RAINBOW

Product Manual

V1.0

Contents

1．Machine instructions

1．1．Specification and Parameter

1.Voltage：AC220V 50Hz（Please refer to the machine nameplate for specific use voltage）
2.Dimension：W1100×D1620×H2245mm（Assembly）
3.Weight：about 200 Kg
4.Power：450W

1．2．Considerations

1.Suitable for indoor environment
2.Please do not placed in the tilted position, so as to avoid accidents
3.Please do not use it in the following places：

- ❖ In the dusty environment；
- ❖ In the high temperature or airiness environment ；
- ❖ A condensing place that causes a machine to produce condensed water or humidity.；
- ❖ Near hot objects ；
- ❖ Dangerous object ；
- ❖ Strong magnetic interference ；
- ❖ Near devices that are prone to spark;；
- ❖ Voltage instability or voltage is too low ；
- ❖ Vibration serious place ；

4.The machine must be assembled and fixed in accordance with assembly instructions before normal operation
5.Before moving, must turn off the power and unplug the power cord
6.If the caster can not move when moving, the machine's foot seat is put away, please confirm whether the bottom surface is flat
7.Random human movement, flip, transport, etc. can damage equipment, damage machine performance
8.Confirm in the process of moving, overturning, transporting and so on to meet the requirements of the manufacturers
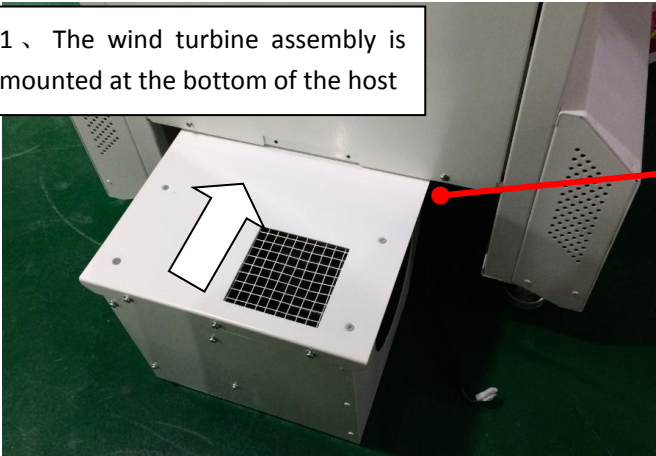
1．3．Installation notes

1．3．1． Unpack the packing material of each part of the machine

Lottery box

Host

Steps

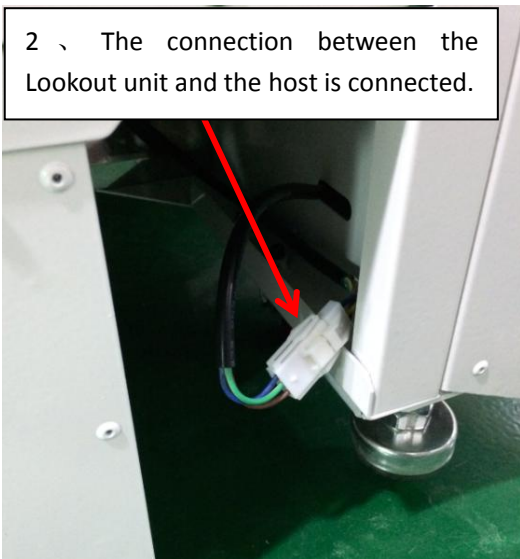Wind turbine

Coin box

Accessories bag

1.3.2. Install the wind turbine component to the host as shown below

1 、 The wind turbine assembly is mounted at the bottom of the host

Wind turbine components need to be plugged into the slots on both sides of the bottom of the host.
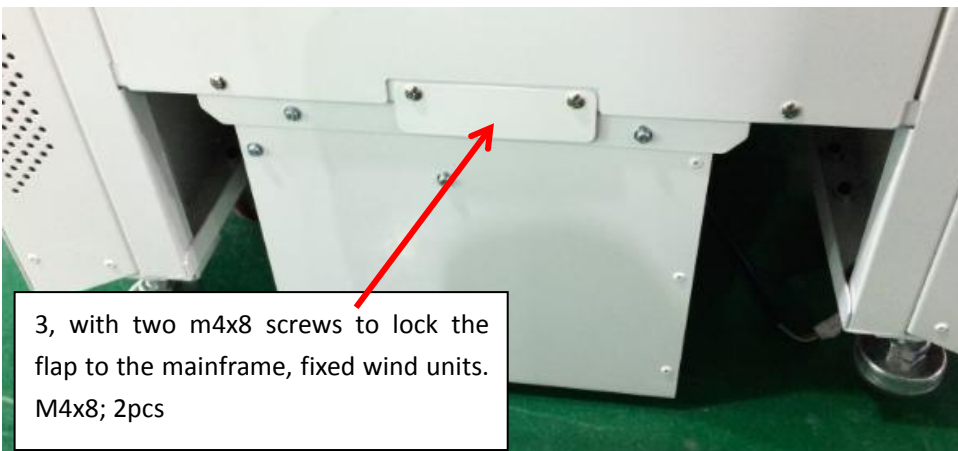
2 、 The connection between the Lookout unit and the host is connected.

After the need to put the wire on the host, to prevent falling.

