##  



## ! WARNING

Be sure to read this operation manual before use.

Bromley incorporated in conjunction with universal space.

## The Company

Universal Space (UNIS) is a leading manufacturer of amusement machine. Our business first started as a small company in 1993. The last decade of hard work, innovation, and technology excellence have allowed our company to evolve from a small-scale factory to a corporate organization, branching out into four distinct departments: Manufacturing, Design, Sales, and Operation. We specialize in manufacturing redemption games, kiddy rides, prize machines, indoor/outdoor rides, and selective arcade games.

Thank you for your purchase. We hope you enjoy the product.

## Safety Instructions:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning display and cautions, handle the product appropriately. Be sure to keep this operation manual nearby the product or elsewhere convenient for referring to it when necessary.

Depending on the potentially hazardous degrees, the terms of NOTICE, WARNING GAUTION, etc. are used. Be sure to understand the content of the displays before reading the text.


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


## No Touching Warning:

This part may cause an electric shock or the surface is overheating. Do not touch this part.

## High Voltage Warning:

This part may caused by scalding if somebody inadvertent to do something.

## 4 WARNING

Non-technical personnel who do not have technical knowledge and Expertise should refrain from performing such work that this manual requires the location's maintenance man or a serviceman to carry out, or work which is no explained in this manual failing to carry out, or work which is not explained in this manual. Failing to comply with this instruction can causes a severe accident such as electric shock.

## CONTENTS

1. Specifications ..... 3.
2. Package contents ..... 4.
3. Assembling instruction ..... 6.
4. Intallation ..... 19.
5. Package ..... 21.
6. Game descripiton ..... 22.
7. Switches control signal ..... 23
8. Parameter setting ..... 27
9. Game installation and service ..... 33
10. Game maintenance ..... 34.
11. Overall structure ..... 35.
12. I/Ochart ..... 49
13.Wiring Diagram

## 1. Specifiactions:



Rated power supply: AC220V $\pm 10 \quad 50 \mathrm{~Hz}$ or $110 \mathrm{~V} \pm 1060 \mathrm{~Hz}$
(1) Power consumption: Min power consumption: 90 W

Max power consumption: 390W
(2) Dimensions: W1030×D2200×H2243 (mm)
(3) Weight: about 260 Kg
(4) Environment condition: (indoor) temperature : $-10^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$

Humidity : $\leqslant 90 \%$
Atmospheric pressure : $86 \mathrm{P}_{\mathrm{a}} \sim 106 \mathrm{P}_{\mathrm{a}}$
※Note : Game parameters are subject change without notice.

## 2 Package contents

2.1 Make sure that all the parts shown below are included in the product package: :

| NO | Part No. | Name | Qty | Illustartion |
| :---: | :---: | :---: | :---: | :---: |
| 1 | R102-001-000 | Main cabinet | 1 |  |
| 2 | R102-002-000 | Control panel | 1 |  |
| 3 | R102-003-000 | Header | 1 |  |
| 4 | R102-004-000 | Ball Gate Assy. | 1 |  |
| 5 | R102-005-000 | Playfield | 1 |  |
| 6 | R102-006-000 | Beam \& back 1 | 1 |  |
| 7 | R102-007-000 | Beam \& back 2 | 1 |  |
| 8 | R102-101-000 | Control panel fix board | 2 | $\square$ |
| 9 |  | Spare parts 1 | 1 | See below table for detail |

### 2.2 Spare parts 1:

| No | Part No. | Name | Spec. | Qty | Illustration | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-810-000 | Power cord | 15A/220V 3.5m | 1 | I |  |
| 2 | R102-429-000 | Fuse | $\begin{gathered} 5 \mathrm{~A} / 250(10 \mathrm{~A} / 125 \mathrm{~V}) \\ \phi 5-20 \end{gathered}$ | 2 |  |  |
| 3 | R102-730-000 | Manual | English | 1 |  |  |
| 4 | R102-423-000 | Key | 171 | 4 | $48$ |  |
| 5 | R102-422-000 | Key | 2222 | 2 |  |  |
| 6 | R102-442-000 | Bearing | 6002Z | 2 |  |  |
| 7 | R102-303-000 | Circlip | $\begin{gathered} \mathrm{GB} / \mathrm{T} 894.2-1986 / \mathrm{d}_{0} \\ =16 \end{gathered}$ | 2 |  |  |
| 8 | R102-443-000 | Air pin |  | 2 |  |  |
| 9 | R102-444-000 | Basketball | \#5 | 8 |  |  |
| 10 | R102-445-000 | Pump |  | 1 |  |  |
| 11 |  | Hexagonal socket flat round head screw | M8×25 BLK | 12 |  |  |
| 12 |  | Hexagonal socket flat round head screw | M6×80 BLK | 4 |  |  |
| 13 |  | Hexagonal socket flat round head screw | M6×40 BLK | 8 |  |  |
| 14 |  | Cross hexagon head kit bolt | M8×20 BLK | 8 |  |  |
| 15 |  | Cross hexagon head kit bolt | M6×16 BLK | 4 |  |  |
| 16 |  | Hex lock net | M8 BLK | 12 |  |  |
| 17 |  | Hex lock net | M6 BLK | 4 |  |  |
| 18 |  | Flat washer | M8 BLK | 12 |  |  |
| 19 |  | Flat washer | M6 BLK | 4 |  |  |
| 20 | R102-415-000 | Bulb | 12V 3W | 1 |  |  |
| 21 | R102-409-000 | Reflect paper | $50 \times 55$ | 1 |  |  |
| 22 |  | Spare screws |  | 1 |  |  |

