



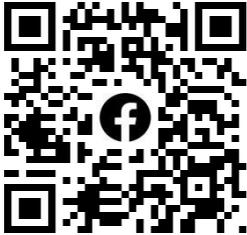
# Pacer Commuter E-Bike

## User Manual



[www.dirwinbike.com](http://www.dirwinbike.com)

Ver. 1.21



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## About the Manual

This manual includes details of the product, and information on its operation and maintenance and other helpful tips for owners. Read it carefully and familiarize yourself with the Dirwin Pacer before using it to ensure safe use and prevent tragic accidents. Be sure to retain this manual as your convenient Dirwin Pacer information source.

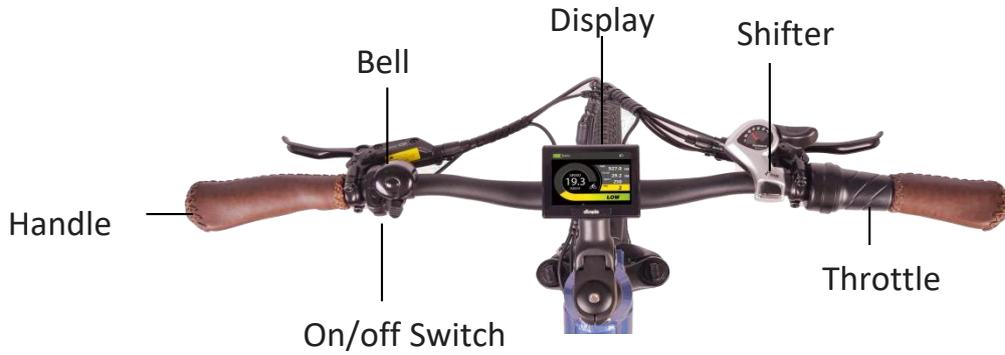
This manual contains many Warnings and Cautions concerning the safe operation and consequences if safe setup, operation and maintenance are not performed. All information in this manual should be carefully reviewed and if you have any questions you should contact Dirwin Bike immediately. The notes, warnings and cautions contained within the manual and marked by this triangular Caution Symbol should also be given special care. Users should also pay special attention to information marked in this manual beginning with NOTICE.



Because it is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representations about the safe use of bicycles under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should keep this manual, along with any other documents that were included with your bicycle, for future reference, however all content in this manual is subject to change or withdrawal without notice. Visit [www.dirwinbike.com](http://www.dirwinbike.com) to download the latest version. Dirwin Bike makes every effort to ensure accuracy of its documentation and assumes no responsibility of liability if any errors or inaccuracies appear within. Assembly and first adjustment of your Dirwin Bike requires special tools and skills and it is recommended that this should be done by a trained bicycle mechanic if possible.

# Product Specification

<b>Battery</b>	48v 15Ah Lithium Battery	<b>Front Fork</b>	Alloy Front Suspension Fork
<b>Motor</b>	500W Motor	<b>Bike Frame</b>	A6061 ALUMINUM TIG WELDED FRAME
<b>Display</b>	Colored LCD Display	<b>Brake</b>	180mm Hydraulic Disc Brakes
<b>Derailleur</b>	7-speed Shimano-Altus-7 Speed	<b>Charger</b>	US Standard 2.0A Smart Charger
<b>Speed</b>	Max. 28 MPH	<b>Freewheel</b>	Shimano 7 Speed
<b>Range</b>	35 Miles (No Pedaling) ~ 55 Miles (With Pedal Assist)	<b>Saddle</b>	Soft Saddle
<b>Pedal Assist</b>	Intelligent 5 Level Pedal Assist	<b>Shifter</b>	Shimano 7S
<b>Throttle</b>	Half Twist Throttle	<b>Tires</b>	KENDA 27.5" x 2.2"
<b>Charging Time</b>	4 ~ 5 Hours	<b>Product Weight</b>	62 lbs
<b>Recommended Rider Heights</b>	5.4" ~ 6.4"	<b>Total Payload Capacity</b>	300 lbs



