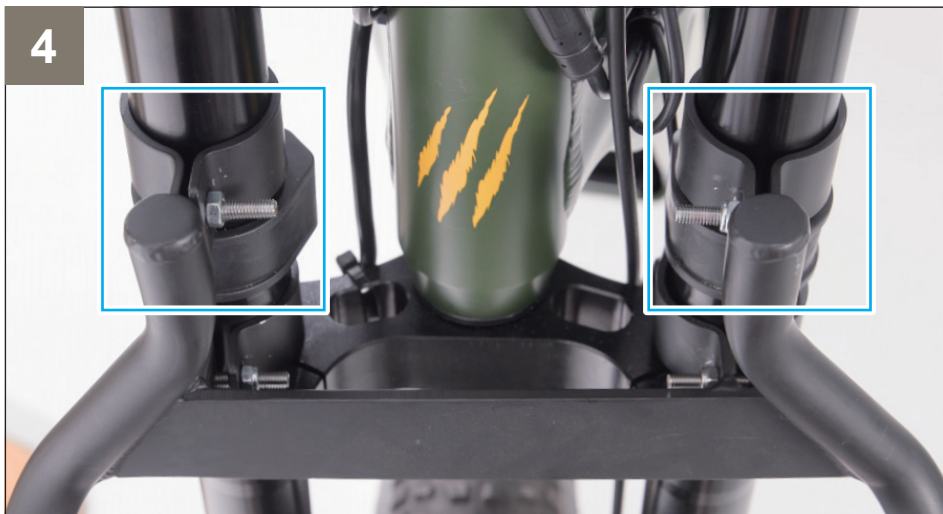
2



- Find the four locking plates (**D**) that come with M6 Phillips bolts and nuts.
- Wrap two plates around the mounting bracket and suspension fork at the left side, partially joining them with the tab and slot as shown.







- a. Secure the two plates completely with the M6 bolts and nuts.
- b. Tighten them using the Phillips screwdriver (L) and 8×10 mm wrench (N).



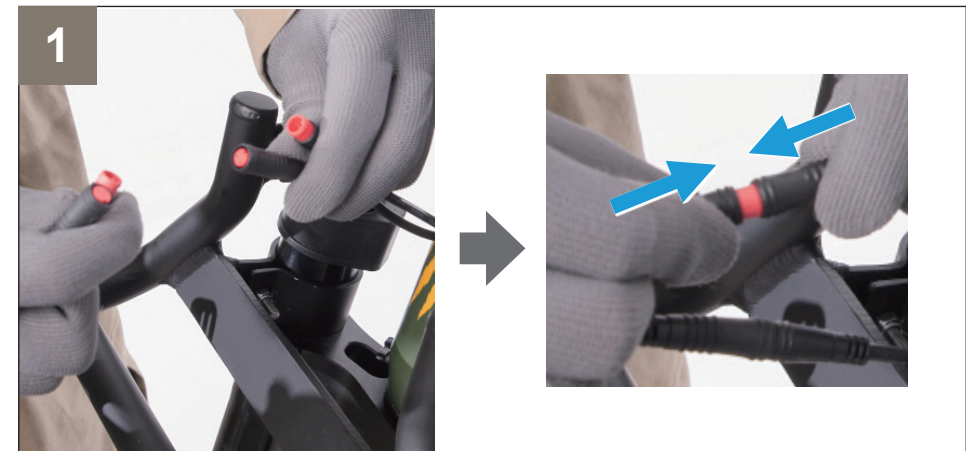
Repeat **steps 2–3** for the other side, ensuring that the front rack is tightly secure to the suspension fork on **BOTH** sides.

3.3 Front Light

Parts and Tools

<p>A</p>  <p>Front Light</p>	<p>B</p>  <p>Locking Plates with M5 Phillips Bolts & Nuts</p>
<p>L</p>  <p>Phillips Screwdriver</p>	<p>N</p>  <p>8×10 mm Wrench</p>

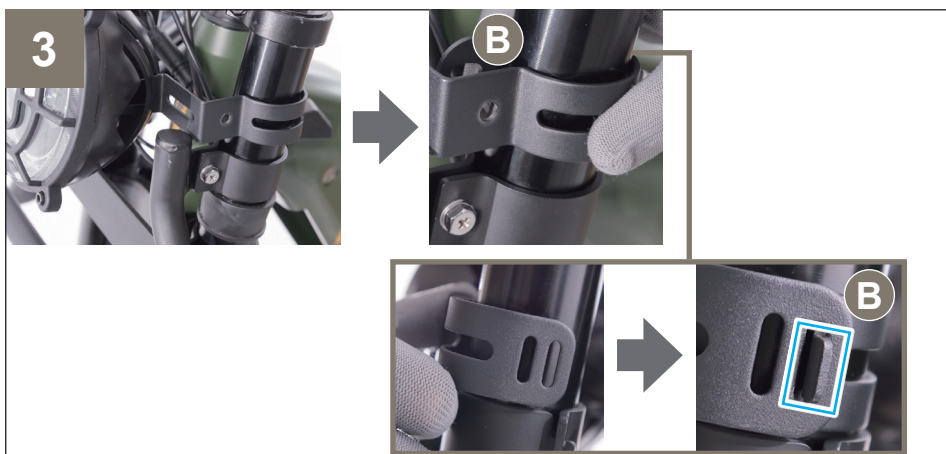
Steps



Connect the remaining two red-banded wires from the handlebars to the wires from the front light (A).



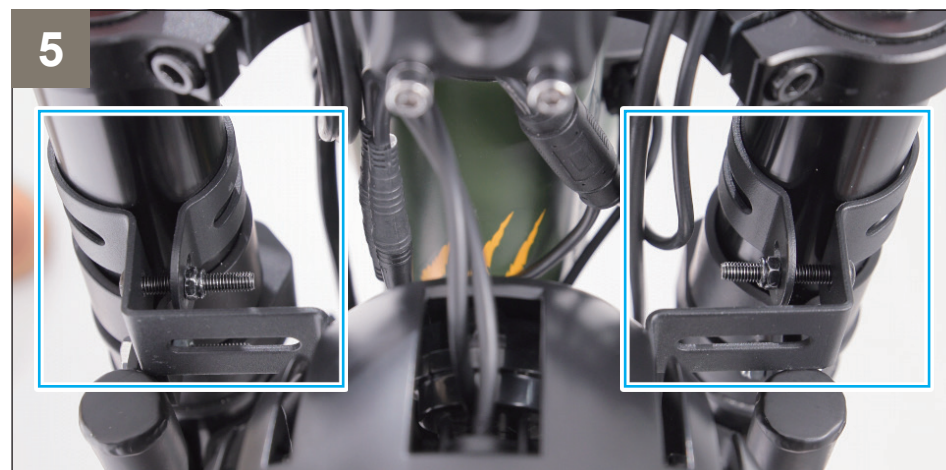
Place the front light (A) onto the suspension fork using its mounting brackets.



- Find the two locking plates (B) that come with M5 Phillips bolts and nuts.
- Wrap either plate around the fork at the left side, joining it with the mounting bracket using the tab and slot as shown.



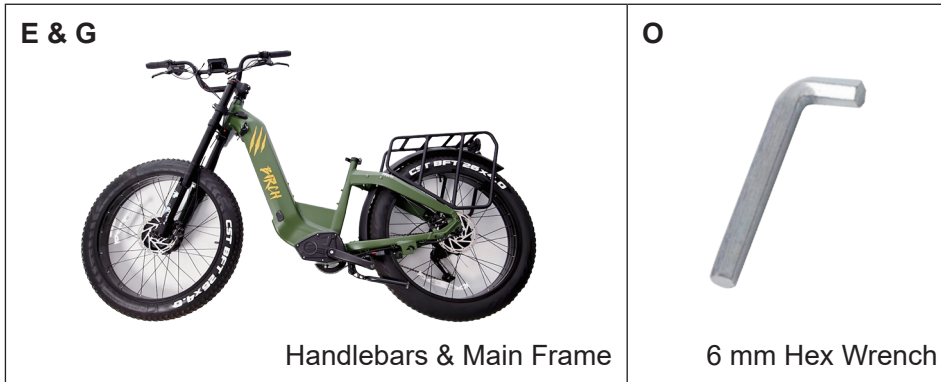
- Secure the plate to the mounting bracket with the M5 bolts and nuts.
- Tighten them using the Phillips screwdriver (L) and 8x10 mm wrench (N).



Repeat **steps 3–4** for the other side, ensuring that the front light is tightly secure to the suspension fork on **BOTH** sides.

3.4 Handlebars

Parts and Tool

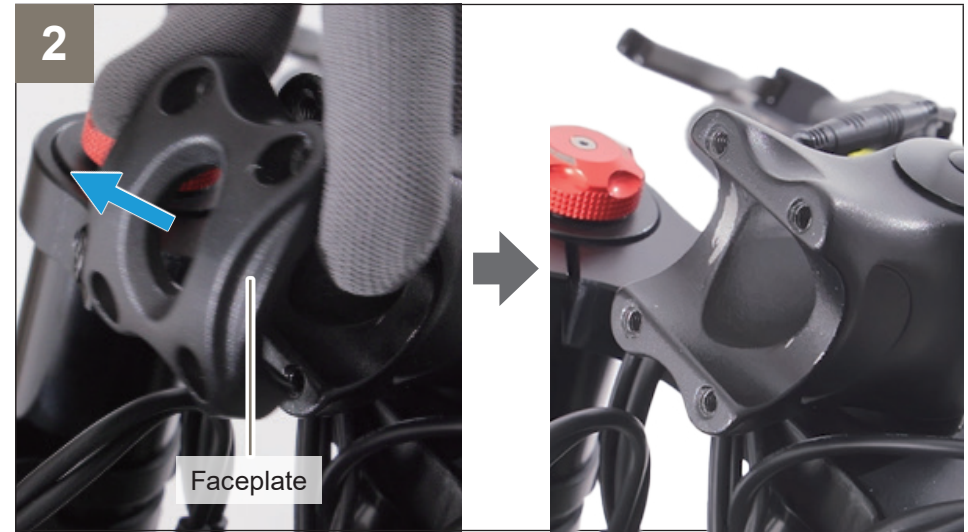


Steps

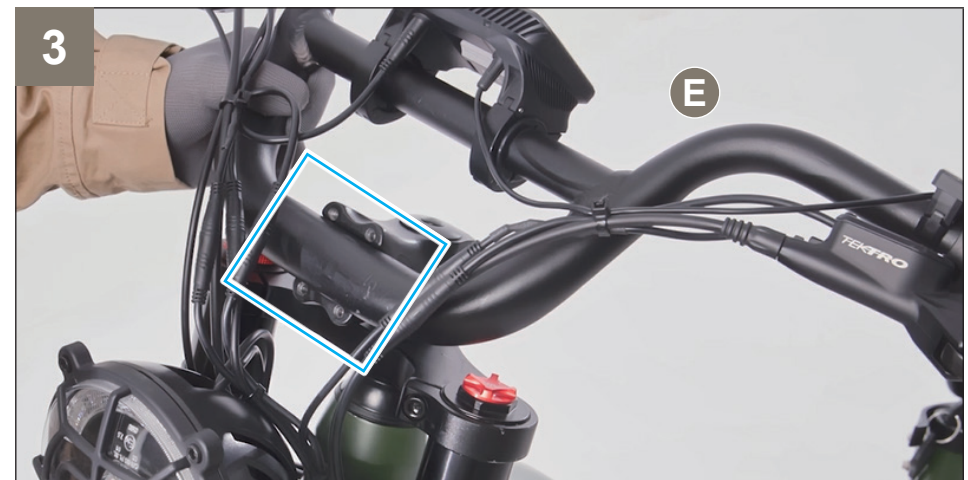


- Locate the stem above the suspension fork on the main frame (**G**).
- Unscrew the four bolts from the stem using the 6 mm hex wrench (**O**).

