

# MAGNUM

## METRO / METRO +

### USER GUIDE



Please read before use!



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

## Foreword

These operating instructions must be carefully read in order to quickly familiarize yourself with your bicycle. The knowledgeable treatment, regular maintenance, and care of the bicycle is essential for its preservation and safety.

For reasons of safety, please also pay attention to the information on chargers, accessories and other spare parts.

**Note to Magnum dealers:** Please provide the operating instructions for the new owner when selling your bicycle.

The factory is constantly working on the further development of all models. Please understand that changes to the scope of delivery in form, equipment and technology are possible at times.

All texts, illustrations and instructions in this manual are based on information at the time of printing. The information contained in this manual is valid at the time of issue.

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## Symbols used

Important notes for your safety are specially marked. Be sure to follow these instructions to avoid injury and damage to the unit:

**“WARNING”** Warns of dangers to your health and indicates possible risk of injury.

**“DANGER”** Indicates a potential hazard to the unit or others.

**“NOTE”** Highlights tips and information for the user.

## Table of Contents

### Service

Function and operation of handlebar components	4
Mounting instructions for handlebars	5
Pedal installation	7
Seating position	8
Adjusting the seat height	9
Adjusting the saddle	9
Suspension fork	9
Safety instructions for charger	10
Charger functions	11
Safety precautions for battery	11
Handling of the battery and charger	13
Charging the battery	14
Tire pressure	15
Support level	16
Range	16
Brakes	17
Leaving the bike	17
Display instructions	19

### Riding

Safety instructions	22
Removing the front wheel	23
Transport	23
Carrying loads	23
Antitheft	23

### Care

Device care	24
Winter operation and corrosion protection	25
Disposal	25
Tire care	26
Technical changes, accessories, spare parts	26

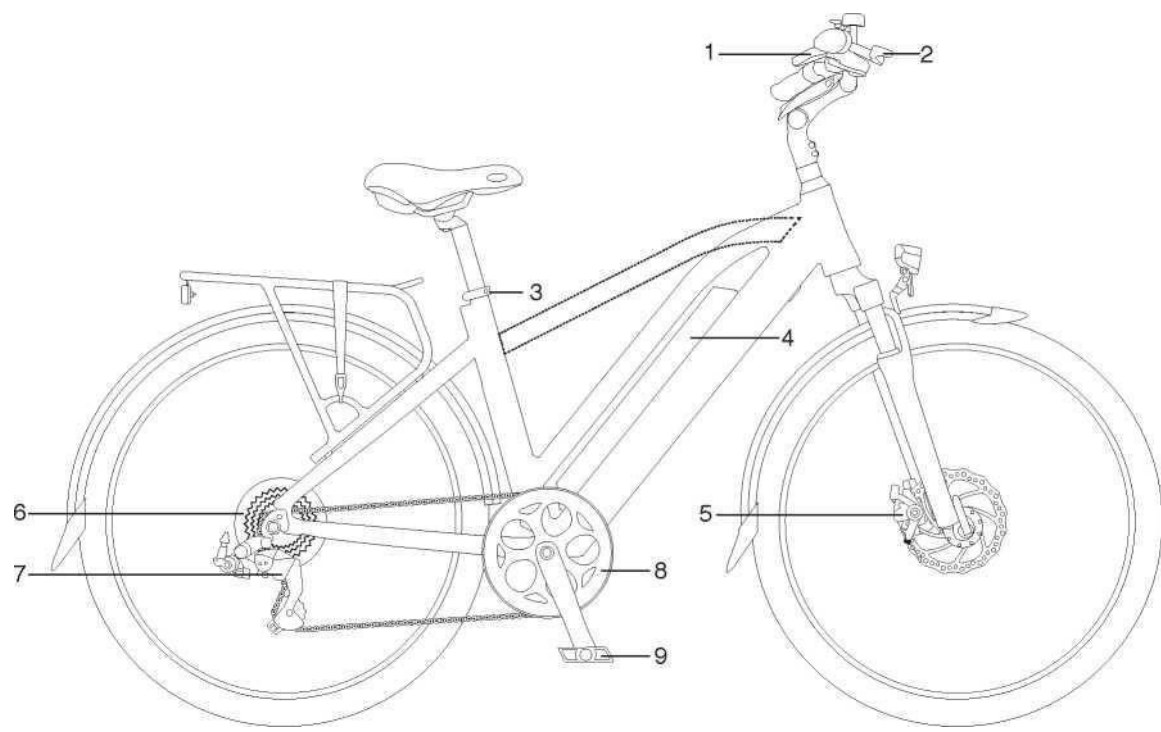
### Maintenance

Maintenance and care	27
Cranks	28
Pedals	28
Headset bearings	28
Spokes	29

Technical specifications	30
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### Warranty service

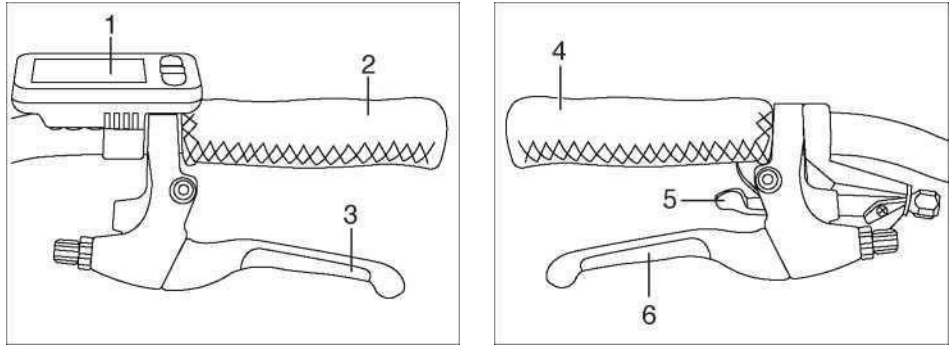
Wear & Tear parts list	31
Warranty terms	32



