

Personal hearing loop

Body worn device (hanging around the neck), designed for one person, for receiving or transmitting sound using magnetic, wireless signal in induction loop systems, that is picked up by the hearing aid when it is set to 'T' (Telecoil) setting. A personal hearing loop consists of a portable inductive mono listening device, without batteries (passive), with a wire loop connected to a cable with a 3.5mm jack, used with any equipment which provides a suitable output for operating personal headphones, by plugging directly into the headphone socket. Portable personal hearing loops may be neck loops (hanging around the neck, different length), inductive silhouette ear hook, pillow loops, or clip-on equipment.

Possible variants concern the length of the loop (shorter or longer), the form of the loop (can be also a silhouette ear hook), the canal transmission (can be also stereo), the location of the loop (can be also on the ear or in a pillow), and the mode of operation (can be also active powered by batteries, with built-in amplifiers, microphone, Bluetooth connectivity, that connect a Bluetooth device to the hearing aid).

- **Product Classification**

- APL (WHO Assistive Product Priority List): 18 (Hearing loops/FM systems)
- ISO 9999:2022: 220625 (Sound transmission systems for hearing aids)

- **Possible configuration variants**

None specified.

- **Possible accessories or optional components**

None specified.

- **Product goals**

Activities or functions the product is mainly intended to support, according to WHO ICF Classification:

- Hearing [\[b230\]](#).
- Listening [\[d115\]](#).
- Understanding spoken words [\[d310\]](#).

- **Indicated impairments**

Difficulties the product is mainly intended to address, according to the WHO ICF Classification:

- Hearing [\[b230\]](#).

- **Contraindicated impairments**

Difficulties for which the product may be inappropriate:

- Difficulty to remember to switch the t-coil function (to deactivate the hearing aid microphone).

- **Indicated environments**

Specific environments in which the product should be used:

None specified.

- **Contraindicated environments**

Environments in which the product may be inappropriate:

None specified.

- **Other indicated factors**

Other factors or situations the product is intended to address:

- Cutting out unwanted background noise into a hearing aid.
- Sending audio information directly to hearing aids or cochlea implants with integrated T-coil sensor (information such as voice amplifier, MP3 player, computer, or mobile phone).

- Other contraindicated factors

Other factors or situations in which the product may be inappropriate:

- Wearing a hearing aid without telecoil sensor (such as complete-in-the-canal or invisible-in-the-canal hearing aids).

- Points to be considered in product selection

- Ensure that the hearing aid or cochlear implant has an integrated T-coil sensor and a T-switch for activating the magnetic wave receiver.
- Ensure that the audio transmission device or audio system can be connected to induction loop devices.
- If principally used in lying or body relaxed positions (bed, sofa, armchair) a pillow loop may be recommended.
- For a bilateral hearing aids user, a stereo inductive silhouette ear hook can be selected for stereo listening.
- For people with only one hearing aid (with integrated induction coil) select an induction ear hook matched to a normal headphone and a microphone (for listening to stereo music, binaural telephone use).
- An inductive headset with build in microphone is suitable for the hard of hearing without hearing aid.
- For Bluetooth induction loop devices ensure that the audio transmission device or audio system to be connected is equipped with Bluetooth.
- Personal hearing loops can be connected to different audio devices (personal radio, CD player, MP3 player, TV, home theater, smartphone, talking book machines) and result in an increased sound clarity and volume.

- Points to be considered in product fitting

- Ensure that user can switch on/off the T-position on the hearing aid.
- Ensure that the neck loop length is adequate to wearing and to managing the device.
- Ensure that user can connect the 3,5 mm jack to the audio device or audio system.
- In case of a Bluetooth induction loop, ensure that a Bluetooth connection will be established to the Bluetooth device and check, if the user is able to manage the different control functions.
- In case of an active personal hearing loop, check if user can see or feel the different control buttons; in case of difficulties, visual and/or tactile markers on the buttons may be added.
- If using an active personal hearing loop, ensure that the user can replace or recharge the batteries.
- USB charging devices need to be charged with USB cable, check if user can connect the personal hearing loop to an USB charging point or station.

- Points to be considered in product use

- Always switch the hearing aid to T- position, when using personal hearing loops, and remember to switch off T-coil for normal microphone use of the hearing aid.
- Use both hands when connecting the hearing loop to a device; do not pull on the cable itself but pull on the jack, when unplugging the personal hearing loop.
- Increase the amplification when the magnetic signal is weak.
- If using a Bluetooth hearing loop, activate Bluetooth in the audio device to be connected.
- Ensure that batteries of an active personal hearing loop have enough charge during use, especially out of home.
- To receive the magnetic signal, the user must switch the telecoil enabled hearing device in the T- position. For most hearing aids when T-position is selected the microphone becomes dead.
- Meaning problems of feedback are eliminated and hearing aid(s) might be able to be used louder than usual.

- Points to be considered in product maintenance / follow-up

- Regularly review if personal hearing loop system is working correctly and transmitting audio signal with clarity and adequate volume.
- Do not put magnets near the hearing loop when it is in use.
- Regularly review if batteries are charged or need to be replaced.
- In case of problems, review the personal hearing loop, the audio device connected and the hearing aid in T position.

- Examples of products available on the market

- Live product search in the EASTIN website <https://www.eastin.eu/en/searches/products/list?iso=220625>

Source

This Fact Sheet was compiled in 2021 by an international team of experts, to provide the initial knowledge base for a project ("An online system to assist the selection of assistive product") supported by the World Health Organization in 2020-2021 within the GATE Initiative (Global collaboration on Assistive Product). Fact Sheets were compiled for each of the 50 types of products included in the WHO APL (Assistive Product Priority List).

The team was composed of Renzo Andrich (Italy, group leader), Natasha Layton (Australia), Stefan von Prondzinski (Italy), Jerry Weisman (USA), Silvana Contepomi (Argentina) and Hasan Minto (Pakistan).

The project led to a prototype online tool called ASPREX (ASsistive PProduct EXplorer). At the end of the project, it was transferred to a WHO collaborating center (the Global Disability Hub in the UK), in view of possible future developments.