

If you are in any doubt about these issues each pacemaker manufacturer gives detailed instructions about the sources of electromagnetic interference you should avoid. Please refer to the booklet about your type of pacemaker which you were given when your device was fitted. If you have any further questions about what you can and can't do, contact your pacemaker clinic or the manufacturer.

## **Will electrical equipment stop my pacemaker from working?**

All pacemakers have a metal shell to protect them from other electrical signals so you can use most household equipment without any bother. They also contain a special circuit to detect and remove unwanted electrical activity. Problems with everyday equipment are rare. As general guidance any electrical equipment not discussed here keep it at least 20 centimetres (8 inches) from your pacemaker or attached equipment.

## **Everyday equipment to be aware of**

### ***Magnetic devices and fasteners***

You do need to be careful around some equipment with magnets in.

There's a very small, theoretical risk that small magnetic devices, such as the magnetic fasteners on a tablet computer case, could affect your pacemaker. While normal use is fine, it's sensible to avoid 'hugging' these devices against your pacemaker.

### ***Hands-free kits and Bluetooth***

There's no evidence that these devices affect pacemakers, but some manufacturers recommend that you use the ear on the opposite side to your pacemaker.

### ***Phones and computer equipment. Mobiles, cordless phones, tablets, iPods and MP3 players***

You can use mobiles, cordless phones, tablets, iPods and other brands of disk-based or solid-state MP3 players, if you don't place them directly over your pacemaker. If you keep them at least 20 centimetres away from your pacemaker, you avoid any possible risk of interference.

Avoid having headphones near your pacemaker, so don't put them in a pocket near the pacemaker or let them dangle around your neck when you're not using them.

You can safely use your mobile or cordless phone but keep it more than 20 centimetres away from your pacemaker. Always use the ear on the opposite side to your pacemaker, and don't put the phone in a shirt pocket over your pacemaker.

### ***WiFi, wireless LAN, wireless internet for computers and 3G/4G networks***

There's no clear evidence that these interfere with pacemakers.

### ***Games consoles***

There's no clear evidence that devices such as the Wii, PlayStation or Xbox have an effect on pacemakers, but games manufacturers advise you to contact your pacemaker manufacturer for more guidance.

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Information sourced from British Heart Foundation leaflet '*Living with a Pacemaker*'. For further information see [www.bhf.org.uk](http://www.bhf.org.uk). Or view <https://www.nhs.uk/conditions/pacemaker-implantation/recovery/>

## Specific equipment information.

### ***Room loop systems – LA240.***

The magnetic field strengths created by room loops are well below the magnetic fields that can be found in everyday life and as such should not cause a problem. Keep pacemaker 20cm away from the loop cable itself.

### ***Counter/portable loops – LA90, Loop Pad.***

The magnetic field strength of counter loops is much stronger than room loops. Stand at least 20cm away from the counter loop.

### ***Personal listeners - Crescendo 60, Bluetooth listeners***

The main issue is when used with a neck loop. As neck loop should be kept 20cm away from a pacemaker, we would not recommend the use of these for pacemaker wearers. The alternative is to use an ear hook single or dual as these produce very low magnetic fields and are worn at ear level well away from the pacemaker.

### ***TV listeners – Sonumaxx, Earis***

The use of neck loops with these receivers is not recommended, use an ear hook as described for Personal Listeners with PR receivers. Possibly use headphones. Sonumaxx headset receivers do use a pairing technology like Bluetooth and is unlikely to cause any interference. Both Earis receivers are constantly in communication with their transmitters and so only PR receiver system with ear hook or headset is recommended. However the receiver itself should be not worn within 20cm of the implant.

### ***Headphones***

Contain magnets in the speaker housings, do not let them fall over the pacemaker area.

### ***Pagers, Alerting Systems – Lisa, Signolux***

Receivers are not an issue as they only receive. In normal usage users do not wear transmitters and so are unaffected. If a user was checking a transmitter then they should always keep the transmitter at least 20cm away from their pacemaker. If using the personal call button this should be treated as a mobile phone and not used within 20cm of the pacemaker.

### ***Vibrating Pads – Lisa, Signolux, Alarm Clocks with Vibration function (e.g. TravelTim, Wake'n'Shake), Smoke Alarm receivers.***

The vibrating pads for all these systems contain magnets. To maintain a minimum distance of 20cm at all times during sleep we recommend the pads are placed either inside a pillowcase or preferably under the sheet under the pillow. This will help to keep the pads from moving during sleep.

### ***Mobile/DECT/portable phones***

Advice given by the manufacturer's states try not to use them within 20cm of the pacemaker.