Maximum Load Capacity  
**300 lbs**

Min / Max Seat Height  
**32.3" ~ 40.6"**

Wheelbase  
**47.2"**

Motor  
**500w**

Tires  
**27.5" x 2.2"**

Total Length  
**74.8"**

Handlebar Reach  
**43.3"**



## Safety Checklist

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

Safety Check	Basic Steps
Brakes	<ol style="list-style-type: none"> <li>1. Ensure front and rear brakes work properly.</li> <li>2. Ensure brake pads are not over worn and are correctly positioned in relation to the rims.</li> <li>3. Ensure brake control cables are lubricated, correctly adjusted and display no obvious wear.</li> <li>4. Ensure brake control levers are lubricated and tightly secured to the handlebars.</li> </ol>
Wheels and Tires	<ol style="list-style-type: none"> <li>1. Ensure tires are inflated to within the recommended limits displayed on the tire sidewalls.</li> <li>2. Ensure tires have tread and have no BULGES OR EXCESSIVE WEAR.</li> <li>3. Ensure rims run true and have no obvious wobbles or kinks.</li> <li>4. Ensure all wheel spokes are tight and not broken.</li> </ol>
Steering	<ol style="list-style-type: none"> <li>1. Ensure handlebar and stem are correctly adjusted and tightened, and allow proper steering.</li> <li>2. Ensure the handlebar is set correctly in relation to the forks and the direction of travel.</li> </ol>
Chain	<ol style="list-style-type: none"> <li>1. Ensure the chain is oiled, clean and runs smoothly.</li> <li>2. Extra care is required in wet or dusty conditions.</li> </ol>
Crank and Pedals	<ol style="list-style-type: none"> <li>1. Ensure pedals are securely tightened to the cranks.</li> <li>2. Ensure the cranks are securely tightened and are not bent.</li> </ol>
Derailleurs	<ol style="list-style-type: none"> <li>1. Check that the derailleur(s) are adjusted and functioning properly.</li> <li>2. Ensure shift and brake levers are attached to the handlebars securely.</li> <li>3. Ensure all brake and shift cables are properly lubricated.</li> </ol>
Motor Drive Assembly and Throttle	<ol style="list-style-type: none"> <li>1. Ensure hub motor is spinning smoothly and the motor bearings are in good working order.</li> <li>2. Ensure all power cables running to hub motor are secured and undamaged.</li> <li>3. Make sure the hub motor axle bolts are secured and all torque arms and torque washers are in place.</li> </ol>
Battery Pack	<ol style="list-style-type: none"> <li>1. Ensure battery is charged before use.</li> <li>2. Ensure there is no damage to battery pack.</li> <li>3. Lock battery to frame and check to see that it is secured.</li> </ol>

# Assembly Instructions

NOTICE: The following assembly steps are only a general guide to assist in the assembly of your Dirwin Bike and is not a complete or comprehensive manual of all aspects of assembly, maintenance and repair. We recommend you consult a certified bicycle mechanic to assist in the assembly, repair and maintenance of your bicycle. For detailed instructions please view the Dirwin Pacer Assembly video and Quick Release Installation video found at [www.dirwinbike.com](http://www.dirwinbike.com).

- Step 1 :** Install the handle bars. Remove the four screws from the stem, ensuring the linear markings on the handlebars are centered and handlebars are adjusted to the comfortable position. Finally, tighten the screws with the assembly tool.
- Step 2 :** Install the headlight. Use a socket wrench to hold the nut and loosen the screw with a screwdriver and remove the screw. Install the screw passing through the headlight and the bracket and adjust the headlight properly for riding conditions.
- Step 3 :** Install the front wheel. Remove the plastic axle guards from the front wheel being sure not to touch the brake rotor set. Open the quick skewer and remove the thumb nut and cone spring. Carefully lower the fork and ensure the brake rotor goes into the caliper. Next align the dropouts with the axle of the wheel hub to make sure the fork dropouts are fully seated on the axle. Install the quick skewer starting from the brake rotor side of the wheel and then push quick release skewer through the hub. Keep two cone springs pointed towards the wheel hub. Tighten the thumb nut until the quick release lever is held in line with the axle, and then use the palm of your hand to close the quick release skewer.



Step 4 : Use a bike pump with a press gauge to Inflate tires to desired PSI. The recommended pressure for this mode is 20 PSI (1.379 Bar). Do not overinflate or underinflate tires.

Step 5 : Install the pedals. The left and right pedals are marked on both ends. First, install the right pedal by tightening the pedal in clockwise direction. The left pedal is tightened by turning the pedal in counterclockwise direction. Both pedals should be tightened to 35 Newton meters by using a torque wrench.



