

# PONG<sup>®</sup>

Arcade version



**IMPORTANT**



Be Sure  
to Read this  
Manual  
Before Use



[www.universal-space.com](http://www.universal-space.com)

# Operation Manual

# WE ARE HERE TO ASSIST For parts and service



**Have Questions? Contact us!**

**UNIS SERVICE CENTER**  
Tel: 972-241-4263  
Email: [service@unispartsandservice.com](mailto:service@unispartsandservice.com)

When contacting Service, you will need the following information  
and the name of your authorized distributor.

INDOOR MACHINE	
NAME: PONG ARCADE	MAX POWER: 280W
MODEL: A-427	MIN POWER: 200W
S/N:	FREQUENCY: 50/60Hz
VOLTAGE: AC110V ~	DATE:
Guangdong UNIS Technology Co.,Ltd.	

INDOOR MACHINE	
NAME: PONG ARCADE	MAX POWER: 280W
MODEL: A-427	MIN POWER: 200W
S/N:	FREQUENCY: 50/60Hz
VOLTAGE: AC220V ~	DATE:
Guangdong UNIS Technology Co.,Ltd.	

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Thank you for purchasing **PONG**. We hope you enjoy the product.

This manual contains valuable information about how to operate and maintain your game machine properly and safely. It is intended for the owner and/or personnel in charge of product operation. Carefully read and understand the instructions.

If you need any help during installation and setup please utilize this manual and troubleshooting guide. If the product fails to function properly, *non-technical personnel should under no circumstance attempt to service the machine*. Contact your distributor or manufacturer for help.

Before use, please read **IMPORTANT SAFETY INSTRUCTIONS**.

## IMPORTANT SAFETY INSTRUCTIONS

**To ensure the safe usage of this product, carefully read and understand these instructions before operating your game.**

**Save these instructions for future reference.**

Use this product only as described in this manual. Other uses not recommended may cause fire, electric shock or personal injury. Unplug the game from the outlet when not in use, when moving from one location to another, and before cleaning/servicing.

Explanations which require special attention are indicated by signs of warning. Depending on the potential hazardous degree, the terms: **NOTE**, **NOTICE**, and **WARNING** are used.

**NOTE:** A NOTE indicates useful hints or information about product usage.

**NOTICE:** A NOTICE indicates potential damage to product and how to avoid the problem.

**WARNING:** A WARNING indicates a potential for product damage or serious personal injury.

It is important to understand the meaning of the following HAZARD SIGNS before continuing:

### High Voltage and Shock Hazard:

High voltage can cause electric shock.  
Turn off/unplug power before servicing.



### High Temperature Hazard:

This part may cause scalding.  
Do not touch. Surface may be hot.



### No Touching Hazard:

This part may be hot or can cause electric shock.  
Do not touch.



Use the following safety guidelines to help ensure your own personal safety and to help protect your equipment and surrounding environment from potential damage.

**⚠ This product is an indoor game machine. Do not install outdoors.**

Avoid installing in the following places to prevent fire, electric shock, injury and/or machine malfunctioning:

- Places subject to rain/moisture, or places subject to high humidity.
- Places subject to direct sunlight, or places subject to extremely hot or cold temperatures to ensure that it is used within the specified operating range.
- Places where inflammable gas may be present or in the vicinity of highly inflammable/volatile chemicals or items that can easily catch fire.
- On unstable or sloped surfaces. The machine may topple or cause unforeseen accidents.
- Vicinity of fire exits, fire extinguishers etc that may block/prevent safety measures.

**IMPORTANT NOTE:**

**ALL REPAIRS MUST BE DONE TO ORIGINAL MANUFACTURER SPECIFICATIONS. FAILURE TO DO SO VOID ALL WARRANTIES AND OPERATOR ASSUMES ALL RISKS.**

**ANY LUBRICATION TO THE MECHANISM WILL VOID THE WARRANTY**

**IMPORTANT NOTE:  
ALL REPAIRS MUST BE DONE TO ORIGINAL MANUFACTURER SPECIFICATIONS.  
FAILURE TO DO SO VOIDS ALL WARRANTIES  
AND THE OPERATOR ASSUMES ALL RISKS.**

Maintenance should be performed with caution on always done with power off.

If a liquid spill has occurred, you must take immediate action to assure that the spill has been absorbed to prevent damage. Turn the machine off and unplug immediately.

**THIS GAME SHOULD BE SERVICED BY AUTHORIZED PERSONNEL ONLY**

Note: The contents of this manual may be updated without notice.

# 1. SPECIFICATIONS

Rated power supply: AC110V~50/60Hz; AC220V~50/60Hz;

Min. Power consumption: 200W

Max. Power consumption: 280W


Dimension: W 55.91×D 34.10×H 31.67 in

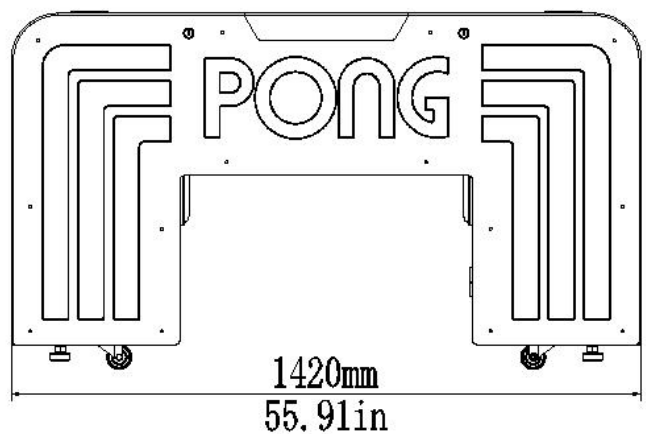
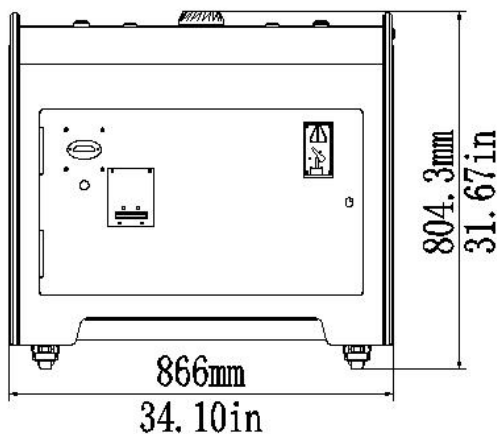
W 1420×D 866×H 804.3 mm

Weight: Approximately 353 lb

Part No: P148

Model: A-427

 **NOTICE** : After turning off the game, please wait at least 1 minute before restarting again.



**Note:** Game specifications are subject to change without notice.

## 2. CONTENTS OF THE ACCESSORY KIT

Open the package and make sure all the items are included:

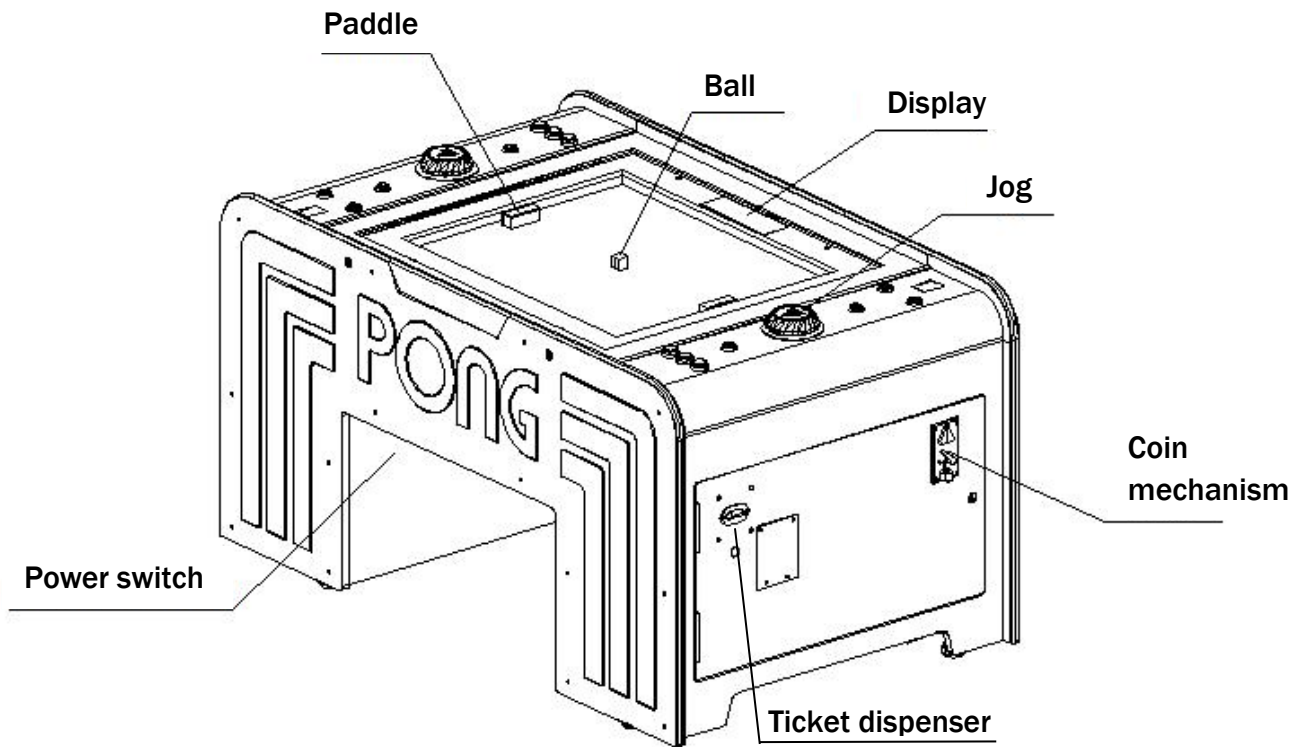
### 1. Following accessories

No.	Part No.	Code	Name	Picture	Qty
1	P152-801-000	23301010020	Power cord		1
2	P152-436-000	21901000010	Fuse		1
3	P152-806-000	41440000247E	Manual		1
4	P152-180-000	20211707045A	Adjust plate A		1
5	P152-181-000	20211707046A	Adjust plate B		1
6	P152-803-000	25300171002	Key		2
7	P152-804-000	25300172002	Key		2
8	P152-334-000	20101020034	Cross recessed pan head screw set		2
9	P152-303-000	20113000003	Standard spring washer		2
10	P152-805-000	25302000010	Key		2
11	P152-807-000	20211707H040	weight		1
12	P152-808-000	40607000013	Allen wrench		1

**NOTE:** Part models are subject to change without notice.

### 3. PART NAME

#### Key Components





## 4. SET UP & INSTALLATION

### ! NOTICE

**We do not recommend using power tools as they may cause damage.**

**! This product is an indoor game machine. Do not install outdoors.**

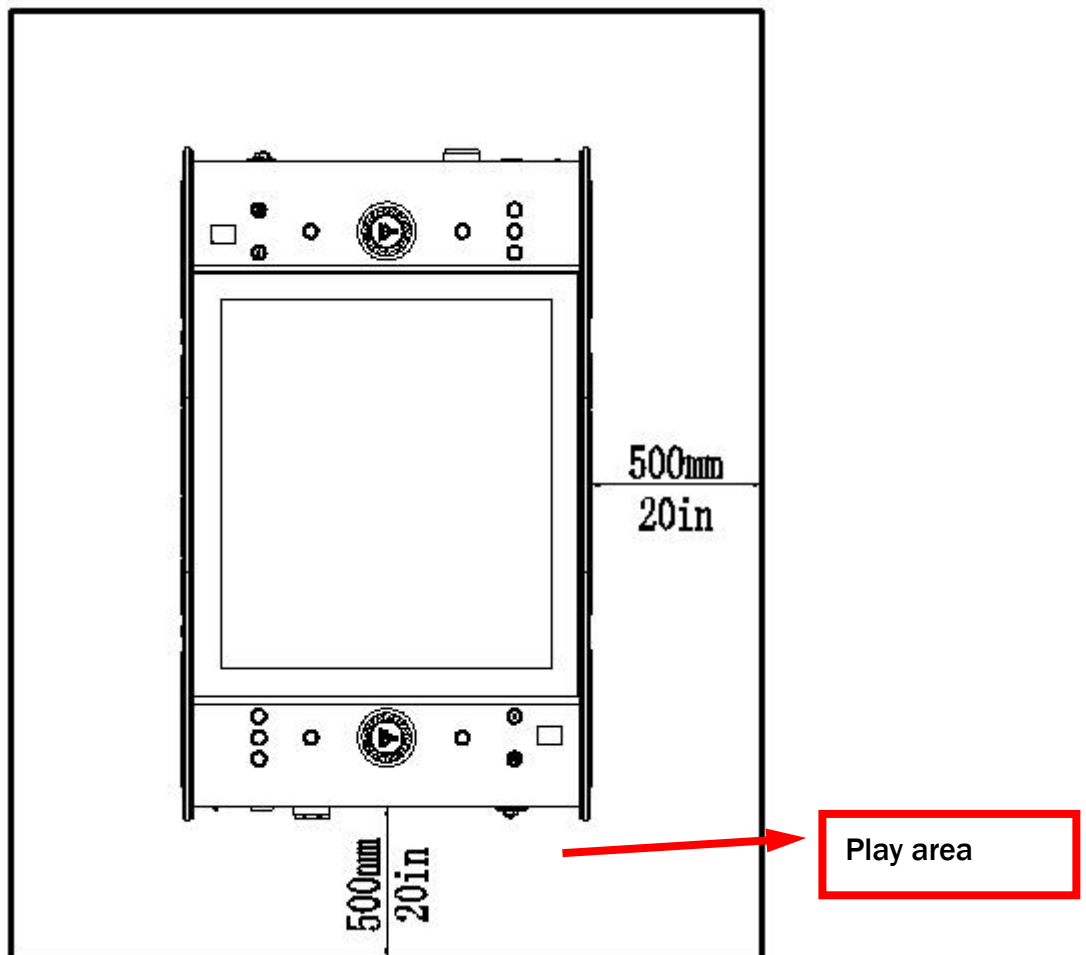
- Refer to IMPORTANT SAFETY INSTRUCTIONS (Pg. 3) for places to avoid
- Place the unit on a dry level surface
- Ventilation openings must not be obstructed by objects or by wall.

### 4.1 Play Zone

This machine requires space for playing and for maintenance as shown below.

Leave space around the game upon installation:

Play area: 20 in



### NOTICE


**Your unit must be leveled to operate properly.**

## 4.2 Voltage Conversion

Locate the Power supply. Loosen the power supply cover screws and take it off.  
Toggle the switches to 115V or 230V according to your need.

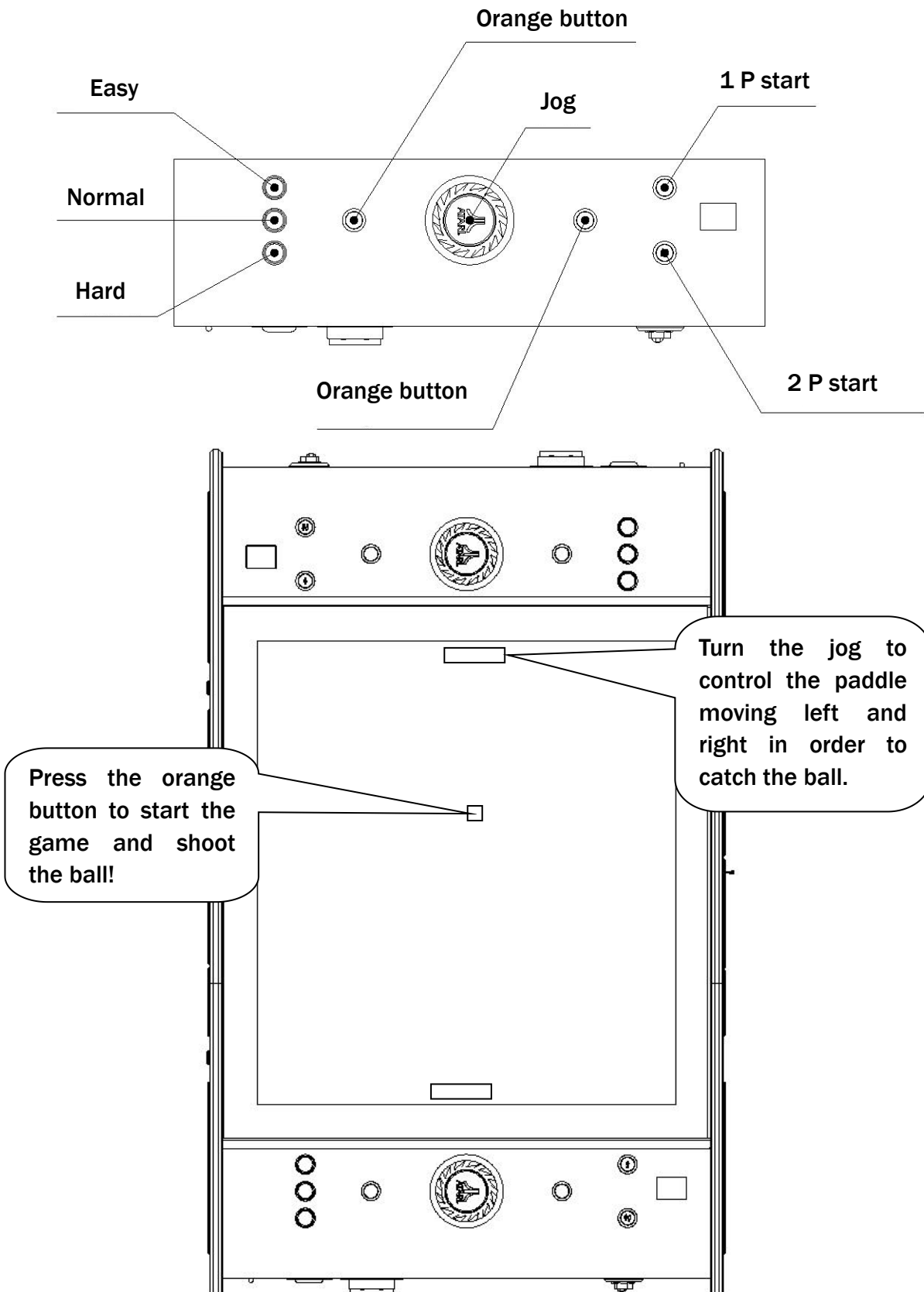


## 4.3 Card Reader Installation Safety Notice

 Take precaution to assure that all wiring voltages are confirmed prior to installation of card reader. All warranties are void if not properly installed resulting in logic board damage.

