Electrical Safety First

The UK's electrical safety experts

Using Smart Technology at Home

Your Guide to a Safer, Smarter Home

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Using Smart Technology at home

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The Smart Technology Product Safety Stakeholder Group was established by Electrical Safety First and DLA Piper (UK) LLP, in March 2019. It is a round table forum for key stakeholders to discuss and promote best practice and safety in relation to smart technology.

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Your Guide to a
Safer, Smarter Home

1.   INTRODUCTION

In 1923 the Swiss-born architect, Le Corbusier, described a house as "a machine for living in". Now, that metaphor is becoming a reality. Our home environment is evolving during a rapid period of technological and cultural change. Today, our living space can be controlled remotely by the touch of a button when using smart technology.

The focus of this guide is on 'plug-in and play' smart devices - which can simply be plugged in and set up to work straight away. For more complicated devices or smart systems, always use a professional installer and check that the installer is properly qualified to install those devices and systems.
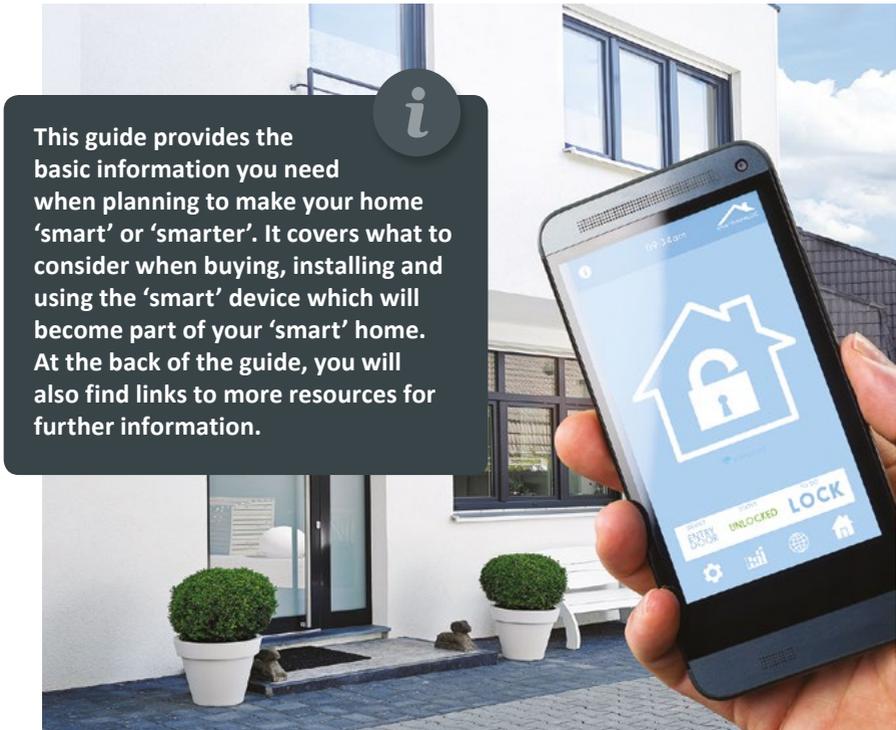
This guide provides the basic information you need when planning to make your home 'smart' or 'smarter'. It covers what to consider when buying, installing and using the 'smart' device which will become part of your 'smart' home. At the back of the guide, you will also find links to more resources for further information.

2.   WHAT IS A 'SMART' HOME?

Many people already live in 'smartish' homes, where home appliances, such as a central heating thermostat, can be controlled remotely.

Smart homes take this idea further by introducing a centralised control, allowing you remote access to a range of devices. These are underpinned by communications networks that connect the electrical appliances and services in the home and allow them to be remotely controlled and monitored.

Smart homes range from basic systems with a few plug-in devices that are easy to install, to sophisticated wireless systems that can be programmed and managed over the internet. A totally smart home often uses a central control system covering the entire house. The system can automatically monitor and maintain the devices which form part of your home 'ecosystem' and respond to your needs, whether you are at home or away.

Various products with built-in technology can be connected through a network to talk to one another, so you can control your home environment remotely. This is often referred to as 'The Internet of Things' or 'IOT'.

The key elements of a smart home are:

- An internal network (like your Wi-Fi)

- A 'gateway' to manage the system (such as a mobile phone app)

- Devices which link to services and systems outside the home (such as your smart phone or tablet).

