Welcome, and congratulations on your purchase of a new Giant electric vehicle; the fun of pedaling your new Giant electric vehicle is only moments away.

The Suede E is designed for on-road use only. Extreme off-road use, jumping or racing will put the user at risk of serious injury and death.

Please read all information in this manual carefully for maximum performance, safety, and enjoyment of your electric bicycle. In addition to being a full-featured bicycle, there is also an integrated on-board electric power assist unit. Suede E provides three types of power assist:

1. Pedal Activated Power (PAP)—Power assist is automatically provided while pedaling.
2. Variable Power Control (VPC)—Additional power can be delivered via a throttle while pedaling.
3. Direct Drive (DD)—Power delivered by the throttle only while not pedaling.

It is important that you understand the operation of each of these three functions. Failure to do so could cause damage to the motor, energy set (battery pack/charger unit), or the entire bicycle. You should also read the accompanying owner’s manual for information regarding the standard bicycle features of Suede E, especially if you have not ridden a bicycle in some time. While they are easy to use and understand, many components operate differently from components of just a few years ago.

Taking a few moments now to understand the electric bicycle’s operating procedures will help you get the most out of every ride. Please read section “Battery Charging” before operating the electric bicycle’s electric powered functions. The electric bicycle’s battery must be charged completely before the motor can be operated.

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**NOTE:**

This manual is not intended as a comprehensive use, service, repair or maintenance manual. Please see your retailer for all service, repairs or maintenance. Your retailer may also be able to refer you to classes, clinics or books on electric bicycle use, service, repair or maintenance.
What it’s called

- **Battery Charger**
- **Handlebar**
  - Shifter
  - Handlebar
  - Throttle
  - Indicator

![Bicycle Diagram](image)

- **Carrier**
- **Battery Lock**
- **Battery**
- **Fender**
- **Hub Motor**
- **Chain Cover**
Range on One Charge

Running distance on one charge varies depending on rider’s weight, wind resistance, outdoor temperature, etc. Below chart is the approximate range based on different road patterns.

<table>
<thead>
<tr>
<th>Riding condition</th>
<th>Road</th>
<th>Gear</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP (Pedal Activated Power)</td>
<td></td>
<td>Flat</td>
<td>Top Gear</td>
</tr>
<tr>
<td>DD (Direct Drive)</td>
<td>Flat</td>
<td>Top Gear</td>
<td>20 km/h (12.4mph)</td>
</tr>
<tr>
<td>VPC (Variable Power Control)</td>
<td>Flat</td>
<td>Top Gear</td>
<td>23 km/h (14.3 mph)</td>
</tr>
</tbody>
</table>

CONDITIONS THAT EFFECT BATTERY RANGE

- Ambient temperature: Extreme cold and heat can deplete the battery’s charge more quickly.
- Number of charges/discharges: The more charge/discharge cycles the battery has undergone, the less capacity it will have.
- Headwinds: Riding into a strong headwind will cause the motor to use more energy.
- Road conditions: Hilly and rough terrain will cause the motor to use more energy.
- Luggage: Carrying extra luggage on the carrier or in a backpack will cause the motor to use more energy.
- Rider weight: A heavier rider will cause the motor to use more energy than with a lighter rider.
- Acceleration from a standing stop: Since more energy is used during initial acceleration, riding in conditions that force you to start and stop often (i.e. city traffic) will cause the motor to use more energy.
- Proper gear usage: Pedaling in the correct gear for the terrain will help save energy for both you and the battery.
- Poor maintenance: A dry or dirty chain and under-inflated tires can cause the motor to use more energy.

To help maintain maximum range

- Charge the battery under room temperature 0 – 40 degrees C. (32~104 degrees F)
- Discharge the battery as much as possible before recharging.
- Refresh-charge after every 15 normal charges, but at least once every three months.
- Use the gears while accelerating or riding uphill.
- Don’t ride with under inflated tires and keep the chain clean and well lubricated.
Safety

These safety precautions are provided for your benefit to protect you and those around you. Please read and follow them carefully to avoid unnecessary injury, damage to the product, or damage to other property.