RIGHT SIDE VIEW

1. Display	6. Motor
2. Brakes	7. Derailleur
3. Seatpost	8. Crankset
4. Battery	9. Pedals
5. Disk brake	

Function and operation of handlebar components

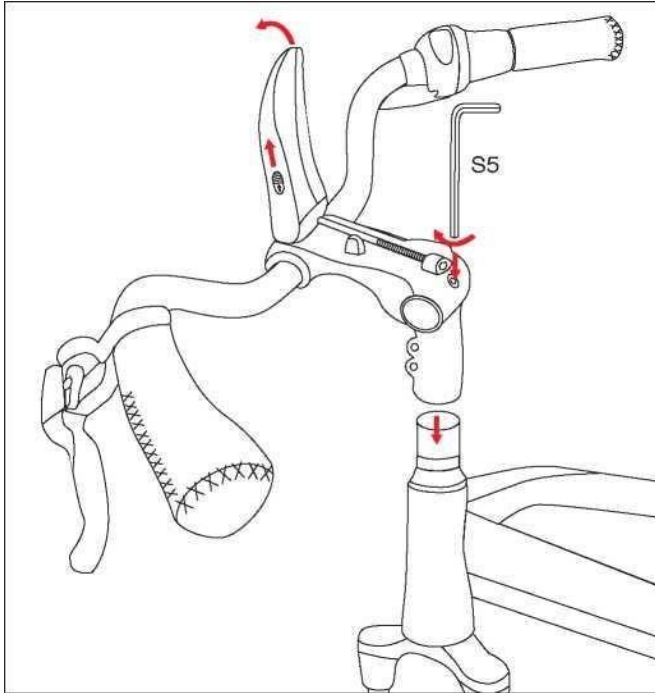


1. Display	4. Right grip
2. Left grip	5. Right shift lever
3. Left brake lever	6. Right brake lever

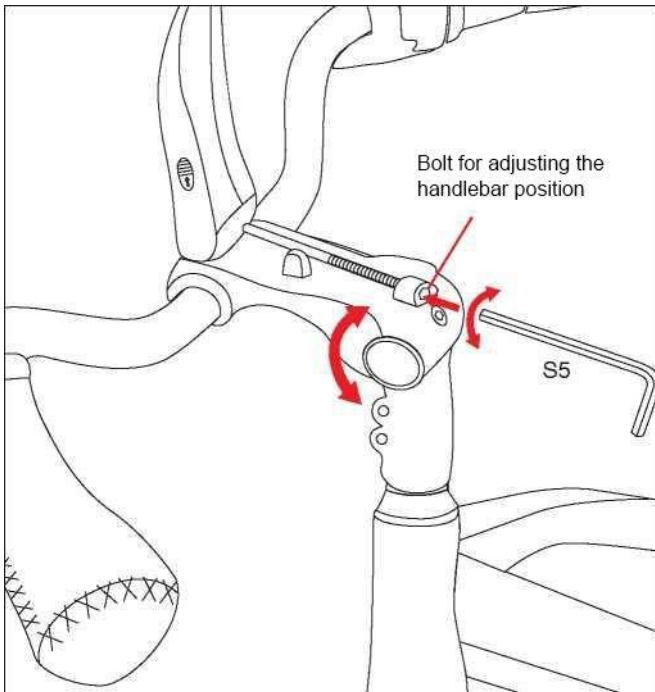
USE

## Mounting instructions for handlebars

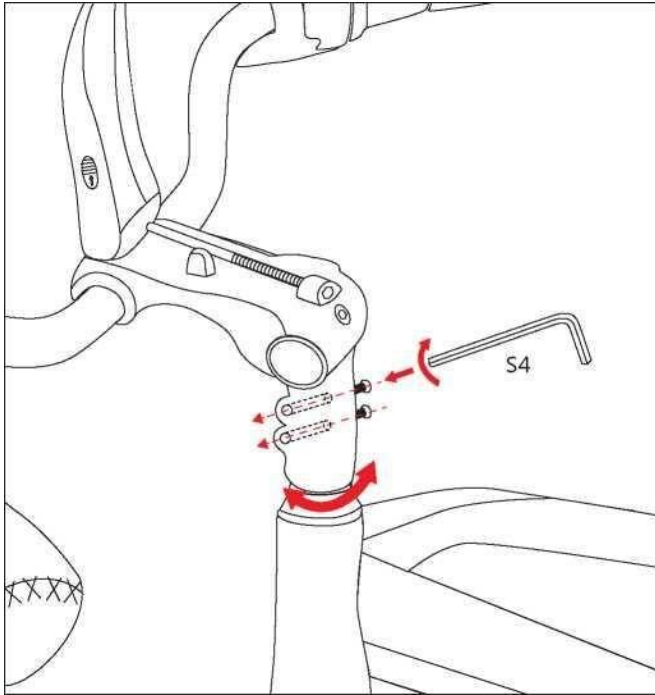
Adjustable handlebar



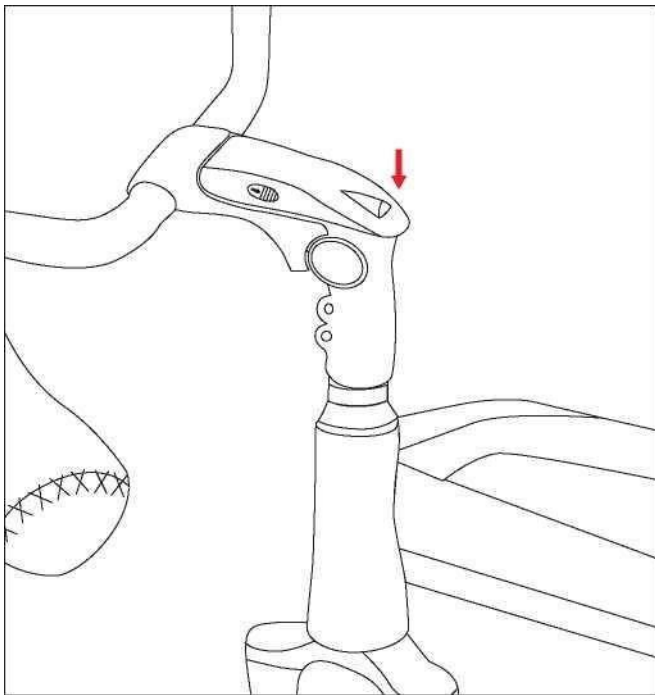
1. Install the handlebars as shown and tighten the upper screw.



3. Move the handlebar up or down to the desired position. If it is too loose or too tight, please adjust the screw on the handlebars.



2. Adjust the handlebar to the desired position and tighten the screws on the right side.



4. Close the cover plate to complete the setting.

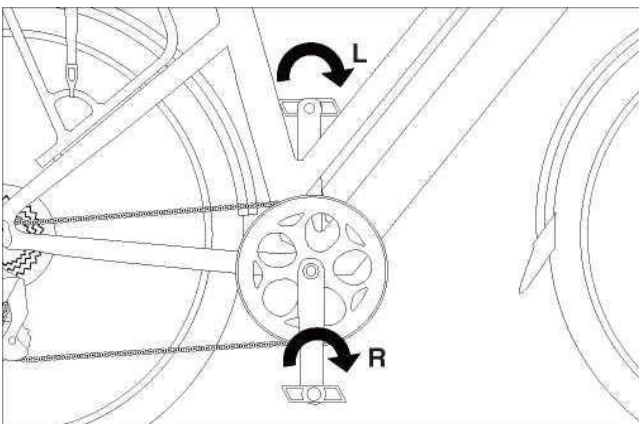
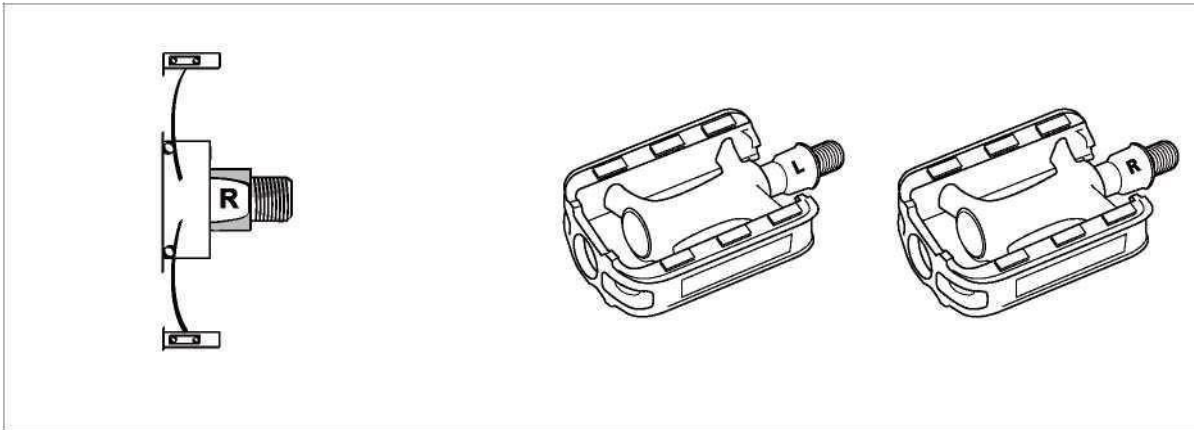
USE

## Pedal mounting

### WARNING

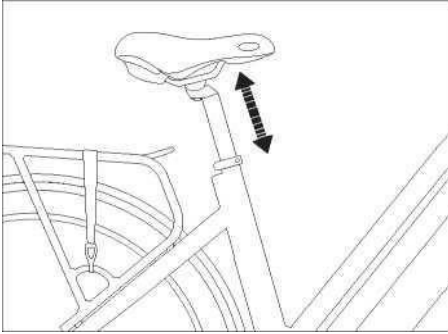
**Do not tighten the pedals by hand, use a suitable wrench.**

- Identify your pedal: Check the letter on the pedal: "L" or "R".
- The pedal marked "R" is for the right. Turn the wrench handle clockwise.
- The pedal marked "L" is for the left. To tighten the pedal, turn it counterclockwise.

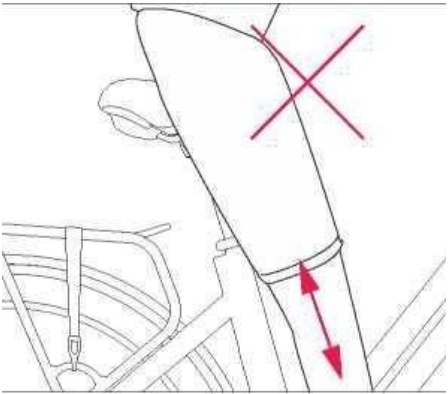


USE

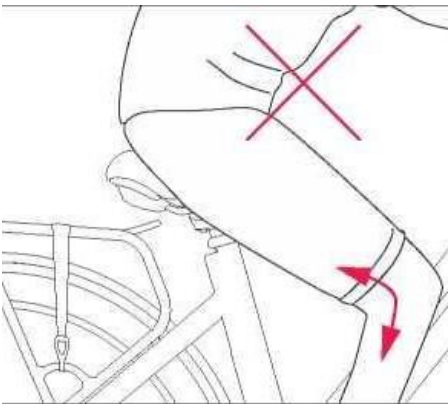
## Seating Position



To ensure comfortable, fatigue-free and safe riding, the saddle and handlebar height should be adjusted to the rider's body size. The saddle height is correct when the foot is resting on the pedal at the lowest position while the leg is not fully extended. The tips of the toes should be able to touch the ground. Raising or lowering the seat to the height of the rider's hip, while they are standing on the ground next to the bike, is a good starting point.

