

# RAINBOW

-US

Product Manual

V1.1



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# 1. Machine instructions

## 1.1. Specification and Parameter

- 1.Voltage: AC110V 50/60Hz
- 2.Dimension: W1100×D1620×H2205mm (Assembly)
- 3.Weight: About 210 Kg
- 4.Power: 800W

## 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

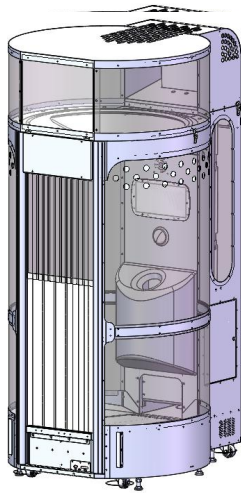
6.If the caster can not move when moving, the machine's foot seat is put away, please confirm whether the bottom surface is flat.

7.Random human movement, flip, transport, etc. can damage equipment, damage machine performance.

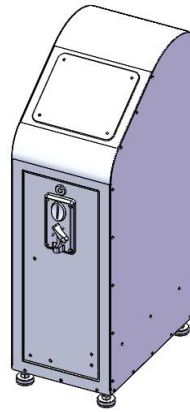
8.Confirm in the process of moving, overturning, transporting and so on to meet the requirements of the manufacturers.

### 1. 3. Installation notes

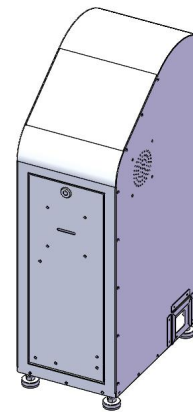
#### 1. 3. 1. Unpack the packing material of each part of the machine



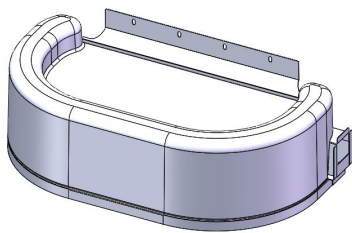
Main cabinet



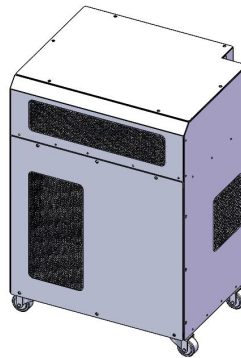
Coin cabinet



Ticket cabinet



Step assembly



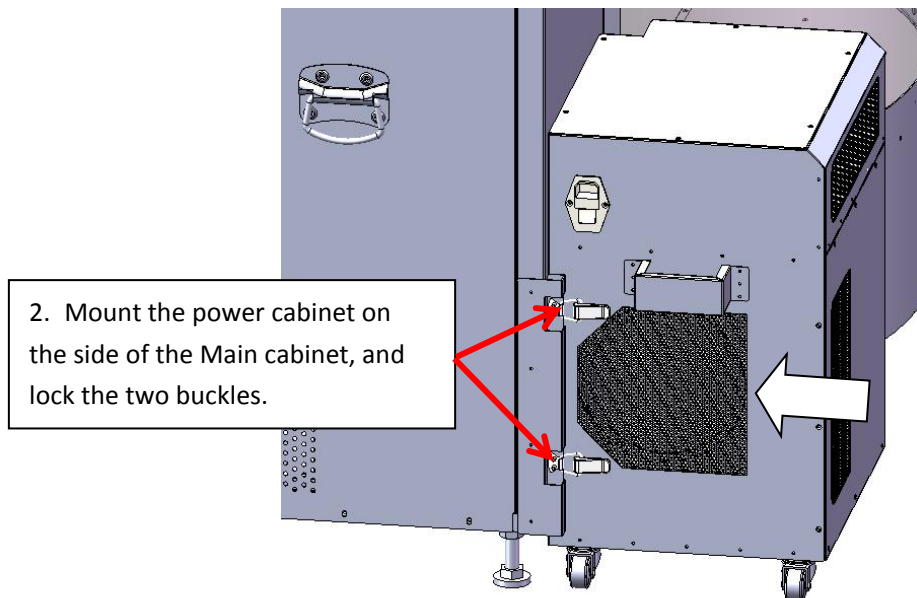
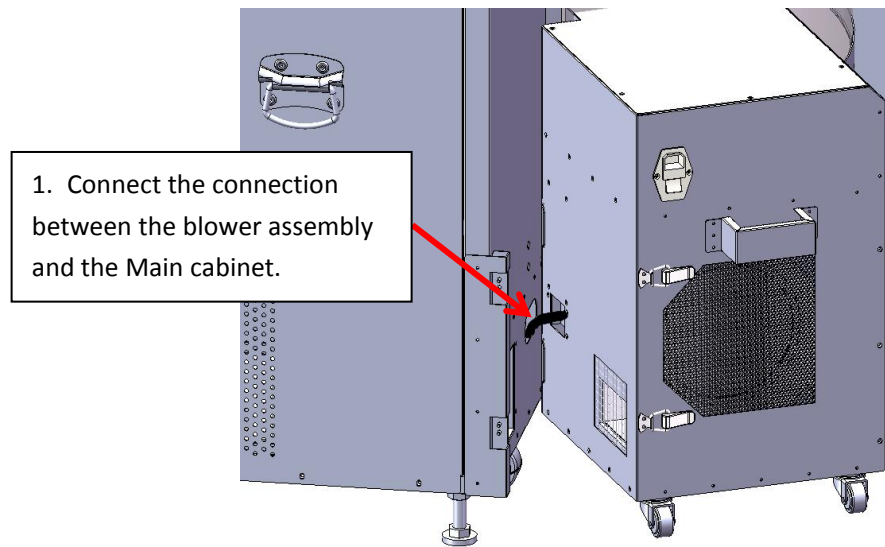
Power cabinet



