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**Datasheet for the decision
of 15 May 2025**

Case Number: T 0748/24 - 3.5.05

Application Number: 16818723.5

Publication Number: 3314913

IPC: H04R25/02, H04R25/00

Language of the proceedings: EN

Title of invention:

Transducer modules for auditory communication devices and
auditory communication devices

Patent Proprietor:

HEAR-WEAR TECHNOLOGIES, LLC

Opponent:

K/S HIMPP

Headword:

Auditory-communication device/HEAR-WEAR

Relevant legal provisions:

EPC Art. 116(1), 123(2)

RPBA 2020 Art. 12(8)

Keywords:

Decision in written proceedings - (yes): proprietor did not request oral proceedings and oral proceedings neither necessary nor expedient

Added subject-matter - claim 1 as maintained by the opposition division (yes): unallowable generalisation

Decisions cited:

T 1160/19



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Case Number: T 0748/24 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 15 May 2025

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
27 March 2024 concerning maintenance of the
European Patent No. 3314913 in amended form.**

Composition of the Board:

Chair K. Bengi-Akyürek
Members: K. Peirs
C. Heath

Summary of Facts and Submissions

- I. The opponent's appeal lies from the interlocutory decision of the opposition division to maintain the opposed patent in amended form on the basis of the patent proprietor's "auxiliary request 22" (Article 101(3) (a) EPC).
- II. Claim 1 of the **patent as maintained** by the opposition division ("auxiliary request 22") reads as follows (board's feature labelling and highlighting, the latter reflecting a particularly relevant amendment vis-à-vis original claim 31):
- (a) "An on-ear speaker component (10) for an ~~auditory~~ communication device (30), the on-ear speaker component comprising:
 - (b) a speaker housing (100) shaped to fit around an ear of a user so that when in use a first portion of the speaker housing is positioned behind the ear, a second portion of the speaker housing on top of the ear and a third portion of the speaker housing in front of the user's ear;
 - (c) a speaker (101) disposed in the speaker housing,
 - (d) wherein the speaker is suspended by a first sound tube (115) connected to the speaker, such that the speaker is within an inner wall (114) of the speaker housing but not in contact with the speaker housing and a space (116) is defined between the speaker and the inner wall, and
 - (e) wherein the first sound tube leads into an acoustic channel (118) formed by the speaker housing, and
 - (f) the acoustic channel ends at a sound port (113) adapted to connect to a second tube adapted to

conduct sound from the acoustic channel to an ear canal of a user; and

(g) an electrical connection (500) adapted to communicatively couple the speaker to a microphone (3002) and/or signal processing circuitry (3003) in a housing (3000) different from the speaker housing."

III. The opponent requested that the appealed decision be set aside and that the patent be revoked.

IV. The patent proprietor, as a party as of right, did not provide any written submissions in these appeal proceedings.

Reasons for the Decision

1. Decision in written proceedings

The proprietor did not make any written submissions (cf. point IV above). This means in particular that the party adversely affected by the present board's decision did not request oral proceedings. In turn, the board did not consider it expedient or necessary to have an oral hearing of the case (cf. Article 116(1) EPC). As a consequence, the decision is handed down in written proceedings (Article 12(8) RPBA).

2. Technical background

2.1 The opposed patent concerns "auditory-communication devices", particularly hearing aids. Traditional behind-the-ear (BTE) hearing aids often house all necessary electronic components (e.g. microphone, receiver/speaker, processing circuitry, battery) in a

single BTE unit. This can however lead to electroacoustic feedback ("squealing") due to the proximity of the microphone and receiver, and can result in bulky and unattractive BTE housings (cf. opposed patent, paragraphs [0003] and [0004]). While receiver-in-canal (RIC) devices improve on this by placing the receiver in the ear canal, they can present fitting challenges and limitations due to the small size of the ear canal (cf. paragraph [0005]).

2.2 The invention underlying the opposed patent aims essentially to improve the design and effectiveness of auditory-communication devices by relocating components, particularly by utilising the space typically occupied by a simple ear hook (cf. paragraph [0085] of the patent). In this way, a modular auditory-communication system is created.

2.3 Figure 1 of the opposed patent, reproduced below, illustrates this specifically for an on-ear speaker component.

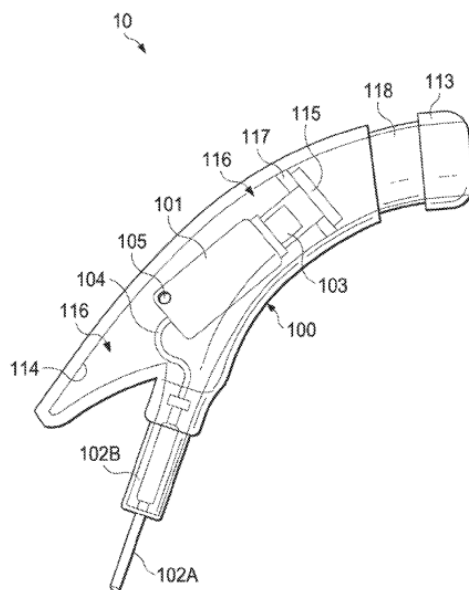


FIG. 1

The on-ear speaker component housing (100) is shaped to

fit around the ear. A speaker (101) is disposed within this housing. It has a vent (105) and a speaker sound port (103). A first sound tube (115) is coupled to the speaker's sound port (103). This sound tube (115) serves two key functions:

- It *conducts sound* from the speaker (101) into an acoustic channel (118) formed by the housing (100). This acoustic channel (118) ends at a sound port (113), to which a second sound tube (not shown in Figure 1, but see unit 201 in Figure 2 or unit 301 in Figure 3A of the opposed patent) can be attached to direct sound to the user's ear canal.
- Additionally, this sound tube (115) can *suspend* the speaker (101) (cf. paragraphs [0038] and [0039]).

