

Marubot **Football** League (4 players)

User Manual



Important

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



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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 failure.

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 infrared ray 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.



1.1 Product Information

- Game Name : Marubot Football League (4 players)
- Main Features :
 - Using our patented technologies, 4 players control wireless robots one by one in the play ground using the joystick.
 - Football or battle game can be played. Since there is no need additional battery charging, players are able to last enjoying the game.
- Specifications :
 - Dimension : 1750 * 1270 * 850 (W x D x H)mm
 - Weight : 265 kg
 - Power : AC 230V, 50Hz

1.2 Components

All components are in the box on the play ground inside of the cover.



< Game Playing Machine >
"Stadium"



< 4 Robots >



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



< 2 Balls >

<AC Power Cable 1>

<Key : 2 kinds (1for cover and case, 1 for coin box)>

<Manual>



< 1Cleaner >

2. Cautions for operation of the machine

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 machine.
- 4) Do not put wet hands or articles on the power supplying board once 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 towel. Get rid of any wetness.
- 6) Make sure to remove any dust and especially metallic articles on the power supplying board, otherwise it is caused to short the power or create possible burning.

2.2 Installation

- Installation or dismantling should be made by authorized expert. Contact your local dealer if you have any trouble on the machine.
- Avoid any shock during transportation or installation.
- Keep the machine horizontally and hold it with stopper provided.

1) Location

- Find stable and flat place. Avoid moisture place.
- Avoid a direct light, heat, and the place changes humidity and temperature dramatically.
- All machines must use proper power outlet.
- Please check total amperage when you use an extension line.

2) Set up

- Fix the machine with stoppers under the machine.



3) Setting Robot and ball

- Open the chemlok located on the cover then pull up the cover.



- Put the robots and ball in the playing ground.
→ Read page 12, “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 playing ground is clean against conductors.



4) Connect a main power cable

- Connect a main power cable AC input on the backside with an outlet.



5) Turn on the main Switch

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



6) Check the proper working

- Insert coin and play game to work properly.

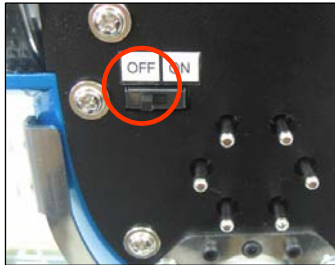
7) If you see the right side of control panel, you can find coin box.



2.3 Handling the robot

- 1) Position the power switch to "On" which is located on the lower side of the robot and lay down it on the power supplying board.

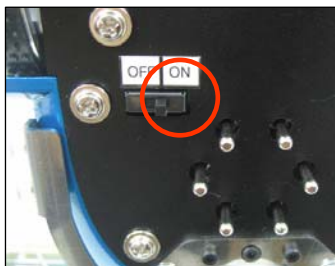
♣ Remark : On/Off switch of the robot



The switch is Off



LED lamp is out



The switch is On

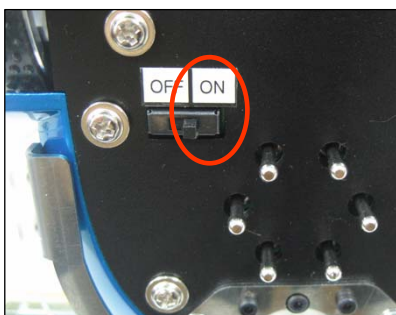


LED lamp is on

- 2) Since very sensitive electronic parts are used for the control unit and the robot, avoid any shock.
- 3) It is recommendable to play the game after 20~30 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 the condition of it periodically and replace it if it is not good shape. If the wheel is cleaned out from time to time, it will drive more smoothly.



- 5) In case the storage battery is discharged, the robot is inactive, position the power switch to "On" and place the robot on the power supplying board at least 30 minutes. Make sure that the power of the control unit should be "On" and not to play the game until full charged.



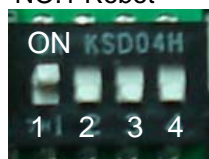
2.4 How to set ID of each robot.

- * ID of robot can be set with dip switches placed on the back of the robot
- * Use a small driver and set ID as blow



< The location of ID S/W >

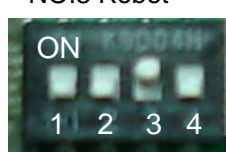
- ① ID Setting of NO.1 Robot



- ② ID Setting of NO.2 Robot



- ③ ID Setting of NO.3 Robot



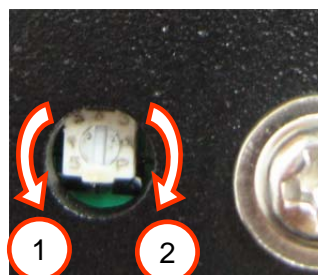
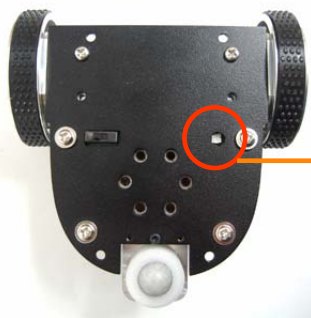
- ④ ID Setting of NO.4 Robot



* When setting is finished, the power should be off and on.

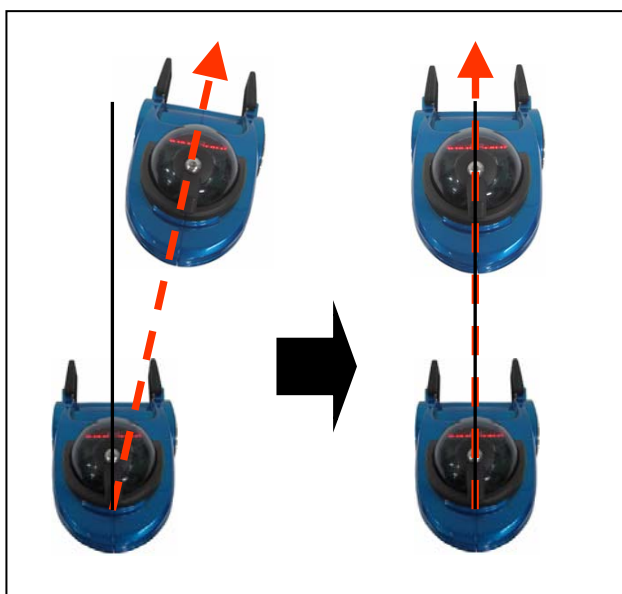
2.5 Adjust the straight control tap

*Adjust the straight control tap in the blow of the robot. Clockwise or count-clockwise.

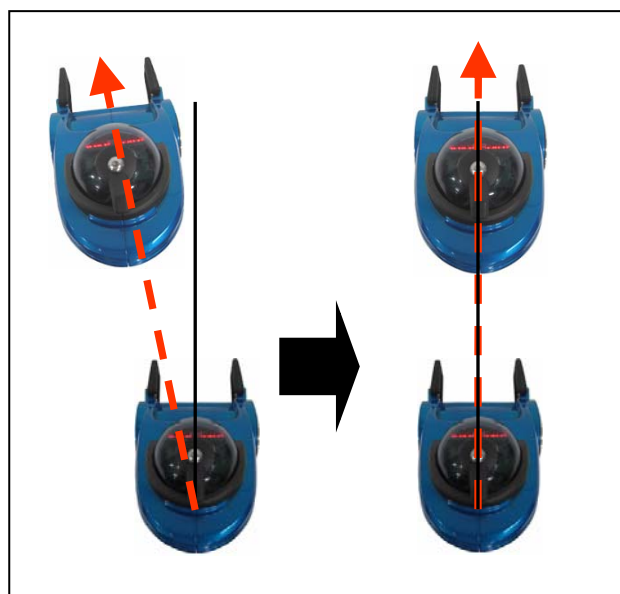


< straight control tap >

- ① count-clockwise.



- ② clockwise



* * When setting is finished, the power should be off and on.

3. How to play ?

① Insert the designated coin

The number is appeared on the “Coin” display panel as how many games can be played.

* Before pushing the start button, try to control your robot for 10 seconds.



② To play, push each start button in the same time.

* The game will be started automatically after 10 seconds even the start button is not pushed.

The number is appeared on the “Time” display panel as possible operating time in seconds. Time for one coin can be set differently by a machine holder.



③ The game will be started with whistle.

Control the robot by using joysticks and the button.

* How to operate the joystick

- Joystick : Pushing it forward, the robot will go forward, pulling it backward, the robot will go backward.
- Steering : Turn it to the left, the robot will go to the left, turn it to the right, the robot will go to the right.



joystick

Turbo
button

Steering

* How to operate the Turbo Button

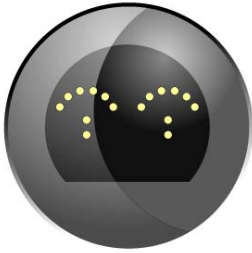
After pushing or pull the joysticks, it presses the button (Turbo button) then the speed of robot comes to be quick.

➔ **The player use Turbo button when the robot is moving.
It doesn't work individually.**

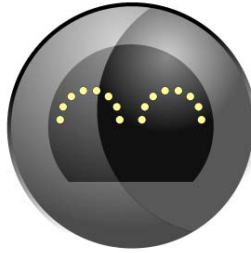
* After making a goal

- After making a goal, the ball will be on the floor automatically by the elevator system built-in.
- Number of goal will be shown on the display.
- The team who make a goal, they will do goal ceremony.
- The team who lose a goal, they will show sad expression.

