communication cable and the power supply cable are also a hindrance to the operation to set the card reading device on the game table and to maintenance operations. In some cases, the communication cable or the power supply cable may become a cause of a malfunction.

Citation List

Patent Literature

[0009]

Patent Literature 1: Japanese Patent Laid-Open No. 2005-296634

Summary of Invention

Technical Problem

[0010]

Embodiments of the present disclosure seek to provide a card reading device capable of facilitating moving the card reading device in a participatory tabletop game.

Solution to Problem

[0011]

An aspect of the present invention provides a tabletop game system comprising a card reading device comprising a card shoe including a card container portion configured to hold a plurality of cards that include a cut card, the card shoe including a detachable cover disposed at a top of the card container portion, and defining an opening through which the cards can be withdrawn from the card container portion; a card reader configured to obtain information on one or more cards of the plurality of cards; a controller configured to determine an outcome of a card game based on

the information on the one or more cards obtained by the card reader; a display configured to output an indication of the outcome determined by the controller; a battery configured to supply electric power to the controller and the display; and a wireless transmitter configured to wirelessly transmit cut card appearance information to a main computer after obtaining the cut card appearance information from the card reader.

Another aspect of the present invention provides a tabletop game system comprising a plurality of cards, wherein each of one or more cards of the plurality of cards has a corresponding code representing information associated with the card; and a card reading device comprising: a card shoe including a card container portion configured to hold the plurality of cards, including a detachable cover disposed at a top of the card container portion, and defining an opening through which the one or more cards can be individually withdrawn from the card container portion; a card reader configured to read the codes from each of the one or more cards to obtain information on the one or more cards; a controller configured to determine an outcome of a card game based on the information obtained by the card reader; a display configured to output an indication of the outcome determined by the controller; a battery configured to supply electric power to the controller and the display; and a wireless transmitter configured to transmit the information on the cards obtained by the card reader or information on the outcome determined by the controller, wherein the controller further is configured to determine a transmission timing so that at a time when the outcome of the card game is obtained, the information on the cards

obtained by the card reader and information on the outcome of the card game are transmitted according to the transmission timing determined by the controller, and wherein the controller is further configured to detect that the detachable cover is detached and to transmit a notification that the detachable cover is opened to an external device via the wireless transmitter.

There is also disclosed a card reading device. This card reading device includes a card shoe part having a card container portion that contains a plurality of cards, a

detachable cover disposed above the card container portion, and an opening through which the card can be taken out one by one from the card container portion, a card reading part in which information attached to the cards drawn out from the card container portion onto a game table is read from each of the cards, a control part that determines the outcome of a card game based on the information on the cards read in the card reading part, a display part that outputs the game outcome determined by the control part, a wireless output part that transmits, to an external device, via wireless communication, the information on the cards successively read in the card reading part and information on the game outcome determined by the control part together with an ID for identification of the card reading device, and a battery that supplies electric power to the control part, the display part and the wireless output part. The card shoe part, the card reading part, the control part, the display part and the wireless output part can be placed on the game table by being integrally combined with each other, and the battery is detachably attached to the card reading device.

[0012]

There is also disclosed a tabletop game system constituted of a card reading device and a main computer apparatus. The card reading device includes a card shoe part having a

reading device if the received ID coincides with an ID set in advance.

[0013]

There is also disclosed a tabletop game system constituted of a plurality of cards, a card reading device and a main computer apparatus. Each of the plurality of cards has a code expressing information on the card and attached to one surface of the card in ink reactive to ultraviolet light. The card reading device includes a card shoe part having a card container portion that contains a plurality of cards, a detachable cover disposed above the card container portion, and an opening through which the card can be taken out one by one from the card container portion, a card reading part in which information attached to the cards drawn out from the card container portion onto a game table is read from each of the cards, a control part that determines the outcome of a card game based on the information on the cards read in the card reading part, a display part that outputs the game outcome determined by the control part, a wireless communication part that transmits, to the main computer apparatus, via wireless communication, the information on the cards successively read in the card reading part and information on the game outcome determined by the control part together with an ID for identification of the card reading device, and a battery that supplies electric

CLAIMS

1. A tabletop game system comprising:

a card reading device comprising:

a card shoe including a card container portion configured to hold a plurality of cards that include a cut card, the card shoe including a detachable cover disposed at a top of the card container portion, and defining an opening through which the cards can be withdrawn from the card container portion;

a card reader configured to obtain information on one or more cards of the plurality of cards;

a controller configured to determine an outcome of a card game based on the information on the one or more cards obtained by the card reader;

a display configured to output an indication of the outcome determined by the controller;

a battery configured to supply electric power to the controller and the display; and

a wireless transmitter configured to wirelessly transmit cut card appearance information to a main computer after obtaining the cut card appearance information from the card reader.

2. The tabletop game system according to claim 1, wherein the controller is further configured to detect whether an amount of charge in the battery is less than or equal to a threshold value and to transmit a notification to an external device via the wireless transmitter, the notification indicating the amount of charge in the battery.

