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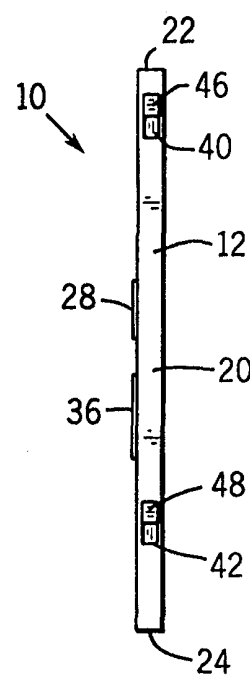
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(54) Title: DIGITAL DICTATION CARD AND METHOD OF USE IN BUSINESS

(57) Abstract

Disclosed herein is a digital dictation card (10), and a method of its use in business, that is low cost, lightweight and has a thin profile. A plurality of cards may be stored in a cradle to be used as additional dictated messages are required. The cards may be discarded after each use or used repeatedly after the memory is cleared. The digital dictation card has large easily operated controls and an attachment member so that it can be easily secured to a paper, file, computer, cabinet, telephone, desk or any other flat-surfaced object. The attachment member can be a spring clip, a low grip adhesive, a magnet or any other such device.



(This area contains the main body of the patent document, including the description and claims, which are not fully legible in this scan.)

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**DIGITAL DICTATION CARD
AND METHOD OF USE IN BUSINESS**

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims the benefit of U.S. provisional application serial number
60/109,278 filed November 20, 1998.

STATEMENT REGARDING FEDERALLY
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BACKGROUND OF THE INVENTION

This invention relates to the field of portable voice recorders and in particularly to lightweight, inexpensive dictation cards that can be secured to papers, files or other such business documents.

15 Virtually every field of business requires the interaction and cooperation of co-workers, partners and associates to perform tasks. There are times in which co-workers cannot be in direct communication with each other, such as when one colleague is undertaking another matter or out of the office. As such, information, instructions and questions may have to be communicated by leaving a message
20 containing such information that the recipient will receive at a later time.

There are a number of well-known ways to provide a message for someone. For example, one can write the information on a piece of paper or notepad and deliver the message to the recipient's desk. Adhesive backed notepads can be used to attach notes to documents in an office environment. Preparing a note can be time
25 consuming, however, and quickly prepared notes are often illegible. Further such

notes require access to a writing implement and a writing surface which are not always available. Still another way to send a message is via electronic mail. However, this is only possible if the recipient has an email account, and the sender must know the account address and be at a computer terminal.

5 Still another means is to leave a verbal message. For example, one can communicate the information to an assistant of the intended recipient who will relay the message upon his or her return. Alternatively, one can leave a voice mail message via the telephone. This is a convenient and reliable method, however, it requires access to a telephone as well as a preexisting voice mail account. Still another way to
10 leave verbal messages is by using a dictation machine.

 Dictation machines are well known and typically consist of a recording apparatus that can be used to convert speech to electric signals suitably transferred to a storage medium, such as a magnetic tape. Initially, these machines were large desktop tape recorders. Technological advancements reduced their size allowing them to be
15 held easily within one hand. The development of micro-cassette tape cartridges further reduced the size of the dictation machines. Such micro-cassette dictation cards are commonly used today by doctors and lawyers to dictate reports and memoranda for transcription by an assistant or secretary.

 Digital dictation machines in which the speech is stored in a memory module,
20 rather than a tape medium, are also well known. These digital devices are typically the same size as micro-cassette dictation device such that they are portable and can be hand-held. These devices eliminate the need for a tape, however, the amount of storage space is limited to the storage capacity of the memory module. Thus, when the memory is at full capacity, no additional dictation can be stored until the memory
25 is cleared. Moreover, since the memory is permanently fixed on board the device, the entire device must be given to the transcriptionists, rather than merely one of many

low cost cassette tapes. Additionally, because these devices are typically quite costly, one is unlikely to have a spare or backup device.

Some of these concerns are remedied by more sophisticated digital devices that can be interfaced with a computer to download the dictation and store it as a file on the computer. The file can then be sent electronically to a transcriptionists or processed by a speech-to-text engine. However, such sophisticates devices are costly and require access to a high-speed computer system. Further, none of the aforementioned dictation devices are particularly well suited for recording and distributing multiple, short-length notes.

Moreover, it is often desired to attach the message to a letter, file or other document. Common digital dictation devices are too large and heavy to attach to a paper or file. And, although it is true that tapes can be removed from their dictation machines and conveyed along with a document or file, they do not have a built-in attachment member for attaching the tape to the document or file. Moreover, common paper clips and adhesives are ineffective in properly securing the tape in place. Consequently, the tape may be lost or disassociated with a particular file or documents.

Accordingly, there exists a need in the art for a low cost, lightweight method of conveying verbal messages to a business associate or other intended message recipient.

BRIEF SUMMARY OF THE INVENTION

The present invention provides a digital dictation card that can be described as an electronic version of the common sticky note. The dictation card of the present invention includes a powered integrated circuit audio record/play device in a very small or thin profile format. This device has on its reverse side a method of attachment such as a removable tac adhesive or a physical clipping device. It is also intended to be permanently attached to other common office supplies such as file

folders or accordion folders. The present invention also includes a method for using the digital dictation card in business.

Specifically, the present invention is a thin, portable dictation card for use in conveying a spoken message from a speaker to a message recipient. The dictation card has a housing having a planar front joined to a planar back by edge surfaces. The housing has a controller opening through which an operation controller is partially disposed so as to be accessible from outside of the housing. The housing also includes an attachment member for retaining said dictation card to an object. The housing contains record/playback circuitry linked to said operation controller and including a microphone disposed adjacent to the microphone opening for receiving audio signals corresponding to the spoken message; an analog to digital convertor for digitizing the audio signals; a processor for receiving input signals from the controller and processing the input signals and the digitized audio signals; a memory module linked to the processor for storing the digitized audio signals upon the processor receiving a record input signal from the controller; an output device linked to the processor for presenting the stored digitized audio signals upon the processor receiving a playback input signal from the controller. The housing also contains a power supply coupled to the record/playback circuitry for energizing the dictation card.

