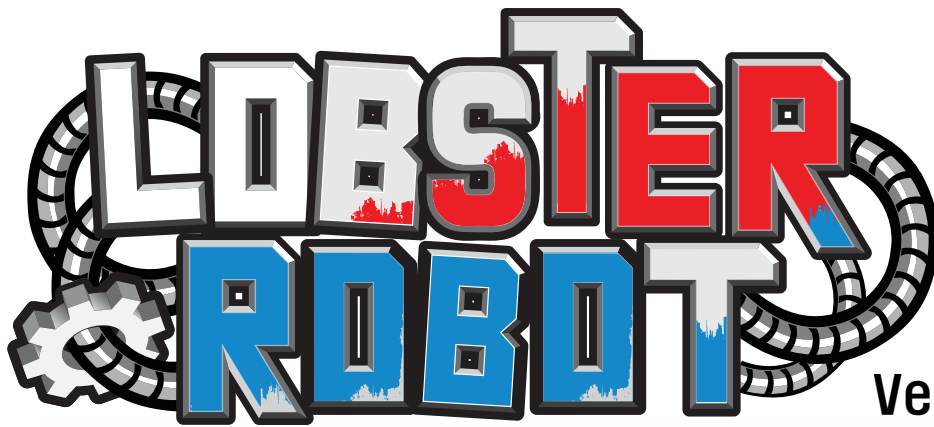# SERVICE MANUAL

**LOBSTER ROBOT**

**Ver 1.0**



ISSUEDATE:Apr.9, 2014

**STOP**

IMPORTANT

▶ Please read the manual carefully and keep it in mind before using this machine.

▶ Put this manual within touch of your reference in anytime.

# PRECAUTIONS FOR USE

The following safety precautions are given throughout this manual. They must be strictly followed to protect those who install, use or maintain this product as well as to protect players, visitors and property.

For safty reasons.
- The following suggestions should be adhered to:

⚠ **WARNING**
Disregarding could result in serious injury.

⚠ **CAUTION**
Disregarding could result in injury or product damage.

**• The following graphic suggestions describe the types of precautions to be followed.**

⚠
Indicates a care should be taken.

🚫
Forbidden.

🔌
Indicates a matter which must be performed.

**• Precautions to be followed:**

**Certain procedures require a qualified in-shop maintenance person or industry specialist. For such instructions, a qualified person must take care of the jobs.**
- Otherwise an electric shock, machine trouble, or a serious accident may result.
- Replacing the machine parts, inspecting and maintaining the machines, and troubleshooting must be assigned only to a qualified in-shop maintenance person or industry specialist. This booklet gives instructions that hazardous jobs in particular must be handled by an industry specialist. Qualified in-shop maintenance person and industry specialist are defined as follows.

**Qualified in-shop maintenance person**
- A service staff shall have experience in operations of game machines. The staff shall be responsible for assembly, installation, inspection and maintenance of the machine.

**Industry specialist**
- An industry specialist must be engaged in designing, manufacturing, inspecting and servicing amusement machines. He or she must have an education in electrical, electronic and mechanical engineering, and routinely maintain and repair amusement machines.

# PRECAUTIONS FOR USE

## ⚠ WARNING

**Be sure to consult an industry specialist when setting up, moving or transporting this product.**
- This product should not be set up, moved or transported by any one other than an industry specialist.
- When installing this product, set the 4 leg levelers evenly on the floor and make sure that the product is installed stably in a horizontal position. Unstable installation may result in injury or accident.
- When installing this product, do not apply undue force on movable parts. Otherwise, injury and accident may result, or the product may be damaged.

**The machine for indoor usage only does not install outside.**

**Do not set the game machine up near emergency exits.**

**Protect the game machine from:**
- Rain or moisture.
- Direct sunlight.
- Direct heat from air-conditioning and heating equipment, etc..
- Hazardous flammable substances.
- Otherwise an accident or malfunction may result.

**Do not place containers holding chemicals or water on or near the game machine.**

**Do not place objects near the ventilating holes.**

**Do not bend the power cord by force or place heavy objects on it.**

**Never plug or unplug the power cord with wet hands.**

**Never unplug the game machine by pulling the power cord.**

## ⚠ CAUTION

**Be sure to use indoor wiring within the specified voltage requirements. For extension cord, use the specified rating or more.**

**Be sure to use the attached power cord.**

**Never plug more than one cord at a time into the electrical receptacle.**

**Do not lay the power cord where people walk through.**

**Be sure to ground this product.**

**Do not exert excessive force when moving the machine.**

**For proper ventilation, keep the game machine 100mm(4″) away from the walls.**

**Do not alter the system related dipswitch settings.**

# PRECAUTIONS FOR USE

## ⚠ WARNING

**If there is any abnormality such as smoke, bad smell or abnormal noise being emitted from the machine, immediately turn OFF the main power switch and unplug the power cord from the receptacle to stop operating it.**

- Using the machine in abnormal conditions could result in fire or accidents.

---
In case of abnormality

1. Turn OFF the main power switch.
2. Unplug the power cord from the receptacle.
3. Contact your nearest dealer.

---

**Do not leave the power cord plugged in improperly or covered with dust.**

- Doing so could resu t the power cord periodically.

## ⚠ CAUTION

**Do not use this product anywhere other than industrial areas.**

- Using in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc..

- Do not give shock the surface of glass products.

- Please do not play this game if
  - When you do drinking;
  - When your physical condition is not normal;
  - When you are in pregnancy;
  - When you have on a pulse controller;
  - When you have recently experienced a cramp or fainting away while watching TV.
- Avoid excessive force/shock while playing/moving the game.
- While do games, pay attention to surrounding.

**Do not plug or unplug the power cord with wet hands.**

**In handling the power cord, follow the instructions below.**

| | |
|---|---|
| • Do not damage the power cord. | • Do not modify the power cord. |
| • Do not bend the power cord excessively. | • Do not twist the power cord. |
| • Do not heat the power cord. | • Do not pull the power cord. |
| • Do not bind the power cord. | • Do not stand on the power cord. |
| • Do not sandwich the power cord. | • Do not drive a nail into the power cord. |

**If the power cord or power plug becomes damaged, stop using the machine immediately and ask your nearest dealer to replace the parts.**

\* Electromagnetic wave may cause unexpected noise from speaker.

# PRECAUTIONS FOR USE

## ⚠ WARNING

**Be sure to turn OFF the main power switch and unplug the power cord from the receptacle before inspecting or cleaning the machine.**

**When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.**

**Opening inside the machine shall be done by machine specialist only as high electric current is being sent inside. For game machine with monitor, a care should be taken while opening its back door. If not, a damage to the inside parts or the monitor may occur.**

**If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power supply unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.**

**Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodeling.**

**To clean the game machine, wipe it with a soft cloth dampened in a neutral detergent.**
- Using thinner of other organic solvent or alcohol may decompose the material.
- Electrical shock or equipment failure could be caused by water entering the inside of the machine.

## ⚠ CAUTION

**Components in the game are sensitive to vibrations and impact. Care should be used when moving and transporting the game machine.**
**Be sure not to let the machine tip over.**

**Before moving the machine, be sure to turn OFF the main power switch, unplug the power cord from the receptacle and remove the power cord form the machine.**

**Before moving take the machine, off the levelers and move it on the casters.**

**Avoid excessive force while moving the machine.**

### P R E C A U T I O N S  I N  H A N D L I N G

- When setting up, inspecting, maintaining, moving or transporting this product, follow the procedures and instructions set forth in this manual and perform such work safely.

- Do not set up, handle, inspect, maintain, move or transport this product under conditions equivalent to the condition of "WARNING" or "CAUTION" specified in this manual.

- If a new owner is to have this product as a result of transfer, etc., be sure to give this manual to the new owner.

# CONTENTS

# 1. SPECIFICATION AND DIMENSION

## 1-1. DIMENSION



1583[mm]-62[inches]

1360[mm]-54[inches]

566[mm]-22[inches]

1877[mm]-74[inches]

1163[mm]-46[inches]
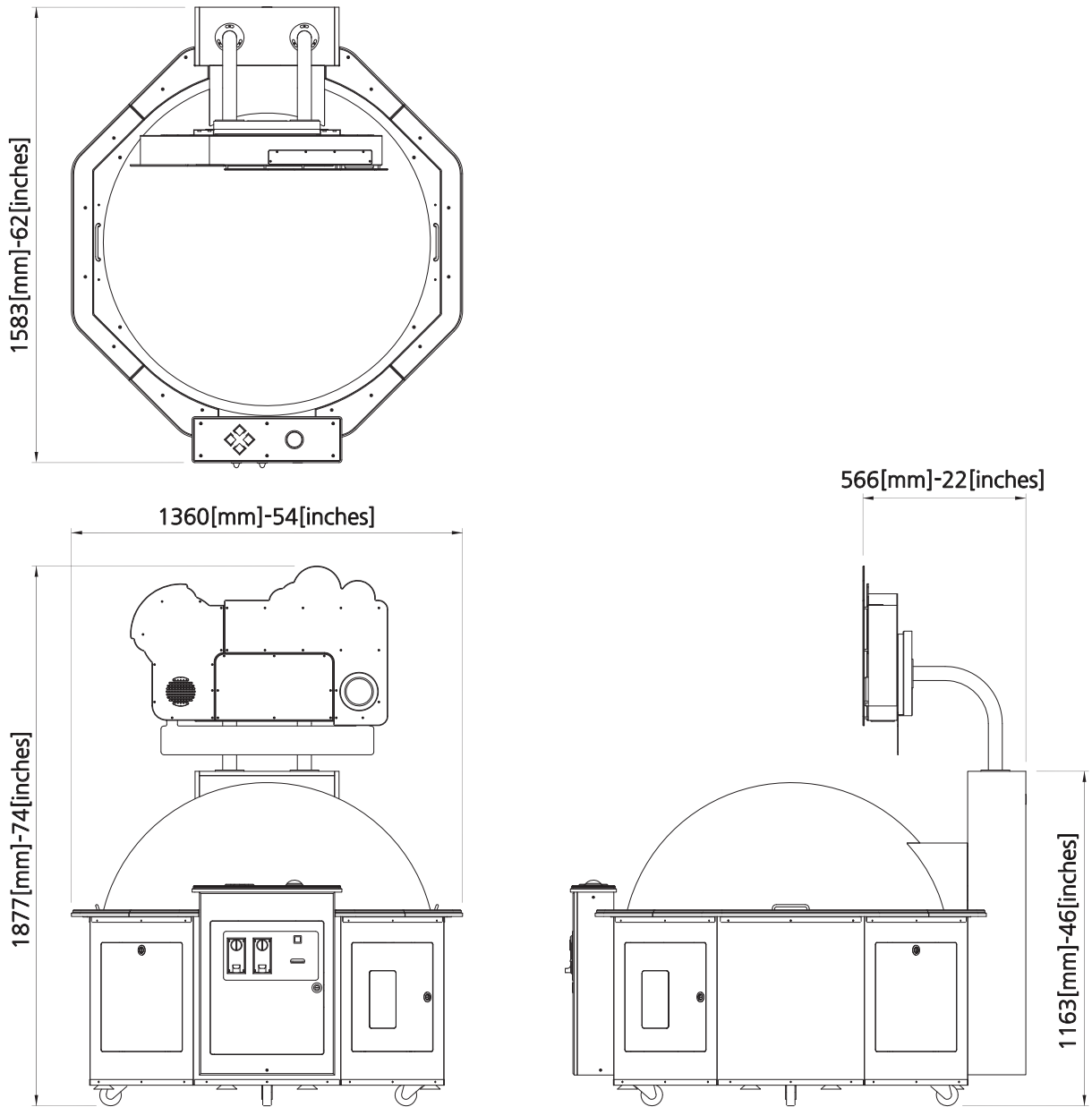
## 1-2. SPECIFICATION

| DIMENSION (W x D x H) | 1360x 1583 x 1877 (mm) |
|---|---|
| PACKING DIMENSION (W x D x H) | 1460 x 1750 x 1980(mm) |
| WEIGHT (kg) | 202 kg [ WEIGHT INCLUDING PACKAGING : 235 kg ] |
| VOLTAGE | AC 110V ( or AC 220V ) |
| FREQUENCY RANGE | 50, 60Hz |
| CONSUMPTION | 130 W |
| CERTIFICATION | - |

# 1-3. NAME OF PARTS

BILLBOARD

REAR CABINET

DOME MOLDING

MAIN CABINET

MAIN PCB

SETUP LCD

COUNTER BKT PART

ROBOT ASS'Y

FIELD PANEL

BUTTON PANEL

COIN SELECTOR PART

ELEVATOR PART

SMPS BKT PART

**3**
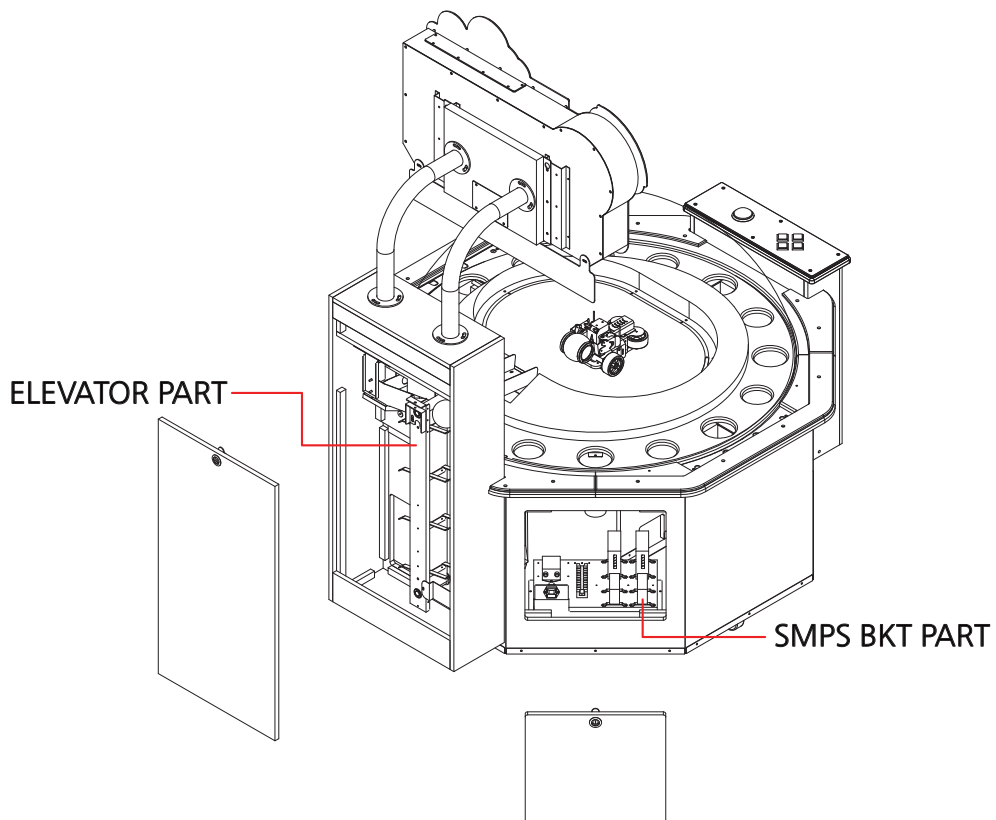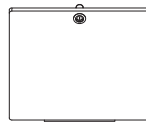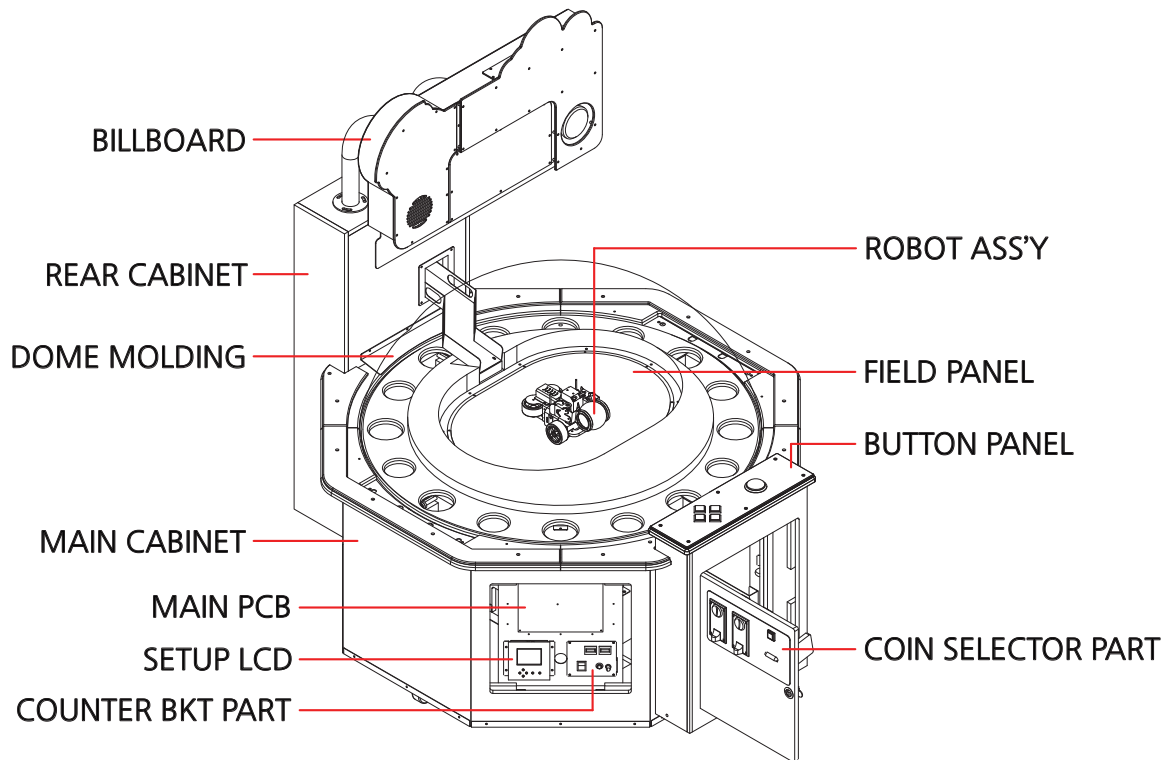
## 1-4. STICKER LOCATION



