

PONG[®]

4P Version



IMPORTANT



Be Sure
to Read this
Manual
Before Use



UNIS TECHNOLOGY

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

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

INDOOR MACHINE	
NAME: PONG 4P D&B	MAX POWER: 480W
MODEL: A-439	MIN POWER: 180W
S/N:	FREQUENCY: 50/60Hz
VOLTAGE: AC110V~	DATE:
Guangdong UNIS Technology Co.,Ltd.	

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Thank you for purchasing **PONG 4P**. 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 and 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

Min. Power consumption: 180W

Max. Power consumption: 480W

Dimension: Width: 61.00" (1550mm)

Depth: 61.00" (1550mm)

Height: 116.34" (2955mm)

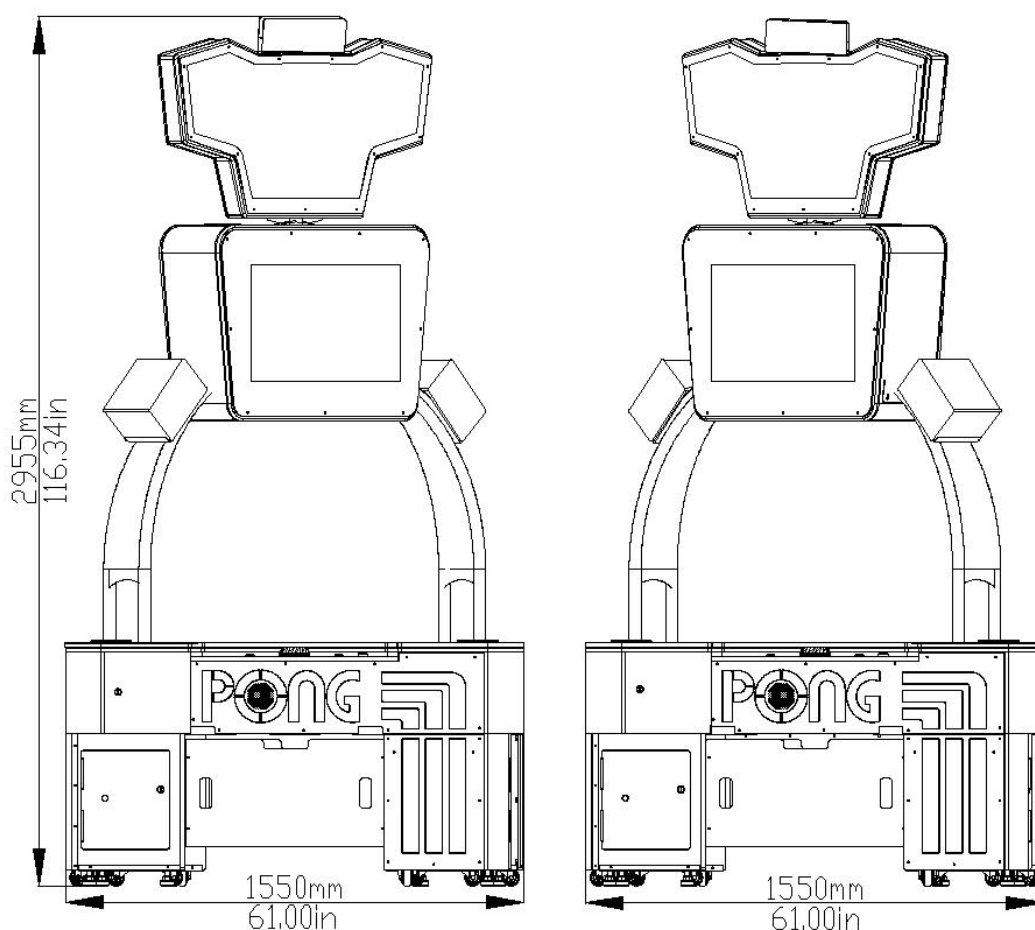
Weight: Approximately 860 lb (390kg)

Part No: P163

Model No: A-439



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



Note: Game specifications are subject to change without notice.

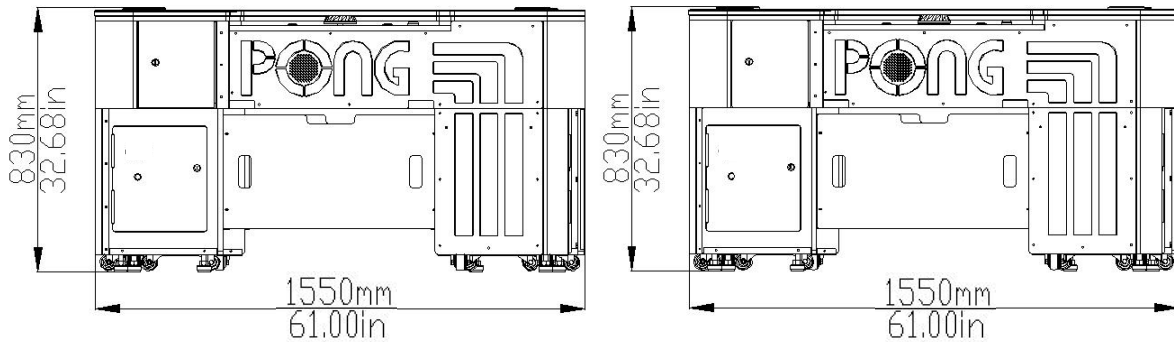
This machine will be divided into a few parts.

Main Cabinet:

Width: 61.00" (1550mm)

Depth: 61.00" (1550mm)

Height: 32.68" (830 mm)

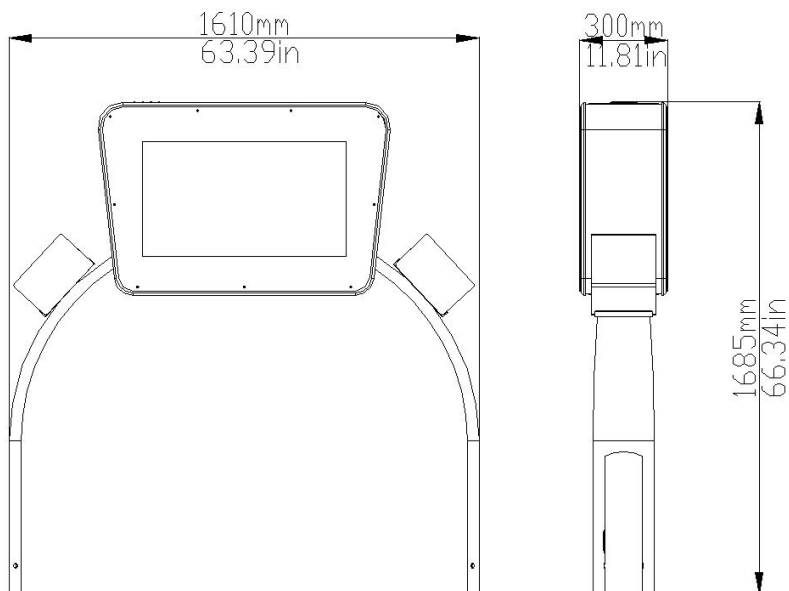


Monitor Assembly:

Width: 63.39" (1610mm)

Depth: 11.81" (300mm)

Height: 66.34" (1685mm)

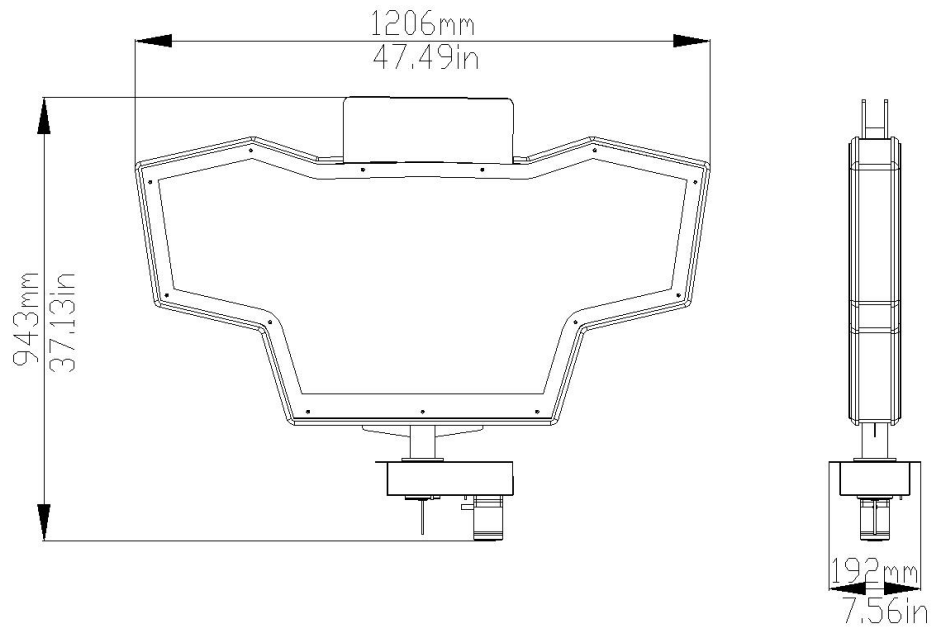


Rotational Marquee & PONG Foam Core Sign:

Width: 47.49" (1206mm)

Depth: 7.56" (192mm)

Height: 37.13" (943mm)



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:

1.1 Following accessories (Package 1)

No.	Part No.	Name	SPEC	Picture	Qty
1	P163-801-000	Power cord	3×16AWG 1.8M		1
2	P163-432-000	Fuse	Φ5×20mm T6.3A 250VAC		1
3	P163-444-000	Fuse	Φ5×20mm T10A 250VAC		1
4	P163-802-000	Key	171A		2
5	P163-803-000	Manual	D&B		1
6	P163-131-000	Adjust plate A (Short)	δ1.5		1
7	P163-132-000	Adjust plate B (Long)	δ1.5		1
8	P163-362-000	Cross recessed pan head screw set	M4×10 Color zinc		2
9	P163-311-000	Standard spring washer	4×1.1h GB/T93-1987		2
10	P163-101-000	Adjustment weight	White zinc plated		1
11	P163-804-000	Teflon	973UL-S 0.13X25X10		1

1.2 Following accessories (Package 2)

No.	Part No.	Name	SPEC	Picture	Qty
1	P163-159-000	Ball	Assembly		2
2	P163-160-000	Paddle	Assembly		4

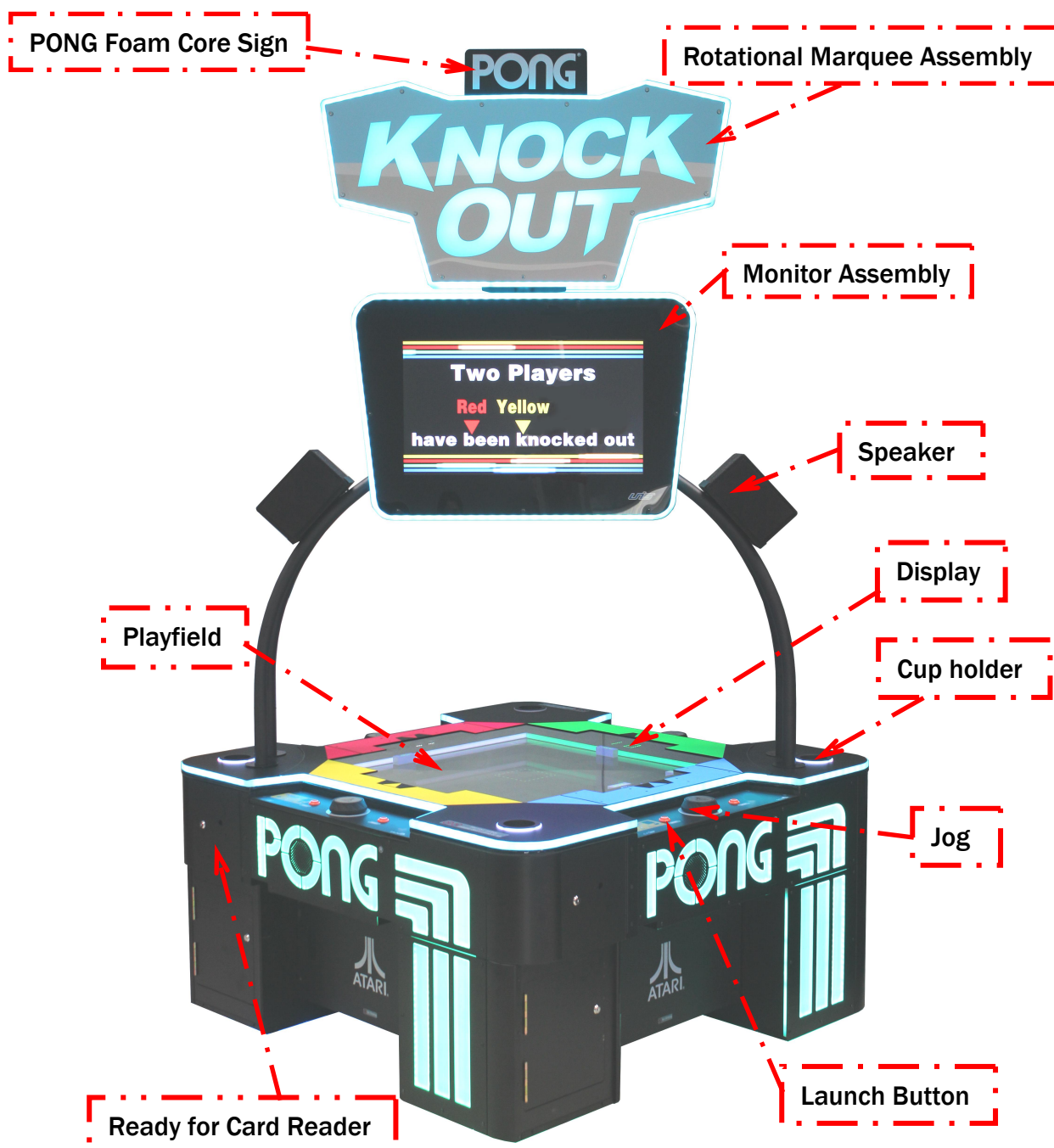
2. Accessory KIT

No.	Part No.	Name	Qty	Picture
1	P163-435-000	Cup holder LED ring	1	
2	P163-462-000	42MM Stepping motor	1	
3	P163-463-000	57MM Stepping motor	1	
4	P163-477-000	Motor driver	1	
5	P163-461-000	24V Table lifting motor	1	
6	P163-134-000	Anti-scratch foam A	10	
7	P163-135-000	Anti-scratch foam B	8	
8	P163-159-000	Ball	1	
9	P163-160-000	Paddle	1	
10	P163-482-000	Y axle Toothed belt (XL type)	75.90inX1	
11	P163-483-000	X axle Toothed belt (XL type)	74.92inX1	
12	P163-484-000	Paddle axle Toothed belt (XL type)	65.63inX1	
13	P163-901-000	Jog assembly(with Encoder)	1	

NOTE: Part models are subject to change without notice.

3. PART NAME

Key Components



4. SET UP & INSTALLATION

⚠ NOTICE

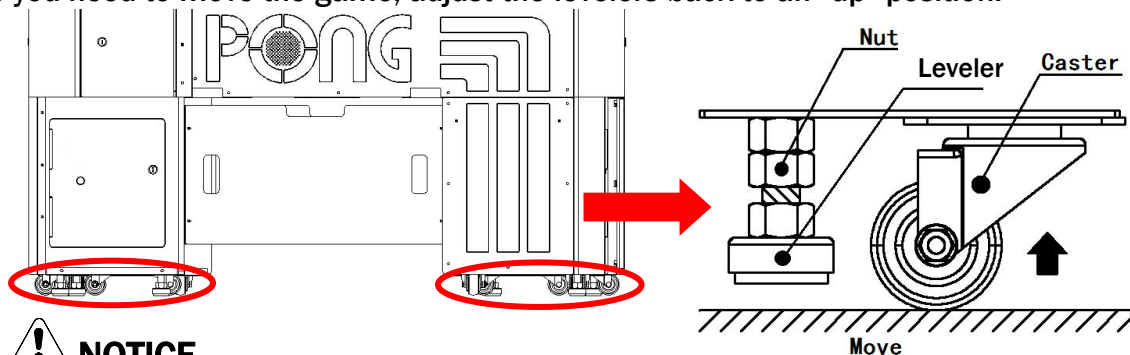
We do not recommend using power tools as they may cause damage.

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

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

4.1 Transporting the Game

If you need to move the game, adjust the levelers back to an “up” position.



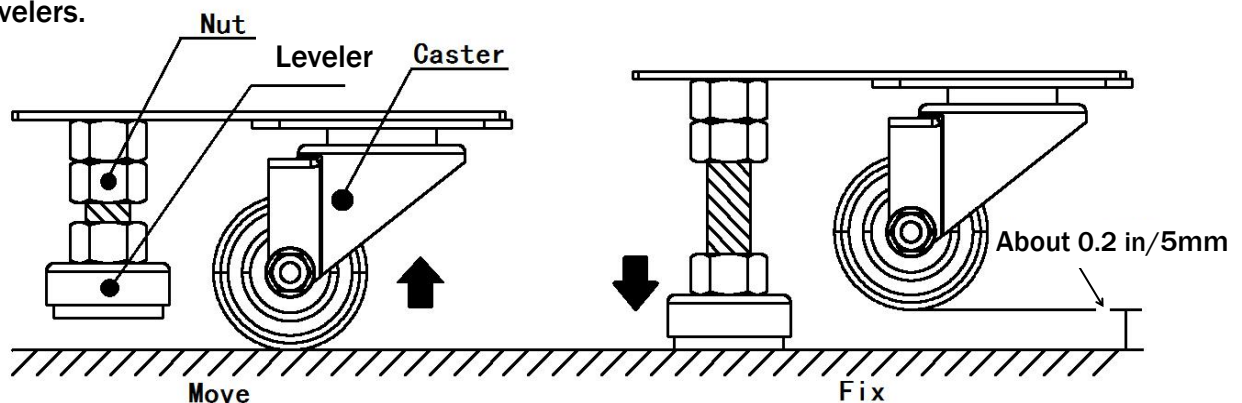
⚠ NOTICE

- Be careful not to damage the machine during transport.
- Always unplug the game before moving.
- Keep the machine in upright position during transport.
- For longer distance transport, package the game properly to prevent damages.

4.2 Level Adjustment

Install this game on a flat surface. If the game is installed on an unsuitable floor, it could cause game malfunction.

To secure the game, loosen the nut, utilize wrench to adjust the leveler down until it touches the floor, lifting the casters off the ground by 0.2 in/5mm. Repeat the same for all levelers.



⚠ NOTICE

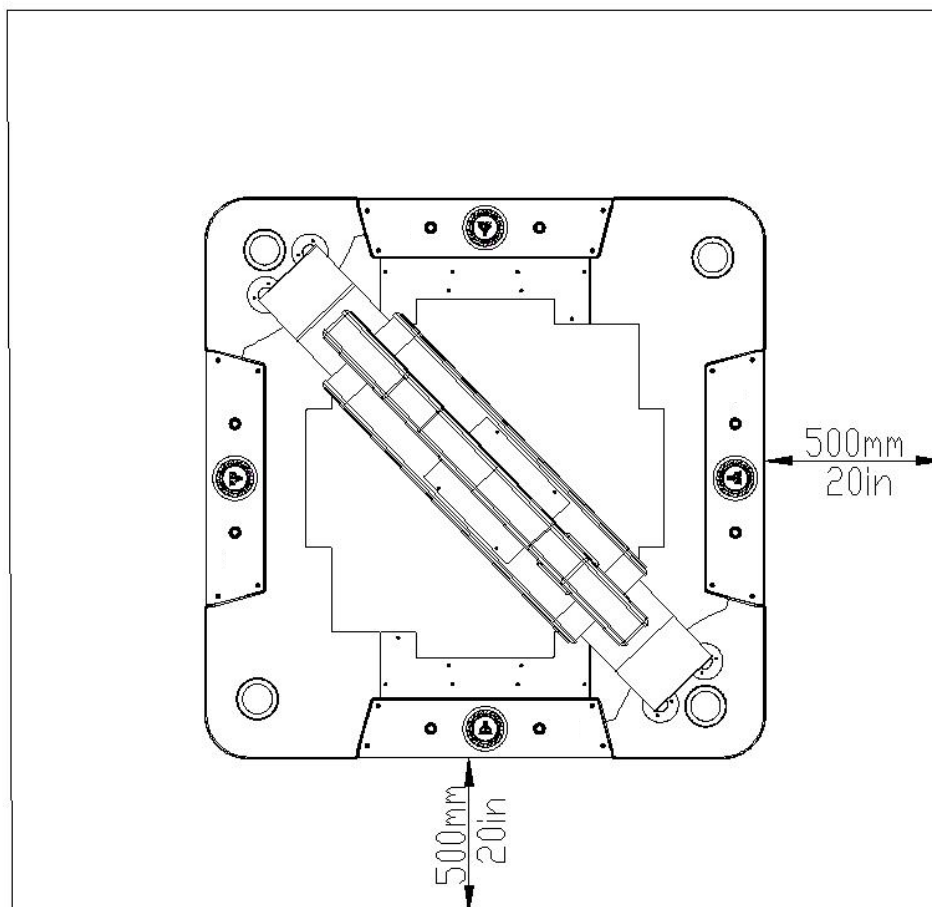
Make sure the machine is level.

4.3 Play Zone

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

Leave space around the game upon installation:

Service area: 20 in



NOTICE

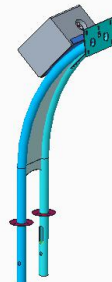
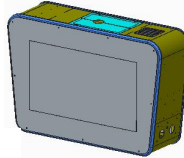
Your unit must be leveled to operate properly.

4.4 Machine Installation

Before processing with assembly assure you have the following tools.

No.	Name	Picture
1	Allen wrench	
2	Spanner	
3	Phillips screwdriver	
4	Ladder	

Component Weight:

No.	Name	Picture	Weight
1	Support post (with a Speaker)		22lb (10kg)
2	Monitor assembly		135lb (61kg)
3	Rotational marquee		40lb (18kg)

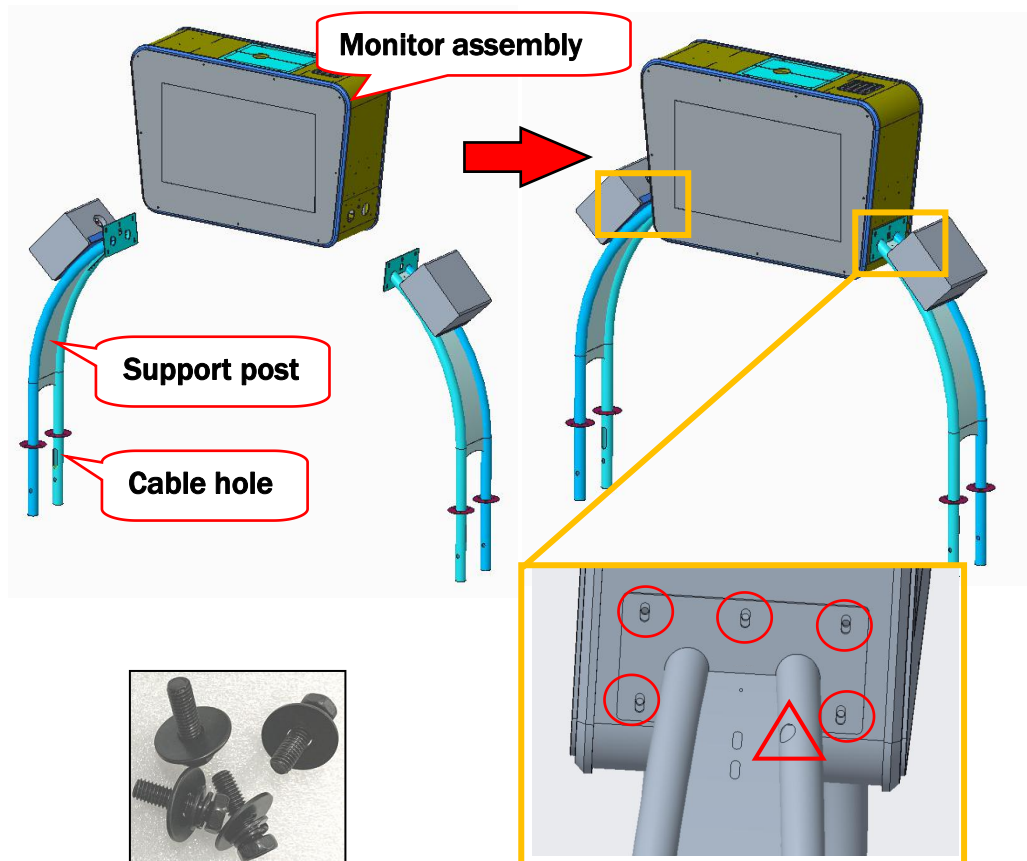
When installing the machine, be very careful and pay attention to ensure that the player can enjoy the game safely.

Inappropriate handling running counter to the cautionary matters can cause personal injury or damage to the machine.

Step 1 Guide the Monitor assembly cables to the bottom cable hole of Support post. Tighten 5 screws and washers on each side to secure the Support posts to Monitor assembly.

Guide the Speaker cable through the hole indicated by triangle to the Monitor assembly and connect on each side.

Note: Tighten the screw in the middle of the hole to ensure that it is secured well.

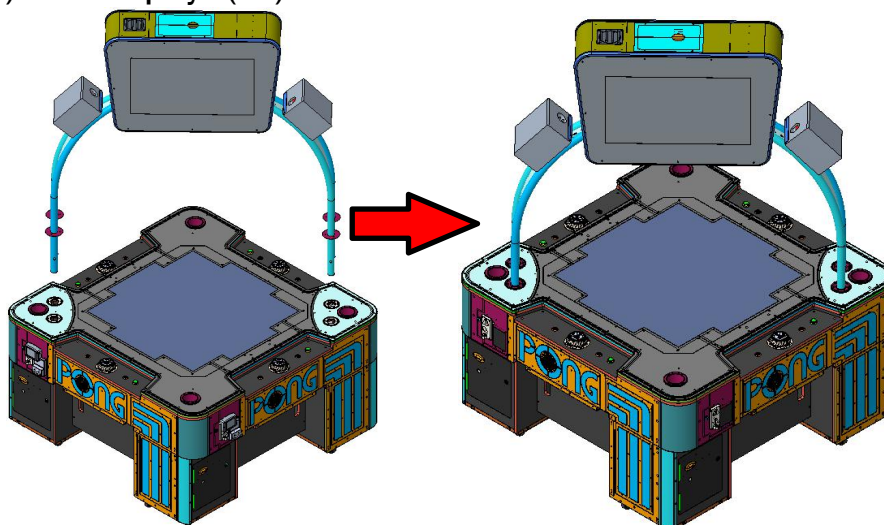


Name	Cross recessed hexagon screw set
SPEC	M6×20 black
Qty	10

Name	C washer
SPEC	6×1h black
Qty	10

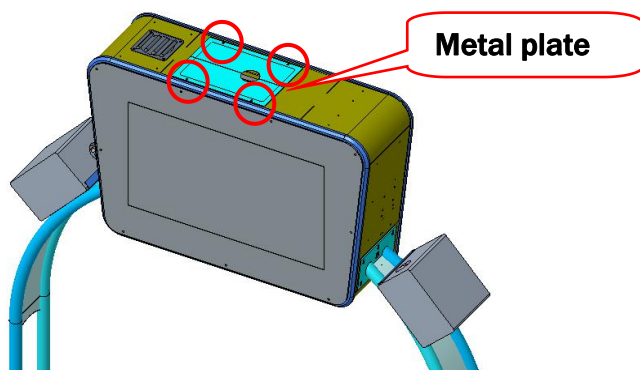
Step 2 Place the Monitor assembly on the cabinet.

Note: The Support post with cable slot should be installed to the brackets between Yellow player(P2) and Red player(P1).



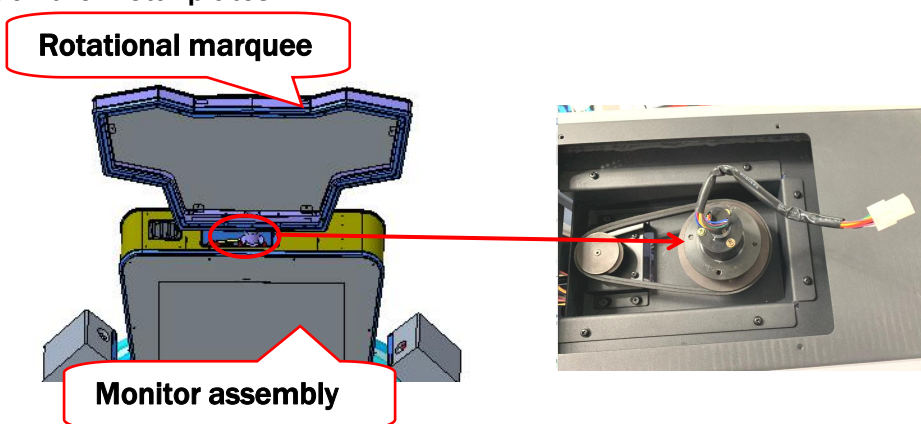
Notice: Due to the size, weight and balance, it is required that multiple installation personnel be available for this task.

Step 3 Utilize Allen wrench to loosen 4 screws indicated by circles; remove the Metal plates.



Step 4 Place the Rotational marquee on the Monitor assembly. Guide the cable from Monitor assembly to Rotational marquee and connect.

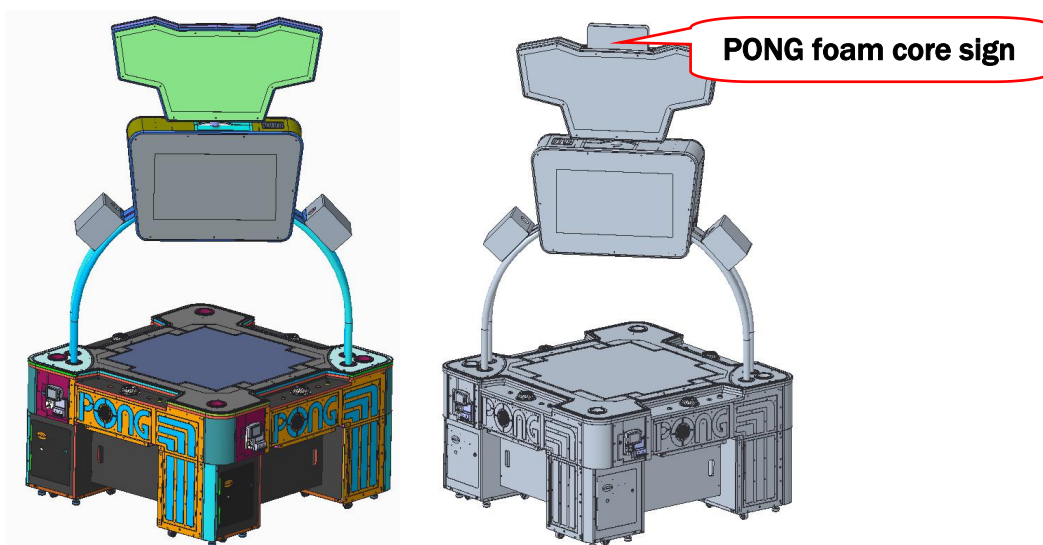
Tighten 4 screws to secure the Rotational marquee to the Monitor assembly. Secure back the Metal plates.



Name	Cross recessed hexagon screw set
SPEC	M6×16 black
Qty	4

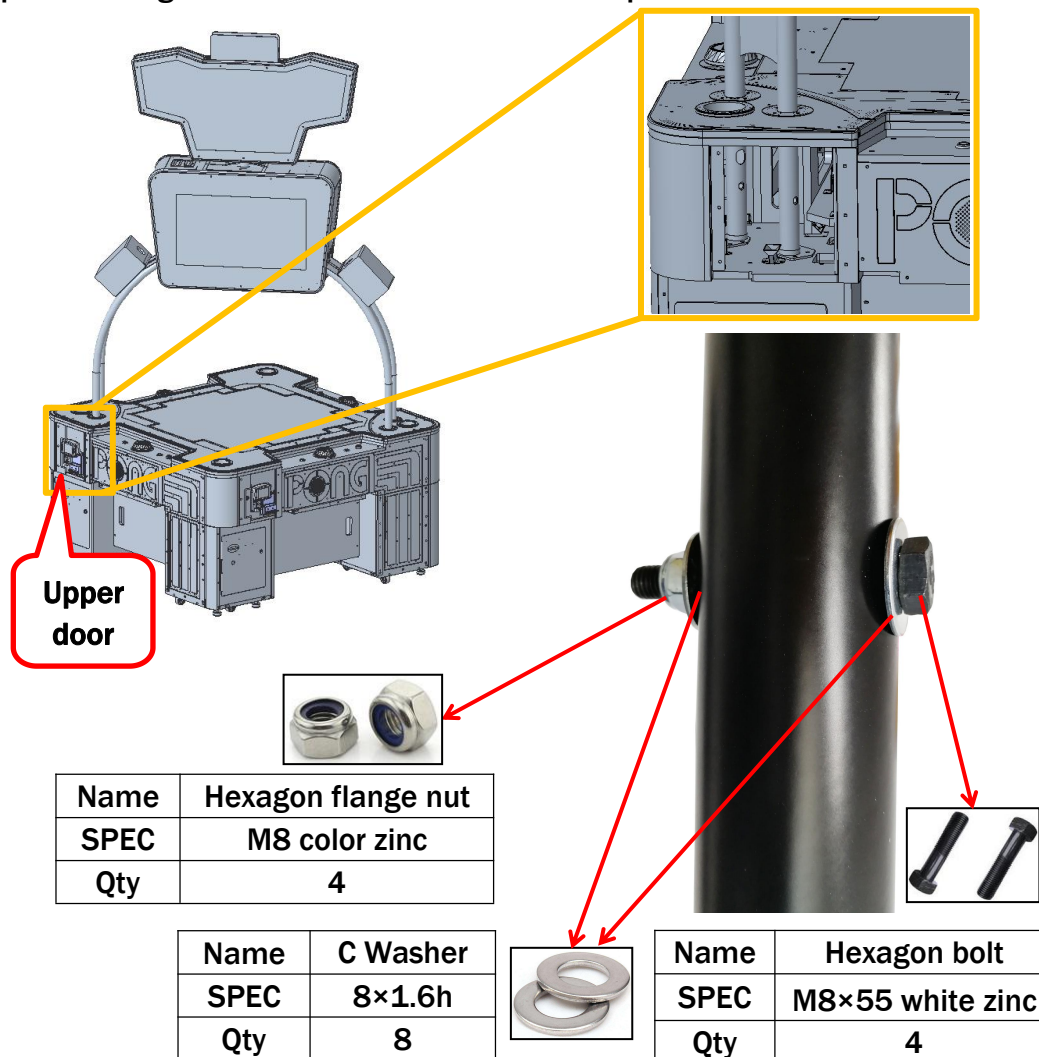


Step 5 Utilize dual adhesive to affix the PONG foam core sign to the top Rotational marquee.

