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SERVICE MANUAL

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STOP
IMPORTANT

- Please read the manual carefully and keep it in mind before using this machine.
- Put this manual within touch of your reference in anytime.

PRECAUTIONS FOR USE

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

For safety reasons.

- The following suggestions should be adhered to:

⚠ WARNING
Disregarding could result in serious injury.

⚠ CAUTION
Disregarding could result in injury or product damage.

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

⚠
Indicates a care should be taken.

⃠
Forbidden.

Indicates a matter which must be performed.

- **Precautions to be followed:**

Certain procedures require a qualified in-shop maintenance person or industry specialist. For such instructions, a qualified person must take care of the jobs.

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

Qualified in-shop maintenance person

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

Industry specialist

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

PRECAUTIONS FOR USE

⚠ WARNING

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 the power cord periodically.

⚠ CAUTION

Do not use this product anywhere other than industrial areas.

- Using in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc..
- Do not give shock the surface of glass products.

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

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

In handling the power cord, follow the instructions below.

- Do not damage the power cord.
- Do not 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.

*** Electromagnetic wave may cause unexpected noise from speaker.**

PRÉCAUTION D'EMPLOI

⚠ ATTENTION

Si il y a une anomalie comme fumée, mauvaise odeur ou bruit anormal émis par la machine, couper immédiatement l'interrupteur principal et débranchez le câble d'alimentation de la prise pour arrêter son fonctionnement.

- L'utilisation de l'appareil dans des conditions anormales peut provoquer un incendie ou un accident.

En cas d'anomalie

1. Mettez l'interrupteur principal sur ARRÊT.
2. Débranchez le câble d'alimentation de la prise.
3. Contactez votre revendeur le plus proche.

Ne pas brancher le câble d'alimentation incorrectement ou le laisser être recouvert de poussière.

Cela pourrait nuire le câble d'alimentation.

⚠ PRUDENCE

Ne pas utiliser ce produit ailleurs que dans les zones industrielles.

- L'utiliser dans une zone résidentielle ou d'une zone à côté d'un quartier résidentiel pourrait nuire à la réception des radios, téléviseurs, téléphones, etc.
- Ne donnez pas de choc à la surface d'un produit en verre.

- S'il vous plaît ne pas jouer à ce jeu.
  - Quand vous buvez;
  - Lorsque votre condition physique n'est pas normale;
  - Lorsque vous êtes dans une période de grossesse;
  - Lorsque vous avez un contrôleur d'impulsion;
  - Lorsque vous avez récemment subi une crampe ou évanouissement en regardant la télévision.
- Évitez une force excessive / un choc pendant la lecture / de déplacer le jeu.
- Quand vous jouez les jeux, faite attention aux alentours.

Ne pas brancher ou débrancher le câble d'alimentation avec les mains mouillées.

Dans la manipulation du câble d'alimentation, suivez les instructions ci-dessous.

- Ne pas endommager le câble d'alimentation.
- Ne pas plier le câble d'alimentation de manière excessive.
- Ne pas chauffer le câble d'alimentation.
- Ne pas lier le câble d'alimentation.
- Ne pas prendre en sandwich le câble d'alimentation.
- Ne pas modifier le câble d'alimentation.
- Ne tordez pas le câble d'alimentation.
- Ne tirez pas sur le câble d'alimentation.
- Ne montez pas sur le câble d'alimentation.
- Ne pas mettre un clou dans le câble d'alimentation.

Si la fiche du câble d'alimentation ou est endommagé, cessez immédiatement d'utiliser la machine et demandez à votre revendeur le plus proche de remplacer les pièces.

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1. SPECIFICATION

Model	Wacky Racer
Reference Code	FA-912
Standby Power	700W
Operating Power(Max)	2000W
Dimensions (W*D*H)	1380mm*1010mm*2500mm
Weight (KG)	142KG
Rated Voltage	AC 120V (60Hz) / AC 230V (50/60Hz)
Player	2
Users Range of Ages	4Y+

2. COMPONENTS

Please make sure that you have received the items list as below

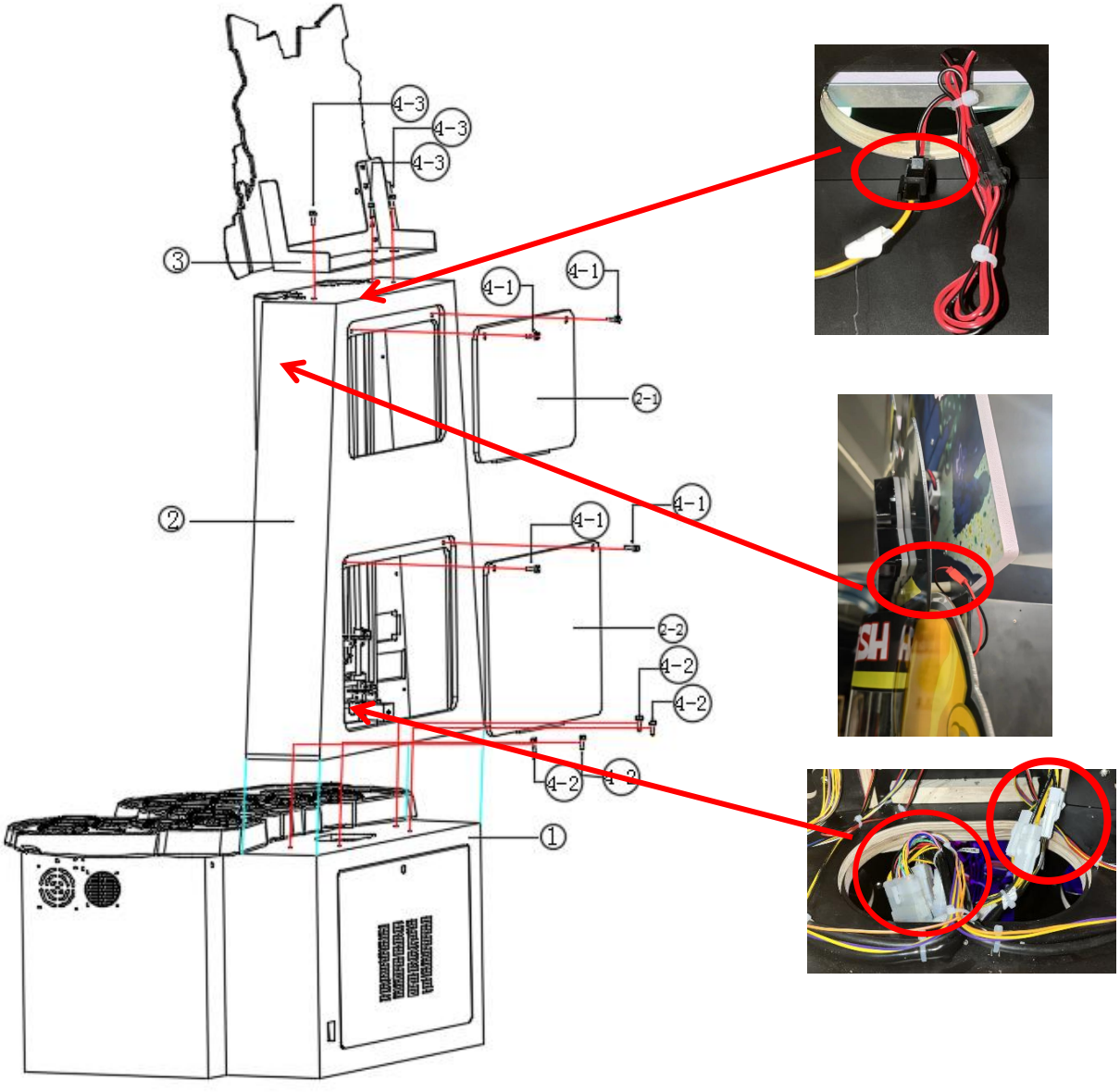
No.	Part Name	Spec.	Picture	QTY	Remark
1	Manual			1	
2	Blue Key			1	Blue key for coin acceptor, access door and line module.
3	Red Key			1	Red key for coin box
4	Power cord	AS		1	
5	Screws	M8*40		11	Fixed equipment. Please refer to section 3-1 for details.

