LEITNER

Powering Your Freedom

ELECTRIC FAT BIKE 500W USER MANUAL

Check your local E-Bike regulations before riding this 500W electric bike

Important: To provide the best experience this manual is continuously updated. To make sure that you are referring to the most up to date information download the latest version at leitner.com.au/manual

About this manual

- Thank you for purchasing a Leitner electric bike. We take pride in providing electric bikes at outstanding value, delivered to you factory direct. Riding an ebike can be fun, however for safety reasons it is important to only ride the bike after reading and understanding the complete manual.
- The following manual is only a basic guide to assist you and is not a complete or comprehensive manual of all aspects of assembling, maintaining, repairing and using your bicycle. In the interest of safety we recommend that you visit a local electric bike professional to assemble, tune and regularly service the bike.
- This manual makes no representation about the safe use of this bike under all conditions. It is impossible to predict all situations when riding a bike and there are risks associated with riding this bike which cannot be avoided. These risks are at the sole responsibility of the rider.
- This assembly and operation manual shall remain an integral part of the electric bicycle. When you transfer the electric bicycle to others, please enclose this manual as it contains important safety guidance and operation instructions. Anyone riding the electric bike shall carefully read the safety guidance and operation instructions before your first ride.

Meaning of Safety Language.

Riding a bike can cause injury and in extreme cases death, therefore it is important to read and understand the manual before using the bike. The most common cause of injury is falling off the bicycle and reading the manual will help to avoid situations which put you at risk of injury or death.

- **WARNING!** Indicates the possibility of injury or death.
- **Caution!** Indicates the possibility of injury.

As there are different models of eBikes, pictures are for reference only and may show a similar component from another model. Certain instructions of this manual may not apply to your model. All content in this manual is subject to change or withdrawal without notice. We made effort to provide accurate information, however we do not assume responsibility of liability if any errors or inaccuracies appear. If you are unsure about certain parts of this manual, if you have a problem or need repair, please visit the website www.Leitner.com.au and email a customer service representative at sales@Leitner.com.au with a problem description and pictures and videos or call 1300 856 725.

Table of contents:

Guide to safe operation

Mechanical and electrical work performed on your ebike. Safety depends on correct assembly and maintenance. The use of a torque wrench is recommended to tighten bolts correctly. Special tools and skills are necessary to comprehensively service this bike. In the interests of safety we recommend that you visit a local electric bike professional to assemble, tune and regularly service the bike. Significant mechanical reparis should be carried out by a skilled bicycle mechanic.

W**ARNING!** Any modification of your bike can provide a safety risk.

- Components which are not approved or incorrect assembly can cause accidents and injury. Do not make any modifications including but not limited to installing incompatible forks, drilling, sanding, filing or removing parts.
- Original components can be purchased through your retailer. Consult your retailer for safety and compatibility advice. For example, installing a seat post which is too long may put stress on the frame leading to damage. Another example is installing an incompatible child seat which could lead to injury.
- The electric parts do not need maintenance. Do not open electric parts. Disassembly of the bike beyond the state in which it has been delivered in the retail box voids warranty.

Riding a bike in different conditions

WARNING! Using a bike in conditions beyond its limits and beyond the skills of the rider could lead to damage to bicycle, fork, frame, parts and injury. Do not use your bike on rough trails, trails with obstacles, areas where tyres are momentarily off the ground, jumps, technical areas, speeds over 32 km/h and for aggressive riding. Do not ride down curbs.

- Riding an ebike can be fun for commuting, exercise or recreation if you ride your bike in a manner that is within your ability and within the limits of the bike. Ride carefully and mindful of your environment to avoid dangerous situations. Bikes are limited by use, surface, maintenance and design.
- This bikes is best ridden on paved surfaces with shallow gradients where the tyres are always on the ground. The wide tyres allow better traction compared to 2inch wide tyres in grass, sand and snow.
- Weight limit of rider (including luggage) 120kg (264 pounds). Do not ride on hills steeper than 15 percent incline.

WARNING! Smooth gravel roads and loose surfaces increase risk of losing control. Your riding style needs to be adjusted. Apply brakes gently, go around turns slowly and be careful not to use motor during turns and do not accelerate quickly.

- Bikes do not protect you in accidents. You may damage the bike, fall and it may cause serious injury or death.

WARNING! Riding a bike after an impact beyond its limits, e.g. accident may cause the bike to break at lower than standard loads. It is recommended to have the bike inspected by an ebike mechanic before riding it again.

Riding instructions

- Use your brakes carefully: if your bike has two brake levers it is recommended to press both brake levers at the same time. Check which brake lever engages which brake. In Australia, normally the right lever engages the front brake, the left lever the rear brake. In the USA, normally the right lever engages the rear brake. Over-using the front brake lever may cause the rear wheel to lift resulting in loss of control.
- Always keep a safe distance from other vehicles or objects. Get to know your brakes by practicing in a flat, safe location with concrete surface at low speeds. Adjust brakes if they are too powerful or too weak.
- Do not use the electric assistance to begin with. If you are comfortable riding the bike without electric assistance, read all instructions about using electric assistance, then ride bike using low assistance levels.
- Always be prepared to press the brake levers in case you accelerate unexpectedly. Do not switch on your bike on unless you are ready to ride it to prevent accidental acceleration. Also refer to section “Changing gears correctly” in this manual.
- Go around turns carefully, do not pedal around turns, keep your pedal arms horizontal to avoid pedals touching the ground.

WARNING! Incorrect use of brakes, gears and electric controls may cause loss of control and injury.

- When you ride, include a pump, a spare inner tube, puncture repair kit, and tools so you can repair your bicycle if it has a flat tyre or other mechanical problem. It is not recommended to ride at night. If you do ride at night, include a spare light source for emergencies.

WARNING! Prevent toe-overlap. Be aware of situations where your feet which are on the pedal touch the front wheel. In normal riding situations the front wheel is not turned sufficiently to allow contact of your toes with the wheel, however this may occur when going around tight turns at low speeds. Do not pedal when going around turns. Toe overlap is affected by the size of your feet, the pedals, crank arms, mudguards and tyres.

- Carrying cargo will change the way your bike handles, including braking distance, steering, acceleration, balancing, hill climbing ability. Cargo should not protrude too far from your bike and a low centre of gravity is recommended.
- When riding in coastal areas, wipe bike after every ride as salt water and humidity are very corrosive. Apply anti-rust treatment to spokes and other unpainted parts. Do not use anti-rust sprays. It may contaminate unwanted parts such as brake pads. Damage from corrosion is not covered under warranty.

WARNING! Avoid pinch points (squeezing hazard), moving parts, hot parts and sharp points. Examples of parts which can cause injury are turning wheels including spokes, sharp cogs driving the chain, hot brakes, folding frame, folding stem and folding seat posts.

- Frame and forks need to be inspected thoroughly before every ride for any unusual signs of damage or wear. If you experience any unusual noise during riding stop using the bike. After impacts, for example accidents or hitting a object at low speeds or if the bike falls inspect the bike including frame and fork closely as it may have been damaged due to high stress. If there are scratches, use clear nail polish to touch up to avoid corrosion.

Life span of your bicycle

- Bicycle parts will wear with use and may need replacement after some time. If a bike is used more often parts will need to be changed more frequently as compared to a bike which is only used occasionally. Rough riding will reduce the life span of the bike. There are many factors determining the lifespan of a part therefore it is not possible to give an exact timetable for replacement.
- Frequent maintenance will increase the lifespan. If you are in doubt whether a part should be changed please contact customer service. Battery capacity will naturally degrade over time and with use.

WARNING! If the lifespan of any part is exceeded it may break and cause injury therefore it is necessary to inspect all parts of the bike regularly to identify damaged components and replace them before they fail.

WARNING! As with all mechanical components, the bicycle is subjected to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component has been exceeded, it may suddenly fail possibly causing injuries to the rider. Any form of crack, scratches or change of colouring in highly stressed areas indicate that the life of the component has been reached and it should be replaced.

Checklist before each ride

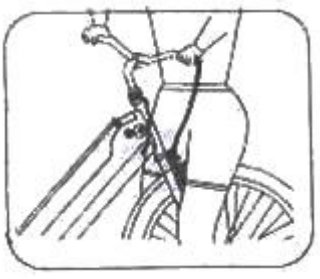
To make sure that the most important components are installed correctly and functioning correctly it is necessary to follow this checklist before each ride. Please note this is not a full maintenance program.

WARNING! If a part of your bicycle is not working properly do not ride your bike. Have the part installed correctly using the adjustment instructions in this manual or have the part repaired or replaced by a professional bike mechanic. Contact customer service if in doubt**.**

Checklist:

- **Battery:** Make sure your battery is fully charged, secured and not damaged.
- **Frame and fork:** Are there signs of stress or fatigue? Discoloration, cracks, dents, chips, irregularities in shape, scratches, unusual noises

Figure FS2



- **Handle-stem and handle-bar:** Is stem aligned with front wheel? Walk to front of bike, put front wheel between your legs (Figure FS2.) Check if the wheel and stem are aligned straight. Try to twist the handle-bar left and right. The handlebar should not be loose and shouldn't move if moderate force is applied. Make sure that all cables are not stretched and that there is enough slack for all cables when turning handle-bar. Make sure the wheel can be turned freely without entangling wires. **WARNING:** The ends of the handle-bars need to be covered, usually by a handle-grip to protect from injuries. Replace if damaged. Apply front brake and move bike forward and backwards. Is fork loose? If it is loose the headset needs to be adjusted.
- **Wheels:** Are wheels installed safely? Lift wheel off the ground, hit it by hand from the top and try to move it by hand left and right. The wheel shouldn't move or come loose. Check if the nuts or quick-release system is holding the wheel in place safely Are tyres inflated to recommended pressure on sidewall of tyre? Tyres with 4 inch width usually require 20psi pressure. Pump tyre using a hand bicycle pump. Do NOT use an automated air compression pump, for example the car tyre pumps at gas stations. Check if wheel is straight. Lift it off the ground and spin it by hand observing any wobbles from side to side where it passes the brake pads. **WARNING!** Wheels need to be installed safely otherwise they may come loose during a ride and cause injury.
- **Brakes:** Check if all brakes on the bike work well. Pressing the lever should stop bike. Rim brakes: Brake pads should be 1-2mm away from rim. If pressing the brake lever results in touching the handle-bar, adjust brakes. Disc brakes: Brake pads should be 0.25-0.75 mm away from disc. If brake lever moves more than 15mm or less than 7mm to stop your bike, adjust brakes. Also make sure that the brake pads are not rubbing excessively against the rim of the wheel or the disc of a disc brake: Lift the wheel off the ground and spin it. If there are any noises or if wheel stops spinning abruptly it indicates that brakes are rubbing. **Caution!** Do not touch the disc of the disc brake after use as it may be hot. Never touch brakes while wheels are turning. Check that engaging brakes switches off motor.
- **Saddle (seat) and seatpost**: Use both hands to twist seat left and right and push seat up and down and try to tilt seat forwards and backwards. It should not move or be loose. Check that minimum insertion mark on seatpost is NOT visible.
- **Suspension:** Make sure that any suspension installed on the frame or fork cannot be compressed fully.
- **Reflectors, front and rear lights:** Make sure both front and rear lights face the correct direction and that they are clean and working properly. Make sure that all reflectors on front and rear wheel and on pedals are clean and not covered by any accessories. **WARNING!** A bike without properly functioning lights and reflectors may be hard to see by other people increasing the chance of an accident.
- **Pedals and crank-arms:** Check that pedals are fully inserted into crank arms and that they are tightened to specification. The pedals and the crank arm should not be loose. Loose pedals will damage the thread on pedal arms. Damaged pedal arms need to be replaced.