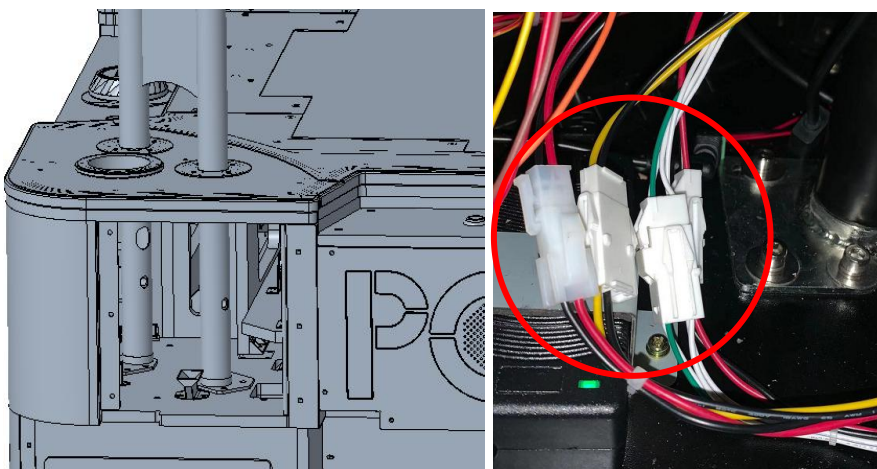


Note: Use of Ladders should be supervised and extreme caution exercised.

Step 6 Open the Upper doors on Yellow player(P2) side and Green player(P4) side. Utilize Spanner to tighten 4 bolts and nuts to fix the 4 posts.

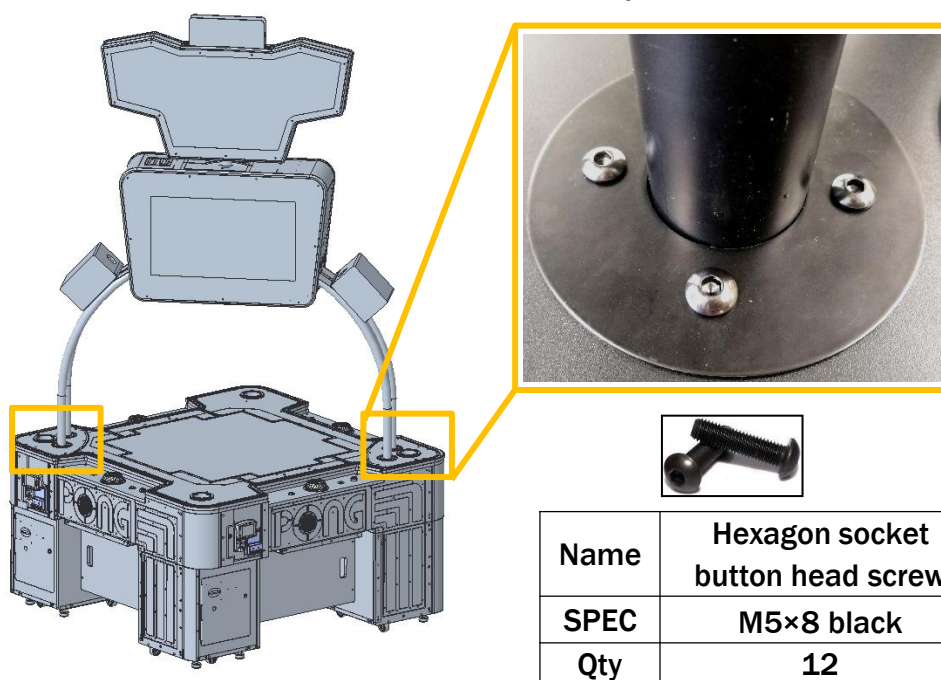


Step 6 Locate Yellow player(P2) side. Plug connectors indicated by circle according to cable color.

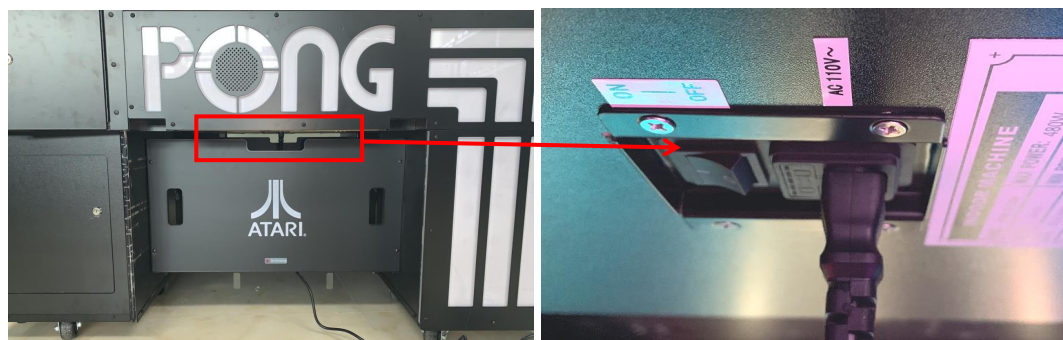


Step 7 Utilize Allen wrench to tighten 3 screws to fix the Metal plate on the cabinet.

Note: The installation method is the same on 4 Metal plates.



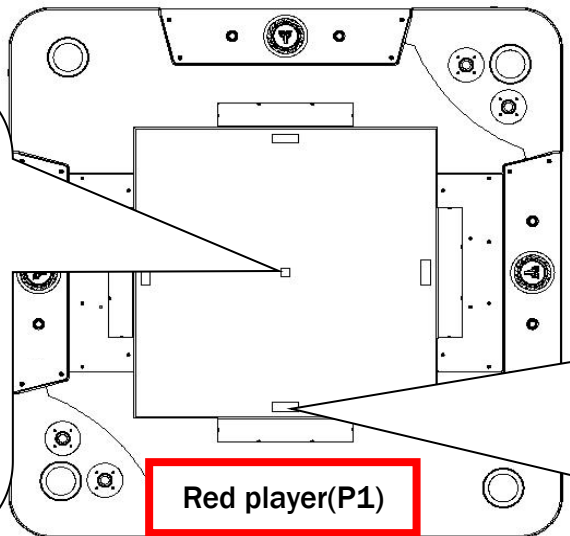
Step 8 Locate Green player(P4) side to power on the machine.



Finish!

4.5 Ball and Paddles Placement

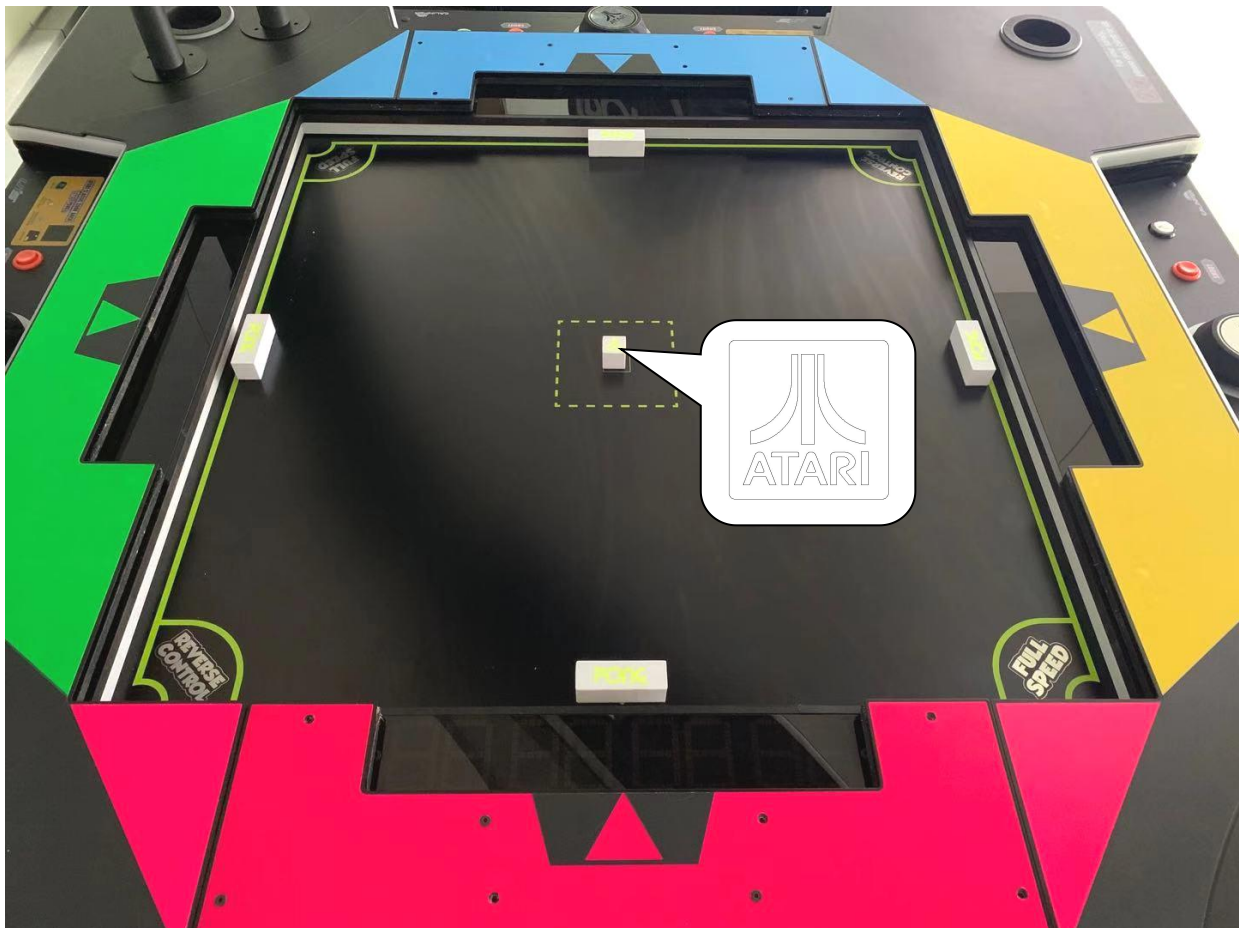
Place the Ball in the middle. Please assure that the magnets stick to the Playfield. Pay attention to the direction.



Red player(P1)

Place the Paddle in the middle. Please assure that the magnets stick to the Playfield. Pay attention to the direction.

PONG.



Red player(P1)

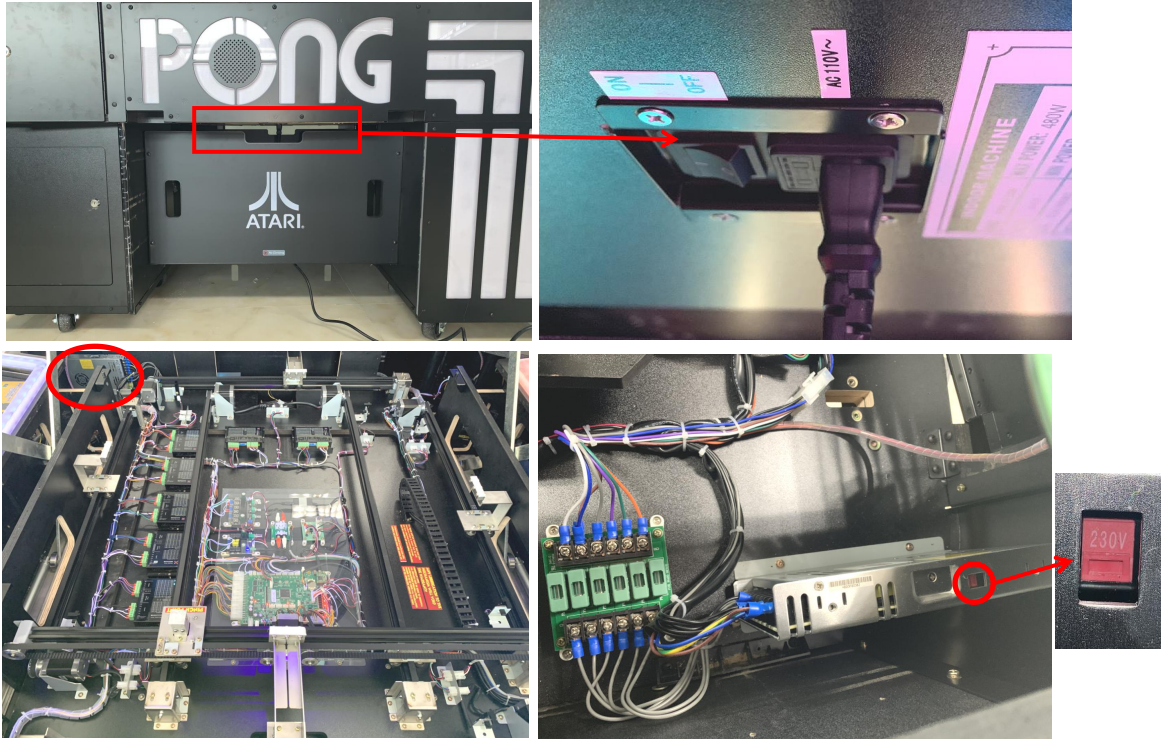
4.6 Voltage Conversion (110V to 220V)

Step 1 Locate Green player(P4) side to power off the machine.

Step 2 Locate the power supply on Yellow player(P2) side.

Step 3 Toggle the switch from 115V to 230V on the power supply.

Step 4 Power on the machine.



4.7 Card Reader Installation Safety Notice



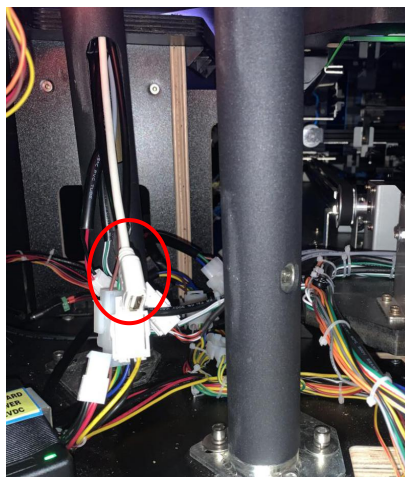
Take precaution to assure that all wiring voltages are confirmed prior to installation of card reader. All warranties are void if not properly installed resulting in logic board damage.

Important: This game is pre-wired to AAMA standards. It is highly recommended to utilize this wiring for Card reader installation.

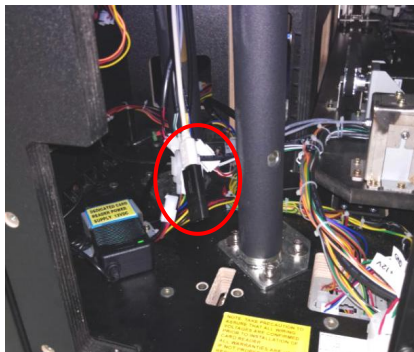
4.8 Program Update Instruction

4.8.1 Monitor Program Update

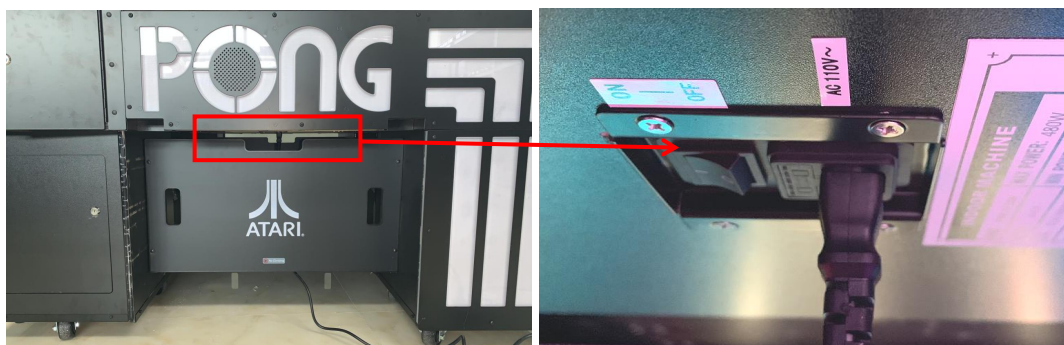
Step 1 Locate Yellow player(P2) Upper door and open it. Locate the Monitor Program Update cable.



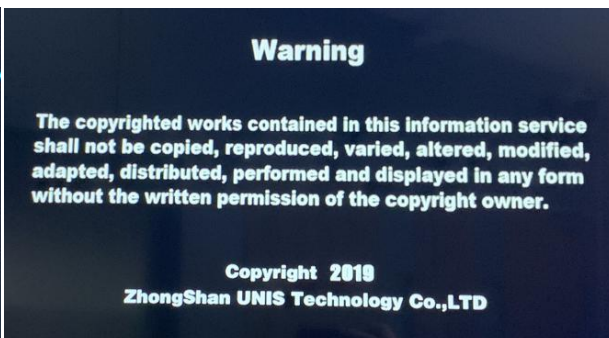
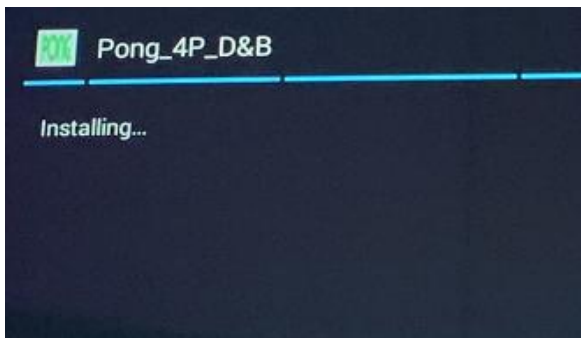
Step 2 Insert the Memory stick(with new program) to the Monitor Program Update cable.



Step 3 Locate Green player(P4) side to restart the machine.



Step 4 The Monitor will show 'Installing...'. After the Monitor shows 'Warning', the program is updated. Remove the Memory stick.



4.8.2 Cabinet Program Update (SD Card)

Before processing assure you have the following tool.

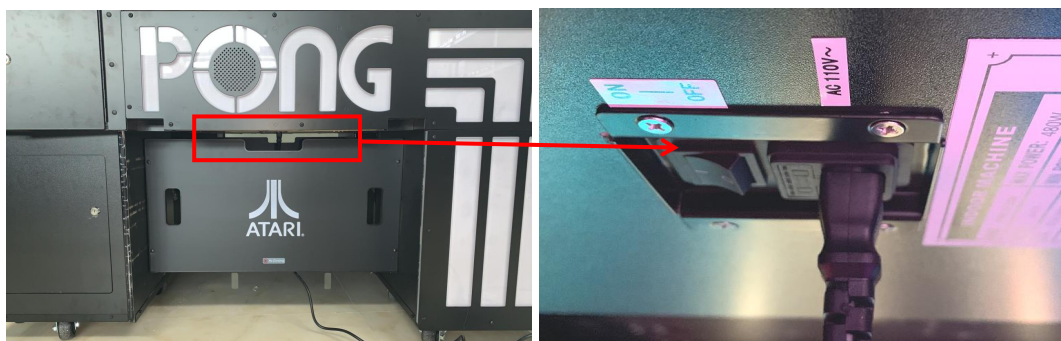
Kit List:

No.	Part No.	Name	QTY	Unit	Note
1	P163-421-000	SD card	1	PCS	This Item Sold Separately

Step 1 Open Green player(P4) Upper door to locate the SD card Program Update Module. Insert the SD Card to SD card Program Update Module.

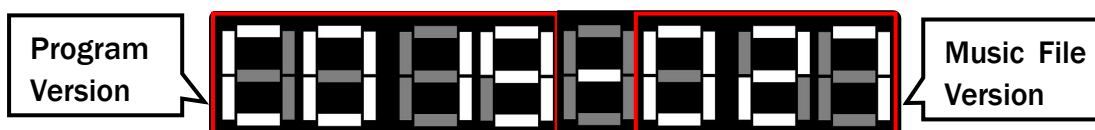


Step 2 Locate Green player(P4) side to restart the machine. The Surrounding light will become green for about 1 minute.



Step 3 The cabinet will restart automatically. Review the new Program version on the Display. Remove the SD card.

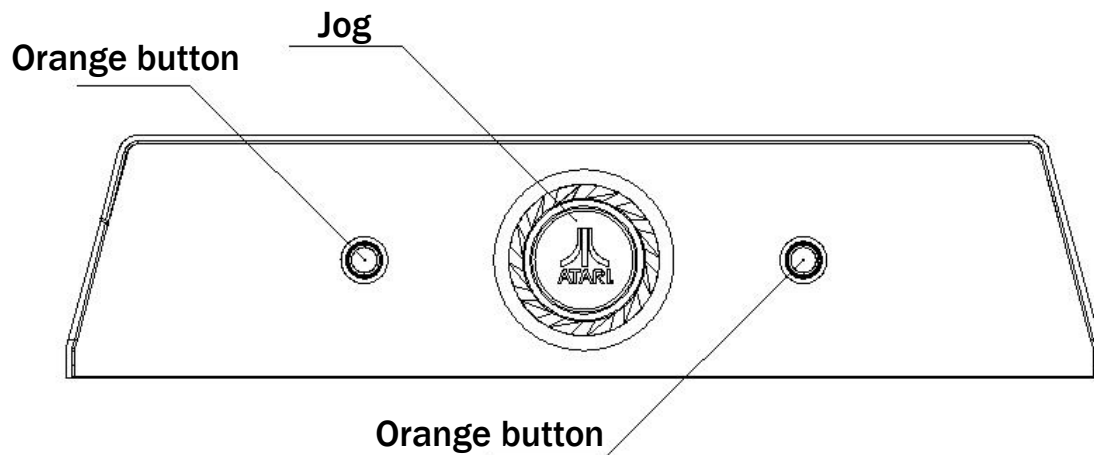
Note: Displays will show the Program Version(the left 4 characters) and the Music File Version(the right 3 characters).



5. HOW TO PLAY

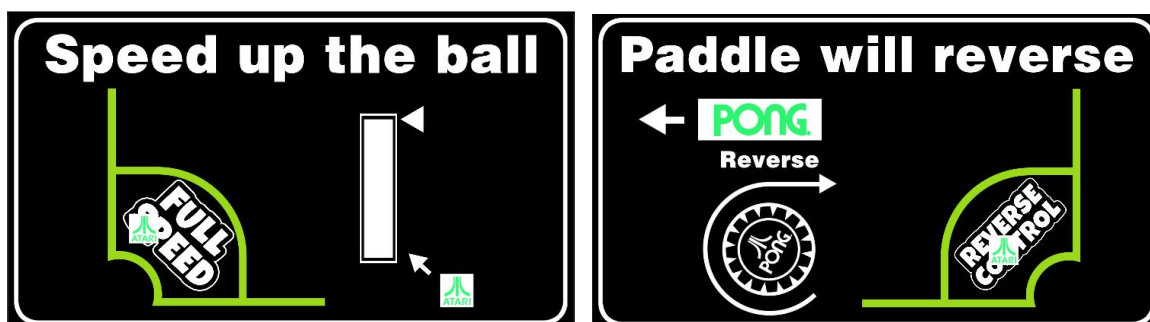
Swipe card to join, there will be 5 seconds before the game starts.

Move the jog to control the paddle, press the orange button to launch. (Same function as the two orange buttons)

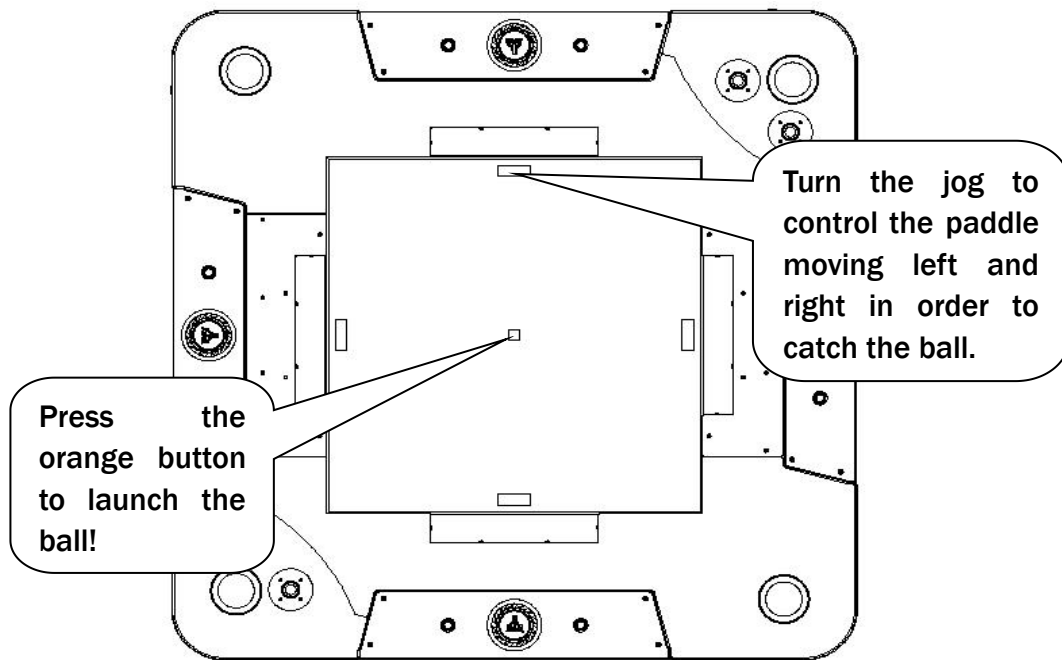


There are 4 special areas on the Playfield, whenever the Ball enters these areas, different play rule applies.

When the Ball hits 'FULL SPEED', the Ball will speed up, respectively, when the Ball hits 'REVERSE CONTROL', the control of the Paddles will be reversed.



Win condition depends on how many players are active:



- 1 player VS 3 AI: Any one gets "0" and the game is over.
- 2 players VS 2 AI: 2 AI have no score and players will be competing with each other.
- 3 players VS 1 AI: AI has no score. Any one gets "0" and he is out of the game, AI takes control till the last player wins.
- 4 players: Any one gets "0" and he is out of the game, AI takes control till the last player wins.

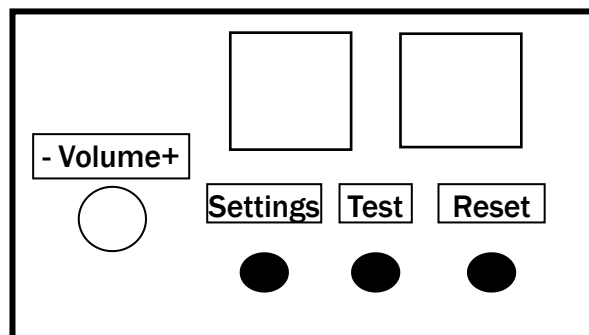
6. GAME OPTION

Enter setting menu

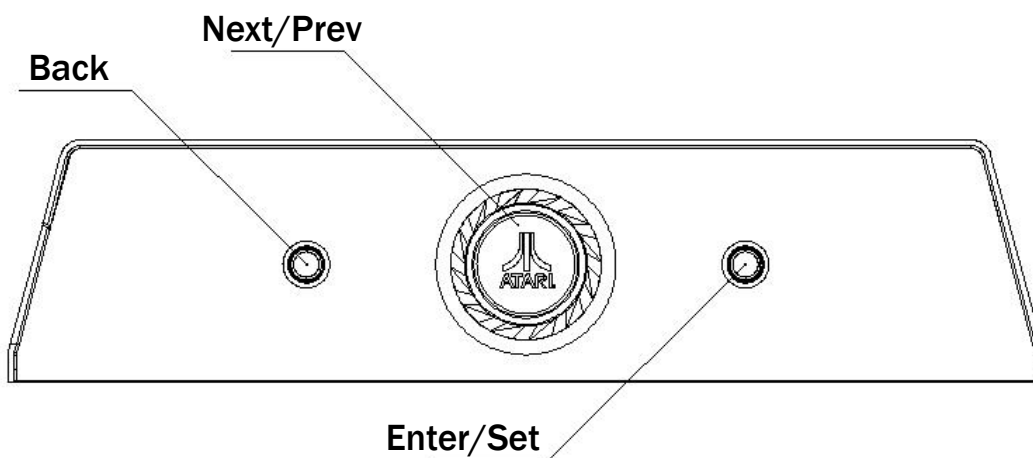
Step 1 Locate the menu panel inside the lower door on Red player(P1) side.



Step 2 Enter the setting menu by pressing the 'Setting' button, 'CONF' will be shown on the Display. (Entering the setup will be disabled during game over phase.)

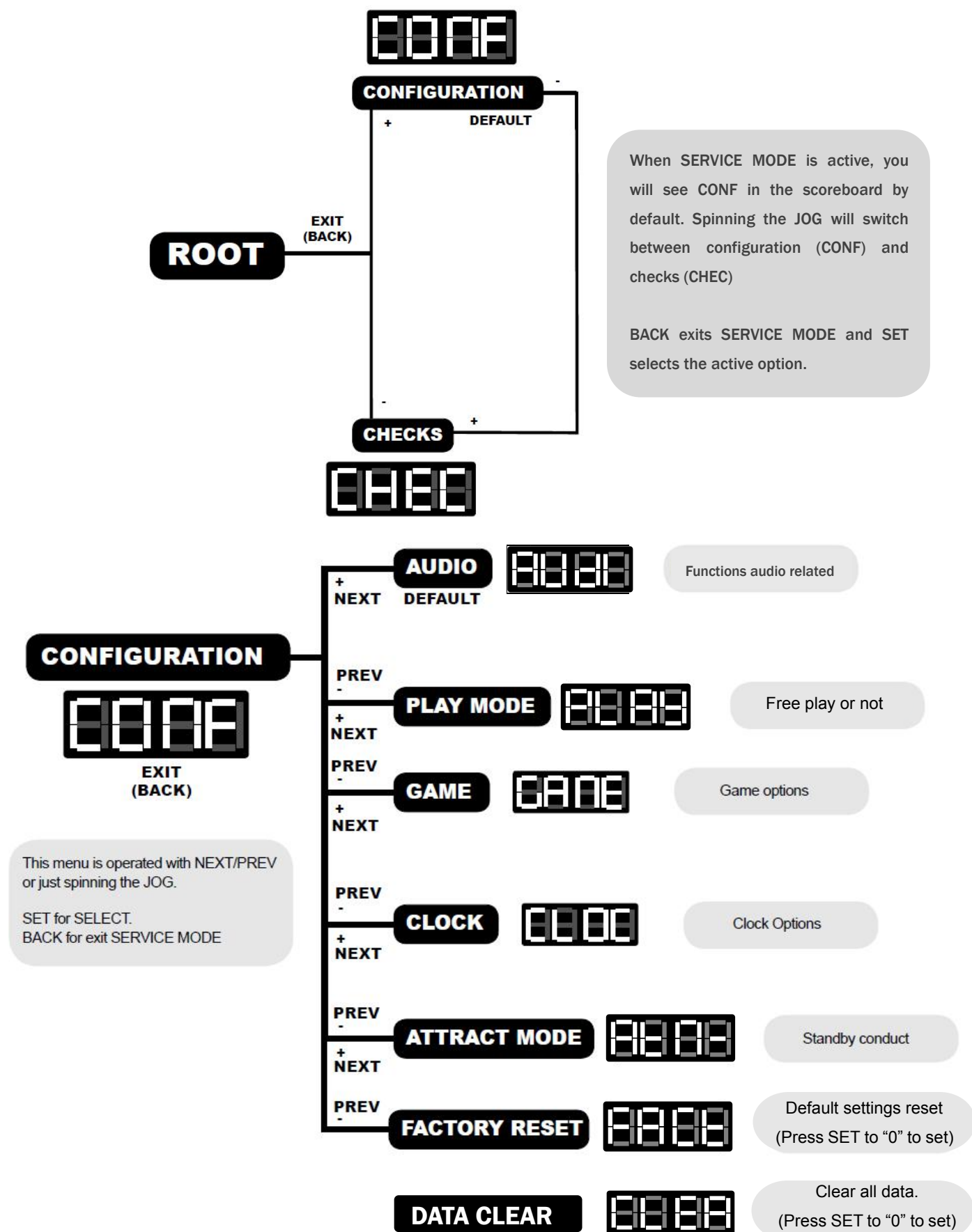


Turn the jog to navigate, press the right orange button to confirm/set, the left orange button to cancel/exit. (Only active on Red player(P1) side)



Note: Setting menu is accessible even when the game is active.

6.1 Setting Menu



Sound options.

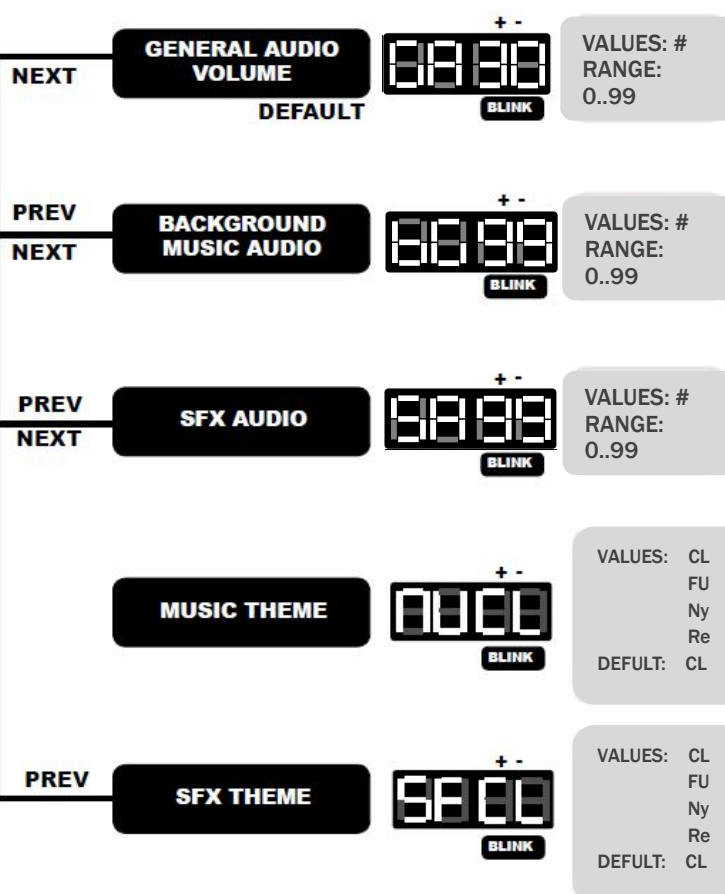
This menu is navigated with
NEXT/PREV

JOG changes its parameter.
SET for select.

8888

AUDIO

BACK TO CONF
(BACK)



8888

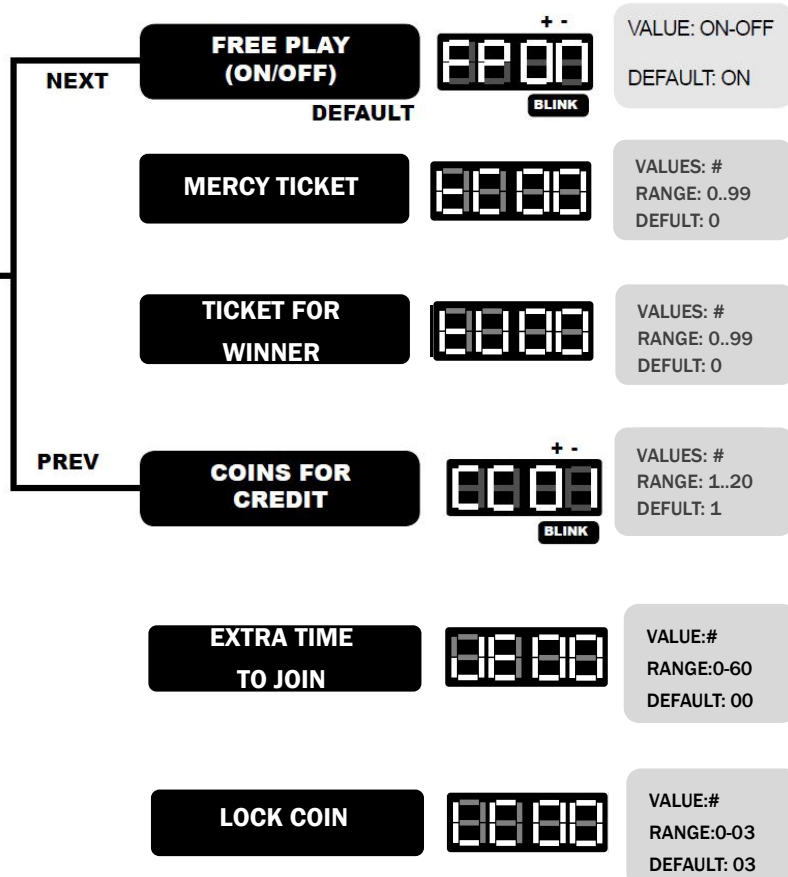
PLAY MODE

BACK TO CONF
(BACK)

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

This menu is navigated with
NEXT/PREV

JOG changes the parameter.
SET for select.

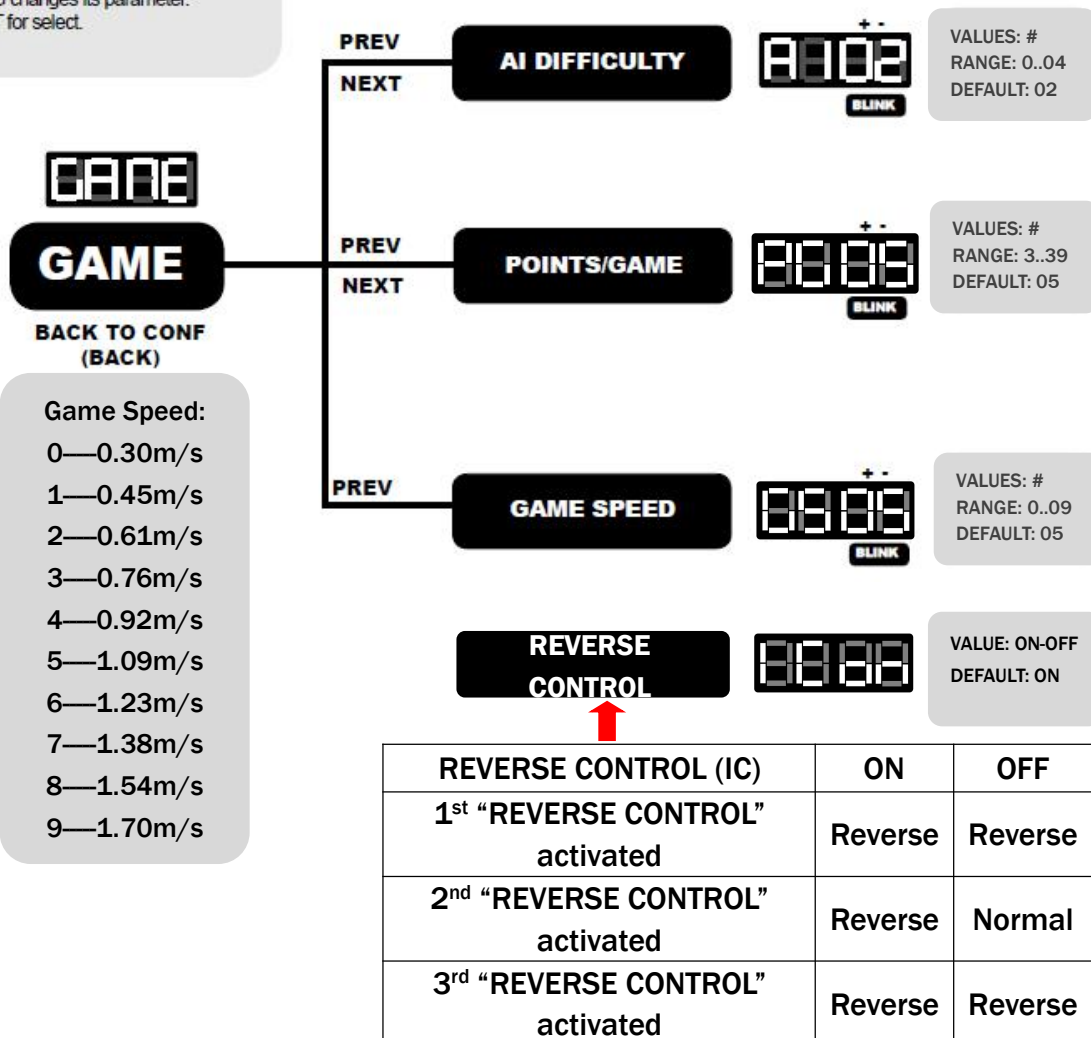


Item Value	Insert Coins/Swipe Card During Play	Shared Credit	Challenger Enable
LC00	Yes	No	Yes
LC01	No	No	No
LC02	Yes	Yes	No
LC03	No	No	No

GAME OPTIONS:
Mode, difficulty and speed.

This menu is navigated with
NEXT/PREV

JOG changes its parameter.
SET for select.

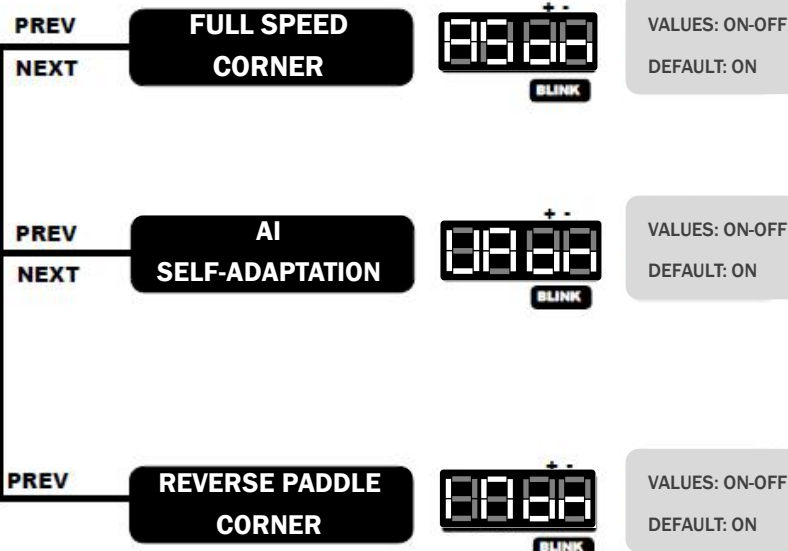


GAME OPTIONS:
Mode, difficulty and speed.

This menu is navigated with
NEXT/PREV

JOG changes its parameter.
SET for select.

GAME
BACK TO CONF
(BACK)



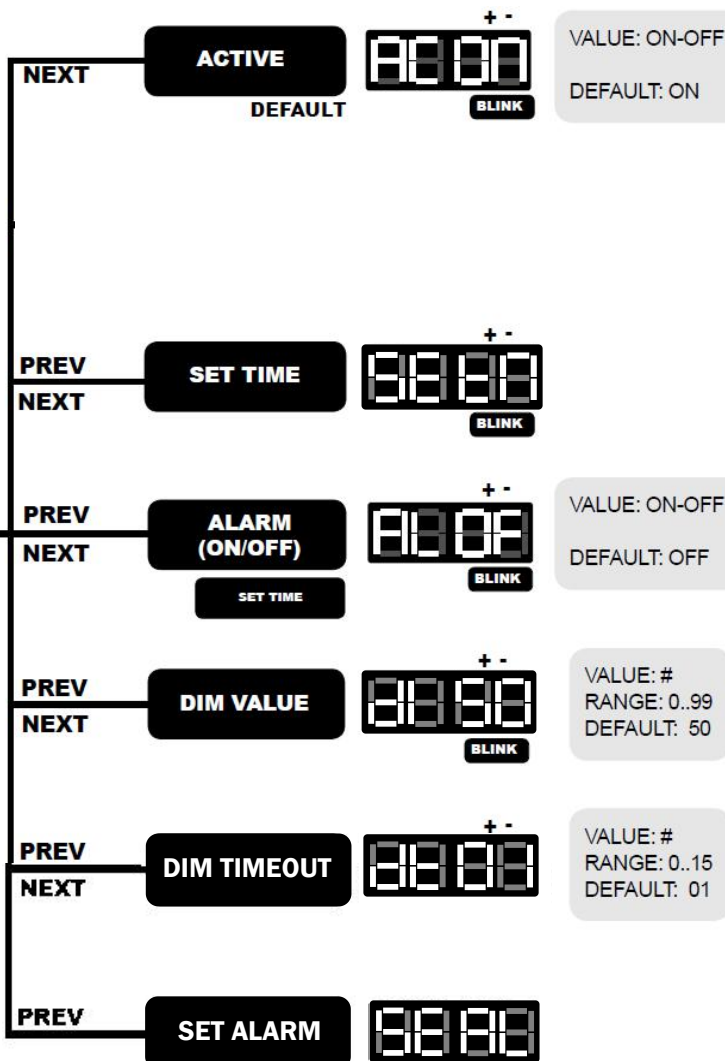
Clock options:

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.

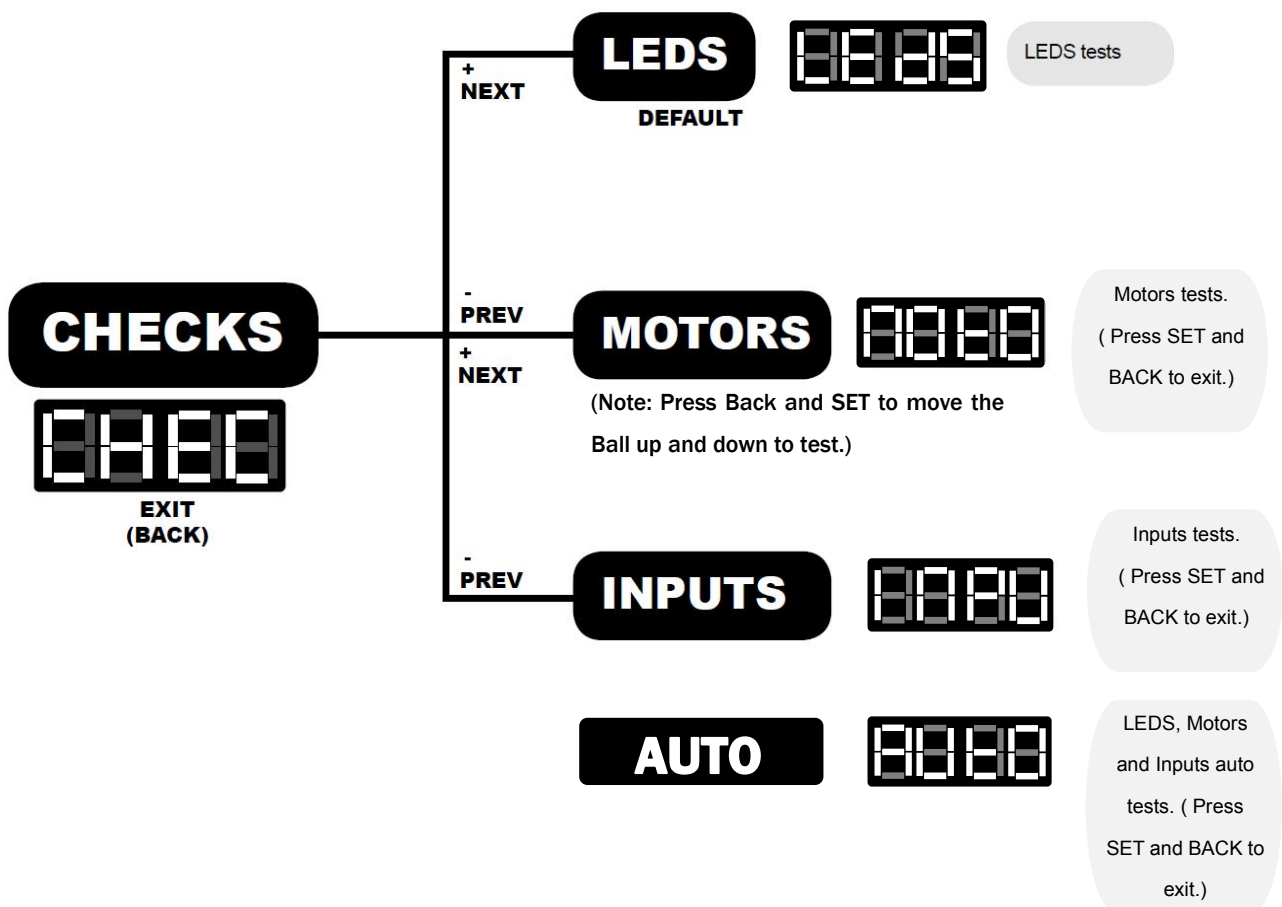
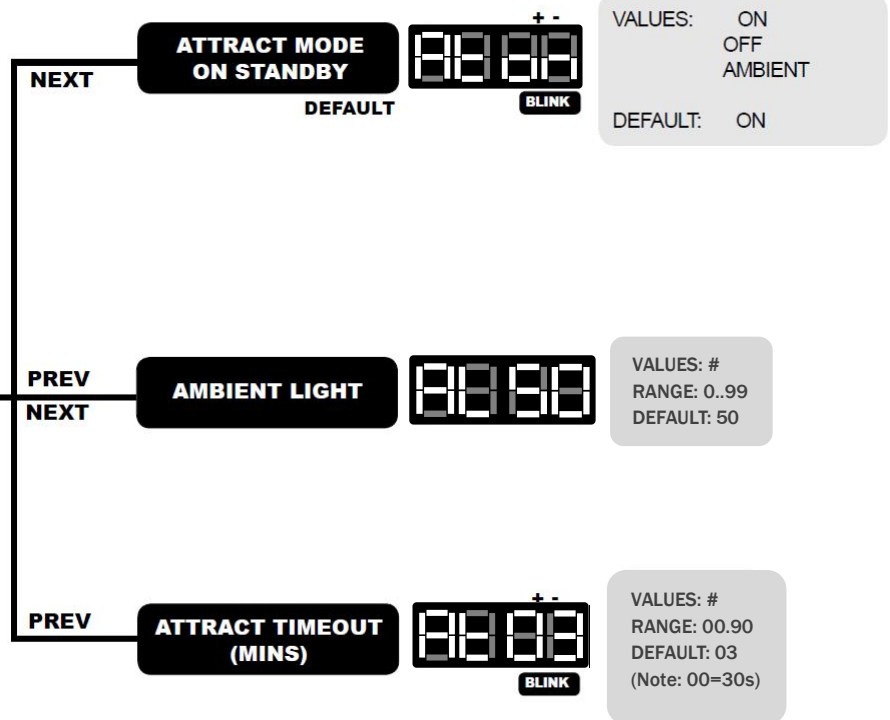
CLOCK
BACK TO CONF
(BACK)

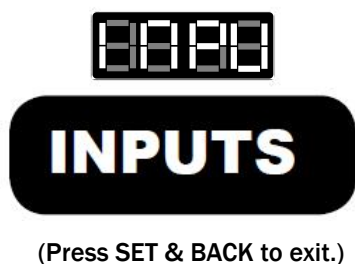


Attract mode option when the unit is in standby.

This menu is navigated with NEXT/PREV

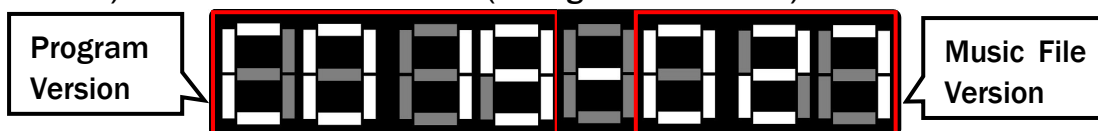
JOG changes its parameter.
SET for select.





8888	Coin received
8888	Red player ATARI pressed
8888	Yellow player ATARI pressed
8888	Blue player ATARI pressed
8888	Green player ATARI pressed
8888	Red player LEFT pressed
8888	Red player RIGHT pressed
8888	Yellow player LEFT pressed
8888	Yellow player RIGHT pressed
8888	Blue player LEFT pressed
8888 + -	Blue player RIGHT pressed
8888 + -	Green player LEFT pressed
8888	Green player RIGHT pressed
8888 + -	Red player JOG
8888 + -	Yellow player JOG
8888	Blue player JOG
8888	Green player JOG

After powering on the machine, the Displays will show the Program Version(the left 4 characters) and the Music File Version(the right 3 characters).



6.2 IO Chart

Pong 4P D&B IO Chart						
Notice [P1:Red player; P2:Yellow player; P3:Blue player; P4:Green player]						
Stepping Motors Control Connectors			Encoder			
MOT-J1	1.VDD	P1 L&R Driver	ENC J1	1.GND	P1 Encoder	
	2.Direction			2.SIG B		
	3.Impulse			3.SIG A		
	4.GND			4.VCC		
MOT-J2	1.VDD	P2 L&R Driver	ENC J2	1.GND	P2 Encoder	
	2.Direction			2.SIG B		
	3.Impulse			3.SIG A		
	4.GND			4.VCC		
MOT-J3	1.VDD	P3 L&R Driver	ENC J3	1.GND	P3 Encoder	
	2.Direction			2.SIG B		
	3.Impulse			3.SIG A		
	4.GND			4.VCC		
MOT-J4	1.VDD	P4 L&R Driver	ENC J4	1.GND	P4 Encoder	
	2.Direction			2.SIG B		
	3.Impulse			3.SIG A		
	4.GND			4.VCC		
MOT-X1	1.VDD	P1 Paddle X-axe Motor	UART3	1.GND	Side LED control board	
	2.Direction			2.VCC		
	3.Impulse			3.TXD		
	4.GND			4.RXD		
MOT-X2	1.VDD	P2 Paddle X-axe Motor	UART5	1.GND	Mainboard update by SD card	
	2.Direction			2.VCC		
	3.Impulse			3.TXD		
	4.GND			4.RXD		
MOT-Y	1.VDD	Paddle Y-axe Driver	PRG	1.GND	Mainboard update by programmer	
	2.Direction			2.SCK		
	3.Impulse			3.SDO		
	4.GND			4.VCC		
EN	1.GND	Stepping Motor Enable				5.RST
	2.Enable					

Motor Initial Sensor			Control Panel Button		
SENS-J1	1.+5V	P1 L&R Motor Initial Sensor	BUTTON-J1	1.GND	P1 Control Panel Button
	2.OUT			2.P1 Left Launch Ball Button	
	3.GND			3.P1 Right Launch Ball Button	
SENS-J2	1.+5V	P2 L&R Motor Initial Sensor		4.-	
	2.OUT			5.-	
	3.GND			6.-	
SENS-J3	1.+5V	P3 L&R Motor Initial Sensor		1.P2 Launch Ball Button	
	2.OUT			2.-	
	3.GND			3.P3 Launch Ball Button	
SENS-J4	1.+5V	P4 L&R Motor Initial Sensor	INPUT	4.-	P2/P3/P4 Control Panel Button
	2.OUT			5.P2 Launch Ball Button	
	3.GND			6.-	
SENS-X	1.+5V	Paddle X-axe Motor Initial Sensor		7.-	
	2.OUT			8.-	
	3.GND			9.GND	
SENS-Y	1.+5V	Paddle Y-axe Motor Initial Sensor			
	2.OUT				
	3.GND				

Marquee communication			Blacklight/Lifting Motor Detection		
UART6	1.GND	Marquee Light control board	LCD	1.-	Driver board LIGHT-01 V1.0
	2.VCC			2.-	
	3.TXD			3.-	
	4.RXD			4.-	
UART4	1.GND	Marquee Android board	LCD	5.Lifting motor detection	
	2.VCC			6.Marquee Blacklight	
	3.TXD			7.VCC	
	4.RXD			8.GND	
SCORE	1.5V	LED display	BAND	1.5V	Playfield inner LED light effect
	2.CI			2.-	
	3.DI			3.DI	
	4.GND			4.GND	
Coin Lock					
OUTPUT1	1.12V	P1-P4 Coin Lock			
	2.P1 Coin Lock				
	3.P2 Coin Lock				
	4.P3 Coin Lock				
	5.P4 Coin Lock				
MENU	1.-				
	2.Settings Button				
J34	1.P1 Coin Counter	P1 Counter Assembly	J35	1.P2 Coin Counter	P2 Counter Assembly
	2.P1 Test Button			2.P2 Test Button	
	3.GND			3.GND	
	4.P1 Ticket Counter			4.P2 Ticket Counter	
	5.Reset Button			5.-	
	6.12V			6.12V	

Coin Lock					
J36	1.P1 Ticket Owed Light	P1 Tickets /Insert Coin/Swipe Card Signal	J38	1.P2 Ticket Owed Light	P2 Tickets /Insert Coin/Swipe Card Signal
	2.P1 Insert Coin/Swipe Card			2.P2 Insert Coin/Swipe Card	
	3.12V			3.12V	
	4.GND			4.GND	
	5.P1 Tickets Driver			5.P2 Ticket Driver	
	6.P1 Tickets Feedback			6.P2 Ticket Feedback	
	7.12V			7.12V	
	8.GND			8.GND	
J37	1.P3 Coin Counter	P3 Counter Assembly/Tickets /Insert Coin/Swipe Card Signal	J39	1.P4 Coin Counter	P4 Counter Assembly/Tickets /Insert Coin/Swipe Card Signal
	2.P3 Ticket Counter			2.P4 Ticket Counter	
	3.P3 Tickets Driver			3.P4 Ticket Driver	
	4.P3 Ticket Owed Light			4.P4 Ticket Owed Light	
	5.GND			5.GND	
	6.P3 Insert Coin/Swipe Card			6.-	
	7.P3 Test Button			7.-	
	8.-			8.-	
	9.P3 Tickets Feedback			9.-	
	10.12V			10.12V	
			BUTTON-J2	1.GND	
				2.P4 Insert Coin/Swipe Card	
				3.P4 Test Button	
				4.-	
				5.P4 Tickets Feedback	
				6.-	

7. TROUBLESHOOTING

7.1 Common Problem

Please confirm that all connectors are secured, all connectors are one way and keyed. If the connectors don't slip in easily upon mating, please don't force them.

Symptom	Possible Cause	Recommended action
Game does not start	Frame assembly connector is loose.	Check connector.
	Faulty frame assembly	Contact UNIS Service.
Power off	Circuit protector changes power SW to "off".	Turn on power SW again. If appeared repeatedly, machine has anomaly. Please contact UNIS Service.
No sound	Low volume	Turn up the volume.
	Loose connectors	Check connector.
	Faulty speaker	Check speaker.
	Loose audio connector or faulty cable	Reconnect the audio cable or replace it.
	Driver problem	Restart the audio driver.
Ball shaking	The bottom of the Ball or the Playfield has dirt.	Utilize non-woven fabric with Glassy water to clean the bottom of the Ball.
Paddle or ball offset	Not enough suction of magnets	Check whether the playfield is fully positioned.
		Clean the playfield, paddle and ball.
		Adjust the rail magnet height upward.
Paddle and ball crash to offset	Over suction of magnets	Adjust the rail magnet height downward.
Platform obviously unbalanced during moving	DC push rod abnormal	Replace DC push rod.
No light of cup holder LED ring	LED ring board of cup holder abnormal	Boot to restart.
		Check if the wire is loose.
		Replace the LED ring board.
Playfield display abnormal	Digital board abnormal	Boot to restart.
		Replace the digital board.
Movement mechanism has obvious noise	Belt or belt wheels abnormal	Check and adjust the belt tension strength.
		Adjust belt wheel position or replace belt wheel.
		Replace the belt.

Symptom	Possible Cause	Recommended action
Glass playfield has scratches	There is friction between the rail and underneath glass graphics.	Adjust the rail magnet height downward.
Digital board error of LED display	The sensor is not working, the motor is not working.	Check the motor works normally or not, if not normal, check the driver and corresponding motor and fuse.
		If motor works normally, check the corresponding sensor.
		Replace the fuse, sensor and driver.
LED light strip not work	Light strip connectors are loose, fuse blown.	Check the light strip connects properly.
		Check the fuse.
		Replace light strip.
The motor doesn't work	The driver is broken, causes fuse overload protection.	Replace the driver or check the motor.
		Check and replace the fuse.

Error code	Possible Cause	Recommended action
	Motors of Ball X axle doesn't work.	Check the connection of motors of Ball X axle.
		Check the motors of Ball X axle.
	Malfunctioning Sensor of Ball X axle	Check the sensor of Ball X axle.
	Motor of Ball Y axle doesn't work.	Check the connection of motor of Ball Y axle.
		Check the motor of Ball Y axle.
	Malfunctioning Sensor of Ball Y axle	Check the sensor of Ball Y axle.
	Motor of Red player(P1) Paddle doesn't work.	Check the connection of motor of Red player(P1) Paddle.
		Check the motor of Red player(P1) Paddle.
	Faulty Sensor of Red player(P1) Paddle	Check the sensor of Red player(P1) Paddle.
	Motor of Yellow player(P2) Paddle doesn't work.	Check the connection of motor of Yellow player(P2) Paddle.
		Check the motor of Yellow player(P2) Paddle.
	Faulty Sensor of Yellow player(P2) Paddle.	Check the sensor of Yellow player(P2) Paddle.

Error code	Possible Cause	Recommended action
	Motor of Blue player(P3) Paddle doesn't work.	Check the connection of motor of Blue player(P3) Paddle.
		Check the motor of Blue player(P3) Paddle.
	Faulty Sensor of Blue player(P3) Paddle	Check the sensor of Blue player(P3) Paddle.
	Motor of Green player(P4) Paddle doesn't work.	Check the connection of motor of Green player(P4) Paddle.
		Check the motor of Green player(P4) Paddle.
	Faulty Sensor of Green player(P4) Paddle	Check the sensor of Green player(P4) Paddle.
	Out of ticket	Fill the ticket dispenser with tickets.
	Wrong connection	Check the connection of Marquee mainboard cable and Cabinet Mainboard according to the Wiring Diagram.
	Cable quality problem	Replace the cable after checking the connection.
	Mainboard program is not updated.	Check the program version.
	Mainboard or Marquee mainboard is faulty.	Contact UNIS Service to replace with a new Mainboard or Marquee mainboard.

8. MAINTENANCE & INSPECTION

8.1 Safety Check

Check the points listed below before operating the machine, which is critical for a 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 when necessary.

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

! NOTICE

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

8.2 How To Clean The Playfield

Step 1 Make sure that there are no items on the Glass.

Step 2 Locate the Lower door on Red player(P1) side and open it.

Locate the rocker switch indicated by circle.

Press UP to lift the Glass to the highest position.



Step 3 Utilize non-woven fabric with Glassy water to clean the Playfield. We recommend to clean once a week.

8.3 How To Clean Paddles & Ball

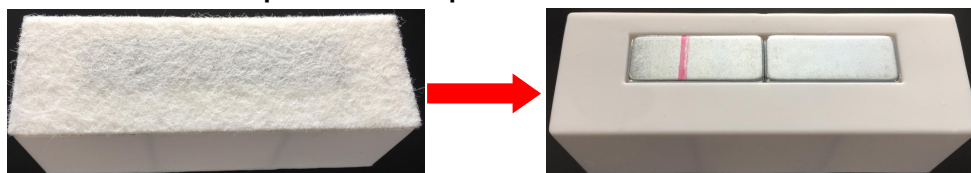
Step 1 Process **Step 1** to **Step 2** in **8.2 How To Clean The Playfield**.

Step 2 Utilize non-woven fabric with Glassy water to clean the bottom of Ball and Paddles. We recommend to clean once a week.

8.4 How To Replace Wool Felt Pad On Paddle

After repeated use the bottom of the Paddles will get worn off due to friction. We recommend to replace the Wool felt pad once every 3 months.

Step 1 Remove the wool felt pad from the paddle.



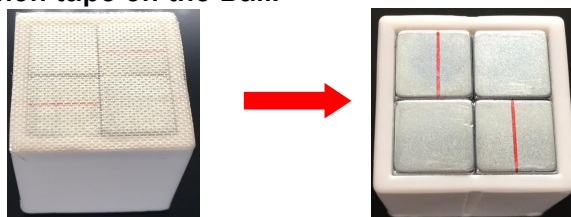
Step 2 Adhere the new wool felt pad to the paddle.



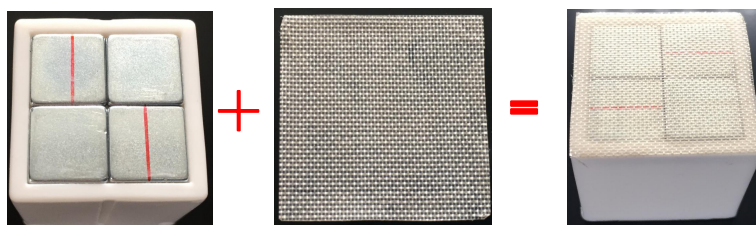
8.5 How To Replace The Teflon Tape On The Ball

After repeated use the bottom of the Ball will get worn off due to friction. We recommend to replace the Teflon tape once every 3 months.

Step 1 Remove the Teflon tape on the Ball.



Step 2 Adhere the Dual adhesive tape on the Ball; adhere new Teflon tape to the Ball.



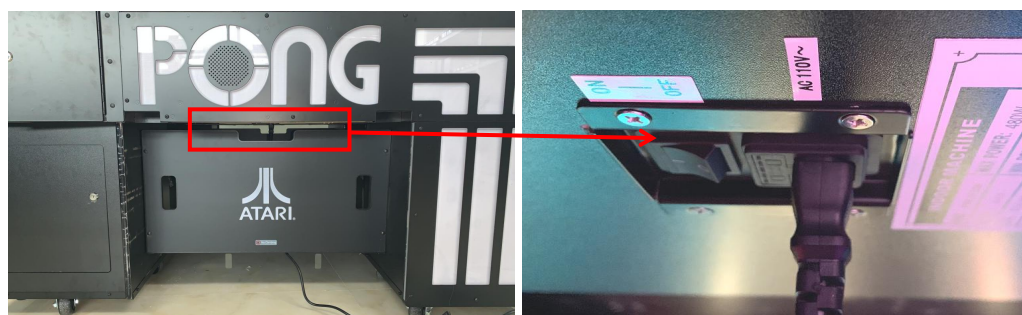
8.6 How To Access Movement Mechanism

Before processing assure you have the following tool.

No.	Name	Picture
1	Phillips screwdriver	

Step 1 Process **Step 1** to **Step 2** in **8.2 How To Clean The Playfield**.

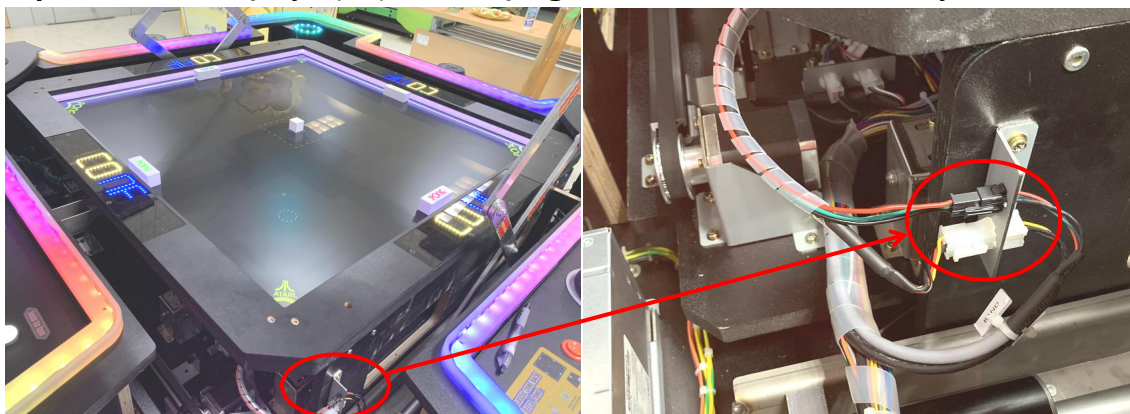
Step 2 Locate Green player(P4) side to power off the machine.



Step 3 Locate the Playfield. Loosen four screws indicated by circles.

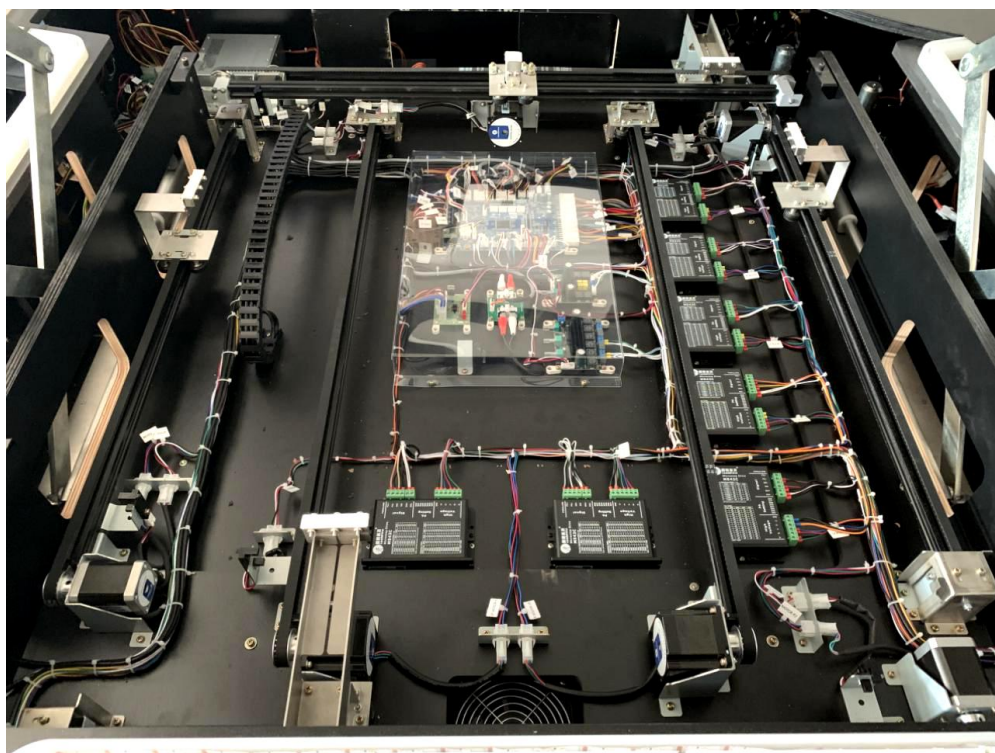


Step 4 Locate Red player(P1) side. Unplug two connectors indicated by circle.



Step 5 Remove the Playfield, please avoid the Paddles and Ball sticking together.

Step 6 Proceed to the Movement Mechanism.