3. INSTALLATION

3-1 Machine installation

1. Loosen the four screws (4-1) on the back plate of 2-1 and 2-2.
2. Place ② on top of ① and tighten four screws (4-2).
3. Place ③ on top of ② and tighten three screws (4-3).
4. Connect the wire referring to the picture. Lock the back plate of 2-1 and 2-2.
5. Tighten the four screws (4-1) on the back plate of 2-1 and 2-2.

No.	Part Name	Spec.	QTY
1	Bottom wooden box module		1
2	Score wooden box module		1
3	LED Light box module		1
4	3-in-1 stainless steel screws	M8*40	11



3-2 How to move/lock the machine

The machine must be placed on a horizontal surface. It comes with 4 foot pads and 4 casters.

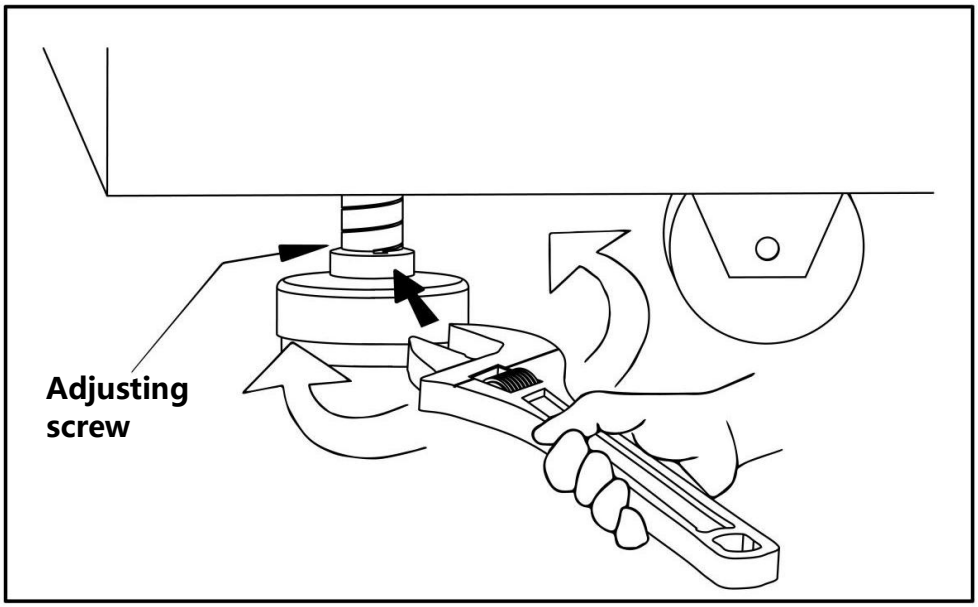
When moving the machine: Adjust the foot pads to the highest point and keep at least 1cm away from the floor.

When lock the machine: please keep all the pads horizontally fixed on the floor.

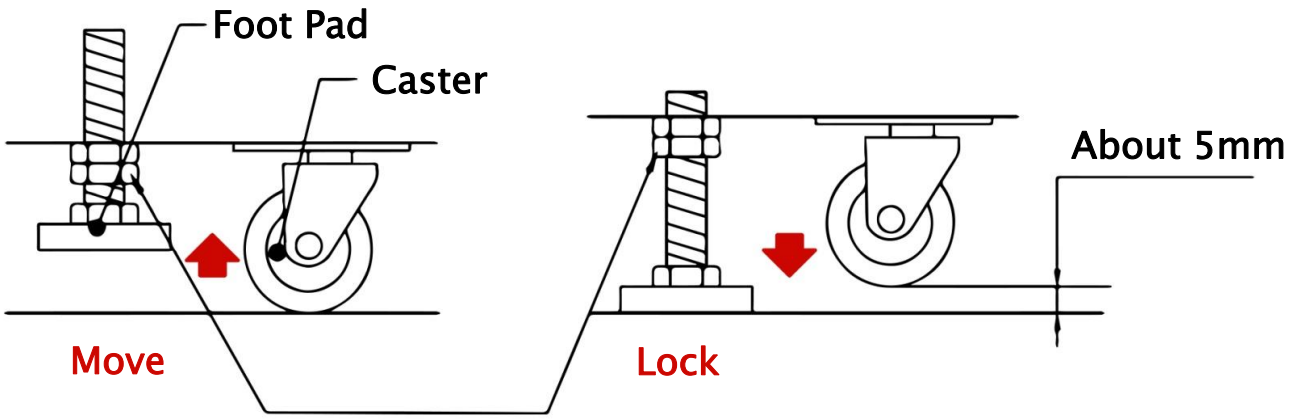
Operation as follows

①When moving the machine, adjust the foot pads to the highest point and keep the casters touch the floor.