3, with two m4x8 screws to lock the flap to the mainframe, fixed wind units. M4x8; 2pcs

1.3.3. Move the host to a suitable position, then unscrew the 6 feet of the machine, adjust the height of the foot, ensure that all casters are off the ground and the force of each foot is close.
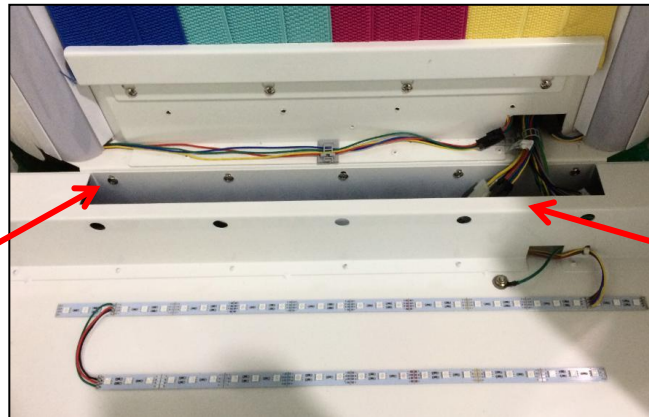

1.3.4. Install the wind turbine components to the host as shown in the following figure
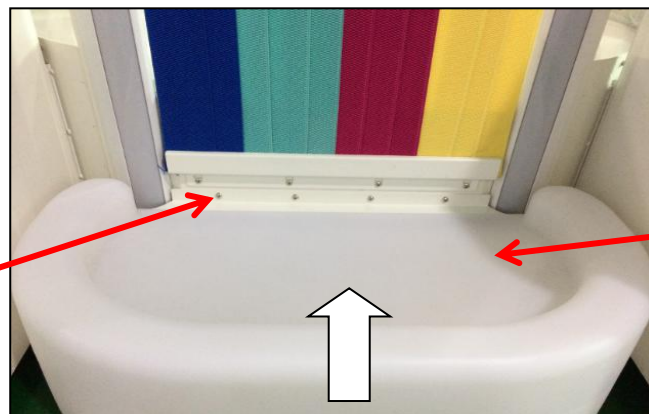

Both sides need locking screws m4x8; 6pcs

Adjust the coin box and the seat of the lottery box, so that the box is highly suitable and stable.
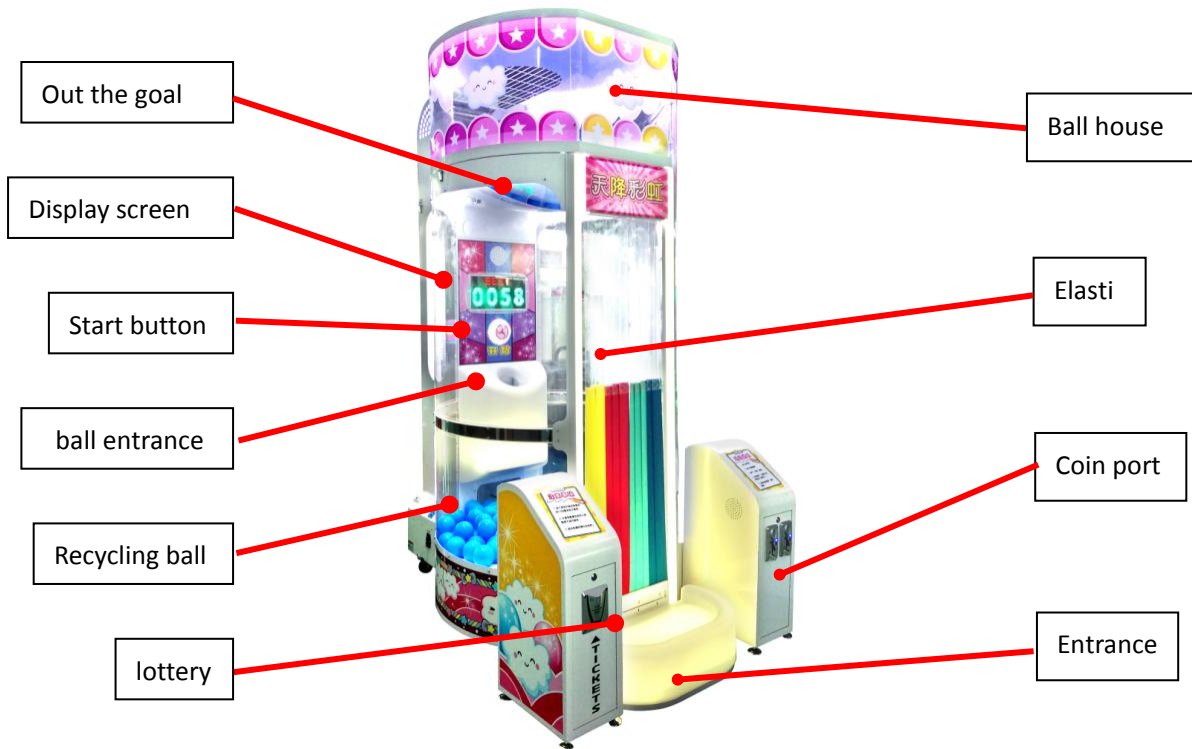
Lock screws m4x8;5pcs

The Coin box, lottery box, LED, ground air connectors are connected, received in the slot

Lock screws m4x8;4pcs

Load the plastic parts of the step assembly onto the step machine. Be careful not to press the wire.

1.4. **Playing way**

Out the goal

Display screen

Start button

ball entrance

Recycling ball

lottery

Ball house

Elasti

Coin port

Entrance

1、 Insert coin, enter the waiting state

2、Open the elastic curtain and carefully enter the machine

3、Press the "Start" button and start the game (after 30 seconds, no one presses the button, the game will also automatically enter the game)

4、the top of the landing goal automatically open, the ball house will be all the balls fall down. At the same time, the bottom of the recycling ball also began to reclaim the balls. (goal where ball drop from will be closed in pre-set time)

5、players put the ball into the ball entrance, the machine will be judged to enter the ball is big or small ball, and then according to the score set the cumulative score, displayed on the display screen.

