

This is Billy. Billy is a typical smartphone user. He uses his phone for emails, texting, phone calls, browsing the internet, listening to music and more. He loves his apps and his phone.

Billy has a problem though. He loves and uses his phone so much that he is always running low on power. He resorts to carrying his charging cables or a clunky external battery wherever he goes. This is quite annoying for Billy.





WIRELESS CHARGING TO THE RESCUE!

Wireless charging helps solve Billy's problem by keeping him charged up wherever he goes. With wireless charging, Billy can keep using his phone and be happy.

Wireless charging is, to put it simply, charging an electronic device without the use of a connecting wire.

These electronic devices include:



Smartphones



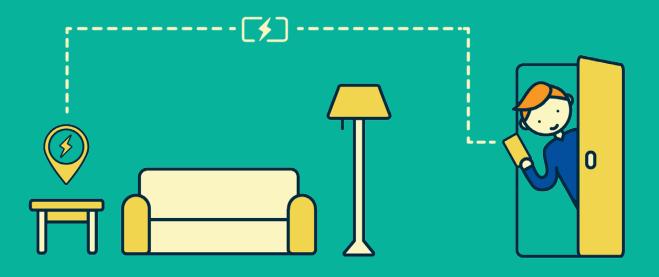
Wearable Electronics



Electric Toothbrushes



Electric Cars



WHY WIRELESS CHARGING?

Imagine walking into a room and having your smartphone start charging. You'd never have to worry about running out of power again!

The holy grail of wireless charging is to achieve, safe, powerful charging from a distance.



That is cool! However, the technology isn't quite there yet. Most wireless chargers out in the world right now can only charge over very short distances. This means that most devices need to be placed on a mat or spot, or in a container to charge.

Researchers are still working on long distance charging that can charge devices simply by having them in a room, but there are still technical and safety challenges that need to be solved.



OH... THAT'S NOT VERY USEFUL, IS IT?

That's not true! Wireless charging in its current form is still very useful. You don't have to go hunting for wires, and can simply charge by having your electronics sit on a surface. For example, you can just pop your phone on the console in a car and drive off, or just sit down at your desk and place the phone on a spot. Imagine leaving work with a full charge on your phone by simply leaving it on your desk!

The greatest benefit of short range wireless charging comes about when you have wireless chargers installed in all the places you spend time at. You can charge constantly, keeping your phone topped up for when you're on the go.

With wireless charging, you can charge at home, work, school, airports, hotels, restaurants, and in your car without having to carry cables.



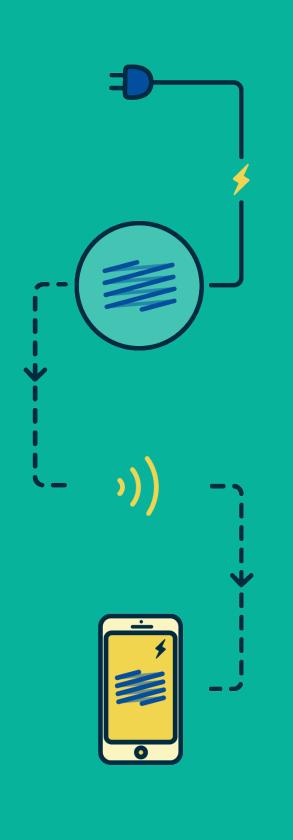










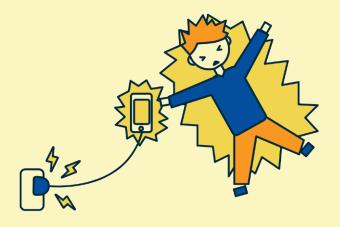


SO, HOW DOES WIRELESS CHARGING ACTUALLY WORK?

There are several different types of technology that are being developed for wireless charging. These include using electromagnetism, radio frequencies, or even sounds waves. The most common and widespread in use right now is electromagnetic induction and that's what we'll focus on here.

INDUCTIVE WIRELESS CHARGING

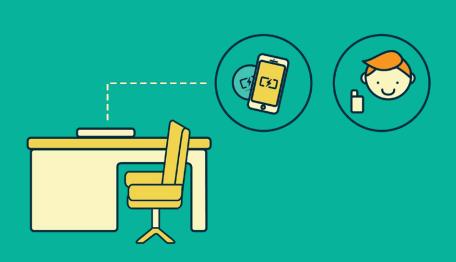
Electromagnetic induction is the most common form of wireless charging right now. This requires two electrical coils – a transmitter and a receiver. The transmitter takes power (alternating current) and creates an oscillating magnetic field. The receiver coil, when placed within range, picks up this magnetic field and converts it back into power to charge your device.



HOW SAFE IS WIRELESS CHARGING? WILL I GET ELECTROCUTED?

If you're using inductive charging, wireless charging is actually really safe! The range of the electromagnetic field is very small and does not have an impact on health. Also, most inductive wireless chargers are built so you have no contact with any exposed wires or electrical parts. This can make it safer than some wired products.

For example, wireless charging is being developed for medical prosthetics and devices that are implanted in the body. This allows charging of these devices without the risks of surgery or having wires passing through skin.





WHAT CAN I USE WIRELESS CHARGING FOR?

Wireless charging works great with small devices. These include wearables, smartphones and other small electronics. In the near future, your fitness tracker could charge while you're running on the treadmill. Wireless charging for smartphones is already available, and manufacturers are building the feature into an increasing number of smartphones.

More powerful technology is also being developed to support larger equipment. Some companies are working on wireless charging to power electric cars. Some researchers have proposed building roadways that will charge electrical vehicles as they drive over the road.



I WANT WIRELESS CHARGING! WHAT DO I DO?

RECEIVERS

Firstly, you will need to make sure that the devices you want to charge can support wireless charging. For smartphones, you can check our list here. For other devices, you should check with the manufacturer.

If your device does not support wireless charging, you can use adaptors. For example, you can purchase wireless charging cases or dongle adaptors for smartphones.

TRANSMITTERS

You will also need a transmitter. Wireless charging transmitters come in many forms. For home use, you can easily purchase a desktop wireless charger stand, or even wireless charging furniture from IKEA.

For the office or public spaces, you might want wireless chargers that are built into surfaces to withstand damage. ChargeSpot's wireless chargers are a great fit for that.

For the car, you might want a charger that mounts to your windshield, or dashboard.