Step 6 : Adjust the saddle height. Loosen the seat clamp, remove the seat post and ensure the seat clamp is centered over the hole in the seat tube. Insert the seat post into the slot, adjust the saddle height to a suitable height and tighten the adjustment nut. When you feel resistance, close the seat tube clamp fully.

Step 7 : Adjust the seat position forwards or backwards. Use an allen wrench to loosen the seat adjustment bolt and make sure to stay within the marked adjustment range.

Step 8 : Install the optional rear rack. Align the holes in the rear rack with the holes in the frame and tighten with screws.

Step 9 : Check that battery pack is locked into the frame of the Dirwin Pacer. When you want to take off the battery, insert the key and turn to release the battery pack. The battery pack can be removed and charged separately. This is the charging port. Align the battery pack to the battery holder carefully and push until when you hear it click into the place.

NOTICE: Ensure all hardware is tightened properly and all safety checks in the following sections are performed before first use. Contact Dirwin Bike if you have any questions regarding the assembly of your bike. If you are not able to ensure all the assembly steps in the assembly video are performed properly, or you are unable to view the assembly video please consult a certified local bicycle service provider for assistance in addition to contacting Dirwin Bike for help.

## Recommended Torque Values

Hardware Location	Torque Required (Nm)
Handlebar	18-20
Stem	18-20
Saddle	18-20
Front Wheel (For Bikes with Bolt on Front Wheel)	16-25

Rear Wheel	35-40
Bottom Bracket Parts	35-55
Pedals	35
Disk Mounting Bolts	6
Disk Caliper Mount	10
Crank Bolts	40
Rear Derailleur Cable Pinch	6
Front Derailleur Clamp	7
Saddle Post Clamp	7

## Display Features

The image shows the various features and information displayed on the Display. You can see 3 buttons in the left,

we will use "mode" to replace , "up" replaces , "down" replaces .

## Start-Up Procedure

After the bike has been properly assembled following the unboxing video and all components are secured correctly, you may now proceed to start up the vehicle and select the power level following the next steps.

1. Hold down the " M "  mode button on the display remote for 2 seconds then release, the display should turn on.
2. Select your desired level of pedal assistance between level 0 through 5 using the up and down arrows on the display remote.

Level 1 corresponds to the lowest level of pedal assistance, and level 5 corresponds to the highest level of pedal assistance. Level 0 indicates pedal assistance will be inactive.

3. To turn on the headlight once the LCD display is on, hold down the " up "  button located on the left side of the handlebars for 3 seconds.
4. Press and hold "down"  and "mode"  keys at the same time for 2 seconds, the Trip Meter will be reset to zero.
5. With the proper safety gear and rider knowledge and understanding you may now proceed to operate your Dirwin Bike. You can begin by pedaling the bike in the appropriate drivetrain gear with or without pedal assistance. You may also use the throttle to accelerate and maintain your desired speed.

## Users attention items

Pay attention to the safety in the process of use, do not plug and unplug the display when it is powered on.



Avoid bumping the display.



The film used for the display is waterproof film, please do not tear it, so as not to affect the waterproof performance of the display.



Please don't change the background parameter setting of the display at will, otherwise normal riding can't be guaranteed.



When the display cannot be used normally, it should be sent for repair as soon as possible.

## Error Detection Display

Your Dirwin Bike is equipped with an error detection system integrated into the display and 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.

Error Code	Definition	Error Code	Definition
05	Throttle error(Start detection)	07	Over voltage protection
08	Hall error	09	Motor phase line fault
10	Controller over temperature protection	11	Motor over temperature protection
12	Current error	13	Motor stalling
14	Fault of temperature sensor in motor	15	Temperature sensor fault in controller
21	Speed sensor fault	23	Headlight fault
24	Headlight sensor fault	25	Torque signal fault of torque sensor
26	Torque sensor speed fault	30	Communication error

When the error code is displayed, please promptly remove the fault. After the fault occurs, the electric bike will not be able to ride normally.

# General Settings

Press and hold the power button to turn it on. There are two kinds of display interface, including normal display interface and

data statistics interface. Long press  +  to switch from normal display interface to data statistics interface; long

press  to switch from data statistics interface to normal display interface.

The normal start-up interface can be displayed when the instrument starts up normally. The interface can display electric vehicle real-time power, real-time speed, trip, ODO, Watt and PAS.



