A slot machine comprises a display including plural slot game areas on each of which a slot game can be executed. An extra slot game is executed when winning slot game areas have brought a specific positional arrangement on the display. According to the slot machine, a new entertaining feature can be provided.
FIG. 2
FIG. 7

<table>
<thead>
<tr>
<th>SYMBOL COMBINATION</th>
<th>PAYOUT AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 - 7 - 7</td>
<td>50</td>
</tr>
<tr>
<td>Apple - Apple - Apple</td>
<td>15</td>
</tr>
<tr>
<td>Bell - Bell - Bell</td>
<td>10</td>
</tr>
<tr>
<td>Bell - Any - Any</td>
<td>2</td>
</tr>
</tbody>
</table>
FIG. 10

MAIN PROCESSING

NO

B = 0?

YES

ACCEPT BET (S)

REDUCE CREDIT AMOUNT

ACTIVATE AREA(S) ON WHICH BET HAS BEEN PLACED

DETERMINE PAYLINE(S) TO BE ACTIVATED

NO

START SWITCH HAS BEEN PRESSED?

YES

BONUS GAME EXECUTION PROCESSING

NO

S16-1

YES

S16-2

RETURN

S10

S11

S12

S13

S14

S15

S16
FIG. 11

SLOT GAME EXECUTION PROCESSING

S23

DETERMINE SYMBOLS TO BE STOPPED

S24

SCROLL SYMBOLS SIMULTANEOUSLY ON ALL AREAS

S25

TERMINATE SYMBOL-SCROLLING SIMULTANEOUSLY

S26

BONUS TRIGGER COMBINATION ON ACTIVATED PAYLINE?

S27

BONUS GAME STARTING PROCESSING

S28

WINNING COMBINATION ON ACTIVATED PAYLINE?

S29

PAYOUT PROCESSING

END
FIG. 12

BONUS GAME STARTING PROCESSING

S31

SET BONUS FLAG B = 1

S32

DETERMINE NUMBER OF GAMES T

S33

PAYOUT PROCESSING

END

FIG. 13

BONUS GAME EXECUTION PROCESSING

S41

DETERMINE SYMBOLS TO BE STOPPED

S42

SCROLL SYMBOLS ON AREA A10

S43

TERMINATE SYMBOL-SCROLLING ON AREA A10

NO

WINNING COMBINATION?

YES

PAYOUT PROCESSING

S44

S45

T = T - 1

S46

T = 0

S47

SET BONUS FLAG B = 0

S48

END
SLOT MACHINE AND CONTROL METHOD THEREOF

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is based upon the prior Japanese Patent Application No. 2007-012628, filed on Jan. 23, 2007, the entire contents of which are incorporated herein by reference.


BACKGROUND OF THE INVENTION

[0003] 1. Field of the Invention

[0004] The present invention relates to a slot machine and a control method thereof.

[0005] 2. Description of the Related Art

[0006] In a conventional slot machine, a plurality of reels (e.g., three reels) on which a plurality of symbols is drawn spins, respectively, when a player inserts a medal(s) into a medal insertion slot and then presses a start button. The reels stop after a predetermind time has elapsed. At this time, a payout is awarded to the player according to the number of inserted medals if a winning symbol combination achieved on a preset payline. Alternatively, a payout is awarded to the player according to the number of inserted medals if a predetermed number of scatter symbols displayed.

[0007] On the other hand, in the gaming machine described in U.S. Pat. No. 6,855,052, a plurality of wheels provided above the reels begins to spin sequentially and then stops if a preset symbol combination has displayed on the reels after the reels has stopped. A large amount payout is awarded if the stopped wheels have brought a predetermined outcome.

SUMMARY OF THE INVENTION

[0008] An object of the present invention is to provide a slot machine and a control method thereof capable of providing a new entertaining feature.

[0009] A first aspect of the present invention provides a slot machine which comprises: a slot game in which symbols which have been arranged are rearranged; a first display including plural slot game areas on each of which the slot game is executed; an input device for accepting a betting operation by a player; and a controller. The controller is operable to: (a) activate slot game areas among the plural slot game areas according to the betting operation via the input device, (b) execute a slot game at each of the slot game areas activated in (a), and (c) execute an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

[0010] According to the first aspect of the present invention, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display.

[0011] It is preferable that the controller is operable to execute the extra slot game only when the winning activated slot game areas also have a specific relationship. It is further preferable that the plural slot game areas are arranged in a matrix of rows and columns on the first display, and the specific positional arrangement is that the winning activated slot game areas positioned linearly on the first display. It is further preferable that the specific relationship is that each of the winning activated slot game areas has an identical winning combination.

[0012] It is preferable that the slot machine further comprises a second display provided independently from the first display for displaying the extra slot game. It is further preferable that the controller is operable to execute the extra slot game only when the winning activated slot game areas also have a specific relationship.

