Big Teeth Battle

OPERATION MANUAL

CONTENT

1、Specification & Technical Data

Unit：mm
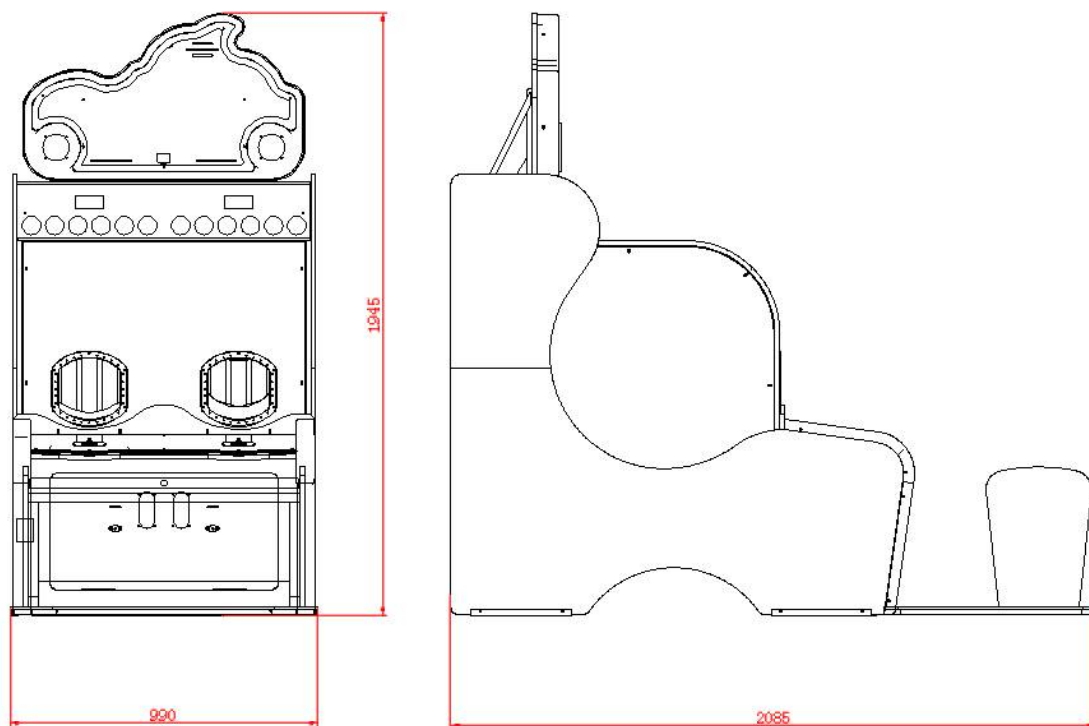
1) Voltage： AC 220V±10% 50Hz

2) Power Consumption: mix150W ～ max280W

3) Dimension：L2085×W990×H1945（mm）

4) Weight : About 214kg

5) Environment: Temperature(Indoor): -10℃～+40℃;

       Humidity：≤90%;

       Air Pressure：86Pa～106Pa。

⚠ **Warning：** To re-start the machine for 1 min after power off。

2、Spare Part List

Part List:

NO.	ITEM	Spec./Material	QTY	UNIT	DRAWING	REMARK
1	Manual	A4	1	Pc		
2	Key	1258	1	Pc		Ticket door, coin door, repair door
		1396	1	Pc		Coin box
3	Fuse	6.3A	1	Pc		
4	Power cord	1.5M	1	Pc		
5	Long micro switch		1	Pc		
6	Micro switch		3	Pc		
7	Ball		10	Pc		
8	Micro switch	Use for button	1	pc		

# 3、Trouble Shooting

| Failure	Reason	Solution
Can not insert coin	Do not adjust the coin acceptor. Have the fake coin	Adjust the coin acceptor Take out the fake coin
No ticket out	No 12V input for ticket dispenser. Drive signal wire loosen. Do not put down the ticket wheel. Ticket dispenser terminal damage. Not for ticket out type.	Check the power supply voltage and wire. Check the drive signal wire/ Put down the ticket wheel. Replace the main board. Adjust the type for ticket out.
No music	Volume is low. Volume output wire short-circuit. Speaker damage. Amplifier damage. PC board damage. Audio connection mouth loosen or damage. Speaker connect or not.	Adjust the volume. Connect the wire. Change the speaker. Change the main board. Change the wire. Re-connect the audio wire. Turn on the speaker.
No movement	No power. Do not turn on the power switch. The power fuse burned. No voltage output for power supply No power pressure for main board. Main board damage.	Turn on and plug the power on. Turn on the power. Change the new fuse. Change the power supply. Connect the main board wire. Change the main board.

4、Game Instruction

4-1 Game Instruction

1. Insert coin and start game.

2. Players move the gun(left/right,up/down) to aim the target to get score.

3. In the game time, the higher score you get the more ticket you earn.

4. Two players mode.

4-2 Operate Menu
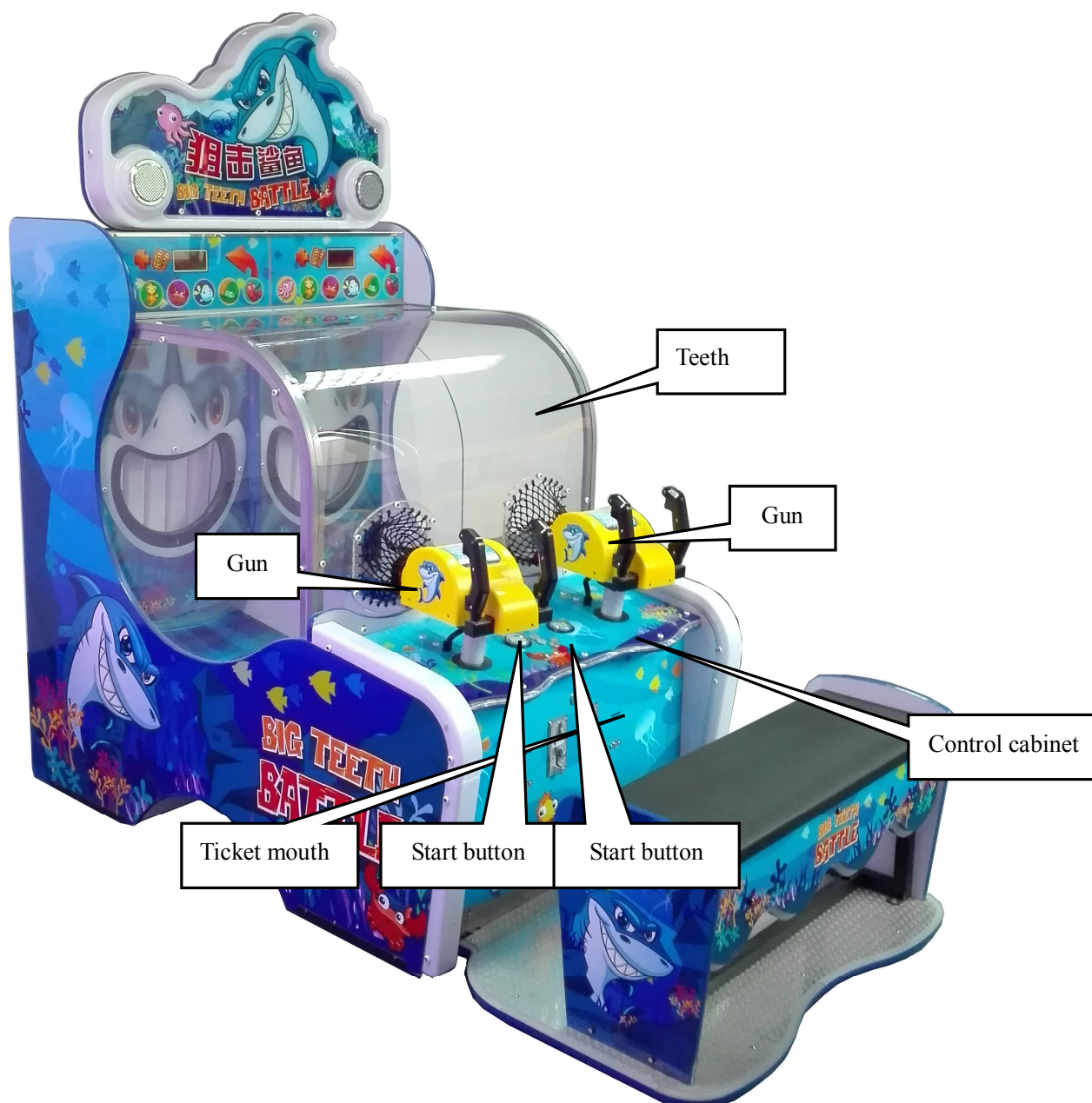
4-3 Control signal & Instruction

1. Check the attach IO sheet and diagram can see the place for output & input on the main board.

2. DIP adjustment can refer to IO sheet, capital letter is for factory setting, customer can adjust according to the operation suitation.