②The machine can be easily moved while the wheels are load-bearing.



③After confirm the location, tighten screws downward and fix it. Adjust the height of the four foot pads until the machine is in level.



4. Game Instruction

2 player whack game, has single-player mode and two-player battle mode. Compared to traditional whack games, we offer a 2-player battle gameplay that is more exciting and fun.

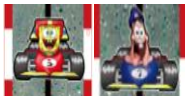
About The Game

1. Single mode: Insert coin and press 1P or 2P button to enter the game, Each hit awards 1 points. The scoring indicator will go down accordingly. Times up then game over, players can get ticket depend on the score.
2. Battle mode: Insert coins on both sides, and then press VS button to start the game. Times up then game ends, the indicators stop moving. Players will get tickets based on their score.

★ Game Feature

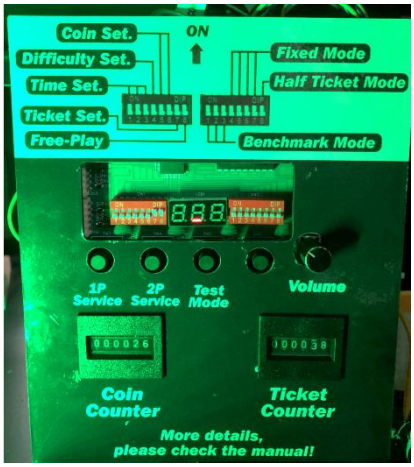
1. Attractive design with luxury lighting effect. Score tips are provided using a small motor and screw, more intuitive.
2. Mechanized structure, the solenoids are made of blow molding material, strong and durable.
3. With single mode and battle mode, double fun, easy to play.

How To Play

Device name	Picture	Function
Two-player VS battle mode button		1P and 2P coin-in at the same time, the button will light up, press it to enter the battle mode
1P/2P Single mode button		1P or 2P coin-in, the button will light up, press it to enter the single mode
Coin credit & Time FND		Displays coin count and game countdown
Ticket FND		Displays the number of tickets that players win (not the final tickets)
Score indicator		Indicates the players' current score

5. SETUP SETTINGS

5.1 How to enter setup menu

Setup key position	Picture	How to operate
Unlock the Coin Acceptor plate		The 8-bit dip switch on the left for 1P&2P game settings, while the right 8-bit dip switch for ticket settings. The detailed information can be found in sections 5.2 and 5.3. The No.1 and No.2 keys below are the service keys for 1P&2P (long press for 3 seconds to clear debt ticket credit), and the No.3 key is the test mode key. No.4 Key no function. The rightmost key is used to adjust volume.
Front Plate		Refill ticket: Press the button to refill the ticket after replacing it when the ticket is empty

5.2 1P & 2P Game setup(The 8-bit dip switch on the left)

	1	2	3	4	5	6	7	8
30s/game	OFF	OFF						
40s/game	ON	OFF						
50s/game	OFF	ON						
50s/game	ON	ON						
Easy Mode			OFF	OFF				
Normal Mode			ON	OFF				
Hard Mode			OFF	ON				
1 coin/game					OFF	OFF		
2 coins/game					ON	OFF		
3 coins/game					OFF	ON		
4 coins/game					ON	ON		
Ticket OFF							OFF	
Ticket ON							ON	
Free Play								OFF
Pay Play								ON

5.3 Ticket setup(The 8-bit dip switch on the right)

	1	2	3	4	5	6	7	8
Benchmark value 1	OFF	OFF	OFF					
Benchmark value 2	ON	OFF	OFF					
Benchmark value 3	OFF	ON	OFF					
Benchmark value 4	ON	ON	OFF					
Benchmark value 5	OFF	OFF	ON					
Benchmark value 10	ON	OFF	ON					
Fixed value 0				OFF	OFF	OFF	OFF	
Fixed value 1				ON	OFF	OFF	OFF	
Fixed value 2				OFF	ON	OFF	OFF	
Fixed value 4				ON	ON	OFF	OFF	
Fixed value 5				OFF	OFF	ON	OFF	
Fixed value 10				ON	OFF	ON	OFF	
Fixed value 15				OFF	ON	ON	OFF	
Fixed value 20				ON	ON	ON	OFF	
Fixed value 25				OFF	OFF	OFF	ON	
Fixed value 30				ON	OFF	OFF	ON	
Fixed value 50				OFF	ON	OFF	ON	
Half Model 1/1								OFF
Half Model 1/2								ON

5.4 Ticket setup instructions

The final ticket amount is calculated by referring to the table below.
If shows a debt ticket, please click the Refill Key after replacing the ticket to complete the remaining tickets.

Mode	Fixed Mode	Benchmark Mode	Half Mode
Ins.	Fixed ticket amount (Regardless of the score.) Default:0	Ticket FND displays amount÷benchmark value. Default:2	When 1/2 is set, the final number of ticket is 1/2 of the timer tickets displayed. Default:1/1
Set value	The range includes 0,1,2,4,5,10,15,20,25, 30 and 50	The range includes 1, 2, 3, 4, 5, and 10	Ticket ratio options are 1 / 1 and 1 / 2.
E.g.	If the fixed mode is set to 10, regardless of the benchmark mode setting, only 10 tickets will be drawn. Only the Fixed mode is set to 0, the benchmark mode calculates the ticket amount as 10 and there will be a total of 10 tickets.	The set value is 1, when Ticket FND 65 points ÷ 1 = 65 tickets will be received. The set value is 2, when Ticket FND 65 points ÷2 = 32 tickets will be received.	When 1/1 is set, the tickets are drawn according to the displayed Benchmark mode setting, which remains unchanged. When set to 1/2, if 9 tickets are displayed, 8 tickets will be drawn first and the last ticket will remain in the game for 3 minutes. The scores will accumulate if the player continues playing; otherwise, they will be automatically cleared.

Ticket FND displays amount = Fixed mode ticket amount or the benchmark mode ticket amount.
(The fixed mode setting is given priority over the benchmark mode)
Final tickets amount = Ticket FND displays amount x half mode ratio.