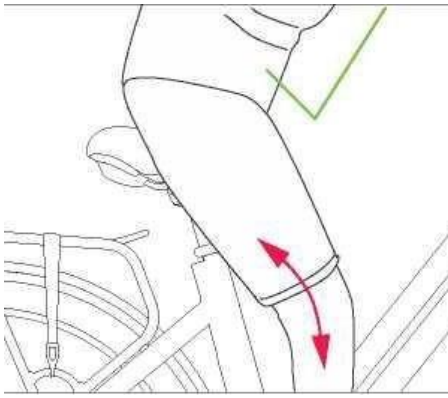


Too high



Too low





Ideal

## SERVICE

### Adjust the seat height

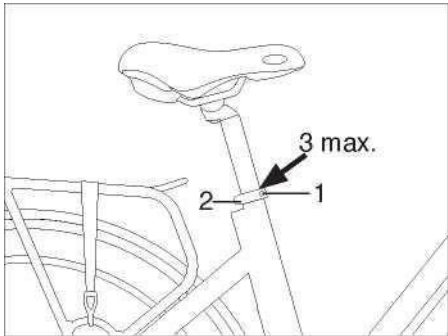
#### Adjusting the seat height

##### WARNING

**A quick release lever that is not fully closed can open while riding allowing the saddle to move. This can lead to severe injury. The tension on the quick release lever should be strong enough to need two hands when closing.**

The saddle can be extended up to the "MINIMUM INSERT" line that is imprinted on the seat post (3).

- Loosen the quick release lever (1), measure the saddle height to the rider's hip and tighten the clamp to close.
- By adjusting the nut (2) on the quick release lever, the clamping tension can be increased or decreased.
- The quick release lever (1) must close with a noticeable pressure.



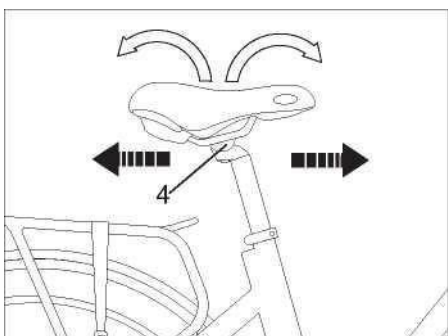
#### Adjusting the saddle

The saddle can also be tilted and adjusted in the longitudinal direction.

- Loosen the screw (4).
- Place the saddle in the desired horizontal position, move it forward or back and tighten the screw (4).

##### NOTE\*

In order to avoid seat discomfort, the saddle should be adjusted as close to horizontal as possible.



## USE

### Important safety precautions for the charger

Before using the charger, please read these safety instructions.

#### WARNING

Protect your charger from children. To prevent injury use the charger that comes with your e-bike. Other battery types can explode when charged with the incorrect charger. This can lead to personal injury and material damage.

The use of accessories or batteries which are not sold or recommended by us can lead to fire, electrical shock, or injuries.

Avoid operating the charging unit in a damp or wet environment.

Avoid water penetration into the appliance. If liquid has entered, unplug the charger from the outlet and take it to your dealer for inspection.

Make sure you have a flat surface on which the unit is secure.

***Disconnect the device from the power supply when fully charged.***

Do not pull on the cable to avoid damage to the cable and the risk of electric shock.

Make sure the power cord is unrolled or unwound after use so as not to damage the cord.

Do not operate the charger with a damaged cable or plug. Ensure immediate replacement by the dealer if damaged.

Do not operate the charger after it has been damaged.

Do not disassemble the charger yourself. Faulty repair may result in electric shock or fire. To prevent electrical shock, disconnect the charger from the outlet before cleaning it.

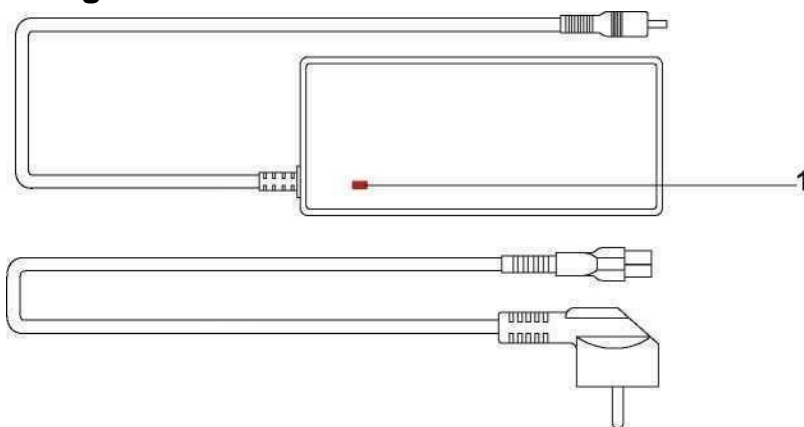
Any cleaning of the charger should only be done with a dry cloth. Do not use oil, water or other solvents.

An extension cable should only be used when absolutely necessary. The use of a faulty extension cables can result in fire or electric shock. If an extension cable needs to be used, make sure that:

- the pins of the plug in number, size and shape exactly correspond to those.
- the extension cable is correctly wired and in good electrical condition.
- the extension cord has no visible damage.
- when using cable drums, the drum is fully unwound.

USE

## Charger functions



Charge cycle and LED indicators for lithium-ion battery	
LED	STATUS
Green	Battery not connected yet
Red	Charging
Green	Charging completed

The LED light (1) on the charger keeps you constantly informed about the charge state of your battery.

### Troubleshooting your charger

#### Please check:

- Check that the power cable is properly connected to the wall outlet and the battery socket.
- Check that the contacts of the charger and battery are clean and not damaged or bent.
- Check that the battery isn't damaged or defective in any way.

If the battery will not charge:

- Unplug the charger from the outlet then plug it back in.
- Check that the outlet your charger is plugged into is functioning properly, if necessary connect other devices to it to confirm.
- Check the contacts of the plug connections.
- If charging is still not possible, please have the battery and charger checked by a Magnum Bikes licensed dealer.

## Important instructions for the battery

Important information, which you should read before use:

- The batteries of the vehicle are approximately 50% charged when new.
- Before using the battery for the first time please fully charge the battery.
- The battery develops its max. output after approx. five discharge / charge cycles.

## USE

### WARNING

**The battery of the bicycle is matched with the charger. Never charge the batteries with another charger.**

- Protect the battery from moisture.
- Before you connect the charger to the outlet, please check that the voltage of your power supply matches the input voltage indicated on the charger (e.g. 240V).
- The maximum lifetime of the batteries is achieved if you use them between 20-80% discharge at an ambient temperature between + 50 ° F and max. + 86 ° F. Overcharge and overdischarge of the battery will weaken the cycle life over time.
- The batteries will heat up under a heavy load. Before charging a battery that has heated up, please cool to room temperature or allow to cool for approx. 30 minutes.

### WARNING

- **Keep out of reach of children.**
- **Do not open or disassemble the battery.**
- **Do not short-circuit metallic objects on the battery.**
- **Do not immerse in any liquid.**
- **Do not incinerate! There is a risk of explosion!**

### NOTE

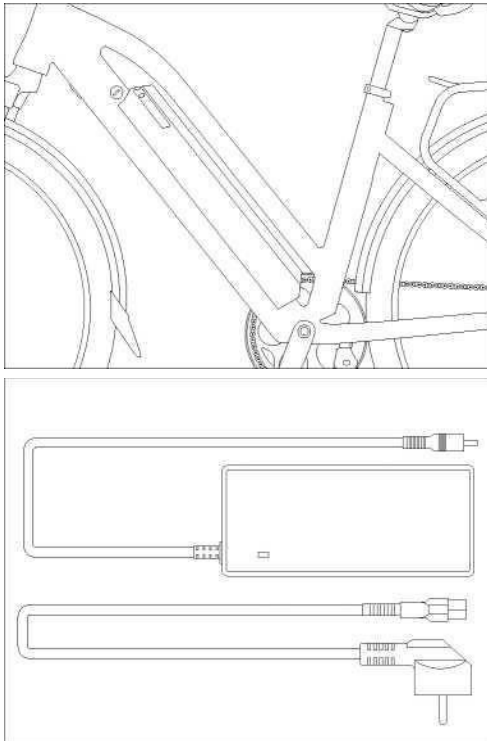
A battery pack contains toxic heavy metals and is therefore subject to special waste treatment.

