FREETHROW

GAME MANUAL

⚠ **WARNING**

Be sure to read this Operation Manual before using your machine to ensure safe operation
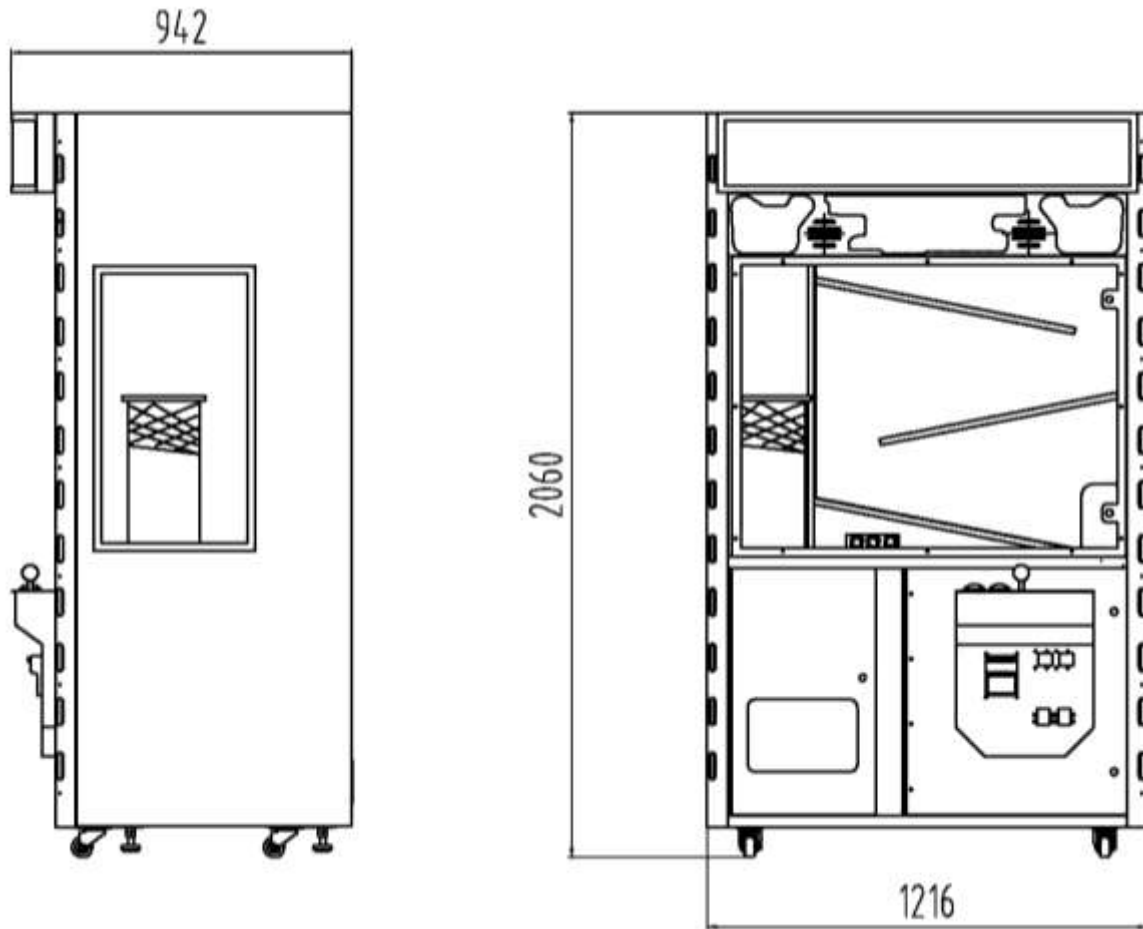
Family Fun Companies
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Bedford Park, IL 60638
Parts, Service & Sales: 708-598-3720

CONTENTS

1. SPECIFICATION

(1) Dimension: 1216mm (W), 942mm (D), 2060mm (H)

(2) Weight: 300kg

(3) Voltage: AC 110V±10%, 60Hz;

(4) Power: 80W-190W

(5) Current：0.8A-2.5A

(6) Operation Condition : Temperature(indoor) -10℃ ~ +40℃; Humidity ≤90% ; Pressure
86Pa ~ 106Pa

NOTE: Game parameters are subject to change without notice

2. INTRODUCTION
2-1 OVERVIEW

Thank you for purchasing the *"FREE THROW "*from ZhongShan Star Animation Technology CO.,LTD. Star located in the largest district of amusement machine design and production in China mainly develops and manufactures amusement equipments including redemption machines, music machines, arcade games, and other indoor game machines. Owing to having the advanced technique and innovation design ideal, Star develops with the best quality and the most favorite price machines, which are competitive all around the world.

This owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, servicing control, spare parts, etc. pertaining to the game.

This manual is intended for the owner, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system.

"*FREE THROW*" is a gift machine, it's have good appearance, color coordination with the rhythm of the music and the referee's whistle, let the player as if in a tense penalty time; The game play operation is easy to understand, which the player is using a joystick to position the ball within a shooting mechanism, and then press the button to let the ball go into basketball ring, Player passes a ball successfully through the goal net and the ball is taken by the Player. Come on! Take away your basketballs go home!

To Maintain Safety:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning display and cautions, handle the product appropriately. Be sure to keep this operation manual nearby the product or elsewhere convenient for referring to it when necessary.

For the safe usage of the product, the following pictographs are used:

Indicate "HANDLE WITH CARE". In order to protect the human body and equipment, this display is attached to places where the instruction manual should be referred to.

Indicate "PROTECTIVE EARTH TERMINAL". Before operating the equipment, be sure to connect it to the ground. (The step may be omitted for products in which a power cable with earth is used.)

⇩ Be sure to understand the contents of the displays before operating the equipment or reading the text.

⚠ **DANGER**   Indicate that mishandling the product by disregarding this pictograph will cause severe injury or death.

⚠ **WARNING**   Indicate that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

⚠ **CAUTION**   Indicate that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and/or material damage.

2-2 IMPORTANT SAFETY INFORMATION

➲ Unplug the game from the AC wall receptacle when servicing this product. Failure to do so could result in serious injury to yourself or others.

➲ Use only a GROUNDED AC receptacle. Failure to do so could result in improper operation or damage to the game and could void your warranty. If you are unsure that your AC receptacle is properly grounded, have a qualified electrician perform this check for you.

➲ Always be sure power to the game is turned off when doing even routine maintenance. Otherwise, moving parts could activate unexpectedly causing injury.

➲ This product is heavy, necessitated by the design. When moving this game, be sure you have adequate help. Use a suitable dolly or hand truck where practical.

2-3 SET UP

➲ Be sure that the game is on a level surface. If the game is rocking on the floor adjust the legs to remove the rocking of the game.

➲ Be sure to plug the game into the proper A.C. GROUNDED receptacle. Do not use long extension cords unless absolutely necessary and if so, be sure it is a heavy duty cord of at least 16 Ga. and no longer than 20 ft. Check the label on the back of the game to make sure the power requirements of the game match that of your location.

➲ Turn the game on and check to be sure there are no unusual sounds and that everything appears to be working correctly.

3. PACKAGE CONTENTS

Be sure to check that you have received all packages indicated below.
☞ **Game Unit**
☞ **Accessories**

NO	DESCRIPTION	SPECIFICATION	DRAWING	QTY	UNIT	REMARK
1	INSTRUCTION			1	BOOK	AS SHIPMENT REQUIREMENT
2	KEY	X818		1	PCS	COIN BOX
		X919		4	PCS	MAINTAINCE DOOR /PRIZE DOOR
3	AMERICAL POWER CABLE	1.8 米		1	BAR	AS SHIPMENT REQUIREMENT
4	FUSE	6.3A		1	PCS	
5	SWITCH			1	PCS	
6	T4 IR	MOC70T4.PCB		1	PCS	
7	SPRING			1	PAIR	

Game accessories are subject to change without notice

4. INSTALLATION

⚠ **CAUTION**
For indoor use only!

4-1 OPERATION ZONE（UNIT: mm）

This machine requires space for playing the game. Be sure to leave enough space when installing the machine.
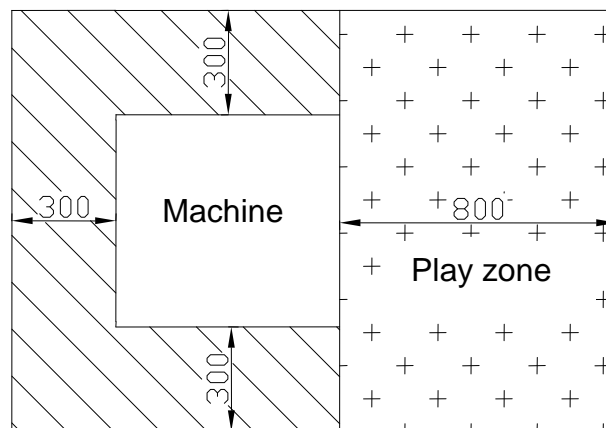
4-2 LOCATIONS TO AVOID

WARNING

The machine is designed for indoor use only. Never install this machine outdoors or in any of the following:
- **Locations exposed to direct sunlight**
- **Locations subject to rain or water leakage.**
- **Unstable locations or locations subject to vibration.**
- **Dusty, hot, or damp locations.**

## 4-3 FIXATION TO SITE

The machine must be fixed on level ground. The product is equipped with 4 casters and 4 adjusters. When installation position /site has been determined, have the adjusters come in direct contact with the floor.

Establish a gap of about 5 mm between the floor and the casters and adjust the unit so that it will remain level.

①Move the product to the installation site.

②Bring the adjusters into direct contact with the floor. Use a wrench to align the height of the adjusters until the cabinet is perfectly level.
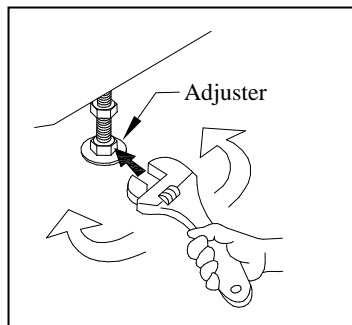
③After setting , turn adjuster nuts upwards to tighten them and secure adjuster heights.
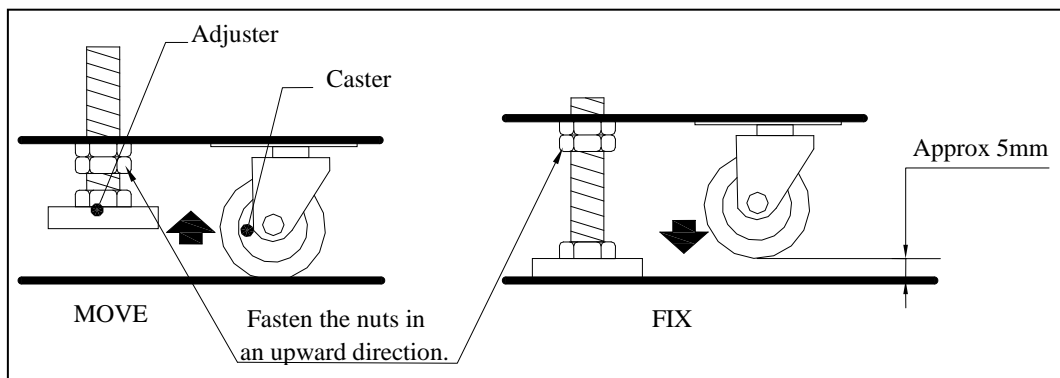
⚠ WARNING