Accessories Box



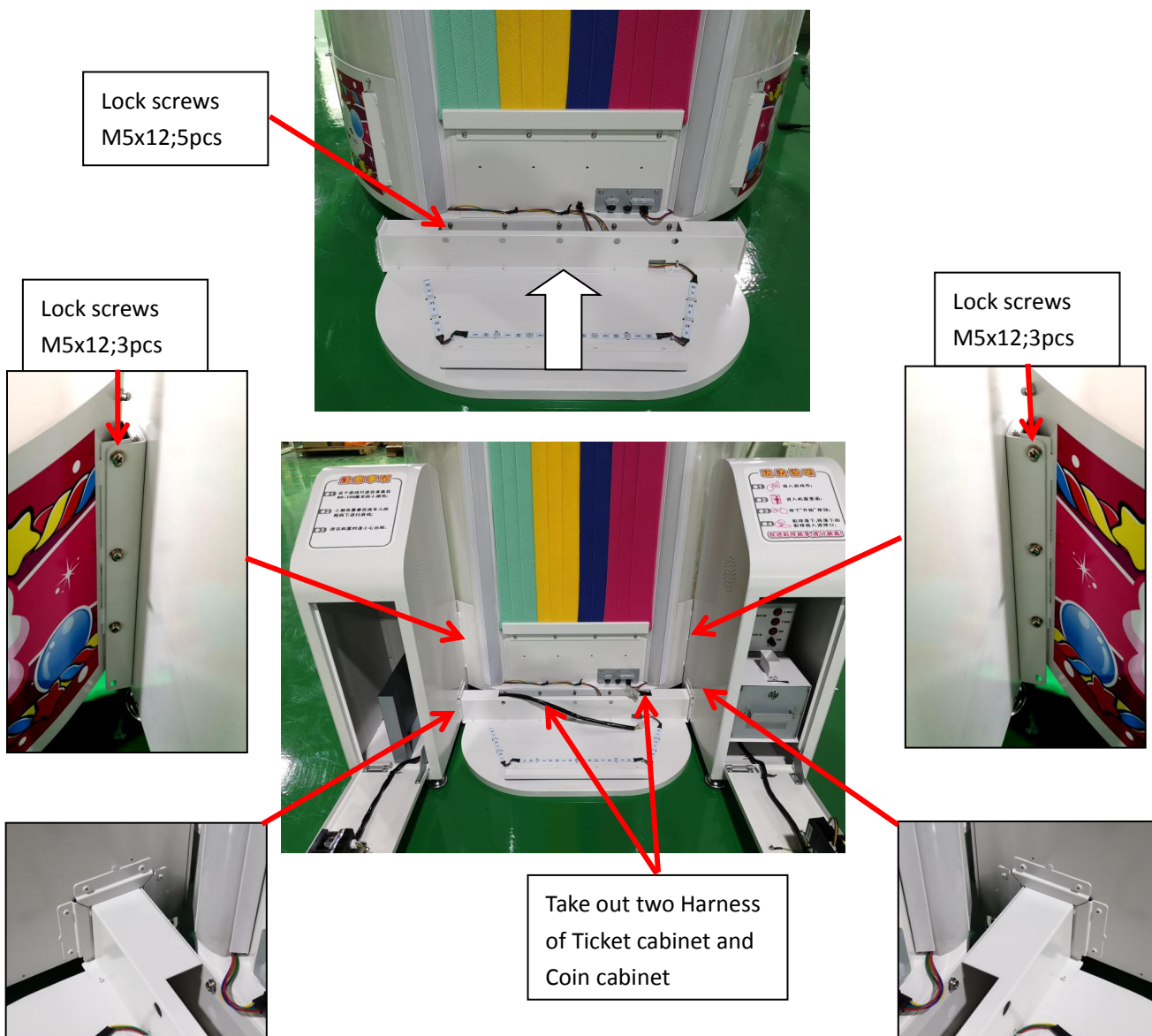
### 1. 3. 2. Install the power cabinet to the Main cabinet as shown below

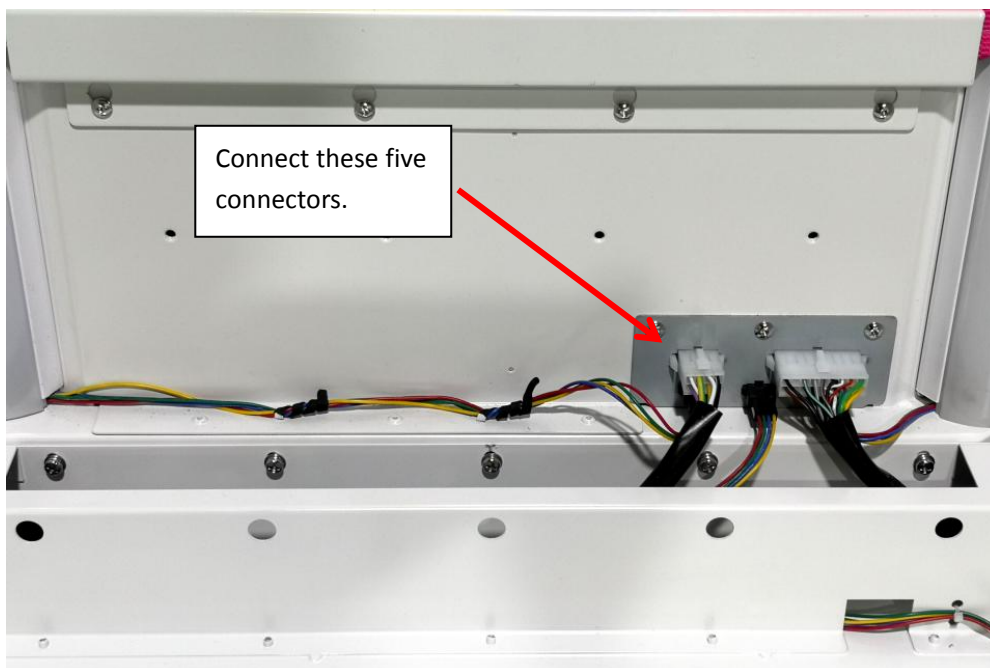


1. 3. 3. Move the Main cabinet to a suitable position, then unscrew the 6 feet of the machine, adjust the height of the foot, ensure that all casters are off the ground and the force of each foot is close.



