

AmericanElectric®

A stylized black silhouette of a raven's head in profile, facing left, with a white diagonal line cutting through it.

**RAVEN**

ELECTRIC BICYCLE OWNER'S MANUAL

## ■ Table of Contents

1. Identifying the Main Components.....	5
2. E-Bike Assembly Instructions.....	6-15
3. How to Operate Your Electric Bicycle.....	16-18
4. Pre-Ride Checklist.....	19-20
5. Safety and Riding Instructions.....	21-22
6. Assembly and Adjustment.....	23-30
7. Inspection & Maintenance.....	31

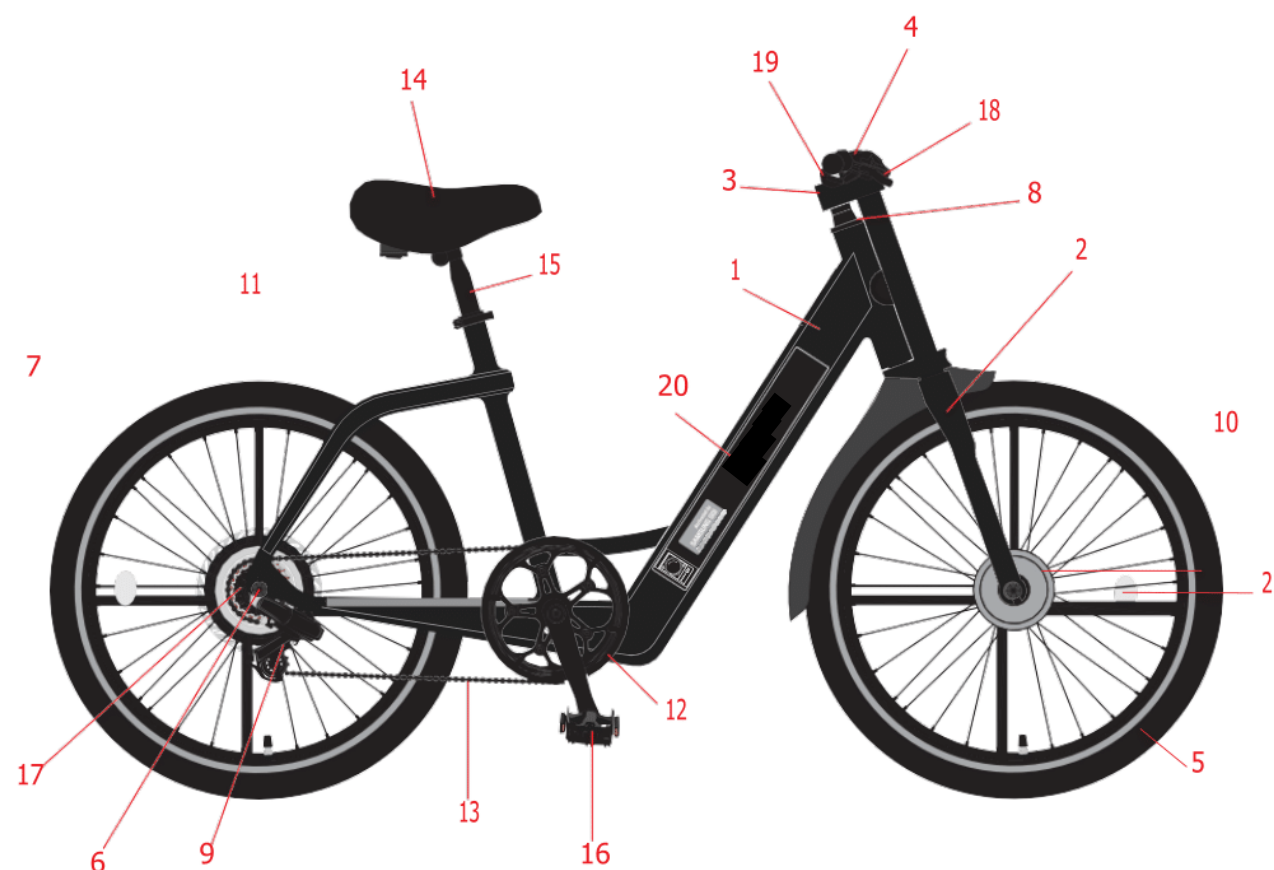
## 1. Identifying the Main Component

### IMPORTANT!

**THIS PRODUCT IS NOT INTENDED FOR OFF-ROAD USE.**

**YOUR INSURANCE POLICIES MAY NOT PROVIDE COVERAGE FOR ACCIDENTS INVOLVING THE USE OF THIS BICYCLE.**

**TO DETERMINE IF COVERAGE IS PROVIDED, YOU SHOULD CONTACT YOUR INSURANCE COMPANY.**



- |                    |                    |
|--------------------|--------------------|
| 1. Frame           | 12. Chain Ring     |
| 2. Front Fork      | 13. Chain          |
| 3. Handle Stem     | 14. Seat           |
| 4. Handlebar       | 15. Seat Post      |
| 5. Tire            | 16. Pedal          |
| 6. Rear Hub        | 17. Cassette       |
| 7. Hub Motor       | 18. Brake Lever    |
| 8. Headset         | 19. Shifting Lever |
| 9. Rear Derailleur | 20. Battery        |
| 10. Front Brake    | 21. Reflector      |
| 11. Rear Brake     |                    |

**⚠ WARNING:** This product can expose you to chemicals including Lead and Phthalates, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**⚠ AVERTISSEMENT:** Ce produit peut vous exposer à des agents chimiques, y compris plomb et Phtalates, identifiés par l'État de Californie comme pouvant causer le cancer et des malformations congénitales ou autres effets nocifs sur la reproduction. Pour de plus amples informations, prière de consulter [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## 2. E-Bike Assembly Instructions

### Unpacking the Bike

1. Open the box by carefully cutting the packaging tape.

2. Remove the bike from the box.



3. Carefully remove the inner boxes and packages. These contain the charger, pedals, grips, handlebar clamp, zip-ties, screws, tools, and power button assembly.