Lithium batteries cannot be disposed of with regular trash. All batteries must be disposed of at a household hazardous waste collection point (check with your local landfill) or battery recycling drop off location, NOT placed in the trash.

(Find a battery recycling drop off location near you here <https://www.call2recycle.org/locator/>)

USE

## Handling of battery and charger



### **In order to achieve the longest possible battery life, the following notes should be observed:**

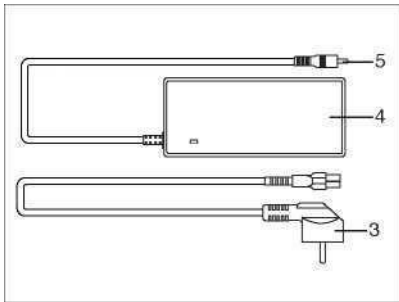
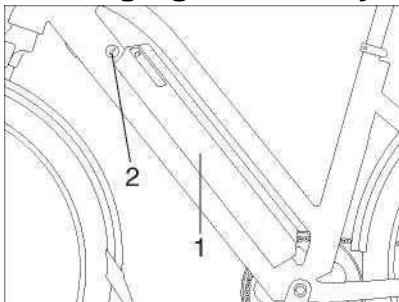
- The charger should not be activated when the battery temperature is below + 32 ° F or above + 140 ° F. Before charging, be sure to bring the battery to about room temperature.
- The charger will stop charging when the battery is fully charged. Please unplug the charger once the battery is fully charged.
- Do not leave the charger to charge the battery for more than 24 hours.
- The battery should not be connected to the charger during extended periods of non-use.
- Keep the battery at 40 - 60% battery capacity in a dry place at approx. 50 ° to 68 ° F when storing (eg in winter).
- **Recharge every 3 months for 2 hours.**
- If the battery is to be used again after a long period of non-use (for example after winter shutdown), the battery should be left to charger for approximately 24 hours.

## **DANGER**

**Failure to observe these precautions may result in low battery charge.  
No warranty will be provided for a deeply discharged battery.**

USE

## Recharging the battery



### NOTE

The battery (1) can be removed from the e-bike.

The battery is secured with a lock (2).

### IMPORTANT NOTE!

The new 48V battery has USB port on the right side of the battery near the top.

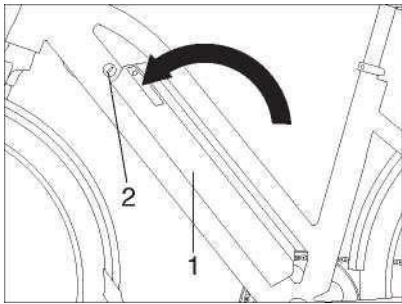
### TO CHARGE THE BATTERY

1. Connect the plug of the charger to the power supply
2. Connect the charger to the battery.

### NOTE

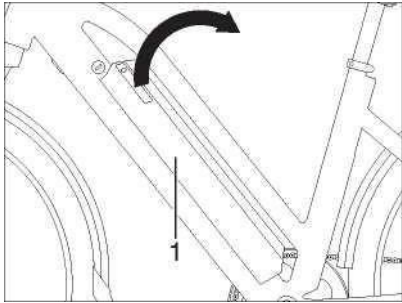
The USB port provides 5V 1A charging power. Cell phone & tablet charging is possible.

## Removing the battery



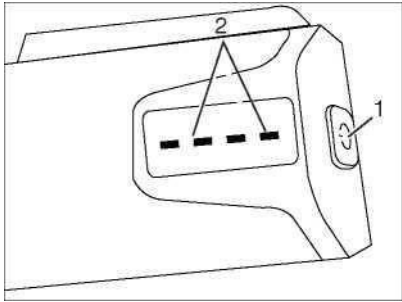
To pull out the battery, insert and turn the key. Hold the key in the unlock position (2) and then pull out battery (1).

### Insert the battery



- To reinsert the battery push the bottom of the battery (1) into the frame as far as it will go and then insert the top end of the battery into the frame until it clicks in place. You may then remove the key.

### Battery charge status



The charge state can also be checked with the battery removed.

- While the button (1) is pressed, the LED (2) will light up depending on the charge state:

green 4	The battery is fully charged.
green 3	The battery is about 3/4 charged.
green 2	The battery is about 2/4 charged.
green 1	The battery is almost empty, you should charge it soon (about 1/4 residual capacity).
red	The battery is empty.

### Tire pressure

To avoid flats, keep tire pressure at the recommended PSI. On off-road terrain a slightly lower PSI will provide more grip but flats can occur.

#### WARNING

**Caution should be exercised when inflating tires with compressor air pressure equipment (eg gas stations). Due to the relatively small volume of air required be sure not to overinflate the tires as this can cause them to burst.**

Correct tire pressure should be adjusted according to the terrain within the range of. 26 to 54 psi.

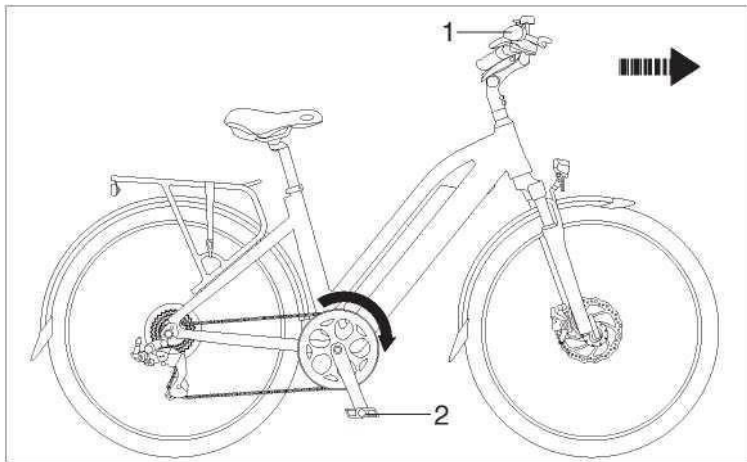
USE

## Riding instructions

### NOTE

The battery must be secured and locked into the frame before riding.

Before riding, be sure that the battery is correctly inserted into the frame and remove the key. If left in place the key can break in case of impact.



### **WARNING - FALL HAZARD!**

### **WARNING - FALL HAZARD!**

To avoid injury be sure to follow the instructions below:

1. Before starting to ride, hold the handlebars (1) straight.
2. To start practicing, start with the motor switched off. Only switch on the motor when you are comfortable riding the bike.
3. Do not use the pedals (2) to start until a safe riding position is assumed.
4. When starting to ride, apply the brakes slightly. This inhibits the motor and enables a safe start to your ride.

The bicycle can be driven with the auxiliary drive switched on or without it.

When the auxiliary drive is activated, the electric motor is activated immediately upon pedaling with a half pedal rotation.

On long uphill runs, the motor could potentially become so hot that the current is reduced by the temperature sensor in the motor. The internal heat



sensor may cut out the electrical system of the e-bike if it overheats.

If the e-bike cuts out let the system rest for a few minutes and resume riding while being sure to pedal in order to alleviate the stress on the electrical system.

## Range per charge

The achievable range with a charge of the battery depends on a variety of factors. These include the battery and vehicle condition, the total load and above all the route elevation. Under normal conditions, the Li Ion battery has a range of up to 90km per charge, depending on assist level and other factors.

Please remember:

- Before each major ride, recharge the battery and check the tire pressure.
- The battery develops its max power after approximately five discharge / charge cycles.
- The battery is subject to normal self-discharge over a long period of time.

## USE

### Brakes

The front and rear brakes operate independently of each other.

When stopping or slowing down, operate both brakes at the same time.

The Magnum Peak e-bike is equipped with hydraulic disc brakes, which have a very high braking power.