8.7 Belt Tension Adjustment Instruction for Y Axle

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

Before processing ensure you have the following tool.

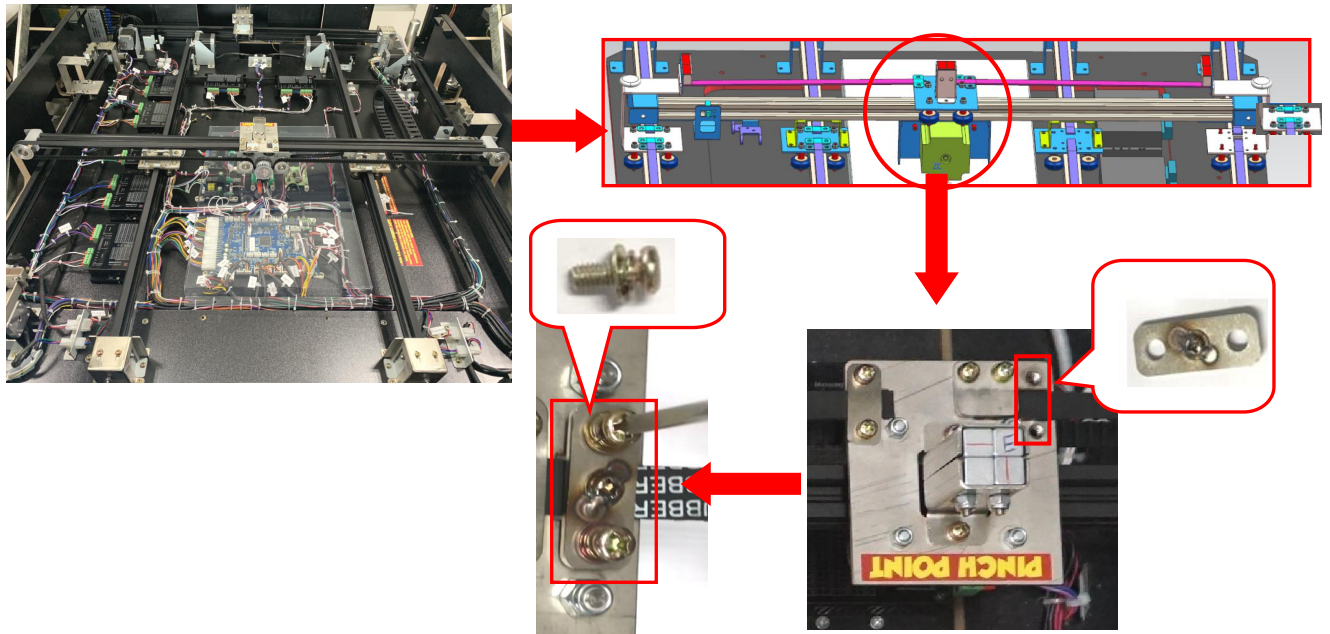
No.	Name	Picture
1	Phillip's screwdriver	

Kit list (Following accessories)

No.	Part No.	Name	Picture	Qty
1	P163-131-000	Adjust plate A (Short)		1
2	P163-132-000	Adjust plate B (Long)		1
3	P163-362-000	Cross recessed pan head screw set		2

Step 1 Follow the 8.6 steps to access Movement Mechanism.

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 and Paddle Axes

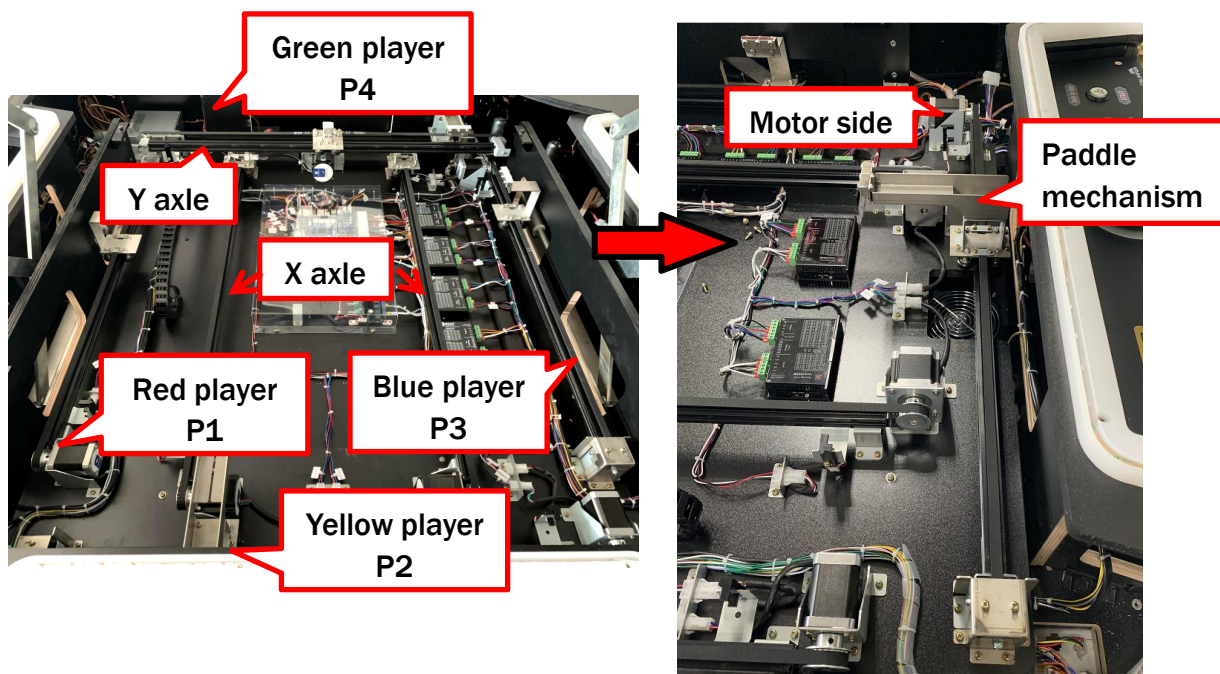
Before processing assure you have the following tools.

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

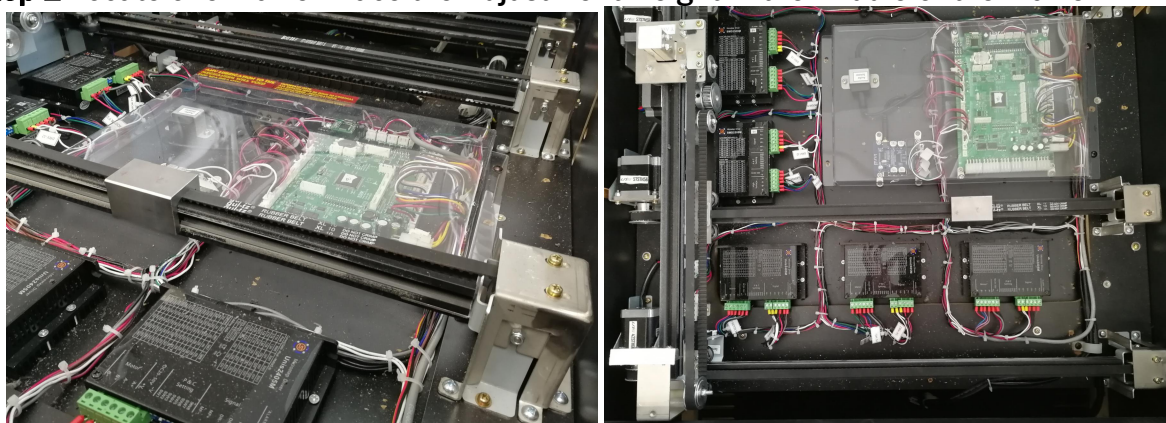
Kit list:

NO.	Code	Name	Picture
1	P163-101-000	Adjustment weight	

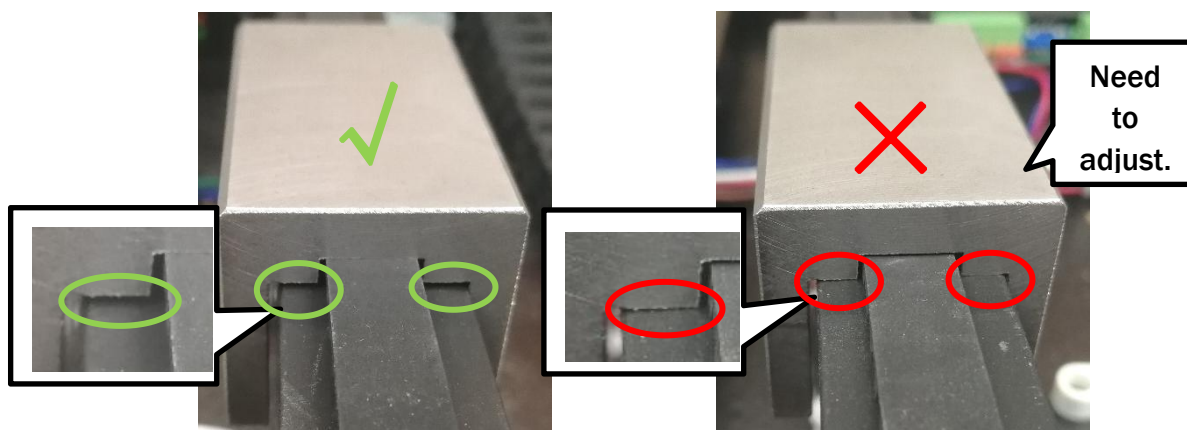
Step 1 Follow the 8.6 steps to access Movement Mechanism. Locate an axle and Move Y axle (and Paddle mechanism) to the motor side.



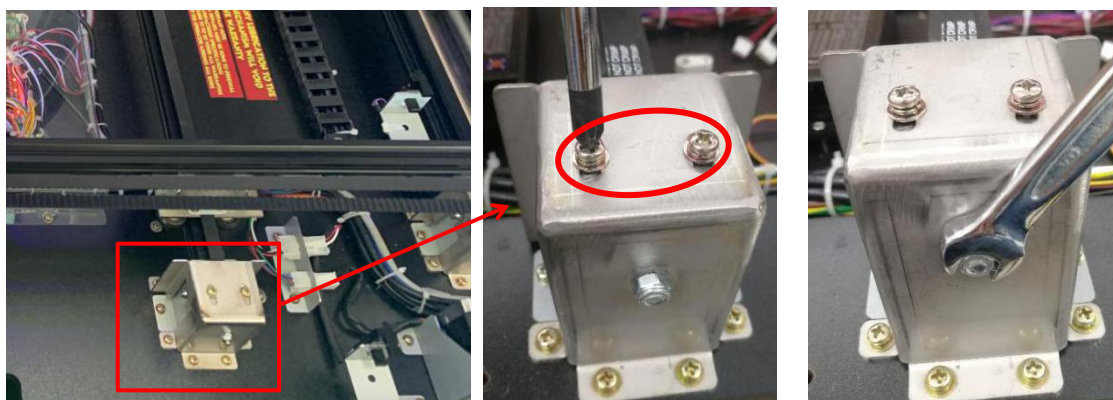
Step 2 Locate one X axle. Place the Adjustment weight in the middle of the X axle.



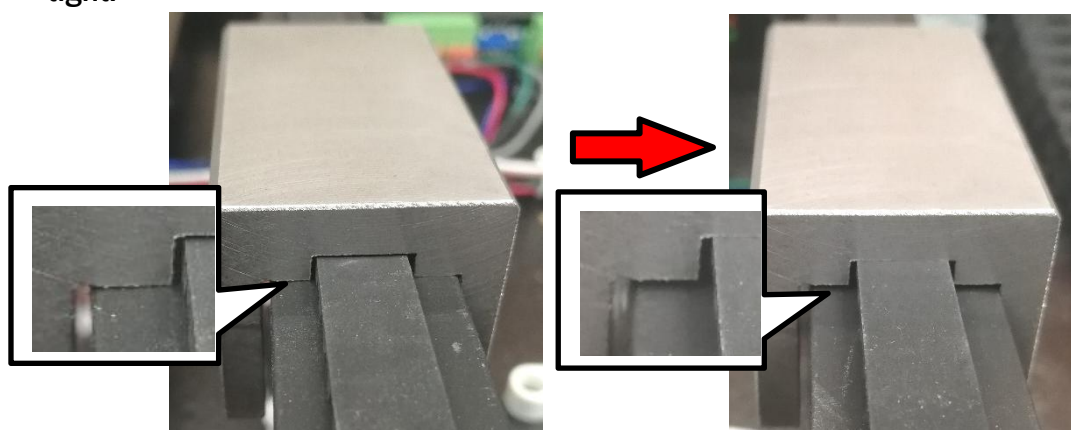
Step 3 Check if the Adjustment weight is slightly above the axle (within 0.04inch). If it is, don't adjust the belt; if it touches the axle, adjust the belt.



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 Adjustment weight when turning the wrench clockwise. Stop turning the wrench when the Adjustment weight is slightly raised (within 0.04 inch above the axle). If the Adjustment weight is raised too much, the belt will be too tight.



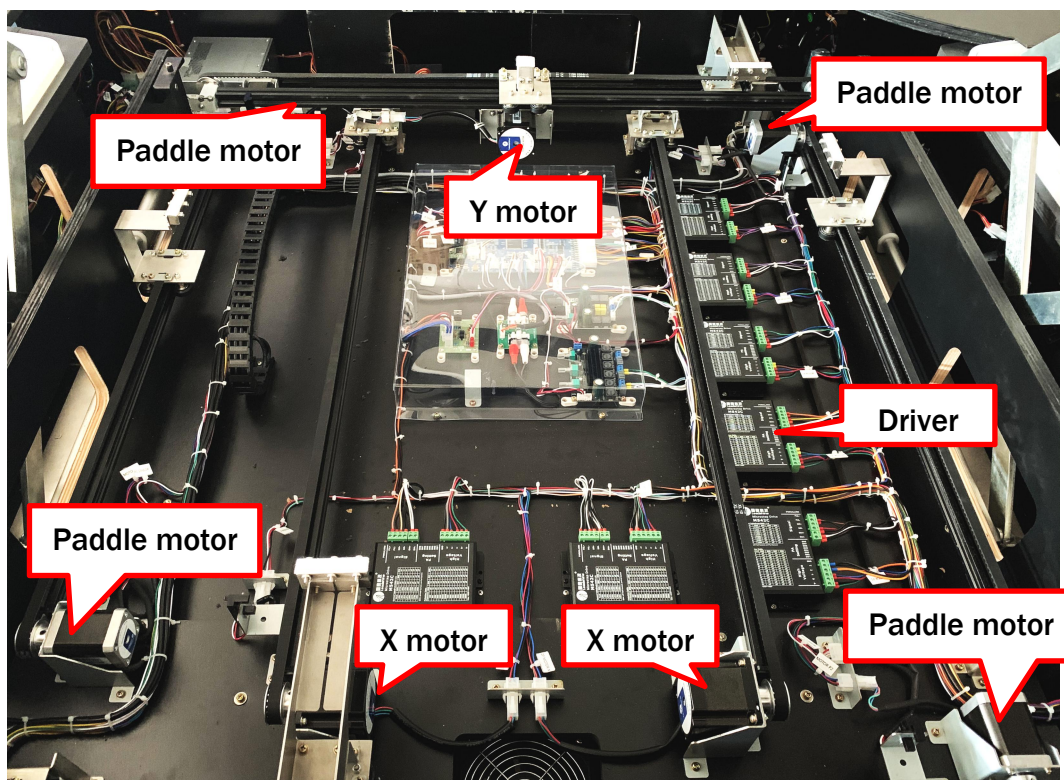
Step 6 To adjust: Remove the Adjustment weight and tighten the screws in **Step 4**. The adjustment method for the 2 X axles and Paddle axles is the same.

8.9 Motor & Driver Replacement

Before processing assure you have the following tools.

No.	Name	Picture
1	Phillips screwdriver	
2	Allen wrench	

Step 1 Follow the 8.6 steps to access Movement Mechanism.



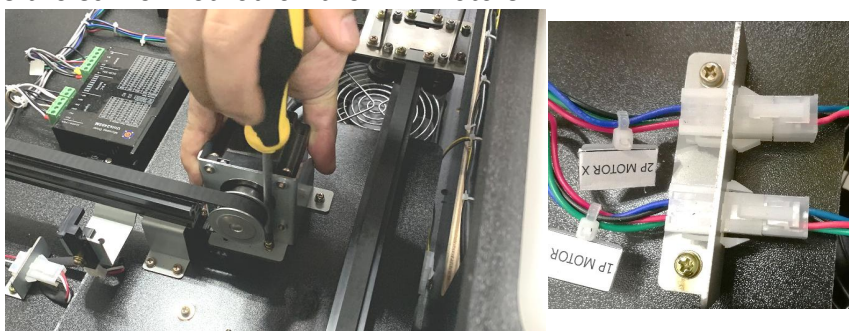
8.9.1 X Motor Replacement

Kit List:

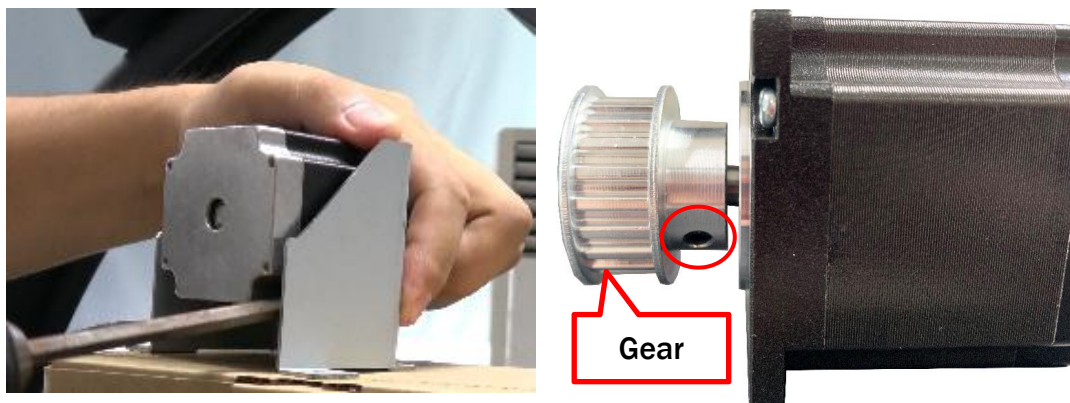
No.	Part No.	Name	Picture
1	P163-463-000	57MM Stepping motor	

Step 1 Locate one X motor. Utilize Phillips screwdriver to loosen 4 screws and unplug the connector to remove the Motor assembly.

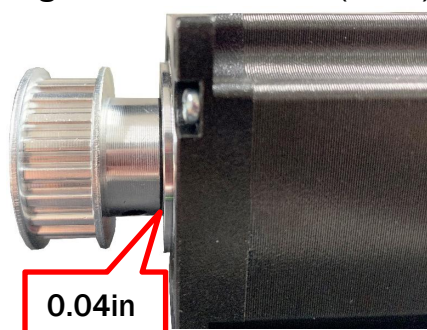
Note: It's the same method on the 2 X motors.



Step 2 Utilize Phillips screwdriver to loosen 4 screws to remove the motor from the bracket. Utilize Allen wrench to loosen 2 screws (turning counterclockwise) to remove the gear from the motor.



Step 3 Replace with the new motor and install in reverse order.
Note: The distance from motor to gear should be 0.04in(1mm).



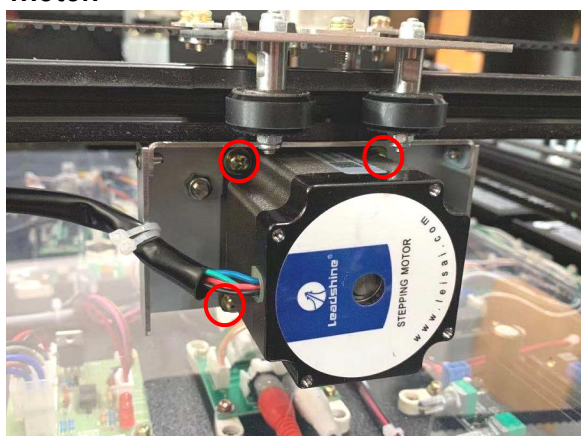
Step 4 Refer to 8.8 *Belt Tension Adjustment Instruction for X Axles and Paddle Axles* in the Manual to test and adjust the belt.

8.9.2 Y Motor Replacement

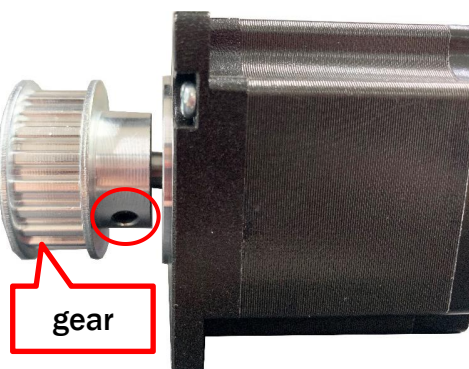
Kit List:

No.	Part No.	Name	Picture
1	P163-463-000	57MM Stepping motor	

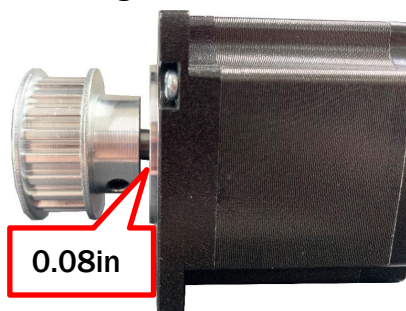
Step 1 Locate Y motor. Utilize Phillips screwdriver to loosen 4 screws and unplug the connector to remove the motor.



Step 2 Utilize Allen wrench to loosen 2 screws (turning counterclockwise) to remove the gear from the motor.



Step 3 Replace with the new motor and install in reverse order.
Note: The distance from motor to gear should be 0.08in(2mm).



Step 4 Refer to 8.7 *Belt Tension Adjustment Instruction for Y Axle* in the Manual to test and adjust the belt.

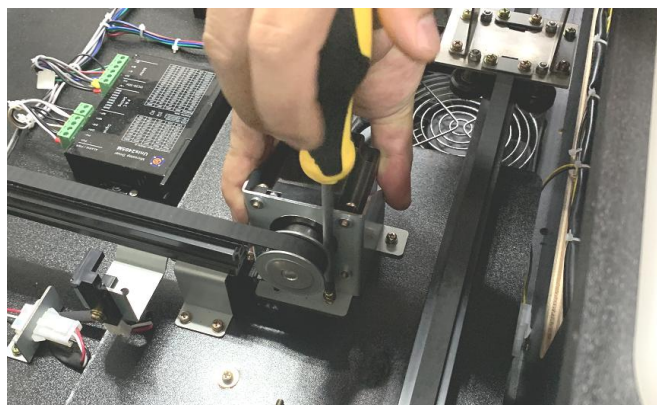
8.9.3 Paddle Motor Replacement

Kit List:

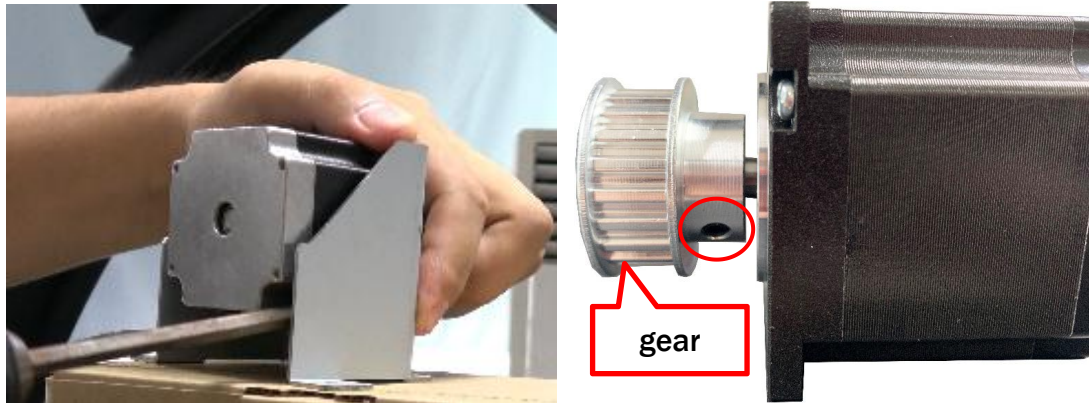
No.	Part No.	Name	Picture
1	P163-462-000	42MM Stepping motor	

Step 1 Locate one Paddle motor. Utilize Phillips screwdriver to loosen 4 screws and unplug the connector to remove the Motor assembly.

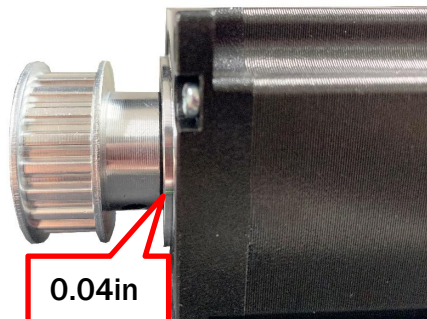
Note: It's the same method on the 4 Paddle motors.



Step 2 Utilize Phillips screwdriver to loosen 4 screws to remove the motor from the bracket. Utilize Allen wrench to loosen 2 screws (turning counterclockwise) to remove the gear from the motor.



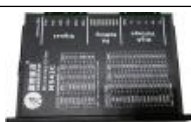
Step 3 Replace with the new motor and install in reverse order.
Note: The distance from motor to gear should be 0.04in(1mm).



Step 4 Refer to 8.8 *Belt Tension Adjustment Instruction for X Axles and P1-P4 Axles* in the Manual to test and adjust the belt.

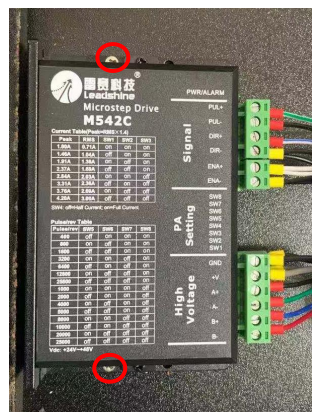
8.9.4 Driver Replacement

Kit List:

No.	Part No.	Name	Picture
1	P163-477-000	Motor driver	

Step 1 Locate a driver. Utilize Phillips screwdriver to loosen 2 screws and unplug the connectors to remove the driver.

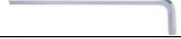
Note: It's the same method on 7 drivers.



Step 2 Replace with the new driver and install in reverse order.

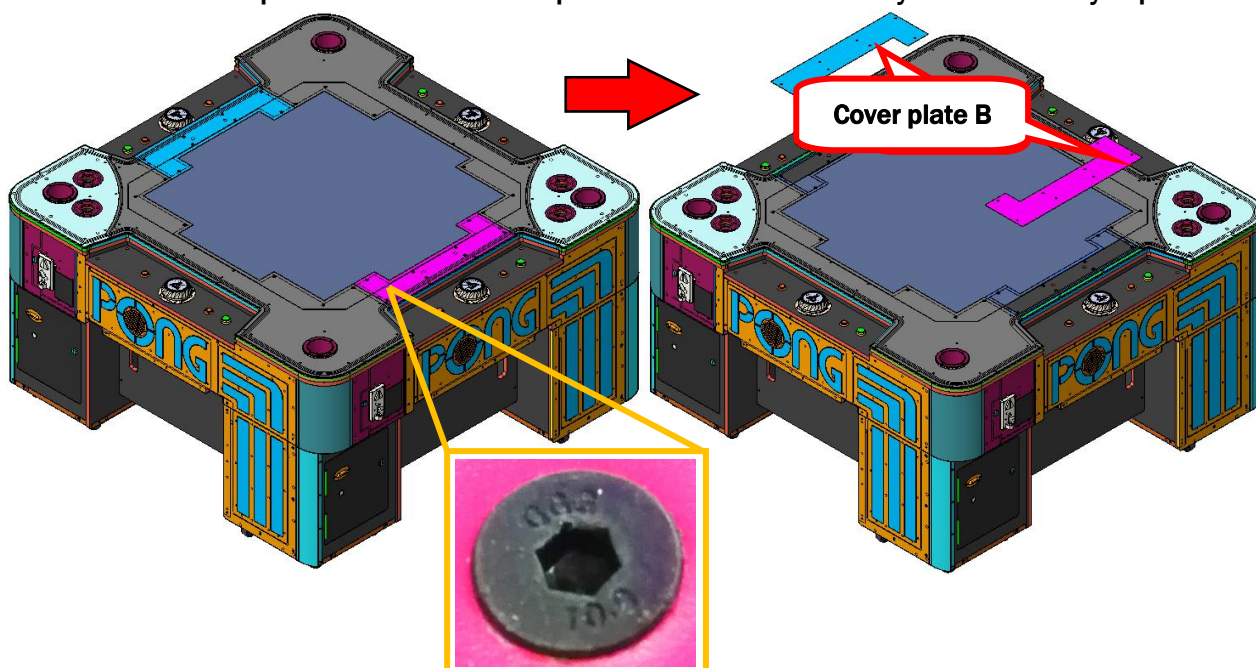
8.9.5 Lifting Motor Replacement

Before processing assure you have the following tools.

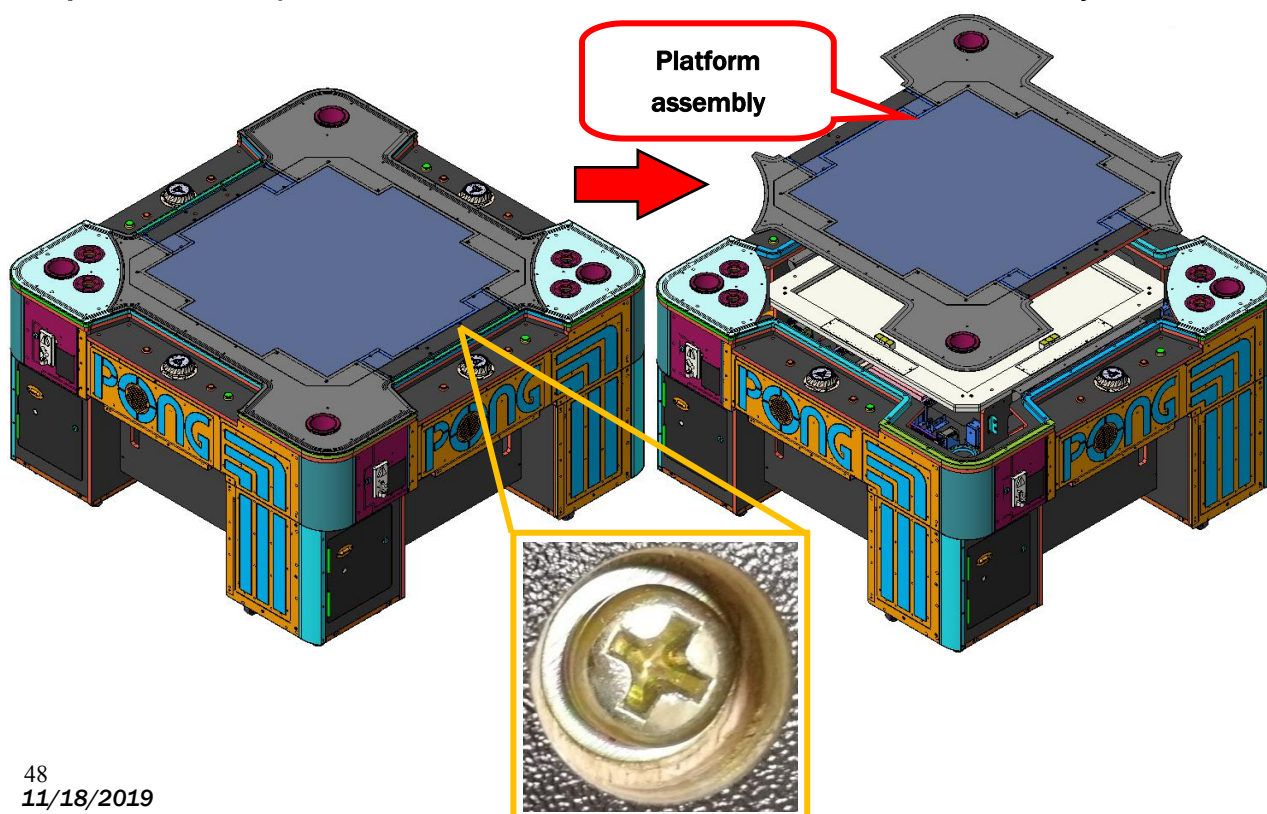
No.	Name	Pictures
1	Phillips screwdriver	
2	Allen wrench	
3	Spanner	
4	Socket wrench	

Note: To illustrate conveniently, pictures below have omitted the marquee part, no effect to actual operation.

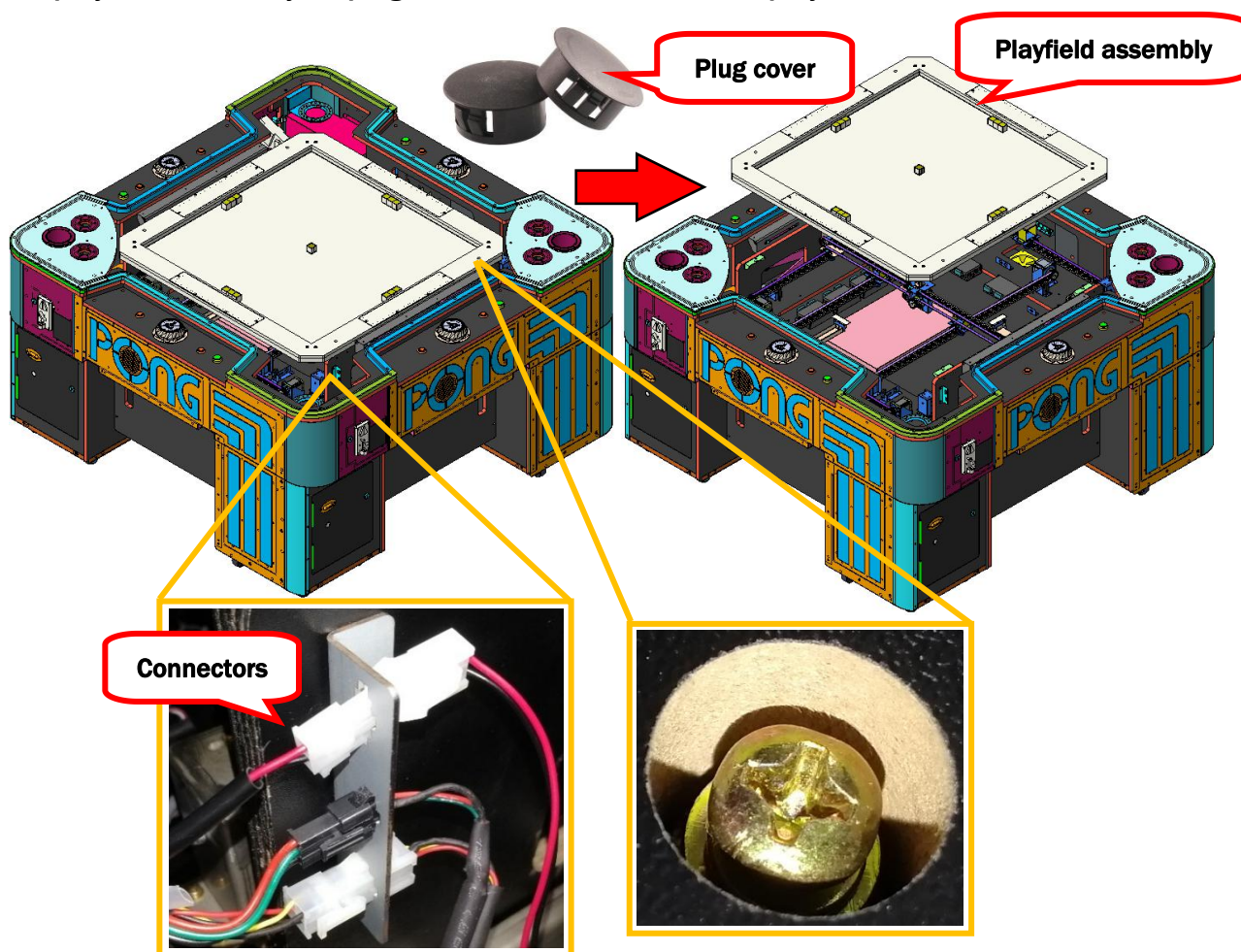
Step 1 Utilize Allen wrench to loosen screws on the Cover plate B, each plate has 8 screws, and take out the plate. It is the same operation on both Red Player & Blue Player position.