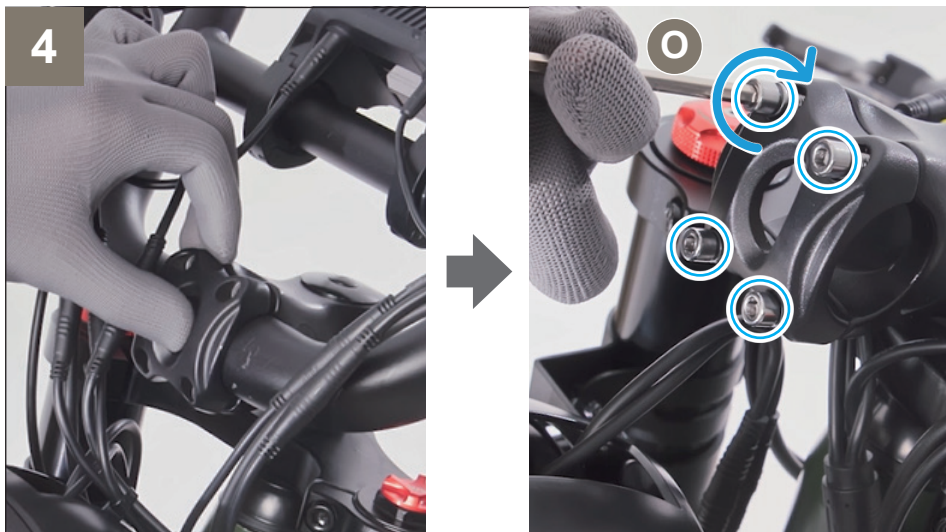
Note: Place them nearby.



Remove the faceplate, exposing the handlebar clamp.



Position the handlebars (**E**) against the stem, ensuring that they are well centered in the clamp and make you comfortable with all handlebar controls.



- a. Replace the faceplate, snugly catching the handlebars.
- b. Lock the faceplate and the handlebars using the bolts removed in **Step 1** on **Page 10**.



Rotate the handlebars, testing that they turn the front wheel left and right smoothly.

3.5 Saddle

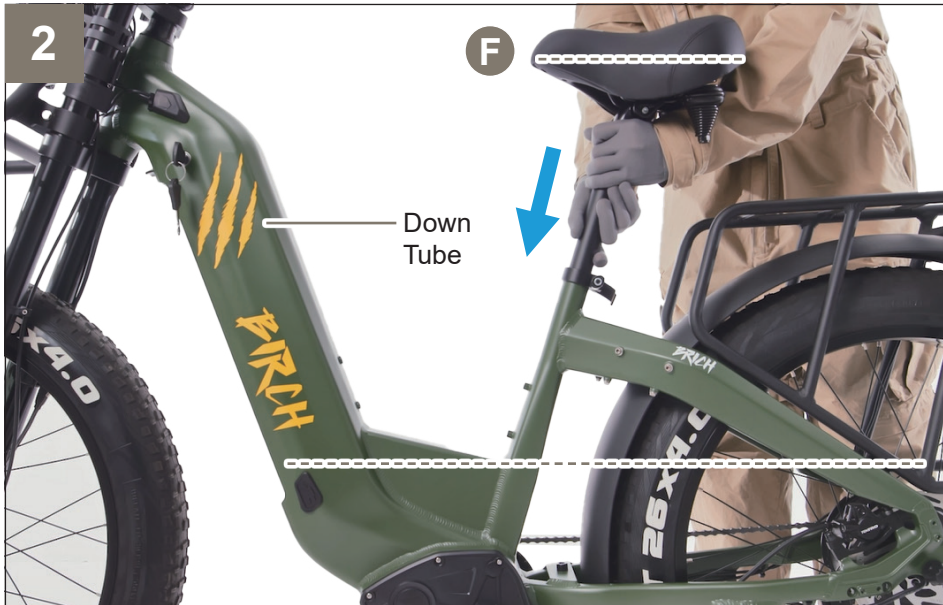
Part



Steps



- a. Locate the saddle clamp at the top of the seat tube.
- b. Pull the locking lever as shown to open the clamp.






- a. Insert the post of the saddle (**F**) into the seat tube until your preferred height is reached.
- b. Rotate the saddle, allowing its nose to face the down tube and its centerline to align with the main frame and rear wheel.



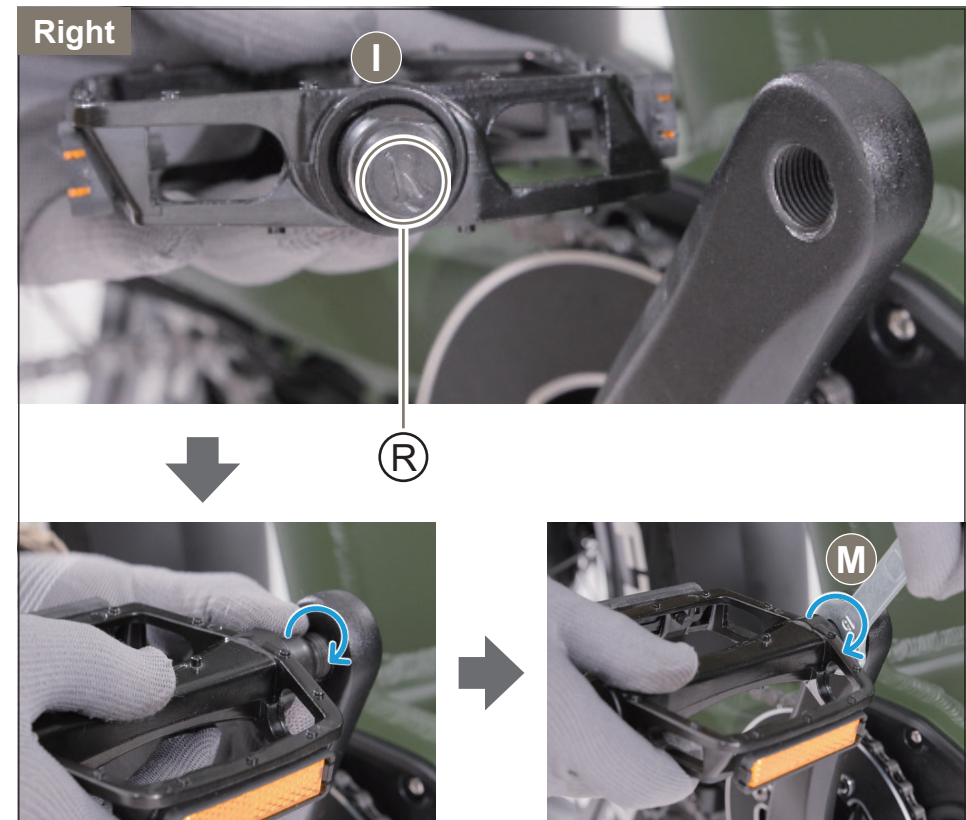
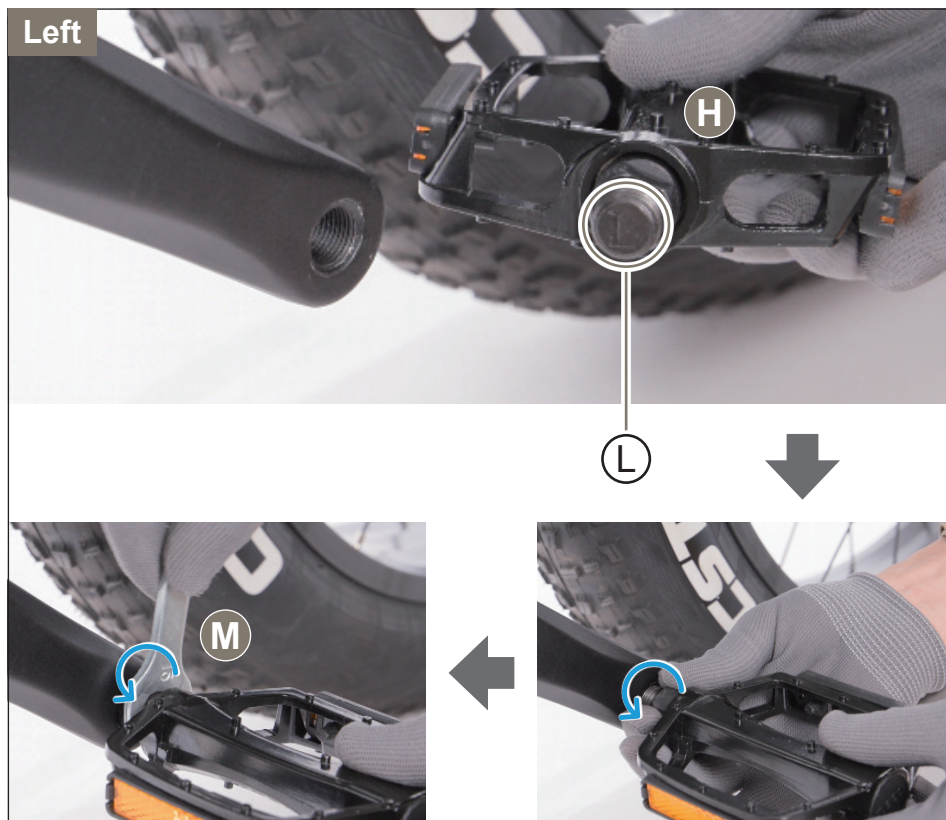
- a. Push the lever back in place to close the clamp.
- b. Check that the saddle post is fully locked.
If it is not, reopen the clamp, fine-tune the nut, and close the clamp. You may need to repeat this several times until the post becomes secure.

3.6 Pedals

Parts and Tool

<p>H</p>  <p>Left Pedal</p>	<p>I</p>  <p>Right Pedal</p>	<p>M</p>  <p>13×15 mm Wrench</p>	<p>Note:</p> <ul style="list-style-type: none"> • The two pedals ARE different and should NOT be mixed up. • The left pedal is marked with L and the right with R. • Screwing a pedal at the wrong side may cause damage to its threads.
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Steps



3.7 Post-Assembly Actions

Caution

- Although this e-bike was highly preassembled at the factory and might not require much effort to install the remaining parts, remember to perform the following checks and tests **AFTER** assembly to ensure optimal functionality for a safe and enjoyable riding experience.
Failure to do so may result in unpleasant riding, property damage, and personal injury.
- Ensure that the display panel remains off **BEFORE** taking any action.
Failure to do so may cause a sudden motor start once the throttle handle is inadvertently turned, leading to accidents and injuries.
- If you need replacements, ask your local dealer or contractor for **IDENTICAL** ones.
- **NEVER** replace the preinstalled **128-LINK** e-bike chain with one intended for manual bikes or of a different length.
- Exercise caution **WITH** the brake systems, **PARTICULARLY** the hoses and calipers, as their hydraulic design is prone to leaks.
- Seek professional assistance from certified and trusted bicycle mechanics if needed.

Intactness



Thoroughly check that **ALL** parts and fasteners **ARE** unbroken and securely attached.

- Pay special attention to the wires, handlebars, saddle, and pedals that you already connected or installed.
- Pay additional attention to preinstalled parts, particularly the battery, display panel, chain, and wheels.
- Use the provided tools (**L-S**) to tighten any loose fasteners as needed.
- Refer to **Maintenance** and **Troubleshooting** if meeting with problems related to wheel tires.

Smooth Operation



Rotate the wheels, steering, and pedaling.

