



## VEHICLE SECURITY.

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### ***Faraday pouches can help reduce the chances of your car being stolen; we explain all***

Modern cars are full of convenience features that help make life just that little bit easier, and one of the more commonplace is keyless entry.

These systems allow you to keep your car key in your pocket or bag, with the car sensing the key's proximity to the car and unlocking it as you approach. Many keyless entry systems will also let you start the car with a button without having to use the key once it detects you are inside the vehicle.

Sounds perfect, right? Well, while keyless entry is a popular and widely fitted feature, it can also make a car more vulnerable to being stolen – something a Faraday bag or pouch can help address.

#### **What is a Faraday bag?**

A Faraday bag, pouch or box is essentially a small Faraday cage, named after its inventor, Michael Faraday.

Faraday bags block electromagnetic fields, such as those emitted by keyless entry systems.

#### **Why do I need a Faraday bag?**

Some keyless entry systems can be vulnerable to keyless theft, also known as relay theft.

Car keys with a keyless function constantly transmit a signal that the car recognises as you approach it; when the car recognises the key is close (within a couple of feet), it unlocks itself.

Problem is, car thieves know this, and can use an electronic tool that can pick up the signal from a key if it is placed near a door, window or exterior wall in your home.

This electronic box then amplifies and repeats the key's signal, which is picked up by a second thief standing close to the car with a second electronic device. This fools the car into thinking the key is close, at which point the vehicle can be unlocked, started and driven away.

Some car makers have taken steps to combat this phenomenon, equipping keyless keys with motion sensors that only activate the signal when the key is moving, or deploying more sophisticated technology that prevents the signal from being cloned.

But some of these techniques are more successful than others, and a Faraday bag, box or pouch acts as a barrier to the signal, giving an extra layer of security.

#### **How does a Faraday bag work?**

The signals sent by keyless keys are electronic, and work by sending out electrons. A Faraday pouch is effectively a metal mesh inside a fabric or leather bag, and the layers of metal absorb the electrons being sent out by the key, stopping or greatly reducing their emission, and thus giving would-be thieves no signal to clone.

#### **Is a Faraday bag expensive?**

No. Faraday pouches are relatively simple things, and can be purchased for £5 or less. Larger pouches that can hold multiple keys are a little more expensive, while Faraday boxes start at around £10.

**Is one Faraday bag as good as another?**

Yes and no. Tests of Faraday bags have found them to generally be effective at blocking signals, but the price, materials and build quality of individual bags can vary, so a little studying of online reviews can help you find a decent one.

**How do I know my Faraday bag is working?**

There are a couple of ways of doing this. If the bag is large enough, put your mobile phone in it and see if you can call it or connect a Bluetooth device: if you can, the bag is not doing its job properly.

You can also put your car key in the bag and see if the car will detect its proximity when in the bag, or try pressing the lock or unlock buttons through the bag to see if the signal can escape it.