Safeguard your bicycle

- Purchase a strong lock to prevent theft. Always lock your bike.
- Note your frame serial number. It is located at the front on the frame on top of the front fork. If you have problems locating your serial number please contact customer service.
- Park your bike undercover, out of direct sunlight protected from rain, snow, water, sea water and wind in a safe location which does not obstruct traffic and is clear from hazardous conditions including heat and cold. Humidity especially in areas close to the sea can cause corrosion. UV exposure can cause rubber to crack and paint to faint.
- Park your bike in a manner that it doesn't fall. Falling may damage the bike, most commonly on the handlebar, handle grips, gear shifter and rear derailleur.
- If bicycle is stored for an extended time it should be lifted off the ground with tyre pressure at half of the recommended level. Charge battery at least every month as per the respective battery maintenance chapter in this manual.
- Clean your bike every week with moist rag. Any parts which rub against the frame can remove paint or in extreme cases damage to frame. Use protective padding material if needed to protect frame.
- Do not clamp the frame during transportation to prevent accidental damage. Use sturdy adapter bars for transport which attach at seat-post and handle-stem. Always use adapters which are able to carry the weight of the bike. Remove battery for transport if needed to reduce weight of bike.
- Cover bikes which are transported on the outside of a vehicle with a suitable cover to prevent exposure to weather.
- Always make sure that no cables are overstretched and that parts of the bike which touch are separated appropriately for example using rags or other padding material.
- To ship a bike in a box wrap frame parts with padding, for example a foam sheet or bubble wrap. Pack bike in the same manner as it has been received by you if you have received a bike in a box. Keep the original packing material and box in the unlikely case the bike has to be shipped again. Make sure the bottom of fork is protected to prevent it from penetrating the box.
- When parking, lock battery into frame and remove keys or remove battery to prevent theft.
- Check with your local authorities whether it is allowed to transport the bike with public transport.

Maintenance

Regular maintenance ensures that the bike is in good condition to be ridden safely. The recommendations below are for normal use. If your bike is used more frequently it needs to be maintained more often. If any parts need repair, fix or replace them immediately.

Tools for maintenance:
Allen keys: , 4, 5, 6, 8 mm
Open end spanners: 8, 9, 10, 13, 15mm
Phillips head screw driver
Bicycle tyre pump with gauge
Spoke spanner
Bike tyre repair kit including tyre removal levers and spare inner tube
Grease and lubricant
Torque wrench showing Nm or lb/inch units
Not all tools are necessary for all bikes.

Important Notice! Having the electric bike assembled, adjusted and serviced by a competent electric bike mechanic is the best practice and it will reduce the risk of injury.

Best practice:
A competent electric bicycle mechanic should perform the following tasks:

- Assembly and full check after assembly, including tuning of spokes.
- After 30 days: Check and re-tuning. After the first days of riding some components may need re-adjustment, for example brake or gear wires may stretch. Disc brakes may need several weeks to “brake-in” until they reach optimum performance.
- Every 600 miles (1000km) or every year, whichever comes first: full service

Maintenance schedule

Before each ride: refer to “Checklist before each ride” section in this manual
Every week: clean with moist rag, check for loose spokes
Monthly check: wheel-bearings, rim wear, Stem bolts, headset-bearing, pedals, chain wear, cable wear, gear levers, derailleur, brakes, stand, accessory bolts, suspension fork bolts, rear suspension bolts, reflectors, lubricate forks, lubricate derailleur. Check battery for signs of damage and anything unusual.
Every three months: Check crank arms and bottom brackets, lubricate brake levers and brake-arm fixing bolts.
Every Year: Lubricate handlebar stem, lubricate seat post, replace grease: on pedal threads, in bottom bracket bearings, in wheel bearings, in headset bearings. Lubricate quick release on wheels and seat-post, and folding pivots (frame, seat post, handle-stem). Inspect motor for any unusual noise.

Before your first ride

Contact a customer service representative to assist you in finding a bike which has the right size for you. Important measurements are the minimum and maximum seat height form the ground to the top of the seat and also the stand-over height.

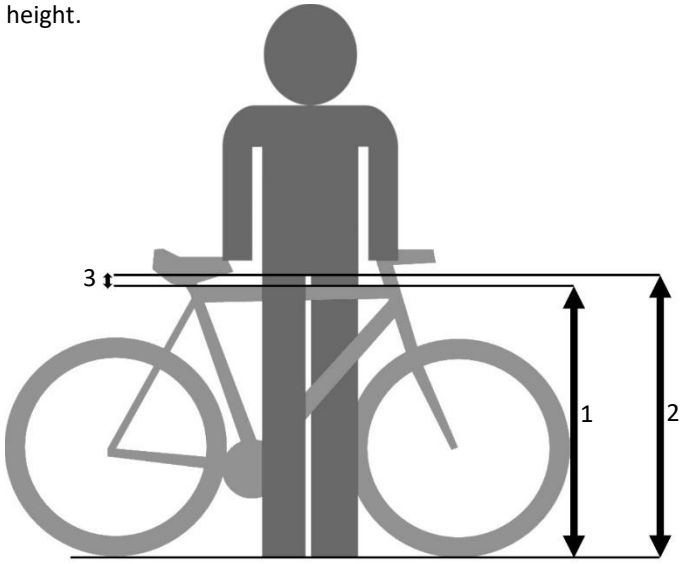


Figure SO1: Stand-over height: To determine the minimum leg-length of the rider refer to the figure on the left.

1: Top tube height of bicycle from ground. A straight top-tube is shown. Step-through frames (sometimes referred to as "Ladies" frames) are specified based on corresponding straight top-tube models.

2: Crotch measurement of rider: Wearing bicycle shoes and having the feet 6 inches apart, measure the inside of the leg from the ground to crotch.

3: **There should be at least 1 inch (25 mm) clearance between the crotch measurement of the rider and the top tube height of the bicycle when straddling the bike**. For mountain bikes at least 2-3 inches clearance is recommended.

- Read and understand the complete manual.
- Adjust seat and handle-bar height and tilt for best comfort. Always make sure that minimum insertion marks on seat post and handle-stem e inserted into frame so that marks are not visible.
- Familiarize yourself with the controls and practise braking and steering at low speeds in a flat, paved, safe environment and always be prepared to apply brakes in case of unexpected acceleration.
- Do not switch on your bike on unless you are ready to ride it to prevent accidental acceleration. Switch bike off while pushing it. If you have any doubts contact customer service.

Rules to ride safely

- Cycling involves risk of injury and damage. By choosing to ride this bicycle you assume the responsibility for that risk.
- This electric bike is intended only for riders 18 years or older who are physically and mentally capable of riding an electric bicycle. Consult your doctor to confirm suitability of riding an ebike as impairments or disabilities may increase the risk of injury or death. Parents and guardians are responsible for the activities and safety of children. This bike is not designed to be used by children.
- Familiarise yourself and comply with your local electric bicycle laws as every state may have different regulations. Consult your local authorities for advice.
- Always ride carefully looking out for other participants in traffic. Bicycles may be hard to see, therefore always ride slowly and defensively always being ready to brake to stop your bike. Use your bell.
- Always avoid obstacles in the road like potholes or curbs. If there are rail or tram tracks cross them at a 90 degree angle to avoid getting caught in the tracks and losing control. Expect opening car doors or cars backing out of driveways. Don't use items which may restrict your hearing.

Always wear a helmet while riding which complies with your local safety standards.

- Do not wear loose clothing which could get caught in the moving parts of the bicycle.
- Do not ride at night, in wet weather, icy conditions, snow or other adverse conditions like wind. Your braking power may decrease, braking distance may increase and you will have less control over the bike if the ground is more slippery.
- Make sure that all your reflectors and lights are working and installed correctly. Front and rear lights may increase your visibility in conditions with low light, however reflectors only increase your visibility if light is pointed at them. Wear high visibility clothing with bright and reflecting materials.

WARNING! Riding in low visibility conditions like night, dusk, dawn or fog will increase your risk of collision as other people may not see you.

Always think safety and apply common sense when riding. Some examples are:

- Do not ride when intoxicated, if you are impacted by medication, extremely tired or if you do not feel well. Always ride carefully and slowly being prepared to stop the bike. Only ride on roads which are bicycle friendly. Try to avoid roads with heavy traffic passing you at a small distance.
- Always keep your hands on the handlebar. If riding in a group, ride in a single file, keep a safe distance from other riders and generally try to avoid riding in a big group as it may increase the risk of accidents.
- Only one person should ride the bike. Do not carry a second person on the bike. Riding off road will increase the risk of damage or injury. Only ride on trails, do not ride through water and avoid all obstacles. Make sure that at no times obstacles hit any parts of your bike including your bike stand. Always make sure that there is enough clearance between the bike and the ground. Do not attach loose objects to your bike.
- Do not jump, do not perform stunts, do not ride over obstacles like curbs, sticks and other obstacles, do not ride in rough terrain, do not ride in an unusual manner.

WARNING! Riding incorrectly can lead to damage and injury.

OPERATION OF YOUR ELECTRIC BIKE

Important legal note. This bike has a maximum continued rated power of 500 Watts (500W). Check your local electric bike regulations to ensure that you comply before riding. You may receive heavy fines if you ride an electric bike which does not comply with your local electric bike regulations and there may be other adverse legal implications. The bike is programmed to have a top speed of over 25km/h out-of-the-box, however the top speed of the bike can be limited to 25km/h and the throttle can be disabled by following the instructions in this manual (next page). Leitner Pty Ltd does under no circumstances take liability for any issues riding this bike illegally. It is the user's responsibility to comply with regulations.