[0013] A second aspect of the present invention provides a slot machine which comprises a slot game in which symbols which have been arranged are rearranged; a first display including plural slot game areas on each of which the slot game is executed; an input device for accepting a betting operation by a player; and a controller. The controller is operable to: (a) activate slot game areas among the plural slot game areas according to the betting operation via the input device, (b) execute a slot game at each of the slot game areas activated in (a), and (c) execute an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

[0014] According to the second aspect of the present invention, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display and the relationship among the winning activated slot game areas.

[0015] A third aspect of the present invention provides a slot machine which comprises: a slot game in which symbols which have been arranged are rearranged; a first display including plural slot game areas on each of which the slot game is executed; a second display provided separately from
the first display for displaying an extra slot game; an input device for accepting a betting operation by a player; and a controller. The controller is operable to: (a) activate slot game areas among the plural slot game areas according to the betting operation via the input device, (b) execute a slot game at each of the slot game areas activated in (a), and (c) execute the extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

According to the third aspect of the present invention, since the extra slot game is executed on the second display provided independently from the first display, the player can receive a stronger impact by starting the extra slot game than when the extra slot game is executed on the first display.

Furthermore, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display.

A fourth aspect of the present invention provides a slot machine which comprises: a slot game in which symbols which have been arranged are rearranged; a first display including plural slot game areas on each of which the slot game is executed; a second display provided separately from the first display for displaying an extra slot game; an input device for accepting a betting operation by a player; and a controller. The controller is operable to: (a) activate slot game areas among the plural slot game areas according to the betting operation via the input device, (b) execute a slot game at each of the slot game areas activated in (a), and (c) execute the extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

According to the fourth aspect of the present invention, since the extra slot game is executed on the second display provided independently from the first display, the player can receive a stronger impact by starting the extra slot game than when the extra slot game is executed on the first display.

Furthermore, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display and the relationship among the winning activated slot game areas.

A fifth aspect of the present invention provides a control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged. The slot machine has plural slot game areas on a first display. The slot game can be executed on each of the plural slot game areas. The method comprising: (a) accepting a bet amount from a player, (b) activate slot game areas among the plural slot game areas according to the bet amount accepted in (a), (c) executing a slot game on each of the slot game areas activated in (b), and (d) executing an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

According to the fifth aspect of the present invention, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display.

A sixth aspect of the present invention provides a control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged. The slot machine has plural slot game areas on a first display. The slot game can be executed on each of the plural slot game areas. The method comprising: (a) accepting a bet amount from a player, (b) activate slot game areas among the plural slot game areas according to the bet amount accepted in (a), (c) executing a slot game on each of the slot game areas activated in (b), and (d) executing an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

According to the sixth aspect of the present invention, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display and the relationship among the winning activated slot game areas.

A seventh aspect of the present invention provides a control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged. The slot machine has plural slot game areas on a first display. The slot game can be executed on each of the plural slot game areas. The method comprising: (a) accepting a bet amount from a player, (b) activate slot game areas among the plural slot game areas according to the bet amount accepted in (a), (c) executing a slot game on each of the slot game areas activated in (b), and (d) executing an extra slot game on a second display provided independently from the first display when winning activated slot game areas have brought a specific positional arrangement on the first display.

According to the seventh aspect of the present invention, since the extra slot game is executed on the second display provided independently from the first display, the player can receive a stronger impact by starting the extra slot game than when the extra slot game is executed on the first display.

Furthermore, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning activated slot game areas on the first display.

An eighth aspect of the present invention provides a control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged. The slot machine has plural slot game areas on a first display. The slot game can be executed on each of the plural slot game areas. The method comprising: (a) accepting a bet amount from a player, (b) activate slot game areas among the plural slot game areas according to the bet amount accepted in (a), (c) executing a slot game on each of the slot game areas activated in (b), and (d) executing an extra slot game on a second display provided independently from the first display when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

According to the eighth aspect of the present invention, since the extra slot game is executed on the second display provided independently from the first display, the player can receive a stronger impact by starting the extra slot game than when the extra slot game is executed on the first display.

