Naughty Penguin

Instruction

⚠ Warning

Please read the manual before using and installing the machine.

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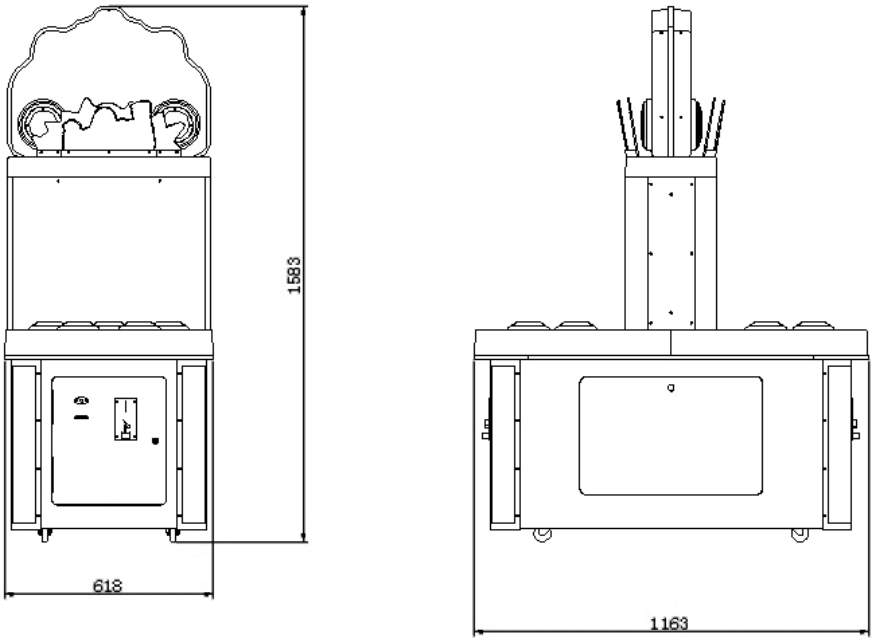
1、Machine specifications and technical parameters

Unit：mm



1) Working Voltage： AC 220V±10% 50Hz

2) Power Consumption：mix 90W ～ max 450W

3) Dimension：L1163×W618×H1583（mm）

4) Weight ： kg

5) Environmental Conditions：Temp.(Indoor)：-10℃～+40℃；

Humidity：≤90%；

Atmosphere：86Pa～106Pa。

⚠ **Warning：** After the shutdown，please wait for 1 min for rebooting

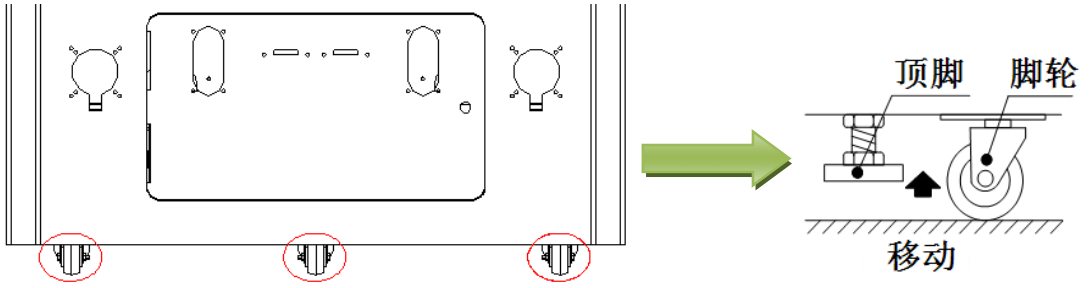
2、List of machine parts

No.	Name	Spec./Material	Qty.	Unit	Photo	Remark
1	Instruction	A4	1	pc		According to shipment requirement
2	Key	AH57	1	pc		Ticket door, Coin door, Maintenance
		AH78	1	pc		Coin box door
3	Fuse	6.3A	1	pc		
4	Power cable	1.5M	1	pc		
5	Sensor board	HEG-PCB-V1.0	2	pcs		

3、Moving and placement instruction

3-1 The way to move machine

There are wheels under machine. Please screw the foundation to leave the ground to let the wheel touch the ground for moving machine. Let the foundation leave the ground to a maximum for avoiding the dangerous of overturn caused by obstacle on ground.



Please screw the foundation to leave the ground to let the wheel touch the ground for moving machine.

For safty, over or 4 people are required to lift the machine when moving it through the position which is not smooth or have ladder.

When packing or bundling the machine for a long-distance moving, please pack a layer of cushion to avoid the scratch on machine.

Warning

Please unplug the power then move the machine to avoid accident and breakdown.

Please do not let power cable be damaged to avoid accident and breakdown.

Please lift the foundation to a maximum then move the machine.

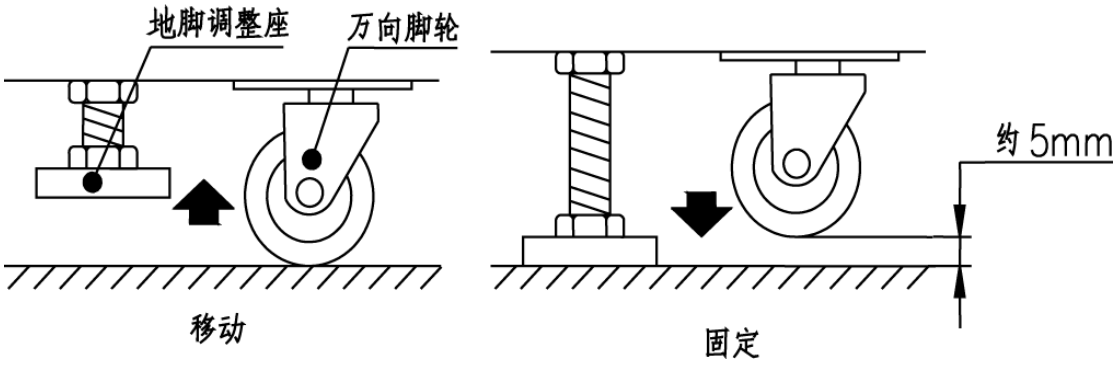
At lest two people are required to do the work for avoid accident.

3-2 Fix the machine

- Please place machine on the smooth ground.
- Please use the foundation under machine to fix. (refer to the photo below)

① Loosen the lock nut on the foundation and let the foundation leave ground about 5mm.

② Tighten the locking nut clockwise to fix machine.



