



**2×2 USER MANUAL
& ASSEMBLY GUIDE**

HELLO.

Congratulations on your new Ubco 2×2.

First things first – register your bike as soon as possible using the enclosed registration card. Record your serial numbers in this booklet and attach your receipt of purchase for safekeeping.

Please read this owner manual carefully; it outlines everything you will need to know when owning an Ubco 2×2. Pay special attention to the safety messages that appear throughout the manual.

This manual should be considered a permanent part of the 2×2 and should remain with the bike if resold.

All information in this publication is based on the latest production information available at the time of approval for printing. Ubco Ltd. reserves the right to make changes at any time without notice.


 **When you see this symbol, the information following is important for safety and proper function of the bike.**

TABLE OF CONTENTS

01 Safety	2
02 About Your Bike	6
03 Assembly	12
04 Riding the 2×2	32
05 Maintenance & Care	46
06 Warranties & Legal	50

01

SAFETY

We want you to have fun riding your 2×2, but it is important that you follow all safety instructions outlined in this section. The 2×2 is a powerful vehicle and should always be operated safely and with caution.

Always ride the 2×2 within its loading and gradient limits as described in this chapter.

Always follow your local off-road laws and regulations.

Protective apparel

As with all off-road vehicles, basic safety apparel should be worn to protect yourself.

You MUST always:

- Wear a helmet that fits well, is securely fastened and provides good all-round visibility.
- Wear sturdy, fully enclosed shoes to protect your feet and ankles.
- Wear adequate protective clothing to protect yourself should you take a fall.

We also recommend you:

- Make yourself easy to see by wearing reflective or bright clothing.
- Wear gloves to protect yourself from knocks and scrapes.
- Wear eye protection to protect yourself from branches, stones and any other external elements.

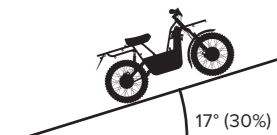
Riders

We recommend that only one person rides on the 2×2 at any one time. This bike is designed for off-road use, so you do not need a licence to operate. We do not advise that young children or inexperienced drivers operate the 2×2.

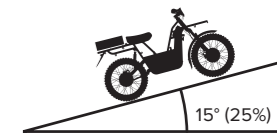
Loading limits

Improperly loading your 2×2 can affect its stability and handling. Ride with caution when your bike is loaded up.

- We recommend you do not exceed your body weight in cargo or over 150kg total.
- Up to 100kg load, it is estimated that the maximum gradient is 25%.
- With loads exceeding 100kg, max and continuous gradients must be reduced accordingly.
- Estimated limits for various gradients are illustrated here. For perspective, Baldwin St, in Dunedin, NZ is the world's steepest street at 19° or 35%.



RIDER ONLY



RIDER + CARGO ≤ 100kg



RIDER + CARGO 100-150kg



Loading safety

- Kickstands are rated to support the bike and 50kg load. If load exceeds 50kg, support the bike while loading.
- Ensure load is strapped securely to the 2x2.
- Balance cargo evenly across the bike.
- Do not impede moving parts.
- Do not obscure lights, suspension or steering.
- Maximum load on the front carrier is 20kg; mid load limit is 40kg; rear carrier load limit is 50kg.



Charging tools and devices safely

The console on the 2x2 has outlets for you to charge power tools and electronic devices. Never put foreign objects into the electrical sockets or plugs. Do not submerge the bike in water and always replace the plug caps when not in use.



Off road safety

The Ubco 2x2 is very quiet due to its electric drive motors. You must always be aware of your surroundings as others may not hear you coming.

You MUST always:

- Be aware of your surroundings.
- Watch for changes in terrain.
- Be aware of other people, animals and vehicles.
- Do not ride beyond your limitations.
- Drive to the conditions.
- Always obey local off-road riding laws and regulations.
- Obtain permission to ride on private property.
- Do not 'wheely' or jump the bike. This can damage the hub motors, causing gear shock when the motor accelerates rapidly in the air and then decelerates instantly when it hits the ground again.



This bike is designed for off-road use ONLY and we do not advise you ride on public roads.



Battery safety

The Lithium-Ion battery and charger are designed to work exclusively with the 2x2. Do not attempt to use any battery or charger other than those supplied. Extra batteries and chargers can be purchased from Ubco Ltd.

- Secure the battery in place when riding.
- Do not drop the battery into the bike from a height. Lower it in carefully.
- Do not submerge the battery or the bike.
- Store in a cool place.
- **Do not store the battery in a fully discharged state.** (See Section 04: Riding the 2x2 for further use and care instructions).
- Do not burn the battery or place it near heat sources above 80°C.
- Keep away from children.
- Do not attempt to open the battery. This will void the warranty. If you have any issues, please contact your service provider.



Emergency numbers

NZ: Dial 111

AUS: Dial 000



Do not operate when impaired

The Ubco 2x2 is a powerful bike.

Do not operate when under the influence of alcohol or drugs, if fatigued or impaired in any way. Remember that alcohol, drugs, fatigue and inattention can significantly reduce your ability to make good judgements and ride safely.

For safe riding, it's important to keep your bike properly maintained. To help avoid problems, go over the pre-ride checklist on page 33; inspect your 2x2 before every ride and perform all recommended maintenance. If parts are broken or need maintenance, we advise you do all that is necessary to ensure a safe ride.



Never ride beyond your personal abilities or faster than conditions warrant. Do not ride when impaired.

02

ABOUT YOUR BIKE

All you need to know about the technical side of the 2x2 is outlined in this section. We advise that you make yourself familiar with this information before assembling the bike.

Technical Specifications

DIMENSIONS

Height* / Length* / Width	1050mm / 1820mm / 800mm (handlebars)
Wheel base	1,200mm
Seat height	800mm
Curb weight	58kg
Carrying capacity	150kg including rider
Equivalent fuel economy	0.32 l/100km
Typical cost to recharge	88¢

ELECTRICAL SYSTEM

Motor	Two 1kW peak air-cooled, high efficiency, brushless motors
Controller	High power density controller; Eco and Power modes, over-heating protection
Est. pack life to 80%	50,000km
Power pack	Ubco 2kW/hr Lithium-Ion
Charger type	50v 350 watt, wall or bench mount
Charge time (standard)	6-8 hours 100% charged
Input	Standard 110V or 240V

DRIVETRAIN

Transmission	Single Stage Planetary Gear Reduction
--------------	---------------------------------------

**Height / Length measures are approximate.*

All product specifications are subject to change without notice to improve performance, function and/or design.

CHASSIS / SUSPENSION / BRAKES

Front suspension	36mm ATF forks with adjustable rebound damping
Rear suspension	32mm ATR shock with adjustable spring preload and rebound damping
Front suspension travel	90mm
Rear suspension travel	120mm
Brakes	Tektro Hydraulic Disk HD-E710, 203 x 2.3mm rotors; pad model D40.11
Tyres	Parwin MR098 2.75x17

RANGE

Based on 100% charge, rider only, mixed speed

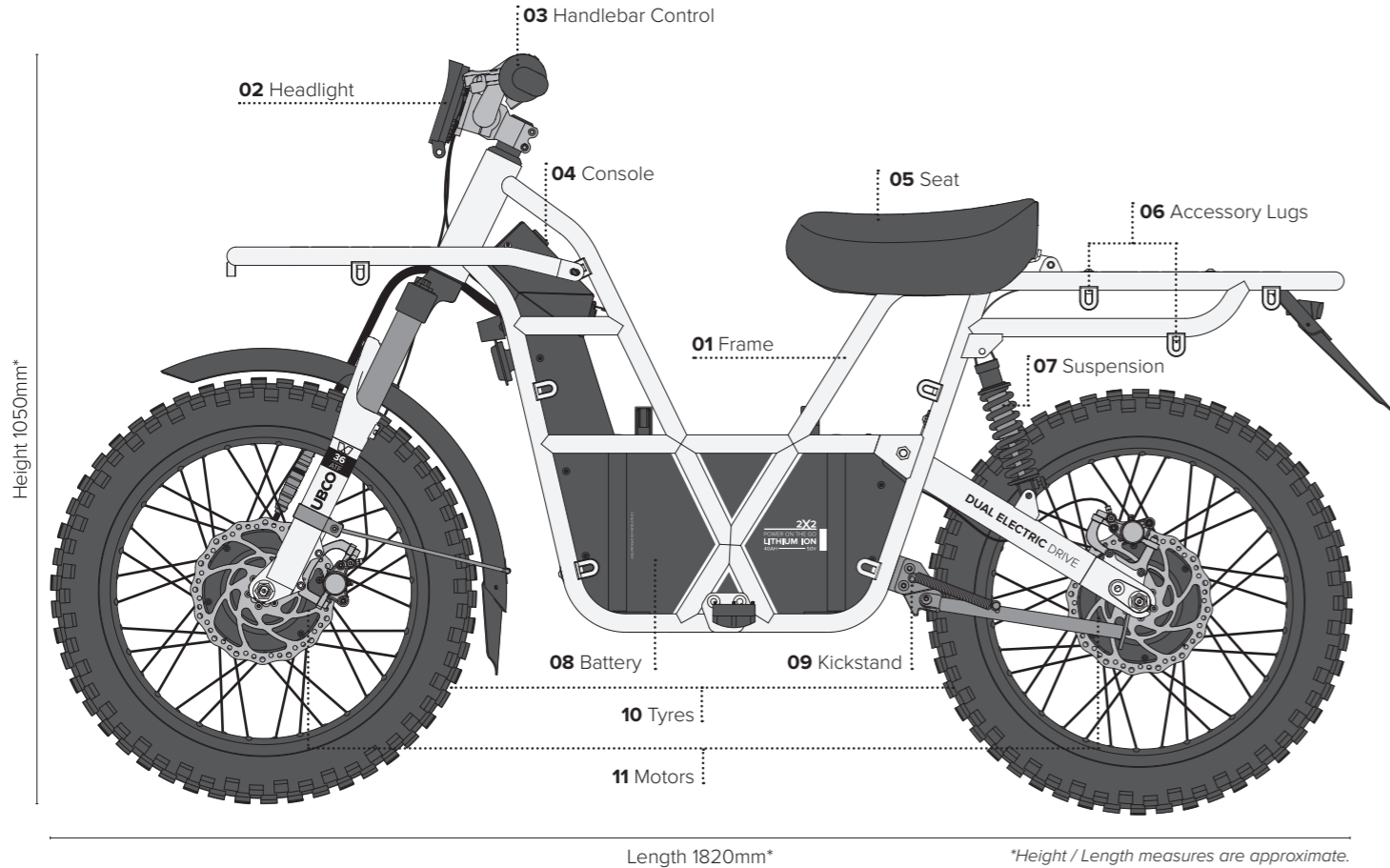
Eco Mode	70 - 100km
Power Mode	50 - 80km

PERFORMANCE

Max torque	90Nm
Max power	2kW
Top speed	45km/h

WARRANTIES

Frame warranty	3 years
Battery warranty	2 years to 70%
Motor warranties	2 years
Parts / Components	6 months



Height: 1050mm*

Length 1820mm*

*Height / Length measures are approximate.

01 Frame

The unique frame is designed for strength and stiffness whilst remaining light weight.

Constructed from 7020 Aluminium alloy, the frame has excellent corrosion resistance.

It has a fixed rear carrier, removable front carrier and lugs for carrying cargo. For full loading limits and guidelines see Section 01: Safety.

02 Headlight

The Ubco 2x2 comes equipped with an 18W LED headlight providing 1440 lumens of light output.

It is mounted to the handlebars via clamps, allowing for easy angle adjustment.

03 Handlebar Control

The handlebars contain the operating controls of the vehicle and headlight.

