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(58) Field of Search:
INT CL **H04B**
Other: **WPI, EPODOC and the Internet**

(54) Title of the Invention: **Communication device**
Abstract Title: **Counter audio-frequency induction loop system having two microphones and two magnetic field producing units**

(57) A counter audio-frequency induction loop system (AFILS) comprising a communication device (100) having a housing (200) attachable to a kiosk (such as in a bank), the housing containing a first magnetic field producing unit (400) which is operatively connected to a first microphone (300), the first microphone (300) being configured to receive a first audio signal (310) from a first user, the first magnetic field producing unit (400) being configured to generate a first magnetic field (410) operable to convey the first audio signal to a hearing aid of a second user. The device further comprising a second magnetic field producing unit (600) operatively connected to a second microphone (500), wherein the second microphone (500) is configured to receive a second audio signal (510) from the second user, the second magnetic field producing device (600) being configured to generate a second magnetic field (610) operable to convey the second audio signal to a hearing aid of the first user.

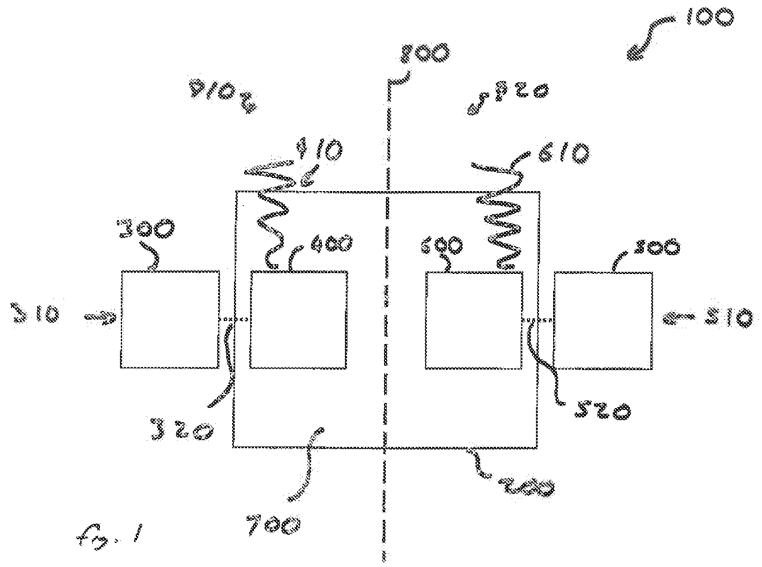

Fig. 1

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At least some of the priority details shown above were added after the date of filing of the application.

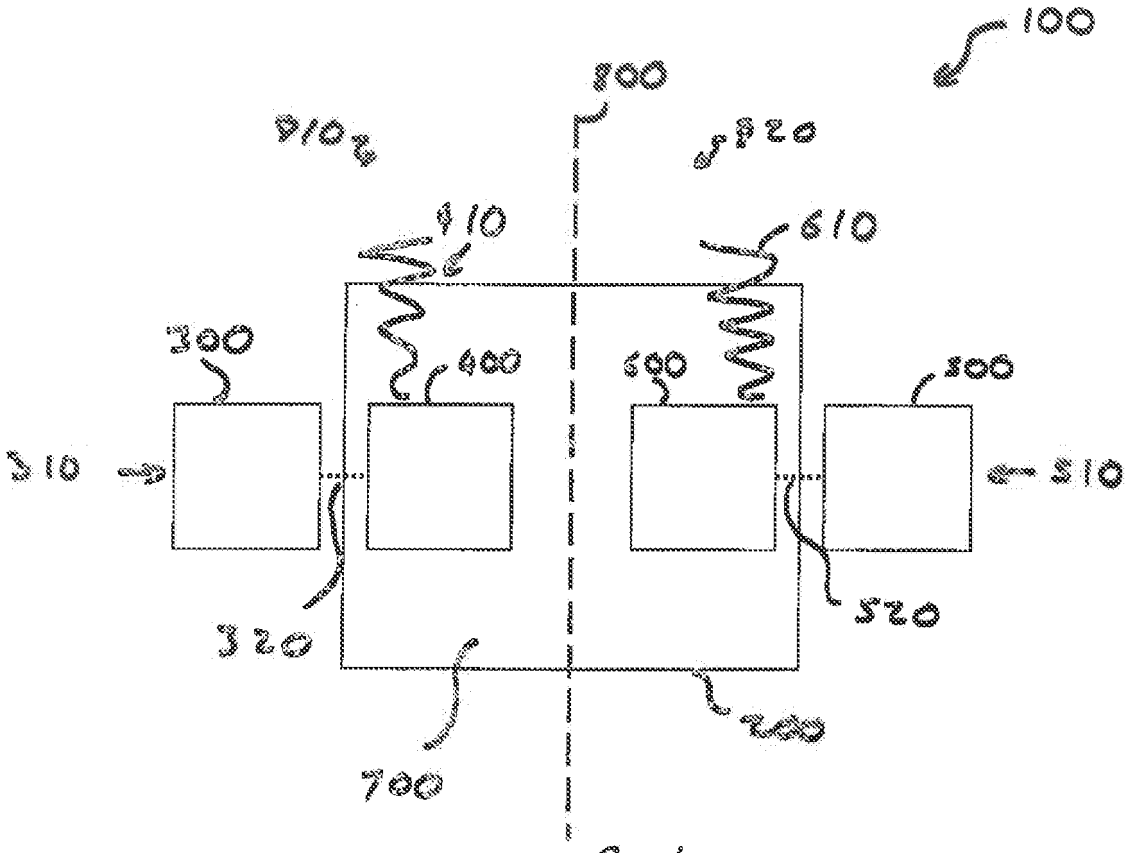
100
800
910
820
410
610
300
400
600
500
510
510
320
520
700
200

fig. 1

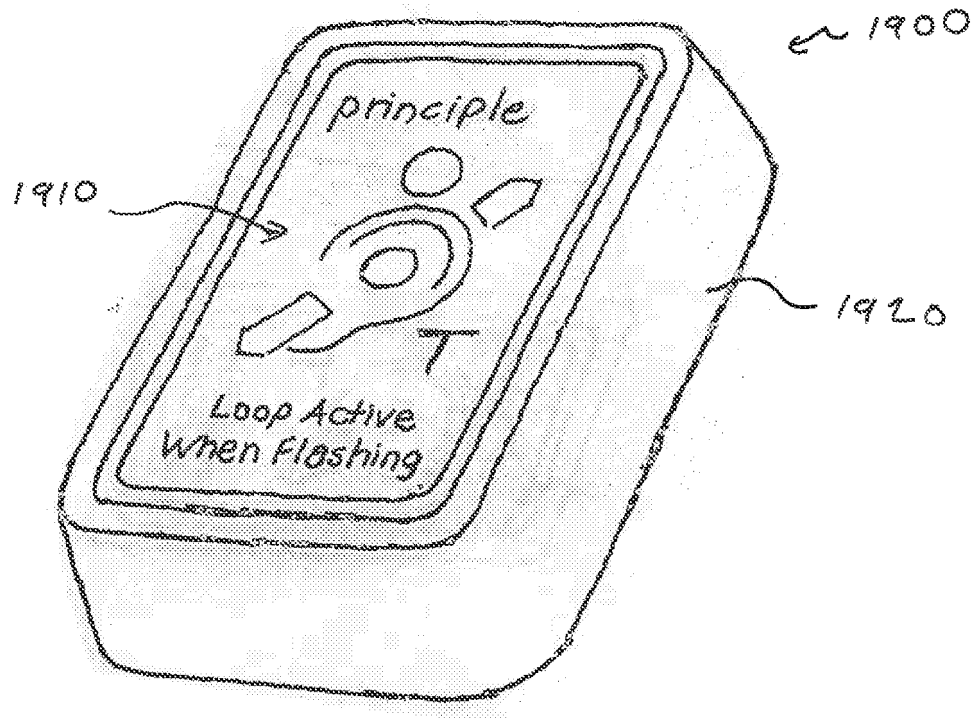
1900
principle
1910
1920
Loop Active
When Flashing

fig. 2

COMMUNICATION DEVICE

FIELD OF INVENTION

The present invention relates to a communication device for establishing communication between users at a kiosk.

BACKGROUND OF THE INVENTION

It is a legal requirement that a kiosk, such as a kiosk at a bank shop floor or other similar shop floor, comprises a communication device, generally known as an induction loop, to enable communication with an operator and a customer, wherein the customer is hearing impaired. Such devices generally comprise a microphone for receiving audio from the kiosk operator. The microphone is arranged to pass the audio signal to a magnetic field producing device. The magnetic field produced by the magnetic field producing device causes an electric signal to be induced in a telecoil of a hearing aid of a hearing impaired customer. The induced signal is then transferred to an amplification stage in the hearing aid and conveyed to the hearing impaired user via a speaker or other suitable means within the hearing aid. In this way the audio signal passes via a magnetic field from the kiosk operator to the hearing aid of the customer. The magnetic field is not affected by ambient noise, which would otherwise occur when an audio signal is communicated acoustically.

It is an object of aspects of the present invention to improve these devices.

SUMMARY OF THE INVENTION

According to a first aspect of the present invention there is provided a communication device comprising:

a housing attachable to a kiosk, the housing containing:

a first magnetic field producing unit which is operatively connected to a first microphone;

the first microphone being configured to receive a first audio signal from a first user, the first magnetic field producing unit being configured to generate a first magnetic field operable to convey the first audio signal to a hearing aid of a second user;

characterized in that the device further comprises a second magnetic field producing unit operatively connected to a second microphone,

wherein the second microphone is configured to receive a second audio signal from the second user, the second magnetic field producing device being configured to generate a second magnetic field operable to convey the second audio signal to a hearing aid of the first user.

Advantageously, the communication device enables communication when the operator of the kiosk and customer are both hearing impaired. The prior art communication devices described herein have been on the market for approximately 30 years, however they do not enable communication in this manner, accordingly a long felt need exists for such a communication device.

Optionally, the first microphone is contained in the housing or discrete from the housing. Optionally the second microphone is contained in the housing or discrete from the housing. Optionally, the second magnetic filed producing unit is contained in the housing. Optionally, the second magnetic filed producing unit is discrete from the housing.

Preferably, the first microphone is configured to receive oral communication from the first user. Preferably, the second microphone is configured to receive oral communication from the second user.

Preferably, the communication device comprises a power supply unit, wherein the power supply unit is configured to supply power to the first microphone, first magnetic field producing unit, the second microphone, second magnetic field producing unit. Preferably, the power supply unit is discrete from or contained in the housing.

Preferably, the housing is removably attachable to a kiosk.

Preferably, the communication device is configured such that a partition is positionable such that the first and second microphones are on opposed sides of the partition.

Preferably, the communication device is configured such that the first magnetic field producing unit and second magnetic field producing unit provide magnetic fields substantially on opposed sides of a partition.

Preferably, the communication device comprises a first indication means, the first indication means being configured to indicate to the second user, or provide a first piece of information to the second user when the communication device is operable to provide the first magnetic field, preferably to convey the first audio signal to a hearing aid of a second user.

Preferably, the first indication means is configured to indicate to the second user over a distance of up to 10 meters.

Preferably, the device further comprises a second indication means, the second indication means being configured to indicate to the second user, or provide a second piece of information to the first user when the communication device is operable to provide the second magnetic field, preferably to convey the first audio signal to a hearing aid of a first user.

Preferably, the second indication means is configured to indicate to the first user over a distance of up to 10 meters.

Preferably, one or more of the following devices: first microphone, second microphone, first magnetic field producing unit and second magnetic field producing unit, power supply, first indication means; second indication means, are formed on / operatively connected to a single circuit board. Advantageously, the communication device is easy and relatively cheap to manufacture.

According to a further aspect of the present invention there is provided a kit of parts for a communication device, the kit of parts comprising:

a housing attachable to a kiosk, the housing containing;

a first magnetic field producing unit which is operatively connected to a first microphone;

wherein when assembled the first microphone being configured to receive a first audio signal from a first user, the first magnetic field producing unit being configured to generate a first magnetic field operable to convey the first audio signal to a hearing aid of a second user;

characterized in that the device further comprises a second magnetic field producing unit connected to a second microphone unit,

wherein when assembled the second microphone is configured to receive a second audio signal from the second user, the second magnetic field producing device being configured to generate a second magnetic field operable to convey the second audio signal to a hearing aid of the first user.

According to a further aspect of the present invention there is provided a method of communication, the method comprising steps of:

a first user supplying a first audio signal to a first microphone of a communication device;

the first microphone transferring the first audio signal to a first magnetic signal producing unit of the communication device;

the first magnetic field producing unit converting the first audio signal to a first magnetic field operable to be received by a hearing aid of a second user;

characterized in that the method further comprises a step of;

supplying a second audio signal from the second user to a second microphone of the communication device;

the second microphone transferring the second audio signal to a second magnetic signal producing unit of the communication device;

the second magnetic field producing unit converting the second audio signal to a second magnetic field operable to be received by a hearing aid of the first user.

According to a further aspect of the present invention there is provided a communication device comprising:

a housing attachable to a kiosk, the housing containing;

a first magnetic field producing unit which is operatively connected to a first microphone;

the first microphone being configured to receive a first audio signal from a first user, the first magnetic field producing unit being configured to generate a first magnetic field operable to convey the first audio signal to a hearing aid of a second user;

characterized in that the communication device comprises a first indication means, the first indication means being configured to indicate to the second user, or provide a first piece of information to the second user, when the communication device is operable to provide the first magnetic field.

A user when communicating using the prior art devices described herein does not know whether the communication device operational until the device is used. This is of particular inconvenience if, for instance, the user has had to queue for a while before approaching the

kiosk where the device will subsequently be used. Advantageously, this aspect of the invention provides a indication means to indicate to a user whether a field is being generated. Thus a user can assess from afar before joining the queue whether they can use the device, such that they do not join a queue to use a de vice with ultimately will not work.

It will be appreciated that the indication means may be positioned in a visible position, such as on the partition, or several meters above the kiosk, such that it can be seen up to about 10 meters away.

Preferably, the second user is a customer and the first user is a kiosk operator.

Alternatively, the second user is a kiosk operator and the first user is a customer. It will be appreciated that the device will also work for a kiosk operator, for instance, the indication means may be mounted on a desk of the kiosk, such that the kiosk operator is able to tell before selecting a kiosk to work at whether the device will work.

Optionally, the first indication means is contained in the housing. Optionally, the first indication means is discrete from the housing and is operatively connected to the first and / or second magnetic field generating unit.

Optionally, the first indication means comprises a light display means. Preferably, the first piece of information comprises a change in intensity of light emitted by the light display means. Preferably, the first light display means comprises one or more LEDS.

Optionally, the first light display means is configured to emit a continuous light when the communication device is operable to provide the first magnetic field. Optionally, the first display means is configured to emit a pulsing light when the communication device is operable to provide the first magnetic field.

Preferably, the first indicating means is able to indicate to the second user once the first magnetic filed is connected to the hearing aid of the second user.

Preferably the first indicating means is positioned proximate the second microphone.

Preferably, the communication device further comprises a second microphone connected to a second magnetic field producing unit, wherein the second microphone is configured to receive a second audio signal from the second user, the second magnetic field producing device being configured to generate a second magnetic field operable to convey the second audio signal to a hearing aid of the first user.

Preferably, the device further comprises a second indication means, the second indication means being configured to provide a second piece of information to the first user when the communication device is operable to provide the second magnetic field.

Optionally, the second indication means is contained in the housing. Optionally, the second indication means is discrete from the housing and is operatively connected to the first and / or second magnetic field generating unit.

Optionally, the second indication means comprises a light display means. Preferably, the second piece of information comprises a change in intensity of light emitted by the light display means. Preferably, the second light display means comprises one or more LEDS.

Optionally, the second light display means is configured to emit a continuous light when the communication device is operable to provide the second magnetic field. Optionally, the second display means is configured to emit a pulsing light when the communication device is operable to provide the second magnetic field.

Preferably, the second indicating means is able to indicate to the second user once the second magnetic filed is connected to the hearing aid of the first user.

Preferably the second indicating means is positioned proximate the first microphone.

A method of indicating whether a connection can be achieved between a user and a communication device, the method comprising:

indicating to the user by means of an indication means when a first magnetic field producing unit of the device generates a first magnetic field, the first magnetic field being configured to convey a first audio signal from a first microphone to a hearing aid of the user,

wherein the first microphone is arranged to receive oral communication from a first user and is connected to the first magnetic field generating unit.

All of the features contained herein may be combined with any of the above aspects and in any combination.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figure 1 shows schematic of a communication device according to an exemplary embodiment of the present invention;

Figure 2 shows a perspective view of a communication device comprising an indication means according to a further embodiment of the invention.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

Figure 1 shows a schematic of a communication device 100 according to a first embodiment of the invention. The communication device 100 includes: a housing 200 attachable to a kiosk (not shown); a first microphone 300 connected to a first magnetic field producing unit 400; and a second microphone 500 connected to a second magnetic field producing unit 600.

In this embodiment, the first and second magnetic filed producing units 400, 600 are contained in the housing 200, and the first and second microphones 300, 500 are connected proximate the housing 200. It will be appreciated that in other embodiments other configurations are possible, for instance, the microphones may also be positioned in the housing such that they can receive a signal from external the housing.

The first and second microphones 300, 500 comprise an acoustic-to-electric transducer that converts sound into an electrical signal. In this particular embodiment the microphones use electro electromagnetic induction, however in alternate embodiment other suitable types of microphones can be used such as capacitance change (condenser microphone), piezoelectric generation, or light modulation to produce an electrical voltage signal from mechanical vibration.

The first and second magnetic field producing units 400, 600 comprise an audio-frequency induction loop (AFILS) amplifier which is operable to output a magnetic field based on the electric signal from the relevant microphone. In this particular embodiment the first microphone 300 is arranged to provide an electric signal to the first magnetic field producing unit 400 which converts it into a first magnetic field 410. The second microphone 500 is

arranged to provide an electric signal to the second magnetic field producing unit 600 which converts it into a second magnetic field 610.

In this embodiment the housing 200 is arranged to contain first and second magnetic field producing units 400, 600 and associated components. In this particular embodiment the housing comprises a plastic material, in another embodiment any other material suitable for protecting the above components, such as metal or wood, can be used. In this embodiment the housing 200 is removably attached to the kiosk, for instance by fixing means, such as nuts and bolts, or a clamp. In an alternative embodiment the housing is formed integrally with the kiosk.

The communication device 100 further comprises a power supply unit (PSU) 700, arranged to supply power to the first and second microphone 300, 500, first and second magnetic field producing units 400, 600 and associated components. Advantageously, all of the above components are powered by a single PSU.

In this particular embodiment the communication device is arranged such that the first microphone 300 microphone is positioned at a first side 810 of a partition 800, and the second microphone 500 microphone positioned at a second side 820 of the partition 800. In this example the first magnetic field producing unit 400 is arranged to generate a first magnetic field 410 in the proximity of the second side 820 of the partition 800, and the second magnetic field producing unit 600 is arranged to generate the second magnetic field 610 in the proximity of the first side 810 of the partition 800.

It will be appreciated that the first and second magnetic field producing units 400, 600 can be positioned on either side of the partition, however it is preferable to position the first magnetic field producing unit 400 on the second side 820, and the second magnetic field producing unit 600 on the first side 810, since in this way they are closer to the relevant user.

In this embodiment the magnetic field producing units 400, 600 are limited to transmit up to 1200mm from their associated antennas.

The above and associated components are formed on or operatively connected single circuit board (not shown). Advantageously, the communication device 100 is easy and relatively cheap to manufacture.

In use the communication device may be operated by: two hearing impaired users, one on the first side 810 and one on the second side 820; or one hearing impaired user on the first

side 810, and a non-hearing impaired user on the second side 820; or one hearing impaired user on the second side 820, and a non-hearing impaired user on the first side 810.

In the case of two hearing impaired users, a first hearing impaired user on the first side 810 supplies a first audio signal 310 to the first microphone 300, which converts it into a first electrical signal 320. The first microphone 300 transfers the first electrical signal 320 to the first magnetic signal producing unit 400. The first magnetic field producing unit 400 converts the first electrical signal 320 to a first magnetic field 410 which is transmitted by an associated antenna. The first magnetic field 410 is then received by a hearing aid (not shown) of a second user on the second side 820 and converted by a telecoil to an electrical signal, which is then converted, by the hearing aid to an audio signal.

The second hearing impaired user on the second side 820, then sequentially communicates to the first hearing impaired user by supplying a second audio signal 510 to the second microphone 500, which converts it into a second electrical signal 520. The second microphone 500 transfers the second electrical signal 520 to the second magnetic signal producing unit 600. The second magnetic field producing unit 600 converts the second electrical signal 520 to a second magnetic field 610 which is transmitted by an associated antenna. The second magnetic field 610 is then received by a hearing aid (not shown) of the first user and converted by a telecoil to an electrical signal, which is then converted, by the hearing aid to an audio signal.

In the case of communication between a non-hearing impaired user and a hearing impaired user, the communication process is as above, however, the hearing-impaired user communicates with the non-hearing impaired orally, and the non-hearing impaired user receives the communication aurally. Accordingly in the above the hearing impaired user may be the first or second user and the non-hearing impaired user may be the other of the first or second user

According to a second embodiment of the invention, there is provided a communication device 1000. The communication device 1000 has: a housing 1200 attachable to a kiosk; a first microphone 1300 connected to a first magnetic field producing unit 1400 and an indication means 1900. The first microphone being arranged to receive oral communication from a first user and the first magnetic field producing unit being operable to supply a first magnetic field to a hearing aid of a second user.

Referring to figure 2 the indication means 1900 comprises a light emitting diode 1910 (LED), in another embodiment the indication means comprises any other suitable light source, or other device operable to provide a notification to a user. In an alternative embodiment the

indication means is positioned on the housing 1200. In this embodiment the indication means is positioned in a separate housing 1920 which is connected to the housing 1200, for instance, via an elongate wire and positioned remote to the housing 1200.

In use, when the first magnetic field producing unit 1400 generates a first magnetic field, the LED changes from a non-light emitting state to a light emitting state. In this way the indication means 1900 indicates to the second user that a magnetic is operable to be received. In this way the second user (for instance a customer) can determine that the device 1000 is operable to enable communication before they join a queue at a kiosk.

It will be appreciate that the indication means 1900 is positioned on a visible place of the kiosk, such as several meters above the kiosk desk or on the partition. The LED is sufficiently bright such that it is visible from a range of up to about 10 meters.

According to a third embodiment of the present invention the first embodiment of the invention is provided with indication means 1900, as described in the second embodiment. In this particular embodiment, the first indication means 1900 is operable to indicate to a hearing impaired second user on the second side 820 of the communication device 100, that the first magnetic field generation unit 400 is operable to generate a magnetic field 410 that can be received by the hearing aid of the hearing impaired second user on the second side 820.

According to a fourth embodiment of the present invention the third embodiment of the invention is provided with a further indication means 2900. In this particular embodiment, a second indication means 2900 is operable to indicate to a hearing impaired first user on the first side 810 of the communication device 100, that the second magnetic field generation unit 600 is operable to generate a magnetic field 410 that can be received by the hearing aid of the hearing impaired first user on the first side 820.

In the above embodiments, the first side of the communication device generally refers to the side occupied by the kiosk operator, and the second side generally refers to the side of the communication device occupied by the customer.

Attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be

combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings) may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A communication device (100) comprising:

a housing (200) attachable to a kiosk, the housing containing:

a first magnetic field producing unit (400) which is operatively connected to a first microphone (300);

the first microphone (300) being configured to receive a first audio signal (310) from a first user, the first magnetic field producing unit (400) being configured to generate a first magnetic field (410) operable to convey the first audio signal to a hearing aid of a second user;

characterised in that the device further comprises a second magnetic field producing unit (600) operatively connected to a second microphone (500),

wherein the second microphone (500) is configured to receive a second audio signal (510) from the second user, the second magnetic field producing device (600) being configured to generate a second magnetic field (610) operable to convey the second audio signal to a hearing aid of the first user.

2. The communication device as claimed in claim1, wherein the first microphone (300) is contained in the housing (200) or is discrete from the housing (200).

3. The communication device as claimed in any preceding claim, wherein the second microphone (500) is contained in the housing (200) or discrete from the housing (200).

4. The communication device as claimed in any preceding claim, wherein the second magnetic field producing unit (600) is contained in the housing (200).

5. The communication device as claimed in claims 1 - 3, wherein the second magnetic field producing unit (600) is discrete from the housing (200).

6. The communication device as claimed in any preceding claim, wherein the first microphone (300) is configured to receive oral communication from the first user.

7. The communication device as claimed in any preceding claim, wherein the second microphone (500) is configured to receive oral communication from the second user.

8. The communication device as claimed in any preceding claim, wherein the communication device comprises a power supply unit, wherein the power supply unit is configured to supply power to the first microphone, first magnetic field producing unit, the second microphone, second magnetic field producing unit.

9. The communication device as claimed in claim 9, wherein the power supply unit is discrete from or contained in the housing.

10. The communication device as claimed in any preceding claim, wherein the housing is removably attachable to a kiosk.

11. The communication device as claimed in any preceding claim, wherein the communication device is configured such that a partition (800) is positionable such that the first and second microphones (300), (500) are on opposed sides of the partition (800).

12. The communication device as claimed in any preceding claim, wherein the communication device is configured such that the first magnetic field producing unit (400) and second magnetic field producing unit (600) provide magnetic fields substantially on opposed sides of a partition (800).

13. The communication device as claimed in any preceding claim, wherein the communication device comprises a first indication means, the first indication means being configured to indicate to the second user, or provide a piece of information to the second user when the communication device is operable to provide the first magnetic field (410), preferably to convey the first audio signal (310) to a hearing aid of the second user.

14. The communication device as claimed in claim 13, wherein the first indication means is configured to indicate to the second user over a distance of up to 10 meters.

15. The communication device as claimed in any preceding claim, wherein the communication device further comprises a second indication means, the second indication means being configured to indicate to the first user, or provide a piece of information to the first user when the communication device is operable to provide the second magnetic field, (610) to convey the second audio signal (510) to a hearing aid of the first user.

16. The communication device as claimed in claim 15, wherein the second indication means is configured to indicate to the first user over a distance of up to 10 meters.

17. The communication device as claimed in any preceding claim, wherein one or more of the following devices: first microphone, second microphone, first magnetic field producing unit and second magnetic field producing unit, power supply, first indication means; second indication means, are formed on / operatively connected to a single circuit board.

18. The communication device as claimed in any preceding claim, wherein the first user is a kiosk operator and the second user is a customer.

19. A kit of parts for a communication device (100), the kit of parts comprising:

a housing (200) attachable to a kiosk, the housing containing;

a first magnetic field producing unit (400) which is operatively connected to a first microphone (300);

wherein when assembled the first microphone (300) being configured to receive a first audio signal (310) from a first user, the first magnetic field producing unit (400) being configured to generate a first magnetic field (410) operable to convey the first audio signal to a hearing aid of a second user;

characterised in that the device further comprises a second magnetic field producing unit (600) connected to a second microphone unit (500),

wherein when assembled the second microphone (500) is configured to receive a second audio signal (510) from the second user, the second magnetic field producing device (600) being configured to generate a second magnetic field (610) operable to convey the second audio signal (510) to a hearing aid of the first user.

20. A method of communication, the method comprising steps of:

a first user supplying a first audio signal (310) to a first microphone (300) of a communication device (100);

the first microphone (300) transferring the first audio signal (310) to a first magnetic signal producing unit (400) of the communication device;

the first magnetic field producing unit (400) converting the first audio signal to a first magnetic field operable to be received by a hearing aid of a second user;

characterised in that the method further comprises a step of;

supplying a second audio signal (510) from the second user to a second microphone (500) of the communication device;

the second microphone (500) transferring the second audio signal to a second magnetic field producing unit (600) of the communication device;

the second magnetic field producing unit (600) converting the second audio signal to a second magnetic field (610) operable to be received by a hearing aid of the first user.

21. A communication device (100) comprising:

a housing (200) attachable to a kiosk, the housing containing;

a first magnetic field producing unit (410) which is operatively connected to a first microphone (300);

the first microphone (300) being configured to receive a first audio signal (310) from a first user, the first magnetic field producing unit (400) being configured to generate a first magnetic field (410) operable to convey the first audio signal to a hearing aid of a second user;

characterised in that the communication device comprises a first indication means, the first indication means being configured to indicate to the second user, or provide a first piece of information to the second user, when the communication device is operable to provide the first magnetic field (410).

22. The communication device as claimed in claim 21, wherein the first indication means is configured to be positioned in a visible position, such as on the partition, or several meters above the kiosk, such that it can be seen up to about 10 meters away.

23. The communication device as claimed in claims 21 – 22, wherein the second user is a customer and the first user is a kiosk operator.