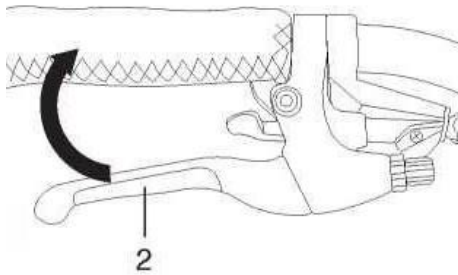
#### WARNING

**The model with hydraulic disc brakes can achieve very rapid braking performance.**

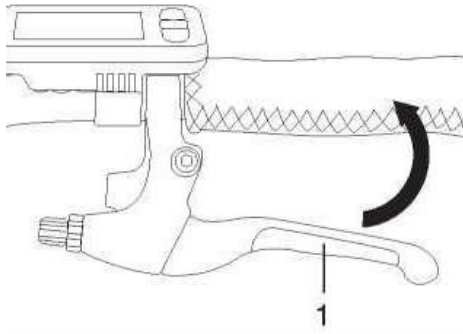
**In tight corners and on trails with loose dirt, on wet asphalt, and on ice, the front wheel brake should be carefully braked so that the front wheel does not slip while braking.**

**Please slow down carefully.**

**When turning always brake before beginning to turn and not during the turn itself as this could cause skidding.**

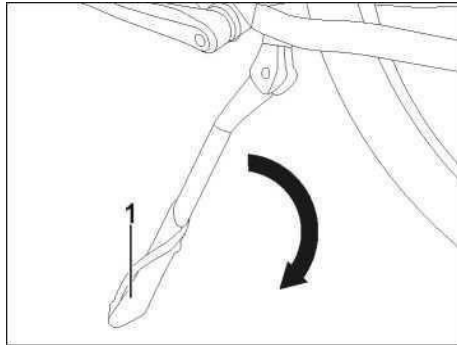


The right brake lever (2) controls the rear wheel



The left brake lever (1) controls the front brake

## Parking the bike



### WARNING

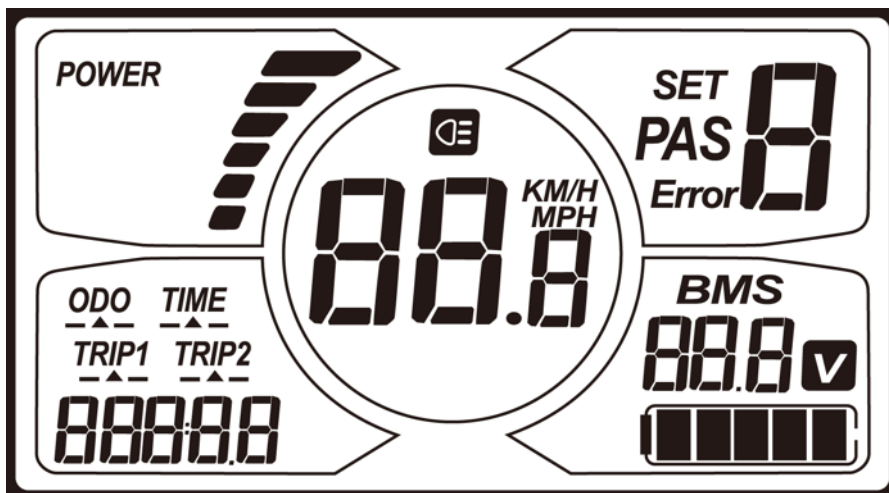
When unfolding the kickstand (1), always make sure that the stand is stable and firm before leaving the bike in place, so as to prevent the bike from falling over. Do not place additional weight on the bike when the kickstand is in use.

### NOTE

Be sure that your kickstand's adjustable leg is adjusted to the position of your preference and screw it tightly in place.

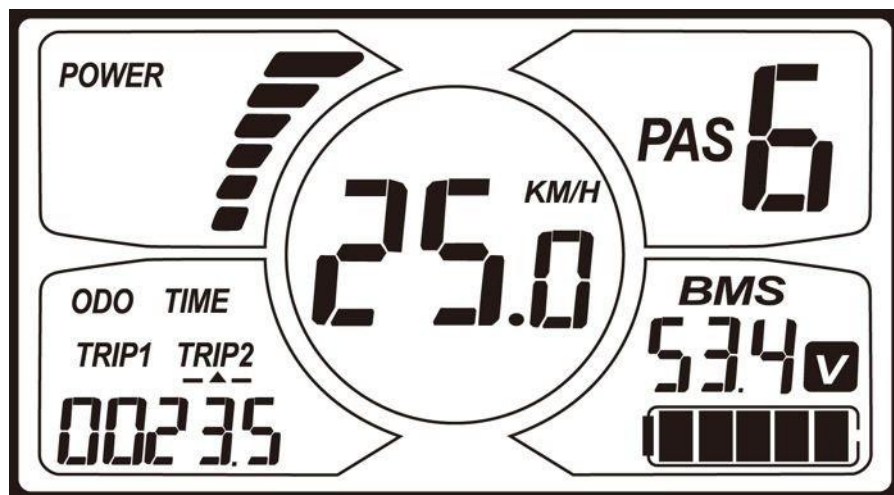
## C7 Display

### FULL VIEW AREA





### NORMAL VIEW AREA

With the display on, the default indicators are ODO, time, trip 1, trip 2 as shown in fig below. Press **SET** to switch the display information.



## Section 1: ON/OFF

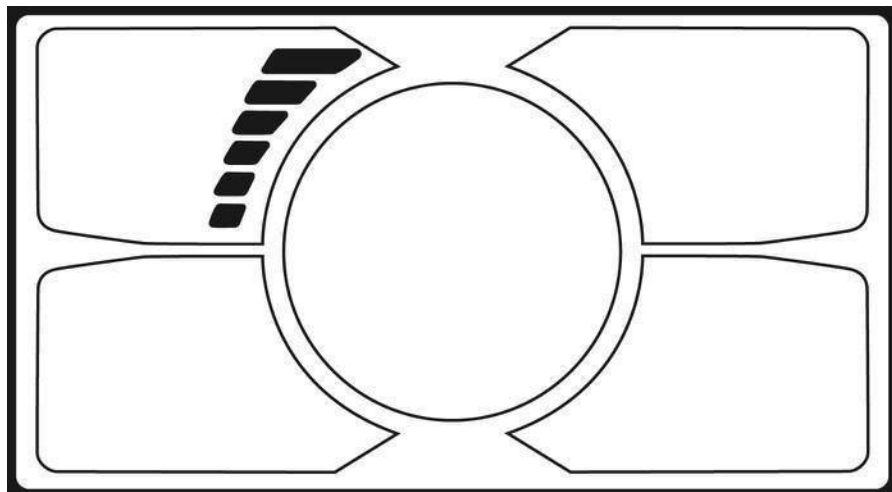
- To power on your e-bike click the power button  once.
- The display will show some of your system parameters immediately when turned on.
- On the bottom right you will see the systems voltage specific for your e-bike (either 36V or 48V).
- In the center you will see the wheel size and on the bottom left the tire width.
- These parameters should not be changed as they are factory set to your specific e-bike model.

With display on, press and hold  for 3 seconds to power off your e-bike. With the display off, there is no battery power consumption. The leakage current is no more than 2μA.

※The panel will power-off automatically when the e-bike is idle for 5 minutes (speed is 0 mph).

## Section 2: CURRENT INDICATOR

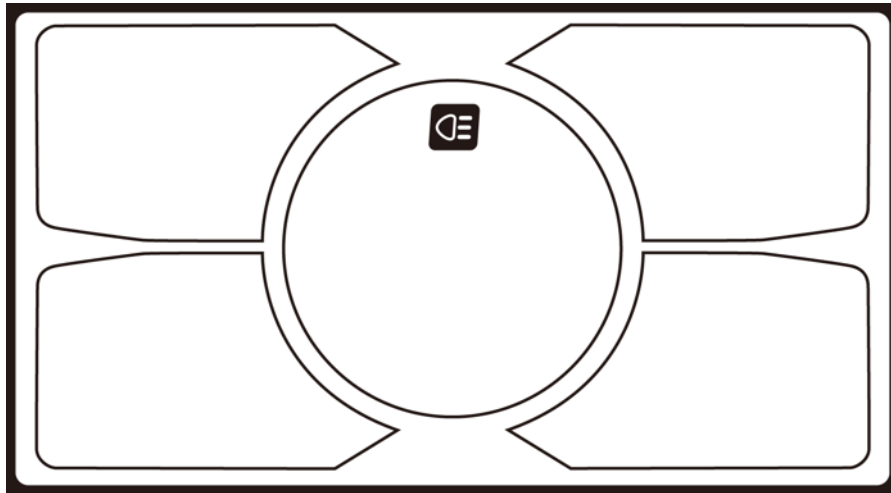
The current indicator represents the discharging current consumption of the controller while in use. Each segment is 2A, six segments are  $\geq 12A$



