

DUST

Safety Guidelines for Your DUST "Ranger"

At DUST, we prioritise your safety while enjoying your electric bicycle. Please review these essential safety guidelines before using your DUST "Ranger":

1. Read and Understand All Instructions:

Take the time to thoroughly read and understand all instructions provided in this manual for your DUST "Ranger".

2. Avoid Exposure to Liquids:

To prevent the risk of fire, electric shock, or injury, keep your DUST "Ranger", cord, and plugs away from water or other liquids.

3. Supervise When Near Children:

Always supervise children when they are in proximity to your DUST "Ranger".

4. Unplug When Not in Use:

Ensure your DUST "Ranger" is unplugged from the outlet when not in use and before cleaning.

5. Warranty and Malfunction Resolution

DUST is committed to ensuring the quality and performance of your DUST "Ranger" electric bicycle. Each DUST "Ranger" is covered by a comprehensive warranty to provide you with peace of mind regarding your purchase. Please review the warranty terms and conditions included with your product for specific coverage details. Address Malfunctions Promptly. Your safety and satisfaction are our top priorities. If you notice a damaged cord or plug or if your DUST "Ranger" malfunctions in any way, please take the following steps:

- Do not operate your DUST "Ranger."
- Contact DUST customer support for examination, repair, or adjustment.

Should you encounter any problems or require support, please contact our dedicated support team at hello@dustbike.com.

6. Avoid Unauthorised Attachments:

Using accessory attachments not recommended by DUST may lead to fire, electric shock, or injury.

7. Be Weather Prepared:

Take precautions in rainy or snowy conditions to prevent water damage to your DUST "Ranger."

8. Prevent Cord Hazards:

Avoid letting the cord hang over the edge of surfaces or touch hot objects.

9. Keep Away from Heat Sources:

Do not place your DUST "Ranger" near hot gas or electric burners or heated ovens.

10. Connect in the Correct Sequence:

Always attach the plug to the battery of your DUST "Ranger" first, then plug the cord into the wall outlet.

11. Use as Intended:

Only use your DUST "Ranger" for its intended purpose as described in the manual.

12. Retain these Instructions:

Keep this manual for reference.

Important Note: This manual provides essential safety information but does not replace a detailed user, service, repair, or maintenance guide. Please consult a qualified technician for any service, repairs, or maintenance needs related to your DUST "Ranger."

Read This First: Safety and Compliance with the Law

Congratulations on purchasing your new DUST "Ranger" electric bicycle. Your new DUST "Ranger" is an excellent piece of personal transportation equipment that will give you good service for many years.

Before you start using your DUST "Ranger," we want you to be aware of a few important points. Please read this section carefully.

Observe Laws Regarding the Use of Battery-Operated Bicycles

Your DUST "Ranger" is designed and manufactured to meet safety requirements as a battery-operated bicycle. However, state and local laws governing the use of battery-operated bicycles on public roadways, parks, and other open areas may differ. Please check with your local authority before using your DUST "Ranger" in public areas.

The Lithium-ion Batteries of Your DUST "Ranger"

Your DUST "Ranger" electric bicycle is equipped with the latest battery technology. The lithium-ion battery is much lighter than lead- or nickel-based batteries that are being used in some older models.

First Ride

Please be VERY CAREFUL when you are ready to get on your DUST "Ranger" for the first time because it moves significantly faster than a regular bicycle at active power-assisted mode. Take your DUST "Ranger" to an area with a lot of open space before you start. Do not start pedalling hard as soon as you get on the DUST "Ranger" (as you normally would with a regular bicycle), as the DUST "Ranger" will accelerate under pedal-assist mode, and you may be unprepared for the sudden increase in speed. However, after a few times, you will enjoy using the pedal-assisted function.

