



# **TWIST FREEDOM DX OWNER'S MANUAL**



# WELCOME, AND CONGRATULATIONS...

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...On your purchase of a new Giant Twist Freedom; the fun of pedaling your new Giant Twist Freedom is only moments away.

## Safety First.

You should completely read through this owner's manual before you take your new Giant Twist Freedom for a spin. By doing so, you will have a greater understanding of the general operation of the various components found on your new Twist bike. Safe riding instructions are equally important and shouldn't be overlooked, so even if you are an experienced cyclist please take a moment to thoroughly read through this manual and also the standard Giant bicycle owner's manual before you ride. The Twist Freedom is designed for on-road use only. Off-road use, jumping or racing will put the user at risk of serious injury and death. Always wear a correct-fitting helmet when you ride your Twist Freedom.

## Sharing the Joy of the Ride.

Nothing makes us happier than seeing people out riding bikes. For over thirty years Giant has manufactured and distributed quality bicycles for every type of terrain and rider imaginable. Giant bicycles have allowed millions of cyclists just like you the opportunity to live happier, healthier lives because of the joy, exercise, and sheer exhilaration riding a bicycle brings. And it's this commitment to sharing the joy of the ride that inspires Giant to continually offer the world's most innovative bicycles.

## Learn More.

We encourage you to get connected and learn more about proper riding and safety through your local Authorized Giant Dealer. Giant independent bicycle retailers are the best in the nation at providing sales and service for all of your bicycle-related needs. Inside their bike shops is where you'll find knowledgeable staff that can assist you with everything you'll require to get the most out of your bike and your ride.

Enjoy.



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**NOTE:**  
This manual is not intended as a comprehensive service, repair or maintenance manual. Please see your Authorized Giant Dealer for all service, repairs or maintenance.

**FOR YOUR CONVENIENCE:**  
Take a moment to record the information below about your Twist Freedom bicycle. Keep this manual in a safe place for future reference.

Date of Purchase \_\_\_\_\_

Dealer \_\_\_\_\_

Key Number \_\_\_\_\_

Twist Serial Number \_\_\_\_\_

# 1. WHAT IT'S CALLED



## A. GENERAL

1. Handlebar

2. Fork

3. Hub Motor

4. Chainwheel and Integrated Torque Sensor

5. Driver
6. Rear Rack

7. Rear Pannier Bag and Battery Cover

8. Battery Lock

9. Rear Light

10. Mudguard

11. Multi-speed Rear Hub/Sprocket

## B. BATTERY AND CHARGER



1. Battery
2. Grip
3. Battery Lock
4. Charging Socket



5. Twist Freedom Charger
6. Charger Plug
7. Power Source Plug

## C. HANDLEBAR AND STEM



1. Handlebar
2. Left Hand Control
3. Handlebar Stem
4. Power Control Switch
5. Gear Shifter
6. Gear Indicator

## 2. BATTERY AND CHARGER OPERATION



**BATTERY MUST BE FULLY CHARGED BEFORE THE FIRST RIDE OR IF THE BIKE HAS NOT BEEN RIDDEN FOR OVER A MONTH!!**

- Charge the battery in a room with a temperature between 32-100 degrees F.
- If you notice a strange smell or smoke, stop the charging procedure immediately! Take your battery and charger to your authorized Giant retailer for service or replacement.
- **DO NOT CHARGE THE BATTERY FOR LONGER THAN 24 HOURS!!** This could seriously reduce the life of the battery.

### A. NORMAL CHARGING

The Twist lithium-ion battery pack : 244-LI9AH-02V

#### STEP 1

Turn the Power Control Switch (on right side of the handlebar) to the "off" position



Step A



#### STEP 2

Follow steps A and B to open the Rear Pannier bag

Step B



#### STEP 3

Turn the battery lock key to the "OPEN" position and at the same time push the top of the battery pack outward to 45 degrees.



**STEP 4** Lift the battery pack out of its holder.



**STEP 5** Place the battery in a horizontal position and then insert the Twist Freedom charger plug into the battery's charging socket.



**STEP 6** 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 7** Confirm that LED lamp of the charger lights up red. The light should remain constant and not flash. When charging is finished (which could take approximately 6 hours) the light will go out. The battery is fully charged.



**CAUTION**

DO NOT CHARGE BATTERIES FOR MORE THAN 24 HOURS!!

**STEP 8** Disconnect the battery from the charger after the charge is completed. Unplug the charger's power source plug from the electrical outlet.

**STEP 9** Mount the battery into its holder.

**Step A**

Slide the battery pack into its holder at a 45-degree angle. Make sure the "GIANT" logo on the battery is on the outside of the bicycle.