Furthermore, a new entertaining nature is provided in that it is determined whether or not the extra slot game is executed based on the positional arrangement of the winning
activated slot game areas on the first display and the relationship among the winning activated slot game areas.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] FIG. 1 is an explanatory diagram showing nine slot game areas displayed on an LCD in an embodiment of a slot machine of the present invention;
[0032] FIG. 2 is an explanatory diagram showing a slot game area displayed on an upper display in the embodiment of the present invention;
[0033] FIG. 3 is a perspective view of the slot machine of the embodiment of the present invention;
[0034] FIG. 4 is an explanatory diagram showing one of the slot game areas in the slot machine of the embodiment;
[0035] FIG. 5 is an explanatory diagram showing paylines on the slot game area;
[0036] FIG. 6 is an explanatory diagram showing the slot game areas displayed on the LCD panel;
[0037] FIG. 7 is an explanatory diagram showing a payout table for slot games;
[0038] FIG. 8 is an explanatory diagram showing the slot game areas displayed on the LCD panel;
[0039] FIG. 9 is a block diagram showing a control circuit of the slot machine of the embodiment;
[0040] FIG. 10 is a flowchart showing a processing procedure (main processing) in the slot machine of the first embodiment;
[0041] FIG. 11 is a flowchart showing a processing procedure (slot game execution processing) in the slot machine of the embodiment;
[0042] FIG. 12 is a flowchart showing a processing procedure (bonus game starting processing) in the slot machine of the embodiment; and
[0043] FIG. 13 is a flowchart showing a processing procedure (bonus game execution processing) in the slot machine of the embodiment.

DETAILED DESCRIPTION OF THE EMBODIMENT

[0044] An embodiment of the present invention will be described below with reference to FIGS. 1 to 3. FIG. 1 illustrates an exemplary display on a liquid crystal display (LCD: first display) 16 of a slot machine 10 of the present embodiment. As shown in FIG. 1, the LCD 16 has nine slot game areas A1 to A9 (simply referred to as “areas”, hereinafter) arranged in a matrix. A slot game is executed on each of the areas A1 to A9.

[0045] Each of the areas A1 to A9 has nine (three rows by three columns) display areas q11 to q33 (FIG. 4). When a bet is placed on any of the areas A1 to A9, the area on which the bet has been placed is activated. Subsequently, symbols displayed (arranged) on display areas q11 to q33 of the activated area(s) are scrolled simultaneously when the start switch 27 has been pressed. And then, the scrolling is finished to stop (rearrange) the symbols at the same time. A payout is awarded to the player when a winning combination has been achieved on any of the paylines of the activated area. Thus, the slot game is a game in which arranged symbols is rearranged for determining whether or not a payout is awarded according to rearranged symbols.

[0046] Here, an example is described in which symbols are scrolled in each slot game and then the symbols are stopped. However, displaying method of the symbols is not limited to scrolling. For example, new symbols may be stopped (rearranged) after each of the symbols in the display areas is switched over successively.

[0047] FIG. 2 illustrates an example of an upper display (second display) 33 of the slot machine 10. The upper display 33 includes an area A10. The area A10 has display windows R1 to R3 aligned laterally as a single row. A mechanical reel 3A (FIG. 9) is provided behind the display window R1. A plurality of symbols is drawn on the circumferential surface of the reel 3A. The circumferential surface faces the display window R1. When the reel 3A stops, a symbol comes to a stop (arranged) within the display window R1. When the reel 3A spins, the symbol scrolls within the display window R1. Subsequently, when the reel 3A stops again, a symbol comes to a stop (rearranged) within the display window R1. A mechanical reel 3B is provided behind the display window R2 and a mechanical reel 3C is provided behind the display window R3. The display windows R2 and R3 are similar to the display window R1, and the reels 3B and 3C are similar to the reel 3A.

[0048] As shown in FIG. 3, the slot machine 10 includes a cabinet 11 and a top box 12 provided on top of the cabinet 11. The cabinet 11 has a main door 13. An upper display 33 is provided on the front of the top box 12 facing the player. The LCD 16 is disposed on the front of the cabinet 11 facing the player. Various component devices are disposed within the cabinet 11, such as a controller 40 (FIG. 9) for electrically controlling the slot machine 10 and a hopper 44 (FIG. 9) for controlling the insertion, pooling, and payout of medals.

[0049] In the present embodiment, medals are used for gaming media at game play. However, gaming media is not limited to medals only. For example, coins, tokens, electronic money, or other equivalent electronic value information may be also used as gaming media.

[0050] The main door 13 is attached to the cabinet 11 so that it can be opened and closed. The LCD 16 is disposed on an upper portion of the main door 13. The nine areas A1 to A9 are provided on the LCD 16 and a slot game is executed on each of the slot game areas A1 to A9. In the present embodiment, the number of slot game areas on the LCD 16 is nine. However, two or more slot game areas may be provided.

[0051] A payout counter 48 for displaying a total credit amount is provided in a bottom left area of the LCD 16. The total credit amount is a sum of medals awarded to the player and is stored in a RAM 110 (FIG. 9).

[0052] A medal insertion slot 21 and a bill validator 22 are disposed below the LCD 16. The bill validator 22 validates bills and accepts valid ones. Various operational switches are disposed nearby the medal insertion slot 21 and the bill validator 22.

[0053] A cash-out switch 23, a max-bet switch (input device) 24, a bet switch (input device) 25, a spin/repeat-bet switch (input device) 26, and the start switch 27 are provided as the operational switches.