3. Main board schemation diagram：
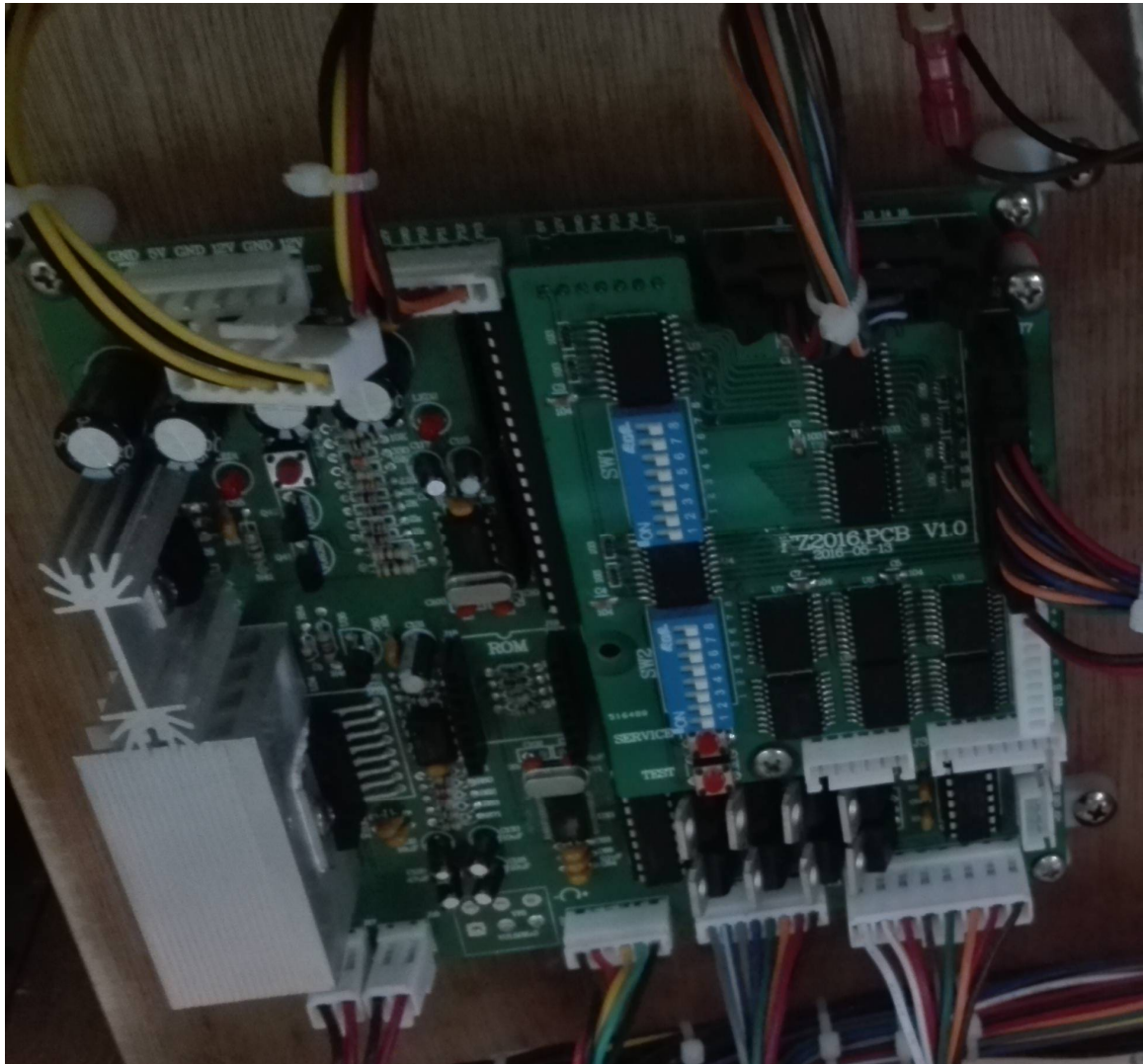
⚠ The above instruction is subject to change without notice.