## 5. HOW TO PLAY

5.1 Press 1P Start button or 2P Start button, then choose Easy/Normal/Hard mode to start the game. Move the jog to control the paddle, press the orange button to shoot. (Same function as the two orange buttons)



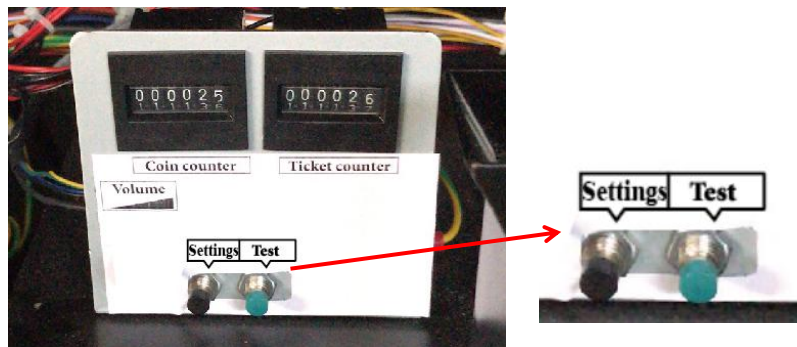
## 6. GAME OPTION

Enter into the setting menu

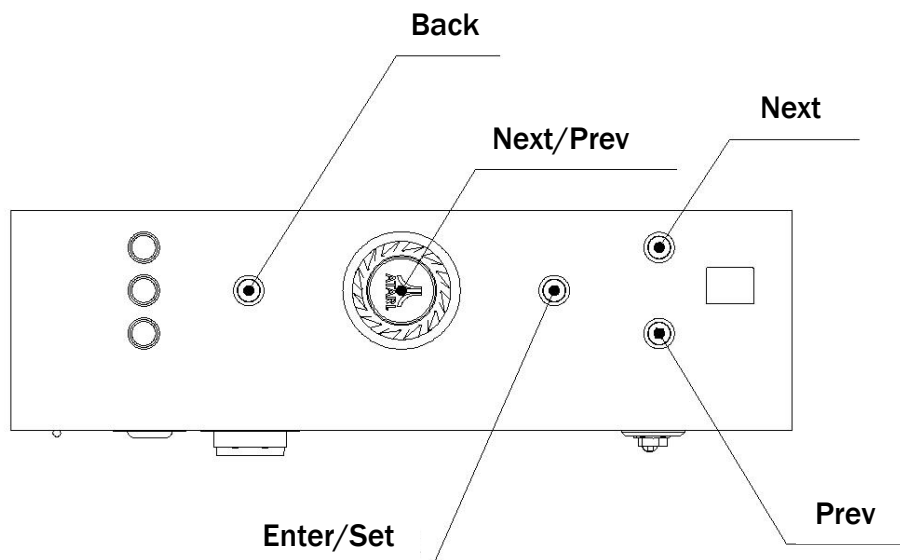
**Step 1** Locate the Player 1 side(the side near Power switch) and open the coin door.



**Step 2** Press Settings button to move the Ball to the middle and press the Settings button again, then you'll see "CONF" on the display. (It doesn't work during game over.)

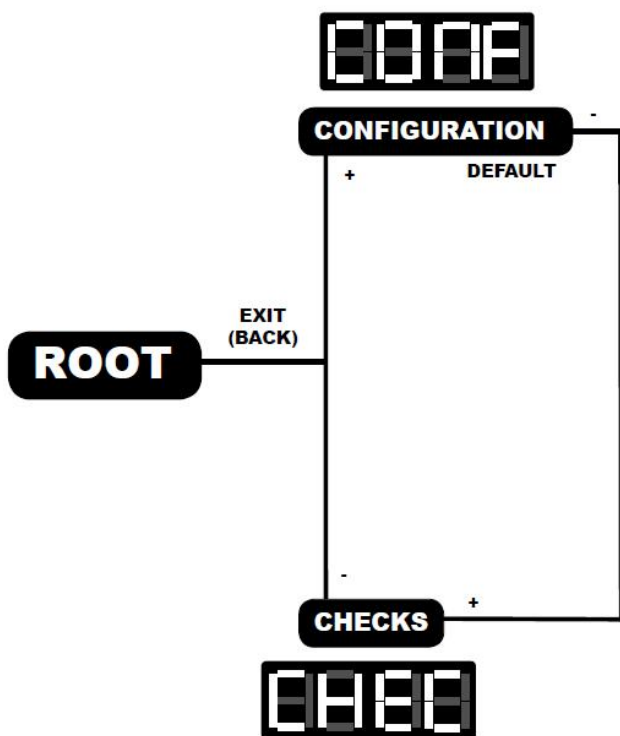


Roll the jog or press 1P and 2P to select the setting, press the right orange button to enter and set, press the left orange button to exit.



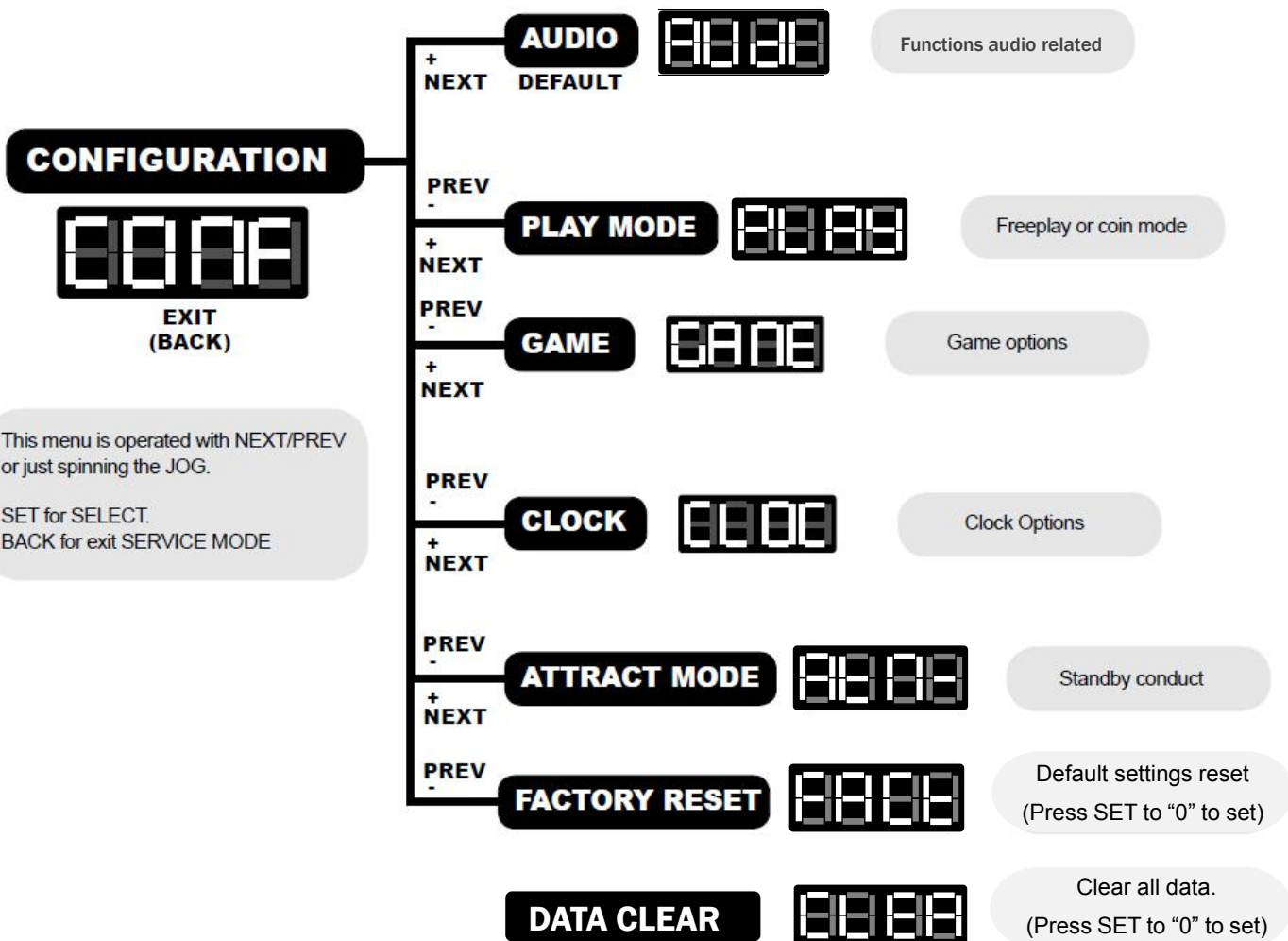
**Note:** It is the same steps when game playing.

## 6.1 Setting Menu



When SERVICE MODE is active, you will see CONF in the scoreboard by default. Spinning the JOG will switch spelling between configuration (CONF) and checks (CHEC)

BACK exits SERVICE MODE and SET selects the active option.



This menu is operated with NEXT/PREV or just spinning the JOG.

SET for SELECT.  
BACK for exit SERVICE MODE

Sound options.

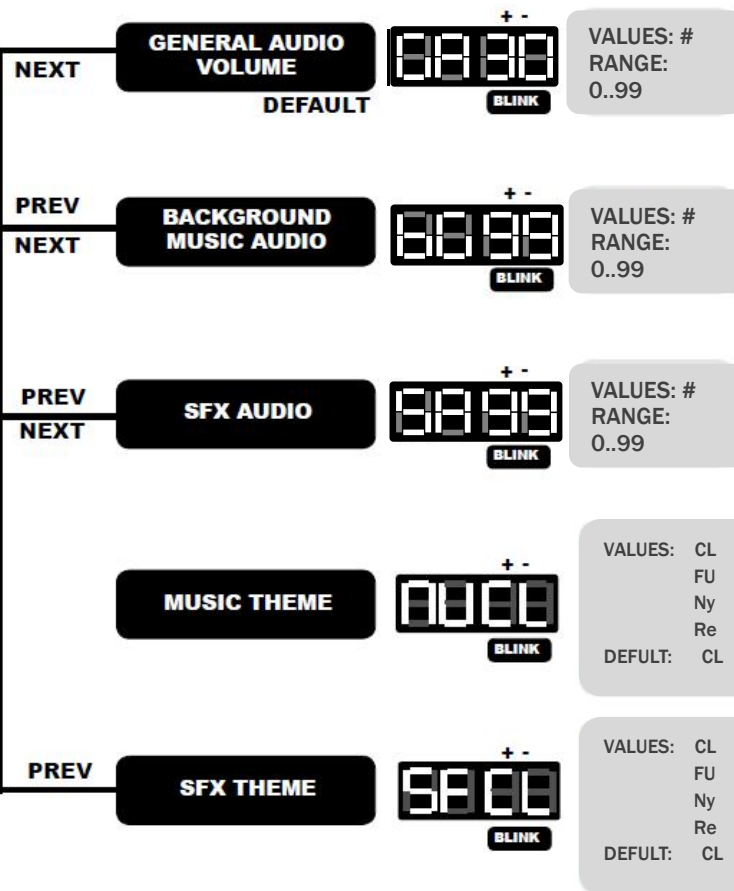
This menu is navigated with NEXT/PREV

JOG changes its parameter. SET for select.



**AUDIO**

BACK TO CONF  
(BACK)



This option only applies to units fitted with a coin mechanism. Choose FREE PLAY or COIN OPERATED.

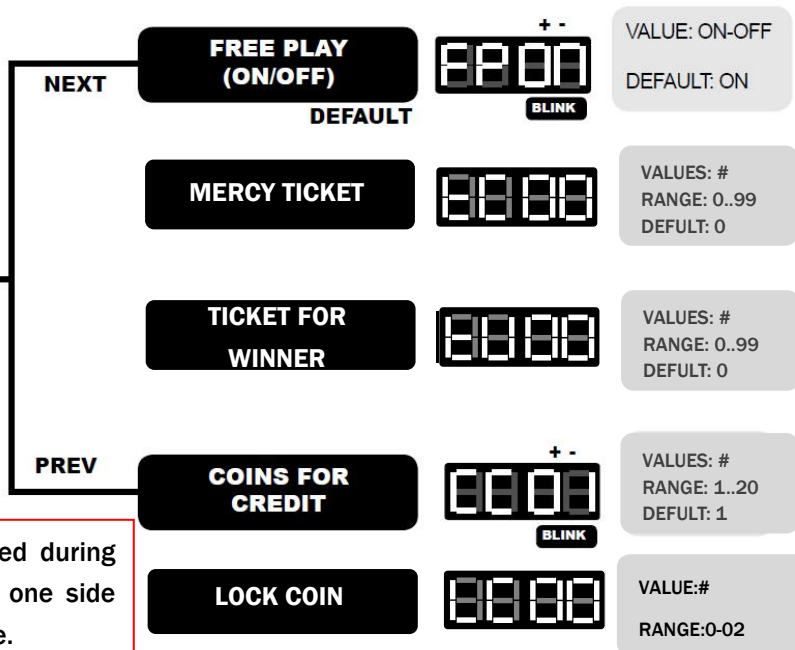
This menu is navigated with NEXT/PREV

JOG changes the parameter. SET for select.



**PLAY MODE**

BACK TO CONF  
(BACK)



LC00: 1. (1)Insert coins is enabled during game time. (2)Coins inserted by one side can't be shared with the other side. (3)Games can only be started by the side that inserts coins.

2. When one side is playing 1P game and the higher score is less than a half of the points per game (Eg: Points per game:6, Score:3-X,  $X \leq 3$ ; Points per game:5, Score:2-X,  $X \leq 2$ ), new player can insert coins and press 2P button to join.

LC01: Lock coin mode. After one side inserts coins, the other side can't insert coins and press 2P button to join until one side consumes all coins.

LC02: 1. (1)Insert coins is enabled during game time. (2)Coins inserted by one side can be shared with the other side. (3)Games can be started by either side.

2. When one side is playing 1P game, new player can insert coins but can't join the game until one side finishes that round.

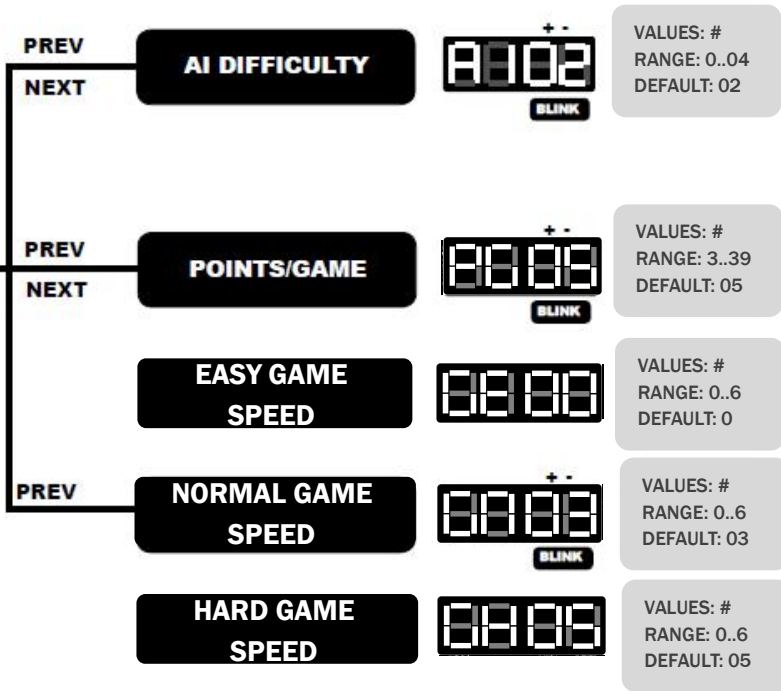
GAME OPTIONS:  
Mode, difficulty and speed.