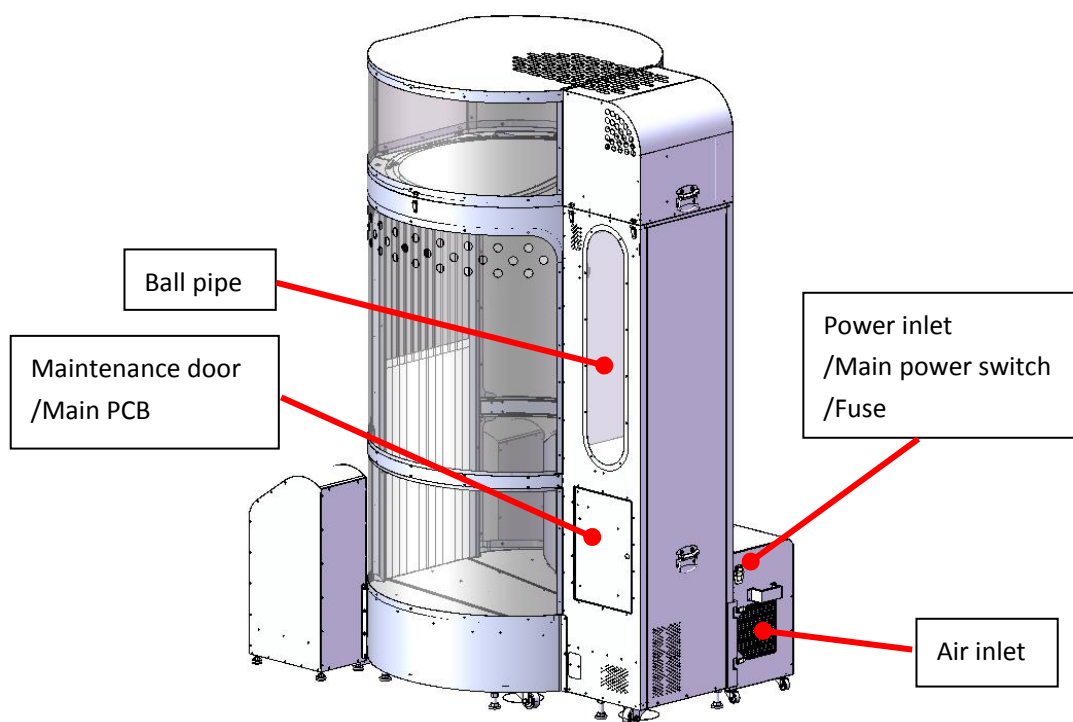
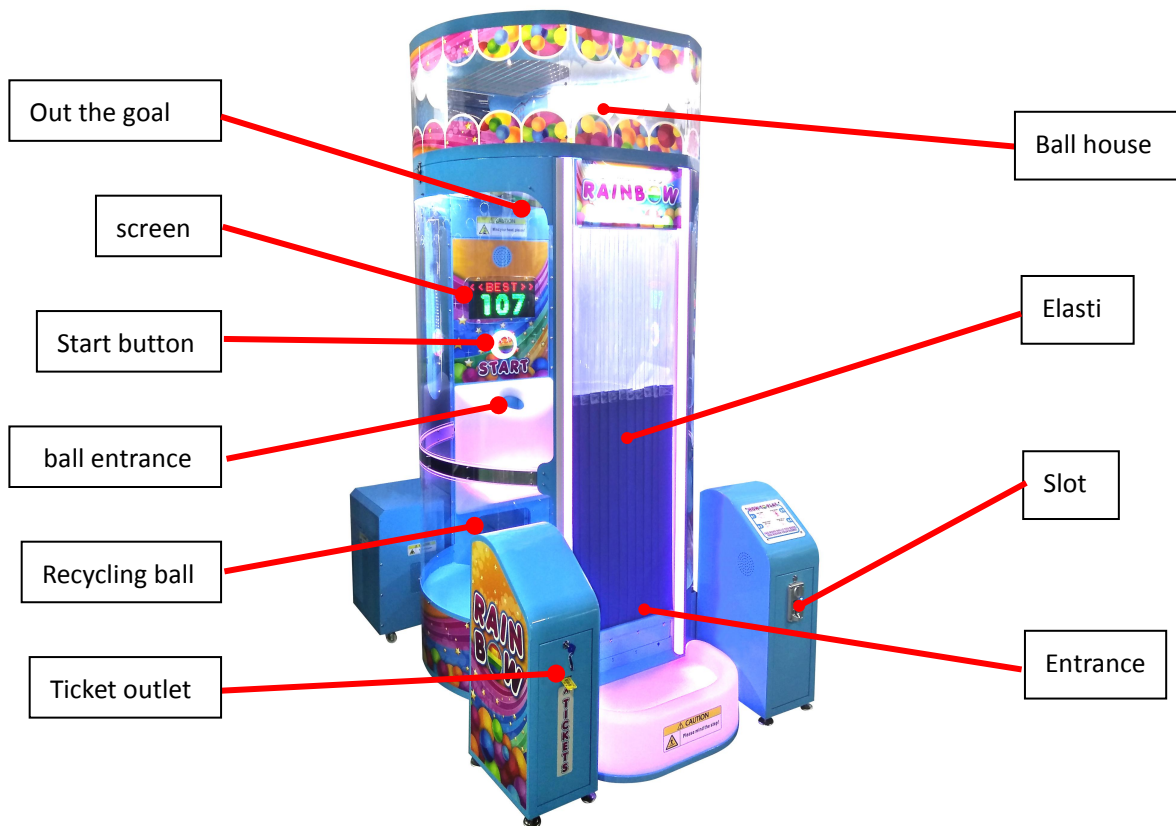
1. 3. 4. Install the Step assembly, Ticket cabinet and Coin cabinet to the Main cabinet as shown in the following figure.