3-3 Do not use machine at the places

- The place will cause machine produce condensate or humidity.
- The place near the high temperature object.
- The place near the dangerous object.
- The place which is smooth or uneven.
- The place near the equipment that is prone to sparking.
- The place vibrates seriously
- In a dusty environment

3-4 Placement

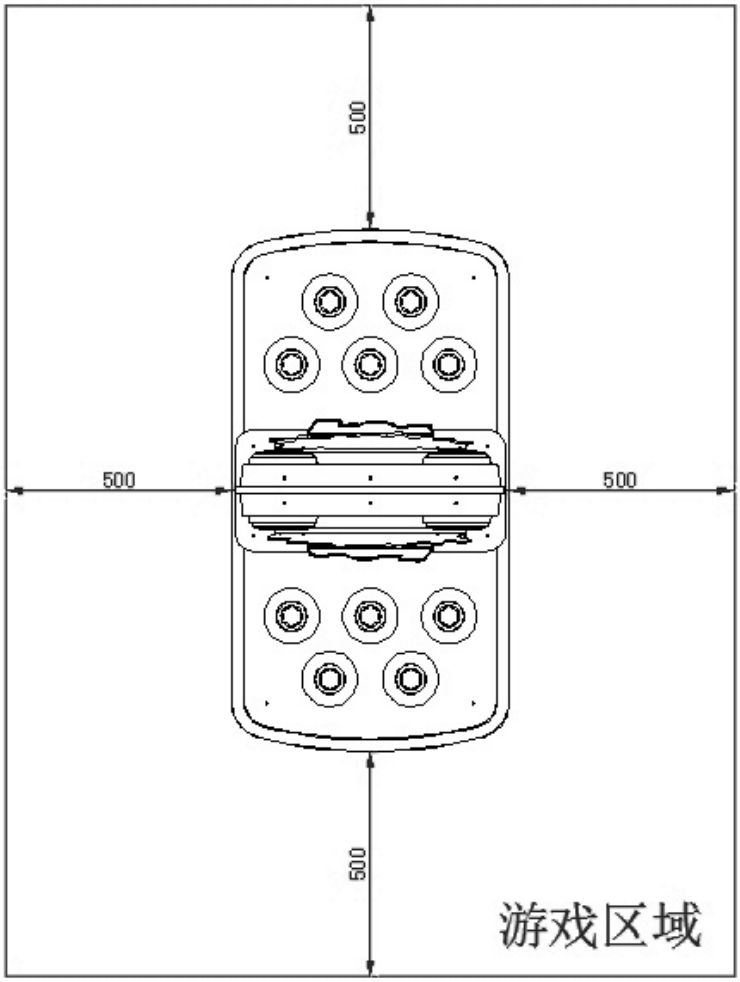
⚠ **Warning：Use machine indoor only, can't use outdoor.**

⚠ **Warning：Do not use forklift truck to move machine, that may cause the damage.**

3-5 Area dimension for placement

For safety, please refer to the photo below to place the machine.

Unit：mm



⚠ **Warning: Machine must be placed on the flat ground.**

⚠ **Warning: Game area depends on the label of machine.**

3-6 Remark before starting the machine

1) Check the parameters of supply voltage. Make sure the parameters are same as requirement. Otherwise, the machine may be caused to burn or cause a fire.

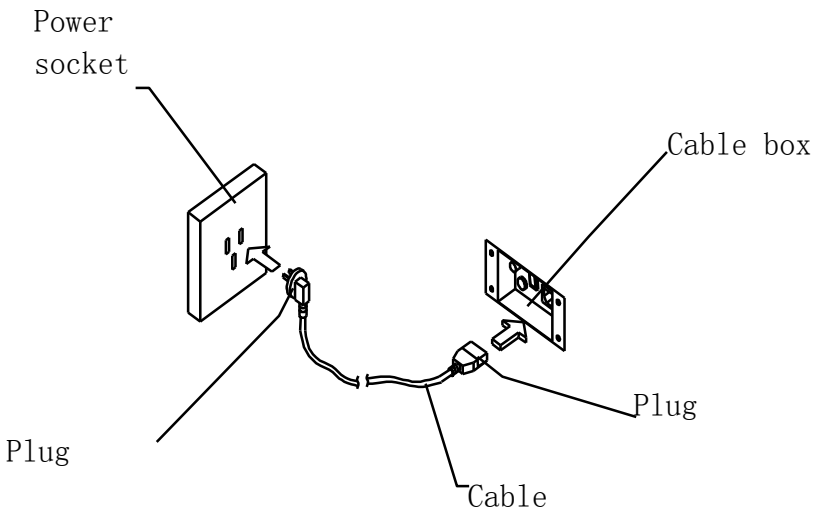
2) Connecting too many wires at the same power socket may cause overheat and a fire.

⚠ Warnin

◎ Don’t change the parts when installing, to avoid make a fire or short circuit.

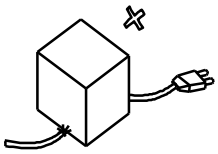
4、Wiring

- Connect one end of the power cord to the machine cable box, and connect another end of power cord to power socket.
- Please refer to the voltage label on machine to avoid the damage.
- In order to avoid unnecessary damage, be sure and check the socket has a grounding function.
- If grounding function can't get through the socket, please try other way to perform.

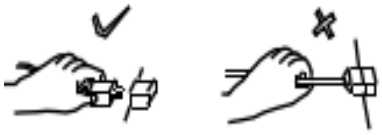


Remark:

- Make sure the power cord is not pressed by heavy object, otherwise that could cause the short circuit or make a fire.



- Hold the plug to pull it out from the socket, not pull the cable.



- Do not touch the plug with wet hands.

- Do not stretch or twist the power cord by forced and near the object with high temp.
- The power cord can not be kicked or touched easily.

- Use the correct voltage and fuse. (refer to the technical parameters)

5、Installation and maintenance

Installation and adjustment

- Before installing, please check the parts (refer to the list of parts).
- The using place must smooth and solid. Adjustment base is adjusted to the ground and fix after placing the machine.
- After installation, plug in the power cord and boot the machine to check the operation is normal. If there is any abnormal situation, please do the troubleshooting and turn off the machine.

Check appearance

For safety, please check the followings before booting the machine.

- Check “Warning signs” is intact, clearly visible, the location is correct.
- Power parameter is same as requirement.
- Check the screws of the parts and the steering wheel assembly are loose or not.
- Check the connectors and terminals are loose or not.
- Check the machine is placed steady. Check the adjustment of wheel and foundation is appropriate.
- Check the area of machine placement is appropriate.

Operation check

- Check the sound of speaker is normal.
- Check all the lights are normal.

Maintenance

- Check the game before operation every day.
- When machine has dirt dust, use a soft cloth with cleaner to clean.
- Check all the parts work properly after operating for one month.
- Check the machine often.

Clean

- The machine surface

  Clean the surface of stain by using the clean, soft cloth.

- Fan

Fan is one of the main tools for heat dissipation of machine inside. Need to keep the fan clean and work properly.

⚠ Warning:

- **Turn off the power when doing the maintenance and repair.**

  To avoid short circuit, the personnel need to turn off the power before touching the internal device. If the operation requires power supply, it needs to meet the requirement on the manual.

- **Use the appropriate parts when replacing.**

  Using the wrong parts may cause short circuit and damage of main board/component.

- **Do not arbitrarily disassemble, assemble or change the equipment.**

  If do so, that may cause short circuit, malfunction or even a fire.