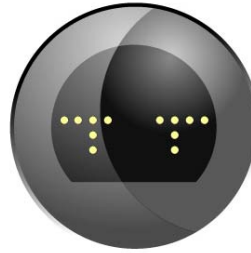
♣ Face expressions of the robot in different situation



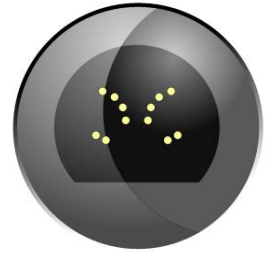
Normal



Make a goal or
Win a game



Lose a goal or
a game



Make a tie goal

④ 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, the winner will do goal ceremony.
- After the game is over, the loser will show sad expression.
- If the game is over in a tie, both teams will do final ceremony.

4. Game Setting

•Control panel

The Control panel is located inside of small door beside of the coin selector.



Open a lock with a key.



Control panel



4.1 Sound Volume

The sound will be bigger to turn the volume switch counter clockwise.

4.2 Service coin

To play the game free of charge, push the service coin button.

4.3 How to set the game time. (It can be set up to 570 from 30 divided by 30 seconds.)

Push the "set" button in a few seconds → "robo" will be shown → Push the "mode" button → "tInE" will be shown → Push the Enter button → "180"(currently setting time) will be shown → Push the "mode" button → "30" will be shown (default) → Select the time to push the "set" button (It will be raised in 30 seconds → Push the Enter button until "end" is shown → "end" will be shown → Push the Enter button



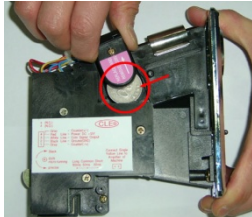

4.4 How to make remain game number as "0"

Starting the game after inserting a coin, the number on the control panel will be raised. Push the "set" button in a few seconds → "robo" will be shown → Push the "mode" button until "Cont" will be shown → "Cont" will be shown → Push the Enter button → "0005"(currently remained game number) will be shown → Push the "mode" button → "0000" will be shown (default number) → Push the Enter button → "end" is shown → Push the Enter button

4.5 How to control the blow button

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

4.7 How to set up 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 to 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 or directly with us in order to confirm how to change. And also if you want to use bill selector or ticket dispenser additionally, please discuss with your local dealer or directly with us as mentioned above.

5. Cleaning

5.1 Stadium

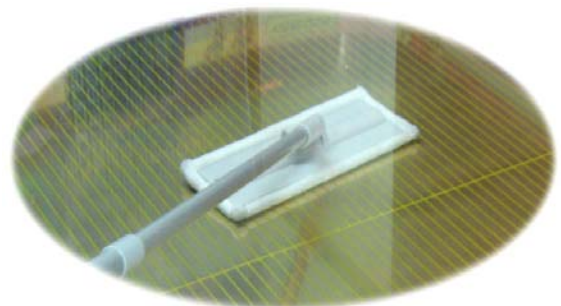
Regular cleaning helps robot's smooth moving and life cycle.

It need at least once a month. If it's under dusty condition, it is needed once a week

- 1) Open the cover
- 2) Clean with the cleaner
- 3) Close the cover

→ Watch you hand when you make it close.

→ Check the playing ground is clean against conductors.



6. Parts replacement

6.1 Robot

1) Exchange of Pins

The power supplying pins are for supplying the power from the power supplying board to the robot.

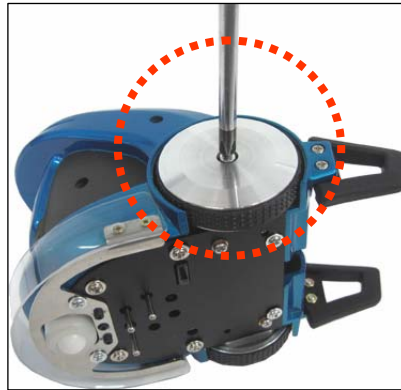
If the tip of pin is worn out, it needs to change with new one.(about three months period) There are 6 extra pins in the package for replacing.

It is easy to take out pin by pulling it and push the pin until the gold color part is not showing when replacing it.

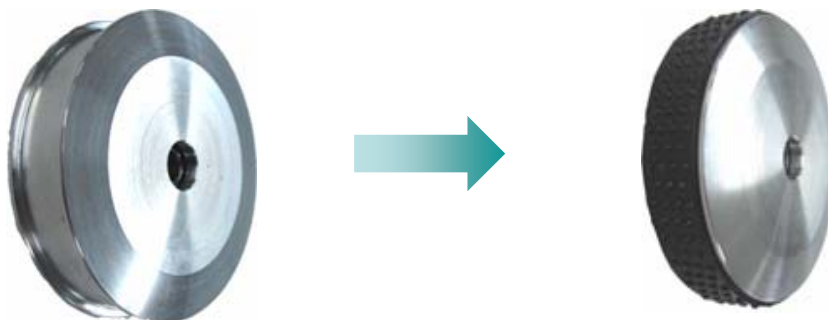


2) Exchange of tire

(1) Disentangle the wheel with a phillips head screwdriver.