### 1. 4. How to play

Machine construction:





**How to play:**

- 1、 Insert coin, machine will enter the waiting state.
- 2、 Open the elastic curtain and enter the machine carefully.
- 3、 Press the "Start" button to start the game , (If no one presses the button, the game will also start the game automatically after 30 seconds).
- 4、 The top of the landing goal open automatically, All the balls in the ball house will fall down. At the same time, recycling at the bottom also began to reclaim the balls. ( goal where the ball drop will be closed in preset time).
- 5、 Players put the ball into the ball entrance, the machine will increase the preset scores, and displayed on the screen.
- 6、 Game over when the game time is running out, and the goal will not be graded.
- 7、 According to the final score, combined with the advance ticket score set, the ticket will spit out the corresponding number of tickets.
- 8、 The machine will continue to reclaim the balls(if set), and return to standby after the collection is completed.

**1. 5. Balls Request**

1、 Please use the original factory color ball. If other colored balls are used, the diameter of the ball should be between 70mm and 80mm. The weight of the ball is between 4g and 7.5 g.

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 Reclaim time and the number of balls is as follows:

**Reclaim time = Game time - Drop time**

ball	100pcs	200pcs	300pcs	400pcs	500pcs
Reclaim time	10s	20s	30s	40s	50s

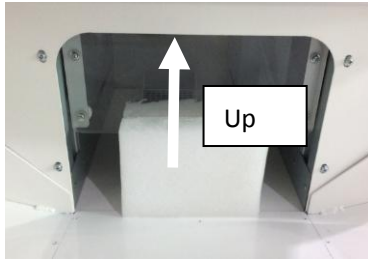
\*This recommended data is the player in the ordinary pitching speed measurement, please follow the actual situation increase and decrease the number of balls.

**1. 6. Game considerations**

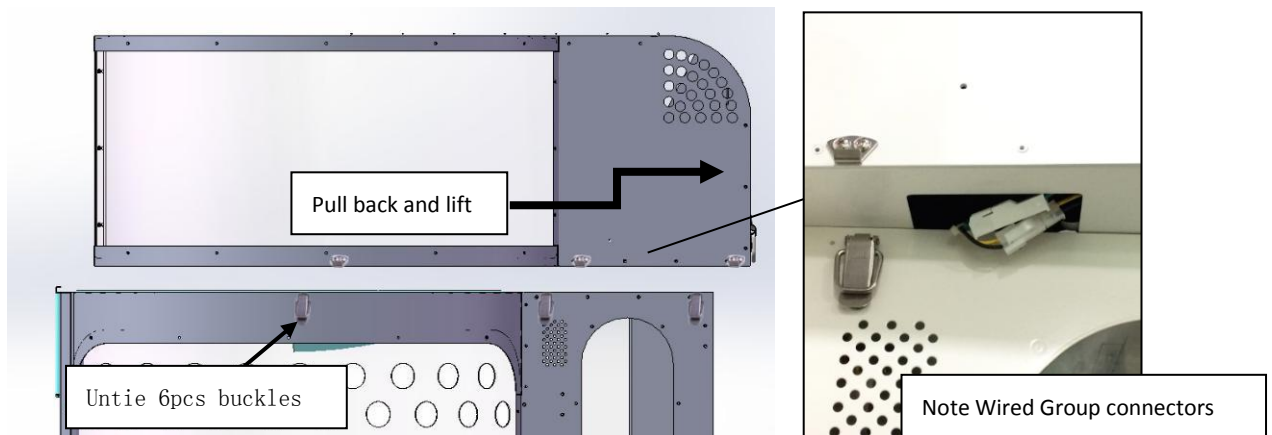
- 1、 This game is only suitable for children standing at 80-130 cm
- 2、 Children need to be accompanied by adults to play games.
- 3、 Don't let the child get into the back of the recycling ball. Don't put your hand into the goal
- 4、 It can not enter 3 or more people at the same time, in case of accident.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



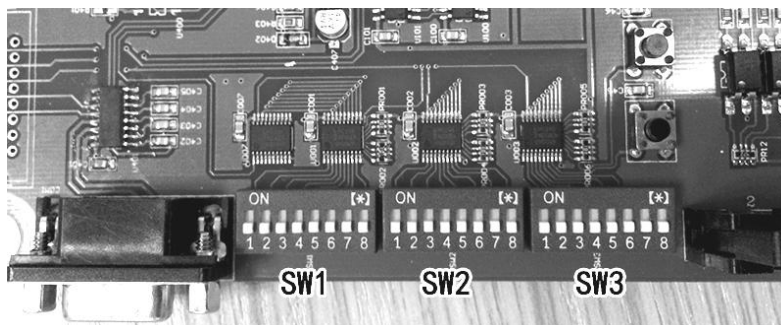
- 5、 If the machine moving in the process of encountering the door is not high enough, you can remove the top of the ball warehouse and then move (as shown in the figure below).