This menu is navigated with  
NEXT/PREV

JOG changes its parameter.  
SET for select.

**GAME**  
BACK TO CONF  
(BACK)

- Game Speed:
- 0—0.3175m/s
  - 1—0.4978m/s
  - 2—0.6782m/s
  - 3—0.8585m/s
  - 4—1.0389m/s
  - 5—1.2192m/s
  - 6—1.5875m/s



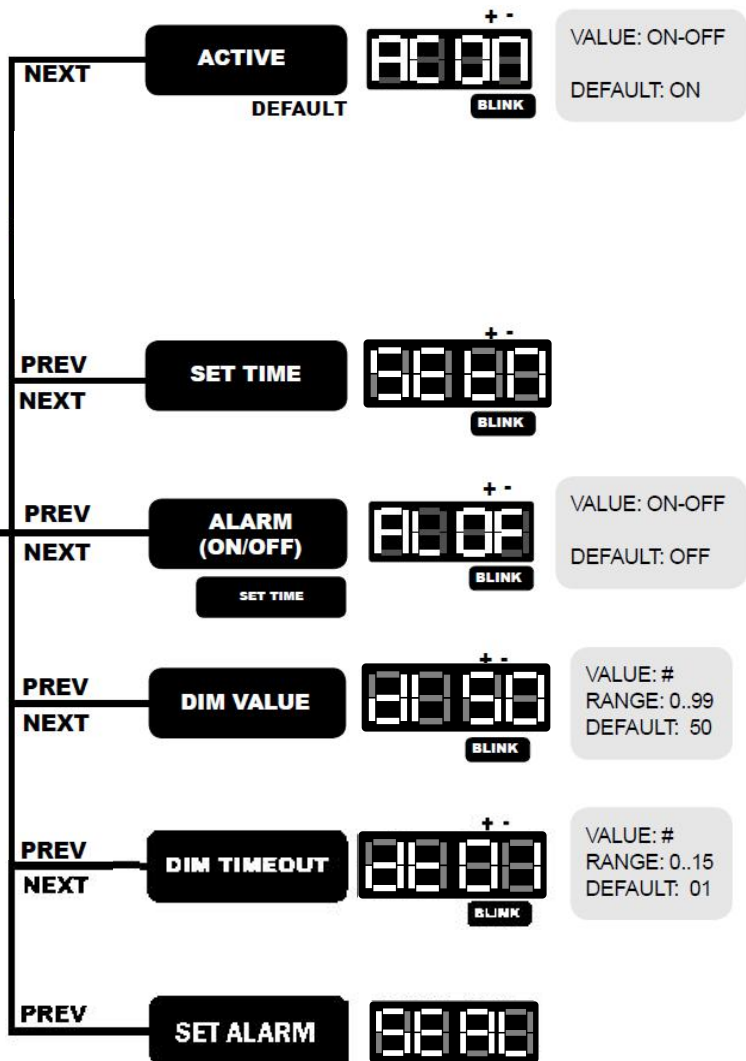
Clock options:

When enabled it can set format, time, alarm, scoreboard intensity when is in clock mode and time out in clock mode for intensity dimming.

This menu is navigated with  
NEXT/PREV

JOG changes its parameter.  
SET for select.

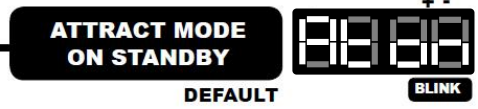
**CLOCK**  
BACK TO CONF  
(BACK)



Attract mode option when the unit is in standby.

This menu is navigated with NEXT/PREV

JOG changes its parameter.  
SET for select.



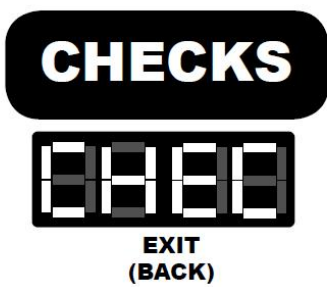
VALUES: ON  
OFF  
AMBIENT  
DEFAULT: ON



VALUES: #  
RANGE: 0..99  
DEFAULT: 50



VALUES: #  
RANGE: 0..90  
DEFAULT: 03  
(Note: 00=30s)



LEDS tests



Motors tests.  
( Press SET and BACK to exit.)



Inputs tests.  
( Press SET and BACK to exit.)



LEDS, Motors and Inputs auto tests.  
( Press SET and BACK to exit.)

This menu is navigated with NEXT/PREV  
JOG changes its parameter.  
SET for select.  
BACK for exit SERVICE MODE



# INPUTS

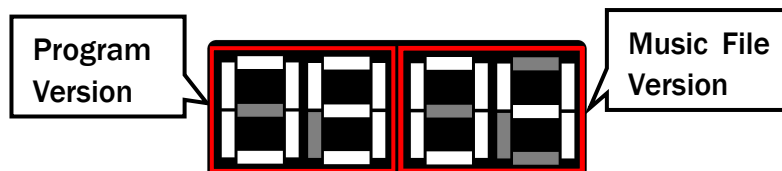
(Press SET & BACK buttons)

Here you can check all inputs of the unit. Each active input will be shown on the scoreboard. In the case of the JOGS his position is displayed.

press PLAYER 1 RIGHT button for three seconds for go back to CHECKS

	Coin received
	P1 1P START pressed
	P1 2P START pressed
	P2 1P START pressed
	P2 2P START pressed
	1P LEFT pressed
	1P RIGHT pressed
	2P LEFT pressed
	2P RIGHT pressed
	JOG PLAYER 1 position
	JOG PLAYER 2 position
	P1 EASY pressed
	P1 NORMAL pressed
	P1 HARD pressed
	P2 EASY pressed
	P2 NORMAL pressed
	P2 HARD pressed

After powering on the machine, the display will show the Program Version(the left two characters) and the Music File Version(the right two characters).











## 7. TROUBLESHOOTING

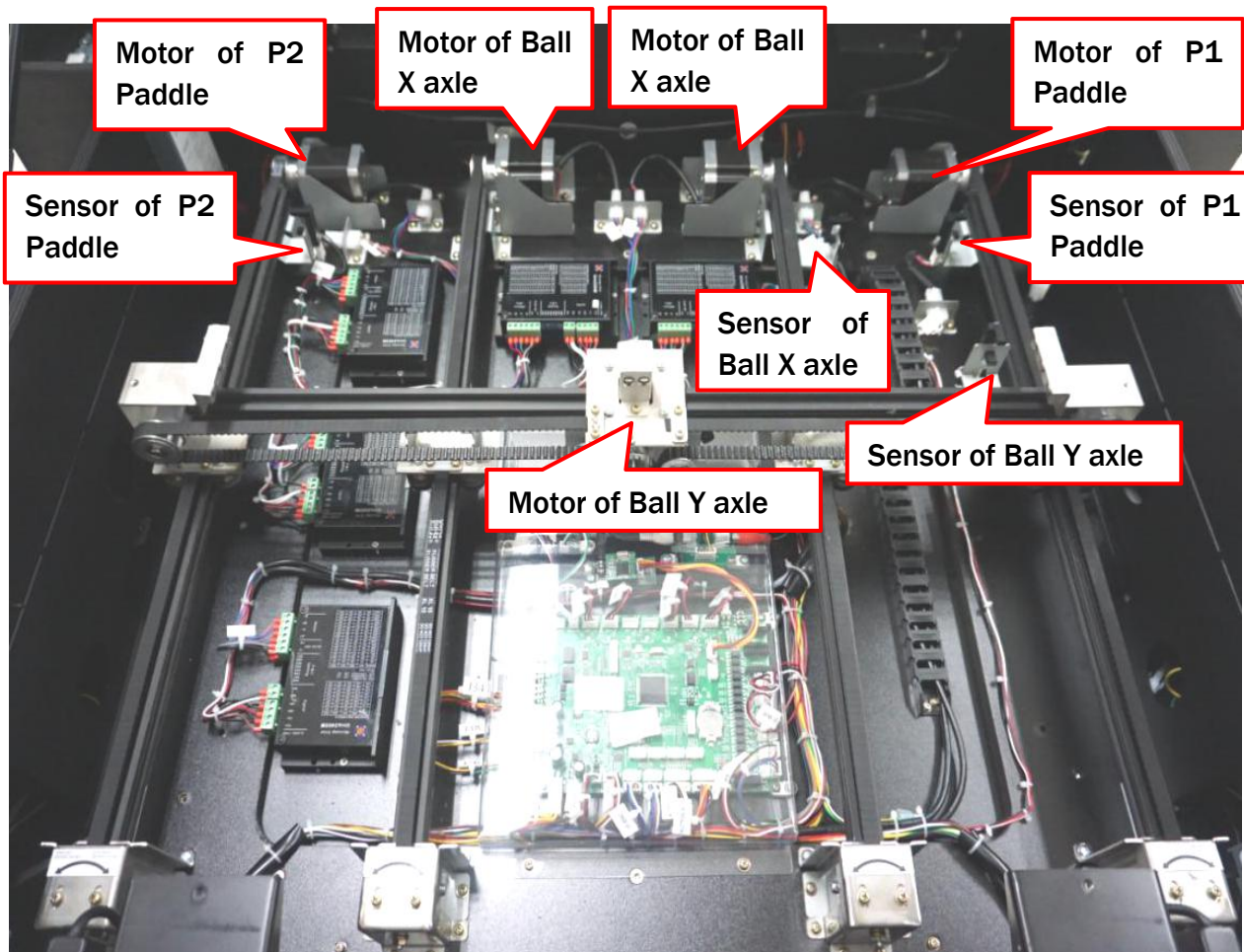
### 7.1 Common Problem

Please confirm that all connectors fit tightly.

Symptom	Possible Cause	Recommended action
Game will not start	Frame assembly connector is loose.	Check connector.
	Frame assembly is faulty.	Contact UNIS Service.
Power off	Circuit protector changes power SW to "off".	Turn on power SW again. If appeared again and again, machine has anomaly. Please contact UNIS Service.
No sound	Low volume	Raise the volume.
	Connector loose.	Check connector.
	Speaker is faulty.	Check speaker.
	Audio cable problem.	Reconnect the audio cable or change it.
	Driver problem	Restart the audio driver.
Ball shaking	The bottom of the Ball or the playfield has dirt.	Utilize non-woven fabric with distilled water to clean the bottom of the Ball.
		Clean the playfield. (Refer to 8.3)

Error code	Possible Cause	Recommended action
	Motors of Ball X axle doesn't work.	Check the connection of motors of Ball X axle.
	Sensor of Ball X axle doesn't work.	Check the motors of Ball X axle.
	Motor of Ball Y axle doesn't work.	Check the sensor of Ball X axle.
	Sensor of Ball Y axle doesn't work.	Check the connection of motor of Ball Y axle.
	Motor of P1 Paddle doesn't work.	Check the motor of Ball Y axle.
	Sensor of P1 Paddle doesn't work.	Check the sensor of Ball Y axle.
	Motor of P2 Paddle doesn't work.	Check the connection of motor of P1 Paddle.
	Sensor of P2 Paddle doesn't work.	Check the motor of P1 Paddle.
	Motor of P2 Paddle doesn't work.	Check the sensor of P1 Paddle.
	Sensor of P2 Paddle doesn't work.	Check the connection of motor of P2 Paddle.
	Out of ticket	Check the motor of P2 Paddle.
	Out of ticket	Check the sensor of P2 Paddle.
	Out of ticket	Fill the ticket dispenser with tickets.

(Refer to next page for detailed locations.)



## 8. MAINTENANCE & INSPECTION

### 8.1 Safety Check

These checks are necessary for safe machine operation:

1. Test game before operation each day.
2. Conduct monthly routine checks of game components to ensure good working condition
3. Check the machine regularly for dust and clean as necessary.

**Note:** Parts and components require preventative maintenance to maintain proper operation.

### 8.2 Handling Precautions

When inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.

Non-compliance with the following points or inappropriate handling running counter to the cautionary matters herein stated can cause personal injury or damage to the machine

### NOTICE

**We do not recommend using power tools as they may cause damage.**

### 8.3 How To Clean The Playfield

**Step 1** Power off the game. Insert the key to the lock and turn 90 ° clockwise or counterclockwise. Press the glass pressing plate slightly to make the lock pop up. (The method is the same on both two locks.)

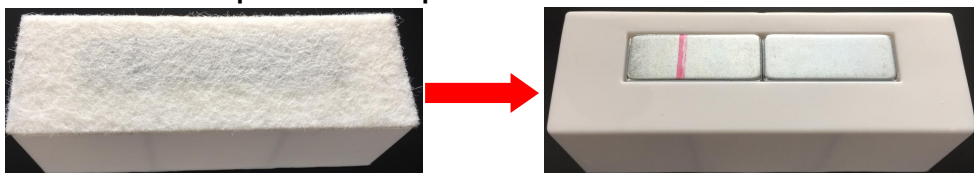
Open the glass.



**Step 2** Utilize non-woven fabric with distilled water to clean the playfield.

### 8.4 How To Replace Wool Felt Pad On Paddle

**Step 1** Remove the wool felt pad from the paddle.

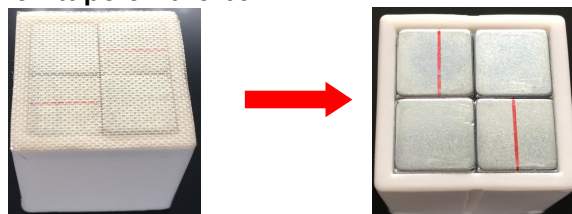


**Step 2** Adhere the new wool felt pad to the paddle.

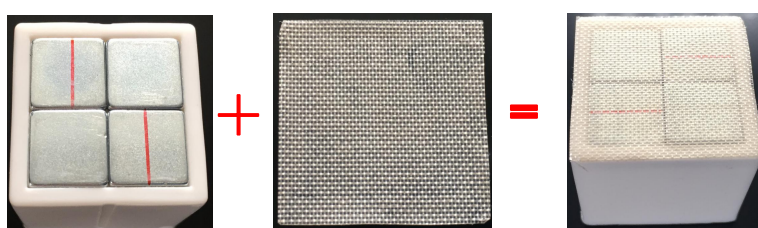


### 8.5 How To Replace The Teflon Tape On The Ball

**Step 1** Remove the Teflon tape on the ball.




**Step 2** Adhere the new Teflon tape to the ball.



## 8.6 How To Access Movement Mechanism

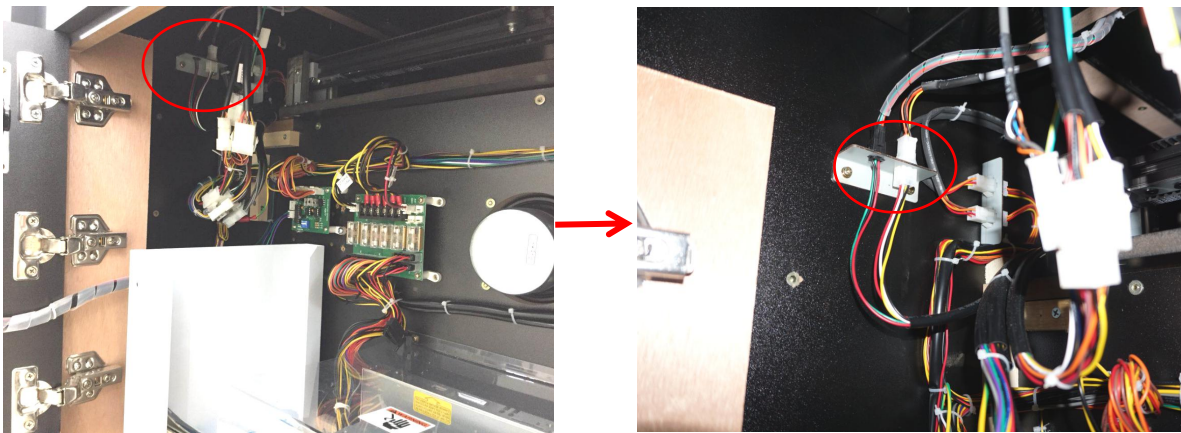
Before processing with assembly assure you have the following tools.