Make sure that **ALL** movements **ARE** fluid and free from any unusual resistance.

Brakes



- Hold both of the handlebar grips, kicking up the kickstand.
- Inspect the front and rear hydraulic brakes by pressing their levers while pushing this e-bike forward.

Be sure that **BOTH** brake levers can effectively engage the brake systems, facilitating prompt and responsive deceleration and bringing this e-bike to a smooth and controlled stop.

Besides, pressing the brake levers should ensure comfort in your hands.

- Confirm that no leaks exit throughout the brake levers, hoses, and calipers.

Warning

*Hydraulic brake leaks **WILL** lead to brake failure during a ride, posing risks and dangers.*

*If such leaks are detected, seek professional assistance from bicycle mechanics **BEFORE** continuing use.*

4. Adjustment

4.1 Handlebars

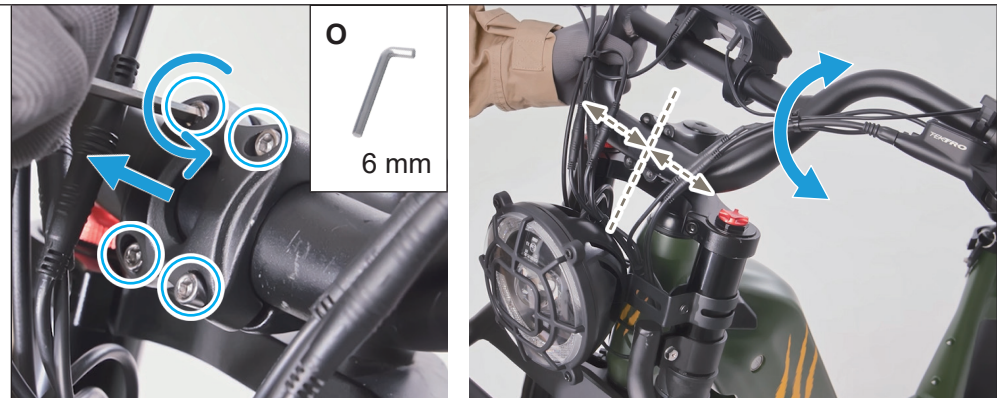
Warning

- Failure to properly adjust the handlebars or tighten the handlebar components may result in loss of control, posing a series of safety hazards.
- **ALWAYS** check that the handlebars **ARE** secure to the stem **BEFORE** riding.
- Ensure that the display panel remains off **BEFORE** making adjustments to prevent **ANY** accidental throttle activation leading to potential risks.

Note: The handlebars' height is **NOT** adjustable.

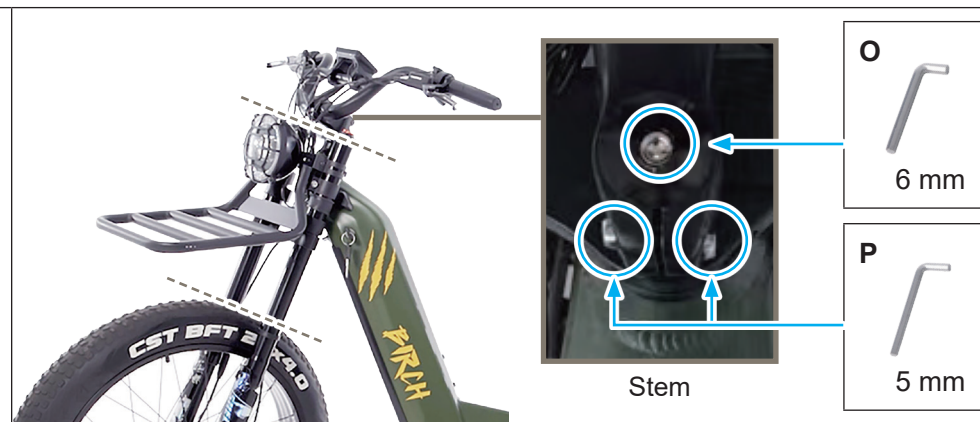
Angle and Centering

1. Unscrew the four M6 hex bolts from the stem's faceplate.
2. Hold a handlebar grip, removing the faceplate from the stem.
3. Tilt the handlebars into your desired position.
For best results, do this while sitting on the saddle.
4. Slide the handlebars to the left or right until they are centered to the stem.
5. Use the removed faceplate and bolts to relock the handlebars.



Alignment

1. Stand in front of the handlebars, holding the front wheel between your legs.
2. Loosen the M5 and M6 hex bolts on the stem.
3. Check that the handlebars are completely locked to the stem.
4. Turn the handlebars left or right until the stem aligns with the front wheel.
5. Retighten these bolts until the stem is firmly secured.

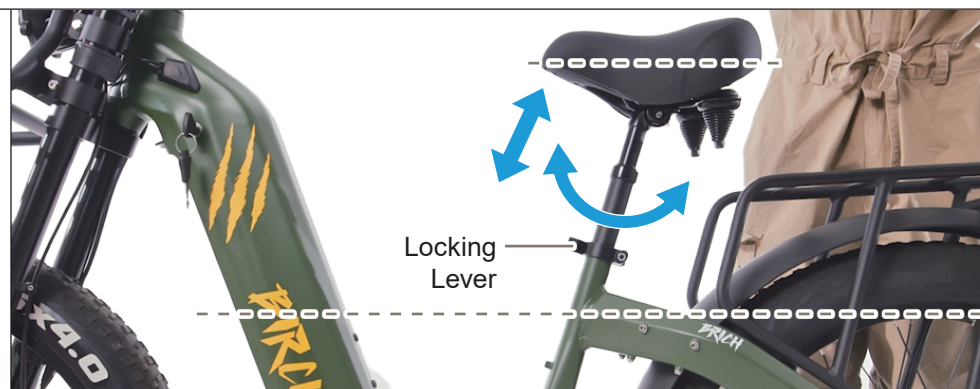


4.2 Saddle

Height and Angle

Note: You can refer to **Section 3.5 on Page 11–12** for details on **steps 1–3**.

1. Open the saddle clamp by pulling out its locking lever.
2. Raise or lower the saddle to your desired height.
3. Rotate the saddle until its centerline aligns with this e-bike's central axis (**e.g., down tube and rear wheel**).
4. Push in the lever, closing the clamp to relock the saddle post.



Seat Cushion

1. Loosen the M5 hex bolt underneath the saddle.
2. Slide the seat cushion's support frame forward or backward.
3. Raise or lower the rear part of the cushion to your desired angle.
4. Retighten the bolt until the cushion cannot move.



Test

1. Sit on the saddle, checking that it is truly secure and correctly aligned.
2. Take a test ride to feel if you are comfortable with the saddle.
If necessary, fine-tune the saddle several times before riding.

5. Operation

5.1 Pre-Ride Checks

 **Warning**

*The brake calipers, chain, spokes, and bolted connections may come loose or out of place after an initial break-in ride of **50–100 miles (80–160 km)** depending on riding conditions such as carrying weight and road surfaces.*

If needed, have a certified and trusted bicycle mechanic perform a tune-up for these.

*Regular inspections and tune-ups **ARE** particularly important to ensure optimal safety and fun for each ride.*

Carry out comprehensive safety checks **BEFORE** each ride, fulfilling the following requirements for your e-bike.

Parts	Requirements
Brakes	<ul style="list-style-type: none"> • The brake levers and calipers stop the wheels effectively. • The brake levers are tightly secured to the handlebars. • The brake levers are comfortable to be pressed. • The brake hoses display no signs of wear, damage, or leakage. • The brake calipers remain in place on the bicycle frame. • The brake discs remain in place on the wheel hubs. • The brake calipers remain properly attached to the brake discs.
Wheels, Tires	<ul style="list-style-type: none"> • The wheel rims have no obvious wobbles, dents, or kinks. • All wheel spokes are tight and unbroken. • All axle nuts are securely tight. • Both tires are inflated to the level marked on their sidewalls and hold air. • Both tires have good tread, display no bulges or excessive wear, and are free from any other damage.

Parts	Requirements
Steering	<ul style="list-style-type: none"> • The handlebars are properly adjusted, meeting the rider's characteristics and allowing for proper steering. • The bolts on the stem and faceplate are fully tightened. • The handlebars are set correctly to the stem.
Chain	<ul style="list-style-type: none"> • The chain is clean and lubricated. • The chain turns smoothly. • Anti-thrust treatment has been given if you are going to ride in wet, salty, or otherwise corrosive or dusty conditions.
Bearings	<ul style="list-style-type: none"> • The wheel, pedal, and bottom bracket bearings are lubricated and run freely. • No excess movement, grinding, or rattling are displayed.
Cranks, Pedals	<ul style="list-style-type: none"> • Both pedals are securely tightened to the crank arms. • The cranks are securely attached to the front cog and not bent.

Parts	Requirements
Main Frame	<ul style="list-style-type: none"> The suspension fork, seat stays, etc. are not bent or broken. <p>Note: <i>If any of them is not, have it replaced.</i></p>
Saddle	<ul style="list-style-type: none"> The saddle is properly adjusted, meeting the rider's characteristics. The saddle post is fully locked by the saddle clamp.
Rear Fender	<ul style="list-style-type: none"> No cracks exist on the rear fender.
Reflectors	<ul style="list-style-type: none"> The front, rear, pedal, and spoke reflectors are properly fitted and not obscured.
Gear Shifting	<ul style="list-style-type: none"> The gear (thumb) shifter remains in place on the handlebars. The rear derailleur remains in place on the bicycle frame. The chain remains in place around the front cog (chain ring), rear cogset (cassette), and rear derailleur. The derailleur cable remains firmly connected and displays no signs of wear or breakage. Both levers on the gear shifter can be easily pulled. The chain moves seamlessly among rear cogs when you pedal this bike while operating the gear shifter. The gear indicators align correctly with the actual gear positions on the rear cogset.
Battery	<ul style="list-style-type: none"> The battery is fully charged before use. The battery is securely seated in the down tube. The battery displays no signs of damage, malfunction, or being internally wet. For best results, avoid leaving the key on the battery to prevent loss or unauthorized use.

Parts	Requirements
Signal Wires	<ul style="list-style-type: none"> Each set of connected wires can be identified by identically colored bands. Each connection is firm and secure. No wear or breakage exist for each wire and its housing.
Control Panels, Display Panel	<ul style="list-style-type: none"> The control panels (function buttons) remain in place on the handlebars. The display panel remains in place on the handlebars. The LCD screen displays no cracks or breakage. All connected wires display no signs of wear or breakage. The display panel can be correctly operated by its function buttons.
Throttle, Motors	<ul style="list-style-type: none"> The throttle handle can be turned. Both hub motors can spin smoothly, with their bearings in good condition. The axle bolts of both hub motors are securely tight. The power cables running to both hub motors are secured and undamaged.
Lights	<ul style="list-style-type: none"> The front, rear, and turn signal lights display no signs of looseness or damage. All lights can be correctly operated by its function buttons.

