

E-Bicycle Riding Guidance

Riding an e-bike is not so different from riding a bicycle, most people get to grips with riding one pretty quickly. This guidance will help you get the most out of riding your electric bicycle (e-bike). It will help you to ensure that your e-bike is roadworthy, you get maximum range from your battery, you can handle it well and are able to ride it both on road and on off road cycle ways, as appropriate.

What are the legalities of riding an E-bike?

An e-bike is a bicycle with an electric motor with a rated power output of 250W or less, which offers electric assistance as you ride. Normally you have to pedal for its motor to work. The maximum speed up to which the motor will assist is 25 km/h (15 mph). Its battery range will typically be between 40 and 60 miles. It is legal to ride on bridleways and cycle-paths like any standard bicycle. Riders must be over 14 to ride one.

You may wish to consider taking some practical riding skills training from a local Bikeability scheme where you will work with an e-cycle trainer who will check your cycle handling skills, then ride with you on some local roads to increase your skills and confidence. Check out <http://bikeability.org.uk> to find your nearest scheme.



What to check before you ride

(If, after performing the checks outlined below, you are unsure about the safety of your e-bike and are unsure how to make appropriate adjustments, do not set off but seek professional assistance.)

Brakes

- Check them before you ride. Pull the front (right hand) brake and roll the cycle forward. The cycle should stop immediately. Pull the rear (left hand) brake and roll the cycle backwards. Again the cycle should stop quickly.

Wheels and tyres

- Spin each wheel and check that it runs smoothly. Squeeze the tyre from the side wall (where the tyre is thinnest) it should feel rock hard. If you have a track pump you can pump it up to the correct pressure written in PSI/Bars on the tyre.

Chain

- Ensure that your chain is clean and lightly oiled. If you spin the pedal backwards

Attachments

- Check that the battery and console are securely connected/clicked in, that the battery key (if the e-bike has one) is safe; that the saddle, handlebars, rack, bottle cages and any other fixtures are secure. If there is anything rattling on the cycle there may be something loose.

Battery charge

- Check the console to ensure that your battery is fully charged before you head out

Fitting

- Stand over the crossbar with your feet flat on the ground. There should be clearance between you and the bike. Sit on the saddle, you should be able to reach the ground with the balls of your feet. Place a foot on the pedal with the pedal near to the ground (at 6 o'clock), your leg should be almost straight.

Fitting your helmet

- If you decide to wear a helmet ensure that it fits snugly around the circumference of your head, the straps should form a V-shape just below your ears, and the clasp should not be too tight below your chin.

Dressing for cycling

- Wear appropriate clothes for the weather. Wear layers rather than thick coats in winter and a waterproof shell in the rain. Ensure you have nothing dangling, such as shoelaces, rucksack straps or long scarves that could get caught in the chain or brakes.

CONTROLLING YOUR E-BIKE OFF ROAD AND ON SHARED PATHS

Practice the skills described below in a non trafficked environment such as a park. You may be tempted to start riding on the highest power setting, however to get the feel for the cycle start by riding your e-bike without any power. When you are comfortable begin using the electric assist at the lowest setting gradually increasing to higher power settings as you gain confidence.

Get used to the weight

- An e-bike is heavier than a standard bicycle. (it feels a little like manoeuvring a bicycle laden with panniers). Try pushing your e-bike straight and around corners to get used to the weight. Consider this additional weight while practicing the skills described below.

Getting on and off

- Squeeze the brakes, lean the cycle towards you and swing your leg backwards over the saddle. Remember that an e-bike will be heavier than a standard bicycle which will affect handling including mounting and dismounting.
- Starting, stopping and riding along: While still holding the brakes, set a pedal with the crank parallel with the downtube (at 2 o'clock), release the brakes then push down and put your other foot on the pedal as you move off. Keep your fingers covering the brakes while riding. Keep your head up looking where you are going. To stop, squeeze both brakes then put your foot down after the cycle has stopped. Remember that you can also slow down if you stop pedaling since this will stop the power assist. Take some time to get used to the speed in a traffic free environment.
- When starting using the electric assist, start in the lowest power setting. Keep the front wheel straight and avoid starting on a cambered road, on gravel or on a slope. Also make sure no one is in front of you as you set off. Be prepared for the cycle to move off quite quickly. (As noted below additional speed is an advantage for riding in traffic)
- Get used to turning corners slowly until you are used to the additional weight. (Turning at speed may cause the wheels to skid or slip)

Gears

- Use your gears on an e-bike exactly as you would on a non-powered bike. Use low gears (low numbers) when starting off and riding at slow speeds, moving to higher gears as your speed increases, dropping back to lower gears as you come to a stop. If your e-bike has a derailleur you must pedal in order to change gears.