[0054] A bet amount is input by the player via the bet switch 25. Specifically, the bet switch 25 is a switch for determining a bet amount on each slot game on the areas A1 to A9. As will be described later, each time the bet switch 25 is pressed, one bet is placed on any one of the areas A1 to A9. The slot game area on which a bet has been placed is activated and a payout is provided to the player when a winning symbol combination has been achieved on a payline on the activated area.
A bet amount can be input by the player via the spin/repeat-bet switch 26. The spin/repeat-bet switch 26 is a switch for placing a bet again without changing a bet amount placed by the bet switch 25 (and the max-bet switch 24) on the previous game on each of the areas A1 to A9 and starting a slot game on each of the areas A1 to A9.

The start switch 27 is a switch for starting a slot game on each of the areas A1 to A9 after bets have been placed on desired areas. A slot game on each of the areas A1 to A9 is started simultaneously after a medal(s) was inserted into the medal insertion slot 21 or a bet(s) was placed by the bet switch 25 and the start switch 27 has been pressed.

The cash-out switch 23 is a switch for cashing out medals corresponding to the total credit amount. The medals are cashed out from a medal cash-out chute 28 opened in the front lower part of the main door 13 and pooled on a medal tray 18.

A bet amount can be input by the player via the max-bet switch 24. Specifically, the max-bet switch 24 is a switch for placing a 3-credit bet on each of all the areas A1 to A9 by one pressing. In the present embodiment, a 3-credit bet is a maximum bet on each of the areas A1 to A9. A maximum bet on each of the areas A1 to A9 may not be limited to a 3-credit bet.

A foot display 34 is disposed on the lower front of the main door 13. Various images relating to the game of the slot machine 10 (such as characters of the slot machine 10) are displayed on the foot display 34.

Lamps 47 are provided on both sides of the foot display 34 and illuminate in a preset illuminating pattern. The medal cash-out chute 28 is provided below the foot display 34.

The upper display 33 is disposed on the front of the top box 12. The upper display 33 has a display panel and displays a payout table indicating each payout amount for each symbol combination etc.

Speakers 29 are provided on the top box 12. A ticket printer 35, a card reader 36, a data display 37, and a keypad 38 are disposed below the upper display 33. The ticket printer 35 prints out a ticket 39 including data such as a credit amount, time and date, identification number of the slot machine 10 printed thereon as a bar code.

The player can play a game at another slot machine by using the bar-coded ticket 39, and exchange the bar-coded ticket 39 for bills at a predetermined site in an amusement facility (e.g., a cashier in the casino).

A smart card can be inserted into the card reader 36 and the card reader 36 reads data from the inserted smart card and writes data onto the smart card. The smart card is carried by the player and stores the player’s identification data and gaming history data of the games played by the player.

Next, images displayed on the areas A1 to A9 are explained with reference to FIG. 4. FIG. 4 is a display example of the areas A1 to A9.

As shown in FIG. 4, the nine (three row by three column) display areas q11 to q33 are provided on each of the areas A1 to A9. Symbols are scrolled simultaneously in each of the columns of the display areas q11 to q33 when the slot game is started on each of the areas A1 to A9 by pressing the start switch 27.

Five LEDs 53a to 53e are provided on the left side of the display areas q11 to q33 of each of the areas A1 to A9. The LEDs 53a to 53e notify the activated payline(s) on each of the areas A1 to A9. As shown in FIG. 5, five paylines are prepared on the display areas q11 to q33. A horizontal line in the middle row is L1, a horizontal line in the upper row is L2, a horizontal line in the lower row is L3, a diagonal line going down to the right is L4, and a diagonal line going up to the right is L5.

The LEDs 53a to 53e light up according to a bet amount. In detail, only the LED 53a lights up when one credit is bet. The LEDs 53b, 53c, in addition to the LED 53a, light up when two credits are bet. The LEDs 53d, 53e, in addition to the LEDs 53a to 53c, light up when three credits are bet.

It is indicated that the line L1 has been activated, when the LED 53a lights up. In addition, it is indicated that the lines L2, L3 have been activated, respectively, when the LEDs 53b, 53c light up. Furthermore, it is indicated that the lines L4, L5 have been activated, respectively, when the LEDs 53d, 53e light up. As a result, only the line L1 is activated when one credit has been bet, the lines L1, L2, L3 are activated when two credits have been bet, and all of the lines L1 to L5 are activated when three credits have been bet. Then, a payout is awarded according to a winning combination(s) when the winning combination(s) is achieved on the activated payline(s).

An activation indicating frame 51 is provided on each peripheral edge of the areas A1 to A9. Each of the activation indicating frames 51 lights up for the activated areas A1 to A9. The activation indicating frame 51 lights up on the areas A1 to A9 on which at least one credit is bet. It is possible for a player to easily recognize the activated area(s) by the activation indicating frame(s) 51. For example, when the areas A1 to A6 has been activated, the activation indicating frames 51 of the activated areas A1 to A6 are lit up, as shown in FIG. 6.