5.2 Personal Protective Equipment

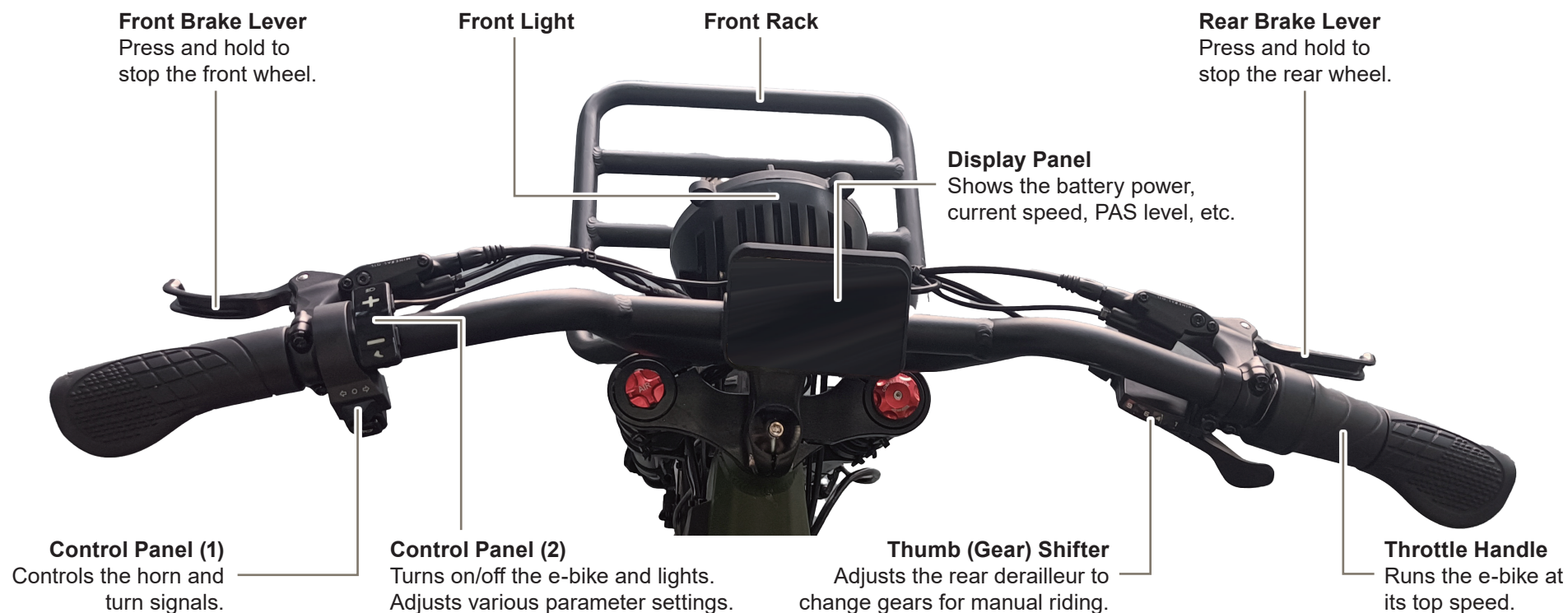
Warning

- Failure to wear appropriate personal protective equipment (PPE) may violate laws and regulations and pose a series of risks.
- **DO NOT** wear loose footwear or ride with bare feet.

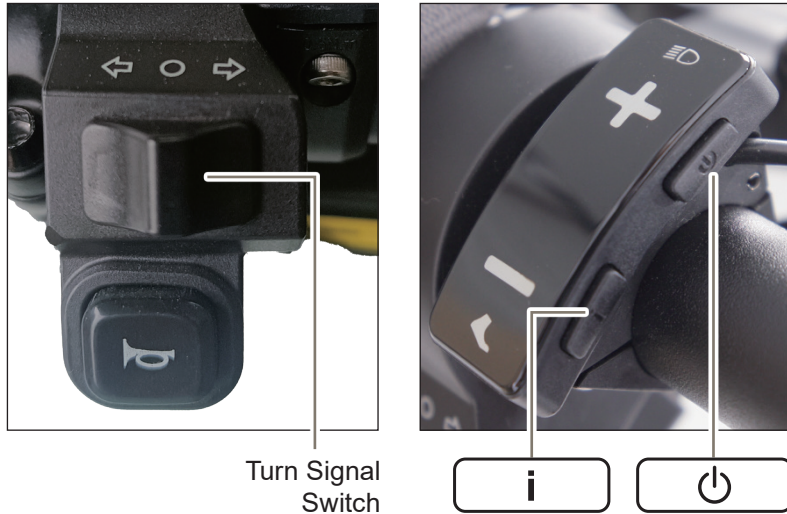
Put on the following PPE **BEFORE** each ride, checking that they meet the required safety standards and show no signs of damage or malfunction.

- Helmet
- Gloves with grip padding
- Sunglasses or other protective eyewear
- Sunscreen (on sunny days)

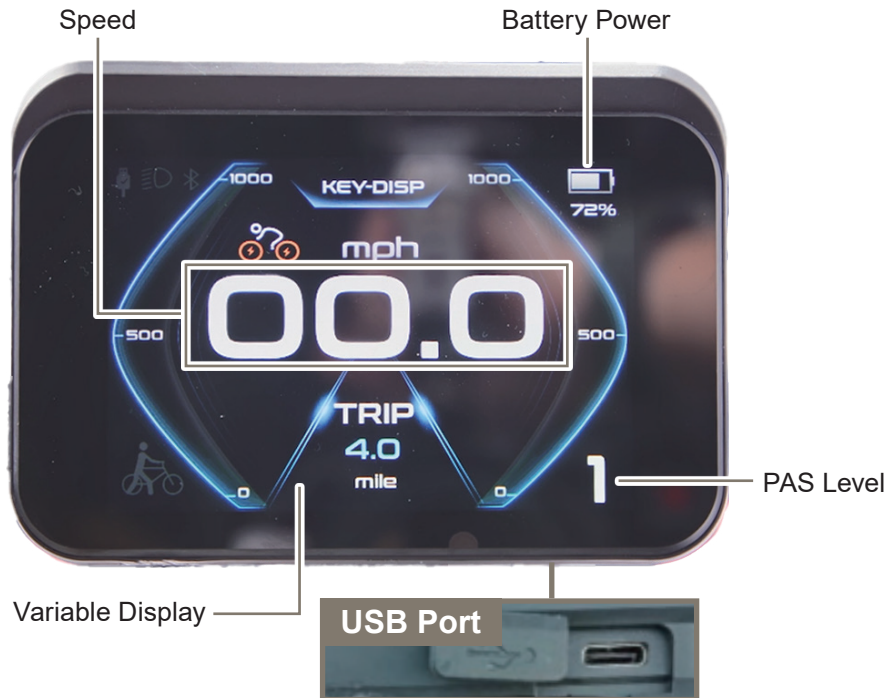
5.3 Familiarizing with the Handlebars



5.4 Control and Display Panels



Turn Signal Switch



Speed

Battery Power

PAS Level



Variable Display

USB Port

Controls	Turn Signal Switch	Controls the rear lighting to signal the e-bike's left or right turn.
		Activates the horn to alert other drivers or pedestrians.
		Turns on/off the display panel and the e-bike.
	i	Enables/Confirms settings adjustment when pressed. Opens/Exits the function menus when held.
	+ /	Increases the pedal assist level when pressed. Turns on/off the front and rear lights when held.
	- /	Decreases the pedal assist level when pressed. Activates push assist control when held.
Displays	Battery Power	Shows the remaining battery power level (0% to 100%).
	PAS Level	Shows the current pedal assist level (0 to 5).
	Speed	Shows the current speed in mph or km/h .
	Variable Display	Shows your current trip distance (TRIP), total distance traveled (ODO), average speed of the current trip (AVS), maximum speed of the current trip (MAX), and length of riding time (TIME).
Icons		Indicates the front and rear lights are on.
		Indicates a successful USB connection.
		Indicates push assist control is operating.
		Indicates front motor drive is enabled.
		Indicates rear motor drive is enabled.
		Indicates dual motor drive is enabled.
	Indicates auto-switch motor drive is enabled.	
USB Port	Charges mobile devices through a type C cable (not included).	

5.5 Turning ON/OFF the E-Bike



- To turn on the e-bike:
 - Ensure that the battery remains in place in the down tube and has sufficient power as described in **Section 5.7** on **Page 24**.
 - Locate the control panel **(2)** and display panel on the handlebars.
 - Hold the  button until the LCD screen lights up.
- To turn off the e-bike, hold  again until the screen shuts down.

Warning

ALWAYS turn off the e-bike between uses or before riding with manual control.

Caution


Simply removing the battery can also turn off the e-bike without deactivating the display panel in advance.

HOWEVER, such abrupt cut of power is **NOT** recommended and risks damaging the e-bike's circuits and controller.


5.6 Lights

Note: Be sure that the display panel is on.

Front and Rear Lights

- To turn on the front and rear lights:
 - Locate the control panel **(2)**.
 - Hold the  button (+) until both lights come on.

Note: Pressing either brake lever will also turn on the rear light as long as the display panel is on.

- To turn off the lights, hold  (+) again until both lights shut off.



Turn Signals

To indicate your e-bike's left or right turn to drivers behind you during a ride:

- Locate the control panel **(1)**.
- Use the upper switch to activate the turn signal's flashing on the side you intend to turn.
 - For a left turn, pull the switch to the left.
 - For a right turn, push it to the right.
- When done, set the switch back to **O**.
The turn signal should stop flashing.



5.7 Battery

Warning

For your safety, read **Section 7.6 in Safety Information on Pages 35–38**.

Battery Power Levels

Caution

DO NOT allow the battery to ever drain completely, which may reduce its lifespan and even make it hard to reactivate.

Method 1

When the display panel is on, you can check the battery's current power level at the screen's upper right corner.

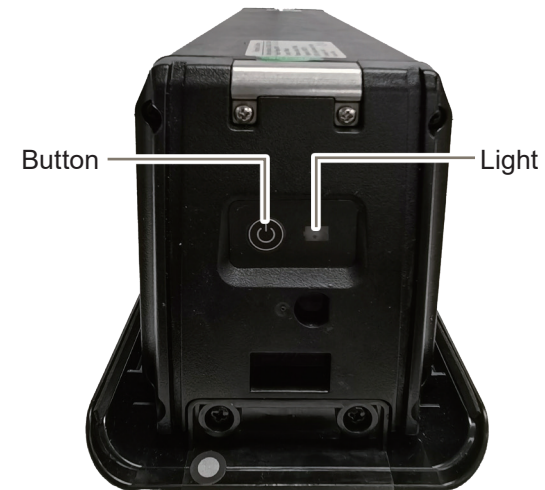
- 100% indicates a full battery.
- ≤20% indicates a weak one.



Method 2

In addition to the handlebar display, the battery power can be briefly checked on the battery itself.

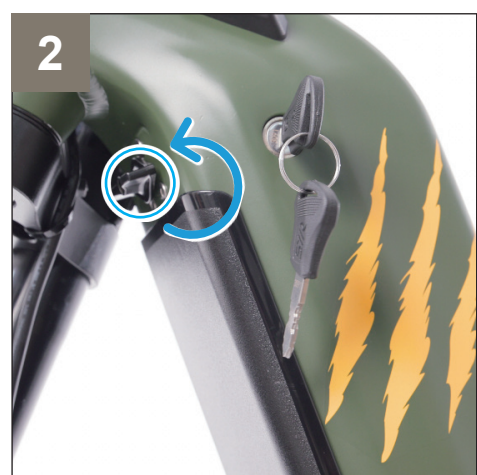
1. Remove the battery from your e-bike.
Note: See **Page 25** for details.
2. Locate the battery's side with a power display button and a power indicator light.
3. Press and hold this button.
 - If the light turns green, the remaining power is ≥20% full.
 - If it turns red, you should recharge the battery **BEFORE** resuming use.



Removing/Reinstalling the Battery

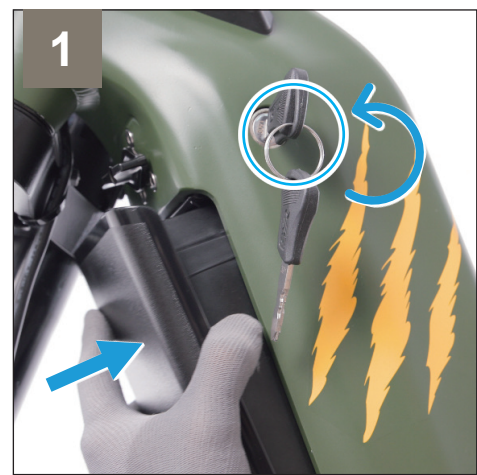
Removal

⚠ Caution
Ensure that the display panel remains off beforehand.