Battery

![CAUTION]

- Do not throw the battery into a fire.
  Do not overheat the battery.
- Do not apply the battery to other appliances.
- Use the specified charger only to charge the battery.

- Do not disassemble or modify the battery.
- Do not connect positive and negative terminals by using metallic objects.

( Electrolyte leakage, overheating and/or rupture may be the result. )

Battery Charger

![CAUTION]

- Do not disassemble or modify the charger. Do not use the charger to charge batteries other than supplied.
- Do not subject the charger to shocks, e.g. by dropping. Keep the charger away from water.
- Do not touch the charger with your skin for long periods during charging.

Burnning of the skin may result, as external temperature of the charger during charging may become 40 °C ~60 °C (104 °F ~140 °F)

- Do not cover the charger or place objects on it.
  Overheating, fire or electric shock may be the result.
- Place the charger firmly on a flat surface.
- Do not short-circuit the terminals by using metallic objects.

Overheating, fire or electric shock may be the result.
WARNING

- Keep the battery away from water. Pouring water on the battery may result in short-circuit and overheating of the battery.

- Do not submerge the battery. Soaking the battery in water may cause irreparable damage.

- Do not apply pressure to the cord or the plug
  Placing the cord tightened between a wall and a window frame, or placing heavy objects on the cord or the plug may result in electric shock or fire.

- Be sure to insert the plug fully into a wall socket.
  Electric shock and overheating may result, causing fire.

- Do not touch the plug with wet hands.
  Electric shock may be the result.

- Keep out of reach of children or pets.
  Electric shock or injury may be the result.

- Do not attempt to use another brand/model’s charger to charge the battery.
  Overheating, fire or electric shock may be the result.

- Do not rotate the pedals when charging the battery while it is mounted on the bicycle.
  The cord may twist around the pedal or the crank, and the damage to the plug may result, causing electric shock or fire.

- Do not apply voltage over the rated value to the charger.

- Do not use sockets, connectors and other wiring devices with a power source other than standard rated volts (AC110~240 volts) power supply.
  Overheating, fire or electric shock may be the result.

- Do not use damaged components such as charge case, power cord, plug etc.

- Do not use the charging plug and/or the power source plug when they are dustv.
  Insulation failure due to moisture absorbed in the dust may result, causing fire.
  Pull out the power source plug and clean it with a dry cloth.

- To remove a cable from a socket, do not pull the cable, pull the plug.

- Always pull the charging cable gently.

- Do not apply pressure to the cord or the plug
  Pulling the power source plug and placing heavy objects on the cord or the plug may result in electric shock or fire.

- Do not use damaged components such as charge case, power cord, plug etc.

Electric shock, short-circuit or fire may be the result.
Operation of Energy Indicator

It is extremely important to the performance, enjoyment and safety of your electric vehicle and yourself to understand how the features of the electric bicycle operate. Even if you’re an experienced cyclist, you should not assume that the way things have worked on previously owned bicycles will operate similarly on the electric bicycle. Be sure to read – and to understand – this section of the owner’s manual. If you have even the slightest doubt about how any of the mechanical features of the electric bicycle operate, talk to your authorized Giant retailer.

Indicator

The Battery Energy & Malfunction Indicator is located on the right side of the handlebar. To access electric motor assistance, press the “ON/OFF” power button. You will hear a one-second beep indicating that the system is functioning properly.

- When Energy Indicator is turned on, Suede E provides Pedal Activated Power (PAP) any time the rider pedals. By using the twist throttle, rider can increase power while pedaling (Variable Power Control) or control power by using the throttle only without pedaling.
- Suede E is equipped with automatic Cruise Control. When a constant speed has been maintained for over five seconds, motor assistance will maintain that motor assistance until you either accelerate using the throttle or apply the brake.
- When the bike provides VPC or PAP function, motor power automatically shuts down at the speed of 17 mph (28km/hr). When the bike provides DD function, the max speed is 12 mph (20km/hr).
- DD function is not available when the speed is under 3 mph (5 km/hr).
- The indicator is automatically shut off 5 minutes after the bicycle stops. (auto-off system)
- When you press the button from “OFF” to “ON”, the four LEDs will light up, indicating that the system is okay.
- LEDs on the Energy Indicator will be lit while power is on and there will be a beep for approx. one second.

