

Marubot Football League (4 players)

Instruction Manual



Important

- ▶ Please read the manual carefully before using this machine.
- ▶ Keep this manual for your reference at anytime.

★ Specifications including design and color are subjected to change without notice.



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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 prevent other people's injuries and property damages.

Be sure to read the following

People's injuries and property damages.

- The following suggestions show the degree of danger and damage caused



WARNING

Indicates a situation where disregarding the suggestions could result in death or serious injury.



CAUTION

Indicates a situation where disregarding the suggestions could result in injury or product damage.

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



Indicates a matter of which care should be taken.



Indicates a matter which is forbidden.



Indicates a matter which should be performed without fail.

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

In this instruction manual, some 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 qualified in-shop maintenance person must have experience in maintaining amusement machines. Under the supervision of an amusement machines shop owner or manager, he or she routinely assembles, installs, inspects and maintains the amusement machines, or replaces their component units and consumable parts, in the amusement machines workshop and/or location.

Jobs handled by qualified in-shop maintenance person

- Assembling, installing, inspecting and maintaining amusement machines and replacing their component units and consumable parts.

Industry specialist

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

Jobs handled by industry specialist

- Assembling and installing amusement machines and repairing and adjusting their electrical, electronic and mechanical component parts.

Setting Up



WARNING

Be sure to consult your nearest dealer 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. Doing so could result in injury or product damage.
- 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, use caution not to apply undue force to opening and closing parts and other movable parts. Otherwise, injury and accident may result, or the product may be damaged.

This product is an indoor game machine. Never set the game machine up outside.

- Setting this product up outside could result in accidents or equipment damages.

Do not set the game machine up near emergency exits.

- Doing so could block exits in time of emergency and could result in death or serious injury.

Do not set the game machine up.

1. In a place exposed to rain or moisture.
 2. In a place exposed to direct sunlight.
 3. In a place exposed to direct heat from air-conditioning and heating equipment, etc..
 4. Near hazardous flammable substance such as thinner and kerosene .
- Otherwise an accident or malfunction may result.

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

- Electrical shock or damage could be caused by water or foreign matter entering the inside of the machine.

Do not place objects near the ventilating holes.

- Doing so could cause the internal temperature to rise excessively, resulting in fire or equipment failure.

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

- Doing so could result in electrical shock or fire.

Never plug or unplug the power cord with wet hands .

- Doing so could result in electrical shock or fire.

Never unplug the game machine by pulling the power cord.

- Doing so could damage the cord, resulting in electrical shock or fire.



CAUTION

Be sure to use indoor wiring for within the specified voltage range.

For extension cord, use indoor wiring of the specified rating or more.

- Failure to do so could result in fire or equipment failure.

Be sure to use the attached power cord.

- Otherwise a fire or machine trouble may result.

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

- Doing so could result in fire or electrical shock.

Do not lay the power cord where people walk through. You may trip on or stumble over the cord.

- You may stumble down and get injured, or damage the power cord.

Be sure to ground this product.

- Otherwise an electrical shock or machine trouble may be caused.

Do not apply a strong force for moving the machine.

- Otherwise, it may result in an accident or breakage of the units.

Clearance of 100 mm (3.94in) or more should be created between the game machine and walls.

- Otherwise the machine (s) cannot be ventilated well, resulting in malfunction.

Do not change the DIP switch setting of this product to other than factory setting.

- Otherwise, the game can not be played properly.

Operating



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 result in electrical shock or fire, so inspect 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 impact to the glass cover.

- Otherwise, it may result in an unexpected accident or injury.

- Please do not play this game if
 1. you have been drinking.
 2. you are tired or sick or have been recently sick.
 3. you think you might be pregnant.
 4. you have a pace maker.
 5. you have previously experienced muscle spasms or loss of consciousness by watching a TV screen.
- This game is designed for one player only. Do not play with 2 or more people.
- When playing, please be aware of your surroundings.

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

- Doing so could result in electrical shock.



In handling the power cord, follow the instructions below.

- Otherwise, fire or electrical shock may result.

- Do not damage the power cord.
- Do not bend the power cord excessively.
- Do not heat the power cord.
- Do not bind the power cord.
- Do not sandwich the power cord.
- Do not modify the power cord.
- Do not twist the power cord.
- Do not pull the power cord.
- Do not stand on 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.

- Using a damaged power cord or power plug could result in fire or electrical shock.

Inspection and cleaning**Moving and transportation****WARNING**

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

- Failure to do so could result in electrical shock.

When replacing parts, be sure to use parts of the correct specifications.

Never use parts other than the specified ones.

- Using improper parts could result in fire or equipment failure.

There is high voltage inside the machine.

Only qualified industry specialist is allowed to open the machine's back door.

With the back door open, be very careful not to touch the monitor and its nearby parts.

- Otherwise an accident or electric shock may result.

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.

- Otherwise, there may be danger an accident or electric shock.

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

- Otherwise, a fire, malfunction or trouble may result. In case of any trouble, ask your nearest dealer for repairs and other services. ANDAMIRO will not resume any responsibility for the damage to the product attributable to 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 or 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**

The game machine contains parts such as electronic components and precision components which are sensitive to vibrations and impacts. Great care therefore should be taken 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 from the machine.

- Stepping on or tripping over the power cord may result in an accident or damage to the machine.

Before moving the machine, be sure to fully lift the four levelers and move it on the casters.

- Otherwise, an accident, breakage or trouble may result.

Do not apply a strong force for moving the machine.

- Otherwise, it may result in an accident or breakage of the units.

**PRECAUTIONS IN HANDLING**

- 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.

1. Introduction

Welcome!

Thank you for purchasing our Marubot Football League game machine. It is brand-new model of the robot game machines that we have developed this category since 2003. The basic techniques under patent pending are stable power supplying method without any power cable or battery and Zigbee wireless communication control system. Our techniques make it possible to operate the robot without any additional countermeasure to play the game once it is launched.

Please read this manual carefully before operating the machine to avoid any trouble from wrong use. Thank you and enjoy with our robots.

- Product design and specifications may be changed without notice in order to enhance product performance.



1.1 Product Information

Name of Game : Marubot Football League (4 Players)

Main Features :

- Game for up to four players
- No additional battery charging or changing and continuous playing game possible
- Joysticks and specially equipped steering make easy robot controlling
- Very stable wireless communication system applied : Zigbee
- Easy new robot replacing function
- Adding dribble function with magnetic holder and unique designed ball
- Adjusting robot speed possible
- Turbo function added for instant fast moving
- Automatic ball supplying function
- Stopper built-in for fixing the machine position
- 4 wheels help easy movement to new location

Specifications :

1) Machine (1 Unit)

- Dimension : 2000 * 1500 * 864 mm (W x D x H)mm
- Weight : 300 kg
- Main Power : AC 220/230V, 50/60Hz (110V : Optional)
- Working Electricity : DC 12V/DC 5V and AC

2) Robot (4 ea)

- Dimension : 135 * 99 * 116 (W x D x H)mm
- Weight : 0.6 Kg
- Power : supplied from the playground directly
- Working Electricity : DC 12V
- * **Only on standby status will charging battery of the robot.**

3) Communication System

- Type : Zigbee Type
- Frequency Range : 2,400~2,483.5MHz
- Transceiver : Single-chip 2.4GHz RF Transceiver
- * **The each module of the machine do not transmit at the same time and same frequency.**

1.2 Components



< Game Machine >
"Stadium"



< Robots >
Red : 2, White : 2



< 2 Balls >



<AC Power Cable : 1>



<Key : 2 sets>
(1 for glass cover , 1 for Main Body)