②



③



①
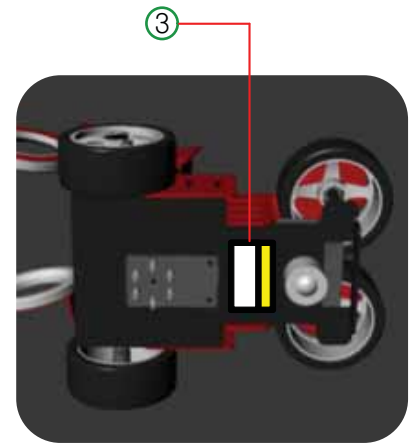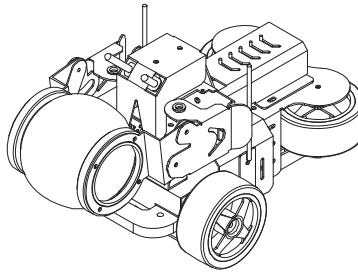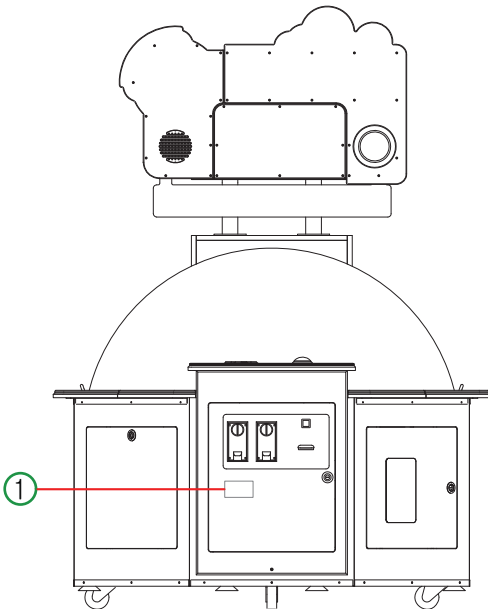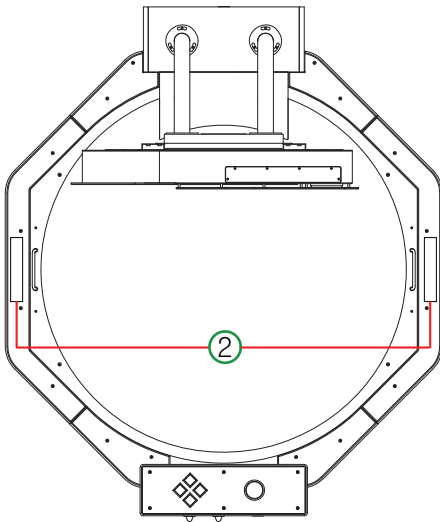


① 

| MODEL NAME | LOBSTER ROBOT |
|---|---|
| PRODUCT S/N | - |
| MAIN BOX S/N | - |
| LCD S/N | - |
| CERTIFICATE | - |

MADE IN KOREA
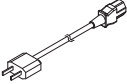
Koyang-si, Kyouggi-do,Korea  Phone:82-31-909-2100

② 

⚠ CAUTION
Watch your head and hand while opening.
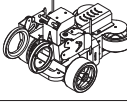Please be noted that liquid may cause electrode plate damaged.

- Please be careful that potential risk of the hand or head injury when opening a DOME, Please be noted the electrodes plates may get damaged from allowing water or any objects.

③ 

⚠ CAUTION
Turn off power during Robot is not used.

- Please turn off a Robot when not to operate.

## 1-5. COMPONENTS

| NO. | PART NAME | SPEC. | | QTY |
|-----|-----------|-------|---|-----|
| 1 | AC POWER CORD | 110V or 220V | | 1 |
| 2 | KEY | 6001 | | 2 |
| 3 | KEY | 7001 | | 2 |
| 4 | BOLT | M4x10L | | 8 |
| 5 | RENCH | 2.5mm, 4mm | | 1 |
| 6 | BALL | − | | 10 |
| 7 | ROBOT ASS'Y | − | | 2set |
| 8 | MANUAL | − | | 1 |

## [ OPTION ] POP ASS'Y

| NO. | PART NAME | SPEC. | | QTY |
|-----|-----------|-------|---|-----|
| 1 | BOLT | M6x16L | | 6 |

# 2. INSTALLATION

## 2-1. INSATALLATION

- Need to have installation place.
  Maintenance Zone & Play zone should have at least
  2000mm x 2500mm each.
  (IMPORTANT)
- Once you set up the machine with required game-play area,
  when installing this product, set the 4 leg levelers evevly on
  the floor and make sure that the product is installed stably in
  a horizontal position.
  Otherwise the set winning percentage can be twisted.



NUT

ADJUSTER

CASTER

PLAY ZONE +
MAINTENANCE ZONE

2000mm

2500mm
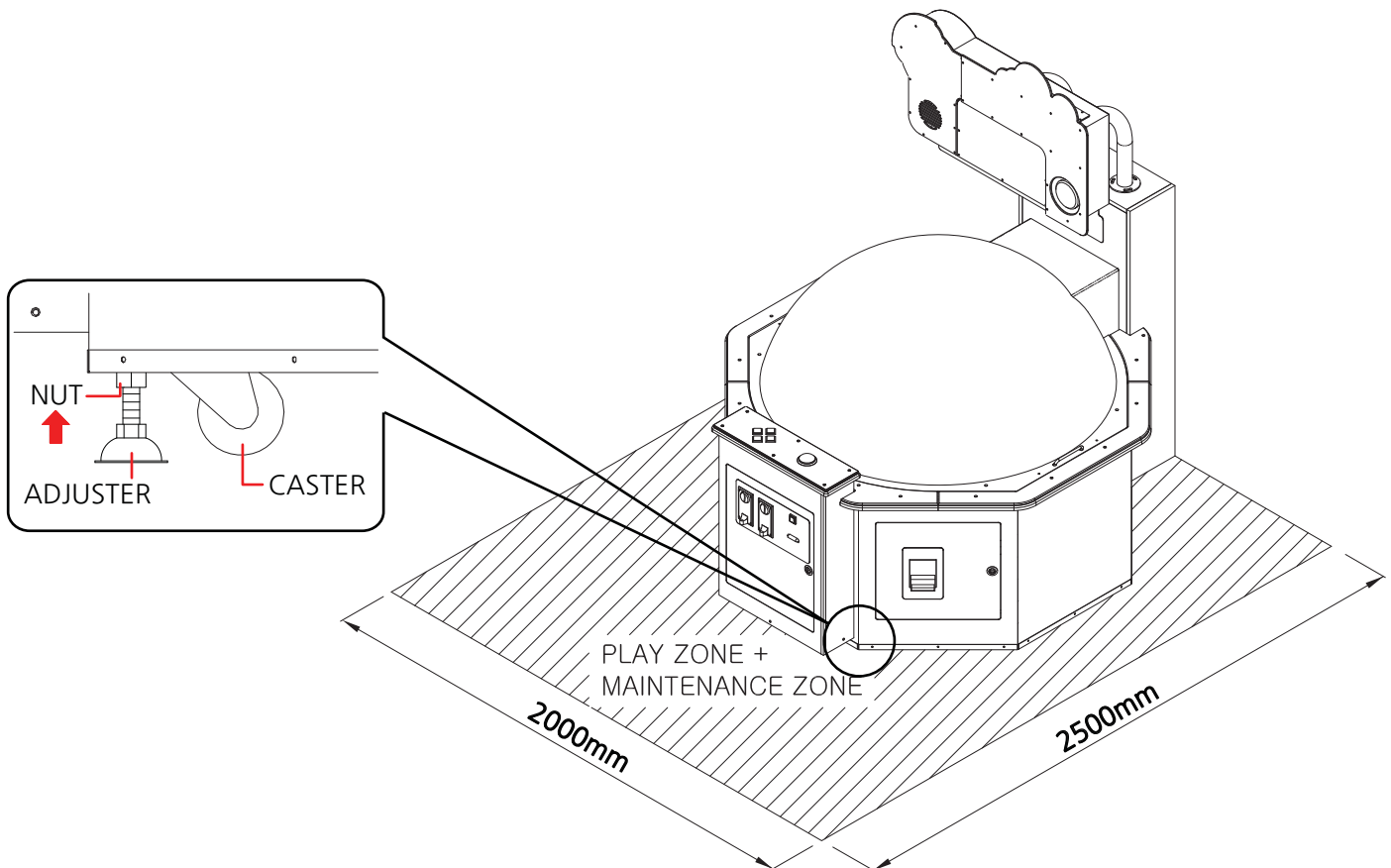
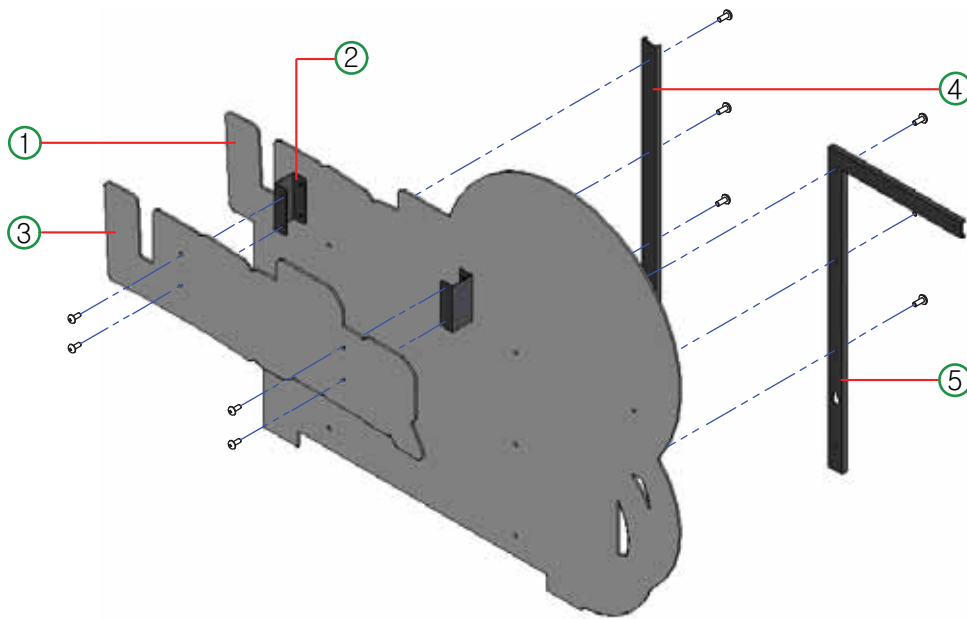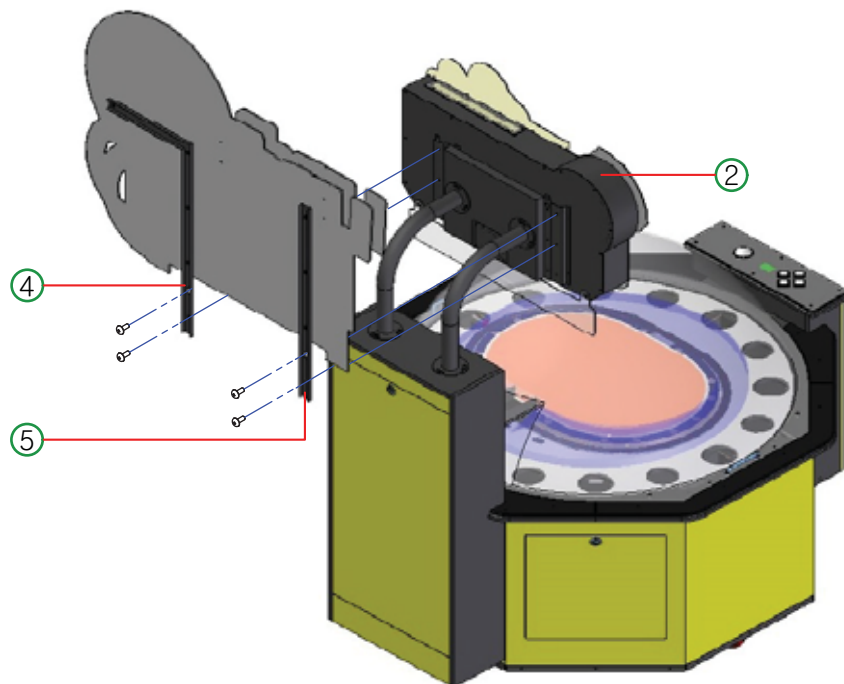## 2-2. POP INSTALLATION

1
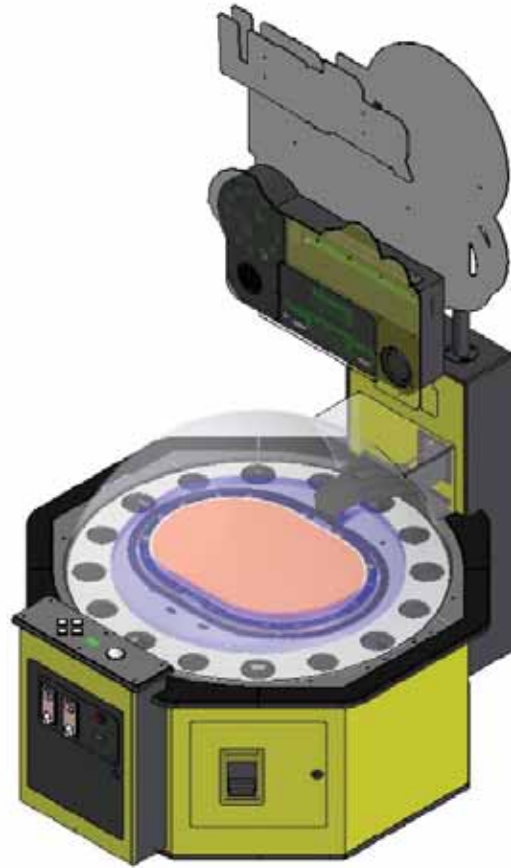


1) FIX ②BILLBOARD POP FIX BKT & ③BILLBOARD POP FRONT INTO ①BILLBOARD POP REAR FORMAX [M4 bolts, 8 places]

2) AND THEN FIX④BILLBOARD POP SUPPORT BKT-A & ⑤BILLBOARD POP SUPPORT BKT-B [M4 bolts, 6 places]

2



1) FIX ASSEBLED ④⑤BILLBOARD POP SUPPORT BKT.INTO ②BILLBOARD FIXED BKT

**7**

1) LIKE 3 ATTACH BILLBOARD POP TO THE MACHINE.