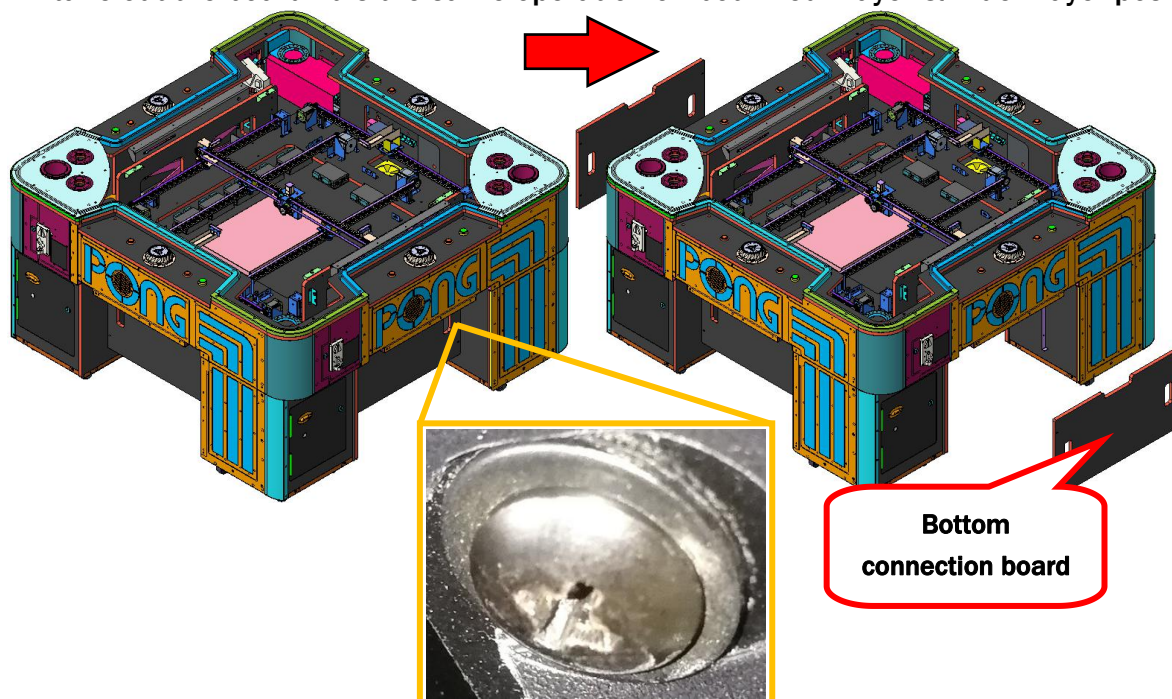
Step 2 Utilize Phillips screwdriver to loosen 4 screws on the Platform assembly.



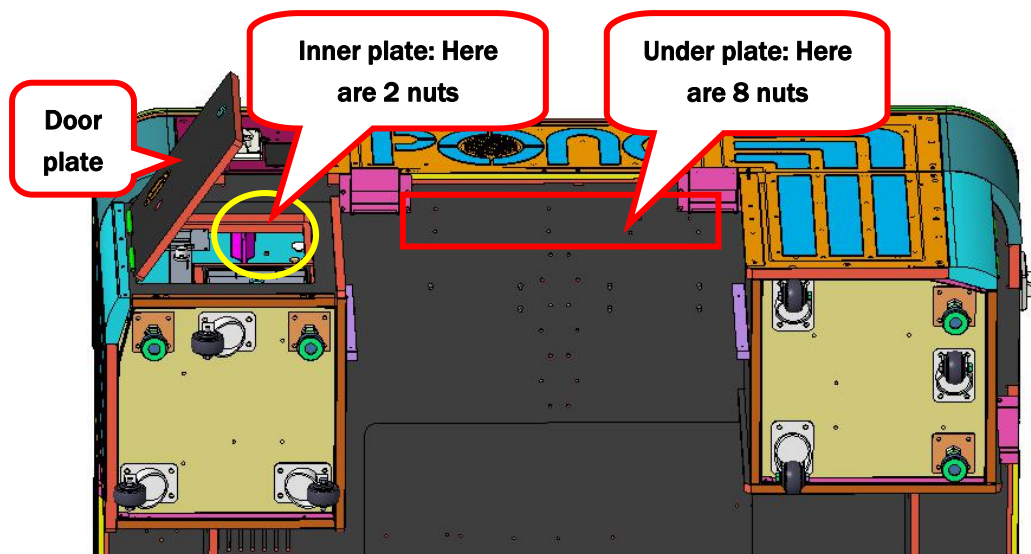
Step 3 Take out the plug covers, utilize Phillips screwdriver to loosen the screws on the playfield assembly, unplug 3 connectors, take out the playfield.



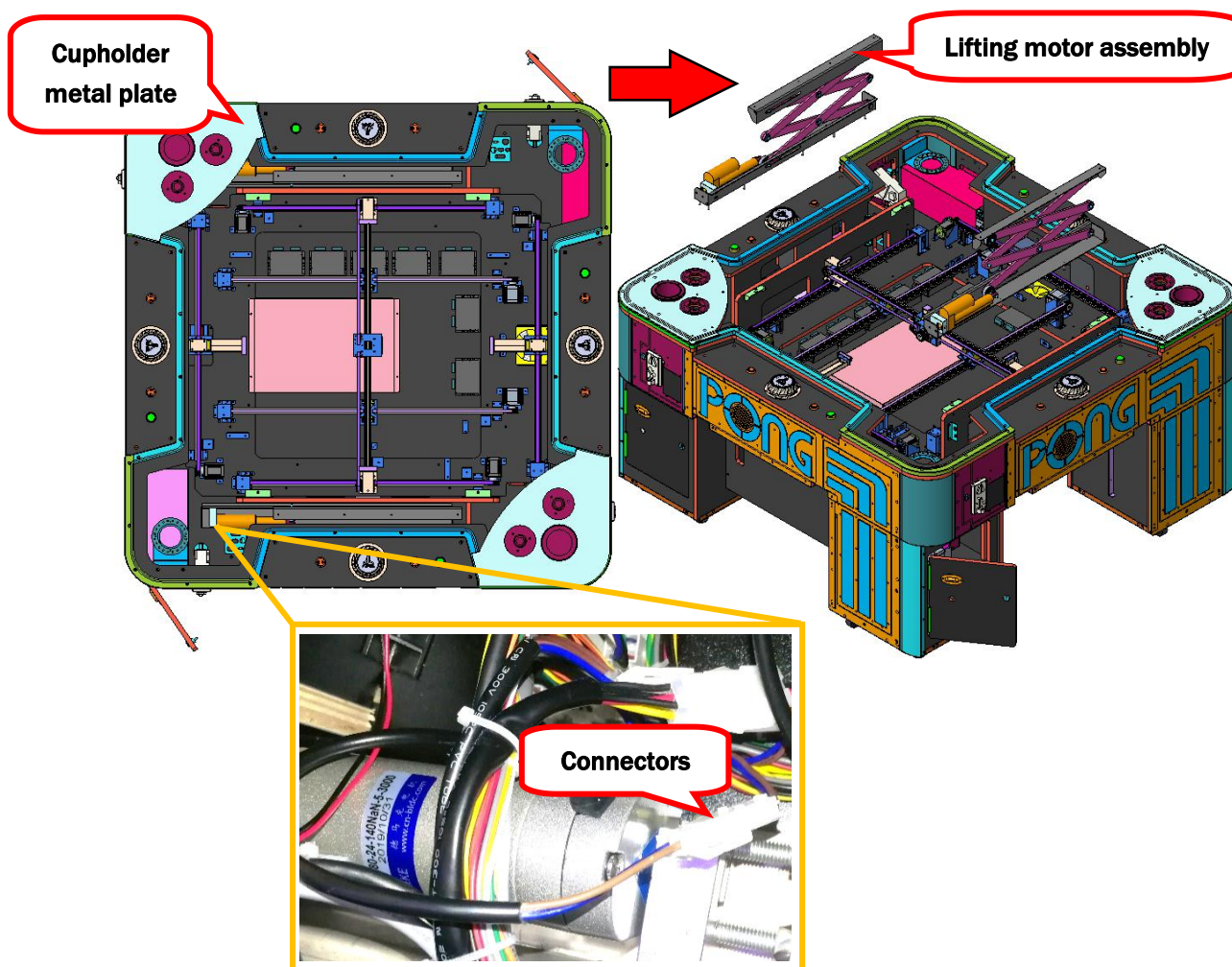
Step 4 Utilize Phillips screwdriver to loosen screws on the Bottom connective board and take out the board. It is the same operation on both Red Player & Blue Player position.



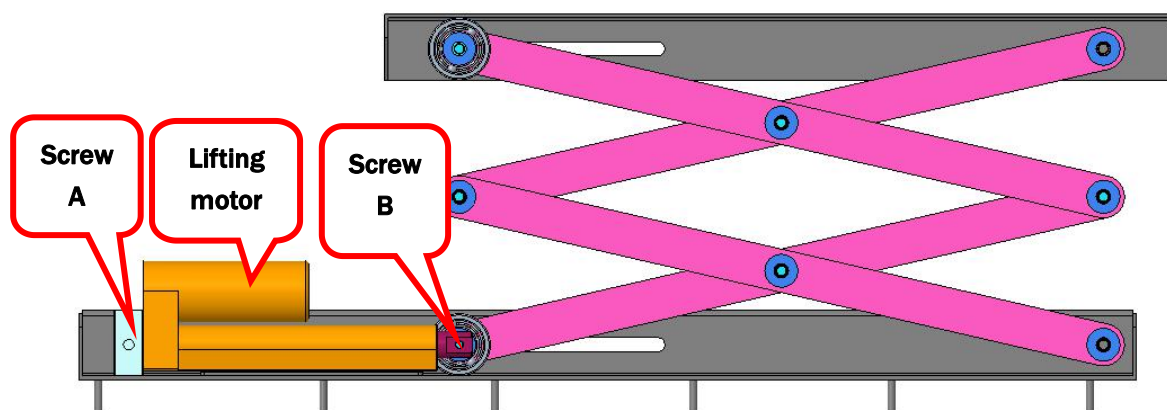
Step 5 Utilize Socket wrench to loosen 8 nuts on the under plate and 2 nuts on the inner plate. It is the same operation on both Red Player & Blue Player positions.



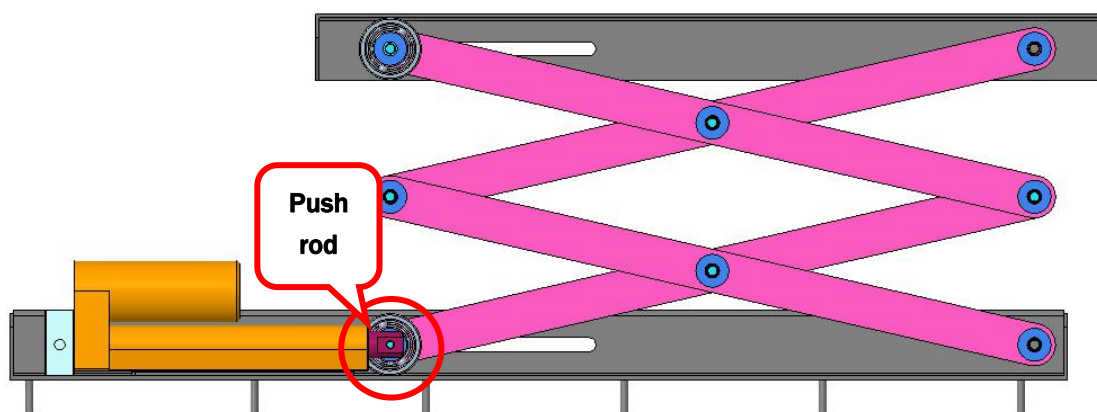
Step 6 Unscrew the Cupholder metal plate, lift it up by hand. Unplug the connectors to the Lifting motor, and take the Lifting motor assembly out.



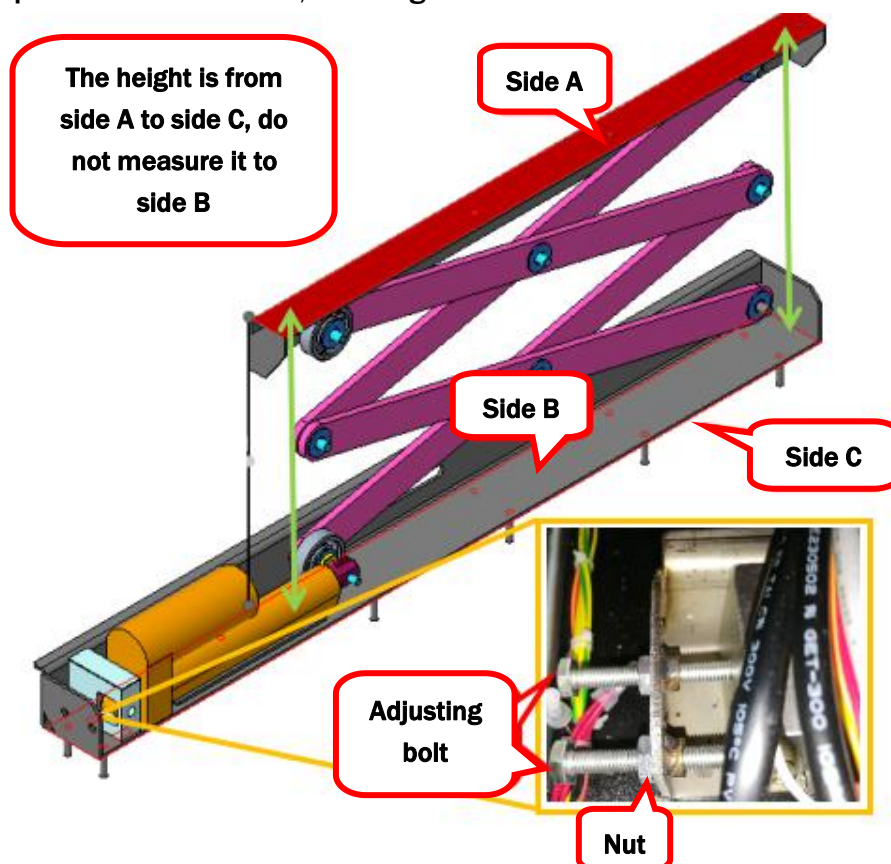
Step 7 Loosen the screws A & B which fix the motor, take the motor out and replace with a new motor; tighten the screws back.



Step 8 Adjust new Lifting motor: before fixing it to the cabinet, please plug the connector to test first; make sure the Push rod is at extreme short position.



Step 9 As picture shows below , the height from side A to side C is 10.90 inch.

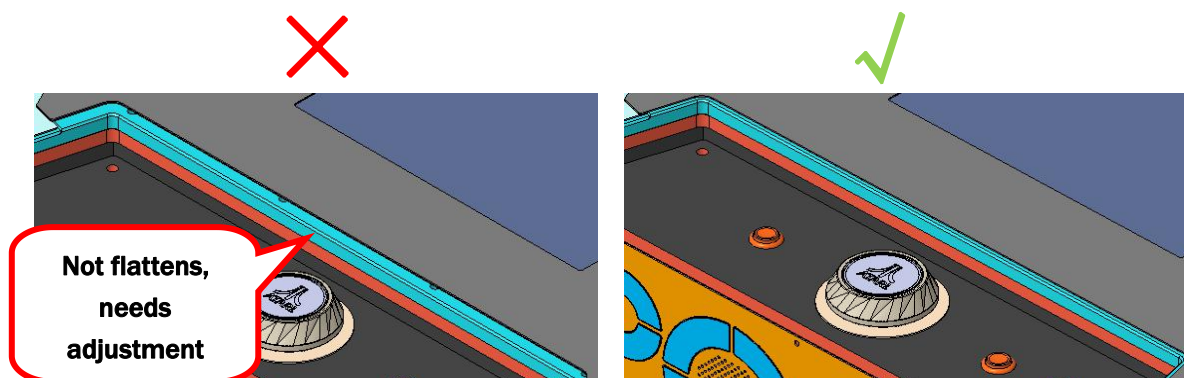


Utilize the spanner loosen the nuts and turn the adjusting bolt at the same time (clockwise is to go up, and counterclockwise is to go down), please measure the height first and then fasten the nuts, to make sure the height is 10.90 inch(277 mm).

Purpose of adjustment: To ensure when the lifting platform lowers down, it flattens on the cabinet surface at the extreme low position.

Step 10 After fully checking, please install as **Step 1** to **Step 6** in reverse order.

Note: There may have slight difference or tolerance of each cabinet, the height of 10.90 inch is taken as a reference value; if the Platform does not flattens on the cabinet surface, slight adjustment of the height is recommended and allowable.

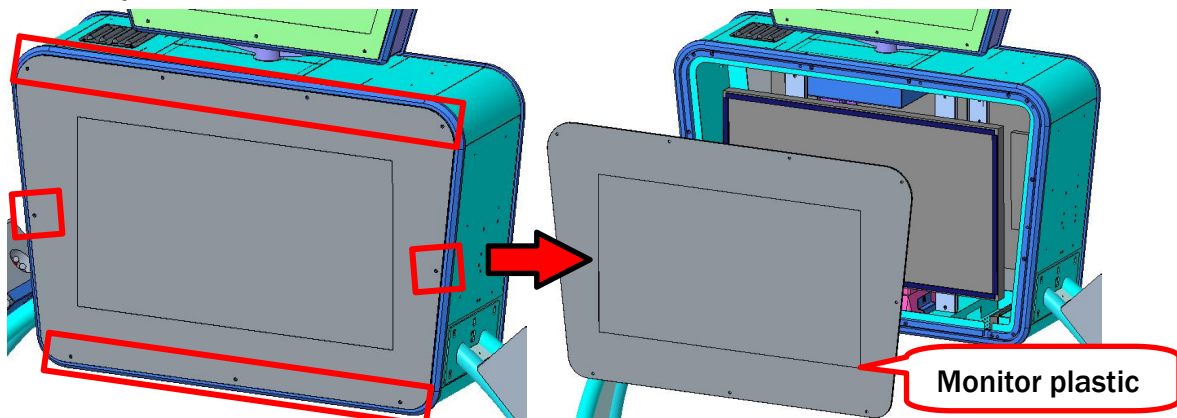


8.10 Marquee Monitor Replacement

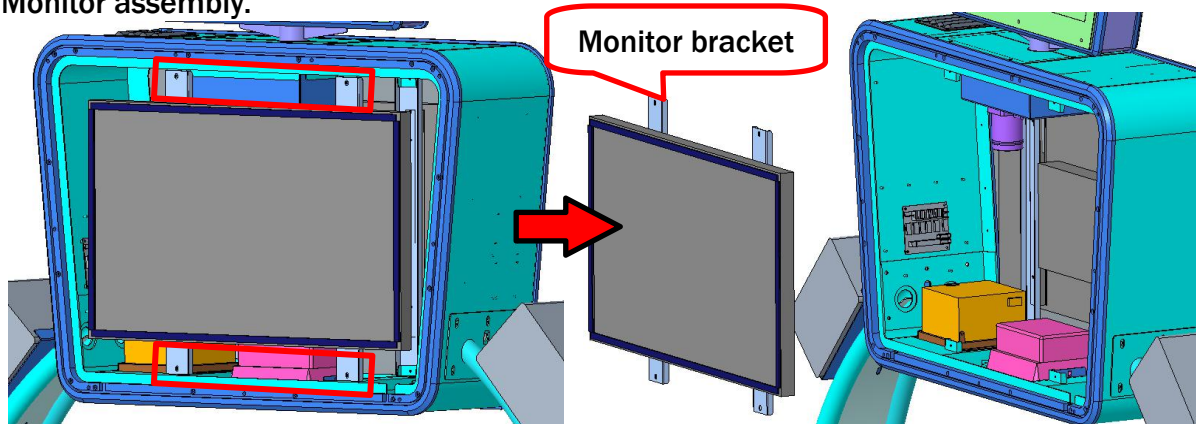
Before processing assure you have the following tools.

NO.	Name	Picture
1	Phillips screwdriver	
2	Allen wrench	
3	Ladder	

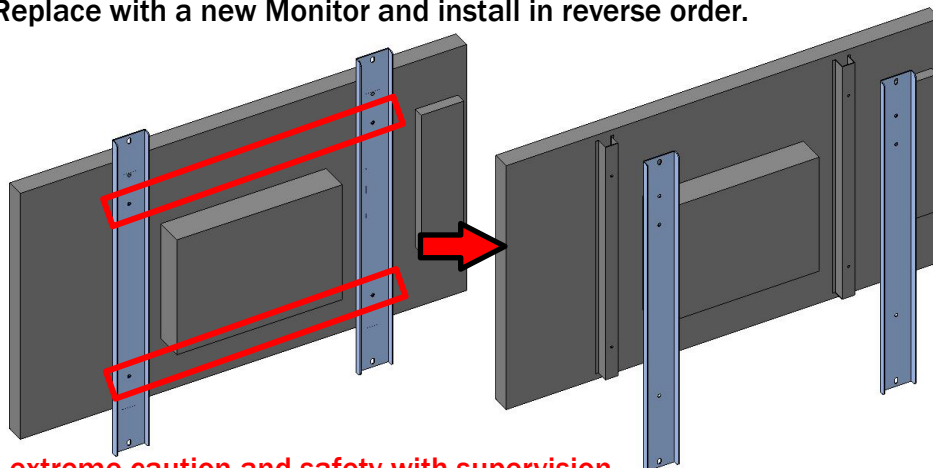
Step 1 Utilize Allen wrench to loosen 9 screws indicated by rectangles; remove the Monitor plastic and put aside.



Step 2 Utilize Phillips screwdriver to loosen 4 screws on the Monitor brackets; remove the Monitor assembly.



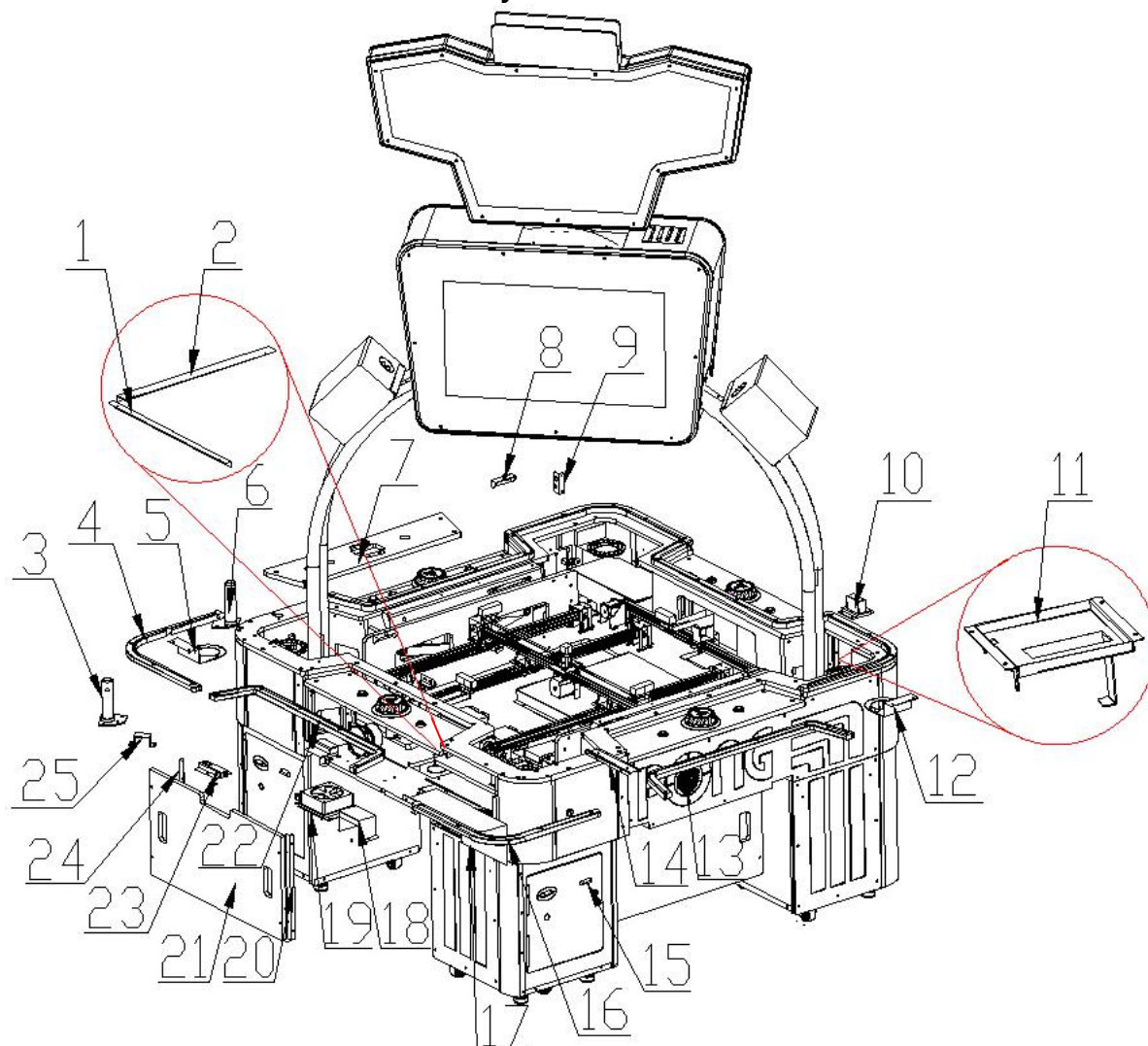
Step 3 Utilize Phillips screwdriver to loosen 4 screws on the Monitor brackets; remove the Monitor. Replace with a new Monitor and install in reverse order.



Note: Use extreme caution and safety with supervision.

9. OVERALL CONSTRUCTION

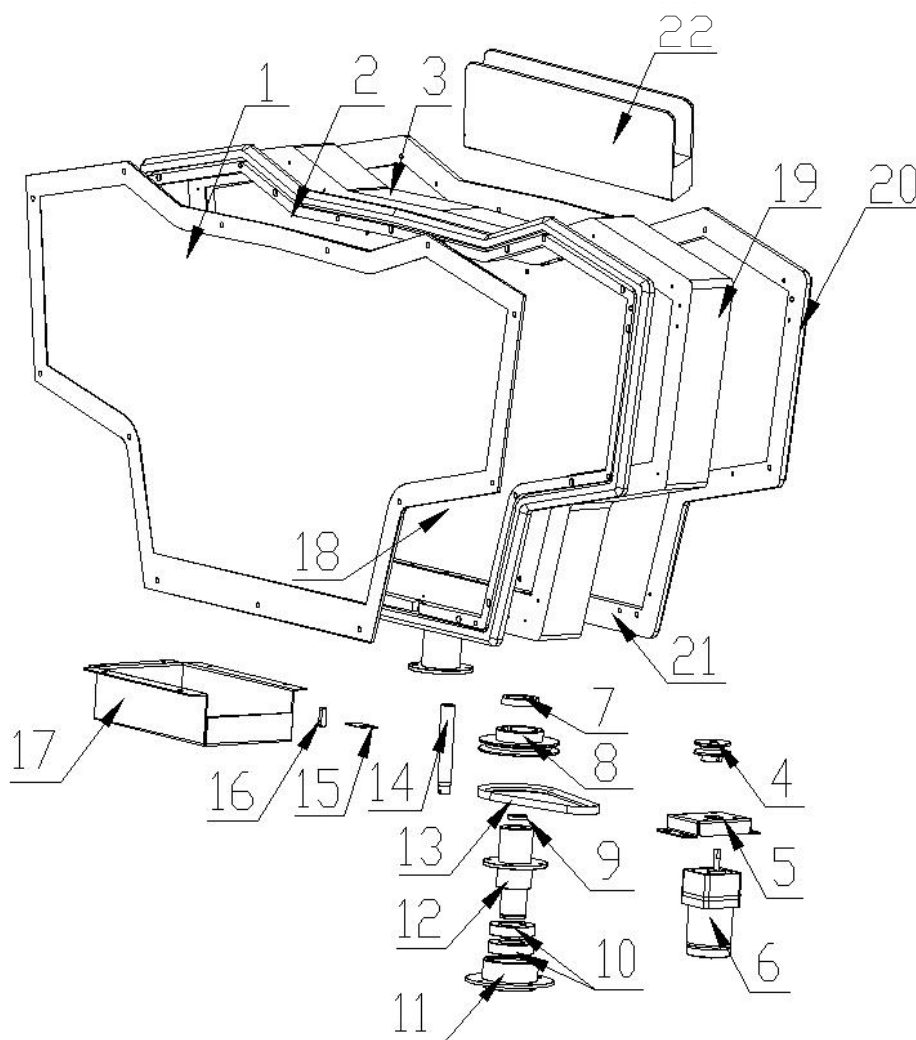
9.1 Main Cabinet General Assembly



No.	Part No.	Code No.	Name	Qty
1	P163-149-000	20211707R022	Movement bracket A	2
2	P163-150-000	20211707R023	Movement bracket B	2
3	P163-157-000	20211707R013A	Marquee fixing bracket B	2
4	P163-144-000	20611707R002	Surrounding plastic plate B	2
5	P163-155-000	20211707R026	Cup holder LED ring bracket	4
6	P163-156-000	20211707R012A	Marquee fixing bracket A	2
7	P163-467-000	25100080014	Screw cover	16
8	P163-151-000	20211707R024	Frame support	4
9	P163-152-001	20211707R062A	Connector bracket	1
10	P163-147-000	20211707R020	Power plate	1
11	P163-274-000	26000061000	Power supply bracket	2
12	P163-161-000	20611707R045	Waterproof plastic A	1
13	P163-146-000	20611707R004	Surrounding plastic plate D	2
14	P163-102-000	20211707H033	Power supply bracket	1
15	P163-153-000	20211707R025	Lifting button bracket	1

No.	Part No.	Code No.	Name	Qty
16	P163-143-000	20611707R001	Surrounding plastic plate A	2
17	P163-162-000	20611707R044	Waterproof plastic B	1
18	P163-158-000	20611707R017	Plastic cover	4
19	P163-148-000	20211707R021	Fan bracket	1
20	P163-141-000	20211707R018	L isolate bracket	4
21	P163-501-000	20311707R001	Bottom connective board	4
22	P163-145-000	20611707R003	Surrounding plastic plate C	2
23	P163-275-000	26000064000	Recovery stick holder	1
24	P163-142-000	20211707R019	R isolate bracket	4
25	P163-154-000	20211707R063	Power pressing plate	2

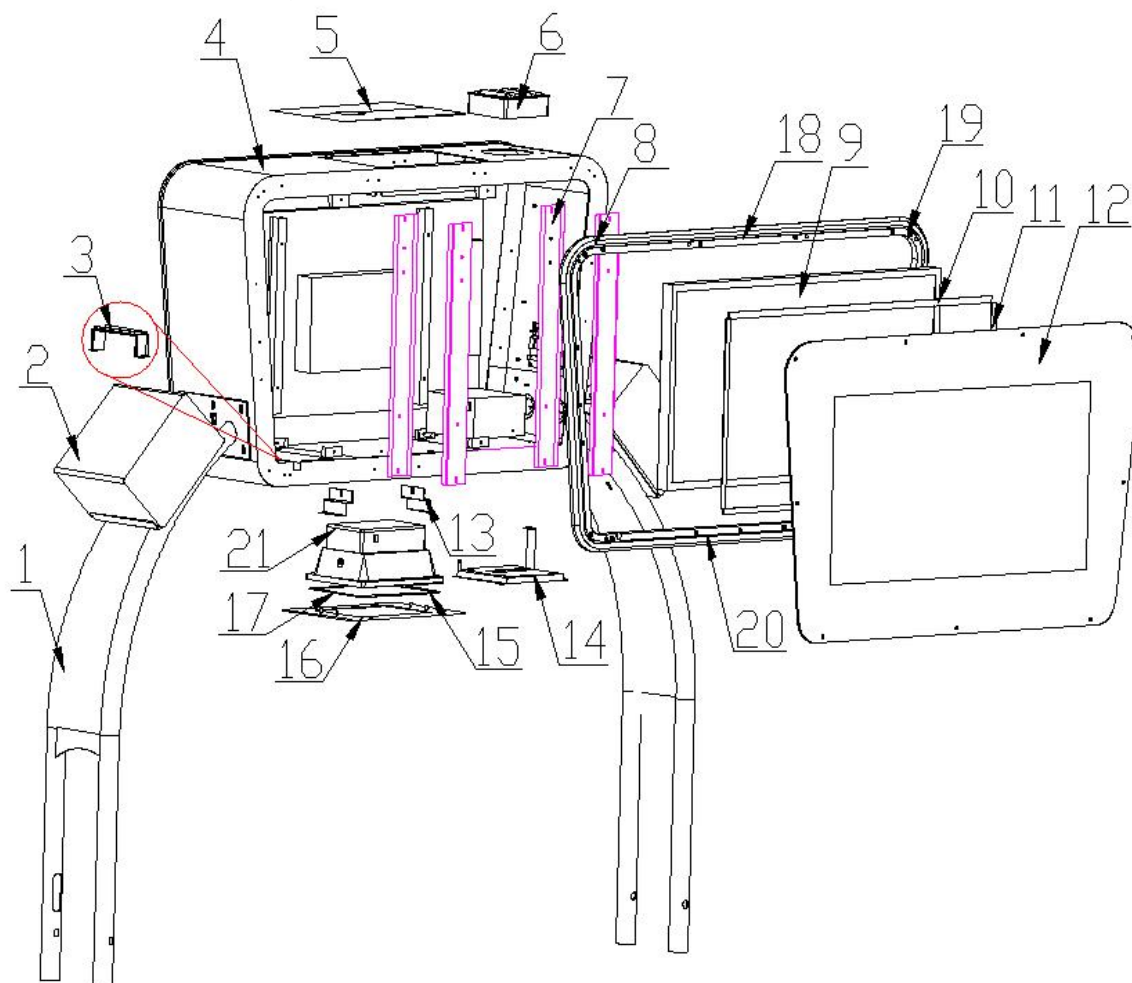
9.2 Rotational Marquee Assembly



No.	Part No.	Code No.	Name	Qty
1	P163-731-000	20511707R027	Rotational marquee plastic	2
2	P163-264-001	20611707R039A	Rotational marquee light plastic A	2
3	P163-263-000	20211707R092A	Rotational marquee	1
4	P163-257-000	20211707R099	Driving belt wheel	1
5	P163-256-000	20211707R089	Motor bracket	1