< Hexagon socket
screw key, 2.5mm : 1 >



< Hand Cleaner : 1>



<Manual>

*** One set of spare parts (for robot) included**



< Power supplying Pin
Total 24 ea (4 robots, each 6 pins) >



<2 Tires>
<screws>



< Snap Ring for Wheel>

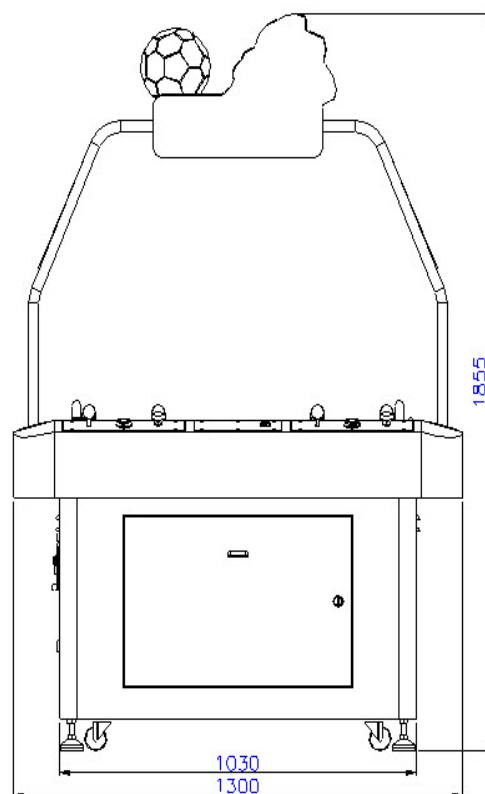
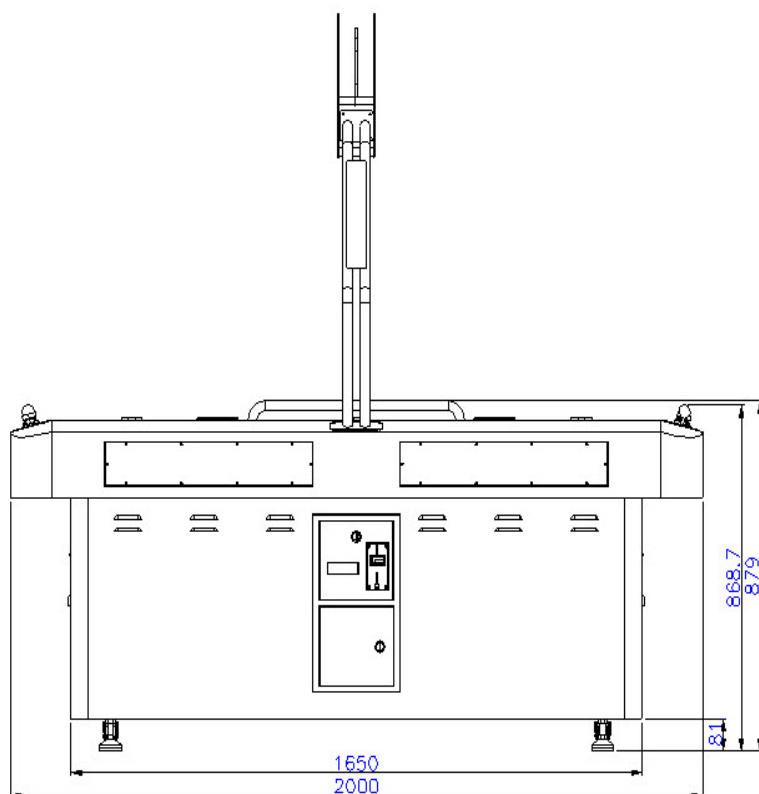
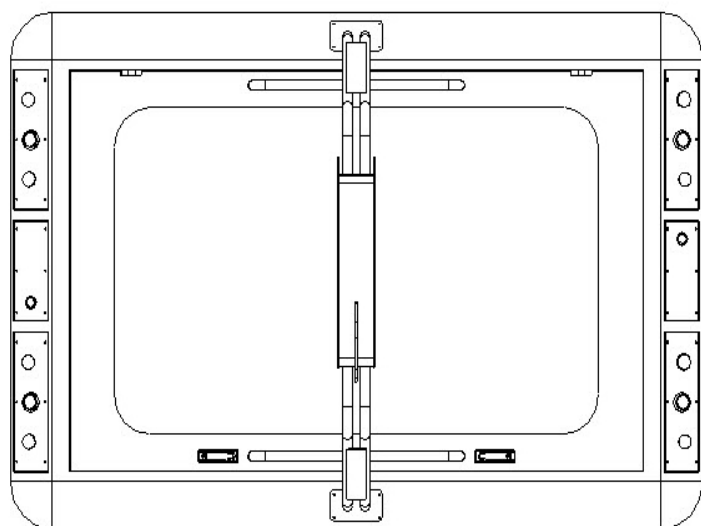


<Magnetic Ball Holder>

1.3 Product Specifications

1.3.1 Machine

- Size : 2000 * 1500 * 864 mm (W x D x H)
- Weight : 300kg
- Power : AC 110/220~230V, 50~60 Hz



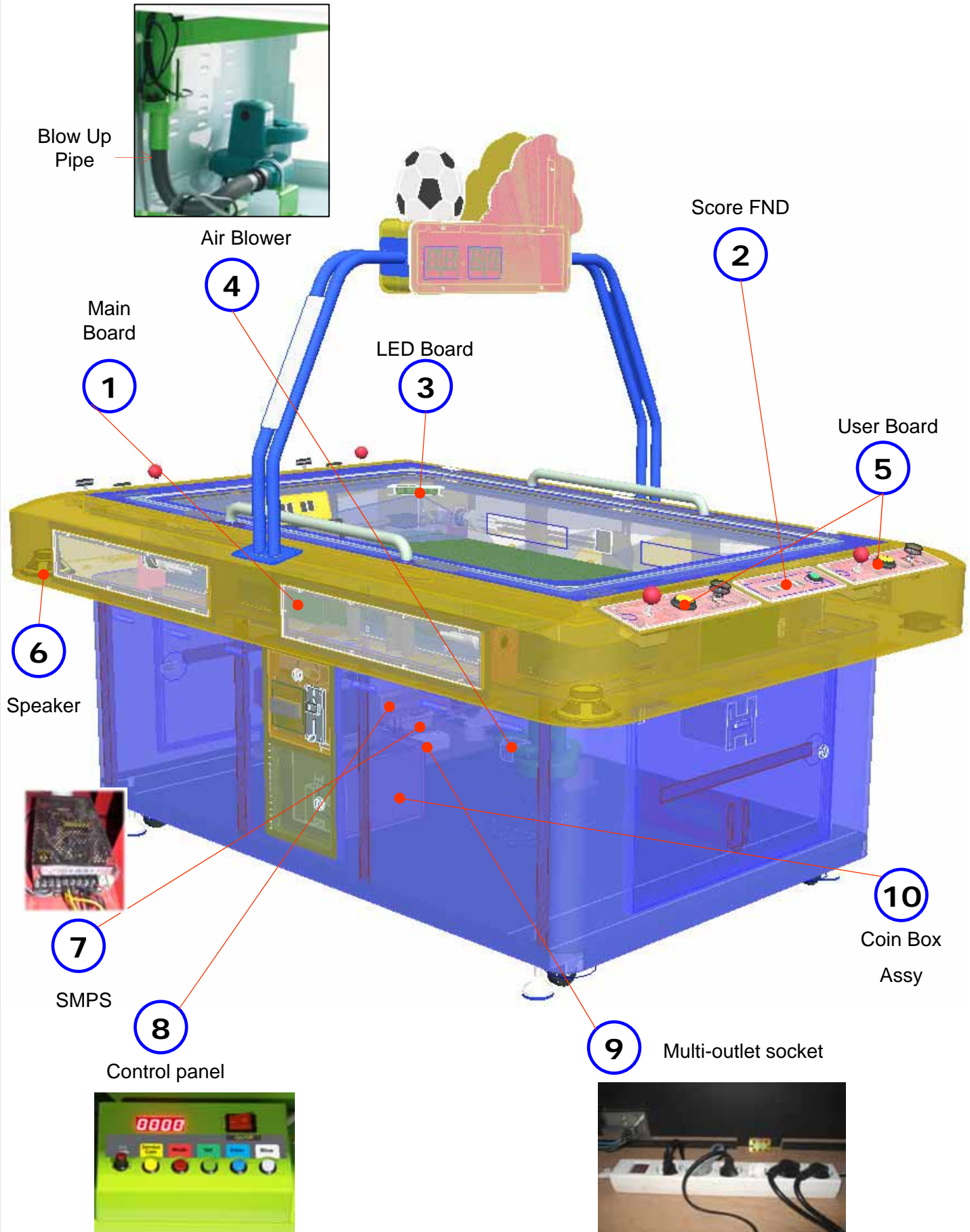
1.3.1.1 Parts Name of the Machine



1) Function of Parts

| No. | Name | Functions |
|-----|-------------------|---|
| ① | Control Part 1, 2 | Joystick, Turbo button, and Steering included. Controls the robot |
| ② | Turbo Button | Increasing robot speed momentarily |
| ③ | Speaker | Speaker |
| ④ | Start Button | Game start button |
| ⑤ | Credit Display | Displays remaining credits |
| ⑥ | Time Display | Displays game time |
| ⑦ | Wheel/Stopper | 4 Wheels for movement and 4 stoppers for positioning |
| ⑧ | Coin Collect Box | Collects coins |
| ⑨ | Coin Selector | Coin inserting hole |
| ⑩ | Score FND | Shows goal scores |
| ⑪ | Glass Cover | Glass cover of upper case |
| ⑫ | Playground | Controls robots on this playground. Mainly power supplying from this board to the robots. |
| ⑬ | LED Lamp | Each LED lamp is located individually at 4 corner |
| ⑭ | Ball Outlet | The ball comes out to the ground through this outlet. |

