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# Datasheet for the decision of 30 June 2020

**Case Number:** T 2090/16 - 3.5.03

**Application Number:** 11250440.2

**Publication Number:** 2375786

**IPC:** H04R25/00

**Language of the proceedings:** EN

**Title of invention:**
System for programming special function buttons for hearing assistance device applications

**Patent Proprietor:**
Starkey Laboratories, Inc.

**Opponents:**
Oticon A/S
Widex A/S
GN Resound A/S

**Headword:**
Programmable control of a hearing aid/STARKEY

**Relevant legal provisions:**
EPC Art. 56
RPBA 2020 Art. 13(2)

**Keyword:**

Inventive step - main request and auxiliary request 4 (no)
Admission of late-filed requests - auxiliary requests 1, 2, 2', 3 and 5 (no): no exceptional circumstances

**Decisions cited:**

T 0698/10

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**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

**Case Number: T 2090/16 - 3.5.03**

# D E C I S I O N
# of Technical Board of Appeal 3.5.03
# of 30 June 2020

| | |
|---|---|
| **Appellants:** (Opponents) | Oticon A/S<br>Kongebakken 9<br>2765 Smoerum<br><br>Widex A/S<br>Nymoellevej 6<br>3540 Lynge<br><br>GN Resound A/S<br>Lautrupbjerg 9<br>2750 Ballerup (DK) |
| **Representative:** | TBK<br>Bavariaring 4-6<br>80336 München (DE) |
| **Respondent:** (Patent Proprietor) | Starkey Laboratories, Inc.<br>6600 Washington Avenue South<br>Eden Prairie, MN 55344 (US) |
| **Representative:** | Vossius & Partner<br>Patentanwälte Rechtsanwälte mbB<br>Siebertstrasse 3<br>81675 München (DE) |
| **Decision under appeal:** | **Decision of the Opposition Division of the European Patent Office posted on 6 July 2016 rejecting the opposition filed against European patent No. 2375786 pursuant to Article 101(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chair** | K. Bengi-Akyürek |
| **Members:** | K. Schenkel |
| | R. Romandini |

## Summary of Facts and Submissions

I. The appeal of the opponents (appellants) lies from the decision of the Opposition Division rejecting the opposition filed against the present European patent *inter alia* on the ground that the subject-matter of claims 1 and 8 as granted involves an inventive step (Article 56 EPC), having regard to the disclosure of

**E1:** US 2005/0281424 A1.

II. Oral proceedings before the board were held on 30 June 2020.

- The appellants' final requests were that the decision under appeal be set aside and that the patent be revoked.

- The respondent's final requests were that the patent be maintained in amended form on the basis of the claims of a **main request**, or, in the alternative, on the basis of the claims of one of **auxiliary requests 1, 2, 2', 3, 4 and 5**, all requests filed with the reply dated 29 May 2020 in response to the board's communication under Article 15(1) RPBA 2020.

At the end of the oral proceedings, the board's decision was announced.

III. Claim 1 of the **main request** reads as follows:

"A system for controlling a hearing aid, the system comprising:

a wireless remote control including a plurality of controls including a first programmable control; and

a hearing aid, configured to receive a wireless transmission including commands and information from the remote control, the hearing aid including a second programmable control on the hearing aid;

wherein the second programmable control of the hearing aid is configured to be programmed by wireless communications initiated by the wireless remote control."

IV. Claim 1 of **auxiliary request 1** reads as follows (amendments vis-à-vis claim 1 of the main request indicated by the board):

"A system for controlling a hearing aid, the system comprising:
a wireless remote control including a plurality of controls including a first programmable control; and
a hearing aid, configured to receive a wireless transmission including commands and information from the remote control, the hearing aid including a second programmable control on the hearing aid, wherein the second programmable control is a sensor, wherein the sensor includes a multi-axis accelerometer;

wherein the second programmable control of the hearing aid is configured to be programmed by wireless communications initiated by the wireless remote control."