5、Part List

5-1 Mechanical Part

Overall

Light box

Shooting mechanic

Teeth mechanic

Ball out mechanic
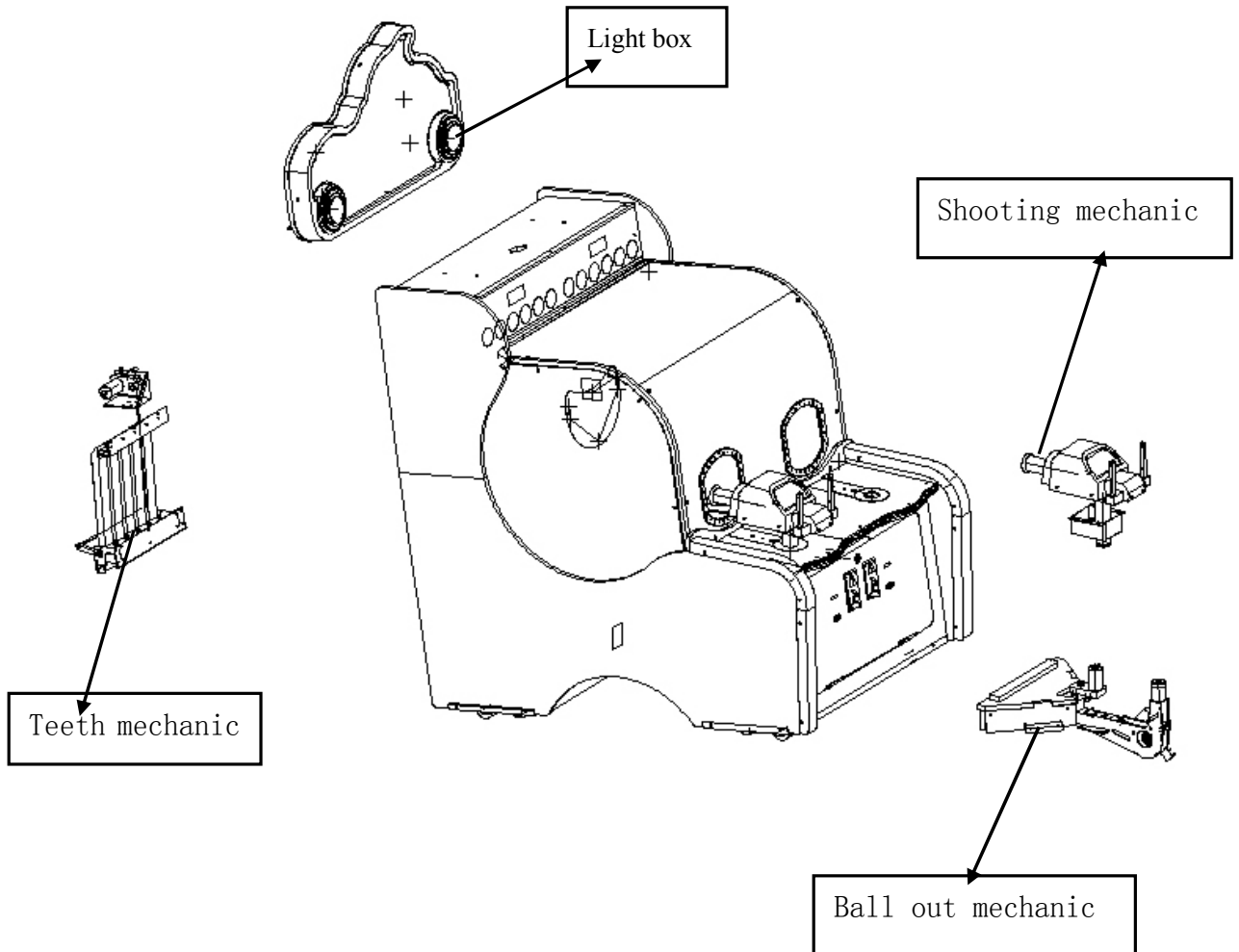
Light box assembly
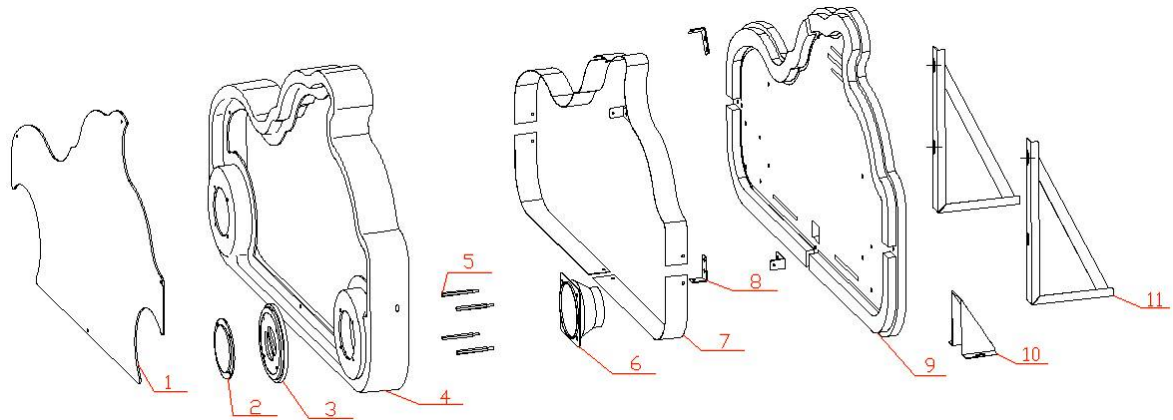
No	Name	Spec/Material	Qty
1	Light box cover	Transparent plastic	1
2	Speaker cover		2
3	Light cover of speaker		2
4	Plastic light box	White plastic	1
5	Speaker column		8
6	Speaker		2
7	Light barrier		1
8	Fixer of plastic light box		
9	Back plate of light box	Plywood	1
10	Sheet metal		1
11	Light box holder	Q235	2

Teeth mechanism
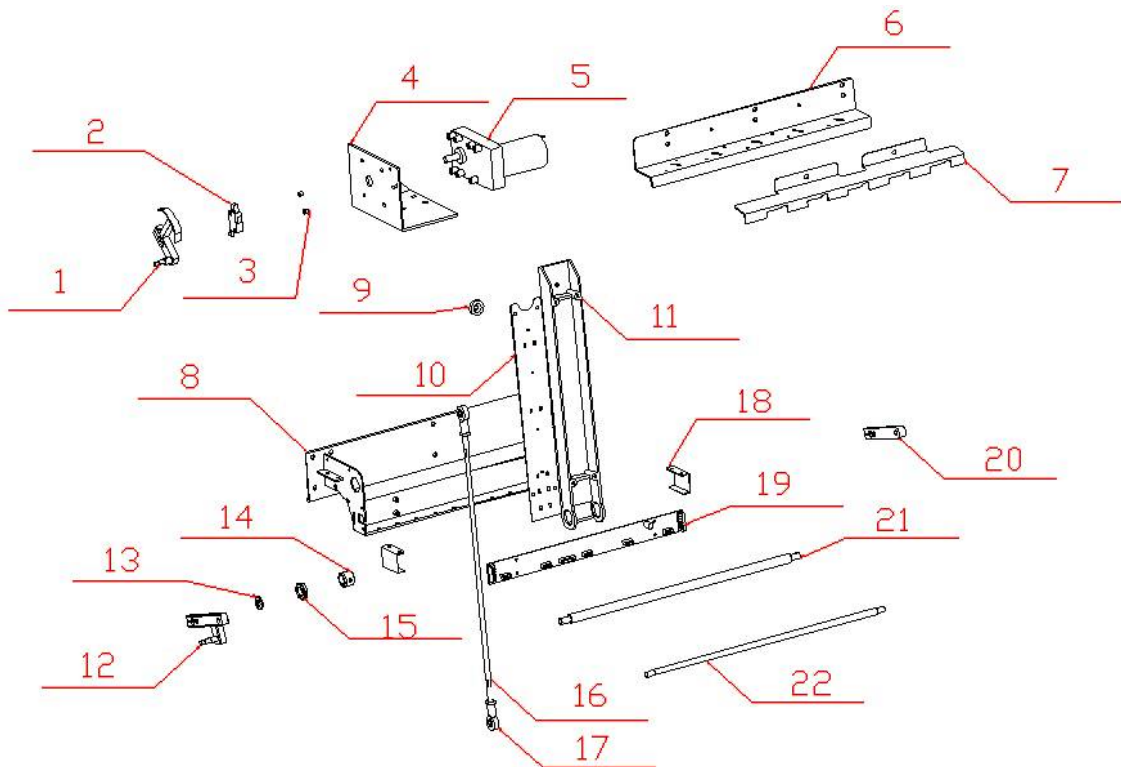
No	Name	Spec/Material	Qty
1	Strong magnet	d6*D20*H5	3
2	Support seat	Stainless steel	1
3	Tooth axis	Length 380mm chrome-plated optical axis	1
4	Septum sleeve	Stainless steel	4
5	Bearing	F688Z	8
6	Stop swing rod	Stainless steel	1
7	Teeth	PC	3
8	Teeth back plate	Stainless steel 201	3
9	Back stop rod	Stainless steel 201	1
10	Upper pendulum	Stainless steel 201	1
11	sleeve	Stainless steel 201	4
12	Joint bearing	Inter tooth M6	2
13	Starting with connecting rod	Stainless steel 201	1
14	Upper teeth crank	Stainless steel 201	1
15	Micro switch		1

16	Joint pads	Stainless steel 201	4
17	Motor fixer sheet metal	Stainless steel 201	1
18	Motor	24V 25RPM	1
19			
20			
21			
22			