## 2. Machine setting & Test instructions

### 2. 1. Dialing switch setting

The DIP switches on the machine board :



#### SW1 :

Item	Coins			Drop time (The time of the ball felling.)		Game time (Total game time)					
	1	2	3	4	5	6	7	8			
Free	OFF	OFF	OFF								
1 Coin/Game	ON	OFF	OFF								
2 Coins/Game	OFF	ON	OFF								
3 Coins/Game	ON	ON	OFF								
4 Coins/Game	OFF	OFF	ON								
5 Coins/Game	ON	OFF	ON								
6 Coins/Game	OFF	ON	ON								
7 Coins/Game	ON	ON	ON								
0s				OFF	OFF						
10s				ON	OFF						
20s				OFF	ON						
45s				ON	ON						
30s									OFF	OFF	OFF
45s									ON	OFF	OFF
60s									OFF	ON	OFF
70s									ON	ON	OFF
80s									OFF	OFF	ON
90s									ON	OFF	ON
100s									OFF	ON	ON
120s									ON	ON	ON
Defaults	ON	OFF	OFF	OFF	ON	OFF	ON	OFF			

**SW2 :**

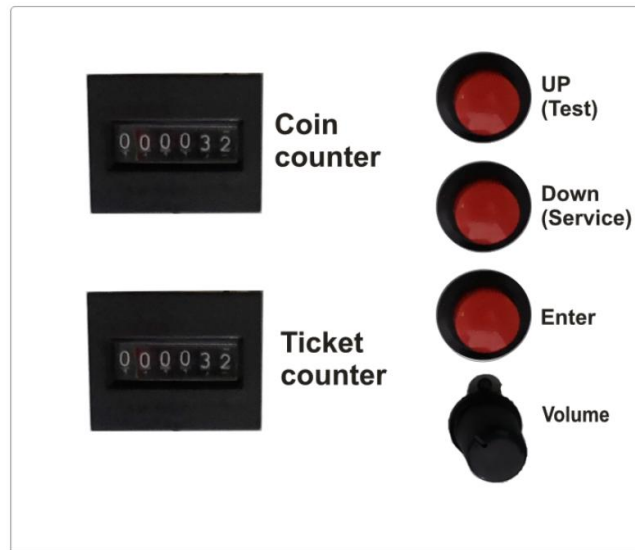
Item	Small ball score				Item	Fixed Ticket			
	1	2	3	4		5	6	7	8
1 Score/ball	OFF	OFF	OFF	OFF	No Ticket (Regular ticket)	OFF	OFF	OFF	OFF
2 Score/ball	<b>ON</b>	OFF	OFF	OFF	1 Ticket/Game	<b>ON</b>	OFF	OFF	OFF
3 Score/ball	OFF	<b>ON</b>	OFF	OFF	2 Tickets/Game	OFF	<b>ON</b>	OFF	OFF
4 Score/ball	<b>ON</b>	<b>ON</b>	OFF	OFF	3 Tickets/Game	<b>ON</b>	<b>ON</b>	OFF	OFF
5 Score/ball	OFF	OFF	<b>ON</b>	OFF	4 Tickets/Game	OFF	OFF	<b>ON</b>	OFF
6 Score/ball	<b>ON</b>	OFF	<b>ON</b>	OFF	5 Tickets/Game	<b>ON</b>	OFF	<b>ON</b>	OFF
7 Score/ball	OFF	<b>ON</b>	<b>ON</b>	OFF	6 Tickets/Game	OFF	<b>ON</b>	<b>ON</b>	OFF
8 Score/ball	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF	7 Tickets/Game	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF
9 Score/ball	OFF	OFF	OFF	<b>ON</b>	8 Tickets/Game	OFF	OFF	OFF	<b>ON</b>
10 Score/ball	<b>ON</b>	OFF	OFF	<b>ON</b>	9 Tickets/Game	<b>ON</b>	OFF	OFF	<b>ON</b>
15 Score/ball	OFF	<b>ON</b>	OFF	<b>ON</b>	10 Tickets/Game	OFF	<b>ON</b>	OFF	<b>ON</b>
20 Score/ball	<b>ON</b>	<b>ON</b>	OFF	<b>ON</b>	12 Tickets/Game	<b>ON</b>	<b>ON</b>	OFF	<b>ON</b>
25 Score/ball	OFF	OFF	<b>ON</b>	<b>ON</b>	15 Tickets/Game	OFF	OFF	<b>ON</b>	<b>ON</b>
30 Score/ball	<b>ON</b>	OFF	<b>ON</b>	<b>ON</b>	18 Tickets/Game	<b>ON</b>	OFF	<b>ON</b>	<b>ON</b>
35 Score/ball	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>	20 Tickets/Game	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>
40 Score/ball	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	25 Tickets/Game	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>
Defaults	OFF	OFF	OFF	OFF	Defaults	OFF	OFF	OFF	OFF

**SW3 :**

Item	Regular ticket			Save	Standby	Clean ball	7	8
	1	2	3					
No Ticket	OFF	OFF	OFF					
1 Score/Ticket	<b>ON</b>	OFF	OFF					
2 Score/Ticket	OFF	<b>ON</b>	OFF					
3 Score/Ticket	<b>ON</b>	<b>ON</b>	OFF					
5 Score/Ticket	OFF	OFF	<b>ON</b>					
10 Score/Ticket	<b>ON</b>	OFF	<b>ON</b>					
20 Score/Ticket	OFF	<b>ON</b>	<b>ON</b>					
30 Score/Ticket	<b>ON</b>	<b>ON</b>	<b>ON</b>					
Not save coin , ticket								
Save coin , ticket				<b>ON</b>				
No demo				OFF				
Demo				<b>ON</b>				
Don't Collect the balls after a game						OFF		
Collect the balls after a game						<b>ON</b>		
Defaults	OFF	OFF	OFF	OFF	<b>ON</b>	<b>ON</b>	OFF	OFF

## 2.2. Test instructions

### Setting Panel Description



**up(test)** : Click to enter the test mode when standby, Turn up in the test mode.

**down(serve)** : Click to free game once when standby, Turn Down in the test mode.

**Enter** : Click to select or determine.

#### 2.2.1. Bottom Door Test

Press "TEST" to enter the bottom door test, as the picture shown in the right.

1) Press "Enter" key, the screen <OFF> turns <ON>, the bottom door begins to open and close continuously, Press "Enter" again, the bottom door stops.

2) When the bottom door is open, "OPEN" shows "ON" to indicate that the "open check" micro switch is normal.

3) When the bottom door is closed, "CLOSE" shows "ON" to indicate that the "off check" micro switch is normal.