Note: *Using a high gear at low speeds is not good for the motor and will drain the battery more quickly.*

Stopping quickly and swerving

- To stop quickly to avoid a hazard, pull both brakes sharply, brace your arms and push your body back while keeping your pedals flat. Keep the e-bike straight. Put your foot down after the bike has stopped.
- To swerve quickly around a hazard (such as a pothole) move the front wheel around the hazard but close to it to keep the manoeuvre tight. Get back to your original line as quickly as you can. Practice this at slow speeds initially until you are used to the weight.
- If you ever need to mount a curb or cross tramlines do this at a 90° angle to avoid slipping. Try and lift the front wheel up slightly as you mount a curb.

Looking all around especially behind

- Look over each shoulder riding in a straight line without wobbling. Check how far back you can see. While doing this keep pedaling so that you maintain the same speed. If you touch your shoulder with your chin you will be able to see more.

Signaling

- Check over your shoulder before signaling. Signal with your arm at 90° from your body with your palm facing forward. Ensure that your brakes are covered with your other hand. Practice slowing down using your brakes while signaling. Practice looking back and signaling at the same time.



Sharing space off-road with walkers and other cyclists

- People walking (or cycling slowly in front of you) have priority - only pass them when there is room. Pass them wide and slowly. Consider remaining behind riding slowly or even getting off to push if there is no room to pass. Consider whether or not it is appropriate to ring a bell, you can always say "excuse me".

RIDING ON ROADS

Start riding on road only after you have mastered the e-bike control skills outlined above. If you are still focusing on these basic skills while on road you will not be able to give your full attention to sharing the road with drivers. Start riding on roads with low speeds and low traffic density. (This guidance assumes that you have a basic understanding of the Highway Code such as who goes first in different situations.)

Road position

- Ride in the stream of moving traffic when you can match the speed of the moving traffic or need to in order to minimise risk (as described below). Using the electric assist you may be able to ride in the traffic stream where you will not only be more visible but will avoid many kerb-side hazards such as people stepping off the kerb. This will be easier where the speed limit is 20mph, where road calming measures are in place, or where traffic is moving slowly due to congestion.
- Where you are unable to match the speed of the traffic and there are no curbside hazards you could ride to the left of the traffic stream, where you are still visible, out of consideration to faster drivers.
- Never ride in the gutter.

Ride in the traffic stream / the centre of a lane in the following circumstance

- When passing parked cars. Ride at least a car doors width away from them.
- When passing side roads. So drivers pulling out see you and drivers behind are less likely to overtake.

- Where the road narrows. To prevent drivers overtaking too close.
- On approach to junctions. So drivers remain behind, one vehicle moving through a junction at a time.
- When filtering to turn right off multi-lane roads. So you are visible and ensure drivers give you space to move
- When moving around roundabouts and gyratory systems. To ensure you are visible and to minimise the chance of drivers squeezing past.

Passing stationary or slower moving vehicles

- Where roads are congested it is possible to enjoy the benefits of being in an e-bike by filtering past the traffic jam. While many people on cycles tend to pass on the left side nearer the curb, it is less risky to pass on the right side (in accordance with the Highway Code). Passing to the right means that you are more visible to drivers that you are passing (since many check their right hand mirrors more). You will be visible to oncoming vehicles. You can move into a gap between the slower moving vehicles should an oncoming driver need room. When filtering right, do so slowly, check for people crossing the road as you pass high-sided vehicles (such as buses) and for drivers pulling through the traffic from a side road.

