



## USER'S MANUAL

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# Assembly instructions

**Step 1:** Remove bike from carton and carefully set out all contents of the box. Remove packaging material protecting the bicycle frame and components. Ensure the following pieces are included in the package.

1. Bigcat bike
2. Front Wheel
3. Pedals (Left and Right)
4. Front headlight
5. Charger
6. Keys for battery pack
7. Assembly tools and manuals.
8. Seat and seat post

**Assembly note:** Using a small amount of grease on stem bolts and pedals threads can improve installation.

**Step 2:** Install handlebar onto stem , install the bigcat LCD display

Be sure to center the handlebar and ensure hardware is properly secured.

**Step 3:** Install front wheel. Ensure washers are on outside of fork, and installed before the axle nut.

**Step 4:** Install seat post. Secure tightly with the quick release lever at the desired height.

**Step 5:** Install the pedal. Use the pedal marked with “L” on the left side(Left crank is a reverse thread) and the right pedal marked with an “R” on the right side( side with drivetrain gears). Be careful to not cross thread the pedals.

## Adjusting Seat Height

Use the quick release lever to free the seat post and pull upwards or push downwards to reach desired height.

**Notice:** Ensure seat post and seat are properly adjusted before riding. Do not raise the seat post beyond the “Minimum” insertion marking etched into the seat post tube. If your seat post projects from the frame beyond these markings, the seat post or frame may break, which could cause you to lose control and fall. Prior to first use, be sure to tighten the seat clamp properly. A loose seat clamp or seat post binding bolt can cause damage to the bicycle or can cause you to lose control or fall. Periodically check to make sure these the seat clamp is properly tightened.

## Rider Comfort

To obtain maximum comfort, the rider should not overextend his or her arms reach when riding. In order to obtain the most comfortable riding position and offer the best possible pedaling efficiency, the seat height should be set correctly in relation to the rider’s leg length. The correct saddle height should not allow leg strain from over extension, and the hips should not rock from side to side when pedaling. While sitting on the bicycle with one pedal at its lowest point, place the ball of your foot on that pedal. The correct saddle height will allow the knee to be slightly bent in this position.



## Battery charging

- The battery should be recharged after each use. There is no memory effect so you can charge the battery after short rides without damage.
- The battery can be recharged on or off the bike.

- Remove the battery by turning the key and then pulling the battery forward and up until the battery lifts off of the mating receptacle.
- The charger will automatically stop when the battery pack is full
- Always charge in dry locations and indoors away from direct sunlight, dirt or debris.
- Do not cover up the charger when plugged in or charging, it air cools and needs to be left in a clear space. Do not charge with the charger in the inverted position which can inhibit cooling and reduce the chargers life.
- Check the charger cables, charger and battery for damage before beginning each charge.
- The light on the charger will turn green when charge is complete and stay red while the battery charges
- Charging normally takes 3-5 hours, however it can take longer when you first receive the bike since the battery pack is balancing.
- Charge in a clear area away from potential to trip on the charging cords, or damage to occur to the bike, battery or charging equipment while parked.

## Charging Procedure

1. Turn the battery pack off by turning the key to the off position (vertical / seat tube battery) or removing the battery from its cradle (horizontal / down tube battery).
2. Remove the rubber cover on the charging socket.
3. With the battery on or off the bike, place the charger in a flat, secure place, and connect the DC output plug from the charger (round barrel connector) to the charging port on the side of the battery pack.
4. Then connect the input plug (110/220 volt plug) to the power outlet, charging should initiate and will be indicated by the LED charge status light on the charger turning red.
5. After charging, unplug the charger from the wall outlet first and proceed to remove the charger DC plug from the bike battery socket.



# Operation

## Start-Up Procedure

After the bike has been properly assembled following the “Instructions” and all components are secured correctly, you may now proceed to start up the vehicle and select the drive mode and power level.

**Notice:** Do not perform any of the steps in the Operation section of this manual until you have read this entire manual since there are important details in the following sections, especially related to safety.