#### 2.2.2. Top Door Test

Press "TEST", and press "DOWN" to enter the top door test, as the picture shown in the right.

1) Press "Enter" key, the screen <OFF> turns <ON>, the top door begins to open and close continuously, Press "Enter" again, the top door stops. When testing again, the top door rotates in opposite direction.

2) When the top door is open, "OPEN" shows "ON" to indicate that the "open check" micro switch is normal.

3) When the top door is closed, "CLOSE" shows "ON" to indicate that the "off check" micro switch is normal.

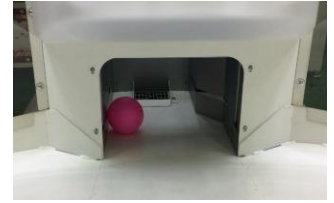


**2. 2. 3. Blower test**

Press "TEST", and press "DOWN" to enter the blower test, as the picture shown in the right.

1) Press "Enter" key, the screen <OFF> turns <ON>, the blower starts to work, Press "Enter" again, the blower stops.

2) When there is no ball at the bottom, the screen "SEN1" does not show "ON"; When there is a ball at the bottom, the screen "SEN1" will shows "ON".



**2. 2. 4. Screen test**

Press "TEST", and press "DOWN" to enter the screen test, as the picture shown in the right.

Press "Enter" key, the screen will shows red and green lines moving from top to bottom alternately,

Check whether the pixels on the screen are abnormal.

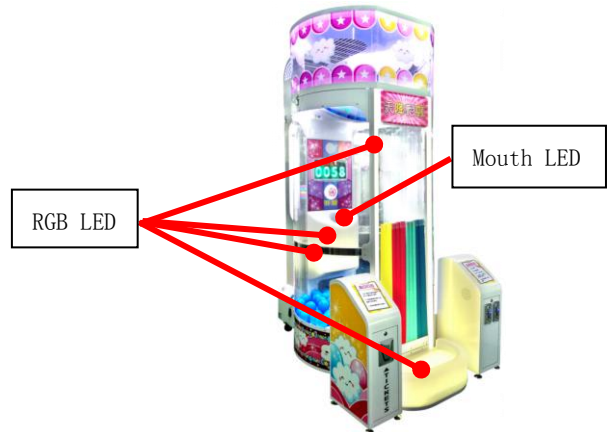


**2. 2. 5. RGB LED test**

Press "TEST", and press "DOWN" to enter the RGB LED test, as the picture shown in the right.

Press the "Enter" button, The LEDs of the machine will be turned on in turn.

- R: ON ---- light red
- G: ON ----light green
- B: ON ----light blue
- M: ON ----Mouth light



**2. 2. 6. Coin Counter 1 Test**

Press "TEST", and press "DOWN" to enter the Coin Counter 1 test, as the picture shown in the right.

Press the "Enter" key, the screen will shows "CCNT1:on" 0.5 second, And the coin counter 1 count 1.



**2. 2. 7. Coin Counter 2 Test**

Press "TEST", and press "DOWN" to enter the Coin Counter 1 test, as the picture shown in the right.

Press the "Enter" key, the screen will shows "CCNT2:on" 0.5 second, And the coin counter 2 count 1.



2. 2. 8. Ticket Counter Test

Press "TEST", and press "DOWN" to enter the Ticket Counter test, as the picture shown in the right.

Press the "Enter" key, the screen will shows "TCNT:on" 0.5 second, And the Ticket Counter count 1.



2. 2. 9. Ticket Out Test

Press "TEST", and press "DOWN" to enter the Ticket Out test, as the picture shown in the right.

Press the "ENTER" key and a ticket will be sent out at the ticket outlet.



2. 2. 10. Button LED Test

Press "TEST", and press "DOWN" to enter the Button LED test, as the picture shown in the right.

Press the "ENTER" key and the LED light in the <START> button will shine.



2. 2. 11. Sounds Test

Press "TEST", and press "DOWN" to enter the Sounds test, as the picture shown in the right.

Press the "ENTER" key, the screen shows the sound segment number and starts playing the segment sound.



2. 2. 12. Input signal Test

Press "TEST", and press "DOWN" to enter the Input signal test, as the picture shown in 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.



A	Coin selector1 Signal	I	Bottom door "CLOSE" sensor	Q	Enter button
B	Coin selector2 Signal	J	Ball pipe bottom sensor	R	*
C	Ticket Repair button	K	*	S	*
D	Ticket Machine Feedback Signal	L	Goal scoring A sensor	T	*
E	Start button	M	Goal Scoring B1 sensor	U	*
F	Top door "CLOSE" sensor (NH)	N	Goal Scoring B2 sensor	V	*
G	Top door "OPEN" sensor (NH)	O	Up(Test) button	W	*
H	Bottom door "OPEN" sensor	P	Down (Service) button	X	*



### 2. 2. 13. DIP Switch Test

Press "TEST", and press "DOWN" to enter the DIP Switch test, as the picture shown in 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 work is normal.

Red means OFF, Green means ON

A-H represents the 1-8 bit of the SW1, the I-P represents 1-8 bit of SW2, and the Q-X represents 1-8 bit of SW3.



### 2. 2. 14. Time of Bottom door opened setting

Press "TEST", and press "DOWN" to enter the Time of Bottom door opened setting, as the picture shown in the right.

Press the "ENTER" button, the "<>" shows on the screen, and press the "Up" or "down" button to increase or decrease the value, and then press the "ENTER" button again to determine



### 2. 2. 15. Time of Bottom door closed setting

Press "TEST", and press "DOWN" to enter the Time of Bottom door closed setting, as the picture shown in the right.

Press the "ENTER" button, the "<>" shows on the screen, and press the "Up" or "down" button to increase or decrease the value, and then press the "ENTER" button again to determine.



### 2. 2. 16. Second drop time setting

Press "TEST", and press "DOWN" to enter the second drop time setting, as the picture shown in the right.