Once available only to the very rich or the most technologically savvy, smart homes and smart devices are now entering the mainstream. There are various reasons for this, including the fact that broadband is faster, more reliable and more affordable than ever. And the improved signal range of Wi-Fi routers means a single router can now cover more rooms in a house – even those in older homes, with thicker walls – allowing more devices to be connected.

3.   WHAT ARE 'SMART' DEVICES?

Smart devices are electronic products that can connect to, share, and interact with you and your other smart devices, such as smartphones or smart watches. Even if your appliance isn't 'smart', a smart socket could turn it into a smart device, allowing you to switch it on or off remotely.

4.   THE BENEFITS OF A SMART HOME

With so many electrical devices becoming smart and having the capability to connect, if set-up and used properly, they can really make a positive difference to the home. Here are a few examples:

Convenience

Wherever you are, you can control your home environment using a smart phone (or other smart device) - as long as you are connected to the internet, with connected devices and home Wi-Fi in good working order.

Monitor, Control and Save

Smart devices can help keep track of your heating, water and electricity, so you can monitor how much you use – and spend! And if you forget to turn the lights or heating off, when leaving in a hurry, you can simply turn your smart products off remotely.

Security

Smart security cameras can provide a live stream directly to your phone. Other smart devices can also lock and unlock the door of, for example, your home or car, remotely.

Safety

You can check if an appliance has been left on - and turn off any potential fire hazards, for example - if needed. Electricity is the cause of over half of all fires in UK homes but, with a smart home, potential domestic disasters can be rapidly discovered. For example, smart home sensors can detect temperature, levels of carbon dioxide, or water leaks. They can automatically adjust the settings, or isolate (or disconnect), a product if necessary – while keeping you regularly updated. These devices (when in good working condition) could help save you and your family from electric shock, fire or flood.

Helping the vulnerable

For the elderly or disabled, a smart home can make a huge difference to quality of life – and to the peace of mind of care-givers. Individuals with dementia, for example, could have their home fitted with automated sensors that check if a cooker has been left on, or a bath is overflowing. Or their homes could have lighting activated by motion sensors, so that if they need to get up in the night, they can avoid falls from stumbling in the dark. Voice-controlled smart devices could also help people with limited mobility by making household appliances easier to use.

5.   BEFORE YOU BUY: A CHECKLIST

Here are the key things to consider before you buy a smart device:

Will it work with my other smart devices?

When you choose a smart device you need to know if it is for a 'closed ecosystem', or able to work with other smart devices.

For example, a device which operates security cameras at your home might work only if it forms part of a larger, integrated 'system' (such as an alarm system or smart hub). In other words, it needs to be compatible with those devices in order to function. Many large companies have developed their own 'ecosystems' of products designed to work together seamlessly. You might not be able to use competitors' products with a 'closed' ecosystem but many smart devices can link with other, or 'open' ecosystems.

So before buying your smart device, you need to find out if it is compatible with the other devices in your home. Your retailer, or the product manufacturer, can advise you about this. In fact, retailers and other businesses selling products directly to UK consumers are legally obliged to provide you with information on the main characteristics and compatibility of their products.

Do I have enough Wi-Fi connection at home?

Smart devices require good Wi-Fi connection to function properly, so ensure that you have a stable, sufficient and speedy Wi-Fi available. Any problems with your device that you encounter could be due to your Wi-Fi connection rather than the device itself. A home Wi-Fi system with limited bandwidth may struggle to support multiple devices. There are free apps you can download to test the speed and strength of Wi-Fi connections (so-called Wi-Fi analysers).

Is the device supported by software updates?

Regular maintenance helps your smart device work properly. It is particularly important that you allow regular software updates to your device. Software updates after purchase fix issues that have been identified by the manufacturer, often increasing security, or improving original features. Do check how long after purchase your device is supported by software updates and consider if that is long enough for your intended use.

Information on technical support can usually be found on the packaging, or in the product warranty, or the manufacturer's user manual. Alternatively, you can contact the manufacturer or their authorised retailers directly for details before you buy.

After-sales support - what can I expect?

If something doesn't work, it should be fixed quickly and safely. Check if the manufacturer or retailer provides information on the support it provides, and how to access it if you have a problem with your product. You might also be interested to know how customer services handles queries and supports requests after sale. Retailers and other businesses selling smart devices to UK consumers that do offer an after-sales care service are legally obliged to inform their customers of their service and its conditions. You might want to ask for this information before you buy.

Is it the real thing?

