

## Wireless Fact Sheet

### Phonak direct connectivity wireless hearing aids

This fact sheet summarizes some helpful information and is directed to wearers of Phonak direct connectivity hearing aids and their related accessories. These hearing aids have a built-in wireless 2.4GHz radio chip with integrated Bluetooth® Classic and Bluetooth Low Energy wireless technology.

If you are not sure whether your hearing aid is based on a wireless chip technology, please contact your hearing care professional.

#### Wireless capabilities

Phonak is able to offer a host of revolutionary hearing aids that respond intuitively to your surroundings and give you complete control and access to communication and multimedia devices. Direct connectivity hearing aids have the ability to not only function as separate hearing aids, but can also function as a system directly connecting to cell phones and media devices featuring Bluetooth wireless technology eliminating the use of a body worn streamer. This means that your hearing aids can wirelessly connect, transmit and receive signals from cell phones featuring Bluetooth wireless technology as well as from Phonak wireless accessories with AirStream™ Technology. The direct connectivity has been designed specifically for communication purposes, particularly taking into account all-day use. The chosen technology for the data transfer between hearing aids is a digital coded inductive transmission technology.

Low-level electromagnetic fields are common to everyday equipment such as televisions, telephones, computer monitors and other consumer electronics such as mobile phones. In every country where wireless hearing aids and accessories are sold, they must meet local regulations based on certified measurements. For example, in the United States they meet Federal Communication Commission regulations and in Canada, they meet the ISED Canada applicable regulations. In Europe, Phonak

wireless hearing aids and wireless accessories are in conformity with the European regulations.

#### Technical data for a wireless hearing system

The transmission frequency range for Phonak direct connectivity hearing aids is 2.4 – 2.48 GHz. This frequency was chosen to be able to support the transfer of complex broadband data with virtually no interference.

The radiated power of direct connectivity hearing aids is <1mW (EIRP) and is far below the international maximum values.

Specific Absorption Rate (SAR) is the widely accepted, scientific measure used to characterize the amount of radiofrequency energy absorbed by the body. For example, in the United States, the limit adopted by FCC for mobile phones is that their SAR levels may not exceed 1.6 Watt per kilogram (W/kg).

In Europe, the European Union Council has set a SAR limit of 2.0 W/kg. The typical SAR rating emission of a mobile telephone ranges from 0.3 to 1.5 W/kg.

Tests and the calculated maximal power showed that the wireless hearing aids are exempted from the Specific Absorption Rate (SAR) evaluation which also shows that the hearing aids fall significantly below the recommendations from both the European Commission and the United States.

## Commonly asked questions

### **Is the wireless link always stable, or will it be interrupted in certain environments?**

Due to the fact that all radio transmissions can be disturbed by other electromagnetic fields, you may experience interference in areas with strong electromagnetic fields (around high-power electronic equipment, larger electronic installations, power lines, electrostatic discharge, airport metal detectors etc.).

### **Are the direct connectivity hearing aids and wireless accessories compatible with implantable devices?**

The field strengths with direct connectivity hearing aids are very low. For comparison, hearing aids operate with much lower field strengths than some other everyday electronic devices such as mobile phones. However, for persons with implantable devices, such as a pacemaker or cardioverter defibrillators, the following is applicable:

- Keep the hearing aids and wireless accessories at least 15 cm (6 inches) away from the active implant.
- If you experience any interference, switch off the wireless hearing aids and the wireless accessories and contact your doctor or hearing care professional.
- Do not use the device in explosive areas (mines or industrial area with danger of explosions, oxygen-rich environments or areas where flammable anesthetics are handled) or where electronic equipment is prohibited.
- Users of implantable devices should contact their doctor and/or the manufacturer of the implantable device before they start using Phonak hearing aids or wireless accessories. Stop using the Phonak device if any influence of the Phonak device on the implantable device is experienced and contact the manufacturer of the implantable device for advice.

### **Are there any risks from using direct connectivity hearing aids all day, every day?**

The amount of radio frequency energy to which the body is exposed is so little, that there are no foreseen risks in the continual use of wireless hearing aids for a full day.

### **Can I use my direct connectivity hearing aids on an airplane?**

Your hearing aids operate in the frequency range of 2.4 GHz–2.48 GHz. When flying please check if flight operator requires devices to be switched into flight mode. See the respective hearing aid user guide for more information on how to set the hearing aids into flight mode.

### **Can I use my wireless accessories (e.g. TV Connector) on an airplane?**

Your wireless accessories operate in the same frequency range as your hearing aids. When flying please check if the flight operator requires wireless accessories that use 2.4 GHz to be switched off.