**Step B**

Replace the grip. Gently pivot the battery pack to an upright position until the battery pack snaps into place. If the battery pack does not pivot easily, remove it and reposition it in the holder and try again.



**STEP 10** Make sure that the battery is secured in the "LOCK" position, so that it cannot move from side to side.

## B. BATTERY LOCK KEY




Your Giant Twist Freedom comes standard with 2 battery lock keys; we suggest you keep one in a safe place for emergencies. Giant Twist Freedom bike keys may be duplicated by a qualified locksmith. Blank keys for the Twist Freedom are available through your Authorized Giant Dealer.

Please record the key number for future reference and key replacement. If your keys are ever lost or stolen, contact your Authorized Giant Dealer for replacement.

## C. RANGE FOR BATTERY

Running distance on one charge varies depending on rider's weight, wind resistance, outdoor temperature, terrain, etc. The chart below is the approximate riding range based on different road conditions.

### RIDING RANGE FOR TWIST FREEDOM DX WITH 2 LITHIUM-ION BATTERIES

RIDING CONDITION	ECO (MILES)	NORMAL (MILES)	SPORT (MILES)
Flat/No wind 	68 - 86	52 - 74	43 - 52
Slope or slight headwind 	58 - 66	43 - 58	31 - 43
Steeper incline or stiff headwind 	46 - 58	31 - 46	21 - 31

#### PLEASE NOTE:

- In cold weather, the riding range per charge becomes shorter.
- The riding range per charge decreases as the charge/discharge cycle is repeated.
- The riding range may vary depending on road or riding conditions.
- The riding range decreases after prolonged use even if the number of charges is limited.

### 1. CONDITIONS THAT EFFECT BATTERY RANGE

- Ambient temperature: Extreme cold and heat can deplete the battery's charge more quickly.
- Number of charges: The more charge 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 rear rack 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.

### 2. TO HELP MAINTAIN MAXIMUM RANGE

- Charge the battery at a room temperature between 32~100 degrees F.
- Use the proper gear while accelerating or riding uphill.
- Don't ride with under-inflated tires and keep the chain clean and well-lubricated.

### 3. BATTERY TIPS AND APPROXIMATE LIFE

- The Twist Freedom is equipped with lithium-ion batteries. If used and maintained properly they should last approximately 600 charging cycles.
- Use and drain the battery as much as possible before charging.
- At the end of a useful life, lithium-ion batteries are recyclable.
- In various localities, there are laws regulating proper disposal.
- **When your Twist Freedom battery must be replaced, please return it to an Authorized Giant Dealer for recycling. Your Authorized Giant Dealer can also order a replacement battery for you.**

### 4. FOR EXTENDED STORAGE

- If you won't be riding your Twist Freedom for an extended period of time, remove the batteries from the bicycle.
- Charge the batteries to full level.
- Recommended storage temperature: 0 - 80 degree F.
- Charge the battery every 3 months.



## D. SAFETY PRECAUTIONS

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.

### ⚠ CAUTION

#### 1. BATTERY

- Do not throw the battery into a fire.
- Do not apply the battery to other appliances.
- Use only the specified charger to charge the battery.
- Do not disassemble or modify the battery.
- Do not connect positive and negative terminals by using metallic objects.
- Keep the battery away from water. Pouring water on the battery may result in a short-circuit and overheating of the battery.
- Do not submerge the battery. Soaking the battery in water may cause irreparable damage.

### ⚠ CAUTION

#### 2. CHARGER

- Do not disassemble or modify the charger.
- Do not use the charger to charge batteries other than those supplied.
- Do not subject the charger to shocks – such as dropping it. Keep the charger away from water.
- Do not touch the charger with your skin for long periods during charging. Burning of the skin may result.
- Do not cover the charger or place objects on it.
- Place the charger firmly on a flat surface. Using the charger upside-down or stretching the cord tight may result in malfunction, fire or electric shock.

### ⚠ WARNING

#### 3. CHARGER & BATTERY

- **ALWAYS REMOVE THE BATTERY FROM THE TWIST FREEDOM FOR CHARGING! DO NOT CHARGE THE BATTERY WHILE IT'S ON THE BIKE!**
- Do not short-circuit the terminals by allowing them to contact metal objects.
- Do not apply pressure to the cord or the plug. Placing heavy objects on the cord or the plug may result in electric shock or fire.
- Be sure to insert the plug fully into the electrical outlet.
- Do not touch the plug with wet hands.
- Keep the charger and battery out of reach of children or pets.
- Do not attempt to use another brand or model of charger to charge the battery.
- Do not use the charging plug and/or the power source plug when they are dusty. Clean both with a dry cloth.
- To remove a power cord from a socket, do not pull the power cord. Always pull the plug.
- Do not use damaged components such as a cracked or dented charger or battery, a frayed power cord, or a damaged plug. If the cord that goes between the charger and the battery is frayed or damaged in any way, do not use it. See your Authorized Giant Dealer for replacement components.
- Do not use sockets, connectors and other wiring devices with a power source other than standard (AC 110~240 volts) power supply.
- When charging is finished, please unplug the charger from the electrical outlet and then detach the batteries from the charger. **DO NOT CHARGE THE BATTERIES FOR MORE THAN 24 HOURS!**

