

Requirement for hearing support function

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Hearing support function

- Hearing support function is not a function of hearing aid.
 - Hearing aid is under pharmaceutical law, primarily it helps conversation of person who has a hearing difficulty. Standardization is under IEC/TC 29.
 - Hearing support function is one of functions of AV&IT multimedia, it helps to enjoy audio, music and conversation for elder or having small hearing difficulty people, not under pharmaceutical law.
 - This function is provided by dedicated equipment and also a part of AV&IT multimedia equipment and systems.

Hearing support function examples

Dedicated hearing support equipment

- Portable audio player type, many kind of this type equipment are available in the market.



- Hearing support equipment is easy to handle and affordable.

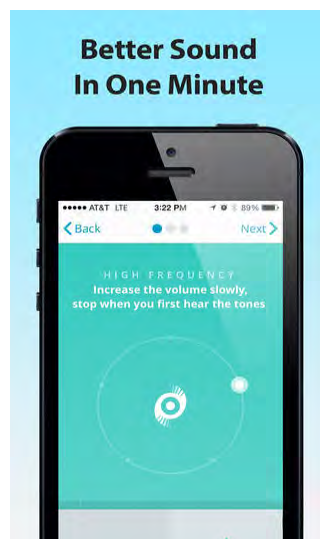


Mobile phone/device application with earphones

- To listen music, EQ and calibration
- To turn it hearing support device



Denon Audio



SoundFocus



ききとり上手
(Hearing well)

Wearable device

- It can support hearing support function



From Google

Additional loudspeaker

- To hear at hand



Problems

- Many of the current AV&IT equipment and systems that have a hearing support function, but they do not provide sufficient quality of listening.
 - Some of hearing support equipment's frequency response tend to similar to hearing aid, it means not for enjoying music.
 - Sometimes audio feedback occurs.
 - Dynamic range control, compression and loudness is not appropriate to hear natural sound.
 - Anyway, sound is not natural.
 - Some portable music players and headphones can provide a good quality of music experience for ordinary user, but not for elder or having small hearing difficulty people.
 - User cannot understand what ability it has because there is no evaluation or measurement method for this kind of functionality.

Solution

- There are various kind of equipment and systems of this hearing support system.
 - Standard for each equipment and systems can be a solution for the problems.
However, this needs many dedicated standard.
- One general reason of the problems is that there is no measurement method for hearing support function.
- This method will makes it clear that the ability of the hearing support equipment and systems.

Proposal

Preliminary draft NP on health/hearing support

- Standardize; Measurement method for hearing support equipment and systems
 - Object
 - The health support portable or wearable equipment or systems that have input function of audio signal input or microphone, and output function of earphone or loudspeaker, for support audio and music experience of user.
 - Measurement objects
 - Frequency response and other related characteristics
 - Dynamic range control function and characteristics
 - Compression function and characteristics
 - Loudness control function and characteristics
 - Audio feedback margin
 - Time domain characteristics (in Stereophonic)
 - Other
 - Addition in annex
 - Indication of characteristics