



How to compete in your EV

Are EVs suitable for motorsport?

Absolutely! It's a myth they're only good for drag racing. The instant torque and power delivery means they're quick off the line, but also out of corners. Although they tend to be heavier than an equivalent ICE vehicle, the batteries are often situated under the floor, meaning the centre of gravity is very low, and they handle well.

Noise and environmental issues are becoming a big issue for motorsport organisers and venues, so it makes sense for those who can to start the switch now.

What can I enter?

The best place to start with a production EV is a “grassroots” discipline:

- Autocross
- Autotest/Autosolo
- Trials
- Navigational Rallying (Scatter rallies)
- Hill Climb
- Sprint

In this guide, we're going to focus mainly on hill climbs and sprints, but take a look at all of them here and see what you might enjoy doing the most:

<https://www.motorsportuk.org/the-sport/types-of-motor-sport/>

Motorsport UK (MSUK) is the official UK body responsible for licensing competitors and organisers. They cover the majority of 4-wheeled motorsport in the UK.

What do I need to do?

If you've never entered an event before, it can be a daunting prospect. Rules, regulations, licences, safety equipment, car preparation, the list is seemingly endless. Here's a step by step guide with some budgetary costs so you can see at a glance what you're in for. Motorsport isn't the cheapest pastime, but if you compete in a production road car, it doesn't have to be ridiculously expensive either. The rules are all contained in a book called “The Motorsport UK Yearbook” published each year by MSUK. It's also known as “The Blue Book”. In this guide we've referenced Yearbook rule numbers by highlighting them like this: (X X.XX) so you can look them up easily.

The latest Yearbook can be downloaded from here:

<https://www.motorsportuk.org/resource-centre/>

Step 1 - Join a club

You need to be a member of a MSUK recognised motor club to compete. This doesn't necessarily have to be the one based closest to where you live. A bigger club is likely to organise more events and also be invited to events by other clubs.

For a full list of UK clubs, go here: <https://www.motorsportuk.org/clubs-organisers/>

If you want more help deciding which club to join and how to go about it, please email us here: info@EVMUK.org

Step 2 - Get a licence from MSUK

For a club hill climb/sprint, you'll need an RS Interclub licence. This can be done online if you are a British citizen, 18 or over and medically fit. No medical is required if you don't have a health condition. You'll get it in the post within a couple of weeks.

To apply for an RS Interclub Licence, go here:

<https://www.motorsportuk.org/competitors/competition-licences/>

Step 3 - Get an EV Passport for your car (not needed for Autotests/Autosolos)

(J 5.22.1) This is a document issued by MSUK to ensure it's safe to compete and isn't modified outside the regulations. It's currently required for standard and production EVs entering any speed event other than an Autosolo or Autotest. No inspection is required following a recent rule change..

To apply for an EV Passport email: technical@motorsportuk.org

Step 4 - Enter an event

You can't afford to wait too long to enter an event after it's been announced, so once you've joined a club and got your licence, it's probably best to get your entries in! Some events fill up within days of being announced. You can find events through your club or one of the many associations around the UK.

The amount of actual driving time you'll get will vary, but with a speed event you'll usually have a couple of timed practise runs in the morning followed by 2 or 3 runs to count in the afternoon. With speed events such as hill climbs and sprints, it's possible for two people to share a car, which helps spread some of the costs.

Step 5 - Safety Equipment

If you're competing in a standard production car, you don't have to fit a roll cage, fire extinguisher or special seat belts, but you will need to be wearing the correct clothing and a helmet.

Helmet – (K 10.1) This needs to be to a specific standard and carry the MSUK approval sticker (normally applied at your first event by a scrutineer).

Overalls/Gloves - If you're competing in a sprint or hill climb in a 'standard' car the use of flame-resistant overalls and gloves is recommended but isn't mandatory (S 9.2.1.1). but you must have arms and legs covered. However, due to the way a 'standard' car is defined (S 11), it's unclear whether production EVs qualify for this class. We recommend speaking to the event organiser about this. Autosolos and autotests usually don't require overalls, gloves or helmets to be worn but always check with the organiser first.

If you're not in a 'standard' car as most EVs won't be, you'll need flame-resistant overalls and gloves as a minimum. The current approved standards for hill climbs and sprints (for a road car) are:

- BS6249 part 1 Index A or B (but not part C).
- BSEN533
- EN533:1995 Index 3
- ISO 14116
- FIA 8856-2018
- FIA 8856-2000
- FIA 1986 Standard

Competitors are also advised to wear flame-resistant socks, balaclavas and underwear. Plastic shoes (such as trainers) should be avoided.

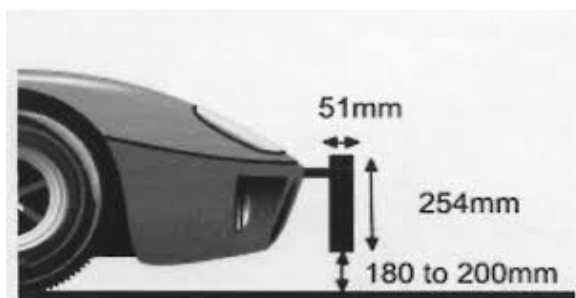
There are several suppliers of clothing and helmets who can help you with sizing and making the right choices for the type of motorsport you want to take part in:

- <https://gsmperformance.co.uk/>
- <https://www.gprdirect.com/>
- <https://www.hedtec.co.uk>

Step 6 - Preparing your car

If you're entering a speed event in a road going car, there isn't much you need to do. In the production car classes, modifications are deliberately limited to keep costs as low as possible. Here are a few things you will need to do to meet the regulations:

