

[0023] FIG. 4 shows a principle of the input device 2, an X signal detecting unit 31, and a Y signal detecting unit 32;

[0024] FIG. 5 is a sectional view showing an example of construction of section in an X direction of the input device 2 of FIG. 4;

[0025] FIG. 6 is a circuit diagram showing an example of construction of one section of the detecting unit 32 of FIG. 4;

[0026] FIG. 7 shows an example of a waveform for explaining about an operation of the one section of the detecting unit 31 of FIG. 6;

[0027] FIG. 8 shows an example of the other construction of an information transmitting system to which the present invention is applied;

[0028] FIG. 9 shows a construction of inside of a transmitter 141 of FIG. 8;

[0029] FIG. 10 shows an example of construction of inside of a tuning circuit type detecting unit 142 of FIG. 8;

[0030] FIG. 11 shows the other further construction of an information transmitting system to which the present invention is applied;

[0031] FIG. 12 shows the other further construction of an information transmitting system to which the present invention is applied;

[0032] FIG. 13 shows the other further construction of an information inputting system to which the present invention is applied;

[0033] FIG. 14 shows an example of construction of a detecting unit in which a smoothing circuit 85 is used that smoothes a detection signal;

[0034] FIG. 15 shows the other example of construction of the detecting unit;

[0035] FIG. 16 shows the other example of construction of the input device 2 of FIG. 4;

[0036] FIG. 17 is an outline view showing an example of construction of the transmitter 141 of FIG. 8;

[0037] FIG. 18 shows an example of construction in which a transmitter 221 is used which transmits identification information as an inducing voltage source;

[0038] FIG. 19 shows an example of construction of inside of a transmitter 221 of FIG. 18;

[0039] FIG. 20 shows an example of construction of a coordinate detecting unit 232 of FIG. 18;

[0040] FIG. 21 shows an example of construction of a demodulation circuit 234 of FIG. 18;

[0041] FIG. 22 shows a waveform of operation of a PLL circuit 293 of FIG. 21;

[0042] FIG. 23 shows a construction in which a communicating device 310 is used as the inducing voltage source;

[0043] FIG. 24 is an outline view showing an example of construction of the transmitter 310 of FIG. 23;

[0044] FIG. 25 is a view showing an example of construction of inside of the communicating device 310 of FIG. 23;

[0045] FIG. 26 is a flowchart for explaining about a half-duplex communication processing by an ambience-side communication device whose transmitting and receiving terminal is an input device 2 of FIG. 23;

[0046] FIG. 27 is a flowchart for explaining about a half-duplex communication processing by the communicating device 310 of FIG. 23;

[0047] FIG. 28 shows an example of the other information processing system to which the present invention is applied;

[0048] FIG. 29 shows a further example of the other information processing system to which the present invention is applied; and

[0049] FIG. 30 shows an example of construction in which an input device constructed by a resistor array formed in a manner is used.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0050] FIG. 1 shows a basic principle of the present invention. An electrode 402 is amounted to a top-sitting surface of a chair 401 on which a human body 1 sits. An electrode 402 is covered with a cover 403. A signal generator 404 is connected to the electrode 402 and generates an alternating current signal of a sine wave, a rectangular wave or the like. The cover 403 is provided for protecting the electrode 402 that is formed by materials having a thickness by which a signal generated by the signal generator 404 can be transmitted (induced) to the human body 1 byway of the electrode 402. An electrode 405 is disposed at a position where touching action of finger of the human body 1 can be detected, e.g. a predetermined position of a keyboard to be operated when operating a computer. The signal detected thereby is amplified by an amplifier 406 to output the same to an output terminal 407.

[0051] Following will be explained about the operation. When the human body 1 sits on the chair 401 whose top-sitting surface is covered with the cover 403, a signal generated by the signal generator 404 is transmitted (induced) to the human body 1 by way of the electrode 402. When the human body 1 touches to the electrode 405 by way of the finger or the like, or closely approaches the electrode 405, the electrode 405 has the signal transmitted (induced) by way of the human body induced. The induced signal is outputted to the amplifier 406. The amplifier 406 amplifies a signal supplied from the electrode 405 to output the amplified signal to the output terminal 407.

[0052] An experiment as for the information transmitting system, to which the present invention is applied, as above-mentioned, is performed under following conditions.

[0053] As the chair 401, a chair having around top-sitting surface over which vinyl is covered and having a diameter of 40 cm is employed. The electrode 402 is made of a square copper foil whose size is 20 cm×20 cm. The cover 403 is made of a cushion material whose thickness is substantially 1 mm and made of expandable vinyl. A signal output level of the signal generator 404 is defined by substantially 4 Vpp (peak-to-peak voltage). The waveform of the output signal is formed by a sine wave or a rectangular wave. The frequency of the output signal is defined by substantially 500 Hz to 1 MHz. FIG. 2 shows a construction of inside of the amplifier