## Section 3: BACKLIGHT INDICATOR

Press the power button  once to illuminate the backlight. The backlight indicator symbol will show when the backlight is illuminated (see

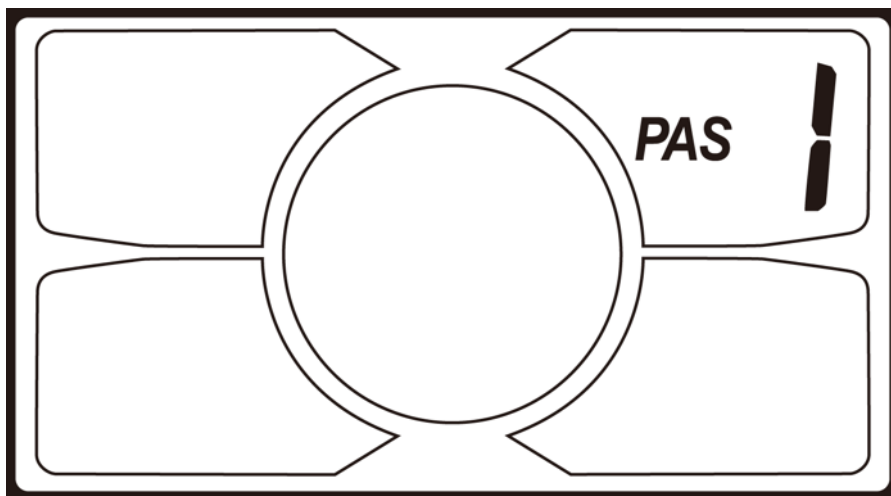
picture below). Press the power button  again to turn off the backlight.



## Section 4:

### 4.1) PEDAL ASSIST & SPEED SELECTION

- Click on the +/- **UP** or **DOWN** to change the PAS (pedal assist) level and change the power output and speed. The default mode is level 1 and ranges from level 0 to level 6.
- When set to level 0 the electric system is disabled and the e-bike will not provide any motorized assistance.
- Levels 1-6 will provide an increasing range of speed and power output.
- According to Federal Regulations the throttle on your e-bike is limited to 20 MPH. The pedal assist will continue to provide motorized assistance up to 28MPH.



### 4.3) PARAMETER SETTINGS

Your e-bike parameter settings have all been factory set for your specific model and region. This includes the wheel and tire size, speed denomination (km/h or mph), power level and speed output.

In order to eliminate confusion the section to change these factory settings is available only to Magnum Bikes licensed dealers and is password protected.

#### 4.3.1) Walk Mode 6KM/H

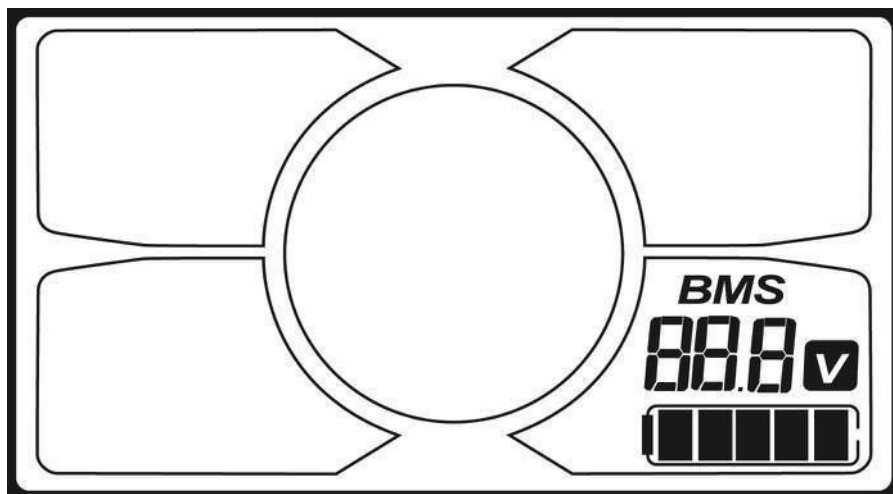
Hold down the "-" button for 3 seconds to enter the power assisted walk mode. An indicator will show 6KM on the display and your e-bike will be travelling at a speed of 6km/h to provide assistance.

#### 4.3.2) Reset TRIP 1 (See also Section 6)

Press the SET for 5 seconds to reset TRIP 1.

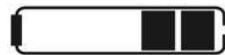
## Section 5:

### 5.1) BATTERY INDICATOR



#### 5.1.1 ) Battery level indicator

The battery capacity viewing area has five segments, each representing 20% of the battery capacity. When the capacity is full, all five segments are all lit up. If the battery capacity is low, the battery indicator will flash indicating that the battery is low and needs to be recharged immediately.



Flashing low battery indicator



#### 5.1.2) Battery BMS voltage

The (BMS) battery management system will show an accurate reading of the battery voltage on the bottom right of the display at all times (See Picture in Sec 5)

The lithium battery voltage will slowly decrease with use until it is empty and needs to be recharged. 48V Lithium batteries will be approximately 54V when full and 40V when depleted.

## SECTION 6: DISTANCE AND TIME INDICATOR

### 6.1) SWITCHING BETWEEN MODES

With the display on, press **SET** to switch between modes to select ODO, time, trip 1 and trip 2.

### 6.1.1 ) ODO

The ODO records your total mileage and cannot be cleared.

### 6.1.2) Time

The riding time parameter is automatically reset when powering off your e-bike.

### 6.1.3) Trip 1

Press the SET button for 5 seconds to reset trip 1.

### 6.1.4) Trip 2

Trip 2 represents your most recent ride mileage and will be automatically reset every time your e-bike is powered off.

## RIDING

### Safety instructions

#### Traffic safety

The e-bike is only suitable to ride on fixed roads and paths. Do not use the e-bike in water crossings or for terrain jumps.

For your own safety do not ride your e-bike freehanded or too close to another rider.

Do not use headphones while riding.

#### Riding safety

For your riding safety, always verify the correct placement of the seat and handlebar height according to the body size of the rider, the prescribed tire pressure, and check that the brakes are functioning properly before riding.

Every so often it is necessary to check the axle nuts, headset bearings, handlebars, saddle, seatpost, pedal cranks and pedals to ensure they are tightened sufficiently.

## DANGER

### Be sure to use only Magnum approved replacement parts and accessories for your e-bike.

Magnum Bikes will not warranty or be liable for any e-bikes that were altered, changed or otherwise tampered with or for e-bikes that have used generic replacement parts.

### Safety Precautions

#### Is your e-bike fit to ride?

Perform the following checks regularly:

- Check the tire pressure (See chapter "Technical data")
- Check that the handlebar pedals and crank arms are properly tightened (See chapter "Steering bearings" and "Pedal cranks")
- Check that the spokes are in place and none are loose (See chapter "Spokes").
- After a fall or accident, make sure that the e-bike is not bent or damaged (frame, handlebars, rims, etc.).

- Do not ride the e-bike if any of the above is not properly secured.

## WARNING

**When starting to ride your bike be sure to hold the handlebars straight.**

**Do not start with the motor switched on until you are comfortable riding the electric bike.**

- Always follow local traffic regulations.
- Do not ride in blind spots of cars or bicycles .
- Be sure to signal when turning.
- Drive defensively and always be aware of your surroundings.
- Hold the handlebars with both hands while riding.
- On sandy soil, leaves, and wet roads the tires do not have as much traction as on dry asphalt. Take this into account when turning and braking, so as not to slip. Also leave room for a longer braking distance.
- Slow down before steep sloping terrain.

## What to wear when riding your e-bike

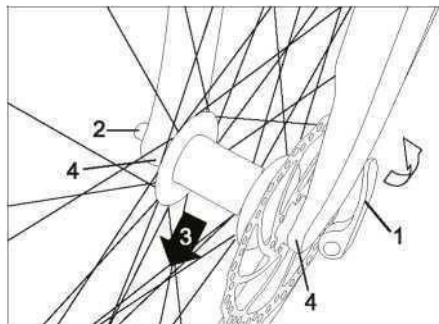
Many accidents happen because e-bikers are not recognized in time. Therefore, it is useful to wear bright and reflective clothing. Be careful not to wear loose clothing that can get caught in the chain, handlebar, pedals or wheels. **Be sure to wear a helmet at all times while riding.** Make sure that your helmet complies with the safety standards SNELL and ANSI.