# 3. PRODUCT FEATURE AND ADVANTAGE

**3-1.** This is a mechanical ticket redemption game to control a robot mechanism carrying out the balls.

**3-2.** Robot is always being an object of children's dream.

**3-3.** FUN + REDEMTION

**3-4.** A ticket redemption game by 100% user skills.

**3-5.** Unique Game Elements.

**3-6.** Opened play field to increase visibility and accessibility.

**3-7.** Robot Specifications

- Robot mobile BLDC (Brushless) Motors apply :
  The life of motor is permanent because of no motor Brush wear issue.

- ARM Motion Servo Motor applies :
  Apply Precision ARM Motion Servo Motor with metal gears for a long life.

- Surge protection circuit applies :
  To avoid electric shock and static electricity applied to a power surge protection circuit

- 2cell Li-ion batteries apply :
  For temporary power supply issue, adapting a 2cell lithium-ion battery.

# 4. HOW TO PLAY (Basic)



1) Control the robot a given period time.

2) Get the points by putting the ball in the rotary hole.

3) If achieve a CHALLENGE SCORE, get the number of tickets of the score.

4) JP game method is the way of grasp a lamp.



Based on the moving direction of the robot



CATCH    DROP
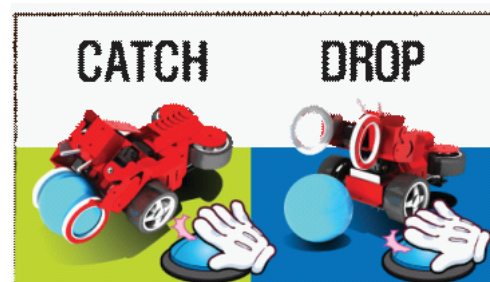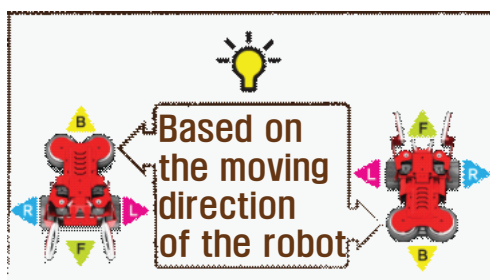
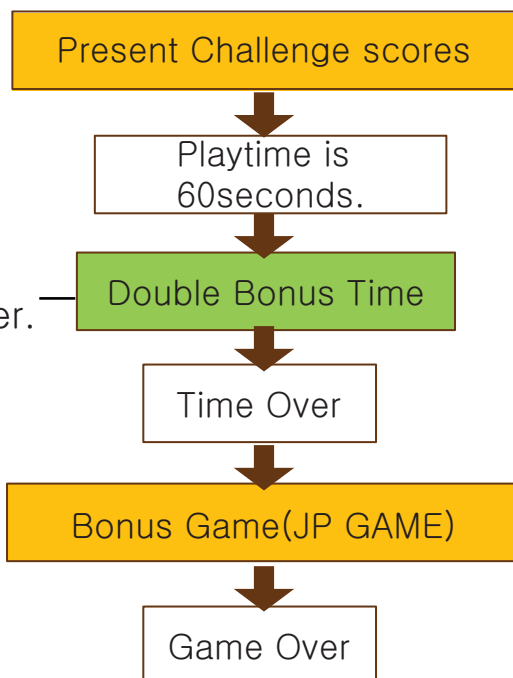# 5. DIRECTION CONTROLLER
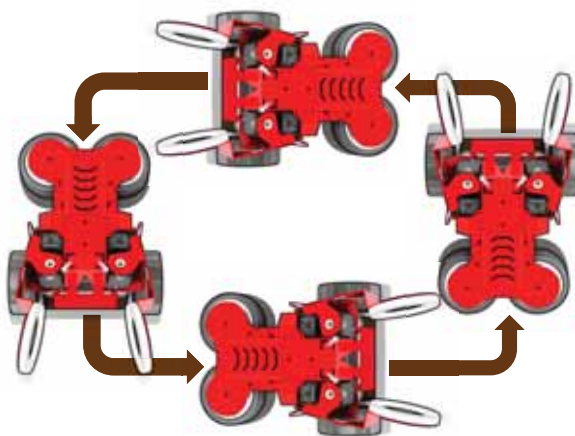




BUTTON TYPE

[OPTION] JOYSTICK TYPE
_ Possible a future replacement

**10**

# 6. GAME RULES

**\* GAME RULES FOR AIMING HIGH SCORES**

- CHALLENGE SCORE : If achieved a challenge score, compensate a high-ticket reward.

- BONUS GAME : JP BONUS GAME (Manually Stop)

- ??? HOLE : Get randomly the point from 100 to 1000 points.

- DOUBLE BONUS : Get double Points for the limited time.



Present Challenge scores

↓

Playtime is 60seconds.

↓

\* 0 to 15 seconds before the time over. — Double Bonus Time

↓

Time Over

↓

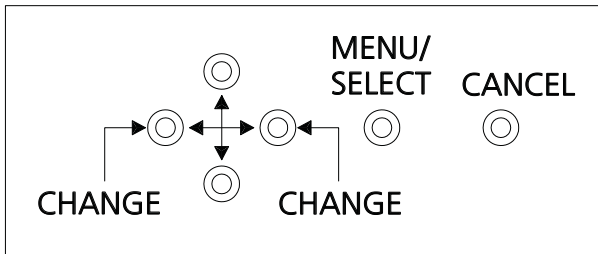Bonus Game(JP GAME)

↓

Game Over

# 7. SETUP SETTING

## 7-1. MACHINE SETUP

### 1. HOW TO ENTER SETUP MENU

1 There is "Control panel" inside cabinet, User may set any setting using following.

LCD

COIN COUNTER  TICKET COUNTER

ON

OFF  SERVICE  VOLUME

AC S/W
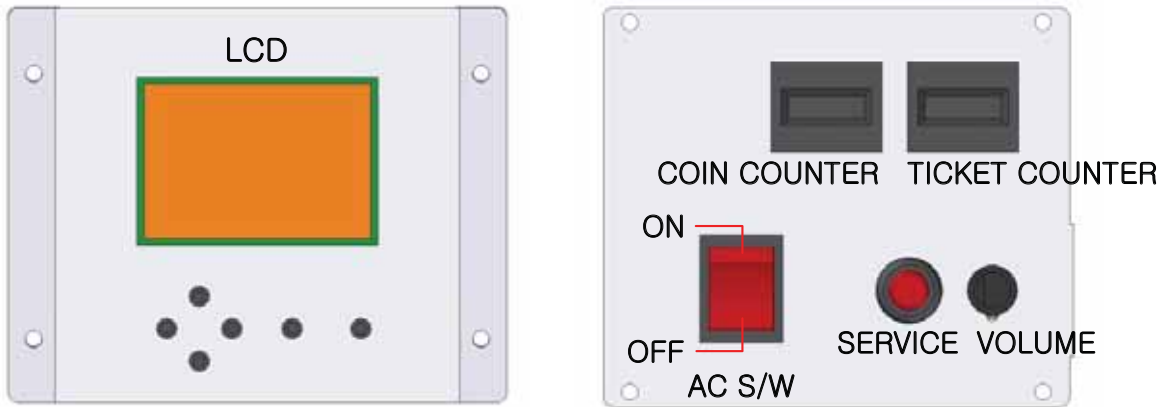
[ CONTROL PANEL ]

### 2. BUTTON INSTRUCTIONS FOR USE

MENU/
SELECT  CANCEL

CHANGE  CHANGE

1) [ ↑↓ ] UP/DOWN BUTTON : MOVE MENU UP/DOWN
2) [ ← → ] L/R SETTING BUTTON : CHANGE THE SETTING L/R
3) MENU/SELECT BUTTON : SETUP MENU MODE,
                        EXECUTE THE SELECTION
4) CANCEL BUTTON : EXIT/UNBLOCK ERROR

## [ OPERATION MENU ]

| PRESS THE MENU BUTTON [SELECT BUTTON TO ENTER] | |
|---|---|
| ## OPERATION MENU ## | |
| SETUP MODE | Setup mode |
| CLEAR MODE | Clear mode |
| VIEW INT-DATA | Check internal data |
| FACTORY-SETTING | Back to factory setting |
| TEST MODE | Return to game mode |
| GAME MODE | Test mode |

## 7-2. SETUP MODE

| SETUP MODE | | | |
|---|---|---|---|
| LCD DISPLAY | DESCRIPTION | RANGE | DEFAULT SETTING |
| Credit/Coin | COIN PER CREDIT | Free, 1/1, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 2/1, 3/1, 4/1, 5/1 | 1/2 |
| RobotID | ROBOT COMMUNICATION CHANNEL ID SETTING ("How to set up Robot's ID DIP S/W is separately explained below ) | 0 ~ 7 | 0 |
| Jackpot | NUMBER OF TICKETS AWARDED OF JACKPOT | 100 ~ 2000 | 1000 |
| PayoutTable | REFER TO #1 TICKET PAYOUT TABLE | TICKET TABLE BASED ON MAX SCORE<br>50~ : Max 5000 Point<br>70~ : Max 7000 Point<br>100~: Max 10000 Point | 50~ |
| GameTiime | GAME PLAY TIME | 20 ~ 300 (SEC) | 60 |
| TimeBonus | PLAY TIME BONUS | Rand, 5 ~ 50 (SEC)<br>THE BONUS TIME BASED ON "Rand" is between 5~10 seconds | Rand |
| DoubleBonus | DOUBLE BONUS TIME. THE SCORE FOR DOUBLE BONUS TIME IS DOUBLED. | 5 ~ 50 (SEC) | 10 |
| MysteryType | TYPE OF MYSTERY HOLE | 0 - No : NOTHING<br>1 - Sc : RANDOM SCORE IS GIVEN<br>2 - Bn : TIME OR DOUBLE BONUS OR JACKPOT IS RANDOMLY GIVEN<br>3 - Al : RANDOM SCORE OR TIME BONUS OR DOUBLE SCORE BONUS OR HACKPOT IS RANDOMLY GIVEN | 1 - Sc |
| ExtraScore | SCORE SET-UP FOR EVENT HOLES. (Time, Double, Jackpot Score set-up for time / double / jackpot mystery holes) | 0 ~ 1000 | 100 |
| WheelType | WHEEL TYPE | Def (DEFAULT), User | Def |
| WheelSpeed | WHEEL SPEED | 55 ~ 100 | 55 |
| HALFPAYOUT | ONE TICKET PER TWO POINTS | OFF, ON | OFF |
| MERCYTICKET | NUMBER OF MERCY TICKET | 0 ~ 10 | 0 |
| NO-TICKET | NO TICKET DISPENSING | OFF, ON | OFF |
| AVG-TICKET | AVERAGE TICKETS DISPENSED PER GEME | 1 ~ 150 | 60 |
| DEMOVOLUME | DEMO SOUND VOLUME | OFF, 10 ~ 100 | 100 |
| DEMO-ROBOT | SET THE ROBOT MOVEMENTS IN DEMO MOVE | OFF, ON | ON |
| SAVE AND EXIT | SAVE AND EXIT | PRESS THE BUTTON TO ENTER THE SELECTION | |
| CANCEL AND EXIT | CANCEL AND EXIT | | |

# [ 1 ROBOT RATE PER 1 PURSE OF BILL ]

* As shown on the below photo, "ON" means raising a button to the upwards on the DIP SW.
  On the contrary, "OFF" means moving it down to the downwards.



| ROBOT ID | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ROBOT | 1 | On | **Off** | On | **Off** | On | **Off** | On | **Off** |
| DIP | 2 | On | On | **Off** | **Off** | On | On | **Off** | **Off** |
| S/W | 3 | On | On | On | on | **Off** | **Off** | **Off** | **Off** |

* SELECT THE PAYOUT TABLE (USER) OF SETUP MODE AND MOVE TO BELOW ITEMS USING THE SELECT BUTTON

SETUP MODE  -> PayoutTable -> User

ONCE EACH ITEM IS CHANGED, AN AVERAGE TICKETS AWARDED AND THE NUMBER OF TICKETS DISPENSED WILL BE CHANGED.

| LCD DISPLAY | DESCRIPTION | RANGE | DEFAULT SETTING |
|---|---|---|---|
| 0 ~ 0 | | 0 ~ 150 | 10 |
| 100 ~ 300 | | 0 ~ 150 | 30 |
| 400 ~ 600 | | 0 ~ 150 | 40 |
| 700 ~ 900 | | 0 ~ 150 | 50 |
| 1000~1400 | TICKET SET-UP FOR EACH SCORE RANGE | 0 ~ 150 | 60 |
| 1500~1900 | | 0 ~ 150 | 70 |
| 2000~2900 | | 0 ~ 150 | 80 |
| 3000~4900 | | 0 ~ 150 | 90 |
| 5000~ | | 0 ~ 150 | 100 |
| DEFAULT TICKETS | RETURN TO FACTORY DEFAULT PAYOUT TABLE | | |
| SAVE AND EXIT | SAVE AND EXIT | PRESS THE BUTTON TO ENTER THE SELECTION | |
| CANCEL AND EXIT | CANCEL AND EXIT | | |

\* SELECT THE WHEEL TYPE (USER) OF SETUP MODE AND MOVE TO BELOW ITEMS USING THE SELECT BUTTON

SETUP MODE   -> WheelType -> User

ONCE EACH ITEM IS CHANGED, AN AVERAGE TICKETS AWARDED AND THE NUMBER OF TICKETS DISPENSED WILL BE CHANGED.

| LCD DISPLAY | DESCRIPTION | RANGE | DEFAULT SETTING |
|---|---|---|---|
| Hole - A01 | SCORE SET-UP FOR EACH HOLE | None 100 200 300 500 TIME DOUBLE MYSTERY JACKPOT | 500 |
| Hole - A02 | | | 100 |
| Hole - A03 | | | MYSTERY |
| Hole - A04 | | | 100 |
| Hole - A05 | | | 200 |
| Hole - A06 | | | 100 |
| Hole - A07 | | | TIME |
| Hole - A08 | | | 100 |
| Hole - A09 | | | 300 |
| Hole - A10 | | | 100 |
| Hole - A11 | | | JACKPOT |
| Hole - A12 | | | 100 |
| Hole - A13 | | | 200 |
| Hole - A14 | | | 100 |
| Hole - A15 | | | DOUBLE |
| Hole - A16 | | | 100 |
| SAVE AND EXIT | SAVE AND EXIT | PRESS THE BUTTON TO ENTER THE SELECTION | |
| CANCEL AND EXIT | CANCEL AND EXIT | | |

| CLEAR MODE | | |
|---|---|---|
| LCD DISPLAY | DESCRIPTION | |
| CLEAR TOPSCORE | TOP SCORE IS CHANGED TO THE BASIC SCORE "2,500" | PRESS THE BUTTON TO ENTER THE SELECTION |
| CLEAR TICKETS | CLEAR THE NUMBER OF TICKETS OWE | |
| CLEAR CREDITS | CLEAR ANY EXTRA CREDITS AND BALLS | |
| CLEAR GAMEDATA | CLEAR GAME DATA | |
| EXIT | EXIT | |

| VIEW INT-DATA | |
| --- | --- |
| LCD DISPLAY | DESCRIPTION |
| GAMES | TOTAL NUMBER OF GAMES PLAYED |
| PAYOUT | TOTAL NUMBER OF TICKETS DISPENSED |
| AVG TOTAL | AN AVERAGE TICKETS PAID PER GAME |
| **** CREDITS IN **** | TOTAL NUMBER OF COINS PLAYED AND SERVICE COINS |
| **** TICKETS OUT *** | TOTAL NUMBER OF GAME DISPENSED AND JACKPOT AWARED |
| **GAMESCORE INFO*** | TOTAL NUMBER OF GAME DISPENSED AND JACKPOT AWARED |
| ** JP BONUS INFO *** | BONUS GAME SCORE AND |
| ***** VER INFO ***** | CURRENT INSTALLED VERSION NUMBER & OPERATION HOUR |
| CANCEL : PRESS THE CANCEL BUTTON TO EXIT | |

| FACTORY-SETTING |
| --- |
| FACTORY SETTING (CLEARS ALL DATA AND SETS VALUES TO DEFAULT) |
| SELECT : PRESS THE CANCEL BUTTON TO INITIALIZE |