- **Disconnect game power before moving.**
- **Make sure all wheels are intact. Replace any wheels that are damaged or broken before moving the game.**
- **When moving the game, DO NOT slide the game across the floor.**
- **Ensure the game is level before connecting the power.**
- **It is required to wrap with soft cushion when carry the machine in long distance. The packages standard is based on specific conditions.**

5. CONNECTING THE POWER CORD

Power socket

Inlet box

Power plug

Power cable

Power plug

POWER JUNCTION BOX

Fuse

Main Switch

Grounding

Ground symbol

IEC Inlet
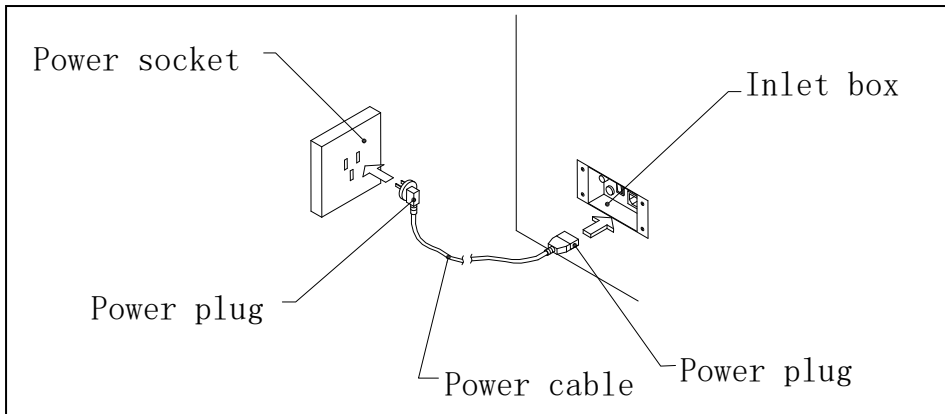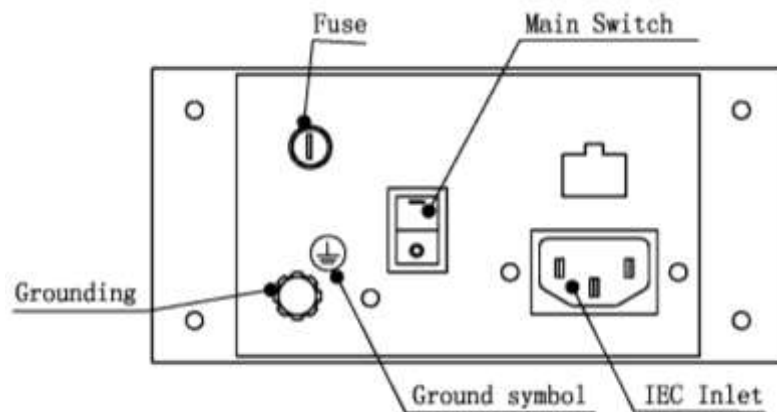
⚠ WARNING

● Do not put heavy items on power cord.
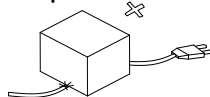
● Hold the power plug instead of the wire to draw the power cord out of the socket.
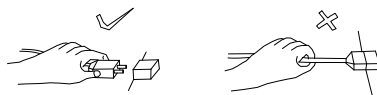
● Do not touch the power plug with wet hands.

● Do not draw or twist the cord or near a heat source.

● Do not place the cord where the player can easily trip over or come in contact with it.

● Operate this game with the correct power and fuse configuration.

6. PARTS DESCRIPTION

The machine without ball, Customers have to double check the game after you received. When everything confirmed is ok, start the machine and then open the front maintenance door, put into the ball from the ball inlet until the fairway ball up, finally, opened the box cover and fill the ball with the ball storage area.
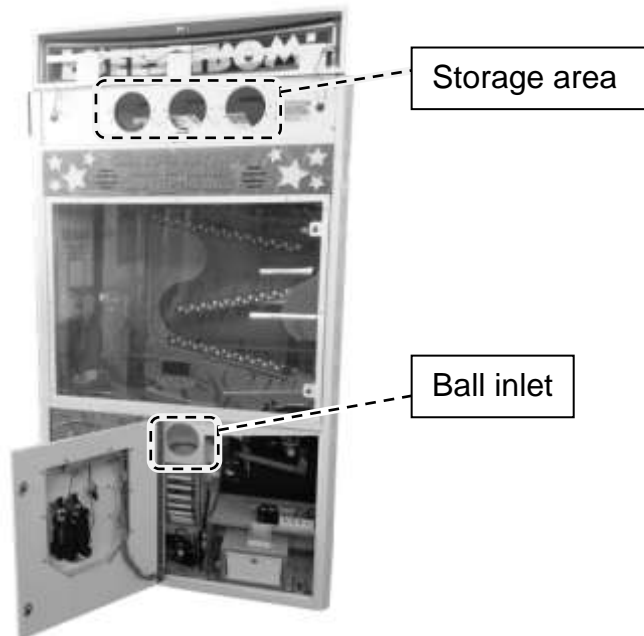
6-1 GAME OUT LOOK
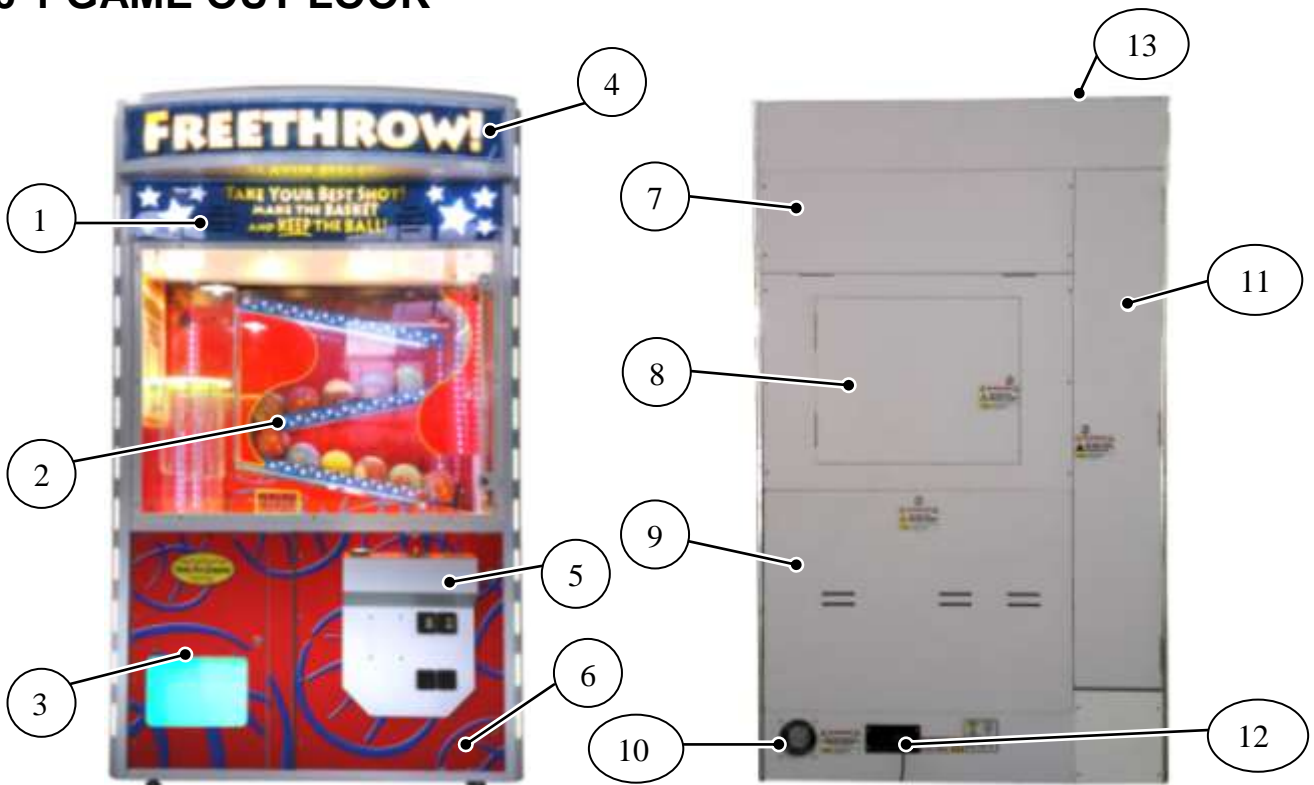
① Speaker: Left and right on each side and playing the game audio.

② Game zone: A transparent door lock, with two (key X919)

③ Prize door: The LEDs will be flashing to mean the player take the gifts away, when the player hit the basket fall into the mouth of prize. (key X919)

④ Billboard: Open the back box can be examined the ball storage area; (key X919)
Ball storage area: This areas shall be filled with the ball, which the ball will be reducing with the player winning. and the ball storage area will automatically add the ball to the game area, so as to ensure that the game smoothly.

⑤ Control panel: Using the button and joystick control progress of the game.

⑥ Front maintenance door

⑦ Back door (in Top)： Storage ball mechanism maintenance door (M4*4)

⑧ Back door (in Middle) ： Main panel maintenance door（Key X919）。

⑨ Back door (in Bottom) ：Key X919

⑩ Cooling Fun.

11. Back door (on side): Chain maintenance door (Key X919)

12. Power box.

13. Top door cover：Open the top cover can adjust the chain tension.(M4*4)

6-2 GAME AREA

①**Fairway**: Start game, ball go from fairway, reach the shooting area. Key X919

②**Digital display panel**

③**Shooting area**: Push "SHOOT" button, ball spring from the area.

④**Basketball frame**: Ball fell into ring, the player win the ball.

⑤**Bottom Ball Lane:** Ball not hit to ball ring successfully, Ball will running away from fairway, then re-back to Fairway.

6-3 BILLBOARD

Open the lock (Above circle position showed), then open the billboard , See below:

The top of ball storage area with three ball box, each box can be placed 6pcs ball. When the ball on the fairway is reduced to below circle position showed , the ball of ball boxes will automatically added to the fairway, From ①to ➜②to ➜③

The order from #①to add ball to the Fairway then by # ②at last by #③ To ensure the game go smoothly, it must add the ball to the Fairway in time before the ball used off.

6-4 CONTROL PANEL

From left to right:

SHOOT! Button: Push "SHOOT" button, ball spring from the area.

SHOOTING joystick: using a joystick to position the ball within a shooting mechanism, and adjust the position then press the button to let the ball go into basketball ring.

