

through one of the pin holes 6. As the housing 1 is rotated about the rotating shaft 5 to place the display screen 2 in a predetermined orientation, the pin 7 can be fitted into a nearby pin hole 6 to fix the display screen 2 substantially in this predetermined orientation.

[0040] In this manner, the pin holes 6 and pin 7 implement a means for adjusting the orientation (angle) of the display screen 2, so that the orientation of the display screen 2 can be changed in as many stages as the number of pin holes 6.

[0041] As illustrated in FIG. 1C, the display panel 8 as a display means is supported by the supporting member 10 and incorporated in the housing 1. The display surface 8a of the display panel 8 for displaying an image is fitted in the opening 1a of the housing 1, as the display screen 2, together with the touch panel 9 which covers the entirety of the display surface 8a.

[0042] FIGS. 2A and 2B are diagrams generally illustrating specific examples of the display means contained in the housing 1 in FIGS. 1A to 1C. Specifically, FIG. 2A illustrates a display means which may be used when the display panel 8 is implemented by a liquid crystal panel, a Braun tube, a plasma display panel, or the like, while FIG. 2B illustrates a display means which may be used together with a projector such as a liquid crystal projector. The display means comprises a supporting member 11; a projection unit 12; a mirror 13; a screen 14; and a supporting member 15. Components corresponding to those in FIGS. 1A to 1C are designated the same reference numerals, and repetitive description thereon is omitted.

[0043] In FIG. 2A, the display panel 8 is supported by the supporting means 11 in the housing 1 as described above, while the touch panel 9 is supported on the display panel 8 by the supporting means 11.

[0044] The touch panel 9 comprises a transparent film that covers the entire display surface 8a, and senses a touch thereon by the user with a finger tip (touch sensing) to detect the touched position (position detection). In this specific example, the touch panel 9 further comprises a function of detecting a pressure when the user touches the touch panel 9 (pressure detecting function). This function of detecting a pressure may be implemented by three methods as shown in the following Table 1.

TABLE 1

	Example 1 Touch Sensing Position Detection Pressure Detection	Example 2 Touch Sensing Position Detection	Example 3 Touch Sensing Position Detection
Touch panel 9			
Supporting Member 10	(Support)	Pressure Detection	(Support)
Supporting Member 11	(Support)	(Support)	Pressure Detection

[0045] In Table 1, Example 1 provides the touch panel 9 with the function of sensing a touch, and associated functions of detecting a touched position and detecting a pressure at the touched position, wherein the supporting members 10, 11 only have their inherent functions of supporting the

display panel 8, and supporting the touch panel 9, respectively. In Example 2, the supporting member 10 for supporting the display panel 8 is provided with a pressure sensor to have the function of detecting a pressure, while the touch panel 9 and supporting member 11 only have their inherent functions. In Example 3, the supporting member 11 for supporting the touch panel 9 is provided with a pressure sensor to have the function of detecting a pressure, while the touch panel 9 and supporting member 10 only have their inherent functions.

[0046] In the specific example illustrated in FIG. 2B, the housing 1 contains a projector which is composed of the projection unit 12 including a liquid crystal panel, a Braun tube, or the like for generating a video image, the mirror 13, and the screen 14, and the touch panel 9 is disposed outside of and integral with the screen 14. The screen 14 and touch panel 9 are supported in the opening 1a of the housing 1 by the supporting member 15.

[0047] The projection unit 12 comprises a projecting lens, not shown, to project a video image from the projection unit 12 onto the screen 14 through the mirror 13, wherein the video image projected onto the screen 14 is enlarged by the projecting lens. The mirror 13 may be removed when the projection unit 12 is arranged to directly oppose the screen 14.

[0048] Likewise, in this specific example, the touch panel 9 is provided with a function of detecting a pressure produced when the user touches the touch panel 9 (pressure detecting function). This function of detecting a pressure may be implemented by two methods as shown in the following Table 2.

TABLE 2

Touch panel 9	Example 4 Touch Sensing Position Detection Pressure Detection	Example 5 Touch Sensing Position Detection
Supporting Member 15	(Support)	Pressure Detection

[0049] In Table 2, Example 4 provides the touch panel 9 with the function of sensing a touch, and associated functions of detecting a touched position and detecting a pressure at the touched position, whereas the supporting member 15 only has its inherent function of supporting the display panel 8. In Example 5, the supporting member 15 is provided with a pressure sensor to have the function of detecting a pressure, whereas the touch panel 9 only has its inherent function.

[0050] In the foregoing Tables 1, 2, "touch sensing" refers to a conventional function of a touch panel for sensing a finger tip 16 which gets into touch with the touch panel 9.

[0051] Alternatively, in either of the foregoing examples, the touch panel 9 may determine that the finger tip 16 gets into touch with the touch panel 9 when a position touched by the finger tip 16 is detected on the touch panel 9 (i.e., when P>=P1).

[0052] FIGS. 3A to 3C are diagrams illustrating how the user touches a finger tip 16 on the touch panel 9, wherein FIG. 3A illustrates that the finger tip 16 is not in touch with