## 3. HOW THINGS WORK

It is extremely important to the performance, enjoyment and safety of you and your Twist Freedom bicycle that you understand how the features of the bicycle operate. Even if you're an experienced cyclist, you should not assume that the way things have worked on bicycles you've owned previously will operate similarly on the Twist Freedom bike. 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 Twist Freedom operate, talk to your Authorized Giant Dealer.

### A. HYBRID CYCLING TECHNOLOGY

Hybrid Cycling Technology provides motor assistance based on your pedaling force and speed. To engage hybrid power, turn the Power Control Switch located on the right side of the handlebar to either the “R” or “L” position. This engages the battery on either the right (“R”) side of the bicycle or the left (“L”).

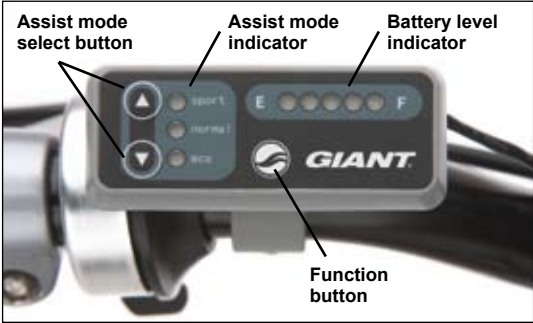
### B. POWER CONTROL SWITCH



- The Power Control Switch is located on the right side of the handlebar.
- R position: The battery on the right side of the bicycle.
- L position: The battery on the left side of the bicycle.
- When one battery has completely run down, turn the Power Control Switch to the other battery indicator. For example, if you've been riding with the Power Control Switch at “R” and the battery as completely run down, turn the Power Control Switch to the “L” position to once again engage hybrid power.
- If the Twist is parked or stored with the battery in place, turn the Power Control Switch to the “OFF” position. **LEAVING THE POWER SWITCH IN THE “L” OR “R” POSITION WHILE STORED OR PARKED WILL RESULT IN RAPID ENERGY LOSS!**
- If left unattended for 5 minutes, the Twist Freedom will go into a “sleep” mode. Simply reset the indicator on the Power Control Switch to “OFF” for 1 - 2 seconds, and then move back to either “R” or “L” to reactivate the Twist Freedom.

## C. LEFT HAND CONTROL

The Left Hand Control is located on the left side of the handlebar.



### 1. ASSIST MODE SELECT BUTTON

- When you turn the power switch to “L” or “R” position, the Twist Freedom provides hybrid power in the “NORMAL” mode any time the rider pedals.
- If you want to go faster, press the select button to “SPORT” mode.
- Press the select button to “ECO” mode to extend the range.
- When your speed reaches 15 mph, the Twist’s motor will automatically disengage and cease assistance. When your speed drops below 15 mph, the motor can assist you once again.

### 2. BATTERY LEVEL INDICATOR

LEDS ILLUMINATED	BATTERY CAPACITY	SYSTEM STATUS
	100% - 90%	The battery has adequate power.
	85% - 70%	About 3/4 the capacity is remaining.
	75% - 50%	About 1/2 the capacity is remaining.
	45% - 30%	About 1/3 to 1/4 the capacity is remaining.
	25% - 0%	Charging the battery is recommended.
	0%	The battery has completely run down. Charging the battery is required.

**IMPORTANT:** Please note that the battery capacity shown on this table is approximate.

### 3. MALFUNCTION INDICATOR

If the LED lights flash while riding, it means that there is a possible malfunction.



LEDS STATUS	WHAT’S HAPPENING	SOLUTION
L1 flashing	The battery has completely run down.	Charging the battery is required.
L2 flashing	Torque Sensor malfunction	Reset the power by turning the Power Control Switch to “OFF” and waiting several minutes. Turn the unit back on. If the symptom persists after this procedure, bring your Twist Freedom to an Authorized Giant Dealer.
L3 flashing	Driver overheating	
L4 flashing	Motor malfunction	

- Hybrid power is not available when any LED indicator is flashing.
- If one or more LED lamps fail to light up during operation, check to see if the battery is charged and securely mounted.