1.3.1.2 Inner Parts Name of the Machine



1) Function of Inner Parts

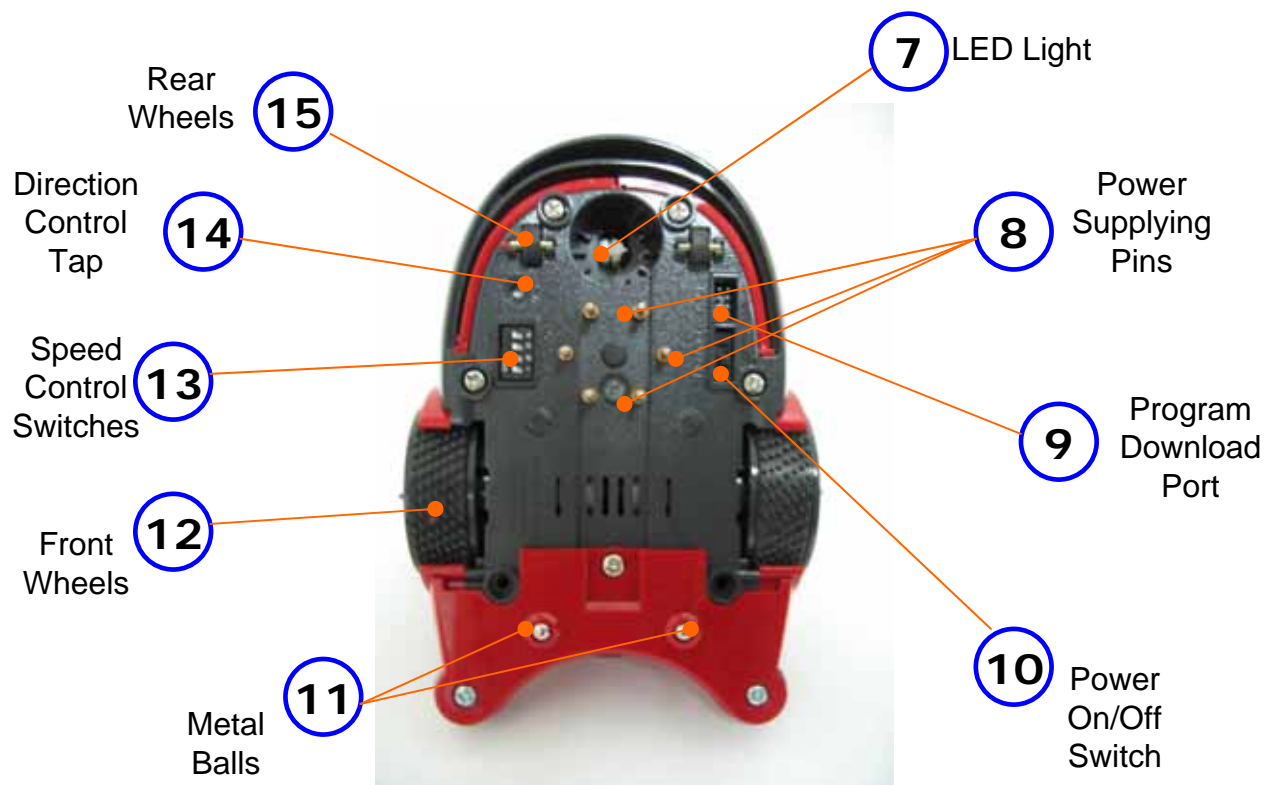
| No. | Name | Functions |
|-----|---------------------|--|
| ① | Main Board | Controls all parts of the machine |
| ② | Score FND | Shows goal scores |
| ③ | LED Board | 4 LED boards in each corner illuminate the playground. |
| ④ | Air Blower | Discharges the ball to the playground with air |
| ⑤ | User Board | Controls joystick, turbo button, steering, start button, and time/credit display |
| ⑥ | Speaker | Speaker |
| ⑦ | SMPS | Converts AC to DC |
| ⑧ | Control Panel | Controls all setting for playing games, coin/credit etc. |
| ⑨ | Multi-outlet Socket | Use for outlets need AC power directly |
| ⑩ | Coin Box Ass'y | Coin selector and coin collect box positioned |

1.3.2 Parts Name of the Robot

- Size : 135 * 99 * 116 mm (W x D x H)
- Weight : 0.6kg
- Power : DC 12V



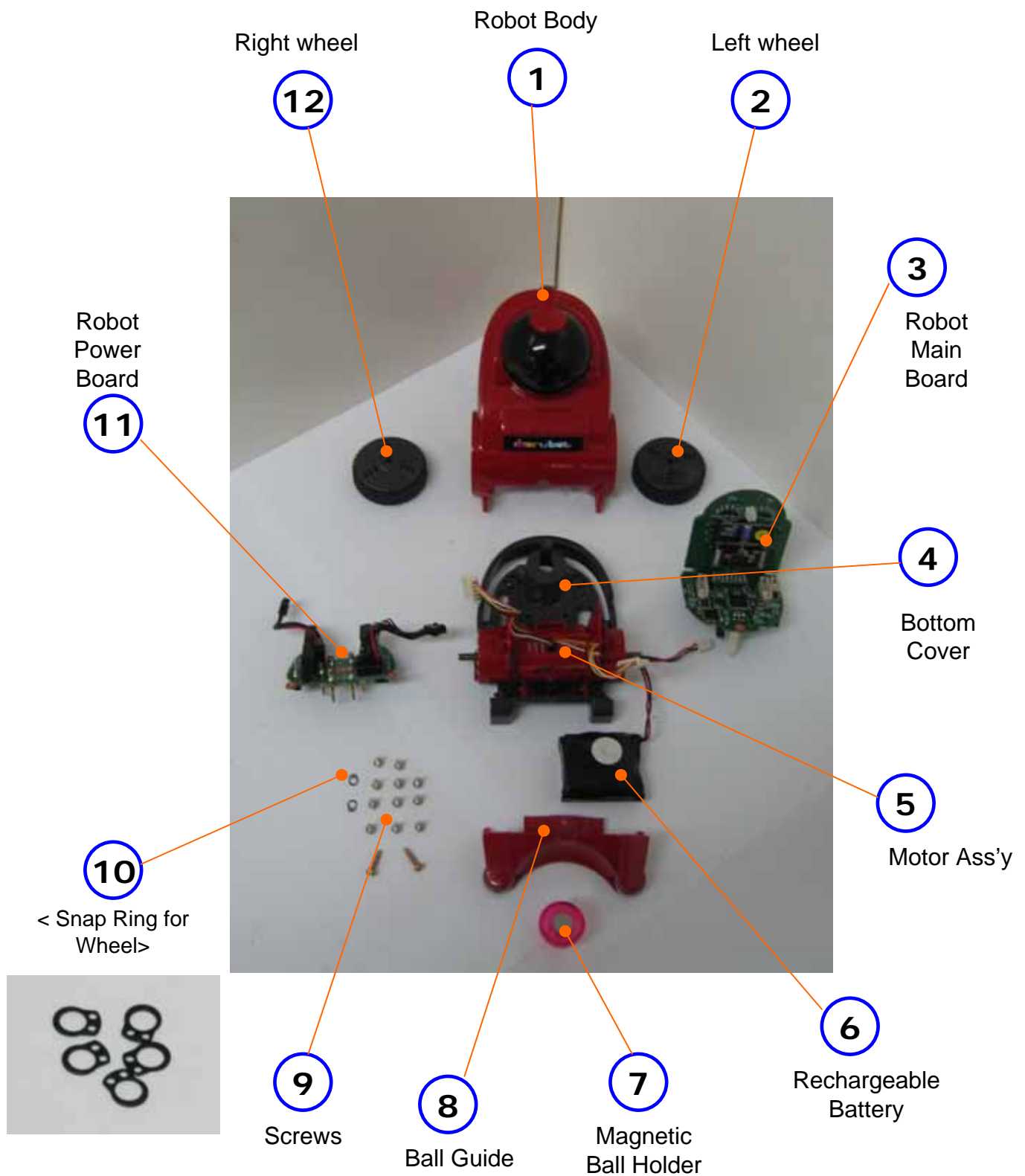
[MARUBOT(game robot)]