Controls include:

- Twist throttle.
- Horn.
- Front and rear brake levers.

04 Console

The front console houses the brains of the bike.

- Key ignition switch – turns the bike on and off.
- Battery level indicator – displays the remaining charge of the battery.
- Headlight switch – turns the high intensity LED light on and off.
- Drive mode – allows you to switch between full power and eco motor output modes.
- Warning indicator – flashes when signalling a warning (See page 42 for warning codes).
- 12v Power Port – allows you to charge power tools and other devices (10A max).
- USB Charge Ports – allows you to charge electronic devices.

05 Seat

The 2x2 has a large cushioned seat to provide a comfortable platform for the rider to sit on. It fastens to the frame via two plastic spring clips and lifts up to allow you to remove the battery from the frame.

Ensure the clips are securely engaged on the frame before operating the vehicle.

06 Accessory Lugs

There are 16 accessory lugs built into the frame to provide solid mounting points for accessories. Three more lugs are available on the front carrier.

These lugs fit standard M8 bolts and contain a cavity in the back to house an M8 nut, preventing it from spinning as the bolt is tightened or loosened.

These lugs are strategically placed on the frame to provide maximum flexibility facilitating the attachment of small and large items. Ensure all nuts are securely tightened and loads are strapped down before riding the bike.

07 Suspension

The Ubco 2×2 is equipped with both front and rear suspension for a smooth ride. The front suspension is 36mm ATF forks with adjustable rebound damping with 90mm of travel. The rear suspension is 32mm ATR shocks with adjustable spring preload and rebound damping with 120mm of travel.

08 Lithium-Ion Battery

The specially designed 40ah 50V lithium-ion battery provides a riding range of up to 100km per charge. This can be more or less depending on your riding habits and terrain. The long range battery takes just 6 to 8 hours to charge from empty, emits no smoke or noise and costs an average of 88¢ NZD for a full charge.

The battery comes with a wall charger that is designed to be plugged into a 100-240V AC 50/60 Hz outlet only. Do not attempt to charge the battery with anything other than the supplied charger.

The battery is interchangeable and can be removed from the bike simply by unlatching, unplugging and lifting with care. To find out how to charge the bike, see Section 04: Riding the 2×2.

09 Kickstands

The Ubco 2×2 is equipped with two side kickstands for maximum flexibility. The stands are sprung to allow for easy deployment and stowage.

10 Tyres

The 2.75 x 17 tyres are designed for long life and ultimate grip. They are suitable for a wide range of terrain, including tough, hilly, rocky, muddy and wet environments.

11 Dual Electric Drive Motors

The Ubco 2×2 is dual electric drive, meaning it has a motor in both the front and back wheels. The nature of the bike results in no clutch or drivetrain, so it releases no emissions and is whisper quiet. This also allows for better handling, especially in slippery conditions.

The two 1kw air cooled, high efficiency, brushless motors have great power and traction, allowing you to tackle difficult terrain. The bike has a top speed of 45km/h and a max combined torque of 90 Nm.

Modifications

We strongly advise not to remove any original equipment or modify the bike any way that would change its design or operation. The 2×2 has been designed in a way that makes it safe for all users; changing this intention could result in injury both to riders and those around you.

If you are to adapt the bike for your needs, use all lugs and carriers provided and follow safety instructions.

03

ASSEMBLY

Getting your bike ready to ride is quick and easy, as long as you follow these simple instructions properly. We recommend getting a mate to lend a hand.

If you get stuck, contact your service provider.

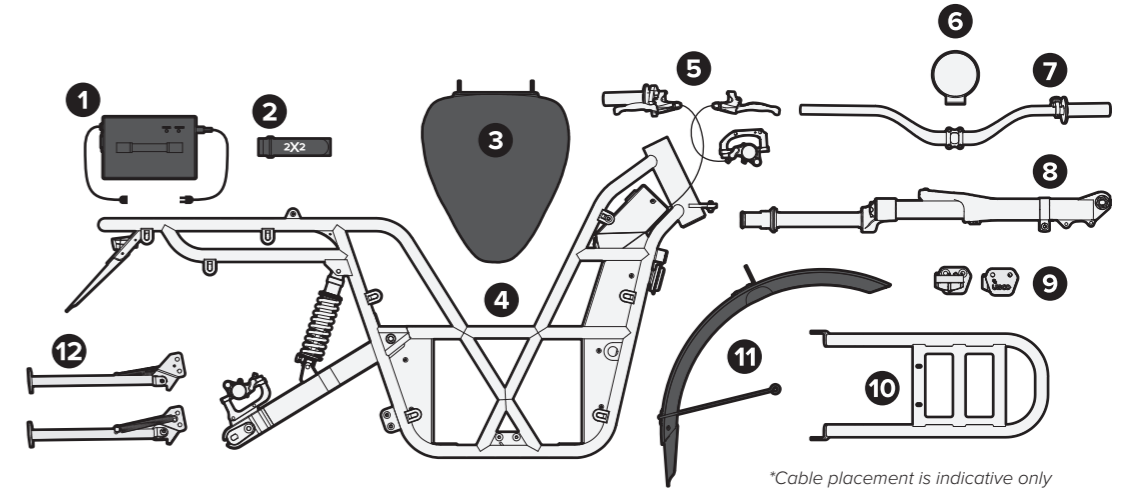
Box 1:

1. Charger
2. Battery Strap
3. Seat
4. Ubco 2x2 Frame
5. Throttle & Front Brake Calliper
6. Headlight
7. Handlebars
8. Front Forks
9. Foot Pegs
10. Front Carrier
11. Mud Guard
12. Kick Stands

Not Shown: Fasteners (attached in place)

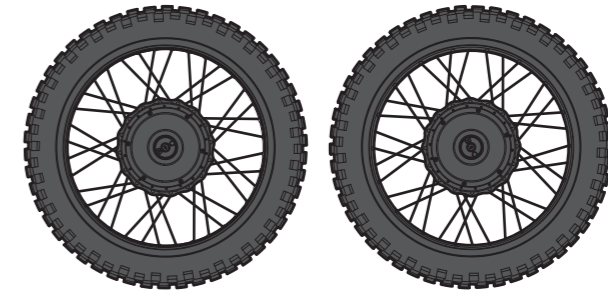
Box 3:

Ubco Lithium Ion Battery



Box 2:

- Ubco 2x2 Wheel Assembly
- Fasteners (attached to axles)



Required tools:

- 22mm Spanner
- 13mm Spanner
- 10mm Spanner
- 5mm Allen Key
- 4mm Allen Key
- 3mm Allen Key

To Prepare

We recommend that you familiarise yourself with the bike parts before assembling. Technical information and a diagram can be found in Section 02: About Your Bike.

Gather all required tools. Be sure to work in a clean, dry space with plenty of room. You might wish to lay down a tarpaulin or old blanket to protect the bike during assembly.

You may find it helpful to stand the bike frame on a block or place a sturdy box under the battery housing to work with it in an upright position. Please watch the balance when installing wheels.

Don't attempt to install the battery until all other components are complete.

Remove the bike components from Box 1. Take care not to stress or damage any of the cables between the forks, handlebars and bike frame.

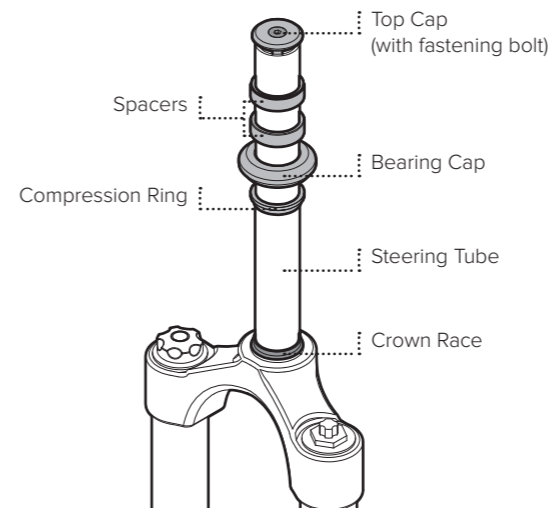
Remove wheels from Box 2 and set aside. Wheels have motors and brake rotors (disks) pre-installed.

⚠ Do not activate the brakes until the bike is fully assembled. Squeezing brake levers while callipers have no disc rotor between them can damage the brakes.

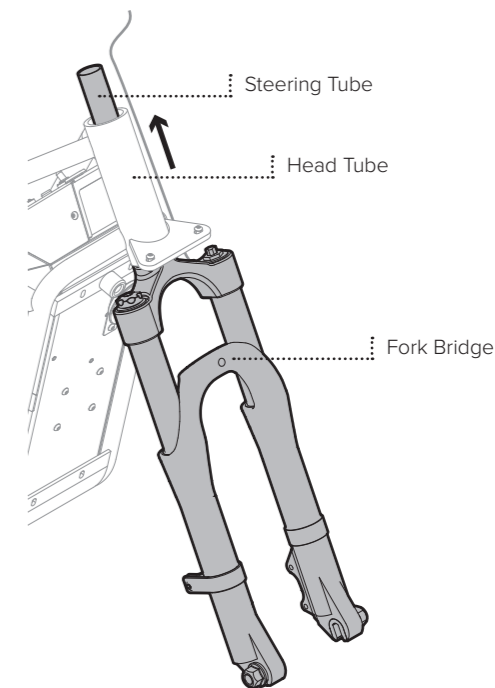
Step 1: Suspension Fork

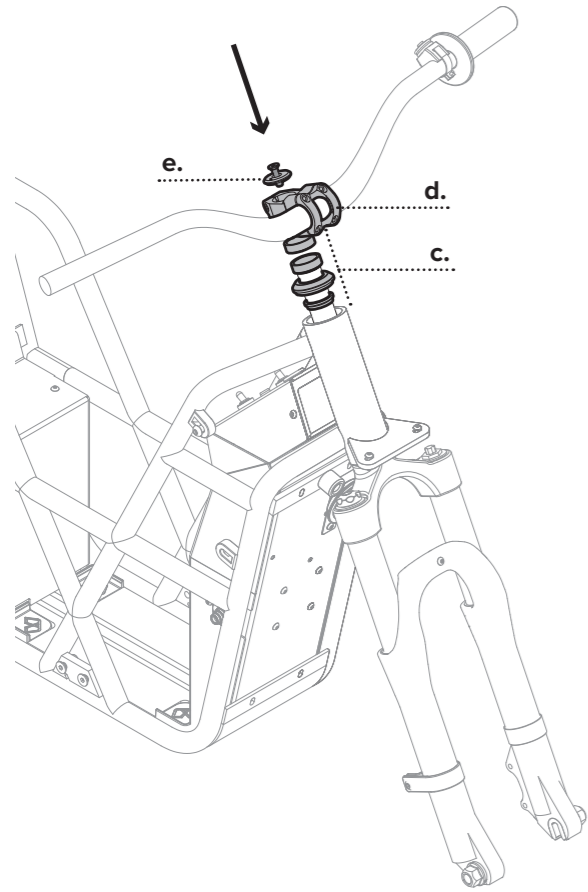
Ensure the components are installed on the fork steering tube in the correct order as shown in the image below.