- **Do not place vases, cups or containers with water, and no chemicals & heavy objects on the machine.**

  Spilled liquid can cause the short circuit and damage to the device. And, the fallen objects will hurt the people and damage the machine.

- **Do not place objects at the exhaust vent.**

  If the exhaust vent is blocked, it would cause the high temperature in machine and affect the game operation, even damage the device.

- **Do not arbitrarily to repair the machine.**

  That may cause the short circuit, run out of control or other failures.

6、Troubleshooting

Situation	Cause	Troubleshooting
Coin selector can't work	Coin selector didn't set well. Counterfeit coin in the slot.	Adjust the coin selector and resistance. Take the counterfeit coin out.
Can't ticket out	Ticket dispenser has no 12V input. Drive or cancel signal wire may be loose. Ticket wheel doesn't put down. Ticket dispenser drive or ticket cancellation terminal fault. Ticket output didn't set in the main board.	Check the output voltage of the power supply box and the circuit. Check the change of signal and the circuit. Put the ticket wheel down. Replace the main board. Set mode to ticket output.
No music	Volume is too small. Circuit of sound output signal line was Broken. Speaker failure. Sound power amplifier fault. Circuit board failure. Check the audio jack is loose or damaged. Check the speaker is ok.	Turn the volume up. Connect wire well. Change the speaker. Change the main board. Change the circuit board. Connect the the audio jack again. Turn on the speaker switch to connect the power.
Machine doesn't work	No power input to the machine. Didn't turn on the power switch. Fuse burn out. No voltage output from power box. No power voltage on main board. Main board failure.	Turn on power switch and plug in the power cord. Turn on power switch. Check the short circuit and replace a new fuse. Replace power box. Connect the circuit of main board. Replace main board.
No score	Infrared connection line dropped. Infrared failure.	Connect the wire. Replace the infrared.

7、Game Instruction

7-1 Playing Instruction

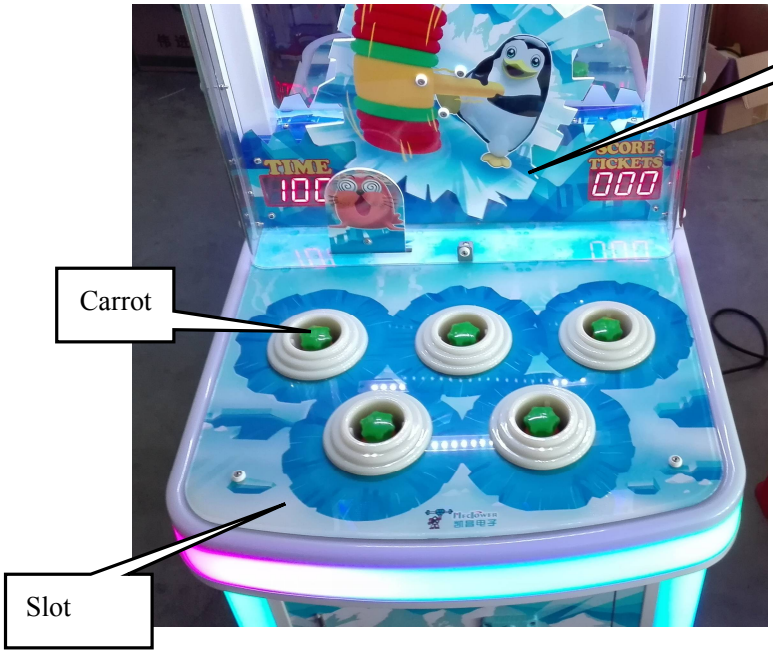
1. Insert coin, press the start button.

2. Hit the target and get scores.

3. During the game time, get more score, get more ticket.

4. The game can be for 2 players.

7-2 Operation Interface

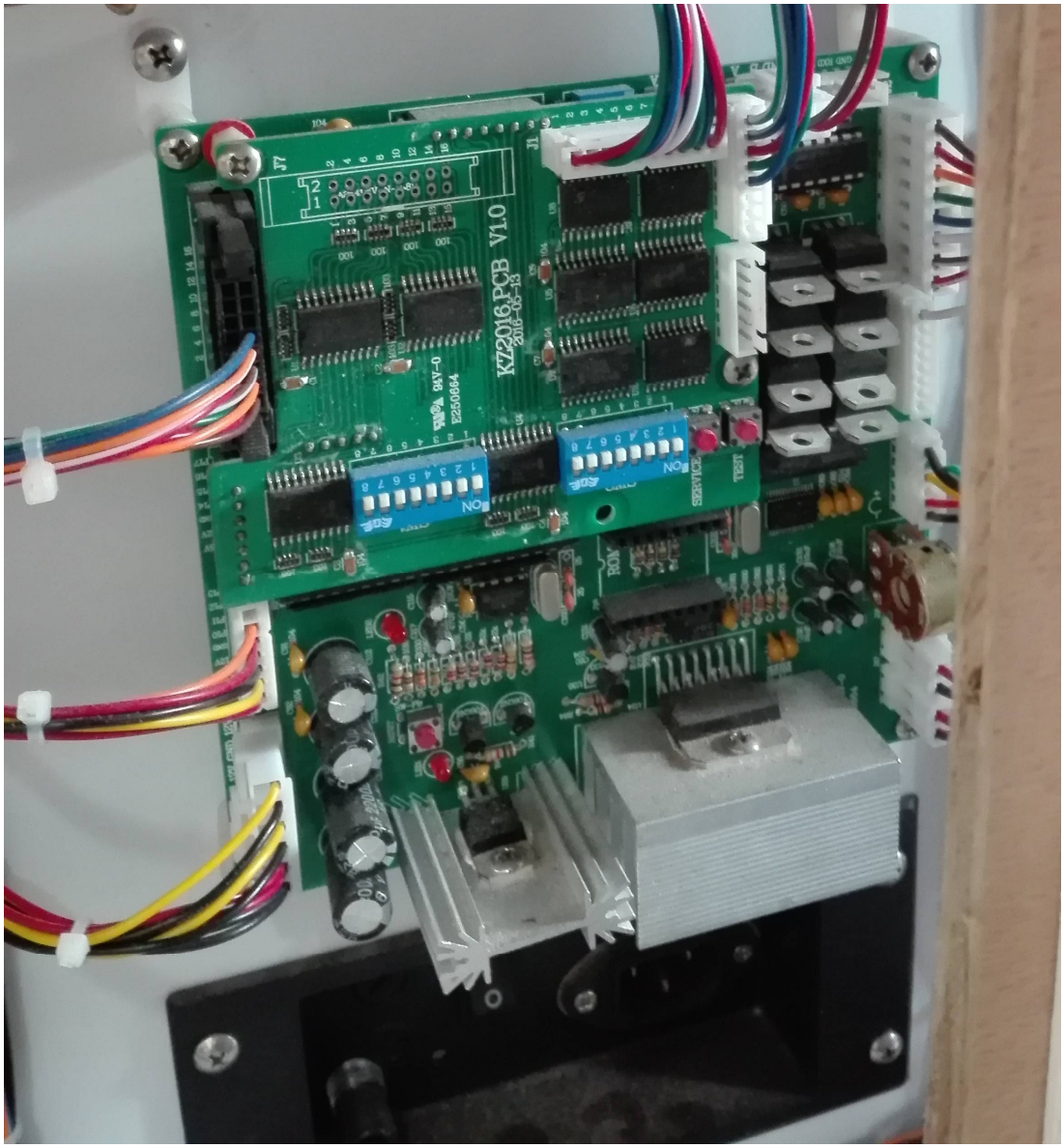


7-3 Control Signals and instruction

1. Check the attached IO table and schematic for wiring.

2. DIP adjustment can refer to IO table , Capital letters is default settings , the user can adjust according to the operation situation.