1) Function of Parts

| No. | Name | Functions |
|-----|------------------------|---|
| ① | Head Cover | Head cover. Protects inside electric board |
| ② | Body Part | Robot body |
| ③ | Ball Guide | Guides the ball as human feet |
| ④ | Magnetic Ball Holder | Holds the ball to be able to dribble with a magnetic |
| ⑤ | Front Wheel | Front wheel |
| ⑥ | Tire | Rubber tire |
| ⑦ | LED Light | Identifies other robot with different color of the LED light |
| ⑧ | Power Supplying Pins | Main power for the robots flows in through these pins from the power supplying board. |
| ⑨ | Program Download Port | If there is any damage on the program, it can be downloaded with this port. |
| ⑩ | Power On/Off Switch | Power On/Off Switch |
| ⑪ | Metal Balls | Two metal balls help smooth movement of the robot. |
| ⑫ | Front Wheels | Front Wheels |
| ⑬ | Speed Control Switches | Robot speed control switches(Refer to P.21) |
| ⑭ | Direction Control Tap | Controls straightness of the robot in movement |
| ⑮ | Rear Wheels | Rear Wheels |

1.3.2.1 Inner Parts Name of the Robot



2. Installation Instructions

2.1 General Instructions

- 1) Consider to avoid the place such as humid, dusty or any possibility to damage the machine during transportation or storing the machine, otherwise it can be major reason to damage the machine.
- 2) Do not disassemble, repair, or remodeling the machine except authorized expert.
- 3) Avoid direct sunlight or placing the machine beside heating appliances.
- 4) Do not put wet hands or articles on the power supplying board during the power in "On".
- 5) Before cleaning the machine, the power should be "Off". Do not put the water or chemical cleanser inside of the machine and just clean up with dried and soft cloth. Get rid of any wetness.
- 6) Make sure to remove any dust and materials especially metallic articles on the power supplying board,
otherwise it is caused to short the power or create possible burning.

2.2 Installations

- Installation or dismantling should be made by authorized expert. Contact your local dealer if you have any trouble on installation.
- Avoid any shock during transportation or installation.
- Keep the machine horizontally and hold it with stopper under the machine.
- The Z/B signal might be jammed up, if you install more than 2 machines in the same area.(within20m)

1) Location

- Find stable and flat place and avoid wet place.
- Avoid direct sunlight, heat, and the place changes humidity and temperature dramatically.

2) Set up

- All machines must use proper power outlet.
- Please check total amperage when you use an extension line.
- Fix the machine with stoppers under the machine.



3) Installing Robots and Ball

- Open the locks located on the side of cover then pull up the cover.
- Put the robots and ball in the playground.
- ➔ Read page 20, "2.3 Handling the robot" first before put the robots in.
- Then, pull down the cover carefully.
- ➔ Watch you hand when you make it close.
- ➔ Check the playground is clean against any dusts and conductors.



① Lock and Handle



② Open two locks.



③ Full up the handle.



④ Complete stand up the handle



⑤ Pull up with two handles.



⑥ Full up the cover until shock-up out fully.



⑦ Check the playground is clean.



⑧ Pull down the cover.



⑨ Watch out you hand jammed. Return the handle inside and close the locks.

4) Connect a main power cable

- Connect a main power cable on the backside with an outlet.
- Don't treat electricity with wet hand



5) Turn on the main switch

- Open the front door, and turn on the switch located in control panel.



① Open the front door using a key



② Turn on the switch on the control box



Main Power switch

6) Checking the proper workability

- Insert coin and play game to check its workability.
- Set the volume according to the surrounding condition.
- Other functions of control panel are described on page "24"



Volume Controller



Service Coin button

7) Coin or bill selector



Coin module



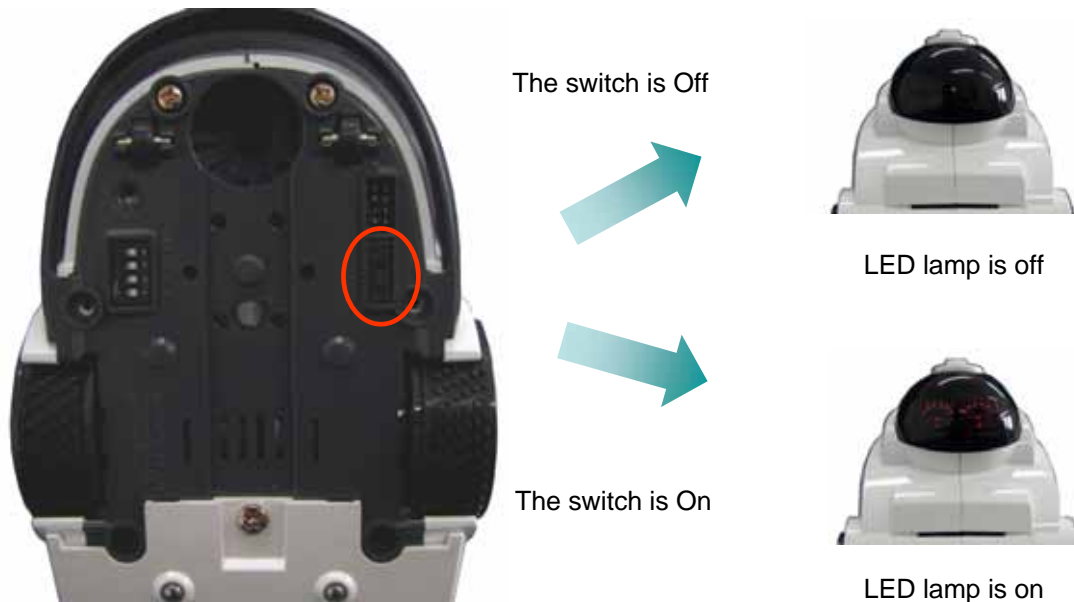
Coin Collect box



2.3 Handling the robot

- 1) Position the power switch to "On" which is located on the bottom of the robot and lay down it on the playground.

♣ Remark : On/Off switch of the robot



- 2) Since very sensitive electronic parts are used for the machine and the robot, avoid any shock.
- 3) It is recommendable to play the game after 1~2 minutes from the power "On" because warm-up is needed to avoid troubles if the machine is not operated in the long time.
- 4) The wheel of the robot can be worn away or changed its shape after long time operated. Check its condition periodically and replace it. If the wheel is cleaned out from time to time, it will drive more smoothly.
- 5) **You have to check the power supplying pins periodically. They are needed to replace immediately when they are run out. (Every 500plays are recommended)**
- 6) In case the storage battery inside of the robot is discharged and the robot is inactive, position the power switch to "On" and place the robot on the power supplying board 1~2 minutes. Make sure that the power of the machine should be "On" and not to play the game until full charged.