6、Game over when time finish, then the goal will not be graded.

7、according to the final score, combined with the Advance lottery score set, the lottery will spit out the corresponding number of lottery tickets.

8、The machine will continue to reclaim the inside ball (if set) and then return to standby.

1.5. Color Ball Request

1、Please use the original factory color ball. If other colored balls are used, the diameter of the ball should be between 79mm and 81mm. The diameter of the ball is between 69mm and 71mm. The weight of the ball is between 6.5g and 7.5 g. The weight of the ball is between 4g-6g

2、The number of balls placed inside the machine game needs to match the game time and the ball time.

3、It is assumed that the recommended amount of payback time and the number of

balls is as follows: "Payback time = game time-drop time":

| ball	100pieces	200pieces	300pieces	400pieces	500pieces
Time	30s	50s	70s	90s	110s

*This recommended data is the player in the ordinary pitching speed measurement, please follow the actual situation increase and decrease the number of balls

1.6. Game considerations

1、This game is only suitable for children standing at 80-130 cm
2、Children need to be accompanied by adults to play games.
3、Don't let the child get into the back of the recycling ball. Don't put your hand into the goal
4、It can not enter 3 or more people at the same time, in case of accident.
5、Children feel uncomfortable and need to stop the game.

1.7. Machine Movement considerations

1、Be sure to pick up each foot and move it
2、After the uneven ground movement, the Wind turbine component must be removed before moving.
3、The individual components must be packed and transported for long distances
4、Long distance transport needs to be in the bottom of the department of EPE and other Shockproof materials (as shown in the figure below).


Up
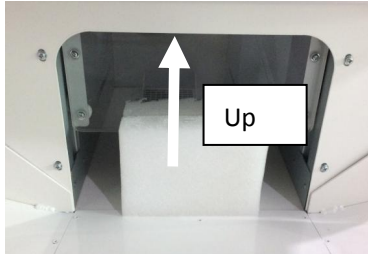
5、If the machine moving in the process of encountering the door is not high enough, you can remove the top of the ball warehouse and then move (as shown in the figure below).

Pull back and lift

Untie 6pcs buckles

Note Wired Group connectors
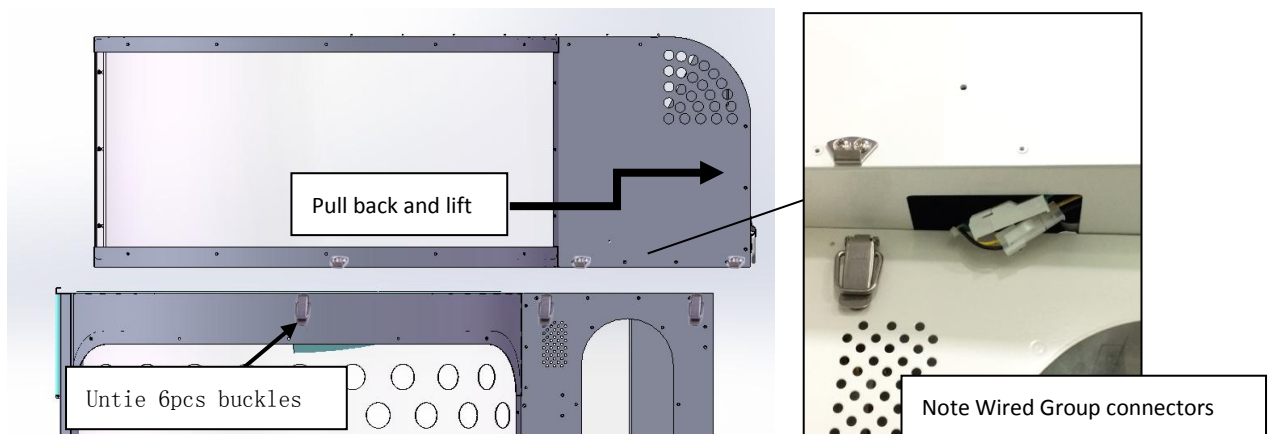
2. Machine setting & test instructions

2.1. Dialing switch setting

The dialing switches on the machine board are shown in the following illustration:
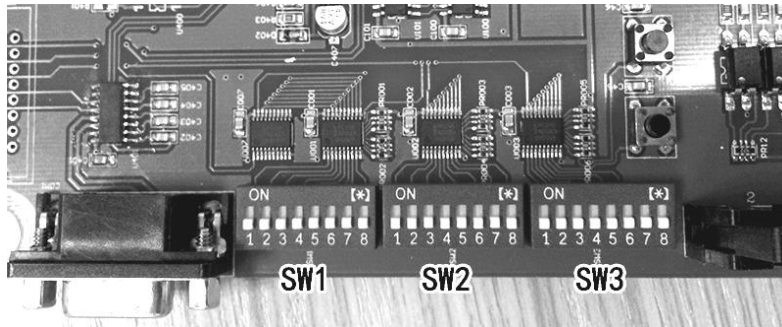
SW1 :

project / detail	Currency per			Fall ball time (In a game, when the goal remains open)		Game time (Total game time)		
	1	2	3	4	5	6	7	8
Wireless free	OFF	OFF	OFF					
1coin/time	ON	OFF	OFF					
2coin/time	OFF	ON	OFF					
3coin/time	ON	ON	OFF					
4coin/time	OFF	OFF	ON					
5coin/time	ON	OFF	ON					
6coin/time	OFF	ON	ON					
7coin/time	ON	ON	ON					
0s				OFF	OFF			
10s				ON	OFF			
20s				OFF	ON			
30s				ON	ON			
60s						OFF	OFF	OFF
70s						ON	OFF	OFF
80s						OFF	ON	OFF
90s						ON	ON	OFF
100s						OFF	OFF	ON
120s						ON	OFF	ON
150s						OFF	ON	ON
180s						ON	ON	ON
Factory defaults	ON	OFF	OFF	OFF	ON	OFF	OFF	ON