- Install the key and secure the battery pack to the frame mount, turning in the clockwise direction. Remove the key and test to see the battery cannot be removed before proceeding. (Horizontal / down tube battery)
- Insert the battery into the frame (Vertical / seat tube battery), turn the key to the "on" position, when the key can not be removed from the battery.
- Hold down the power mode button on the LCD display toggle switch for 2 seconds then release, the LCD readout should turn on.
- Select your desired level of pedal assistance between level 1 and 5 using the up and down arrows on the display remote. Level 1 corresponds to the lowest level of pedal assist, and level 5 corresponds to the highest level of pedal assist. The approximate top speed of each level of pedal assist is show in the table below:

Pedal Assist Level	Approximate Top Speed
1	10 MPH
2	13 MPH
3	15 MPH
4	18 MPH
5	20 MPH

## Best Practices for Extending Range and Battery Life

**Notice:** It is recommended that users pay close attention and ride within the following limitations to ensure the hub motor does not overheat or become damaged from excessive loading.

- Do not climb hills steeper than 15% in grade.
- Pedal to assist the motor when climbing hills and accelerating from a stop.
- Avoid sudden starts and stops.
- When climbing hills reduce the power output to 500 watts or less. This can be accomplished by pedaling with the bike while in pedal assist modes 1 or 2.
- Accelerate slowly.

## Parking, Storage and Transport

Please follow these basic parking, storage and transport tips to ensure your bike is well cared for on and off the road.

- When pushing the vehicle manually, turn off the power to avoid accidental acceleration from the motor.
- It is recommended to park indoors. If you must park outdoors, store the battery indoors to avoid extreme temperatures.
- Switch the power off, and any lights to conserve battery. Remove the key from the bike and ensure the battery is locked to the frame or removed and brought with you for security.
- In public places, your Bike must be parked in accordance with local rules and regulation.
- If you have to park outdoors in rain, or wet conditions you should only leave your Bike outside for a few hours and proceed to park the bike in a dry location afterwards in order to allow all the systems to dry out. Much like a regular bike, use in wet conditions mandates a more regular maintenance schedule to ensure your bike does not become rusty, corroded and to ensure all systems are always working safely.
- Do not park, store, or transport your Bike on a rack that is not designed for the size and weight of the bike.
- Wide tires, as used on the Bikes, cannot fit into all bike racks, please select an appropriate rack for the width of tires used on your bike.



- Locking up your bike is recommended to ensure your bike is secure and the chance of theft is reduced.
- When storing your bike or carrying your bike on a rack for transport, you can remove the battery pack to reduce the weight of the bike and make lifting and loading easier.

## Carrying Loads

### MAXIMUM PAYLOAD

The total maximum weight limit of Big Cat Bikes (285Lbs) includes the weight of the rider as well as clothing, riding gear, cargo, etc. The kickstand is not designed to be used for loading cargo. You **MUST** hold onto the bike whenever loading cargo. Do not assume the bike is stable and balanced when using the kickstand, always hold onto the bike when cargo is being loaded or in place.

Total payload: 285lbs

Rear Rack: 40 lbs.

### CARRYING CARGO

Carrying a cargo involves additional risks which need to be paid close attention to ,users should practice riding on a flat and open area with light cargo before attempting to carry heavier loads or passengers. You must become accustomed to the braking ,steering, and operational adjustments required to safely operate the cargo. Braking ,acceleration, and balancing are all significantly affected by the addition.

**Notice:** The following bulleted list provides important tips for the safe operation of the cargo.



- Plan your route accordingly as your hill climbing ability ,steering and braking are all impacted when cargo is loaded. Hills that are normally easy to climb and descend without cargo can become challenging and dangerous once cargo is loaded.
- Cargo should be loaded as low as possible to lower the center of gravity and improve stability, but ensure that cargo does not interfere with any moving components or the ground.
- Ensure your loads are properly secured and periodically check that nothing loosens.
- Get a feel for the cargo load in a flat and open area before riding on roads.



**Do not use the front brake by itself, always apply the rear brake first followed by the front brake and be sure to use both brakes for all braking operations. Front fork failure or loss of control are plausible when the front brake is operated independently for slowing at high speed with cargo loads.**



**The kickstand is not designed to be used for loading cargo. You MUST hold onto the bike whenever loading cargo. Do not assume the bike is stable and balanced when using the kickstand, always hold onto the bike when cargo is being loaded or in place.**

## Maintenance

### Bicycle Care

To ensure safe riding conditions you must properly maintain your bike. You should follow these basic guidelines and see your certified local bike shop seasonally to ensure your bike is safe for use.