4. Before you begin to assemble your new e-Bike, remove the battery and charger from their boxes and begin charging. You can check the battery charge level by pressing the status button on the battery.



5. Remove ALL the packaging from the bicycle's frame, seat, drivetrain, wheels, and handlebars.





## 2. E-Bike Assembly Instructions

### Handlebar & Power Button Installation

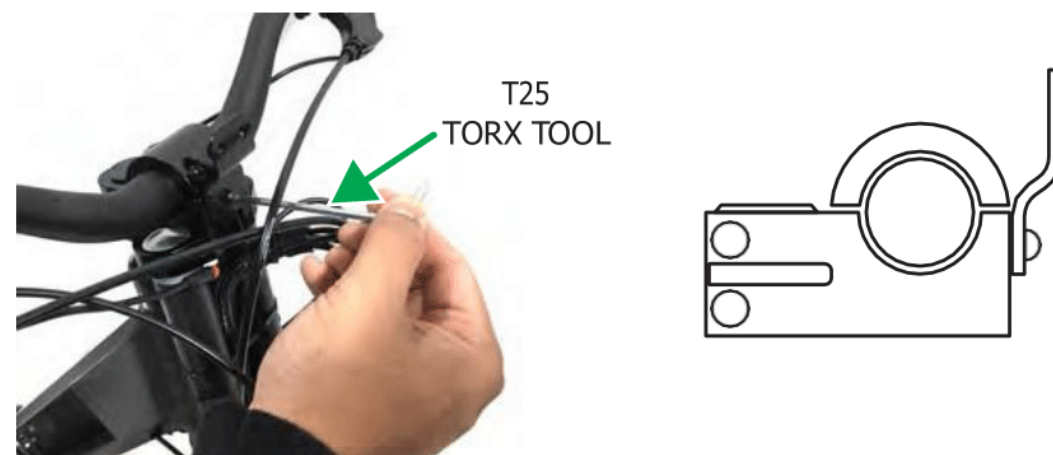
1. Loosely install the handlebar clamp with 2 of the 4 provided black M6x20 security torx bolts. Torx tools for assembly have been provided in the box. Begin by installing one in each corner using the T30 torx tool as shown below.



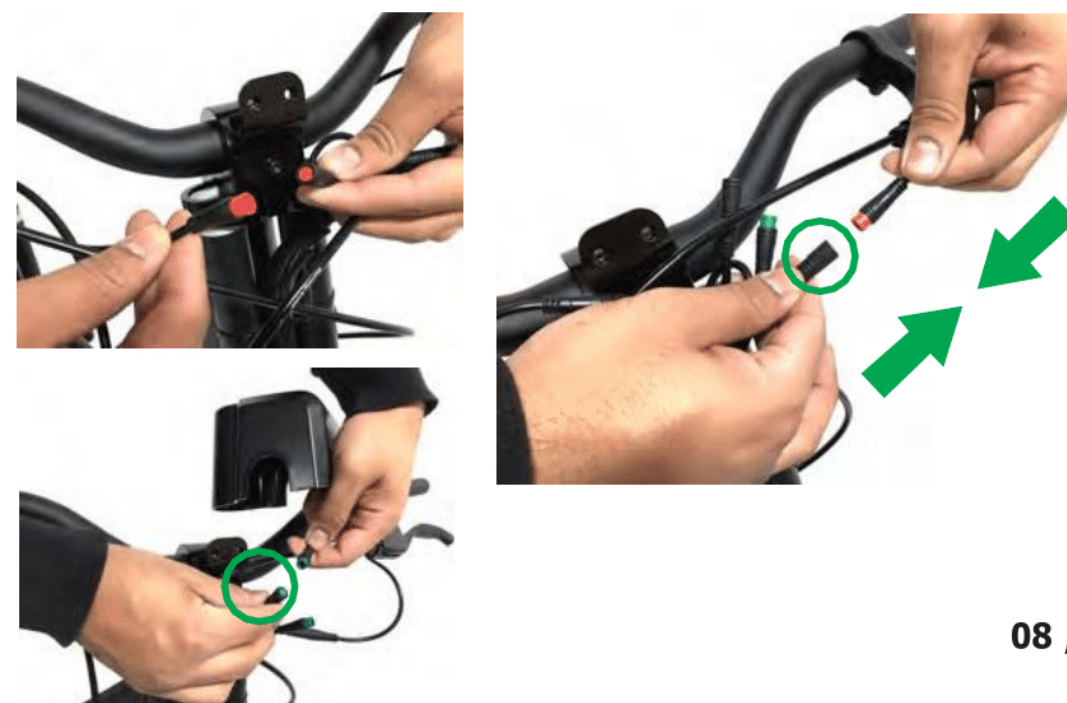
2. Ensure that the handlebar is centered and the brake levers are angled toward the ground at approximately 45 degrees prior to tightening the first 2 bolts. Make sure that there is an equal amount of space between the clamp and the stem before installing the next 2 screws. Tighten all 4 bolts in a criss-cross pattern



3. Locate the M5x10 security torx bolt (in the same box as the pedals) and the power button mounting bracket (inside the power button housing assembly). Position the bracket as shown and tighten the screw using the T25 torx tool.