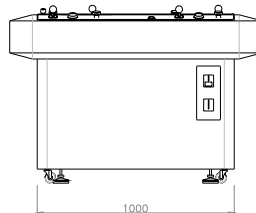
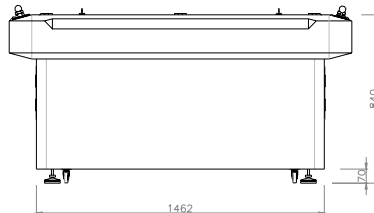
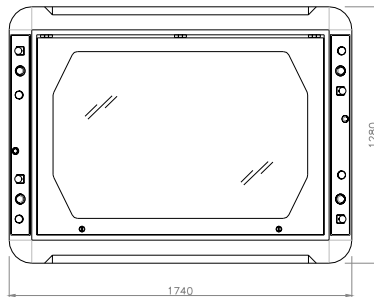


(2) Remove the damaged tire on the wheel and set new tire.

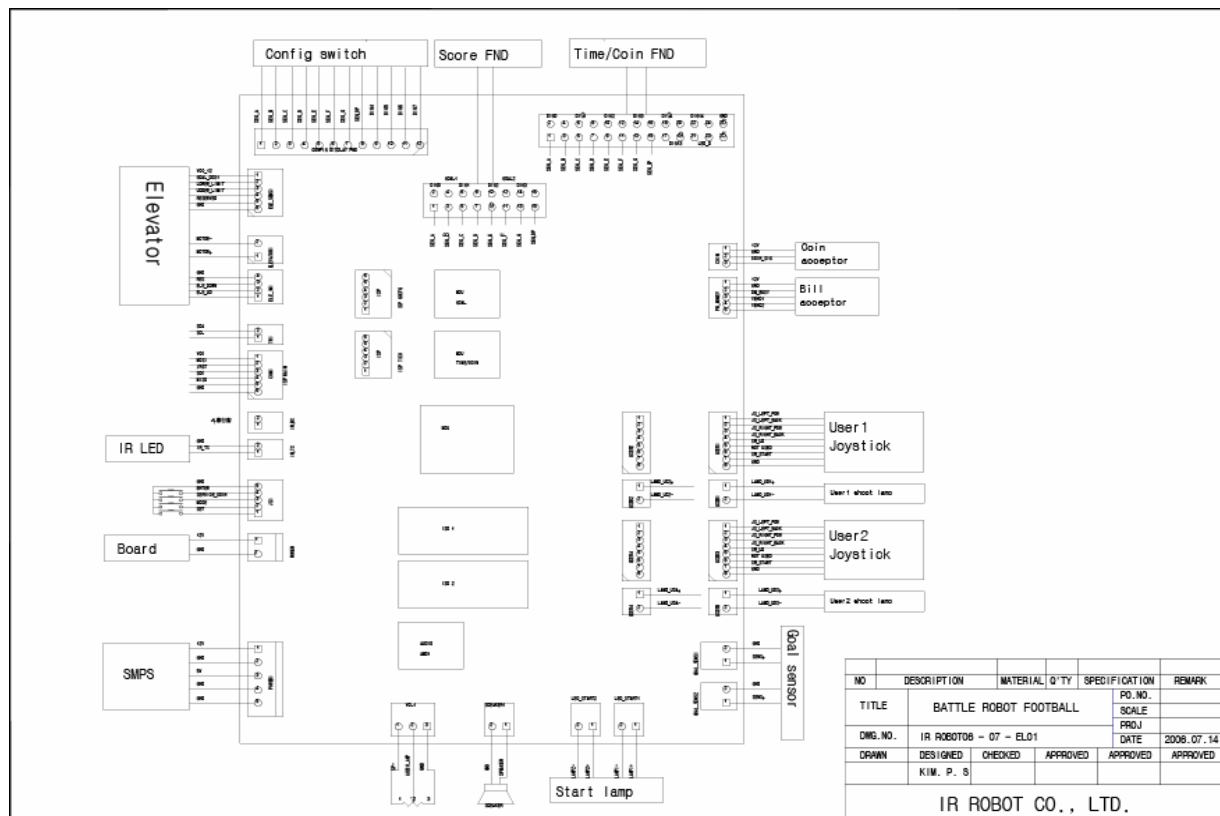