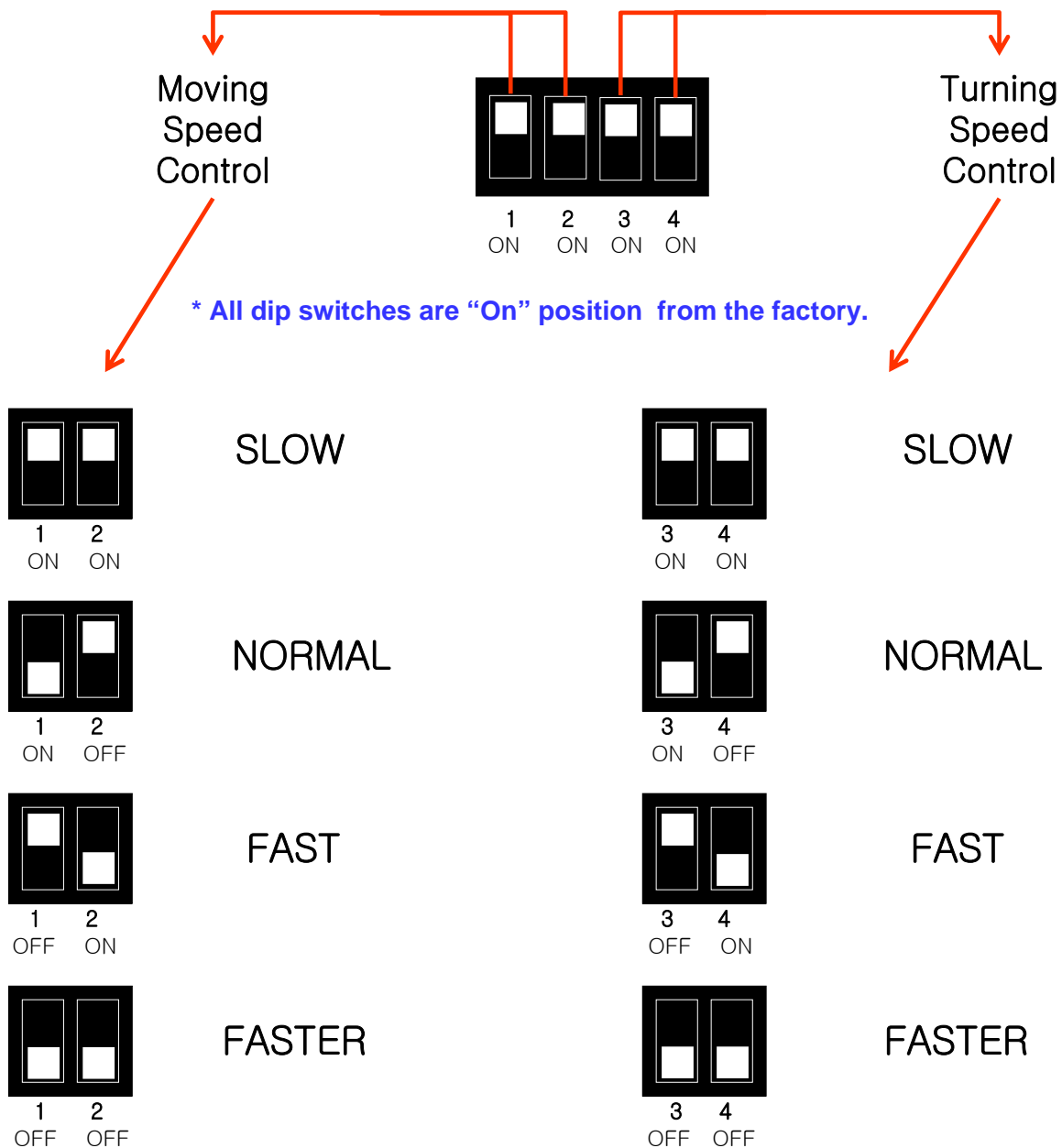


2.4 How to Set Robot Speed.

* The operator can adjust speed of robot.



< The location of Robot Speed Control Dip Switch >



* When setting is finished, the power should be "Off" and "On" again.

3. How to play ?

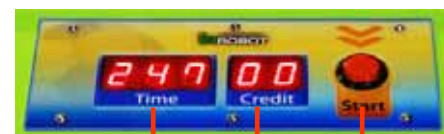
1) Insert designated coin.

- When you insert coin, the start button is lighted on.
- The FND shows Credit number. If one coin permits one credit of game, the FND shows "1".



2) Push the "Start" button on both display panel.

- The both side "Start" buttons must be pushed for starting game.
- The light of "Start " button turns off when the game is started.
- Even if player doesn't push the start button, the game starts automatically after 10 seconds. During this period each player can find own robot and check its movement.
- The LED lamps around the playground are turn in white.
- There will be "Whistle" sound when the game is started.
- "Time" FND shows remaining game time.
- The Operator can adjust the game time per credit.
- Default game time is 3 minutes.



Time Credit Start Button

(Refer to P. 26 & 27)

3) Control the robot using joystick and steering.

- Joystick control

- push up : Move forward
- Pull down : Move backward

- Steering control

- Turn left : Turn to left
- Turn right : Turn to right

- Turbo Button

The robot will move faster in a moment when pushing the turbo button.

- Only push turbo button : The Robot will move forward faster at present location
- Push turbo button with Joystick control : move forward faster, move backward faster
- Push turbo button with Steering control : turning faster to left, turning faster to right



Joystick Turbo Button Steering

4) Robot function

- Dribble : The player can hold the ball and dribble with magnetic holder on the front of the robot.
- Battle : Beat other player when you want to intercept the ball. The body of robot is strong enough
- Ceremony : The robot does ceremony when you make a goal or win the game.
- Face expression : The face expression change occasionally.(refer to P.23)

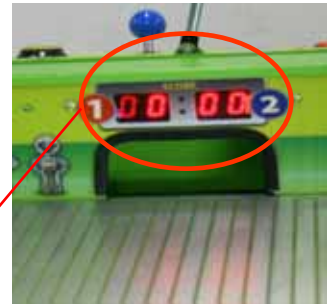
5) After making a goal

- After making a goal, the ball will be on the floor automatically by the air blow system built-in.



- Number of goal will be shown on the score FND display.
- The team who make a goal, their robots will do goal ceremony.
- The team who lose a goal, their robots will show sad expression.

Score FND



- ♣ Face expressions of the robot are changing according to the situations.



6) The game is over after designated time is passed.

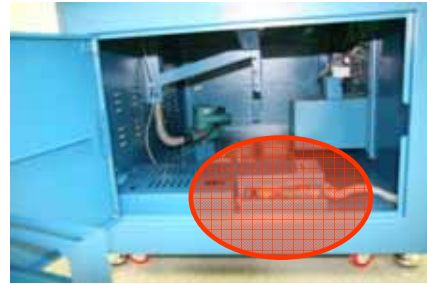
(The game time is set as 3 minutes from the factory.)

- After the game is over, both teams will do goal ceremony.

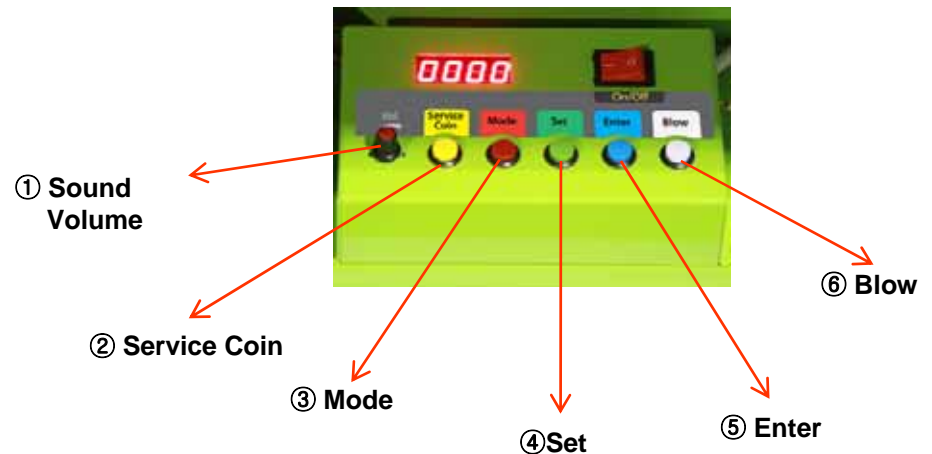
4. Game Setting

4.1 Control panel

The Control panel is located inside of the door.