Normal Interface



Data Statistics Interface

NOTICE: The maximum statistical time range of linear statistical chart is three hours, and the timing will start again after three hours.

In the power-on state, while the vehicle is stationary, press and hold “up” and “down” buttons for more than 2 seconds, and the meter enters the normal setting state. Each setting item needs to be carried out while the e-bike is stationary.

## Brightness

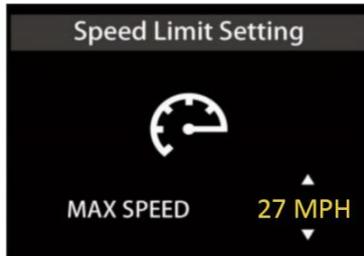
Use the “up” and “down” buttons to click the brightness and then you can change the backlight brightness. Parameters 1, 2, and 3 can be set to indicate backlight brightness, 1 is the darkest, 2 is the standard brightness, and 3 is the brightest. The factory default value is 3. Press the “up” and “down” button to change the backlight brightness parameter. Long press the “MODE” button to exit the general setting state.



## Speed Limit Setting

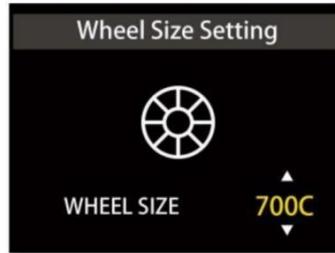
The default value of the highest riding speed of the instrument is 27 mph. Change this value to set the maximum riding speed of the electric vehicle. When the electric motor exceeds the set value, the controller will stop supplying power to the motor to protect the rider.

Driving safety: LS means speed limit, the maximum speed setting value can be selected below 27 mph, can be adjusted by “up” and “down” button; Long press “MODE” button confirm and exit the setup status.



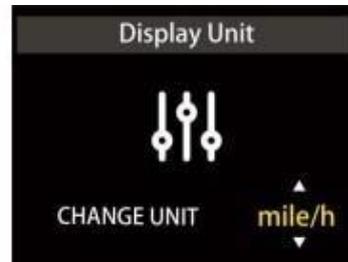
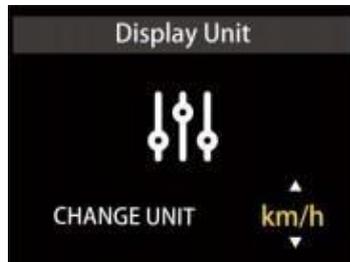
## Wheel Size

LD stands for wheel diameter and can be set to 16, 18, 20, 22, 24, 26, 700C, 28,29. Use the “up” and “down” buttons to select the wheel diameter corresponding to the e-bike to ensure the accuracy of the meter speed display and mileage display. The factory default wheel diameter value is 26inch. Long press the “MODE” button to exit the speed limit setting interface.



## Inch and Metric Conversion

Use the “up” and “down” buttons to choose imperial system or metric system. The default unit of the meter is metric. Long press and hold the “MODE” button to confirm and exit the normal setting.



## Driving Range

The range of your Dirwin Bike is the distance the bike will travel on a single full charge of the onboard battery pack. The range values in this manual are estimates based on expected usage characteristics. Some of the factors which effect range include changes in elevation, speed, payload, and acceleration, number of starts and stops and ambient air temperatures. Tire pressure and terrain are also important variables to consider.

We suggest that you select a lower assistance level when you first get your Dirwin Bike to get to know your bike and travel routes. Once you become familiar with the range requirements of your travel routes, and the capabilities of your Dirwin Bike you can then adjust you riding characteristics if you so desire.

The following table provides general estimates and outlines various factors affecting range and their combined estimated effects on range. This table is meant to help owners understand the factors that can increase or decrease range, but Dirwin Bike makes no claims to the range that individual users might obtain.

### Best Practices for Extending Range and Battery Life

1. Do not climb hills steeper than 15% in grade.
2. Pedal to assist the motor when climbing hills and accelerating from a stop.
3. Avoid sudden starts and stops.
4. Accelerate slowly.

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.