- Your e-bike is driven by a motor embedded in the hub (centre) of the rear wheel. The motor is powered by a battery. The amount of power delivered to the motor, and hence the accelerating force on the e-bike, is controlled by you.
- There are two systems to activate the motor: Throttle and Pedal Assist.
- The throttle can be twisted by hand and activates the motor (Figure C1).
- In Pedal Assist mode (Figure C2), the motor is triggered when you pedal forward, and power assist will stop when you stop pedaling. In other words, power assist happens as long as you pedal. You don't need to pedal hard. All you need is to apply a light force to the pedals continuously to maintain continuous rotation. When you apply one of the brakes, power-assist will automatically stop, allowing the e-bike to slow down or stop. Power assist will turn itself off before the e-bike has reached the maximum speed of approximately 32 km/h on the flat, 40 km/h downhill.
- You should use the gear shifter at the handlebar to set the gears appropriately according to road conditions and pedal as usual. Please refer to relevant section in this manual how to use gears.
- Note that the Battery level indicators on the display (Figure C2, 1) will only show an estimate of the battery charge level when power is not being drawn from the battery (bike standing still). While using motor assistance voltage will decrease.

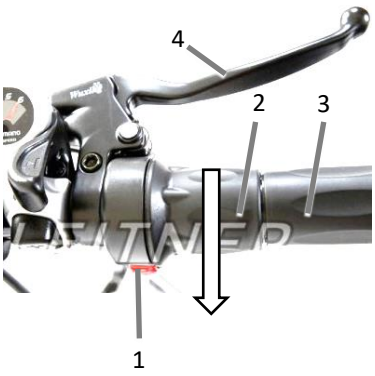


Figure C1: The **twist-and-go throttle (2)** is located on the right hand side of the handlebar, next to the **handle-grip (3)**. Push the **red button (1)** IN to switch the throttle on. **Push the red button (1)** again, so that it moves OUT to disable throttle.
Grabbing the throttle with your right index finger and thumb wrapped around it and twisting it down in the direction of the white arrow will activate the motor and the ebike will move forward. The twist acceleration is gradual: Twist it down only a little bit for moderate acceleration. Twist it down all the way for maximum acceleration. The throttle will accelerate the bike to a maximum speed of about 32 km/h on the flat and to about 40km/h downhill. The throttle may override the pedal assist system meaning if you twist the throttle the pedal assist system may not work. Release throttle to use the pedal assist system.

WARNING! Only switch throttle ON if you intend to ride the bike. Always switch throttle and bike OFF when walking next to bike and pushing the bike to prevent accidental acceleration. Always be ready to press **brake lever (4)** to stop bike.

The display panel (Figure C2) controls a number of features on your ebike.
WARNING! Only switch Pedal Assist ON if you intend to ride the bike. To disable Pedal Assist push the **"-" button (7)** until the **pedal assist level indicator (2)** displays a "0". Do not pedal when turning! Always switch bike and Pedal assist OFF when walking next to bike and pushing the bike to prevent accidental acceleration. Always be ready to press **brake lever (Figure C1, 4)** to stop bike**.**
-Switch bike ON: switch battery ON (refer to relevant section in this manual). Push **M button (6)** for 2 seconds to switch the display ON. The **voltage display (1)** will show the battery voltage. When the battery is full, there will be 5 bars, when the battery discharges less bars will show as the battery voltage decreases. The voltage will drop while the bike is used. Stop the bike to read voltage. Voltage reading is just and estimate and approximate. Voltage may not drop in a linear fashion. Check battery power by pushing the black button on the side of the battery. Refer to relevant section in this manual.
-Switch bike OFF by pushing and holding the **M button (6)** for 2 seconds. Push the power button on the battery to switch the battery OFF. Always switch bike OFF if it is not used.
-The **current speed (3)** is displayed in km/h and the **trip distance (4)** in km.

Figure C2: Display panel.

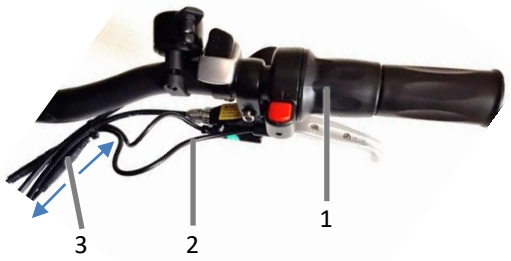
-Turn on the front light of bike and the display back-light: push **"+" button (5)** for 2 seconds: Switch the front light and display back-light on
-**Turn on Pedal Assist Mode:** "Pedal assist" means that the motor will be activated when you start pedalling and the bike will move forward with motor assistance while you are pedalling. Push **"+" button (5)** to increase pedal assist (PAS) level. 0, no assistance. 5 maximum assistance. At maximum assistance the bike will reach approximately 32km/h on the flat and up to 40km/h downhill. On steep declines the bike can go faster. Push **"-" button (7)** to decrease PAS level

Limiting the speed to 25km/h

Click the link to see the video: https://youtu.be/-XdF2gdqiCo or scan the QR code

- Switch ON the bike and display (Figure C2, page 6)
- Push the + and – button at the same time until the screen changes
- Push the M and – button at the same time until the screen changes
- Ld flashing. Correct setting : 26inch. To change setting, push M briefly, then choose correct setting using + and – buttons. To save correct setting push M briefly.
- LS flashing: maximum speed limit in km/h: To change setting, push M briefly, then choose correct setting 25 using + and – buttons. To save correct setting push M briefly.
- Test ride the bike and confirm that the motor cuts out at 25km/h. If the motor cuts out at slightly higher speeds, reduce the top speed to a lower number, for example 24 or 23 and test ride again.
- To return to the main menu hold M until the screen changes

Disabling the throttle



- Switch bike OFF and remove the battery
- Look for the **cable (2)** connected to the **throttle (1)** on your handle-bar
- Follow the **cable (2)** until you find two **connected plugs (3)**
- Carefully disconnect the **plugs (3)** by pulling in the directions of the arrows
- Use tape to water-proof the ends of the plugs
- Use cable-ties to tie the loose cables so that they don't interfere with riding the bike safely.
- The throttle is now disconnected and disabled. The bike can be ridden without throttle acceleration.

Re-connecting the throttle

- Switch bike OFF and remove the battery
- Re-connect the **plugs (3)** by aligning the **bump (5)** with the **groove (4)** and pushing them together carefully. Take care not to damage the small pins inside the plugs. Push plugs together all the way
- The bike can now be ridden with the throttle. Please note the throttle speed is higher than 6km/h and cannot be limited to 6km/h

Getting Started

- First, unpack your electric bike carefully making sure that you don't scratch the bike with sharp tools such as paper knifes or scissors.
- Keep all packing material including the carton in the unlikely case the bike has to be re-packed and shipped.
- Locate all parts: battery, keys, front wheel, charger, seat and seat post, front light, handle-stem, pedals, tools and any small parts like nuts or screws inside the shipping carton.
- Sometimes small parts like nuts or screws may come loose during shipping so be sure and check the bottom of the carton and protective wrapping carefully. Please note that eBikes are fragile items. Although we are using first class courier services and the bikes are professionally packed it may happen that they get damaged during transit.
- **Please check the bike for damage and any missing parts upon arrival and let us know immediately.** We will then work with you on a solution and ship replacement parts as soon as possible.

Assembly Instructions

- This bicycle has been disassembled for shipping. To ship the bike, the pedals, front light, seat, front wheel and sometimes the handlebar may be loosened or removed.
- Different parts of the bikes such as brakes and gears may need adjustment. This manual will list the steps required for installation.
- Check all nuts and bolts on the bike, even if parts have already been assembled by the factory, to make sure that they are installed safely.
- In the interest of safety It is recommended to have the bike assembled and adjusted by a bike mechanic and serviced regularly.

Installation of front lights

Install **front light (1)** on top part of **fork (2)** using the **bolt (3)** and **nut (4)** as shown in the picture above.

Connect **black wire to the "-" pole** at the back of the light.

Connect **red wire to the "+" pole.** Make sure the small metal pins of the light are inserted <u>into</u> the ending of the wire.

<u>This part of fork facing forward</u>. The brake calipers must be on the LEFT side of the bike.

Picture of correctly installed front wheel and front lights.

QUICK RELEASE LEVERS

Figure Q1: Lever in closed position

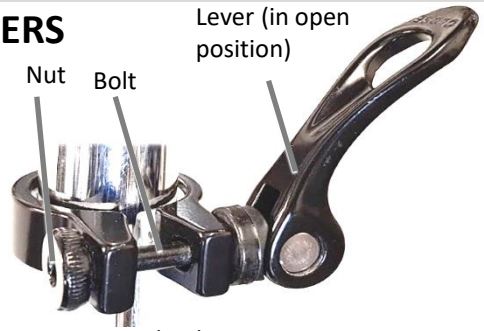


Figure Q2: Quick release parts on a seat clamp. It is the same concept as quick-release parts on the front wheel.

How to operate quick-release levers:

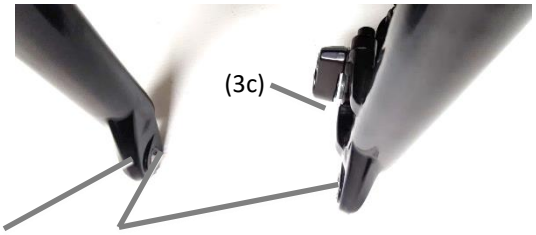
- **Step 1:** Close Lever (figure Q1). If lever closes very easily (less than 12 pounds or 53 Newton) it indicates that it is loose. If lever is very hard to close completely (more than 45 pounds or 200 Newton), don't force it and go to step two.
- **Step 2:** Open lever. **If lever was too loose, tighten nut. If lever was too hard to close, loosen nut**. Close lever again.
- **Step 3**: Repeat step 2 until lever is firmly closed and can't move. Do NOT turn lever like a wing-nut to close as this will not close it firmly.

WARNING! Quick release levers must be closed in such a position so that the lever won't be accidentally hit while riding causing it to open. If quick release lever is not closed safely, components of the bike can loosen while riding causing serious injury or death.

INSTALLATION OF FRONT WHEEL

1) Pull out **black plastic protector** from front wheel on both sides. Please note there may plastic residues inside the axle hole. You may have to push the residues out carefully when inserting the axle.

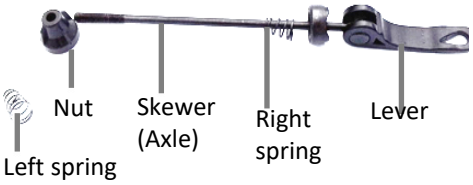
2) Remove black protective plastic bar from bottom of front fork



3a) This part of fork facing forward .

3b) Insert front wheel axle here

3c) Insert front wheel disc between two brake pads (3c). If there is not enough gap between the two brake pads, move brake pads further away from disc. Refer to disc brake section for further help.



4)Prepare the quick release skewer for installation of front wheel. Remove the left spring and the nut.

5) Insert skewer. Sometimes there may be plastic residues inside the hole which need to be pushed out with the skewer. Don't use extreme force.

6) Insert skewer until it's visible from the other side

7) Insert one spring onto skewer on this side and fasten nut onto the threads on the end of the skewer by hand. Close the quick release lever on the other side. Refer to the section "Quick Release Levers" of this manual to ensure correct use.

8) Quick release lever in closed position. The mechanism should emboss the fork ends when closed to the locked position.