3. Schematic diagram of the main board:



7-4 Maintenance

1. Turn off the power when doing the maintenance and repair.

To avoid short circuit, the personnel need to turn off the power before touching the internal device. If the operation requires power supply, it needs to meet the requirement on the manual.

2. Use the appropriate parts when replacing

Using the wrong parts may cause short circuit and damage of main board/component

3. Do not arbitrarily disassemble, assemble or change the equipment.

If do so, that may cause short circuit, malfunction or even a fire.

4. Do not place vases, cups or containers with water, and no chemicals & heavy objects on the machine.

Spilled liquid can cause the short circuit and damage to the device. And, the fallen objects will hurt the people and damage the machine.

5. Do not place objects at the exhaust vent.

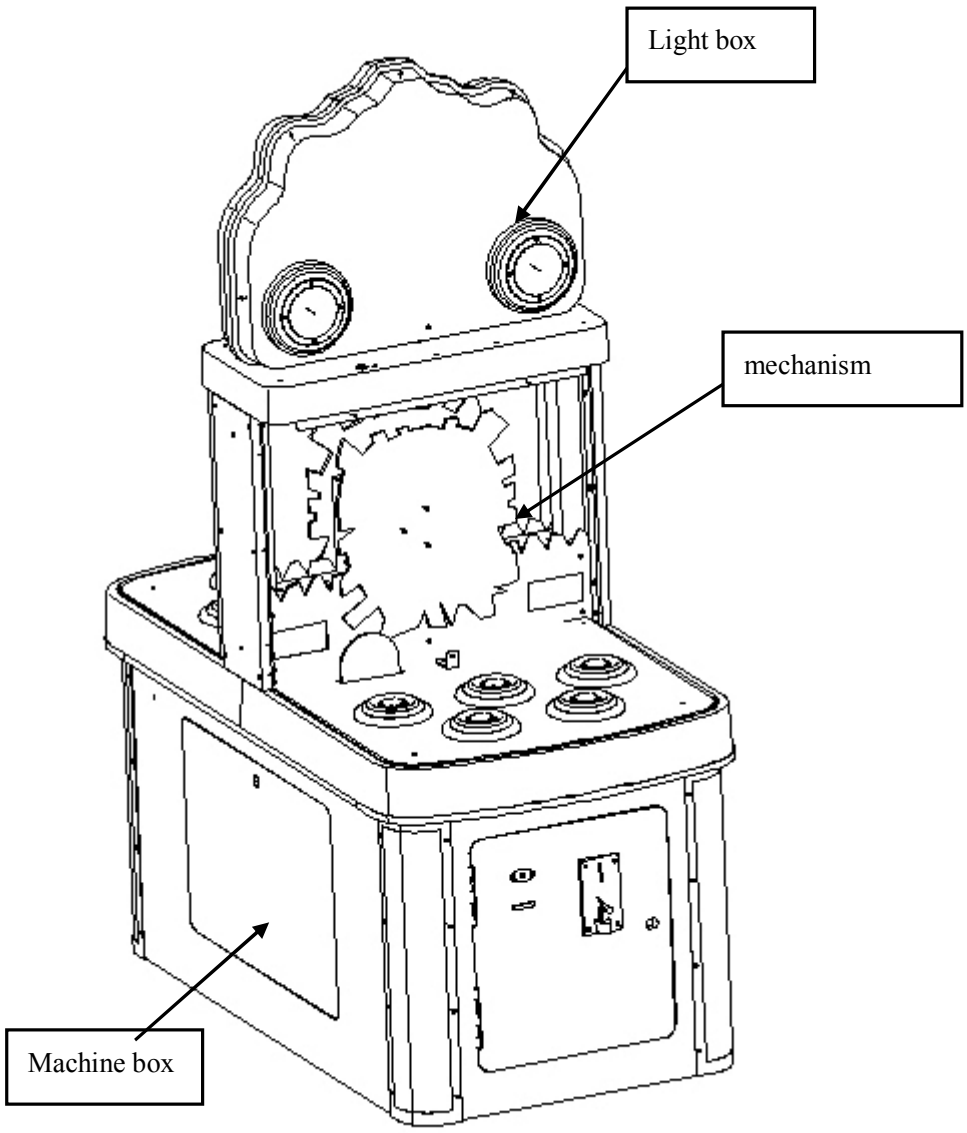
If the exhaust vent is blocked, it would cause the high temperature in machine and affect the game operation, even damage the device