Reinstallation

⚠ Caution
When finished, remove the key to prevent unauthorized use.



Charging

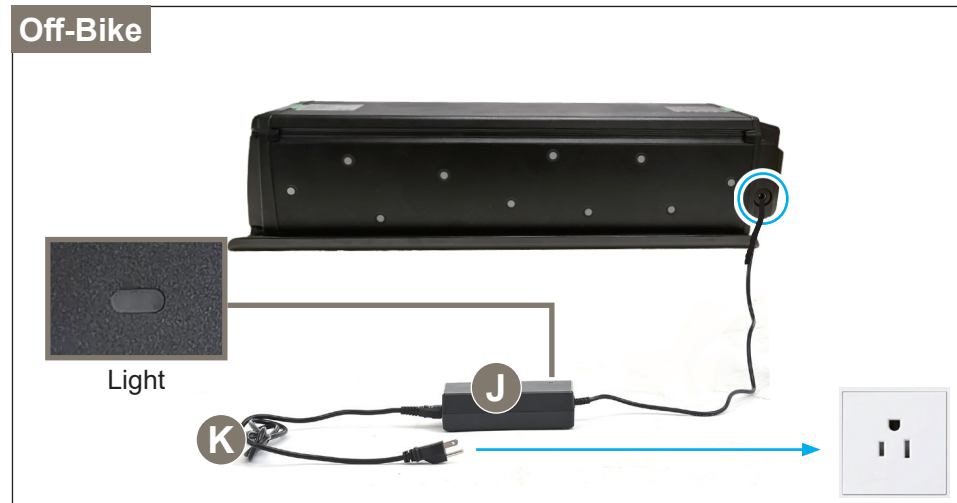
1. Connect the charger (**J**) to the battery's charging port using its DC cord.
2. Connect the AC cord (**K**) to this charger's power inlet and your power source.
The charger's power indicator light should turn red and charging begin.
3. Periodically check the battery's state.
 - For on-bike charging, see the battery power display. **(Recommended: $\geq 80\%$)**
 - For off-bike charging, wait until the charger's indicator light turns **green**.
4. When finished, disconnect the AC cord from power and then the charger from the battery.

Warning

DO NOT leave the battery connected to power once it is already fully charged.

Overcharging can cause the battery to overheat, which may result in decreased performance or **EVEN** fires or explosions.

Note: In the event that charging fails, refer to **Section 9.1 in Troubleshooting on Page 53** for the usual solutions.



5.8 General Riding Guide

Even if you are proficient in riding a bike, read the following warnings, notices, and instructions before each ride and bear them in mind during each ride.

Using the Brakes Sensibly

Warning

*If the front brake is applied too quickly or too hard, especially when the bike is going down a slope, the front wheel **WILL** completely lose traction and the rear wheel may go off the road, potentially tipping over the bike and causing serious personal injury.*

You may operate one brake at a time or both together.

However, be careful with the front brake, which can lock up the front wheel during a ride. To avoid this:

- Apply both brakes simultaneously while shifting your body weight back slightly to compensate for braking force.
- As terrain changes, practice and learn how the e-bike will respond to a new terrain or weather change.
- The same brake will react differently if there is gravel on the road.
- Always test the brakes and be sure you feel comfortable with the reaction.

This is an on-road bike, not for off-road riding or rough terrains.

When braking hard, press both levers at the same time, tightening up your arms and legs to brace for the braking force.

Staying Alert and Obeying Traffic Rules

- Follow all local and national laws and regulations on e-bike use. Pay special attention to speed, road, and load limits.
- Hold the handlebar grips firmly with both hands.
- Mind your balance, being attentive to your riding while being careful about any changes to weather, traffic, pedestrians, and road conditions.
- Avoid focusing on the display panel for extended periods of time while riding.

This may lead to distraction and accidents.

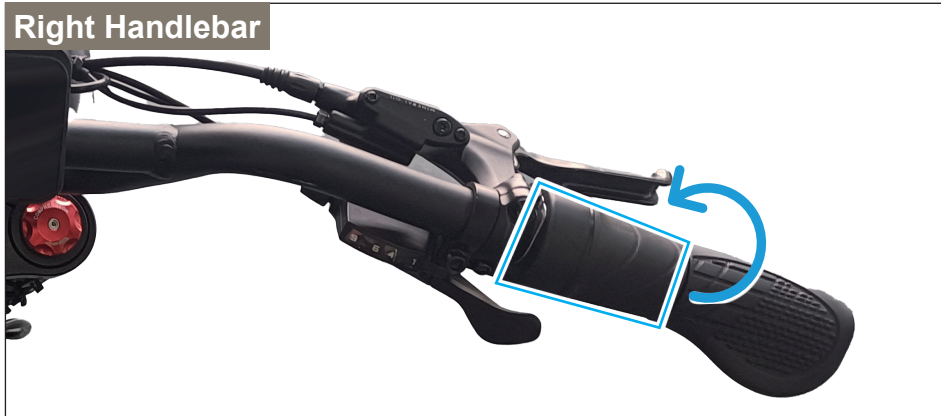
- When riding fast, refrain from cornering, as this could tip over the e-bike.
- Keep your feet on the pedals.
NEVER place them close to the spokes of either running wheel.
- If exposed to sunlight for a prolonged period of time in hot summer, the e-bike's metal parts may become hot and can burn the skin if contacted.

Allow time for them to cool **BEFORE** touching them with bare skin.

5.9 Throttle Control

Throttle control is available when the display panel is on, enabling your e-bike to run at the 20 mph (32 km/h) top speed using the throttle handle on the right handlebar.

Activating the Throttle



Turn the throttle handle and stop pedaling the e-bike.
Your e-bike will continue along at the top speed.

Note: The e-bike will not exceed its top speed on flat pavement but may do so on slopes.

Pausing the Throttle

Throttle control automatically pauses and the motor(s) temporarily shift to neutral in the following cases:

- You release the throttle handle completely.
- You press either brake lever.
- You accelerate beyond the 20 mph (32 km/h) top speed.

Reactivating the Throttle

The motor(s) will resume working in the following conditions:

- You turn the throttle handle again.
- You release both brake levers.
- Your speed returns to the top speed or below.

Note:

- *If you begin pedaling while throttle control is active, the e-bike will activate pedal assist control.*
- *If you turn off the display panel while throttle control is active, the motor(s) will stop and your bike will only operate manually.*

5.10 Pedal Assist Control

The pedal assist system (PAS) is available when the display panel is on, requiring you to continue using the pedals to keep the motor(s) active but providing additional speed and strength as you ride.

Activating the PAS



Simply pedal your e-bike while keeping the display panel on.

The PAS has 5 levels. The e-bike will accelerate to the speed of the current level as soon as the pedals fully turn two times.

Level	0	1	2	3	4	5
Speed	—	10 mph	12 mph	14 mph	17 mph	20 mph
	—	16 km/h	19 km/h	22 km/h	27 km/h	32 km/h
	0%	50%	60%	70%	85%	100%

Note: True speed will vary according to variables.

Pausing the PAS

The PAS automatically pauses and the motor(s) temporarily shift to neutral in the following cases:

- You stop pedaling.
- You press either brake lever.
- You accelerate beyond the 20 mph (32 km/h) top speed.

Reactivating the PAS

The PAS reactivates in the following conditions:

- You resume pedaling.
- You release both brake levers.
- Your speed returns to the top speed or below.




Note:

- If you turn the throttle handle while the PAS is active, the e-bike will activate throttle control and accelerate to its top speed.
- If you turn off the display panel while the PAS is active, the motor(s) will stop and your bike will only operate manually.
- Downshifting the PAS level to 0 disables the PAS and puts the motor(s) in neutral until the + button is pressed, restarting the PAS at Level 1.

5.11 Push Assist Control

The push assist system is available when the display panel is on, providing additional strength as you push the e-bike for a walk or climb.

Steps

1. Stand beside the e-bike.
2. Hold the  button (–) while pushing your e-bike forward, which will cause the motor(s) to run at a very low speed around 4 mph (6 km/h).
During the process,  should be present in the lower left display area.
3. To stop push assist control, release  (–) or press either brake lever.

Warning

NEVER turn the throttle handle while using push assist control, as this **WILL** switch to throttle control.

Since you are pushing the e-bike rather than riding it, throttle speed can result in accidents and injuries.

Caution

Push assist control is **NOT** recommended in the following conditions:

- You are going down steep inclines.
- You are walking over rough terrains or obstacles.
- You are navigating through confined or crowded areas.
- You need to push the e-bike for an extended period of time.



5.12 Manual Control

To ride your bike normally, you can select any of the following methods:

- Downshift the PAS level to **0**.
- Turn off the display panel.
- Simply remove the battery from the e-bike following **Charging** on **Page 26**.

Adjusting the Speed Gearing

Pull to **UPSHIFT** one gear per click.



Gear Indicators

Push to **DOWNSHIFT** one gear per click.

The thumb (gear) shifter on the right handlebar uses two levers to control the 9 rear cogs, providing 9-speed gearing for manual riding.

The larger the number, the smaller the cog and the faster your bike will turn the wheels with the same effort.

Note: Be sure that your bike's crank is turning while using the shifter to adjust the chain on the cogs.

5.13 Securing the E-Bike

Example: Cable Locks



Nobody wants their newly bought bike to be stolen when it has to be left unattended.

To prevent this:

- Use cable locks (**not included**) or other appropriate tools specially designed for bikes.
- Lock the battery **FULLY** by turning the key completely clockwise and **THEN** remove the key from the down tube.

Note: Individual parts of a bicycle can be removed.

If you only lock the handlebars, suspension fork, saddle post, down tube, seat tube, seat stay, and wheels, the other parts may be removed.

- *Although it is impossible to lock all parts, use additional tools to lock the major components as much as possible to reduce the risk of theft.*
- *Register your e-bike with the local police and/or bicycle registry, which is helpful for theft recovery and insurance claims.*

6. Function Menus



Introduction

The display panel provides three function menus:

- **Display Setting:** Adjusts parameters concerning various display clearance, LCD screen brightness, measurement units, state of charge, timed shutoff, settings restoration, password protection, etc.
- **Advanced Setting:** Adjusts parameters that require professional guidance.
- **Information:** Displays the system information.

Brief Guide

1. When the display panel is on, hold the **i** button to enter the menu directory (**SETTING**).
2. Use the **+** or **-** button to select a function menu (**Display Setting**, **Advanced Setting**, or **Information**) or **Exit**.
3. Press **i** to open the selected menu or to leave the directory.

Caution

*Failure to follow these conditions may cause this e-bike to malfunction or break, posing a series of risks and voiding **ALL** warranties implied or stated.*

- *Read the detailed digital instructions for these function menus **BEFORE** opening **ANY** of them and **BEFORE** viewing or adjusting **ANY** parameter settings therein.*
- ***DO NOT** adjust **Battery Voltage** in **Display Setting** or **ANY** parameters in **Advanced Setting** at random. If such an adjustment happens, restore the default settings in accordance with the digital instructions.*
- *Seek professional guidance from customer service as needed, **ESPECIALLY** if you are unclear or confused with any point in the digital instructions.*

Detailed Guide

Scan the following QR code for detailed instructions in digital form.