LED status on indicator

<table>
<thead>
<tr>
<th>LED/Warning beep status</th>
<th>Battery Capacity</th>
<th>System status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Three LED light up</td>
<td>100%~70%</td>
<td>The battery has adequate power.</td>
</tr>
<tr>
<td>2. Two LED light up</td>
<td>75% ~ 35%</td>
<td>About half the capacity is remaining.</td>
</tr>
<tr>
<td>3. One LED light up</td>
<td>40% ~ 10%</td>
<td>Charging the battery is recommended.</td>
</tr>
<tr>
<td>4. One LED blinks slowly</td>
<td>approx. 10-0%</td>
<td>Recharging is required.</td>
</tr>
<tr>
<td>5. One LED blinks quickly</td>
<td>0%</td>
<td>The battery has completely run down. Recharging is required.</td>
</tr>
<tr>
<td>6. One LED blinks</td>
<td>Driver overheating</td>
<td>Wait approx. 10 minutes for temp. to drop. If the symptom persists, see an Authorized Giant retailer.</td>
</tr>
<tr>
<td>7. One LED blinks</td>
<td>Torque sensor malfunction</td>
<td>Reset the power.</td>
</tr>
<tr>
<td>8. One LED blinks</td>
<td>Motor IC malfunction</td>
<td>If the symptom persists even after resetting, bring your bike to an Authorized Giant retailer.</td>
</tr>
<tr>
<td>9. Continuous beep</td>
<td>Twist grip malfunction</td>
<td></td>
</tr>
</tbody>
</table>

CAUTION: Please note that the capacity of the battery shown on this table is approximate.

CAUTION:
- If LED lamp does not light up during operation, check if the battery is charged and securely mounted.
- Power assist is not available when indicator is blinking or continuous beep.
  If the other LED lights flash while riding, it means that there is a possible malfunction. The light will keep flashing for approx. five minutes, then it will shut off. Press the button to “OFF” and back to “ON” again. If they keep flashing, bring your bike to your Authorized Giant retailer to have it checked as soon as possible.
- If the electric bicycle is stored with the battery in place, press the power button on the indicator to the “OFF” position. Leaving the power indicator in the “ON” position while stored or parked will result in rapid energy loss.
CAUTION:

- When the battery is new or remains unused for a long period, in very cold weather, the following failure may occur:
  1. Indicator does not light up at all even after full-charge.
     → Press the Power Button to cut off the power and press the Power Button again. If the same symptom persists even after resetting, refresh charging is recommended.
  2. Assistance power is not supplied, while the indicator is on.
     → “Normal-charge” the battery again.

### Kickstand

The electric vehicle is equipped with a retractable kick stand for parking and storage while not in use. Always use the kickstand when parking or storing your electric vehicle. Do not lean it against anything (wall, post, fence, etc.) or lay it on its side.

To park bike, step down on the support’s stand with your toe and move the bike backward until the support locks.

![Kickstand Image]

To ride bike again, put your foot in front of the kick stand and move the bike forward. Press the kickstand upward into it’s retracted position.

### Carrier

If you carry luggage on the carrier, make sure everything is securely fixed and free from the rear wheel, chain, etc. Total weight of the luggage must not exceed 15 kg (35lbs). The carrier is not equipped with rack straps; ask your retailer for straps so luggage can be carried safely.

Never carry a passenger. You may carry a child as long as it is placed in a proper child seat that is fitted securely to the bicycle.
Maintenance

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■ Battery Tips

◆ Approximate life
  ▪ The battery has, if used in accordance with the guidelines in this manual, a life span of more than 500 charging cycles.
  ▪ If the range per charge becomes too short, even after refreshing the battery, the battery’s life may have come to an end. Replace the battery with a new one.

◆ For extended storage
  ▪ Charge the battery to full level.
  ▪ Recommended temperature : 10-30 degree C. (50-86 degree F)
  ▪ Charge the battery every 3 months.