No.	Name	Picture
1	Phillips screwdriver	

**Step 1** Power off the game and open the coin door on Player 1 side (the side near the power switch).



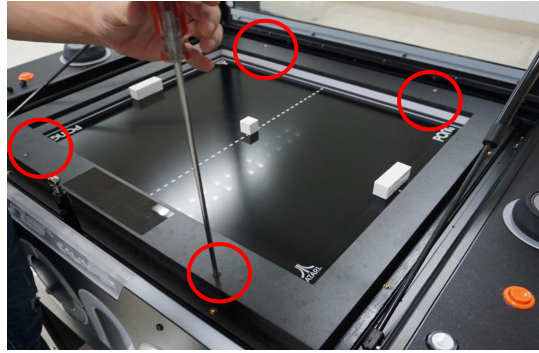
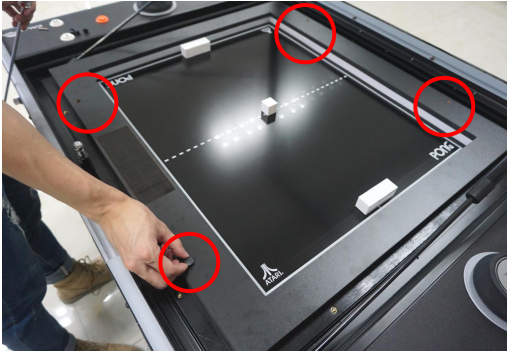
**Step 2** Unplug the two connectors as shown below.



**Step 3** Insert the key to the lock and turn 90° clockwise or counterclockwise. Press the glass pressing plate slightly to make the lock pop up. (The method is the same on both two locks.) Open the glass.



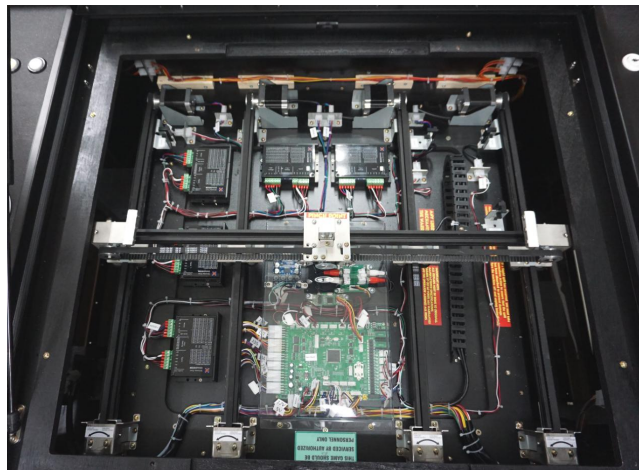
**Step 4** Remove the screw covers and loosen the screws shown in the picture.



**Step 5** Remove the playfield. Note: please avoid the Paddles and Ball sticking together.



**Step 6** Proceed to the movement mechanism.




**CAUTION:** Do not leave the game unattended with the playfield removed.




### 8.7 Belt Tension Adjustment Instruction for Y Axle

If noise is heard from the tracks inside the machine, one of the reasons is that the belt has loosened. Here is the process to tighten the belt.

Before processing with assembly ensure you have the following tool.

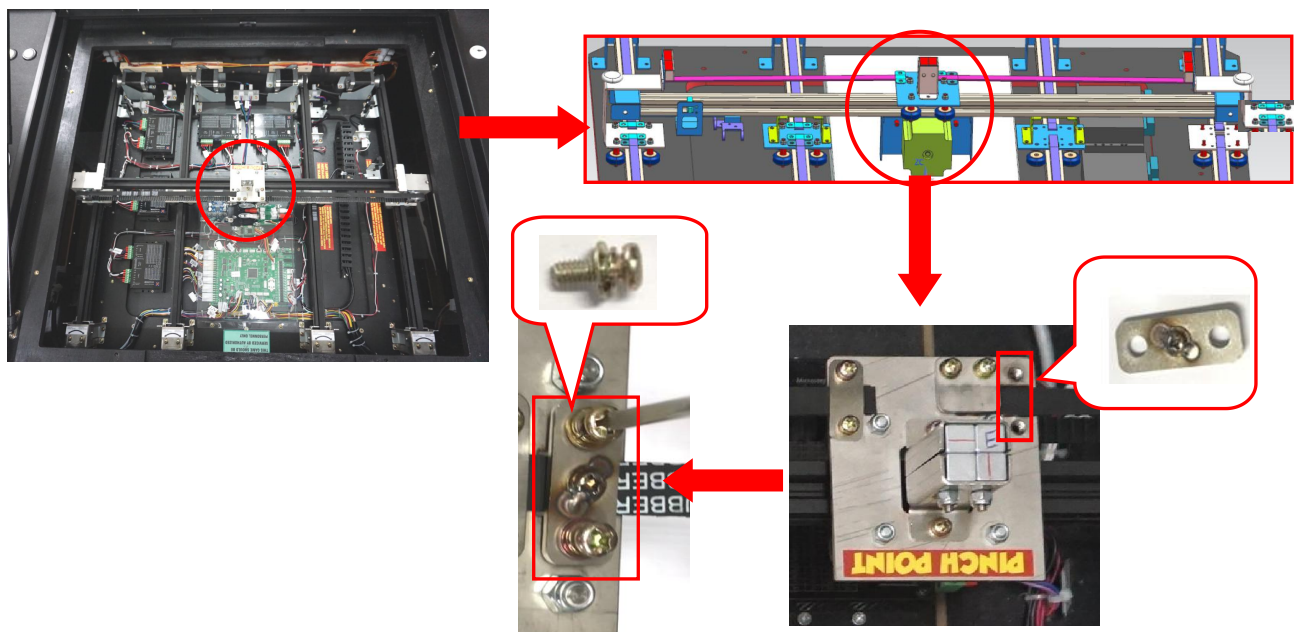
No.	Name	Picture
1	Phillip's screwdriver	

Kit list (shipped with game accessories)

No.	Part No.	Name	Picture	Qty
1	P152-180-000	Adjust plate A (Short)		1
2	P152-181-000	Adjust plate B (Long)		1
3	P152-334-000	Cross recessed pan head screw set		2

**Step 1** Follow the 8.6 steps to remove the playfield.



**Step 2** Locate ball movement mechanism and place adjust plate A on it. Utilize Phillip's screwdriver to tighten two screws to fix the adjust plate A to the ball movement mechanism.




**Step 3** If the belt is still loose, please remove adjust plate A and install adjust plate B to the ball movement mechanism. (The installation method is the same as **Step 2**.)

## 8.8 Belt Tension Adjustment Instruction for X Axes

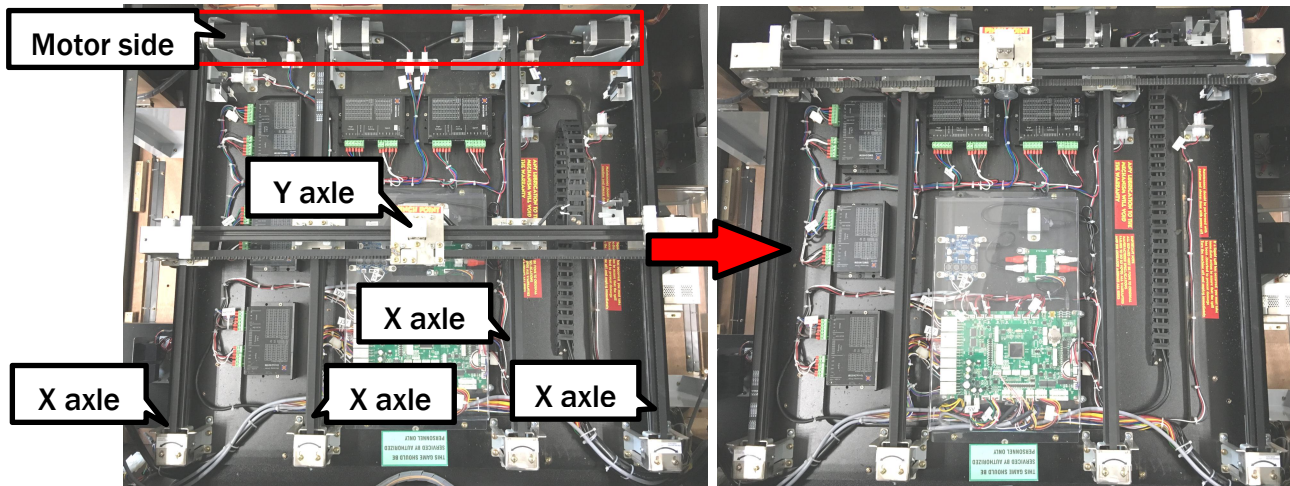
Before processing with assembly assure you have the following tools.

NO.	Name	Picture
1	Phillips screwdriver	
2	Wrench(8mm)	

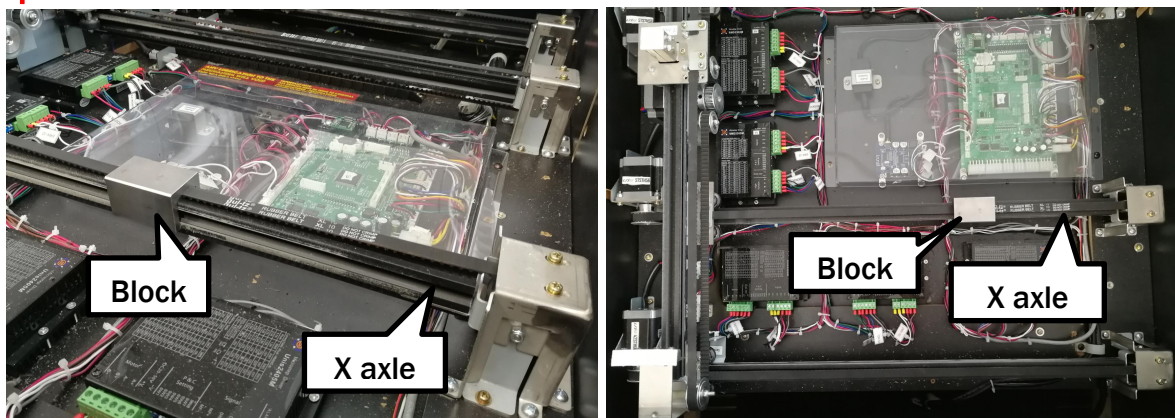
Kit list:

NO.	Name	Picture
1	Block	

**Step 1** Follow the 8.6 steps to remove the playfield. Move Y axle to motor side.

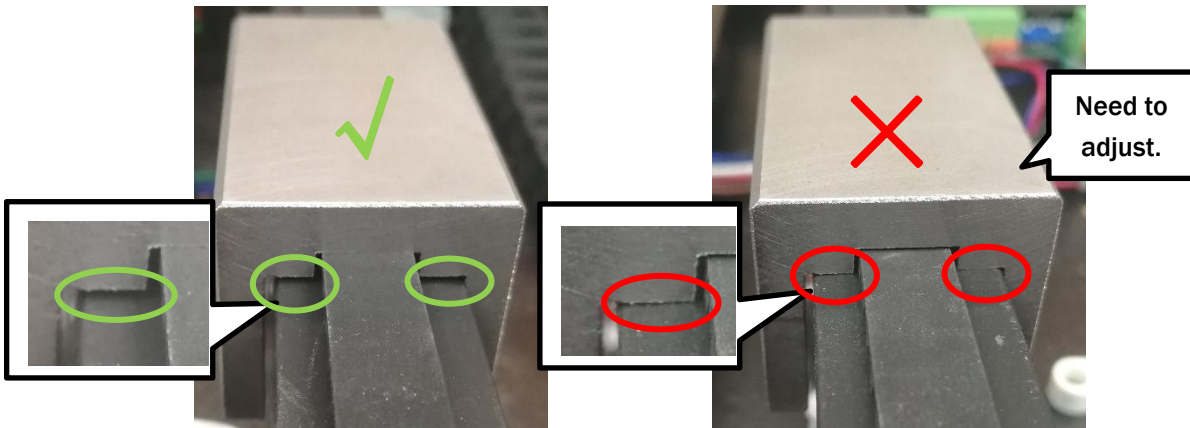


**Step 2** Locate one X axle. Place the block in the middle of the X axle.

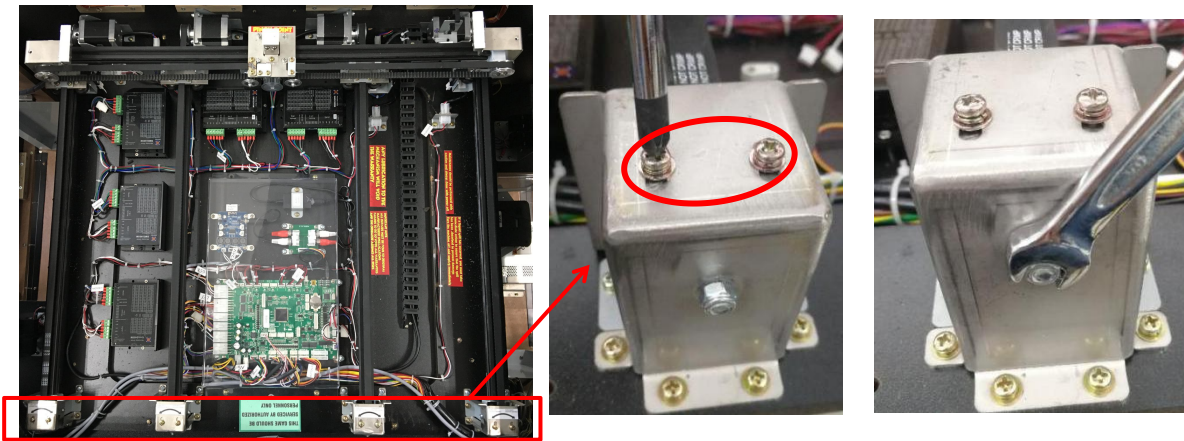




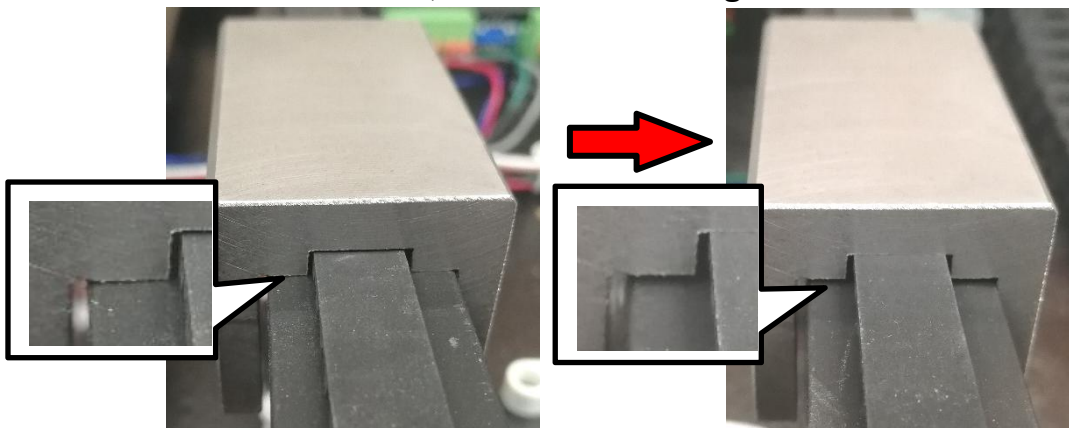
**Step 3** Check if the block is slightly above the X axle (within 0.04inch). If it is, don't adjust the belt; if it touches the X axle, adjust the belt.



**Step 4** To adjust: Utilize Phillips screwdriver to loosen the screws a bit. Utilize the wrench to adjust the nut on the side.




**Step 5** To adjust: Pay attention to the block when turning the wrench clockwise. Stop turning the wrench when the block is slightly raised (within 0.04 inch above the X axle). If the block is raised too much, the belt will be too tight.



**Step 6** To adjust: Remove the block and tighten the screws in **Step 4**. The adjustment method for all the 4 X axles is the same.

## 8.9 How to Replace the Side Light Strips

Before processing with assembly assure you have the following tools.