## 3. Assemble instruction:

### 3.1 Assemble screws part list:

| No. | Name | Spec. | Qty | Illustration | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Hexagonal socket flat round head screw | M8×25 BLK | 12 |  |  |
| 2 | Hexagonal socket flat round head screw | M6×80 BLK | 4 |  |  |
| 3 | Hexagonal socket flat round head screw | M6×40 BLK | 8 |  |  |
| 4 | Cross hexagon head kit bolt | M $8 \times 20$ BLK | 8 |  |  |
| 5 | Cross hexagon head kit bolt | M6×16 BLK | 4 |  |  |
| 6 | Hex lock nut | M8 BLK | 12 |  |  |
| 7 | Hex lock nut | M6 BLK | 4 |  |  |
| 8 | Flat washer | M8 BLK | 12 |  |  |
| 9 | Flat washer | M6 BLK | 4 |  |  |

### 3.2 Assemble steps:



Step 1


Step 2



Remove bolts and take the front panel assembly.

## Step 4



Step 5


## Step 6



Fix control panel
Step 7

3.3 Layout on control panel:

Control panel:


Step 1: Connecting


Step 2: Connecting


Connect the wires to the PBC as per the numbers marked on the PBC.
3.4 Link game:
$\triangleleft$ There are two buttons on the control panel:


Link game button: Press this button to compete with others.

Single player: Press this button to have single player game.
$\diamond$ Link game schematic:


How to link games: Connect Link 2 (in Game (1)) to Link 1(in Game (2)). Then connect Link 2(in Game (2)) to Link 1(in Game (3). The rest of the connections are the same. [For more detail, please refer to page 28]

Connection illustration:


## Notice :

$\diamond 1$.when linking the game, there should be one game set as game \#1. Any of the games can be set as game \#1. The rest of the games can be \#2 to \#30 but you cannot repeat.
> 2.30 games can compete with each other in griups.
$\diamond 3$. The first time to start the game, it will show "1IP01 V1.02". The first "1" means the goup form. "IP01" means the NO1 machine.
$\diamond 4$. NO1 machine will send it's setting (excluding SW4) to the linking games after a few seconds when game starts. It will reset when turned off.
$\diamond 5$. The DIP SWITCH setting in other games should be the same as the game NO1 setting except the Game NO.
$\diamond 6$. To set the JP value, you need to set on the game NO1.

### 3.5 Wiring layout:

In order to clear the layout in the machine, below is the instruction for you reference:



The extra Light Belt is wrapped with Nylon tape.
3.6 Connecting the power cord:


Notice
$>$ Do not put heavy items on power cord.

$>$ Do not touch the power plug with a wet hand.

> Do not draw or twist the cordl

$>$ Do not place the cord near a heat source.
$>$ Do not place the cord where the player can easily touch or kick it.

$>$ Run this machine with the correct power configuration.

## 4. Installation:



### 4.1 Play Zone:

this machine requires space for playing the game and for maintenance as shown below.
Be sure to leave enough space when installing the machine.
$\triangleleft$ Notice: This machine can be located side by side for linking games.

C.Locations to avoid installing:

## ! Warning

This machine is designed for indoor use only. Necer install this machine outdoors or any of the flowing:

- Places where dew may develop due to temperature differences;
- Locations close to hazardous article;
- Locations close to a heating instrument;
- Close to instrnments that can easily catch fire;
- Unstable or vibrating places;


### 4.2 Game leveling:

Install this machine on a flat surface. Adjust levelers to lift casters off the ground and level game. Make sure that the machine is level with the floor. If the machine is not level, it may not play well.


Move


Fix

## Warnig

Unplug the game before moving.