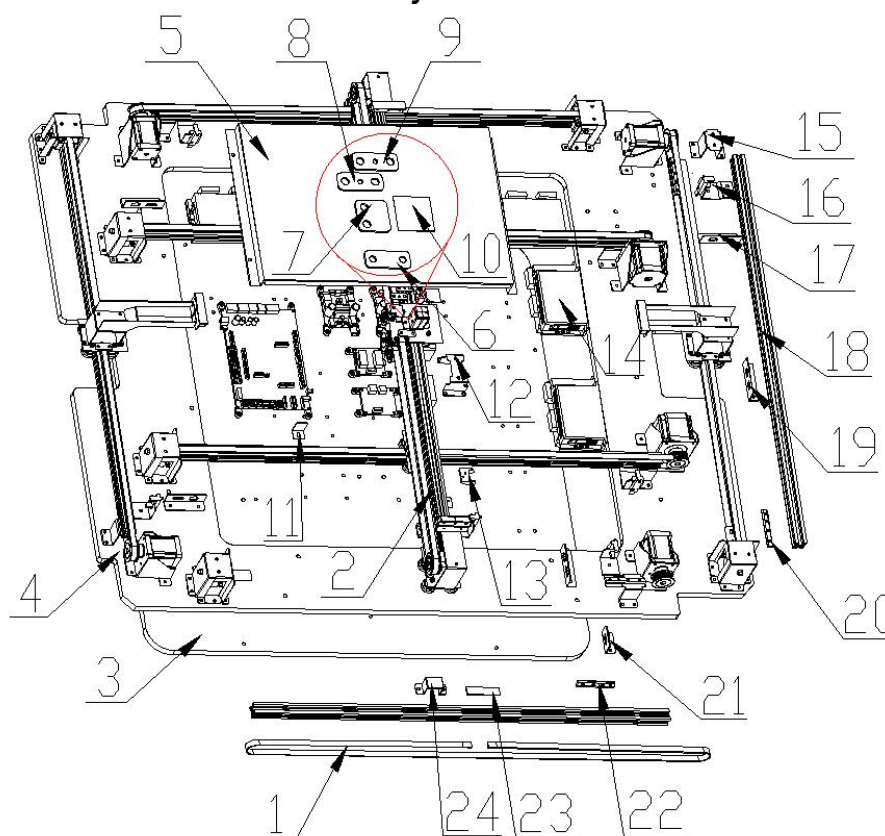
No.	Part No.	Code No.	Name	Qty
6	P163-481-000	23404000107	Motor	1
7	P163-269-000	20211707R096	Large axle sleeve	1
8	P163-258-000	20211707R100	Driven belt wheel	1
9	P163-472-000	20106000090	Deep groove ball bearing	1
10	P163-473-000	20106000176	Deep groove ball bearing	2
11	P163-255-000	20211707R093	Rotational bearing bracket	1
12	P163-259-000	20211707R094	Marquee rotational shaft	1
13	P163-464-000	26501000018	A type belt	1
14	P163-260-000	20211707R095	Wiring tube	1
15	P163-262-000	20211707R091	Wiring limited plate	1
16	P163-261-000	20211707R090	Shaft key	1
17	P163-254-000	20211707R088	Rotational base bracket	1
18	P163-268-000	20611707R043A	Top LED mounting plastic	1
19	P163-267-001	20611707R042A	Rotational marquee light plastic D	2
20	P163-266-001	20611707R041A	Rotational marquee light plastic C	2
21	P163-265-001	20611707R040A	Rotational marquee light plastic B	2
22	P163-745-000	20511707R032	PONG foam core sign	1

9.3 Monitor Assembly



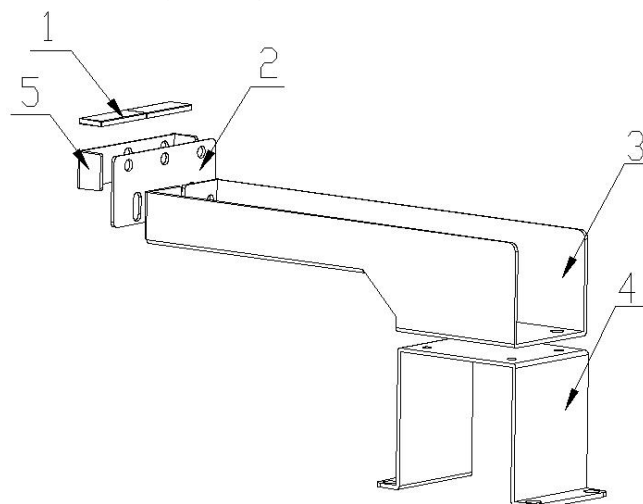
No.	Part No.	Code No.	Name	Qty
1	P163-238-000	20211707R082A	Support post	2
	P163-250-000	20211707R085	Speaker bracket	2
2	P163-251-000	20211707R098	Speaker inner plate	2
	P163-439-000	22806000032	Marquee speaker	2
3	P163-253-000	20211707R087	Pressing plate	1
4	P163-237-000	20211707R081	Monitor marquee	1
5	P163-252-000	20211707R086	Metal plate	2
6	P163-271-000	26000014000	Louver	1
7	P163-239-000	20211707R097	Monitor fixing bracket	4
8	P163-244-001	20611707R037A	Monitor light plastic C	2
9	P163-450-000	21201032018	32" monitor	2
10	P163-240-000	20611707R031	Monitor long damping foam	4
11	P163-241-000	20611707R032	Monitor short damping foam	4
12	P163-730-000	20511707R026	Monitor plastic	2
13	P163-247-000	20211707R084	Blacklight bracket	2
14	P163-274-000	26000061000	Power supply bracket	1
15	P163-248-000	20611707R033	Long light damping foam	2
16	P163-246-000	20211707R083	Blacklight base plate	1
17	P163-249-000	20611707R034	Short light damping foam	2
18	P163-242-001	20611707R035A	Monitor light plastic A	2
19	P163-245-001	20611707R038A	Monitor light plastic D	2
20	P163-243-001	20611707R036A	Monitor light plastic B	2
21	P163-437-000	22003230002	Blacklight	1

9.4 Movement Mechanism Assembly

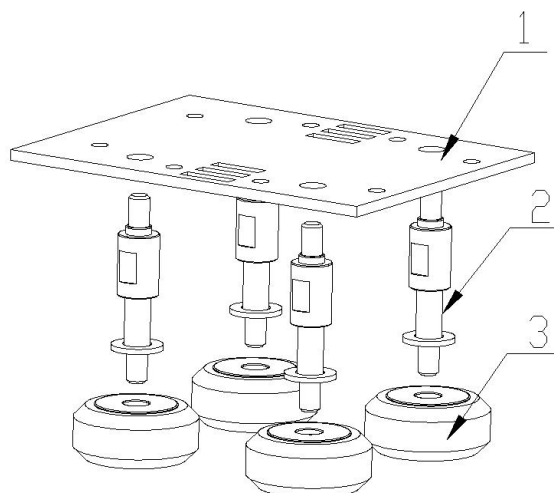


No.	Part No.	Code No.	Name	Qty
1	P163-482-000	26504010002	Y axle Toothed belt (XL type)	75.9in (1928mm)
	P163-483-000	26504010002	X axle Toothed belt (XL type)	74.92in x2 (1903mm x2)
	P163-484-000	26504010002	Paddle axle Toothed belt (XL type)	65.63in x4 (1667mm x4)
2	P163-170-000	20211707R079	Long track	3
3	P163-515-000	20311707R026	Electrical component supporting board	1
4	P163-514-000	20311707R025	Supporting board	1
5	P163-181-000	20611707R018	Dust-free cover	1
6	P163-129-000	20211707043A	Fixing plate A	13
7	P163-130-000	20211707044A	Fixing plate B	1
8	P163-131-000	20211707045A	Adjust plate A (Short)	2
9	P163-132-000	20211707046A	Adjust plate B (Long)	2
10	P163-134-000	20611707R046	Anti-scratch foam A	1
11	P163-182-000	20211707R068	Locking plate	1
12	P163-127-000	20211707051A	Connecting bracket	2
13	P163-125-000	20211707027A	Chain mounting plate	1
14	P163-477-000	23429000009	Motor driver	7
15	P163-122-000	20211707022	Track bracket	6
16	P163-128-000	20211707052A	Long sensor SW bracket	6
17	P163-180-000	20211707R067	Wiring plate D	4
18	P163-171-000	20211707R080	Paddle track(Short)	4
19	P163-123-000	20211707024	Wiring plate A	1
20	P163-179-000	20211707R077	Long fixing bar	1
21	P163-124-000	20211707026	Wiring plate C	1
22	P163-133-000	20211707049A	Short fixing bar	12
23	P163-135-000	20611707R047	Anti-scratch foam B	4
24	P163-126-000	20211707041	Small pressing plate	1

9.4.1 Sliding Paddle Assembly(Long)

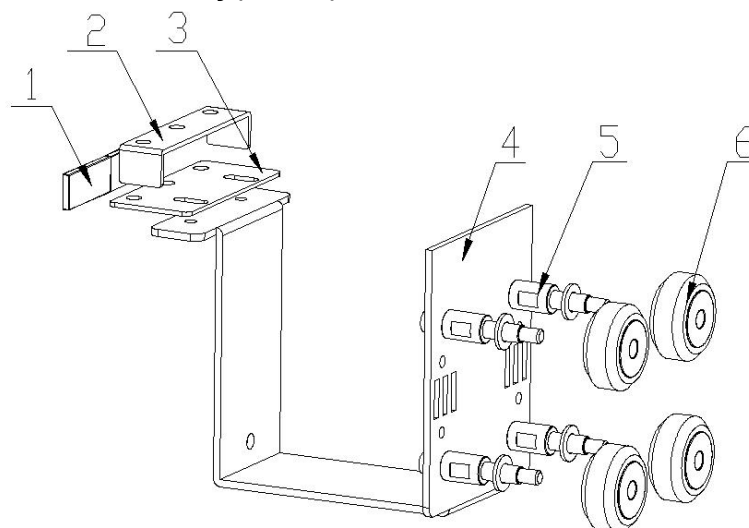


No.	Part No.	Code No.	Name	Qty
1	P163-469-000	23502000041	Magnet	2x2
2	P163-120-000	20211707004A	Magnet plate A	1x2
3	P163-175-000	20211707R003	Extended bracket	1x2
4	P163-174-000	20211707R066	Bottom bracket	1x2
5	P163-121-000	20211707042	Magnet back plate	1x2



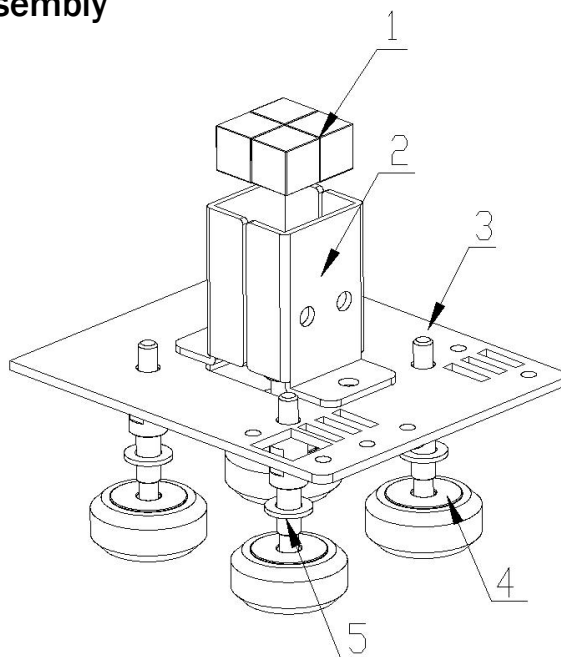
No.	Part No.	Code No.	Name	Qty
1	P163-117-000	20211707002B	Axle bracket	1x2
2	P163-118-000	20211707048A	Wheel shaft	4x2
3	P163-119-000	20611707030	Bearing wheel	4x2

9.4.2 Sliding Paddle Assembly(Short)

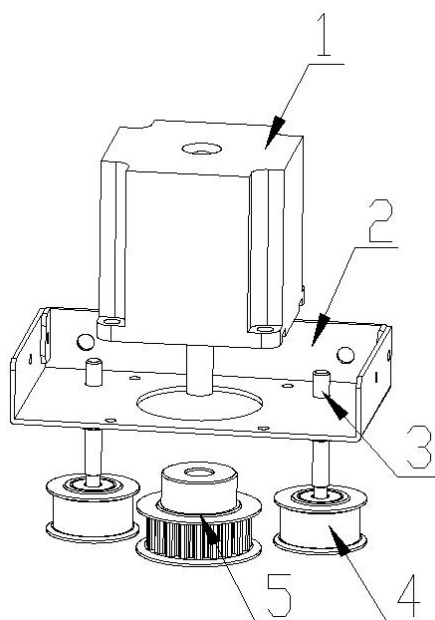


No.	Part No.	Code No.	Name	Qty
1	P163-469-000	23502000041	Magnet	2x2
2	P163-120-000	20211707004A	Magnet plate A	1x2
3	P163-121-000	20211707042	Magnet back plate	1x2
4	P163-176-000	20211707R004	Moving bracket	1x2
5	P163-118-000	20211707048A	Wheel shaft	4x2
6	P163-119-000	20611707030	Bearing wheel	4x2

9.4.3 Sliding Ball Assembly

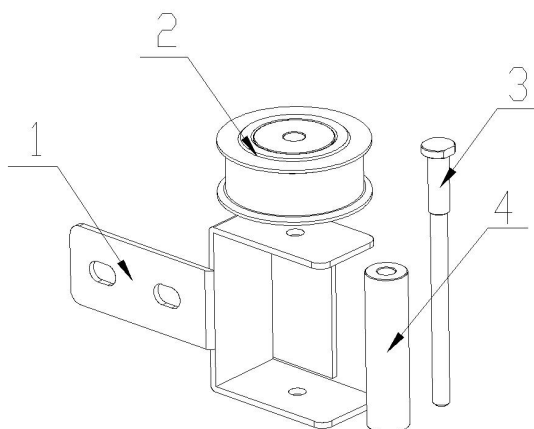


No.	Part No.	Code No.	Name	Qty
1	P163-471-000	23502000049	Magnet	4
2	P163-178-000	20211707R006	Magnet plate B	2
3	P163-177-000	20211707R005	Y axle moving bracket	1
4	P163-119-000	20611707030	Bearing wheel	4
5	P163-118-000	20211707048A	Wheel shaft	4



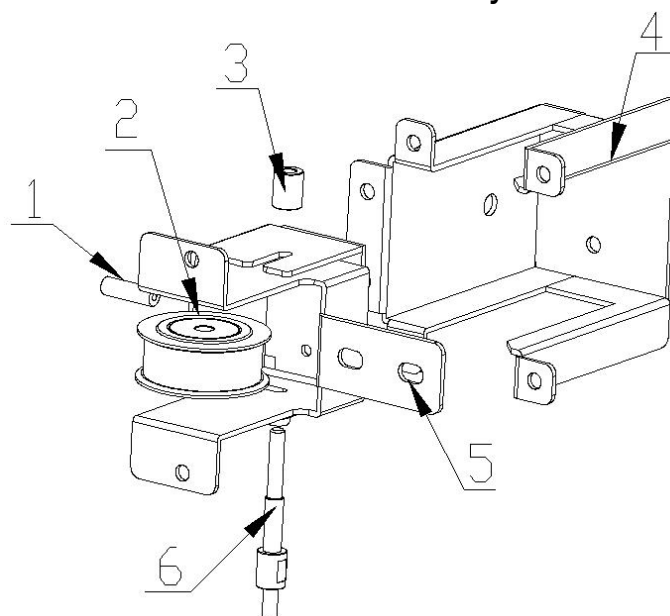
No.	Part No.	Code No.	Name	Qty
1	P163-463-000	23406000033	57MM Stepping motor	1
2	P163-114-000	20211707021A	Motor bracket B	1
3	P163-116-000	20211707007B	Wheel shaft	2
4	P163-115-000	20211707034A	Idle wheel B	2
5	P163-113-000	20211707033A	Driving wheel	1

9.4.4 Y Axle Idle Wheel Assembly



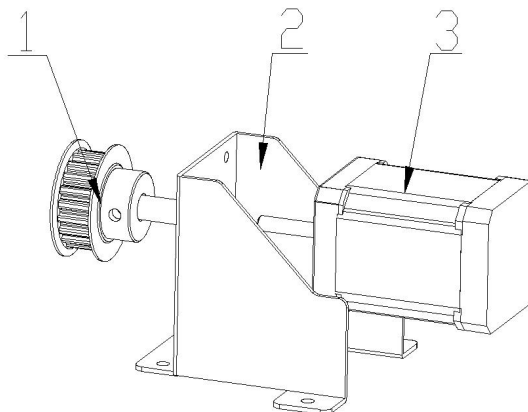
No.	Part No.	Code No.	Name	Qty
1	P163-110-000	20211707018B	Idle wheel bracket B	1x2
2	P163-105-000	20211707032A	Idle wheel A	1x2
3	P163-112-000	20211707055	Idle wheel shaft B	1x2
4	P163-111-000	20611707026A	Bracket shaft	1x2

9.4.5 X Axle & Paddle Axle Idle Wheel Assembly



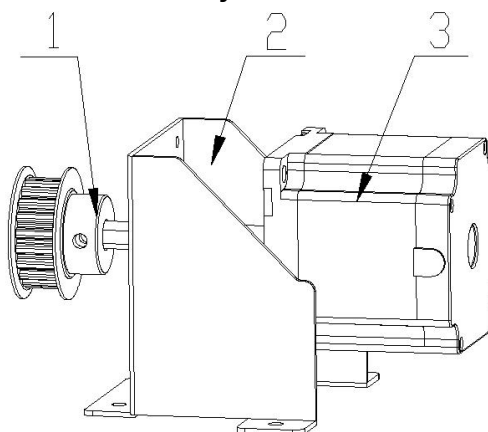
No.	Part No.	Code No.	Name	Qty
1	P163-108-000	20211707058	Axle plate	1x6
2	P163-105-000	20211707032A	Idle wheel A	1x6
3	P163-107-000	20211707054	Wheel sleeve	1x6
4	P163-109-000	20211707059	Limiting bracket	1x6
5	P163-104-000	20211707017B	Idle wheel bracket A	1x6
6	P163-106-000	20211707047B	Idle wheel shaft	1x6

9.4.6 42MM Stepping Motor Assembly



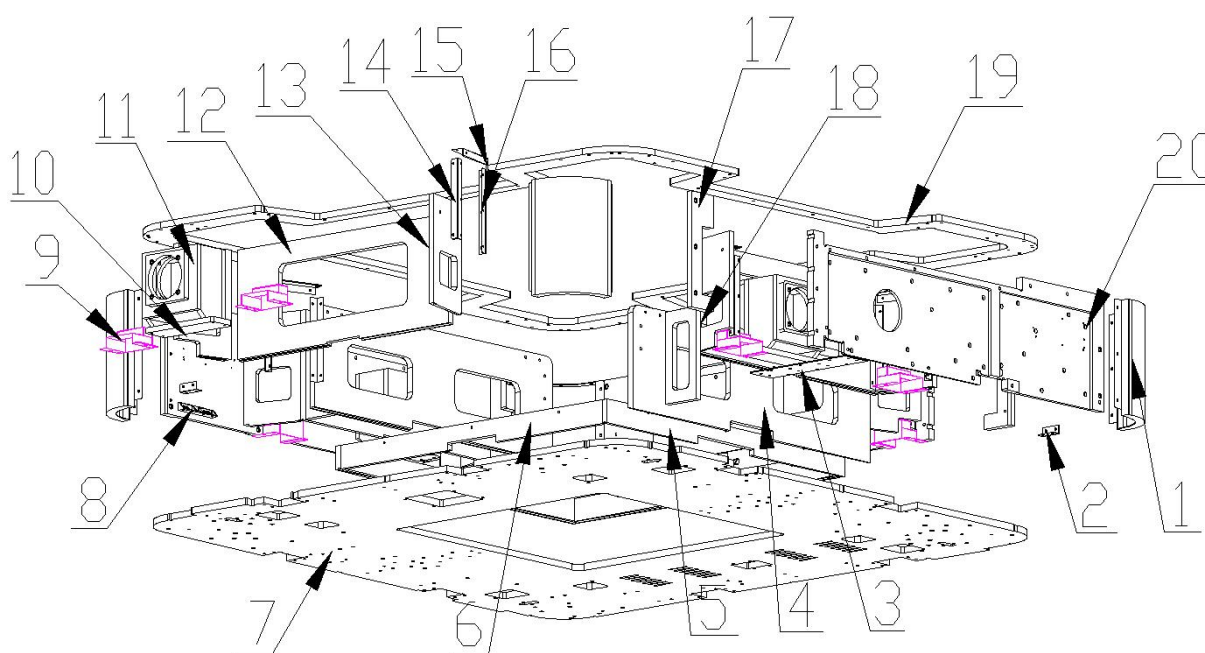
No.	Part No.	Code No.	Name	Qty
1	P163-113-000	20211707033A	Driving wheel	1x4
2	P163-172-000	20211707R064	42MM motor bracket	1x4
3	P163-462-000	23406000032	42MM Stepping motor	1x4

9.4.7 57MM Stepping Motor Assembly

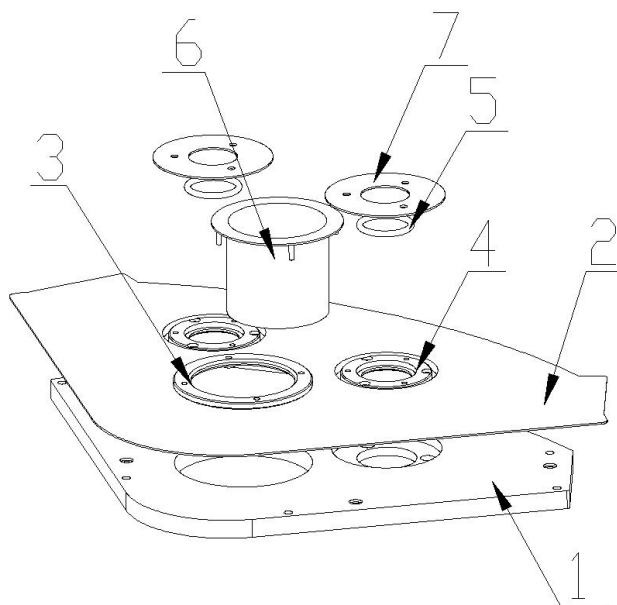


No.	Part No.	Code No.	Name	Qty
1	P163-113-000	20211707033A	Driving wheel	1x2
2	P163-173-000	20211707R065	57MM motor bracket A	1x2
3	P163-463-000	23406000033	57MM Stepping motor	1x2

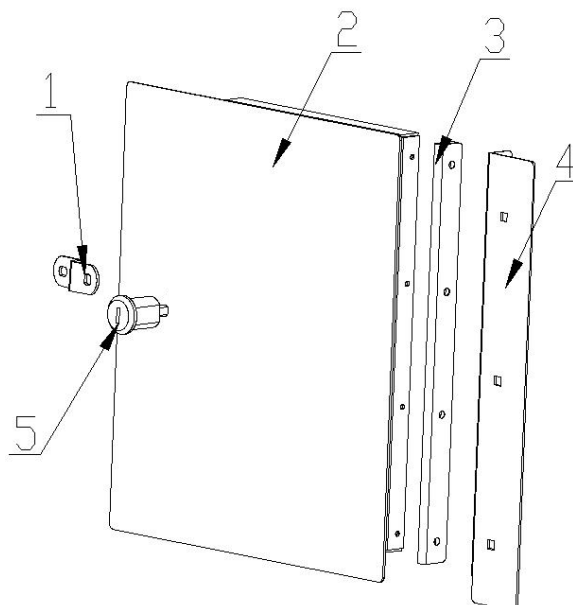
9.5 Top Case Assembly



No.	Part No.	Code No.	Name	Qty
1	P163-163-000	20211707R027	Round connective plate	4
2	P163-169-000	20211707R033	Connective plate C	8
3	P163-166-000	20211707R030	Butt plate	2
4	P163-512-000	20311707R011	Outer surrounding board	2
5	P163-511-000	20311707R010	Inner surrounding board B	2
6	P163-510-000	20311707R009	Inner surrounding board A	2
7	P163-502-000	20311707R002	Top case base board	1
8	P163-276-000	26000067000	Plastic joint	74
9	P163-168-000	20211707R032	Bracket	8
10	P163-509-000	20311707R024	Speaker box	4
11	P163-504-000	20311707R004	Control panel L side board	4
12	P163-506-000	20311707R006	Control panel back board	4
13	P163-505-000	20311707R005	Control panel R side board	4
14	P163-164-000	20211707R028	Connective plate A	8
15	P163-167-000	20211707R031	Control panel mounting plate	8
16	P163-165-000	20211707R029	Connective plate B	8
17	P163-508-000	20311707R008	Top case side board(S)	4
18	P163-513-000	20311707R012	Back support board	2
19	P163-507-000	20311707R007	Top case top board	1
20	P163-503-000	20311707R003	Top case side board	4

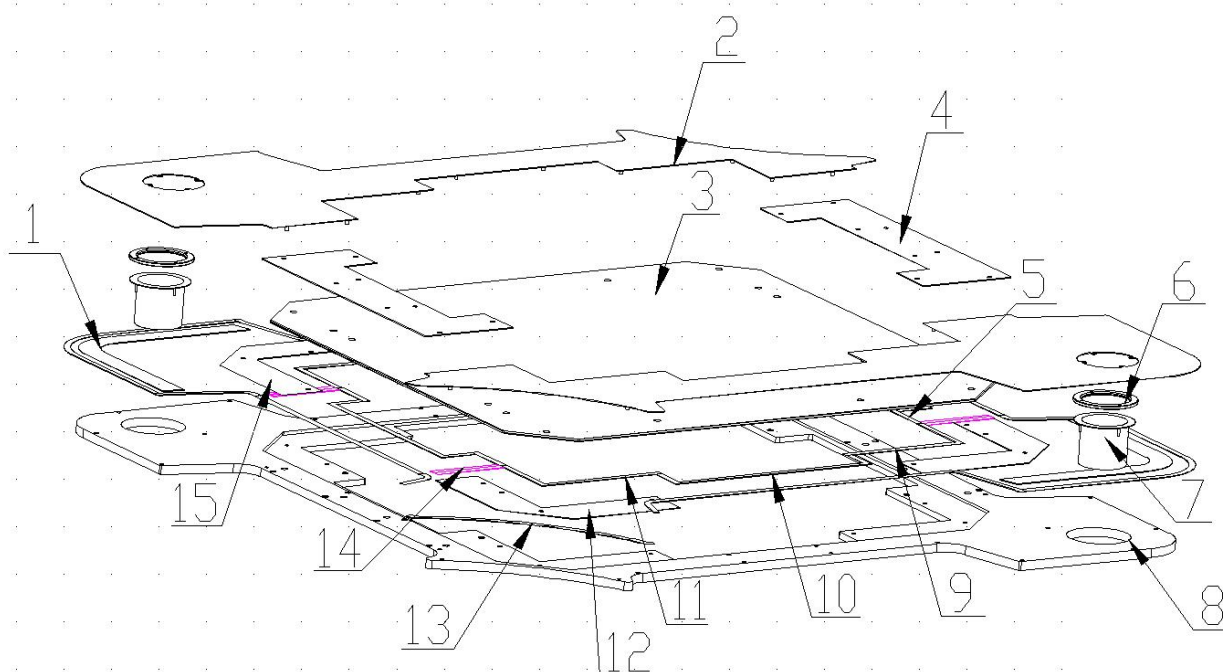


No.	Part No.	Code No.	Name	Qty
1	P163-529-000	20311707R023	Corner board	1x2
2	P163-234-000	20211707R054	Corner plate	1x2
3	P163-189-000	20611707R005	Cup holder plastic	1x2
4	P163-235-000	20211707R055	Zinc ring	2x2
5	P163-465-000	20116000197	Rubber ring	2x2
6	P163-190-000	20211707R036	Cup holder	1x2
7	P163-236-001	20211707R056A	Metal cover	2x2



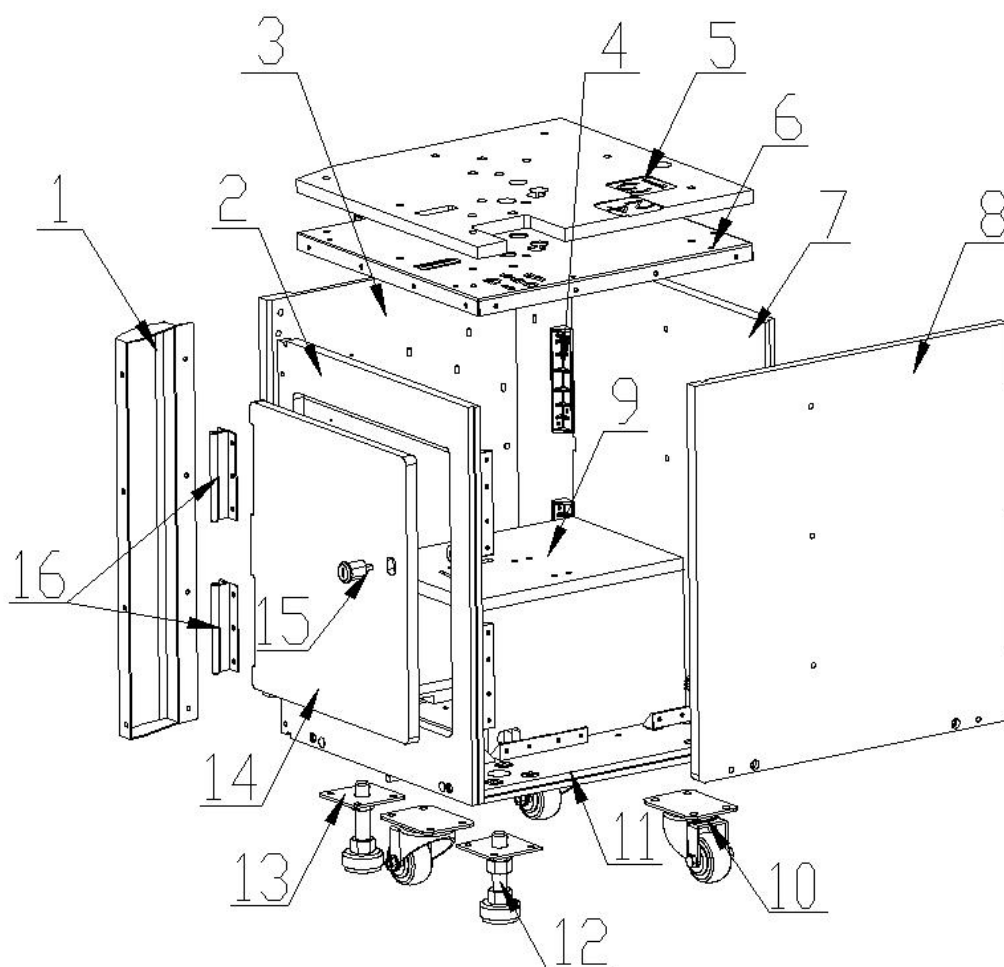
No.	Part No.	Code No.	Name	Qty
1	P163-221-001	20211707R072A	Lock pin	1x4
2	P163-220-000	20211707R051	Upper door	1x4
3	P163-219-000	20211707R050	Side hinge	1x4
4	P163-218-000	20211707R049	Side fixing plate	1x4
5	P163-479-000	25300171001	171 Lock	1x4

9.6 Lifting Platform Assembly

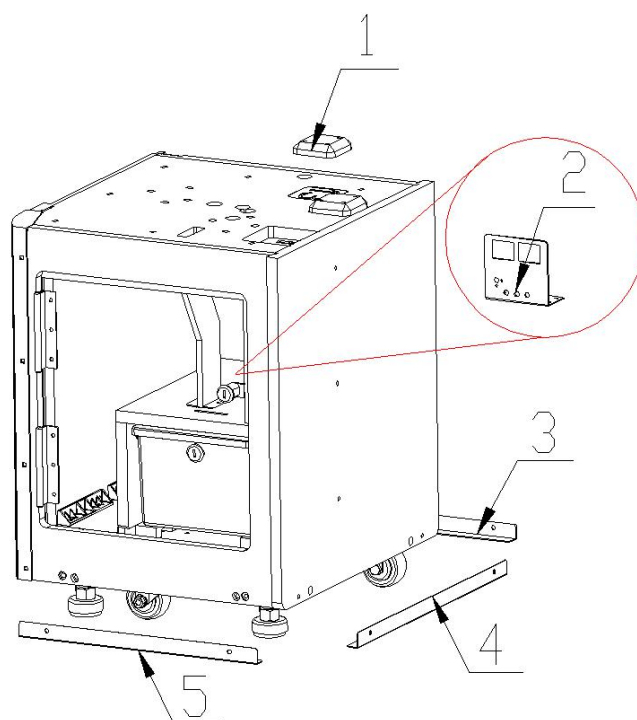


No.	Part No.	Code No.	Name	Qty
1	P163-191-000	20611707R011	Damping foam	2
2	P163-187-000	20211707R034	Cover plate A	2
3	P163-186-000	20611707R024	Tempered glass	1
4	P163-188-000	20211707R035	Cover plate B	2
5	P163-194-000	20611707R014	Glass foam C	4
6	P163-189-000	20611707R005	Cup holder plastic	2
7	P163-190-000	20211707R036	Cup holder	2
8	P163-518-000	20311707R013	Top board	1
9	P163-193-000	20611707R013	Glass foam B	2
10	P163-195-000	20611707R030	Glass foam D	4
11	P163-192-000	20611707R012	Glass foam A	2
12	P163-197-000	20611707R026	Glass foam F	2
13	P163-199-000	20611707R028	Metal damping foam A	2
14	P163-196-000	20611707R029	Glass foam E	8
15	P163-198-000	20611707R027	Glass foam G	2