The dictation unit is ideally used in a business environment in which it is attached to a business object, such a document, file, desk, telephone or computer screen. Preferably, the business object is portable so that the dictation card can be attached to the object at the attachment member and transported from the speaker to the message recipient. The attachment member retains the dictation card to the portable business object during movement.

The dictation card may be configured to include a variety of features. For example, the device may have an digital to analog convertor and a loudspeaker so that

said spoken message is presented audibly via said loudspeaker. Alternatively, the dictation card can include a speech recognition system and an electronic display coupled to the processor, wherein the audio signals corresponding to the spoken message received from the microphone are converted into text and presented on the electronic display. In either case, the controller may include a record button and a playback button that are depressed by the message speaker and recipient for recording and playing respectively the spoken message stored on the dictation card. The controller can also perform other standard cassette player functions such as, fast forward, rewind, pause and stop as well as other dictation equipment functions such as clear and record lock out. The device may be powered by a battery or a solar panel and it may have at least one label surface on the housing for containing message or speaker data or other such information.

The housing also includes, preferably on a back side, an attachment device for connecting to a sheet of paper, a file or other business document. The attachment device can be a spring-biased clip, an adhesive, a magnet or other such device. Alternatively, the attachment device can be a paper receiving member, such as a file or expandible folder.

One purpose of this invention is to increase productivity and communication in an office, home or industrial environment. By relieving the message sender of the time consuming chore of putting his/her thoughts or message into writing his/her productivity has been enhanced.

Another purpose of this invention is to increase the accuracy of communication between parties. The sender can leave a detailed explanation of his/her intentions with the attached papers or object, and not be limited to a small writing area of the typical sticky note. The sender's exact message can be communicated along with voice inflections.

The present invention includes a business method for conveying a spoken message from a speaker to a business associate. The method includes a number of steps such as providing a plurality of dictation cards to the speaker, recording the spoken message onto one of the portable dictation card, transporting the dictation card to the business associate, and the business associate receiving the spoken message contained within the dictation card. The method may also include disposing of the dictation card containing the received message. Alternatively, the business method may include resetting the dictation card containing the received message and returning it to the original or any other speaker.

Thus, yet another purpose of this device is to make recorded voice communication inexpensive and common. It has the ability to change and simplify the way we do business and communicate. In addition it will greatly improve the accuracy of message content since the recipient is hearing the message in the sender's own words.

These and other objects, advantages and aspects of the invention will become apparent from the following description. In the description, reference is made to the accompanying drawings which form a part hereof, and in which there is shown a preferred embodiment of the invention. Such embodiment does not necessarily represent the full scope of the invention and reference is made therefore, to the claims herein for interpreting the scope of the invention.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

Fig. 1 is a front elevational view of a first embodiment of the thin profile digital dictation card of the present invention having an adhesive attachment member;

Fig. 2 is a side plan view of the dictation card of Fig. 1;

Fig. 3 is a back perspective view of the dictation card of Fig 1;

Fig. 4 is a block diagram of the electronic circuitry of the dictation card of Fig. 1;

Fig. 5 is a flow chart of a preferred method of using the dictation card of Fig. 1;

Fig. 6 is a second embodiment of the dictation card of the present invention
5 having a clip attachment member;

Fig. 7 is a third embodiment of the dictation card of the present invention
having a magnet attachment member;

Fig. 8 is a fourth embodiment of the dictation card of the present invention in
which it is integral with a file folder;

Fig. 9 is a fifth embodiment of the dictation card of the present invention
10 having a solar panel, speech recognition engine and an electronic display;

Fig. 10 is an alternate embodiment of the dictation card of Fig. 9 having
additional control capabilities; and

Fig. 11 is cradle for containing one or more dictation cards of the present
15 invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring to Figs. 1-3, the dictation card of the present invention is referred to
generally by the reference numeral 10. The dictation card 10 includes a preferably
low-cost plastic housing 12 having a front 14, a back 16, sides 18 and 20 and top 22 and
20 bottom 24 ends. The front 14 and back 16 of the housing 12 are broad, planar surfaces
that are joined by the narrow sides 18, 20 and ends 22, 24 to define a small, thin-profile

package approximately the size of a standard business card. The housing front 14 has an opening 26 for receiving a thin-profile record button 28 and two additional openings 30, 32 for receiving a similar playback button 34 and a reverse cue button 36, respectively. The housing front 14 also defines a loudspeaker/microphone opening 38 through which sound may pass. Other less accessible controls are located at the right side 20 which has two openings 40 and 42 near respective top 22 and bottom 24 ends in which are disposed a record lock 44 and a message clear button 46, respectively.

The controls are simple and intuitive enough for anyone to use immediately.

Disposed in a suitable location on the front 14 and back 16 of the housing 12 are labels 47, 49 having lines for writing information such as the content of the stored message(s) or the identification of the speaker.

Preferably, the housing is no larger than 100mm x 70mm x 5mm and the dictation card weighs no more than 2 ounces. Its small size and low weight allow the dictation card to be easily handled and passed along from a speaker to a message recipient. Its thin profile also allows one or more cards to be stacked together in a small space for storage or stacked on top of or in between documents and files. Additionally, on the back 16 is an attachment member 51 for securing the dictation card to a stationary or portable object. In a first embodiment shown in Figs. 1-3, the attachment member 51 is an adhesive. The adhesive is preferably low-grip allowing the dictation card 10 to be adhered and easily removed from a business object or document such as a file, computer screen, telephone or any other such object multiple times. The dictation card 10 may be attached to objects in other ways, as described below with regard to alternate embodiments of the invention.

