

input device 300 includes a display unit 29, an input detection unit 45 and a touch-sensitive variable sheet unit 103.

[0138] The display unit 29 has an operation surface and displays a plurality of push button switch images at a time of the input operation. The push button switch images constitute icon images for the input operation. The push button switch images include a key K1 of numeral "1" to a key K10 of numeral "0", a key K11 of symbol "*", a key K12 of a symbol "#" or the like, a key K13 of determination "O" of a cross key, a left facing arrow key K14 thereof, an upward facing arrow key K15 thereof, a right facing arrow key K16 thereof, a downward facing arrow key K17 thereof, a key K18 of "etc", a key K19 of "REW", a left facing arrow stop key K20, a right facing arrow stop key K21, a left facing fast-forward key K22, a fast-forward key K23, a reproduction key K24 and a stop key K25 or the like. As the display unit 29, a color organic EL display device or a liquid crystal display device (LCD device) is used.

[0139] The input detection unit 45 which constitutes the detection unit is provided on the upper portion of the display unit 29. The input detection unit 45 includes the operation surface. The input detection unit 45 is provided on the upper portion of the display unit 29 and operates so as to detect the slide position of the operator's finger or the like. As the input detection unit 45, for example, a capacitive touch panel is used. With respect to the input detection unit 45, anything is available only if the cursoring and the selection function can be distinguished. For example, other than the capacitive input device, it also may be a resistive touch panel, an input device of a surface acoustic wave system (SAW) or an optical system, a tact switch of a multi stage system or the like. Preferably, it may be enough if the input device has a constitution by which position detection information and press detection information can be applied to a control system.

[0140] The transparent touch-sensitive variable sheet unit 103 constituting the touch-sensitive sheet member is provided on the upper portion of the input detection unit 45. The touch-sensitive variable sheet unit 103 is provided so as to cover the whole of the input detection unit 45 and the operator performs any slide and/or press operation along the operation surface of the display unit 29. It is needless to say that the touch-sensitive variable sheet unit 103 may cover a portion of the input detection unit 45. The touch-sensitive variable sheet unit 103 is provided with the embodiment of the touch-sensitive sheet member 200 having a bag structure.

[0141] In this embodiment, the touch-sensitive variable sheet unit 103 contains a base member 101 which has predetermined hardness and also a plurality of concave portions of a rectangular dish shape and which is used as the flow channel panel 2 concurrently, a sheet shaped film portion 5 for a lid which covers the upper portion of the base member 101 in good air-tightness, and an air-circulation unit 3 which supplies the air to a plurality of the element bag portions E1 to E25 for representing a sense of touch which are constituted by the base member 101 and the film portion 5. The air-circulation unit 3 includes a flow channel changeover unit 3a and a blower 3b as shown in FIG. 2. The blower 3b having the piezoelectric unit 315 is used. The element bag portions E1 to E25 constituted by the base member 101 and the film portion 5 have predetermined sizes and are distributed in spots of the base member 101 or predetermined positions thereof.

[0142] For example, the base member 101 includes the plurality of the element bag portions E1 to E25 which are distributed at the predetermined positions by forming the

concave portions of the predetermined sizes. The element bag portions E1 to E25 constitutes the sense-of-touch-representing unit. In this embodiment, the element bag portions E1 to E12 for the keys of the numerals "0" to "9", the key of symbol "*" and the key of symbol "#" and the like and the element bag portions E13 to E17 for the cross key corresponding to the icon image for the input operation have, for example, square concave shapes.

[0143] The element bag portion E18 for the key of "etc" for function selection, the element bag portion E19 for the key of "REW", the element bag portion E20 for the left facing arrow stop key thereof, the element bag portion E21 for the right facing arrow stop key thereof, the element bag portion E22 for the left facing fast-forward key thereof, the element bag portion E23 for the fast-forward key thereof, the element bag portion E24 for the reproduction key thereof and the element bag portion E25 for the stop key thereof have also the square concave shape. The respective element bag portions E1 to E25 are formed in the base member 101 having the hardness of 20° to 40° which is used as the flow channel panel 2 concurrently.

[0144] The above-mentioned element bag portions E1 to E25 are arranged corresponding to the keys K1 to K25 of various kinds of functions. For example, the element bag portion E1 is arranged so as to be positioned on the key K1 of numeral "1" of the icon image displayed on the display unit 29. The element bag portion E2 is arranged so as to be positioned on the key K2 of numeral "2" of the icon image displayed on the display unit 29. The element bag portion E3 is arranged so as to be positioned on the key K3 of numeral "3" of the icon image displayed on the display unit 29. The element bag portion E4 is arranged so as to be positioned on the key K4 of numeral "4" of the icon image displayed on the display unit 29. The element bag portion E5 is arranged so as to be positioned on the key K5 of numeral "5" of the icon image displayed on the display unit 29. The element bag portion E6 is arranged so as to be positioned on the key K6 of numeral "6" of the icon image displayed on the display unit 29. The element bag portion E7 is arranged so as to be positioned on the key K7 of numeral "7" of the icon image displayed on the display unit 29. The element bag portion E8 is arranged so as to be positioned on the key K8 of numeral "8" of the icon image displayed on the display unit 29. The element bag portion E9 is arranged so as to be positioned on the key K9 of numeral "9" of the icon image displayed on the display unit 29. The element bag portion E10 is arranged so as to be positioned on the key K10 of numeral "0" of the icon image displayed on the display unit 29.

[0145] Also, the element bag portion E11 is arranged so as to be positioned on the key K11 of symbol "*" of the icon image displayed on the display unit 29. The element bag portion E12 is arranged so as to be positioned on the key K12 of symbol "#" of the icon image displayed on the display unit 29. The element bag portion E13 is arranged so as to be positioned on the key K13 of determination "O" of the icon image of the cross key displayed on the display unit 29. The element bag portion E14 is arranged so as to be positioned on the left facing arrow key K14 of the icon image displayed on the display unit 29. The element bag portion E15 is arranged so as to be positioned on the upward facing arrow key K15 of the icon image displayed on the display unit 29. The element bag portion E16 is arranged so as to be positioned on the right facing arrow key K16 of the icon image displayed on the display unit 29. The element bag portion E17 is arranged so as