Shooting mechanism
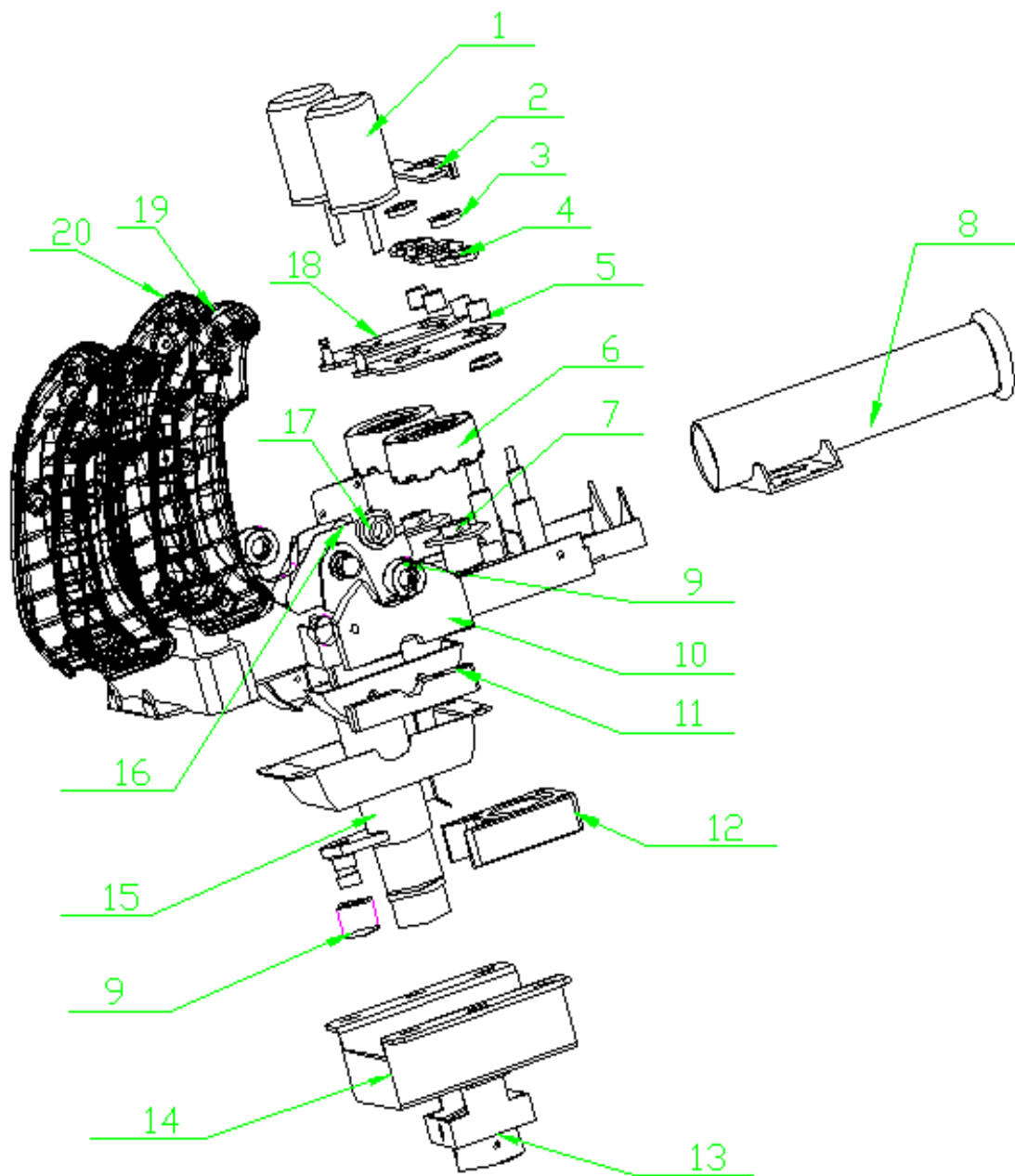
No	Item No.	Name	Spec/Material	Qty
1		Motor	ZYTD38SRZ-R(55) 24V3000RPM	2
2		Adjustment plate	Stainless steel	1
3		Rib bearing	F688	2
4		Synchronous tooth plate	Stainless steel	2
5		Pillar(common parts)	White nylon	4
6		Wheel for sending ball(common parts)	silica gel	2
7		Shooting motor wheel seat	Aluminum alloy	2
8		Pipe	Q235	1
9		Limit rubber(common parts)	Polyurethane	3
10		Side vertical plate A	Q235	2
11		Side vertical plate B(common parts)	Q235	2
12		Limit block	Q235	1
13	No use	Connector B	Stainless steel	1
14		Fixed seat	Q235	1
15		throwing branch pipe	Q235	1
16		bucket	Stainless steel	1
17		Copper sleeve (common parts)	brass	2
18		Motor plate	Stainless steel	2
19		Left handle	Black plastic	2
20		Right handle	Black plastic	2

Sending ball mechanism
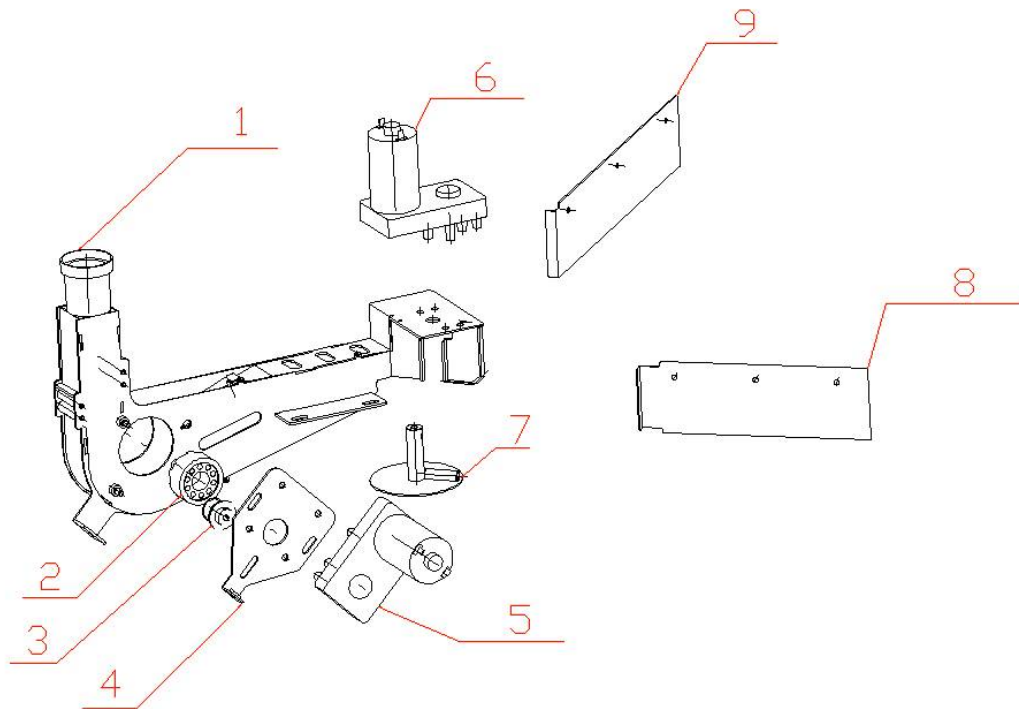
No	Name	Spec/Material	Qty
1	Ball rack	Stainless steel　201	1
2	Friction wheel A	Rubber	1
3	Friction wheel seat A	Aluminum alloy	1
4	Modulation plate	Stainless steel　201	1
5	Mixing ball plate motor	24V　25RPM	1
6	Sending ball motor	24V　25RPM	1
7	Mixing ball plate	Stainless steel　201	1
8	Slide plate A	Stainless steel　201	1
9	Slide plate B	Stainless steel　201	1