9.7 Base Case Assembly

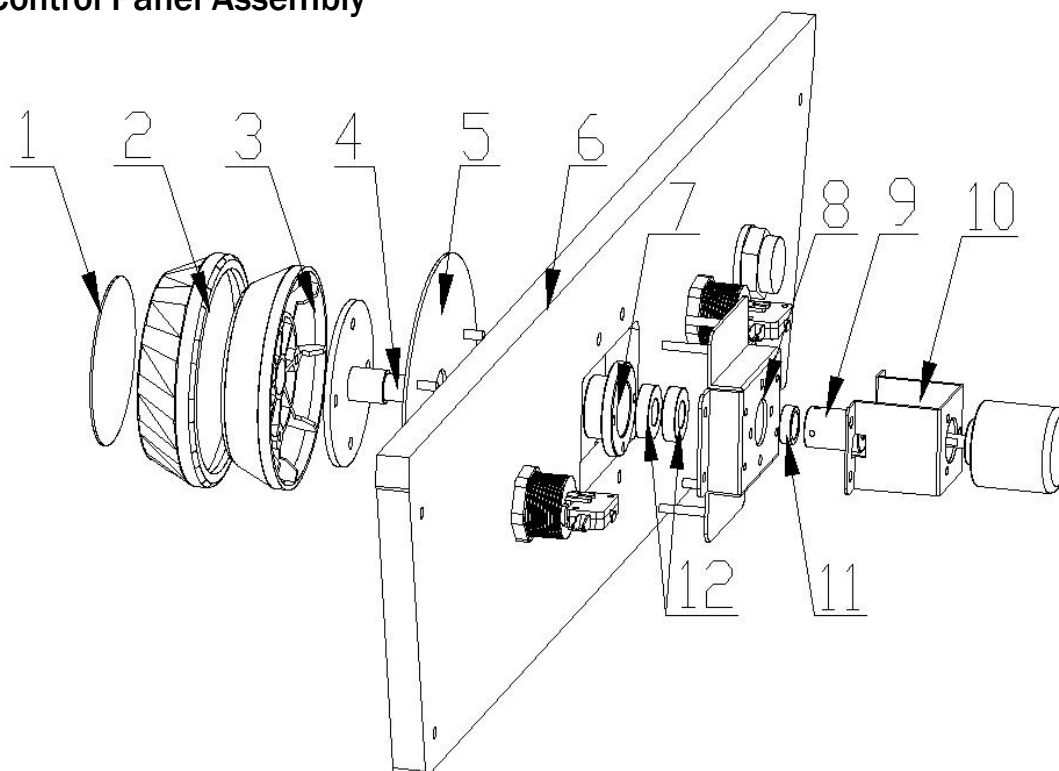


No.	Part No.	Code No.	Name	Qty
1	P163-204-000	20211707R038	Corner plate	1x4
2	P163-524-000	20311707R020	Base case front frame	1x4
3	P163-521-001	20311707R017A	Base case L board	1x4
4	P163-276-000	26000067000	Plastic joint	14x4
5	P163-526-000	20311707R022	Base case top board	1x4
6	P163-206-000	20211707R071	Base case inner plate	1x4
7	P163-523-001	20311707R019A	Base case back board	1x4
8	P163-522-001	20311707R018A	Base case R board	1x4
9	P163-527-000	20311707R016	Outer coin box	1x4
10	P163-460-000	25501000047	Caster	3x4
11	P163-520-000	20311707R015	Base case bottom board	1x4
12	P163-270-000	26000008000	Cabinet leveller	2x4
13	P163-205-000	20211707R039	Base plate	2x4
14	P163-525-000	20311707R021	Base case front door	1x4
15	P163-479-000	25300171001	171 Lock	1x4
16	P163-478-000	26300000001	Hinge	2x4



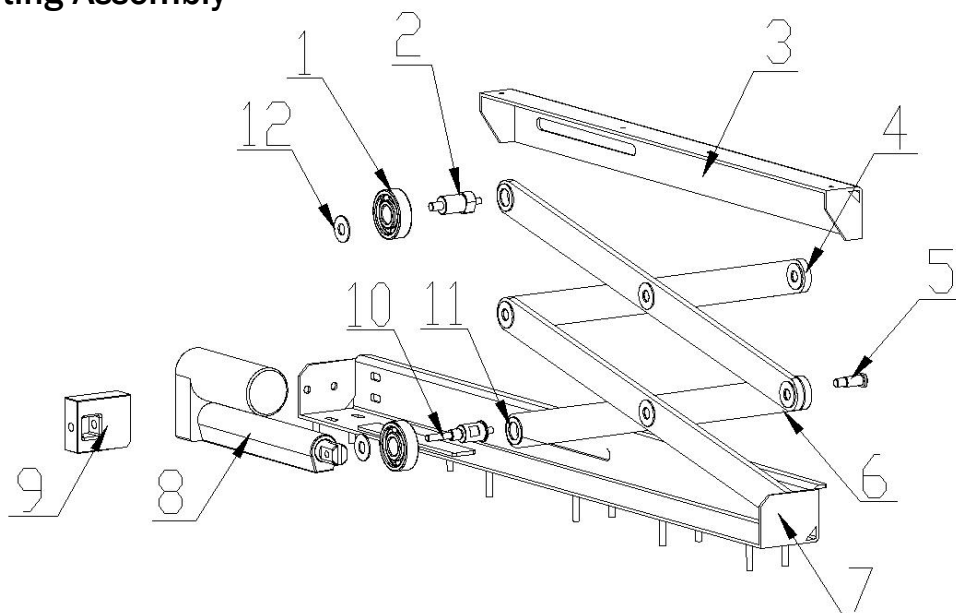
No.	Part No.	Code No.	Name	Qty
1	P163-528-000	20311707R029	Cover board	1x4
2	P163-272-000	26000044000	Counter bracket	1x4
3	P163-208-000	20211707R041	Bottom protective bar B	1x4
4	P163-209-000	20211707R042	Bottom protective bar C	1x4
5	P163-207-000	20211707R040	Bottom protective bar A	1x4

9.8 Control Panel Assembly



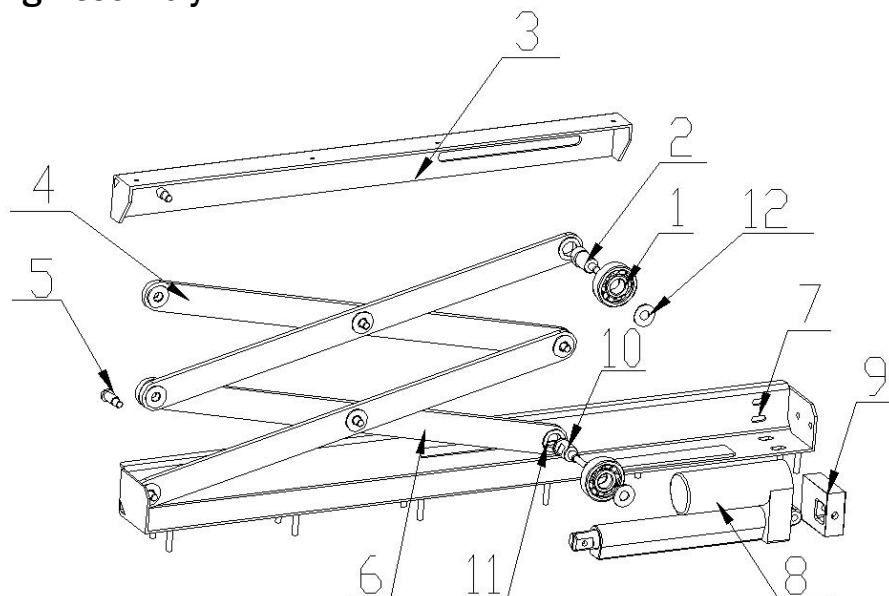
No.	Part No.	Code No.	Name	Qty
1	P163-705-000	20511707002	ATARI Logo	1x4
2	P163-138-000	20611707008	Jog shell	1x4
3	P163-137-000	20611707009	Jog	1x4
4	P163-202-000	20211707R014	Rotation shaft	1x4
5	P163-200-000	20211707R037	Decoration plate	1x4
6	P163-519-001	20311707R014A	Control panel board	1x4
7	P163-139-000	20211707013A	Bearing bracket	1x4
8	P163-201-000	20211707R069	Support plate	1x4
9	P163-468-000	20117000296	Coupling	1x4
10	P163-203-000	20211707R070	Encoder bracket	1x4
11	P163-140-000	20211707038	Shaft sleeve	1x4
12	P163-474-000	20106000318	Deep groove ball bearing	2x4

9.9 L Lifting Assembly



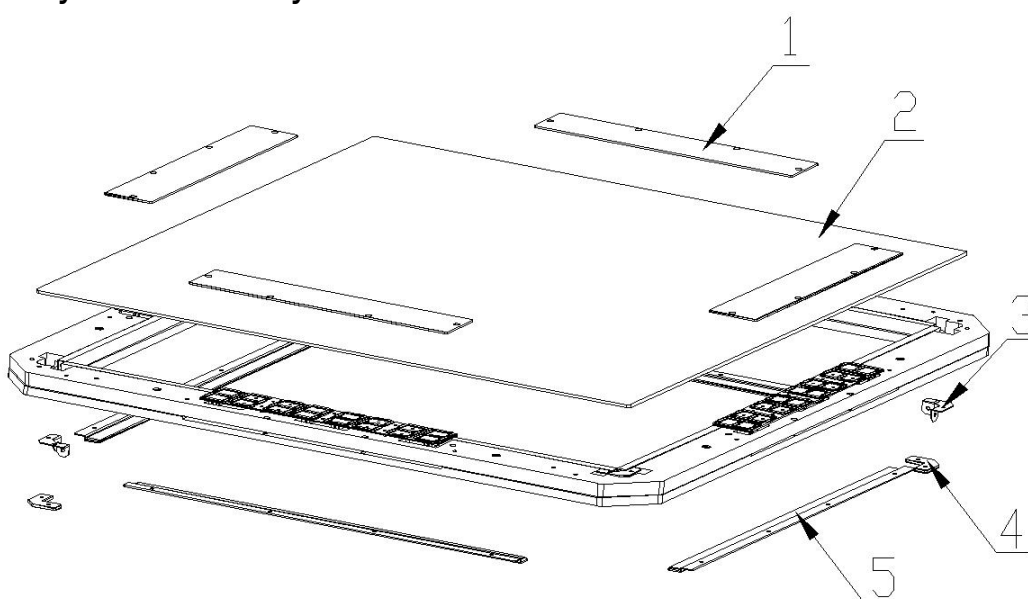
No.	Part No.	Code No.	Name	Qty
1	P163-475-000	20106000336	Deep groove ball bearing	2
2	P163-228-000	20211707R017	Rob shaft C	1
3	P163-223-000	20211707R009	L lifting movement plate	1
4	P163-224-000	20211707R052	Lifting rob A	2
5	P163-226-000	20211707R015	Rob shaft A	4
6	P163-225-000	20211707R053	Lifting rob B	2
7	P163-222-000	20211707R008	L lifting base plate	1
8	P163-461-000	23404010006	24V Table lifting motor	1
9	P163-231-000	20211707R078	Push rob bracket	1
10	P163-227-000	20211707R016	Rob shaft B	1
11	P163-230-000	20211707R074	Plate B	2
12	P163-229-000	20211707R073	Plate A	18

9.10 R Lifting Assembly

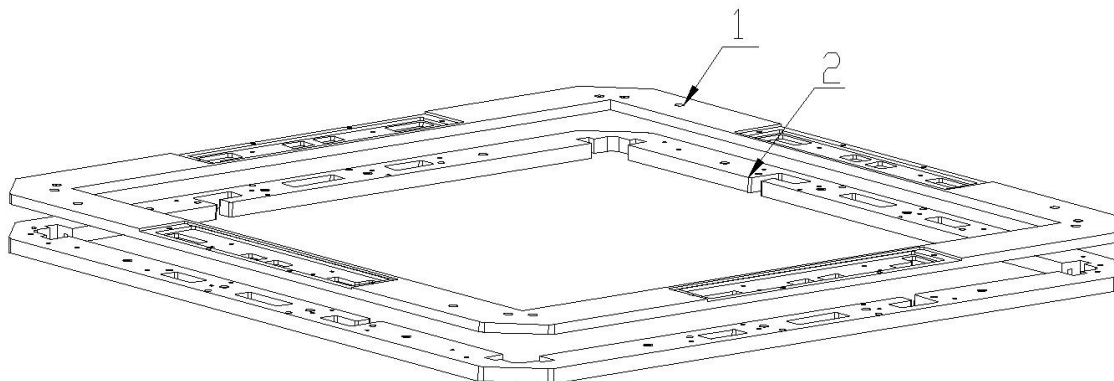


No.	Part No.	Code No.	Name	Qty
1	P163-475-000	20106000336	Deep groove ball bearing	2
2	P163-228-000	20211707R017	Rob shaft C	1
3	P163-233-000	20211707R011	R lifting movement plate	1
4	P163-224-000	20211707R052	Lifting rob A	2
5	P163-226-000	20211707R015	Rob shaft A	4
6	P163-225-000	20211707R053	Lifting rob B	2
7	P163-232-000	20211707R010	R lifting base plate	1
8	P163-461-000	23404010006	24V Table lifting motor	1
9	P163-231-000	20211707R078	Push rob bracket	1
10	P163-227-000	20211707R016	Rob shaft B	1
11	P163-230-000	20211707R074	Plate B	2
12	P163-229-000	20211707R073	Plate A	18

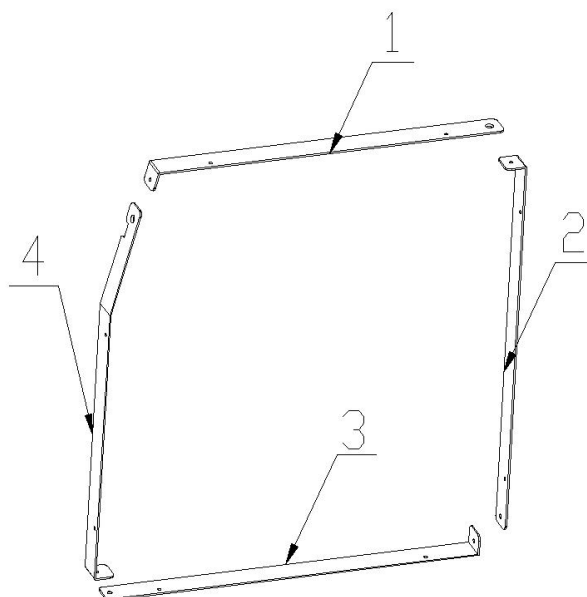
9.11 Playfield Assembly



No.	Part No.	Code No.	Name	Qty
1	P163-184-000	20611707R010	Brown plastic	4
2	P163-711-001	20511707R004A	Playfield glass	1
3	P163-136-000	20211707028	Connecting plate	4
4	P163-185-000	20611707R019	Glass limited plastic	2
5	P163-183-000	20211707R007	Glass pressing plate	4

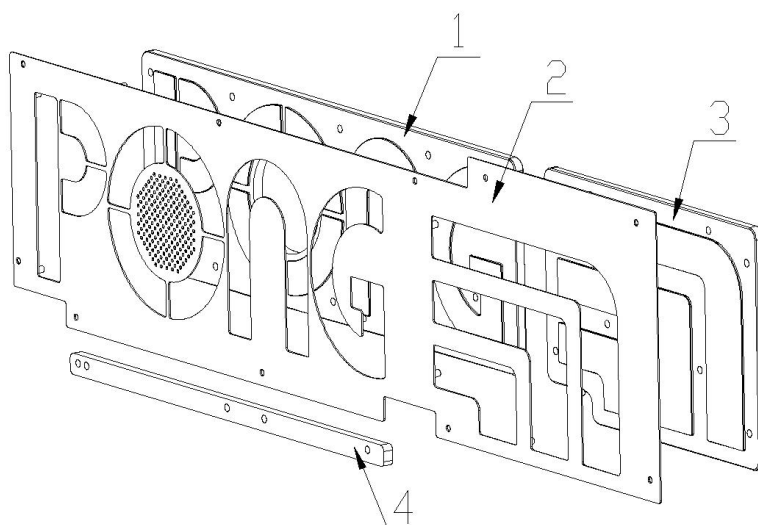


No.	Part No.	Code No.	Name	Qty
1	P163-516-000	20311707R027	Frame top board	1
2	P163-517-000	20311707R028	Frame bottom board	1

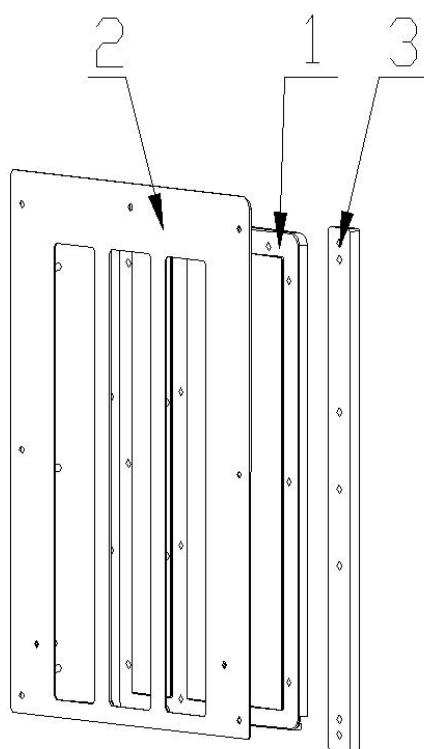


No.	Part No.	Code No.	Name	Qty
1	P163-212-000	20211707R045	Surrounding light plate C	1
2	P163-211-001	20211707R044A	Surrounding light plate B	1
3	P163-210-001	20211707R043A	Surrounding light plate A	1
4	P163-213-001	20211707R046A	Surrounding light plate D	1

9.12 Side Light Assembly

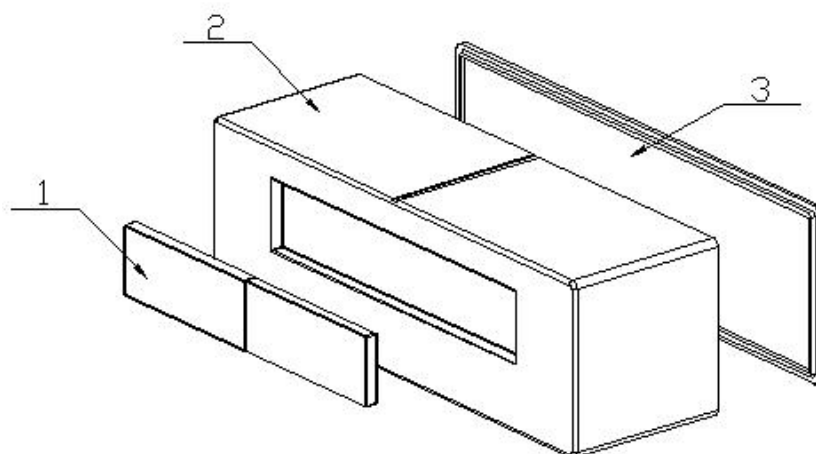


No.	Part No.	Code No.	Name	Qty
1	P163-708-000	20511707R001	Middle light plastic	1x4
2	P163-214-000	20211707R047	Upper light plate	1x4
3	P163-709-000	20511707R002	Right light plastic	1x4
4	P163-215-000	20611707R006	Lower light plastic	1x4



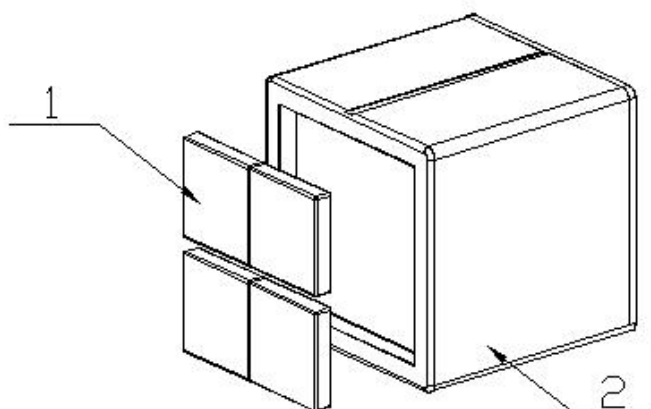
No.	Part No.	Code No.	Name	Qty
1	P163-710-000	20511707R003	Lower plastic	1x4
2	P163-216-000	20211707R048	Lower light plate	1x4
3	P163-217-000	20611707R007	L light plastic	1x4

9.13 Paddle Assembly



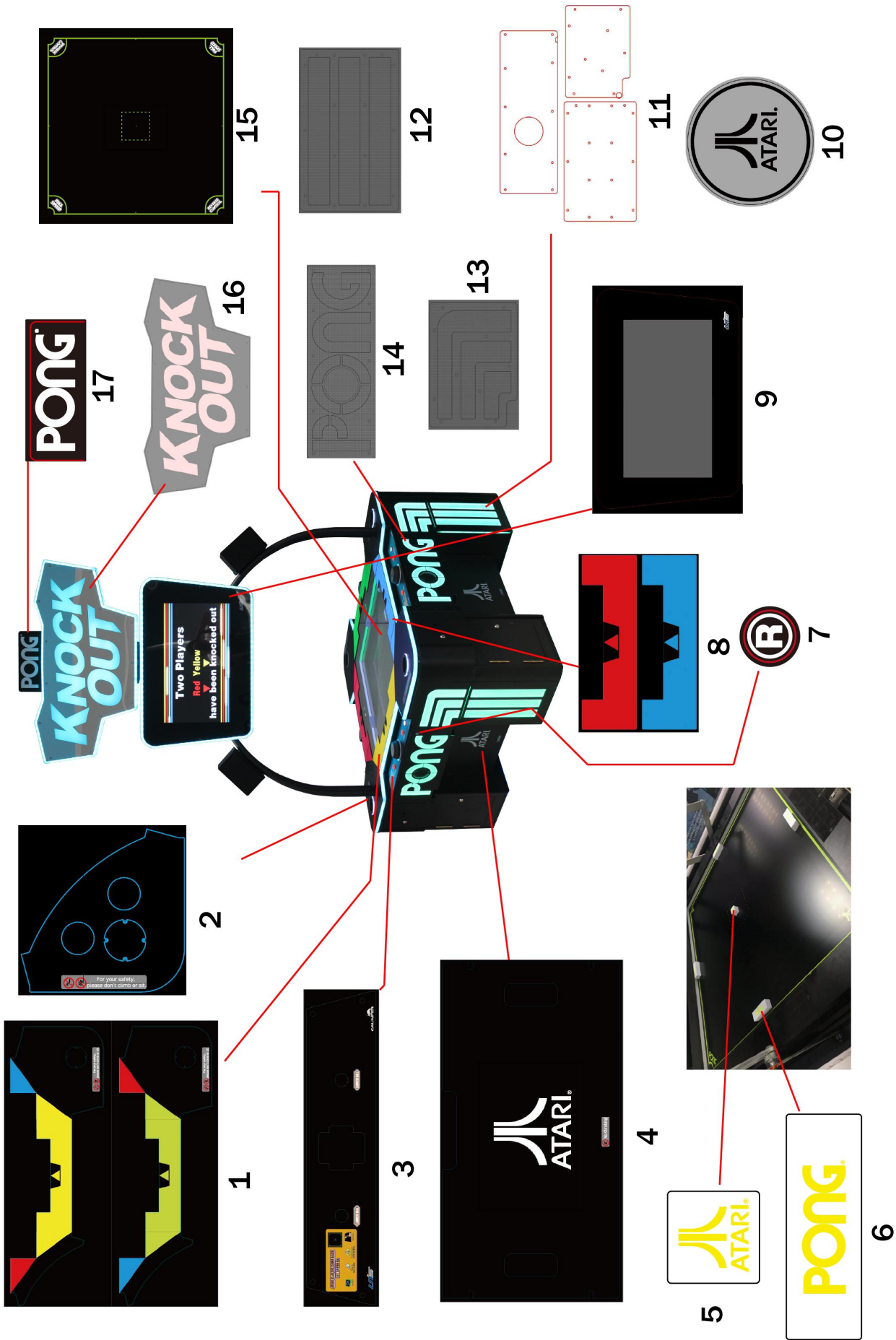
No.	Part No.	Code No.	Name	Qty
1	P163-469-000	23502000041	Magnet	2x2
2	P163-278-000	20211707R002	Paddle shell	1x2
3	P163-103-000	20611707020A	Wool felt pad	1x2

9.14 Ball Assembly



No.	Part No.	Code No.	Name	Qty
1	P163-470-000	23502000048	Magnet	4
	P163-480-000	40203020002	Teflon tape	0.02
2	P163-277-000	20211707R001	Ball shell	1

9.15 Decals

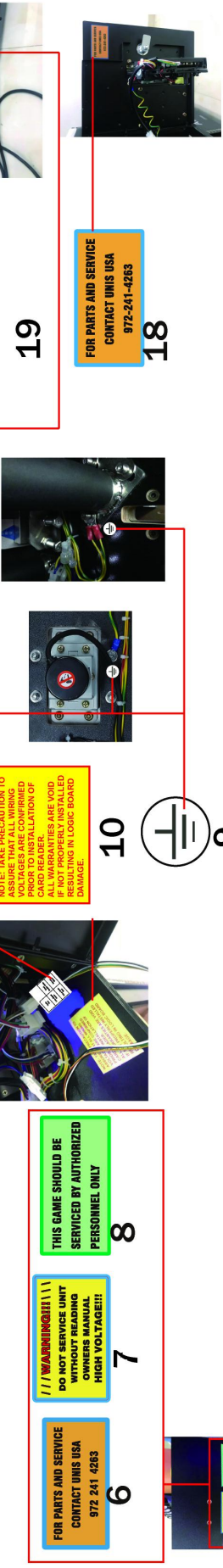
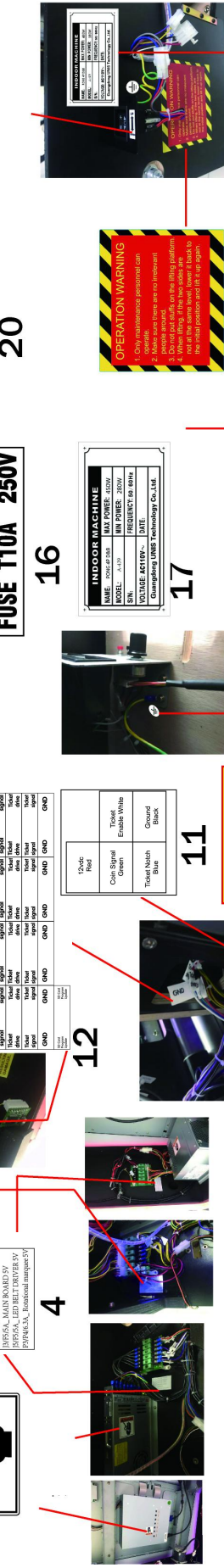
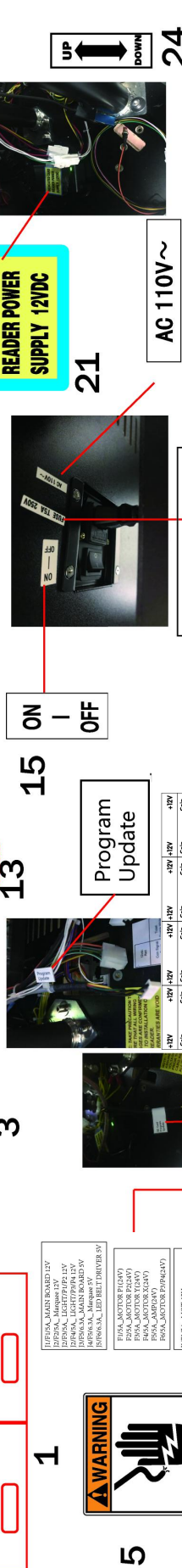
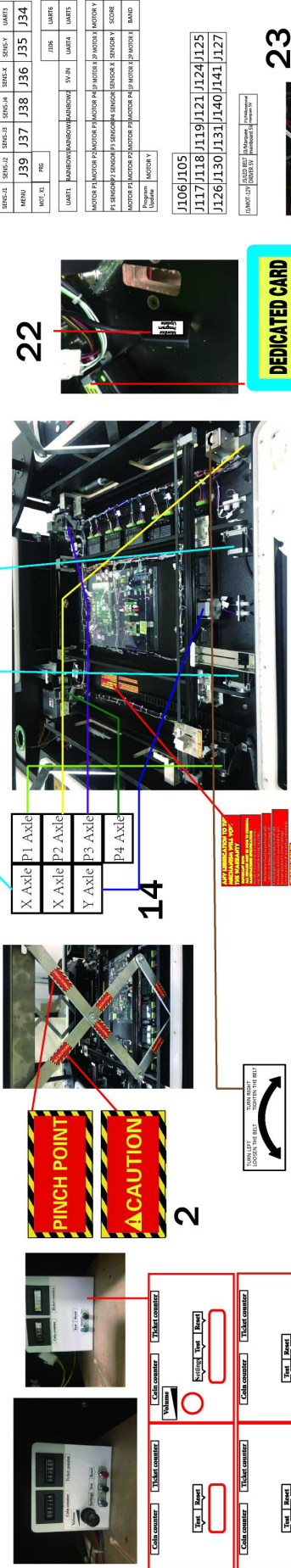


No.	Part No.	Code No.	Name	Qty
1	P163-712-000	20511707R006A	Cover decal A	1
2	P163-716-000	20511707R010	Corner plate decal	2
3	P163-714-000	20511707R008A	Control panel decal	4
4	P163-722-000	20511707R017	Base case connective board decal	4
5	P163-726-000	20511707R022	Ball decal	2
6	P163-727-000	20511707R023	Paddle decal	4
7	P163-702-000	20511707K011	Brand R label	7
8	P163-713-000	20511707R007	Cover decal B	1
9	P163-730-000	20511707R026	Monitor plastic	2
10	P163-705-000	20511707002	ATARI Logo	4
11	P163-715-000	20511707R009	Base plate decal	4
12	P163-710-000	20511707R003	Lower light plastic	4
13	P163-709-000	20511707R002	Right light plastic	4
14	P163-708-000	20511707R001	PONG light plastic	4
15	P163-711-001	20511707R004A	Playfield glass	1
16	P163-731-000	20511707R027	Rotational marquee plastic	1
17	P163-745-000	20511707R032	PONG foam core sign	1

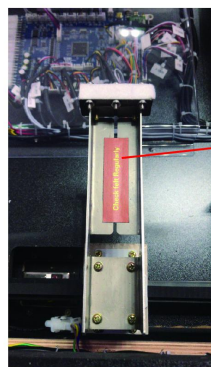
MOTOR P1	MOTOR P2	MOTOR X	MOTOR Y	AMP	MOTOR P3	MOTOR P4
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED

MOTOR P1	MOTOR P2	MOTOR X	MOTOR Y	AMP	MOTOR P3	MOTOR P4
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED
ARMED	ARMED	ARMED	ARMED	ARMED	ARMED	ARMED

Monitor
Program
Update

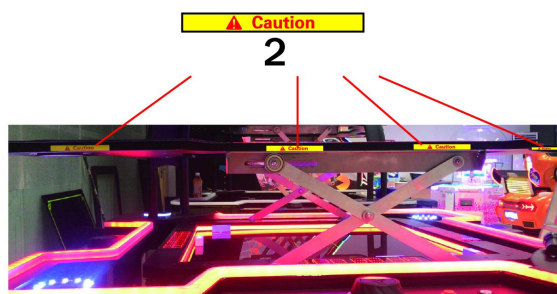


No.	Part No.	Code No.	Name	Qty
1	P163-720-000	20511707R015	Counter label	1
2	P163-723-000	20511707R018	Caution label	6
3	P163-729-000	20511707R025	Belt Direction label	6
4	P163-718-000	20511707R013	Fuse label	1
5	P163-735-000	256000000036	Warning label(S)	6
6	P163-741-000	256000000095A	Service label(L)	1
7	P163-737-000	256000000067A	Service notice label	1
8	P163-736-000	256000000042A	Service label 1	1
9	P163-740-000	256000000091	GND label	11
10	P163-704-000	20511707K020	AAMA warning label	4
11	P163-725-000	20511707R021	AAMA label	4
12	P163-744-001	20511707R031A	Wiring label	1
13	P163-706-000	20511707R038	No lubrication label	1
14	P163-728-000	20511707R024	Axle decal	1
15	P163-734-000	256000000017	Power switch label	1
16	P163-739-000	256000000077	Fuse label	1
17	P163-724-000	20511707R019	110V nameplate	1
18	P163-742-000	256000000096A	Service label(S)	4
19	P163-721-000	20511707R016	Warning decal	1
20	P163-738-000	256000000071	110V label	1
21	P163-707-000	20511605A040	Adapter label	2
22	P163-717-000	20511707R011	Recovery stick decal	1
23	P163-719-000	20511707R014	Wiring decal	1
24	P163-701-000	20511707H009	Up-down button label	1



Check felt Regularly

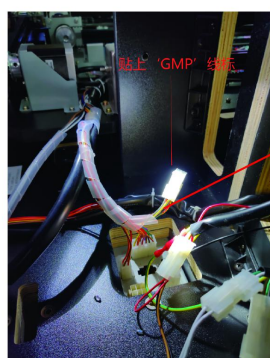
1



2

J145/5V	J6/5V
---------	-------

3

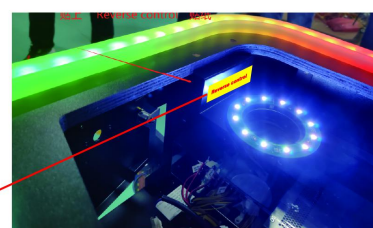


GMP	GMP
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4

Reverse control

5



Suitable for Indoor Use Only	
NAME: PONG 4P D&B	MAX POWER: 450W
MODEL: A-439	MIN POWER: 280W
VOLTAGE: AC110V-120V~	FREQUENCY: 50/60Hz
S/N:	DATE:
Guangdong UNIS Technology Co.,Ltd.	