# 7-3. TEST MODE

| TEST MODE | | |
|---|---|---|
| LCD DISPLAY | DEFAULT SETTING | DESCRIPTION |
| INPUT TEST | [->] | ENTER THE INPUT MODE STATUS |
| LAMP | Off, On | CHECK LAMP Off, On(JACKPOT LAMP, BUTTON LAMP, TICKET LAMP) |
| FND & LED | 0 ~ 4 | CHECK FND & LED |
| WHEEL | Off, On | CHECK THE WHEEL |
| ELEVATOR | Off, On | CHECK THE BALL ELEVATOR |
| ROBOT | | CHECK THE ROBOT TEST (BOOT & MOVE) |
| COIN | Off, On | CHECK THE COIN SELECTOR |
| TICKET | Off, On | CHECK THE TICKET OPERATING (DISPENSING 5 TICKETS) |
| SOUND TEST | [->] | RETURN TO THE SSOUND TEST MPDE |
| GAME MODE | RETURN TO THE GAME MODE | |

| GAME MODE | |
|---|---|
| RETURN TO THE GAME | PRESS THE SELECT BUTTON TO ENTER THE SELECTION |

| TEST MODE -> INPUT TEST | |
|---|---|
| LCD DISPLAY | DESCRIPTION |
| 0:0000,1:0000,7:0000 UP : 0, DOWN : 0 LEFT : 0, RIGHT : 0 BUTTON : 0, SERVICE : 0 | UP : FORWARDING BUTTON(JOYSTICK) DOWN : REWARDING BUTTON(JOYSTICK) LEFT : REVOLVING BUTTON(JOYSTICK) RIGHT : REVOLVING BUTTON(JOYSTICK) BUTTON : TO HOLD AND RELEASE THE BALL SERVICE : SERVICE BUTTON |

| TEST MODE -> SOUND TEST | | |
|---|---|---|
| LCD DISPLAY | DEFAULT SETTING | DESCRIPTION |
| SOUND        Stop/Play | 0 ~ 9 | CHECK THE SOUND PLAY (On, Off) |
| -EXIT- | RETURN TO THE TEST MODE | |

# PAYOUT TABLE

| PAYOUT TABLE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 50~ | | | 70~ | | | 100~ | | |
| SCORE | | PAYOUT | SCORE | | PAYOUT | SCORE | | PAYOUT |
| Min | Max | Tickets | Min | Max | Tickets | Min | Max | Tickets |
| 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 |
| 100 | 300 | 30 | 100 | 400 | 30 | 100 | 900 | 30 |
| 400 | 600 | 40 | 500 | 900 | 40 | 1000 | 1900 | 40 |
| 700 | 900 | 50 | 1000 | 1500 | 50 | 2000 | 2900 | 50 |
| 1000 | 1400 | 60 | 1600 | 1900 | 60 | 3000 | 4900 | 60 |
| 1500 | 1900 | 70 | 2000 | 2900 | 70 | 5000 | 6900 | 70 |
| 2000 | 2900 | 80 | 3000 | 4900 | 80 | 7000 | 7900 | 80 |
| 3000 | 4900 | 90 | 5000 | 6900 | 90 | 8000 | 9900 | 90 |
| 5000 | ~ | 100 | 7000 | ~ | 100 | 10000 | ~ | 100 |

## 7-4. ERROR CODE

| Error Code | TIME Fnd Display | Error Type | DESCRIPTION | REMEDY |
|---|---|---|---|---|
| Er0-1 | | SETUP LCD | SETUP LCD NOT RESPONDING | CHECK THE SETUP LCD (THE PLAY WORKS NORMALLY) |
| Er0-2 | | SYSTEM | FAILED TO READ & WRITE MEMORY OF SETUP SAVE DATA | POWER OFF AND ON IF PROBLEM CONTINUES CHANGE THE MAIN BOARD |
| Er0-3 | | | FAILED TO SETUP SAVE DATA | |
| Er0-4 | | | FAILED TO READ & WRITE MENORY OF GAME SAVE DATA | POWER OFF AND ON IF PROBLEM CONTINUES REPLACE THE TOP CPU BOARD |
| Er1-1 | | COIN SELECTOR | COIN 1 SENSOR SIGNAL CONTINUES | CHECK THE COIN SELECTOR 1 (COIN SWITCH) |
| Er1-2 | | | COIN 2 SENSOR SIGNAL CONTINUES | CHECK THE COIN SELECTOR 2 (COIN SWITCH) |
| Er4-1 | | ROBOT | RF COMMUNICATION MODULE DOES NOT WORK | CHECK THE BOARD OR RF COMMUNITION MODULE PCB |
| Er4-2 | | | NO COMMUNICATION WITH THE ROBOT | CHECK THE ROBOT COMMUNICATION |
| Er4-3 | | | ROBOT IS NOT CONNECTED TO THE ELECTRODE PLATE | CHECK THE ROBOT ELECTRODE PIN OR ELECTRODE PLATE |
| Er5-1 | | WHEEL | WHEEL HOME ENCODER SIGNAL NOT CHANGED | CHECK THE HOME ENCODER SENSOR |
| Er5-2 | | | WHEEL ENCODER SIGNAL NOT CHANGED | CHECK THE MOTOR FUNCTION OR ENCODE SENSOR |
| Er5-2 | | | WHEEL DOES NOT WORK | CHECK THE BALL STUCK OR WHEEL |
| Er6-1 | | ELEVATOR | BOTTOM ENCODER SIGNAL NOT CHANGED | CHECK THE MOTOR FUNCTION OR BOTTOM ENCODER SENSOR |
| Er6-2 | | | NO SIGNAL IN TOP SWITCH OF BALL | CHECK THE BALL OR TOP SWITCH |
| Er6-3 | | | TOP SWITCH OF BALL SIGNAL CONTINUES | CHECK THE TOP BALL SWITCH |
| Er8-1 | | GOAL IN SWITCH | HOLE 1(TOP) SWITCH SIGNAL CONTINUES | CHECK THE SWITCH OF GOLE IN 1(TOP HOLE IN 12 O'CLOCK) |
| Er8-2 | | | GOLE IN 2(BOTTOM) SWITCH SINGAL CONTIUNES | CHECK THE SWITCH OF GOLE IN 2 (BOTTOM HOLE IN 6 O'CLOCK) |
| Er8-3 | | | GOLE IN 3(LEFT) SWITCH SINGAL CONTINUES | CHECK THE SWITCH OF GOLE IN 3(LEFT HOLE IN 9 O'CLOCK) |
| Er8-4 | | | GOLE IN 4(RIGHT) SWITCH SINGAL CONTINUES | CHECK THE SWITCH OF GOLE IN 4(RIGHT HOLE IN 3 O'CLOCK) |
| Ert-1 | | TICKET ERROR | NO TICKETS | CHECK TICKET DISPENSER OR FUNCTION |
| Ert-2 | | | TICKET JAMMED | CHECK TICKET DISPENSER JAMMED OR DIP SWITCH |

# 8. HOW TO REPLACE MAJOR COMPONENTS

## 8-1. Replacing MAIN PCB & COIN SELECTOR
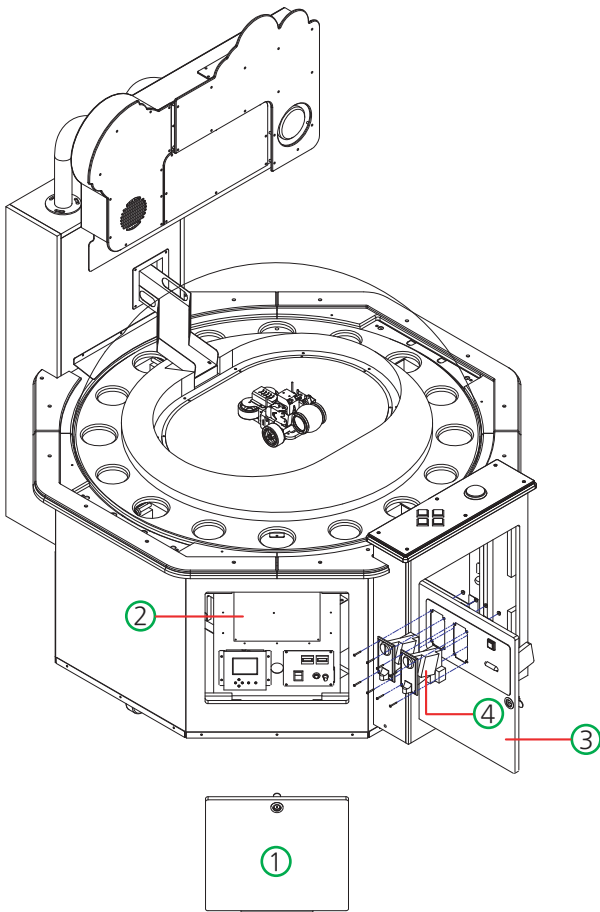
### * MAIN PCB ASS'Y

(1) ①Open a Left Side Door, There is a ②MAIN PCB.
   After separate a connected connector, replace a PCB.

### * COIN SELECTOR

(1) ③Open a Front Side Door, Separate a connected connector with
   COIN SELECTOR, And then ④Separate a COIN SELECTOR.
   [Each M4 bolts, 4points]
(2) After separating, replace a COIN SELECTOR.

| NO. | PART NAME | SPEC. | CODE NO. |
|---|---|---|---|
| ② | MAIN PCB ASS'Y | - | AICU0PCB011 |
| ④ | COIN SELECTOR | TW-130B | MZZZ0COS032 |

## 8-2. Replacing FILED LED PCB ASS'Y
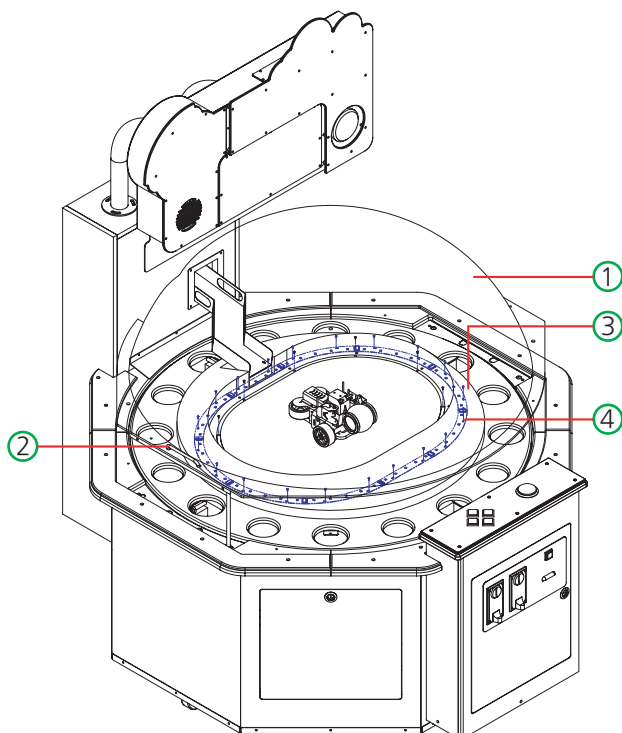
### * FILED LED PCB

(1) ①After disconnecting a DOME MOLDING PART,
   [M6 bolts, 4 places] ②Pull up ROUND BAR HANDLE
   to open the DOME.
(2) ③After disconnecting a FIELD COVER MOLDING,
   [M4 bolts, 10 places]
(3) ④After separating connectors connected to FIELD LED PCB ASS'Y
   PCB, Replace a PCB.

| NO. | PART NAME | SPEC. | CODE NO. |
|---|---|---|---|
| ② | ROUND BAR HANDLE | - | - |
| ④ | FIELD LED PCB ASS'Y-A,B,C | - | ALOB0PCB002~007 |

   * See details of PCB on P31.

**19**

## 8-3. Replacing WHEEL MOTOR
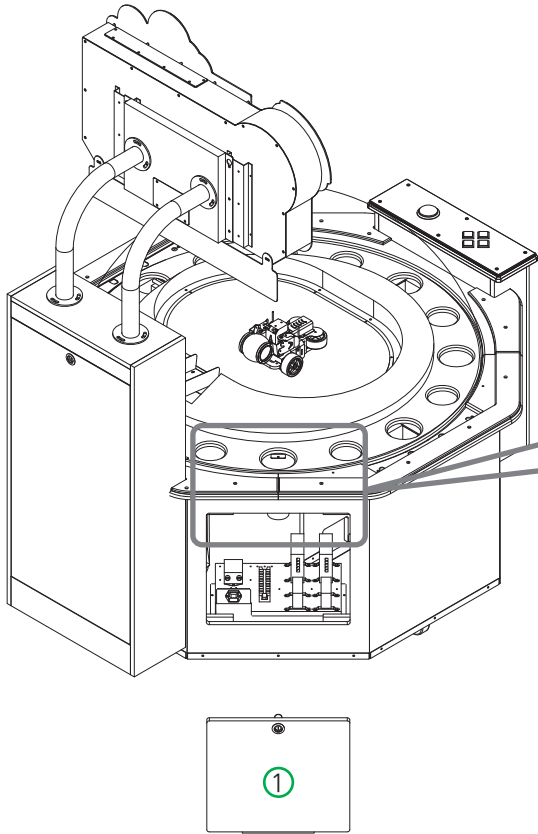
(1) ①Open a Left Side Door, There is a ②③④WHEEL MOTOR.