MODEL: Ranger

Specifications

- **MODEL:** Ranger
- **Frame Construction:** Aluminum Alloy
- **Wheelbase:** 1240mm
- **Gear Range:** 7-speed type
- **Tire Size:** 20"*4.0"
- **Climb Grade:** 30 degrees
- **Max Load:** 150kg (330 lb)
- **Max Speed:** 25 km/h (Restricted) 55 km/h (Unrestricted)
- **Power:** 1000W
- **Battery Capacity:**
 - The Seat Post Battery Capacity: 48V 20Ah
 - The Main Frame Battery Capacity: 48V 19Ah
- **Battery Charger Input Voltage:** 110/220 volt AC
- **Battery Operating Temperature:** 0°C to 40°C (32°F to 104°F)
- **Battery Life:** Approximately 500 complete charge/discharge cycles

Riding Range

The following riding range assumes a 60kg load (rider weight + any carry-on weight) on a flat road, with the temperature ranging from 25°C to 30°C, at a speed of 20 km/h:

The Seat Post Battery Capacity: 48V 20Ah

- Maximum Riding Range in Pedal Assist Mode 1 gear: 120-145 km
- Maximum Riding Range in Hand Throttle Mode 1 gear: 75-100 km

The Main Frame Battery Capacity: 48V 19Ah

- Maximum Riding Range in Pedal Assist Mode 1 gear: 90-110 km
- Maximum Riding Range in Hand Throttle Mode 1 gear: 65-85 km

Assembling Your New DUST "Ranger" Electric Bicycle

Your DUST "Ranger" electric bicycle will arrive partially unassembled, please follow these instructions to assemble your new DUST "Ranger" e-bike under the guidance of an adult. Assembly is quite easy as most of the parts are already assembled; you need only to put a few large pieces together to complete the job.

For more information, please refer to this website: www.dustbike.com

Name of Each Part



Assembly - Step 1: Check that the Package is Complete and Undamaged

Your DUST "Ranger" electric bicycle comes in a carton containing the following components:

- The main body of the Ranger – consisting of the frame, the rear wheel, the gear and chain, the rear brake, the battery in or next to the frame.
- The handlebar subassembly with the battery's keys attached to it – the handlebar subassembly is not really separate, as it is connected to the main body by the brake cables and electrical wires. The handlebar also has the brake levers and gear control already assembled. Additionally, the handle also has an integrated control for the throttle mode power-assist and a display panel.

- The Seat – the seat is attached to the seat post battery.
- The front wheel.
- Front light.
- Tools and other parts – tools, one charger, a pair of foot pedals, and this manual.

Assembly - Step 2: Attach the Handlebar Subassembly

- Stand the main body of your DUST "Ranger" electric bicycle on the kickstand.
- Stand up and lock the steering column located at the front of the main body frame.
- Insert the stem of the handlebar subassembly into the locked steering column.
- Ensure that the fork (that will hold the front wheel) is pointing forward, and orient the handlebar accordingly.
- Insert the stem all the way and tighten it from the top using the quick lock.

Assembly - Step 3: Attach the Front Light

- Make sure that the fork from the steering column is pointing forward.
- Place the front light within the fork, fit it to the bolt at the back of the base of the steering column.

Assembly - Step 4: Attach the Front Wheel and Adjust the Front Brake

- Make sure that the fork from the steering column is pointing forward.
- Remove the protective bar from the front fork.
- Place the front wheel within the fork and the brake disc within the brake block.
- Seat the axial stem properly within the receptacles at the tips of the fork.
- Tighten the nuts with the multi-tools.
- Ensure that the front wheel moves freely and does not wobble from side to side.
- Reposition the wheel and re-tighten if necessary.

Assembly - Step 5: Installing the Seat and Pedals

- Insert the seat post of the seat into the seat column of the main body frame.
- Use the built-in lever to tighten securely.
- Attach a pedal on each side of the crank, noting the distinction between the left pedal and the right pedal.
- Tighten the pedals using the multi-tools.

- At this point, your DUST "Ranger" electric bicycle is a fully functional bicycle, although it does not yet have a battery installed. Check all tightening points to ensure they are secure.
- Adjust the height of the handlebar, and the height and tilt of the seat, if necessary, for maximum comfort.