- a. Remove all components on steering tube except the Crown Race (bottom most piece) and set aside, **keeping them in the correct order, as below.**



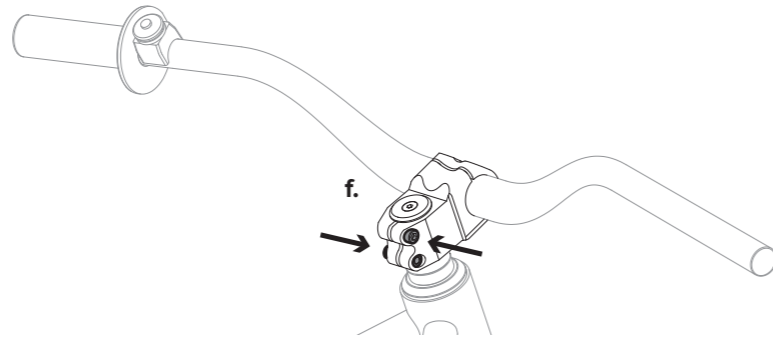
- b. Insert the steering tube through the head tube on the bike frame, making sure to have the fork the correct way around. The bridge of the fork should face forwards on the bike.





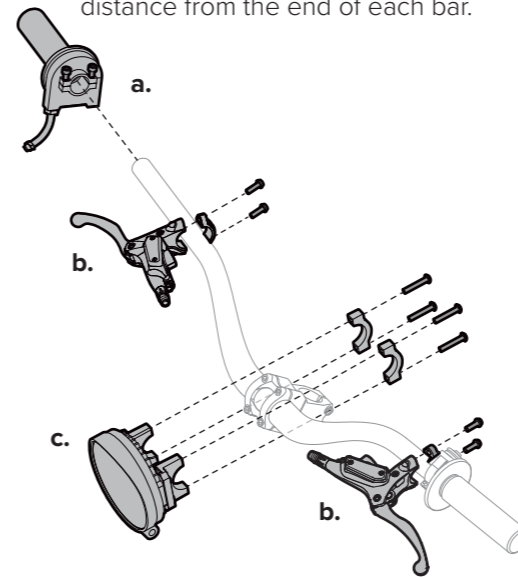
Step 1, cont'd:

- c. Replace the components on the steering tube above the head tube. **Be sure they go on in the original order**, leaving off the Top Cap.
- d. Lower the handlebar stem onto the steering tube with handlebars facing forwards and the grip on the left-hand side.
- e. Place the Top Cap in the top of the steering tube, above the handlebar stem. Fasten the bolt using a 5mm Allen Key until there is no lateral movement in the bearing but the forks can still turn freely.
- f. Line up the handlebars with the forks and fasten the stem bolts to finger-tight. Final alignment will be done after the wheels are installed.



Step 2: Handlebars

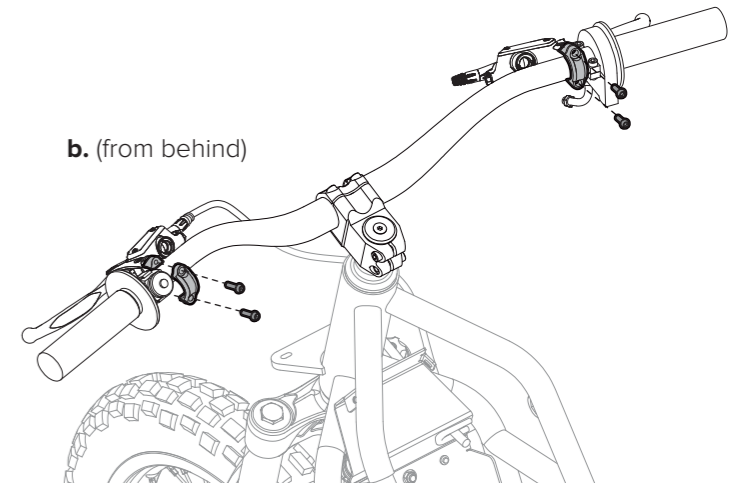
- a. Slide the throttle grip onto the right-hand side of the handlebar, ensuring the handlebar does not touch the end face of the grip.
Tighten the two fastening screws on the top of the throttle, ensuring the throttle actuates smoothly and springs back to its original position when released.
- b. Attach the two brake levers onto the handlebars, ensuring both levers are mounted an equal distance from the end of each bar.



Pivot the levers so that when on the bike holding the grips, your wrists are in line with your forearm. The angle of the throttle may need adjusting to ensure the right-hand brake lever can be actuated without touching the throttle.

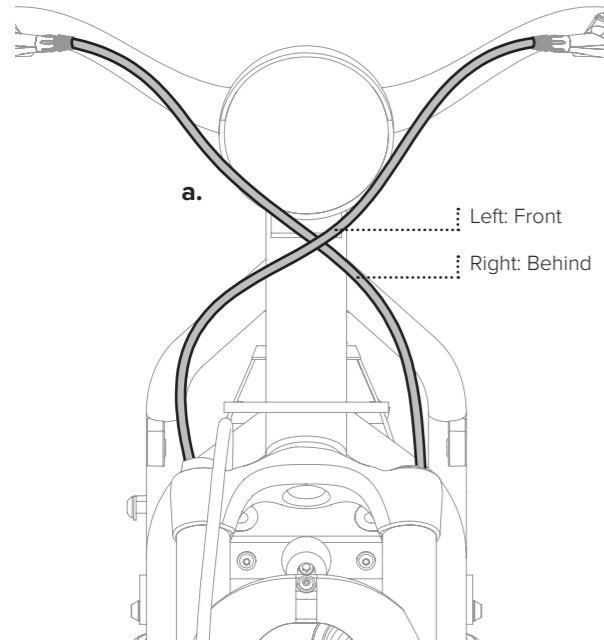
- c. Using four M5 x 30mm screws, fasten the two parts of the headlight clamp to the centre of the handlebar.

Tip: To keep your 2x2 looking its best, align the logos on the two parts of the clamps to face the same way.

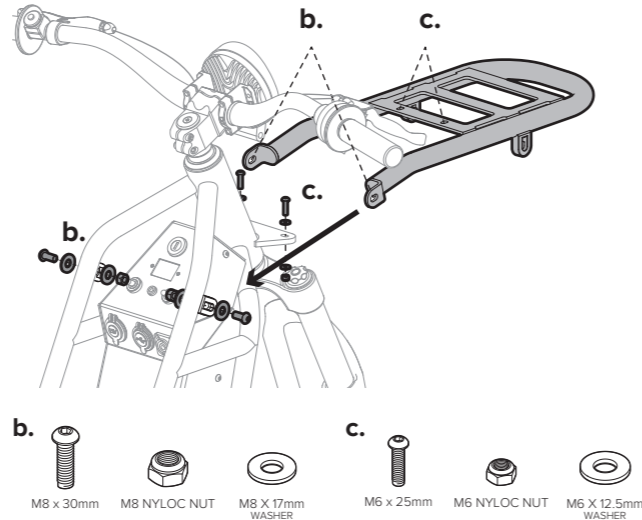


Step 3: Front Carrier Installation

- a.** Check the brake cables cross over in front of the light with the right-hand cable being closest to the light.

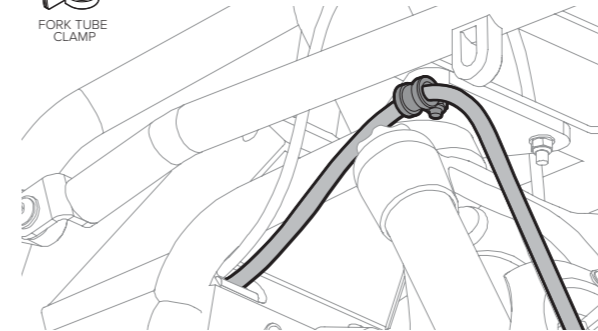


- b.** Attach the front carrier to the front accessory lugs on the frame with M8 x 25mm bolts and M8 nuts. The M8 nut will fit into the recess in the lug, preventing it from spinning.
- c.** Fasten to the plate on the head tube with M6 x 25 bolts and washers from above and M6 nuts and washers from below.

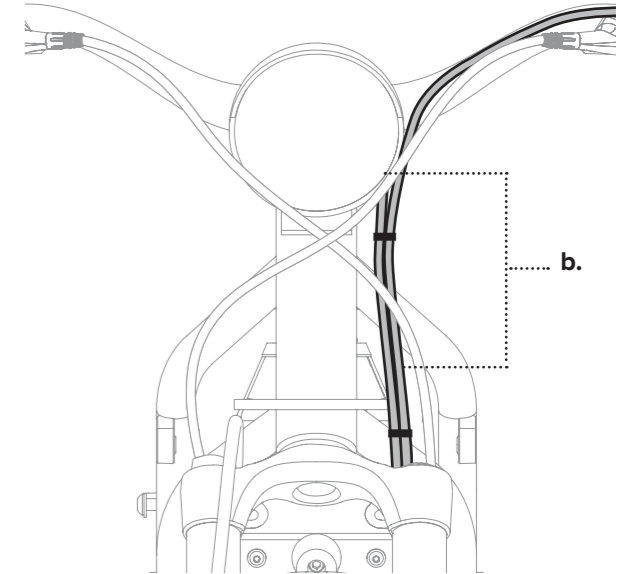


Step 4: Cable Tidy Up

- a.** Secure the front motor cable with a small tube clamp under carrier:
- » When facing the front of the bike, unscrew the left M6 nut and washer from under the front carrier (Step 3c).
 - » Put the motor cable into the tube clamp.
 - » Thread the tube clamp onto the bolt, ensuring the motor cable is running on the outside of the bike. Check the cable doesn't get caught on the top of the fork when the steering is moved from left to right.

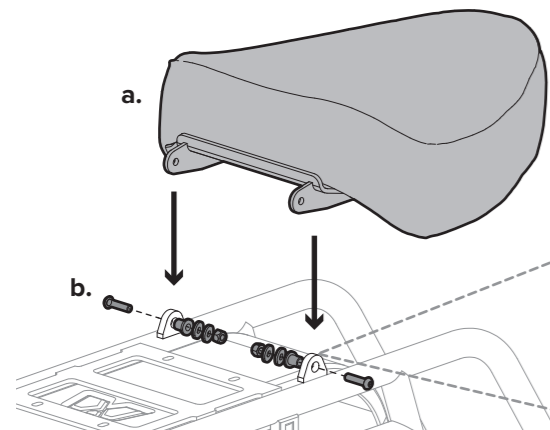


- b.** Secure the horn cable and light cable together, using two of the supplied cable ties. Attach one at the top of the cables and one part way down. Ensure the steering range is not limited due to the cables being tied too tight.



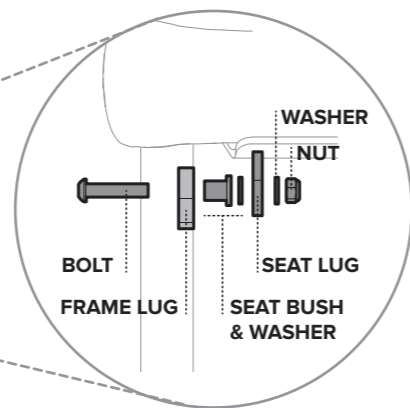
Step 5: Seat

a. Lower the seat onto the seat mounting plates located on the top of the frame.



b. Fasten the seat to the plates with fasteners in this order, from the outside in:

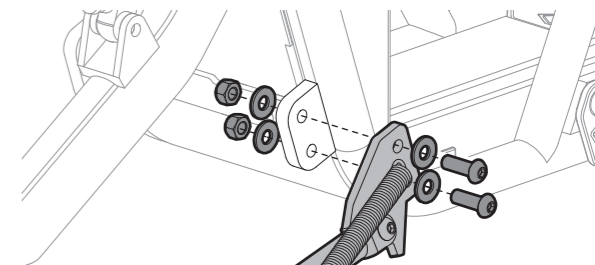
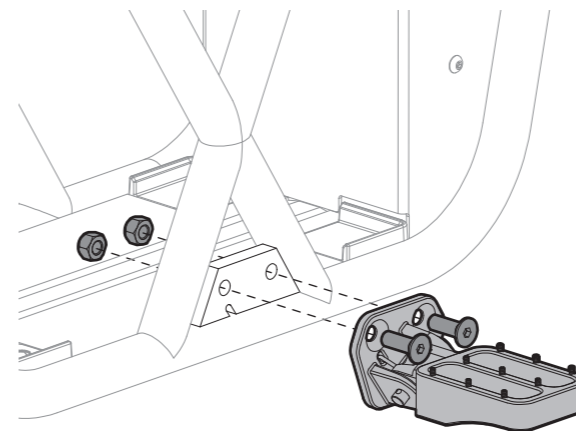
M6 x 25mm bolt, frame lug, seat bush, M6 washer, seat lug, M6 washer, M6 nut.