The housing 12 contains record/playback circuitry the construction of which may be in accordance with the teachings of U.S. Patent 4,791,741 entitled: Card With Built-In Record/Playback Capabilities hereby incorporated by reference. Referring to

Fig. 4, generally, the record/playback circuitry 48 includes a processor 50 electrically connected to an input controller 52, a read/write memory module 54, a power supply 56, an analog-to-digital (A/D) converter 58 and a digital-to-analog (D/A) converter 60. These elements may be separate components, or with the exception of the power supply 56, they may be included in a single microcontroller chip, as is known in the art. In either case, the elements may be any suitable standard electronic components known in the art.

The A/D convertor 58 is electrically connected to a suitable microphone 62 and the D/A convertor 60 is electrically connected to a suitable loudspeaker 64. It should be noted that the figure shows the microphone 62 and loudspeaker 64 as separate components, however, the invention is not limited in this regard as a single piezoelectric device 66 may be used instead. Preferably, the memory module 54 has sufficient capacity to store up to 5 minutes of monaural audio signals. The dictation card 10 of the present invention is not limited in this regard, however, as memory modules having more or less capacity can be used depending upon the intended use of the cards.

The dictation card 10 is operated by a speaker depressing the record button 28 while speaking a message. The record button 28 may be depressed and held throughout the duration of the message or once at the beginning and end of the message. As the speaker begins uttering a message, the microphone 62 converts the audio waves into analog electronic signals. These analog signals are converted into a digital representation by the A/D convertor 58. The processor 50 begins processing these signals upon receipt of a record input signal sent from the controller 52 initiated by depressing the record button 28. The digital signals are then stored in the memory module 54 for playback. Additional recording may be added on to full capacity of the memory 54 at any time. Moreover, the processor 50 can be programmed to augment

an original message with additional recording, thus, treating the stored signals as one message. Alternatively, the processor 50 can index and store the signals as a new message each time the record button 28 is depressed.

5 The speaker or message recipient may then depress the playback button 34 which initiates a playback signal from the controller 52 to the processor 50. The processor 50 then begins transmitting the stored message from the memory module 54 to the to the D/A converter 60, which convertors the digital message signal to analog format to be output via the loudspeaker 64. Preferably, the processor 50 will default to playing stored messages from the beginning upon receiving a playback signal. In
10 this way, the speaker can quickly playback the message to review its contents or ensure that it was properly recorded. Also, the message recipient can playback and replay the message multiple times by depressing the playback button 34 once time each. Alternatively, the user could "rewind" the message using the reverse cue button 36. In either case, the user can quickly repeat a part or all of stored message by
15 depressing and holding the reverse cue button 36, which initiates a rewind signal from the controller 52 to the processor 50.

Because of its low cost, the dictation card 10 may be designed to be disposable after one or a fixed number of uses, for example 25 messages. For disposable dictation cards 10 the power supply 56 is preferably a low voltage, direct current battery, such as
20 a mercury filled battery. If the dictation card 10 is to be reused indefinitely, the housing 12 includes a battery compartment cover (not shown) that may be removed so as to replace an expired battery. Alternatively, the power supply 56 may be a nickel-cadmium or other such rechargeable battery. In this case, the dictation card 10 includes a standard input jack (not shown) coupled to the power supply 56 for
25 connecting an electrical charging card (not shown). The dictation card 10 would also include an indicator light (not shown) at the front 14 that illuminates during charging.

As yet another alternative, the power supply 56 may be a small solar panel such as that commonly used in small electronics such as calculators.

The dictation card 10 of the present invention may be used to convey messages at home, an office or an industrial facility, such as a hospital or restaurant. For example, the dictation card 10 may be used to convey brief messages in an office setting such as instructions for a secretary or telephone messages taken while the intended recipient was away. It may be used for brief messages in other settings such as by a nurse to convey a patient's status to a doctor, or by parents for leaving instructions about after school activities. The dictation card may also be used to record longer dictation to be transcribed by a human or electronic transcriptionist.

Referring to Fig. 5, a preferred method of use includes supplying one or more dictation cards 10 to a speaker, as shown in block 68. Since the dictation cards 10 are low cost and small, the speaker can affordably store a plurality of cards 10 for example at his/her desk without occupying a significant amount of desk space. At block 70, the speaker can select one of the dictation cards 10 and record a message by depressing the record button 28 and speaking, as described above. The dictation card 10 having the message is then conveyed to an associate or any other intended message recipient, at block 72. This can be done transporting the dictation card 10 alone or, however, preferably the dictation card 10 is physically attached to a portable business object, document or file to which the content of the message on the dictation card pertains. At block 74, once the dictation card 10 is received by the associate, the message is played by depressing the playback button 34. After the message has been conveyed, at block 76, the memory 54 can be erased or reset by depressing the message clear button 46 and the dictation card 10 returned to the original speaker or any other message sender, at block 78. Alternatively, because of its low cost, after the message has been played the dictation card 10 can be discarded, at block 80.

Referring to Fig. 6, the dictation card 10 is identical to that of the first embodiment, however, the attachment member 151 is a spring biased clip having opposing clasp members 152 and 153 biased together along a bottom edge 154 by a spring 155. This attachment member provides a positive connection of the dictation card 10 to files, letters and other business documents. Alternatively, referring to Fig. 7, in a third embodiment of the present invention, the dictation card 10 is identical to that of the first embodiment except that the attachment member 251 is a magnet. The magnet is suitably attached to the housing back 16, such as by an adhesive. This attachment member 251 allows the dictation card 10 to be affixed to any metal object, such as those commonly found in an office environment including a file cabinet, file organizers, book ends, staplers. Similarly, the dictation card 10 of this embodiment could also be conveniently used at home to leave a message for a family member by attaching the dictation card 10 to a refrigerator, as is commonly with paper notes. Moreover, this dictation card 10 could be used in industries, and be affixed to metal objects in a machine shop or a restaurant, for example. A magnetic attachment member can be used with the dictation card 10 of the present invention without erasing a stored message as may occur in conventional tape-based dictation devices.