## 5. Package :

For moving the game a short distance, just adjust the leveler and then move the game. For moving the game a long distance, it should be packed. Before operating the game, it should be assembled .
$\diamond$ Remove the control panel:

Step 1: Unlpug the conncetors from the PBC.


Step 2: Unplug the high voltage and low voltage connectors pictured.

Step 3: Pull the wires out of the hole carefully. Please do not break the wire.


Step 4: Remove screws on the two side of the control panel.

Step 5: pull the control panel in the front.


Step 6: The package should be the same as the factory original packing.

## 6. Game Description:

$\checkmark$ Insert coin(s). Press "single player" button or "link game" button to strat the game.
$\checkmark$ Start shooting. The big display will show some relative information. The default setting is: points for stage 1.60 points for stage 2.100 points for stage 3 . If the player cannot get that score, the game is over.
$\checkmark$ Tickets will be paid according to the score.
(Notice: It is suggested that 6 balls for each game to play.)

## 7. Switches control signal

7.1 Refer to the attached I/O chart and the schematic.
7.2 To adjust DIP SWITCH, please refer the I/O chart. The initial setting is in capitalization.
7.3 Main board:

7.4 Main board connecting:


Test : Press" test" to this mode, go into 0 , press "test" after 1 second to go to 1 . The oter is the same. Test 0: Jack number Led_J33 2-1 flash and display "-0" to Test 0 . the rest will display LED numbers, Led J-33, Led -J-32 is c. Dox martrix display each number.
Test 1: LED Led_J33 2-1 flash and display "-2", Led_J33 3-6
Test 2: DIP SW LED_J33 2-1 flash and display,'-2', LED_J33 3-6 display each DIP state.
Test3: Input LED_J33 2-1 flash and display, '-3', LED_J33 4-3 display 1 st GND input signal ,LED_J33 6-5 display $2^{\text {nd }}$, an so on. LED_J32 8-7display $7^{\text {th }}$. Each input has coin sound .
Test 4: Output LED_J33 2-1 flash and display,'-4', I1-I8 and I9-I16control Out1-Out48
Test 5: Output LED_J33 2-1 flash and display,'-5', I1-I48control Out1-Out48.
Test 6: Output LED_J33 2-1 flash and display,'-6', Out1-Out48, 8numbers as one group for output..
Test 7: Music LED_J33 2-1 flash and display, '-7', LED_J33 5-3 display present music number, I1for play, I2 for +1, I3for set to 0, I4plus 10 .
7.5 Signal detections:

Sensor detection board

Sensor light:
To detect if the rim is in the center or not. If the sensor detects the rim, it will light up.


The rim is out of the position of the sensor. It can't detect the signal so the light is off.
7.6 Relay board and the ticket drive board location:

The relay board is located at the right corner of the service door.


Open the ticket door to find the ticket drive board.

Relay board:


Ticket drive board:


Relay board shetch map:


Ticket drive board shetch map:


### 7.7 DIP Setting (Default setting)



Notice
The above are subject change without notice.

## 8. Parameter Setting:

(1) Coin per game:

SW1-1 and SW1-2 are the switches to adjust how many coins to start the game. There are 4 options.

| Item | Content | DIP SW1 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 |  |
| Coin per <br> game | 0 | on | On | O. |
|  | $\mathbf{1}$ | OFF | ON | $\mathbf{1}$ coin for one game |
|  | 2 | on | off | 2 coin for one game |
|  | 3 | off | off | 3 coin for one game |

(2) Score per ticket:

SW1-3 and SW1-5are the switches to adjust the payout. There are 8 options.

| Item | Content | DIP SW1 |  |  | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 3 | 4 | 5 |  |
| Score per ticket | 10 | on | on | on | Every 10 points for 1 ticket |
|  | 20 | off | on | on | Every 20 points for 1 ticket |
|  | 30 | ON | OFF | ON | Every 30 points for 1 ticket |
|  | 40 | off | off | on | Every 40 points for 1 ticket |
|  | 50 | on | on | off | Every 50 points for 1 ticket |
|  | 60 | off | on | off | Every 60 points for 1 ticket |
|  | 80 | on | off | off | Every 80 points for 1 ticket |
|  | No ticket | off | off | off | No tickets payout |

(3) Mercy ticket

SW1-6~SW1-7are switches to adjust the minimum ticket payout. There are 4 options.

| Item | Content | DIP SW1 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 6 | 7 |  |
| High score <br> menory | 0 | on | on | N |
|  | $\mathbf{1}$ | OFF | ON | At least dispenes 1 tickets |
|  | 2 | on | off | At least dispenes 2 tickets |
|  | 3 | off | off | At least dispenes 3 tickets |