## DRIVING

### Removing the front wheel

#### Extend:

- Open the quick-release lever (1) and loosen the axle nut (2) several turns.
- Remove the front wheel (3) from the fork.



## WARNING

**A quick release lever that is not properly closed can open while riding and cause severe damage and or bodily harm. Be sure that the tension on the quick release lever is high and should require two hands to close properly.**

#### Installing:

1. Insert the front wheel (3) into the dropouts (4) of the front fork.
2. Tighten and close the axle nut (2) and the quick-release lever (1).
3. The lever should point upwards and be closed with considerable pressure.

### Transporting your e-bike by car

## WARNING

The bicycle may only be mounted for transportation on appropriate bicycle racks that can support its weight (passenger cars, other transport vehicles, roof trusses or trunk carriers, trailers).

Before transporting your bike, be sure to remove all parts that can be removed during transport particularly the battery.

## Carrying loads

### WARNING

- Do not transport oversized bulky loads.
- Do not cover the lights.
- Do not connect a trailer to the back of your e-bike without first consulting with a licensed Magnum Bikes dealer.

In general, loads (shopping bags, etc.) should not be transported on the handlebars, but rather on the luggage carrier intended for this purpose.

Do not exceed the permissible total load on the bicycle.

**Total Max Load is 120kgs**

## Antitheft

Secure your bicycle with an additional bicycle lock against theft, and lock it to fixed devices. The cable lock should secure the frame and the rear wheel. Make sure that the lock closes tightly around the bike and the fixed device. We recommend using a dense U-Lock that is rated for the price of the bike.

Turn off the battery and remove it to prevent theft.

## MAINTENANCE

### Bicycle care / care products

#### NOTE

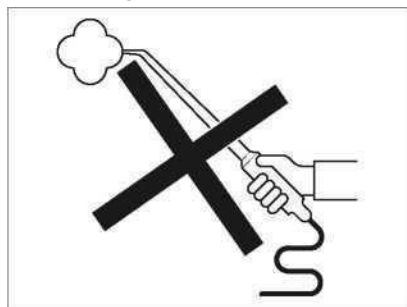
Regular and expert care is essential for the maintenance of the bicycle and is one of the requirements for the validation of warranty claims. Corrosion is not covered under the manufacturer's warranty.

#### WARNING

Rubber and plastic parts can be damaged by cleaning agents or solvents.

#### DANGER

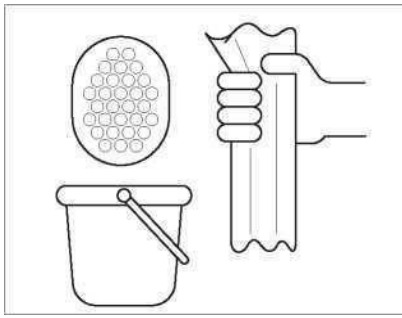
- Always test the brakes after cleaning before riding!
- Do not use steam or high pressure equipment!
- High pressure water can damage the bearings, seals, battery and the entire electrical system.



#### Clean

- Use only a soft sponge or cloth and clean water when cleaning the e-bike.
- Polish only with a soft cloth



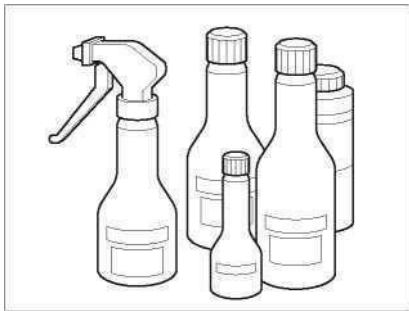


### Care products

If necessary, the bicycle should be treated with commercially available care products that are made for bicycles.

You can prevent corrosion-prone parts from becoming a precautionary measure, especially during winter, with certain care products.

### DANGER



**Do not use silicone-containing cleaning agents or varnish polishes for plastic parts.**

- Carefully clean the frame and aluminum parts after long rides and preserve them with a commercially available anti-corrosive agent.

## MAINTENANCE

### Winter operation and corrosion protection

### DANGER

**If the e-bike comes in contact with salt water follow the instructions below**

- Immediately clean the bicycle with cold water after riding.
- Dry the bike well.
- Treat corrosion-damaged parts with wax-based corrosion inhibitors before use and repeat this several times.

### Repair paint damage

Repair small lacquer damage immediately with varnish.

## Disposal

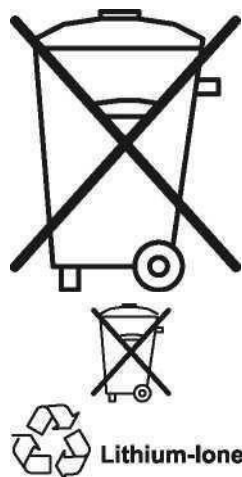
### NOTE

Electrical and electronic equipment must not be disposed of with household waste.

All batteries must be disposed of at a household hazardous waste collection point (check with your local landfill) or battery recycling drop off location, NOT placed in the trash.

(Find a battery recycling drop off location near you here <https://www.call2recycle.org/locator/>)

The symbol on the product indicates this requirement:



By recycling you are making an important contribution to the protection of our environment.

### **Charger**

Dispose of the device according to the environmental regulations in force in your country. Electrical waste must not be disposed of together with household waste. Contact your local authority or the dealer for information.

### **Other components**

Dispose of the components in accordance with the environmental regulations applicable in your country.

Electrical waste must not be disposed of together with household waste. Contact your local authority or the dealer for recycling advice.

## **Tire care**

To increase the life of your tires, keep your tires at the

### **DANGER**

**The tire profile thickness must not be less than 1 mm.**

**Driving over edges, sharp-edged obstacles, floor recesses, potholes, etc. can cause damage to the rim, spoke breakage or to the tire (cracking), especially when the tire pressure is low. These parts are not covered under the manufacturer's warranty.**

## **Technical changes, accessories and spare parts**

**Technical modifications to the vehicle may void the EC type-approval.**

If technical changes are to be made, our guidelines must be observed. This ensures that no damage is caused to the bicycle, traffic and operational safety are maintained, and the changes are permissible. The retailer carries out this work conscientiously. Before purchasing any accessories or technical modifications, always consult a licensed Magnum Bikes dealer.

### **DANGER**

**For your own safety, we recommend using only approved accessories and original spare parts for Magnum e-bikes. For these accessories and parts, safety, suitability and reliability have been specially tested for the bicycle.**

**Magnum Bikes will not be liable in any way for damage to the e-bike or any physical harm caused by faulty components that were attached to the e-bike by the customer after market.**

You can obtain approved accessories and original Magnum spare parts from a licensed Magnum dealer.

The assembly should be carried out by a professional.

## MAINTENANCE

<b>M = Maintenance by the dealer</b> <b>O = Test by the Owner</b>				
Work to be done	Before riding	Monthly	Yearly	If necessary
<b>Check all bolts and nuts, which are important for driving safety and function, if necessary.</b> <b>Axle nut - steering bearing - handlebar - saddle - seatpost - brakes - pedal crank</b>	O	O	M	O M
<b>Clean chain and lubricate with chain lube. Check the rear wheel.</b>		O	M	M
Check the steering bearing.	O			
Check steering bearing, adjust if necessary. Grease and adjust if necessary.			M	M
Check the cables.	O			
Check and adjust the cables.			M	M
Check the adjustment of the electrical connectors, adjust if necessary.		O		O M
Grease the seatpost.			O M	O M
Check brake system for proper operation.	O			
<b>H = Maintenance by the dealer</b> <b>F = Test by the driver</b>				
Work to be done	Before each ride	Monthly	Yearly	If necessary
<b>Brakes</b> <b>The dealer is responsible for poor braking or low brake pressure.</b>	O		M	M
Check the rims and spokes for side and vertical impact.	O	O		

Check the rims and spokes for side and vertical impact. Spoke tension			<b>M</b>	<b>M</b>
Check, adjust.	<b>O</b>	<b>O</b>		<b>M</b> <b>O</b>
Check tire pressure regularly.	<b>O</b>	<b>O</b>		<b>M</b> <b>O</b>
Check tire thickness.	<b>O</b>			<b>M</b> <b>O</b>
Check the lighting and signal system, including the headlight, adjust if necessary.	<b>O</b>			<b>O</b>
Charge the battery with the charger.				<b>O</b>

## Maintenance and Care

### WARNING

For reasons of safety, it is prohibited to carry out repairs and major adjustments to the product independently. Improper work done on safety-related parts puts you and others at risk. This applies in particular to work done on the electrical steering, and braking systems of your e-bike.