Press the "ENTER" button, the "<>" shows on the screen, and press the "Up" or "down" button to increase or decrease the value, and then press the "ENTER" button again to determine.



### 2. 2. 17. Restore factory setting

Press "TEST", and press "DOWN" to enter the Restore factory setting, as the picture shown in the right.

Press the "ENTER" button to Restore factory settings.



### 2.2.18. Software versions

Press "TEST", and press "DOWN" to enter the Software Version page, as the picture shown in the right.



### 2.2.19. Save and exit

Press "TEST", and press "DOWN" to enter the Save and exit page, as the picture shown in the right.

Press the "ENTER" button to save settings and Exit.



## 3. Fault & Resolution

### 3.1. Fault code description and fault handling

Fault code	Fault Name	Fault Analysis and treatment
Error 1	Software change	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)	Ticket is empty	The ticket has been finished, waiting to be added. The "surp :xxx" on the screen indicates the number of tickets left. 1/ add ticket tickets, and press the "repair" button next to the ticket machine, the remaining ticket can be output. 2/ Joben machine set the ticket, then restore the factory settings can be lifted alarm.
Error 6	Bottom door "Open" sensor error	1/check the bottom of the door whether there is foreign body jammed, 2/, into the "bottom of the test procedures", check the bottom of the door 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 sensor.
Error 7	Bottom door "Close" sensor error	1/ check the bottom of the door whether there is foreign body jammed, 2/ into the "Bottom door test", check the bottom of the door 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 sensor.
Error 8	Top door "open" sensor error	1/ check the top door whether there is foreign body jammed, 2/ check the belt and coupling is loose, 3/ into the "Bottom door test", check the top door 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 door "Close" sensor 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

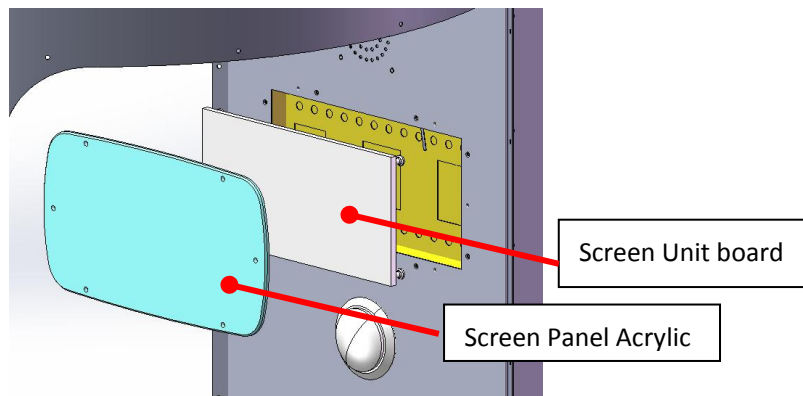
		need to be treated as follows: 1/ check the top of the door whether there is foreign body jammed, 2/ check the belt and coupling is loose, 3/ into the "top door test procedure", check the top door motor is normal work. If the motor does not turn, change the motor; if there is no "off" signal, adjust 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

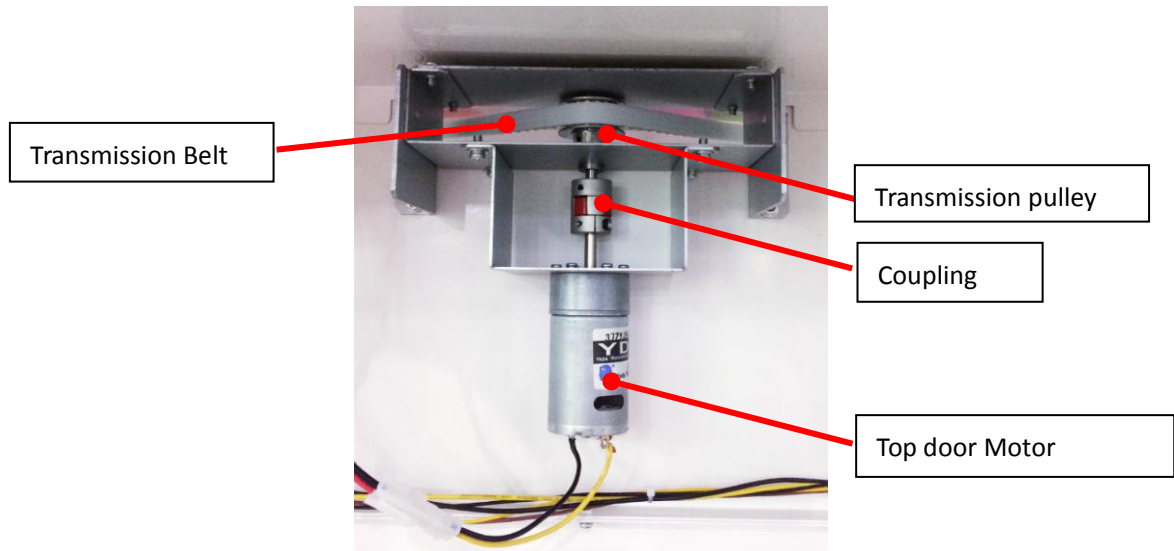
- 1、The ball is stuck, the wind can't blow the ball into the silo.
  - A、Check if the ball weighs more than 8g.
  - B、Check if the site's voltage is too low
  - C、Check the wind turbine and outlet whether there is debris blocked.
  - D、Check if dust is accumulated inside the blower and clean it.
  
- 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 sensor has debris or dust shielding, if any, clean it.
  
- 3、The screen blurred or irregular flicker
  - A、Check the ground connection.
  - B、Replace the screen.