Still further, as shown in Fig. 8, a fourth embodiment of the present invention the dictation card 10 is identical to that of the first embodiment except that it includes a paper receiving member 351 as the attachment member. The paper receiving member 351 has two plastic planar halves 352 and 353 joined along a bottom edge 354. In this embodiment, the dictation card 10 is integrally joined to the paper receiving member 351 at the back 16 by any suitable means such as an adhesive or a heat or ultrasonic welding process. The paper receiving member 351 could be any common office type paper folder including an accordion or clasp envelope. Preferably, the paper receiving member 351 is sized to contain a standard letter sized paper, however,

it can be any suitable size including that necessary for containing standard legal and internal papers.

Referring to Fig. 9, in a fifth embodiment of the present invention, the dictation card 10A has a thin profile housing 12A having substantially the same dimensions as housing 12. The housing 12A, however, the front 14A includes openings for receiving a display 82 for viewing message text, a solar panel 84 for energizing the card, and a single multi-function button 86. In addition, the loudspeaker/microphone opening 38A is smaller and in a different location than that of the first embodiment. The front 14A also includes a label 47. The right side 20 includes openings for record lockout 44 and message clear 46 switches as described above as well as a mute switch 88 for suppressing audio playback of the messages. The record/playback circuitry (not shown) is identical to that of the first embodiment, however, the memory module stores a speech recognition grammar set, as known in the art, which the processor uses to model the digitized audio signals received from the microphone so as to convert the spoken message to text, which the processor sends to the display 82, in addition to or instead of the loudspeaker, depending upon the position of the mute switch 88. Lengthier messages are presented by the message text on the display. The processor and display also operate to indicate the total number and time of stored messages as well as the number and time of the current message. Additionally, the multi-function button 86 is used to record and playback messages as well as scan an index of stored multiple messages.

Referring to Fig. 10, a sixth embodiment of the present invention is identical to the fifth embodiment, except that the power supply is a battery and the single multi-function button is replaced by standard cassette controls, including a playback button 90, a fast cue button 92, a reverse cue button 94, a playback pause button 96 and a stop button 98.

Referring to Fig. 11, a plurality of dictation cards 10, of any of the above described embodiments, may be stored in a cradle 100 when not being used. The cradle 100 has a base 102 and four exterior sides 104 tapering inwardly from the base 102 to a top perimeter 106. Four interior sides 108 extend vertically from a floor 110 to the top perimeter 106. Two opposing interior sides 112 and 114 include partitioning ribs 116 spaced throughout each side 112 and 114 to define slots for receiving a dictation card 10.

For rechargeable dictation cards 10, the cradle 100 can include positive and negative conductive terminals (not shown) at one or both of sides 112 and 114 so as to contact positive and negative terminals (not shown) at one or both of the top 22 and bottom 24 ends of a dictation card 10. The cradle terminals are electrically coupled to a DC transformer (not shown) via a conductive lead (not shown). The dictation card terminals are suitably coupled to the terminals of the rechargeable battery. The cradle can include positive and negative terminals for each slot defined by the partition ribs 116 so that a dictation card 10 can be recharged in any slot and so that multiple cards can be recharged at the same time. Alternatively, terminals can be provided in only one recharging slot, such as the first slot. The cradle 100 also includes an indicator light (not shown) which illuminates when a dictation card is being charged.

The present invention may include other aspects not specifically delineated in the aforementioned preferred embodiments. The above in no way is intended to limit the scope of the invention. Accordingly, in order to apprise the public of the full scope of the present invention, reference must be made to the following claims.

CLAIMS

I claim:

1. A thin, portable dictation card for use in conveying a spoken message from a speaker to a message recipient, comprising:

(a) a housing having a planar front joined to a planar back by edge surfaces, said housing having a controller opening and a microphone opening and an attachment member for retaining said dictation card to an object;

(b) an operation controller partially disposed in said controller opening so as to be accessible from outside of said housing;

(c) record/playback circuitry disposed within said housing and linked to said operation controller including:

(i.) a microphone disposed adjacent to said microphone opening for receiving audio signals corresponding to said spoken message;

(ii.) an analog to digital convertor for digitizing said audio signals;

(iii.) a processor for receiving input signals from said controller and processing said input signals and said digitized audio signals;

(iv.) a memory module linked to said processor for storing said digitized audio signals upon said processor receiving a record input signal from said controller;

(v.) an output device linked to said processor for presenting said stored digitized audio signals upon said processor receiving a playback input signal from said controller;

(d) a power supply coupled to said record/playback circuitry for energizing said dictation card.

2. The device of claim 1, wherein said object is a portable business object and said attachment member retains said dictation card to said portable business object during movement.

3. The device of claim 1, wherein said record/playback circuitry further includes a digital to analog convertor linked to said processor and wherein said output device is a loudspeaker so that said stored digitized audio signals are presented audibly when said processor receives said playback input signal.

4. The device of claim 3, wherein said controller includes a record button and a playback button, said record button being depressed by said speaker for recording said spoken message and said playback button being depressed by said message recipient for playing said spoken message stored in said memory module.

5. The device of claim 3, wherein said loudspeaker and microphone are a single piezoelectric device.

6. The device of claim 1, wherein said record/playback circuitry further includes a speech recognition system and wherein said output device is an electronic display, said speech recognition system and said electronic display being coupled to said processor such that said digitized audio signals are converted into text and presented visually on said electronic display.

7. The device of claim 1, wherein said power supply is a battery.

8. The device of claim 7, wherein said battery supplies energy for approximately 25 record-playback cycles.
9. The device of claim 1, wherein said power supply is a solar panel.
10. The device of claim 1, wherein said memory module can store up to 5 minutes of digitized monaural audio signals.
11. The device of claim 1, wherein said housing is no thicker than 5mm.
12. The device of claim 1, wherein said housing is no larger than 100mm x 70mm x 5mm.
13. The device of claim 1, wherein said dictation card weighs no more than 2 ounces.
14. The device of claim 1, wherein said controller can perform at least one additional function selected from the group consisting of: fast forward, rewind, pause, stop, clear and record lock out.
15. The device of claim 1, wherein a housing has a label surface for containing message information and speaker/recipient information.
16. The device of claim 1, wherein said attachment member is a paper receiving member.