SW2：

project detail	Small ball score				内 容 item	Big ball score			
	1	2	3	4		5	6	7	8
1Score/ball	OF	OFF	OFF	OFF	1Score/ball	OFF	OFF	OFF	OFF
2Score/ball	ON	OFF	OFF	OFF	2Score/ball	ON	OFF	OFF	OFF
3Score/ball	OF	ON	OFF	OFF	3Score/ball	OFF	ON	OFF	OFF
4Score/ball	ON	ON	OFF	OFF	4Score/ball	ON	ON	OFF	OFF
5Score/ball	OF	OFF	ON	OFF	5Score/ball	OFF	OFF	ON	OFF
6Score/ball	ON	OFF	ON	OFF	6Score/ball	ON	OFF	ON	OFF
7Score/ball	OF	ON	ON	OFF	7Score/ball	OFF	ON	ON	OFF
8Score/ball	ON	ON	ON	OFF	8Score/ball	ON	ON	ON	OFF
9Score/ball	OF	OFF	OFF	ON	9Score/ball	OFF	OFF	OFF	ON
10Score/ball	ON	OFF	OFF	ON	10Score/ball	ON	OFF	OFF	ON
15Score/ball	OF	ON	OFF	ON	15Score/ball	OFF	ON	OFF	ON
20Score/ball	ON	ON	OFF	ON	20Score/ball	ON	ON	OFF	ON
25Score/ball	OF	OFF	ON	ON	25Score/ball	OFF	OFF	ON	ON
30Score/ball	ON	OFF	ON	ON	30Score/ball	ON	OFF	ON	ON
35Score/ball	OF	ON	ON	ON	35Score/ball	OFF	ON	ON	ON
40Score/ball	ON	ON	ON	ON	40Score/ball	ON	ON	ON	ON
Factory setting	OFF	OFF	OFF	OFF	Factory setting	ON	OFF	OFF	OFF

SW3：

project detail	Score per ticket			Save	Stand by	Clean ball		
	1	2	3	4	5	6	7	8
No Ticket	OFF	OFF	OFF					
1Score/Ticket	ON	OFF	OFF					
2Score/Ticket	OFF	ON	OFF					
3Score/Ticket	ON	ON	OFF					
5Score/Ticket	OFF	OFF	ON					
10Score/Ticket	ON	OFF	ON					
20Score/Ticket	OFF	ON	ON					
30Score/Ticket	ON	ON	ON					
Not save coin 、votes				OFF				
Save coin 、votes				ON				
No standby Sound, demo					OFF			
standby Sound, demo					ON			
Don't clean the ball after the end						OFF		
Clear the ball after the end						ON		
Factory setting	OFF	OFF	OFF	ON	ON	ON	OFF	OFF

2.2. **Test instructions**

Setting Panel Description

| Coin count 1 | 投币1计数 | 上(测试) |
| Up(test) |
| Coin count 2 | 投币2计数 | 下(服务) |
| Down(serve) |
| | 确定 | Enter |
| Lottery count | 彩票计数 | 音量 |
| Volume |
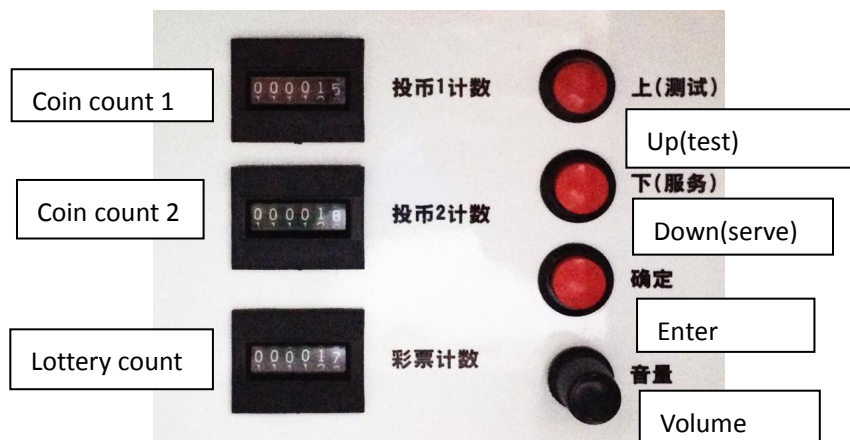
up(test)   : Click in the standby state to enter the test program; Press the flip page in the test program

down(serve)   : On standby, click the free game once; Click on the next page in the test program

Enter ：Tap in the test program to select or determine

2.2.1. Bottom Department Test

After entering the bottom department test, as shown in the right picture

1）Press "OK" key, the screen <OFF> becomes <ON>, the bottom department starts continuously opens and closes; Press OK again, and the bottom department stops.

2）In the process of opening and closing the bottom department:

When the bottom department is open, open (open) becomes on to indicate that the "open check" micro switch is normal

3）When the bottom department is closed, close (off) turns on to indicate that the "off check" micro switch is normal


2.2.2. Top Department Test

After you go to the top department test, as shown in the picture on the right.