7. Specifications

7.1 Stadium specifications

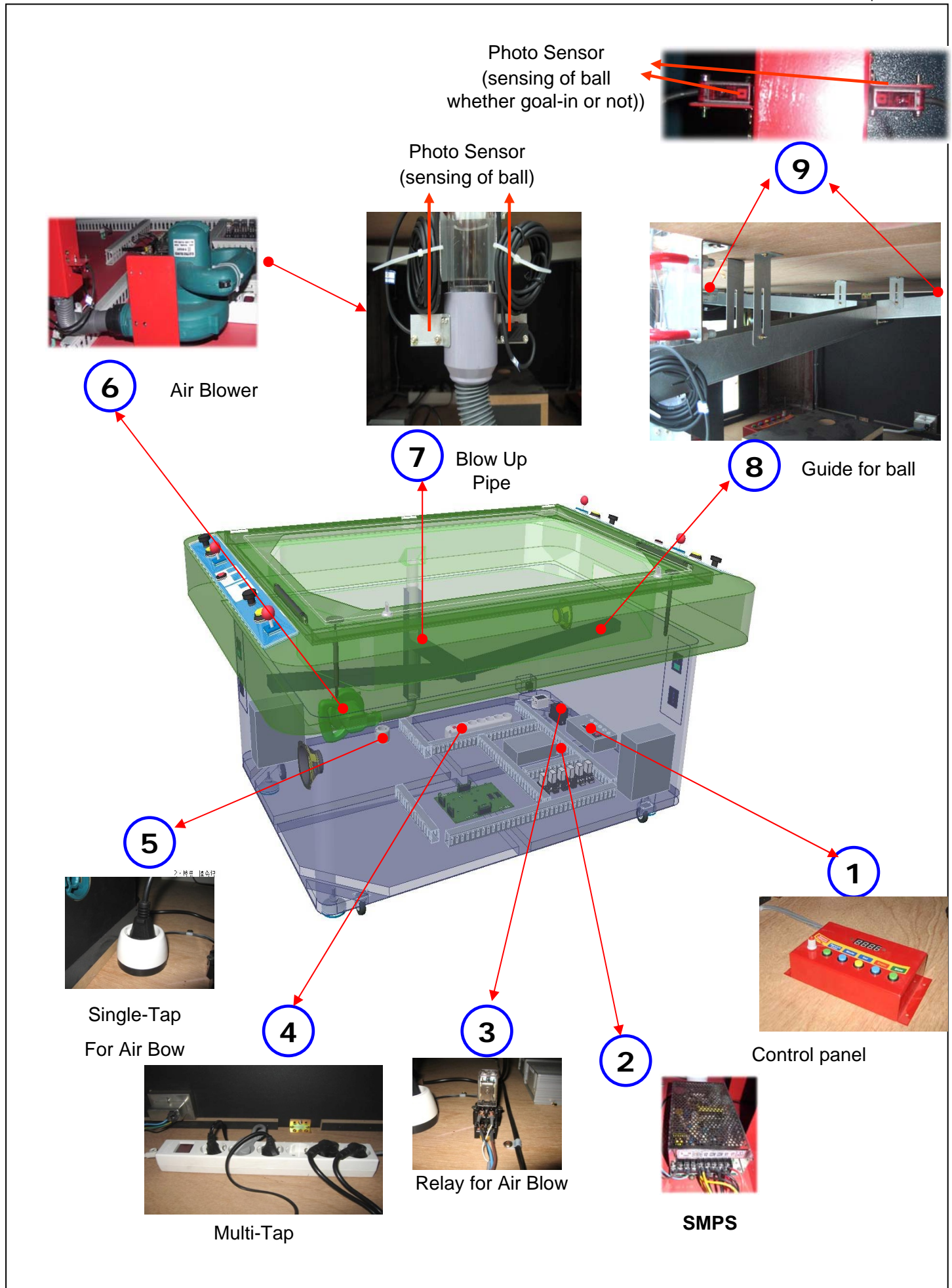


- Weight : 265kg
- Power : AC 110/220V, 50/60Hz

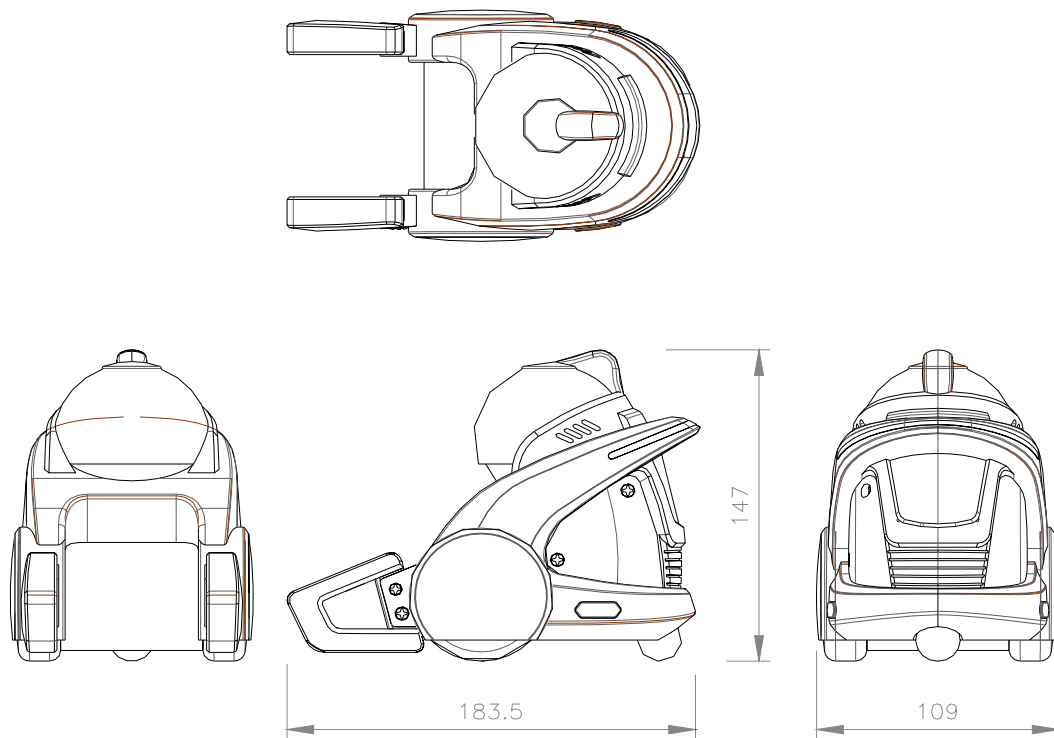


[Circuit diagram]