(4) High score menory

SW1-8 is switch to keep the high score or not. There are 2 options.

| Item | Content | DIP SW1 | Note |
| :---: | :---: | :---: | :---: |
|  |  | 8 |  |
| High score <br> menory | Able | on |  |
|  | Unable | OFF |  |

(5) Round per game

SW2- 1~ SW2-2 are the switches to adjust how many rounds for one play. There are 4 options.

| Item | Content | DIP SW2 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 |  |
| Round per <br> game | 1 | on | on | 1 round for 1 game |
|  | 2 | off | on | 2 round for 1 game |
|  | 3 | on | off | 3 round for 1 game |
|  | $\mathbf{4}$ | OFF | OFF | 4 round for 1 game |

(6) Game time

SW2-3~ SW2-4 are the switches to adjust the play time for each round. There are 4 options.

| Item | Content | DIP SW2 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 3 | 4 |  |
| Game time | A | ON | ON | Select project B |
|  | B | off | on | Select project C |
|  | C | on | off | Select project D |
|  | D | off | off |  |

(7) High score initial value

SW2-5~ SW2-6 are the switches to adjust the initial value of the high score setting. There are 4 options

| Item | Content | DIP SW2 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 5 | 6 |  |
| High score <br> initial value | 150 | on | on | He |
|  | 200 | OFF | ON | High score setting is 200 |
|  | 250 | on | off | High score setting is 250 |
|  | 300 | off | off | High score setting is 300 |

(8) DBV (Round per bill)

SW2-7~ SW2-8 are the switches to adjust the bill for each round. There are 4 options.

| Item | Content | DIP SW2 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 7 | 8 |  |
| DBV <br> (Round per <br> bill) | 1 | on | on | 1 bill for 1 round |
|  | 2 | OFF | ON | 1 bill for 2 round |
|  | 3 | on | off | 1 bill for 3 round |
|  | 4 | off | off | 1 bill for 4 round |

(9) Score for pass

SW3-1~ SW3-2 are the switches to adjust the score for passing each stage. There are 4 options.

| Item | Content | DIP SW3 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 |  |
| Score for <br> pass | A | ON | ON | Select project B |
|  | B | off | on | Select project C |
|  | C | on | off | Select project D |
|  | D | off | off |  |

(10) JP score

SW3-3~ SW3-4 are the switches to adjust the JP score. There are 4 options.(Only enabled when using the JP marquee)

| Item | Content | DIP SW3 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 3 | 4 |  |
| JP score | 200 | on | on | Reach 200 score for JP ticket |
|  | 250 | off | on | Reach 250 score for JP ticket |
|  | 300 | on | off | Reach 300 score for JP ticket |
|  | 350 | OFF | OFF | Reach 350 score for JP ticket |

(11) 3 Point time

SW3-5 is the switch to adjust the time during 3 point shooting, There are 2 options.

| Item | Content | DIP SW1 | Note |
| :---: | :---: | :---: | :---: |
|  |  | 5 |  |
| 3 Point <br> time | A | on | Select project A |
|  | $\mathbf{B}$ | $\mathbf{O F F}$ | Select project B |

## (12) Win JP ticket

SW3-6~SW3-7 are the switches to adjust tickets on JP. There are 4 options. (It is enabled when using JP marquee.)

| Item | Content | DIP SW3 |  | Note |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 6 | 7 |  |
| JP ticket | 10 | ON | ON | Get 10 extra tickets whem JP is won |
|  | 20 | off | on | Get 20 extra tickets whem JP is won |
|  | 30 | on | off | Get 30 extra tickets whem JP is won |
|  | 50 | off | off | Get 50 extra tickets whem JP is won |

SW3-8 is the switch to adjust if getting the JP ticket or not when you reach the JP score. There are 2 options.(It is ecabled when using JP marquee)

| Item | Content | DIP SW1 | Note |
| :---: | :---: | :---: | :---: |
|  |  | 8 |  |
| Win JP <br> ticket | Yes | on | Have JP ticket |
|  | No | OFF | No JP ticket JP |

(14) Game time, score for pass, 3 point time table.

| Version | NO | Game time |  |  |  | 3 Point time |  |  |  | Score for pass |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Stg 1 | Stg 2 | Stg 3 | Stg 4 | Stg 1 | Stg 2 | Stg 3 | Stg 4 | Stg 1 | Stg 2 | Stg 3 | Stg 4 |
| CEC | A | 30 | 25 | 20 | 20 | 25 | 20 | 20 | 20 | 30 | 60 | 100 | 150 |
|  | B | 30 | 30 | 25 | 20 | 25 | 25 | 20 | 20 | 40 | 80 | 150 | 200 |
|  | C | 40 | 35 | 30 | 25 |  |  |  |  | 50 | 100 | 160 | 250 |
|  | D | 45 | 40 | 35 | 30 |  |  |  |  | 60 | 130 | 200 | 300 |