◆ Characteristics of Ni-MH Battery :
  ▪ Maintains nearly full power output up to just before energy is completely consumed.
  ▪ Most of the components can be re-cycled.

■ Battery Recycling Program

  ▪ At the end of useful life, Ni-MH batteries are recyclable.
  ▪ In various countries, there are laws regulating proper disposal.
  ▪ When your Suede E battery must be replaced, please return it to an Authorized Giant retailer for recycling. Your Giant retailer can also order a replacement battery for you.

■ Washing

To keep your bicycle in proper working condition, keep it clean. If your frame or a component is dirty, clean it with a soft damp cloth and neutral bike cleaner or a similar product.

CAUTION:
Do not use high-pressure water or air hoses to clean the electric bike. This can force water into electric components that may cause malfunction.

■ Avoid leaving your bicycle out in the weather

When not riding, keep your electric bike in a location where it will be protected from snow, rain, sun, etc. Snow and rain can cause your electric bicycle to corrode. The ultraviolet radiation from the sun can fade the paint, or crack any rubber or plastic on the electric bicycle.
Battery Charging

CAUTION:
• Battery must be fully charged before first ride, or if the bike has not been ridden for over a month.
• Charge the battery in a room with a temperature between 0°C - 40°C (32-104°F)
• If you notice a strange smell or smoke, stop the charging procedure immediately! Take your electric vehicle to your authorized retailer for service or replacement.
• Do not recharge the battery for over 24 hours. This could seriously reduce the life of the battery.
• If the “refresh” button is pushed during normal charging, charging mode will be switched to “Refresh-charging”. Turn off the power switch and restart normal charging.

Normal Charging

Procedure
CAUTION: It is best to charge the battery prior to full discharge.

Step 1
While holding the key in the OPEN position, with the finger of the same hand, tilt the top of the battery to the left until it clears the frame. Lift the battery up and out of its holder.

CAUTION:
The battery can be charged either when mounted on the bicycle or removed.

Step 2
• Insert the charger plug into the battery’s charging socket.
• Connect the power source plug into an electric outlet (AC 110~240 volts) and make sure that all poles are fully inserted into the socket.

CAUTION:
Keep the area where the battery is charged well ventilated and free from litter or anything else combustible to avoid fire from sparks or overheating.

Step 3
• Turn on the power switch.
• Confirm that LED lamp of the charger lights up as follows:

<table>
<thead>
<tr>
<th>RED light (power on)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery temp. may be too high or battery fuse may be blown.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORANGE light blinking (stand-by)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blinking exceeds 2 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORANGE light continuously (charging)</th>
</tr>
</thead>
<tbody>
<tr>
<td>After approx. 4-5 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GREEN light (charging completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bring battery and charger to Authorized Giant retailer.</td>
</tr>
</tbody>
</table>

CAUTION:
Charging time is for reference only. Actual charging time depends on the age of the battery and the number of times it has been charged / discharged.
Step 4

- Turn off the power switch
- Disconnect the battery from the charger, after the charge is completed.

Step 5

- Mount the battery onto the bicycle.

CAUTION:
Make sure that the battery is secured in “LOCK” position, so that it cannot move sideways.

Refresh Charging

CAUTION:
- The electric vehicle’s charger has the ability to do a battery refresh. Refreshing simply involves the process of fully discharging the battery before it is fully recharged. This process is an essential step for extending the life of battery.
- The time required for refresh charging becomes shorter, as remaining battery capacity becomes less.
- Charge the battery in a room with a temperature between 0°C - 40°C (32-104°F)
- Refresh charging should be done frequently. This process must be executed after every 15 charges, or at least once every three months.
- If the riding range per charge becomes too short even after refresh charging is repeated, the battery’s lifecycle may have ended. Replace the battery with a new one.
- Do not recharge the battery for over 24 hours. This could seriously reduce the life of the battery.