Open a lock with a key.



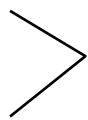
4.2 ① Sound Volume

The sound can be controlled lower and higher.

4.3 ② Service Coin

To play the game free of charge as a service, push the service coin button. The number of credit will be increased by 1.

③ Mode
④ Set
⑤ Enter



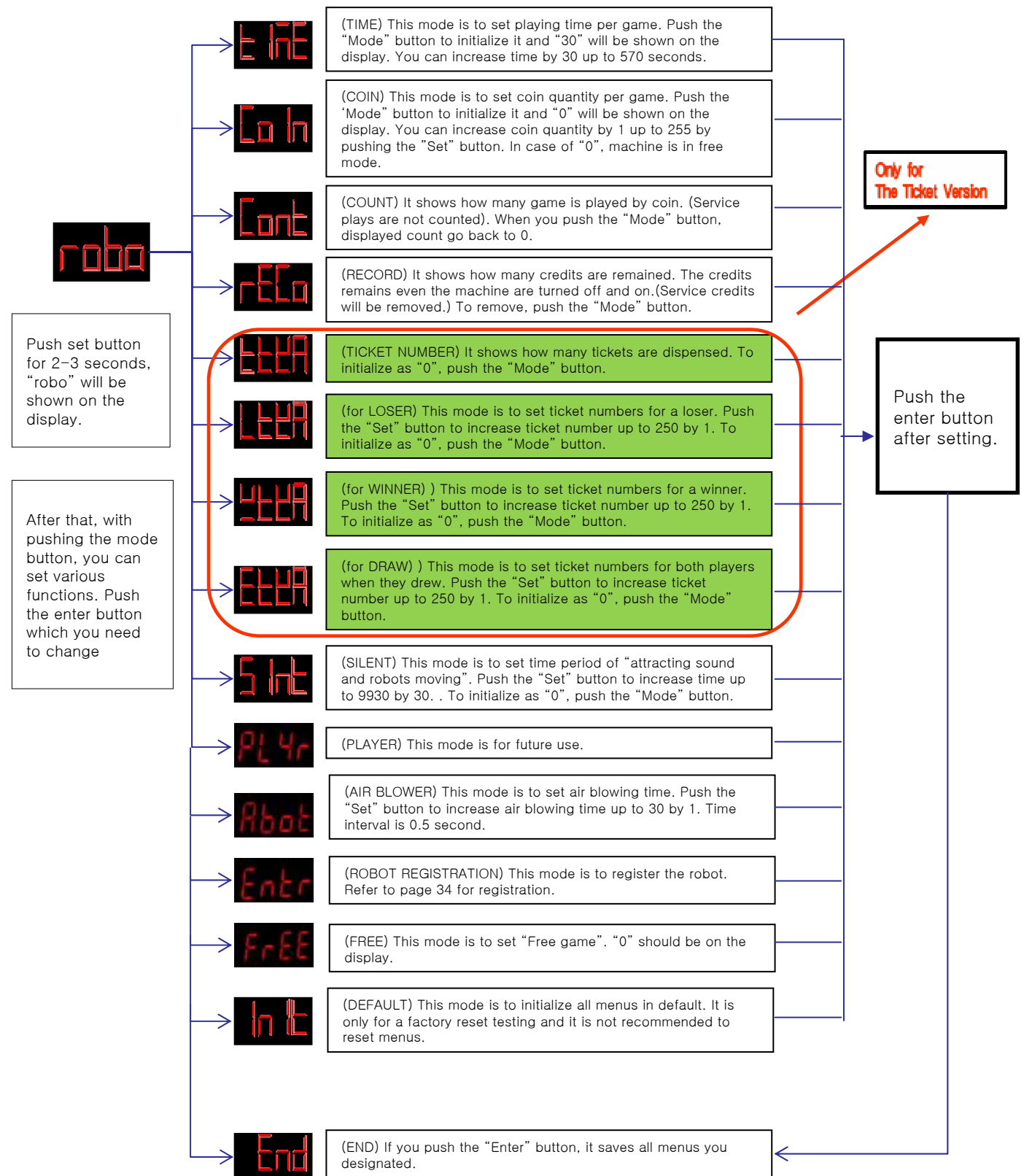
(Refer to P.25)

4.4 ⑥ Blow Button

In case of the ball does not come out, push the blow button.



4.5 Mode, Set, and Enter Button

You can set time, coin, count, and credit by using these buttons.



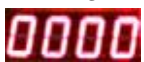
4.5.1 Coin Setting



Set the coin number for a game

“Set” button (Push 2~3 Sec),  shows. → Push “Mode” button (1 time),  shows.

→ Push “Enter” button and display shows  → Push “Set” button to put the number.

The number will be increased by 1 up to . If you want to change the number or



decrease it, push the “Mode” button and then the display shows  and you can put new number again with “Set” button.

→ After setting the number, push “Enter” button and display shows . → Push the “Enter” button again and display shows . The setting is done.

* When set up the coin number , play the game at free charge.
(Set up the coin number when play continual game without coin : an exhibition)


4.5.2 Time Setting



Set the playing time for a game (It can be adjusted from 30 to 570 seconds by 30.)

“Set” button(Push 2~3 Sec),  shows. → Push “Mode” button(2 times),  shows.

→ Push “Enter” button and display shows  → Push “Set” button to put the number.



The number will be increased by 30 up to . If you want to change the number or



decrease it, push “Mode” button and the display shows  again and you can put new number again with “Set” button.

→ After setting the number, push “Enter” button and display shows . → Push the “Enter” button again and display shows . The setting is done.

4.5.3 Credit reset

The number of credit goes back to “0”

“Set” button (Push 2~3 Sec),  shows → Push “Mode” button (3 times),  shows.



→ Push “Enter” button and display shows loaded number. For example, if the credit is loaded “2”, It shows  → Push “Mode” button, The count goes back to “0”. 

→ After setting the number, push “Enter” button and display shows . → Push the “Enter” button again and display shows . The reset is done.

4.5.4 Attracting sound time setting


When the game is not playing, to attract the people, sound comes out and robot do ceremony. It can be set time interval of this attracting mode.


It can be adjusted from 0 to 240 by 30. If you set "0", the function does not work.


"Set" button(Push 2~3 Sec),  shows. → Push "Mode" button (9 times),  shows.

→ Push "Enter" button and display shows  → Push "Set" button to put the number.

The number will be increased by 30 up to  . If you want to change the number or

decrease it, push "Mode" button and the display shows  again and you can put new number again with "Set" button.





→ After setting the number, push "Enter" button and display shows  . → Push the


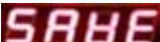
"Enter" button again and display shows  . The setting is done.


4.5.5 Ticket Dispenser Setting

*** Below setting depend on attaching ticket dispenser.**





Tickets for Looser



Push the “Set” button for 2~3 Seconds. Display shows  → Push the “Mode” button 5 times. → The display show  → Push the “Enter” button 1 time → The display shows  or any number set before → Push the “Mode” button → The display will go back to  → Push the “Set” button until the display shown your desired number.

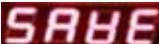
For example, if you want to give 5 tickets to looser, push the set button 5 times only → When you finish setting, push the “Enter” Button → The display will be changed to  → push the “Enter” button again →  will be Shown → The setting is done.

Make sure that it should be saved and final display must shows 

Tickets for Winner

Push the “Set” button for 2~3 Seconds. Display shows  → Push the “Mode” button 6 times. → The display shows  → Push the “Enter” button 1 time → The display will be changed to  or any number set before → Push the “Mode” button → The display will go back to  → Push the “Set” button until the display shown your desired number.





For example, if you want to give 15 tickets to winner, push the set button 15 times only → When you finish setting, push the “Enter” button → The display shows  → push the “Enter” button again →  will be shown → The setting is done.

Make sure that it should be saved and final display must shows 

Tickets for drawing

Push the “Set” button for 2~3 Seconds. Display shows  → Push the “Mode” button 7 times. → The display shows  After that just follow above winner or looser setting procedures.