4. Plug in the red tip connectors from the brake levers to the red tip connectors coming out of the wire bunch near the handlebar stem as shown below. Plug in the green tip connector from the power button assembly to the circled green tip connector coming out of the wire bunch near the handlebar stem as shown below. Take care to properly align the arrows on the connectors before plugging them in.





## 2. E-Bike Assembly Instructions

- Position the power button housing over the handlebar clamp. Tuck any extra wires or connectors under the housing. Install 2 M5x12 security torx bolts to affix the housing to the handlebar bracket using the T25 torx tool.



- Locate the red connector near the front fender. Tuck this wire away as it is not necessary for assembly or operation of the bicycle.



- Install hand grips by simultaneously twisting and sliding each one onto the handlebar. We recommend that you place the shorter grip on the left side of the bar. The brake lever can be moved closer to the grip, but is not necessary.



### Install the Battery & Check Power Button Operation

- Fully insert the lower end of the battery into the battery compartment ensuring that the bottom edge of the battery lines up with the bottom edge of the compartment.
- Turn the key counter-clockwise and hold.
- Press the top of the battery into the compartment until the latch engages the battery and it locks in place.
- Release the key to lock the battery in the bike.





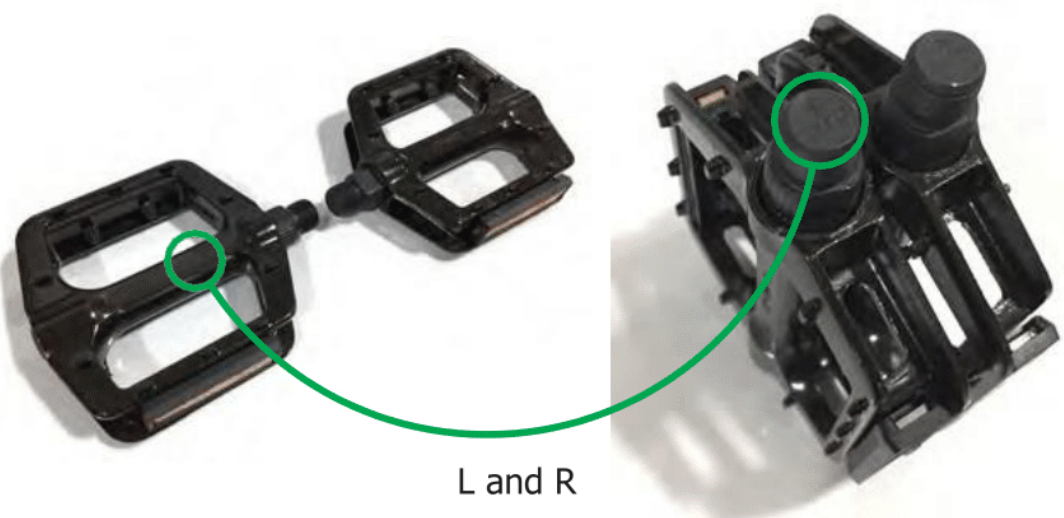
## 2. E-Bike Assembly Instructions

- Press the power button to turn the bike on. The different modes are indicated by the button color, as described below.



### Pedal Installation

- Remove the pedals from their box and remove the packaging. Each pedal is labelled "L" for left and "R" for right on the pedal spindle or platform of the pedal itself. Grease each spindle before installing.  
NOTE: The left pedal is threaded in reverse. Tighten the left pedal by turning counter-clockwise.



- Thread the pedal marked "R" into the crank arm on the right (drive) side of the bicycle by turning the spindle clockwise. Make sure that you are not "cross-threading", which can strip the threads in the crank arm. If the threads do not turn easily, don't force them. Back the spindle out and start over. Once the pedal is threaded into the crank, tighten the spindle securely to the crank arm with a 15 mm open-ended wrench.



- The left pedal is threaded in reverse. Thread the pedal marked "L" into the crank arm on the left (non-drive) side of the bicycle by turning the spindle counter-clockwise. Make sure that you are not "cross-threading", which can strip the threads in the crank arm. If the threads do not turn easily, don't force them. Back the spindle out and start over. Once the pedal is threaded into the crank, tighten the spindle securely to the crank arm with a 15 mm open-ended wrench.





## ■ 2. E-Bike Assembly Instructions

### Miscellaneous Instructions

1. Locate the 2 wires below the seatpost clamp. Cut the 2 zip-ties holding the wires on the seat tube.



3. The bike is equipped with a security seatpost that is adjustable by 8" or 20cm.



2. Bundle the 2 wires with the provided zip-ties and bundle the wires as shown below. Ensure the bundled wires do not interfere with the rear tire and zip-tie them through the loop to the seat tube near the bottom bracket as shown below.