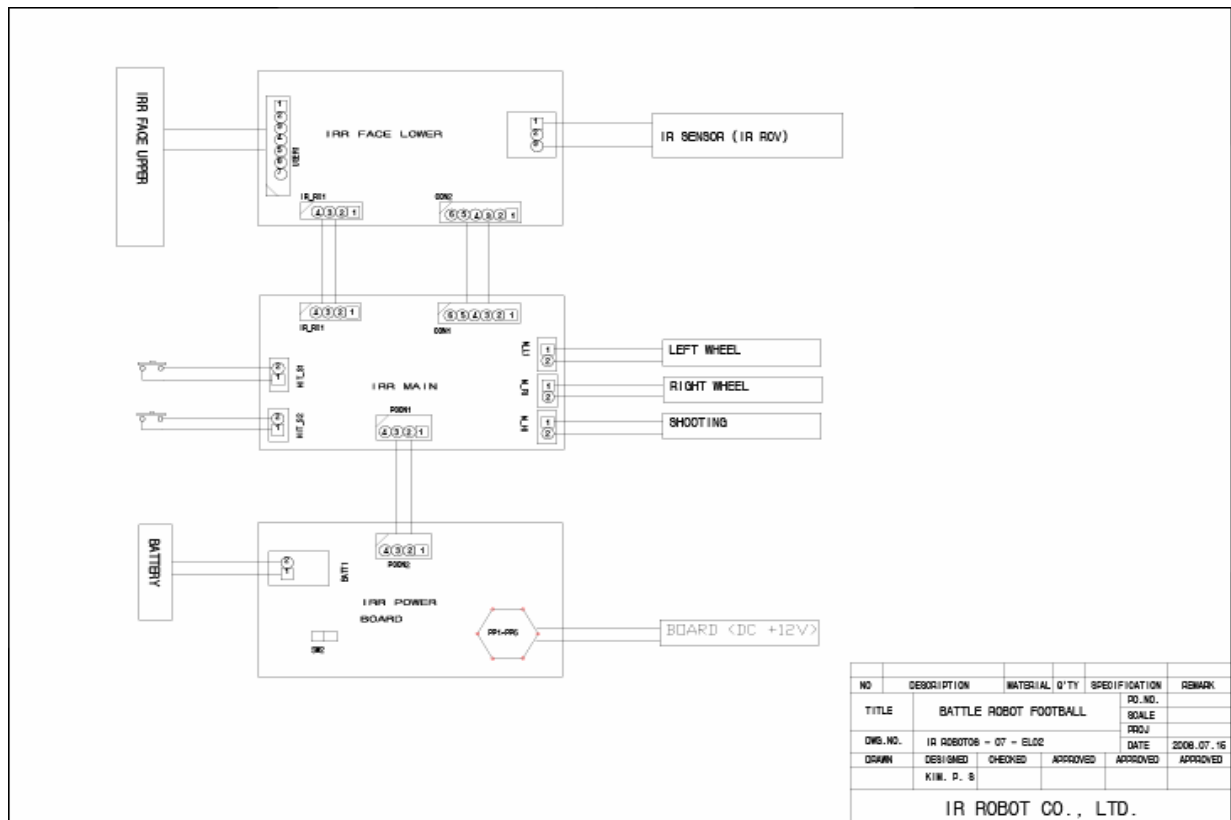




7.2 Robot specifications