(15) Game NO. , Group and Demo

SW4-1~ SW4-8 are the switch to show the game No., the group way and demo switch.

| Item | Content | DIP SW |  |  |  |  |  |  |  | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |  |
| Main | NO 1 | OFF | ON | ON | ON | ON |  |  |  |  |
| Game No. | NO 2 | on | off | on | on | on |  |  |  |  |
|  | NO 3 | off | off | on | on | on |  |  |  |  |
|  | NO 4 | on | on | off | on | on |  |  |  |  |
|  | NO 5 | off | on | off | on | on |  |  |  |  |
|  | NO 6 | on | off | off | on | on |  |  |  |  |
|  | NO 7 | off | off | off | on | on |  |  |  |  |
|  | NO 8 | on | on | on | off | on |  |  |  |  |
|  | NO 9 | off | on | on | off | on |  |  |  |  |
|  | NO 10 | on | off | on | off | on |  |  |  |  |
|  | NO 11 | off | off | on | off | on |  |  |  |  |
|  | NO 12 | on | on | off | off | on |  |  |  |  |
|  | NO 13 | off | on | off | off | on |  |  |  |  |
|  | NO 14 | on | off | off | off | on |  |  |  |  |
|  | NO 15 | off | off | off | off | on |  |  |  |  |
|  | NO 16 | on | on | on | on | off |  |  |  |  |
|  | NO 17 | off | on | on | on | off |  |  |  |  |
|  | NO 18 | on | off | on | on | off |  |  |  |  |
|  | NO 19 | off | off | on | on | off |  |  |  |  |
|  | NO 20 | on | on | off | on | off |  |  |  |  |
|  | NO 21 | off | on | off | on | off |  |  |  |  |
|  | NO 22 | on | off | off | on | off |  |  |  |  |
|  | NO 23 | off | off | off | on | off |  |  |  |  |
| Game | NO 24 | on | on | on | off | off |  |  |  |  |
|  | NO 25 | off | on | on | off | off |  |  |  |  |


| No. | NO 26 | on | off | on | off | off |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NO 27 | off | off | on | off | off |  |  |  |  |
|  | NO 28 | on | on | off | off | off |  |  |  |  |
|  | NO 29 | off | on | off | off | off |  |  |  |  |
|  | NO 30 | on | off | off | off | off |  |  |  |  |
|  | JP <br> Maqee | OFF | OFF | OFF | OFF | OFF |  |  |  |  |
| Group per game | 1 |  |  |  |  |  | ON | ON |  | 1 game as 1 group |
|  | 5 |  |  |  |  |  | off | on |  | 5 game as 1 group |
|  | 10 |  |  |  |  |  | on | off |  | 10 game as 1 group |
|  | 1 |  |  |  |  |  | off | off |  | 1 game as 1 group |
| Demo | Yes |  |  |  |  |  |  |  | on |  |
|  | No |  |  |  |  |  |  |  | OFF |  |

$\diamond$ Meter panel :

$\diamond 1$. Coin counter: Display the amount of the coins put in.
$\diamond 2$. Ticket counter: Display the amount of the tickets dispensed.
$\diamond 3$. Volume:
$\triangleleft 4$. Bass:
$\diamond 5$. Ticket reset: Reset the tickets when refill the tickets.
$\diamond 6$. Option: No function for the moment.
$\diamond 5$. Setup: No function for the moment.
9. Game installation and service

### 9.1 Installation

(1) Firstly check the assembling instructions and assemble the game.
(2) Secondly, adjust the leveler of the game on even ground.
(3) After installation, plug in. check the game operation. If there is a problem, stop the game and please check the trouble shooting section of this manual.

### 9.2 Game maintenance

(1) Try to run the game first before operation every day .
(2) Check every component after running the game for a month.
(3) Check the machine regularly.