Step 6: Foot Pegs

Using M8 x 25mm bolts and M8 nuts, install the foot pegs to the mounting plates on the frame.

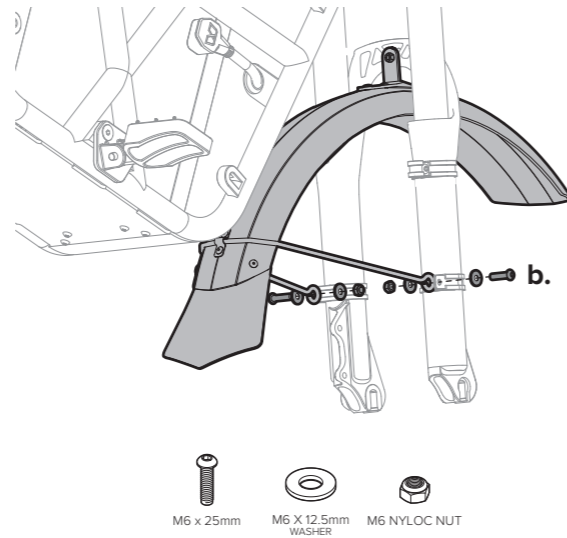
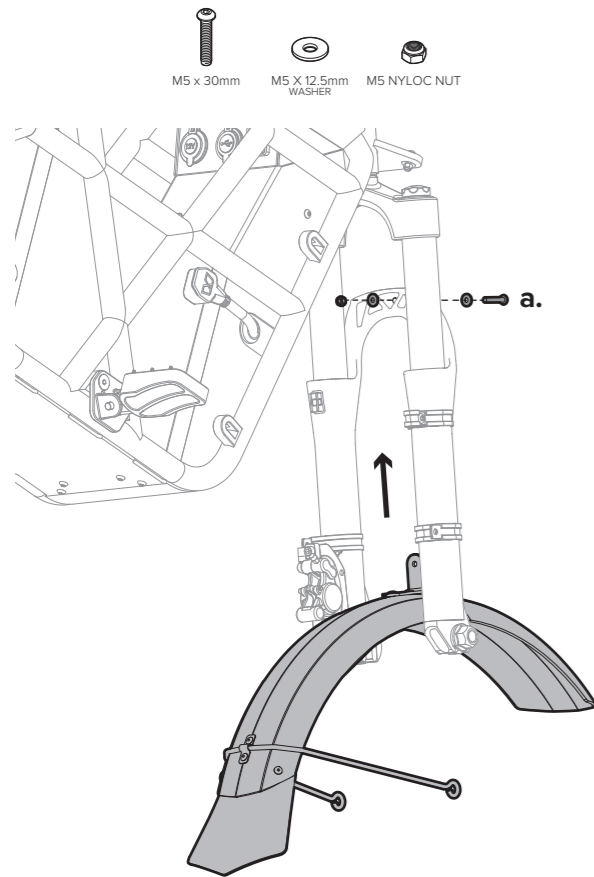
The foot pegs are sprung. If installed properly, they will retract towards the rear of the bike.



Step 7: Kick Stands

Using M8 x 25mm bolts, M8 washers and M8 nuts, attach the side kick stands to the mounting plates on the frame.

Ensure the correct kick stand is installed to the correct side of the frame, with the spring facing outwards. The kick stand will spring into place in either the stowed or engaged position.



Step 8: Front Mud Guard

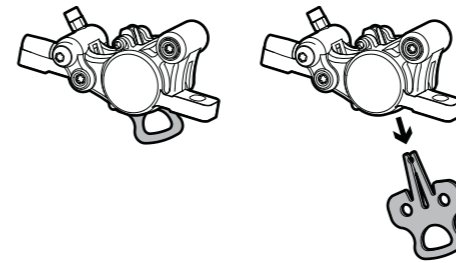
- Insert the front mud guard between fork lowers. Using one M5 x 30mm bolt, two M5 washers and one M5 nut, bolt the top mount plate to the bridge.
- Using M6 x 25mm bolts, M6 washers and M6 nuts, fasten the stays of the mud guard to the fork lowers.

Step 9: Rear Wheel

TIP: It is helpful to have a 10mm spanner on hand to help with aligning the motor axle with the dropout during wheel installation.

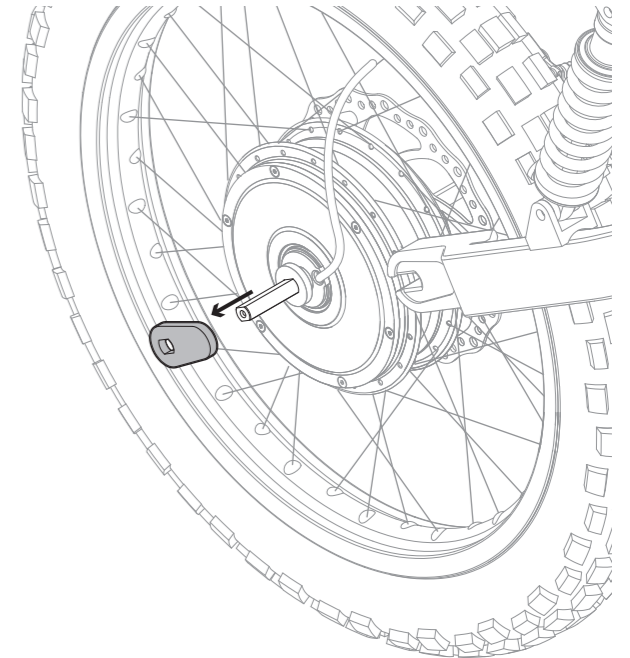
- Remove the brake calliper spacers from the rear brake callipers. **Avoid activating brakes until wheels are installed.**

If you intend to remove the wheels for transport, keep the spacers somewhere safe.



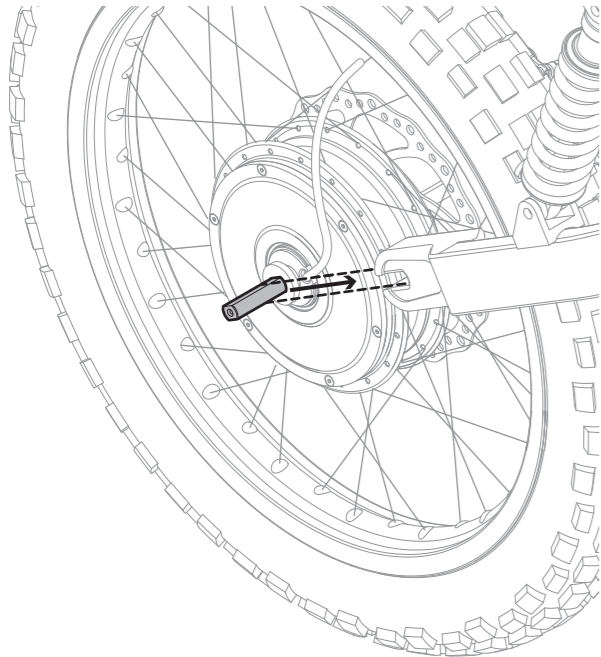
- Position the rear wheel in between the swing arm lowers on the rear of the bike. The brake disk should be on the left-hand side of the bike. Ensure the two 5mm washers are positioned hard against the shoulders on either side of the wheel hub.

- Remove the two torque arm plates from the rear wheel axle and set aside.

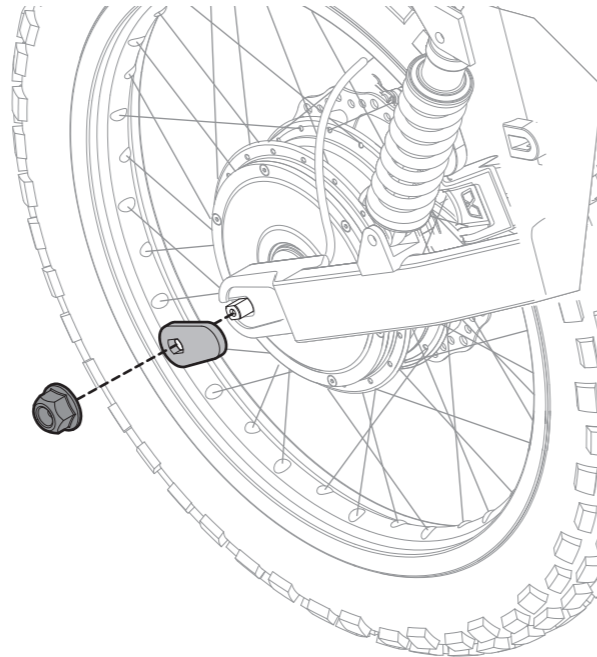


Step 9: cont'd

- d. Slide the wheel into the dropouts ensuring the flat faces on the axles match the flat faces on the dropout and the cable from the motor is exiting towards the front of the bike.



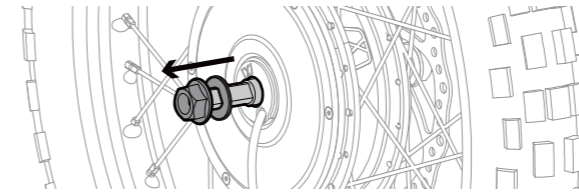
- e. Once the wheel is installed, re-install the two torque arm plates and fasten the plates to the dropouts with the provided M14 nuts.



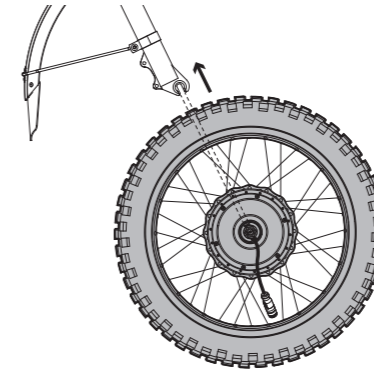
Step 10: Front Wheel

TIP: It is helpful to have a 10mm spanner on hand to help with aligning the motor axle with the dropout during installation.

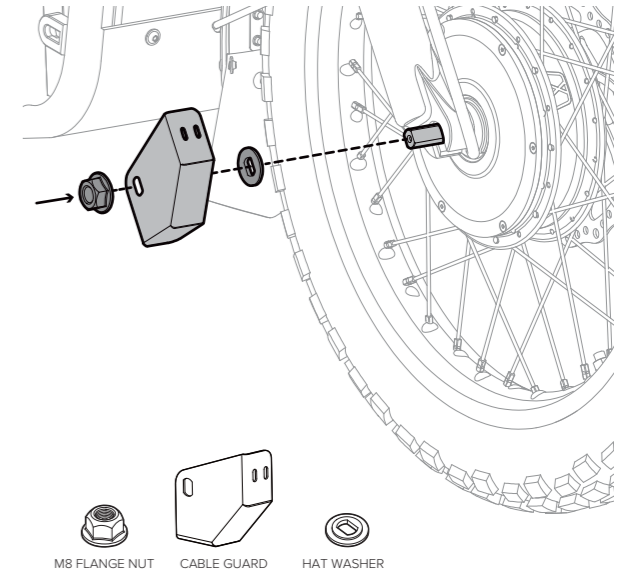
- a. Remove the nut and hat washer from the axle on either side.