7. Safety Information

7.1 General Notice

- Read **ALL** these instructions completely **BEFORE** assembly, use, adjustment, and maintenance.
- Contact customer service if any point herein is unclear or confusing.
- Provide this manual to anyone who will use or service this e-bike and provide it with this e-bike (whether already assembled or not) if it is ever given or sold to a third party.
- **ONLY** assemble, use, adjust, and maintain this e-bike in accordance with these instructions.
- Failure to follow these instructions may lead to serious property damage and severe personal injury and void **ALL** warranties implied or stated.

7.2 Traffic Rules

- **ALWAYS** obey **ALL** applicable local and national laws and regulations while riding.
- **DO NOT** allow use by children, by persons unfamiliar with this e-bike or these instructions, or by anyone whose physical or mental impairment precludes safe use.
- **DO NOT** ride this e-bike while tired or under the influence of drugs or medication.
- **DO NOT** ride this e-bike in **ANY** area prohibited to electric bicycles.
- **ALWAYS** maintain your reflectors and other required safety equipment.

- It is advisable to equip your e-bike with additional warning devices such as a bell in case you are riding at times of poor visibility or heavy traffic.

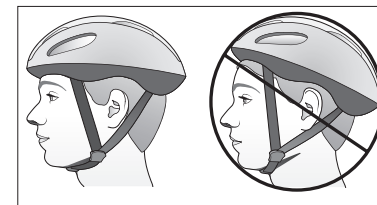
This is **EVEN** required in some jurisdictions.

7.3 Clothing

- **ALWAYS** wear appropriate hand protection during assembly, disassembly, adjustment, or repair of this e-bike.
- **DO NOT** wear loose footwear or clothing that may become caught in the wheels or any other moving parts while riding.
- **DO NOT** ride this e-bike with bare feet.

ALWAYS wear closed-toe shoes with good traction to maintain grip on the pedals and provide protection for your feet.

- **ALWAYS** wear a helmet and other required protective gear that meet safety standards while riding.



- Gloves with grip padding are strongly recommended for riding. They can strengthen your hold on the handlebars and protect your hands in case of a fall.
- Wear sunglasses or other clear protective eyewear to shield your eyes from dust, debris, and insects.

- In sunny conditions, it is advisable to apply sunscreen to exposed skin, especially for long rides.
- For best results, choose brightly colored or reflective clothing or attach reflective accessories or strips to your clothing to enhance visibility from all angles, especially during low-light conditions.



7.4 Safety Checks

- **ALWAYS** check that **BOTH** the front and the rear brakes function well **BEFORE** riding.

Even when power is cut to the motor(s), the inertia of this e-bike will often require active braking power.

- **ALWAYS** check that **ALL** components and fasteners **ARE** intact and securely tightened **BEFORE** and **AFTER** riding.
- Regularly check the reflectors to make sure that they are clean, straight, unbroken, and securely mounted.

Also perform this check for **ALL** lights installed or preinstalled.

Riding with low light or without lights or reflectors is **EXTREMELY** dangerous.

- **DO NOT** ride this e-bike if any part is damaged or shows any sign of malfunction.

Repair or replace problematic components **BEFORE** further use, especially damaged brakes and bent or broken spokes and wheel rims.

- **NEVER** replace **ANY** components or fasteners with nonidentical or unauthorized ones.

7.5 Sensible Use

- **ONLY** allow one person to ride this e-bike at a time.
- **DO NOT** carry children or pets on the front or rear rack while riding.
- If carrying things on either rack, ensure that this act is permitted in your jurisdiction and they have been safely secured.
- **DO NOT** carry packages or objects on your e-bike in a way that obstructs your view of the road.
- **DO NOT** load this e-bike with more than **395 pounds (180 kg)**, including **33 pounds (15 kg)** on the front rack and **110 pounds (50 kg)** on the rear rack.
- **NEVER** ride at a speed where your stopping distance exceeds your visibility.
- For optimal safety, it is **NOT** recommended to ride your e-bike at night or in environments with poor visibility (e.g., foggy or snowy conditions).

If you have an emergency that makes it necessary to do so, keep your lights on and limit your speed appropriately.

- **DO NOT** ride your e-bike in extreme weather conditions, such as thunderstorms and hurricanes.

If you meet with them during a ride, stop the e-bike, find a safe shelter, and wait until they pass.

- When meeting a strong wind, keep a firm grip on the handlebars, lean into the wind, and adjust your position as needed to maintain control.
- In wet weather, be careful to avoid sharp turns, which are easy to cause an accidental fall.

- It is recommended that you **NOT** ride your e-bike fast **UNTIL** you are **FULLY** familiar with this new e-bike and its controls.

HOWEVER, even when you are familiar with this e-bike, **ALWAYS** be mindful of your speed, ensuring that you have sufficient room to brake in an emergency.

- **ALWAYS** allow more distance for braking when riding through leaves, loose gravel, or other debris, as these can affect the stopping power of your brakes.
- **ALWAYS** be cautious when using the front brake.

While riding down slopes, **DO NOT** use the front brake only **BUT** apply **BOTH** brakes simultaneously.

- **ALWAYS** slow down **BEFORE** making a turn.
- **ALWAYS** be alert for people, animals, or any obstacles that may appear in front of you while riding your e-bike.

ALWAYS be careful when passing parked cars, whose doors might open suddenly.

It is advisable to use warning devices to draw their attention, **BUT** always be ready to turn safely out of their way if needed.

- **ALWAYS** be careful at road and rail crossings.
Slow down and check both ways for oncoming traffic.
- **DO NOT** ride your e-bike in close proximity to precipices or on highly uneven, sandy, or sloped surfaces.
- **DO NOT** push backward on the pedals when using the gear shifter.
Otherwise, the chain may get stuck, causing serious damage to this e-bike.
- **DO NOT** use harsh abrasives or caustic chemicals to maintain this e-bike.

- When inflating the wheel tires, maintain the pressure around **30 psi (2 bar)**.
- **NEVER** inflate the wheel tires with gas station service pumps or high-pressure air compressors.
- Place this e-bike in locations inaccessible to children after each use. Otherwise, provide constant supervision to avoid accidents.
- To prevent theft, use cable locks and other appropriate tools to lock this e-bike to immovable objects between uses, especially when parking it outdoors.
- **DO NOT** touch the hub motors or brake discs with bare skin **IMMEDIATELY** after riding, as they may remain hot.

7.6 Battery and Charger

Failure to observe the following instructions could result in fires, explosions, electric shocks, or electrocutions, leading to property damage, severe burns, or **EVEN** death.

Safe Use

- The battery and charger contain hazardous materials.
DO NOT allow children, pets, or persons unaware of the potential hazards to play with the battery or charger.
ALWAYS keep the battery and charger in places out of the reach of them.
- The battery and charger possess **NO** customer-serviceable parts.
NEVER open, disassemble, or modify the battery or charger.
- **DO NOT** move the battery or charger while charging is ongoing.

- **DO NOT** place **ANY** items on the battery or charger during charging.
- **DO NOT** hold the battery or charger during a thunderstorm.
- **DO NOT** charge the battery if damage is detected on the charger's AC or DC cord.

If the AC cord is damaged, ask your local dealer or contractor for an identical replacement.

If the DC cord is damaged, ask for an identical charger with an intact DC cord.

- **DO NOT** attempt to remove the permanently preconnected DC cord from the charger.
- **DO NOT** remove or reinstall the battery with wet hands.

DO NOT plug in or unplug the charger with wet hands.

DO NOT rinse the battery or charger with tap water, immerse them in **ANY** cleaning fluid, subject them to direct pressurized spray, or expose them to rain for a prolonged period of time.

If the interior of the battery accidentally becomes wet, replace it with a new identical one. For the charger, wait for it to completely dry **BEFORE** further use.

- **DO NOT** charge the battery with an unstable or damaged power source.
- **DO NOT** loosen or release the battery using the key while riding, as this may not only abruptly cut power and damage other electronic components but also lead to distraction and accidents.
- If you are going to leave the battery unattended in this e-bike between uses, it is strongly recommended to lock the battery and then remove the key to prevent theft.
- **ALWAYS** remove the battery from this e-bike **BEFORE** undertaking any cleaning, repair, and storage.

- Take care **NOT** to drop the battery or subject it to impacts at **ANY** time.

When removing or carrying the battery, keep holding it and avoid throwing it.

When reinstalling the battery, be sure to push it completely back into place.

- **NEVER** expose the battery to radiation or excessive pressure.
- **NEVER** place the battery near heat sources, around corrosive substances, or in the presence of explosive or flammable gases.
- Overcharging the battery could result in electrical fires and explosions.

DO NOT leave the battery connected to a powered charger for an extended period of time if it has already been fully charged.

- Make sure the charger has been **FULLY** disconnected from power when it is **NOT** in use.
- **DO NOT** allow metal objects such as paper clips, coins, keys, nails, bolts, and screws to contact the battery's terminals (marked + and -).

Failure to follow this could short out the battery, causing fires and explosions.

- If the battery is ever damaged, avoid **ALL** contact with it or any leaking fluid.

Remove contaminated clothing and flush with copious amounts of water if contact accidentally occurs with the skin.

If contact accidentally occurs with the eyes, **IMMEDIATELY** flush them with copious amounts of water for at least 15 minutes while seeking medical attention.

Charger Compatibility

- Charging the battery with **ANY** incompatible charger or using the charger with **ANY** incompatible AC cord may result in fires, explosions, electric shocks, or electrocutions.
- **ONLY** use the provided charger with the battery.
- **ONLY** use the provided AC cord with the charger.
- **NEVER** use the provided charger with **ANY** other batteries or AC cords.
- **NEVER** use the provided AC cord with **ANY** other chargers.
- If you need to replace the battery, charger, or AC cord, ask your local dealer or contractor for a new **IDENTICAL** one.

Charging Environment

- **DO NOT** charge the battery in confined rooms with poor ventilation.
- **DO NOT** charge the battery near flammables, explosives, or corrosives, such as gasoline, propane, firecrackers, and cleaning chemicals.

For optimal safety, prepare a fire extinguisher nearby as a precaution.

- **ONLY** charge the battery in locations with an ambient temperature between **32°F (0°C)** and **113°F (45°C)**.
- It is highly recommended to remove the battery from this e-bike for charging.

This can not only prevent an unauthorized or accidental motor start but also reduce the risk of electrical damage to this e-bike's components.

- For off-bike charging, **ONLY** place the battery and charger on firm, level, dry, and clean surfaces.

Transportation

- The battery is subject to **HAZARDOUS** materials regulations when in transit.

If you are unclear about the specifics, consult competent authorities for the legal or regulatory requirements on rechargeable lithium battery transportation.

- **DO NOT** transport the battery **WITHOUT**: (1) confirming the battery's intactness, (2) insulating the battery contacts, (3) properly packaging the battery in an authorized shipping container, or (4) applying required safety labels.
- **NEVER** transport the battery if it is damaged, which can short circuit, overheat, or cause chemical leaks, posing the risks of fire, explosion, and contamination.
- Remove the battery from this e-bike **BEFORE** transporting your e-bike via an aircraft.

For specific requirements, contact the airline company.

Disposal

- The rechargeable lithium battery and the charger contain regulated materials.

Disposal **MUST** comply with **ALL** applicable local and national laws and regulations.

- **NEVER** dispose of the battery or charger in unapproved facilities or with unauthorized recyclers.

- **NEVER** dispose of the battery or charger by throwing them into fire, water, or sewers or out of your building, yard, or car.
- **NEVER** discard the battery or charger with ordinary household waste or garbage.
- **NEVER** discard the battery or charger by leaving them in public areas at random.