NO.	Name	Picture
1	Allen wrench(3mm)	

**Step 1** Power off the game and open the coin door.



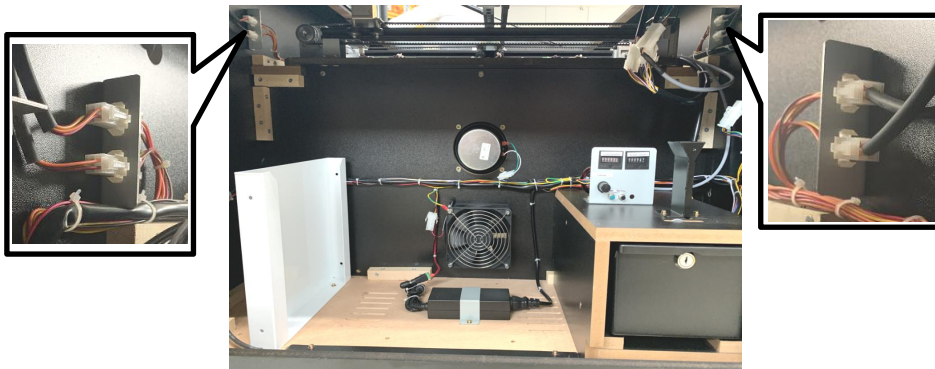
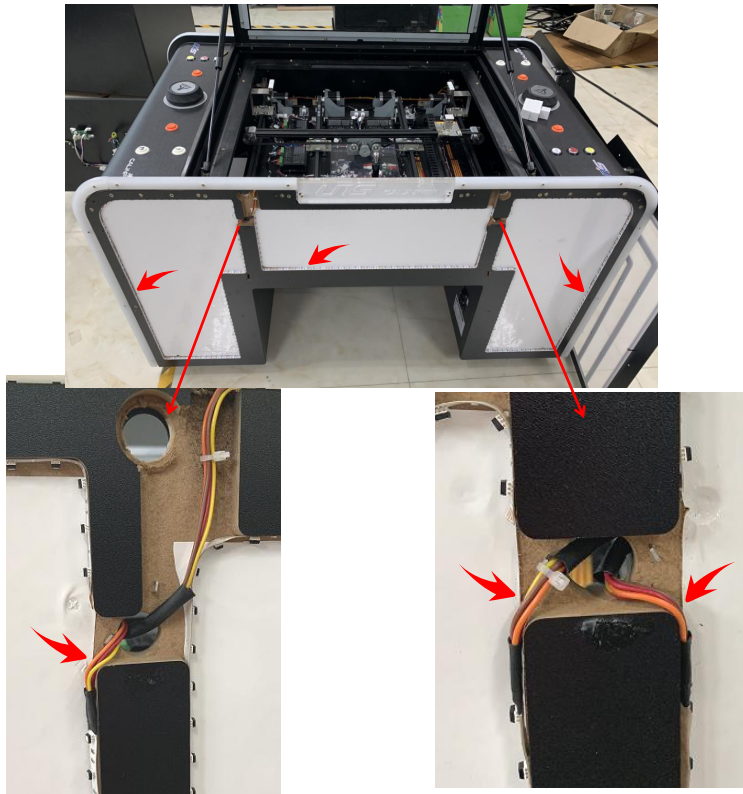
**Step 2** Insert the key to the lock and turn 90° clockwise or counterclockwise. Press the glass pressing plate slightly to make the lock pop up. (The method is the same on both two locks.)



**Step 3** Utilize the Allen wrench to loosen 14 screws indicated by circles to remove the side plate. (The method is the same on both sides.)



**Step 4** There are three light strips indicated by arrows on each side that can be replaced. Pull the plug from the hole to locate the connector behind the coin door and unplug it. Remove the light strip.



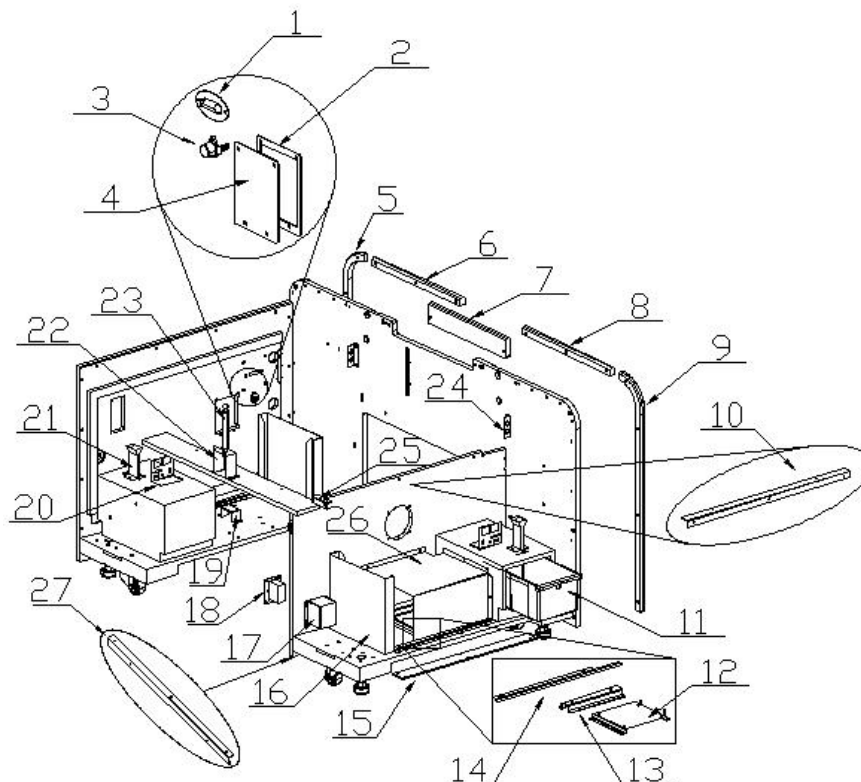
**Step 5** Attach the new light strips.



**Step 6** Install all the rest components back in reverse order.

## 9. OVERALL CONSTRUCTION

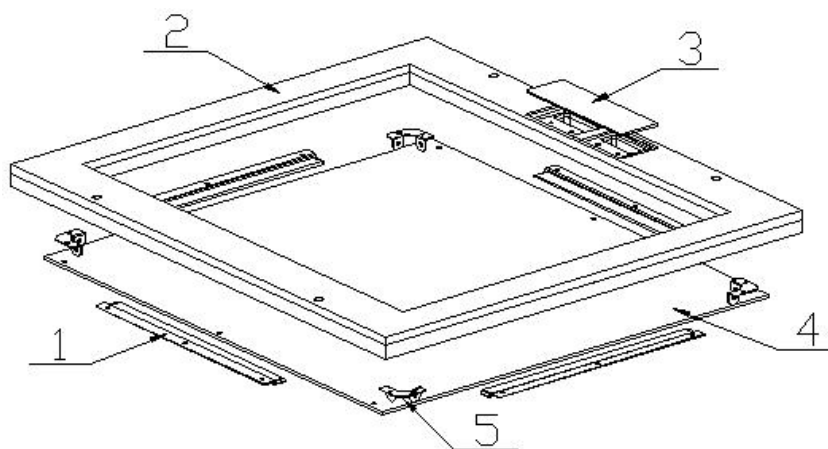
### 9.1 General Assembly



No.	Part No.	Code	Name	Qty
1	P152-197-000	26000051000	Ticket cover	2
2	P152-113-000	20211707K006	DBV panel	2
3	P152-200-000	26000065000	Out of ticket light cover	2
4	P152-112-000	20211707K005	DBV cover	2
5	P152-107-001	20611707K001A	Light plate A	2
6	P152-109-001	20611707K003A	Light plate C	2
7	P152-111-001	20611707K007A	Plastic plate	2
8	P152-108-001	20611707K002A	Light plate B	2
9	P152-110-001	20611707K004A	Light plate D	2
10	P152-101-000	20211707K001	Down support	2
11	P152-199-000	26000062000	Coin box	2
	P152-628-000	25300172001	Lock	2
12	P152-198-000	26000061000	Supply bracket	1
13	P152-103-000	20211707K020	Power supply bracket	1
14	P152-105-000	20211707K004	LED light bracket	2
15	P152-106-000	20611707K006	Down clear plastic plate	2

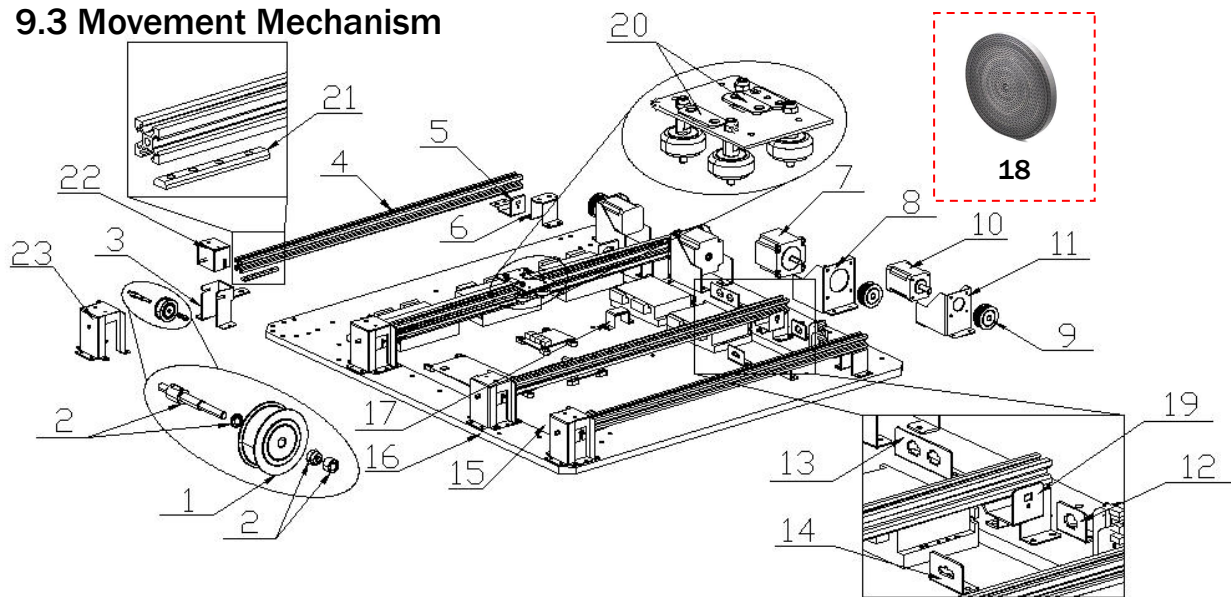
No.	Part No.	Code	Name	Qty
16	P152-193-000	26000006000	Ticket box	2
17	P152-116-000	20611707K009	Power supply cover	1
18	P152-102-000	20211707K002	SW plate	1
19	P152-115-000	20211707K022	Power supply pressing plate	1
20	P152-203-000	20211707k026	Counter bracket A(with POT hole)	1
	P152-204-000	20211707k025	Counter bracket B	1
21	P152-104-000	20211707K003	Coin box hopper	2
22	P152-118-000	20211707K007	Up-down bracket	1
23	P152-622-000	25101210026	Spring	1
24	P152-170-000	20211707024	Wiring plate A	4
25	P152-114-000	20211707K021	LED bracket	1
26	P152-117-001	20611707K010A	Cover	1
27	P152-202-000	20211707K024	Edge Protector	2

## 9.2 Playfield Assembly



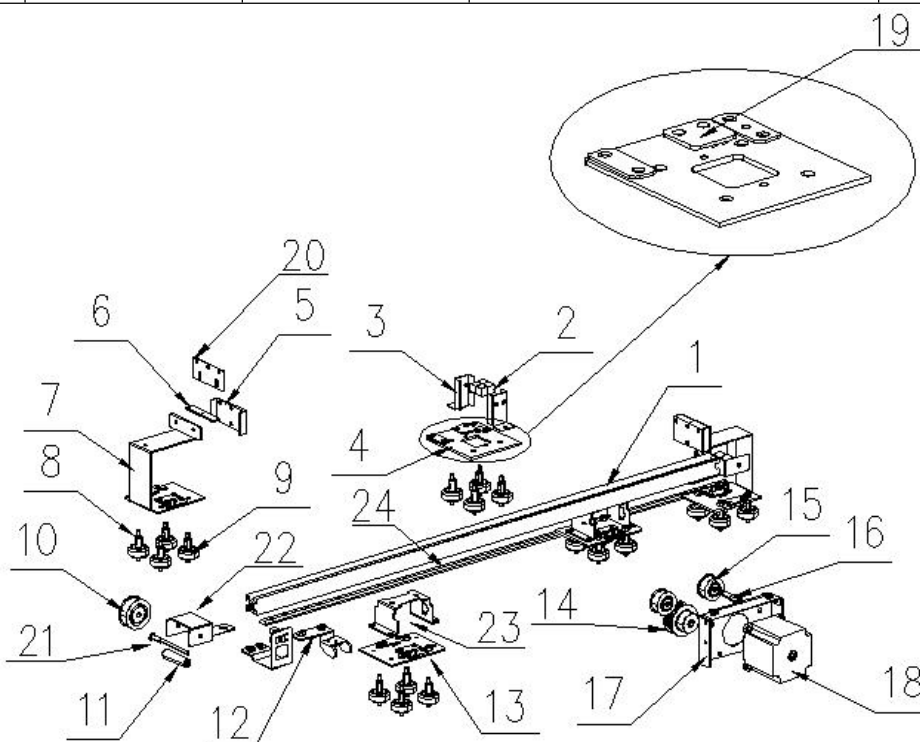
No.	Part No.	Code	Name	Qty
1	P152-125-000	20211707K019	Glass pressing plate	4
2	P152-511-001	20311707K007A	Frame top plate	1
	P152-512-001	20311707K008A	Frame bottom plate	1
3	P152-124-001	20611707K005A	Light barrier	1
4	P152-714-000	20511707001C	Playfield glass	1
5	P152-186-000	20211707028	Connecting plate	4

### 9.3 Movement Mechanism



No.	Part No.	Code	Name	Qty
1	P152-144-000	20211707032A	Idle wheel A	4
2	P152-145-000	20211707047B	Idle wheel axle	4
	P152-305-000	20102000022	Non-metallic hexagon lock nut	4
	P152-301-000	20113000055	C flat washer	4
	P152-146-000	20211707054	Wheel sleeve	4
3	P152-143-000	20211707017B	Idle wheel A bracket	4
4	P152-168-000	20211707035	X axle track	4
5	P152-167-000	20211707023B	Sensor SW bracket	3
6	P152-166-000	20211707022	Track bracket	4
7	P152-614-000	23406000031	Hybrid stepping motor	2
8	P152-154-000	20211707020A	57 motor bracket A	2
9	P152-153-000	20211707033A	Driving wheel	4
10	P152-613-000	23406000030	Hybrid stepping motor	2
11	P152-152-000	20211707019	42 motor bracket	2
12	P152-171-000	20211707025	Wiring plate B	2
13	P152-170-000	20211707024	Wiring plate A	1
14	P152-172-000	20211707026	Wiring plate C	3
15	P152-515-00A	20311707K010A	Electric part support plate	1
16	P152-514-000	20311707K009	Support plate	1
17	P152-174-000	20211707041	Small pressing plate	1
18	P152-615-000	26504010002	Belt	7500mm (295.2in)

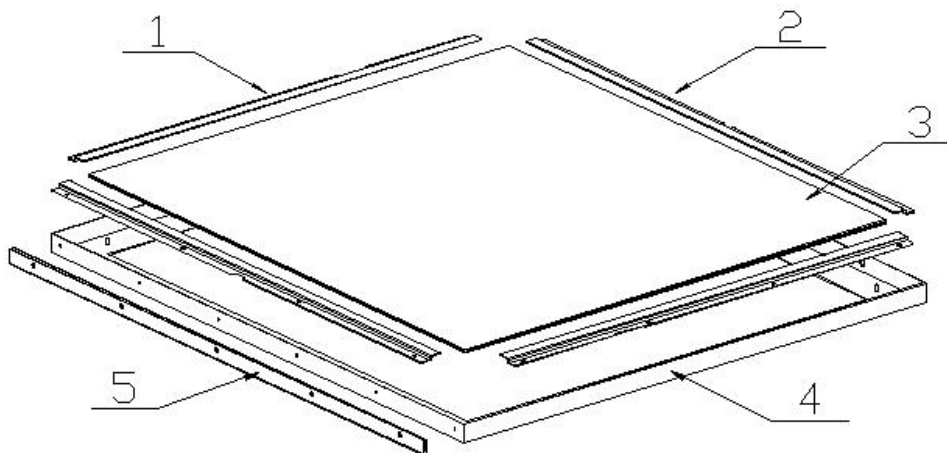
No.	Part No.	Code	Name	Qty
19	P152-177-000	20211707052A	Long sensor SW bracket	1
20	P152-178-000	20211707043A	Fix plate A	9
21	P152-182-000	20211707049A	Short fix bar	8
22	P152-147-000	20211707058	Axle plate	4
23	P152-148-000	20211707059	Limit bracket	4



No.	Part No.	Code	Name	Qty
1	P152-169-000	20211707036	Y axle track	1
2	P152-620-000	23502000049	Magnet	4
3	P152-165-000	20211707006B	Magnet plate B	2
4	P152-164-000	20211707005B	Y axle bracket	1
5	P152-162-000	20211707004A	Magnet plate A	2
6	P152-619-000	23502000041	Magnet	4
7	P152-161-000	20211707003B	X axle bracket	2
8	P152-159-000	20211707048A	Wheel shaft	20
9	P152-160-000	20611707030	Axle wheel	20
10	P152-144-000	20211707032A	Idle wheel A	2
11	P152-150-000	20611707026A	Support bracket axle	2
12	P152-173-000	20211707027A	Chain mounting plate	1