- b. Slide the wheel into the fork ensuring the flat faces on the axle line up with the flat faces of the slot. Ensure the cable from the motor is exiting to the bottom of the wheel.



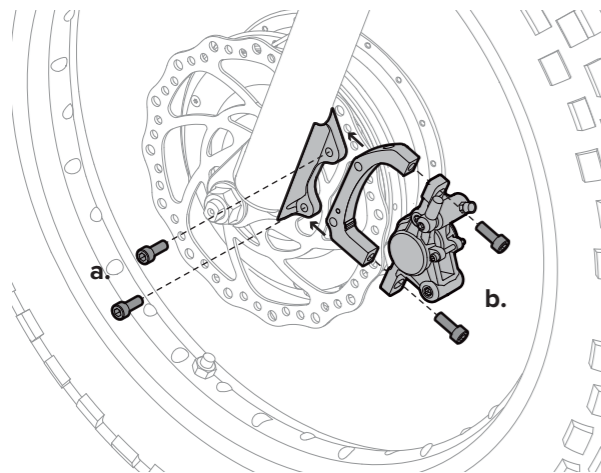
- c. Re-install the hat washer onto the axle, ensuring the flat face is facing outwards. Bend the motor cable up towards the front of the fork. Fix the cable guard onto the right-hand axle and reinstall the nut on the axle. Tighten the axle nuts with a torque wrench to 80Nm.



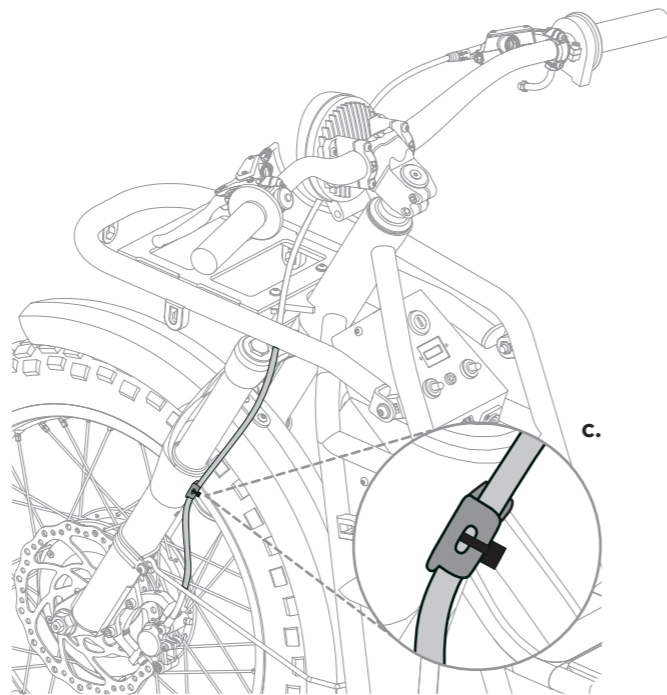
Step 11: Front Brake Calliper

Remove the brake calliper spacers from the front brake callipers, in the same way as instructed in Step 9a.

- Attach the front brake calliper to the mounting detail on the front fork using the supplied M6 x 18mm bolts.
- Align the calliper to the front brake rotor and fasten the two M6 x 18mm bolts.



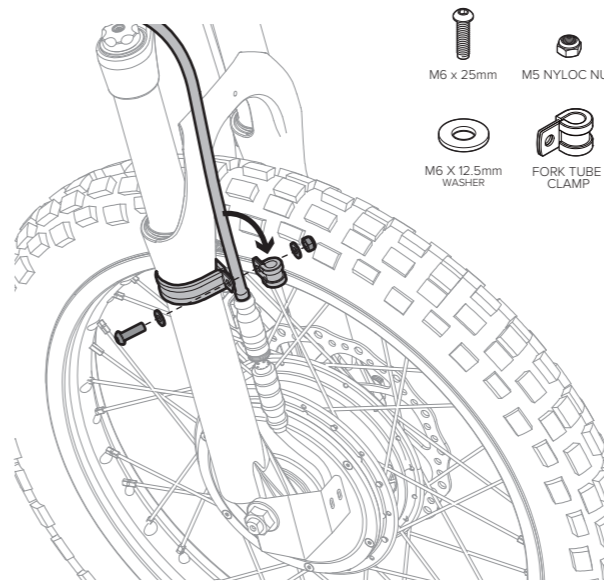
- Fasten the brake line to the cable tie detail on the fork leg ensuring the brake line is not forced to bend unnaturally.



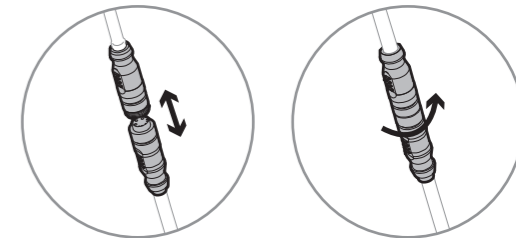
Step 12: Motor Cable Connection

Front Motor:

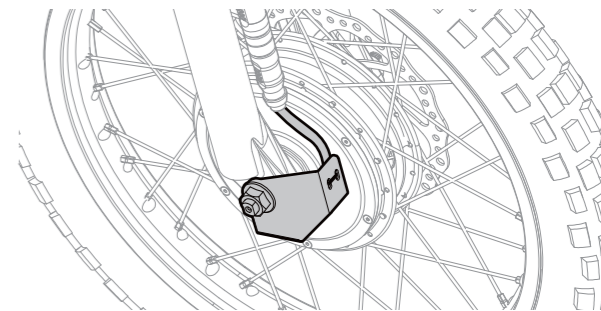
- Thread the front motor cable through the fork tube clamp. Fix the clamp onto the fork using one M6 x 20mm bolt, two M6 washers and one M6 nut.



- Plug the two ends of cable together, ensuring they are correctly aligned. Screw the two metal sleeves together to secure the plug and socket.



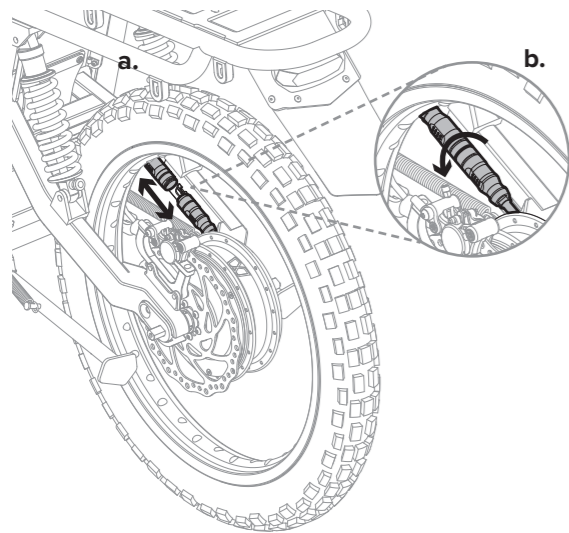
- Use a cable tie to secure the front motor cable to the cable guard through the two holes at the front of the cable guard.



Step 13:

Rear Motor:

Repeat Step 12b to connect rear motor cables.

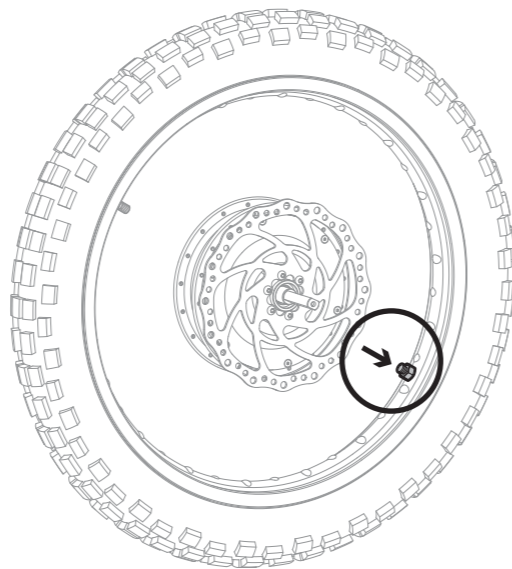


Step 14: Rim Lock

The wheels include a rim lock, which helps keep the tyre securely on the rim.

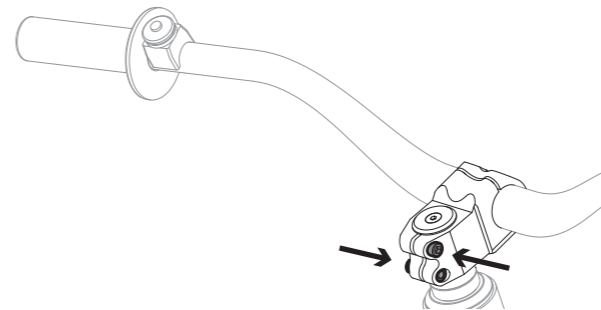
Check the tension on the M8 nut installed on the threaded bolt on the inside face of the rim, directly opposite the tyre valve. It should be tight against the rim.

Do not over-tighten the rim lock, as this can cause distortion to the rim.



Step 15: Steering Alignment

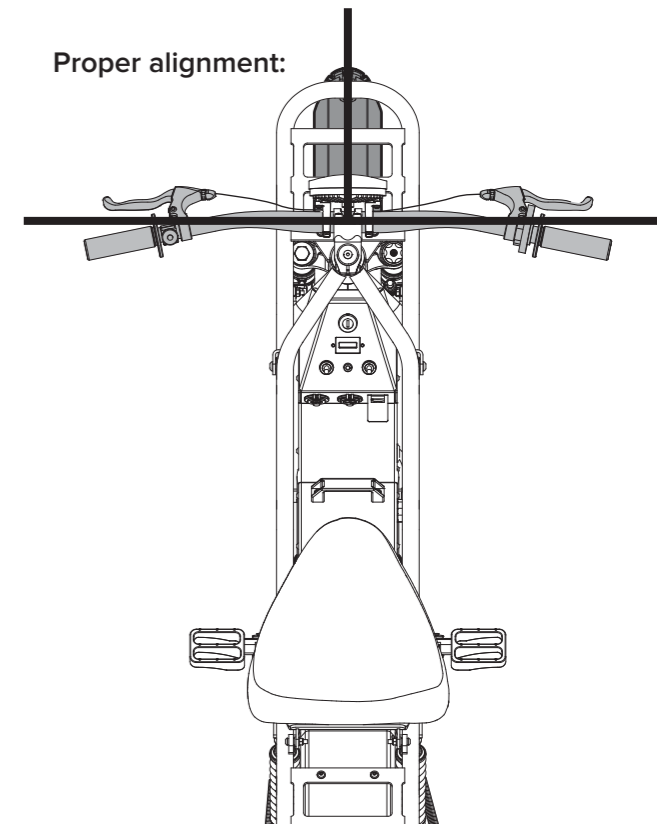
a. Locate the side bolts that hold the handlebars on the stem. Loosen them enough to allow the handlebars to rotate without turning the wheel.



b. Sitting on the bike, align the handlebars so they are perpendicular to the wheel. Once the handlebars are aligned, tighten the two bolts slowly, alternating between the left side and the right side; tighten to the setting specified on the headset.

Note: Tightening the bolt on one side fully before tightening the other side can damage the threads and put strain on the bolts.

Proper alignment:

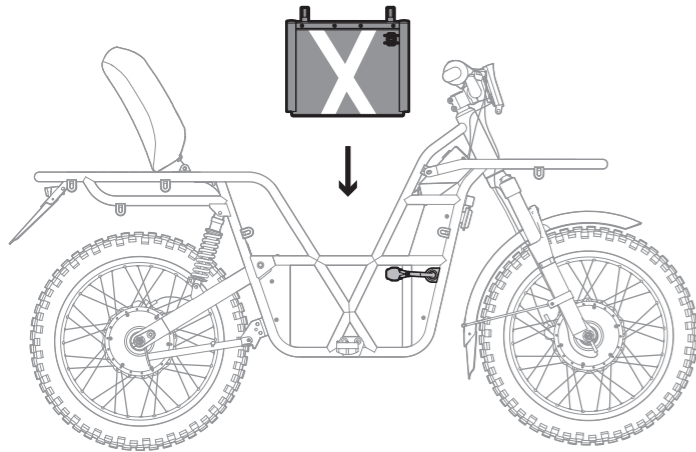


Step 16: Battery

Stand the bike upright or remove it from the stand or block. Engage the kickstand so the bike can stand on its own. Lift the seat of the bike.

Lower the battery into the bike with the socket on the right-hand side of the bike. **Do not drop the battery into the bike from a height.** Ensure the socket is clean. Plug the bike cable firmly into the battery socket.

Turn the key to ACC to check the battery charge.

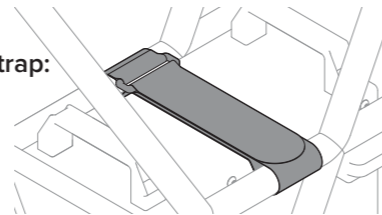


Attach the battery strap:

- Slide the round end of the open strap under the left-hand bar with the Velcro facing up.
- Holding the clip in place above the left-hand bar, pull the strap across the battery and slide it under the right-hand bar.
- Bring the round end back across the battery and thread it through the clip, from bottom to top.
- Secure the Velcro closed so that it lies flat on top of the battery, keeping the clip close to the left-hand bar. Ensure battery is tightly secured.



Finished strap:



Final Checklist

- Turn the bike on to check battery level. The battery level indicator should light up on the console. There won't be any sound or vibration to indicate the power is on.
 - » If the bike doesn't turn on, check the battery plug is firmly inserted in the socket on the battery.
- Ensure wheel nuts are tight (Step 14).
- Check motor cables are attached and secured.
- Check the brakes function properly.
- Check the kickstands function properly.
- Ensure the seat clips are securely engaged on the frame.
- Pump up the tyres according to your cargo.
- Familiarise yourself with the following Section 04: Riding the 2x2 and follow the pre-ride inspection before riding.

If anything goes wrong with assembly, please contact your service provider or contact Ubco Ltd via www.ubcobikes.com.

Load Tyre Pressure

RIDER + CARGO	FRONT (PSI)	REAR (PSI)
75kg	20	20
100kg	20	25
125kg	25	30
150kg	33	33

04

RIDING THE 2×2

The 2×2 is a unique bike, differing largely from the standard farm bike or quad. Make yourself familiar with all the components before you take the 2×2 out for a spin.

Pre-ride Inspection

You should perform a pre-ride inspection each time you ride to ensure all parts are in full working order.

Mentally check off each of the following before riding the 2×2:

- Lights, front & back – check they are working.
- Battery – ensure there is enough charge to carry out your travel, activities or work.
- Tyres – check condition and pressure (see guidelines on page 31). Tyres are interchangeable and can be swapped if required (details on page 48).
- Brakes – check they are operational.
- Check for any loose nuts, bolts and/or fixings.

General Riding

Do not 'wheely' or jump the bike. This can damage the hub motors, causing gear shock when the motor accelerates rapidly in the air and then decelerates instantly when it hits the ground again.

The Ubco 2×2 has been designed to be a workhorse and is not a Motor Cross (MX) bike. Rather, it has been designed to be lighter and more functional. Using the 2×2 like an MX bike may damage the drive system. If you are unsure about the type of riding you are doing, please check with your service provider or the team at Ubco and we can advise you.

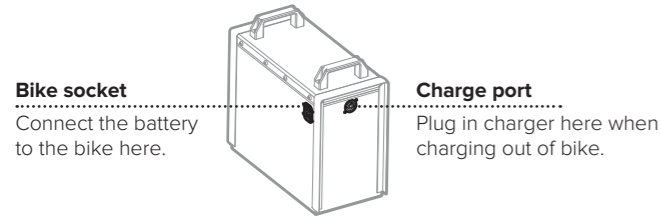
Riding in the wet

Battery, motors and electrical components are protected against mud, heavy rain, surface water and shallow water crossings. They are not protected against submersion and the bike should not ford water deeper than the wheel axles.

Lithium-Ion Battery

A battery socket is located on the right-hand side (when sitting on the bike) of the battery case.

Charge ports are located on the front of the battery and on the right side of the console.



⚠ It is important that the plug, socket and charge ports stay clean and in good condition to operate properly.

Battery on arrival

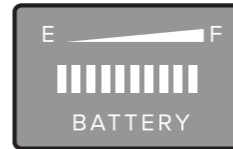
The battery will come half charged. There is no need to fully charge the battery before the first use but we do advise you charge it overnight after your first day of riding.

When placing the battery into the bike, lower it in slowly, then attached the battery strap (See Assembly Step 16: page 30). Do not drop the battery into the bike from a height.

How to check battery life

To check the capacity of your battery, ensure the battery is plugged into the bike and turn the key to ACC or RUN. The battery meter display on the console will indicate the charge state of the battery. The battery can be charged either when installed or uninstalled from the bike.

The battery meter is an approximation of the battery life remaining. The lights will flash or the display will delay if the charge is too low.



BATTERY LEVEL INDICATOR

How to charge the battery (in bike)

1. Turn off the bike at the key switch and remove the key.
2. Plug the provided charger into any standard wall socket and switch on at the wall.
3. Plug the charger into the battery charge port on the 2×2 console and twist to lock.
4. The LED indicator lights will signal:

GREEN: Battery is Full or Disconnected

RED - Solid: Charging

RED - Flashing: Charge Error

- » Disconnect charger from bike and wall socket. Reconnect. If flashing persists contact your service provider.

The charger has two settings: Max and Normal. Max charges the battery to 100% capacity, but in turn, stresses the battery cells. Using this setting often will reduce the life of the battery; it is useful when you require maximum range from your battery.

Normal is recommended for day to day charging and will charge the battery to a little less than full capacity; this will ensure greater battery pack life.

⚠ CHARGER WARNING:
Keep away from sparks / flame.
Install a smoke alarm near your charging area.
Do not charge if cables, charger or battery are damaged.
Use charger in dry, indoor conditions only, with adequate ventilation.

Removing the Battery

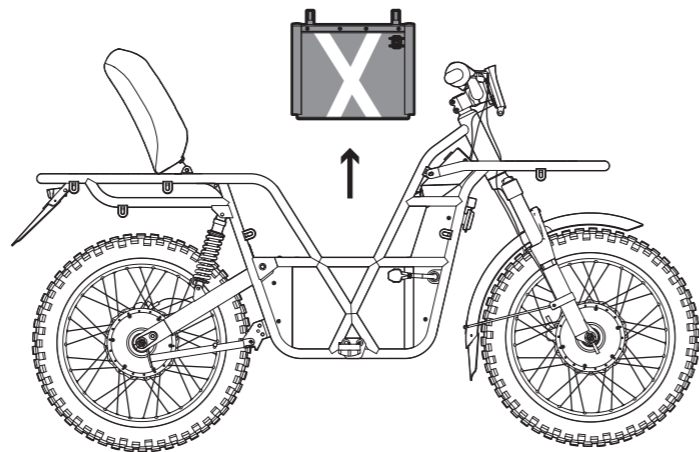
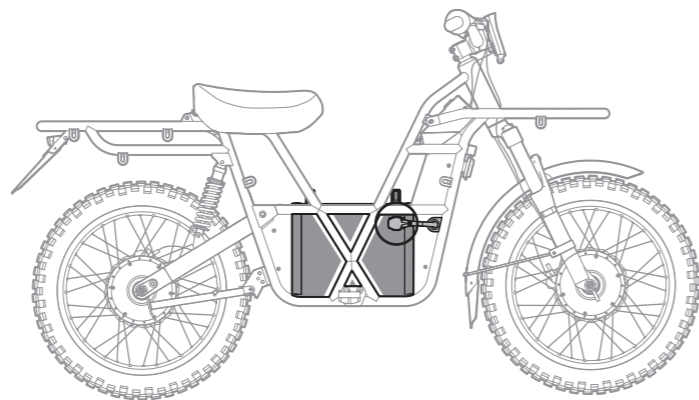
The 2×2's battery is interchangeable, meaning no downtime when working with the bike. Extra batteries can be purchased from Ubco Ltd.

The battery can charge while it is installed in the bike or when removed from the bike. Removal is not required for charging.

To remove the battery

1. Turn off the bike at the key switch and remove the key.
2. Unplug the battery from the bike. The socket is located on the right-hand side of the battery.
3. Remove the battery strap.
4. Lift the seat. Lift the battery out of the bike with two hands
5. Store the battery on a stable, cool, dry surface.

⚠ Never store the battery in an uncharged state. Doing so can void the warranty. Always top up after use.



How to charge the battery (removed from bike)

1. Turn off the bike at the key switch and remove the key.
2. Remove the battery from the bike and place it on a sturdy, dry, non-flammable surface.
3. Plug the provided charger into any standard wall socket and switch on at the wall.
4. Plug the charger into the charge port on battery and twist to lock.
5. The LED indicator lights will signal:

GREEN: Battery is Full or Disconnected

RED - Solid: Charging

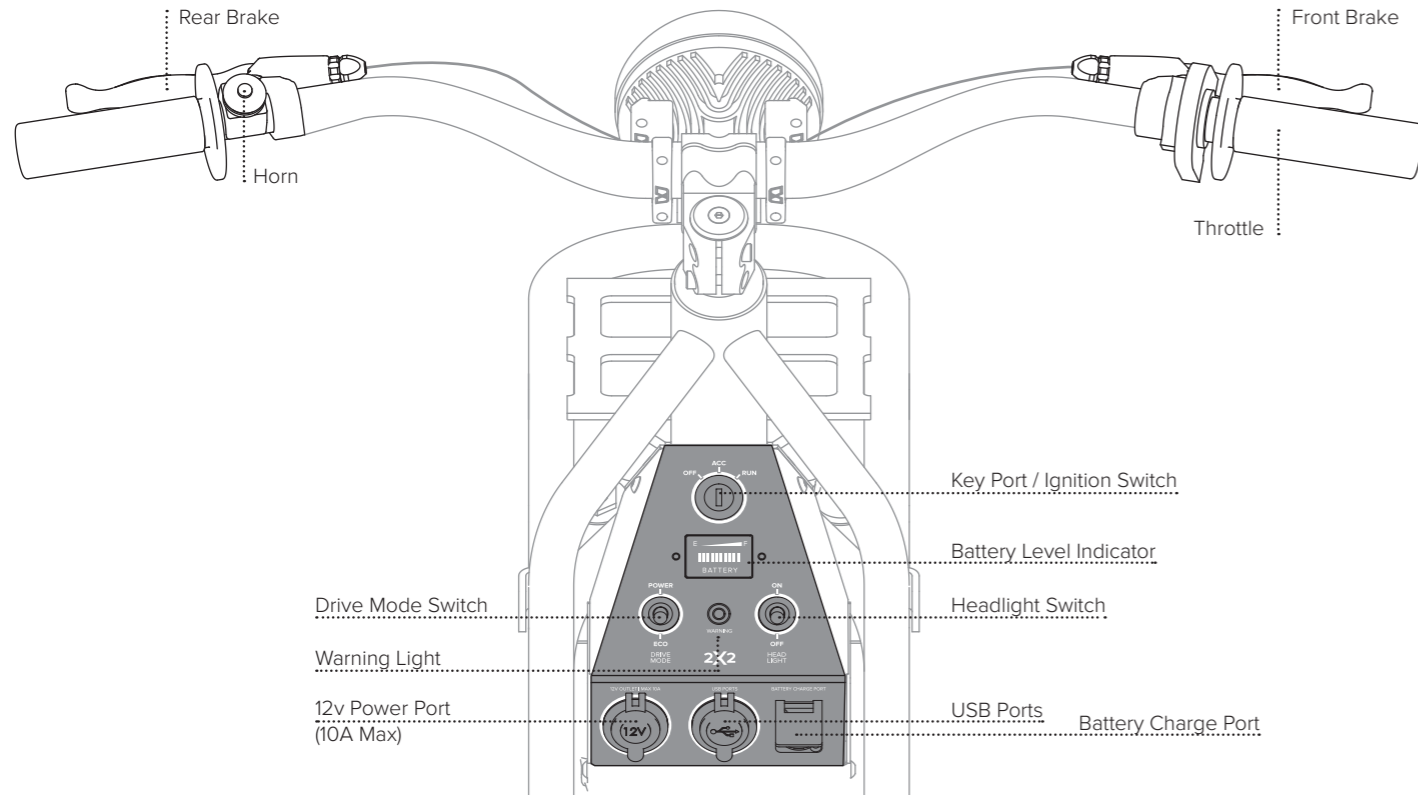
RED - Flashing: Charge Error

- » Disconnect charger from battery and wall socket. Reconnect. If flashing persists contact your service provider.

Battery care when charging

- Keep your battery topped-up. Charge your battery overnight at least once a month to ensure the health of the battery.
- Lithium-Ion batteries do not suffer from the same charge memory problems as other batteries, therefore can be topped up at any time.
- Always charge your bike indoors and at a temperature between 0-40°C. Charging the battery outside of this temperature range could damage your battery or effect performance and life span.
- Store the battery in a cool place indoors.
- Due to a low fire risk, always charge the battery in a non-flammable environment (on a concrete floor, steel shelf, etc).
- If storing for an extended period, ensure the battery has between 50% and 90% charge. Storing the battery with either full or too low a charge can cause cell damage, reducing battery life.
- See Section 01 for battery safety.

Console View



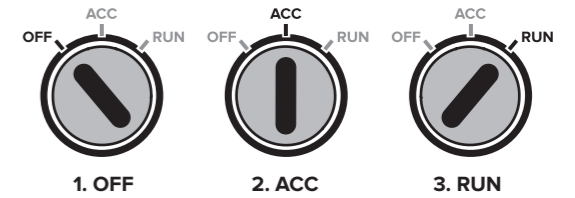
Powering the 2x2

The 2x2 is equipped with a three stage key switch. Due to the electric drive, you will not hear a sound when the bike is turned on. The battery meter display will illuminate on the console of the bike and you are good to go.

Position 1: OFF

Position 2: ACC – the low current accessories are now active (lights, horn, USB port and 12V outlet).

Position 3: RUN – the bike can now be ridden.

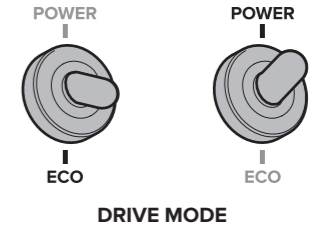


Drive Mode Switch

This switch controls power output of the motors.

Switch Down: Eco – Low Power; helps save battery charge, speed limited.

Switch Up: Power – Full Power and Speed; best for steep or difficult terrains.

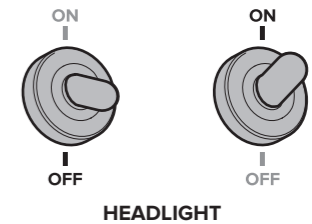


Headlight Control

This controls the high intensity LED headlight:

Switch Down: Off

Switch Up: On



Riding

Accelerating

To accelerate, twist the throttle grip towards you. There are no gears or clutch on the 2×2, so the throttle controls all acceleration from start to maximum speed (excluding gravity).

To maintain a constant speed you must hold the throttle in a constant position. If you let go of the throttle, it returns to neutral position and the 2×2 is no longer under power.

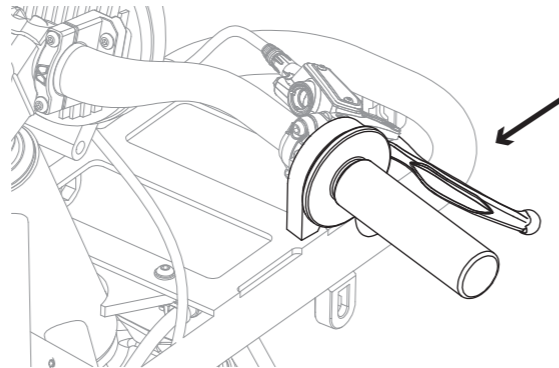
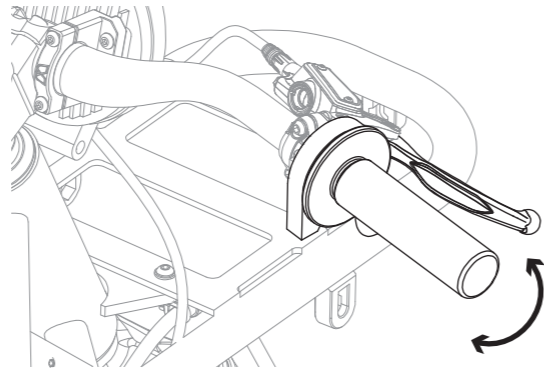
Note: Do not continuously power the throttle when the bike is held stationary, as this can damage the bike.

Braking

To brake or slow down, allow the throttle to return to neutral position and apply the brakes via the brake levers on the handlebars: left = rear, right = front.

The electric drive motors do not provide any braking assistance. Brakes can get hot with extended braking. On a long descent, rest the bike for 5 minutes to cool the brakes.

For recommended load limits and riding gradients, see Section 01: Safety.

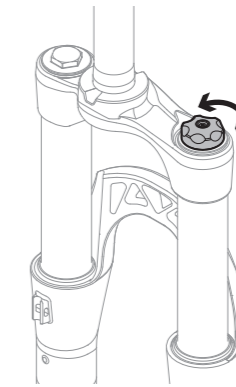


Adjustable Suspension

Front:

The front forks have adjustable rebound dampening control that controls the rate the suspension re-extends after an impact.

This feature can be adjusted on the top right-hand side of the fork crown. Twist the dial clockwise to slow the rebound; counter-clockwise speeds it up.



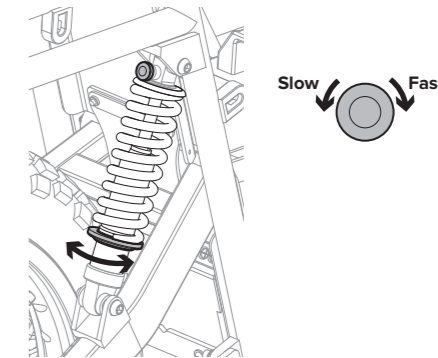
Rear:

The 2×2's rear suspension comes set to an average user setting but can be adjusted.

Wind the disk at the base of the spring clockwise to lessen the spring force and make the suspension softer. Twist counter-clockwise to increase the spring force and make the suspension stiffer.

The rear forks also have adjustable rebound dampening control. It can be adjusted using the red dial at the top of the spring. Twist the dial counter-clockwise to slow the rebound; clockwise speeds it up (this is opposite to the front fork).

The rear suspension and rebound dampening control should be set equally on both sides.



Warning Light

The warning light will signal that there is a problem by flashing a series of codes. Stop the bike, hold it stationary and follow the solution indicated by the flash code. If flashing does not stop, or the code is not listed, discontinue riding and contact your service provider.

PROBLEM	FLASH	CODE	SOLUTION
Motor Hot	—••••—•	Long, 5 short, long, short	Slow bike or rest.
Motor Overheat Shutdown	—•—••	Long, short, long, 2 short	Turn bike off. Wait 10 minutes for motor to cool down. Clean mud off motor.
Controller Hot	—••••—••	Long, 5 short, long, 2 short	Slow bike or rest. Clean mud from front of bike.
Controller Overheat Shutdown	—•••••	2 long, 4 short	Turn off bike and rest 10 minutes. Clean front panel behind front wheel.
Low Voltage	—•••••••	2 long, 6 short	Check battery plug. Charge battery.
Motor Sensor Fault	—•••••	2 long, 5 short	Check motor plug is clean and connected. Check motor cable for damage.
Power Surge Protection	—•—•	Long, short, long, short	Turn key off, then on.
Throttle Communication Fault	—•—•••	Long, short, long, 3 short	Contact your service provider.

Loading up your bike

The 2×2 is unique in featuring 16 accessory lugs on the frame, plus three on the front carrier, for attaching tie downs, mounts and other accessories. This will allow you to adapt the bike to suit your needs. These lugs have been positioned strategically on the frame to provide maximum flexibility.

Do not load the front carrier over 20kg.

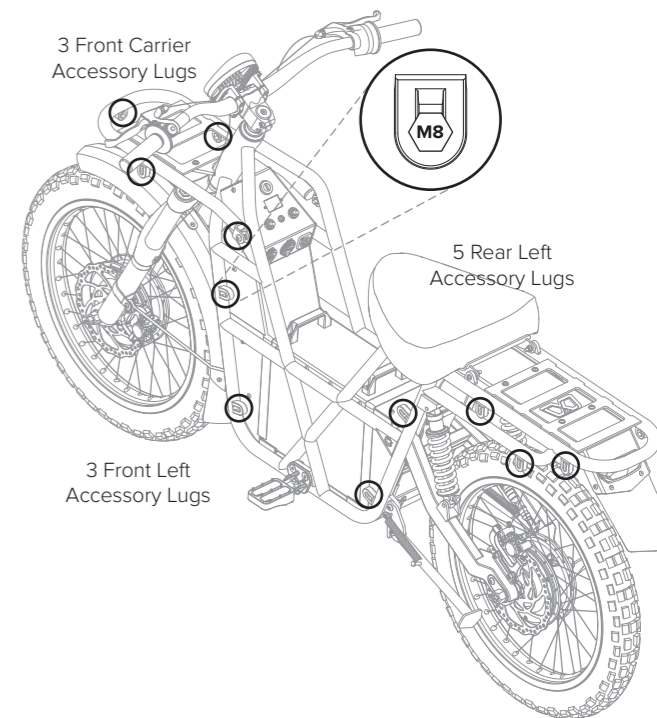
The accessory lugs use standard M8 bolts. They contain a cavity to house an M8 nut, preventing it from spinning as the bolt is tightened or loosened.

Check your tyre pressure aligns with the load guidelines on page 31.

⚠ To ensure a safe ride, always load up your 2×2 properly.

Do not allow the load to impede the bike's moving parts or steering.

See Loading Limits in Section 01: Safety.



Charge your personal devices and tools

When out and about, you are able to charge your hand held devices and tools via outlets on the console of the bike. Be aware that charging your tools and devices will drain your battery.

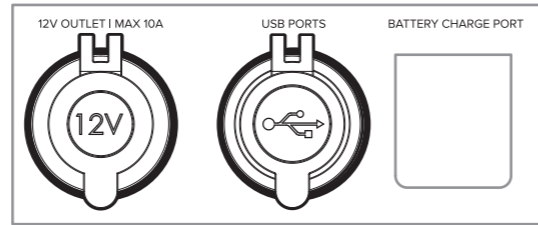
Turn the key to ACC or RUN to power the outlets.