V. Claim 1 of **auxiliary request 2** reads as follows (amendments vis-à-vis claim 1 of the main request indicated by the board):

"A system for controlling a hearing aid, the system comprising:

a wireless remote control including a plurality of controls including a first programmable control, wherein the plurality of controls includes a microphone configured to detect voice commands; and
a hearing aid, configured to receive a wireless transmission including commands and information from the remote control, the hearing aid including a second programmable control on the hearing aid;
wherein the second programmable control of the hearing aid is configured to be programmed by wireless communications initiated by the wireless remote control."

VI. Claim 1 of **auxiliary request 2'** is identical to claim 1 of auxiliary request 2.

VII. Claim 1 of **auxiliary request 3** reads as follows:

"A method for controlling a hearing aid, the method comprising:
programming a second programmable control on the hearing aid using wireless communications initiated by a wireless remote control including a plurality of controls, the plurality of controls including a first programmable control,
wherein programming the control includes changing input of the hearing aid among induction coil, induction coil and microphone, directional microphone, direct audio input, audio input via frequency modulation, FM, transmission *[sic]*, audio input via 900 MHz wireless transmission and programmable combinations of inputs."

VIII. Claim 1 of **auxiliary request 4** reads as follows:

"A system for controlling a hearing aid, the system comprising:

a wireless remote control including a plurality of first programmable controls, each programmable control being programmable for a number of functions; and
a hearing aid, configured to receive a wireless transmission including commands and information from the wireless remote control, the hearing aid including a second programmable control on the hearing aid;
wherein the second programmable control on the hearing aid comprises a button, a switch, sensor or microphone and is configured to be programmed for a number of functions by wireless communications initiated by the wireless remote control."

IX. Claim 1 of **auxiliary request 5** reads as follows (amendments vis-à-vis claim 1 of auxiliary request 3 indicated by the board):

"A method for controlling a hearing aid, the method comprising:
programming a second programmable control on the hearing aid using wireless communications initiated by a wireless remote control including a plurality of controls, the plurality of controls including a first programmable control,
wherein programming the control includes programming the control to switch the hearing aid between omnidirectional and directional microphone modes ~~changing input of the hearing aid among induction coil, induction coil and microphone, directional microphone, direct audio input, audio input via frequency modulation, FM, transmission *[sic]*, audio input via 900 MHz wireless transmission and programmable combinations of inputs~~."

## Reasons for the Decision

*1. Background of the opposed patent*

The present patent relates to a system for and a method of controlling a hearing aid by means of a wireless remote control. The remote control includes a first programmable control and the hearing aid includes a second programmable control, the second programmable control being programmable wirelessly by the remote control. This is illustrated by the following figure of the patent (Fig. 1):

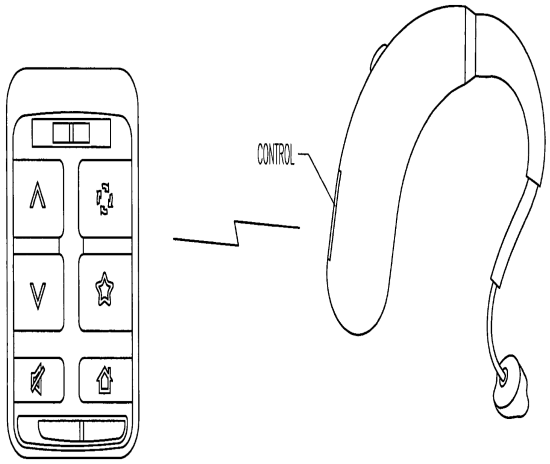


Fig.1

*2. Main request - inventive step*

2.1 Claim 1 of the main request includes the following features, as labelled by the board:

A system for controlling a hearing aid, the system comprising:

(a) a wireless remote control including a plurality of controls including a first programmable control;

(b) a hearing aid, configured to receive a wireless transmission including commands and information from the remote control,
(c) the hearing aid including a second programmable control on the hearing aid;
(d) wherein the second programmable control of the hearing aid is configured to be programmed by wireless communications initiated by the wireless remote control.

2.2 The "programmable controls" at the hearing aid and the remote control are understood by the board to be programmable units that are able to control the hearing aid. The board does not agree with the respondent's view that a "programmable control" necessarily constitutes a *user interface*.

2.3 Prior-art document **E1** relates to the improvement of the operation of a hearing aid, wherein the acoustic environment is analysed to detect the auditory situation associated with the hearing aid and an adjustment function is assigned to at least one control element dependent on the detected auditory situation (see e.g. Abstract). The control element's function is determined by a "selection unit 6" (paragraph [0020], Fig. 1). Since the function assigned to the control element is changed by the system, the control unit is considered to be *programmable*.

In a first embodiment (i.e. relating to a hearing aid *without* remote control), the selection unit 6 of the hearing aid, being a unit that is able to control the hearing aid, may be read onto a "programmable control" in view of the interpretation set out in point 2.2 above (paragraph [0020] and Fig. 1). In a second embodiment, which further includes a "remote

control 11", the "programmable control" is provided at the remote control (paragraphs [0014], [0023], [0024] and Fig. 2). In that second embodiment (i.e. relating to a "hearing aid 10" *with* remote control 11), data - in particular a parameter set assigned to the selected program key - is transmitted wirelessly from remote control 11 to the hearing aid (paragraph [0023]).

2.4 However, E1 does not directly and unambiguously disclose a combination of "programmable controls" at the hearing aid *and* at the remote control in which the programmable control of the hearing aid is configured to be programmed by wireless communications initiated by the wireless remote control according to features (a) and (c).

Claim 7 of E1 is directed to a hearing aid comprising an "operating device" (i.e. the combination of key switch 7 and selection unit 6; see Fig. 1) having at least one "control element". In claim 11, the operating device is further characterised as a "remote control". Hence, the claims only disclose a system with one operating device, either at the hearing aid or at the remote control unit.

2.5 E1 therefore does not disclose that a "programmable control" is accommodated in both the hearing aid and the remote control unit and that the hearing aid's programmable control is configured to be programmed by wireless communications initiated by the wireless remote control. Hence, the board concurs with the finding of the decision under appeal that the system of claim 1 differs from the system according to the second embodiment of E1 in features (c) and (d) of claim 1.

2.6 It is apparent to the board that the opposition division did not indicate any technical effect associated with the above distinguishing features, nor did it formulate any objective technical problem in its decision. The board considers that the above distinguishing features have the technical effect of increasing the number of possible control options regarding the hearing aid - with or without a remote control unit.

The board notes in this regard that the patent itself does not provide a more specific effect of having "programmable controls" at the hearing aid and at its remote control other than providing an "improved" control of hearing assistance devices (see e.g. paragraphs [0004] and [0010]).

2.7 Starting out from the second embodiment of E1, the objective technical problem underlying the claimed subject-matter may therefore be seen in "how to extend the available input options for a user of the hearing aid of E1".

The respondent argued that the correct objective problem was "to improve the options and the flexibility of the controls". It was further argued that E1 contained no pointer towards the objective problem formulated by the board and rather aimed at the simplification of the control, reference being made to paragraphs [0008] to [0010], [0020] and [0023] of E1. In that context, the board notes that the objective problem does not need to be proposed by a prior-art document but results objectively from the effects achieved by the differences (see e.g. T 698/10, Reasons, point 3.4). Further, the problem of simplification mentioned in E1 does not preclude the

aim of extending the user input options since the solution proposed in E1 is also directed to extend the user input options, namely by creating the possibility to select one of a plurality of input options with a *single* control element.

2.8 The board further concludes that the person skilled in the field of hearing aids, starting out from the second embodiment of E1 and faced with the above-mentioned objective problem, would have understood that the user input options also depend on the number of control elements and their location and that the user input options can be extended by increasing the number of programmable control elements and their locations.

More specifically, as to feature (d) and considering that the skilled person would have deduced from the teaching of E1 that hearing aid 10 of the second embodiment at least includes a selection unit 6, a key switch 7 and a signal processing unit 2 (see Fig. 1 in conjunction with claim 7 and claim 11: "A hearing aid according to claim 7, wherein the operating device is a remote control"), the skilled person would have envisaged essentially three different options for implementing the "automatic selection" according to paragraph [0020] of E1, namely (1) programming the selection unit by the hearing aid only, (2) programming the selection unit by both the hearing aid and the remote control unit, (3) programming the selection unit by the remote control unit only.

When seeking the optimal solution to the above objective technical problem, the skilled person would have been aware of the fact that option (1) would yield a *limited* range of input options due to space constraints at the hearing aid side, that option (2)

would be prone to *conflicts* due to overlapping control functions making a burdensome control priority scheme and the use of two "analysing units 5 and 18" (see Figs. 1 and 2 of E1) necessary, whilst option (3) would allow for a conflict-free, complementary programming of both selection unit 6 of "hearing aid 10" and selection keys 12 to 15 of "remote control unit 11", thereby relying merely on a single analysing unit ("analysing unit 18"). In view of the above considerations, the skilled person would definitely opt for the solution according to option (3). Following the example of the first embodiment in E1, the skilled person would therefore have configured selection unit 6 of E1 such that it is programmable by wireless transmissions initiated by the wireless remote control unit 11, since the latter already includes means for analysing the acoustic environment ("analysing unit 18"), programming the control functions and transmitting data wirelessly to the hearing aid. A reason not to use these existing means of the respective remote control unit to program the control unit at the hearing is not apparent. The board adds in this respect that the efficient use of existing hardware is a common goal in all technical fields.

The skilled person would thereby arrive at a system which includes all the features of present claim 1, without exercising any inventive skill.

2.9 The respondent argued that a combination of the two embodiments of E1 would result in a system with two microphones with respective analysing and selection units and with a programmable control unit at the remote control which are programmed at the remote control and a programmable control unit at the hearing aid which is programmed at the hearing aid. Contrary to

that, in the system of claim 1, the control at the hearing aid was programmed by the remote control. In a system that combined both embodiments of E1, different adjustments for the same function could be determined at the hearing aid or the remote control which was however not desirable. Further, it could become unclear what adjustment is selected. The skilled person therefore would not combine the two embodiments of E1 and, even if, not arrive at the system of claim 1 in which the programmable control unit of the hearing aid is configured to be programmed by the remote control unit.

The board however holds that the skilled person would have in fact recognised that it is not necessary to provide a second means for analysing the acoustic environment at the hearing aid in order to extend the user input options and that the system of claim 1 does not prevent a conflict between the programming of control functions at the hearing aid and the remote control unit either.

2.10 The respondent further argued that the purpose of providing "programmable controls" at the hearing aid and the remote control unit would have been to use the hearing aid *without* the remote control. The skilled person therefore would have maintained the automatic programming of the control functions at the hearing aid by means of the hearing aid and would not have used the remote control unit for this purpose.

The board firstly is of the view that this alleged purpose is only a speculation. Further, even if the use without the remote control was indeed a motivation, it would not preclude the programming of a control function at the hearing aid by means of the remote

control unit since the other functions of the hearing aid could still be used without the remote control unit.

2.11 In view of the above, the subject-matter of claim 1 of the main request does not involve an inventive step. The main request is therefore not allowable under Articles 52(1) and 56 EPC.

*3. Auxiliary requests 1, 2, 2', 3 and 5 - admissibility*

3.1 Auxiliary requests 1, 2, 2', 3 and 5 were filed for the first time with the letter dated 29 May 2020 in response to the board's communication pursuant to Article 15(1) RPBA 2020, i.e. approximately one month before the scheduled oral proceedings. Since they were filed after the notification of the summons to oral proceedings before the board, their admittance is in principle governed by Article 13(2) RPBA 2020.