Approaching traffic lights

- Using the technique described above it is possible to get to the front of the queue when the light is red passing on the right, especially if there is an Advanced Stop Line (ASL). If there is no ASL wait behind to the right of the first car in the queue. If the light goes green while you are filtering, check back at the driver behind, signal and move back into the traffic stream to go through the lights. It is also possible to filter to the left if there is a dedicated cycle lane or if there is a lot of room.

Note: ***Never filter to the left of a lorry as this may place you in the driver's blind-spot!***

Dedicated cycle infrastructure

- On-road cycle lanes may help your journey, though some may not. If a cycle lane puts you in a less visible position (to the positions described above), or is circuitous you do not have to remain in the cycle lane (though you may experience some aggression from drivers who may not understand why you are not using that lane).
- When sharing a cycle lane (or roads) with other riders who may not be riding power assisted cycles ride at their pace only overtaking when you have ample room to pass them wide. When stopped behind other cyclists remember that you can accelerate much faster than they can, especially if you have stopped in the highest power setting, so don't stop too close to them and consider starting off at their speed without the power assist!

Awareness:

- Be aware of who is on the road with you at all times including behind you. You cannot rely on hearing since many vehicles such as electric cars and other cycles are silent. Scan the road ahead anticipating potential hazards and check behind regularly even if you are not planning to turn. If you see a hazard ahead such as a parked car or side road,



look back then move right into the traffic stream early maintaining your riding line and avoiding sudden changes in road position.

- Glance behind when you do not know what is behind you so you are never surprised when a vehicle overtakes you. Doing this will also make people behind aware of you which may make them decide to hang back or overtake more carefully (since showing your face to drivers humanises you in their eyes). If you drop your hand from the handlebar and turn back you are able to really stare at a driver which is useful if you wish to prevent them passing when overtaking would be risky
- Make eye contact with someone behind, when you want to ensure you are not overtaken. Do this when passing a side road to drivers in the side road, and when riding on narrow roads to oncoming drivers to ensure that they have seen you. Make eye contact with pedestrians about to cross the road to ensure that they have seen you. Where a pedestrian is crossing the road as you approach give way to them especially at junctions

Communication

- Riding in the manner described above, positioning yourself where drivers can see you and being aware of everything around you will ensure that you are able to communicate clearly to people letting them know that you are there and what you plan to do.

Turning or changing lane

- Well ahead of your manoeuvre check behind over your right shoulder to if anyone needs to know what you are planning to do. If someone does need to know, signal to them the direction you intend to move. If moving left, check over your left shoulder before signalling left since a fellow cyclist could be passing you on your left. Signal to pedestrians if necessary. Hold the signal as long as you need to communicate your manoeuvre. You could check back while signalling to ensure the person behind has seen it. There is no need to signal if no one will be affected by your manoeuvre as it's better to keep both hand on the bars.

Final check

- Just before any turn or change of direction glance back in the direction you plan to move to check that it is still clear. Things can change rapidly on the road so while it may have been clear a few seconds before when you first looked behind it may not be know. This is especially important when turning or moving right since other vehicles may ignore your earlier signalled request and may try and overtake you as you turn.

Riding etiquette

- It is good practice to facilitate positive interactions and communications with all other road users. From the saddle of an e-bike you are more visible than a driver in a car. You can thank people and talk to them, especially to other cyclists and pedestrians. Acknowledge anyone who has been courteous to you with a wave and a smile. Should you experience a negative interaction with another road user (such as a driver hooting at you) try and ignore this and seek out a positive interaction for balance. If, however a driver has behaved in a risky manner it is worth recording details of the incident to report to the police.

Be self aware

- Being mindful of your skill level and ability will ensure that you put yourself in situations that you know you can handle. Build up your skills, and so your confidence, by giving yourself

feedback and reflecting on what you are doing well and in which areas you could improve. Observe how other people ride. Ride with friends. Consider contacting your local Bikeability scheme for a cycle lesson - even experienced riders benefit from input from someone else.

Plan your route

- There are many maps and apps available that will suggest appropriate routes to use on a cycle. Check out what is available locally to you. Your local e-bike hire / shop may have local guides and suggested routes. If you are new to cycling you may have a map in your head of your local area which you evolved as a driver or public transport user. This could be different to the map you will develop as an e-bike rider. The more you ride the more options you discover and the more fun you will have.

Enjoy the ride!