Assembly - Step 6: Charging the Batteries

- Take out the charger from the box, attach the power cord, and insert it into any wall outlet.
- Insert the plug at the end of the smaller cable into the charging terminal of the battery and start charging. The charging terminal is on the side of the bike frame with the locking latch. (when the battery has been inserted into the bike frame)
- To charge the seat post battery, Insert the plug at the end of the smaller cable into the charging terminal that can be found on the rear of the seat post beneath the rear light.
- The LED on the charger will glow RED while charging and GREEN when charging is complete. The battery should be turned OFF while being charged.
- When the LED on the charger turns Green, disconnect the charging cord and cover the charging terminal with the rubber cap.
- If a battery is installed on the e-bike and turned ON, the display panel will show the charge level of the battery when the bike is turned ON.

You are now ready to start using your DUST "Ranger" electric bicycle.

Operating Your DUST "Ranger" Electric Bicycle

To turn on your DUST "Ranger" electric bicycle, follow these simple steps:

Step 1:

Insert the main frame battery into the frame by using the locking latch to fold the bike, allowing you to insert the battery securely.

Step 2:

Insert the main plug into the rear of the seat post battery and ensure it's securely locked in place. (To unlock, twist the blue cap.)

Step 3:

Insert and twist the key in the mainframe battery lock counterclockwise to the end to activate the battery.

Step 4:

Press the turn on/off button located beneath the saddle on the seat post.

Step 5:

Press the power button on the left handlebar until the display lights up.

Step 6:

Ride on the bike and either twist the throttle bar or pedal the bike. The bike will begin to move. You can change the power level with the control buttons; level 1 is the slowest, level 5 is the fastest, and level 0 is the bicycle mode.

Your DUST "Ranger" electric bicycle is driven by a motor embedded in the hub of the rear wheel. The motor is powered by a battery. The amount of power delivered to the motor, and consequently, the accelerating force on the e-bike, is controlled by you, depending on the power-assisted mode or full power mode you choose.

You can configure the e-bike to operate in the pedal-assist-only mode or the full power mode (please check local laws to ensure full power mode is permitted), where you can also use the hand throttle to deliver power to the motor.

Your First Ride

Please exercise extreme caution when embarking on your inaugural ride with your DUST "Ranger", as it accelerates significantly faster than a regular bicycle when in active power-assisted mode. To ensure safety:

- Take your DUST "Ranger" to an area with ample open space before you begin.
- Avoid immediately pedalling with great force, as you would on a regular bicycle. The DUST "Ranger" accelerates swiftly under pedal-assist mode, and you might be caught off guard by the sudden increase in speed.
- After a few rides, you'll become accustomed to using the pedal-assisted function and enjoy the experience.

Pedal-Assisted Mode

To utilise the DUST "Ranger" in pedal-assisted mode, you must activate the batteries. Here's how it works:

- In pedal-assisted mode, power assistance engages when you pedal forward, and it disengages when you stop pedalling. Essentially, power assistance occurs as long as you continue pedalling, requiring only a gentle force on the pedals to maintain the current flow.
- When you apply one of the brakes, power assistance will automatically cease, allowing the DUST "Ranger" to decelerate and stop. Power assistance is also

deactivated when the DUST "Ranger" reaches the maximum speed corresponding to your selected power level.

- Adjust the gear shifter at the handlebar according to road conditions, and pedal as you normally would. You'll discover that you require much less effort, and the DUST "Ranger" maintains a steadier, faster pace.

Hand Throttle Control

In hand throttle mode, the degree of power assistance is determined by the throttle switch controlled by your right hand. Here's how it operates:

- To accelerate the DUST "Ranger", twist the throttle from its resting position. The farther you twist it, the more power is delivered to the motor.
- To decelerate, release the throttle and allow it to return to its resting position. Simultaneously, apply the brakes if necessary.
- While using the hand throttle, pedalling is not required, but you can pedal to conserve energy and extend the battery's charge.
- The throttle will be able to bring you to 25 km/h to allow for effortless cruising when restricted.
- When the bike is unrestricted you will be able to use the throttle to go max speed.