1）Press "OK" key, the screen <OFF> becomes <ON>, the top department begins to rotate clockwise, press "OK" again, top department stops; When testing again, the top department rotates counterclockwise.

2）during the top department rotation (open and close):

3）When the top department is closed, close (off) becomes ON to indicate that the "off check" sensor is normal.

4）When the When department is closed, close (off) becomes on to indicate that the "off check" sensor is normal.
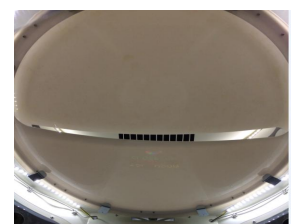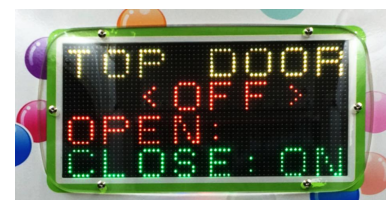
Wind turbine test

After entering the wind turbine test, as shown in the right picture.

1）Press "OK" key, the screen <OFF> becomes <ON>, the bottom Wind turbine starts to work, presses "OK" again, the Wind turbine stops working。

2）when is no ball in the recovery ball, the "on" screen "SEN1" does not show "on"; when the ball is in the recycling ball, as in the right, the "SEN1" on the screen displays "on".
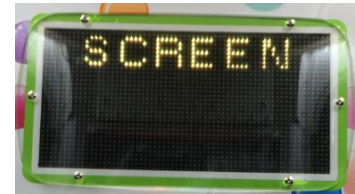

2.2.3. screen test

After enter the screen test, as shown in the image on the right.

Press the "OK" key,the screen will alternately display red and green lines moving from top to bottom.

Observe whether the line is continuous, the color is normal, so as to determine whether the lattice screen is normal

2.2.4. Three-color LED light test

After entering the three-color LED light test, as shown in the right picture

Press the "OK" button to display the screen alternately:
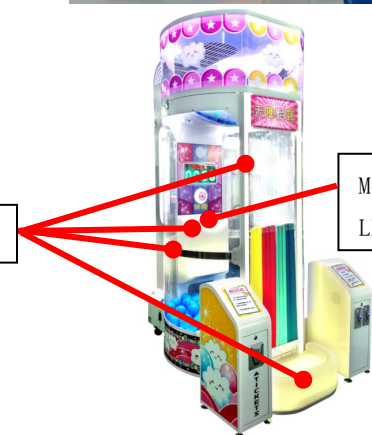
R：ON ---- light red

G：ON ----light green；

B：ON ----light blue

M：ON ----light white

Three-color LED

Mouth throw LED

2.2.5. Coin Counter 1 Test

After entering the coin counter 1 test, as show in the right image

Press the "OK" key, the screen will display "Ccnt1:on" 0.5 seconds after the disappearance, while the coin counter 1 count plus 1.

2.2.6. Coin Counter 2 Test

After entering the coin Counter 2 test, as shown in the right image.

Press the "OK" key, the screen will display "Ccnt2:on" 0.5 seconds after the disappearance, while the coin counter 2 count plus 1.

2.2.7. Lottery Counter Test

After entering the lottery counter test, as shown in the right image

Press the OK button, the screen will display "Tcnt:on" 0.5 seconds to disappear, while the lottery counter count plus 1.

2.2.8. Lottery test

After entering the lottery test, as shown in the picture on the right.

Each time the "OK" key is pressed, the lottery will output 1 lottery tickets.

If the lottery box is not placed in the lottery, and the test, you should be at the end of the test to restore the factory settings to clear the lottery data, or exit the test program will report the lack of lottery errors.

2.2.9. Start button Light Test

Enter the Start button lamp after testing, as shown in the right picture

Press the "OK" key, the screen will display <ON>, start the button light on, press the "OK" button again, and the light is off.

2.2.10.   Sound Testing

After enter the sound test, as shown in the image on the right.

Press the "OK" key, the screen displays the sound segment number and starts playing the segment sound.

2.2.11.   Browse all input signal states

Enter all input signal states as shown in the image on the right.

Each letter represents an input signal, by manually touching a signal's switch or sensor, to observe whether the corresponding letter on the screen changes, you can check whether the switch or sensor work is normal.

The corresponding signal name for each letter is shown in the following table:

A	Coin Converter 1 Signal	I	Lower door Clearance Check switch	Q	OK button
B	Coin Converter 2 Signal	J	Detection of optical eye by ball recovery port	R	*
C	Ticket Repair button	K	*	S	*
D	Ticket Machine Feedback Signal	L	Goal scoring a light eye	T	*
E	Start button	M	Goal Scoring B1 Light eye	U	*
F	Door off Detection sensor (NH)	N	Goal Scoring B2 Light eye	V	*
G	Door opening detection sensor (NH)	O	up(test) button	W	*
H	Lower door open detection switch	P	down (Service) button	X	*

2.2.12.   Browse Dialing Switch Status

Enter the browse code switch state as shown in the image on the right.

Each English letter represents the status of a dialing code. Compare the status of the actual dialing switch with the corresponding letter state on the screen to check whether the dialing switch is normal.

Red represents OFF, and green is ON

A-H represents the 1-8 digits of the SW1, the i-p represents SW2 1-8 bits, and the q-x represents SW3 1-8 digits.

The bottom door stays open for hours

The bottom door holding time is the time at which the gate of the bottom ball recovery port remains in the "open" state during the game, and the unit is seconds. This increase will speed up the recovery of the ball and also increase the burden of recycling the fairway.