7.7 Other Electronic Components

- **NEVER** use the throttle, PAS, or push assist control in any situation, road condition, or terrain where doing so might impair your control of this e-bike.
 - When pushing your e-bike for a walk or climb, **NEVER** turn the throttle handle while the display panel is on.
 - **NEVER** use the controls to adjust the default settings for **Battery Voltage** and **ALL** parameters in the **Advanced Setting** menu at random or **WITHOUT** any professional guidance.
 - **DO NOT** turn off the display panel or lights by directly removing the battery, as such an abrupt power cut may damage this e-bike's electronic components or shorten their lifespans.
 - **DO NOT** disassemble the display panel or modify its internal components.
 - **DO NOT** disassemble the internal controller or modify any preconnected wiring.
 - If any wiring displays signs of wear, breakage, or malfunction, have trained technicians address the issue(s) **BEFORE** resuming use of this e-bike.
- **ONLY** make wire connections in accordance with the instructions herein.
NEVER connect **ANY** wiring to other power sources, such as wall outlets and extension cords.
 - **ALWAYS** avoid direct pressurized spray that might allow the interior of the control and display panels, lights, and other electronic components to become wet.
DO NOT submerge this e-bike or **ANY** of its electronic components in cleaning fluid.
If their interior accidentally gets wet, wait for them to completely dry **BEFORE** resuming use.
 - **ALWAYS** ensure that the display panel and lights have been turned off **BEFORE** performing cleaning, repair, or battery removal.
 - To dispose of this e-bike or any electronic component, obey **ALL** applicable local and national laws and regulations.

8. Maintenance

Warning

- *Failure to maintain this e-bike may result in malfunction of vital parts, leading to property damage and severe personal injury. Proper maintenance is critical to the safe use and sound performance of this e-bike.*
- *The exact intervals for lubrication and other maintenance may vary depending on the conditions this e-bike is exposed to. **ALWAYS** inspect this e-bike and conduct necessary maintenance **BEFORE** each use.*
- ***DO NOT** leave the display panel on during cleaning, maintenance, or repair. Failing to follow this can cause accidental activation of the motor(s), posing a series of safety hazards.*

This section presents important information on maintenance and will assist you in determining the proper course of action to take when you meet with problems concerning use of this e-bike.

If you have questions regarding maintenance, please contact us.

Correct routine maintenance of your new e-bike will ensure:

- Safer riding
- Smooth running
- Longer lasting components
- Good-looking appearance

8.1 Basic Maintenance

The following procedures will help you maintain your e-bike for years of enjoyable riding.

Cleaning the Exterior

- For loose dirt, dust the surface with a dry cloth.
- For stubborn stains, wipe with a damp cloth presoaked in a mild detergent mixture and then dry with another clean cloth.
- For the painted frame, polish its surface with car or furniture wax after cleaning.
- Use soap water to clean the plastic parts and rubber tires.

Caution

- ***DO NOT** use abrasive or caustic cleaners for **ANY** part of this e-bike.*
- ***DO NOT** flush or soak the entire e-bike or **ANY** of its electronic components including the battery, control and display panels, front and rear lights, etc.*

Protecting Against Environmental Corrosion

Riding on the beach or in coastal areas exposes your e-bike to salty airborne moisture, which is very corrosive. Besides, riding in the rain for a long time can corrode this e-bike's metal components, leading to rust and deterioration.

- Wash your e-bike's non-electronic components frequently and wipe or spray all unpainted parts with an anti-rust treatment.

Make sure the brake discs are dry so that braking performance cannot be affected.

- After riding in the rain, dry your e-bike and apply anti-rust treatment.

If the hub and bottom bracket bearings have been submerged in water, take out and regrease them to prevent accelerated deterioration.

- If the paint has become scratched or chipped off the metal parts, use touch-up paint to prevent rust. Clear nail polish is also recommended for use.

Checking for Problems

- Inspect all parts of this e-bike for any looseness, stiffness, wear, damage, or malfunction after each use.
- Tighten, lubricate, repair, or replace any problematic parts before further use.

Warning

- **ONLY** use identical replacements.
- *Wear hand protection or other necessary PPE during maintenance or repair.*
- *Keep children and pets away during work, restricting access to the area as needed.*

Storing in a Sheltered Area

If this e-bike is not to be used for an extended period of time:

- Remove the battery and store everything in a cool dry location inaccessible to children, against unauthorized use, and well protected from the elements.
- Secure your e-bike to immovable objects using cable locks or other similar tools.
- Avoid exposure to corrosive materials, such as salt, bleach, acids, fertilizers, pesticides, and industrial chemicals.
- Avoid storing electronics in plastic bags, which might allow humidity to build up over time.

For best results, maintain the room humidity within **25% to 50%**.

- To store the battery for **less than 3 months**, maintain the ambient temperature within **-4°F (-20°C) to 113°F (45°C)**.

To store it for **at least 3 months**, maintain the temperature within **-4°F (-20°C) to 77°F (25 °C)**.

- For best results, check the battery every three months.

If its power sinks **below 20%** (with a **red** power indicator light on itself), recharge it for at least **2 hours** or until the light turns **green** before returning it to storage.

8.2 Lubrication Schedule

 **Caution**

*This e-bike has **NO** brake cables **BUT** brake hoses that contain hydraulic fluid.*

***DO NOT** attempt to remove the brake calipers or the casing of the brake hoses in search of brake cables for lubrication.*

*Failure to follow this **WILL** result in a leakage in the hydraulic brake system.*

Schedule	Parts	Lubricants	Methods
Weekly	Chain	Chain lube or light oil	Brush or squirt.
	Brake levers	Oil	Drip two drops from oil cans.
	Crankset, rear cogset, chain tensioner wheel	Oil	Drip two drops from oil cans.
Yearly	Bottom bracket	Lithium-based grease	Disassemble and rub.
	Pedals	Lithium-based grease	Disassemble and rub.
	Wheel bearings	Lithium-based grease	Disassemble and rub. Note: Exercise caution with the motors and brakes.
	Saddle post	Lithium-based grease	Disassemble and rub.

8.3 Parts Maintenance

Parts	Items	Checks		Measures
		Actions	Frequency	
Tires	Inflation	Squeeze the tires by hand, seeing if they are firm, loose, or flat.	Each use	Inflate the tires to the pressure marked on their sidewalls, i.e., 30 psi (2 bar or 200 kPa) . See Section 8.5 on Pages 46–47 for more details. If a tire gets flat, refer to Section 8.6 on Pages 48–50 .
		Inspect the bead while inflating or refitting a tire, seeing if it remains properly seated.		Reduce the air pressure in the tube and reseal the bead.
		Spin a wheel, seeing if rotation is even and smooth while alignment is maintained.		Reinflate or deflate the tire as needed.
	Bead seating	Inspect the spokes that support the bead for looseness and breakage.		Contact a bicycle mechanic for servicing.
	Tread	Inspect for excessive wear, flat spots, cuts, or damage.		Replace the problematic tire(s).
	Valves	Inspect that valve caps are firmly fitted and free of dirt.		Clear any dirt from the valves.
Wheels	Axles	Inspect the axle nuts for looseness.	Each use	Retighten the axle nuts.
		Spin a wheel, seeing if rotation is even and smooth while alignment is maintained.		Contact a bicycle mechanic for servicing.
	Rims	Inspect for dirt and grease.		Wipe clean with a rag; or wash with soapy water, rinse clean, and air dry.
	Spokes	Inspect for looseness and breakage.		Contact a bicycle mechanic for servicing.
	Hub bearings	Raise each wheel, inspecting for looseness from side to side.		Contact a bicycle mechanic for servicing.

Parts	Items	Checks		Measures
		Actions	Frequency	
Drivetrain	Pedals	Inspect that each pedal is secure to the corresponding crank arm.	Every month	Retighten or reinstall any problematic pedal.
		Inspect that the reflectors on both pedals remain clean and in place.	Each use	Clean or replace the reflectors.
	Pedal bearings	Raise the e-bike off the ground and spin each pedal by hand, seeing if the pedal rotates smoothly and freely without grinding noises or resistance.		Adjust, lubricate, or replace the bearing; or contact a bicycle mechanic for servicing.
	Chain	Inspect that the chain remains clean, properly lubricated, and rust-free, displaying no breakage, excessive looseness, or stiff links.	Every week	Lubricate the chain as needed. Replace the chain if it is rusted, worn, or broken.
	Crankset	Inspect that the crank arms, the front cog (chain ring), as well as the bottom bracket axle and its bearings remain in place.	Every month	Contact a bicycle mechanic for servicing.
	Chain tensioner	Inspect that the chain tensioner remains in place.		Retighten all fasteners that secure the tensioner.
	Rear cogset	Inspect that the rear cogset (cassette) remains in place.		Contact a bicycle mechanic for servicing.
	Rear derailleur	Inspect that the rear derailleur remains in place.		Retighten all fasteners that secure the derailleur.
Brakes	Levers	Inspect that the levers are securely attached to the handlebars.	Each use	Retighten all fasteners that secure the levers.
		Inspect that the levers are pressed comfortably.		Contact a bicycle mechanic for servicing.
	Hoses	Inspect the hoses for kinks, coils, wear, and leaks.		Contact a bicycle mechanic for servicing.
		Inspect that the hoses remain well connected.		Contact a bicycle mechanic for servicing.
	Calipers, discs	Inspect for looseness, wear, and damage.		Retighten all fasteners that secure the calipers and discs. To replace either, contact a bicycle mechanic.

Parts	Items	Checks		Measures
		Actions	Frequency	
Battery	Remaining power	Inspect that the battery remains in place.	Each use	Push the battery into place.
		Inspect that the battery power remains no lower than 20%.		Recharge the battery.
Control panels	Locking clamps	Inspect that panels are securely clamped to the handlebars.	Each use	Retighten the clamp bolts.
	Function buttons	Inspect that all buttons remain clean.		Clean dust off the buttons.
		Inspect that all buttons function well.		Replace the panels with new identical ones.
Display panel	Locking clamp	Inspect that the panel is securely clamped to the handlebars.	Each use	Retighten the clamp bolts.
	LCD screen	Inspect that the LCD screen has no cracks.		Have the panel repaired by trained technicians; or replace it with a new identical one.
	Display content	Inspect that all letters, numbers, and icons are clearly displayed.		Have the panel repaired by trained technicians; or replace it with a new identical one.
		Inspect that no error codes are displayed.		Refer to Section 9.2 in Troubleshooting on Page 54.

8.4 Adjusting a Hub Bearing

Caution

*Exercise caution **NOT** to damage the motors or brakes.*

Note: Servicing hub bearings requires specialized tools such as cone wrenches (**not included**).

If lacking such tools or unsure about hub bearing adjustment, have a skilled bicycle mechanic handle the task to avoid potential issues.

1. Check that neither locknut is loose.
2. Remove the wheel from the bicycle frame.
3. Loosen the locknut on the side of the hub with the bearing while holding the bearing cone at the same side using a cone wrench.
4. Rotate the cone as needed to eliminate free play.
5. Retighten the locknut while maintaining the cone in position.
6. Replace the wheel to the bike frame, testing that it can rotate smoothly without any excessive side-to-side play.

8.5 Inflating a Tire Tube

Warning

- *An improperly seated inner tube can rupture unexpectedly, leading to serious injury and even death in some circumstances.
ALWAYS ensure that the inner tube is properly seated **BEFORE** performing inflation.*
- *Overinflation or inflating a tire tube too quickly may cause the tire to blow off the rim, resulting in damage to this e-bike and posing a risk of harm to the rider.
ALWAYS inflate the tires with hand pumps designed for bikes.
NEVER use gas station service pumps or any high-pressure air compressors.*



1 Examine the rim and the tire, ensuring that the tire is evenly seated on the rim while the inner tube is **NOT** exposed.



