

GAMING MACHINE

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is based upon and claims the benefit of priority from the prior Japanese Patent Application No. 2003-035670 filed on Feb. 13, 2003, the entire contents of which are incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention relates to a symbol combination gaming machine, and more particularly, to a slot machine, a pachinko machine, or the like, which has variable display means for performing variable display of various kinds of symbols and a function of controlling the variable display so as to provide a player with advantages based on a result of the control.

RELATED ART

[0003] A slot machine may be a typical example of such gaming machines. The slot machine generally has a plurality of rotating reels, each of which have a plurality of symbols arranged around each circumferential surface thereof. When a combination of symbols appearing on respective front surfaces of the stopped reels matches a predetermined combination (for example, the same kind of symbols are lined up), the slot machine determines that the player has won with the symbol combination or that it is the winning symbol combination such that the slot machine pays out coins, gifts, or the like to the player. In general, many slot machines make use of various kinds of contingency so that the player cannot completely control the result of the game even if the player desires to win the game with his/her best techniques. Accordingly, the slot machine is mainly characterized with its gambling features.

[0004] To realize such contingency, various methods have been adopted. A control method called "pre-determination" is mainly employed. In the method, a microcomputer executes a winning lottery with software and performs control for stopping reels in accordance with a result of the lottery. For example, the slot machine described in Japanese Examined Patent Publication No. H03-72313 (JP-B-3-72313) relates to a slot machine with stop buttons (so-called pachi-slot) and includes random number sampling means for sampling a random number on the basis of a start lever operation by a player. The slot machine is provided with a winning probability table having columns respectively containing "big hit," "medium hit," and "small hit" random number ranges according to the ranks of respective winning combinations. If a sampled random number falls in any one of the winning random number ranges of the winning probability table, the slot machine determines that the corresponding winning combination is won, and sets a hit (winning) flag for the winning combination. There are various winning flags such as a winning flag for a winning combination called "small winning combination" and a winning flag for a winning combination called "bonus combination". The small winning combination causes payout of about ten coins to the player when predetermined symbols (for example, "bell" symbols or "cherry" symbols) are lined up on an activated pay line. The bonus combination is generated when a predetermined kind of symbol (for

example, "7" symbol or "BAR" symbol) appears on each reel so as to make a line of symbols of the same kind, and provides a game state which has higher possibility of winning than the normal game state during a predetermined number of games, whereby 100 to 400 coins may be paid out.

[0005] The state in which a winning flag is set is generally called a state of "internal winning" such that a combination of symbols corresponding any one of the winning combinations may line up along a pay line. An actual winning has not been established yet. In order to generate the actual winning, the player may need to perform a so-called "observation push", which should be made at the timing to cause respective desired symbols to line up along the pay line. The timing is generally at the moment a symbol faces the front within four precedent symbols from the desired symbol in the series of symbols drawn on the surface of each reel. Thus, each symbol in the series of symbols may be referred to as a frame. If such an operation is performed at a bad timing, so-called "unexpected loss" occurs, that is to say, no winning is established despite of the achieved internal winning.

[0006] The unexpected loss can be referred to as failure in the observation push on the whole, but the causes of the unexpected loss show several patterns. The first pattern is that a player fails to recognize each symbol on the surface of the moving reel and cannot perform a stop operation at a good timing although he/she has already chosen a target symbol. The second pattern is that the player fails to specify a target symbol the player should aim at when a plurality of kinds of winning combinations may cause the winning in a state of the internal winning such that the player cannot perform a stop operation at a good timing.

[0007] As to the first pattern, if the player becomes familiar with the observation push, the player can expect improvement in the timing accuracy to some extent. As to the second pattern, improvement in the timing accuracy of the observation push is not useful since the player needs to grasp an internal winning state, which is unrecognizable to his/her eyes.

[0008] In other words, if the slot machine is designed to notify the player of the internal winning combination, it is possible to realize such a game state as a bonus game state in which a large amount of coins may be paid out even during a normal game state. Further, a gaming machine having a function of so-called "Assist Time (AT)" is provided such that a gaming characteristic peculiar to the pachi-slot may be utilized so as to make the unexpected loss occur less frequently by notifying occurrence of the internal winning as well as the kind of the internal winning combination during a predetermined period, thereby decreasing the probability of the unexpected loss to realize payout of a large number of coins if compared to a normal gaming machine in which no notification is performed at all. The gaming state of the above may be categorized in a "general game state", which is one of the "gaming states" to be described later, and can also be a gaming state that the actual amount of coins to be paid but becomes comparable to that in the bonus gaming state.

[0009] Similarly, a "Super Time (ST)" may be provided such that the amount of coins to be paid out may be varied by providing or not providing support to get the "winning"