5-2 Coin selector assembly
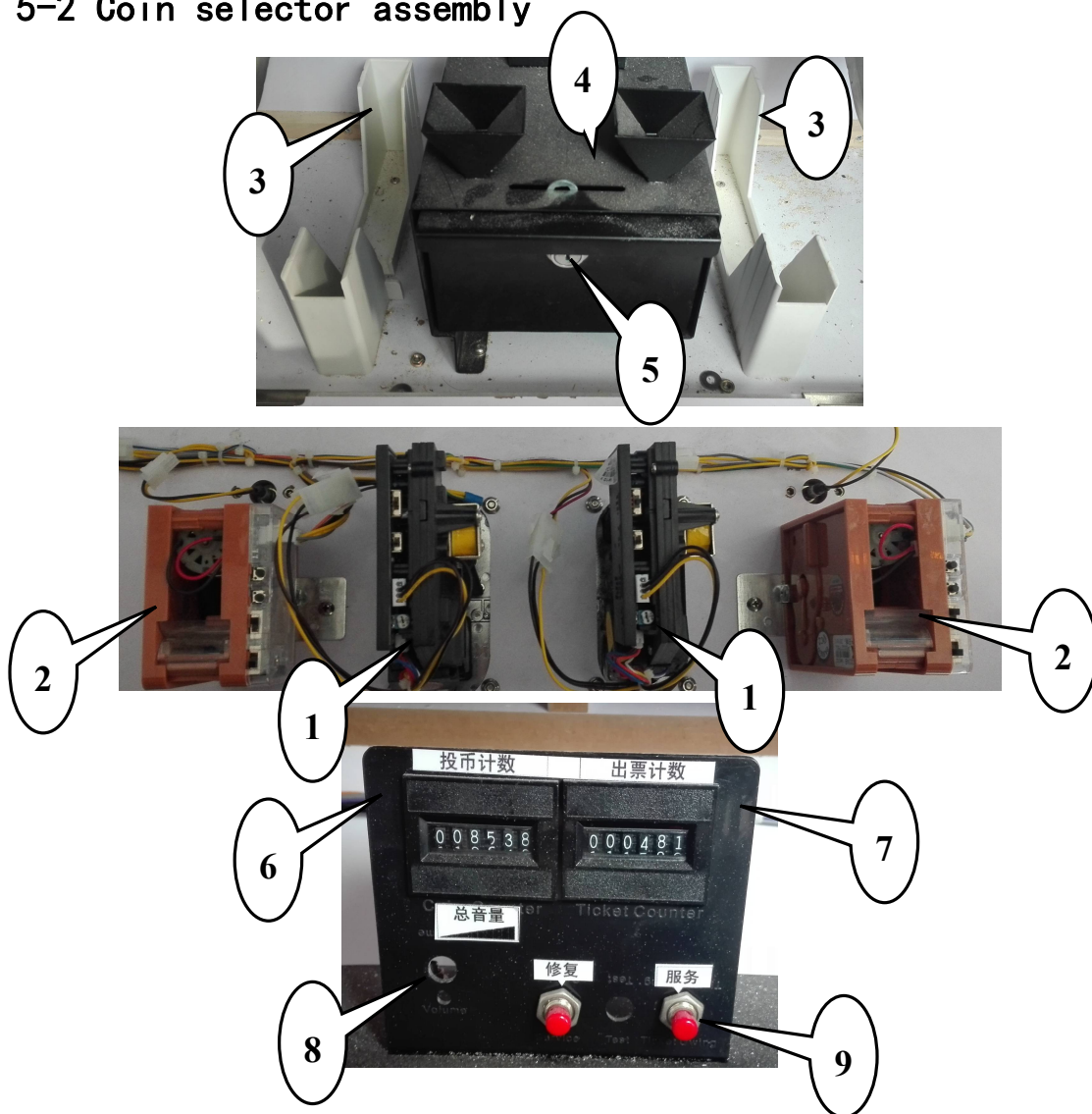
No	Name	Spec/Material	Qty
1	Coin selector	Electronic operated	2
2	Ticket dispenser		2
3	Ticket box	White plastic	2
`4	Coin box	iron	1
5	AH78 Lock	78 short lock	1
6	Counter bracket	Black plastic	1
7	6 bit counter	C-012	2
8	Sound regulator	Black plastic	1
9	Reset button	Red button	3

5-3 投币器说明

When the coin stuck in coin selector, pull button as shown in photo, the coin will be withdrawn from it. If the coin can not be withdrawn, it is necessary to open the coin acceptor and remove the coin.
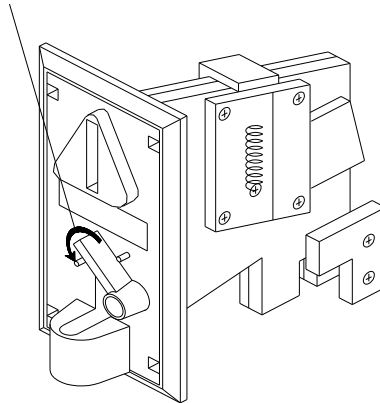
Electronic operated coin selector instruction：

A. Please first remove the plastic coins in the coin slot and replace with the coin you want to use.

B. Loosen the screws on the back of the coin slot and adjust the fixing tabs on the back of the coin slot according to the diameter of the coin.

C. Select N.O (normally open) and N.C (normally closed) switch; the general use is N.O (normally open).

D. Select COIN length / speed switch (TIMER SWITCH): 30MS (short fast signal) /50MS (middle fast signal) /100MS (long slow signal), general use is 50MS.

E. The VR knob is used to adjust the sensitivity of the coin selection. Adjusting clockwise (+), the range of acceptable coin tolerances is large and the counterclockwise adjustment (-) allows for a smaller range of tolerances for coins, which means the screening is more stringent.

F. Wiring instruction：
　　1. Gray wire
　　　Red wire-DC+12V
　　2. White wire-COIN Signal

　　　　　　　　　　　　　　　　meter

　　3. Black wire-ground wire
　　4. Gray wire

5-4 Speaker assembly
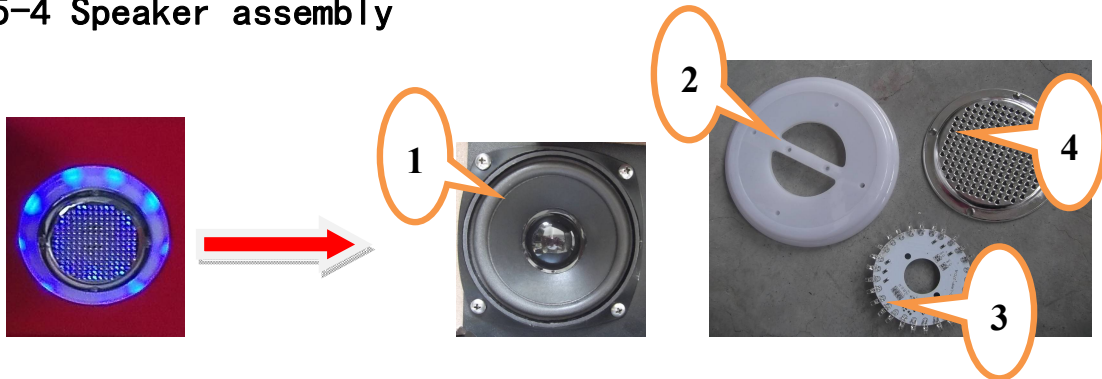
No	Name	Spec/Material	Qty
1	Round speaker	4 inch 8Ω15W	2
2	White plastic cover	Plastic	2
3	Speaker light board	Red, Green, Blue RGB	2
4	Speaker net	Silver	2

5-5 Fuse and power components
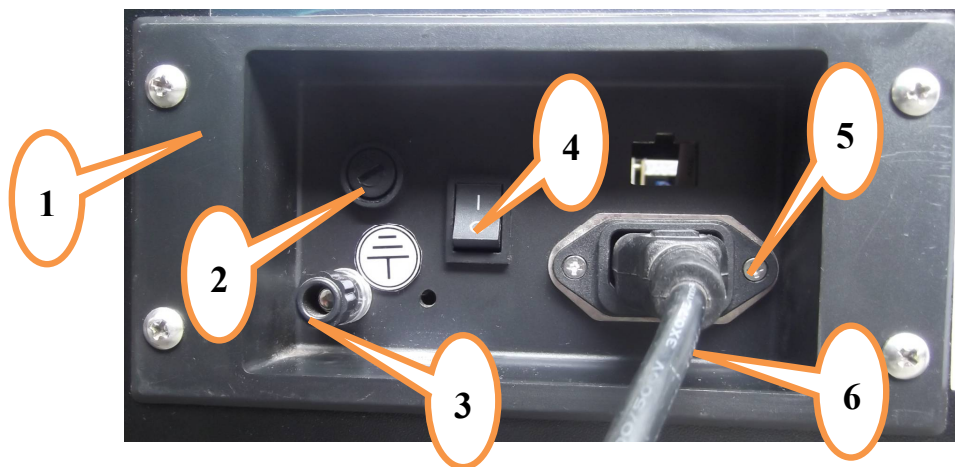
No	Name	Spec/Material	Qty
1	Wire box	Black plastic	1
2	Fuse base	HJMF-527	1
3	Ground terminal		1
4	Switch	Black plastic	1
5	Power outlet		1
6	Power cable	6.3A	1

