compared with the electric current "i" of a state in which there is no press on the element muscle portion **54**. The change of this electric current "i" appears as the voltage drop between both terminals of the load resistance RL.

[0417] According to the position detection processing in the step ST**92**, the slide position of the operator's finger **30***a* or the like is detected by monitoring the output voltage V**0** of the connection point of the load resistance RL and electrode **52**. In this embodiment, at step ST**93**, the comparator **451** compares the threshold voltage Vth**1** with the output voltage V**0** and monitors the output voltage V**0** exceeding threshold voltage Vth**1**. At this time, when the comparator **451** detects output voltage V**0** exceeding the threshold voltage Vth**1**, for example, the position detection signal S**1** of a high level=1 (it is also allowed to be the position detection voltage V**1**) is outputted to the A/D driver **31**. The A/D DRIVER **31** outputs the position detection information D**1**, in which the position detection signal S**1** is analogue-digital-converted, to the CPU **32**. When the output voltage V**0** exceeding such a threshold voltage Vth**1** is detected, the process shifts to step ST**94** where the position detection information DI is stored in the memory unit **35** as shown in FIG. **20**.

[0418] According to the press detection processing which executes in the step ST**95** in parallel with the above-mentioned processing, the pressing force of the operator's finger **30***a* or the like is detected by monitoring the output voltage V**0** of the connection point of the load resistance RL and the electrode **52**. In this embodiment, at step ST**96**, the comparator **452** compares the threshold voltage Vth**2** with the output voltage V**0** and monitors the output voltage V**0** exceeding the threshold voltage Vth**2**. At this time, when there is a further strong press on the element muscle portion **54**, the comparator **452** detects the output voltage V**0** exceeding the threshold voltage Vth**2**, so that, for example, the press detection signal S**2** of a high level=1 (it is also allowed to be the position detection voltage V**2**) is outputted to the A/D DRIVER **31**. The position detection voltage V**1** and the press detection voltage V**2** are the different in the voltage-level (V**1**≠V**2**). The A/D driver **31** outputs the position detection information D**2**, in which the position detection signal S**2** is analogue-digital-converted, to the CPU **32**.

[0419] In the above-mentioned embodiment, when the output voltage V**0** exceeding the threshold voltage Vth**2** is detected, the process shifts to step ST**97** where the input is determined by making the press detection information D**2** as a trigger. Thus, in the CPU **32**, it becomes possible to detect the slide position and pressing force F of the operator's finger **30***a* or the like from the position detection information D**1** and the press detection information D**2**.

[0420] In this manner, the input device **900** as the ninth embodiment is provided with the touch-sensitive variable sheet unit **190**, the load resistance RL and the comparison circuit **450** with respect to the one operation key element, and the output voltage V**0** of the connection point of the electrode **52** and the load resistance RL of the touch-sensitive variable sheet unit **190** is monitored by the comparison circuit **450**. When, for example, the twenty operation keys exist, it is enough if the twenty circuits each for monitoring the above-mentioned output voltage V**0** are provided.

[0421] Consequently, it is possible to build the function of the input detection unit **45** by the element muscle portion **54** (electrically conductive rubber **182**) and the comparison circuit **450** of the touch-sensitive variable sheet unit **190**, thereby enabling to be omitted the resistive touch panel or the capacitive touch panel which constitutes the input detection unit **45** in the fifth to eighth embodiments. The comparison circuit **450** is not necessary to be arranged on the display screen and can be arranged on a circuit board apart from the display screen, so that it becomes possible to improve the design restriction of the input detection unit **45**.

[0422] Moreover, it is possible to execute the convex and concave shape representation through the sense of touch on the display screen as compared with the past system. Further, it is possible to change the representation place thereof depending on the state of the application of the operation key screen, so that the user can obtain the sense of touch information (simple concavity and convexity or skin touch of cloth) which is obtained by touching the key board of the past or the material having the convex and concave shape of the existent world from the operation plane. Further, it becomes possible to improve the operability incredibly.

Embodiment 10

[0423] FIGS. **51**A to **51**C show a configuration of a mobile phone **110** as a tenth embodiment.

[0424] The mobile phone **110** shown in FIG. **51**A is provided with a nonskid sheet **160**A to which the touch-sensitive sheet member **160** explained in the sixth embodiment is applied. The nonskid sheet **160**A is provided so as to surround the side surface region that the operator grasps in the mobile phone **110**, for example.

[0425] The mobile phone **110** shown in FIG. **51**B has a housing **111**, and for example, the electrode **52**, the muscular sheet portion **54**A and the electrode **51** are layered so as to surround this housing **111**. With reference to the driving example shown in FIG. **35**, this is a case (OFF) in which there is no the shape presentation instruction for executing the shape presentation from the high ranking CPU **32** to the driving power supply **55**A. In this case, the change of the convex and concave shape is not seen in a periphery of the side surface of the housing **111**. There is no difference from the state of a periphery of the side surface of the mobile phone of the past system.

[0426] The mobile phone **110** shown in FIG. **51**C indicates a case(ON) where there is the shape presentation instruction for executing the shape presentation from the high ranking CPU **32** to the driving power supply **55**A. In this case, the convex and concave shape appears in the periphery of the side surface of housing **111**. In this case, the side surface portion of the housing of the mobile phone **110** on which the operator grasps changes to the waveform-like or the convex and concave shapes. With respect to the control for changing only the grasping portion to the convex and concave shape, it may employ the control method explained in the ninth embodiment. Thus, a grip feeling come to be given as compared with the state of the periphery of the side surface of the mobile phone of the past system.

Embodiment 11

[0427] FIGS. **52**A to **52**C show a configuration of a variable sheet device **220** for braille as an eleventh embodiment. The variable sheet device **220** for braille shown in FIG. **52**A is provided with a variable sheet **180**A for braille to which the touch-sensitive sheet member **180** explained in the eighth embodiment is applied. The variable sheet **180**A for braille is provided, for example, on the operation screen which the operator touches in the variable sheet device **220** for braille.