6. Non-maintenance personnel do not arbitrarily to repair the machine.

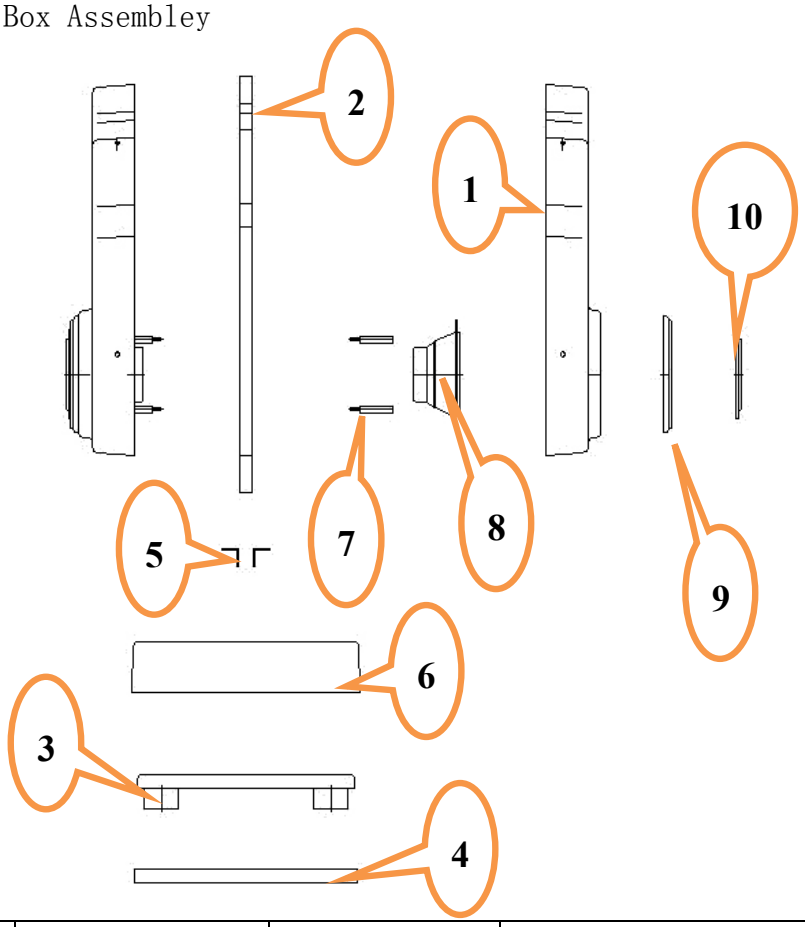
8、Parts List

8-1 Body Part

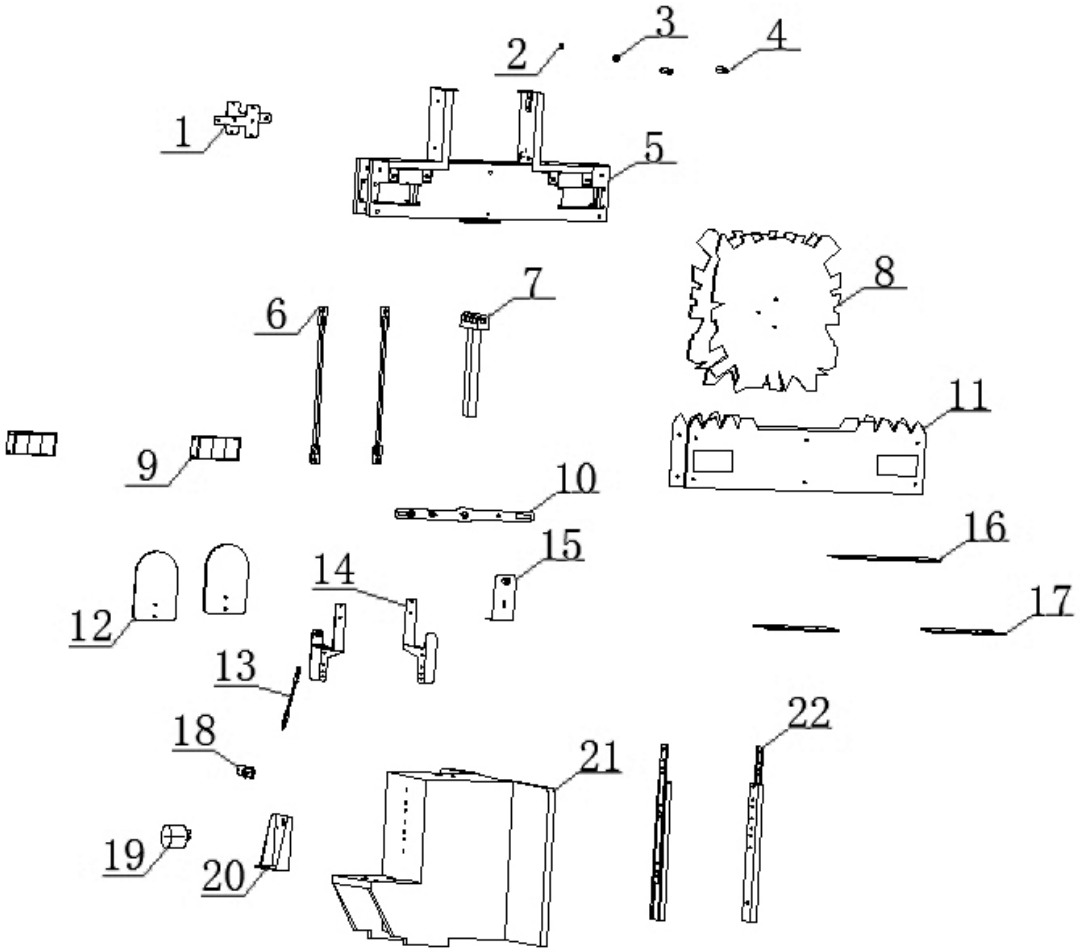
Final Assembly



Light Box Assembley



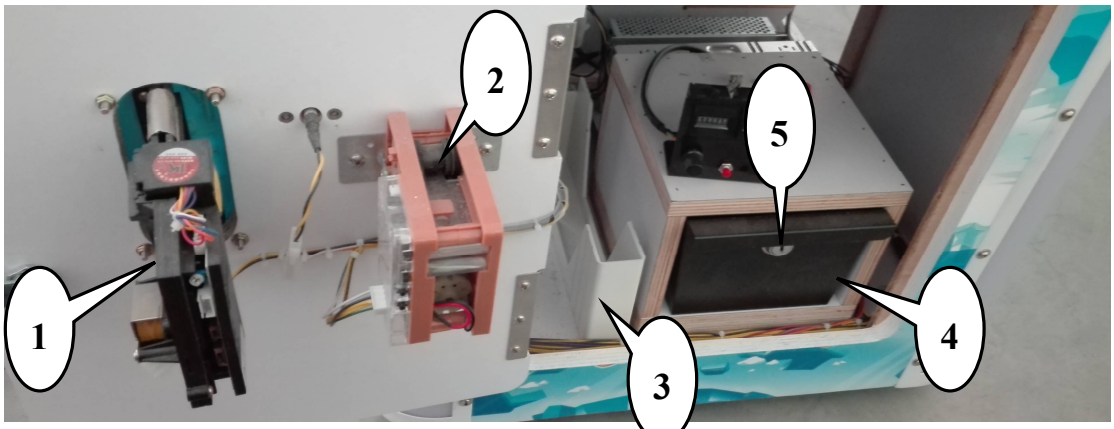
Number	Figure No.	Name	Specification or material	Qty.
1		Plastic light box	Plastic sheets for blistering	2
2		Back board of light box	16. 5mm Double sided white plywood	1
3		Light box fixed chassis A	16. 5mm Double sided white plywood	2
4		Light box fixed chassis B	16. 5mm Double sided white plywood	2
5		Light box backplane fixed sheet metal	201 stainless steel	2
6		Lamp fixed chassis plastic cover		1
7		Pillar	Q235	8
8		Speaker		2
9		Milk white plastic cover		4
10		Speaker cover		4



No.	Figure No.	Name	Specification or material	Qty.
1		Penguin fixed board	2mm stainless steel 201	2
2		Bearing	F686zz	5
3		Bearing	MF84	6
4		Linkage axis	stainless steel 201	2