5-6 Electrical installation components
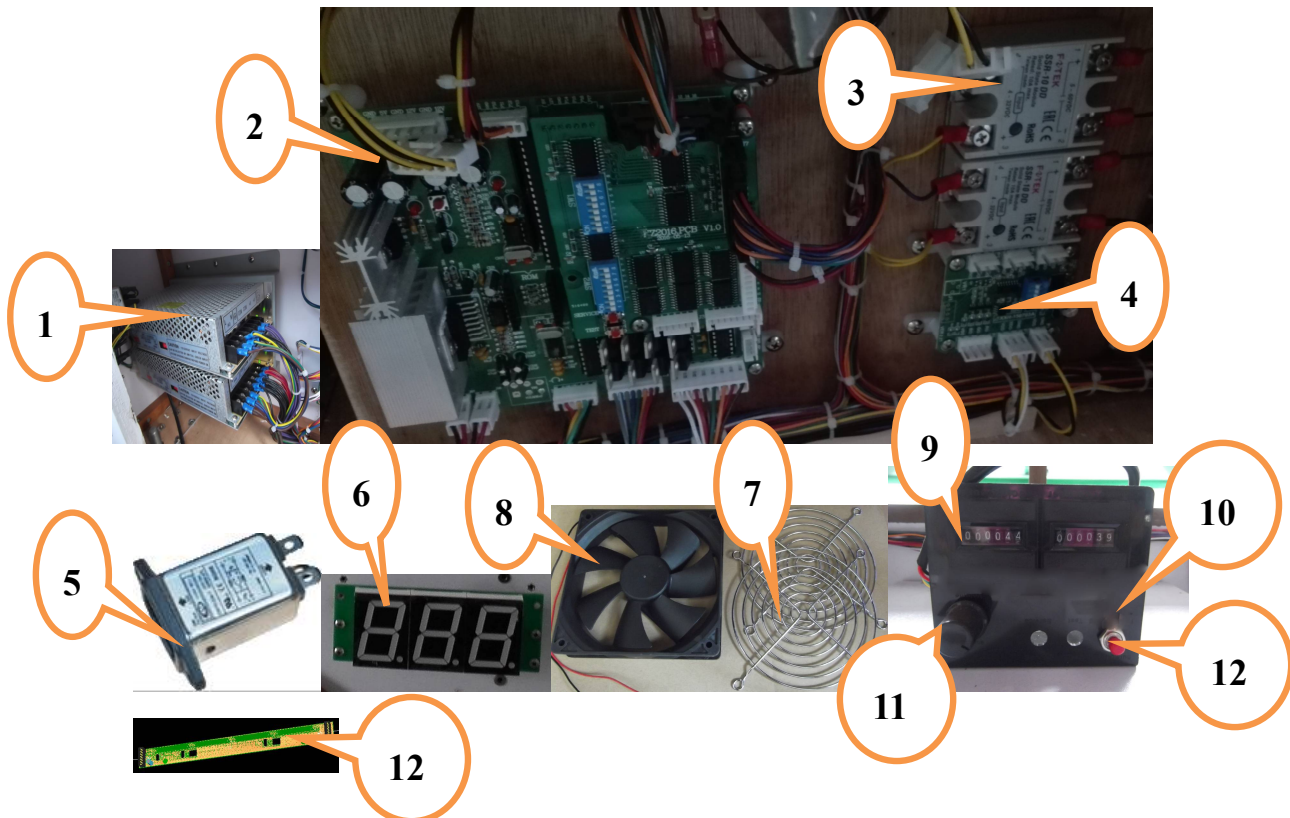
No	Name	Spec/Material	Qty	Unit
1	Power Supply	12V 150W	1	pc
		24V 150W	1	pc
2	Main board	SXKJ-2013.PCB VER1.0	1	pc
3	Solid state relay	SSR-10DD	2	pc
4	12V Light control board	XXH-150703A	1	pc
5	Filter	YB10A1	1	pc
6	LED	SMG15102-3W.PCB V3.0	4	pc
7	Exhaust fan net		2	pc
8	Exhaust fan	1804U3A 001 12V	1	pc
9	6 bit counter	C-012	2	pc
10	Counter bracket	Black plastic	1	pc
11	Sound regulator	Black plastic	1	pc
12	Repair button	Red button	2	pc
13	Tooth lamp wiring board	SY-5W.PCB V1.1	2	pc

5-7 Artwork
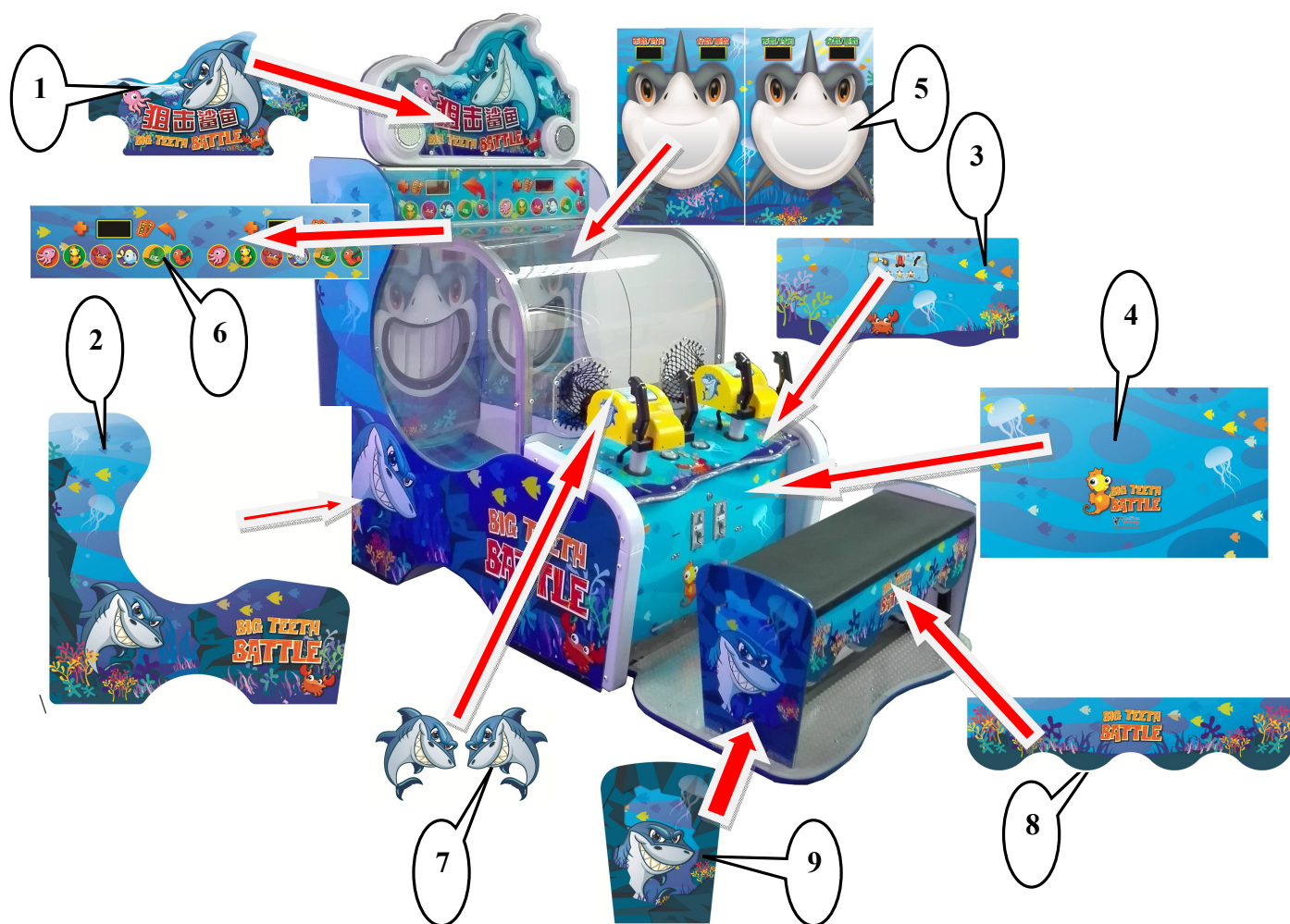
No.	Name	Spec/Material	Qty
1	Image of Light box	Sticker	1
2	Image on two sides of machine	Sticker	Bilateral
3	Image on console	Sticker	1
4	Image on front door	Sticker	1
5	Main image A	Sticker	1
6	Main image B	Sticker	2
7	Image on shooting mechanism	Sticker	4
8	Image on back of seat	Sticker	1
9	Image on two sides of seat	Sticker	Bilateral