Enter the bottom door to keep the time set, as shown in the right picture

Press the "OK" button, when the "symbol" on the screen can be modified, press the "Up" or "down" button to increase or decrease the value, and then press the "OK" button to determine.

2.2.13. Bottom Closing Time

The bottom door holding time is the time at which the gate of the bottom ball recovery port remains in the "off" state during the game and the unit is seconds. This decrease will speed up the recovery of the ball and also increase the burden of recycling the fairway. (The game, the program will also be based on the player pitching speed appropriate increase the time value, to ensure the smooth recovery of the fairway) to enter the bottom of the door to maintain the time settings, as shown in the right image.

Press the "OK" button, when the "symbol" on the screen 《》, press the "Up" or "down" button to increase or decrease the value, and then press the "OK" button to determine.

2.2.14. Restore factory setting

Enter the Restore factory settings option, as shown in the figure on the right.

press the "OK" button, you will restore the bottom door retention time, bottom closing time, and clear all saved coins, votes, and highest scores. After you restore the factory settings, the screen displays "OK".。

2.2.15. View Software versions

After you go to view the software version options, as shown in the figure on the right. You can view the current machine software version.

2.2.16. Save and exit

After enter save and exit options, as shown in the right image

Press the "OK" button to save the current settings and exit back to standby.

3. Fault & Resolution

3.1. Fault code description and fault handling

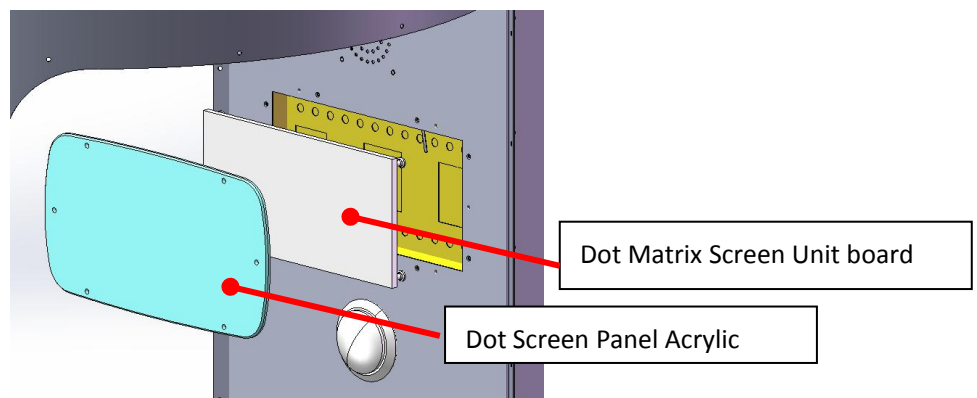| Fault code	Fault Name	Fault Analysis and treatment
Error 1	Software version update	The prompt version has been updated. Reboot to remove the alarm
Error 2	Data error	Internal data error. 1, restore the factory settings; 2. Replace the motherboard.
Error 3	Slot 1 failure	1, check the coin 1 whether there is a card currency, if there is a check out; 2, checking the SW1 switch of the slot 1 is in NC. Status, and if so, dial No. State, 3, replace slot 1.
Error 4	Slot 2 failure	1, check the coin 2 whether there is a card currency, if there is a check out; 2, checking the SW1 switch of the slot 2 is in NC. Status, and if so, dial No. State, 3, replace slot 2.
TICKET IS EMPTY (Error 5)	Lottery is empty	The lottery has been finished, waiting to be added. The "surp :xxx" on the screen indicates the number of tickets left. 1, add lottery tickets, and press the "repair" button next to the lottery machine, the remaining lottery can be output. 2, Joben machine set the lottery, then restore the factory settings can be lifted alarm.
Error 6	Bottom department "open" check error	check the bottom of the department whether there is foreign body jammed, 2, into the "bottom of the test procedures", check the bottom of the Department of Motor is normal work. If the motor does not turn, change the motor, if there is no "open" signal, adjust the lock micro-switch, or change the micro-switch.
Error 7	Bottom department "off" check error	1, check the bottom of the department whether there is foreign body jammed, 2, into the "bottom of the test procedures", check the bottom of the Department of Motor is normal work. If the motor does not turn, change the motor, if there is no "off" signal, adjust the lock micro-switch, or change the micro-switch.
Error 8	Top department "open" check error	1, check the top department whether there is foreign body jammed, 2, check the belt and coupling is loose, 3, into the "top department test procedures", check the top department motor is normal work. If the motor does not turn, change the motor, and if there is no "open" signal, adjust the gap between the sensor and the door, or replace the sensor.
Error 9	Top department "off" check error	When this error occurs during the game, the machine pauses the game and tries to repair it automatically, and then continues the game. If the machine can not be repaired automatically will