Procedure
Step 1. Remove the battery from the bike. (The battery can also be charged when mounted on the bicycle.)
Step 2. Connect the battery to the charger.
Step 3. Turn on the power switch. The LED shows RED.
Step 4. Push refresh button on the charger. Confirm that LED lamp of the charger lights up as follows:

<table>
<thead>
<tr>
<th>LED Light</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Power on</td>
</tr>
<tr>
<td>Yellow</td>
<td>Refreshing/discharging</td>
</tr>
<tr>
<td>Orange/Green</td>
<td>Discharging has completed/charging is in progress</td>
</tr>
<tr>
<td>Green</td>
<td>Charging completed</td>
</tr>
</tbody>
</table>

CAUTION:
Refresh charging takes longer than normal charging, depending on the amount of energy that is still in the battery.
- Battery at 100% charge: Refresh charge takes approximately 18 hours.
- Battery at 10% charge: Refresh charge takes approximately two hours.
Step 5. Disconnect the battery from charger after the charge is completed.
Step 6. Mount the battery onto the bicycle. Key must be turned to open to allow battery to fit into frame.

CAUTION:
Make sure that the battery is secured in “LOCK” position, so that it cannot move sideways.
GIANT ELECTRIC VEHICLE LIMITED LIFETIME WARRANTY

Giant Bicycle, Inc. ("Giant") warrants to the original purchaser of each new Giant brand electric vehicle that the following components will be free from defects in material and workmanship for the period indicated:

A. Frame - As long as the original purchaser owns the vehicle
B. Batteries - Six months (180 days) from purchase
C. All other components (except front suspension forks) - One year (12 months) from purchase

Front suspension forks, including Suede’s Inner Active™ internal front suspension, are warranted by the fork manufacturer, and Giant makes no warranty for this component.

Giant further warrants that any repair or replacement parts supplied by Giant, except batteries and front suspension forks, will be free from defects in material and workmanship for a period of one year from the date of purchase. Replacement batteries are warranted to be free from defects in material or workmanship for a period of six (6) months from purchase. Replacement front suspension forks are warranted by the fork manufacturer and not by Giant.

REQUIRED ASSEMBLY WHEN PURCHASED

An Authorized Giant Electric Vehicle Dealer is required to assemble your Giant brand electric vehicle, without charge, at the time of purchase.

FREE 60-DAY REPAIR LABOR

If your Giant brand electric vehicle is found to be defective in materials, workmanship, or assembly within 60 days of purchase, it will be repaired for you without charge for labor or materials. To receive this service, simply bring your Giant brand electric vehicle to the Authorized Giant Electric Vehicle Dealer from whom it was purchased.

LIMITED REMEDY

Unless otherwise provided, the sole remedy under the above warranty, or any implied warranty, is limited to the replacement of defective components and parts with those of equal or greater value at the sole discretion of Giant. Unless within the free 60-day repair labor period, you will be responsible for labor costs associated with warranty replacements. IN NO EVENT SHALL GIANT BE RESPONSIBLE FOR DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, DAMAGES FOR PERSONAL INJURY, PROPERTY DAMAGE, OR ECONOMIC LOSSES, WHETHER BASED ON CONTRACT, WARRANTY, NEGLIGENCE, PRODUCT LIABILITY, OR ANY OTHER THEORY. Some states do not allow the exclusion or limitation of damages, so the above limitation or exclusion may not apply to you.

EXCLUSIONS

THE ABOVE WARRANTY, OR ANY IMPLIED WARRANTY, DOES NOT COVER NORMAL WEAR AND TEAR. ALL WARRANTIES ARE VOID IF THE ELECTRIC VEHICLE IS USED FOR OTHER THAN NORMAL ACTIVITIES, INCLUDING, BUT NOT LIMITED TO, FAILING TO FOLLOW THE OWNER’S MANUAL OR USING THE ELECTRIC VEHICLE FOR COMMERCIAL ACTIVITIES OR IN COMPETITIVE EVENTS, AND TRAINING FOR SUCH ACTIVITIES OR EVENTS.

GIANT MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THAT OF THE EXPRESS WARRANTIES STATED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WHAT YOU SHOULD DO

Bring your electric vehicle, along with a purchase receipt or other proof of purchase, to an Authorized Giant Electric Vehicle Dealer, or write to the Customer Service Department at: Giant Bicycle, Inc., 3587 Old Conejo Road, Newbury Park, CA 91320.