WARNING! Before each ride make sure that the front wheel is installed safely using the quick release system. Lift the wheel and hit it from above with your hand to make sure that it won't move and that it is stably installed into the fork. When trying to move the wheel by hand from left to right, the wheel must not move. Refer to guide how to operate quick release levers. Failure to do so may result in serious injury or death.

To remove a wheel with a quick release lever first open the lever then loosen the nut by several turns and remove the wheel from the fork.

The handle-bar and stem are used to steer the bike. The handle-stem connects to the fork. Some stems can be adjusted in height to provide a comfortable riding position.

Assembly and adjustment of direct-connect handle-stem:

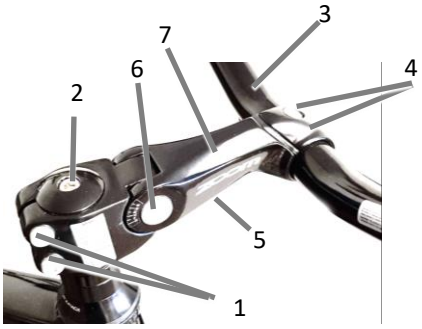


Figure DS1: Direct-connect handle-stem

- **To insert handle-bar (3) into stem (7)**, remove both **handlebar clamp bolts (4)** and insert **handle-bar (3)**. **Centre** handle-bar, adjust position until suitable and tighten **handle-bar clamp bolts (4)** to 19Nm.
- **Caution!** Do not use force when re-inserting **handlebar clamp bolts (4)** into handle-stem. If the bolts are hard to tighten, remove the bolts and re-insert straight into thread to avoid cross-threading.
- **To adjust ANGLE of HANDLEBARS**, loosen **handlebar clamp bolts (4)**, adjust **handle-bar (3)** angle and tighten **handle-bar clamp bolts (4)** to 19 Nm.
- **To adjust ANGLE of STEM** loosen **angle adjustment bolt (5)** UNDERNEATH the handle-stem. DO NOT loosen **hinge bolts (6)**. Tighten **angle adjustment bolt (5)** UNDERNEATH the handle-stem to 19 Nm.
- **WARNING!** If bolts are overtightened, under-tightened or cross-threaded components may break and cause you to fall.

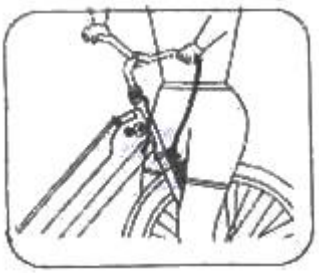
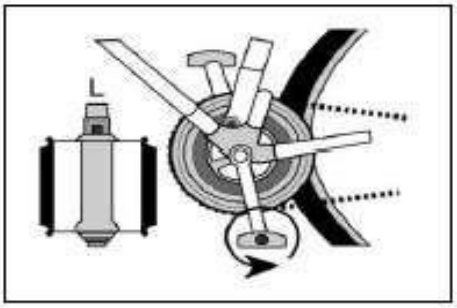


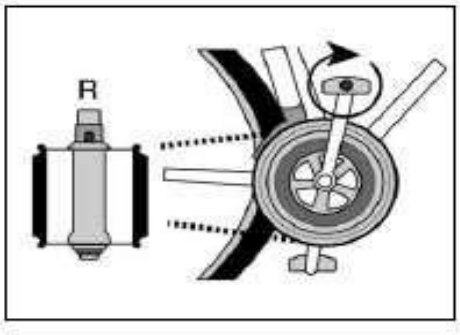
Figure DS2

Figure DS2: To align stem with wheel, walk to front of bike, put wheel between your legs and turn stem. To adjust the alignment of the stem with the front wheel, loosen **steerer clamp bolts (Figure DS1, 1)** by two turns and tighten after alignment to 13 Nm. Make sure the **centre bolt (Figure DS1, 2)** is tight (13 Nm).
Move handle-bar left and right while holding wheel between your legs. The alignment shouldn't come loose easily. Make sure handle-stem is installed safely and push handle-bar down with force to make sure it won't come loose while riding. If needed tighten handle-bar clamp bolts **(Figure DS1, 4)** and **steerer clamp bolts (Figure DS1, 1)** and **angle adjustment bolt (Figure DS1, 5) .**

WARNING: If handle-stem and handle-bar are not installed correctly they may become loose during riding and cause you to fall. Check safe installation before every ride!

Installation of Pedals





- **Pedals are marked „L" (LEFT) and „R" (RIGHT) on axle end. You need to look carefully to locate the engraving.** Lubricate the thread of the pedal with lubricant (available at bike shops)
- Carefully position the pedal at a 90 degree angle (straight) to the crank arm. Don't insert washers between the pedal and pedal-arm. Use your hands. Don't use a tool. Don't use force!
- **The left pedal needs to be turned anti-clockwise into the crank arm on the LEFT side of the bike**
- **The right pedal needs to be turned clock-wise into the crank arm on the RIGHT side of the bike.**
- The pedal will screw in without resistance if it's placed correctly into the thread. If you feel resistance, don't continue! Un-screw the pedal and start again.
- Use your hands to screw the pedal all the way in, so that the thread is not visible anymore.
- **Once the pedal is all the way in, use a spanner and tighten the pedal up very firmly (40 Nm)** so that it won't come off while riding. Remember : clock-wise for the right pedal and anti-clockwise for the left pedal. It is necessary to check that the pedals are tight before every ride as they may loosen up over time.

WARNING! Incorrect installation and failure to check pedal installation before each ride may cause the thread on the pedal arm and pedal to be damaged, resulting in the pedal to fall off while riding. DO NOT insert washers between the pedal thread and the crank arm as it may prevent pedal from gripping correctly and eventually causing damage to threads.

Seat (saddle) and seat post

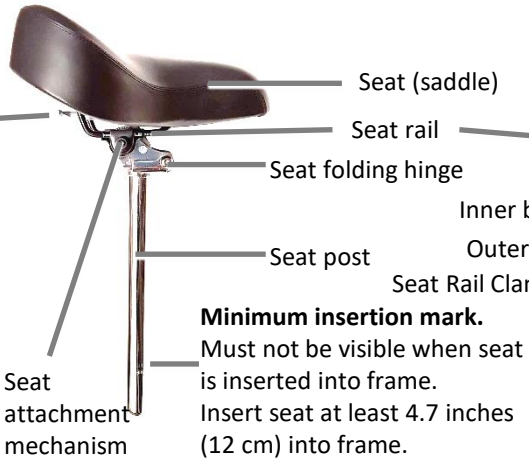
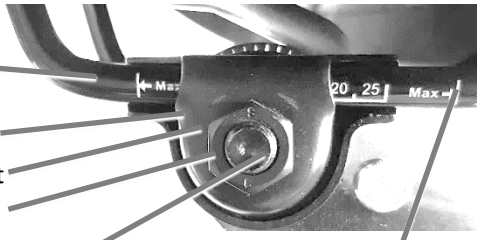


Figure S1: Magnification of seat attachment mechanism



The model SuperT does NOT have a folding seat post. The seat needs to be twisted to remove the battery.

Caution! When folding seat and returning seat in to riding position, stay clear of seat folding hinge area as it is a pinching hazard and may cause injury, e.g. to your hand.

Inspection: Before each ride make sure all nuts, bolts and quick releases are safely installed. Use both hands and move seat left and right or up and down. If seat moves easily, tighten bolts. Make sure the seat folding hinge is closed. Inspect seat-post every 30 days to make sure it is straight. If it is bent, contact customer service.

Recommended seat position: To check for the correct seat height, sit on the seat, put one heel on the pedal in the down position while the crank arm is parallel to the seat tube. Adjust seat height until your leg is straight. If the knee is bent, raise the seat. If your hips rock for the heel to reach the pedal, lower the seat. For people of short stature the seat should be adjusted to a height so that the feet of a seated rider can reach the ground. **WARNING!** Adjust height, position on rail and tilt of seat to a comfortable position. Do not continue to ride if you feel pain, discomfort or numbness while riding. **WARNING!** If seat post is too high and not inserted at least 12cm (4.7 inch) into frame, the frame or post may break and cause injury. The minimum insertion mark must not be visible when seat is inserted into frame. The minimum insertion mark is printed or engraved on the seat post. You may have to look closely to identify it. **WARNING!** If nuts, bolts and quick-releases are not tightened safely the seat position may change unexpectedly during ride and cause injury. **Caution!** When you open the quick-release the seat may drop down and present a squeezing hazard. Always hold the seat with one hand to prevent it from dropping and operate quick-release lever with other hand. **WARNING!** Cover any coil springs under the saddle if a child-seat is fitted to prevent trapping of fingers;

Headset

The headset is the system of bearings which sits around the handlebar and fork it needs to be checked every 30 days by applying the front brake while moving the bicycle back and forth. To check if steering is smooth, lift front wheel off the ground and steer left and right. If there is excessive movement or if steering is not smooth, the headset needs to be adjusted by a bicycle professional.

Chain

Check chain tension every month. If it is too lose use derailleur to adjust tension. Check all links of the chain. If there are any stiff links, apply lubricant and try to move them carefully by hand or have them replaced at a bike shop.

To adjust seat tilt and position on rail loosen the seat rail clamp nut. Stay between rail maximum marks. Tighten to 22 Nm. Right hand side of seat shown. Analog setup on Left hand side of seat. **WARNING!** Stay within maximum marks or the rail may brake.

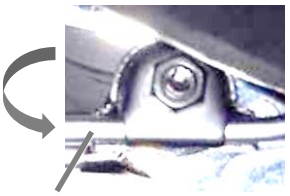


Figure S3: To lower the minimum seat height by approx. 2 cm, loosen seat rail clamp nut, remove inner and outer bracket and bolt (Figure S1).
Turn inner and outer brackets on both sides of the seat upside down (180 degrees) and re-assemble . Make sure seat is installed safely before riding.

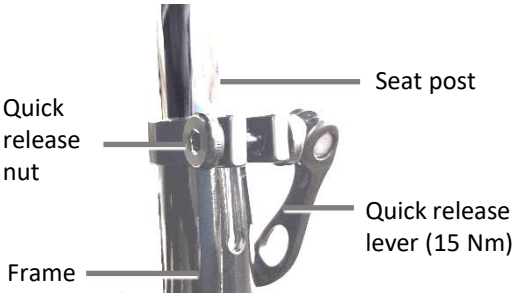


Figure S2: Seat post is attached to frame with quick-release mechanism.

For bicycles with rear suspension, point the nose of the saddle down slightly. When you sit on the seat, the rear shock will compress and the seat will be level.

Bike stand (Kick-stand)

Make sure the stand is fully retracted before riding the bike. The stand is designed to only carry the weight of the bike. When you are on the bike, do not lean against the stand. Do not use the stand if there is any luggage on the bike. Do not use the stand if there is a person on the bike. Make sure that the stand does not hit obstacles while riding. If your stand hits obstacles while riding, adjust riding style or remove stand. Every 30 days check if the stand is attached safely to the bike. Tighten stand attachment if needed. **WARNING!** Always hold onto bike when loading bike to prevent falling. Do not assume that the stand alone supports the bike.