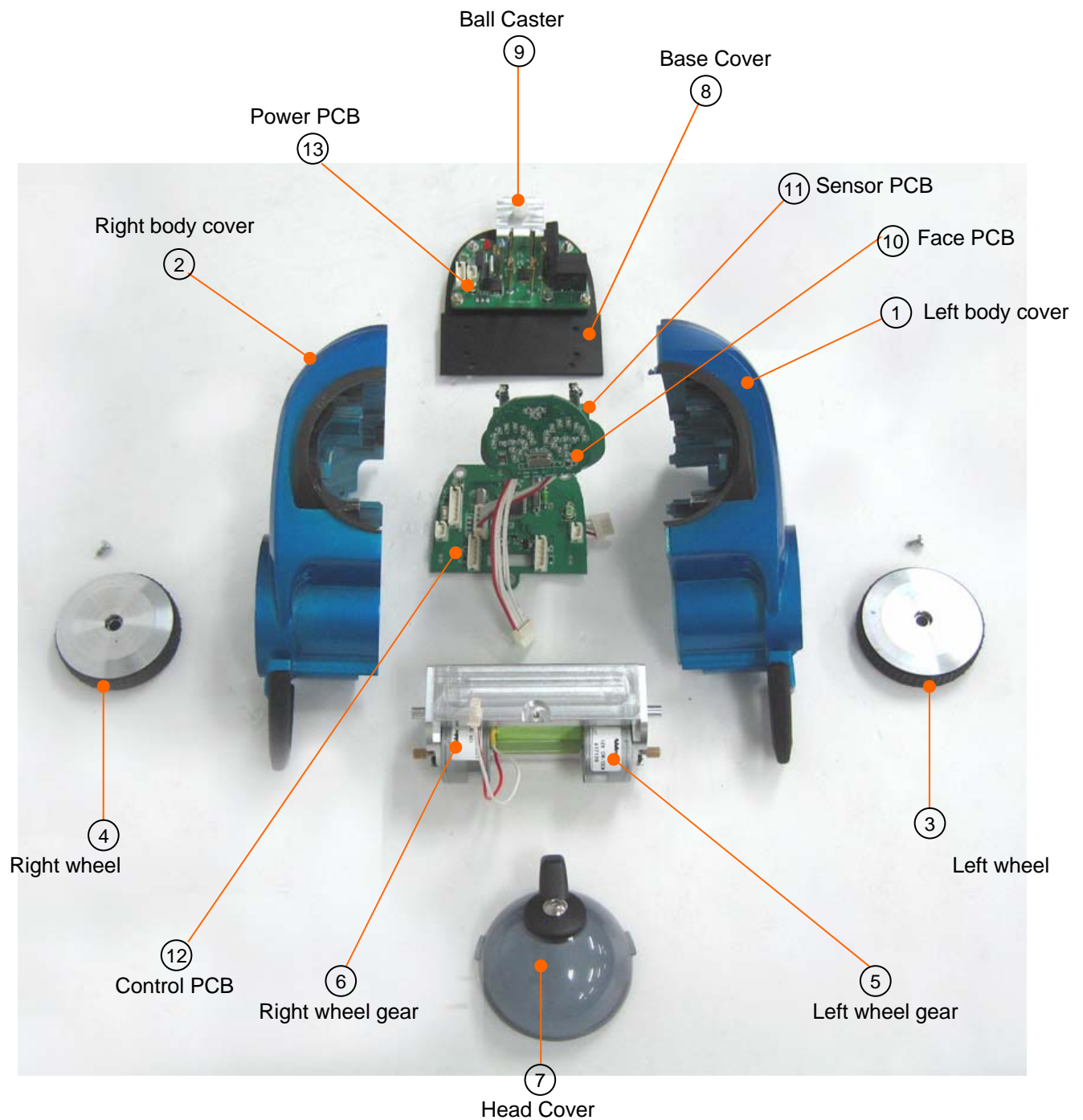


[Robot dimensions (unit. mm)]



[Circuit diagram]