# Parking Storage and Transport

1. Please follow these basic parking, storage and transport tips to ensure your bike is well cared for on and off the road.
2. When pushing the vehicle manually, turn off the power to avoid accident acceleration from the motor.
3. 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.
4. In public places, your Dirwin Bike must be parked in accordance with local rules and regulations.
5. If you must park outdoors in rain, or wet conditions you should only leave your Dirwin Bike outside a few hours and proceed to park the bike in a dry location afterwards 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.
6. Do not park, store, or transport your Dirwin Bike on a rack that is not designed for the size and weight of the bike.
7. Wide tires, as used on Dirwin Bike, cannot fit into all bike racks. Please select an appropriate rack for the width of tires used on your bike.
8. Locking up your bike is recommended to ensure your bike is secure and the chance of theft is reduced, Dirwin Bike makes no claims or recommendations on the proper lock hardware or procedures to secure your bike, but we do recommend you take the appropriate precautions to keep your Dirwin Bike safe from theft.
9. 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 FOR Dirwin Pacer

The total maximum weight limit of the Dirwin Pacer(115 Kilograms) 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 maximum payload: 125 Kilograms.**

## Carrying Cargo

Carrying a cargo load 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. You must become accustomed to the braking, steering, and operational adjustments required to safely operate the Dirwin Pacer with cargo. Braking, acceleration, and balancing are all significantly affected by the addition of cargo loaded on the Dirwin Pacer.

The following bulleted list provides important tips for the safe operation of the Dirwin Pacer when used for carrying cargo.

1. Plan your route accordingly as your hill climbing ability, steering and braking are all impacted when cargo is loaded on the Dirwin Pacer.
2. Hills that are normally easy to climb and descend without cargo can become challenging and dangerous once cargo is loaded.
3. 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.
4. Ensure your loads are properly secured and periodically check that nothing loosens.
5. 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.



## Charging Procedure

Follow these steps for charging your Dirwin Bike:

1. Turn the battery pack off using the key switch.
2. Remove the rubber cover on the charging socket on the opposite side of the battery switch.
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 LCD charge status light on the charger turning red.
5. After charging, indicated by the charging indicator light turning green, unplug the charger from the wall outlet first and proceed to remove the charger output plug from the bike charging port.
6. There is a USB interface on the top of the battery where you can connect your smartphone to charge.



Locking and Turning Battery On/Off



Charge Port

Always charge your battery in temperatures between 10 and 26 degrees Celsius and ensure the battery and charger are not damaged before initiating charge. If you notice anything unusual while charging, please discontinue charging and use of the bike and contact Dirwin Bike for help.



## **Basic Battery Charging Tips**

1. The battery should be recharged after each use. There is no memory effect, so you can charge the battery after short rides without damage.
2. The battery can be recharged on or off the bike.
3. Remove the battery by turning the key and then pulling the battery forward and up until the battery detaches from the mating receptacle.
4. The charger will automatically stop charging when the battery pack is full.
5. Always charge in dry locations and indoors away from direct sunlight, dirt or debris.
6. Do not cover up the charger when plugged in or charging, it air cools and needs to be left in an open space. Do not charge with the charger in the inverted position which can inhibit cooling and reduce the charger's life.
7. Check the charger cables, charger and battery for damage before beginning each charge.
8. The light on the charger will turn green when charge is complete and stay red while the battery charges.
9. Charging normally takes 6~9 hours, however it can take longer when you first receive the bike since the battery pack is balancing.

## **When the Battery Is Removed**

1. Do not touch the "+" and "-" terminal contacts on the bottom of the battery when the battery is removed from the bike.
2. Be careful not to drop or damage the battery pack when loose from the bike.

## **When Installing the Battery onto the Bike**

1. Do not force the battery onto the receptacle, slowly align and push battery down into the receptacle.
2. Ensure the key is in the locked position before riding and check that the battery has been properly secured to the bike before each use by pulling upwards and testing the security of the pack.

## Charging Time

When the input and output plugs of the charger are connected properly, and the battery is not fully charged, the red charging indicator light should illuminate, showing that the battery is charging. The time that the battery takes to fully charge the battery is dependent on various factors including distance traveled, riding characteristics, terrain, payload, and battery age.

NOTICE: The battery pack can take longer to charge when fully depleted and when the battery is new. As your battery ages you might also experience increased charging times, but this is only expected after 3-5 years of regular use. If your battery does not seem to be charging normally, and taking longer to charge than expected, please discontinue charging and contact Dirwin Bike immediately.