5		LED fixed wooden box	16.5 white plywood	1
6		mandrel	Φ10 stainless steel tube &2mm stainless steel 201	2
7		Penguin support board	20X20 square tube &1.5mmQ235	1
8		Penguin swing plate	5mm	2
9		LED		4
10		Linkage plate	stainless steel 201	1
11		LED acrylic	3mm transparent acrylic	2
12		Seal swing plate	5mm	2
13		Eccentric motor sets	stainless steel 201	1
14		Drive plate	stainless steel 201	2
15		Fulcrum fixing plate	stainless steel 201	1
16		Swing mechanism cover	3mm transparent acrylic	1
17		LED top cover	3mm transparent acrylic	2
18		Eccentric motor sets	stainless steel 201	1
19		Motor	50YD-220V15RPM	1
20		Swing motor board	1.5mm stainless steel 201	1
21		Machine body	16.5_White plywood	1
22		Drawer slide	12 inch 3 knots	1

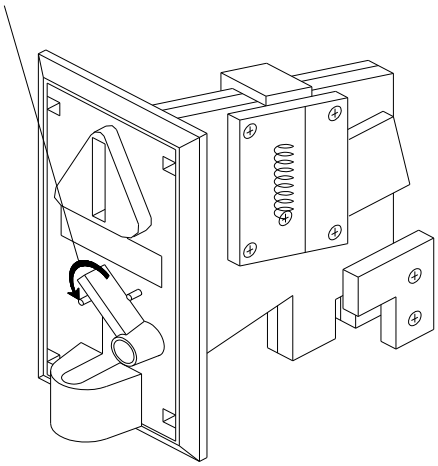
8-2 Coin Assembly Part



No.	Figure No.	Name	Specification or material	Qty.
1		Coin Selector	Side electronic	2
2		Ticket Dispenser		2
3		Ticket box	White plastic	2
`4		Coin box	Iron	2
5		AH78 lock	78 short lock	2
6		Counter bracket	Black plastic	2
7		Counter	C-012	4
8		Sound regulator	Black plastic	2
9		Restore button	Red button	4

8-3 Coin Selector Instruction

When the coin selector is jammed, poke button as shown in the figure, then coin will be backed out. If it does not work, coin selector needs to be taken apart to get the coin.



Description of the use of electronic comparison coin:

A. Remove the plastic coin from the coin slot and put a using coin in it.

B. Loosen the screw at the back of coin slot. Adjust the piece of fixer according to the size of coin for avoiding insert the wrong coin.

C. To meet the requirement of the game board, choose N.O (normally open) and N.C (normally close) switch; generally use N.O (normally open) mostly.

D. To meet the requirement of the game board, choose three signals of timer switch: 30MS is short-fast signal for machines request inserting coin quickly, 50MS is middle-fast signal for general machines (non-special specification machine, 100MS is long-slow signal for machines not request inserting coin quickly.

E. The VR knob is for setting the sensitivity of token tolerance. Clockwise (+): increasing the sensitivity of token tolerance, that is, the range of accepting the token tolerance will be larger. Counterclockwise (-): decrease the sensitivity, that is, the range will be smaller and choose the token more strictly.

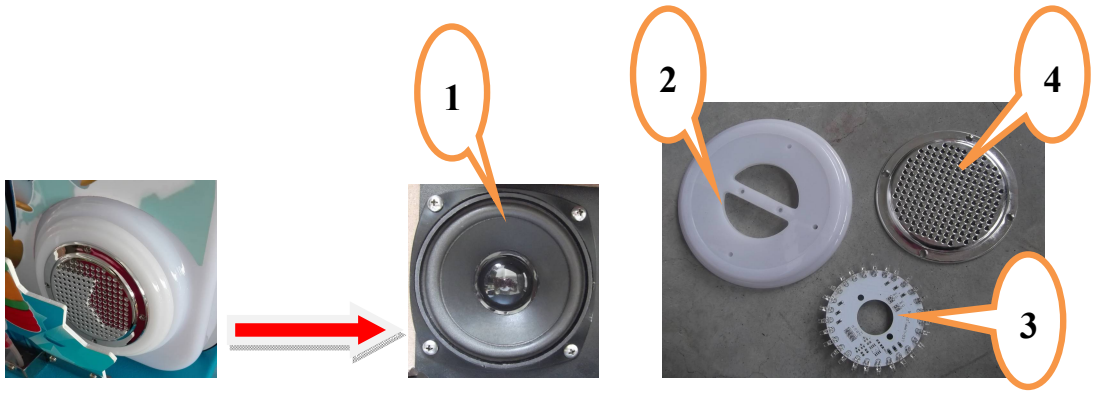
F. Connection description:

1. Gray wire
   Red wire-DC+12V
2. White wire-COIN Signal

Code Table

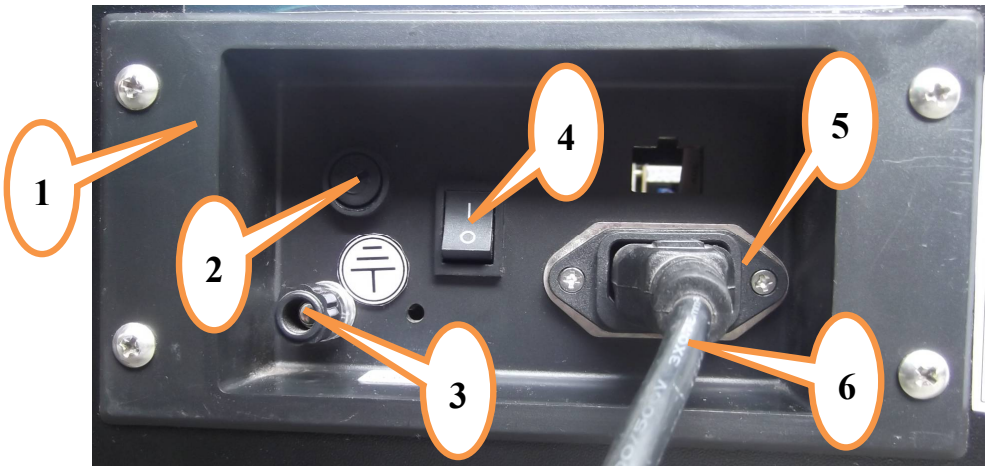
3. Black wire-Ground wire
4. Gray wire

8-4 Speaker Assembly Part



No.	Figure No.	Name	Specification or material	Qty.
1		Circular speaker	4 inch 8Ω15W	2
2		Milk white acrylic	acrylic	4
3		Circular Speaker light	Red, Green, Blue	4
4		Speaker cover	Silver white	4