(2) After separating ⑤WHEEL MOTOR BKT [Each M6 bolts, 4 points] and then Replace a MOTOR ASS'Y

| NO. | PART NAME | SPEC. | CODE NO. |
|-----|-----------|-------|----------|
| ② | DC MOTOR | K6D-12V-15W | MZZZ0MOT032 |
| ③ | GEAR HEAD | K6D-30:1 | MZZZ0GEA004 |
| ④ | GEAR HEAD | K6G10BX | MZZZ0GEA005 |

## 8-4. Replacing ELEVATOR MOTOR

(1) ①Open a Rear Door, There is a, ②ELEVATOR ASS'Y.
(2) After separating ③ELEVATOR MOTOR BKT.
    [Each M4 bolts, 2 points]
(3) After separating, replace a ④MOTOR.
    [Each M4 bolts, 4 points]
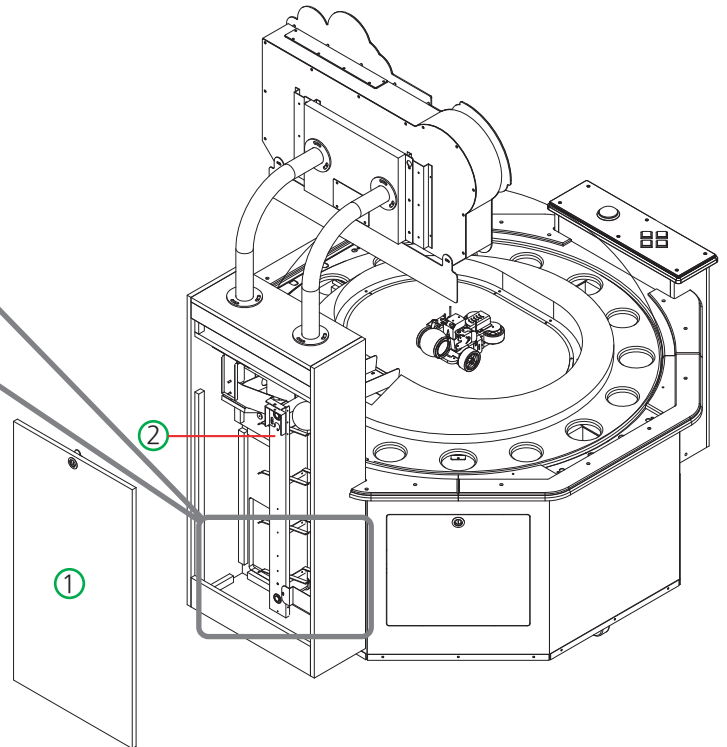
| NO. | PART NAME | SPEC. | CODE NO. |
|-----|-----------|-------|----------|
| ④ | DC MOTOR | KGE-3448-050-12V _1/204 F-TYPE | MZZZ0MOT072 |

**\* Reassemble them in reverse order and check performance of the game.**

**20**

# 9. TROUBLESHOOTING

## 9-1. IN CASE OF POWER FAILURE

*Common: Check the input voltage, check wiring

```
POWER ──── Abnormal ────▶  1. Connection & A measure
                           2. Displacement NOISE FILTER

[CHECK]
1. AC CORD
2. FUSE(250V)
3. AC S/W
4. AC Connector
5. INPUT VOLTAGE TESTER
   : AC110V or 220V

normal

SMPS Change
```
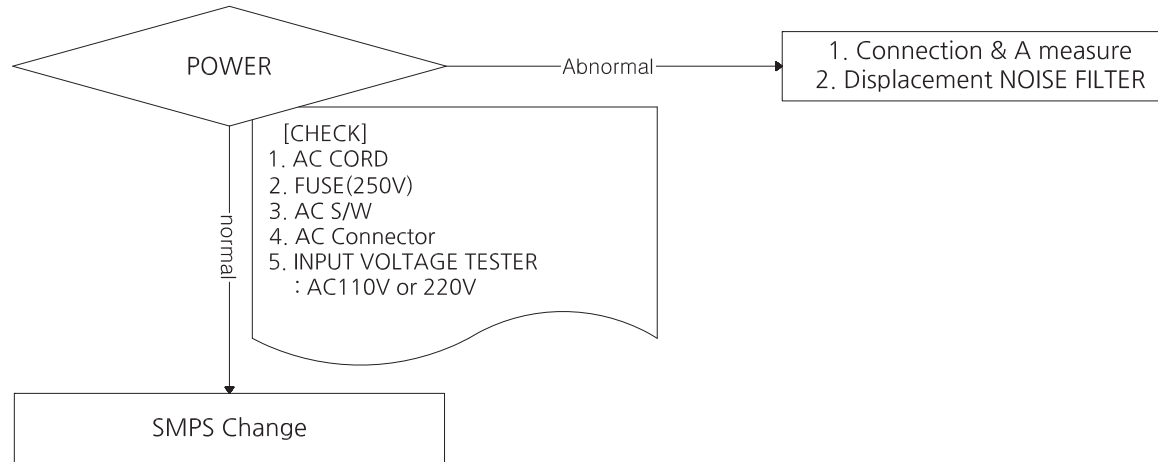
## 9-2. JACKPOT LED PCB & BILLBOARD LED PCB ASS'Y ERROR

*Common: Check the input voltage, check wiring

```
JACKPOT LED PCB &      ──── Abnormal ────▶  JACKPOT LED PCB &
BILLBOARD LED PCB                           BILLBOARD LED PCB Change

[CHECK]
1. Assemble appearance of
   JACKPOT LED PCB & BILLBOARD LED PCB
2. Wiring connection
3. Power operation LED (Blinking)
4. Service VOLTAGE : 12V, 5V

normal

MAIN PCB ASS'Y Change
```

## 9-3. BALL OUT LED PCB & FILED LED PCB ASS'Y ERROR

BALL OUT LED PCB & FILED LED PCB

— Abnormal → BALL OUT LED PCB & FILED LED PCB Change

[CHECK]
1. Assemble appearance of
   BALL OUT LED PCB & FILED LED PCB
2. Wiring connection
3. Power operation LED (Blinking)
4. Service VOLTAGE : 12V, 5V

normal

MAIN PCB ASS'Y Change

# 9-4. SOUND ERROR

**VOLUME PCB ASS'Y** —— Abnormal ——→ VOLUME PCB ASS'Y Change

[CHECK]
1. Assemble appearance of VOLUME
2. VOLUME Control
3. VOLUME value measurement
   tester (resistance)
   VOLUME - 10K

normal

**MAIN PCB ASS'Y** —— Abnormal ——→ MAIN PCB ASS'Y Change

[CHECK]
1. AUDIO Wiring connection & Change
2. AC CONNECTOR

normal

**SPEAKER** —— Abnormal ——→ SPAEKER Change

[CHECK]
1. Assemble appearance of SPEAKER
2. SPEAKER Wiring

## 9-5. COIN SELECTOR ERROR

*Common: Check the input voltage, check wiring

COIN SELECTOR ASS'Y —— Abnormal —→ COIN SELECTOR Change

[CHECK]
1. Assemble appearance of COIN SELECTOR
2. Wiring connection
3. Service VOLTAGE : 12V
4. COIN SIGNAL ON/OFF

normal

MAIN PCB ASS'Y Change
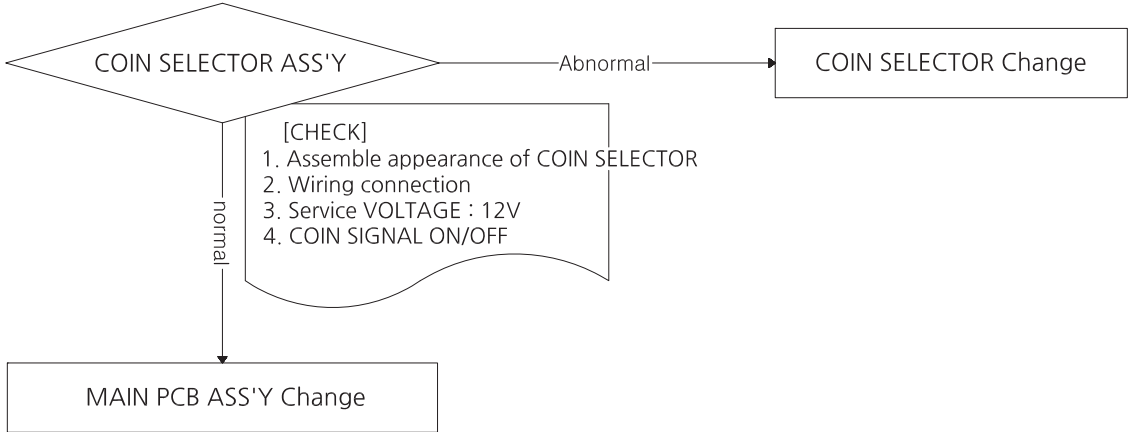
## 9-6. TICKET DISPENSER OPERATING

*Common: Check the input voltage, check wiring

TICKET DISPENSER ASS'Y —— Abnormal —→ TICKET DISPENSER Change

[CHECK]
1. Wiring connection
2. Service VOLTAGE : 12V
3. TICKET JAM

normal

MAIN PCB ASS'Y Change

# 9-7. BUTTON & COUNTER ERROR

SET UP
(BUTTON, COUNTER)

BUTTON
(START, SERVICE)

COUNTER

Abnormal

Abnormal

[CHECK]
1. Assemble appearance of BUTTON
2. Wiring PIN
3. SW ON/OFF Check (TESTER)

[CHECK]
1. Assemble appearance of COUNTER
2. Wiring PIN
3. When two wires are short-circuited,
   the signal is on.

BUTTON Change

COUNTER Change

normal

MAIN PCB ASS'Y Change

**25**
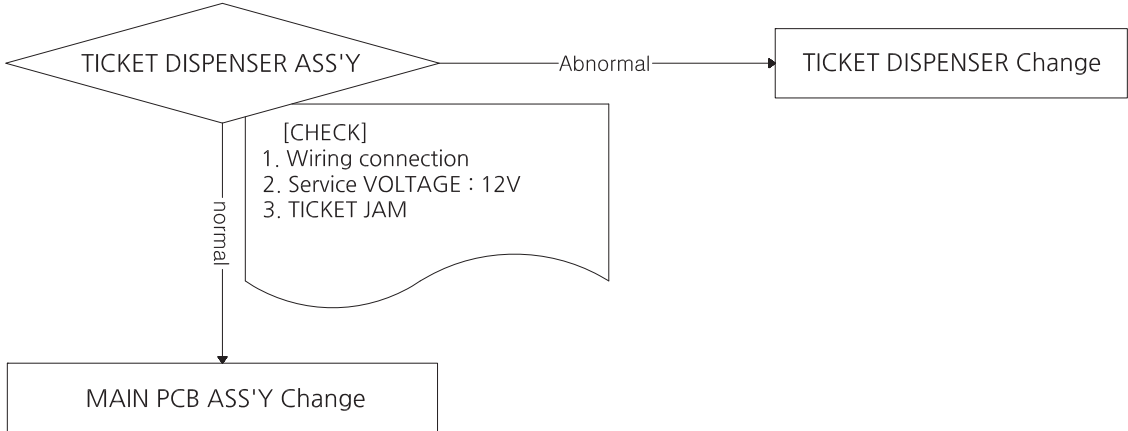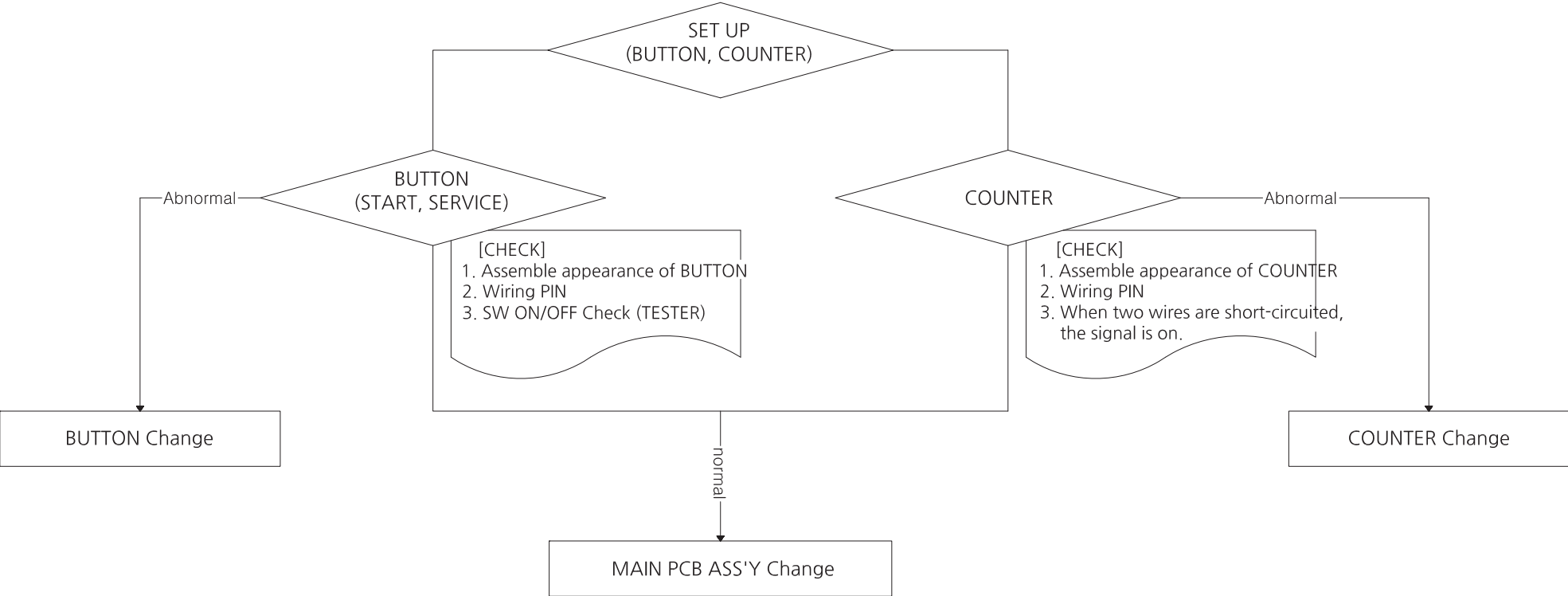
# 9-8. WHEN A ROBOT DOESN'T WORK

*Common: Check the input voltage, check wiring

**ROBOT ASS'Y**

normal

[CHECK]
1. Assemble appearance of ROBOT ASS'Y
2. Wiring connection
3. Electrode plate
4. Service VOLTAGE : 12V
5. Power operation LED (Blinking) : RED

**ROBOT TEST**

[CHECK]
1. TEST on TEST MODE_ROBOT mode.
   [Check with Up and down, left and right
    buttons and START button]
   _ ARM Up and down,
   left and right/wheel movement

Abnormal                                        Abnormal

**SERVOR MOTOR**
**(LEFT, RIGHT, UP/DOWM)**

Abnormal

[CHECK]
1. Assemble appearance of SERVOR MOTOR
2. Wiring connection
3. Power status LED : GREEN

**WHEEL MOTOR**
**(LEFT, RIGHT)**

Abnormal

[CHECK]
1. Assemble appearance of WHEEL MOTOR
2. Wiring connection
3. Power operation LED (Blinking)

| SERVOR MOTOR Change |

| WHEEL MOTOR Change |

normal

| I/O PCB ASS'Y Change |

26

## 9-9. WHEN A ROBOT CAUSED A COMMUNICATION PROBLEM

RF MODULE PCB ASS'Y —————Abnormal————▶ RF MODULE PCB ASS'Y Change

[CHECK]
1. Assemble appearance of RF MODULE PCB ASS'Y
2. Wiring connection
3. Power status LED_LIGHTS : RED

normal

MAIN PCB ASS'Y Change
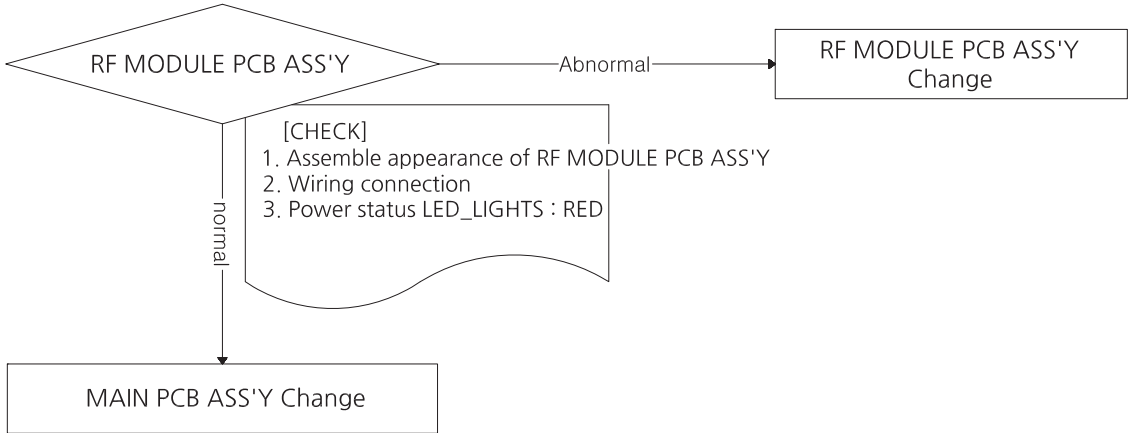
# 10. EXPLODED VIEW