3. The tabletop game system according to claim 1, further comprising an auxiliary battery configured to supply

electric power to the controller and the wireless transmitter based on removal of the battery from the card reading device or based on an amount of charge in the battery being less than or equal to a threshold value.

4. The tabletop game system according to claim 1, wherein:

the card reading device is one of a plurality of card reading devices that the tabletop game system comprises;

the tabletop game system further comprises the main computer;

the main computer is associated with the plurality of card reading devices;

each of the plurality of card reading devices has a corresponding unique ID; and

the main computer is configured to identify each unique ID of the plurality of card reading devices.

5. The tabletop game system according to claim 1, wherein the controller is further configured to determine a transmission timing in the wireless transmitter.

6. The tabletop game system according to claim 5, wherein the card reader is configured to read a code on each card of the one or more cards to obtain the information on the one or more cards, wherein the controller is further configured to determine the transmission timing so that, after a threshold number of cards of the one or more cards are read by the card reader, the information on the threshold number of cards, is transmitted.

7. The tabletop game system according to claim 5, wherein the controller is further configured to determine the transmission timing with a program, and wherein the program

is configured to determine the transmission timing based on a number of cards dealt via the card shoe, the cut card appearance information, expiration of a time period, a time corresponding to a time when the outcome is determined by the controller or a combination thereof.

8. The tabletop game system according to claim 1, the card reading device further comprising a second battery, wherein the battery corresponds to a main battery and is coupled to the detachable cover, and wherein the second battery is configured to supply power to the card reading device responsive to the detachable cover being removed from the card reading device.

9. The tabletop game system according to claim 1, the card reading device further comprising a transmission button configured to initiate transmission of the information on the cards obtained by the card reader and information on the outcome of the card game, and wherein the cut card appearance information is transmitted independent of the transmission button.

10. The tabletop game system according to claim 9, the card reading device further comprising a transmission button configured to initiate transmission of the cut card appearance information.

11. The tabletop game system according to claim 1, the card reading device further comprising a transmission button configured to initiate transmission of second information on second cards obtained by the card reader, a second outcome of a second card game determined by the controller, or both.

12. A tabletop game system comprising:

a plurality of cards, wherein each of one or more cards of the plurality of cards has a corresponding code representing information associated with the card; and

a card reading device comprising:

a card shoe including a card container portion configured to hold the plurality of cards, including a detachable cover disposed at a top of the card container portion, and defining an opening through which the one or more cards can be individually withdrawn from the card container portion;

a card reader configured to read the codes from each of the one or more cards to obtain information on the one or more cards;

a controller configured to determine an outcome of a card game based on the information obtained by the card reader;

a display configured to output an indication of the outcome determined by the controller;

a battery configured to supply electric power to the controller and the display; and

a wireless transmitter configured to transmit the information on the cards obtained by the card reader or information on the outcome determined by the controller,

wherein the controller further is configured to determine a transmission timing so that at a time when the outcome of the card game is obtained, the information on the cards obtained by the card reader and information on the outcome of the card game are transmitted according to the transmission timing determined by the controller, and

wherein the controller is further configured to detect that the detachable cover is detached and to transmit a notification that the detachable cover is opened to an external device via the wireless transmitter.

13. The tabletop game system according to claim 12 wherein the controller is further configured to detect whether an amount of charge in each of the battery and a second battery is less than or equal to a threshold value and to transmit a notification to the external device via the wireless transmitter, the notification indicating that the amount of charge in each of the battery and the second battery is less than or equal to a threshold value.

14. The tabletop game system according to claim 12, wherein the card reading device comprises an auxiliary battery configured to supply electric power to the controller and the wireless transmitter responsive to the battery being removed from the card reading device or responsive to an amount of charge in the battery being less than or equal to a threshold value.

15. The tabletop game system according to claim 14, wherein the card reading device further comprises a battery switching device configured to control the electric power supplied to the controller from the battery, auxiliary battery, or both.

16. The tabletop game system according to claim 12, wherein a code indicating the information on at least one of the one or more cards is printed on two opposite sides of the at least one card along a direction in which the at least one card is drawn out.

17. The tabletop game system according to claim 12, wherein:

the card reading device is one of a plurality of card reading devices that the tabletop game system comprises;

the tabletop game system further comprises a main computer;

the main computer is associated with the plurality of card reading devices;

the plurality of card reading devices each has a corresponding ID, different from one another, for identification of the corresponding card reading device; and

the main computer is configured to identify the IDs of the plurality of card reading devices.

18. The tabletop game system according to claim 12, wherein the determined transmission timing is timing according to which the wireless transmitter performs the information transmission.

19. The tabletop game system according to claim 12, wherein the battery is attached to the detachable cover, and wherein the outcome of the card game comprises a win, a loss, or a draw.

20. The tabletop game system according to claim 12, wherein the wireless transmitter is further configured to wirelessly transmit cut card appearance information to a main computer responsive to activation of a transmission button.