5.5 Scores and tickets setup

Get 1 point for each hitting the solenoid.
1 point=1 ticket

EASY : 1hit = 3 points
NORMAL : 1hit = 2 points
HARD : 1hit = 1 point

5.6 Test Mode

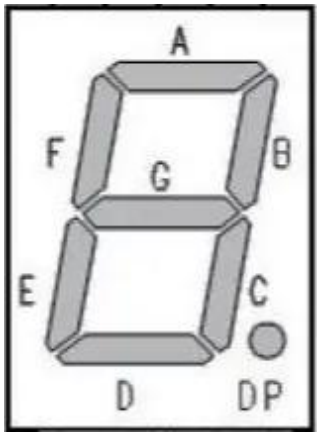
In standby state, press the test key to enter the testing mode. Press the 1P/2P game button to switch between test options, and use the VS button to enter or exit test options.

1P TIME FND	Options	Description
	Test mode	ⓐ After enter the test mode, the functions of the 1P game button and 2P game button are as follows: 1) 1P game button function is to move up. 2) 2P game button function is to move down. ⓑ The test menu is composed of" A1→B1→ C1→ D1→ E1→ F1→ G1→ H1→OU ". The menu options loop indefinitely in order " A1→B1→C1→D1→E1→F1→G1→H1 → OU→A1→B1→C1→D1→E1→F1→G1→H1→OU→A1 ~~~ " . ⓒ The downward direction is shown in the timer in the following order. 1) A1 → B1 → C1 → D1 → E1 → F1 → G1 → H1 → OU ⓓ The upward direction is shown in the timer in the following order. 2) OU → H1 → G1 → F1 → E1 → D1 → C1 → B1 → A1 ⓔ Press the VS button to access the chosen mode. ⓖ After selecting the mode, the 1P and 2P game buttons operate based on the corresponding instructions below. ⓗ In test mode, use either the 1P game button or 2P game button to select different options. Press the VS button to end the current test option and proceed with the newly selected one ⓘ Press the VS button for more than 3 seconds to exit the test mode.
A1	LED & FND test	ⓐ 1P Time FND shows A1, press the VS button to enter. ⓑ All the RGB and monochrome LED display test sequence is as follows: The monochrome LED alternates between on and off every 0.5 seconds, based on follow colo and loop indefinitely in order: RED (0.5s) → GREEN (0.5s) → BLUE (0.5s) → WHITE (0.5s) ⓒ FND loop demonstration in order of 0.0. ~ 9.9. (Performance time 0.5s) ⓓ Press the VS button to exit the test mode.
B1	Solenoid test	ⓐ 1P Time FND display B1, press the VS button to enter. ⓑ The Solenoid and Sensor test process is as follows: 1) The solenoids from numbers 1 to 7 lift and fall in sequence every 0.5 seconds when press 1P or 2P Game Button(As picture 2). 2) When each solenoid falls off, the LED light around it will turn on when its bottom sensor completes identification. (The light will be on continuously ON when it is sensed, or OFF.) 3) The aforementioned test state will be reiterated. ⓒ Press the VS button again to exit the test mode.
C1	Score race car lift test	ⓐ 1P Time FND C1, press the VS button to enter. ⓑ The SCORE RACE CAR LIFT TEST process is as follows 1) The third digit of the 1P ticket FND shows the lifting time. (unit in seconds) - Rise time: The time between the bottom sensor OFF and the top sensor ON - Fall time: The time between the top sensor OFF and the bottom sensor ON 2) The first digit of the ticket FND shows the input status of the sensor, and the second digit shows the operating status - The bottom sensor is at position "E" , while the top sensor is at position "F".(As

		picture 1) When recognized, "E" , "F" segment ON. When not recognized "E" , "F" segment OFF. 3) After entering the test, both 1P and 2P race cars move to the top, pausing for one second after being recognized by the top sensor before moving to the bottom. They then pause for another second after being recognized by the bottom sensor before moving upward again. 4) The aforementioned test state will be reiterated. ⓒ Press the VS button again to exit the test mode.
D1	Coin function test	ⓐ 1P Time FND D1, press the VS button to enter. ⓑ The third digit of the ticket FND shows the number of coins (Show 0 ~9, show 0 ~9 sequence again from 10) ⓒ Press the 1P Start button to activate the coin ban function. 1) When the coin ban function is turned OFF, the LED light on 1P Game Button is on. 2) When the coin ban function is turned ON, the LED light on 1P Game Button is off. 3) After entering this test mode, the ban function is automatically OFF. Press the Start button to turn it on/off. ⓓ Inserting coins will have a sound effect and the quantity will be displayed when the coin ban function is disabled. When the coin ban function is enabled, please disregard the coin number and reset the previous coin credit count. ⓔ Press the VS button again to exit the test mode.
E1	Ticket test	ⓐ 1P Time FND E1, press the VS button to enter. ⓑ The third digit of the ticket FND shows the number of tickets (The tickets will be counted in the order of "3, 2, 1, 0" while running, with a 0.3-second interval) ⓒ Press the 1P Game button or 1P Ticket Refill button to draw 3 tickets ⓓ Press the 2P Game button or 2P Ticket Refill button to draw 3 tickets ⓔ When the draw ticket function malfunctions, the FND stops moving and displays an error code. ⓕ Press the VS button again to exit the test mode.
F1	Counter test	ⓐ 1P Time FND F1, press the VS button to enter. ⓑ The 1P coin counter and ticket counter are activated once each when press the 1P Game button, with a 0.5-second interval. ⓒ The 2P coin counter and ticket counter are activated once each when press the 2P Game button, with a 0.5-second interval. ⓓ Press the VS button again to exit the test mode.
G1	Audio test	ⓐ 1P Time FND display G1, press the VS button to enter. ⓑ The speakers on both sides will be played in the following order by pressing the 1P game button. Left "1" → right "2" → left "3" → right "4" → left "5" → right "6" → left "7" → right "8" → left "9" Automatically loop in order ⓒ Press the 2P game button to play various audio through both side speakers, including sound effects, demos, and game sounds. ⓓ Press the VS button again to exit the test mode.

H1	Aging Test	ⓐ 1P Time FND H1, press the VS button to enter. ⓑ The 1P and 2P Solenoids are moved in the following sequence during the aging test. 1) Action : ① → ② → ③ → ④ → ⑤ → ⑥ → ⑦ repeat the lifts in sequence. 2) The ①Solenoid rises, wait for 3 seconds, then fall. During the waiting time or after the descent, there is a signal from the bottom sensor that can be viewed as a cycle. 3) The ② solenoid then repeats the action cycle once the ① solenoid is done. ⓒ Each Solenoid rises and falls a total of 99 times. ⓓ All solenoids will stop after 99 cycles, and the Ticket FND for 1P and 2P will show the number of times their sensors detected movement. ⓔ 1P timer, 2P timer display as below 1) The first digit shows the solenoids number, the last two digits show the times of senses. 2) Example: "199" and "299" and "399" and "499" and "599" and "699" and "799" each display for 1 second. If there is a sensing problem or the solenoid does not go up, the last two digits on the FND will not increase. Ex) If the final result is 296, then there is a number 4 problem at Pop 2. ⓕ Press the VS button again to exit the test mode.
OU	Exit	Exit test mode

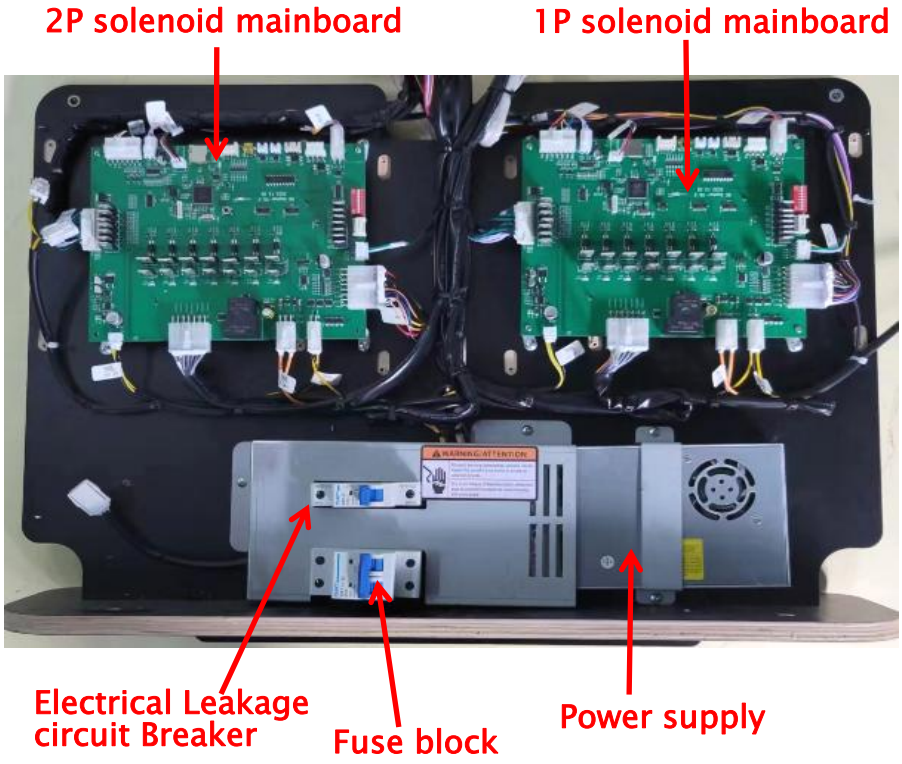
Picture 1: Corresponding position of FND in C1 test



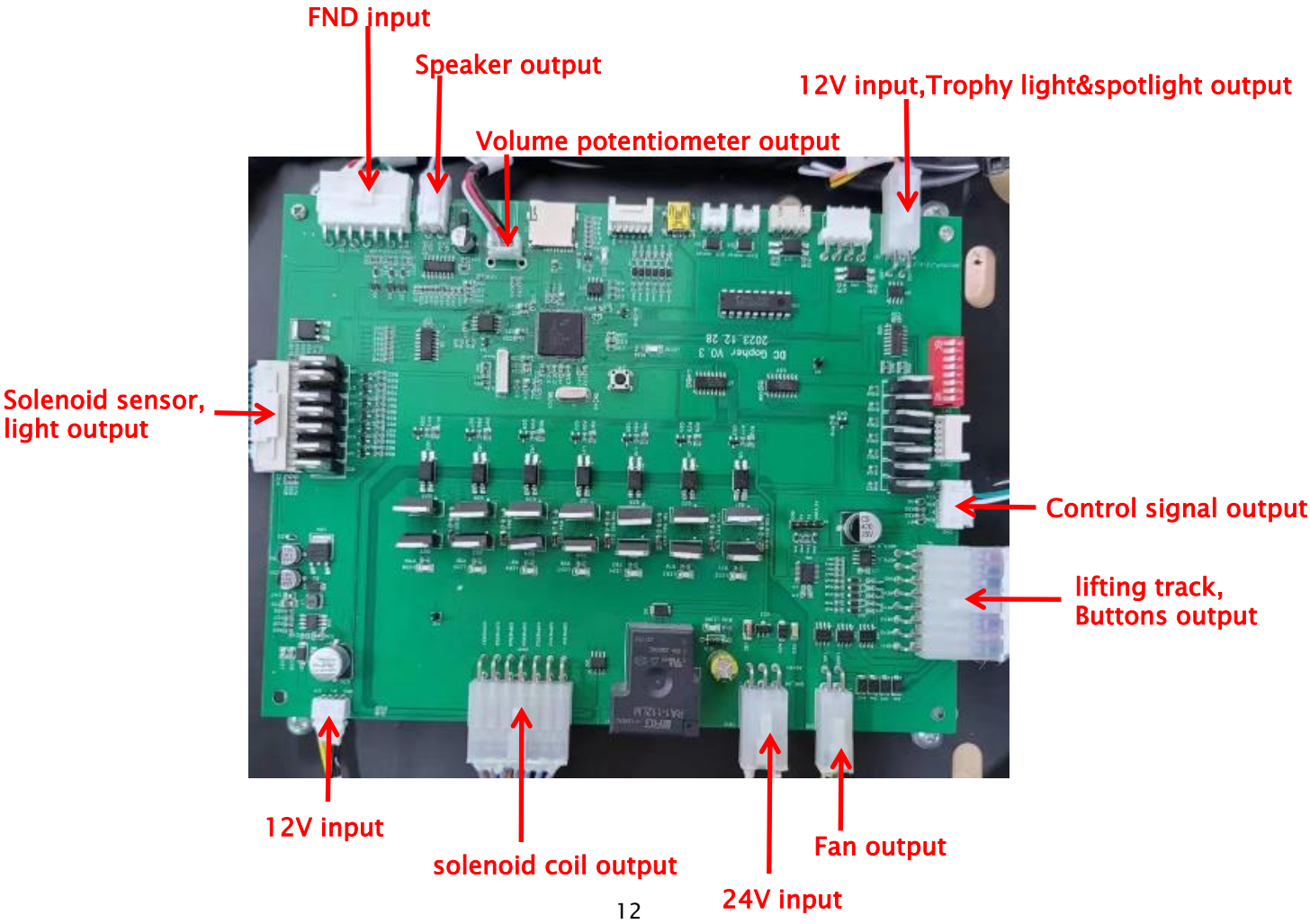
Picture 2: Jumping sequence of solenoids in B1 and H1 tests