## 10-1. MAIN CABINET
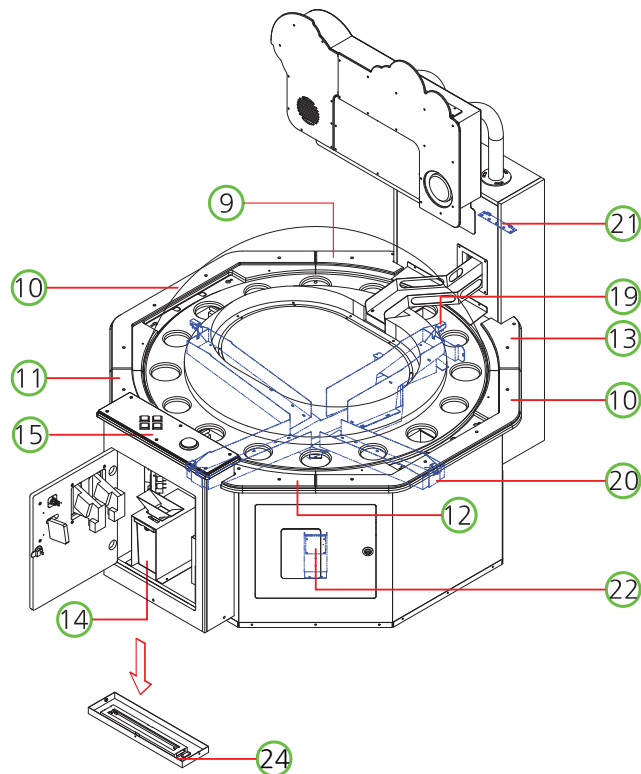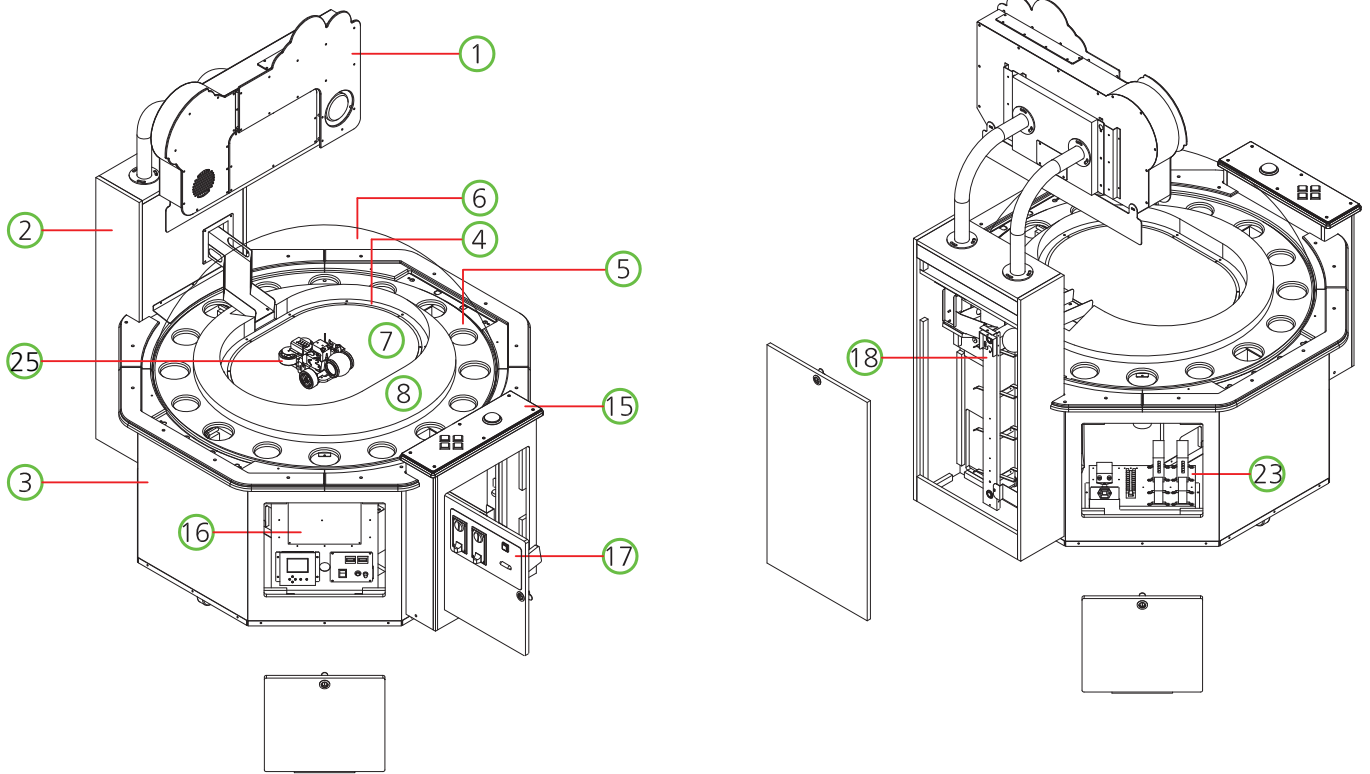
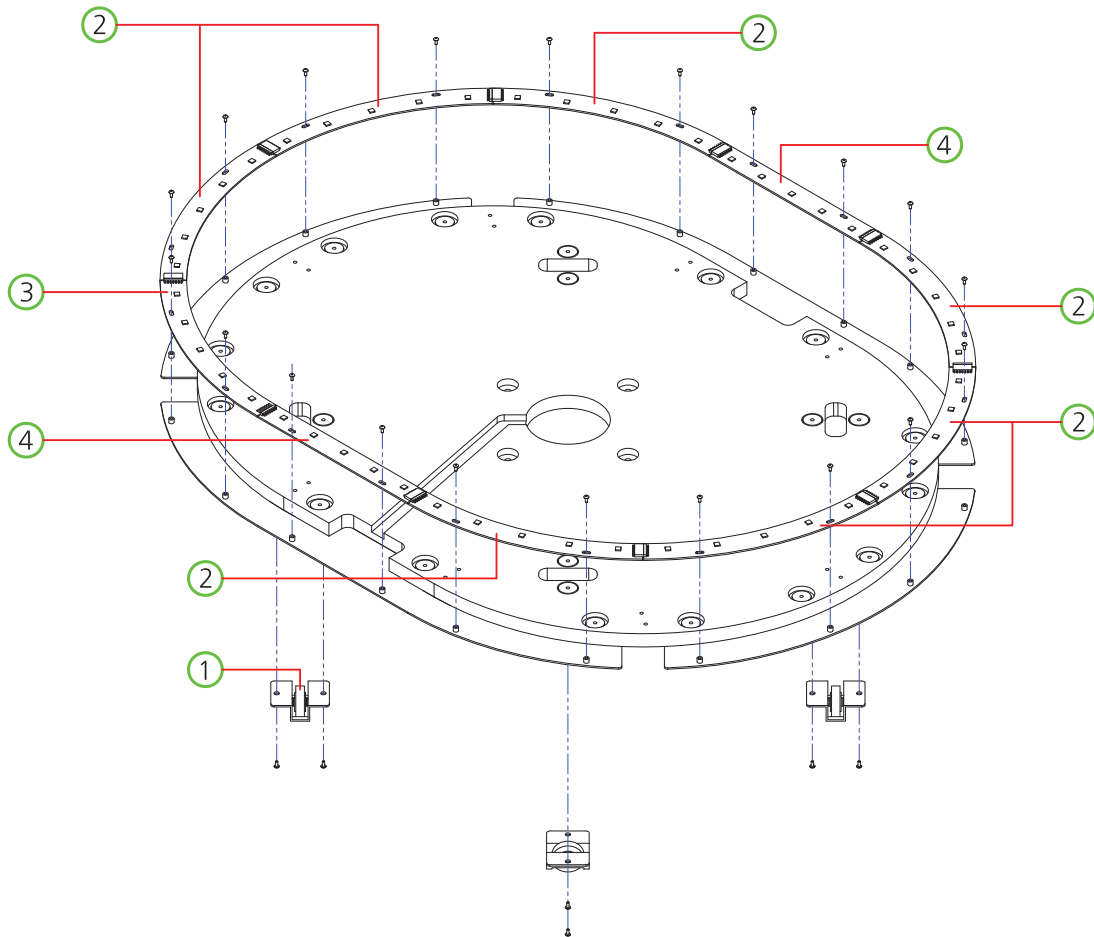| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | BILLBOARD ASS'Y | - | 1 | - |
| 2 | REAR BODY ASS'Y | - | 1 | - |
| 3 | MAIN CABINET ASS'Y | - | 1 | - |
| 4 | BASE PANEL ASS'Y | - | 1 | - |
| 5 | FIELD PANEL ASS'Y | - | 1 | - |
| 6 | DOME MOLDING ASS'Y | - | 1 | - |
| 7 | ELECTRODE PLATE | - | 1 | - |
| 8 | FIELD COVER | - | 1 | - |
| 9 | TABLE ACRYL-D | ACRYL-8.0t | 1 | MLOBACR004 |
| 10 | TABLE ACRYL-C | ACRYL-8.0t | 2 | MLOBACR003 |
| 11 | TABLE ACRYL-A | ACRYL-8.0t | 1 | MLOBACR001 |
| 12 | TABLE ACRYL-B | - | 1 | - |
| 13 | TABLE ACRYL-E | - | 1 | - |
| 14 | COIN BOX ASS'Y | - | 1 | - |
| 15 | BUTTON PANEL ASS'Y | - | 1 | - |
| 16 | MAIN BOARD ASS'Y | - | 1 | - |
| 17 | COIN SELECTOR ASS'Y | - | 1 | - |
| 18 | ELEVATOR ASS'Y | - | 1 | - |
| 19 | BALL GUIDE BKT-C ASS'Y | - | 1 | - |
| 20 | BALL GUIDE BKT-A ASS'Y | - | 1 | - |
| 21 | TOP CORNER LED PCB ASS'Y | - | 1 | AFP20PCB004 |
| 22 | RF MODULE PCB ASS'Y | - | 1 | - |
| 23 | SMPS ASS'Y | - | 1 | - |
| 24 | FRONT LOWER LIGHT ASS'Y | - | 1 | - |
| 25 | ROBOT ASS'Y | - | 1 | - |

# 10-2. BILLBOARD
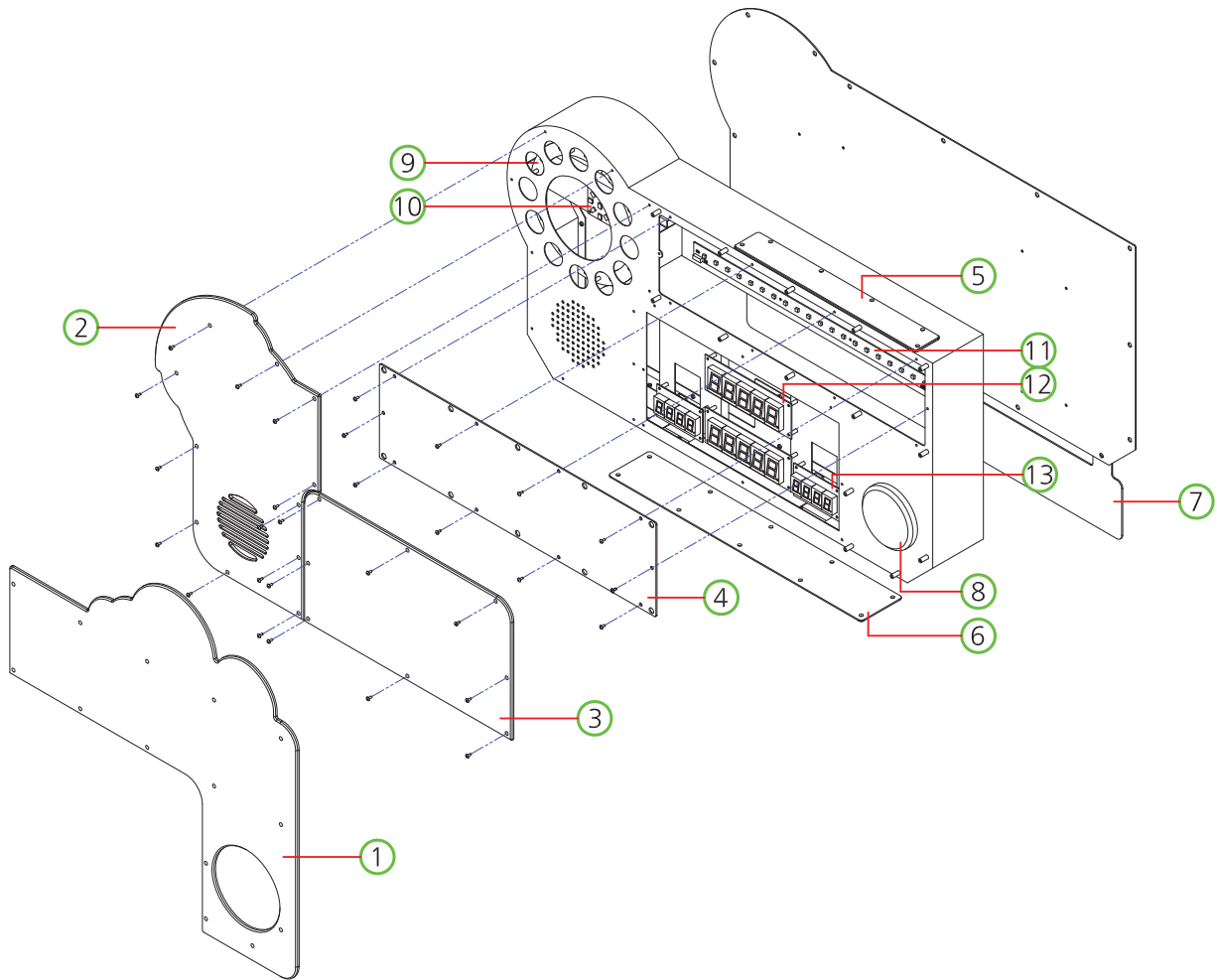


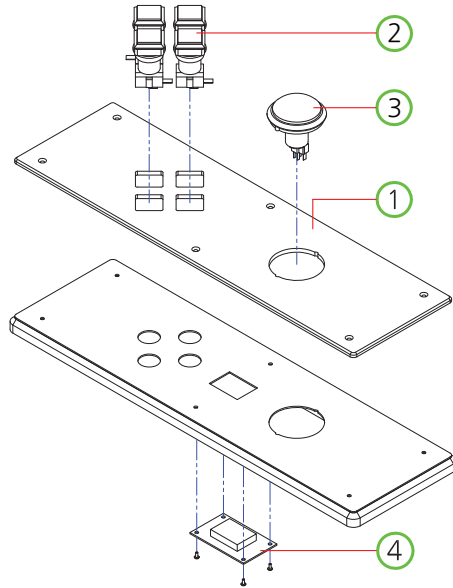| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | BILLBOARD ACRYL | ACRYL-5.0t | 1 | MLOB0ACR008 |
| 2 | BILLBOARD JACKPOT GAME ACRYL | ACRYL-5.0t | 1 | MLOB0ACR007 |
| 3 | BILLBOARD FND ACRYL | ACRYL-5.0t | 1 | MLOB0ACR006 |
| 4 | BILLBOARD INNER ACRYL | PET-2.0t | 1 | MLOB0ACR014 |
| 5 | BILLBOARD TOP LIGHT ACRYL | ACRYL-3.0t | 1 | MLOB0ACR009 |
| 6 | BILLBOARD BOTTOM LIGHT ACRYL | ACRYL-3.0t | 1 | MLOB0ACR010 |
| 7 | HOW TO PLAY ACRYL | PET-2.0t | 1 | MLOB0ACR013 |
| 8 | SPEAKER | MID4.5"+TW1/2" 8Ω | 2 | MZZZ0SPE021 |
| 9 | JACKPOT GAME LED PCB ASS'Y | - | 2 | ALOB0PCB004 |
| 10 | SPEAKER LAMP PCB ASS'Y | BLUE | 1 | APUF0PCB001 |
| 11 | BILLBOARD LED PCB ASS'Y | WHITE TYPE | 2 | ASUP0PCB001 |
| 12 | JACKPOT FND PCB ASS'Y | - | 2 | ADOS0PCB005 |
| 13 | FND PCB ASS'Y | - | 2 | AWID0PCB004 |