Digital display panel

6-5 COIN DOOR

Open this door can ①.use by air condition to blow the balloon up,②.adjusting the coin Mechanism, ③.set the parameters, ④. check and repair the button of jock stick etc.(Key X919).
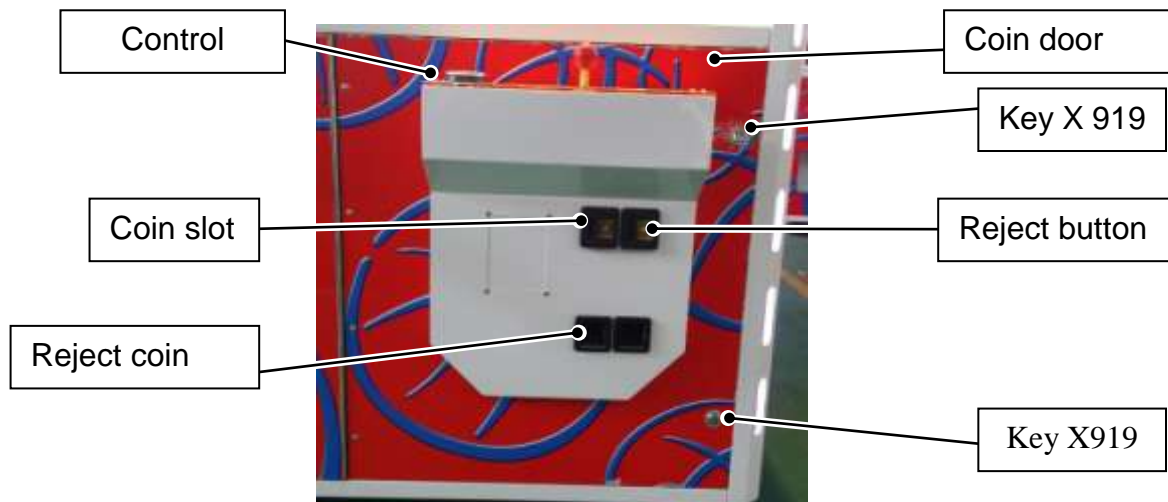
DESCRIPTION	QTY	FUNCTION
COIN SLOT	2	INSERT COIN, PRESS START BUTTON TO STAR GAME
REJECT BUTTON	2	WHEN COIN JAM, PRESS THIS BUTTON TO GET BACK THE JAM COIN
COIN DOOR	1	OPEN THIS DOOR FOR COIN MECH ADJUST AND SETTING. KEY X919.
REJECT COIN	2	ONCE COIN JAMMING, PRESS REJECT BUTTON, THE COIN WILL COME OUR

6-5-1 AIR COMPRESSOR
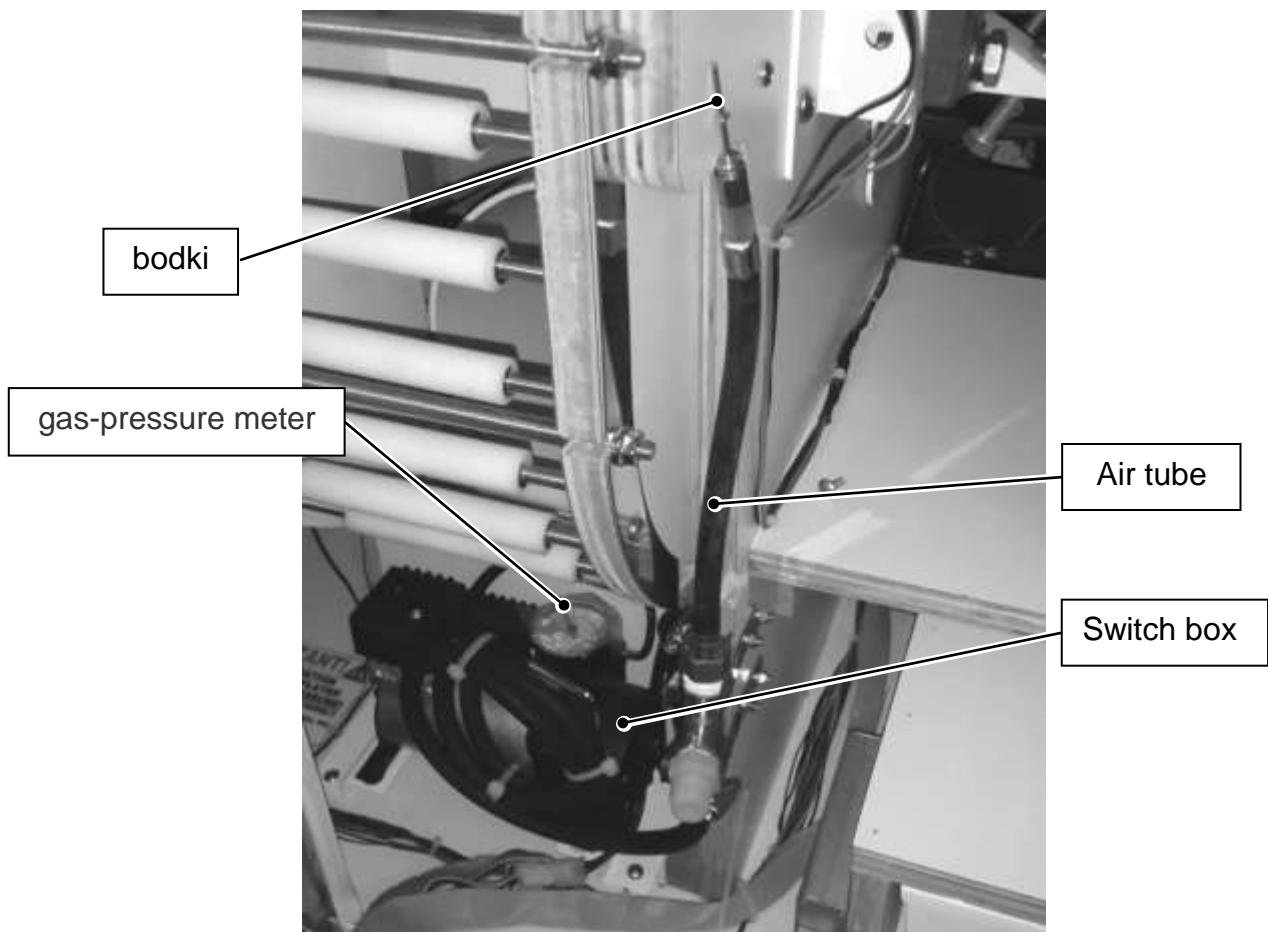
When the ball need inflation, first- bring out the air tube, and inserted into the air-eye of ball, then Press the power supply of switch box to began inflation.

Air Compressor remarks:

⇨ Do not use continuously pump more than 15 minutes, when reached to 15 minutes, shutdown to cooling for at least 15 minutes, and then use it.

⇨ If the inflation pump issue abnormal sound or the temperature is too high, please shut down immediately, and allowed to cool for at least 30 minutes. The use of incorrect methods may damage the pump;

⇨ Don't take the air tube insert or face to a person or animal ,also don not face the mouth, ears, eyes and other important body parts. Don't take the air compressor as toy.

6-5-2 COIN MECH.
⇩ **Insert coin to check its running; adjust accordingly.**
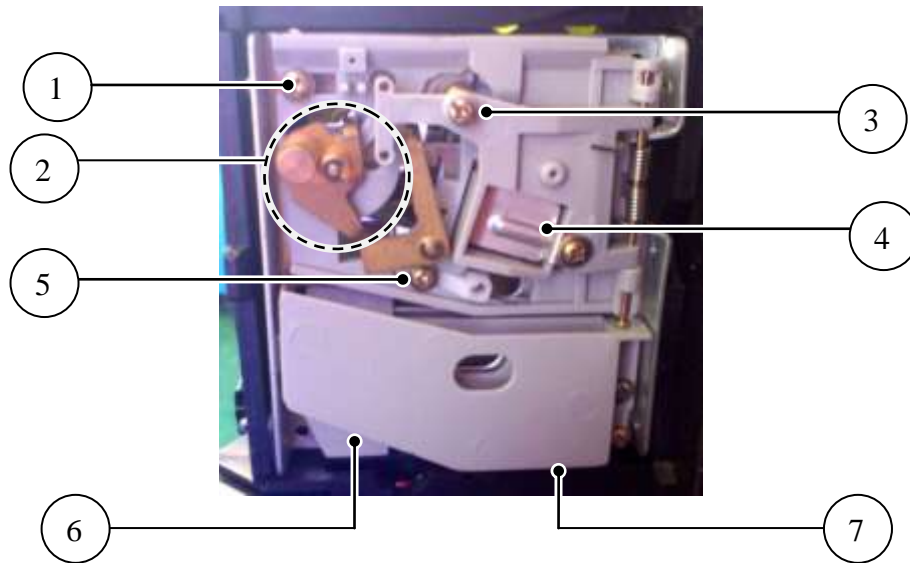
① Screw#1 is for Coin dimension adjustment. Loosen screw#1 to adjust the acceptability of coin size; move screw to right side to limit the acceptable dimension of coin; so to eliminate wrong coin with big dimension inserting.

② Device#2 is for wrong coin weight rejection: When coin fails to meet the weight request will be stuck to hook#2.

③ Screw#3 is for coin thickness adjustment.

④ Magnet device#4 is for catching up steel material coin, avoiding false coin inserting. Please take out the magnet device if steel material coin is acceptable.

⑤ Screw#5 is for adjusting false coin detecting.

⑥ Device#6 is for correct coin. The coin inserted meets the sample coin will reach this device and touch switch, then game starts.

⑦ Device#7 is for false coin. The false coin will be rejected and be out from #7. Press reject button when coin jam happened, jam coin will be out from #7.

⇩ **Maintenance for Coin Mech.**

Coin channel door

Power off and take out Coin Mech.. Refer to ARROW to open the coin channel door. Clean and maint the Coin Mech. Use banister brush or wet towel to clean dirt and stain.
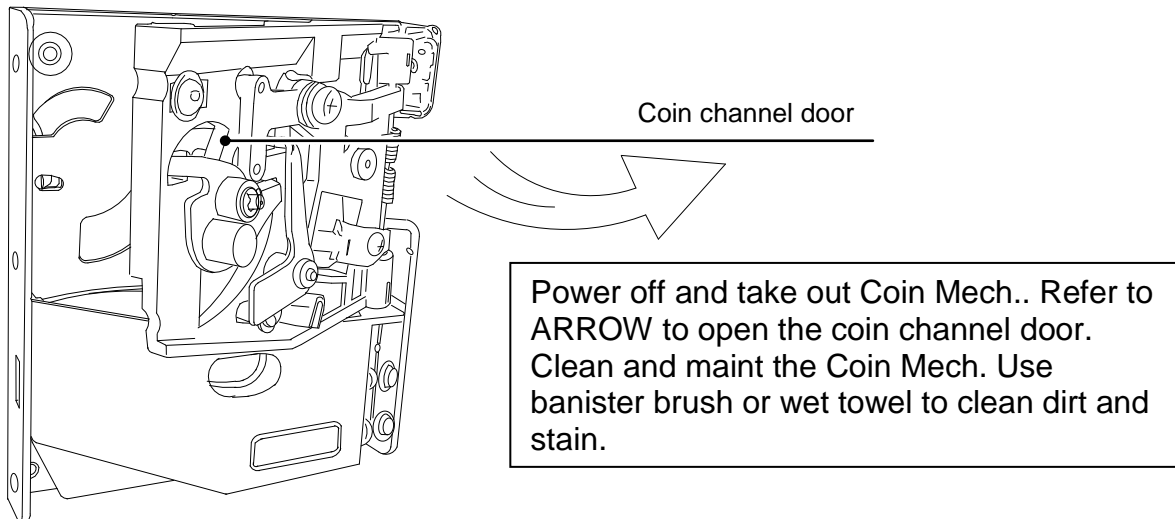
⚠ **CAUTION**
Never apply machine oil.etc. to the Coin Mech.

