

tion selecting table for use in the determination of win or loss of a random number obtained by the operation of the start lever **13** in a probability selection process to be described below, a stop table for determining the stop positions of the reels **24L**, **24C** and **24R** according to the operations of the stop buttons **15L**, **15C** and **15R**, various game information commands to be sent to the sub control circuit **201**, and the like.

[**0084**] The various peripherals (actuators) are connected to the CPU **103** via an input/output (I/O) port **110**.

[**0085**] A motor drive circuit **111** drives stepping motors **112L**, **112C** and **112R** for rotating the reels **24L**, **24C** and **24R**, respectively, according to drive signals from the CPU **103**. The motor drive circuit **111** stops the stepping motors **112L**, **112C** and **112R** in response to stop control signals from the CPU **103**.

[**0086**] A hopper drive circuit **113** drives a hopper **114** as a coin payout device based on a payout command from the CPU **103**.

[**0087**] A seven-segment drive circuit **122** drives various displays (bonus information display **33**, credit display **34** and payout display **35**) of seven-segment LEDs.

[**0088**] A lamp drive circuit **116** controls the lighting of various indicators in the form of lamps (REPLAY lamp **30**, WAIT lamp **31**, WIN lamp **32** and START lamp **36**).

[**0089**] There are other display means such as the reel LCD **21**, electronic shutter **22** and reel backlights, which are controlled by the sub control circuit **201**.

[**0090**] Main input signal generating means for generating input signals necessary for the microcomputer **102** to generate control signals to the drive circuits includes the start lever **13**, the 1-BET switch **8**, the 2-BET switch **9**, the MAXBET switch **10**, the C/P switch **12**, an inserted coin sensor **117**, a reel stop signal circuit **118**, a reel index detector circuit **115** and a payout detector circuit **119**. These are also connected to the CPU **103** via the I/O port **110**.

[**0091**] The start lever **13** detects a start control by a player. The inserted coin sensor **17** detects coins inserted through the coin slot **11** and passed through a selector for screening irregular-shaped coins and the like. The reel stop signal circuit **118** detects the presses of the stop buttons **15L**, **15C** and **15R** and generates stop signals. The reel index detector circuit **115** receives signals from rotational reference position detection switches in the stepping motors **112L**, **112C** and **112R** and supplies symbol position reset signals to the CPU **103**. The payout detector circuit **119** receives signals from a coin detector **120** in the hopper **114** and supplies payout amount signals to the CPU **103**.

[**0092**] Now a description will be made of how the drive circuits are controlled during the sequence of a game. The random number generator **108** has generated random numbers in a certain numeric range since the power switch of the pachislo machine **1** was turned on. If the inserted coin sensor **117** detects coin insertion by a player or there is a credit of coins, a bet operation with the 1-BET switch **8**, 2-BET switch **9** or MAXBET switch **10** causes the reel LCD **21** to display an active line(s) according to the bet amount. As shown in the enlarged view of **FIG. 7**, a bet of one coin causes the center line **L1** to be an active pay line (hereinafter abbreviated as an active line), a bet of two coins causes the

top line **L2A** and the bottom line **L2B** in addition to the center line **L1** to be active lines, and a bet of three coins causes the center line **L1**, top line **L2A** and bottom line **L2B** and also diagonal lines **L3A** and **L3B** to be active lines.

[**0093**] Then, in the timing when the start lever **13** detects a game start by a player, the sampler **109** selects a random number. The selected random number is checked against the winning combination selecting table stored in the ROM **104**. When the number corresponds to a winning combination, the winning flag thereof is set. This software selection process is referred to as a "probability selecting process," and will be described in detail below.

[**0094**] Drive pulses are supplied to the stepping motors **112L**, **112C** and **112R** through the motor drive circuit **111**. The reels **24L**, **24C** and **24R** start rotating. The CPU **103** monitors the drive pulses supplied and updates "pulse counters" provided in the RAM **105**. When the values of the pulse counters monitored reach a predetermined value, the CPU **103** determines a one-symbol (one-segment) shift and adds 1 to the values of "symbol counters" provided in the RAM **105**.

[**0095**] When the stepping motors **112L**, **112C** and **112R** are adapted to rotate 360 degrees by 400 pulses and twenty-one symbols are arranged on a reel periphery, for example, about 19 pulses cause a one symbol segment shift. When the values of the pulse counters reach 19 pulses, the CPU **103** determines a one-symbol shift and adds 1 to the values of the "symbol counters."

[**0096**] Every time the reference points of symbols on the reels **24L**, **24C** and **24R** pass the center line **L1** shown in **FIG. 7**, index detection signals are generated and reset pulses are transmitted to the CPU **103** via the reel index detector circuit **115**. The CPU **103** detects the input of the reset pulses and clears the values of the symbol counters in the RAM **105** to ensure consistency between symbol positions calculated by software and actually displayed symbol positions.

[**0097**] When the reels **24L**, **24C** and **24R** are at constant-speed rotation after a lapse of a given time since the start of rotation, the stop buttons **15L**, **15C** and **15R** can be operated. When a player performs stop controls, reel stop signals are supplied to the CPU **103** via the reel stop signal circuit **118**. After software processing such as the selection of stop positions, stop pulses are supplied to the stepping motors **112L**, **112C** and **112R** via the motor drive circuit **111** to stop the reels **24L**, **24C** and **24R**.

[**0098**] In the stop control of the reels **24L**, **24C** and **24R**, the CPU **103**, upon receiving stop signals from the reel stop signal circuit **118**, stores in a predetermined area of the RAM **105** the code numbers of symbols along the center line **L1** as stop control positions, and accesses the stop table in which stop control positions are associated with symbols to be stopped and displayed along the center line **L1**. The CPU **103** stores symbol stop positions corresponding to the stop control positions in a predetermined area of the RAM **105**, calculates how many pulses (how many segments) to be supplied to stop and display the target symbols, supplies the calculated number of pulses, and then performs stop control.

[**0099**] When all the reels **24L**, **24C** and **24R** are stopped, a winning search is performed. In the winning search, first, a symbol table stored in the ROM **104** and the symbol stop