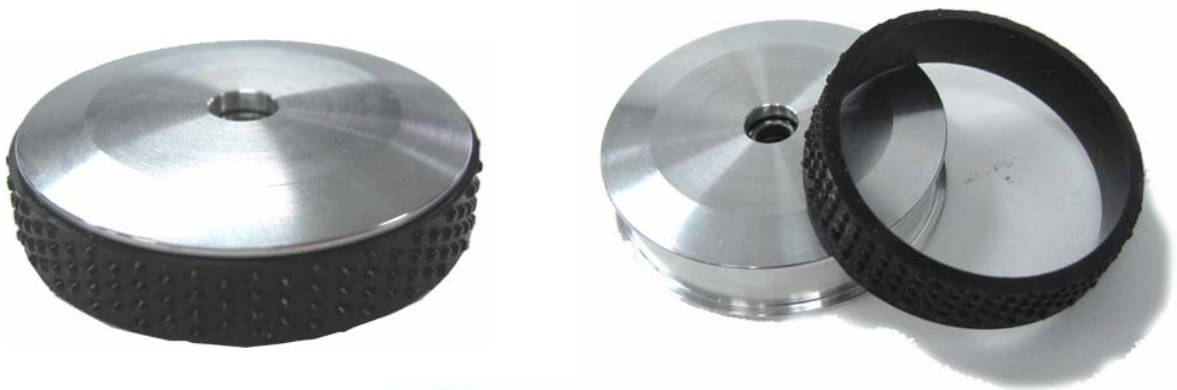




① ② Left/Right Cover



③ ④ Left/Right Wheel



⑤ ⑥ Left/Right BLDC Motor



⑦ Head Cover / Reflector



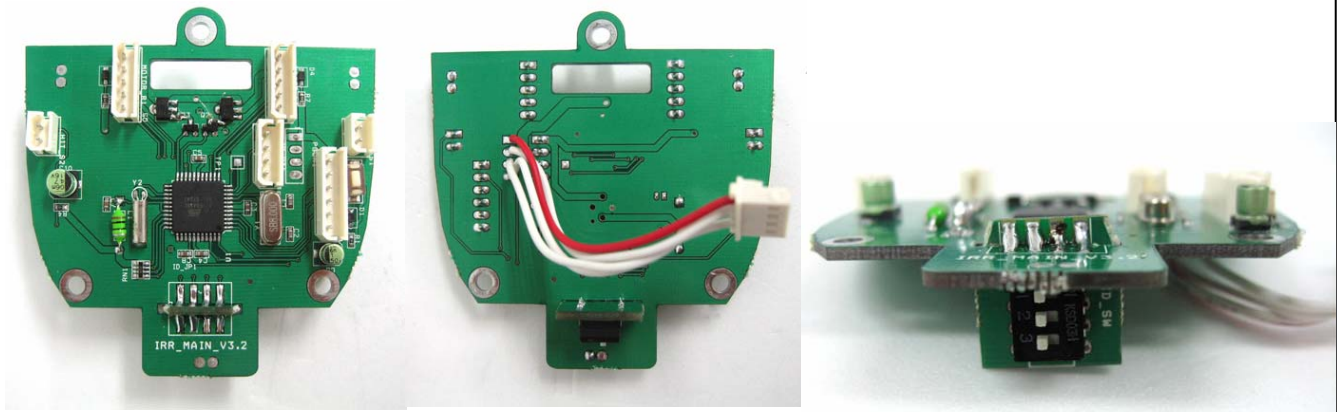
⑧ ⑨ Base Cover / Ball Caster



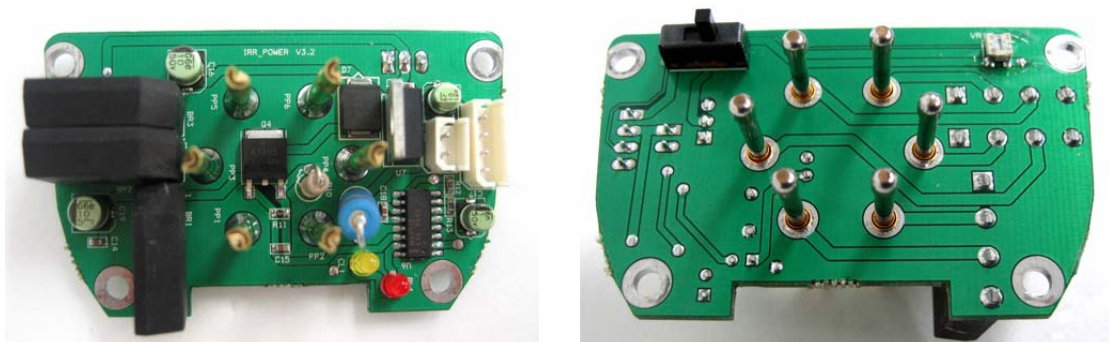
⑩ ⑪ Face PCB / Sensor PCB



⑫ Control PCB



⑬ Power PCB



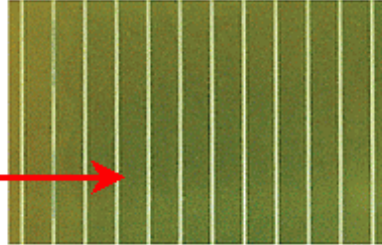
8. Appendix

8.1 Core technologies : **Electric Supply System**

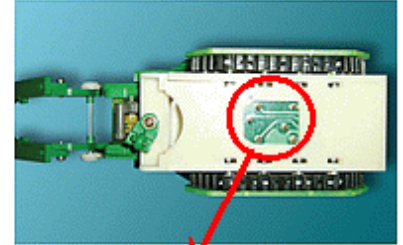
Supplying the necessary electric power from the supplying board to robot - **No Battery Required.**



Robot in action



► **Electric Supplying Board**
Supplying the electric power
DC 12V +, - electricity



► **Supply and Demand part**
Located at robot's bottom part
Gets electric supply from the
board

- ※ [The main reason of unpopularity of robot game is due to battery issue in the past.](#)
- ※ At present electric supply system is patent registered in Korea (2004.6.22) & patent applied in Japan.

9. Customer Service

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

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