Charging Your e-Bike Batteries

- Your e-bike batteries are lithium-ion batteries, requiring specially designed chargers.
- Never use a substitute charger not intended for this purpose, as it may lead to overheating, fire, or explosion.
- Ensure that the charger voltage matches the battery's voltage. If you lose or damage your charger, you can buy one on our website as a replacement.
- Charge the batteries when the e-bike is not in use, and turn off the batteries before charging.
- Charging can be done with the batteries mounted on/in the e-bike or after removing it.
- Avoid placing the charger or the batteries near flammable substances during charging. Keep charging away from infants and small children.
- It's advisable not to charge the batteries unattended for extended periods, and nighttime charging is best avoided for safety reasons.

To maximize your batteries lifespan and performance, follow these guidelines:

- **Avoid fully discharging:**
Do not wait until the batteries are completely depleted before charging. It is advisable to start charging when the battery's power is below 20 percent.
- **Periodic charging:**
If you won't be using the e-bike for an extended period, fully charge the batteries and then recharge it monthly. Failure to do so may lead to complete self-discharge, rendering the batteries unable to recharge.
- **Charging time:**
The charging duration depends on the remaining battery charge. If the battery is completely drained, it will take approximately 6 hours for a full recharge. When the batteries are fully charged, the LED on the charger will switch from RED to GREEN. Disconnect the charger promptly at this point. Leaving it connected for overnight charging is acceptable.
- **Charging temperature:**
It is normal for both the charger and the batteries to become slightly warm while charging is in progress.

Proper battery maintenance ensures longevity and optimal performance for your e-bike.

Removing the Batteries from Your DUST "Ranger" E-bike

The batteries are a critical and valuable component of your DUST "Ranger" e-bike, designed to be securely locked in place with a key and an antitheft device to prevent theft. However, there are situations where you may need to remove the batteries, such as when your bike is parked unattended or when you want to recharge it at a location where parking your bike is not possible. Here's how to remove the battery:

Main Frame Battery

Step 1:

Open the locking latch on the side of the charging port and fold the bike for convenient access.

Step 2:

Insert the key into the battery lock, and while holding the key slightly pressed, twist it clockwise until it reaches the end. Note that you cannot remove the battery until the lock bar fully withdraws into the battery.

Step 3:

Carefully slide off the battery. Be cautious, as the battery is quite heavy, and you should avoid dropping it.

Seat Post Battery

Step 1:

Open the locking latch at the top of the seat post/below the saddle.

Step 2:

Carefully slide out the battery. Be cautious, as the battery is quite heavy, and you should avoid dropping it.

Maximizing Your Riding Range

Numerous factors influence the rate of electrical energy consumption and, consequently, your riding range. To make the most of your DUST "Ranger" e-bike's capabilities:

- Always fully charge the batteries before embarking on long journeys.
- Be aware that rough road conditions and hilly terrain will consume more energy.
- Frequent speed changes also lead to increased energy consumption.
- Carrying additional weight on the e-bike will result in higher energy consumption.
- Maintain properly inflated tires and keep the e-bike clean and well-lubricated to conserve energy.
Ensure that both wheels move freely when brakes are not applied to minimize energy consumption. Regularly check brake adjustments.
- Pedal while riding to reduce electrical energy consumption and extend your riding range.
- When the batteries are turned off, your DUST "Ranger" e-bike functions as a regular bicycle. For extended journeys, consider turning off the batteries on level or downhill roads and pedal the e-bike as you would a regular bicycle to conserve the stored electrical energy in the batteries.

By following these guidelines, you can maximize your riding range and make efficient use of your DUST "Ranger" e-bike's capabilities.