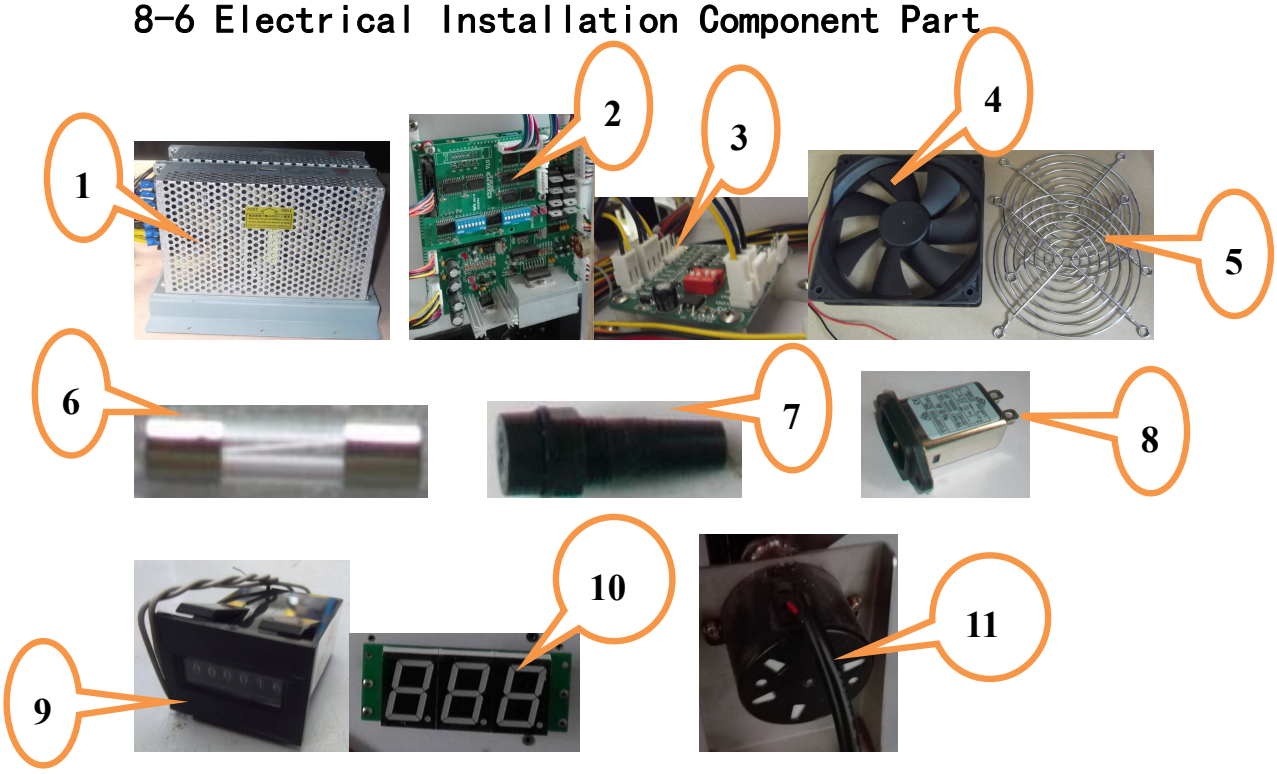
8-5 Fuse and Power Supply Subassembly Part



No.	Figure No.	Name	Specification or material	Qty.
1		Cable box		1
2		Fuse holder	HJMF-527	1
3		Ground terminal		1
4		Rocker switch		1

5		Power outlet		1
6		Power cable	6.3A	1

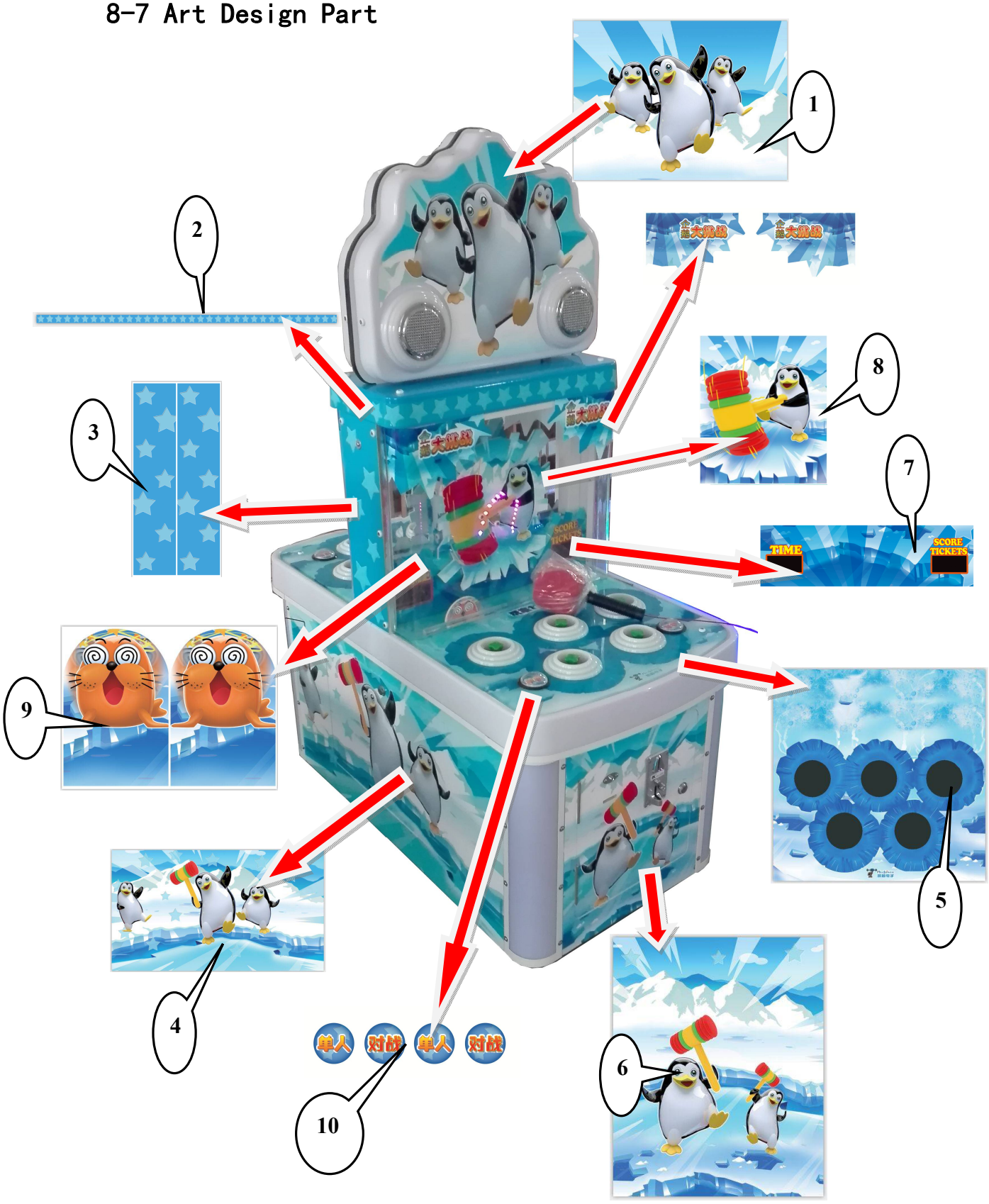
8-6 Electrical Installation Component Part



No.	Figure No.	Name	Specification or material	Qty.
1	Power supply box	12v 150w	1	pc
		24v 150w	1	
2	Main board		2	pcs
3	12V color lights control board	XXH-150703A	1	pc
4	Exhaust fan	1804U3A 001 12V	1	pc
5	Exhaust fan net		2	pcs
6	Fuse	Y101124/A1 5*20 6.3A	1	pc
7	Fuse holder	HJMF-527	1	pc
8	Filter	YB10A1	1	pc
9	Counter	C-012	4	pc
10	LED		4	pc