### DANGER

Before doing any type of work on the electrical system, disconnect the battery, even when replacing the light or reconnecting any of the display cables.

In case of non-compliance the manufacturer's warranty will be voided.

Any work on the motor unit, the cable harness, the battery and the charger or their disassembly will void the warranty as well.

Please note the following:

- All maintenance carried out during the warranty period must be done by a licensed Magnum Bikes dealer.
- Use only original spare parts.

## MAINTENANCE

### Crank Arm

The crank arm (1) in some circumstances can loosen while riding. Regularly check that the crank arm of your e-bike is securely tightened before riding.

No play should be felt when pulling or pushing the crank arm to the side.

Also the bottom bracket (2) must not have any play and the pedal cranks must rotate easily. This indicates that the bearing is in the proper condition.

Check the bottom bracket regularly by moving the crank arm back and forth sideways.

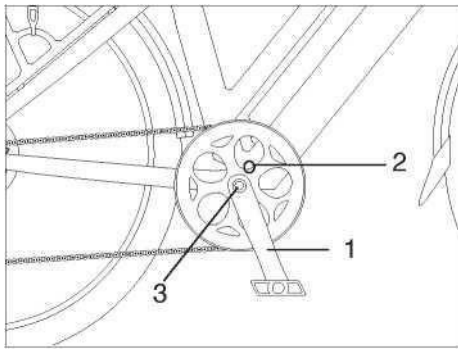
#### Warning

If you find that the pedal cranks or the bottom bracket are loose, please contact the dealer immediately

The pedal cranks are equipped with max. 35 Nm.

#### Tightening:

- See exhibit (3) to tighten the screws on both sides of the bottom bracket.



## NOTE

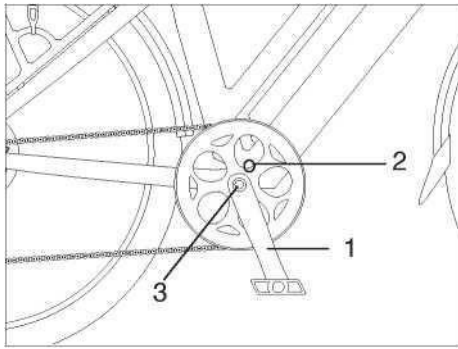
If the pedal cranks have come loose, the inner bolt has most likely been displaced. The pedal crank arms must then be re-tightened. Only dismantle the crank arm with the correct tool and be sure never to pull it out by force. When installing the crank arm all surfaces of the crank and axle must be completely free of grease.

## Pedals

Check regularly that the pedals (4) are firmly screwed into the pedal crank arms. Note that each pedal is equipped with different directional threading.

The left pedal has left-hand thread and is tightened counter-clockwise while the right pedal has right-hand thread and is tightened clockwise. On each pedal there is a marking near the key surface: "L" for the left side, "R" for the right side.

Tighten the pedals with a 15 mm pedal wrench.



## Headset Bearings

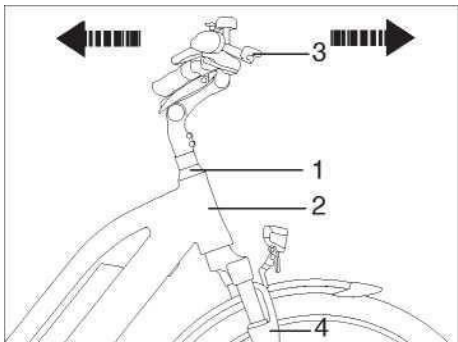
### WARNING

**In the case of continued riding with a loose steering bearing (1), breakage of the fork shaft (2) can occur which can result in serious injury to the rider.**

Check:

- Use the handbrake lever (3) to move the bicycle back and forth.
- Any play or wiggle room in the steering bearing (1), must be adjusted.

## NOTE



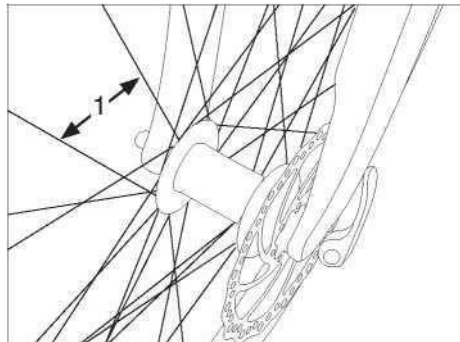
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Check:

- Use the handbrake lever (3) to move the bicycle back and forth.
- Any play or wiggle room in the steering bearing (1), must be adjusted.



## Replacing the battery fuse

The ebike battery is equipped with a safety fuse to prevent damage to the battery in case of excessive electric current while charging or discharging.

**Under no circumstances should a stronger fuse be used or the fuse be repaired. Improper handling can destroy the entire electrical system!**

**If the fuse is blown for any reason it is replaceable. Contact your dealer and do not open the battery case yourself.**

### NOTE

**The fuse for the battery is located inside the battery case. When replacing the fuse, use a 30A fuse for the discharge fuse located in the top end of the battery and 5A for the charge fuse located in the bottom part of the battery case .**

## TECHNICAL SPECIFICATIONS

Components	Metro
motor	DAS-KIT, 48V 300W, ~40kph, rear hub motor
battery pack	48V 13Ah, with USB connection
display	DAS-KIT C7 LCD display
fork	RST, Neon-TNL with oil suspension and lock out
brake lever	Tektro, with electronic cut-off sensor
brakes	Tektro, hydraulic disc brakes
derailleur	Shimano Acera

sprocket	Shimano, Acera M360, 8 speed
tire	Schwalbe, Big Ben, 26" * 2.25
<b>Components</b>	<b>Metro+</b>
motor	DAS-KIT, 48V 300W, ~40kph, rear hub motor
battery pack	48V 13Ah with USB connection
display	DAS-KIT C7 LCD display
fork	RST, Neon-TNL with oil suspension and lock out
Brake lever	Tektro, with cut-off sensor
brakes	Tektro, hydraulic disc brakes
derailleur	Shimano Acera
sprocket	Shimano, Acera M360, 8 speed
tire	Schwalbe, Marathon, 700c

## WARRANTY

### Wear & Tear Parts List

Parts with wear & tear	Expected lifespan
Tires, cables, rims	Depending on riding conditions, load, and air pressure the lifespan can be approximately 500km.
Wheels, spokes, hubs	Depending on riding conditions, load, and air pressure, the lifespan can be approximately 1000km. Corrosion and rust will decrease the lifespan.
Lights	Depending on the frequency of use light bulbs and or batteries may need to be replaced after 6-12 months of use.

Electrical system, electronic controller	Depending on riding conditions, load, and frequency of use the expected lifespan can be 12- 36 months.
Brake linings, brake discs	Depending on the pavement texture and maintenance care, the lifespan is approximately 800km. Inspect often. Do not wash with a high pressure or with cleaners!
Suspension fork and wheels	Depending on riding conditions, load, and frequency of use the expected lifespan can be 12- 36 months.
Battery, fuse	Depending on the external temperature and riding conditions as well as the average riding load, the battery safety fuse can fail after 6 months time although in most cases it will remain intact for a number of years.
Cable pulls, brake cables	Depending on use and care the lifespan is approximately 12 months. Corrosion and other external factors can lower it further.
Freewheel sprocket	Depending on care and proper lubrication the lifespan can be from 6 - 24 months.

## WARRANTY

### WARRANTY CONDITIONS

The frame and electronic components are warrantied for two years. Other components are warrantied by the relevant component manufacturers.

The warranty will be void in the following cases of damage to the product:

- Abusive or improper handling (eg operating errors, mechanical damage, incorrect operating voltage, faulty storage, improper connection, or faulty installations).
- Excessive environmental influence (moisture, heat, overvoltage, dust, etc.)
- Failure to observe any of the specified safety precautions in this manual.
- Failure to observe the operating instructions and / or recommended maintenance schedule.
- Use of force (eg impact, fall)
- Unauthorized attempts to repair the product without prior written consent by Magnum Bikes. Maintenance by a third party that is not authorized by Magnum Bikes.
- Commercial use of the product.
- Defects due to normal wear and tear, unless Magnum Bikes voluntarily provides goodwill service within the first year.