### 4. SELF-TEST INDICATOR

The Self-Test system can help determine if two components, the Torque Sensor and the front wheel Hub Motor, are working properly. To begin the self-test, make sure your Twist Freedom is resting on its kickstand and the Power Control Switch is in the “OFF” position. Place the right pedal forward at the “3:00 o’clock” position.

- Press the Self-Test button and turn the Power Control Switch to either “R” or “L.” One or more of the middle LED’s on the Left Hand Control should light up.
- While standing on the right side of the Twist Freedom, steady the bicycle by holding the saddle with your left hand. Then step down on the right pedal while squeezing the right brake lever with your right hand. Don’t let the rear wheel move. L1, L2, L3 and L4 should light up in order, depending on the strength and torque you’ve generated while stepping on the right pedal. The harder you push down on the pedal, the more LED’s (up to L4) will light up.
- Next, carefully lift the front of the bicycle off the ground and gently spin the front wheel forward. L2, L3 and L4 should light up and flash in sequence as the wheel spins. Stop the wheel from spinning and carefully place it back on the ground.

If the Twist Freedom passed these two tests, you must turn the Power Control Switch to “Off” and then back to “R” or “L” to ride again.

If the Twist Freedom did NOT pass either or both of these tests, bring it to your Authorized Giant Dealer for service.



## D. REAR RACK

If you carry items on the Rear Rack, make sure everything is securely fixed and free from the rear wheel, chain, etc. Total weight of the luggage must not exceed 35 lbs. The Rear Rack is not equipped with rack straps; ask your Authorized Giant Dealer for straps so luggage can be carried safely. **NEVER CARRY A PASSENGER!**

### ⚠ CAUTION

**DO NOT ATTACH A CHILD CARRIER TO THE TWIST FREEDOM!!**

## 4. SERVICE & MAINTENANCE

### ⚠ CAUTION

#### A. RECOMMENDATION FOR CLEANING

Use a soft cloth, lightly moistened with water, to wipe the dirt off all plastic and metal parts. Wipe dry with clean soft cloth.



**DO NOT** wash plastic parts or any components with running water. If the internal electrical parts become wet, corrosion, a short-circuit, a power-leak or other damage may occur.



**DO NOT** use chemical cleaners to wash plastic components. Chemical cleaners can cause color-changes, distortions, scratches, or other damage to the finish.



**DO NOT** use high-pressure water spray or compressed air to clean the Twist Freedom.

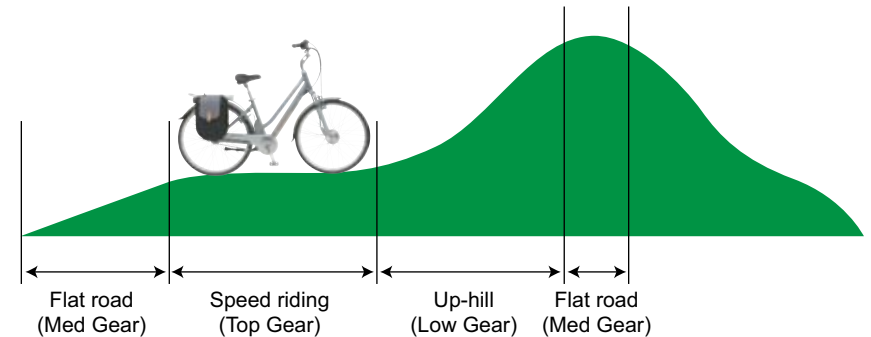
#### B. AVOID LEAVING YOUR TWIST FREEDOM OUTSIDE IN BAD WEATHER

When you're not riding your Twist Freedom, keep your bike in a location where it will be protected from rain, snow, and sun. Rain and snow can cause parts on your Twist Freedom to corrode. The ultraviolet rays from the sun can -- over time -- fade the finish, or crack any rubber or plastic components on the Twist Freedom.

## 5. TROUBLESHOOTING GUIDE

This table is only a guide to aid you in getting your Twist Freedom bicycle running again should you encounter a problem. If you are unable to get your Twist Freedom bicycle operating, bring it to an Authorized Giant Dealer.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Range less than expected	1. Cold weather reduces battery life	Allow batteries to reach room temperature and then fully charge.
	2. Riding up lots of hills Riding with frequent starts and stops	Larger amount of battery power is consumed as the bicycle is used under high load conditions.
	3. Riding at high gear ratio	Select the optimum position of the gear shift and/or Assist mode depending on uphill or down hill, head-wind or tail-wind, and your physical condition.





## 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 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

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.