- Properly maintain batteries by keeping them fully charged when not in use.
- Never immerse the bike or any components in water as the electrical system may be damaged.
- Periodically check wiring and connectors to ensure there is no damage and the connectors are secure.
- To clean, wipe the frame with a damp cloth soaked in a mild non-corrosive detergent mixture.

- Store under shelter; avoid leaving it in the rain or exposed to corrosive materials. If exposed to rain, dry your bicycle afterwards and apply anti-rust treatment to chain and other unpainted steel surfaces.
- Riding on the beach or in coastal areas exposes your bicycle to salt which is very corrosive. Wash your bicycle frequently and wipe or spray all unpainted parts with anti-rust treatment. Damage from corrosion is not covered under warranty so special care should be given to extend the life of your bike when used in coast areas or areas with salty air or water.
- If the hub and bottom bracket bearings have been submerged in water they should be taken out and re-greased. This will prevent accelerated bearing deterioration.
- If the paint has become scratched or chipped in the metal, use touch up paint to prevent rust. Clear nail polish can also be used as a preventative measure.
- Regularly clean and lubricate all moving parts, tighten components and make adjustments and required.

## Safety Checklist

**Notice:** Before every ride it is important to carry out the following safety checks.

Safety Check	Basic Steps
1. Brakes	<ul style="list-style-type: none"> <li>○ Ensure front and rear brakes work properly.</li> <li>○ Ensure brake pads are not over worn and are correctly positioned in relation to the rims.</li> <li>○ Ensure brake control cables are lubricated, correctly adjusted and display no obvious wear.</li> <li>○ Ensure brake control levers are lubricated and tightly secured to the handlebars.</li> </ul>
2. Wheels and Tires	<ul style="list-style-type: none"> <li>○ Ensure tires are inflated to within the recommended limits displayed on the tire sidewalls.</li> <li>○ Ensure tires have tread and have no BULGES OR EXCESSIVE WEAR.</li> <li>○ Ensure rims run true and have no obvious wobbles or kinks.</li> <li>○ Ensure all wheel spokes are tight and not broken.</li> </ul>

	<ul style="list-style-type: none"> <li>○ Check axle nuts and quick releases to ensure they are tight. If your bicycle is outfitted with quick release axles, ensure the locking levers are correctly tensioned and in the closed position.</li> </ul>
3. Steering	<ul style="list-style-type: none"> <li>○ Ensure handlebar and stem are correctly adjusted and tightened, and allow proper steering.</li> <li>○ Ensure the handlebars are set correctly in relation to the forks and the direction of travel.</li> </ul>
4. Chain	<ul style="list-style-type: none"> <li>○ Ensure the chain is oiled, clean and runs smoothly.</li> <li>○ Extra care is required in wet or dusty conditions</li> </ul>
5. Bearings	<ul style="list-style-type: none"> <li>○ Ensure all bearings are lubricated, run freely and display no excess movement, grinding or rattling.</li> <li>○ Check headset, wheel bearings, pedal bearings and bottom bracket bearings.</li> </ul>
6. Cranks and Pedals	<ul style="list-style-type: none"> <li>○ Ensure pedals are securely tightened to the cranks.</li> <li>○ Ensure the cranks are securely tightened and are not bent.</li> </ul>
7. Derailleurs	<ul style="list-style-type: none"> <li>○ Check that the derailleur(s) are adjusted and functioning properly.</li> <li>○ Ensure shift and brake levers are attached to the handlebar securely.</li> <li>○ Ensure all brake and shift cables are properly lubricated.</li> </ul>
8. Frame and Fork	<ul style="list-style-type: none"> <li>○ Check that the frame and fork are not bent or broken.</li> <li>○ If either are bent or broken, they should be replaced.</li> </ul>
9. Accessories	<ul style="list-style-type: none"> <li>○ Ensure all reflectors are properly fitted and not obscured.</li> <li>○ Ensure all other fitting on the bike are properly secured and functioning.</li> <li>○ Ensure rider is wearing helmet and any other required riding safety gear.</li> </ul>
10. Motor Drive Assembly and Throttle	<ul style="list-style-type: none"> <li>○ Ensure hub motor is spinning smoothly and the motor bearings are in good working order.</li> <li>○ Ensure all power cables running to hub motor are secured and undamaged.</li> <li>○ Make sure the hub motor axle bolts are secured and all torque arms and torque washers are in place.</li> </ul>
11. Battery Pack	<ul style="list-style-type: none"> <li>○ Ensure battery is charged before use.</li> <li>○ Ensure there is no damage to battery pack.</li> <li>○ Lock battery to frame and check to see that it is secured.</li> </ul>