4.6 Coin Selector

| No | Photos | Setting Up |
|----|---|--|
| 1 |  | Setting Module |
| 2 |  | Pull out the module slowly as shown. |
| 3 |  | Put the coin into the coin setting hole and adjust module width for the coin that you want to use. |
| 4 |  | Push the module into the original position, then setting-up is finished. |

[Note]

The above coin selector shows only general type.

Therefore, If you want to use your own coin, then please discuss with your local dealer. And also if you want to use bill selector or ticket dispenser additionally, please discuss with your local dealer.

5. Cleaning

5.1 Machine

The periodic cleaning helps smooth moving of the robot and its life time.

It needs at least once a month. If it is under dusty condition, it may need once a week

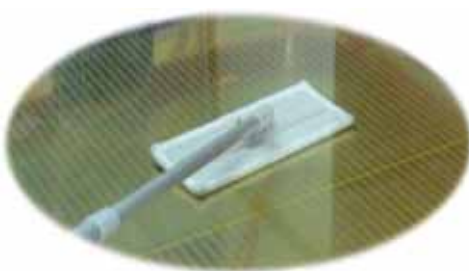
- 1) Turn off the main switch before cleaning.
- 2) Open the cover.
- 3) Clean with the cleaner that we supplied(Strongly recommended).

In any case, if the machine is wet, it needs dry up completely before operating.

- 4) Close the cover

→ Watch you hand when you make it close.

→ Check the playing ground is clean against any dusts and conductors.



Watch out you hand jammed.
Return the handle inside and
close the locks.

5.2 Robots

The robots are also needed periodic cleaning to keep its mobility and lift time.

It needs at least once a month. If it is under dusty condition, it may need once a week

Especially, check whether there is a foreign substance in 6 power supplying pins on the bottom of the robot

6. Trouble shooting

6.1 Power out

The machine is designed to use AC and DC electricity together according to parts specifications. So, if the trouble seems on the power, consider the power source first and fix it as below.

6.1.1 Power Sources

- 1) AC : Main Power, Fluorescent lightings, SMPS, Fans, and Air Blower
- 2) DC : Other Parts

6.1.2 All lights out

In this case, the most problems are on AC power. Check it as below.

- 1) Check the main power on the control panel. (Refer to page 24)
- 2) Check the main power cable between inlet and outlet.
- 3) Check the fuse in the Inlet socket.
- 4) Check the light on the multi outlet.

If the light is off, you need to replace the multi-outlet

6.1.3 Above Light s using AC power are on, but other parts are off.

In this case, the most problems are on DC power and there may be conductors on the playground. If so, it make the short-circuit and fix it as below.

Check the SMPS and if it does not work properly, replace it. If it works, remove conductors as below.

- 1) Turn off the power of the machine.
- 2) Open the Cover.
- 3) Clean the playground and remove the conductors.
- 4) Close the cover.
- 5) Turn on the power of the machine and test it

(When you turn off and on, you have to wait 10-15 seconds for warming up.)

※ If you cannot fix the problem after above treats, call to your local dealer.

6.2 The robot is not moving

A. All Robots are not moving.

- 1) Check the main power is on.
If all powers are on, but robots are still not moving, go to next step.
- 2) Even all powers are on, but FND and LED are out, there are conductors on the playground.

Check point :

- ① Turn off the main power switch on the control panel.
- ② Disconnect the main AC cable.
- ③ Pull up the cover and clean the playground.
(Refer to page 30 C.)
- ④ Check 6 power supplying pins on the bottom of the robot.
- ⑤ Check the condition of power supplying pins.
If they are abnormal condition, it needs to replace.
- ⑥ Turn on the robot and put them on the playground.
- ⑦ Pull down the cover and connect AC cable.
- ⑧ Turn on the main power switch on the control panel.
- ⑨ Try to play game whether it works properly.
- ⑩ If they are still not moving, go to next step.

B. One of two robots is not moving.

- 1) Check the robot power switch is "On" in the bottom of the robot.
- 2) Check the number of the power supplying pin under the robot. It must be six.
- 3) All of six have to have proper tension and tightly fixed.
- 4) If the power supplying pin is missing, broken, or worn out, replace the pin immediately.
Also, it needs to check whether there is a missing or broken pin on the playground.
Make sure to remove it, otherwise it will make short-circuit.
- 5) The robot's LED is out within 10 minutes after putting the robot out from the playground, it may be discharged. Put the robot onto the playground and test it after 1~2 minutes.
- 7) If it's still not working, replace the robot.

※ If you cannot fix the problem after above treats, check the main board and contact your local dealer.

c. The Robot do not go straight

- 1) Check 6 power supplying pins on the bottom of the robot.
check the tension of supplying pin that bottom of a robot
When push 6 pins individually, check supplying pins enter easily
Replace supplying pins that don't enter easily when push them
Disorder supplying pin effects motion of a robot
- 2) Check the motions of robot's wheels
Check when spinning the wheels of robot with hand works well
Check condition of robot's tires.
If the appearance of tire is problem, replace the tire.
(Process of replacing tire refer to page 34)

6.3 The ball does not come out.

Once the ball goes into goal area, the ball move through the guide to the center pipe. And Air Blow System will blow the ball to the playground.

The balls might be jammed at the entrance.



**Push the blow button
on the control panel.**

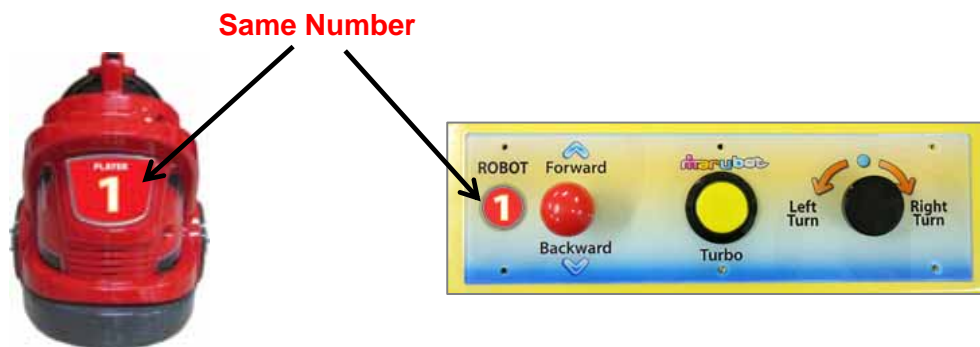
- 1) Try to test with blow button on the control panel in the front door.
- 2) The ball is still not come out :
If there is any elements, particles, or dusts in the goal area or in the guide, the ball will not come out to the ground and it needs to remove them immediately.
- 3) How to remove particles : Use the vacuum cleaner to remove particles in the ground especially in the goal area and remove particles in the guide with hands after opening the door behind the machine.

7. New Robot Replacement

To replace new robot, each new robot ID must be registered to each machine as below.

7-1. New robot ID registration

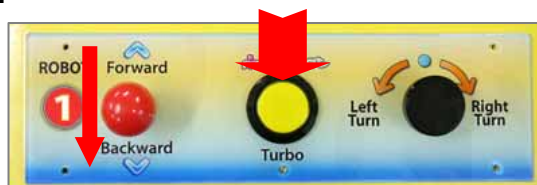
- 1) Before entering the process, check whether the label number(1,2 or A, B) that is stuck on the back of a robot is the same of the number(1,2 or A, B) that is stuck on the Robot Control Board (Joystick, Turbo button, and Steering).



- 2) Turn on the main power switch and open the side door which control panel is positioned.
- 3) Push set button on the control panel for 2-3 seconds, **robo** will be shown in the display.
 - Push "Mode" button 12 times, **Enter** shows.
 - Push "Enter" button, **Good** shows and both "11" scores will be shown on the score display as below.



- 4) When replace new robot, it needs to make new registration. Turn the robot "On" and place the robot on the playfield.
 - ※ Make sure that all other robots must turn "Off", otherwise other robot will be registered with same ID.
- 5) Put down the joystick and push the Turbo Button in the same time and wait for 10 ~ 20 seconds.



6) Registration is finished when robot facial express turn into wink. Since it makes wink only once, fix your eye on the robot face.