A payout indicator 52 is provided above each of the areas A1 to A9. The payout indicator 52 of each of the areas A1 to A9 lights up when a payout is awarded according to a slot game on that very area. It is possible for a player to easily recognize the area(s) on which a payout is awarded by the bonus game indicator(s) 52.

FIG. 7 shows a payout table. The payout table shows relationships between winning combinations and payout amounts. In the present embodiment, winning combinations are a symbol combination of three 7’s, a symbol combination of three BELLs, and a symbol combination including a leftmost CHERRY on a payline. In other words, a 50-credit payout is awarded to the player if the line L1 (FIG. 5) is activated and three 7’s are achieved on the payline L1. A 15-credit payout is awarded to the player if three APPLs are achieved on the payline L1. A 10-credit payout is awarded if three BELLs are achieved on the activated payline L1. A 2-credit payout is awarded if a CHERRY comes to a stop in the display area q12 on the activated payline L1.

FIG. 8 shows an example in which a bonus game starting condition is met. In the present embodiment, the bonus game starting condition is such that three areas each having an identical winning combination on a payline are aligned vertically, laterally, or diagonally. In FIG. 8, three areas A3, A5 and A7 with an identical winning combination (three BELLs) are aligned diagonally. In the present embodiment, a “predetermined arrangement” is an “arrangement of three winning areas aligned vertically, laterally, or diagonally”, and a “predetermined relationship” is that “winning combinations are identical”. Of course, the predetermined arrangement and the predetermined relationship are not limited to these.
FIG. 9 is a block diagram illustrating the electric configuration of the controller 40 and various components connected to the controller 40, which are provided within the slot machine 10 of the present embodiment. The controller 40 of the slot machine 10 is a microcomputer and includes interface circuits 102, an input/output (I/O) bus 104, a CPU 106, a ROM 108, a RAM 110, a signal communication interface (I/F) circuit 111, a motor drive circuit 120, a random number generator (RNG) 112, a speaker drive circuit 122, a hopper drive circuit 124, a display control circuit 128, and a display controller 140.

The interface circuits 102 are connected to the I/O bus 104. The I/O bus 104 inputs/output data signals and address signals to/from the CPU 106.

The start switch 27 is connected to the interface circuits 102. A start signal output from the start switch 27 is transmitted to the CPU 106 via the I/O bus 104, after having been converted into a predetermined signal by the interface circuits 102.

The bet switch 25, the max-bet switch 24, the spin/repeat-bet switch 26, and the cash-out switch 23 are connected to the interface circuits 102. A switching signal output from each of the switches 23 to 26 is transmitted to the CPU 106 via the I/O bus 104, after having been converted into a predetermined signal by the interface circuits 102.

A medal sensor (input device) 43 is connected to the interface circuits 102. A bet amount by the player’s inserting a medal(s) can be detected via the medal sensor 43. The medal sensor 43 detects a medal(s), which has been inserted into the medal insertion slot 21. The medal sensor 43 is provided inside the medal insertion slot 21. The detection signal output from the medal sensor 43 is transmitted to the CPU 106 via the I/O bus 104, after having been converted into a predetermined signal by the interface circuits 102.

A reel position detecting circuit 46 is connected to the interface circuits 102. The reel position detecting circuit 46 detects each current spinning or stopped position of the reels 3A to 3C. The detection signal output from the reel position detecting circuit 46 is transmitted to the CPU 106 via the I/O bus 104.

The ROM 108 storing system programs and the payout table, and the RAM 110 storing various data are connected to the I/O bus 104. The RNG 112, the signal communication I/F circuit 111, the motor drive circuit 120, the display controller 140, the hopper drive circuit 124, the speaker drive circuit 122, and the display control circuit 128 are connected to the I/O bus 104.

The CPU 106, triggered by receiving the start signal from the start switch 27, reads a game execution program among the system programs and executes a game. The game execution program is a program for executing the slot game in each of the areas A1 to A9 on the LCD 16 using the display controller 140.

In other words, the game execution program is programmed so as to execute a slot game in which symbols are rearranged after scrolling simultaneously on each of the areas A1 to A9 and a payout is provided when a winning combination is achieved on an activated payline.

The signal communication I/F circuit 111, which is connected to a hall server etc., transmits gaming history data etc. of the slot machine 10 to the hall server. The signal communication I/F circuit 111 receives various data transmitted from the hall server.

The RNG 112 generates a random number for determining whether or not to achieve a winning combination in the slot game on each of the areas A1 to A9.