3.2 According to Article 13(2) RPBA 2020, any amendment to a party's case after notification of a summons to oral proceedings shall in principle **not be taken into account** unless there are **exceptional circumstances**, which have been justified with **cogent reasons** by the party concerned. Hence, the question is whether exceptional circumstances are objectively apparent in the present case.

3.3 In the present case, the filing of auxiliary requests 1, 2, 2', 3 and 5 was not occasioned by developments during the appeal proceedings. Nor did the appellant argue otherwise.

3.4 In particular, in claim 1 of **auxiliary requests 1, 2 and 2'**, only the type of the "programmable controls"

has been further specified:

- In claim 1 of **auxiliary request 1**, the programmable control of the hearing aid is specified as a sensor including a multi-axis accelerometer.

- In claim 1 of **auxiliary requests 2 and 2'**, it has been specified that "controls" of the remote control includes a microphone configured to detect voice commands.

It follows from the above that the limitations added to claim 1 of auxiliary requests 1, 2 and 2' merely specify the type of "controls" without being related to its programming, it being noted that multi-axis accelerometers as well as microphones configured to detect voice commands were well-known user input means at the priority date of the opposed patent.

3.5 Moreover, claim 1 of **auxiliary requests 3 and 5** adds to the features of claim 1 of the main request only limitations related to the *function* of the programmable control.

- In claim 1 of **auxiliary request 3**, the limitation has been added that programming the control includes changing input of the hearing aid among induction coil, induction coil and microphone, directional microphone, direct audio input, audio input via frequency modulation, FM transmission, audio input via 900 MHz wireless transmission and programmable combinations of inputs.

- In claim 1 of **auxiliary request 5**, the limitation has been added that the control is programmed to

switch the hearing aid between omnidirectional and directional microphone modes.

In both cases, the added limitations do not refer to the system or the programming of a "control" but only to its function. The board notes that switching between different input sources is a well-known function of a hearing aid control unit and that the mentioned specific input sources were known as well at the opposed patent's priority date. Also, switching between omnidirectional and directional microphone modes is a common function which was well-established in the field of hearing devices at the patent's priority date.

3.6 As a consequence, the limitations added to claim 1 of auxiliary requests 1, 2, 2', 3 and 5 constitute only juxtapositions of features which are *per se* known and which *prima facie* do not contribute to an inventive step. Hence, those claim requests are not clearly allowable. In sum, the board sees cogent reasons for not admitting the above auxiliary requests into the appeal proceedings rather than acknowledging "exceptional circumstances" justifying their admittance.

3.7 In view of the above, the board, exercising its discretion under Article 13(2) RPBA, did not admit auxiliary requests 1, 2, 2', 3 and 5 into the appeal proceedings.

*4. Auxiliary request 4 - inventive step*

4.1 Auxiliary request 4 corresponds to the auxiliary request as filed with the respondent's reply to the appellant's statement of grounds of appeal.

4.2 In claim 1 of auxiliary request 4, essentially, it has been further specified that

(e) the programmable controls of the remote control and of the hearing aid are programmable for a number of functions;
(f) the programmable control of the hearing aid comprises a button, a switch, a sensor or a microphone.

4.3 As to added feature (e), the board holds that the feature of the "controls" being programmable includes implicitly that a number of different functions can be assigned to the respective "control". Thus, feature (e) represents merely a clarification of this term without adding a further limitation and therefore does not contribute to an inventive step either.

4.4 As to added feature (f), E1 discloses a selection unit 6 as "programmable control" of the hearing aid (see paragraph [0020]), which palpably corresponds to a "switch". Feature (f) is thus known from E1.

4.5 Hence, the subject-matter of claim 1 of auxiliary request 4 does not involve an inventive step. Therefore, auxiliary request 4 is likewise not allowable under Articles 52(1) and 56 EPC.

5. As there is no allowable claim request, it follows that the opposed patent is to be revoked.

**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:

A. Vottner K. Bengi-Akyürek

Decision electronically authenticated