4. The bike is outfitted with a Sturmey Archer Dynohub drum brake. Please refer to the manufacturer's website or an authorized mechanic for maintenance and adjustment if needed in the future. <http://www.sturmey-archer.com>





### 3. How to Operate Your Electric Bicycle

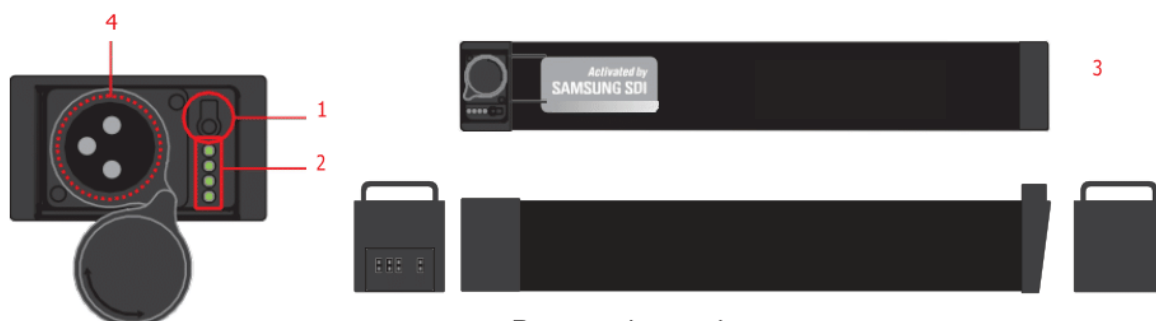
- Recharge the battery fully before leaving it for an extended period of time. Make sure that it is recharged at least once every 10 days whether you use it or not. (Note that recharging may not be possible once a battery becomes fully discharged.)
- Protect the battery from rain or moisture, which could cause failure.
- Charge the battery in environments between 15°F and 100°F.
- It is recommended that your e-bike be inspected by an authorized GenZe dealer or an experienced independent bicycle dealer or mechanic at least once a year.
- If your e-Bike fails to work properly, consult your retailer or authorized dealer.
- It is important that your e-Bike is well maintained in order to prolong its life.
- Ensure the brake pads are promptly replaced when they become worn out.
- GenZe recommends the use of genuine replacement parts.

Frequency	Component	Lubricant	How to Lubricate
Weekly	Chain	Chain Lube or Light Oil	Brush On or Squirt
	Derailleur Pulleys	Chain Lube or Light Oil	Brush On or Squirt
	Derailleur	Oil	Oil Can
	Brake Levers	Oil	2 Drops from Oil Can
Monthly	Shift Lever	Lithium Based Grease	Disassemble
Every Six Months	Freewheel	Oil	2 squirts from Oil Can
	Brake Cables	Lithium Based Grease	Disassemble
Yearly	Bottom Bracket/Pedals/Derailleur Cables/Wheel Bearings/Headset/Seat Post	Lithium Based Grease	Disassemble

### 4. Pre-Ride Checklist

1. Check that the front and rear brakes are properly adjusted. Squeeze the front brake lever (left) and the rear brake lever (right) with your e-Bike at a standstill and the kick stand is in the upright position, then apply full pressure to one pedal. The e-bike should not move forward if the brakes are adjusted properly.
2. Check that the handle stem and the seat post clamp are fully tightened.
3. Check the front and rear wheels to ensure that they are secure. Ensure that the hub nuts on the front (if applicable = 15mm) and rear wheel (19mm) are securely fastened.
4. Check tire pressure (found on the tire's sidewall). Do not overinflate.
5. Ensure the seat quick-release clamp is secured and that the seat and seat post do not have any movement.
6. Check the pedals and the gear crank to ensure that they are secure.
7. Check that side reflectors are in place and free from damage and contamination.
8. Check the frame and the front fork for any deformation.
9. Ensure that the front wheel and the handlebars are set in the correct orientation.
10. Secure any loose fitting pants to your leg with a band or other similar means.
11. For your safety, always wear protective clothing (helmet, biking gloves) each time you ride your e-Bike.

## 3. How to Operate Your Electric Bicycle

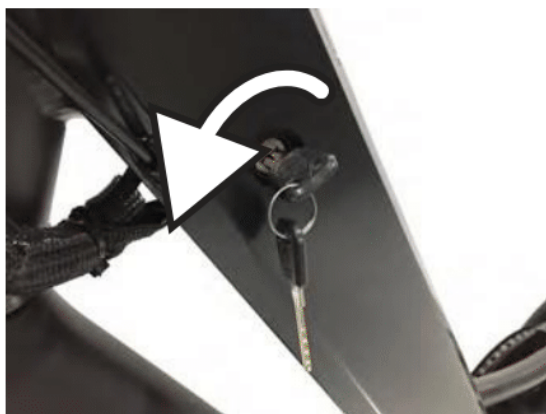


Battery size and appearance may vary.

1. Battery Indicator Switch – Press to see the indication of battery charge.
2. Battery Indicators – The battery charge status is indicated in five levels including the last indicator which will show as red, but only when the battery is low. Recharge the battery when two or fewer indicators are shown.
3. Handle – Rotate the key counter-clockwise and hold and pull the handle to remove the battery.
4. Recharging Inlet – Located beneath the on/off switch. Connect the charging jack here.

### How to Insert or Remove the Battery

1.

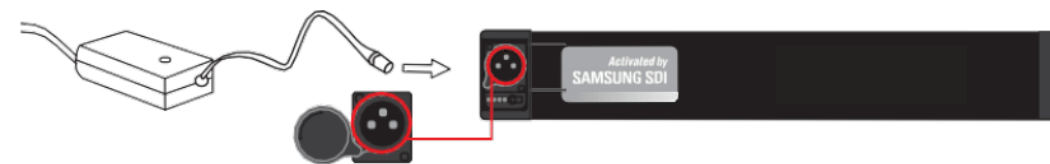


2.

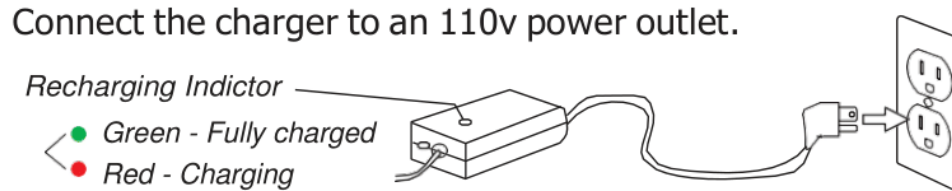


### Recharging the Battery

1. With the battery installed or removed from the frame, connect the charger to the battery pack.



2. Connect the charger to an 110v power outlet.



3. You can monitor the charging progress by observing the colored LED light on the charger. When the light is red, the battery is charging. When the light is green, charging is complete.
4. Once charging is complete, disconnect the charger from the outlet and disconnect the charging cable from the battery pack.



### Caution

- Do not move the charger and battery while charging is in progress.
- Use the charger in a well-ventilated place free from moisture. Do not leave anything flammable or explosive near the charger. **WARNING: CHARGER MAY GET HOT!**
- Ensure that the charger is out of reach of children.
- Only use the certified charger provided and always follow the instructions to recharge correctly.
- To extend the battery's life, recharge it immediately after it has discharged.






## 4. Pre-Ride Checklist

## 5. Safety and Riding Instructions


We recommends reviewing the local ordinances, safety equipment, licensing, and usage requirements in your area when riding an electric bicycle.

12. This product is not intended for children.

In this manual, there are three signs used to alert you of the degree of danger associated with riding: Danger, Warning, and Caution.

 <b>Warning</b>	<p><i>Indicates an imminently hazardous situation which is liable to result in death or serious personal injury.</i></p>
 <b>Warning</b>	<p><i>Indicates a potentially hazardous situation which could result in death or serious personal injury.</i></p>
 <b>Caution</b>	<p><i>Indicates a potentially hazardous situation which may result in minor or moderate personal injury.</i></p>


- Read the entirety of this user’s manual carefully before your first ride and fully abide by the warnings and guidelines listed.
- Misuse of your e-Bike can result in injury.

 Make sure that wires are not entangled


**Warning**


- Riding with the wires entangled may cause the brake to be applied unexpectedly or not work properly.

NORMAL



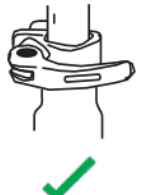
ENTANGLED




 Make sure that the seat is held securely before every ride

**Danger**

- Make sure that the minimum insertion mark on the seat post is not visible beyond the bike frame
- If you are unsure about whether the seat post is secure, loosen it via the quick release and then fasten it again securely.





- Consult your retailer before riding an e-Bike if you are over 230 lbs.

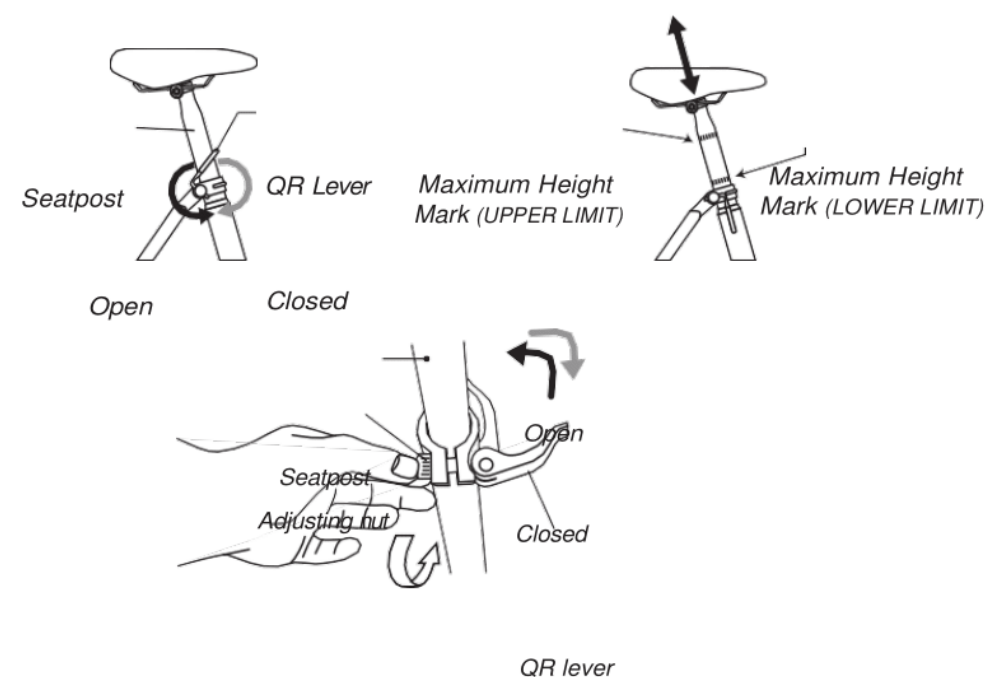
## 5. Safety and Riding Instructions

- Do not ride tandem on your e-bike under any circumstances.
- Do not use your e-Bike to do “tricks” such as pulling a wheelie, performing jumps, or riding down stairs.
- Do not ride under the influence of alcohol or any other substances.
- Do not ride while walking a pet or when holding an object.
- Do not ride on rough trails, including mountain trails.
- Do not step on your e-Bike to reach something above your head.
- Do not only use your front brake.
- Applying the brakes abruptly on a wet or icy surface may cause the bike to skid uncontrollably.
- Ensure the kickstand is up before every ride.
- Placing an excessive load on your bike may cause you to lose control.
- Avoid wearing loose-fitting clothing that might get caught in the e-Bike’s chain or in other moving parts.
- Refrain from cycling in high heels, slippers, sandals, or while barefoot. Always wear closed toed footwear while riding your GenZe e-Bike.
- Always use proper hand signals.
- If you are a beginner, make sure you practice in a large open area before riding on public roads.
- Do not allow anyone who does not know how to control an e-bike to ride your e-Bike.

## 6. Assembly and Adjustment

### Seat Assembly and Height Adjustment

1. Insert the seat post into the frame until the maximum height marks are no longer visible. Next, adjust the seat post to the appropriate height by standing next to the seat and adjusting it until it is approximately level with your hip bone. Do not raise the seat higher than the maximum seat height limit as marked on the seat post. Tighten the jam nut as necessary and clamp the lever to securely fasten the seat.
2. Securing the quick-release clamp should only take enough force to leave an imprint on your hand. Do not force the clamp shut. If it feels too tight to close, loosen the jam nut enough to permit the clamp to close with the proper amount of force. If you have questions, check with your retailer or GenZe authorized service center for proper installation instructions as the seat height will vary depending on the rider’s height.





## 6. Assembly and Adjustment

### Wheel Installation

- If you received your e-Bike without the front wheel installed, install the front wheel using a 15mm wrench and tighten the axle nuts.
- If they are ever removed for maintenance and or repairs, make sure that the front and rear wheel wheels are reinstalled correctly with their axles fully seated as shown in figures 1 and 2 below. Note that the rear wheel requires a 19mm wrench for removal and installation.

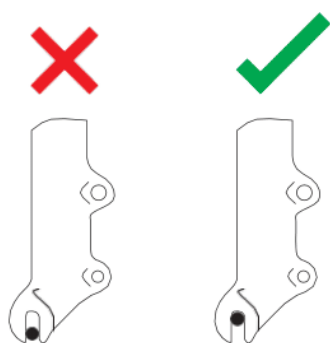


Figure 1

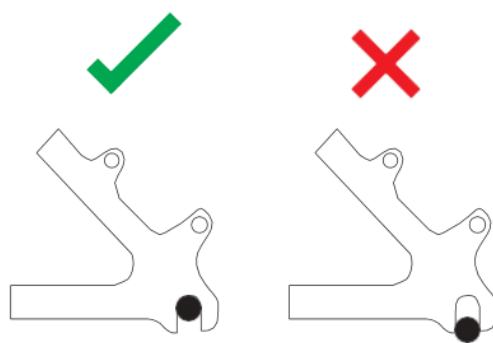


Figure 2

### Tire Inflation

- Fill tires to recommended pressure as indicated on the sidewall of the tire.

### Pedal Assembly

*\*Make sure that the pedals are mounted on their respective sides, as labeled. Failure to do so will prevent their being removed or reattached.\**

- The left and right pedals are fastened by screws rotating in the opposite directions.
- The pedal with "R" marked on one side is the Right Pedal. The pedal with the "L" marked on one side is the Left Pedal.
- Use a 15mm narrow open-ended wrench and make sure that the pedal axle and the gear crank arm are perpendicular to each other when attaching the pedals.



## 6. Assembly and Adjustment

### Brakes - Drum and Disc

- Riding with improperly adjusted brakes or worn brake pads can result in serious injury or death.
- Adjust the brake lever if the distance between the lever and the handlebar is uncomfortable for ease of operation.
- Make sure that the disc is fully coupled to the hub and securely held.
- Insert the disc into the brake body (attach the front wheel) and then fix the brake wire.
- Squeeze the brake lever 10 times to see whether the brake pad touches the disc.



#### Warning

- **Please use extra caution to keep your fingers away from the rotating disc brake rotor and spokes. This disc brake rotor is sharp and can inflict serious injury to your fingers if caught within the openings of the rotor or spokes.**
- **If the disc brake is cracked in anyway, contact your GenZe dealer**
- **Be careful not to let any grease or oil on the rotor or pads. This may cause the brakes to not work or respond correctly.**
- **Check the brake rotors and cables for any rust or fraying. If any is found contact your GenZe dealer.**
- **When removing or installing the tire be sure that the quick release lever does not interfere with the movement of the brake rotor. This could cause a dangerous situation.**