17. The device of claim 16, wherein said paper receiving member is a file folder.
18. The device of claim 1, wherein said attachment member is a spring biased clip.
19. The device of claim 1, wherein said attachment member is a low grip adhesive.
20. The device of claim 1, wherein said attachment member is a magnet.

21. A method for conveying a spoken message from a speaker to a business associate, comprising the steps of:

(a) providing a plurality of dictation cards to said speaker, said plurality of dictation cards each having a thin profile housing in which an operation controller is partially disposed so as to be accessible from outside of said housing, said housing
5 containing record/playback circuitry linked to said controller including:

(i.) a microphone disposed adjacent to a microphone opening in said housing for receiving audio signals corresponding to said spoken message;

(ii.) an analog to digital convertor for digitizing said audio signals;

(iii.) a processor for receiving input signals from said controller and processing said input signals and said digitized audio signals;

(iv.) a memory module linked to said processor for storing said digitized audio signals upon said processor receiving a record input
15 signal from said controller;

(v.) an output device linked to said processor for presenting said stored digitized audio signals upon said processor receiving a playback input signal from said controller;

wherein said housing further contains a power supply coupled to said record/playback circuitry for energizing said dictation card;

(b) recording said spoken message onto one of said plurality of dictation cards;

(c) transporting said recorded dictation card to said business associate; and

(d) said business associate receiving said recorded dictation card and playing
25 back said spoken message stored on said memory module.

22. The method of claim 21, further comprising the step of:
 - (e) clearing said spoken message from said recorded dictation card and returning said cleared dictation card to a speaker.

23. The method of claim 21, further comprising the step of:
 - (e) disposing of said recorded dictation card.

24. The method of claim 21, wherein said plurality of dictation units each include an attachment member affixed to said housing for retaining said plurality of dictation cards to business objects.

25. The method of claim 24, wherein in said business objects are portable and wherein in step (c) said recorded dictation card is transported to said business associate while being attached to a portable business object at said attachment member.

26. The method of claim 25, wherein said portable business object pertains to said spoken message stored on said recorded dictation card.

27. The method of claim 24, wherein said attachment member is a paper receiving device.

28. The method of claim 27, wherein said paper receiving device is a file folder.

29. The method of claim 24, wherein said attachment member is a spring biased clip.

30. The method of claim 24, wherein said attachment member is a low grip adhesive.

31. The method of claim 24, wherein said attachment member is a magnet.

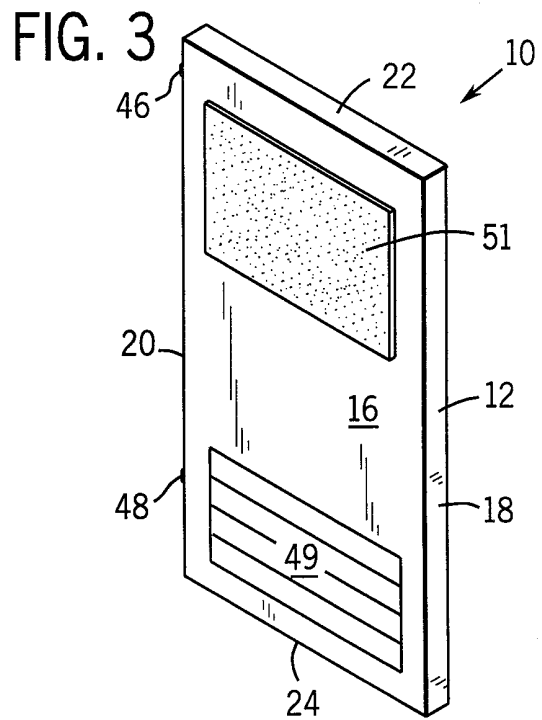
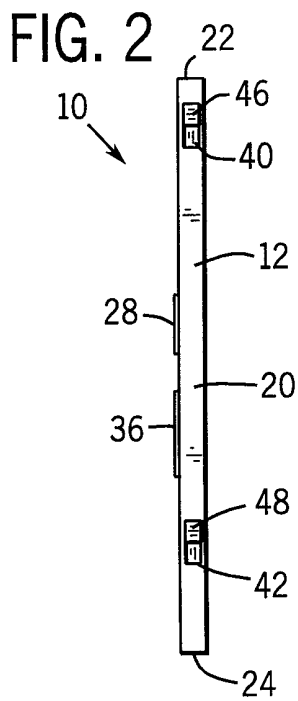
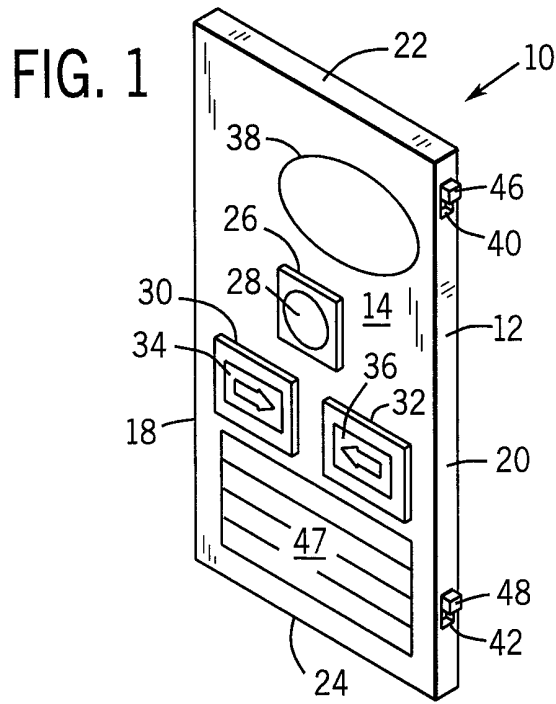
32. The method of claim 21, wherein said record/playback circuitry further includes a digital to analog convertor linked to said processor and wherein said output device is a loudspeaker, and wherein step (d) further includes said business associate activating a playback function of said controller so that said spoken message is presented audibly via said loudspeaker.