The outlets are as follows:

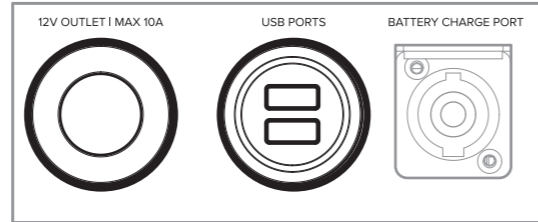
- One (1) 10A (car style) power port for charging any 12V device.
- Two (2) USB ports for charging hand held devices such as mobile phones, tablets and GPS.

⚠ Protect the outlets from external elements such as dirt and splashes. When you have finished charging, always replace the rubber caps. Avoid bumping or knocking the ports when items are plugged in.

CAPS ON

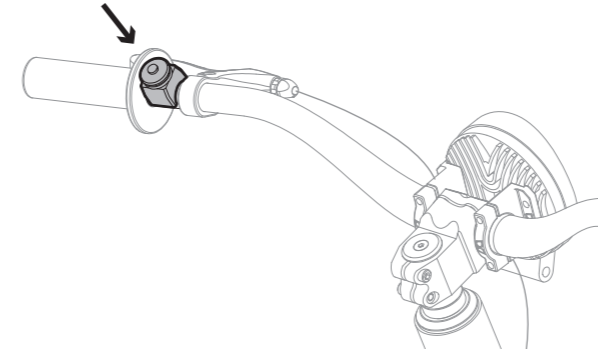


CAPS OFF



Horn

A horn is provided to allow you to indicate your presence. Press the red button to sound the horn.



Share your ride

#ubco2x2

We built the Ubco 2x2 to ride across all kinds of terrain and in all sorts of conditions. Working on the farm, hunting in the bush, fishing on the beach – the opportunities are endless.

We'd love to see how you use your 2x2, so next time you're out and about on your bike, take a camera along to snap some photos or video of your adventures.

Email us or find us on social media and share your ride with the world using #ubco2x2.

✉ info@ubcobikes.com

fb [fb.com/ubcobikes](https://www.facebook.com/ubcobikes)

ig [@ubcobikes](https://www.instagram.com/ubcobikes)

05

MAINTENANCE & CARE

Correct maintenance is important in keeping your 2×2 in good working order. Proper care means the bike will always be ready to work when you are. Only you can decide whether or not you should perform any given task – if you are unsure please contact your service provider. Before you start any maintenance, turn the bike off and remove the key.

Do not carry out any maintenance when the bike is connected to a power supply.

Service check up

Contact your Ubco certified service provider for a service check up after 6 weeks or 10 hours of riding (whichever comes first). This check up is required for warranty purposes.

Service provider:

Date serviced:

Signed:

To keep your bike in the best condition possible, the bike should also have a full service every 6 months. A small fee may apply.

A full listing of certified dealers is available online: ubcobikes.com/support.

Cleaning

Do:

- Clean your 2×2 after each day of use, especially when exposed to dirty terrain or salt water. If you are using the 2×2 in a clean environment, this may not be necessary.
- Before cleaning, turn the 2×2 off and remove the key. Ensure all power outlets, including the battery, have their rubber seals securely in place. The battery should be plugged into the bike while cleaning.
- Clean the bike with a low pressure hose and soft automotive cleaning brush or sponge.

Do Not:

- Do not water blast or use a high pressure hose on the bike.
- Do not submerge electrical parts – they are protected from the rain and splashes, but should not be left in water.
- Do not use cleaning products that are not specifically designed for cars or motorcycles. They may contain ingredients that could scratch the finish or harm components of the 2×2.

Tyres

The tyres on your 2×2 use a standard, car style valve for inflation and deflation. For standard off-road driving, we recommend inflating the tyres between 30-40 psi. See guidelines on page 31.

The tyre model is Parwin MR098 2.75x17. If you need to change your tyres, we recommend you take the bike to a shop that services motorcycles. Take this manual with you to ensure proper installation.

The front and rear tyre can be interchanged if required due to wear. Remove the collar that comes with the rear wheel and be sure to change over all spacers and covers between the wheels.

Lithium-Ion Battery

Battery performance degrades over time through the number of charge/discharge cycles. Battery capacity is estimated to drop from 100% to 70% over an average two years of use. For extra batteries, contact Ubco Ltd.

To get the most out of your battery, we recommend you keep it topped up. Lithium-Ion batteries do not suffer from the same charge memory problems as other batteries, therefore can be topped up at any time. You do not need to run it flat to recharge.

- ⚠ **Do not drop or attempt to dismantle or burn the battery.**
- ♻ **Dispose of or recycle the battery at a proper facility.**

Battery care when charging

- Keep your battery topped-up. Charge your battery overnight at least once a month to ensure the health of the battery.
- Always charge your bike indoors and at a temperature between 0-40°C. Charging the battery outside of this temperature range could damage your battery or effect performance and life span.
- Store the battery in a cool place indoors.
- Due to a low fire risk, always charge the battery in a non-flammable environment (on a concrete floor, steel shelf, etc).
- If storing for an extended period, ensure the battery has between 50% and 90% charge. Storing the battery with either full or too low a charge can cause cell damage, reducing battery life.
- Never store the battery in an uncharged state. Doing so can void the warranty. Always top up after use.

Brakes

The 2×2 includes front and rear hydraulic disk brakes, operated by levers on the handlebars.

Ensuring your brake pads are in good condition is critical to your safety. Check the brake pads regularly, especially when a lot of heavy braking has occurred.

- ⚠ **Brake rotors get hot during braking. Allow sufficient time for brakes to cool before touching or doing any maintenance.**

To replace the brake pads:

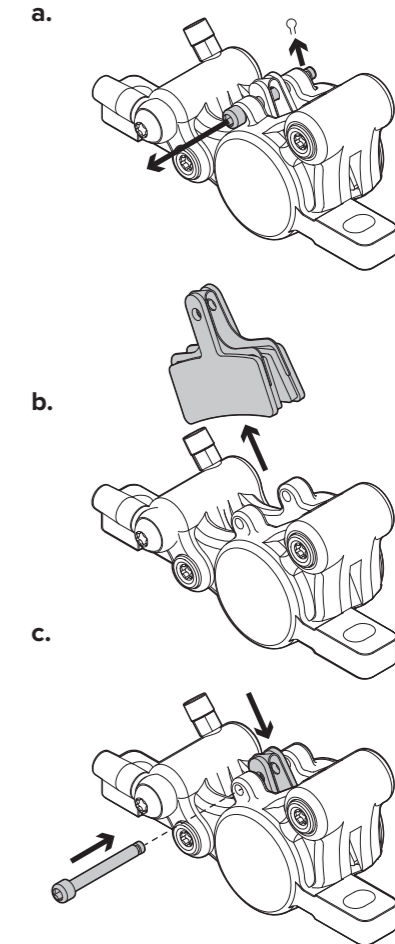
Replacement brake pads are Tektro D40.11 and are available from Ubco Ltd.

Unscrew the pin (a.) on the top of the calliper body with a number 3 Allen key, remove the end clip and pull the pin out.

Remove the brake pads (b.) from the top of the calliper and discard.

Guide new brake pads in, from the top of the calliper, until the holes line up. Do not touch the pad surface with your skin.

Re-install the fastening pin (c.) and tighten with the Allen key. Replace the end clip.



06

WARRANTIES & LEGAL

Warranties

Ubco Limited provides the following limited warranties for all new Ubco 2x2 electric bikes:

Motors

Free from defects in material and workmanship for 2 years from original retail purchase.

- Motor warranty will be voided if the motor is opened and modified by the customer. Any motor maintenance should be performed by an Ubco Certified Technician.
- The gears are considered a wear and tear item and should be regularly inspected and replaced in the event of wear; wear is related to the level and type of use.
- Planetary Gears and elements of the motor system are designed to protect the main motor. In extreme stress they may be damaged in order to protect the motor's integrity. The motor warning light will provide an indicator if something has malfunctioned.

Please contact your service provider or Ubco Ltd for technical support.

Frame

- Free from structural defects in material and workmanship for 3 years from original retail purchase.
- Warranty does not cover damage caused by over-torquing, cross threading or other damage caused by attempted repair by unauthorised service personal.

Battery

- Free from defects in material and workmanship for 2 years from original retail purchase.

Parts / Components

- Free from defects in material and workmanship for 6 months from original retail purchase.

These warranties do not apply to parts or components subject to normal wear and tear (e.g. tyres, tubes, cables, motor gears, brake pads).

Further, these warranties do not apply where:

- The bike has been used otherwise than in accordance with the instructions set out in this manual.
- The bike has not been maintained in accordance with this user manual.
- The bike has been used for an activity that is not consistent with the intended use of the bike.
- Any modifications or repairs have been made, unless approved and authorised by Ubco Limited.
- Proof of purchase is not available.

Where warranty conditions are met, defective bikes or components will be repaired or replaced at Ubco Limited's discretion.

These warranties do not detract from the guarantees under the New Zealand Consumer Guarantees Act 1993. All other conditions or warranties, which might otherwise be implied by statute or common law, are expressly excluded to the maximum extent permitted by law.

Warranty Claim Procedure

To make a warranty claim:

- All warranties must be registered via physical mail-in card or on the website with serial numbers quoted to validate your warranty.
- You must have the proof of the purchase date to make a warranty claim.
- If you purchased the bike from a dealer, please contact the dealer in the first instance. The dealer will then liaise with Ubco regarding your warranty claim.
- If you purchased the bike directly from Ubco, or cannot contact the dealer, please contact Ubco Customer Services in New Zealand on 0800 UBCO2X2 [0800 822 6292].
- You must have the original proof of purchase receipt to make a warranty claim.
- You may be asked to provide photographic evidence of the defect and/or to quote serial numbers from defective parts where visible.
- You must allow an Ubco Representative or your dealer to inspect the bike for the purpose of assessing your warranty claim.

- If your warranty claim is accepted you will be issued with a warranty approval number. This number must be retained.
- If your warranty claim is accepted, Ubco will, at its sole election, repair or replace at no charge the product or component that is proven to be defective, provided that the defective product or component is returned to Ubco or the dealer (as applicable).

Disclaimer

All information in this publication is based on the latest production information available at the time of the last version release.

Ubco Limited reserves the right to make changes at any time without notice.

Owner Responsible for Safe Use

This manual contains recommendations on the safe use of the 2x2 bike. As the owner it is your responsibility to ensure that any person using the 2x2 is physically capable of doing so and that their use of the 2x2 complies with the recommendations in this manual. If you will be using the 2x2 in a place of work, you must ensure that your use complies with any relevant safety legislation.

Ubco Limited disclaims all responsibility for any personal injury or property damage which may occur as a result of improper or unsafe use of the 2x2.

Maximum Liability

To the maximum extent permitted by law, Ubco's maximum liability in contract, tort, equity, statute, regulation or otherwise for any loss, damage or injury directly or indirectly resulting from any defect in, or non-compliance of, or use of, the 2x2 bike will not in aggregate exceed the price (excluding GST) for the bike that caused the loss, damage or injury.






Postal Address:

PO Box 16530
Bethlehem, Tauranga 3147
New Zealand




Physical Address:

25b Nature Place
Greerton, Tauranga
New Zealand

Contact Us:

 ubcobikes.com
 info@ubcobikes.com
 0800 UBCO 2X2

Social Media:

 fb.com/ubcobikes
 @ubcobikes
 @ubcobikes