

[0052] FIG. 9 is a timing chart showing a relationship between a detection signal, symbol numbers, a drive signal and position data;

[0053] FIG. 10 is a flowchart showing operation of the slot machine to be performed when the CPU executes a control program;

[0054] FIG. 11 is a descriptive view showing an example displayed state of a panel display section before a masking operation;

[0055] FIG. 12 is a descriptive view showing an example displayed state of a panel display section after the masking operation;

[0056] FIG. 13 is a plan view showing transparent electrodes used for a left reel liquid-crystal panel, a center reel liquid-crystal panel, and a right reel liquid-crystal panel;

[0057] FIG. 14 is a descriptive view schematically showing mechanical constitution of the panel display section in a slot machine according to a second embodiment of the invention;

[0058] FIG. 15 is a cross-sectional view of the panel display section shown in FIG. 14 taken along a line Z1-Z2; and

[0059] FIG. 16 is a block diagram showing the electrical configuration of principal section of the slot machine shown in FIG. 14.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0060] Embodiments of the invention will be described hereinbelow by reference to the accompanying drawings. Here, an explanation is given of a case where the invention is applied to a slot machine.

[0061] As shown in FIG. 1, a slot machine 1A according to a first embodiment of the invention comprises a main unit 2 and a front door 3 attached to the front of the main unit 2. A liquid-crystal display device 62 for providing a player with predetermined information is provided at an upper portion of the front door 3. A panel display section D disposed at a middle portion of the front door 3 has three vertically-oriented rectangular display windows 4a, 4b, and 4c. The display windows 4a, 4b, and 4c are formed from transparent material; e.g., acrylic resin. Three horizontal paylines L1 through L3 and two inclined paylines L4 and L5 are provided across the display windows 4a, 4b, and 4c.

[0062] In addition, an auxiliary display section 20 is provided on the left side of the display window 4a. The auxiliary display section 20 comprises five LEDs assigned to the respective paylines L1 through L5. When a player inserts tokens or performs a betting operation to be described later, one or more of the paylines L1 through L5 are made valid, in a number corresponding to the number of tokens bet. In the slot machine 1A, when one token is bet, the payline L1 becomes valid. When two tokens are bet, the paylines L1 through L3 become valid. When three tokens are bet, the paylines L1 through L5 become valid. LEDs constituting the auxiliary display section 20 are illuminated when corresponding paylines L1 through L5 are valid. In contrast, the LEDs become extinguished when the corresponding pay-

lines L1 through L5 are invalid. Thus, the player can ascertain valid lines from among the paylines L1 through L5.

[0063] FIG. 2 shows the structure of the panel display section D and a peripheral configuration thereof. A left reel liquid-crystal panel 21 is laminated on an internal peripheral wall of the display window 4a; a center reel liquid-crystal panel 22 is laminated on an internal peripheral wall of the display window 4b; and a right reel liquid-crystal panel 23 is laminated on an internal peripheral wall of the display window 4c. The left, center, and right reel liquid-crystal display panels 21 through 23 can, adjust transparency, thereby changing a transparent state thereof among an opaque state, a translucent state, and a transparent state.

[0064] Three rows of reels, on whose outer peripheral faces a plurality of kinds of symbols are drawn; that is, a left reel R1, a center reel R2, and a right reel R3, are rotatably disposed at the inside of the panel display section D. Consequently, if the left reel liquid-crystal panel 21, the center reel liquid-crystal panel 22, and the right reel liquid-crystal panel 23 are transparent, the player can observe symbols on the left reel R1 by way of the display window 4a, those on the center reel R2 by way of the display window 4b, and those on the right reel R3 by way of the display window 4c.

[0065] A shading piece 491 projects from a portion of a reel main body of the right reel R3. When the right reel R3 spins, the shading piece 491 runs across a photo coupler 492. As in the case of the right reel R3, the shading piece 491 and the photocoupler 492 are provided on each of the left reel R1 and the center reel R2.

[0066] The left reel liquid-crystal panel 21, the center reel liquid-crystal panel 22, and the right reel liquid-crystal panel 23 are transparent panels. Each of the panels is formed from first and second substrates with liquid crystal being sandwiched therebetween. The first and second substrates are formed from a transparent, flexible material. For instance, transparent plastic can be used as material for the first and second substrates. In terms of heat-resisting properties, use of polyethersulfone (PES) is more preferable. Liquid-crystal has the property of changing the orientation of molecules in accordance with an applied voltage. Transparent electrodes are formed on mutually-opposing surfaces of the first and second substrates.

[0067] The transparency of liquid crystal changes in accordance with a voltage applied across transparent electrodes. The left reel liquid-crystal panel 21, the center reel liquid-crystal panel 22, and the right reel liquid-crystal panel 23 are constructed so as to operate in a normally-white mode. Consequently, when no voltage is applied across the transparent electrodes, each of the panels permits transmission of light. In contrast, when a voltage is applied across the transparent electrodes, each of the panels permits transmission of light at a transparency corresponding to the applied voltage. In the embodiment, a voltage V at which liquid crystal becomes translucent is applied across the transparent electrodes during a predetermined period of time.

[0068] FIG. 3 shows the appearance of the left reel liquid-crystal panel 21. As illustrated, the left reel liquid-crystal panel 21 has three bored portions. In the following description, bored portions are referred to as non-mask areas