33. The method of claim 32, wherein said controller includes a record button and a playback button, said record button being depressed by said speaker in step (b) for recording said spoken message and said playback button being depressed by said business associate in step (d) for playing said spoken message stored in said memory module.

34. The method of claim 32, wherein said loudspeaker and microphone are a single piezoelectric device.

35. The method of claim 21, wherein said record/playback circuitry further includes a speech recognition system and wherein said output device is an electronic display, said speech recognition system and said electronic display being coupled to said processor such that said digitized audio signals are converted into text and presented visually on said electronic display.

36. The method of claim 21, wherein said power supply is a battery.
37. The method of claim 21, wherein said power supply is a solar panel.
38. The method of claim 21, wherein said memory module can store 5 minutes of digitized monaural audio signals.
39. The method of claim 21, wherein said dictation card is no larger than 100mm x 70mm x 5mm.
40. The method of claim 21, wherein said dictation card weighs no more than 2 ounces.
41. The method of claim 21, wherein said controller can perform at least one additional function selected from the group consisting of: fast forward, rewind, pause, stop, clear and record lock out.
42. The method of claim 21, wherein said dictation card has a front joined to a back via edge surfaces.
43. The method of claim 42, wherein at least one of said front and back contain a label surface for containing message information.
44. The method of claim 21, wherein said plurality of dictation cards are stored in a cradle which defines an opening partitioned to retain each of said plurality of dictation cards individually in an edge-wise orientation.



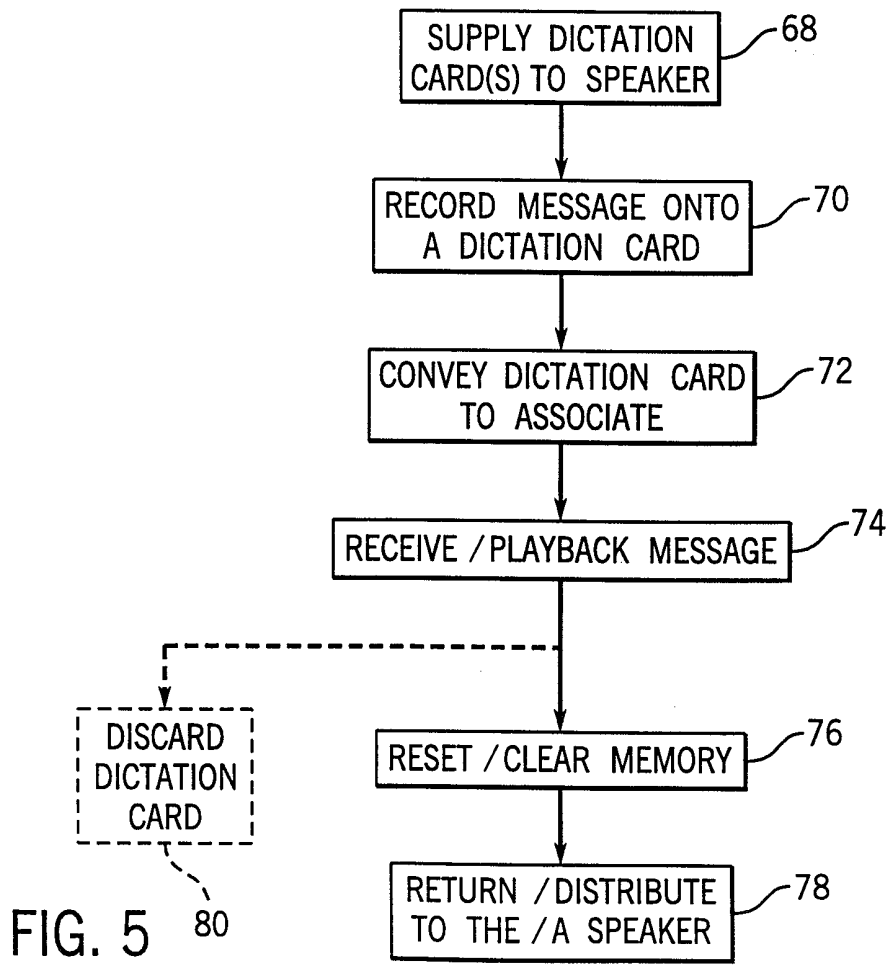
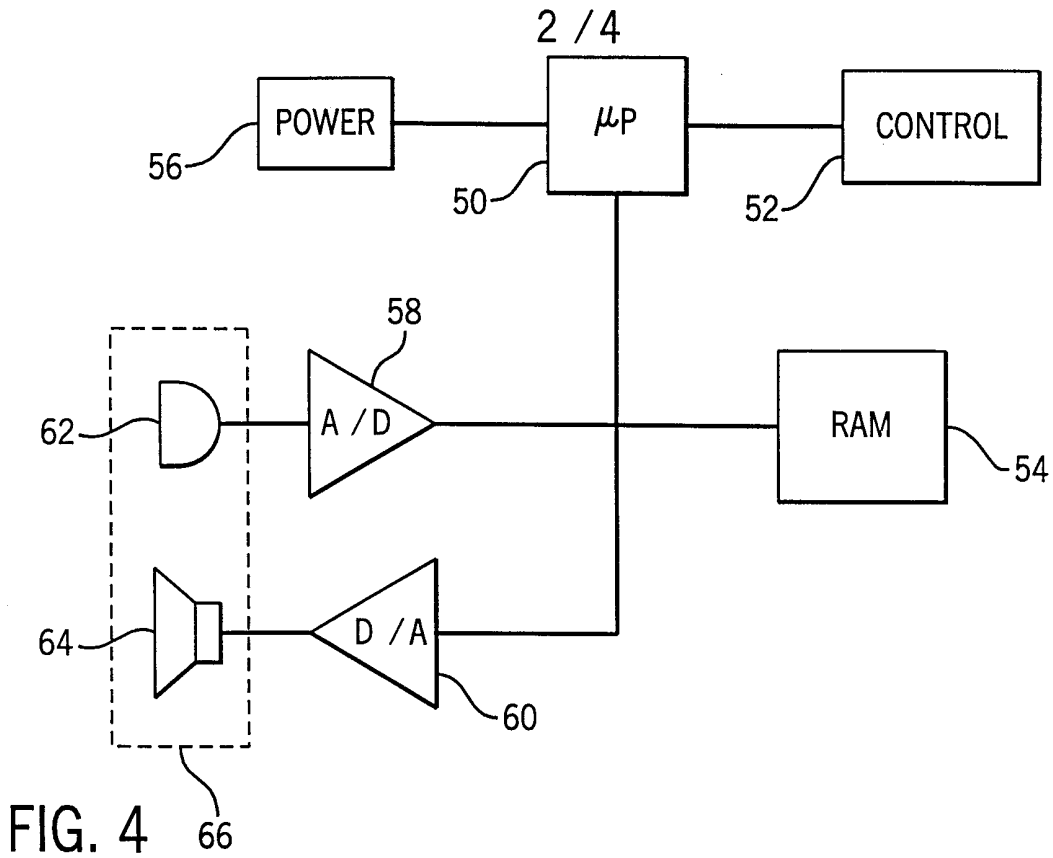