### 3.3. Machine structure diagram

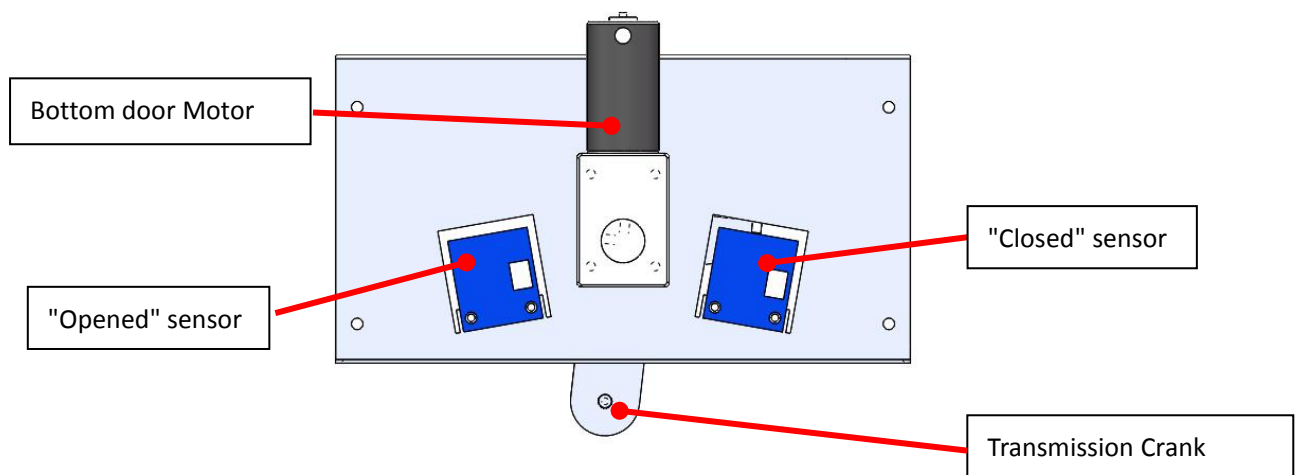
#### 3.3.1. Screen Component:



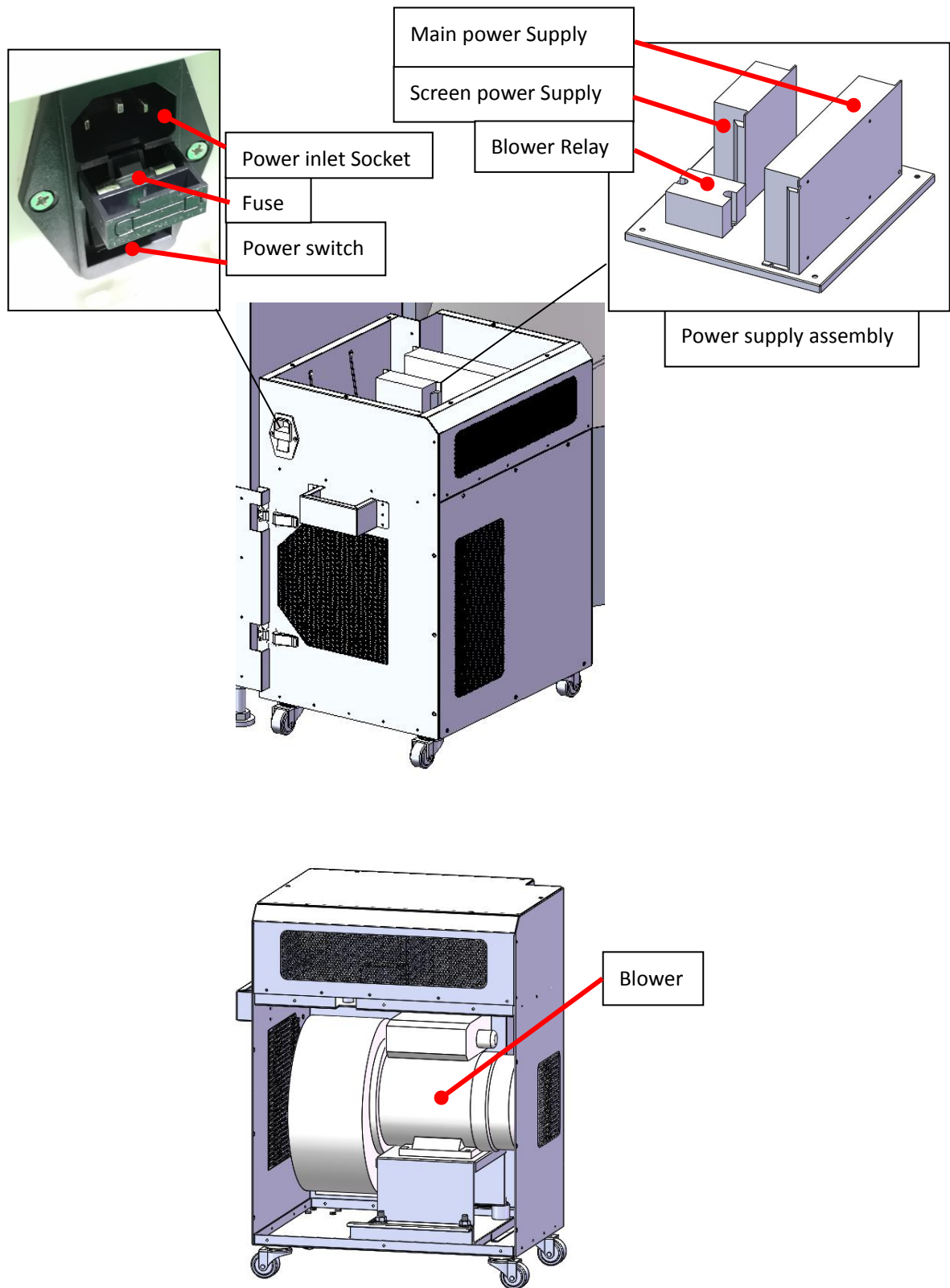
3.3.2. Top door components:



3.3.3. Bottom door Components:



3.3.4. Power components:



## 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 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.