Motors 45A to 45C are connected to the motor driving circuit 120. The motor 45A spins the reel 3A and stops the spinning reel 3A. The motor 45B spins the reel 3B and stops the spinning reel 3B. The motor 45C spins the reel 3C and stops the spinning reel 3C. The motor driving circuit 120 is controlled by the CPU 106 to drive the reels 3A to 3C.

The display control circuit 128 controls displaying the total credit amount on the payout counter 48 provided at the lower left area of the LCD 16.

The speaker drive circuit 122 outputs sound data to the speakers 29. In other words, the CPU 106 reads the sound data stored in the ROM 108 and transmits the sound data to the speaker drive circuit 122 via the I/O bus 104. In this manner, predetermined sound effects are generated via the speakers 29.

The hopper drive circuit 124 outputs a cash-out signal to the hopper 44 when providing a cash-out. In other words, the CPU 106 outputs a drive signal to the hopper drive circuit 124 via the I/O bus 104 when receiving the cash-out signal from the cash-out switch 23. As a result, the hopper 44 cashes out medals equivalent to the total credit amount.

The display controller 140 controls the execution of the slot game on each of the areas A1 to A9. In detail, the CPU 106 generates an image display signal according to status and an outcome of the slot game on each of the areas A1 to A9, and outputs the image display signal to the display controller 140 via the I/O bus 104. Upon receipt of the image display signal, the display controller 140 generates a drive signal of the LCD 16 based on the image display signal. And then, the display controller 140 outputs the drive signal to the LCD 16. In this manner, the predetermined images are displayed on the LCD 16.

Next, an operation of the slot machine of the present embodiment is described with reference to flowcharts shown in FIG. 10 to FIG. 13. FIG. 10 is a flowchart showing a main processing.

The CPU 106 determines whether or not a bonus flag B is “0” (step S10). The processing flow proceeds to step S11 if B=0, and otherwise to step S16-1. Here, the bonus flag B is set to “1” if the bonus game starting condition has been met. The initial value of the bonus flag B is “0”. The bonus flag B is stored in the RAM 110.

A player places a bet with a desired bet amount on a slot game on each of the areas A1 to A9 by pressing the max-bet switch 24, the bet switch 25, or the spin/repeat-bet switch 26 (step S11). Alternatively, the player places a bet by inserting a desired number of medals into the medal insertion slot 21. In the present embodiment, each bet is placed a slot game on each of the areas A1 to A9 in an ascending order of the area numbers. For example, when 15 credits are bet, the 1st to 9th credits are bet as a 1st-bet on a slot game on each of the areas A1 to A9, and the 10th to 15th credits are bet as a 2nd-bet on the slot game on each of the areas A1 to A6. Thus, two credits are bet on the areas A1 to A6 and one credit is bet on the areas A7 to A9.

The CPU 106 (FIG. 9) subtracts the credit(s) corresponding to the bet amount from the total credit amount when a bet(s) is placed by pressing the max-bet switch 24, the bet switch 25, or the spin/repeat-bet switch 26 (step S12). For example, if 27 credits are bet when the total credit amount is 50 credits, the total credit amount becomes 50-27=23 credits.
Next, the CPU 106 activates the area(s) on which a bet has been placed (step S13).

The CPU 106 determines payline(s) to be activated on the activated area(s) (step S14). As described above, the line L1 (FIG. 5) is activated on the area(s) on which a 1-credit bet has been placed, the lines L1, L2 and L3 are activated on the area(s) on which a 2-credit bet has been placed, and all of the lines L1 to L5 are activated on the area(s) on which a 3-credit bet has been placed. The CPU 106 lights up the activation indicating frame(s) 51 of the activated area(s) to notify the player.

Subsequently, the CPU 106 determines whether or not the start switch 27 has been pressed (step S15). If the start switch 27 has been pressed, a slot game execution processing (FIG. 11) is executed for the activated area(s) (step S16).

On the other hand, if the bonus flag B is “1” in step S10 (step S10: NO), the CPU 106 waits until the start switch 27 is pressed (step S16-1). And then, the processing flow proceeds to step S16-2 when the start switch 27 has been pressed.

If step S16-1 is affirmative, the CPU 106 executes a bonus game execution processing (FIG. 13) (step S16-2). Subsequently, the CPU 106 terminates the main processing.

Next, the slot game execution processing executed for the activated area(s) will be described with reference to FIG. 11.

The CPU 106 first determines symbols to be stopped (7, BELL, APPLE, etc.) in each display area q11 to q33 of the areas A1 to A9 (step S23).

Subsequently, the CPU 106 scrolls symbols in each column of the display areas q11 to q33 of the areas A1 to A9 (step S24). On this occasion, scrolling of symbols is started simultaneously on the areas A1 to A9. In other words, scrolling of symbols is started on all of the areas A1 to A9 simultaneously when the start switch 27 has been pressed.

Then scrolling symbols are terminated after a predetermined time has elapsed (step S25) and symbols come to a stop in each of the display areas q11 to q33 on all of the areas A1 to A9. The stopped symbols were the symbols determined in step S23. On this occasion, scrolling of symbols is terminated at the same time on the areas A1 to A9. The CPU 106 lights up the payout indicator(s) 52 of the area(s) on which a winning combination has been activated on the activated payline.

Then, the CPU 106 determines whether or not the bonus game starting condition has been met (step S26). In other words, it is determined whether or not three areas each having an identical winning combination on the activated payline are aligned vertically, laterally, or diagonally. The CPU 106 advances the processing flow to step S27 if the bonus game starting condition is met and otherwise advances the processing flow to step S28.

If step S26 is affirmative, the CPU 106 executes a bonus game starting processing (step S27). The bonus game starting processing will be described below with reference to FIG. 12.

On the other hand, if step S26 is negative, the CPU 106 determines whether or not a winning combination has been achieved on the activated payline (step S28). If a winning combination has been achieved (step S28: YES), the CPU 106 executes a payout processing for awarding a payout to the player according to the winning combination(s) (step S29). In the payout processing, if a winning combination has been achieved on plural activated areas, the payout is provided in a lump sum for winning combinations on plural activated areas.

On the other hand, if no winning combination has been achieved (step S28: NO), the CPU 106 terminates the slot game execution processing without awarding a payout. Here, there are cases such that medals corresponding to a payout amount are cashed out from the cash-out chute 28 and that credits corresponding to a payout amount are added to the total credit amount.

Next, the procedure of the bonus game starting processing will be described with reference to the flow chart shown in FIG. 12. The CPU 106 first sets the bonus flag B to “1” (step S31). Subsequently, the CPU 106 determines the number of bonus games T (step S32). The number of bonus games T is 50, for example. The number of bonus games T may be a constant number, or may be determined randomly by the CPU 106 each time. The number of bonus games T is stored in the RAM 110.

Subsequently, the CPU 106 provides a payout to the player (step S33). If winning combinations have been achieved on plural activated areas, the CPU 106 provides a payout to the player in a lump sum according to the winning combinations. In addition, in the present embodiment, a 15-credit payout is provided to the player as an award of getting the bonus game, for example. Then the CPU 106 terminates the processing.

If the bonus flag is set to “1” in the bonus game starting processing (FIG. 12), the bonus game execution processing (step S16-2) is executed after step S10 becomes negative in the next main processing (FIG. 10).

Next, the bonus game execution processing will be described with reference to the flow chart shown in FIG. 13. The CPU 106 first determines symbols to be stopped in each of the display windows R1 to R3 of the area A10 on the upper display 33 (step S41). Here, a winning combination is achieved with a higher probability than in the slot games on the areas A1 to A9. In other words, a symbol combination of three 7's, a symbol combination of three BELLs, and a symbol combination of three APPLES, or a symbol combination including a left-most CHERRY shown in FIG. 7 is achieved with the higher probability in a bonus game on the area A10 than in a slot game on each of the areas A1 to A9.

Subsequently, the CPU 106 starts scrolling of symbols by spinning the reels 3A to 3C (step S42). Subsequently, the CPU 106 stops the spinning reels 3A to 3C so that symbols are rearranged, which were determined in step S41 (step S43).

Then, the CPU 106 determines whether or not a winning combination has been achieved on the area A10 (step S44). If a winning combination has been achieved (step S44: YES), a payout is awarded to the player according to the winning combination (step S45). Otherwise, if no winning combination has been achieved (step S44: NO), the CPU 106 does not award a payout.

Subsequently, the CPU 106 decrements the number of games T=T–1 stored in the RAM 110 (step S46).

The CPU 106 determines whether or not the number of games T stored in the RAM 110 is “0” (step S47). If T=0, the bonus flag B is reset to “0” (step S48). In other words, if the predetermined number of bonus games T has played out, the CPU 106 resets the bonus flag B and terminates the bonus game. The bonus game is an extra slot game executed on the area A10, in which a winning combination will be achieved with the higher probability in a bonus game on the area A10.
than in a slot game on each of the areas A1 to A9. Of course, the bonus game may be another type of game.

[0115] As described above, with the slot machine 10, a slot game area(s) which has accepted a bet via an input device(s) (i.e., slot game area(s) on which a bet has been placed) is activated among the slot game areas A1 to A9, and a slot game is executed on the activated slot game area(s). Furthermore, with the slot machine 10, a bonus game is executed when three slot game areas awarding a payout have been aligned vertically, laterally, or diagonally.

[0116] Therefore, according to the slot machine 10, a new entertaining feature is provided in that whether or not a bonus game is executed is determined based on the arrangement of slot game areas awarding a payout.

[0117] Particularly, according to the slot machine 10, a bonus game is executed when three slot game areas each having an identical winning combination have been aligned vertically, laterally, or diagonally.

[0118] Thus, according to the slot machine 10, a new entertaining feature is provided in that whether or not a bonus game is executed is determined based on the arrangement of the slot game areas awarding a payout and the relationship among the slot game areas awarding a payout.

[0119] Furthermore, according to the slot machine 10, a bonus game is executed on the upper display 33 which is provided independently from the LCD 16 having the slot game areas A1 to A9. Therefore, the player can receive a stronger impact by starting a bonus game than when a bonus game is executed on the LCD 16.

[0120] Therefore, the player can place bets on plural slot games in a lump and then slot games are executed on the slot game areas individually. Thus, according to the slot machine 10, a player can relief from a cumbersome betting operation compared with a conventional slot machine in which a player has to place a bet on a slot game one by one.

[0121] The slot machine or the control method of the slot machine of the present invention has been described based on the embodiment. However, the present invention is not limited to the embodiment. Arrangement of respective components of the present invention may be replaced by any components having similar functionalities.

What is claimed is:

1. A slot machine comprising:
a slot game in which symbols which have been arranged are rearranged;
a first display including plural slot game areas on each of which the slot game is executed;
an input device for accepting a betting operation by a player; and
a controller operable to:
(a) activate slot game areas among the plural slot game areas according to the betting operation via the input device,
(b) execute a slot game at each of the slot game areas activated in (a), and
(c) execute an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

2. The slot machine according to claim 1, wherein the controller is operable to execute the extra slot game only when the winning activated slot game areas also have a specific relationship.

3. The slot machine according to claim 2, wherein the plural slot game areas are arranged in a matrix of rows and columns on the first display, and the specific positional arrangement is that the winning activated slot game areas positioned linearly on the first display.

4. The slot machine according to claim 3, wherein the specific relationship is that each of the winning activated slot game areas has an identical winning combination.

5. The slot machine according to claim 1, further comprising a second display provided independently from the first display for displaying the extra slot game.

6. The slot machine according to claim 5, wherein the controller is operable to execute the extra slot game only when the winning activated slot game areas also have a specific relationship.

7. A slot machine comprising:
a slot game in which symbols which have been arranged are rearranged;
a first display including plural slot game areas on each of which the slot game is executed;
an input device for accepting a betting operation by a player; and
a controller operable to:
(a) activate slot game areas among the plural slot game areas according to the betting operation via the input device,
(b) execute a slot game at each of the slot game areas activated in (a), and
(c) execute an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

8. A slot machine comprising:
a slot game in which symbols which have been arranged are rearranged;
a first display including plural slot game areas on each of which the slot game is executed;
a second display provided separately from the first display for displaying an extra slot game;
an input device for accepting a betting operation by a player; and
a controller operable to:
(a) activate slot game areas among the plural slot game areas according to the betting operation via the input device,
(b) execute a slot game at each of the slot game areas activated in (a), and
(c) execute the extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

9. A slot machine comprising:
a slot game in which symbols which have been arranged are rearranged;
a first display including plural slot game areas on each of which the slot game is executed;
a second display provided separately from the first display for displaying an extra slot game;
an input device for accepting a betting operation by a player; and
a controller operable to:
(a) activate slot game areas among the plural slot game areas according to the betting operation via the input device,
(b) execute a slot game at each of the slot game areas activated in (a), and
(c) execute the extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

10. A control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged, the method comprising:
(a) accepting a bet amount from a player,
(b) activate slot game areas among plural slot game areas provided on a first display according to the bet amount accepted in (a),
(c) executing a slot game on each of the slot game areas activated in (b), and
(d) executing an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display.

11. A control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged, the method comprising:
(a) accepting a bet amount from a player,
(b) activate slot game areas among plural slot game areas provided on a first display according to the bet amount accepted in (a),
(c) executing a slot game on each of the slot game areas activated in (b), and
(d) executing an extra slot game when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

12. A control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged, the method comprising:
(a) accepting a bet amount from a player,
(b) activate slot game areas among plural slot game areas provided on a first display according to the bet amount accepted in (a),
(c) executing a slot game on each of the slot game areas activated in (b), and
(d) executing an extra slot game on a second display provided independently from the first display when winning activated slot game areas have brought a specific positional arrangement on the first display.

13. A control method of a slot machine for playing a slot game in which symbols which have been arranged are rearranged, the method comprising:
(a) accepting a bet amount from a player,
(b) activate slot game areas among plural slot game areas provided on a first display according to the bet amount accepted in (a),
(c) executing a slot game on each of the slot game areas activated in (b), and
(d) executing an extra slot game on a second display provided independently from the first display when winning activated slot game areas have brought a specific positional arrangement on the first display and have a specific relationship.

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