## 10. Game maintenance:

| No. | Problem | Cause | Possible solution |
| :---: | :---: | :---: | :---: |
| 1 | No ticket dispensed | 1. No tickets in the game; <br> 2. Tickets are jammed; <br> 3. Poor connection on the ticket dispenser. | 1. Refill and press reset button; <br> 2. Take the jammed tickets out and then press the reset button; <br> 3. Replace with a better connector。 |
| 2 | Does not score when ball goes in | 1. Reflective paper is worn or old; <br> 2. Poor connection; <br> 3. Ball sensor is damaged. | 1. Replace the reflective paper; <br> 2. Make sure the connection is good; <br> 3. Replace with new sensor. |
| 3 | Rim in wrong position | 1. Sensons disconnection <br> 2. Rim detected sensor is damaged; | 1. connect the sensor; <br> 2. replace the sensor board. |
| 4 | Rim doesn't move | 1. Relay is not working; <br> 2. Motor is not working; <br> 3. Faulty connectors | 1. Check the power voltage to see if it is the same as motor voltage; <br> 2. Insure wire is connected properly; <br> 3. Replace with new sensor. |
| 5 | Ball gate faulty | 1. sensor connector is loose; <br> 2. sensor is no $t$ working. | 1. Connect the wire properly; <br> 2. Replace the new sensor. |
| 6 | Ball gate not open or not closed | 1. Drive board sensor is not working; <br> 2. Motor os not working; <br> 3. Poor connection. | 1. check the ball sensor input signal; <br> 2. make sure power voltage is the same as motor voltage; <br> 3. make sure every connetor is connected. |

11. Overall structure
11.1 Main part 1:


| No. | Part No. | Name | Qty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-003-000 | Header Assy. | 1 |  |  |
| 2 | R102-102-000 | Rear frame_L | 1 | Square tube |  |
| 3 | R102-103-000 | Rear frame_R | 1 | Square tube |  |
| 4 | R102-008-000 | Motion Assy. | 1 |  |  |
| 5 | R102-104-000 | Rear side panel | 3 | Square tube |  |
| 6 | R102-105-000 | Shield ring | 1 | Square tube |  |
| 7 | R102-106-000 | Rear side panel | 2 | Q235 |  |
| 8 | R102-301-000 | Shield ring | 1 | Q235 |  |
| 9 | R102-302-000 | Frame fix cover | 1 | Q235 |  |
| 10 | R102-107-000 | Front side panel | 2 | Q235 |  |
| 11 | R102-501-000 | Playfield 3 | 1 | Plywood |  |
| 12 | R102-004-000 | Ball gate assy. | 1 |  |  |
| 13 | R102-009-000 | Speaker_L rack | 1 | Q235 |  |
| 14 | R102-010-000 | Speaker_L rack | 1 | Q235 |  |
| 15 | R102-401-000 | Speaker | 2 | FEILO 8 $\Omega / 10 W$ |  |
| 16 | R102-502-000 | Playfield 1 | 1 | Plywood |  |
| 17 | R102-002-000 | Control panel <br> assy. | 1 |  |  |
| 18 | R102-108-000 | Front door | 1 | Q235 |  |
| 19 | R102-402-000 | Triple door | 1 | Standard (with coin |  |
| mech frame) |  |  |  |  |  |
| 20 | R102-109-000 | Big speaker net | 1 |  |  |
| 21 | R102-110-000 | Front low right | 1 | Q235 |  |

### 11.2 Main part 2



| No. | Part No. | Name | Q'ty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-111-000 | Rear frame rack | 1 | Square tube |  |
| 2 | R102-112-000 | Rear side_R net | 1 | Q235 |  |
| 3 | R102-113-000 | Front frame | 1 | Q235 |  |
| 4 | R102-114-000 | Front net | 1 | Q235 |  |
| 5 | R102-115-000 | Front side_R rack | 1 | Square tube |  |
| 6 | R102-116-000 | Beam rack 2 | 1 | Q235 |  |
| 7 | R102-117-000 | Beam 2 | 2 | Square tube |  |
| 8 | R102-118-000 | Beam rack 1 | 1 | Q235 |  |
| 9 | R102-119-000 | Beam rack 4 | 1 | Q235 |  |
| 10 | R102-120-000 | Damping board | 2 |  |  |
| 11 | R102-121-000 | Beam 1 | 2 | Square tube |  |
| 12 | R102-122-000 | Rear side_L net | 1 | Q235 |  |
| 13 | R102-123-000 | Beam rack 3 | 1 | Q235 |  |
| 14 | R102-124-000 | Front side_L rack | 1 | Q235 |  |
| 15 | R102-403-000 | Leveller | 8 |  |  |
| 16 | R102-404-000 | Castor | 8 | $2 "$ |  |
| 17 | R102-125-000 | Botton net | 4 | Q235 |  |