6. BOARD INFORMATION

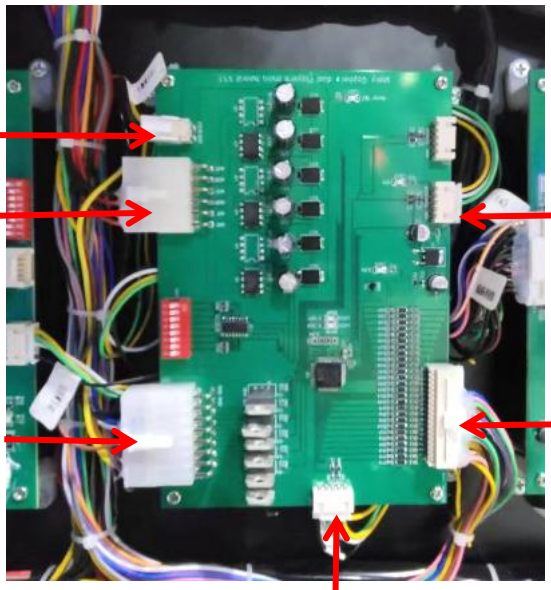
6-1 Backstage module



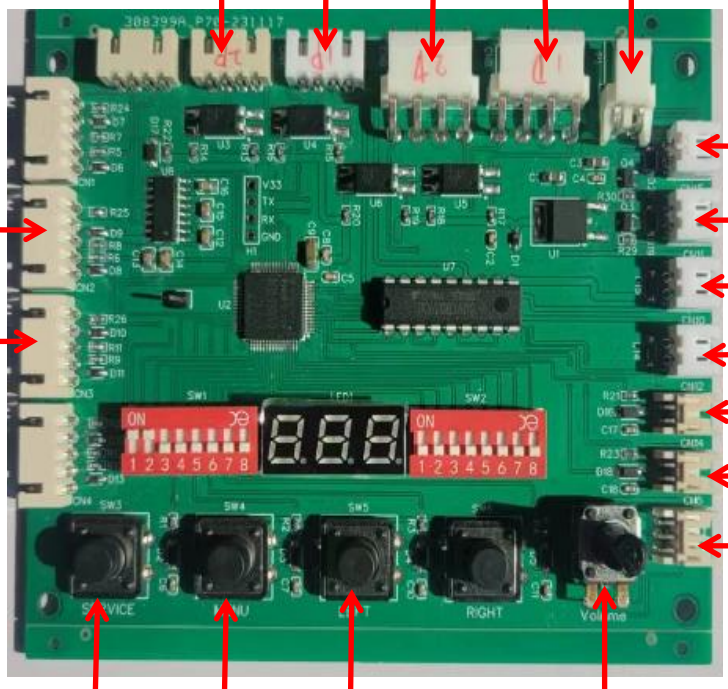
6-2 Solenoid mainboard (1P & 2P)