Timing strut – (S 10.10) In a hill climb, sprint or other events where a light beam activates the timing equipment, your car needs to be fitted with a beam breaker. This can be home made or you can buy them online quite easily. They have to comply to specific measurements:

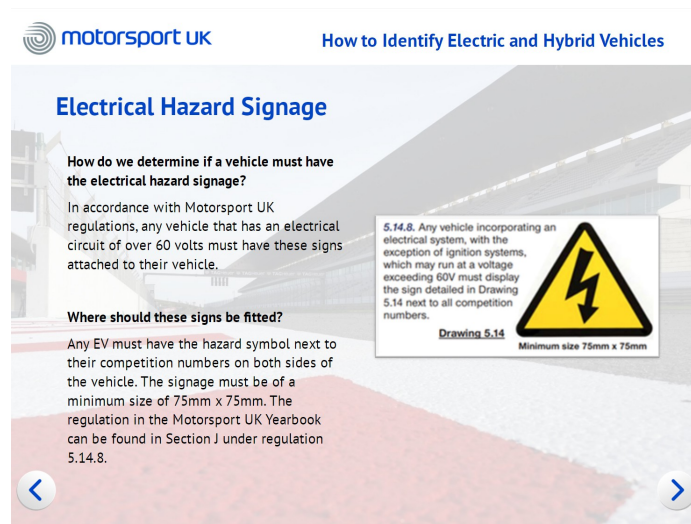


Example: <https://compositemap.co.uk/p/msa-timing-strut-with-90-degree-bracket>

Towing Point(s) - (S 10.2.15) If your car stops on the course for whatever reason, the marshals need to recover it, so you'll be required to have front and rear towing points clearly marked. If your car doesn't have a rear towing eye as standard, you should mark any point of adequate size and strength you would want the vehicle to be towed from. Some EVs should not be towed in Neutral or at all. Make sure you know how to advise marshals should they ever need to tow your car, even for a very short distance.

Stickers - You will inevitably need to stick a few things on your car for the event:

- Your competition number on each side of the car. (Some events may also require your number on the windscreen or bonnet too). (J 4)
- EV warning stickers (J 5.14.8) - Buy at least 3.



- Championship/club/event sponsor stickers as required (usually supplied by the championship or club)
- Usually an ignition on/off label next to the ignition key switch is required. What this means for EVs without an ignition key we don't know yet, but if you have a 'first responder loop' on your car somewhere make sure it's clearly labelled so a marshal can find it and cut it easily if they have to.
- We also recommend you print out and have available a copy of the first responder safety information EV manufacturers publish. You'll need this for when you get your EV Passport. For example, Tesla's information can be found here: https://www.tesla.com/en_GB/firstresponders?redirect=no

Tyres/tyre pressures - You won't be allowed to use racing slicks or special track day tyres on a production car, so you probably won't need to budget for special tyres. Tyre wear at a speed event will be minimal, because of the limited number of runs you'll be doing. Refer to each event's regulations to find out which tyres are permitted if you do want to look at changing them.

The only 'setup' change you can make to a standard production car is the tyre pressures. There may be benefits in using a different pressures from the manufacturer's recommendations. If in doubt, ask some other competitors what they recommend.

Brakes - Depending on the regulations, you may be allowed to use uprated brakes/brake pads. On the whole, a speed event won't be taxing your brakes much, so this really isn't something to be too concerned about. The factory brakes should be perfectly adequate for most events.

Charging - Virtually no motorsport venue has dedicated on-site charging facilities currently, so you'll need to plan your journey to and from the event carefully. A hill climb/sprint is probably the best activity for an EV because of the limited number of runs you'll get, so as long as you arrive with plenty of charge, you should be good for the day.

Use apps such as these to plan:

- <https://abetterrouteplanner.com/>
- <https://www.zap-map.com>

Step 7 - Preparing yourself

This is a big subject. How do you go about preparing yourself mentally and physically for any sport? With motorsport you need to be mentally alert, disciplined and confident both you and your car will make it to the end!

You should find a lot of information on line about how best to approach this, but here are some suggestions:

- Watch any onboard videos you can find showing experienced competitors on the track or hill you're going to be driving. Slow the video down and look carefully for the braking, entry, apex and exit points for each corner.
- If you can find the course on a driving simulator/video game, download it and give it a go. You can have as many runs as you like at home. You'll only have a few on the day itself.
- Sign up to a school/practise day. You'll gain more time from experienced instructors and driver coaching than you will from an expensive set of sticky tyres.
- Drive within your ability. Concentrate on technique, not speed, and faster times will follow.
- Have fun! This is club motorsport, not F1 and none of us are getting paid to do it, so we may as well arrive back home with our cars in one piece having had a great time.

Budgetary costs

So now you know what to do, here's the painful bit:

Autotest/autosolo Costs

Club Membership	£45 p.a.
MSUK Clubman licence	£Free
Entry Fee	£50
Stickers, numbers etc.	£10

Speed events (sprints/hill climbs)

Club Membership	£45 (approx.)
MSUK Inter Club licence (2023 cost)	£74
Entry Fee	£150 (approx.)
EV Passport (One off cost)	£22.50
Timing strut	£20
Stickers, numbers etc.	£20
Helmet example - (Hedtec)	£150
Overalls example – (OMP First S)	£200
Gloves example - (Hedtec)	£30
Boots (optional)	£50

Other Information

HSA guide on getting started in hill climbing:

<https://www.hillclimbandsprint.co.uk/allabout.asp>

For any questions you might have, please email: info@evmuk.org

Please forward this guide to anyone you know who might be interested.
Help us accelerate the acceptance of EVs into UK Motorsport.

Thank you!

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evmuk.org