DISC BRAKES

General information about brakes: The brake system allows you to decrease speed or your bicycle. This operation is very important to your safety. Only use original brake pads. **WARNING!** Brakes needs to be adjusted correctly to avoid injury!

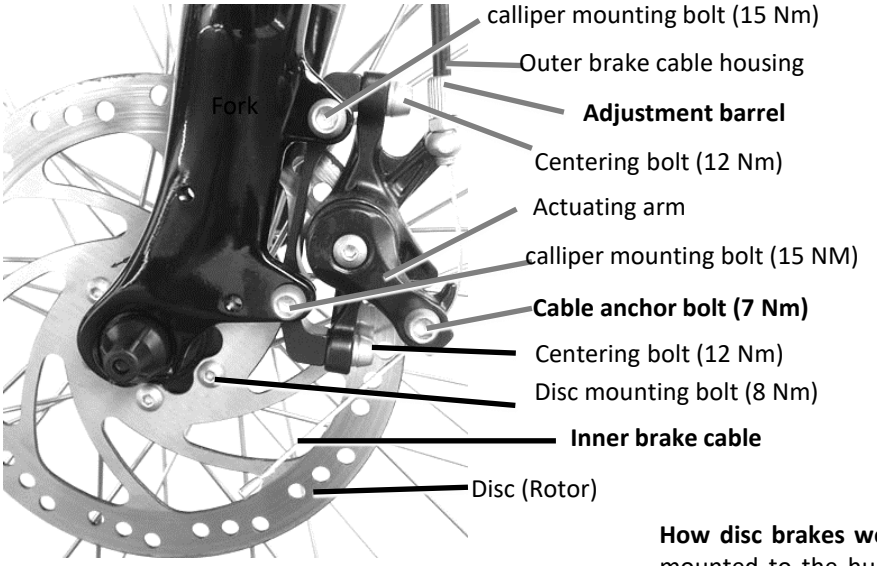


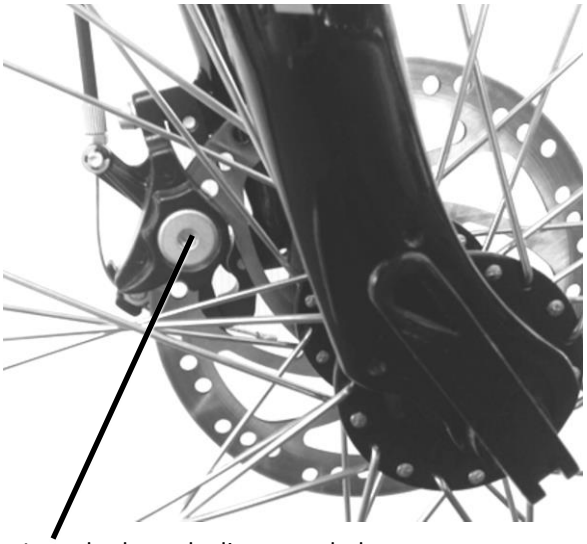
Figure DB1: Disc Brake Assembly: View from left side

Disc Brakes: Braking in period:

- Please note that brand new disc brakes need "braking in". This means it may take a few weeks until they perform optimally. Ride your bike very carefully and allow plenty of time for braking.
- Please find below a guide on how to adjust the disc-brakes. You may have to re-adjust them several times during the brake-in period. Brakes need to be re-adjusted regularly, also after the brake-in period. This is normal as brake pads will wear down. Before each ride, make sure that both front and rear brakes work well and follow the guide below to maintain the brakes.

How disc brakes work: Disc brake pads apply pressure to a disc mounted to the hub of the wheel (Figure DB1). The pressure is controlled with a hand lever on your handle-bar that is connected to the brake by a cable (inner brake cable). Do not press brake lever when wheel is not installed.

Inspection: Every 30 days inspect all bolts for correct tightness and pads for thickness. Replace brake pads at your local bike shop if disc brake pads are thinner than 1mm. Pushing the brake lever will push the outer pad against the disk and the inner pad. The friction will cause the bike to slow down. (Figure DB3).



Inner brake pad adjustment bolt.

Figure DB2: Disc Brake Assembly: View from right side

Adjusting Disc Brake Clearance:

- The pads need to be adjusted to be as close to the disc as possible without rubbing much. Slight rubbing is normal initially and will get better after the break-in phase. To check if the brakes are rubbing lift the wheel, spin it and listen for rubbing sound. Brake pads can be moved very close to the disc for best performance. This may cause slight rubbing which is normal. If there is a lot of rubbing and the wheel is slowed down without braking, increase the brake pad distance.
- If you position yourself towards the back of the brake pads and look very carefully against a bright background, you will see the brake pads as in figure DB3. If you engage the brake lever, you will see the outer brake pad moving towards the disc. Visual inspection will make it easier to position the brake pads while adjusting.

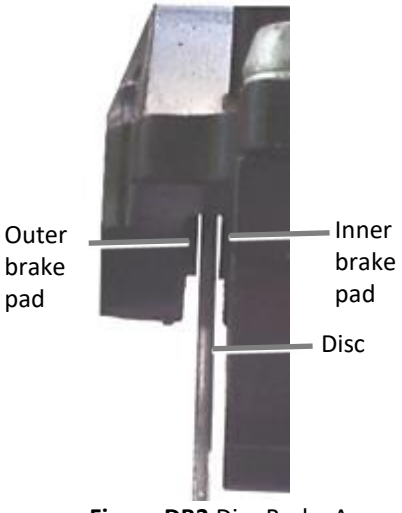


Figure DB3 Disc Brake Assembly: Magnified view from back

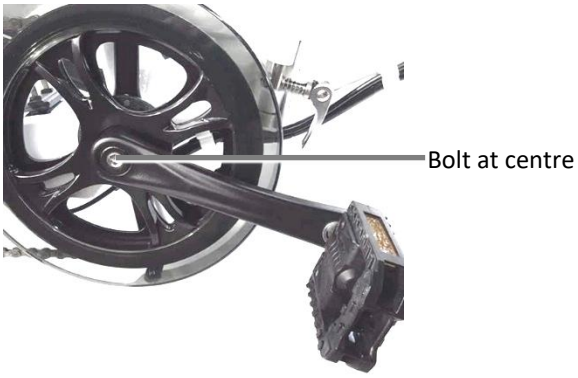
1) Before adjusting the brakes, push and release the brake lever on your handle-bar 10 times. This tightens the brake cable. It may loosen up again in time and you may have to repeat this step.

2) Adjust OUTER brake pad **(Figure DB1)**: **Turn adjustment barrel all the way clock-wise.** Loosen **cable anchor bolt.** Adjust **inner brake cable** tension until outer pad is as close as possible to disc without touching disc. Tighten Cable anchor bolt. Turn adjustment barrel to fine-tune.

3) Adjust INNER brake pad **(Figure DB2):** Turn **Inner brake pad adjustment bolt:** Turn clockwise: reduce distance of brake pad to disc. Turn anti-clockwise: increase distance of brake pad to disc.

Aligning brake with disc (Figure DB1): Loosen centering bolts, align brake pads to disc by visual inspection (Figure DB3) or slide a thin object like a business card between outer brake pad and the disc. Pull handlebar lever fully and tighten Centering bolts to 12 Nm.

Changing Brake pads: Remove wheel or remove brake calliper by loosening Calliper centering bolts. Remove pads and replace with new brake pads. Re-install wheel or tighten Calliper centering bolts in correct position.



Crank arms and bottom bracket

Check the **allen bolt at the centre** of both crank arms, left and right hand side. (right arm shown in picture). If the arms are loose, tighten the bolt with a 8mm allen key (key not supplied) to 40Nm. Don't overtighten. It is necessary to check the crank arms regularly as they may get loose over time. The bottom bracket is the bearing system which is attached to the pedal arm. Move the crank arm with one hand towards bike frame and hold bike with other hand at seat post. The arm shouldn't move if the bottom bracket is tight. There should be no noise or looseness while riding the bike. If there is excessive movement, have the bike serviced by a bike professional.

Brake Levers

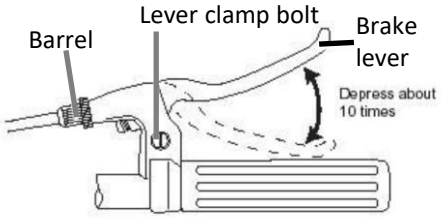


Figure BL1: Brake lever

The brake wire is attached to the lever and pressing the lever (moving the lever closer to the handlebar using your hand) will pull the wire and activate the brakes. Brake levers are attached with a lever clamp bolt and it should be tightened to 7 Nm. To change which lever controls the front brake open the brakes, detach the brake cable and install cables into opposite levers. Close brakes and re-adjust as described in brake adjustment chapter.

Reflectors

- Every 3 months check that all reflectors are clean, installed securely and not covered up by any accessories.
- Reflectors need to be installed at front (facing forward, color-less) and rear of bike (facing backwards, red) on pedals and on spokes on front and rear wheel . If the red rear reflector is installed on seat post and interferes with battery removal, do as follows: tighten it so that it is installed securely but not overly tight so that it can be twisted to the side to make space for battery removal. After battery is installed, twist red rear reflector so that it faces backwards.

To install a brake or gear cable

Locate the ball end of the cable in the brake lever or gear shifter. Memorize cable path along bike, loosen the cable-clamp and remove the old cable. Apply grease to the part of the new cable which is inside the outer brake cable housing. Thread new cable through housing. Check that the end of the cable with the ball is installed correctly in the lever/shifter. Check that the housing is positioned in the housing stop of the lever/shifter. Adjust brakes/derailleur according to the respective section in this manual. Tighten cable-clamp bolt to 7Nm. Cable should be cut at about 1 ½ inches after cable-clamp. Cover the end of the cable with a cable cap to prevent fraying.

Cables and electric wires

Check all cables monthly if there are any bends, cuts, frays or worn areas. Do not ride bike with damaged cables. Have damaged cables replaced.

Figure G1: Parts of gear shifter

Changing gears correctly

- Changing gears will allow you to pedal at a comfortable and constant rate. The external (derailleur) gears consist of different sizes of cogs on the rear wheel.
- Operating the gear shifter will move the chain to different cogs. The gear shifter is located on the right hand side handle bar. Only shift gears while pedalling forward. Decrease force on the pedals to allow smooth shifting.
- Do not shift gears when the bike is standing or going over bumps. The chain could fall off or jam.