There is a space (116) shown between the speaker (101) and the inner wall (114) of the housing (100). This space is described as a "sealed pocket area" that helps to achieve a desired frequency response by allowing controlled air movement around the speaker. Moreover, walls (117), which are extensions from the housing, hold the sound tube (115) and contribute to creating this sealed space (116). An electrical connector (102A), insulated by portion (102B), connects to the speaker (101) via a cable (104). This connector (102A) allows the speaker component (10) to be electrically coupled to a separate BTE unit.

3. *Claim 1 as maintained - added subject-matter*

Reasons 22.1 of the appealed decision rightly considered that claim 1 of **auxiliary request 22** underlying the appealed decision is related to original claims 31 and 32. Nonetheless, in its statement of

grounds of appeal, the appellant provided convincing arguments why the opposition division erred in its finding in Reasons 22 of the appealed decision that auxiliary request 22 was allowable under Article 123(2) EPC:

- 3.1 The appellant correctly identified that **feature (a)** differs from the corresponding subject-matter in claim 31 as filed in that the qualifying term "auditory", which qualifies the "communication device", is removed. In Reasons 22.1.1 of the appealed decision, the opposition division found that the omission of the qualifying term "auditory" did not result in added subject-matter in view of original claim 31 because the system resulting from a combination of the "on-ear speaker component" and the "communication device" mentioned in feature (a) "inherently" allowed "auditory communication".
- 3.2 The board recalls that Article 123(2) EPC requires an assessment of whether a particular amendment is directly and unambiguously disclosed in the application as filed for a skilled reader (i.e. the test according to the "gold standard"). This means that all interpretations of the amendment that would occur to the skilled reader must have a direct and unambiguous disclosure in the application as filed (cf. **T 1160/19**, Reasons 2.2.4).
- 3.3 In the case in hand, the question is not whether "auditory communication" was *possible* by the combination of the "on-ear speaker component" and the "communication device" as the opposition division deemed in the appealed decision. Instead, the decisive question is whether the skilled reader would *directly and unambiguously* understand from the application as

filed that the "on-ear speaker component" mentioned in original claims 31 and 32 was suitable for use in an *arbitrary* "communication device".

3.4 The board observes that original claim 31, consistently supported by paragraphs [0011] and [0031] of the application as filed, specifies an "on-ear speaker component (10) for an auditory communication device" (board's emphasis). The application as filed (see e.g. paragraphs [0009], [0030] and [0031]) exemplifies such devices as "hearing aids", "earphones", "headsets" or "IFB devices". These devices are inherently characterised by demanding audio performance, requiring speakers capable of faithful reproduction of complex audio signals like speech or music, often with specific frequency emphasis and power-handling capabilities. This implication is reinforced by the reference in paragraph [0033] of the application as filed to "speakers supplied by Knowles Electronics Incorporated" and the detailed acoustic considerations for frequency response in paragraphs [0035] to [0037] of the application as filed. This suggests that the "speaker" in accordance with feature (c) is a transducer of a certain quality and that the "electrical connection" (cf. feature (g)) and associated "signal processing circuitry" are commensurate with such a speaker.

3.5 The appellant's example of a "transcriber device" in fact illustrates the consequence of the omission of the qualifying term "auditory". It should in this regard be noted that headsets belong to the standard equipment for transcription and dictation. Therefore, the board considers that a device that captures audio for transcription is indeed a plausible application for the "on-ear speaker component" in accordance with claim 1.

While the primary communication output of such a device (i.e. text files via Wi-Fi or Bluetooth) is not "auditory", an accurate transcription often hinges on a clear *audio* input. It therefore makes technical sense that said "transcriber device" encompasses a "speaker for feedback to the user for confirmation of the audio levels" as suggested by the appellant. The board understands that, at the very simplest, this "confirmation of the audio levels" could concern an output signal as follows:

- a specific beep or tone if the input audio is too quiet;
- a different beep or warning tone if the input audio is too loud and clipping;
- arguably a series of beeps or a changing tone pitch that roughly corresponds to the input volume.

As a result, the speaker's role in the "transcriber device" is solely for basic audio-level feedback. For such a rudimentary feedback, a simple "buzzer" connected to a basic tone generator might suffice. The acoustic and electronic demands on such a basic transducer are substantially less severe than those pertinent to the auditory-communication devices consistently described in the application as filed. In the board's judgment, the skilled reader, reading the original application with their clear focus on proper auditory reproduction and the associated sophisticated components, would not directly and unambiguously derive that the claimed features - particularly the "speaker" (cf. feature (c)) and implicitly its associated "electrical connection" and "signal processing circuitry" (cf. feature (g)) - were also

intended to encompass embodiments as elementary as a simple "buzzer".

- 3.6 Therefore, the removal of the qualifying term "auditory" in **feature (a)** cannot pass the gold-standard test and leads to an unallowable generalisation of the original content. Correspondingly, auxiliary request 22 underlying the appealed decision is not allowable under Article 123(2) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated