

tions as a symbol to shift to the free game in the base game, and when the trigger symbol 97 is stopped and displayed on the pay line L in the variable display portion 23, the game condition shifts to the free game from the base game.

[0077] Here, when the symbol rows 41 to 43, which are scrolled on the variable display portions 22 to 24 respectively, are stopped and displayed thereon, three symbols are stopped and displayed on each variable display portion.

[0078] And various winning combinations are set beforehand based on a plurality of symbol combinations and when the symbol combination corresponding to the winning combination is stopped on the pay line L, coins are paid out from the coin payout chute 15 according to the winning combination. The above mentioned points are as same as those in the conventional slot machine, therefore detailed description thereof will be omitted.

[0079] Next, it will be described a construction of the control system in the slot machine 1 with reference to FIG. 4. FIG. 4 is a block diagram schematically showing the control system in the slot machine 1.

[0080] In FIG. 4, the control system of the slot machine 1 is basically constructed from the CPU 50, and a ROM 51 and a RAM 52 are connected to the CPU 50. The ROM 51 stores a main process program mentioned later, a base game process program, a free game process program, various effect programs for executing various effects on the upper liquid crystal display 3 and the lower liquid crystal display 4 according to progress in games, a lottery table utilized in lottery of the symbols stopped and displayed in the base game, a lottery table utilized in lottery of the symbols stopped and displayed in the free game, various programs necessary for controlling the slot machine 1 and various data tables and the like. And the RAM 52 is a memory for temporarily storing various data calculated by the CPU 50.

[0081] And to the CPU 50, a clock pulse generator 53 for generating standard clock pulses and a frequency divider 54 are connected, and a random number generator 55 and a sampling circuit 56 are also connected. Random number sampled by the random number generator 56 is utilized in various lotteries of the winning combinations, the effects and the like. Further, to the CPU 50, the start switch 57 attached to the start lever 17, the spin switch 58 attached to the SPIN/REPEAT BET button 12, the 1-BET switch 59 attached to the 1-BET button 11, the 3-BET switch 60 attached to the 3-BET button 13, the 5-BET switch 61 attached to the 5-BET button 14, the change switch 62 attached to the change button 6, the payout switch 63 attached to the payout button 7 and the help switch 64 attached to the help button 8 are connected respectively. The CPU 50 controls the slot machine 1 to execute various operations corresponding to each button, based on the switch signal output from each switch when such buttons are pressed.

[0082] To the CPU 50, three stepping motors 68 for rotating each of the reels 220 through a motor drive circuit 167 are connected, and also a reel position detection circuit 69 is connected. When a motor drive signal is output to the motor drive circuit 167, each stepping motor 68 is driven to rotate by the motor drive circuit 167, thereby each reel 220 is rotated.

[0083] At that time, after each reel 22 is started to rotate, the number of drive pulses provided to each stepping motor

68 is calculated and the calculated value is written in the predetermined area of the RAM 52. And the reset pulse is output every one rotation of the reel 220 and such reset pulse is input to the CPU 50 through the reel position detection circuit 69. When the reset pulse is input to the CPU 50, the calculated value written in the RAM 52 is cleared in "0", and the CPU 50 recognizes the symbol rotational position in the reel 220, based on the calculated value corresponding to the rotational position of the reel 220 within one rotation and the symbol table in which the rotational position of the reel 22 stored in the ROM 51 and the symbols formed on outer peripheral plane of the reel 22 are corresponded with each other.

[0084] Further, to the CPU 50, the coin sensor 65 positioned in the coin insertion slot 9 and the bill sensor 66 positioned in the bill insertion portion 10 are connected respectively. The coin sensor 65 detects coins inserted from the coin insertion slot 9 and the CPU 50 calculates the number of inserted coins based on the coin detection signal output from the coin sensor 65. The bill sensor 66 detects the kind and sum of bill and the CPU 50 calculates the number of coins equivalent to sum of bill, based on the bill detection signal output from the bill sensor 66. And to the CPU 50, the stop button switches 67 attached to the stop buttons 27 to 29 are connected. When press operation of the stop buttons 27 to 29 is conducted, switch signals are output from the stop button switches 67 and the CPU 50 stops and displays the symbols which are scrolled on the variable display portions 22 to 24, based on switch signals.

[0085] To the CPU 50, a hopper 71 is connected through a hopper drive circuit 70. When a drive signal is output to the hopper circuit 70 from the CPU 50, the hopper 71 pays out predetermined number of coins from the coin payout chute 15

[0086] And to the CPU 50, a coin detection part 73 is connected through a payout completion signal circuit 72. The coin detection part 73 is arranged in the coin payout chute 15 and when the coin detection part 73 detects that a predetermined number of coins are paid out from the coin payout chute 15, the payout completion signal is output to the payout completion signal circuit 72 from the coin detection part 73. Based on this, the payout completion signal circuit 72 outputs the payout completion signal to the CPU 50. Further, to the CPU 50, the upper liquid crystal display 3 is connected through a liquid crystal drive circuit 74 and the lower liquid crystal display 4 is connected through a liquid crystal drive circuit 75. The upper liquid crystal display 3 and the lower liquid crystal display 4 are controlled by the CPU 50.

[0087] At this point of view, as shown in FIG. 5, the liquid crystal drive circuit 74 is constructed from a program ROM 81, an image ROM 82, an image control CPU 83, a work RAM 84, a VDP (Video Display Processor) 85 and a video RAM 86. And in the program ROM 81, an image control program concerning with display on the lower liquid crystal display 4 and various selection tables are stored. Further, in the image ROM 82, for example, it is stored dot data for forming images such as the symbol rows 41~43 in FIG. 6 displayed on the lower liquid crystal display 4 (or variable display portions 22 to 24). And the image control CPU 83 determines images displayed on the lower liquid crystal display 4 among the dot data stored in the image ROM 82