Care and Maintenance for Your DUST "Ranger" E-bike

In general, you should care for your DUST "Ranger" E-bike much like you would a regular bicycle: keep it dry, clean, and ensure that moving parts are well lubricated. Whenever possible, avoid parking your E-bike in exposed areas. Here are some additional considerations specific to your E-bike:

- **Brake Effectiveness:** Before each use, check the effectiveness of the brakes to ensure your safety.
- **Intended Use:** Your E-bike is designed for regular country road use by a single person. Using it for extreme manoeuvres such as extreme off-road riding, jumping, or carrying excessive loads can damage the E-bike and pose a serious injury risk.
- **Cleaning:** Avoid using high-pressure water streams to clean your E-bike, as water may infiltrate the motor or wiring compartment, leading to rusting of electrical components or short circuits.
- **Weather Considerations:** When it rains or snows, avoid leaving your E-bike outdoors. After riding in wet conditions, bring the E-bike inside and use a clean, dry towel to remove any moisture.
- **Key Management:** Ensure you do not lose both keys. If one key is lost, promptly make a copy as a backup. Losing both keys will prevent you from removing the batteries from the E-bike.

Special Care for the Batteries and Charger

- **Charger Usage:** Only use the provided charger to charge your batteries. Avoid using unauthorised substitutes. If your charger is lost or damaged, contact your dealer to order a replacement.
Battery Alterations: Do not open or modify the batteries or battery charger.
- **Battery Storage:** Keep the batteries away from fire or corrosive substances, and do not immerse them in water or other liquids. Avoid exposing the batteries to high temperatures, such as direct sunlight for extended periods.
- **Battery Connection:** Never connect (short circuit) the two poles of the batteries.
- **Battery Ageing:** Over time, the batteries' charge-holding capacity may decrease with extensive use. If you find that your batteries cannot hold sufficient charge for even short trips, contact your dealer to order replacements. Typically, the batteries undergo around 500 charging and discharging cycles under normal use.
- **Long-Term Storage:** If the E-bike batteries will not be used for an extended period, ensure they are fully charged and recharge them every month. Store them in a cool place.
- **Battery Use:** The E-bike batteries are specifically designed for high capacity and long useful life for powering your E-bike. We strongly advise against using them to power other electrical devices, as improper use can damage the batteries, shorten their useful life, and pose fire or explosion hazards.

Care and Maintenance for Your DUST "Ranger" E-bike

In general, you should care for your DUST "Ranger" E-bike much like you would a regular bicycle: keep it dry, clean, and ensure that moving parts are well lubricated. Whenever possible, avoid parking your E-bike in exposed areas. Here are some additional considerations specific to your E-bike:

- **Brake Effectiveness:** Before each use, check the effectiveness of the brakes to ensure your safety.

Additional Care Considerations for Your DUST "Ranger" Electric Bicycle

In addition to the general care and maintenance guidelines, here are some specific considerations to ensure the longevity and safe operation of your DUST "Ranger" electric bicycle:

- **Intended Use:** Your DUST "Ranger" is designed for regular country road use by a single person. Using it for extreme manoeuvres, such as extreme off-road use, jumping, or carrying an excessive load, can damage the electric bicycle and pose a serious injury risk.
- **Cleaning:** Avoid using high-pressure water streams to clean your DUST "Ranger" electric bicycle, as water might seep inside the motor or the wiring compartment, leading to rusting of electrical parts or short circuits.
- **Weather Protection:** Avoid parking your DUST "Ranger" electric bicycle outside during rainy or snowy conditions. After a ride in such weather, bring the electric bicycle indoors and use a clean, dry towel to eliminate any moisture.
- **Key Management:** Ensure you do not lose both keys. If one key is lost, promptly make a copy as a backup. Losing both keys will prevent you from removing and/or turning on/off the battery from the electric bicycle.

Special Care for the Batteries and Charger

- **Charger Usage:** Only use the provided charger to charge your DUST "Ranger" electric bicycle's batteries. Avoid using unauthorised substitutes. If your charger is lost or damaged, order a replacement.
- **Battery Alterations:** Do not open or modify the batteries or battery charger.
- **Battery Storage:** Keep the batteries away from fire or corrosive substances, and do not immerse them in water or other liquids. Avoid exposing the batteries to high temperatures, such as direct sunlight for extended periods.
- **Battery Connection:** Never connect (short circuit) the two poles of the batteries.