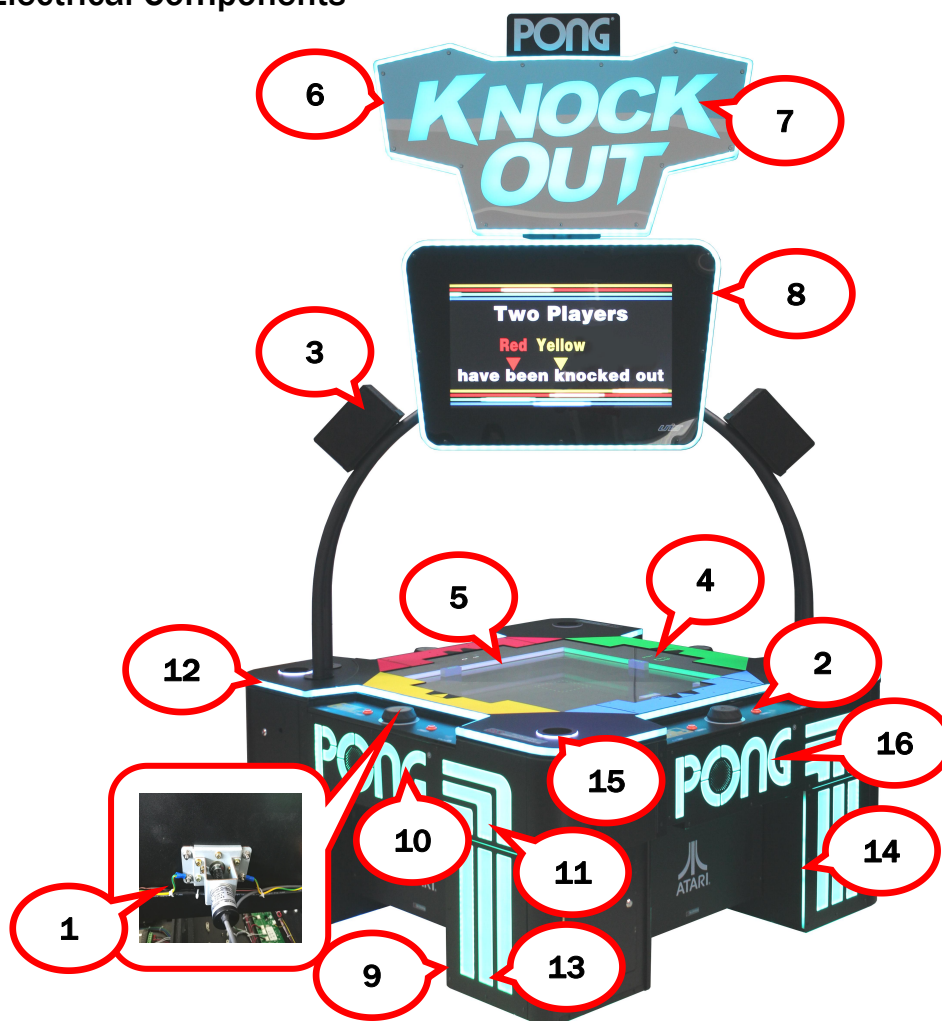
6

Marquee Video
Recovery

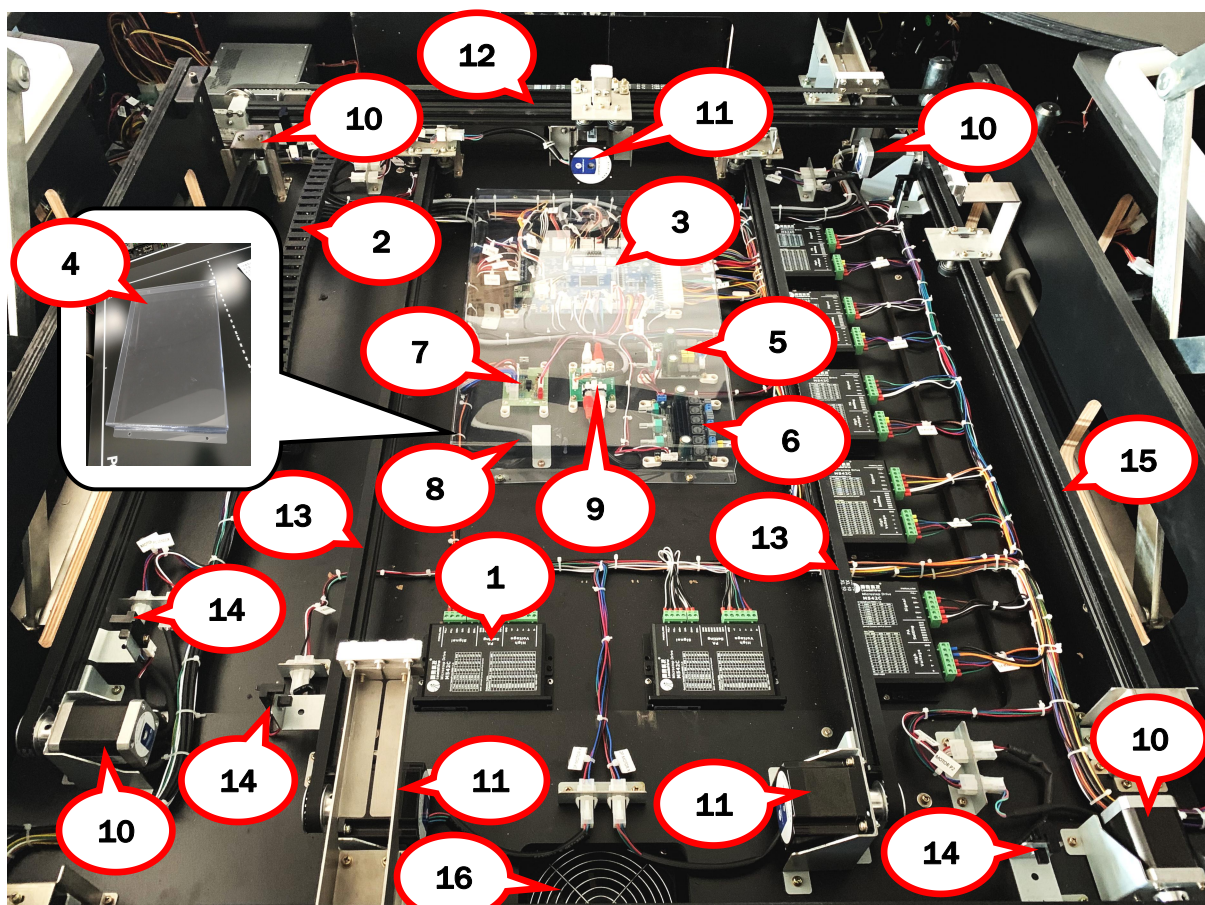
7

No.	Part No.	Code No.	Name	Qty
1	P163-748-000	20511707R035	Check felt regular label	4
2	P163-749-000	20511707R036	Caution label	14
3	P163-750-000	20511707R037	New wiring label	1
4	P163-746-001	20511707R033A	GMP label	4
5	P163-747-000	20511707R034	Reverse control label	2
6	P163-751-000	20511707R039	110V nameplate(TUV)	1
7	P163-752-000	20511707R040	Recovery stick decal	1

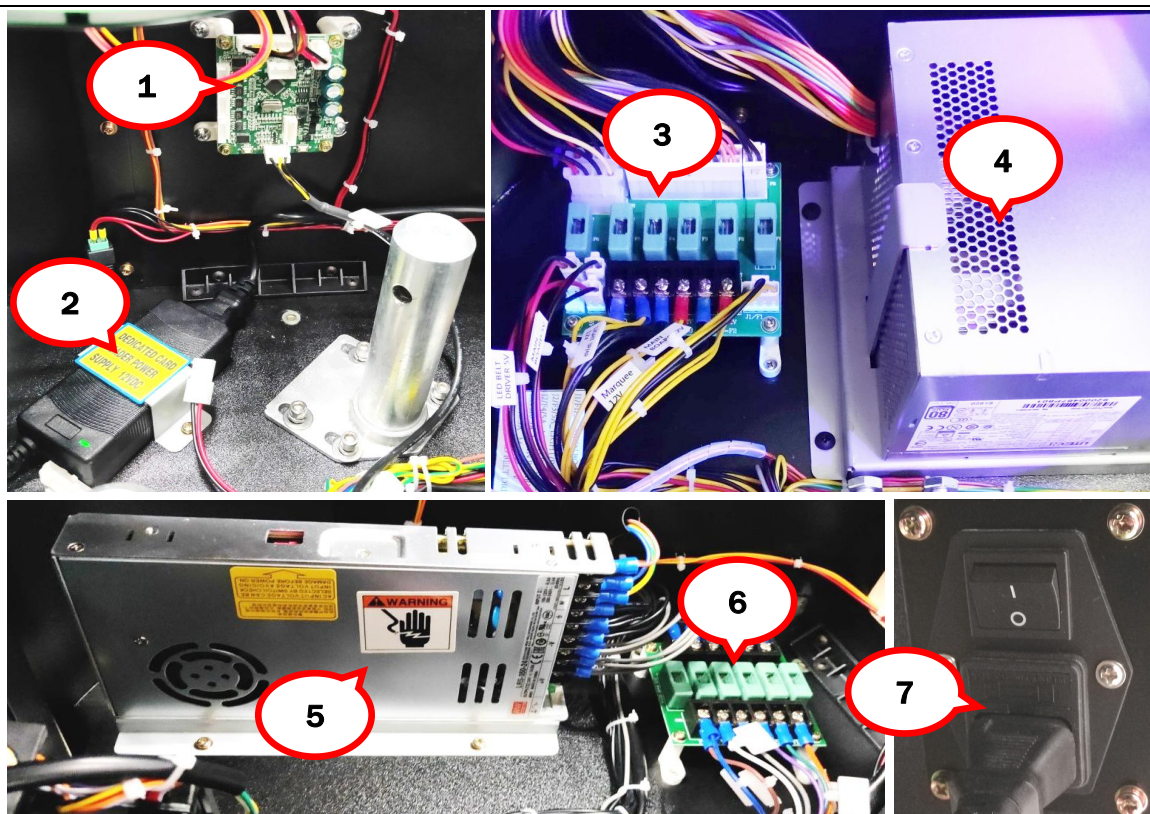
9.9 Electrical Components



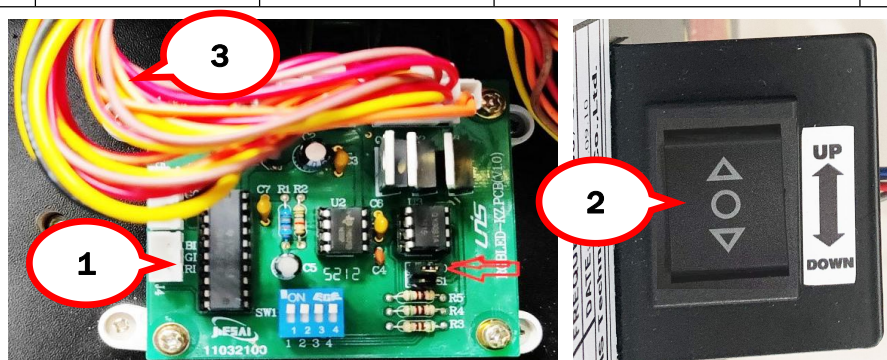
No.	Part No.	Code No.	Name	Qty
1	P163-429-000	21504000002	Encoder	4
2	P163-403-000	22604000006	Micro switch	8
	P163-404-000	22401170004	Orange button	8
3	P163-439-000	22806000032	Marquee speaker	2
4	P163-445-000	29711707017	Display	4
5	P163-438-000	22201010003	Light slot	4
	P163-440-000	22002020003	BSK6812 light strip	1
6	P163-430-000	22002020002	BSK9822-32 light strip	122.0inx2(3.1mx2)
7	P163-430-000	22002020002	BSK9822-32 light strip	118.1inx2(3mx2)
8	P163-430-000	22002020002	BSK9822-32 light strip	117.3inx2(2.98mx2)
9	P163-411-000	22002018002	RX3535RGB light strip	59.1inX4(1.5mx4)
10	P163-411-000	22002018002	RX3535RGB light strip	79.5inX4(2.02mx4)
11	P163-411-000	22002018002	RX3535RGB light strip	40.9inX4(1.04mx4)
12	P163-430-000	22002020002	BSK9822-32 light strip	268.5in(6.82m)
13	P163-411-000	22002018002	RX3535RGB light strip	51.2inX4(1.3mx4)
14	P163-411-000	22002018002	RX3535RGB light strip	16.9inX4(0.43mx4)
15	P163-435-000	29711707015	Cup holder LED ring	4
16	P163-425-000	22801000085	Speaker	4



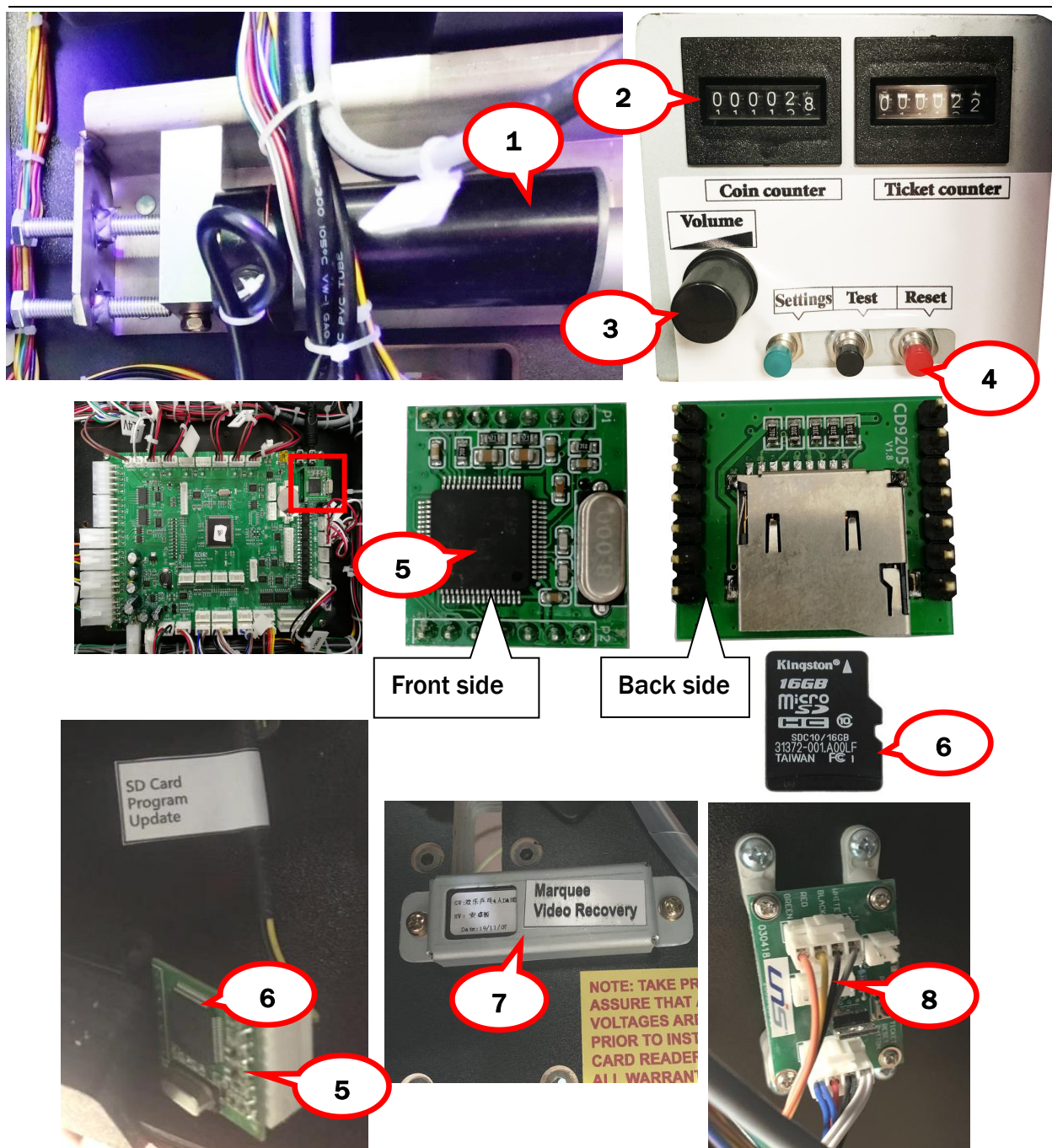
No.	Part No.	Code No.	Name	Qty
1	P163-477-000	23429000009	Motor driver	7
2	P163-431-000	26503020027	Chain	1
3	P163-420-000	29711707009B	Mainboard	1
4	P163-181-000	20611707R018	Dust-free cover	1
5	P163-428-000	22803010011	Amplifier 2.0	1
6	P163-424-000	22803010010	Amplifier 2.1	1
7	P163-452-000	29711707014	Driver	1
8	P163-443-000	22807000003	Audio isolator	1
9	P163-415-000	21702000022	Audio board	1
	P163-416-000	23305000022	Audio cable	2
10	P163-462-000	23406000032	42MM Stepping motor	4
11	P163-463-000	23406000033	57MM Stepping motor	3
12	P163-482-000	26504010002	Y axle Toothed belt (XL type)	75.9inx1 (1928mmx1)
13	P163-483-000	26504010002	X axle Toothed belt (XL type)	74.92inx2 (1903mmx2)
14	P163-408-000	21503000055	Sensor SW	6
15	P163-484-000	26504010002	Paddle axle Toothed belt (XL type)	65.63inx4 (1667mmx4)
16	P163-406-000	22702010025	Fan	1
	P163-410-000	22702000010	Fan net	2



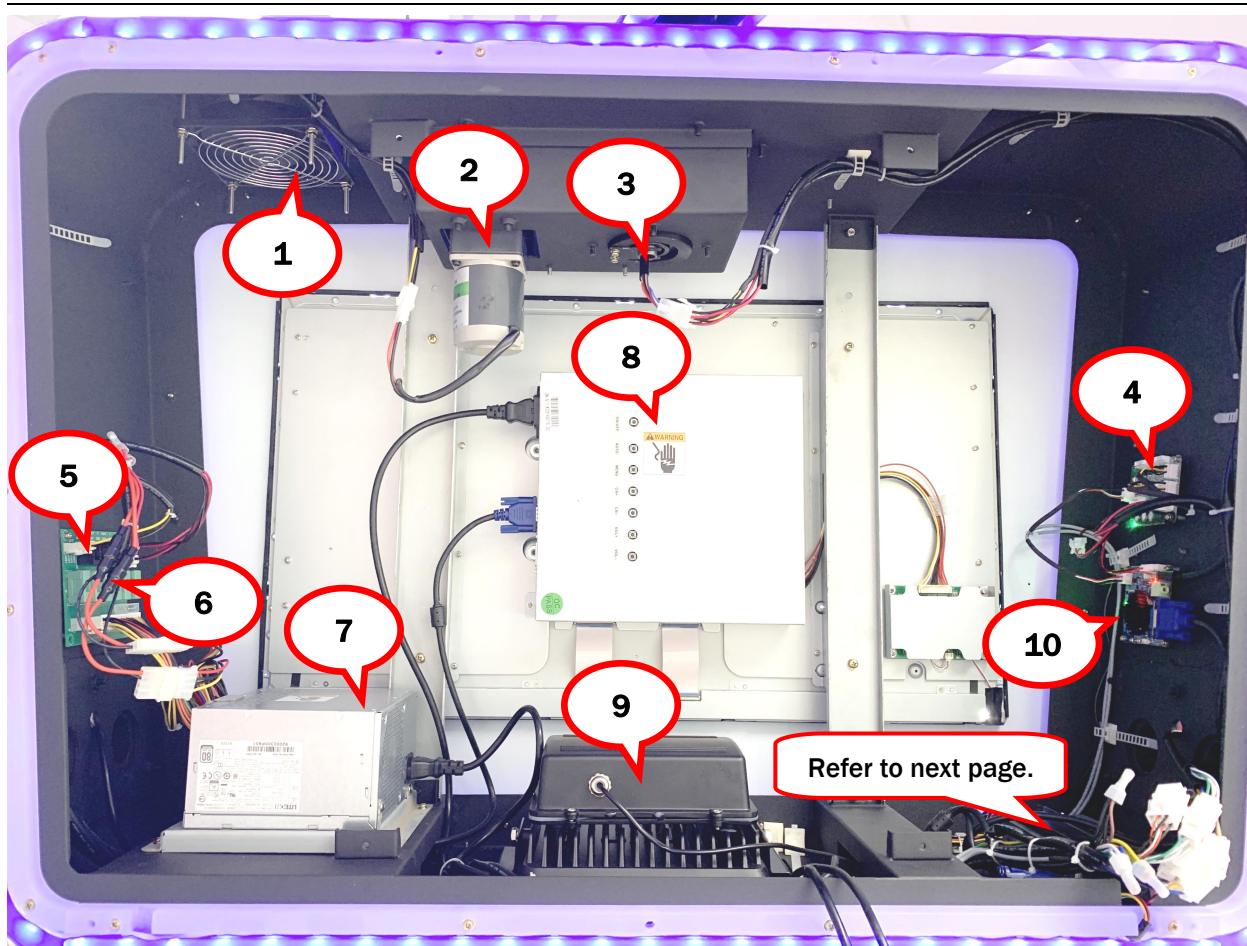
No.	Part No.	Code No.	Name	Qty
1	P163-436-000	29711707018	Light belt driver	1
2	P163-434-000	21603000027	AC adapter	2
	P163-412-000	23301040022	Cable joint	2
3	P163-427-000	21714000148E	Fuse board(green holder)	1
4	P163-418-000	21602000106	Power supply	1
5	P163-405-000	21602000105	Power supply	1
6	P163-426-000	21714000148D	Fuse board(green holder)	1
7	P163-407-000	23201000005	Filter	1
	P163-444-000	21901000013	Fuse	1



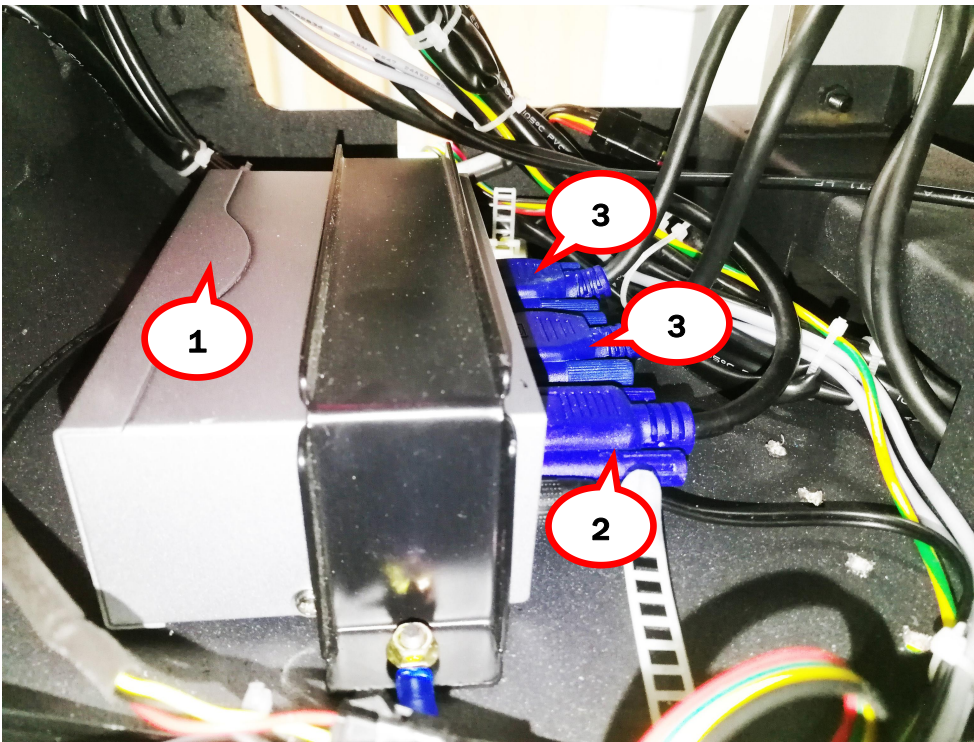
No.	Part No.	Code No.	Name	Qty
1	P163-419-000	29711006008	PCB	4
2	P163-446-000	22601000044	Lifting switch	1
3	P163-441-000	23309000280R	Cable set	1



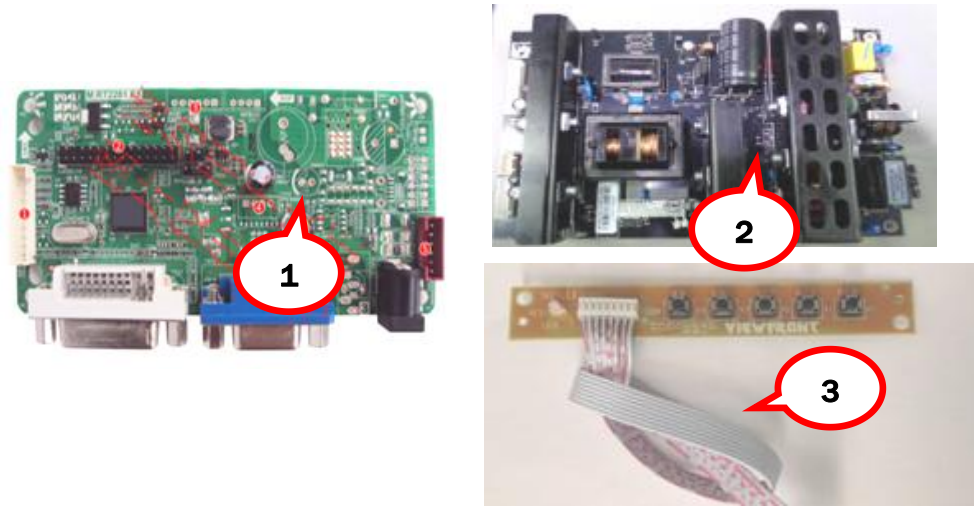
No.	Part No.	Code No.	Name	Qty
1	P163-461-000	23404010006	24V Table lifting motor	1
2	P163-409-000	23000000005	Counter	8
3	P163-414-000	29791400001	POT connect plate	1
	P163-442-000	22403000001	POT knob	1
4	P163-413-000	22402030002	Button(green)	1
	P163-417-000	22402050001	Button(black)	4
	P163-423-000	22402010002	Button(red)	4
5	P163-422-000	51306000020	Quadraphonic mixing module	2
6	P163-421-000	21107010038	TF card	2
7	P163-451-000	41300000007	Recovery stick	1
8	P163-490-000	29790700002	Ticket convert board	4



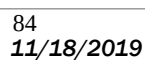
No.	Part No.	Code No.	Name	Qty
1	P163-406-000	22702010025	Fan	1
	P163-410-000	22702000010	Fan net	1
2	P163-481-000	23404000107	Motor	1
3	P163-401-000	21608000010	Conducting ring	1
4	P163-436-000	29711707018	Light belt driver	1
5	P163-427-000	21714000148E	Fuse board(green holder)	1
6	P163-453-000	21902000024	Fuse holder	2
	P163-432-000	21901000015	Fuse	2
7	P163-418-000	21602000106	Power supply	1
8	P163-450-000	21201032020	32" monitor	2
9	P163-437-000	22003230002	Blacklight	1
10	P163-448-000	21107210028	Marquee mainboard	1
	P163-433-000	23304010038	Extended cable	1

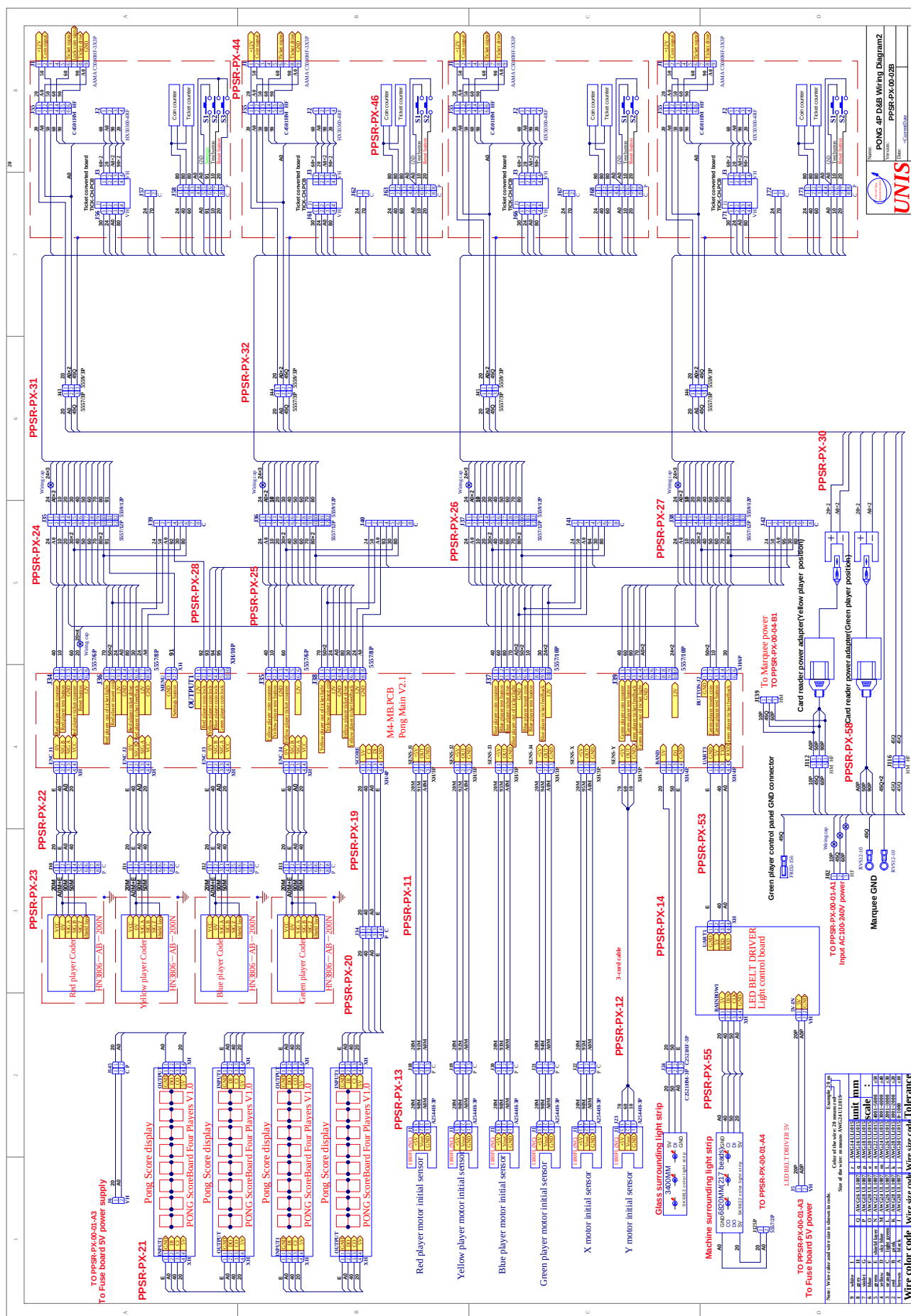


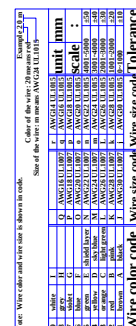
No.	Part No.	Code No.	Name	Qty
1	P163-449-000	21107080011	VGA splitter	1
2	P163-447-000	23307000023	15PVGA video cable	1
3	P163-402-000	23307000001	15PVGA video cable	2

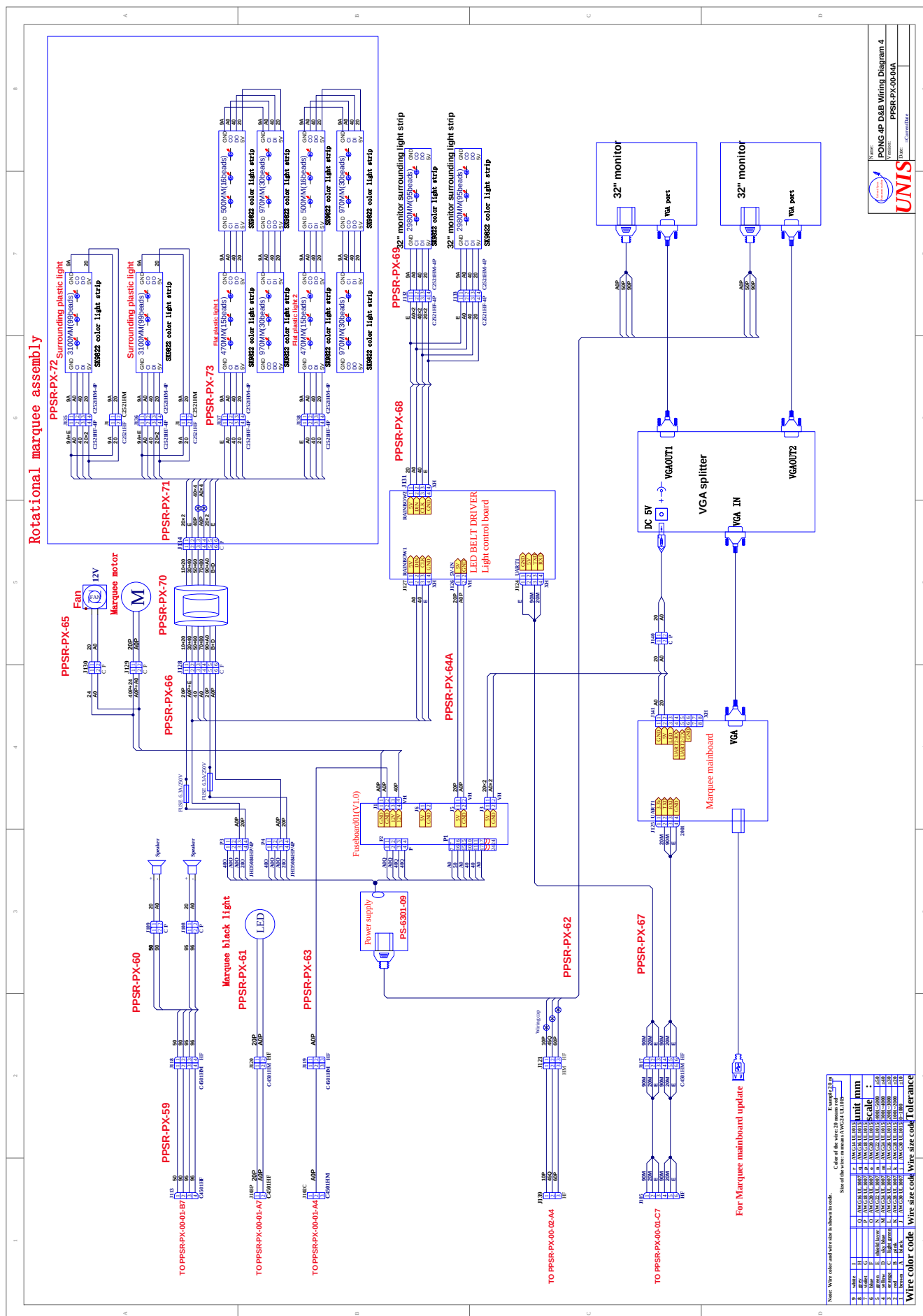


No.	Part No.	Code No.	Name	Qty
1	P163-487-000	20211707Y1420	32" Monitor mainboard	1
2	P163-488-000	20211707Y1421	32" Monitor power module	1
3	P163-489-000	20211707Y1422	32" Monitor 5-key board	1









Appendix 1: LED Blacklight Instruction

Product Basic Parameters

1. Type of light source: UV-LED
2. Voltage range: DC12V-DC27V
3. Lamp bead specification: 45MIL large chip
4. Power: 30W

5. Notice:

- 1) This product belongs to the long wave (UVA), which is within the safe range. Please feel free to use it.
- 2) Do not disassemble and refit this product without permission, otherwise it will bring unsafe factors, and the manufacturer cannot provide normal after-sales guarantee.
- 3) Ensure that the environment is dry (avoid wet places as far as possible) and the ambient temperature is not higher than 50 °C, so as not to affect the lifetime of lamps.

Appendix 2: Video & Scroll Letters Replacement Instruction

Video Replacement:

1. Utilize a blank memory stick (not recovery stick); name the new video **1.mp4**; put the video in the memory stick.

Note: The video resolution should be 1280x720.

2. Locate Yellow player(P2) Upper door and open it; locate Monitor Program Update cable. Insert the memory stick to the cable.

3. Power off the machine. Power on later.

Note: Please do not pull out the memory stick.

Scroll Letters Replacement:

- 1.Utilize a blank memory stick (not recovery stick); type letters in the text file and name the file **2.txt**; put the file in the memory stick.

- 2.Locate Yellow player(P2) Upper door and open it; locate Monitor Program Update cable. Insert the memory stick to the cable.

- 3.Power off the machine. Power on later.

Note: Please do not pull out the memory stick.

Note: 1.mp4 and 2.txt can be put in the same memory stick.

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