No.	Part No.	Code	Name	Qty
13	P152-158-000	20211707002B	Y axle bracket	2
14	P152-153-000	20211707033A	Driving wheel	1
15	P152-156-000	20211707034A	Idle wheel B	2
16	P152-157-000	20211707007B	Axle	2
17	P152-155-000	20211707021A	57 motor bracket B	1
18	P152-614-000	23406000031	Hybrid stepping motor	1
19	P152-179-000	20211707044A	Fix plate B	1
20	P152-163-000	20211707042	Magnet back plate	2
21	P152-151-000	20211707055	Idle wheel axle B	2
22	P152-149-000	20211707018B	Idle wheel B bracket	2
23	P152-176-000	20211707051A	Connecting bracket	2
24	P152-183-000	20211707053	Long fix bar	1

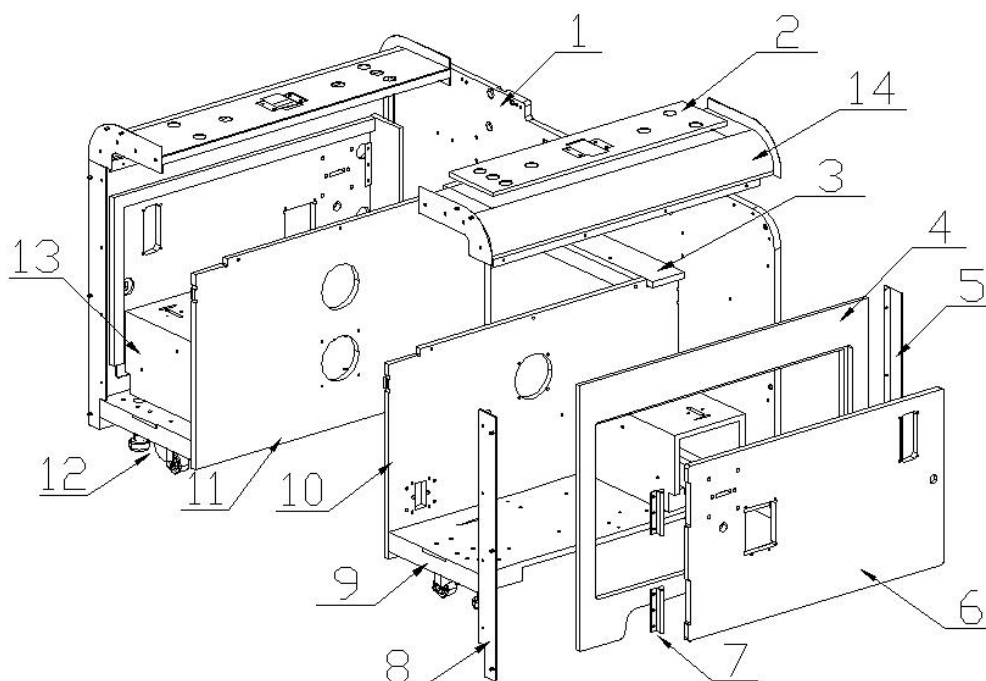
#### 9.4 Frame Assembly



No.	Part No.	Code	Name	Qty
1	P152-132-000	20211707K015	Glass pressing plate B	2
2	P152-131-000	20211707K014	Glass pressing plate A	2
3	P152-130-000	20611707K012	Glass	1
4	P152-129-000	20211707K013	Frame	1
5	P152-133-001	20211707K016A	Hinge	1

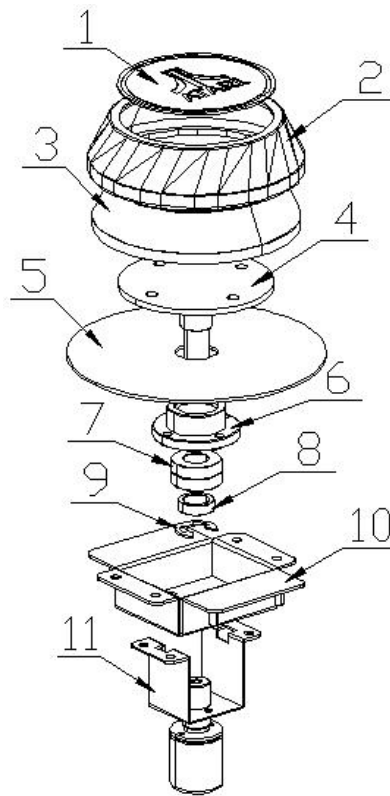


## 9.5 Wooden Assembly



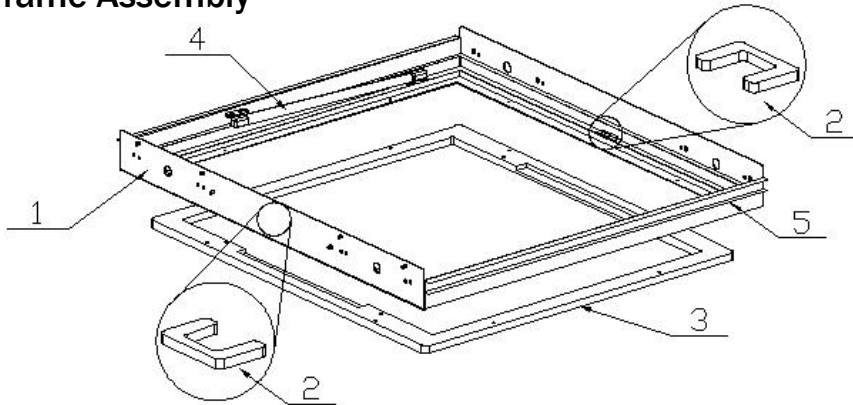
No.	Part No.	Code	Name	Qty
1	P152-502-001	20311707K013A	L&R side plate	2
2	P152-207-000	20211707K027	Control panel plate	1
	P152-205-000	20611707K013	Waterproof foam A(long)	4
	P152-206-000	20611707K014	Waterproof foam B(short)	4
3	P152-509-001	20311707K006A	Sideways plate	2
4	P152-503-001	20311707K002A	Front-back side plate	2
5	P152-120-000	20211707K009	Connecting plate B	2
6	P152-504-002	20311707K003B	Front door	2
	P152-627-000	25300171001	Lock	2
7	P152-618-001	26300000001	Hinge	6
8	P152-119-000	20211707K008	Connecting plate A	2
9	P152-507-001	20311707K011A	Box bed plate	2
10	P152-505-002	20311707K004B	Speaker plate A	1
11	P152-506-003	20311707K005C	Speaker plate B	1
12	P152-608-001	25501000047	2.5" caster	4
	P152-194-000	26000008000	Cabinet leveller	4
	P152-195-000	26000010000	Caster bracket	4
13	P152-510-001	20311707K001A	Coin box shell	2
14	P152-121-002	20211707K010B	Control panel arc plate	2

## 9.6 Jog Assembly



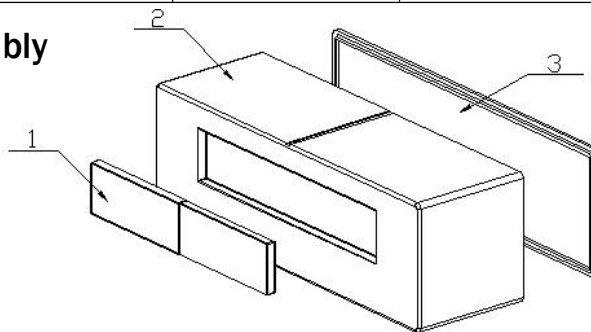
No.	Part No.	Code	Name	Qty
1	P152-715-000	20511707002	ATARL Logo	1×2
2	P152-188-000	20611707008	Jog shell	1×2
3	P152-187-000	20611707009	Jog	1×2
4	P152-190-000	20211707008B	Axle	1×2
5	P152-122-000	20211707K011	Decoration panel	1×2
6	P152-189-000	20211707013A	BR bracket	1×2
7	P152-624-000	20106000318	BR	2×2
8	P152-191-000	20211707038	Axle sleeve	1×2
9	P152-315-000	20105000013	Washer	1×2
10	P152-123-000	20211707K023	Support plate	1×2
11	P152-192-000	20211707030	Coder bracket	1×2

### 9.7 Inner Frame Assembly



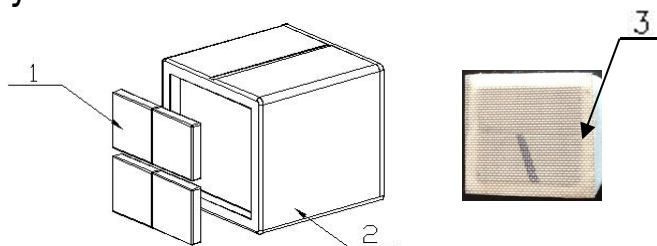
No.	Part No.	Code	Name	Qty
1	P152-126-000	20211707K012	Steel	1
2	P152-128-000	20611707K008	U block	2
3	P152-513-000	20311707K014	Inside pad	1
4	P152-623-000	25101210028	Spring	2
5	P152-127-000	20611707K011	Batten	1

### 9.8 Paddle Assembly



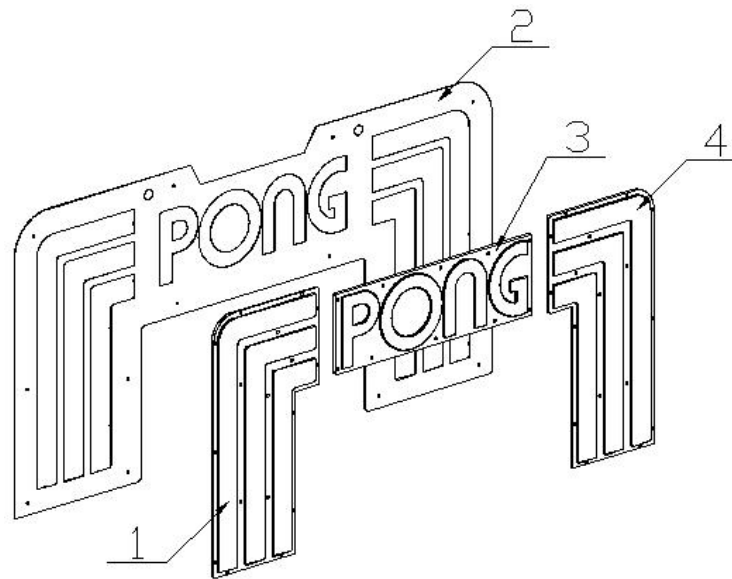
No.	Part No.	Code	Name	Qty
1	P152-619-000	23502000041	Magnet	2×2
2	P152-141-000	20611707013A	Paddle	1×2
3	P152-142-000	20611707020A	Wood felt pad	1×2

### 9.9 Ball Assembly



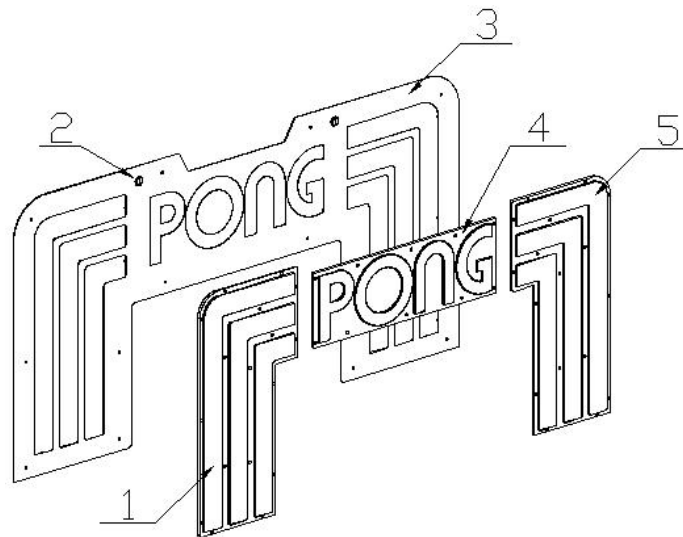
No.	Part No.	Code	Name	Qty
1	P152-621-000	23502000048	Magnet	4
2	P152-138-000	20611707012A	Ball	1
3	P152-629-000	40203020002	Teflon tape	1

### 9.10 Right Light Plate Assembly



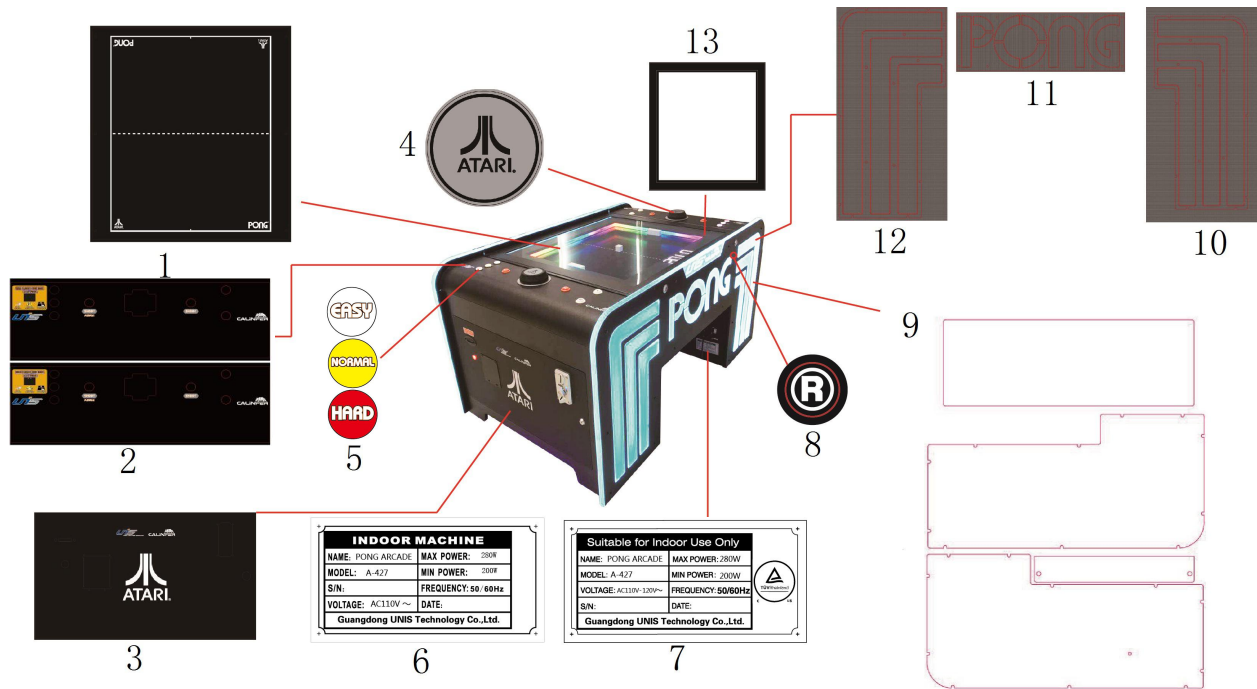
No.	Part No.	Code	Name	Qty
1	P152-702-001	20511707K002A	Left L light plate	1
2	P152-135-001	20211707K018A	Right plate	1
3	P152-701-000	20511707K001	Middle light plate	1
4	P152-703-001	20511707K003A	Right L light plate	1

### 9.11 Left Light Plate Assembly

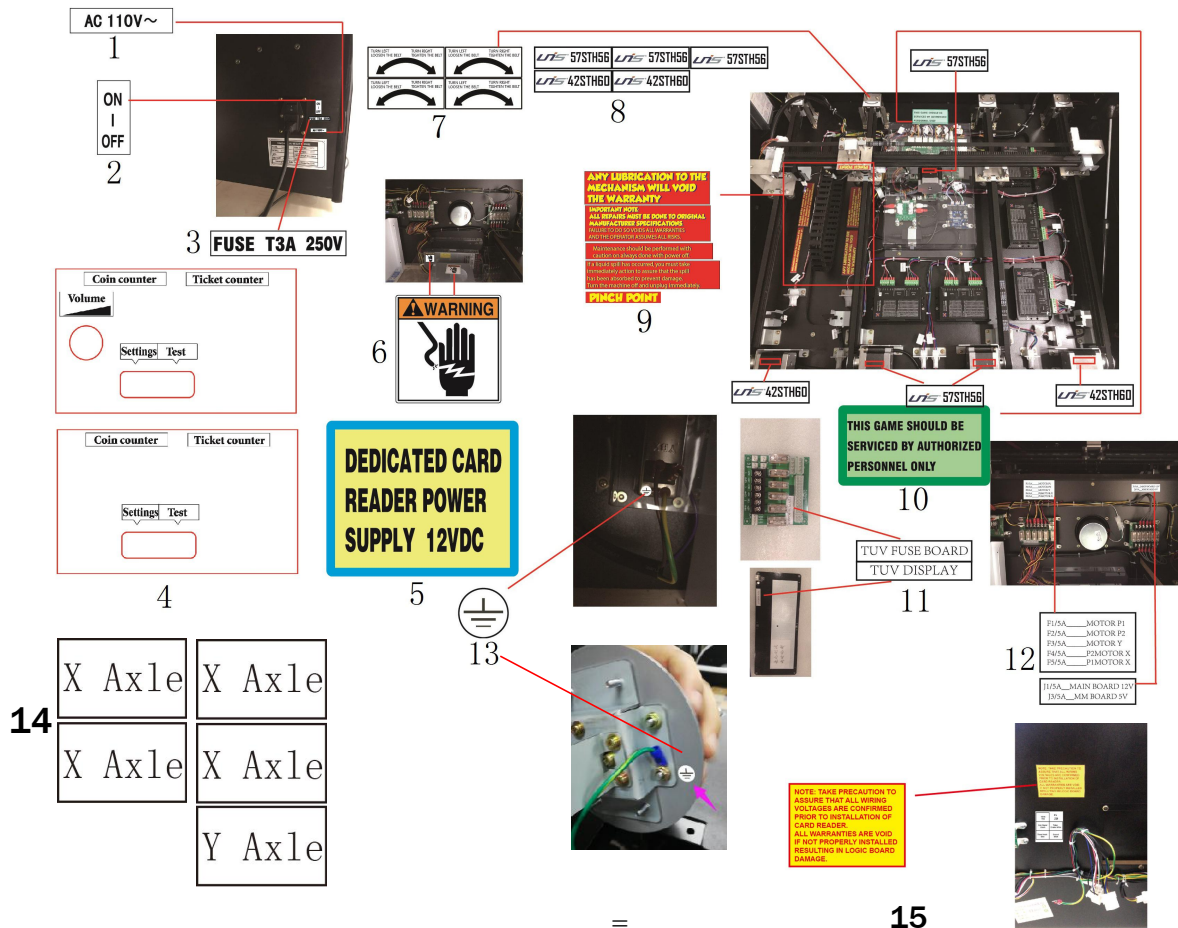


No.	Part No.	Code	Name	Qty
1	P152-702-001	20511707K002A	Left L light plate	1
2	P152-609-000	25300000010	Lock	2
3	P152-134-001	20211707K017A	Left plate	1
4	P152-701-000	20511707K001	Middle light plate	1
5	P152-703-001	20511707K003A	Right L light plate	1