Fake goods may look like the genuine article but they often omit key components (or use counterfeit ones) which affect both the functionality and safety of the product. Using fake products not only affects the user experience, but it can also be unsafe. Counterfeit electrical devices are of particular concern as – unlike a fake handbag or designer dress – they can cause fire, injury and even death.

The "CE" mark on a product does not guarantee its safety but it is a good starting point. The best way to ensure items are genuine – and for the best chance of getting a product which conforms to safety legislation – is to buy from a reputable retailer or manufacturer.

Is my personal data safe?

Some smart devices capture personal data during their operations. These devices should be designed and used in ways that will protect your privacy. You need to know if a device will collect and use your personal data, and how it (and its related services and applications) are set up, or can be configured, to protect your data.

Do read the privacy policies issued by the manufacturer. If you need an app to use your device, always download it from an authentic or reputable site to minimise risk to your personal data.

(For more information on protecting your data, see Section 7 "Setting up your Device").

6.   AFTER PURCHASE: PRODUCT REGISTRATION

Connected devices are often registered with the manufacturer during their set-up and before they can be used. If not, it is important that you register your device with the manufacturer after purchase. This allows the manufacturer to easily contact you if they discover a fault with the item.

Information on how to register can usually be found in a card accompanying the product, in the user guide that comes with it, or on the manufacturer's website.

7. SETTING UP YOUR DEVICE

Below are some of the things you need to consider when setting up your device.

The Basics

Always follow the manufacturer's instructions, so that your smart devices work properly and all safety and security features are enabled.

Protecting your data

Products are often sold with generic passwords. Read the instructions or user manual to find out how to set up or change the password to something more secure. When setting a password, make sure you use a strong word which, for example:

- Has 12 to 14 characters

- Includes a mix of numbers, symbols, capital and lower-case letters

- Isn't a predictable combination of common dictionary words

- Doesn't rely on obvious substitutions (e.g. the number '0' for the letter 'O')

Once set, keep your password secure and to yourself. Remember to keep your internet router away from windows where the network key or password could be seen from the outside!

If information on how to set a new password is not in the user manual, contact the manufacturer for help.

8.   MAINTENANCE

Ensuring your connected or smart devices have regular software updates is essential throughout the product's 'lifetime'. Your device might update automatically, or you may have to provide authorisation first. Failing to update could affect the full functionality and security of your smart home.

Check the user manual to find out what maintenance is required and enable updates during the set-up phase.

9.   THE BACK-UP PLAN

Do plan ahead, so that you know what to do if you lose your smart phone or log-in details and cannot control your smart devices remotely. Check your user manual to find out whether your smart device can be controlled without your phone (perhaps by going online, via a different device, or controlled manually). Keep details of your smart device, your account and log-in details (if any) separate and securely (but easily accessible by you). Making a note of the customer service helpline number might also be useful!

Have a plan in case the smart system itself fails - do you have an alternative device to use the same function? For example, if you have smart lighting system, do you have a manual light that can be used if the system goes down? If you have a smart access to your door, do you know if and how the door can be opened manually?

10.   PROBLEM SOLVING

If you have a problem with your smart device, contact the retailer in the first instance. Continuing to use the device, or attempting to fix it yourself - or by using an unauthorised repairer - could impact on other smart devices in the network.

If you have a product warranty (a written guarantee), check it to see who to contact to make a claim and the warranty conditions. If you do not satisfy these conditions, you may still be able to get the item repaired, replaced or refunded, under your statutory rights, if:

- The product was not, at the time of sale, of satisfactory quality.

- The product was not fit for any particular purpose that you communicated to the sales representative.

- The product failed to match its description.

Retailers and manufacturers normally have customer services helplines, or chat applications, to register your queries and hear your concerns.

11. LINKS - OTHER RESOURCES

Smart Home devices and data security

https://www.getsafeonline.org/themes/site_themes/getsafeonline/resources/
Consumer_Guidance_for_Smart_Devices_in_the_Home.pdf

Electrical Safety First - a range of information on electrical appliances
and safety

https://www.electricalsafetyfirst.org.uk/guidance/

Citizens Advice - Your legal rights as a consumer

For goods bought in a shop

https://www.citizensadvice.org.uk/Global/Public/Campaigns/cra/
ConsumerRightsSummary-GoodsF2F.pdf

For goods ordered at home (e.g. online or over the phone)

https://www.citizensadvice.org.uk/Global/Public/Campaigns/cra/
ConsumerRightsSummary-GoodsOL.pdf

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