11.3 Motion Assy.


| No. | Part No. | Name | Q'ty | Spec. | note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-405-000 | Rim | 1 | ¢ 20 |  |
| 2 | R102-503-000 | Back board | 1 | 15 mm |  |
| 3 | R102-126-000 | Bearing rack | 1 | 3 mm |  |
| 4 | R102-303-000 | Shield ring | 1 | $\mathrm{d}_{0}=16$ |  |
| 5 | R102-304-000 | Bearing axis | 13 |  |  |
| 6 | R102-127-000 | Bearing track | 1 | 1.5 mm |  |
| 7 | R102-128-000 | Sensor rack | 1 | 1.5 mm |  |
| 8 | R102-129-000 | Reinforce_L | 1 |  |  |
| 9 | R102-130-000 | Reinforce_R | 1 |  |  |
| 10 | R102-131-000 | Attached board | 1 | 1.5 mm |  |
| 11 | R102-132-000 | Sensor board | 1 |  |  |
| 12 | R102-133-000 | Sensor block |  |  |  |
| 13 | R102-134-000 | Main frame | 1 | 3 mm |  |
| 14 | R102-135-000 | Guide I | 2 | 2 mm |  |
| 15 | R102-136-000 | Guide $\Pi$ | 2 | 2 mm |  |
| 16 | R102-137-000 | Bracket | 2 | 3 mm |  |
| 17 | R102-406-000 | Bearing | 11 | 6002 |  |
| 18 | R102-138-000 | Connected rod | 1 | 2 mm |  |
| 19 | R102-139-000 | Motor rack | 1 | 2 mm |  |
| 20 | R102-407-000 | Start up capacitor | 1 |  |  |
| 21 | R102-408-000 | Motor | 1 | YN70-15Z/70JB100G8 |  |
| 22 | R102-140-000 | Light tube bracket | 1 | Q235 |  |
| 23 | R102-141-000 | Light tube cover | 1 | Q235 |  |
| 24 | R102-409-000 | Reflect paper | 1 | $50 \times 55$ |  |
| 25 | R102-410-000 | Ball detected | 2 | E3F-R2N1 |  |
| 26 | R102-142-000 | Chain jacket | 1 | BLK PE |  |

11.4 Ball gate Assy


Operation Manual

| No. | Part No. | Name | Q'ty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-143-000 | Ball | 1 | 1.5 mm |  |
| 2 | R102-144-000 | Hinge | 1 |  |  |
| 3 | R102-504-000 | Bed plate | 1 | 15 mm |  |
| 4 | R102-145-000 | Fix board | 1 | 3mm |  |
| 5 | R102-411-000 | Motor | 1 | YN60-6Z/60JB100G10 |  |
| 6 | R102-412-000 | Capacito | 1 |  |  |
| 7 | R102-146-000 | Motor <br> bracket | 1 | 3 mm |  |
| 8 | R102-147-000 | Encoder <br> wheel | 1 |  |  |
| 9 | R102-148-000 | Connection | 1 | 3 mm |  |
| 10 | R102-305-000 | Axle sleeve | 2 |  |  |
| 11 | R102-306-000 | Shield ring | 1 | $\mathrm{~d}_{0}=5$ |  |
| 12 | R102-413-000 | Sensor | 1 | NC(YIIN-5V) |  |

11.5 Control panel Assy.


| No. | Part No. | Name | Qty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-414-000 | Bulb | 4 | 12V 3W |  |
| 2 | R102-415-000 | Coin mech | 2 | CEC |  |
| 3 | R102-416-000 | Coin SW | 2 | ZIPPYCNR-055-03-Z |  |
| 4 | R102-417-000 | Bulb clamp | 2 | For coin lamp |  |
| 5 | R102-418-000 | Counter | 1 | 12 V |  |
| 6 | R102-419-000 | Test button | 3 | 1 RED ,1GRN, 1 BLK |  |
| 7 | R102-420-000 | Dual POT | 1 | 1 K |  |
| 8 | R102-421-000 | Single POT | 1 | 10K |  |
| 9 | R102-149-000 | Coin box | 1 |  |  |
| 10 | R102-422-000 | Coin box lock | 1 | 2222 |  |
| 11 | R102-150-000 | Ticket box | 1 | Q235 |  |
| 12 | R102-801-000 | Ticket conversion board | 1 | TICK-CH.PCB |  |
| 13 | R102-424-000 | Ticket mech | 1 | TD-963CR |  |
| 14 | R102-423-000 | Ticket lock | 1 | 171 |  |
| 15 | R102-802-000 | Main board | 1 | V8 |  |
| 16 | R102-803-000 | Relay board | 1 | JDQ-LY2J-12V |  |
| 17 | R102-423-000 | Service door lock | 1 | 171 |  |
| 18 | R102-425-000 | Power box | 1 | EPM-S-250D12+24 |  |
| 19 | R102-426-000 | Power swithe | 1 | $12 \mathrm{~A} / 125 \mathrm{~V} 1 / 4 \mathrm{HP}$ |  |
| 20 | R102-427-000 | Fuse | 1 | $10 \mathrm{~A} / 125 \mathrm{~V}$ ¢ 5-20 |  |
| 21 | R102-428-000 | Fuse socket | 1 | 10A/250V R3-11 |  |
| 22 | R102-429-000 | Filter | 1 | 10GENG3E-R |  |
| 23 | R102-430-000 | Sound box hole | 1 |  |  |
| 24 | R102-431-000 | 10" Speaker | 1 | 80-150W 10" |  |
| 25 | R102-423-000 | Speaker door lock | 1 | 171 |  |
| 26 | R102-804-000 | Power cord | 1 | 3. 5 M |  |