## Charger Safety Information

1. Keep charger in a safe place away from children.
2. Fully charge the battery before each use to extend the life of the battery and help to reduce the chance of over-discharging the battery pack. Do not charge the battery with any other chargers than what was originally supplied with your Dirwin Bike or a charger purchased directly from Dirwin Bike for use with your specific bike serial number, as approved by Dirwin Bike.
3. The charger works on 110/220V 50/60 Hz standard home AC power outlets do not open the charger to select voltage input, the charger automatically detects and accounts for incoming voltage.
4. Avoid charger contact with liquids dirt, debris or metal objects.
5. Store the charger in a location where it cannot suffer damage from falls/impact.
6. The charger should only be used indoors in a dry ventilated area.

7. If you notice a strange smell or the charger or battery are overheating, please stop charging immediately and contact Dirwin Bike.
8. Do not yank or pull on the cables of the charger. When unplugging carefully remove both the AC and DC cables by way of pulling on the plastic plugs, not pulling on the cables.

Please take special care in charging of your Dirwin Bike in accordance with the above procedures and safety information. Failure to follow proper charging procedures can result in damage to your Dirwin Bike, charger, personal property and/or serious injury or death.



## Bicycle Care

To ensure safe riding conditions you must ensure your bike is properly maintained. You should follow these basic guidelines and see your certified bicycle mechanic at regular intervals to ensure your bike is safe for use.

1. Properly maintain batteries by keeping them fully charged when not in use.
2. Never immerse the bike or any components in water as the electrical system may be damaged.
3. Periodically check wiring and connectors to ensure there is no damage and the connectors are secure.
4. To clean, wipe the frame with a damp cloth soaked in a mild non-corrosive detergent mixture. Dry with a cloth.
5. 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.
6. 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 coastal areas or areas with salty air or water.

7. 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.
8. 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.
9. Regularly clean and lubricate all moving parts, tighten components and adjust as required.

Your cables, spokes and chain will stretch after an initial break in period of 80-160 km, while bolted connections can loosen. Therefore, always have a certified bicycle mechanic perform a tune-up on your Dirwin Pacer after your initial break-in period of 80- 160 km (depending on total weight, riding characteristics and terrain). Regular inspections and tune-ups are particularly important for ensuring that your bicycle remains safe and problem-free.



## Basic Troubleshooting

Symptoms	Possible Causes	Most Common Solutions
It doesn't work	<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 connectors</li> <li>3. Install battery correctly</li> <li>4. Turn on bike with proper sequence</li> <li>5. Disengage brakes</li> </ol>
Irregular acceleration and/or reduced top speed	<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>

When powered on the motor does not respond	<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 orreplace</li> </ol>
Reduced range	<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. Battery discharged for long period of time without regular charges, aged ordamaged</li> <li>5. Brakes rubbing</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>
Wheel or motor makes strange noises	<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>
Wheel or motor makes strange noises	<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>

As a parent or guardian, you are responsible for the activities and safety of your child.  
The Dirwin Pacer is not designed for use by children.



The following safety notes provide additional information on the safe operation of your Dirwin Bike and should be closely reviewed. Failure to review these notes can lead to serious injury or death.

1. All users must read and understand this manual before first use. Additional manuals components used on your bicycle may also be provided and should be read before use in addition to this manual Ensure that you comprehend all instruction and safety notes/warnings.
2. Ensure the bike fits you properly before first use.You may lose control or fall if your bike is too big or too small
3. Always wear an approved bicycle helmet whenever using this product and ensure that all helmet manufacturer instructions are used for fit and care of your helmet Failure to wear a helmet when riding may result in serious injury or death.
4. Ensure correct tightening and setup is performed on your bicycle before first and checkedregularly.
5. It is your responsibility to familiarize yourself with the laws and requirements of operation of this product in the area(s) where you ride.
6. Ensure handle bar grips are not damaged and properly installed. Loose or damaged grips can cause you to lose control and fall.
7. Do not use this product with standard bicycle trailers,stands or bicycle racks Contact Dirwin Bike to check if your equipment will work with the bicycle.
8. Off-road riding requires close attention and specific skills and presents variable conditions and hazards which accompany the conditions. Wear appropriate safety gear and do not ride alone in remote areas. Check local rules an regulations if off-road riding is allowed.
9. Engaging in extreme riding is extremely dangerous and should be avoided.Although many articles/advertisements/catalogue depict extreme riding this is not recommended nor permitted, and you can be seriously injured or killed if you perform extreme riding.
10. Bicycles and bicycle parts have strength and integrity limitations and extreme riding should not be performed or you risk damaging the components or becoming seriously injured or killed
11. Failure to confirm proper installation, compatibility proper operation or maintenance of any component or accessory can result in serious injury or death.
12. After any incident,you must consider your bike unsafe to ride until you consult with a certified bicycle mechanic's comprehensive inspection.
13. Failure to properly charge,store or use your battery will void the warranty and may cause a hazardous situation.