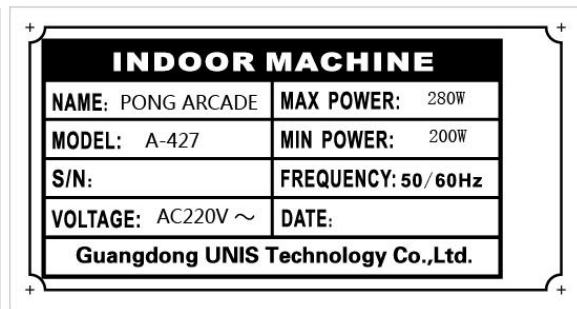
### 9.12 Decals



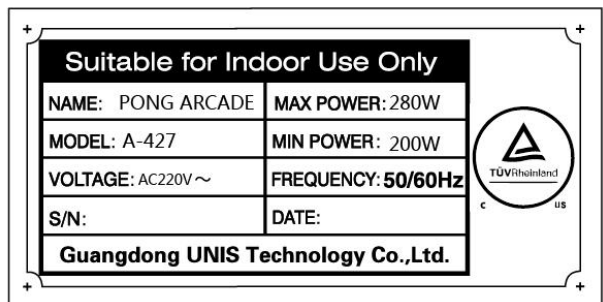
No.	Part No.	Code	Name	Qty
1	P152-714-000	20511707001C	Playfield glass	1
2	P152-707-003	20511707K007C	Control panel arc decal	1
3	P152-708-001	20511707K008A	Front door decal	2
4	P152-715-000	20511707002	ATARI Logo	2
5	P152-706-001	20511707K006A	Button decal	2
6	P152-704-001	20511707K004A	110V nameplate	1
7	P152-710-001	20511707K010A	TUV 110V nameplate	1
8	P152-711-000	20511707K011	Brand R label	2
9	P152-712-000	20511707K012	Bottom plastic decal	2
10	P152-703-001	20511707K003A	Right L light plate	2
11	P152-701-000	20511707K001	Middle light plate	2
12	P152-702-001	20511707K002A	Left L light plate	2
13	P152-709-000	20511707K009	Frame decal	1



No.	Part No.	Code	Name	Qty
1	P152-729-000	25600000071	110V label	1
2	P152-726-000	25600000017	Power SW label	1
3	P152-730-000	25600000073	Fuse T3A/250V	1
4	P152-739-000	20511707K019	Counter decal	1
5	P152-740-000	20511605A040	Adapter decal	2
6	P152-727-000	25600000036	Warning label	2
7	P152-720-000	20511707019	Belt direction label	1
8	P152-717-000	20511707010A	Motor label	1
9	P152-716-000	20511707009B	No lubrication label	1
10	P152-728-000	25600000042	Service label 1	1
11	P152-718-000	20511707017	Fuse label	1
12	P152-713-000	20511707A007	Wiring label 1	1
13	P152-731-000	25600000091	GND label	2
14	P152-732-000	20511707020	X axle & Y axle label	1
15	P152-741-000	20511707K020	AAMA warning label	2



1



2

12vdc Red	P1 J29	12vdc Red	P2 J38
Coin Signal Green	Ticket Enable White	Coin Signal Green	Ticket Enable White
Ticket Notch Blue	Ground Black	Ticket Notch Blue	Ground Black

3

+12V	+12V
Coin signal	Coin signal
Ticket drive	Ticket drive
Ticket signal	Ticket signal
GND	GND

4

MOTOR P1	MOTOR P1	P1 MOTOR X	P2 MOTOR X	P1 MOTOR X
L	R	BUTTON J2	SENS-X	P2 MOTOR X
24V	BUTTON J1	SENS-J1	SENS-Y	MOTOR P2
P1 SENSOR	ENC J2	SENS-J2	12V	MOTOR Y
P2 SENSOR	ENC J1	P2 MOTOR X	5V	MOTOR P2
MOTOR P1	P1 MOTOR X	MOTOR Y	MOTOR P2	

5

MOT_J1	J39	ENC-P1	MOT_EN
MOT_J2	J37	ENC-P2	J34
MOT_X1	J38	BAND	SCORE
MOT_X2	J36		
MOT_Y	J35		

F1/5A	_____	MOTOR P1
F2/5A	_____	MOTOR P2
F3/5A	_____	MOTOR Y
F4/5A	_____	P2MOTOR X
F5/5A	_____	P1MOTOR X

6

J1/5A	__	MAIN BOARD 12V
J3/5A	__	MAIN BOARD 5V

7

Main Board	Sensor
Amplifier Board	Sensor
Score Board	Sensor
Audio Isolator	Sensor
Light control board	Light control board

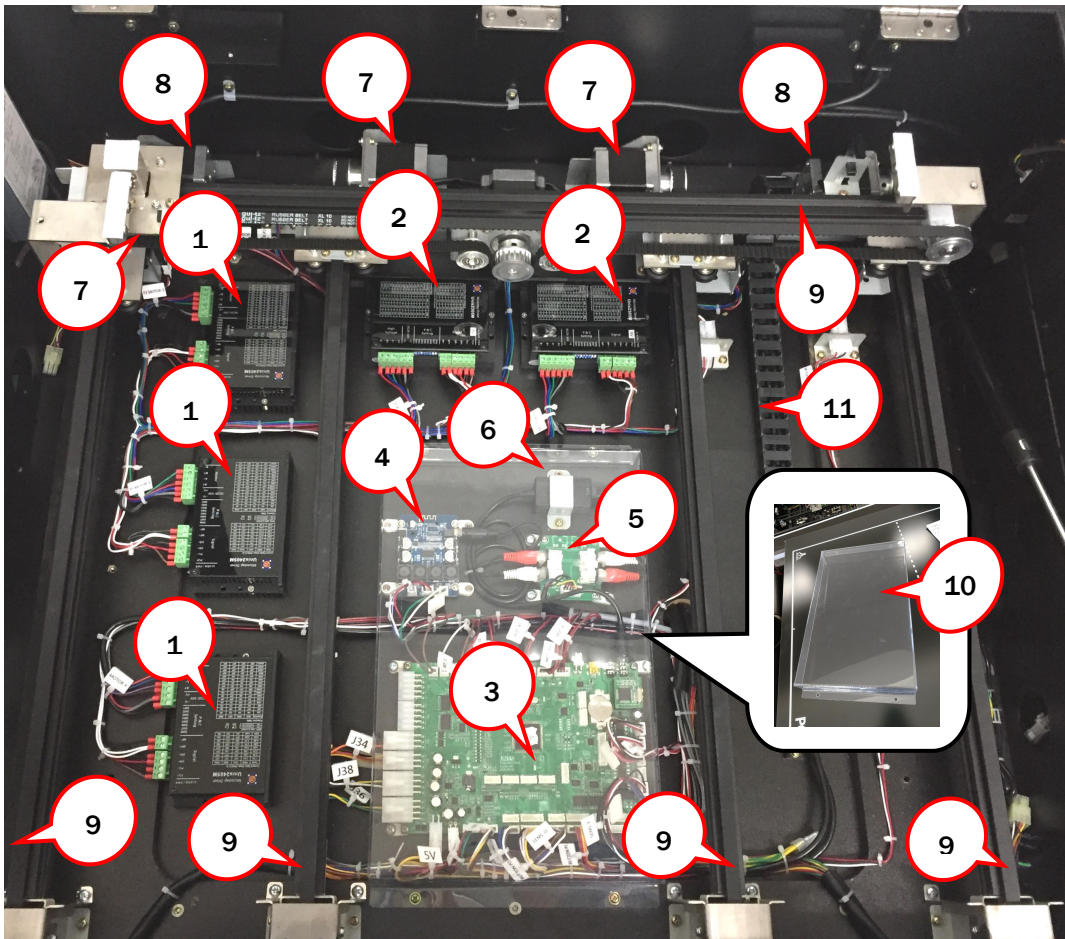
No.	Part No.	Code	Name	Qty
1	P152-733-001	20511707K013A	220V nameplate	1
2	P152-734-001	20511707K014A	TUV 220V nameplate	1
3	P152-735-000	20511707K015	AAMA port label	1
4	P152-736-000	20511707K016	AAMA cable label	1
5	P152-705-002	20511707K005B	Wiring label 1	1
6	P152-737-000	20511707K017	Fuse label	1
7	P152-738-000	20511707K018	Component label	1

### 9.13 Electrical Components

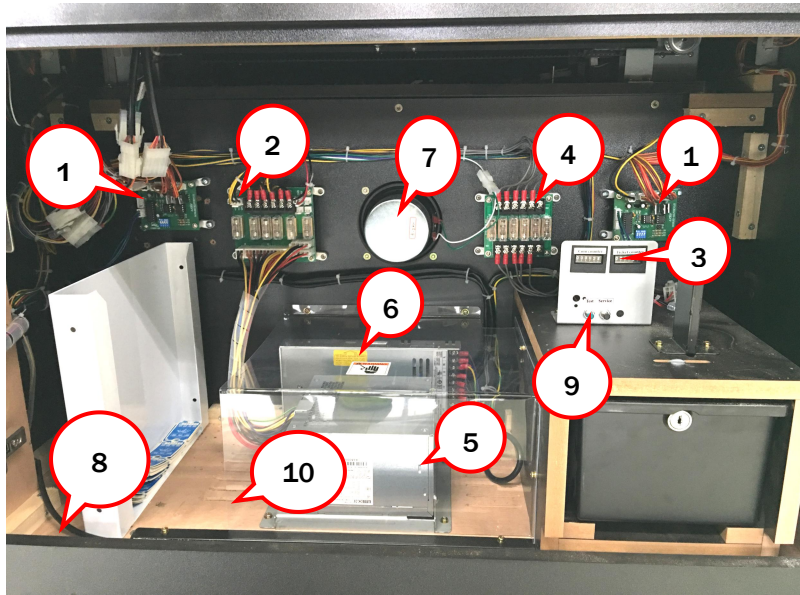


No.	Part No.	Code	Name	Qty
1	P152-402-000	23407030001	Coder	2
2	P152-405-000	22401170004	Orange button	4
	P152-401-000	22604000006	Micro SW	4
3	P152-403-000	22401170002	White button 1P	2
	P152-404-000	22401170003	White button 2P	2
	P152-401-000	22604000006	Micro SW	4
4	P152-410-000	22002020001	Light strip	1
5	P152-432-000	29711707006D	Display board	1
6	P152-407-000	22201010001	Light slot 1	2
7	P152-408-000	22201010002	Light slot 2	2
8	P152-425-000	22301000002	Electronic coin mechanism	2
9	P152-401-000	22604000006	Micro SW	6
	P152-440-000	22401000066	Small button	6
	P152-441-000	22003000018	LED light bulb	6
10	P152-451-000	HLPP.S-PX-38	Side light strip 1	2
11	P152-452-000	HLPP.S-PX-39	Side light strip 2	2
12	P152-451-000	HLPP.S-PX-38	Side light strip 1	2
13	P152-453-000	HLPP.S-PX-30A	Side light strip 3	2

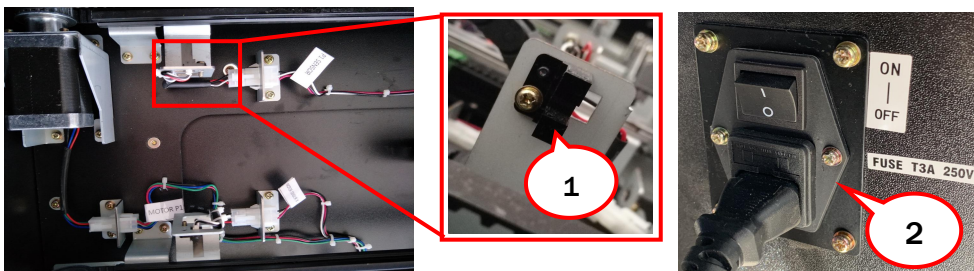




No.	Part No.	Code	Name	Qty
1	P152-612-000	23407010007	Motor driver	3
2	P152-611-000	23407010006	Stepping motor driver	2
3	P152-446-001	29711707009B	Main board	1
4	P152-418-000	22803010008A	Amplifier board	1
5	P152-433-000	21702000022	Multimedia board	1
	P152-434-000	23305000022	Audio cable	2
6	P152-419-000	22807000002	Audio isolator	1
7	P152-614-000	23406000031	Hybrid stepping motor	3
8	P152-613-000	23406000030	Hybrid stepping motor	2
9	P152-615-000	26504010002	Belt	7500mm (295.2in)
10	P152-175-000	20611707021B	Dust-free cover	1
11	P152-411-000	26503020027	Chain	1

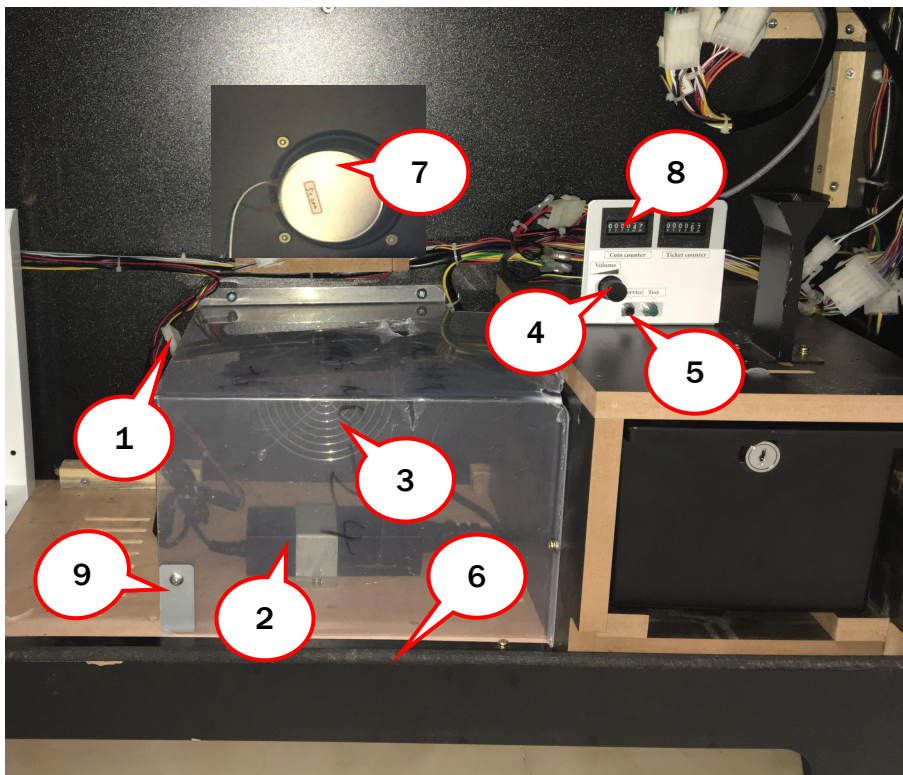


No.	Part No.	Code	Name	Qty
1	P152-438-000	20711006006	PCB	2
2	P152-426-000	21714000148A	Fuse board	1
3	P152-417-000	23000000005	Counter	2
4	P152-416-000	21714000148	Fuse board	1
5	P152-437-000	21602000106	Power supply	1
	P152-414-000	23301018004	Power cord	1
	P152-209-000	20211707K028	Cover fix plate	2
6	P152-406-000	21602000105	Power supply	1
7	P152-412-000	22801000085	Speaker	1
	P152-445-000	25900016000	4" speaker net cover	1
8	P152-442-001	22006012010	B2835B Light strip-blue	4500mm(117.1in)
9	P152-430-000	22402030002	Button(green)	1
	P152-435-000	22402050001	Button(black)	1
10	P152-209-000	20211707K028	Cover fix plate	2
	P152-116-000	20611707K009	Power cover	1