The gear shifter has two controls (Figure G1):

- **push the "plus button" to shift into a high gear (small cogs).**
- **Push and hold the LEVER for a moment to shift into a low gear (large cogs).**
- Shifting to large rear cogs makes it easier to pedal and are recommended for example if you go uphill.
- Small rear cogs make it harder to pedal and can be used on the flat to allow to pedal comfortably when riding at higher speeds.
- Locate the gear clamp bolt which attaches gear shifter to handle-bar and tighten to 7Nm.
- The motor operates independently and is not affected by gear changes.

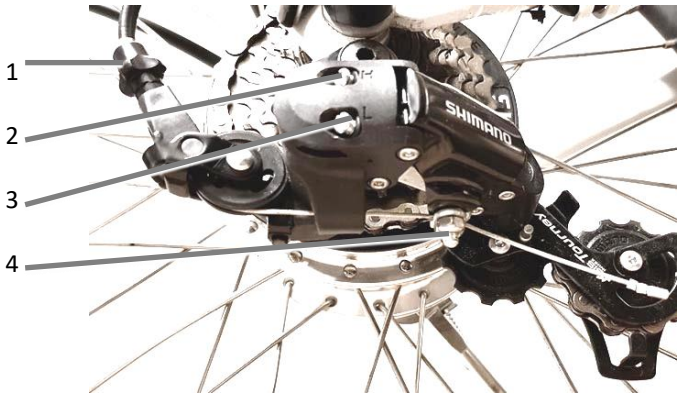


Figure D1: 1 Barrel (SIS Cable adjuster), 2 High gear adjustment screw (H), 3 Low gear adjustment screw (L), 4 Cable anchor screw (Tighten to 7Nm)

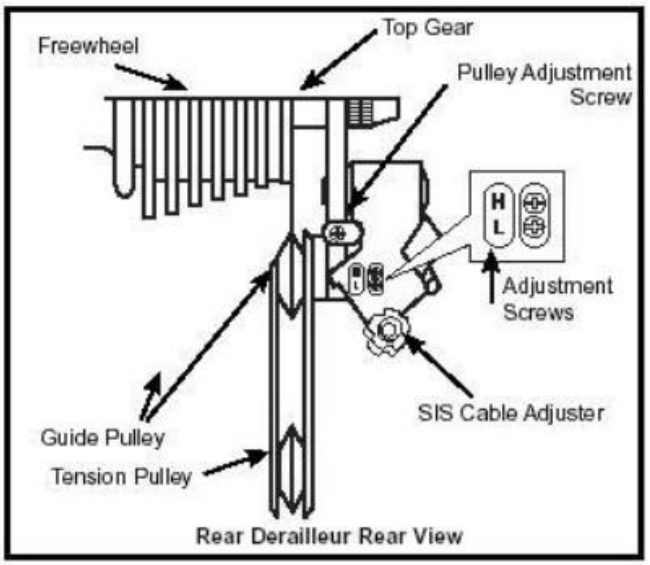


Figure D2: Rear Derailleur Rear View.

Tuning of the gears (rear derailleur)

- If the gears don't switch smoothly, they need adjustment.
- It is recommended to lubricate the chain to insure optimal performance.
- The gears can be adjusted in most cases by **turning the barrel (SIS cable adjuster) (1) by hand anti-clockwise in half turns until the gears switch smoothly**. If that doesn't help, it may be necessary to turn it clock wise.

If that doesn't help please refer to the detailed tuning instructions below and refer to third part video at http://www.youtube.com/watch?v=wQncKmddahk

- shift into small cog
- turn barrel **(SIS cable adjuster)** all the way in clockwise
- adjust high gear screw (H) so that the Tension Pulley (Figure D2) is straight under the small cog (barely outward).
- release wire by turning anchor screw (4) anti-clockwise, gently pull wire tight, tighten anchor screw clock-wise to secure mechanical wire
- adjust barrel (anti-clockwise) until the chain shifts smoothly from the smallest gear to the second-smallest gear
- Shift into centre cog. Line up pulley using barrel barely inward of centre cog
- Shift to large cog. Adjust lower limit screw (L). Align pulley so that it can't over-shift.
- If it's still clicking turn lower limit screw out (anti-clockwise). Move pulley cogs close to derailleur with b-tension screw (pulley adjustment screw). This adjusts angle of derailleur.

REAR WHEEL

The rear wheel is installed into the rear fork with two nuts, one on the left and one on the right side of the wheel axle. Tighten **LEFT and RIGHT rear wheel nuts (7 and 12)** to 30 Nm.

Removal of rear wheel

WARNING! Take care not to damage the wire and pins at end of connector (3). Do not bend wire with force where it enters rear axle (8). To replace damaged wires the whole motor needs to be replaced.

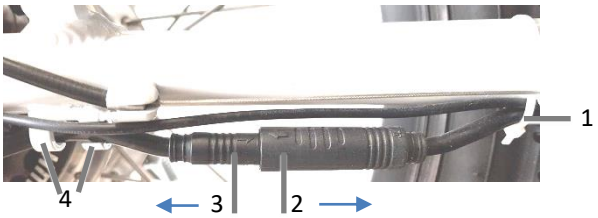


Figure RR1 (right side of bike at rear wheel):
To remove rear wheel, first disconnect **male end of motor wire (3)** from **female end of motor wire (2)** by carefully pulling in the directions of the arrows shown **.** Cut **cable ties (1)** if they are in the way. Then, carefully remove male end of motor wire (3) from the **cable attachment guides (4).**

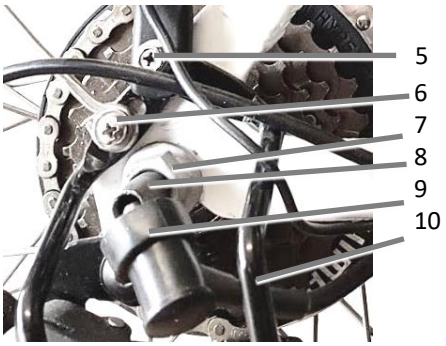


Figure RR2 (RIGHT side of bike, at centre of rear wheel):
Remove **rubber cap (9)** from **rear axle (8)** to expose **RIGHT rear wheel nut (7)**. This figure shows a rubber cap which has already been removed. Use a wrench to loosen RIGHT rear wheel nut (7). If you are having trouble to access the nut (7), remove **bolts 5 and 6** which allows to remove **derailleur guard (10).**

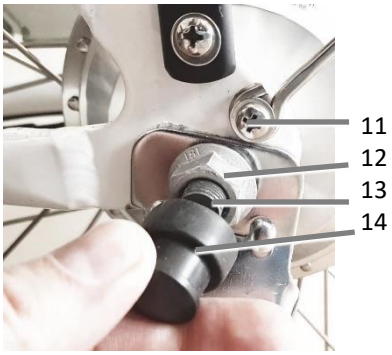


Figure RR3 (LEFT side of bike, at centre of rear wheel):
Remove **rubber cap (14)** from **rear axle (13)** to expose **LEFT rear wheel nut (12)**. This figure shows a rubber cap which has already been removed. Use a wrench to loosen **LEFT rear wheel nut (12)**. The wheel can now be removed. Remove **bolt 11** if you are having trouble to access bolt 12.

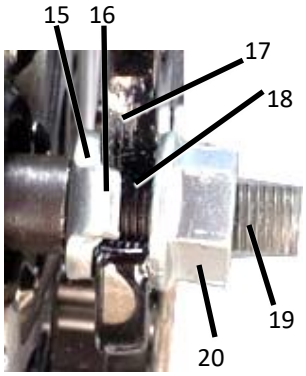


Figure RR4. Correct installation of rear axle into fork. <u>View from bottom UP.</u>
To re-install rear wheel, place chain into one of the cogs on the rear wheel, then carefully insert the rear wheel axle into the fork following the instructions below.
15 Inner washer, 16 Key (small protrusion) of inner washer, 17 Rear fork, 18 Opening of rear fork to insert rear wheel axle, 19 rear wheel axle, 20 rear wheel nut. When installing the rear axle (19) into fork **it is very important to make sure that the inner washer (15) is located at the inner side of the fork. The Key (small protrusion) of the inner washer (16) needs to protrude into the opening of the rear fork (18).** The axle needs to be fully inserted into the fork, then **the nut (20) needs to be tightened to 30 Nm**. Also tighten nut on other side of rear wheel axle

Figure RR5. To re-install rear wheel, follow steps shown in Figure RR3, RR2 and RR1 in reverse order. Make sure the wheel is installed safely. When re-connecting the male and female motor wire, first make sure that both arrows on the wires are aligned, then push both cables together <u>all the way</u> as shown in this figure.

WARNING! Ensure male and female connector are pushed together <u>all the way.</u> If the connection is loose, it may lead to heat build-up, melting connections and damage to motor, controller and bike. During first ride after re-installing rear-wheel check connection regularly for heat build-up and push together if necessary.
WARNING! Ensure rear wheel is installed safely before riding. If wheel becomes loose during riding it may cause you to fall.

Rim, Tyres and Tubes

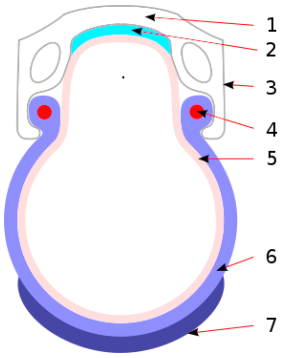


Figure T1: Cross-section of tyre and rim: 1: rim, 2: rim strip, 3: rim braking surface, 4: bead core, 5: inner tube, 6: casing, 7: tread. Image source: Wikipedia, Author Deerwood.

Wheels: When changing a tyre or tube make sure that a rim strip is installed covering all spoke holes and nipples to protect the tube from puncture. Inspect the spokes and make sure the wheel is not wobbly. Clean rims every month with a moist rag and water to allow rim brakes to perform well. Check the rim for wear every month. Replace rim if it is worn or has signs of damage. To check wheel hub bearings lift wheel off ground and spin it by hand. There should be no unusual noise. Try to move wheel left and right. The bearings shouldn't be loose. If there are issues have wheel replaced or repaired by a professional.
WARNING! A worn rim may cause the wheel to malfunction while riding causing you to fall.

The tyre size can be found on the tyre side wall. **Replacing tyres:** Standard tyres consist of an outer tyre and a separate inner tube (Figure T1). If the tube is punctured it needs to be replaced or patched. Make sure tube is same size as old tube. To remove tyres use your hands or a suitable tyre lever available at bike shops. Do not use sharp objects like a screwdriver as they may damage the rim, tyre and tube. To remove a wheel follow the instructions in this manual. Rim brakes need to be released first to allow wheel to be removed. **To remove tyre and tube,** fully deflate inner tube and move tyre bead to centre of rim. Use tyre levers to lift one bead core across the rim. Start opposite the valve as the valve will be in your way. You may have to use three levers. Take care not to damage tyre or tube. Do this around the whole wheel until one bead is completely outside the rim. Remove tube, then remove second bead from rim.
To install tyres and new tube, first carefully check the rim for any damage, cracks or sharp objects. Make sure rim strip is installed correctly. Inflate tube until it takes shape, however don't fully inflate it. Place it inside tyre, insert valve stem through opening in rim and insert one bead using your hands into the rim around the whole wheel. Take care not to damage the tube. Then, using your hands push the tube into the centre of the rim around the whole wheel. Insert second bead into rim by hand. If it is too difficult, carefully use tyre lever without pinching the tube. Push stem of valve through opening in rim and inflate tyre to half pressure. Check around wheel if tube is correctly on inside and tyre on outside. Adjust if necessary. Deflate tube again to prevent pinching. Finally inflate to pressure recommended on tyre wall using a hand bicycle pump. See conversion table psi/kPa in this manual.