6-5-3 BILL ACCEPTOR

● DIP Switch Setting

There are two serial DIP switches which are located on the side of Bill Acceptor (as figure 1). According to different currencies which are used by users, DIP switch settings could be varied to fit users' need.
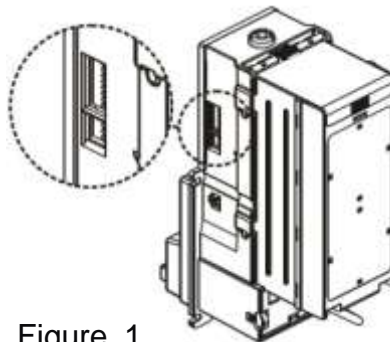
Figure 1

● Maintenance

To make sure the bill acceptor always works smoothly, please clean the internal parts every two weeks to every two months. To clean the internal parts:

1. Pressing the release lever on the sides of bill path unit and pull the unit out.

Release lever
LED
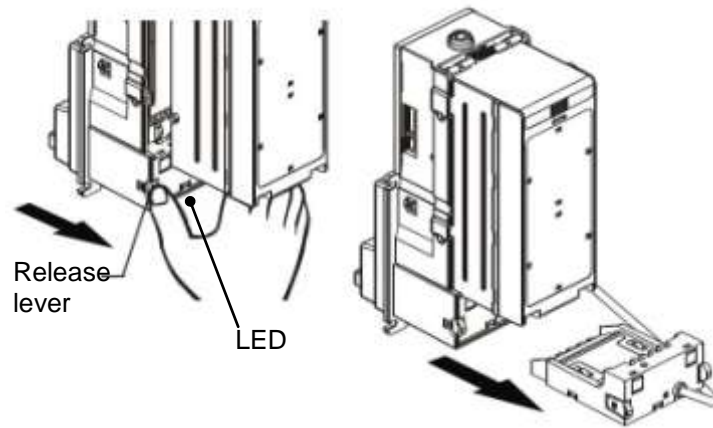
2. Use a soft, dry cloth or towel to clean the bill path and sensors.

Sensors

Sensors

Figure 3
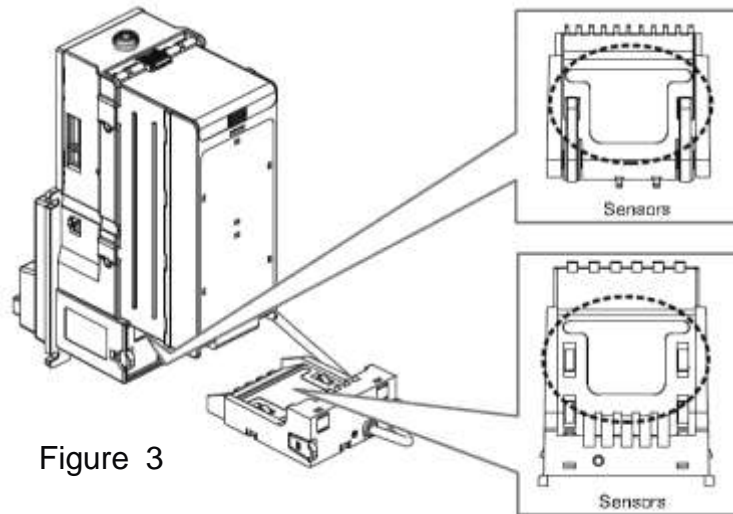
● **Removing Stacker**

Push white button on top of acceptor, lift up and back of stacker.

PUSH BUTTON

ACCEPTOR
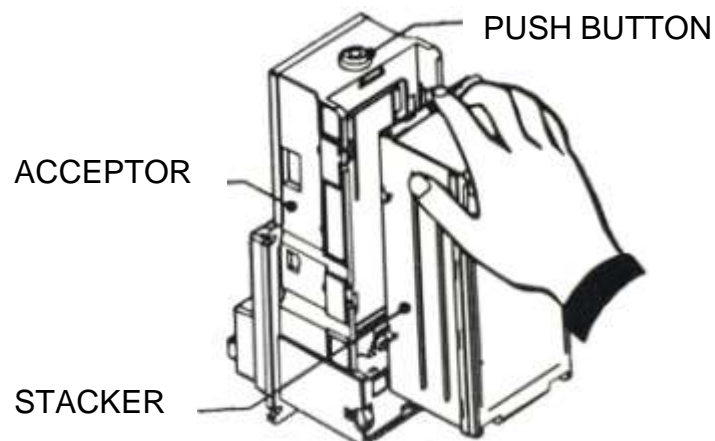
STACKER

⚠ **CAUTION**

Do not use an organic solvent such as gasoline or paint thinner to clean the unit.

● **Trouble Shooting**

DIAGNOSTICS LED ON = OK FLASHES	(GREEN LED) LED OFF =POWER OFF STATUS	CORRECTIVE ACTIONS
1	bill jammed	Remove the stacker by push white button on top of acceptor, lift up and back of stacker, and then remove the jammed bill.
2	disabled from system	Inspect for right DIP switch setting.
3	sensor problem	Inspect for foreign objects on sensor or bill path and clean.
4	reserved	
5	stacker removed	Replace the stacker.
6	stacker full	Empty the stacker.

6-6 HOW TO ADJUST THE CHAIN TENSTION
(SETTING HAS ADJUSTED TO THE BEST STATE BEFORE SHIPPING)

① Remove the 4 screws that fixed to the top of the (M4) and take off the top door cover, then find the adjusting screw is shown below pic.

② Screw off the nuts, then upper and lower adjusting screw can adjust the chain tension.

③ The screws from upper to adjust, the chain will go tight. on the contrary, The screws from downward to adjust, the chain will go loose.

④ After the adjustment, tighten the nut, fixed the top door cover.
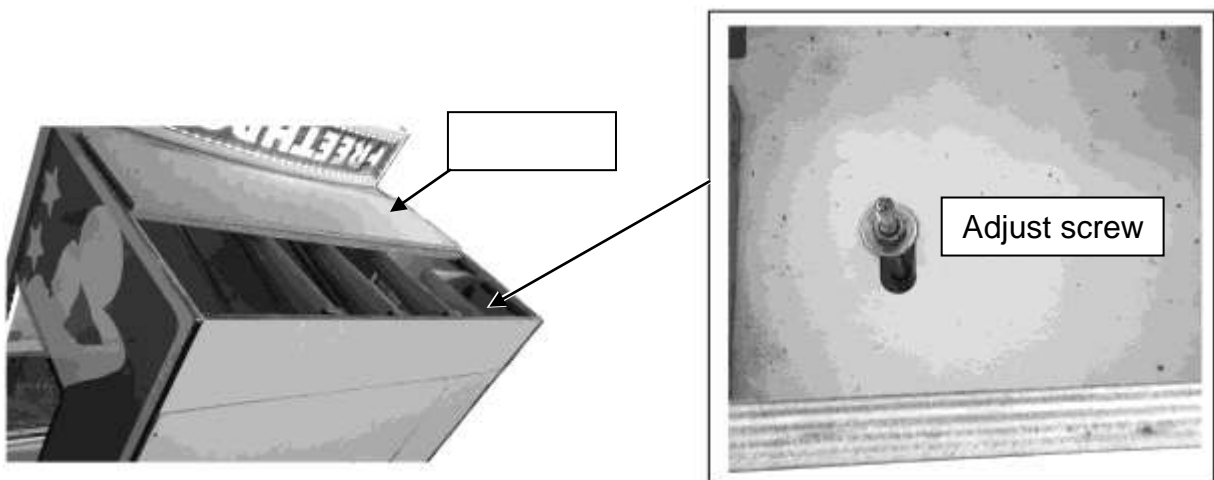
Adjust screw

6-6 HOW TO ADJUST THE BALL SHOOTING ANGLE & STRIKING FORCE

Open the coin door and find the ball shooting mechanism.

Direction adjusting screw rod

Force adjusting screw rod
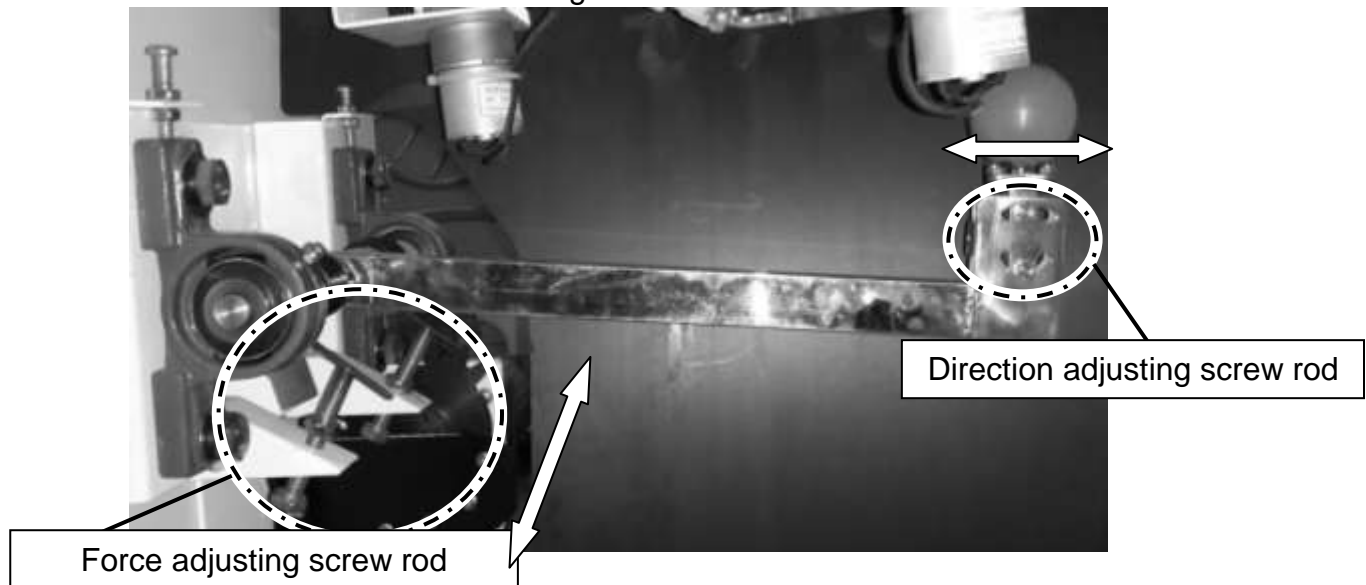
➢ Force adjusting screw rod: Remove the nuts, then upper and lower adjusting screw rod can adjust the ball shooting force. The screws rob from upper to adjust, the force will go increase. on the contrary, The screws rob from downward to adjust, the force will go small. Tighten the nuts after adjustment.

➢ Direction adjusting screw rod: Loosening the screw rob is showed in above pic circle, then left and right adjusting the shooting rob position thus change the ball shooting angle.

Note: Above the regulation factory has been adjusted to the optimum strength and the best shooting angle before they go out, the user can according to business requirement to adjust, but the process need to slowly groping.