FIG. 6

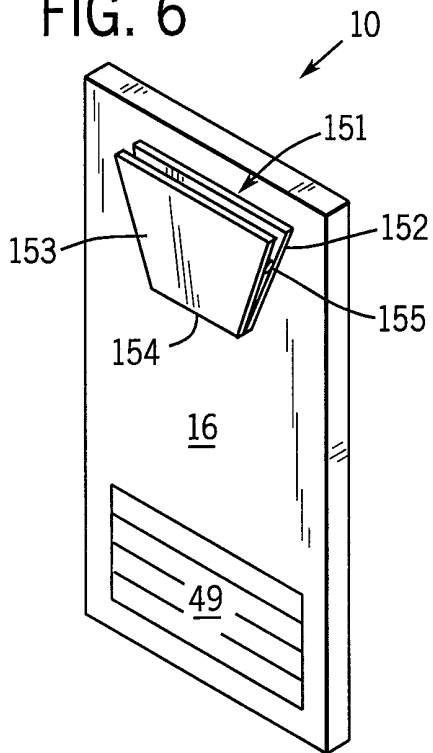


FIG. 7

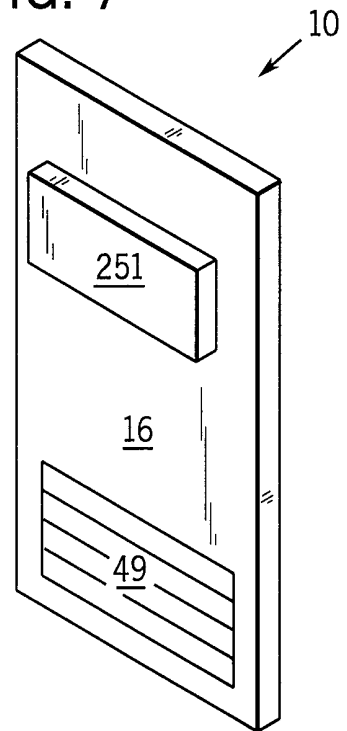


FIG. 8

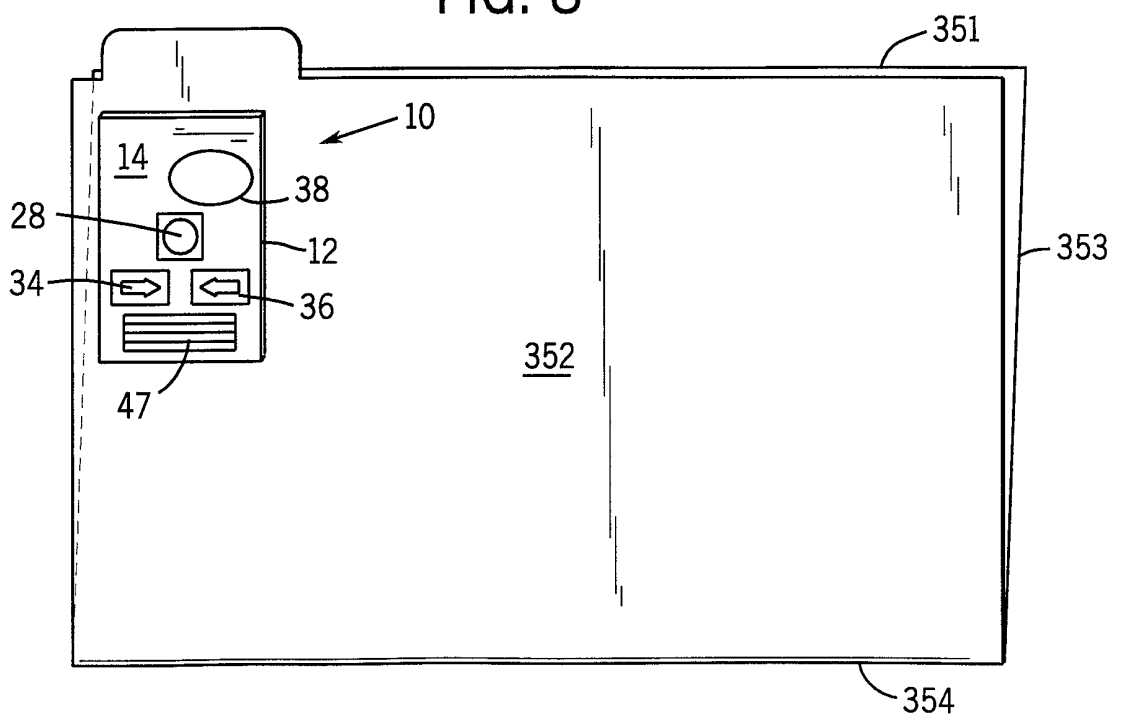


FIG. 9

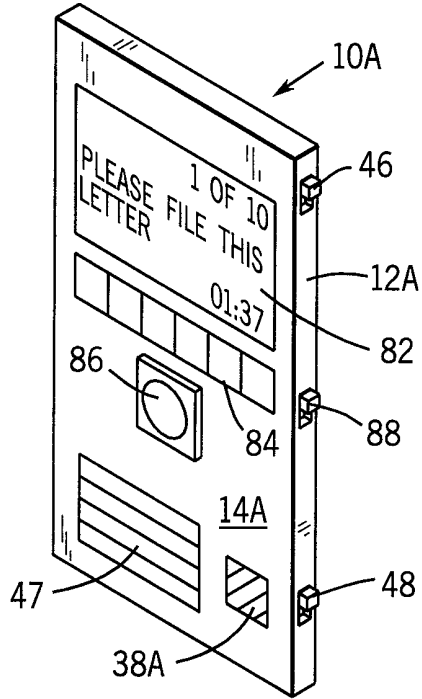


FIG. 10

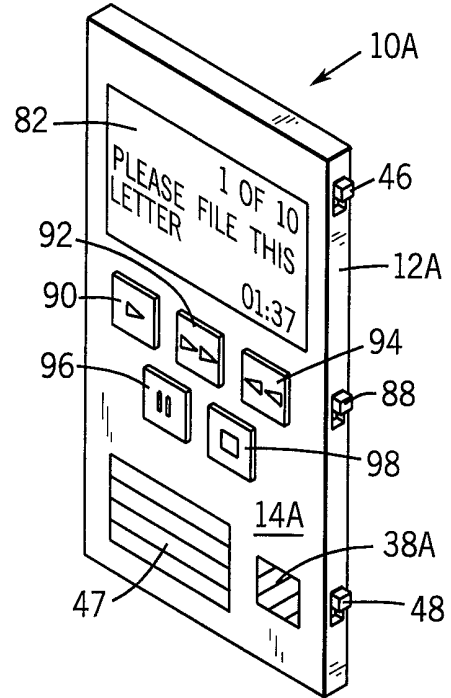
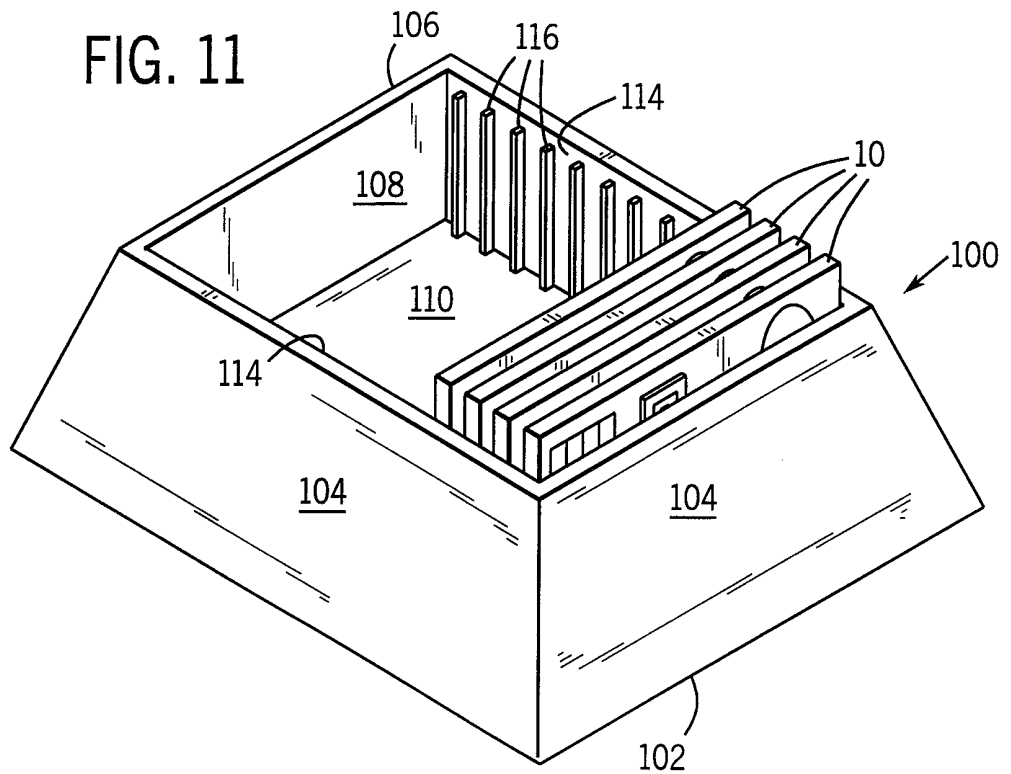


FIG. 11



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/27520

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) :G10L 15/08, 15/26 US CL :704/235, 236, 237, 238, 239, 240, 241, 242 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 704/235, 236, 237, 238, 239, 240, 241, 242		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched none		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) IEL online, Smart Patent Workbench, EAST, West search terms: dictation, portable, audio, vocal, record, playback, A/D converter, memory, microphone input		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 5,875,448 A (BOYS et al.) 23 February 1999, Figs.1-3, Col.3, line 8 - Col. 15 line 65.	1-44
X	US 5,839,108 A (DABERKO et al.) 17 November 1998, abstract, Fig.1, Fig.2, Col.1, line 32 - Col.4 line 10.	1-44
X	US 4,588,857 A (ARSEM) 13 May 1986, abstract, Fig. 1A, Col.1, line 5 - Col.2, line 28.	1-44
X	US 5,477,511 A (ENGLEHARDT) 19 December 1995, Fig.1, Fig.3, Fig.4, Col.1, line 61 - Col.5, line 43.	1-44
Y	US 5,526,407 A (RUSSELL et al.) 11 June 1996, abstract.	1, 21
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* "A" "B" "L" "O" "P"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance earlier document published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed	"T" "X" "Y" "a."
		later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family
Date of the actual completion of the international search 08 MARCH 2000	Date of mailing of the international search report 06 APR 2000	
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer VIJAY CHAWAN <i>Joni Hill</i> Telephone No. (703) 305-3900	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/27520

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,615,296 A (STANFORD et al.) 25 March 1997, abstract, Col.3, lines 25-43.	1,21