The frameset (frame and fork)

- The frame is an important part of the bike to which many parts such as the rear wheel, fork and seatpost attach. It is critical to make sure that the frame is in good condition.
- If suspension is installed into the frame refer to the respective section of this manual for suspension maintenance.
- Do not expose frame to heat over 158° Fahrenheit (70° Celcius).
- Only clean with damp, soft rag, mild detergent and water. Only use small amounts of water to make rag damp.
- Avoid water intrusion into electrical components. Do not spray any components with water or immerse into water.
- Do not use corrosive or harsh chemicals. After cleaning wipe damp parts with dry, clean rag.
- Only use original seatposts with correct diameter, length and correct minimum insertion marks. Installation of seatpost with incorrect diameters, excessive length or too short minimum insertion marks can damage the frame.
- When installing parts into threads on the frame make sure the correct parts are used and that the threads on the frame are not damaged, e.g. by over- or under-tightening. Clean all threads before installation, and insert components at correct angle carefully by hand. If there is too much resistance installing a part it may indicate cross-threading. Un-screw part, re-align and then re-insert. Only use tools to tighten part after it has been fully inserted into thread by hand.
- Do not try to adjust frame by bending. Damaged frames and forks should be reported and need to be replaced or repaired.

Inspection: Check of the frame and fork before each ride for scratches, deformation, chips or any other signs of damage. Inspect fork in detail every year during headset service. This should be done by a bike professional.

Suspension

Check the bolts on all suspension parts and pivots every 30 days. The suspension should not be able to be fully compressed as that may cause the movement to stop suddenly and may cause the rider to fall. If your fork has knobs to adjust the stiffness, turn the knob in the direction of the arrows shown towards the "+" symbol for stiffness, towards "-" for softness.

Accessories

Check your accessories, for example mudguards, lights, kickstand, rack, chainguard every 30 days and adjust attachment and alignment if necessary. The rear rack is not centered however this does not affect the function of the bike.

Bell

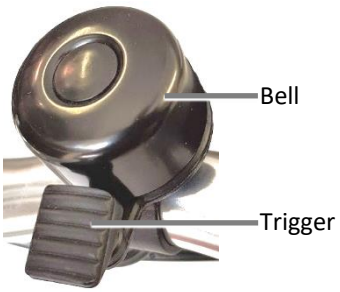


Figure BE1: Bell.
The bell is attached to the handle bar with a clamp and a bolt. Push the trigger down by tapping it with your finger briefly in the direction of the arrow and release it to ring the bell.
Use the bell to make other people aware of you in traffic, e.g. before passing a pedestrian. Make sure the bell is functional and securely installed.

BATTERY

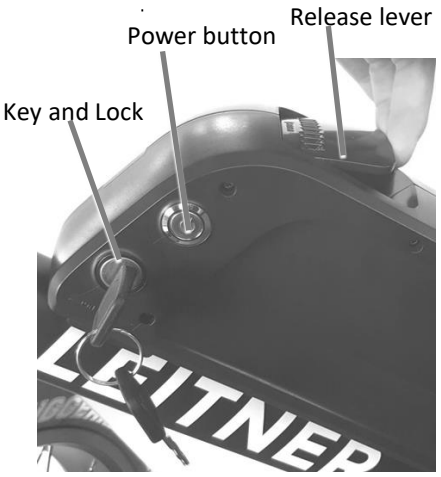


Figure B1.

- **Locking the battery: Turn the key clockwise to lock the battery to the frame.** Make sure that the battery is securely locked to the frame before riding the bike.
- **To remove the battery, turn the key anti-clockwise.** Then, pull the release lever on top of the battery with one hand and slide the battery towards the front of the bike. Hold on to the battery with both hands carefully in order not to drop the battery. The keys are only needed to remove the battery. You can ride the bike without having the keys inserted into the lock.
- **Push the power button to switch the battery on.**

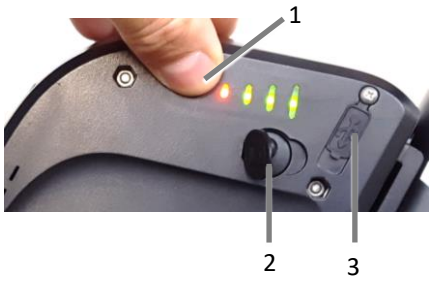


Figure B2. Checking the battery charge:

- Push the **power button (Figure B1**) to switch the battery ON, then push the **black button (1).** 4 lights (3 green, 1 red) mean the battery is full. As the battery discharges, fewer lights will be illuminated.
- **2) Battery input socket** for battery charger cable
- **3) USB outlet**: remove the rubber cover with the USB symbol to expose the USB outlet. It can be used to connect devices, e.g. to charge your phone via USB cable (cable not supplied) while riding. Please note that Leitner does not assume liability in the unlikely case a connected device is damaged.

Charging the battery

- The battery can be charged on or off the bike.
- Charging temperature between 10 ℃ (50 °F) and 30℃ (86 °F).
- During charging the temperature may increase to about 50 ℃ (122 °F).
- Stop charging battery if it gets unusually hot and contact customer service. Charge undercover in dry area.
- Only use original supplied charger to avoid overheating, bursting or ignition.
- The chargers are smart chargers, which means they will automatically stop charging when the battery is full.
- The battery takes about 5-7 hours to charge if It's completely discharged.
- At first charge, it can take longer since battery pack is balancing.
- If battery does not fully charge within 8 hours, disconnect charger and contact customer service.
- If it's not fully discharged it will take less time to charge.
- It is recommended to switch the battery OFF while charging.
- Disconnect charger after charging. Unplug charger from electricity grid if not in use.

Lights on Charger:

- If there are TWO LIGHTS on the charger. BOTH LIGHTS RED: Charging.

ONE LIGHT GREEN and ONE LIGHT RED: Fully charged or not connected.

- If there is ONE LIGHT on the charger: RED: Charging. GREEN: Fully charged.

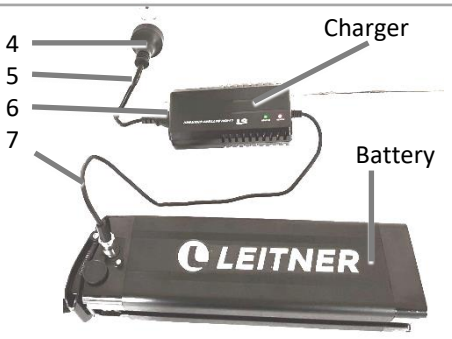
WARNING! The charger can get very hot while charging. Always keep it away from material which can catch fire. Do not cover charger. If there are any signs of smell, smoke or melted plastic or unusual noises, immediately disconnect charger from power socket and do not use charger again. Always attend charger during charging. Keep away from water, moisture, children and pets. Follow instructions contained on the label of the charger.

Figure B3: Charging the battery (Illustration, different battery shape shown)
WARNING! Do not open charger. Voltage is detected automatically. Do not yank cables. Pull on plugs, not on cables. Do not touch any metal parts to avoid electric shock. Always protect your eyes from potential sparking.

Standard Procedure:

A) Connect the **power cord (5)** firmly to the **power socket on the charger (6).**
B) Gently remove the small rubber cap to expose the **battery input socket (Figure B2, 2)** on the battery**.**
C) Connect the **charger output cable (7)** to the **battery input socket (Figure B2, 2)** on the battery.
D) Connect the **power chord (5)** to the **wall power point (AC, 110/220 Volt, 50/60Hz) (4).**

Alternative Procedure if there is a visible SPARK between the **battery input socket (Figure B2, 2)** and the **charger output cable (7):**
Follow the Standard Procedure steps in this order: A), B), D), C)



Battery Care & Storage

- **Charge battery before first ride and after every ride.**
- It is not necessary to fully discharge battery before charging. Lithium-ion batteries do not have any memory effect, so you can charge them at any time.
- Lithium-ion batteries must not be stored if fully discharged. If your battery is fully discharged, charge it immediately. Storing the battery if fully discharged for more than 1 day will damage the battery.
- **Store the batteries fully charged and then charge it at least once a month.** It is not necessary to leave the charger connected to the battery if stored for long periods. Just top the charge up every month. If batteries are not charged at least every month, the battery may be damaged and such damage is not covered under warranty. Disconnect charger after battery is fully charged.
- Store battery between 10 ℃ (50 °F) and 20℃ (68 °F) in a clean, dry place away from sunlight. Do not store with hazardous, corrosive or flammable substances. Do not expose batteries to heat or fire. Store batteries in fire-proof environment.
- Operating temperature range during discharge is 5℃ (41 °F) to 50℃ (122 °F). Do not leave the battery inside car, in direct sunlight or any other hot places. If battery is charged at temperatures lower than 5 ℃ (41 °F), the range of battery will be reduced.
- Do not disassemble, deform or modify battery.
- Do not connect the + and – terminals of battery with metallic objects. Do not store with metallic objects such as hairpins or necklaces as short circuits and burns may occur.
- Do not place into water, salt water and moisture.
- Do not throw battery or subject it to strong shocks.
- Inspect battery and terminals carefully every month for leakage, discoloration, cracks, damage, signs of melting or corrosion.
- If fluid leaks from the battery and gets into contact with your eyes or skin, wash affected area with clean water without rubbing your eyes or skin and visit a doctor immediately to reduce damage to eyes or skin.
- Never handle battery or charger if parts are wet. Dry it thoroughly before usage to avoid electric shock.
- Store out of reach of pets and children.
- Always handle carefully with 2 hands.
- If errors occur, stop using battery, consult manual or contact customer service.
- Discard batteries according to your local battery disposal guidelines.

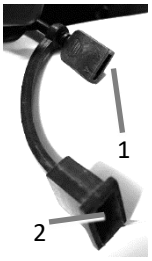
WARNING! If a battery is stored for longer than 1 month without charging it, it may get damaged.

WARNING! Lithium-ion batteries may leak, ignite and burst if not handled properly!