6-6 HOW TO ADJUST THE BALL FRAME SIZE

160mm ball frame
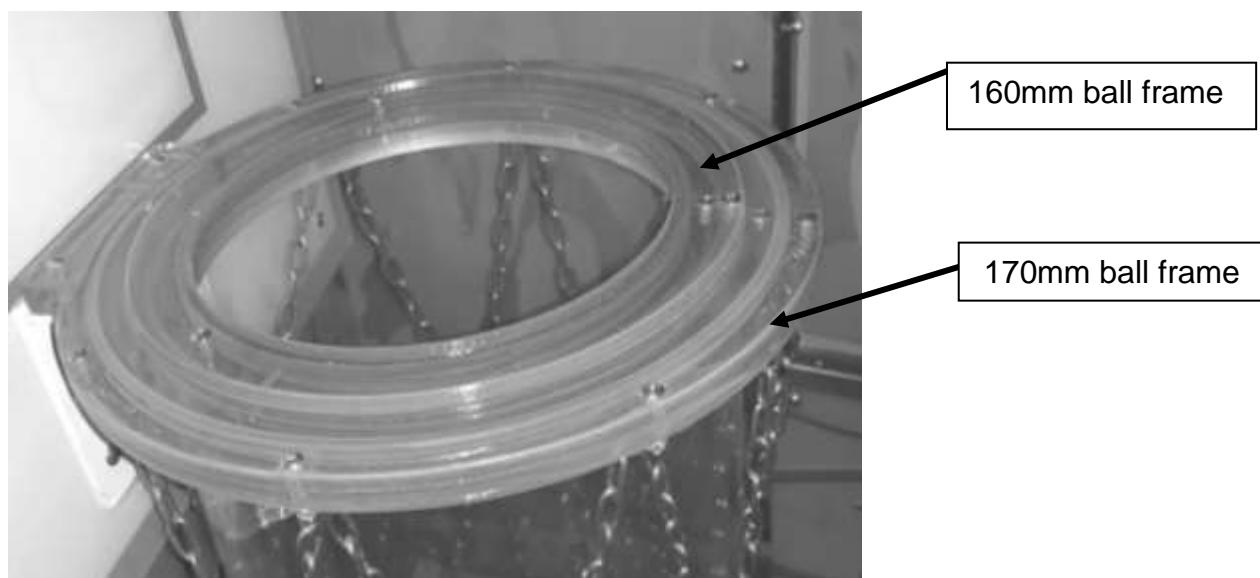
170mm ball frame

This game can be used using two different size ball to play, as shown above, it can be adjusted to 160mm or 170mm ball frame. The default of ball frame is 160mm. When you want to use the 170mm frame, as long as to remove the 4pcs M3 screws from 160mm ball frame and take it off.

7. INSTRUCTION OF PLAY

① Upon credit or cash, game start.

② Fairway rolled a basketball to the launch area, shaking the joystick to control the launch position of ball in the specified time. when aiming the basket ring, press the shot button, the ball is bounced;

③ If the button is not pressed to shoot the ball within the specified time, the game time is 0:00, The ball will be automatically shot.

④ If the ball is thrown to the ball ring, then as a prize from the mouth of prize, the player can take the ball away.

⑤ If the ball bounces back to the launch area, the machine will automatically shot the ball. (Machine will restore the default settings.)

Note：① Coin quantity ② Game time ③ The reaction, which the ball bounced back to the launch area, it can reference game parameters setting or the contents of the game-demand setting.

8. CONTROL SIGNAL INSTRUCTION

8-1 MAINBOARD

⇩ （Star_2010.PCB VER1.0）：
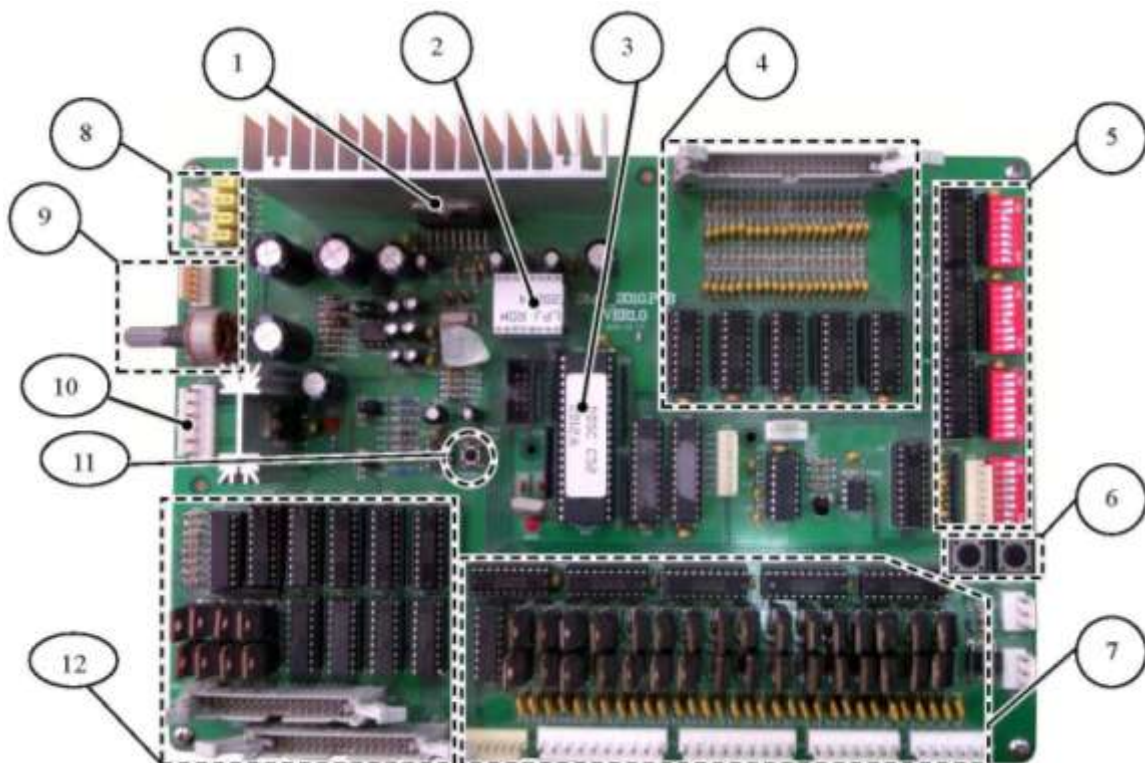
① POWER AMPLIFIER
② SOUND CHIP
③ GAME CHIP

④ SIGNAL INPUT
⑤ SW1,SW2,SW3，SW4（DIP code does not work）
⑥ SERVICE_SW, TEST_SW
⑦ SIGNAL OUTPUT
⑧ SPEAKER OUTPUT
⑨ VOLUME
⑩ POWER INPUT
11. RESET BUTTON
12. LED DISPLAY OUTPUT

(DETAILS REFER TO IO SHEET.)

8-2 GAME SETTING

The Game Menu and Adjustments are accessed through the coin door and located on a small panel where three pushbuttons are found; "MENU", "Jackpot Clear/Standby" and "TEST/OPTION". These pushbuttons are used to access a specific function MENU and change a game settings Option or Test function within a directory of selections, factory default settings, and/or custom settings according to the game manual. These adjustments are shown in the game LED display on the front panel once the "MENU" button has been pressed by the Operator.

The game adjustment settings, by entering the MENU, [pressing the MENU button inside the coin door], are displayed in the 2 block LED display [Score/Jackpot Display].

When an Operator presses the "MENU" pushbutton located inside the coin door- the display changes to display the MENU# and the OPTION# setting within the directory outlined below. By continuing to depress the MENU pushbutton, the Operator may advance through the various MENU #s in order to reach a specific MENU for adjustment. Once a specific MENU is displayed, the Operator uses the OPTION pushbutton to change the various OPTION #s available within that Menu.

The first 2 digits are the **MENU #**.

The second digit is the **OPTION #**.

Advancing through the MENU selections back to 0-0   0-0 will save the selections and return the game to normal after 3 seconds.

The "Jackpot Clear/Standby" button is used to clear any unpaid tickets stored in memory when a new bundle of tickets has been installed.

Turning the Power OFF and then ON again will save the game parameters in the software.

Denotes Factory Default settings at the factory

MENU#	OPTION#	ACTION
00	0	Wait for 3 seconds, the program will automatically save the settings, automatic restart the machine.
01	0	FREE GAME
01	1	1 Credit Play
01	2	2 Credits Play
01	3	3 Credits Play
01	**4**	**4 Credits Play**
01	5	5 Credits Play
01	6	6 Credits Play
01	7	7 Credits Play
01	8	8 Credits Play
02	1	Round of play 1 shot per game
02	**2**	**Round of play 2 shot per game**
02	3	Round of play 3 shot per game
02	4	Round of play 4 shot per game
02	5	Round of play 5 shot per game
02	6	Round of play 6 shot per game
03	**0**	**20 Second game time**
03	1	30 Second game time
03	2	40 Second game time
03	3	50 Second game time
04	0	Attract OFF
04	1	Attract every 15 seconds
04	2	Attract every 35 seconds
04	**3***	**Attract every 45 seconds**
04	4	Attract every 60 seconds
04	5	Attract every 90 seconds
04	6	Attract every 120 seconds
05	0	Attract Audio OFF
05	**1***	**Attract Audio ON**

06	0	**Ball sprang back to the Launch panel to continue to play**
06	1	Ball sprang back to the Launch panel to go to next game
06	2	Ball sprang back to the Launch panel to Auto-launch
07	0	Test: All controlled lamps flash
07	1	Test: All input（all opto sensor and switch ） detect- "ding"
07	2	Test: Play main music
07	3	Test: All mechanism run

9. ERROR CODE DISPLAY

ERROR information, it is showed as follow, if the LED display show ERR code, we can know the related mechanism problem.

Er1	EEPROM error. Solve: 1）Enter the setting, set the options to default values. 2)Change a new chip.
Er11	Hitting ball switch(up) no signal. Question: 1)Hitter let-ball-come switch fail. 2)Motor can't run.
Er12	Hitting ball switch(down) no signal. Question: 1)Hitter ready-to-hit switch fail. 2)motor can't run.
Er21	Ball-pan front-back-ward sensor no signal. Question: 1) Sensor fail. 2)Motor can't run.
Er22	Ball-pan left-right-ward sensor no signal. Question: 1) Sensor fail. 2)Motor can't run.
Er30	Push-ball mechanism no signal. 1)switch fail. 2)Motor can't run.
Er40	Ball-case can't close .Question: 1)Sensor fail or ball-case-has-ball-sensor fail(always see a ball).2) Ball case sensor fail.3)Motor can't run.
Er41	Ball casex#1 sensor no signal. Question: 1)The mechanism to run over, or did not run in place.2)Motor can't run.
Er42	/Ball casex#2 sensor no signal. Question: 1)The mechanism to run over, or did not run in place.2)Motor can't run.
Er43	Ball casex#3 sensor no signal. Question: 1)The mechanism to run over, or did not run in place.2)Motor can't run.
Er50	Elevator chain mechanism stop. Question: 1)Sensor fail.2)Motor can't run.

10. TROUBLE SHOOTING

| Symptom	Possible Problem	Solution
	POWER	*POWER*
Game will not score	Power not on sensor Sensor output not correct Signal not getting to main board Signal gets to main board but board doesn't see it	Check wiring harness for 12 volts on sensor Repair / Replace sensor Repair / Replace harness Replace main board

Sound Problems
  -No sound
  -Low Sound
  -Intermittent Sound
	Low Volume
	
	Faulty speaker harnessing
	
	Faulty speaker
	Faulty sound board or sound board harnessing
	Faulty Main P.C. Board
		Check Volume Control and adjust as necessary
		Check connections and/or repair harnessing
		Check and/or replace speaker
		Check connections or Replace Sound Board
		Check and/or repair or replace Main P.C. Board

Game does not take or add money correctly	Coin switch out of adjustment Coin mech dirty or improperly adjusted Faulty Coin switch Faulty coin switch harness or connector Game improperly programmed Faulty Main P.C. Board or component	Re-bend coin switch wire Clean and adjust mech as necessary Check and/or replace switch Check and/or repair harnessing Check programming options and adjust Repair and/or replace Main P.C. board
Ticket Dispenser not working properly, or no tickets being dispensed	No tickets in the game Tickets jammed in dispenser Ticket dispenser sensor blocked with debris Poor connection on the ticket dispenser Game improperly programmed Faulty ticket dispenser Faulty ticket dispenser harnessing Faulty Main P.C. Board	Refill ticket dispenser Clear ticket jam Clean off sensor Check and/or replace connectors Check ticket programming options Replace dispenser Check and/or repair harnessing Replace or repair Main P.C. Board
Game will not start.	Game power off Electrical Power Switch Open Main fuse blown Power Supply problem or failure Faulty P.C. board or component	Check on/off switch and power cord Close Electrical Power Switch Check and/or replace fuse as necessary Check Power Supply output and connections Repair and/or replace main P.C. board
LED Light fails	Poor contact of terminal LED light is burned out.	Correct the connection Replace the broken LED light with new one.
Game stops or is stopped with nothing displayed	The power connector is disconnected. Possible faulty connection or short circuit.	Reconnect the connector securely. Check all circuitry for faulty connections or short circuits.