# 10-3. BASE PANEL
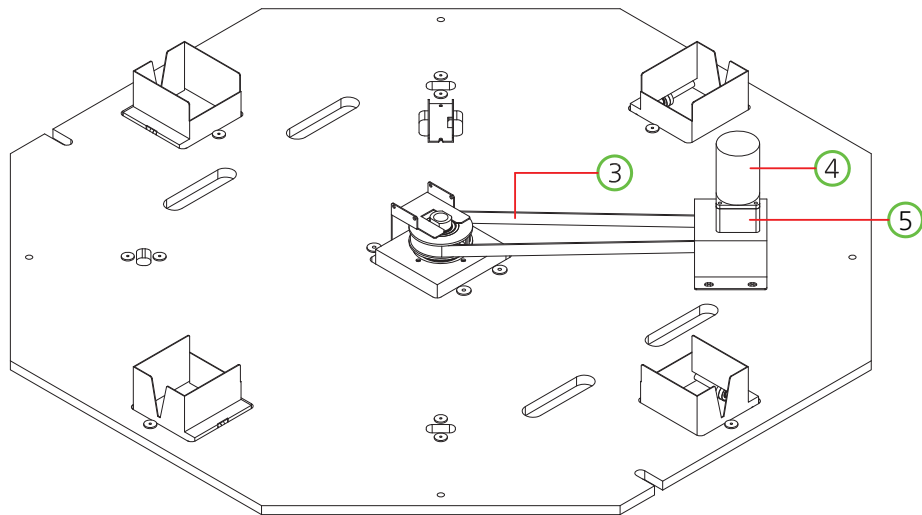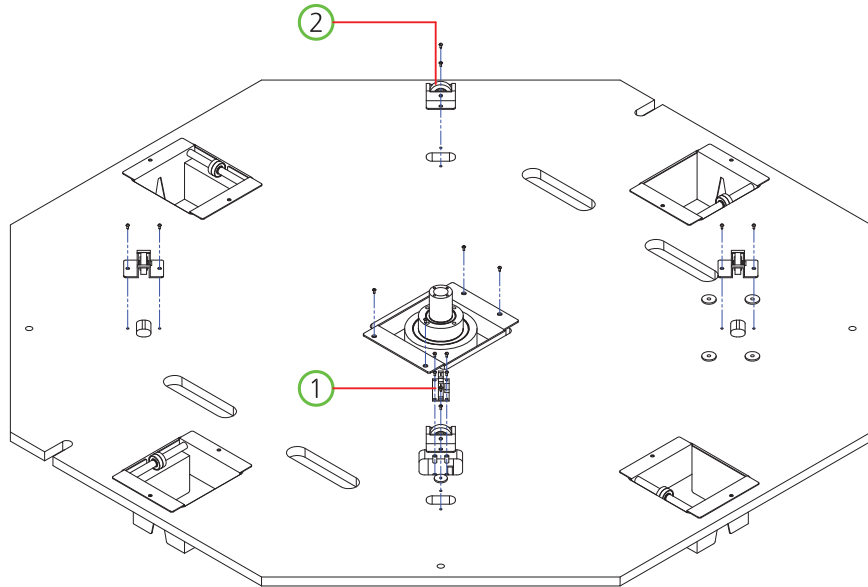


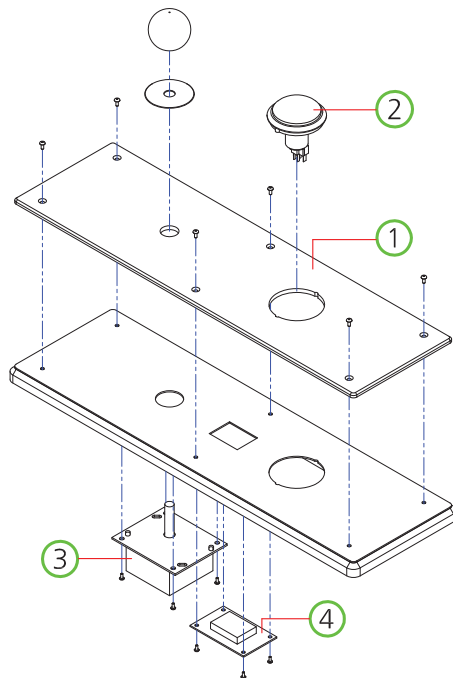| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | SENSOR PCB-2 ASS'Y | - | 1 | - |
| 2 | WHEEL SUPPORT ROLLER ASS'Y | - | 4 | - |
| 3 | TIMMING BELT | 400H-075 | 1 | MZZZ0BEL015 |
| 4 | DC MOTOR | K6D-12V-15W | 1 | MZZZ0MOT032 |
| 5 | GEAR HEAD | K6G-250C 250:1 | 1 | MZZZ0GEA001 |

# 10-4. FIELD PANEL



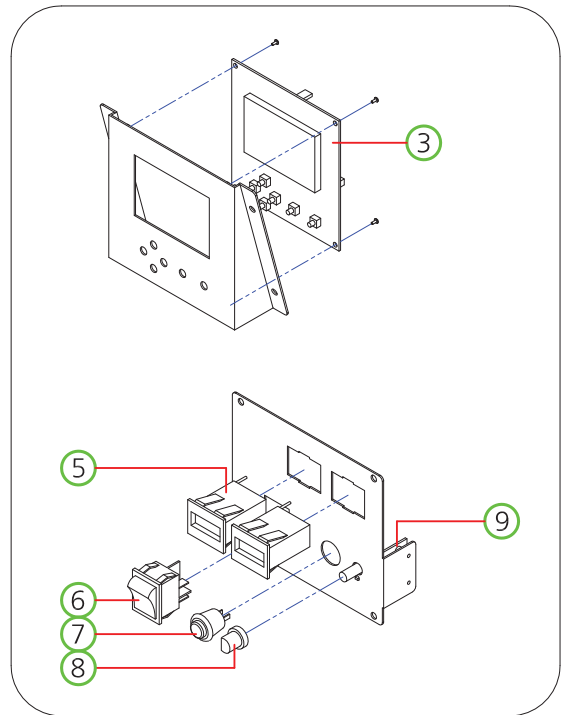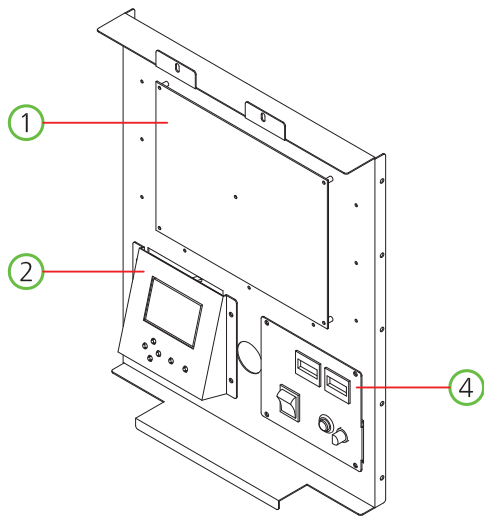| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | WHEEL SUPPORT ROLLER ASS'Y | - | 4 | - |
| 2 | FIELD LED PCB ASS'Y-B | - | 7 | ALOB0PCB003 |
| 3 | FIELD LED PCB ASS'Y-C | - | 1 | ALOB0PCB007 |
| 4 | FIELD LED PCB ASS'Y-A | - | 2 | ALOB0PCB002 |

## 10-5. BUTTON PANEL_BUTTON TYPE

| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | BUTTON PANEL ACRYL_BUTTON TYPE | ACRYL-5.0t | 1 | MLOB0ACR017 |
| 2 | BUTTON | AM1PB-26SH R12D | 1 | MMUM0BUT002 |
| 3 | BUTTON SWITCH | BLC-BL-Φ63-BLUE | 4 | MZZZ0BUT090 |
| 4 | FND PCB ASS'Y | - | 1 | AWID0PCB004 |

## [ OPTION ]_JOYSTICK TYPE

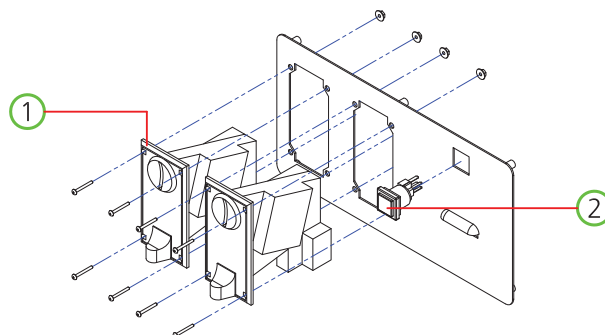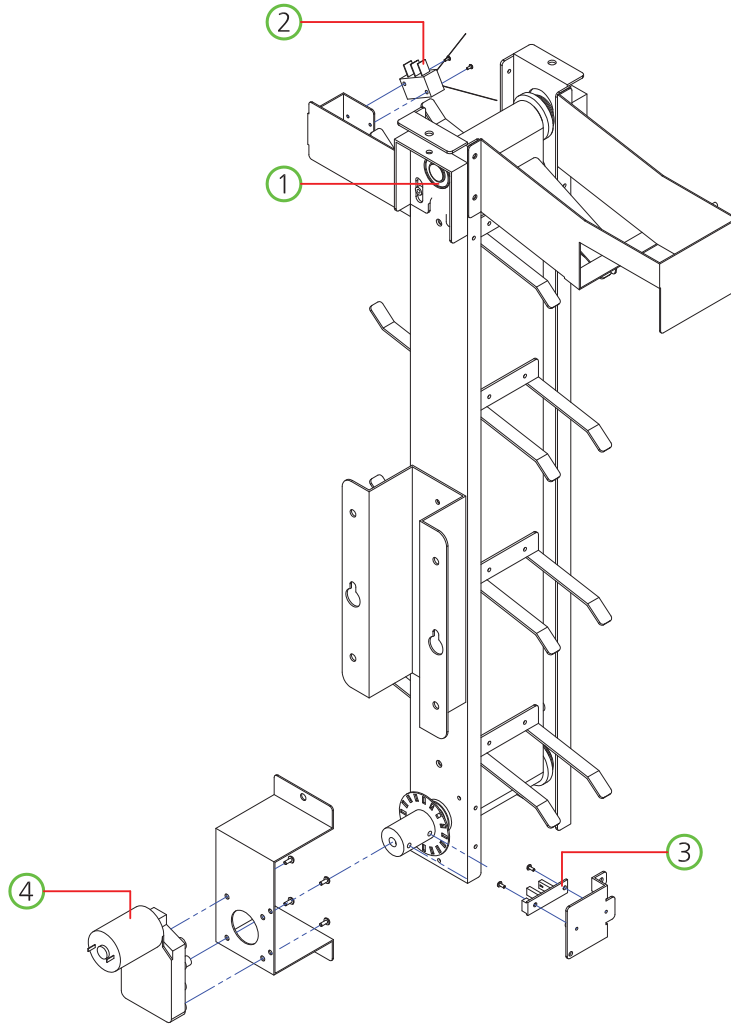| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | BUTTON PANEL ACRYL_JOYSTICK TYPE | ACRYL-5.0t | 1 | MLOB0ACR011 |
| 2 | BUTTON SWITCH | BLC-BL-Φ63-BLUE | 1 | MZZZ0BUT090 |
| 3 | JOYSTICK | - | 1 | MZZZ0JOY011 |
| 4 | FND PCB ASS'Y | - | 1 | AWID0PCB004 |

## 10-6. MAIN BOARD BKT



| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | MAIN BOARD PCB ASS'Y | - | 1 | AICU0PCB001 |
| 2 | [ SETUP LCD BKT PART ] | | 1 | - |
| 3 | SETUP LCD PCB ASS'Y | - | 1 | AZZZ0PCB113 |
| 4 | [ COUNTER BKT PART ] | | 2 | - |
| 5 | COUNTER | AMMC-712(OA127CL) | 1 | MZZZ0COU002 |
| 6 | ROCKER SWITCH | T-125 4P | 1 | MELE0SWI004 |
| 7 | PUSH BUTTON SWITCH | DS-412R | 1 | MELE0PUS006 |
| 8 | VOLUME KONB | - | 1 | MELE0VOL007 |
| 9 | VOLUME PCB ASS'Y | - | 1 | AHM20PCB016 |

## 10-7. COIN SELECTOR



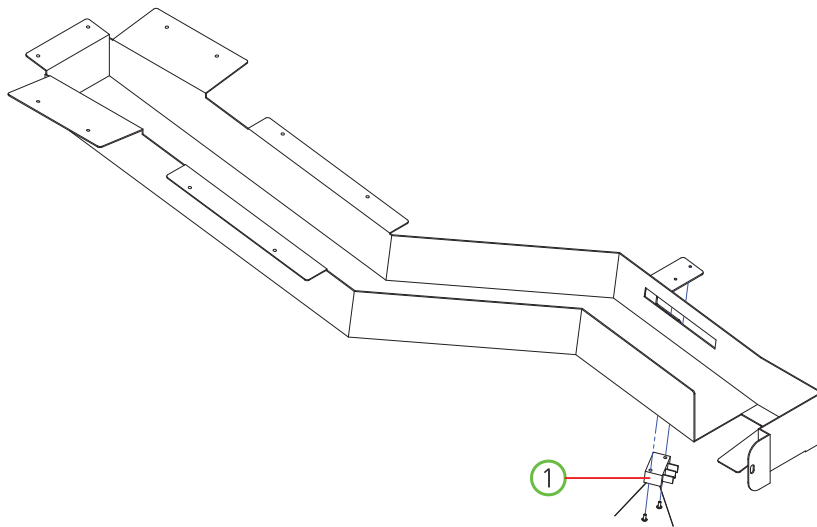| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | COIN SELECTOR | TW-130B | 2 | MZZZ0COS032 |
| 2 | BUTTON SWITCH | - | 1 | MZZZ0BUT090 |

# 10-8. ELEVATOR



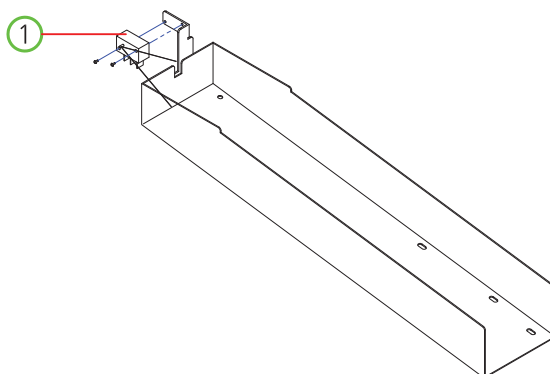| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | BEARING | 6902NR | 4 | MZZZ0BEA080 |
| 2 | MICRO SWITCH | CNR-05H-03 | 1 | MELE0MIC002 |
| 3 | PHOTO INT-1 PCB ASS'Y | - | 1 | ACIR0PCB011 |
| 4 | DC MOTOR | KGE-3448-050-12V _1/204  F-TYPE | 1 | MZZZ0MOT072 |

## 10-9. BALL GUIDE BKT-C
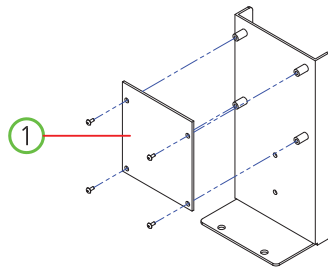


| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | MICRO SWITCH | CNR-05H-03 | 1 | MELE0MIC002 |

## 10-10. BALL GUIDE BKT-A



| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | MICRO SWITCH | CNR-05H-03 | 1 | MELE0MIC002 |

## 10-11. RF MODULE PCB



| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | RF MODULE PCB ASS'Y | - | 1 | - |