11.6 Other electroinc component:


| No. | Part No. | Name | Q'ty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-805-000 | Dot matrix | 1 | DZ-1120.PCB |  |
| 2 | R102-806-000 | 2 Digit display | 1 | LED86*65-2U.PCB |  |
| 3 | R102-807-000 | 3 Digit display | 2 | LED86*65-3U.PCB |  |
| 4 | R102-432-000 | Sensor | 1 | Fanse.PCB |  |
| 5 | R102-433-000 | Fuorescent lamp1 | 1 | T5 14W |  |
| 6 | R102-434-000 | Insulated cable $\phi 50$ | 2 | Caliber $\phi 50$ |  |
| 7 | R102-435-000 | Insulated cable $\phi 24$ | 5 | Caliber $\phi 24$ |  |
| 8 | R102-808-000 | 3 Core connector | 1 | 1 male ,1 female |  |

11.7 Game decal:


Warning and service sticker:


| No. | Part No. | Name | Qty | Spec. | Note |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | R102-701-000 | Header Decal | 1 | $1000 \times 178$ ( 85 PET) |  |
| 2 | R102-702-000 | Back board decal | 1 | $927 \times 1164$ ( $\delta 5$ PET) |  |
| 3 | R102-703-000 | Playfield 3 | 1 | $925 \times 560$ ( $\delta 0.3$ PVC) |  |
| 4 | R102-704-000 | Playfield 2 | 1 | $925 \times 575$ ( $\delta 0.3$ PVC) |  |
| 5 | R102-705-000 | Playfield 1 | 1 | $925 \times 698$ ( $\delta 0.3$ PVC) |  |
| 6 | R102-706-000 | Control panel decal | 1 | $360 \times 630$ ( 80.3 PVC) |  |
| 7 | R102-707-000 | Rear side-L decal | 1 | $809 \times 623$ ( $\delta 0.3$ PVC) |  |
| 8 | R102-708-000 | Rear side-R decal | 1 | $809 \times 623$ ( 80.3 PVC) |  |
| 9 | R102-709-000 | Front side-L decal | 1 | $805 \times 465$ ( $\delta 0.3$ PVC) |  |
| 10 | R102-710-000 | Front side-R decal | 1 | $805 \times 465$ ( $\delta 0.3$ PVC) |  |
| 11 | R102-711-000 | Button decal ( single) | 1 | $48 \times 48$ |  |
| 12 | R102-712-000 | Button decal (link) | 1 | $48 \times 48$ |  |
| 13 | R102-436-000 | Button | 2 | 60\# |  |
| 14 | R102-437-000 | Micro SW | 2 |  |  |
| 15 | R102-713-000 | Front door decal | 1 | $1000 \times 200$ ( 85 PET ) |  |
| 16 | R102-714-000 | Coin decal | 2 | $18 \times 26$ |  |
| 17 | R102-715-000 | Ticket decal | 1 | $190 \times 730$ |  |
| 18 | R102-438-000 | Light belt | 2 | 2.7 m |  |
| 19 | R102-601-000 | Clear acrylic | 1 |  |  |
| 20 | R102-439-000 | Fluorescent lamp | 1 | MXT5-Y21 21W |  |
| 21 | R102-151-000 | Header | 1 | Q235 |  |
| 22 | R102-716-000 | No touching decal | 2 | $66 \times 66$ |  |
| 23 | R102-717-000 | 110V hight voltage decal | 1 |  |  |
| 24 | R102-718-000 | Hight voltage decal | 3 | $60 \times 90$ |  |
| 25 | R102-719-000 | Coin counter decal | 1 | $30 \times 6$ |  |
| 26 | R102-720-000 | Ticket counter decal | 1 | $30 \times 6$ |  |
| 27 | R102-721-000 | Ticket reset decal | 1 | $50 \times 6$ |  |
| 28 | R102-152-000 | Display cover | 1 | Q235 |  |
| 29 | R102-153-000 | Motor cover | 1 | Q235 |  |