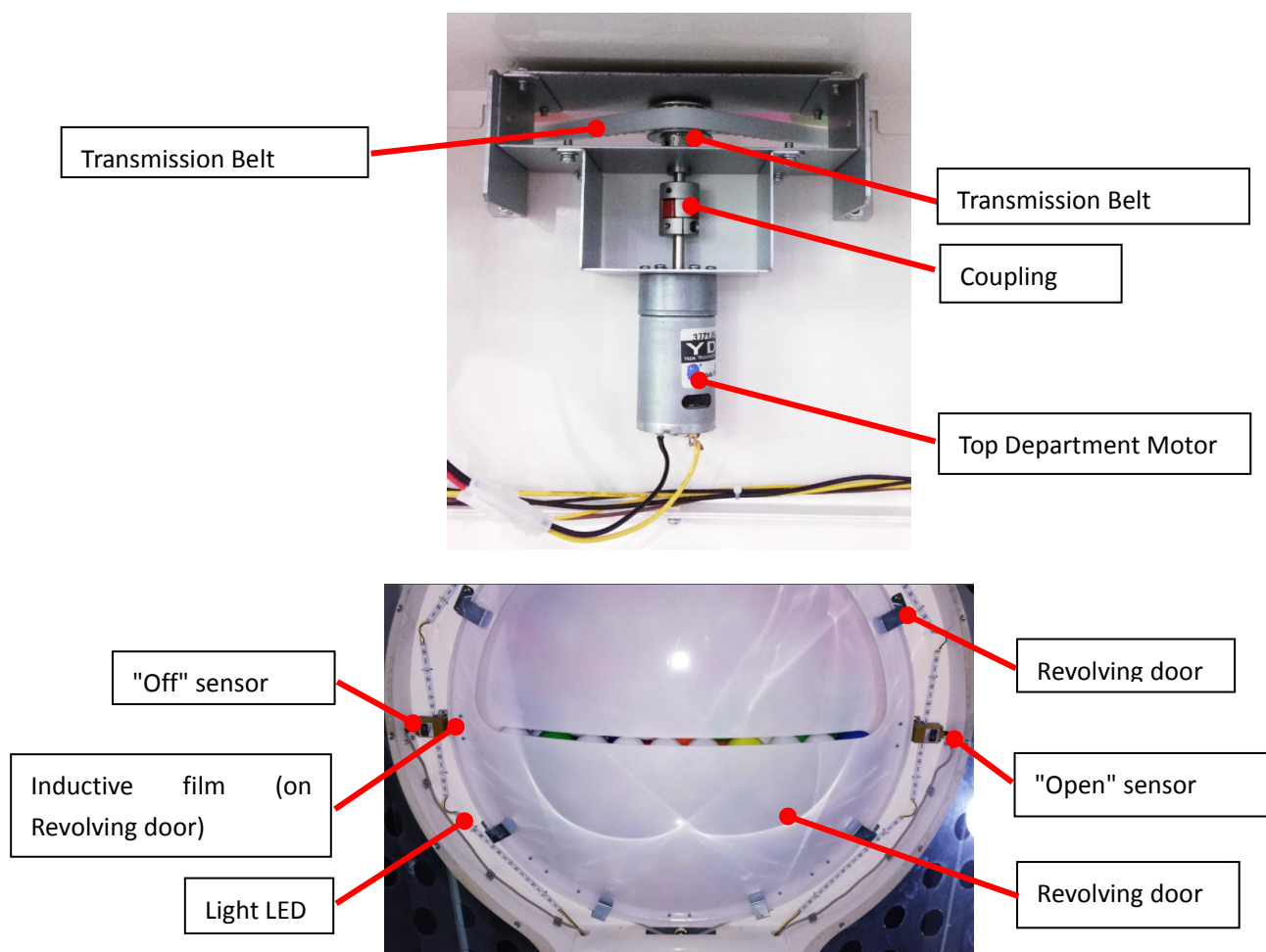|		
		need to be treated as follows: 1, check the top of the department whether there is foreign body jammed, 2, check the belt and coupling is loose, 3, into the "top Department test procedure", check the top department motor is normal work. If the motor does not turn, change the motor; if there is no "off" signal, adjust the clearance between the "off" sensor and the door, or replace the sensor
Error 10	Pitch Card Ball	1, check whether the ball pipe has foreign body stuck, if there is removed; 2, emptying the pitch pipe, enter the "Browse all input" test procedure, check L, M, n items have been shown green items, if the need to replace the corresponding light eye.

3.2. Other fault analysis and treatment

1、Frequent card ball, the wind can't blow the ball into the silo
   A、Check the weight of the ball is over 8g, if there is more than change the color ball
   B、Check if the site's voltage is too low
   C、check the wind turbine and outlet whether there is debris blocked, if there is clean.
   D、Check if dust is accumulated inside the blower and clean up if any.

2、Every time the game is over, the wind turbine have been working for a while.

   A、check the game after the end of the ball recovery is still a ball stay, if there is
    a proper reduction in the number of balls or increase the game time.
   B 、The ball recovery port detects whether the light eye has debris or dust shielding,
    if any, clean.
  3、Dot-matrix screen flower screen, irregular flicker
   A、check the line group is loose
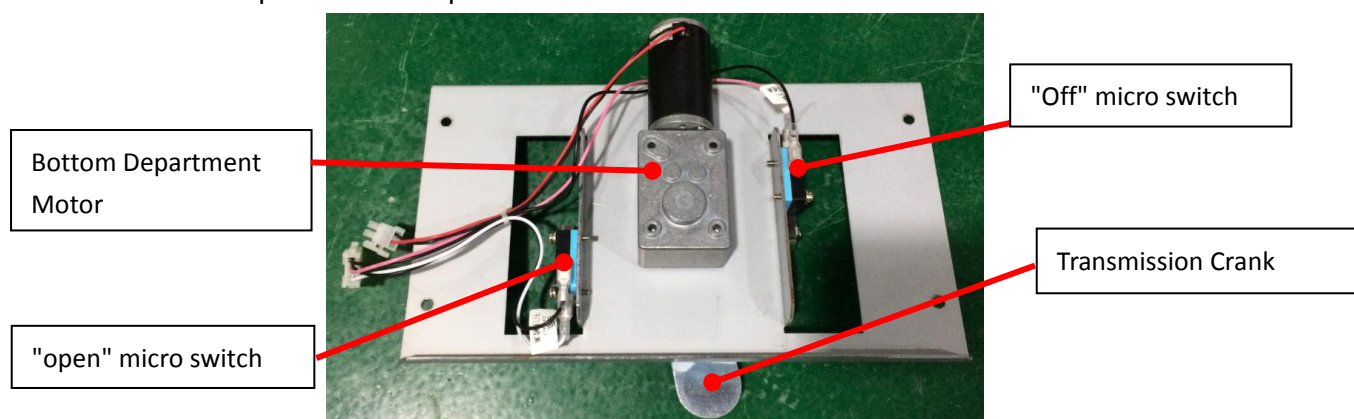   B、 Replace the dot matrix screen