11. PARTS LIST

11-1 STORAGE BALL MECHAISM
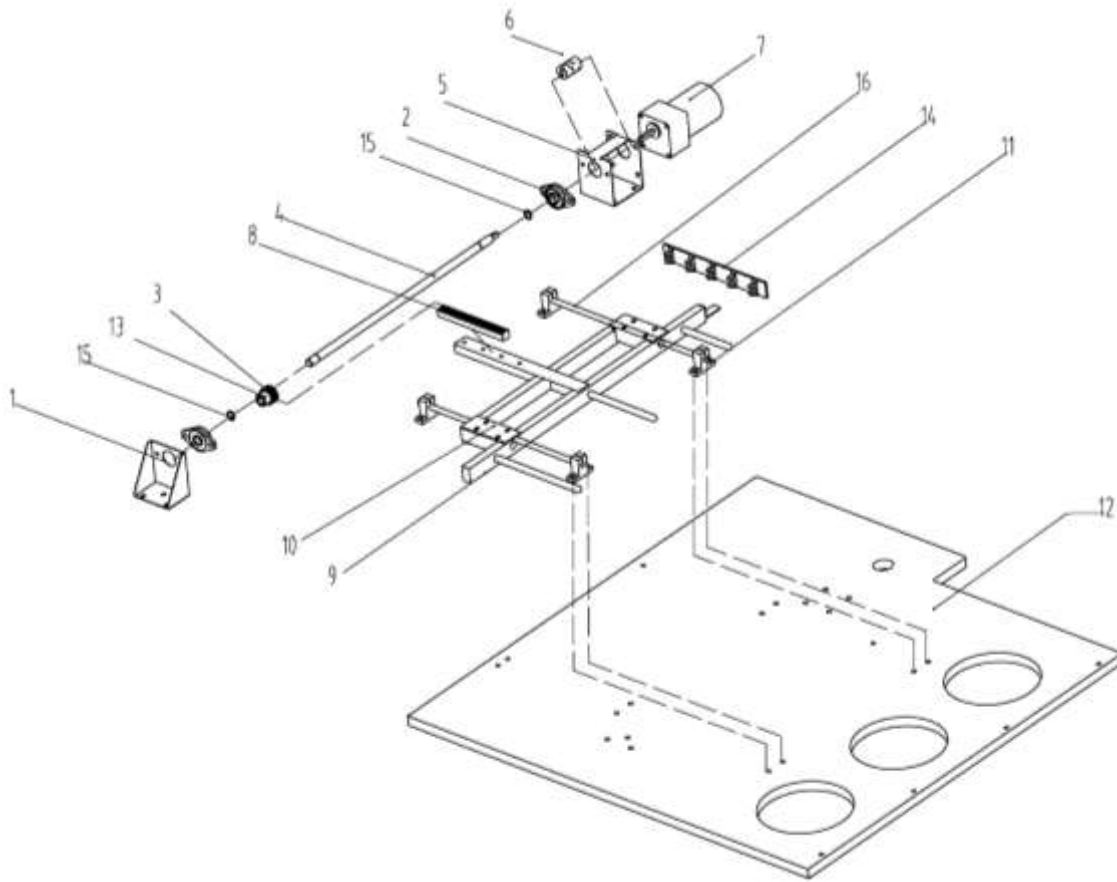
NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL
1	FR-1-01	Storage motor sub plate	1	Q235/2mm
2	FR-1-02	Flange bearing	2	FL001
3	FR-1-03	Gear wheel	1	24tooth，45#
4	FR-1-04	Gear roller	1	Q235
5	FR-1-05	Ball storage motor plate	1	Q235/2mm
6	FR-1-06	Connector	1	M8
7	FR-1-07	Motor(STORAGE BALL)	1	YN60-10/60JB100GB
8	FR-1-08	Gear rack	1	180mm,45#
9	FR-1-09	Ball storage bracket	1	
10	FR-1-10	Straight bearing	2	SK8
11	FR-1-11	Ball storage stand fixture	4	
12	FR-1-12	Ball storage main board	1	Double white fire prevention board 16mm

13	FR-1-13	Screw	1	
14	FR-1-14	Infrared sensor	1	YGLL_33038.PCB
15	FR-1-15	Jump ring	2	
16	FR-1-16	Ball transmission shaft	1	Q235

11-2 SHOOTING BALL MECH
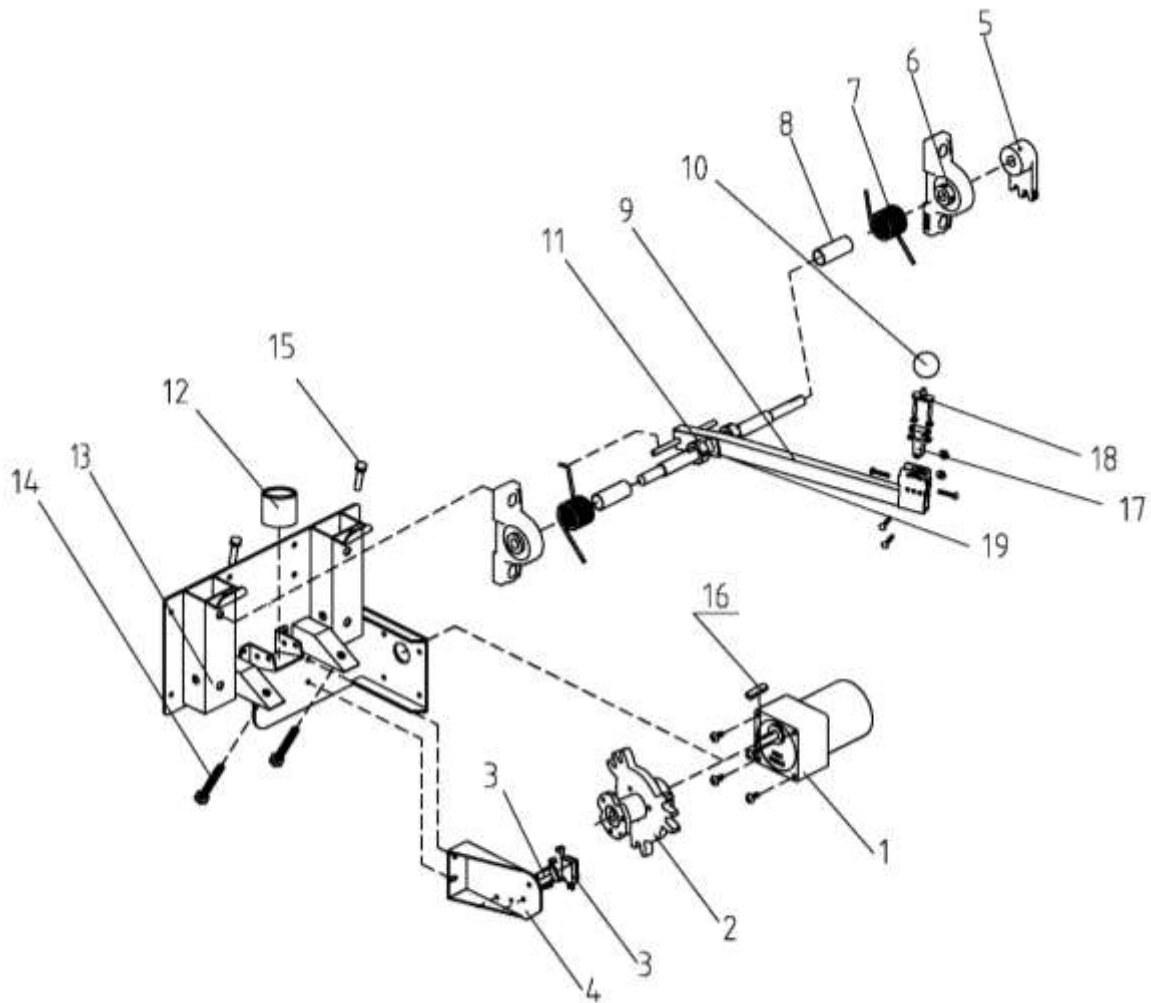
NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL
1	FR-2-01	Motor(Shooting ball)	1	YN70-15Z/70JB150G1032
2	FR-2-02	Main gear	1	8mm，45#
3	FR-2-03	Micro switch	2	
4	FR-2-04	Micro switch base	1	Q235/2mm
5	FR-2-05	Vice gear	1	8mm，45#
6	FR-2-06	P203 Bearing base	2	
7	FR-2-07	Spring	2	Stainless steel 65Mn （L&R）

| 8	FR-2-08	Spring cover	2	MC Nylon
9	FR-2-09	Frame	1	Stainless steel
10	FR-2-10	Ball	1	S∅45mmxM16
11	FR-2-11	Cover	2	Stainless steel
12	FR-2-12	Attack cover	1	polyurethane
13	FR-2-13	Base	1	Q235
14	FR-2-14	Spring adjust lever	2	M8x60
15	FR-2-15	Screw	2	M6x30
16	FR-2-16	Flat key	1	4x28mm
17	FR-2-17	Adjusting collar	1	Stainless steel
18	FR-2-18	Batting lever	1	Stainless steel
19	FR-2-19	Ball rod strengthen board	1	2mm Stainless steel