14. Extreme care should be taken when using the pedal assistance sensor and throttle on this product. Ensure you understand and are prepared for the power assistance to engage as soon as pedaling is underway.
15. You should check the operation of the brake inhibitor switches before each ride. The brake system is equipped with an inhibitor which shuts down the power to the electric motor whenever the brakes are engaged. Check proper operation of brake switches before riding.
16. User must understand the operation of the twist throttle and pedal assistance sensors before using, and take ample care in their usage in respect to traveling at speeds appropriate for usage area and user experience level. Always use the lowest assist level until you are comfortable with the bike and feel confident in controlling the power.
17. Any aftermarket changes to your Dirwin Bike not expressly approved by Dirwin Bike could void the warranty and create an unsafe riding experience
18. Because electric bicycles are heavier and faster than normal bicycles, they require extra caution and care while riding.
19. Take extra care while riding in wet conditions. Feet or hands can slip in wet conditions and lead to death or serious injury from a fall.
20. Do not remove front or rear reflectors, pedal reflectors or bell.

## Warranty Info

Every bike is covered under a manufacturer's two-year all-inclusive warranty for the original owner against all manufacturing defects. Dirwin Bike warrants this product, including all individual components against defects in material or workmanship as follows:

### **Dirwin Bike PROVIDED 1+1 YEAR WARRANTY**

Dirwin Bike 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. Dirwin Bike 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.

Additionally, customers are encouraged to apply for the free 1 year extended warranty by completing the application on our website: <https://dirwinbike.com/pages/extend-your-warranty>.

### **The Following are Also Excluded from the Warranty:**

1. Liability for material defects does not cover normal wear which occurs from the manufacturers intended use of the product. Components such as the battery pack, motor system, braking system, drive train system, saddle, grips and pedals are all subject to intended use-related wear and are not covered under the warranty from normal wear.
2. Damage arising from the use of the bike in a competition or other applications outside of normal intended use.
3. Damage arising by improper tools or inadequate maintenance performed on the bike.
4. Damage resulting from adding non-standard equipment, parts or technical modifications.

## **Additional Warranty Terms**

This warranty does not cover any damage or defects resulting from failure to follow instructions in the owner's manual, acts of God, accident, misuse, neglect, abuse, commercial use, alterations, modification, improper assembly, wear and tear, installation of parts or accessories not originally intended or compatible with the bicycle as sold, operator error, water damage, extreme riding, stunt riding, or improper follow-up maintenance. This warranty does not include consumables or normal wear and tear parts (tires, tubes, brake pads, cables and housing, grips). Dirwin Bike will not be liable and/or responsible for any damage, failure or loss caused by any unauthorized service or use of unauthorized parts. In no event shall Dirwin Bike be responsible for any direct, indirect or consequential damages, including without limitation, damages for personal injury, property damage, or

economic losses, whether based on contract, warranty, negligence, or product liability in connection with their products. All claims to this warranty must be made through Dirwin Bike. Proof of purchase may be required with any warranty request.

## **Additional Information on Wear**

Components of the Dirwin Pacer are subject to higher wear when compared to bicycles without power assistance. This is because the Dirwin Pacer can travel at higher average speeds than regular cycles and has a greater weight. Higher wear is not a defect in the product and is not subject to warranty. Typical components affected are the tires, brake pads, suspension forks, spokes/wheels and battery pack.

When the useful life of a component is surpassed it can cause unexpected loss of function. This can result in serious injuries or even death. Therefore, pay attention to wear characteristics such as cracks, scratches or changes in the color or operation of components which could indicate useful life has been exceeded. Worn components should be immediately replaced.



*Thanks for Riding Dirwin Bike!*



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## **DIRWIN BIKE CO., LTD.**

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<https://dirwinbike.com/>