Battery range

- Battery range is how far you can travel on one full battery charge.
- It depends on a lot of factors including weight of rider, weight of luggage carried on bike, the amount of pedalling, the level of pedal assistance selected on the display, the terrain (hills or flat), tyre pressure, brake adjustment and wheel bearings. It is impossible to provide an exact range for a battery.
- Riding the bike using the throttle only will consume battery faster and the maximum distance per charge will be reduced.
- The more the rider pedals, the longer the distance from one battery charge.
- Battery are a consumable item and range deteriorates naturally over time and with usage. After some time batteries will naturally die and need replacement.
- **A new, fully charged 11 Ah 48V battery on a bike with a 500W motor has a typical range between 20 to 50 km. This range estimate is not guaranteed and more or less distance can be travelled, depending on the conditions.**
- It is recommended to ride conservatively in the beginning. Familiarize your self with the range to avoiding running out of battery. Operating the bike without motor assistance requires pedalling with more effort pedalling and since electric bikes are heavier as compared to non-electric bicycles.
- To extend range avoid hills steeper than 15 percent in grade, pedal to assist the motor when going uphill, avoid sudden stops and starts and accelerate slowly.

Controller



- **Figure CC1:** Towards the bottom and centre of the bike, the **controller programming cable (1)** will exit the controller. Ensure the **dust cap (2)** covers the end of the **controller programming cable (1)** as shown in Figure CC2 to avoid damage to the controller**.** Do not connect this cable to anything. It is only used during manufacturing. This cable may have different colors, e.g. black or white.
- **Figure CC2:** The **dust cap (2)** covers the end of the **controller programming cable (1).**

LIMITED WARRANTY

and Terms and Conditions Summary
P L E A S E KEEP Y O U R PROOF OF PURCHASE

The following parts are warranted to be free from manufacturer's faults for a period of **1 year** (12 months) starting at the date of purchase: battery, motor, fork, headset, seat post, saddle, rims, kickstand, reflectors, wheel hub, controller, brakes, lights, bottom bracket, crank set, pedals, cassette, derailleur, shifter, LCD display, handle-stem, handlebar, charger, throttle. **2 years for the frame.** This limited warranty does not cover normal wear and tear items including but not limited to tires, inner tubes, cables, or any damage, failure, or loss caused by improper assembly, set up, storage, or maintenance. This warranty covers normal use only. It does not cover damage to the the product due to misuse, neglect, accident or improper service. Commercial use, including but not limited to couriers, bike rentals, flyer deliver and food delivery will void the warranty. Any modification of the product without authorization of Leitner will void the warranty. Warranty is for the original purchaser only. Warranty is not transferrable to second hand users. It is the customers' responsibility to service and maintain the products regularly and to make sure that the product is safe to use before each ride. Leitner does not accept claims for repairs which were performed without our written approval. Leitner does not assume any liability to the extent permitted by the law. For full terms and conditions please visit Leitner.com.au. Leitner reserves the right to change warranty terms without notice.

Recommended Torque values in Newton Meter (Nm) unit

Unit conversion: 1Nm = 8.85 Inch-Pounds

- Bolts attaching handle-bar to handle-stem: 18-20 Nm, Figure FS3
- Bolts attaching brake lever, throttle and gear shifter to handle-bar: 7 Nm
- Steerer-clamp bolts on handle-stem: 18-20 Nm, Figure FS1 and FS4
- Other bolts on handle-stem: 10 Nm
- Quick release lever attaching seat post to frame: 15 Nm. Bushing bolt Figure FR1: 10 Nm
- Brakes: calliper mounting bolts: 15 Nm, Centering bolts: 12 Nm, Cable anchor bolt: 7 Nm, Disc mounting bolt 8 Nm, Figure DB1
- Front wheel quick release: Measurement unit in pounds, not Newton Meter: between 12 pounds and 45 pounds
- Rim brake pad clamp bolt: 9 Nm, Figure RB1.
- Rim cable clamp bolt: 7 Nm, Figure RB2.
- Rear wheel nuts: 30-35 Nm, Figure RR4.
- Pedals to crank arm: 40 Nm
- Crank arm to bottom bracket: 40 Nm
- Bolts on rear rack: 16 Nm
- Seat Rail clamp nut: 22 Nm, Figure S1.
- Cable anchor screw at rear derailleur: 7 Nm, Figure D1

Lubrication

Please find short instructions for lubrication below. Suitable grease and oil should be purchased from local bike shops. For further information please contact us. Wipe off any excess oil or grease. Make sure no lubricant is present on parts where it doesn't belong.

- **Chain: Every month.** Use a rag underneath chain to avoid oil spilling onto other parts and use the rag to wipe off excess chain oil after lubrication.
- **Quill type stem: Every year.** Remove stem then remove grease from wedge. Apply thin layer of grease to wedge and the part of stem which is inside frame. Re-install stem
- **Seatpost: Every year** remove seatpost, then remove grease from seatpost. Apply thin layer of grease to the part of seatpost which is inside frame. Re-install seatpost
- **Pedal threads on pedal axle where they insert into crank arms: Every year**. Refer to pedal installation section of this manual to remove pedals, then remove grease from pedal axle. Apply thin layer of grease to the threads. Re-install pedals according to manual.
- **Derailleur: Every month.** Apply grease to all pivot points including the pulley.
- **Brake lever pivots and brake arm fixing pivots: every 3 months.**
- **Quick release lever: Every year.** Apply light oil to lever where it turns inside the body.
- **Suspension fork: Every month** remove old visible grease and apply a thin layer of grease to visible part of fork where it moves up and down due to suspension.
- **Brake cable and gear cable: Lubricate when installing it**

The following parts should be lubricated by a local bicycle professional

- Bottom bracket bearings: Every year
- Direct connect stem: Every year
- Headset bearings: Every year
- Wheel bearings: Every year
- Oil inside Oil suspension fork: Every year.

DO NOT LUBRICATE: Rear suspension shock or pivots, brake pads, wheel rims, brake discs, pedal surface.

Conversion Table psi/kPa

psi	kPa	psi	kPa	psi	kPa
1	6.895	**30**	207	**60**	414
5	34	**35**	241	**65**	448
10	69	**40**	276	**70**	483
15	103	**45**	310	**75**	517
20	138	**50**	345	**80**	552
25	172	**55**	379		

Parts of an electric bike

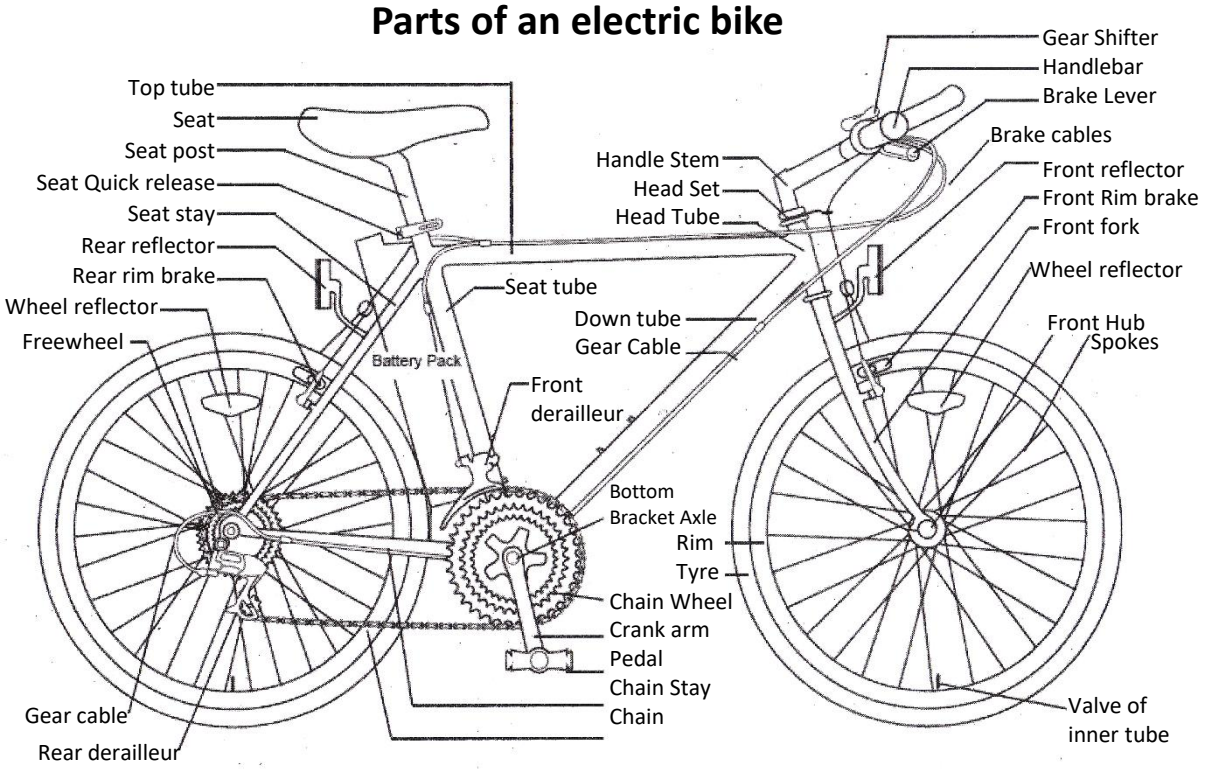


Figure B1: Parts of an electric bike. Some parts may not be on your model.

Basic trouble-shooting guide

No	Faults	Possible Causes	Common Solutions
1	Bike does not work although there is power to Display	1)Brakes are engaged 2)Loose motor wire connector 3)Loose wire 4)Broken wire 5)Throttle or pedal assist sensor faulty	1)Disengage brakes 2) Check motor wire connector 3) Check all connectors 4) Inspect all wires 5) Replace throttle or pedal assist sensor
2	Bike does not work (no power to display)	1)Battery not installed correctly 2)Battery empty 3)Battery not switched on 4)LCD Display not switched on 5)Loose connections 6)Fuse blown	1) Install Battery correctly 2) Charge battery 3) Switch battery on 4) Switch display on 5) Check all wire connections 6) Replace fuse
3	Bike has reduced speed and/or range	1) Low batteries 2)Faulty batteries 3)Low tire pressure 4) Brakes dragging against rim or disc	1)Charge batteries for recommended time 2) Replace batteries 3)Inflate tires to recommended pressure 4) Adjust brakes and/or rim
4	Bicycle has intermittent power	1)Loose connectors 2) Loose fuse 3) Damaged wire	1) Check all connectors 2) Check fuse connector 3) Inspect all wires
5	Charger light does not operate	1)Power outlet faulty 2)Charger is not plugged to wall or battery properly 3)Charger light or charger is faulty	1) Try another outlet 2) Check all plugs 3) Replace charger
6	Charger completes charging in an unusually short amount of time	1) Faulty charger 2) Faulty battery	1) Replace charger 2) Replace battery
7	Strange noise from wheel and motor	1)High-pitched “ticking” noise due to loose spokes which disappears when wheel is off ground and spun by hand 2)Motor internal gears damaged 3)Motor damaged 4)Loose bolts	1) Adjust spoke tension 2) Replace internal motor gears 3) Replace motor 4) Tighten all bolts