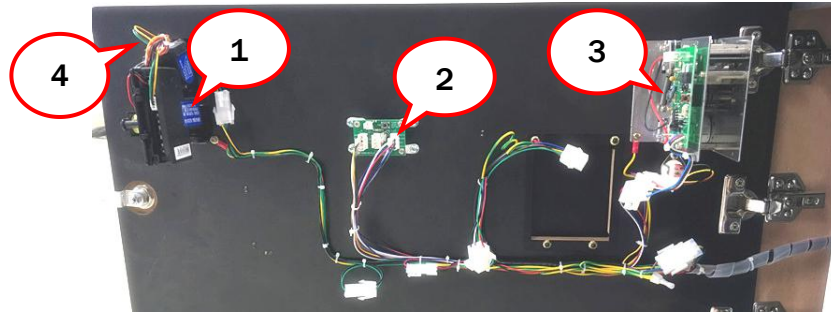


No.	Part No.	Code	Name	Qty
1	P152-415-000	21503000055	Sensor SW	4

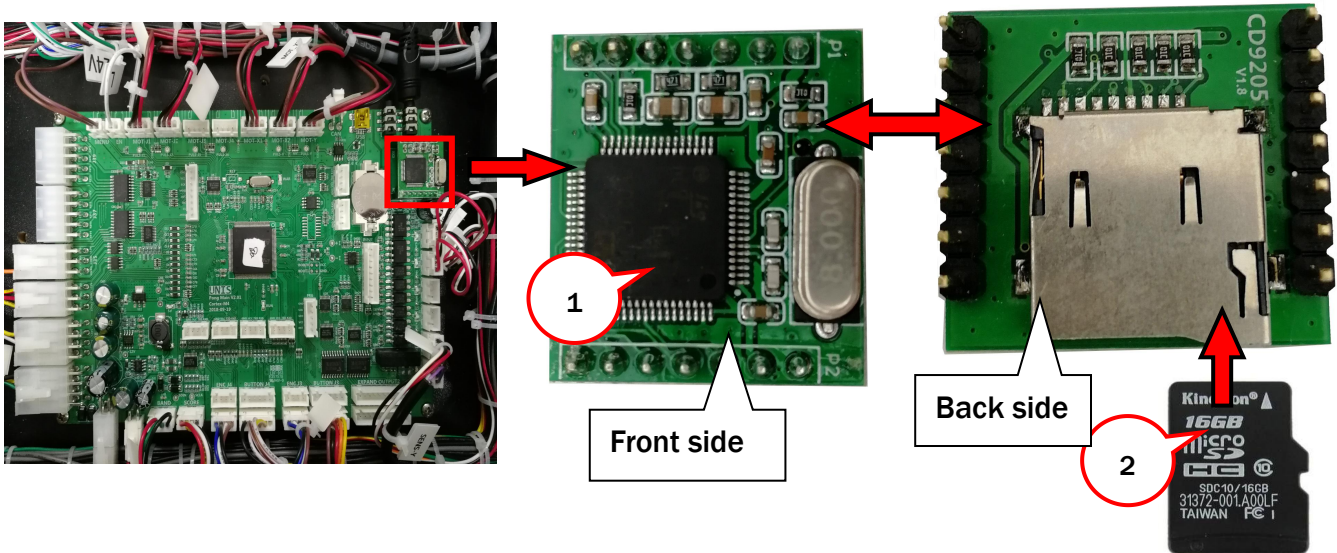
No.	Part No.	Code	Name	Qty
2	P152-413-000	23201000005	Filter	1
	P152-436-000	21901000010	Fuse	1



No.	Part No.	Code	Name	Qty
1	P152-429-000	23301040022	DC Power cord	1
2	P152-428-000	21603020001A	AC adapter	1
3	P152-420-000	22702000010	Fan net	1
	P152-409-000	22702010025	Fan	1
4	P152-431-000	29791400001	POT connect board	1
5	P152-430-000	22402030002	Button(green)	1
	P152-435-000	22402050001	Button(black)	1
6	P152-442-001	22006012010	B2835B Light strip-blue	4500mm (117.1in)
7	P152-412-000	22801000085	Speaker	1
	P152-445-000	25900016000	4" speaker net cover	1
8	P152-417-000	23000000005	Counter	2
9	P152-208-000	20611707K015	Cover	1

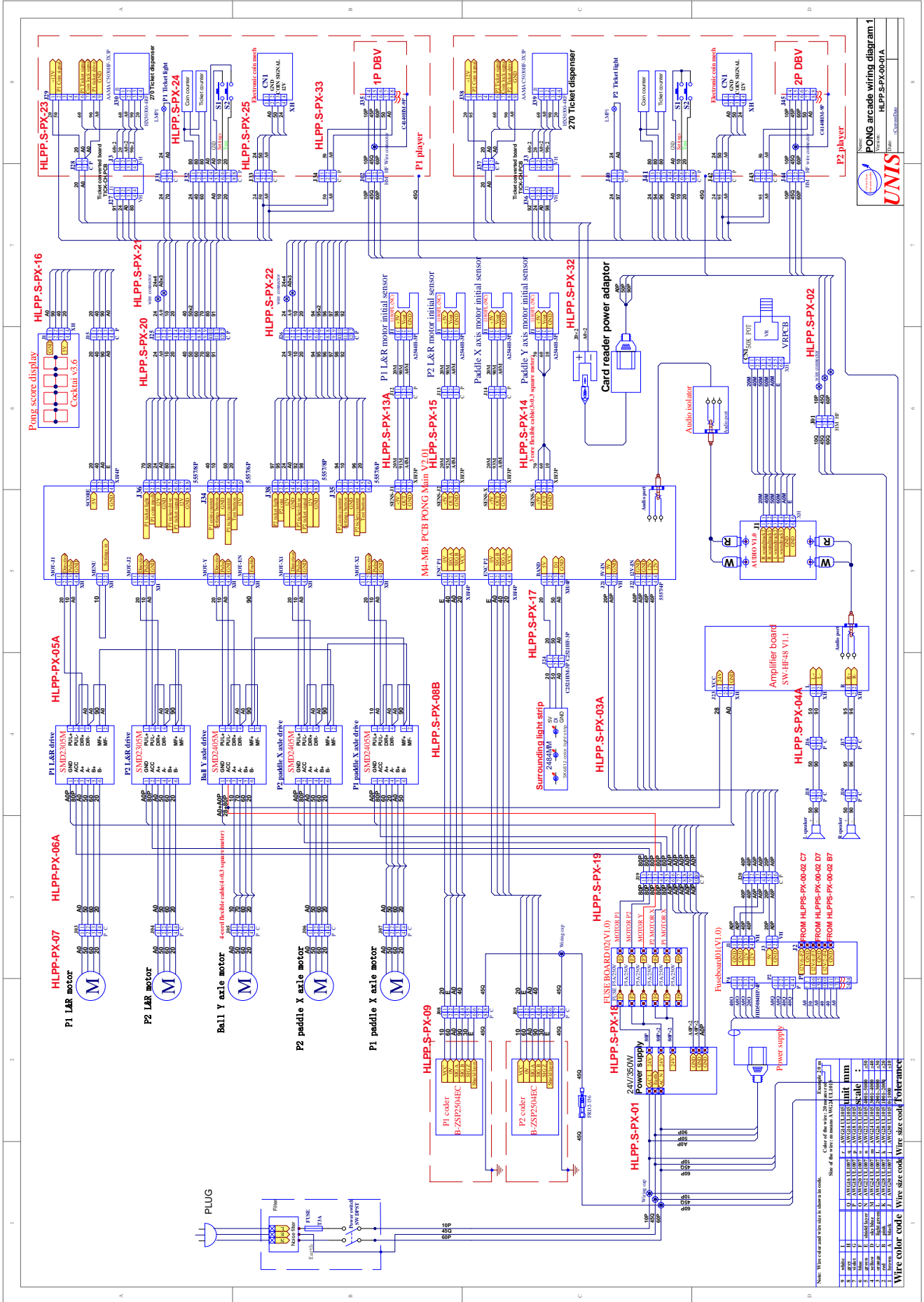


No.	Part No.	Code	Name	Qty
1	P152-425-000	22301000002	Coin mechanism	2
2	P152-447-000	29790700002	Ticket converted board	2
3	P152-439-000	23100000005	Ticket dispenser	2
4	P152-443-000	22003000003	LED(12V) light bulb	2
	P152-444-000	22201000028	12Vwhite light bracket	2



No.	Part No.	Code	Name	Qty
1	P152-448-000	51306000020	Quadraphonic mixing module	1
2	P152-449-001	21107010038	TF card	1

# 10. WIRING DIAGRAM



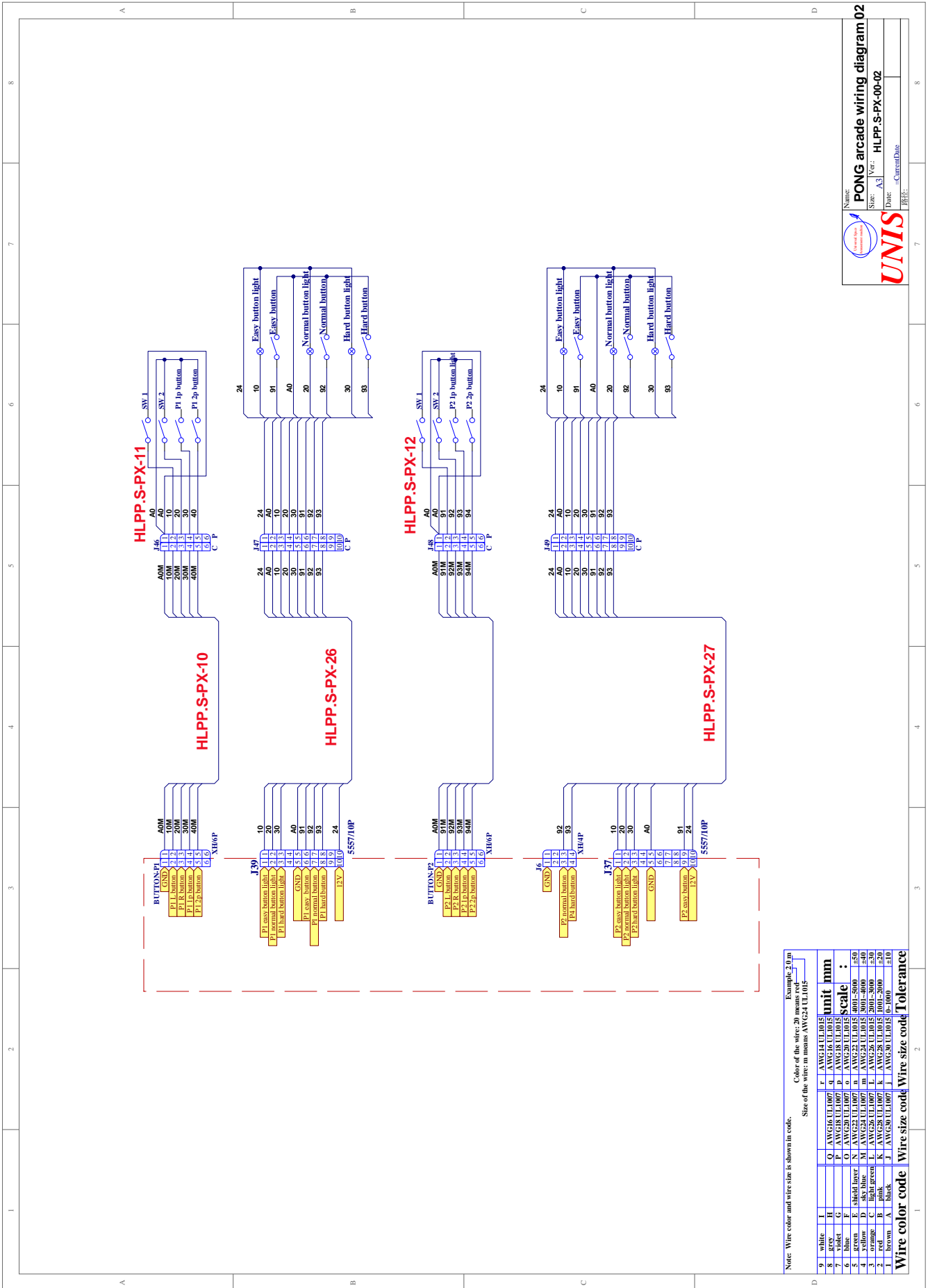
UNIS  
 Name: PONG arcade wiring diagram 1  
 Version: HLPP-S-PX-00-01A  
 Date: 2018-08-13  
 Author: Chuanzhen

Note: Wire color and size are in accordance with the table.

Color of the wire in this table is shown in this table.

Size of the wire in mm (AWG) (UL)

Wire color code	Wire size code	Wire size code	Tolerance
12	AWG14 (UL)	1.6	±0.05
13	AWG16 (UL)	1.0	±0.05
14	AWG18 (UL)	0.8	±0.05
15	AWG20 (UL)	0.6	±0.05
16	AWG22 (UL)	0.5	±0.05
17	AWG24 (UL)	0.4	±0.05
18	AWG26 (UL)	0.3	±0.05
19	AWG28 (UL)	0.2	±0.05
20	AWG30 (UL)	0.1	±0.05
21	AWG32 (UL)	0.1	±0.05
22	AWG34 (UL)	0.1	±0.05
23	AWG36 (UL)	0.1	±0.05
24	AWG38 (UL)	0.1	±0.05
25	AWG40 (UL)	0.1	±0.05
26	AWG42 (UL)	0.1	±0.05
27	AWG44 (UL)	0.1	±0.05
28	AWG46 (UL)	0.1	±0.05
29	AWG48 (UL)	0.1	±0.05
30	AWG50 (UL)	0.1	±0.05
31	AWG52 (UL)	0.1	±0.05
32	AWG54 (UL)	0.1	±0.05
33	AWG56 (UL)	0.1	±0.05



UNIS

Name: PONG arcade wiring diagram 02  
 Size: A3 Ver.: HLPP.S-PX-00-02  
 Date: - Current Date

Note: Wire color and wire size is shown in code. Example: 2.0 m

Wire color code	Wire size code	Wire size code	Wire size code	Tolerance
9	1	white	L	AWG14 UL1015
8	RESV	H	Q	AWG16 UL1015
7	violet	G	P	AWG18 UL1015
6	blue	F	O	AWG18 UL1015
5	blue	E	N	AWG22 UL1015
4	yellow	D	M	AWG24 UL1015
3	orange	C	L	AWG26 UL1015
2	red	B	K	AWG28 UL1015
1	black	A	J	AWG30 UL1015

Color of the wire: 20 means red-2.0 m

Size of the wire in mm: AWG24 UL1015

Scale: 1:50



## MAINTENANCE LIST

The items listed below should be reviewed as required.

<b>Ball</b>		<b>OK/NG</b>	<b>Sign</b>
<b>1</b>	Check quarterly. If the bottom of the Ball has dirt, utilize the non-woven fabric with distilled water to clean. If the bottom of the Ball is damaged, replace the Teflon tape on the ball. (Refer to 8.5)		
<b>2</b>	Replace the Teflon tape on the Ball once a year. (Refer to 8.5)		
<b>Paddles</b>			
<b>1</b>	Check quarterly. If the bottom of the Paddle has dirt, utilize the non-woven fabric with distilled water to clean. If the bottom of the Paddle is damaged, replace the Wool felt pad on the Paddle. (Refer to 8.4)		
<b>2</b>	Replace the Wool felt pad on the Paddles once in every 1.5 years. (Refer to 8.4)		
<b>Playfield</b>			
<b>1</b>	Check quarterly. If the surface of the Playfield has dirt, utilize the non-woven fabric with distilled water to clean. (Refer to 8.3)		
<b>2</b>	Replace the Playfield once in every 2-3 years.		
<b>Belts</b>			
<b>1</b>	Check once in every 6 months if the Belts are loose. (Refer to 8.7 and 8.8)		
<b>2</b>	Replace the Belts once in every 2-3 years.		
<b>Wheels</b>			
<b>1</b>	Replace the Wheels once in every 1000 hours or 2 years.		

Any repairs of parts replacements must be executed with factory standards and only factory authorized parts are to be utilized.