# Troubleshooting

## Basic Troubleshooting

	Symptoms	Possible Causes	Most Common Solutions
1	<b>It doesn't work</b>	<ol style="list-style-type: none"><li>1. Insufficient battery power</li><li>2. Faulty Connections</li><li>3. Battery not fully seated in tray</li><li>4. Improper turn on sequence</li><li>5. Brakes are applied</li></ol>	<ol style="list-style-type: none"><li>1. Charge the battery pack</li><li>2. Clean and repair connections</li><li>3. Install battery correctly</li><li>4. Turn on bike with proper sequence</li><li>5. Disengage brakes</li></ol>
2	<b>Irregular acceleration and/or reduced top speed</b>	<ol style="list-style-type: none"><li>1. Insufficient battery power</li><li>2. Loose or damaged throttle</li></ol>	<ol style="list-style-type: none"><li>1. Charge or replace battery</li><li>2. Replace throttle</li></ol>
3	<b>When powered on the motor does not respond</b>	<ol style="list-style-type: none"><li>1. Loose wiring</li><li>2. Loose or damaged throttle</li><li>3. Loose or damaged motor plug wire</li><li>4. Damaged motor</li></ol>	<ol style="list-style-type: none"><li>1. Repair and or reconnect</li><li>2. Tighten or replace</li><li>3. Secure or replace</li><li>4. Repair or replace</li></ol>
4	<b>Reduced range</b>	<ol style="list-style-type: none"><li>1. Low tire pressure</li><li>2. Low or faulty battery</li><li>3. Driving with too many hills, headwind, braking, and/or excessive load</li><li>4. Batter discharged for long period of time without regular charges, aged or damaged.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust tire pressure</li><li>2. Check connections or charge battery</li><li>3. Assist with pedals or adjust route</li><li>4. Replace the battery</li></ol>
5	<b>The battery won't charge</b>	<ol style="list-style-type: none"><li>1. Charger not well connected</li><li>2. Charger damaged</li><li>3. Battery damaged</li><li>4. Wiring damaged</li></ol>	<ol style="list-style-type: none"><li>1. Adjust the connections</li><li>2. Replace</li><li>3. Replace</li><li>4. Repair or replace</li></ol>
6	<b>Wheel or motor makes strange noises</b>	<ol style="list-style-type: none"><li>1. Damaged motor bearings</li><li>2. Damaged wheel spokes or rim</li><li>3. Damaged motor wiring</li></ol>	<ol style="list-style-type: none"><li>1. Replace</li><li>2. Repair or replace</li><li>3. Repair or replace motor.</li></ol>