11-3 SENDING BALL MECHAISM
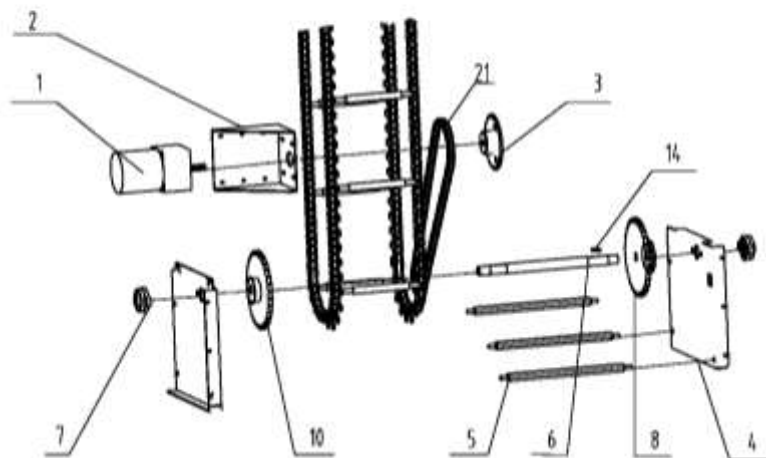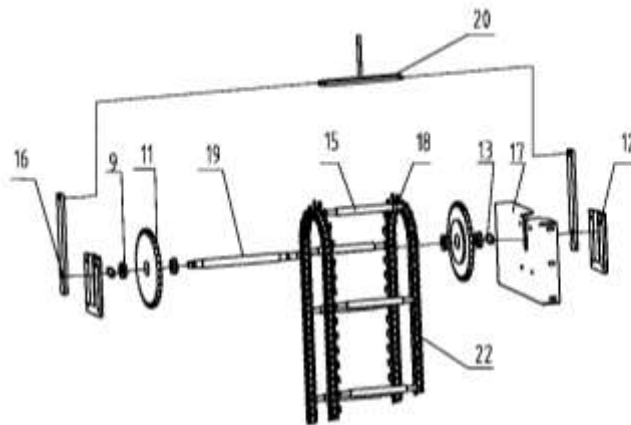
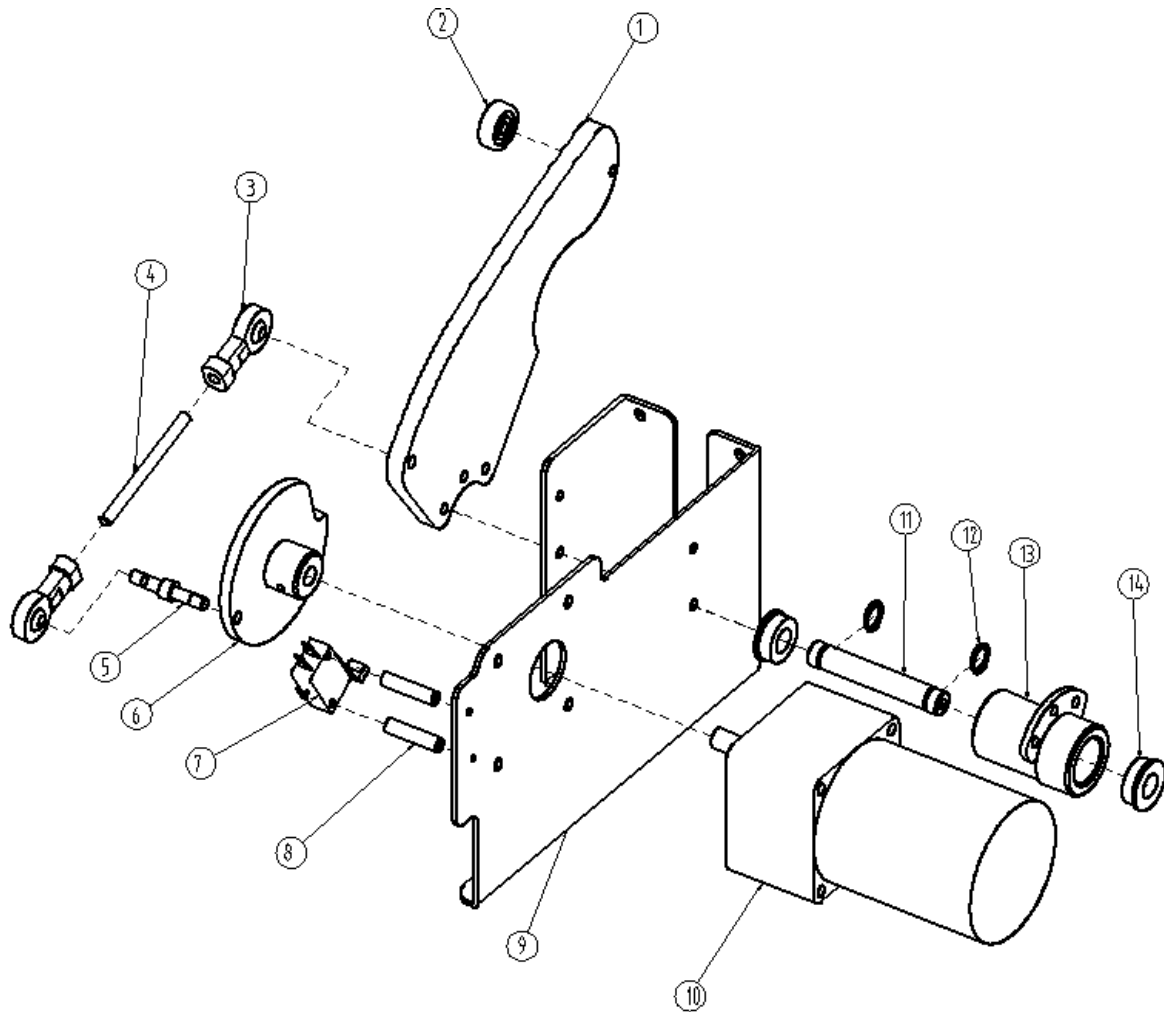| NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL

1	FR-2-01	Motor	1	YN70-15Z/70JB150G1032
2	FR-3-02	Motor seat	1	Q235/2mm
3	FR-3-03	Motor action wheel	1	Q235
4	FR-3-04	Chain wheel frame left and right board	2	Q235/2mm
5	FR-3-05	Backbone	3	Six corner copper pillar
6	FR-3-06	Right chain wheel shaft	1	Stainless steel
7	FR-3-07	Flange bearing	2	FL002
8	FR-3-08	Right chain wheel	1	Q235
9	FR-3-09	Flange bearing	4	F6901ZZ
10	FR-3-10	Left chain wheel	1	Q235
11	FR-3-11	Vice sprocket	2	
12	FR-3-12	Slipping slot	2	45#
13	FR-3-13	Limited spring	1	1x⌀11
14	FR-3-14	Flat key	2	4×20mm
15	FR-3-15	Riding wheel	20	MC Nylon
16	FR-3-16	Slipper block	2	8mm，Q235
17	FR-3-17	Chain wheel upper frame	1	Q235/2mm
18	FR-3-18	Roller axle	20	Stainless steel
19	FR-3-19	Countershaft	1	Stainless steel
20	FR-3-20	Sliding top board	1	Q235
21	FR-3-21	Ball elevator drive chain	1	L=800mm
22	FR-3-22	Ball elevator chain lift	2	L=3033.4mm

11-4 BALL TOSSING MECHANISM
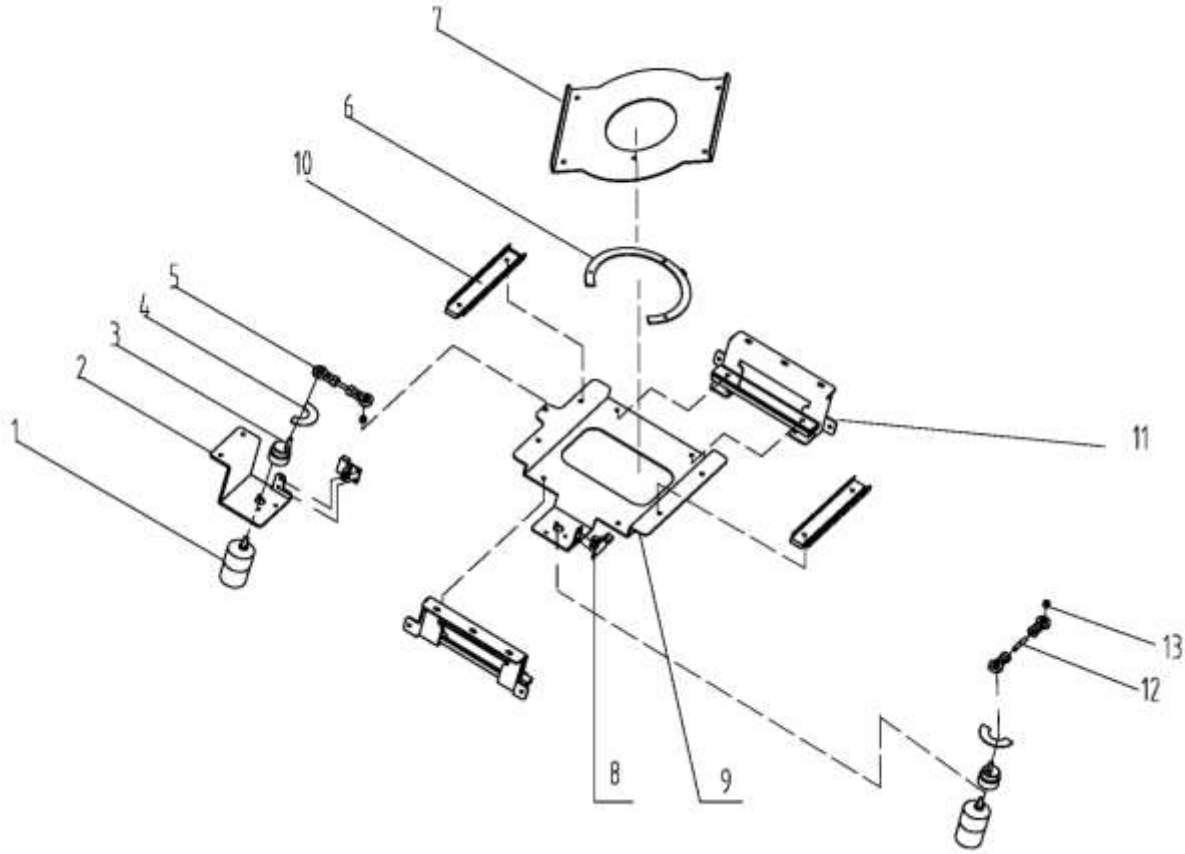
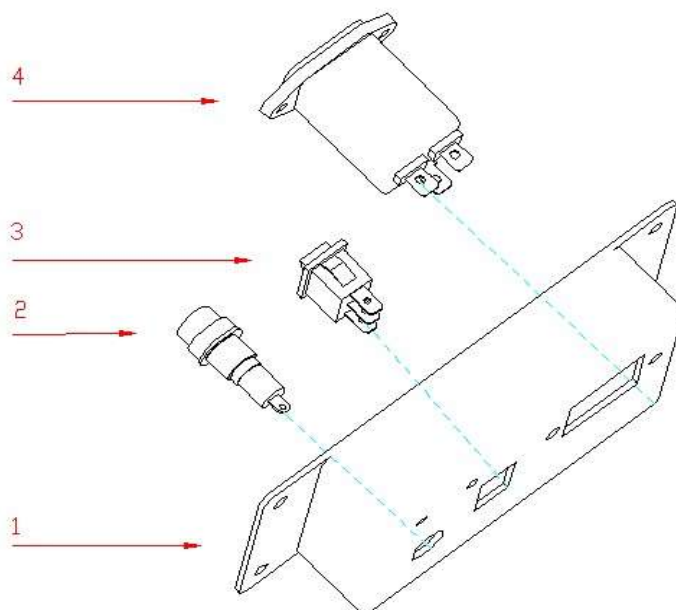| NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL
1	FR-4-01	Motor	2	12V,45 round/minute
2	FR-4-02	Motor board	1	Q235/2mm
3	FR-4-03	Eccentric wheel& Reaction piece	2	Stainless steel /1mm
4	FR-4-05	Joint bearing	3	S15
5	FR-4-06	LED circle	1	YGLQ-LED12.PCB/ 1mm
6	FR-4-07	Base	1	Q235/2mm
7	FR-4-08	T4 sensor	2	MOC70T4.PCB
8	FR-4-09	Under base	1	2mm
9	FR-4-10	Sliding rail	4	
10	FR-4-11	Lead rail frame	2	Q235/2mm
11	FR-4-12	Lead screw	2	
12	FR-4-13	Pad	2	$\varnothing$8x5，Stainless steel

11-5 PUSHING BALL MECHAISM

NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL
1	FR-5-01	Ball-pushing board	1	Black plastic
2	FR-5-02	Bearing	1	696
3	FR-5-03	Joint bearing	2	S15
4	FR-5-04	Lead screw	1	Stainless steel，L=55mm
5	FR-5-05	Connecting rod bearing	2	Stainless steel（M5 nut）
6	FR-5-06	Ball-pushing eccentric gear	1	45#，white-zinc plating
7	FR-5-07	Micro-switch	1	
8	FR-5-08	Pushing switch straw	2	Stainless steel
9	FR-5-09	Ball-pushing fixture	1	2mm，Q235
10	FR-5-10	Ball-pushing motor	1	55ZY12-15-03/60JB60GB
11	FR-5-11	Ball-sending roller	1	Stainless steel