### Brake Lever & Disc Caliper

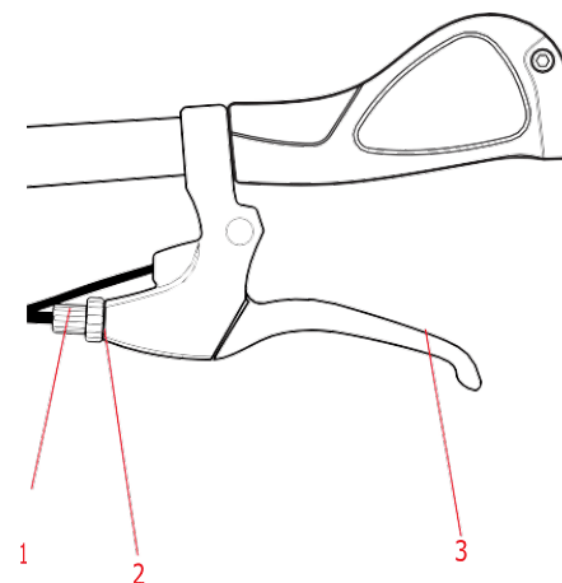


Figure 5

1. Barrel Adjuster
2. Lock Ring
3. Brake Lever

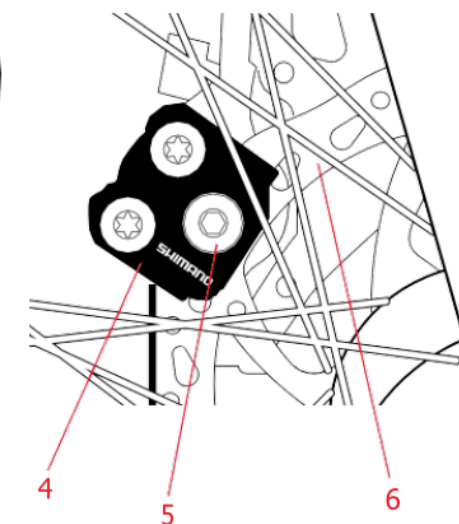


Figure 6

4. Brake Caliper
5. Adjustment Bolt
6. Disc Rotor

*Appearance may vary based on size or model year.*

### Adjust the Brakes Using the Brake Barrel and Lock Ring

This barrel has a knurled outer ring so that it can be adjusted without tools (see figure 5). Loosen the barrel but do not remove it from brake lever. Once loose, unscrew the lock ring until it is adjacent to the barrel. Turn the barrel counter-clockwise by hand and check the new tension and action by squeezing the brake lever. When the brake feels tight and the tension is responsive, properly stopping the wheel, lock the barrel using the lock ring by turning it clockwise until it is securely fastened against the brake lever assembly.



## 6. Assembly and Adjustment

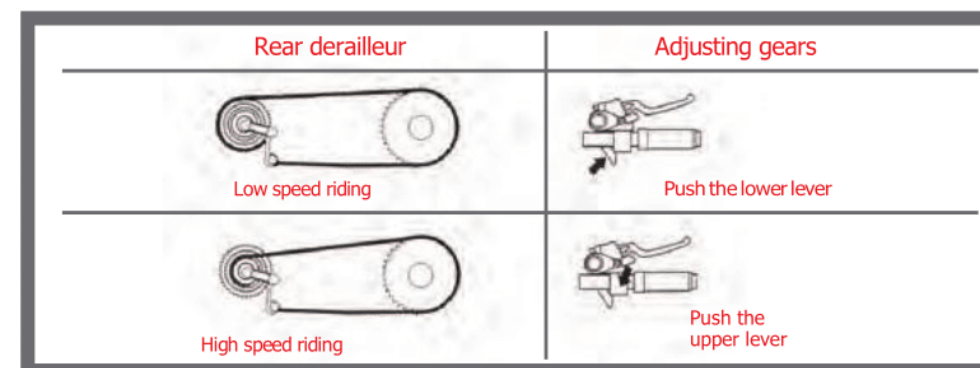
### Adjusting the Disc Brake using the Brake Caliper:

To adjust the brake pads inside the caliper use a #5 Allen wrench by inserting it through the wheel (see figure 6). To tighten the calipers and bring the pads closer to the rotor so there is less movement with the brake lever turn the adjusting bolt using the 5mm Allen wrench clockwise one click at a time until the brake is tight at the lever but is not rubbing against the rotor. If you over tighten the caliper, rotate the adjusting bolt using the Allen wrench counter clockwise one click at a time until the wheel spins freely and the rotor is not rubbing against the disc. Please use extra caution to keep your fingers away from the rotating disc brake rotor and spokes. This disc brake rotor is sharp and can inflict serious injury to your fingers if caught within the openings of the rotor or spokes.

- After each adjustment make sure that the wheel spins freely and that the brake lever action is tight and responsive. It is good practice to depress the brake lever 10 times before you complete the job to insure that wheel spins freely and that the pads do not rub against the rotors.
- A combination of these methods is best for fine tuning the action in your brake levers and insuring proper and safe braking. If you need assistance or are unsure of how to

complete these adjustments contact your GenZe certified Service Station as improper adjustment could cause serious injury or death.