1 TICKETS

2 CAUTION FORK

3

4

5

6

7

8

9
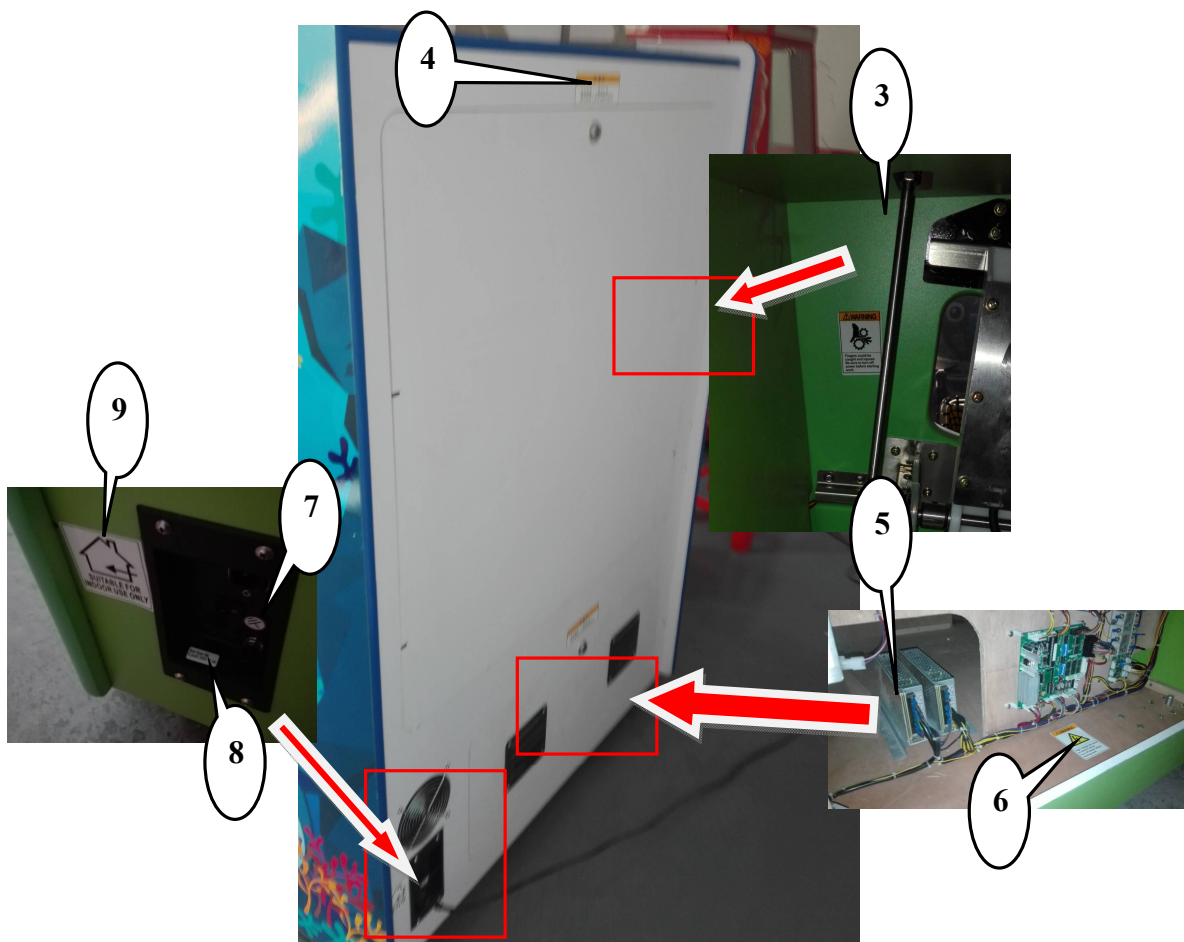
No.	Name	Spec/Material	Qty
1	Ticket gate	White sticker	2
2	Fork label	White sticker	4
3	"Do not touch" label	White sticker	2
4	Repair label	White sticker	2
5	High temp./voltage label	White sticker	1
6	High voltage label	White sticker	1
7	Ground wire label	White sticker	1
8	Fuse current label	White sticker	1
9	Indoor use label	White sticker	1
10	Name plate		1
11	IO sheet		1

5-8 Electrical parts
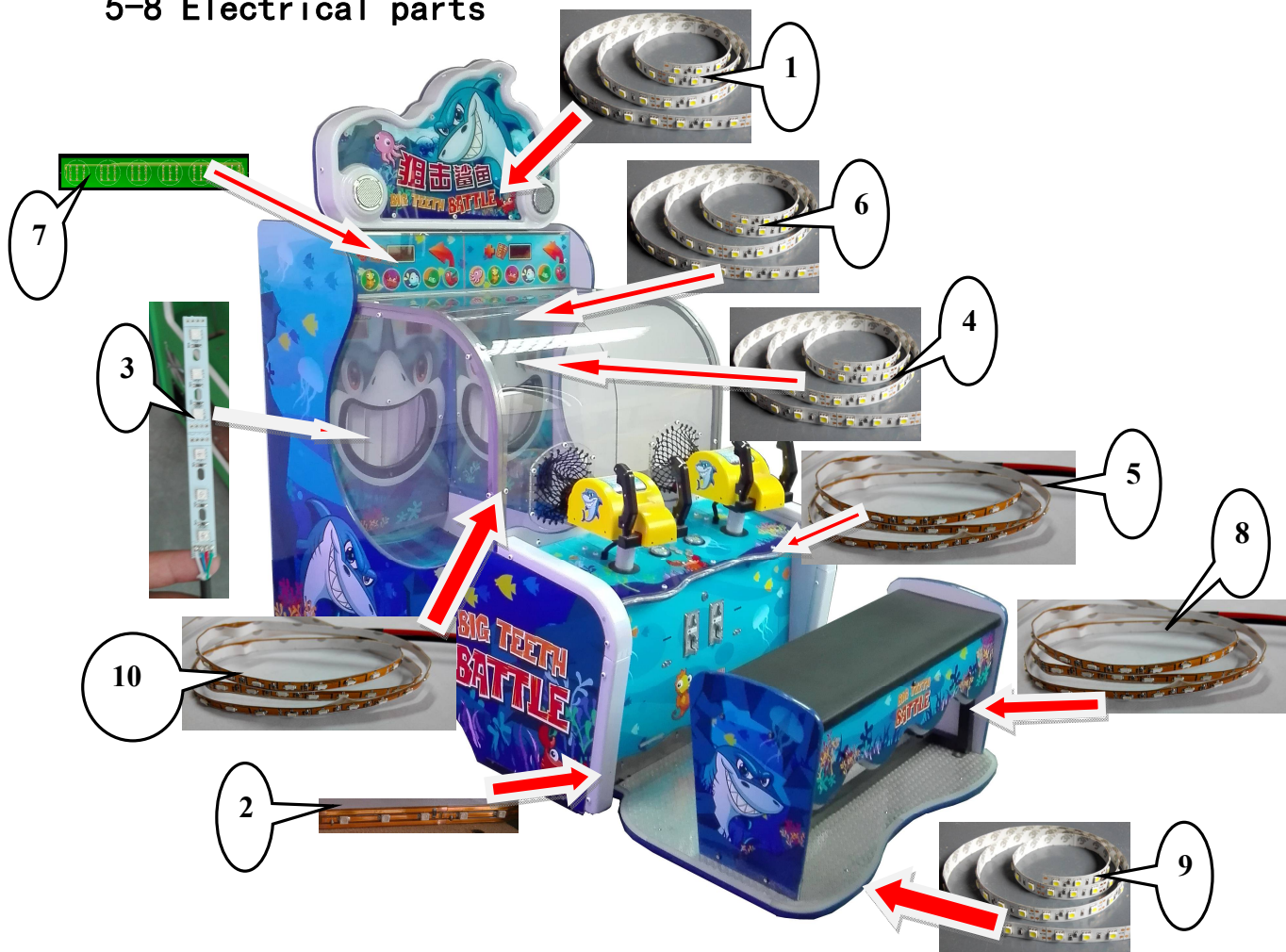
No	Name	Spec/Material	Qty
1	Lights on light box	5050 white light 1.8m	1
2	Two side light of console	WS2811B 60 beads 12V/0.8m	2
3	Light of tooth	LED-5050.PCB V3.1 RGB	12
4	Light of shark's eye	1206 light belt white light width 6mm length 0.35m	4
5	Light of console	3528 light belt blue light Width 8mm length 0.8m	1
6	Light at machine inside	5050 blue light 0.85m	2
7	Light of prize progress	SY-LED-6W.PCB V1.0	2
8	Light at back of seat	3528 light belt blue light Width 8mm length 1.1m	1
9	Light at bottom of seat	3528 light belt blue light Width 8mm length 2.3m	1
10	Light on transparent cover	1206 light belt white light Width 6mm length 1.1m	2