24. The communication device as claimed in claims 21 – 23, wherein the first indication means is contained in the housing (200).

25. The communication device as claimed in claims 21 – 22, wherein the first indication means is discrete from the housing and is operatively connected to the first magnetic filed generating unit.

26. The communication device as claimed in claims 21 – 25, wherein the first indication means comprises a first light display means.

27. The communication device as claimed in claims 21 – 26, wherein the first piece of information comprises a change in intensity of light emitted by the first light display means.

28. The communication device as claimed in claims 26 – 27, wherein the first light display means comprises one or more LEDS.

29. The communication device as claimed in claims 26 – 28, wherein the first light display means is configured to emit a continuous light when the communication device is operable to provide the first magnetic field (410).

30. The communication device as claimed in claims 26 – 28, wherein the first display means is configured to emit a pulsing light when the communication device is operable to provide the first magnetic field.

31. The communication device as claimed in claims 21 – 30, wherein the first indicating means is operable to indicate to the second user once the first magnetic field (410) is connected to the hearing aid of the second user.

32. The communication device as claimed in claims 21 – 31, wherein the first indicating means is positioned proximate the second microphone (500).

33. The communication device as claimed in claims 21 – 32, wherein the communication device further comprises a second microphone (500) connected to a second magnetic field producing unit (600), wherein the second microphone (500) is configured to receive a second audio signal (510) from the second user, the second magnetic field producing unit (600) being configured to generate a second magnetic field (610) operable to convey the second audio signal to a hearing aid of the first user.

34. The communication device as claimed in claims 21 – 33, wherein the device further comprises a second indication means, the second indication means being configured to provide a second piece of information to the first user when the communication device is operable to provide the second magnetic field (610).

35. The communication device as claimed in claim 34, wherein the second indication means is contained in the housing.

36. The communication device as claimed in claim 34, wherein the second indication means is discrete from the housing and is operatively connected to the second magnetic field generating unit.

37. The communication device as claimed in claims 34 – 36, wherein the second indication means comprises a second light display means, and the second piece of information comprises a change in intensity of light emitted by the second light display means.

38. The communication device as claimed in claim 37, wherein the second light display means comprises one or more LEDS.

39. The communication device as claimed in claims 37 – 38, wherein the second light display means is configured to emit a continuous light when the communication device is operable to provide the second magnetic field.

40. The communication device as claimed in claims 37 – 38, wherein the second light display means is configured to emit a pulsing light when the communication device is operable to provide the second magnetic field.

41. The communication device as claimed in claims 34 – 40, wherein the second indicating means is operable to indicate to the first user once the second magnetic filed is connected to the hearing aid of the first user.

42. The communication device as claimed in claims 34 – 41, wherein the second indicating means is positioned proximate the first microphone.

43. A method of indicating whether a connection can be achieved between a user and a communication device (100), the method comprising:

indicating to the user by means of an indication means when a first magnetic field producing unit (400) of the device generates a first magnetic field (410), the first magnetic field (410) being configured to convey a first audio signal (310) from a first microphone (300) to a hearing aid of the user,

wherein the first microphone (300) is arranged to receive oral communication from a first user and is connected to the first magnetic field generating unit (400).

INTELLECTUAL PROPERTY OFFICE

Application No:	GB1218664.9	**Examiner:**	Daniel Voisey
Claims searched:	1 to 20	**Date of search:**	12 July 2013

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1 to 20	GB 2271886 A (PILKINGTON GLASS & BARCLAYS BANK) see particularly the abstract, page 1 paragraph 1 to page 2 paragraph 1, page 3 paragraph 3 to page 4 paragraph 1, and figures 1 and 5.
X	1 to 20	All About Counter Induction Loops, AMPERTRONIC, downloaded 11/7/13 from: http://www.ampetronic.com/write/Documents/Technical%20Library/Information%20Sheets/UP30073-1_All_about_counter_induction_loops.pdf
X	1 to 20	A Guide to Audio-frequency Induction Loop Systems, C-TEC, downloaded 11/7/13 from: http://www.c-tec.co.uk/dlfiles/Sales%20PDFs/C-TEC_AFILS_GUIDE_REV1.pdf

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
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Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

H04B

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC and the Internet

International Classification:

Subclass	Subgroup	Valid From
H04B	0005/00	01/01/2006