

[0103] A detailed operation for resetting the joystick 45 will be described next.

[0104] In order to reset the joystick 45 to determine an origin point thereof, there are three methods, i.e., a method through button operation, a method through turning-on/off the power source, and a method controlled by the image processor 10.

[0105] (1) A reset operation by operating the buttons.

[0106] With reference to the flowchart shown in FIG. 27, a reset operation is shown for the counter 444 which stores data indicative of an inclined state of the joystick 45. First, in a step S432, the switch signal detection circuit 443 detects whether or not the buttons 406L, 406R and 405 are simultaneously depressed. Then, if the three buttons are not depressed, the detection of the switch signals is performed continuously. Furthermore, if the three buttons are simultaneously depressed, the reset signal is outputted.

[0107] In response to the reset signal, in a step S434, the count values of the X counter 444X and the Y counter 444Y are reset. Therefore, the origin point of the joystick is determined at every time that, for example, the buttons 406L, 406R and 405 are simultaneously depressed.

[0108] In this embodiment, at a time that the buttons 406L, 406R and 405 are simultaneously depressed by the operator, the reset signal is generated by the switch signal detection circuit 443; however, the number of the buttons is not limited to three (3), and may, for example, be two (2) or four (4). Furthermore, buttons simultaneously depressed are not limited to the above described buttons, and may be arbitrary buttons.

[0109] (2) A reset operation by turning-on/off the power source.

[0110] With referring to a flowchart shown in FIG. 28, another reset operation of the counter 444 will be described. A reset signal is output from a power-on reset circuit 447 in response to the power source switch (not shown) of the image processor 10 being turned-on by the operator when the controller 40 is connected to the image processor 10, or in response to a fact that the power source is supplied to the controller 40 by inserting the connection jack of the controller 40 into one of the controller connectors 181-184 of the image processor 10 when no controller 40 is connected to the image processor 10. In response to such a reset signal, in a step S442, the count values of the X counter 444X and the Y counter 444Y are reset. Therefore, the origin point of the joystick is determined at every time that the power source is supplied to the controller 40.

[0111] (3) A reset operation by the image processor 10.

[0112] The counter 444 is also reset by executing the steps S60 and S61 shown in the above described FIG. 20. Through such a reset operation, it is possible to freely determine the origin point of the joystick 45 by the program in accordance with a processing status of the image processor 10.

[0113] According to the above described methods, it is possible to reset the X counter 444X and the Y counter 444Y. If the reset signal is output at a time that the lever 474 is in its neutral position, that is, at a time that the lever 474 is not operated by the operator, it is possible to prevent erroneous

count values from being stored in the X counter 444X and the Y counter 444Y, and therefore, it is possible to prevent the erroneous count values from being transmitted to the image processor 10.

[0114] Next, one example where the monitor screen is changed using the controller 40 will be described with referring to FIG. 29. A left illustration in FIG. 29 shows the physically inclined amount of the lever 474 using orthogonal X-Y coordinates. More specifically, a circle illustrated at a center indicates the lever 474, and in this illustration, a state where the operator does not operate the lever 474, that is, a state where the lever 474 stands upright with respect to the housing. If the lever 474 is inclined toward a front side, the circle is moved in a +(positive) direction in the Y axis, and if the lever 474 is inclined toward a rear side, the circle is moved in a -(negative) direction of the Y axis. Furthermore, if the lever 474 is inclined toward a right direction, the circle is moved in a +(positive) direction of the X axis, and if the lever 474 is inclined toward a left side, the circle is moved in a -(negative) direction of the X axis.

[0115] A right illustration in FIG. 29 shows a display screen of a game where an enemy 34 is aimed by inclining the lever 474 toward front, rear, left and right so as to move an aiming device 35 toward upper, lower, left and right. Clouds 31, mountains 32 and buildings 33 constitute a background image which can be changed by, for example, scrolling, the enemy 34 is an object which can freely move within the screen. For example, when the enemy 34 is displayed in a right upper portion of the screen, if the operator inclines the lever 474 toward right and then front, the X counter 444X and the Y counter 444Y are both incremented, and thus, the count values thereof become larger. The count values are transmitted to the image processor 10 which changes a display position of the aiming device 35 thereby utilizing the data of the count values. Therefore, the aiming device 35 becomes to be super-positioned on the enemy 34. Then, at a timing the aiming device 35 is just super-positioned on the enemy 34, if the button such as the button 404A is depressed, the switch data of the button is also transmitted to the image processor 10 similar to the counter data. Accordingly, the image processor 10 generates the image signal so as to display a missile (not shown) or the like which can attack the enemy 34 on the screen.

[0116] Next, one example of a case where the analog joystick is reset in a state where the lever 474 is deviated from the center, that is, the lever 474 is inclined will be described with reference to FIG. 30.

[0117] When the X counter 444X and the Y counter 444Y are reset at the coordinate position indicated by a solid circular line in a left illustration in FIG. 30, if the operator releases his or her hand from the lever 474, the lever 474 returns to the center of the coordinate, i.e., a position indicated by a dotted circular line. A change of the image will be described with utilizing a right illustration in FIG. 30. First, when the X counter 444X and the Y counter 444Y are reset, as similar to the right illustration in FIG. 29, the aiming device 35 is displayed at the solid circular line because the count values of the X counter 444X and the Y counter 444Y are both "0" equal to the initial values. Next, if the operator releases his or her hand from the lever 474, the lever 474 returns to the center position of the coordinate,