6、IO table

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						
Play time(sec.)	30			off	off	off			
	35			on	off	off			
	40			off	on	off			
	45			**on**	**on**	**off**			
	50			off	off	on			
	60			on	off	on			
	75			off	on	on			
	90			on	on	on			
	4						off	off	off
	5						**on**	**off**	**off**

Setting						on/off	on/off	on/off
8						off	on	off
10						on	on	off
15						off	off	on
20						on	off	on
25						off	on	on
No						on	on	on

Item	Setting	SW2							
		1	2	3	4	5	6	7	8
Demo music	YES	**on**							
	NO	off							
Free play	YES		on						
	NO		**off**						
Bonus Additional point	25			off	off				
	50			**on**	**off**				
	75			off	on				
	100			on	on				
Coins increase extra points	20					off	off		
	10					**on**	**off**		
	5					off	on		
	NO					on	on		

Input 1：

INPUT	Content	INPUT	Content
J1-1 (1)	1P Coin signal	J1-9 (9)	1P Toothing motor
J1-2 (2)	2P Coin signal	J1-10 (10)	2P Toothing motor
J1-3 (3)	1P service	J1-11 (11)	1P ball shooting button
J1-4 (4)	2P service	J1-12 (12)	1P ball sending switch
J1-5 (5)		J1-13 (13)	2P ball shooting button
J1-6 (6)	Ticket machine repair	J1-14 (14)	2P ball sending switch
J1-7 (7)	1P ticket dispenser feedback	J1-15 (15)	
J1-8 (8)	2P ticket dispenser feedback	J1-16 (16)	

Input 2：

INPUT	Content	INPUT	Content
J7-1 （1）	1P Target Score 1	J7-9 （9）	2P Target Score 4
J7-2 （2）	1P Target Score 2	J7-10 （10）	2P Target Score 5
J7-3 （3）	1P Target Score 3	J7-11 （11）	
J7-4 （4）	1P Target Score 4	J7-12 （12）	
J7-5 （5）	1P Target Score 5	J7-13 （13）	
J7-6 （6）	2P Target Score 1	J7-14 （14）	
J7-7 （7）	2P Target Score 2	J7-15 （15）	
J7-8 （8）	2P Target Score 3	J7-16 （16）	

Output：

OUTPUT	Content	OUTPUT	Content	OUTPUT	Content
J2-1 (1)	1P Shooting ball motor	J3-1 （9）	Coin counter	J5-4 (P10)	Tooth light SCK
J2-2 (2)	2P Shooting ball motor	J3-2 (10)	Ticket counter	J5-5 (P11)	Tooth light RCK
J2-3 (3)	1P Stirring ball motor	J3-3 (11)	1P ticket dispenser driver	J5-6 (P12)	Tooth light S
J2-4 (4)	2P Stirring ball motor	J3-4 (12)	2P ticket dispenser driver	J5-7 (P13)	
J2-5 (5)	1P Toothing motor	J3-5 (13)	1P Sending ball motor	J6-4 (P14)	LED SCK
J2-6 (6)	2P Toothing motor	J3-6 (14)	2P Sending ball motor	J6-5 (P15)	LED RCK
J2-7 (7)	1P Eye light	J3-7 (15)	1P Lack of ticket light	J6-6 (P16)	LED S
J2-8 (8)	2P Eye light	J3-8 (16)	2P Lack of ticket light	J6-7 (P17)	

Test method:

0	Press the TEST button on the main board for 5 seconds to enter the testing procedure: LED<1>LED<2>LED<3>LED<4> all display 8.8.8.8.8.8.8.8. , all digital tubes flash three times then stop. Play the zeroth segment music to test if the digital tube correct or not (test 32 digital tubes in single time)
1	Press the SERVICE button, digital tube will display: 1.2.3.4.5.6.7.8., play the first segment music at the same time.
2	Press the SERVICE button to enter the DIP switch testing, the digital tubes LED<1>1,2,3,4 digits display DIP SW1，SW2,SW3,SW4, others display 22, play the second segment music at the same time.

3	Press the SERVICE button again to enter the DIP switch number display, then the digital tubes LED<1>1,2 will display the corresponding number, others display 33. All digital tubes flash three times then stop. Play the third segment music at the same time.
4	Press the SERVICE button again to enter the I/O testing, then the I/O follow spot output, digital tubes display 4444. All digital tubes flash three times then stop. Play the forth segment music at the same time.
5	Press the SERVICE button again to enter the music test, it plays the fifth segment music at the same time. Digital tubes LED<1>1,2 will display the music segment number, others display 5555. All digital tubes flash three times then stop. Test: press the first button the music segment number reduce, press the second button the music segment number increase, each time when you press the button, it will play the corresponding music, execution loop, totally 0---8 ,9 segments.
6	Press the SERVICE button again to back to the display test (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 record：Press "SERVICE""TEST" button at the same time，then restart machine can remove memory data.

Test: After test, please clear record and restart machine.

Ticket out repair：When the ticket dispenser is lacking of tickets, LED will display the lacking ticket number and "HELP" alternately, it needs to add the ticket and pressing repair button on ticket dispenser to run out the ticket.

Error code: E01 Sending ball motor   E02 Toothing sensor
**   E17 Tooth switch 1   E18 Tooth switch 2**
**   E19 Tooth switch 3   E20 Tooth switch 4**
**   E21 Tooth switch 5**

Play instruction: 1. Insert coin and press start button to enter the game.
**   2. Shoot down tooth to get score; white 1, yellow 2, red 3.**
**   3. When player hit 5 teeth each time, machine will light a small animal light, 6 small animal lights all bright, player can get additional points.**
**   4. Game over, check the score and change ticket.**