12	FR-5-12	Spring	2	1mm
13	FR-5-13	Ball-pushing bearing cover	1	Stainless steel
14	FR-5-14	Flange bearing	2	F6800ZZ

11-6 POWER BOX

NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL	PICTURE
1	FR-6-01	BINDING POST	1	SPCC	
2	FR-6-02	FUSE BASE	1	R3-11	
3	FR-6-03	FILTER	1	10A	
4	FR-6-04	SWITCH	1	250V/10A	

11-7 INSIDE OF COIN DOOR
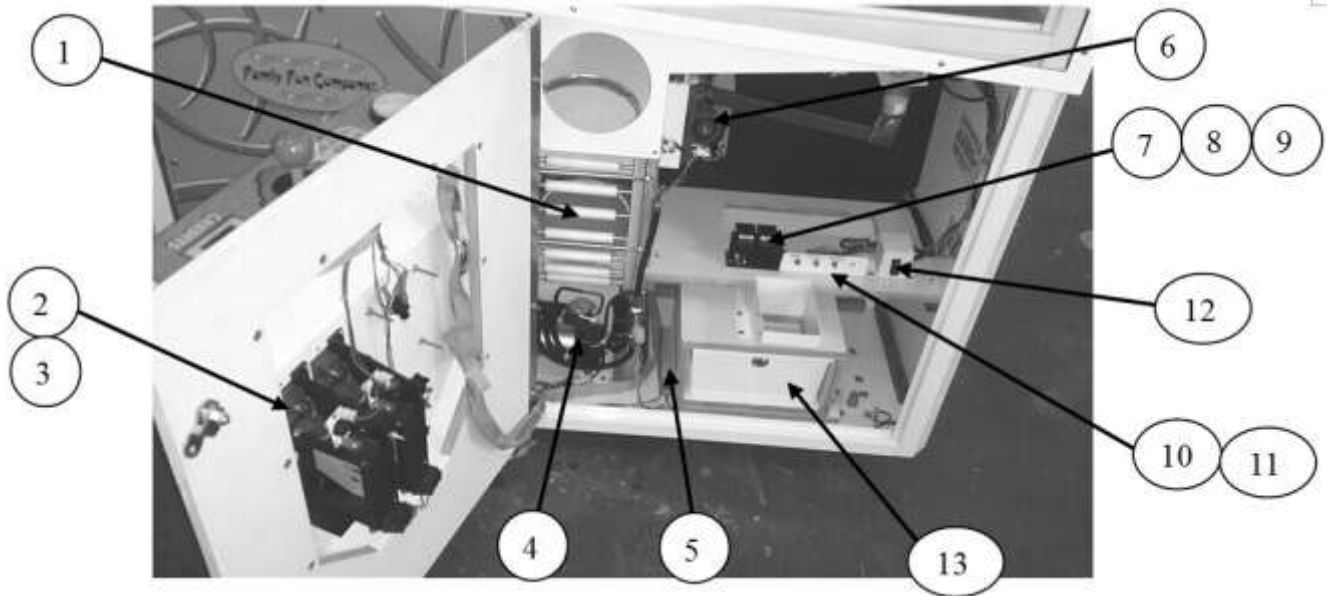
NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL	PICTURE
1	FR-7-01	FAIRWAY	1		
2	FR-7-02	COIN MECHANISM	2	Mechanism	
3	FR-7-03	CALLE COIN MECH HS-05CS	2	TAIWAN	
4	FR-7-04	AIR COMPRESSING	1		
5	FR-7-05	LED LANTERN CONTROLLER	1	HC008	
6	FR-7-06	SHOOTING DEVICE	1	Assembly parts	
7	FR-7-07	COUNTER PANEL	1		
8	FR-7-08	COUNTER	2	6 digital	
9	FR-7-09	VOLUME POTENTIONMETER	1		

10	FR-7-10	SETTING PANEL	1		
11	FR-7-11	SETTING BUTTON	3	Red or Green	
12	FR-7-12	SWITCH	1		
13	FR-7-13	COIN BOX	1	Q235	

11-8 INSIDE OF MAINTAINCE DOOR
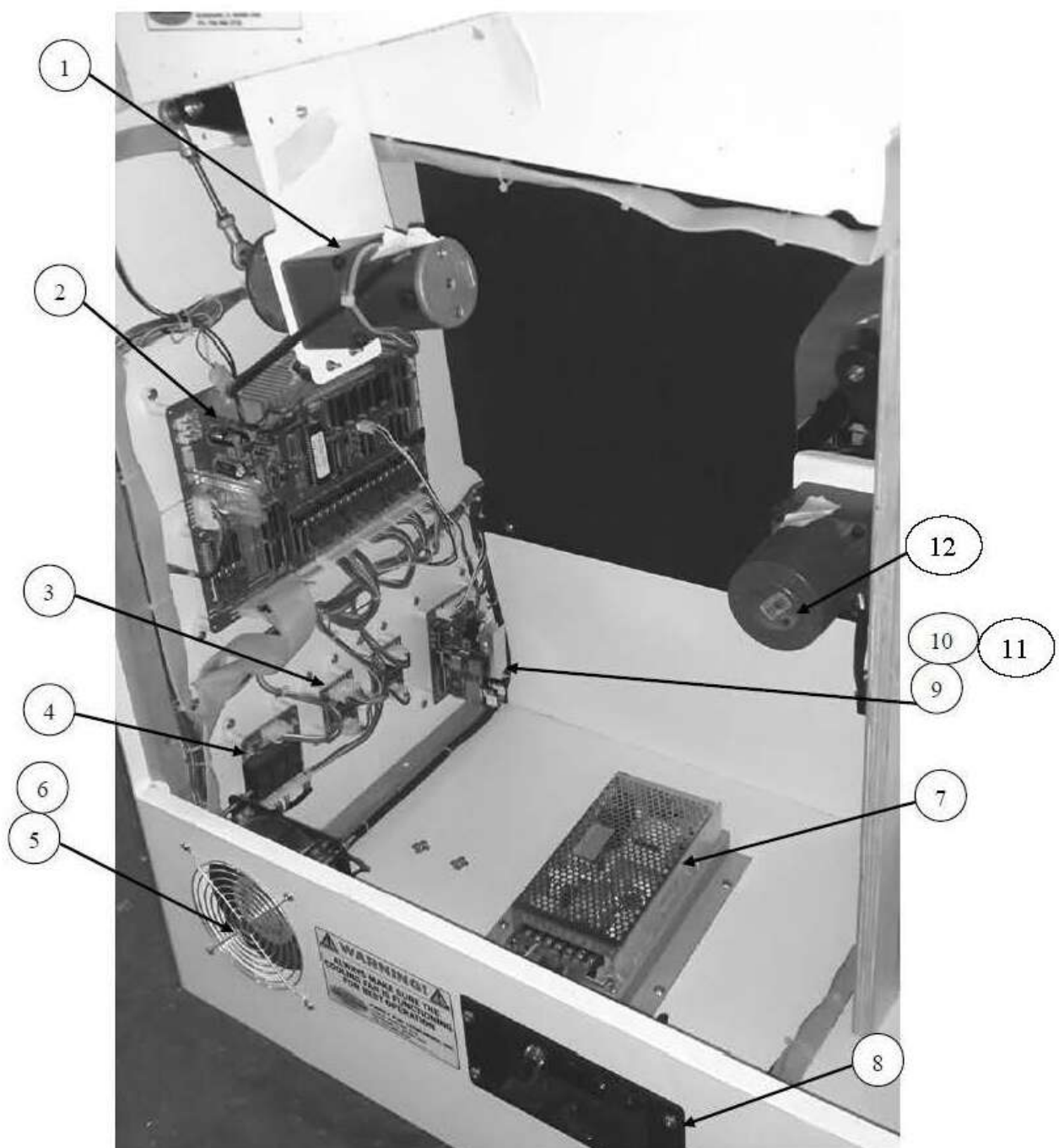
NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL	PICTURE
1	FR-5-10	MOTOR(PUSHING BALL)	1	55ZY12-15-03/60JB60G8	
2	FR-8-02	MAINBOARD	1	STARS_2010.PCB V1.0	
3	FR-8-03	MOTOR SWITCH BOARD	2	DJQDL6205.PCB	
4	FR-8-04	MOTOR DRIVE	3	GTJDQ.PCB V1.0	
5	FR-8-05	COOLING FAN	1	110V/4INCH	
6	FR-8-06	COOLING FAN COVER	2		
7	FR-8-07	SWITCHING POWER SUPPLY	1	OUTPUT12V/5.0A	
8	FR-8-08	POWER BOX	1		
9	FR-8-09	AUDIO BOARD	1	MP3_FDQ.PCB V1.0	
10	FR-8-10	MP3 MOUDLE	2	GINTWAY-GBM01	
11	FR-8-11	MEMORY CARD	2	SD CARD /512Mb OR ABOVE	
12	FR-2-01	MOTOR(SHOOTING BALL)	1	YN70-15Z/70JB150G1032	

11-9 OTHER ELECTRICALS LIST

NO.	PART CODE	DESCRIPTION	QTY	SPECIFICATION/MATERIAL	PICTURE
1	FR-9-01	DIGITAIL PANEL	1	SMG23101_3W.PCB V2.0	
2	FR-9-02	DIGITAIL PANEL	1	SMG8102_2W.PCB V2.0	
3	FR-9-03	LED BEADS	23	12V/WHITE	
4	FR-9-05	LED LANTERN BAR	1	5050/12V/WHITE 0.76m (BASKET FRAME)	
5	FR-9-06	LED LANTERN	2	TM1804 LED COLOURFUL BAR 1.9m (THE SHELL OF LEFT AND RIGHT SIDE)	
6	FR-9-07	LED BAR	2	12V WHITE BACKGROUND/WHITE 0.9m (INNER LEFT AND RIGHT FRAME)	
7	FR-9-08	LED BAR	2	12V WHITE BACKGROUND/WHITE	
8	FR-9-09	LED BAR	1	12V WHITE BACKGROUND/WHITE	
9	FR-9-10	LED LANTERN	1	TM1805 LED COLOURFUL BAR 2.5m (INNER LIGHT BOX)	
10	FR-9-11	POWER CABLE USA TYPE	1	GB 3x0.75 SQUARE/mm	
11	FR-9-12	DIFFUSE SENSOR	4	PES-D18NO30D	
12	FR-9-13	REGRESSION SENSOR	1	PES-RC50NO2MD	
13	FR-9-14	CORRELATION SENSOR	5	SJM_IN.PCB V3.0	
14	FR-9-15		5	SJM_OUT.PCB	

15	FR-9-17	LM393 SENSOR	4	STARS 3011	
16	FR-9-19	SPOTLIGHT（HOUSE）	4	12V/3W/WHITE	
17	FR-9-20	SPOTLIGHT（HOUSE）	1	12V/3W/GREEN	
18	FR-9-21	SPOTLIGHT（HOUSE）	5		
19	FR-9-22	LED BAR（BONE）	2	T8 LED_RGB.PCB	
20	FR-9-23	SPEAKER	2	8Ω/15W	
21	FR-9-24	LED BASE	2	12V/WHITE	
22	FR-9-25	MICRO SWITCH	1	NO PIECE	
23	FR-9-26	LARGER SIZE BUTTON	1	WHITE/CLEAR	
24	FR-9-27	MICRO SWITCH	3	WITH WHEEL	