

113c. When the ON/OFF control circuit **142** causes the liquid crystal shutter display device **112** to be turned ON, in the display shielding units **113a**, **113b** and **113c**, all light emitted from the backlights **17a**, **17b** and **17c** and from the forward illuminating devices **18a** and **18b** is shielded, so that the transparent display units **23a**, **23b** and **23c** of the liquid crystal display device **16** cannot transparently display symbols drawn on the outer peripheral surfaces of the rotatory reels **2a**, **2b** and **2c** as the first display means. When the ON/OFF control circuit **142** causes the liquid crystal shutter display device **112** to be turned OFF, on the other hand, in the display shielding units **113a**, **113b** and **113c**, all the light emitted from the backlights **17a**, **17b** and **17c** and from the forward illuminating devices **18a** and **18b** is allowed to pass therethrough, so that the transparent display units **23a**, **23b** and **23c** of the liquid crystal display device **16** can transparently display the symbols drawn on the outer peripheral surfaces of the rotatory reels **2a**, **2b** and **2c** as the first display means.

[0131] The main control board **60** is connected with a motor drive circuit **80** for controlling the rotation of the rotatory reels **2a**, **2b** and **2c**, a rotatory reel position detecting circuit **90** and a rotatory reel stop signal circuit **100**.

[0132] The motor drive circuit **80** is a circuit used to control stepping motors **110a**, **110b** and **110c** for driving the rotatory reels **2a**, **2b** and **2c** respectively. The rotatory reel position detecting circuit **90** is a circuit used to detect the rotatory position of the rotatory reels **2a**, **2b** and **2c**. The rotatory reel stop signal circuit **100** is connected with stop switches **8a**, **8b** and **8c**, so that, when the stop switch **8a**, **8b** or **8c** are operated, the rotatory reel stop signal circuit **100** transmits a rotatory reel stop signal to the main control board **60**.

[0133] The main control board **60** controls the motor drive circuit **80** and rotation and stoppage of the rotatory reels **2a**, **2b** and **2c**, on the basis of rotatory position of the rotatory reels **2a**, **2b** and **2c** detected by the rotatory reel position detecting circuit **90**. And the main control board **60**, when receiving the rotatory reel stop signal from the rotatory reel stop signal circuit **100**, controls the motor drive circuit **80** and rotatory reel position detecting circuit **90** and stops the rotatory reels **2a**, **2b** and **2c** at their desired positions.

[0134] In this case, the stop control of the rotatory reels **2a**, **2b** and **2c** is carried out based on a predetermined lottery result or based on only the operation of the stop switches **8a**, **8b** and **8c** by the player regardless of the lottery result. Though not shown, the main control board **60** is connected with a plurality of switches or the like for performing various types of control.

[0135] A circuit as the third display control means for driving the liquid crystal shutter display device **112** may be provided on a board separately from the main control board, separately from the display control board, or separately from the main control board and display control board; or may be provided on the main control board or display control board. In the above case of the separate provision, the load of each control means may be reduced in some cases; on the contrast, in the integral provision case, some electronic components on the board may be commonly used in some cases.

[0136] [Control Procedure in Display Control Device]

[0137] Explanation will be made as to a procedure of operations in an image display process in the display control device **50** with reference to FIGS. **11** to **15**. FIG. **11** is a flow chart showing a procedure of operations in an image display process in the display control device **50**, FIG. **12** is a flow chart showing a procedure of operations in a main interrupt process, FIG. **13** is flow chart showing a procedure of operations in a VDP interrupt process, FIG. **14** is a flow chart showing a procedure of operations in a synchronous interrupt process, and FIG. **15** is a flow chart showing a procedure of operations in a timer interrupt process.

[0138] As shown in FIG. **11**, in the image display process of the display control device **50**, initialization of the sub-CPU **51**, RAM **53** and so on is performed (S1), calculation of a check sum for a buffer for backup is performed (S2) and, when the check sum is incorrect, the backup buffer is returned (S3). Subsequently, command process is performed (S4) and whether or not the buffer has been completed is judged (S5). When the buffer is not completed, data updating process is performed (S6) and the acquired data is stored as a buffer (S7).

[0139] When the buffer has been completed, whether or not a timer flag is set at ON is judged (S8) and, when the timer flag is set at ON and screen updating gets ready, whether or not a VDP flag is set at ON is judged (S9). If the VDP flag is set at ON to get ready for drawing, then the timer flag and VDP flag are reset (S10 and S11), the buffer is transmitted to the VDP **54** (S13), and then the buffer is cleared (S14). When the timer flag is not set at ON, the process of the step S9 is not executed and, when the VDP flag is not set at ON, processes of the steps S10 to S14 are not executed. Thereafter, a check sum for the buffer is calculated to be backup (S15), and the process returns to the step S3 to repeat the subsequent processes.

[0140] For the image display process, various sorts of interrupt processes are carried out.

[0141] The main interrupt process from the main control board **60** is an interrupt process to transmit a control command to the display control device **50**, in which the command is stored (S21) as shown in FIG. **12**. In the case of the pachislot machine, since a strobe signal is as relatively long as 20 msec, a signal from the main control board **60** may be imported at the command process (S4) in the image display process without performing the main interrupt process.

[0142] The VDP interrupt process is an interrupt process to inform that the VDP **54** gets ready for drawing. As shown in FIG. **13**, the VDP flag is set (S31). In the image display control process, judgment process at the step S9 is performed on the basis of the VDP flag.

[0143] The synchronous interrupt process is an interrupt process to control drawing timing on the screen of the liquid crystal display device **16**, in which the timer flag is set at intervals of 1,000/60 ms (S41) as shown in FIG. **14**. In the image display control process, judgment is made in the step S8 on the basis of the timer flag. In the embodiment, an image is drawn and varied at intervals of 1,000/30 ms on the display screen of the liquid crystal display device **16**. The timer interrupt process is an interrupt process to update the timer by software, in which a counter is updated at intervals