- **Battery Ageing:** Over time, the batteries' charge-holding capacity may decrease with extensive use. If you find that your battery cannot hold sufficient charge even for short trips, contact your dealer to order a replacement. Typically, the batteries undergo around 500 charging and discharging cycles under normal use.
- **Long-Term Storage:** If the electric bicycle's batteries will not be used for an extended period, ensure they are fully charged and recharge them every month. Store them in a cool place.
- **Battery Use:** The electric bicycle's batteries are engineered with precision for high capacity and long useful life to power your DUST "Ranger." We strongly advise against using them to power other electrical devices, as improper use can damage the batteries, shorten their useful life, and pose fire or explosion hazards.

Important Note:

This manual provides essential safety information but does not replace a detailed user, service, repair, or maintenance guide. Please consult a qualified technician for any service, repairs, or maintenance needs related to your DUST "Ranger."

Safety and Compliance with the Law

Congratulations on choosing your DUST "Ranger." Safety and compliance with local laws are paramount. Here are some key points to consider:

Laws on Battery-Operated Bicycles:

Your DUST "Ranger" complies with safety standards as a battery-operated bicycle. However, local and state laws governing e-bike use in public areas may vary. Verify the regulations with your local authorities before riding your DUST "Ranger" in public.

Adherence to Bicycle Laws:

E-bikes, including your DUST "Ranger" model, are subject to standard bicycle laws, including helmet use. Comply with local bicycle regulations, and be aware of any additional restrictions in your area.

Enjoy your DUST "Ranger" responsibly and safely, and always follow local laws and guidelines to ensure a secure and enjoyable riding experience. For any inquiries or assistance, you can contact DUST at hello@dustbike.com.

Troubleshooting:

Since one or more causes of failure may contribute to the observed failure causes, it is essential to identify the true cause(s) and apply the appropriate solutions to rectify the problem. If you have any doubts or uncertainties, we strongly recommend consulting a qualified technician for professional service, repairs, or maintenance. Your safety and the optimal performance of your DUST bike is one of our top priorities.

Failure	Causes of Failure	Solutions
- Can not turn on the e-bike	<ul style="list-style-type: none"> - Battery is off - The Batteries is out of power - Batteries aging or damaged - Poor contact of display line - Failure of controller - Failure of switch 	<ul style="list-style-type: none"> - Turn on the battery - Fully charge the battery - Replace the battery - Reconnect the display - Replace the controller - Replace the switch
<ul style="list-style-type: none"> - Pedal assist doesn't work - Gear doesn't work well - Brake doesn't work well - Display doesn't light on 	<ul style="list-style-type: none"> - Failure of speed sensor - Rear derailleur mismatch - Brake caliper mismatch - Brake Disc is bent - Poor contact of display line 	<ul style="list-style-type: none"> - Replace speed sensor - Adjust rear derailleur - Adjust brake caliper or disc - Reconnect the display line
<ul style="list-style-type: none"> - Can not adjust the speed - Speed is less than 10km/h 	<ul style="list-style-type: none"> - Battery's voltage is too low - Throttle governing bar is damaged - Poor contact of the controlling line - Spring failure or being locked 	<ul style="list-style-type: none"> - Fully charge the battery - Replace the throttle governing bar - Replace the spring
- E-Bike's mileage is obviously inadequate after fully charged	<ul style="list-style-type: none"> - Inadequate tire pressure - Failure of charger - Failure of in frame controller - Battery aging or battery damaged - E-Bike has not been well assembled - Strong wind - Too much weight - Temperature is too low 	<ul style="list-style-type: none"> - Inflate tire with appropriate air pressure - Replace the charger - Examine and repair the in frame controller - Replace the in frame controller - Replace the battery - Re-adjust the e-Bike - Warm the battery above 0°C (32°F)
- Wheel hub stop running after switching on the power	<ul style="list-style-type: none"> - The connection of battery is loose - Poor contact of controlling line - The connection of wheel hub is loose or damaged - The protective board of the battery is broken 	<ul style="list-style-type: none"> - Re-connect the battery - Replace the connection line - Replace the battery's protective board with a new one

Email: hello@dustbike.com

“DUST BIKE PTY LTD reserves the right to change the features of the product without prior notice.”