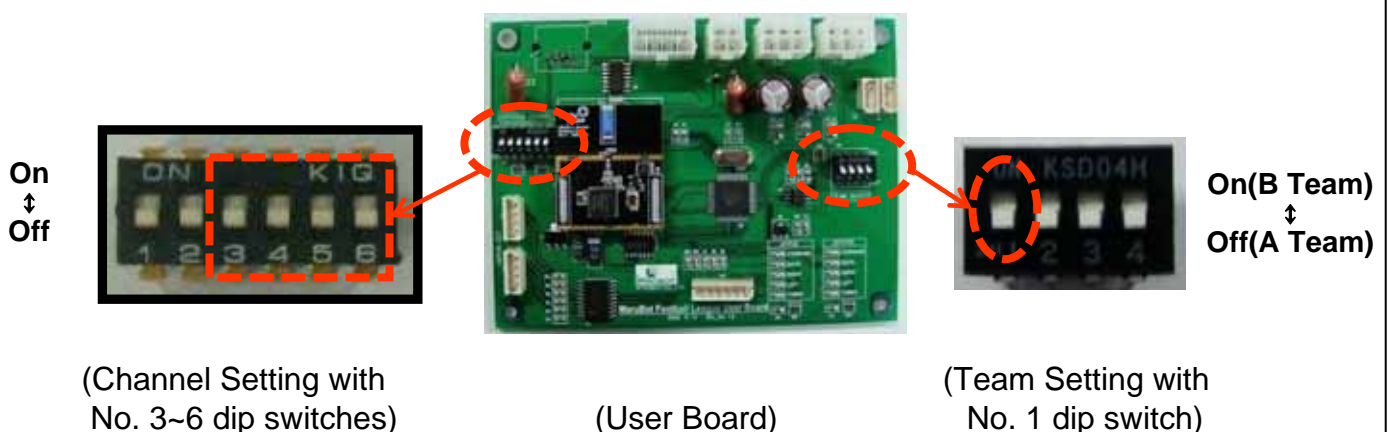
7) in any case, the robot is newly registered, the main power should be “Off” and “On” again.

7.2 Designating the channel using Dip Switches on the user board

Every robot needs to have its own channel to avoid radio wave interference and it also needs to make team designation.

There are 2 dip switches on the user board. One is 6 dip switches and the other is 4 dip switches. 4 dip switches is for team setting, team A and B by using No. 1 dip switch. This switch is “On”, team will be B, white robot.

6 dip switches is for channel setting by using No. 3 to 6 dip switches and choose one channel in the below. Each robot must have different channel.



Channel Index

| 3 | 4 | 5 | 6 | Channel |
|-----|-----|-----|-----|---------|
| OFF | OFF | OFF | OFF | 11 CH |
| OFF | OFF | OFF | ON | 12 CH |
| OFF | OFF | ON | OFF | 13 CH |
| OFF | OFF | ON | ON | 14 CH |
| OFF | ON | OFF | OFF | 15 CH |
| OFF | ON | OFF | ON | 16 CH |
| OFF | ON | ON | OFF | 17 CH |
| OFF | ON | ON | ON | 18 CH |
| ON | OFF | OFF | OFF | 19 CH |
| ON | OFF | OFF | ON | 20 CH |
| ON | OFF | ON | OFF | 21 CH |
| ON | OFF | ON | ON | 22 CH |
| ON | ON | OFF | OFF | 23 CH |
| ON | ON | OFF | ON | 24 CH |
| ON | ON | ON | OFF | 25 CH |
| ON | ON | ON | ON | 26 CH |

* List of robot channels is attached to the door that the control box is located.

8. Parts Replacement

8.1 Robot

8.1.1 Power Supplying Pins

The power supplying pins are key component to get the power from the power supplying board and it is essential to check its state periodically.

If the tip of pin is worn out, it needs to change with new one. (Every 500 plays)

There are 6 extra pins in the package for replacing.



1) Separation of Power Supplying Pins : It is easy to take out the pin by pulling it out. If the pin doesn't pull out by hand, use a long-nose to take out. At this point, use cloth or tissue to cover the pin to protect, then use a long-nose to pull out



1. Before taking out the pin using Long-nose, cover the pin by cloth or tissue



2. Pull out the pin using Long-nose easily



2) Power Supplying Pins Set Up : Pushing in new pin with hand until it stops moving in. Make sure that height of all 6 pins should be the same.



8.1.2 Tires

- 1) Disentangle the snap ring with a snap ring pliers or a pinsette and disassemble the wheel.

A Snap ring Pliers



A Pincette



- (2) Remove the damaged tire on the wheel and set new tire.



8.1.3 Magnetic Ball Holder

How to change Magnetic Ball Holder in front of a robot when it damages



1. Use(+) driver, loosen the screw.



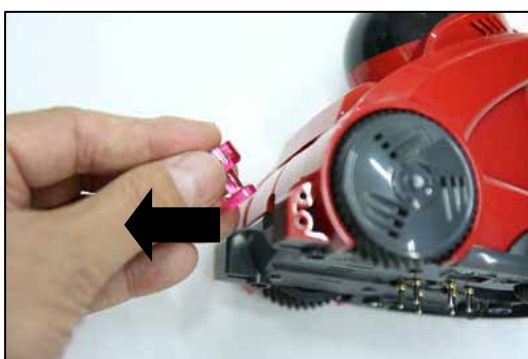
2. Separate the ball guide Carefully.



3. After separating the ball guide



4. Lift the Magnetic ball holder.



5. Lifting the magnetic ball holder, pull it out to the front.



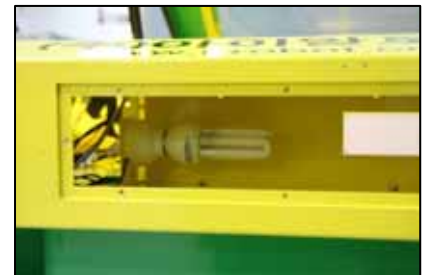
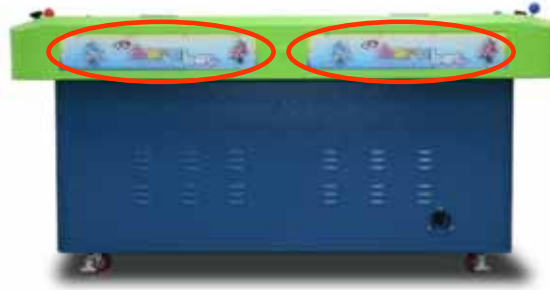
6. The shape after separating a magnetic ball holder from the robot

* Replace the Magnetic Ball Holder in reverse way.

8.2 Machine

8.2.1 Lights

4 fluorescent lamps are located in acrylic covers of each side.



2. Uncover the acrylic panel then you can find a compact fluorescent lamp

*** You must power off the machine before replacement.**

1. Open the Acrylic Cover with the hexagon socket screw key, 2.5".



3. Turn a light bulb to the left.



4. Separate a lamp from body.

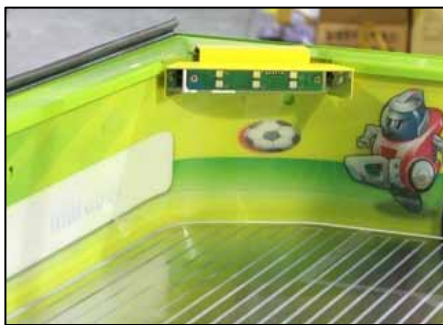
*** Replace the lamp in reverse way.**

8.2.2 LEDs in the each corner of the playground.

* Notice :

You must power off the machine before replacement.

- 1) Pull up the cover and check the LED location. Unscrew 2 bolt s fixing the LED board.
- 2) Replace the LED board in reverse way.



< Disassemble order >

8.2.3 Robot Control Parts (Joystick, Start button, and Steering)

* Notice :

You must power off the machine before replacement.

- 1) Unscrew all bolts fixing the panel, then uncover the part.
- 2) Replace the part in reverse way.



10. Customer Service

If you have questions concerning this product, please contact your local dealer.

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E-mail : sales@irrobot.com

Homepage : www.irrobot.com

FCC Compliance Statement.

**This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions :
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including
interference
that may cause undesired operation.**

Do Not.



**Any changes or modifications to the equipment not expressly
approved by the party
responsible for compliance could void user's authority to operate
the equipment.**

15.105 Federal Communications Commission (FCC) Requirements, Part 15

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.