- a. Check that the valve cap and stem are clean.
- b. Unscrew the valve cap, exposing the valve port.



3 Connect your hand pump to this Schrader valve port.



- a. Inflate the tire to the pressure marked on the outer tire.
- b. When finished, remove your pump and replace the valve cap.

8.6 Repairing a Flat Tire

Warning

A worn tire can rupture unexpectedly, causing serious injury or even death under some circumstances.

- **ALWAYS** ensure that the tire is intact **BEFORE** beginning to inflate its inner tube.
- Repair the tire if it goes flat and cannot be evenly seated after multiple adjustments.
- Replace the tire if it is severely damaged and can no longer be well seated.

Caution

If a wheel needs removal, take care with the hydraulic brake parts to avoid leaks.

Note: *The wheel in the following images is for your reference only and **NOT** the front or rear wheel of this e-bike.*

Tools Necessary or Helpful

- **Hand pump for bikes (or CO₂ inflator):** Whether it is of the handheld or standing style, you need to reinflate your new or patched tire.
- **Spare tire tubes or patch kits:** Carry an identical spare tube for quick replacement. A patch kit is also essential for making repairs at home or during a ride.
- **Tire levers:** A tire lever can help you get your tire off the rim easily.
- **Chalk:** Chalk can help to mark the locations of small punctures on a tire and keep track of the repair areas.
- **Talcum powder:** You can apply talcum powder to the tube to prevent adhesive patches from sticking to your tire's inside when reassembling a wheel.
- **Bucket of water:** Submerging an inflated tube in a bucket of water can detect leaks depending on bubbles.

Steps



Remove your tire.

- a. Hook your tire lever around the outer edge of the tire, i.e., the bead.
- b. Once you have the tire lever under the tire rubber, hook the other end of the lever around one spoke to keep the tire elevated.
- c. Add a second tire lever in the same way, taking the tire out of the bead until one side has been completely removed from the rim.



Find and mark the leak.

If the puncture or gash in your tube is not apparent, refill the tube to locate where the air is escaping. There are a couple of ways for your reference:

- Run your hand along the tube and try to feel out the leak.
- If conditions permit:
 - a. Fill water in your sink or bucket.
 - b. Submerge each end of the tube.
 - c. Observe air bubbles escaping from your tire, locating the problematic area.

Note:

- *Be sure to submerge each side, as there may be more than one leak.*
- *Remember to check the tire's inside, removing any objects that cause the puncture.*



Patch the hole.

- a. Clean any dirt or debris off the area around the puncture.
- b. Use sand or emery paper from your patch kit to rough up the area for your adhesives to grip.
- c. Patch the hole.
 - For patches that require no glue, simply press them firmly over the hole.
 - For patches that do need glue:
 - a) Add a layer of glue and spread it evenly over the area.
 - b) Wait for the glue to get a little tacky.
 - c) Press your patch onto the area, fully covering the hole.

Note: If talcum powder is available, scatter it over the patch's adhesive side exposed from the hole to prevent the patch from sticking to the tire's inside.

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Reassemble the wheel.

- a. Check that there are no foreign objects remaining in the tire.
- b. Inflate the tube 1/4 full.
- c. Refit the tire onto the rim by hand.

DO NOT use tire levers, as they can pinch the tube, causing another flat.
- d. Reinflate the tire to the pressure marked on its sidewall.

During the process, ensure that the tire remains properly seated and the valve stem is securely positioned on the tire.
- e. When finished, check the tire again to confirm that the bead is snugly fitted against the rim.

9. Troubleshooting

Warning

To ensure optimal safety, **ALWAYS** avoid leaving the display panel on when performing **ANY** hardware checks, tests, or repair.

- For best results, remove the battery from this e-bike **BEFORE** starting your work.
- If it is necessary to leave the display panel on, wear **INSULATED** hand protection during the process and restrict access to your work area as needed.

9.1 Common Problems

Problems	Causes	Solutions
Chain slipping	<ul style="list-style-type: none"> • Excessively worn or chipped cog teeth • Chain worn or broken • Chain links stiff • Incompatible chain, chain ring (front cog), chain tensioner wheel, cassette (rear cogset), or rear derailleur 	<ul style="list-style-type: none"> • Replace the chain, chain ring, chain tensioner, cassette, or rear derailleur. • Lubricate, readjust, or replace the links. • Seek advice or help from bicycle mechanics.
Chain jumping off the cogs	<ul style="list-style-type: none"> • Cogs loose • Cog teeth bent or broken 	<ul style="list-style-type: none"> • Refasten the cogs. • Replace the cogs.
Clicking noise during pedaling	<ul style="list-style-type: none"> • Chain links stiff • Pedal axles or bearings loose • Bottom bracket axle or bearings loose • Bottom bracket or pedal axle bent • Crankset loose 	<ul style="list-style-type: none"> • Lubricate, readjust, or replace the links. • Retighten the axle nuts or readjust the bearings. • Readjust the bottom bracket. • Replace the bottom bracket axle or pedals. • Refasten the crank.
Grinding noise during pedaling	<ul style="list-style-type: none"> • Pedal or bottom bracket bearings too tight 	<ul style="list-style-type: none"> • Readjust the bearings.
Rear cogset not rotating	<ul style="list-style-type: none"> • Pawl pins jammed 	<ul style="list-style-type: none"> • Lubricate or replace the rear cogset.

Problems	Causes	Solutions
Brakes not working efficiently	<ul style="list-style-type: none"> • Brake calipers or discs loose • Brake hoses damaged 	<ul style="list-style-type: none"> • Refasten the brake calipers or discs. • Seek advice or help from bicycle mechanics.
Brakes squealing or squeaking	<ul style="list-style-type: none"> • Brake calipers or discs loose 	<ul style="list-style-type: none"> • Refasten the brake calipers or discs.
Wheels wobbling	<ul style="list-style-type: none"> • Wheel axles broken • Wheels out of place • Hubs loose • Hub bearings collapsed 	<ul style="list-style-type: none"> • Replace the wheel axles. • Reinstall or refasten the wheels. • Readjust the hub bearings. • Replace the hub bearings.
Steering not accurate	<ul style="list-style-type: none"> • Suspension fork bent 	<ul style="list-style-type: none"> • Seek advice or help from bicycle mechanics.
Gear shifting failure	<ul style="list-style-type: none"> • Derailleur cable binding, loose, or damaged 	<ul style="list-style-type: none"> • Seek advice or help from bicycle mechanics.
	<ul style="list-style-type: none"> • Rear derailleur loose or out of place 	<ul style="list-style-type: none"> • Refasten the rear derailleur. • Seek advice or help from bicycle mechanics.
Frequent tire breakage	<ul style="list-style-type: none"> • Inner tube old or worn • Tire tread or casing worn • Tire unsuited to rim • Foreign objects remaining in tire • Tire pressure too low • Spoke penetrating into rim 	<ul style="list-style-type: none"> • Replace the inner tube. • Replace the tire. • Replace with the correct tire. • Remove such objects. • Reinflate to the correct pressure. • File down the end of the spoke.

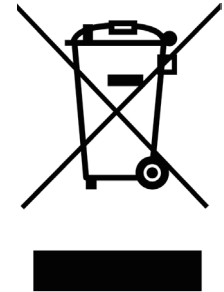
Problems	Causes	Solutions
Charging failure	<ul style="list-style-type: none"> Charger not correctly connected Battery in an over-low-power state Charger, AC cord, or battery broken 	<ul style="list-style-type: none"> Reconnect the charger to the battery and a working power source. Revive the battery in an over-low-power state. <ol style="list-style-type: none"> Ensure the battery remains in place in your e-bike. Raise the wheel where motor drive is enabled. <p>Note: <i>This e-bike applies rear motor drive by default.</i></p> <p><i>If dual or auto-switch motor drive is enabled, toggle it to a single motor mode.</i></p> Run the motor using the throttle handle for a while. Stop the motor and restart charging. Replace the charger, AC cord, or battery with a new identical one.
Control/Display panel failure	<ul style="list-style-type: none"> Battery out of place External wiring loose Mechanical issues 	<ul style="list-style-type: none"> Seat the battery in place. Reconnect or retighten the related external wiring. Have trained technicians inspect, reconnect, retighten, repair, or replace the related internal wiring and/or problematic parts.
Sudden shutdown	<ul style="list-style-type: none"> Battery out of place External wiring loose Auto shutoff set for idle motor(s) and controls Mechanical issues 	<ul style="list-style-type: none"> Seat the battery in place. Reconnect or retighten the external wiring related to the motor(s) and controls. Reactivate the display panel. Have trained technicians inspect, reconnect, retighten, repair, or replace the related internal wiring and/or problematic parts.
Lighting failure	<ul style="list-style-type: none"> Display panel off Mechanical issues 	<ul style="list-style-type: none"> Turn on the display panel. Reconnect or retighten the related external wiring. Have trained technicians inspect, reconnect, retighten, repair, or replace the related internal wiring and/or problematic parts.
Throttle control failure		
PAS control failure		
Push assist control failure		
Password failure	<ul style="list-style-type: none"> Password forgotten 	<ul style="list-style-type: none"> If no new password is already set, simply enter the default 0000. Contact customer service for help. Take notes when setting your password next time.

9.2 Error Codes

Codes	Implications	Causes	Solutions
21	Battery current fault	<ul style="list-style-type: none"> Battery overheating Battery degradation Short circuits Faulty battery management system (BMS) 	<ul style="list-style-type: none"> Allow the battery to rest and cool before resuming use. Replace the battery with a new identical one.
22	Throttle control fault	<ul style="list-style-type: none"> Faulty throttle handle or sensor Loose or broken wiring Controller malfunction 	<ul style="list-style-type: none"> Shut off and reactivate the display panel. Reconnect or retighten the external wiring coming from the throttle handle. Have trained technicians service the throttle handle, controller, or related wiring.
23	Motor phase fault	<ul style="list-style-type: none"> Motor overheating Loose or broken wiring Controller malfunction Short circuits Voltage spikes 	<ul style="list-style-type: none"> Allow the motor(s) to rest and cool before resuming use. Reconnect or retighten the motor cable(s). Shut off and reactivate the display panel. Have trained technicians service the motor(s), motor cable(s), or controller. Replace the battery with a new identical one.
24	Motor hall signal fault	<ul style="list-style-type: none"> Electromagnetic interference Loose or broken wiring Faulty hall effect sensors Voltage fluctuations 	<ul style="list-style-type: none"> Remove any objects that cause external electromagnetic interference. Have trained technicians service the wiring between the hall effect sensors and the controller. Have trained technicians realign or replace any problematic hall effect sensors. Replace the battery with a new identical one.
25	Brake fault	<ul style="list-style-type: none"> Faulty brake levers Loose or broken brake hoses, calipers, discs, or wiring 	<ul style="list-style-type: none"> Retighten the loose parts. Have bicycle mechanics repair or replace the problematic parts.
30	Communication fault	<ul style="list-style-type: none"> Electromagnetic interference Loose or broken wiring Incorrect settings Faulty control software Damaged control hardware 	<ul style="list-style-type: none"> Remove any objects that cause external electromagnetic interference. Reconnect or retighten the external wiring coming from the display panel. Restore the factory settings using the control and display panels. Have trained technicians service the display panel or controller. Replace the display panel with a new identical one.

10. Disposal

Electrical products should not be disposed of with household products. In the EU and UK, according to the European Directive 2012/19/EU for the disposal of electrical and electronic equipment and its implementation in national laws, used electrical products must be collected separately and disposed of at the collection points provided for this purpose. Locations in Australia, Canada, and the United States may have similar regulations. Contact your local authorities or dealer for disposal and recycling advice.





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