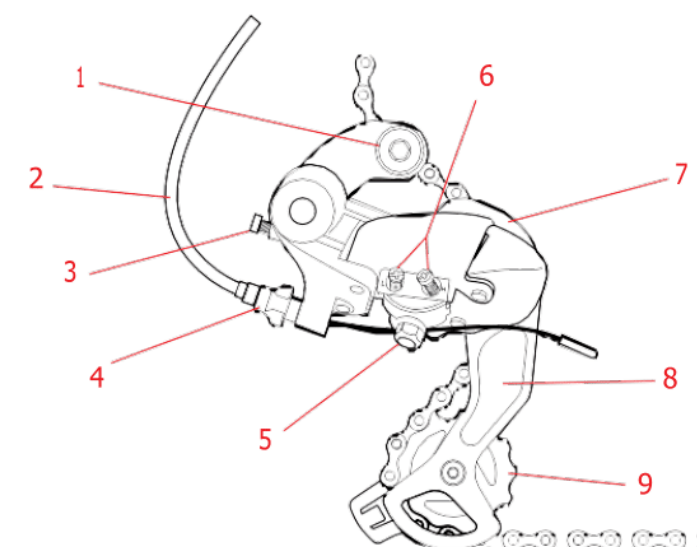
### How to Adjust Gears



### Rear Derailleur

Figure A

1. Mounting Bolt
2. Cable and Housing
3. B-Tension Adjuster
4. Barrel Adjuster
5. Cable Bolt
6. Limiter Screws (L&H)
7. Upper Pulley
8. Cage
9. Lower Pulley



Appearance may vary based on size or model year.

If your e-Bike is not shifting correctly you should contact your local retailer. However, minor adjustments can be made following these simple instructions:

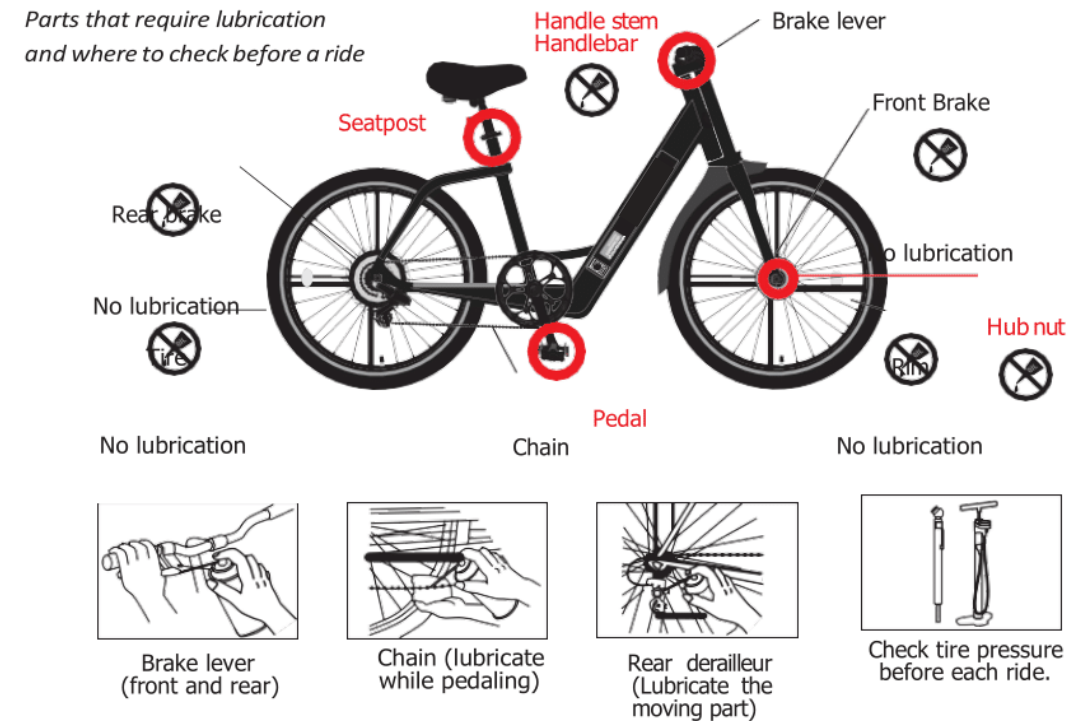
- Shift to the smallest sprocket; gear 8.
- Check for excessive slack in the exposed derailleur cable.
- Inspect the shifter cable for improper tension or kinks.

**6. Assembly and Adjustment** **7. Inspection & Maintenance**

- If when selecting the next higher gear the derailleur does not engage the higher gear, turn the black barrel adjuster (See figure A) on the derailleur counter-clockwise one or two turns until the shift is completed. Continue to make small adjustments until the derailleur engages the next higher gear smoothly.
- If the black barrel adjuster cannot be turned any further there is excessive slack in the cable tension, the cable needs to be reset.
- If when selecting the next lower gear the derailleur does not engage the lower gear, turn the rearmost adjuster on the derailleur clockwise one or two turns and attempt the shift again. Continue to make small adjustments until the derailleur engages the next lower gear smoothly.
- If excessive drivetrain noise is heard from the derailleur, with the e-Bike on its center stand and after shifting to the highest

(8th) gear, begin turning the pedal crank moderately while adjusting the screw adjuster on the derailleur marked "H" in small increments in either direction until the noise is eliminated. Now shift to the lowest (1st) gear and complete the same task as before, this time with the screw adjuster on the derailleur marked "L".

If any drivetrain problems still exist, consult your local retailer.



**Motor:**

- Do not attempt to disassemble the electric motor on your own. Consult your local authorized retailer to check parts for wear or to lubricate applicable components.
- Check that the motor is securely assembled before every ride. If it is loose, contact your local authorized retailer .

We recommend that you do not modify your e-bike on your own. Contact us or consult your dealer prior to any modification. Any damage to your e-bike caused by modifications not approved by or completed by GenZe may void your product warranty.

You are required to follow all traffic laws, regulations, and signals when you ride your e-bike. Please familiarize yourself with your local ordinances.