## Error Detection

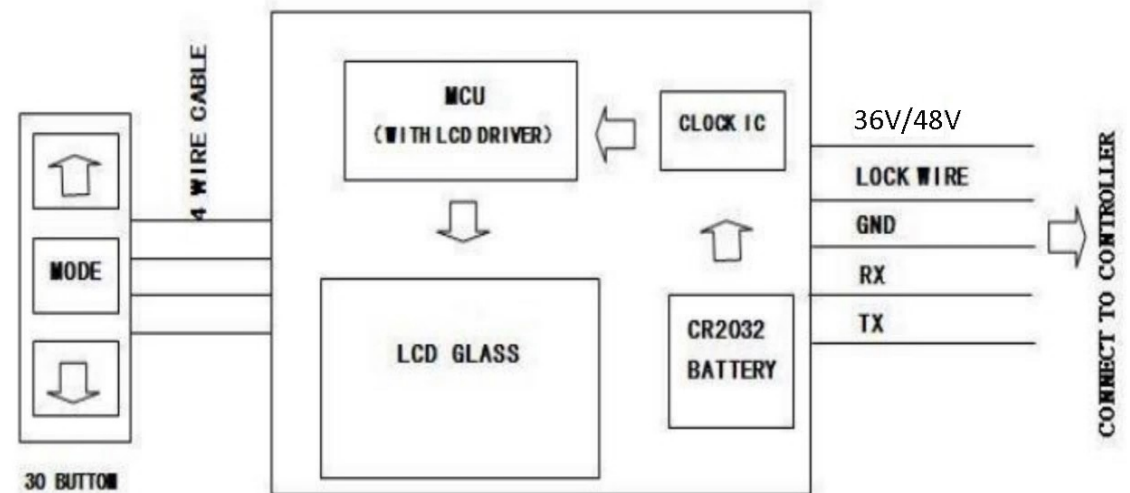
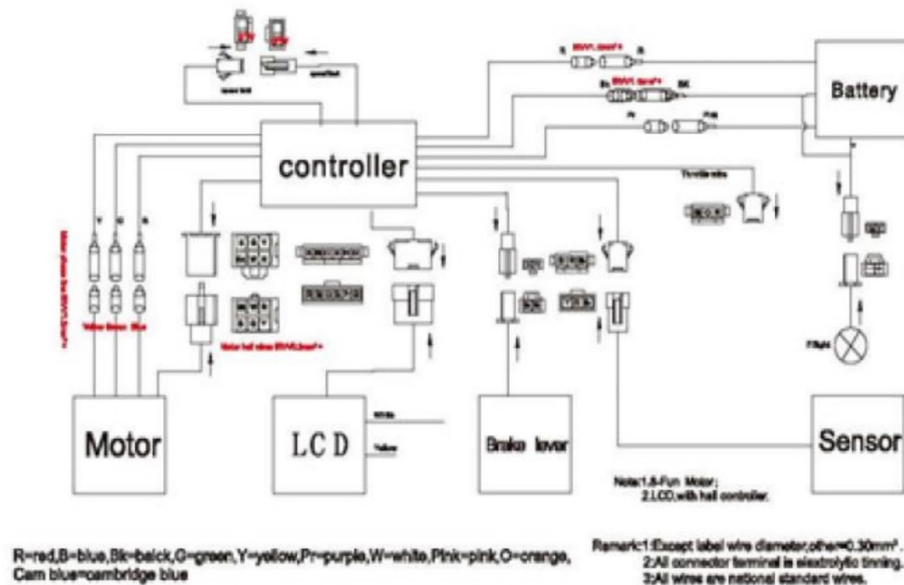
Your Bike is equipped with an error detection system integrated into the LCD display and motor controller. In the case of an electronic control system fault an error code should display. The following error codes are the most common and can aid in troubleshooting. If your bike has an error code displayed at any time it is recommended that you cease operation .



Error Code	Definition
21	Abnormal Current
22	Throttle Fault
23	Motor Phase Problem
24	Motor Hall Defect
25	Brake Failed Or Brake Applied While Turning On
30	Abnormal Communication

## Wiring Diagram

The basic wiring diagram of the complete electronic system (left) and display (right) are meant for use in basic diagnostics or troubleshooting with the help of a Big Cat E-bike technical support agent.



## Limited Warranty

### WARRANTY INFO

Every bike is covered under our manufacturer's one year all-inclusive warranty for the original owner against all manufacturing defects. The warranty of this product, including all individual components against defects in material or workmanship as follows:

#### 1 YEAR WARRANTY

The bicycle components including frame, forks, stem, handlebar, headset, seat post, saddle, brakes, lights, bottom bracket, crank set, pedals, rims, spokes, wheel hub, freewheel, cassette, derailleur, shifter, motor, throttle, controller, wiring harness, LCD display, kickstand, reflectors and hardware are warranted to be free from manufacture defects in materials and/or workmanship for a 1 year period from the date of original purchase.

Wear and tear is not covered under warranty. Bikes' lithium ion batteries are warranted to be free from manufacturing defects in materials and/or workmanship for a 1 year period from the date of original purchase. The battery warranty does not include damage from power surges, use of improper charger, improper maintenance or other such misuse, normal wear or water damage.