Plug in electric car charging instructions

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Electric cars need to be plugged in to charge, in much the same way as a mobile phone or laptop. Unlike petrol or diesel cars, which need to be filled up, they run on electricity supplied by the National Grid.

Plug-in hybrid vehicles (PHEVs) are a mix of both - their batteries can be charged via a plug socket to run for short distances on electric power alone, but there"s also a petrol or diesel engine under the bonnet that needs to be refilled in the conventional way for longer distances.

Charging sockets on electric cars have evolved over time, but have recently started to become more uniform. Most plug-in cars now use Type 2 charger cables as standard, with one or two exceptions.

It"s possible to charge an electric car using a household three-pin plug like a laptop or mobile phone, but it isn't the most efficient method - prepare to be waiting around for hours on end - and isn"t recommended unless you have no other choice.

Home wallbox charging units are the preferred day-to-day charging solution and can cut charge times down to a few hours. For longer drives where faster charging is needed along the way, public rapid-charging stations can top up an electric car in a matter of minutes.

In the early years of electric cars, one of the biggest dilemmas surrounded the kind of charging sockets and cables they would use. While fuel pumps and octane levels have long been standardised across various countries, electric vehicle manufacturers initially developed different connectors that best suited their cars" batteries. However, in Europe there has been a big push to simplify things. In 2014, the European Commission ruled that all new plug-in vehicles and all new charging stations should feature a Type 2 (occasionally called a Mennekes) connector.

Even though new plug-in vehicles now feature Type 2 sockets as standard, a single car may be compatible with multiple cables. That is to say a cable with a Type 2 connector at one end may have a different connector at the other, allowing it to plug into some power sources, but not others. Not all plug-in cars come with a Type 2 cable as standard: some manufacturers will force you to buy them separately as an optional extra.

Yes you can, but it"s not recommended. Most electric vehicles and plug-in vehicles are supplied with a home charging cable that can be plugged into a regular socket. Bear in mind that the maximum current a home socket can draw is around 2-3kW. This means fully charging an electric vehicle such as the best-selling Tesla Model Y RWD with its 57.5kWh battery will take over nine hours.

Not all sockets can supply as much as 3kW reliably: it's common for power to drop to 2kW (or lower), which will extend charging times even further. Another drawback is that sockets aren"t often near a driveway,

so you will likely have to use an extension cord. Using an extension cable can be dangerous, as drawing maximum current for a long period of time could potentially be a fire risk.

This is a single-phase socket that allows a maximum charge speed of 7.4kW. They're predominantly found on older electric cars - such as the first-generation Kia Soul - in Europe. Some home and public charging units come with Type 1 connectors, although there are no public charging stations that only provide Type 1 cables. If you have a cable with a Type 1 plug at one end and a Type 2 plug at the other, you should be able to use the vast majority of public charging points.

The Type 2 socket is the most common kind on new electric cars and on most home wallbox chargers too. Like the Type 1 socket, it allows a maximum, single-phase charging speed of 7.4kW, however it's also compatible with three-phase supplies - usually found in public places such as industrial estates - providing up to 22kW. Houses can be upgraded to three-phase, but this requires work from a qualified electrician, and is usually very expensive.

This style isn"t very popular, as it was featured on cars such as the Ford Focus Electric and other lesser-selling electric vehicles. Some public charging stations feature this connector, but they are rare.