11	Motor	50YD-220V15RPM	1	pc
12				

8-7 Art Design Part



No.	Figure No.	Name	Specification or material	Qty.
1		Light box picture	Glue	2
2		Machine body picture	Glue	1
3		Two sides of light box picture	Glue	2
4		Two sides of machine picture	Glue	2 bilateral
5		Control panel picture	Glue	2
6		Front door picture	Glue	2
7		LED picture	Glue	2
8		Picture A	Glue	2
9		Picture B	Glue	2
10		Button picture	Glue	4

No.	Figure No.	Name	Specification or material	Qty.
1		Ticket out	White stickers	2
2		Forklift label	White stickers	4
3		Counter label	White stickers	2
4		“Do not touch” label	White stickers	1
5		Repair label	White stickers	2
6		High temp./voltage label	White stickers	1
7		High voltage label	White stickers	1
8		Ground label	White stickers	1
9		Fuse current label	White stickers	1
10		“Indoor use” label	White stickers	1
		Name plate		1
		IO table		1

8-8 Electrical Part

No.	Name	Specification or material	Qty.
1	Light bar for light box		6
2	Top light		2
3	Lights for two side of machine		4
4	Lights for control panel		2
5	Lights for mechanism		10

9、IO table

Main board：SXKJ2013.V1.0.PCB

Item	Setting	SW1							
		1	2	3	4	5	6	7	8
Coin insert (pcs)	**1**	**OFF**	**OFF**						
	2	on	off						
	3	off	on						
	4	on	on						
(Game 1) Playing time (sec)	**25**			**OFF**	**OFF**				
	30			on	off				
	35			off	on				
	40			on	on				
(Game 2) Playing time (sec)	30					off	off		
	35					**ON**	**OFF**		
	45					off	on		
	50					on	on		
(Game 3) Playing time (sec)	12							off	off
	15							**ON**	**OFF**
	20							off	on
	25							on	on

Item	Setting	SW2							
		1	2	3	4	5	6		
Free play	YES	off							
	NO	**ON**							
Difficulty setting	Normal		**OFF**						
	Difficult		on						
Score for 1 ticket	5			off	off				
	10			**ON**	**OFF**				
	15			off	on				
	NO			on	on				
Demo	YES					**OFF**			

music	NO					on			
Regular	**Free**						**OFF**	**OFF**	**OFF**

Input：

INPUT	Content	INPUT	Content
J1-1 (1)	Coin signal	J1-9 (9)	Target detection 5
J1-2 (2)	Service button	J1-10 (10)	
J1-3 (3)	Restore ticket dispenser	J1-11 (11)	
J1-4 (4)	Ticket dispenser feedback	J1-12 (12)	
J1-5 (5)	Target detection 1	J1-13 (13)	
J1-6 (6)	Target detection 2	J1-14 (14)	
J1-7 (7)	Target detection 3	J1-15 (15)	
J1-8 (8)	Target detection 4	J1-16 (16)	

Output:

OUTPUT	Content	OUTPUT	Content	OUTPUT	Content
J2-1 (1)	Electromagnet 1	J3-1 (9)	Light for lacking ticket	J5-4 (P10)	LED SCK
J2-2 (2)	Electromagnet 2	J3-2 (10)		J5-5 (P11)	LED RCK
J2-3 (3)	Electromagnet 3	J3-3 (11)		J5-6 (P12)	LED S
J2-4 (4)	Electromagnet 4	J3-4 (12)		J5-7 (P13)	
J2-5 (5)	Electromagnet 5	J3-5 (13)		J6-4 (P14)	
J2-6 (6)	Ticket dispenser driver	J3-6 (14)		J6-5 (P15)	
J2-7 (7)	Coin counter	J3-7 (15)		J6-6 (P16)	
J2-8 (8)	Ticket counter	J3-8 (16)		J6-7 (P17)	

Extended output：

OUTPUT	Content	OUTPUT	Content	OUTPUT	Content
J1-1 (1)	LED No.1 R	J1-9 (9)	LED No.3 B	J2-7 (17)	
J1-2 (2)	LED No.1 G	J1-10 (10)	LED No.4 R	J2-8 (18)	
J1-3 (3)	LED No.1 B	J2-1 (11)	LED No.4 G	J3-1 (19)	
J1-4 (4)	LED No.2 R	J2-2 (12)	LED No.4 B	J3-2 (20)	
J1-5 (5)	LED No.2 G	J2-3 (13)	LED No.5 R	J3-3 (21)	
J1-6 (6)	LED No.2 B	J2-4 (14)	LED No.5 G	J3-4 (22)	
J1-7 (7)	LED No.3 R	J2-5 (15)	LED No.5 B	J3-5 (23)	
J1-8 (8)	LED No.3 G	J2-6 (16)		J3-6 (24)	

Test:

0	Press the TEST button to enter the testing procedure: LED<1>LED<2>LED<3>LED<4> all display 8.8.8.8.8.8.8.8. , all LED lights flash three times then stop. Play the zeroth segment music to test if the LED correct or not (test 32 LED lights at the same time)
1	Press SERVICE button, LED display 1.2.3.4.5.6.7.8. All LED lights flash three times then stop. Play the 1st segment music.
2	Press SERVICE button once again to enter DIP switch test. LED<1> 1,2,3,4 display SW1，SW2,SW3,SW4 and Other LED display 22. All LED lights flash three times then stop. Play the 2nd segment music.
3	Press the SERVICE button again to enter the DIP switch number display, then the LED<1>1,2 will display the corresponding number, others display 33, play the 3rd segment music at the same time.
4	Press the SERVICE button again to enter the I/O test, then the I/O follows spot output. LED display 4444, all LED lights flash three times then stop. Play the 4th segment music at the same time.
5	Press the SERVICE button again to enter music test, it plays the 5th segment music at the same time. LED<1>1,2 will display the music segment number, others display 5555. All LED lights flash three times then stop. Test: Press the first button, the music segment numbers decrease. Press the second button the music segment number increase, when you press the button each time, music will play correspondingly, execution loop, totally 0---8, 9 segments.
6	Press the SERVICE button again to return the display testing (the first procedure) and execute circularly.
7	Press the TEST button to exit the test in any procedure, output is cleared, please start the game after reset.

Clear memory：

Press “SERVICE” button and then press “TEST” button, restart machine to clear the memory.

Error code： E01 Target Score 1 Error E02 Target Score 2 Error

E03 Target Score 3 Error E04 Target Score 4 Error

E05 Target Score 5 Error

Restore ticket dispenser：When lacking tickets, LED will display “the

number of lacking tickets" and "HELP" alternately. After the service staff put tickets, the lacking tickets will be given out.

Press "SERVICE" button and then press "TEST" button, restart machine to clear the memory.