3.3. Machine structure diagram

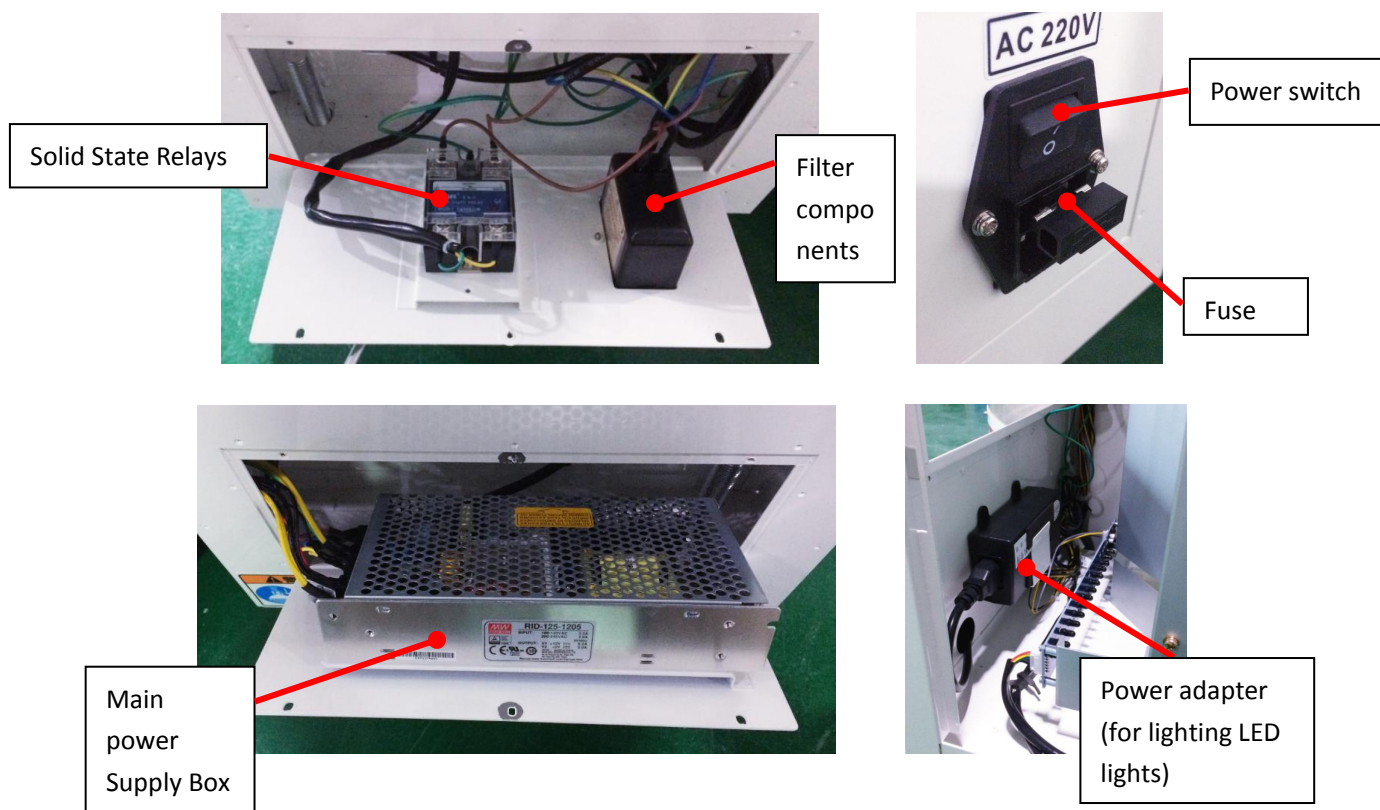### 3.3.1. Dot Matrix Screen Component:

Dot Matrix Screen Unit board

Dot Screen Panel Acrylic

3.3.2. Top Department components：

3.3.3. Bottom Department Components：

3.3.4. Power components:

Solid State Relays

Filter compo nents

Power switch

Fuse

Main power Supply Box

Power adapter (for lighting LED lights)

3.3.5. Back dis-assembly　process:

4. Machine maintenance

　　Even if the machine works properly, in order to allow the machine to operate at its best, and for a longer period of time, check and maintain the following daily:

1、Check if the foot seat is normal to support the good machine.

2、Check whether the wind turbine is loose, whether the air inlet has debris accumulation

3、Regular cleaning fan blade dust

4、 check whether the ball warehouse lock buckle loose.

5、Check if the screws in the parts of the fixing are loose

6、Check whether the connectors are loose and whether the terminals are off.

　　Maintenance Precautions:

1、For maintenance, please cut off the power supply to prevent the occurrence of workers or other people injured, electric shocks and so on.

2、Do not mention the operation of this manual, please be sure to consult the company's after-sales service center, in accordance with the instructions, answer the operation.

3、Consumables and Repair parts please use the company's designated products

4、even if the main power supply, power panels and monitors inside or at high temperature and high pressure state, if encounter there will be burns, electric shock risk. Please be careful not to touch.