## 10-12. SMPS BKT
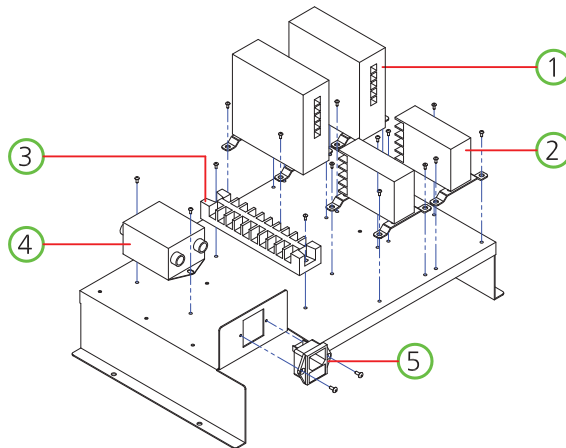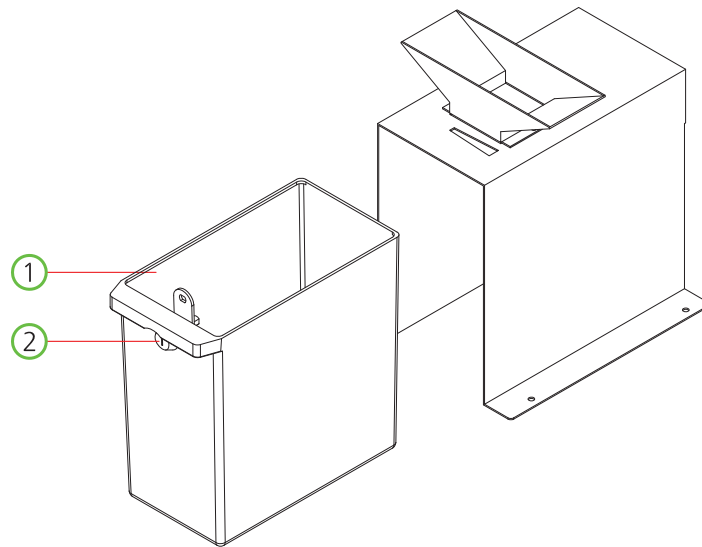


| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|-----|-----------|-------|----------|----------|
| 1 | POWER SMPS | RS50−12V | 2 | MELE0SMP055 |
| 2 | POWER SMPS | RS25−5V | 2 | MELE0SMP056 |
| 3 | TERMINAL BLOCK | 250V 10P | 1 | MELE0TEB003 |
| 4 | NOISE FILTER | ES1−F10 | 1 | MELE0NOI006 |
| 5 | AC INPUT | DAC−13H | 1 | MELE0SWI015 |

# 10-13. COIN BOX



| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | COIN BOX | - | 1 | MDRE0PLA007 |
| 2 | KEY ASS'Y | 6001 | 1 | MZZZ0KEY075 |

# 10-14. FRONT LOWER LIGHT
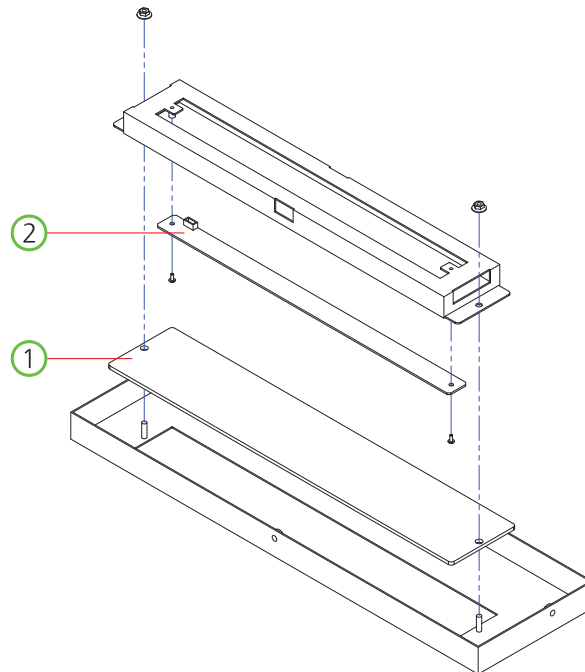


| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | FRONT LOWER LIGHT ACRYL | - | 1 | - |
| 2 | MIDDLE DOOR LED PCB ASS'Y | - | 1 | - |

# 10-15. ROBOT
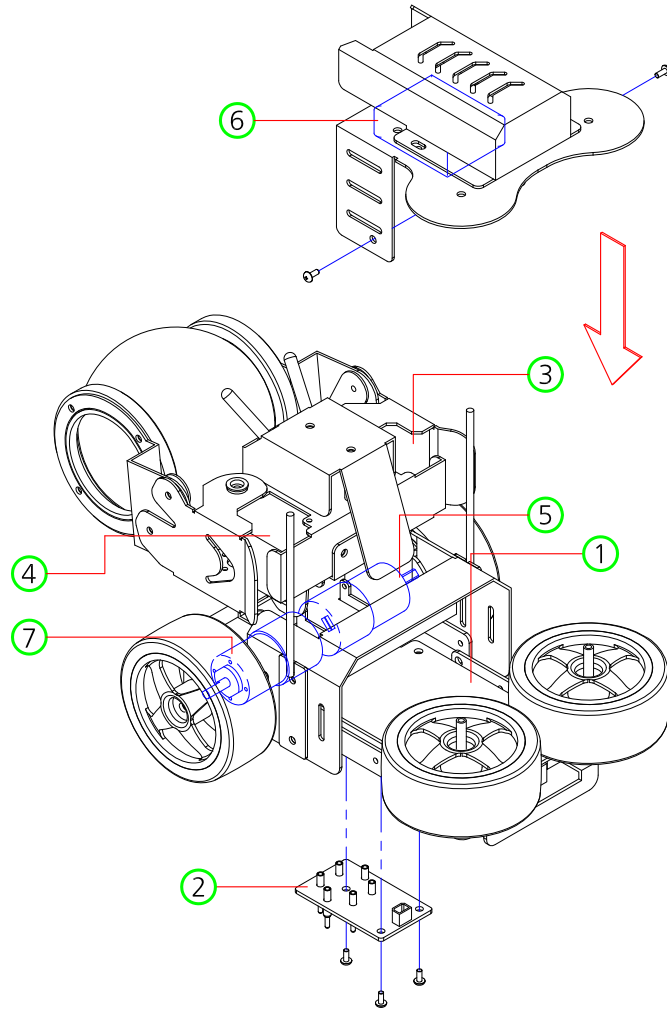
| NO. | PART NAME | SPEC. | QUANTITY | CODE NO. |
|---|---|---|---|---|
| 1 | ROBOT I/O PCB ASS'Y | - | 1 | ALOB0PCB001 |
| 2 | POWER PIN PCB ASS'Y | - | 1 | ALOB0PCB006 |
| 3 | SERVO MOTOR | DRS-0101 A | 1 | MZZZ0MOT074 |
| 4 | SERVO MOTOR | DRS-0101 B | 1 | MZZZ0MOT074 |
| 5 | SERVO MOTOR | DRS-0101 C | 1 | MZZZ0MOT074 |
| 6 | BATTARY | 3.7V X 2-lithium ion-1030 mA | 1 | MLOB0ELE004 |
| 7 | DC MOTOR | K22-0053-NB2419D1 | 2 | MZZZ0MOT073 |

NOISE FILTER

1-3
1-4

POWER S/W
1-1
1-2
1-5

AC INLET
AC IN
FUSE

AC TERMINAL

2-4
2-2
2-1
2-3

UP S/W
DOWN S/W
LEFT S/W
RIGHT S/W
10-2
JOYSTICK

5V SMPS2
AC / AC / FG / 5V / GND

12V SMPS2
AC / AC / FG / 12V / GND

5V SMPS1
AC / AC / FG / 5V / GND

12V SMPS1
AC / AC / FG / 12V / GND

TIKCET BUTTON

7-2
TICKET

15-1

16-2  UP HOLE S/W
16-1  DOWN HOLE S/W
16-1  RIGHT HOLE S/W
16-1  LEFT HOLE S/W
16-3  ELEVATOR S/W
16-2  BALLCHECK S/W

7-1
6-1

COIN 1
COIN 2
6-2

JACKPOT SCORE LED
11-1  11-2

BUTTON
10-3
9-1

TICKET DUAL CN9
1P LIMIT SW CN10
CARD CN8
TILT CN14
BILL CN15
COIN CN11
STEP CN25
EX OUT_5V&12V CN17
COUNTER&SETUP_BTN CN18

START BTN & LAMP CN6
GND / U SW / R SW / D SW / L SW / U LAMP / R LAMP / D LAMP / L LAMP / 12V / 12V

10-1

IR ENCODER2 CN4
GND / IR SEN3 / IR ON2 / 5V / GND / IR SEN2 / IR SEN1 / IR ON1 / 5V

IR ENCODER1 CN7
GND / IR SEN3 / IR ON2 / 5V / GND / IR SEN2 / IR SEN1 / IR ON1 / 5V

13-1

MOTOR CN24
ELEVAT M- / ELEVAT M+ / WHEEL M- / WHEEL M+

14-1

MOTOR POWER CN32
GND / 12V

3-2

MAIN POWER CN31
5V / GND / 12V

3-1

AC_BILL&MOT CN16
CAN CN3

SOUND ROM
TOP CPU

SERIAL1 CN2
SERIAL2 CN1
TXD / RXD / GND

23-1

EX IN CN19

SETUP_LCD CN20
GND / BT6 / BT5 / BT4 / BT3 / BT2 / BT1 / TX / RX / GND / 5V

8-1

SETUP_FND CN21
GND / GND / LED STB / LED SCK / LED SDAT / 5V / 5V

17-1  17-2

CREDIT FND

WIRELESS MODULE

COM JP2
IO POWER J1
TXD / RXD / GND
GND / 5V / GND / 5V

12V OUT BILLBOARD LED & ELETRONIC PANEL
4-1  5-2
22-1
3-3
FRONT LOWER LED
5-1  3-4

VOLUME CN29
AGND / INV2 / SPK R / SPK L

SPEAKER CN30
SPK R / AGND / AGND / SPK L

12-1

FND_CONTROL CN12
GND / GND / FND STB / FND SCK / FND SDAT / 5V

LED_CONTROL CN16
GND / GND / LED STB / LED SDAT / LED SCK / 5V

LCD
COIN
TICKET
SERVICE
VR
CONTROL PANEL

9-2
8-2  9-2  12-2

11-1  11-2  11-3

WHEEL ENCODER
ELEVATOR ENCODER
SPEAKER
SPEAKER
WHEEL MOTOR
ELEVATOR MOTOR

14-2
20-1  LED_CONTROL
18-1  FND_CONTROL

JACKPOT LED

19-3

19-2

TIME

19-1

SCORE

TOP SCORE

19-1

TICKET

19-1

19-1

18-3

BALL OUT LED

18-4

FND_CONTROL

LED_CONTROL

12V OUT BILLBOARD LED & ELETRONIC PANEL

4-1  5-2

5-3

5-3

BILLBOARD LED

**DISPLAY_COPY**

| JP3 DISPLAY1 | | JP4 DISPLAY2 | |
|---|---|---|---|
| 12V | | 12V | |
| 12V | | 12V | |
| 5V | | 5V | |
| 5V | | 5V | |
| DATA | | DATA | |
| CLOCK | | CLOCK | |
| STROBE | | STROBE | |
| GND | | GND | |
| GND | | GND | |
| GND | | GND | |

| JP1 INPUT | J3 POWER |
|---|---|
| GND GND STROBE CLOCK DATA 5V 12V 12V | 5V GND 12V 5V GND 12V |

18-1

4-2

ELECTRO INC PANEL LED

ELECTRO INC PANEL

20-2

20-1

| | A | | B | MARK | DATE | REVISION | DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|---|---|---|---|---|---|---|

POWER
BOARD

BLDC

GND 12V

24-1

MT R CON
MT R
12V
GND

1 2 3 4 5

MOTOR
RIGHT

GND
12V

2 1

POWER

GND
SER MT+
TX
RX

1 2 3 4

SERVO
MOTOR

MOTOR
LEFT

5 4 3 2 1

GND
12V
MT L
MT L CON

BATTERY

1 2

BATTERY+
GND

OFF
12V
ON

1 2 3

POWER
SW

BLDC

BATTERY

RIGHT
ARM

BODY
SERVO

LEFT
ARM
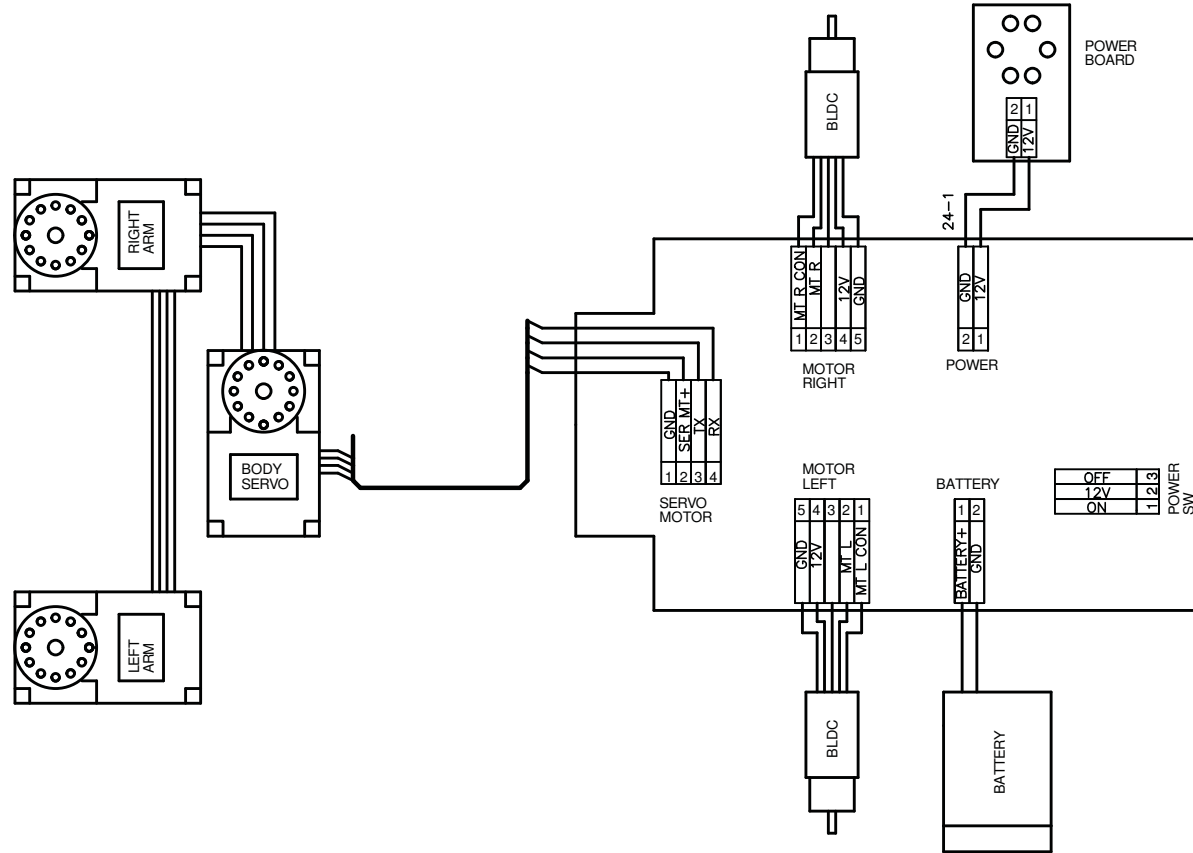
| DRAWN BY | CHECKED BY | APPROVED BY | ITEM | 131002 |
|---|---|---|---|---|
| CHO.Y.Y | | | NAME | LOBSBOT_HOLIC |
| | | | DWG. NO. | ROBOT |
| ANDAMIRO | | | CODE. NO. | |
| | | | DATE | |

Homepage http://www.andamiro.com/

**ANDAMIRO**®