the touch panel **9**; and **FIGS. 3B and 3C** respectively illustrate that the finger tip **16** is in touch with the touch panel **9**. More specifically, **FIG. 3B** illustrates that the finger tip **16** is lightly in touch with the touch panel **9**, while **FIG. 3C** illustrates that the finger tip **16** is strongly pushing the touch panel **9** in.

[0053] **FIG. 4** is a graph showing how to determine from a pressure detected by a pressure sensor whether the finger tip illustrated in **FIG. 3** is pushing the touch panel in, or is in touch with the touch panel, or is released from the touch panel (this determination is made by a control unit, later described), wherein the horizontal axis represents a pressure P acting on the touch panel **9** (a force pushing the touch panel **9**, hereinafter called the "pushing force"), and the vertical axis represents the result of determination on the pushing force P.

[0054] In **FIG. 4, a** low pressure P1 and a high pressure P2 have been previously set, such that the control unit determines that no pushing force P is acting on the touch panel **9** (without reaction) when the pushing force P onto the touch panel **9** is lower than P1 (P<P1); that the finger tip **16** gets into touch with the touch panel **9** when the pushing force P is equal to or larger than P1 and smaller than P2 (P1<=P<P2) (corresponding to the "touch sensing" in the aforementioned Tables 1, 2) to detect the position on the touch panel **9** at which the finger tip **16** is in touch with the touch panel **9**; and that the finger tip **16** is pushing the touch panel **9** in when the pushing force P is equal to or higher than P2 (P2<=P) because a strong pushing force is acting on the touch panel **9** to push the same in (corresponding to the "pressure detection" in the aforementioned Tables 1, 2).

[0055] **FIG. 3A** shows P<P1 in **FIG. 4**, in which case the control unit determines that no finger tip is in touch with the touch panel **9**. **FIG. 3B** shows that the finger tip **16** is in touch with the touch panel **9**, in which case the control unit determines that the finger tip **16** is not in touch with the touch panel **9** when 0<=P<P1, and that the finger tip **16** is only in touch with the touch panel **9** but not pushing the touch panel **9** in when P1<=P<P2. In this manner, erroneous operations can be reduced.

[0056] **FIG. 3C** shows that the user touches the touch panel **9** with the finger tip **16** to push the touch panel **9** in, so that **FIG. 3C** corresponds to P2<=P in **FIG. 4**. In this event, the control unit determines that the touch panel **9** is pushed in.

[0057] As described above, this embodiment enables the sensing of a touch on the touch panel **9** in two stages. This two-stage sensing mode can offer the user an operation feeling close to the operability provided by a keyboard. For example, the user can feel as if he is typing on a keyboard in such a manner that the user recognizes the position of a key with a lighter touch (P1<=P<P2) and strongly pushes the key in (P2<=P). Therefore, this two-stage sensing mode can provide the user with a secure typing feeling which cannot so far been achieved by conventional touch panels. Thus, according to the display unit of this embodiment which employs the two-stage sensing mode, the user can instruct an associated device to activate a particular function by touching a position on the display screen corresponding thereto, as well as perform a function similar to the drag-and drop, as described later, through a touch operation. Moreover, according to the display unit of this embodiment, "activation of a particular function" can be distinguished from a "drag-and-drop" operation based on a pressure with which the user touches the touch panel, without requiring the user to once release the finger tip from the touch panel. This can reduce possible erroneous operations, in comparison with a touch panel which activates similar functions relying on the timing of touch, as previously described in the prior art example, thus providing a satisfactory typing feeling.

[0058] While this embodiment is described in connection with a touch panel which is touched by a finger tip, taken as an example, the display unit with a touch panel according to the present invention can be operated with a rod-shaped member such as a pen, a pen-shaped input device, and the like, other than the finger tip.

[0059] It should be noted that the aforementioned pressure P1 (>0) is set to prevent an erroneous determination that the touch panel **9** is touched when the touch panel **9** is applied with an improper pressure caused, for example, by vibrations or the like.

[0060] **FIGS. 5A and 5B** are block diagrams illustrating exemplary specific circuit configurations of a main portion in the embodiment illustrated in **FIG. 1**. Specifically, **FIG. 5A** illustrates the circuit configuration corresponding to Examples 1, 4 in the aforementioned Tables 1, 2, while **FIG. 5B** illustrates the circuit configuration corresponding to Examples 2, 3, 5 in Tables 1, 2. In these figures, the display panel comprises the control unit **17**; a speaker **18**; and a storage unit **19**. Components corresponding to those in **FIGS. 1 and 2** are designated the same reference numerals, and repetitive description thereon is omitted.

[0061] In the circuit configuration illustrated in **FIG. 5**A, the touch panel **9** comprises a touch sensor and a pressure sensor. A pressure detected P by the pressure sensor is supplied to the control unit **17**. The control unit **17** makes the determination described in connection with **FIG. 4** based on the detected pressure P, and controls the display panel **8** and projection unit **12**, as described later, in accordance with the result of the determination and based on data stored in the storage unit **19**, and reproduces a predetermined voice through the speaker **18**.

[0062] Likewise, in the circuit configuration illustrated in **FIG. 5**B, the control unit **17** performs a similar function control in accordance with a pressure P detected by pressure sensors provided in the supporting members **10**, **11**, **15**.

[0063] Next, the control unit **17** will be described in connection with its operation based on the pressure P. As shown in **FIG. 4**, assume in the following description that the processing performed by the control unit **17** is designated "A" when the pressure P satisfies 0<=P<P1; the processing performed by the control unit **17** is designated "B" when P1<=P<P2; and the processing performed by the control unit **17** is designated "C" when P2<=P. Though the respective processing will be described later in detail, the processing A is performed when the touch panel **9** is free of a touch, as the matter of course.

[0064] Now, the storage unit **19** shown in **FIGS. 5A and 5B** will be described with reference to **FIGS. 6A and 6B**.

[0065] The display unit **8** or **12** displays on the display screen **2** such touch-driven members as icons, functional buttons, and the like. The storage unit **19** stores data for