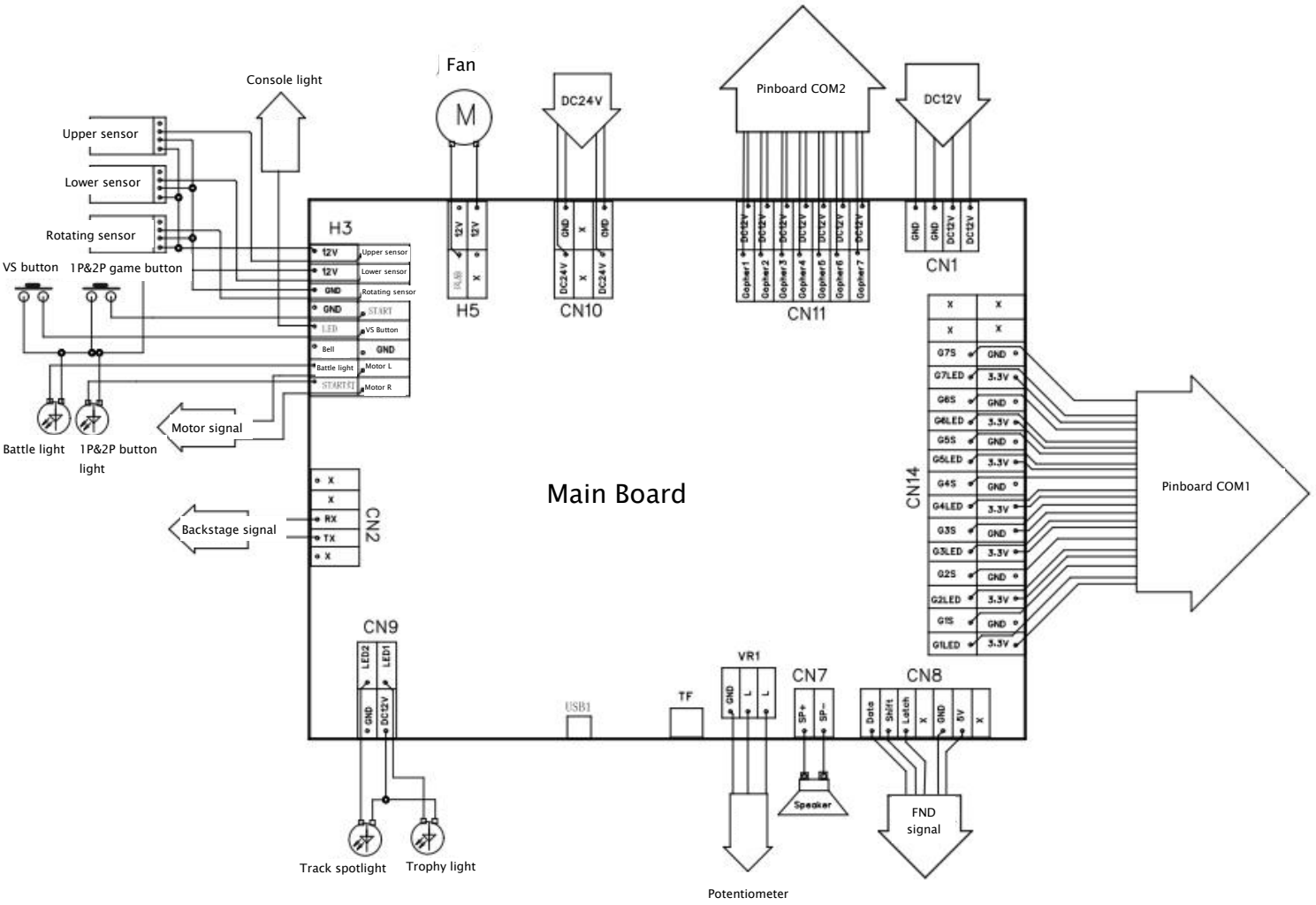
6-3 Control Board

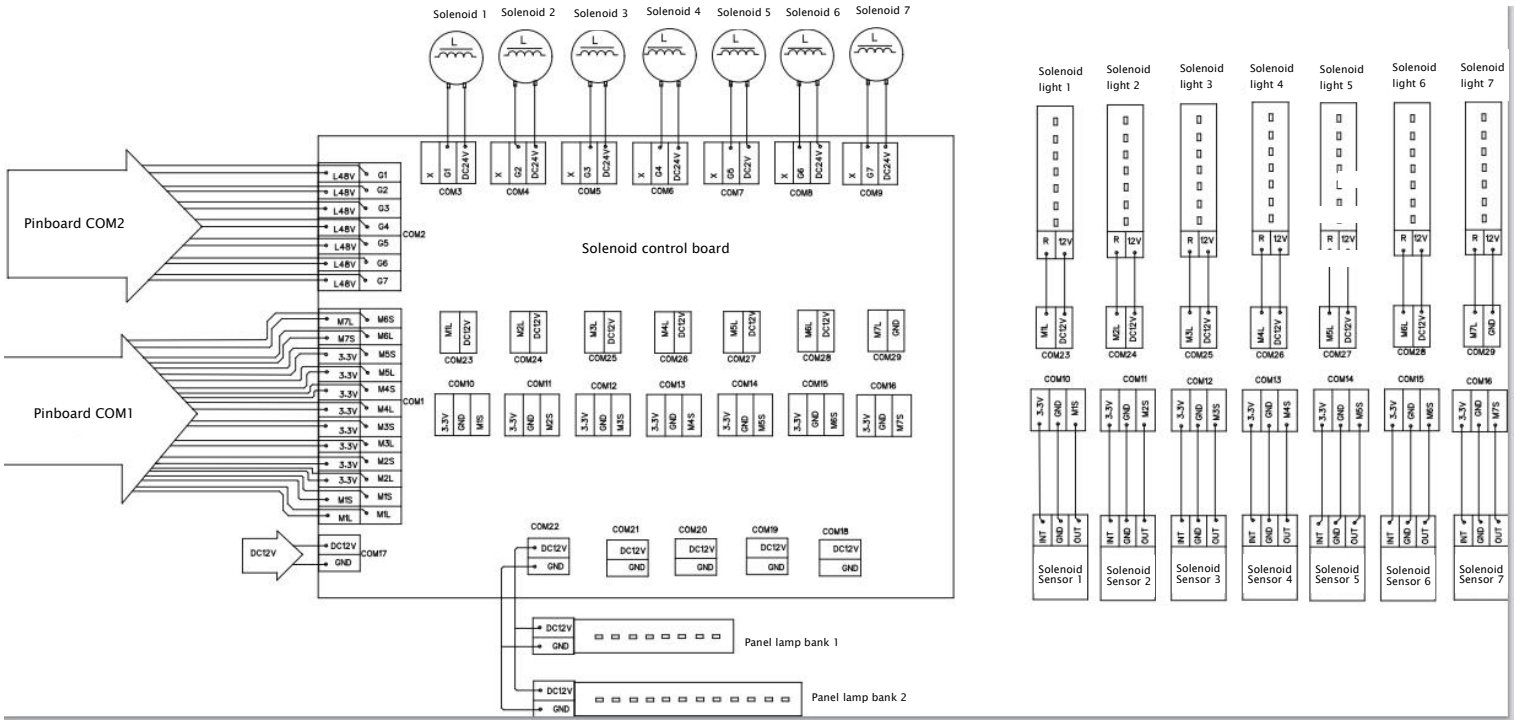


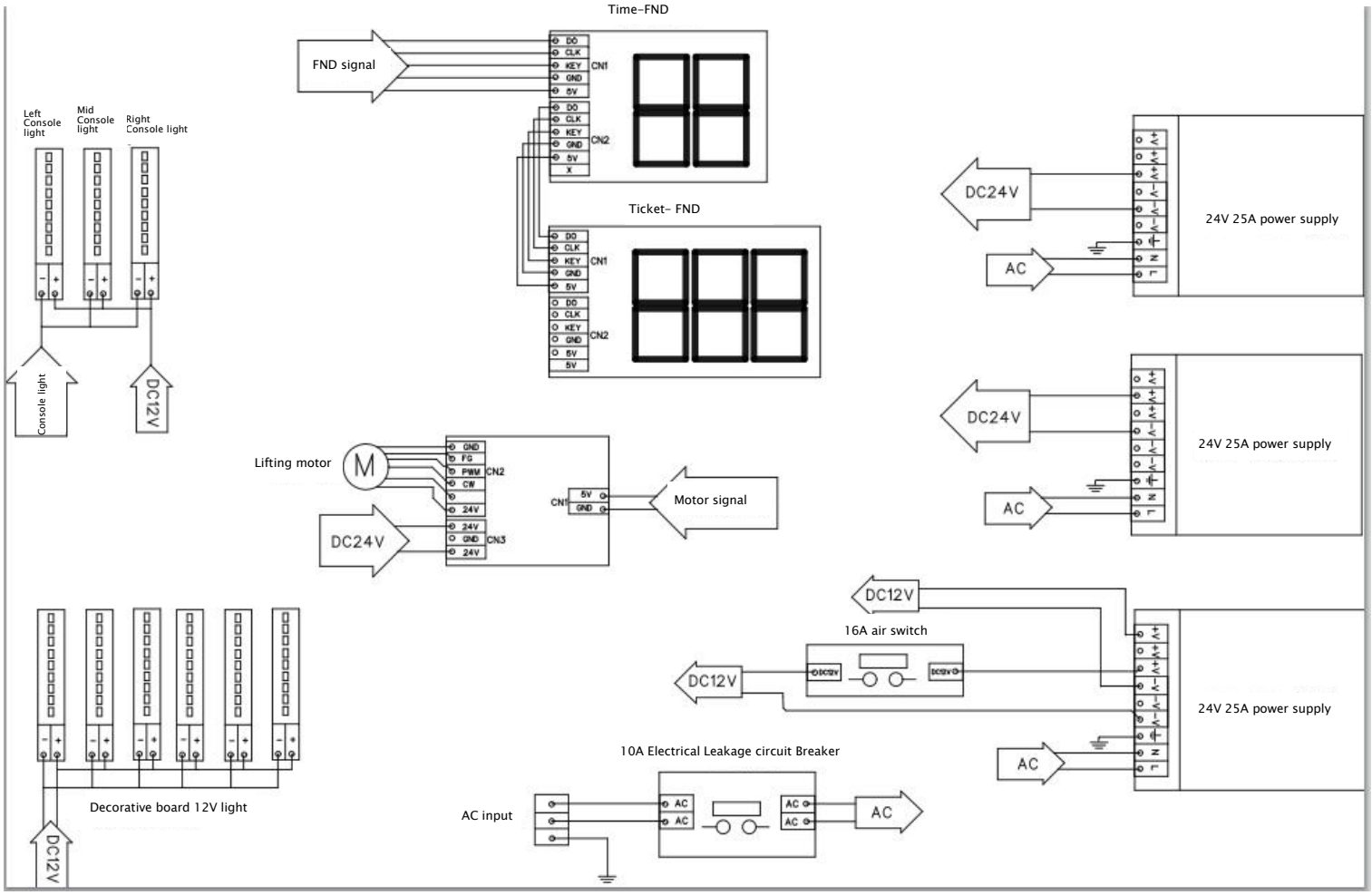
6-4 Setup Board

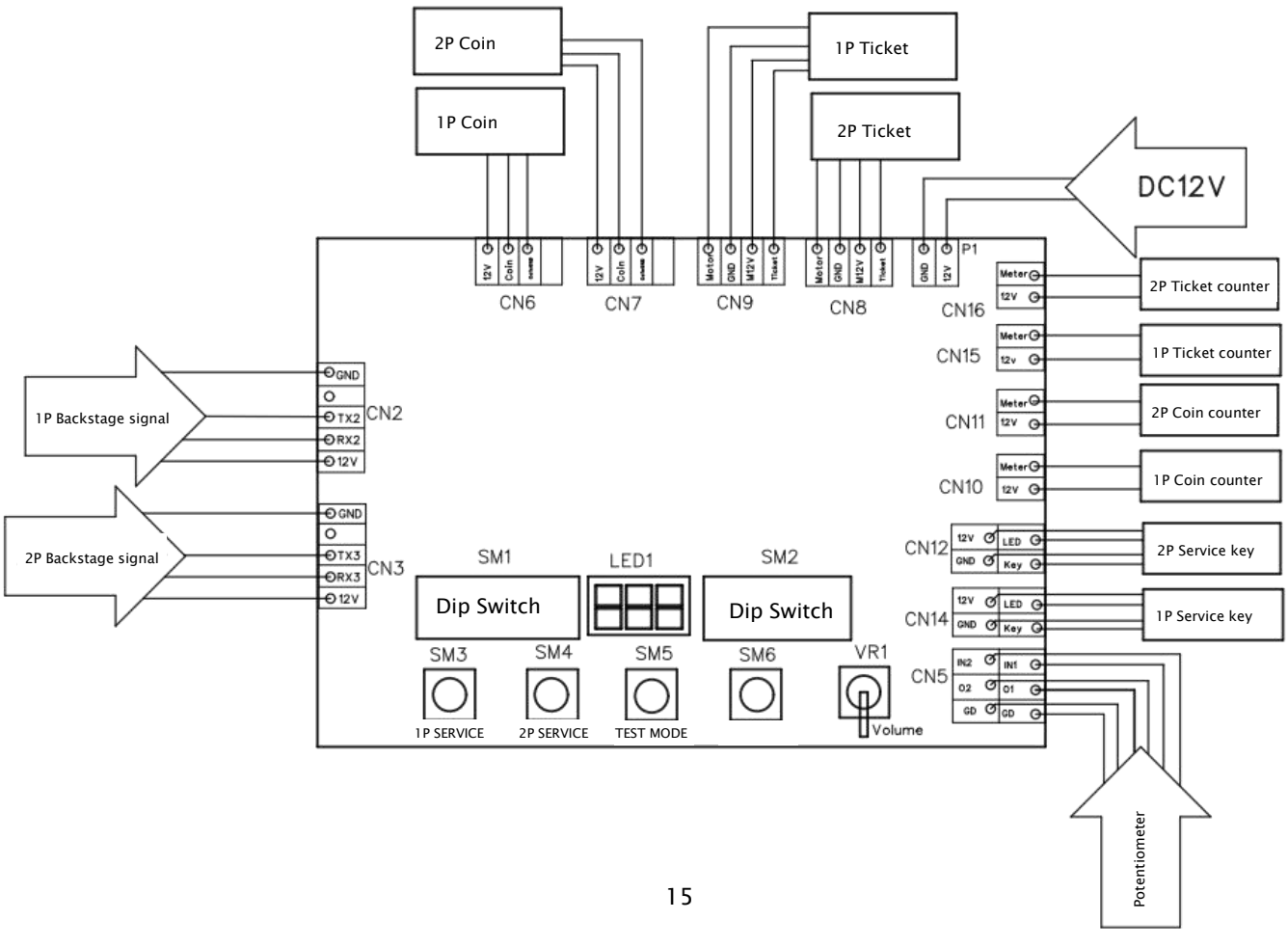


7. CIRCUIT DIAGRAM






Time-FND
FND signal
Ticket- FND
Left Console light
Mid Console light
Right Console light
Console light
DC12V
Lifting motor
M
DC24V
Motor signal
24V 25A power supply
AC
16A air switch
Decorative board 12V light
10A Electrical Leakage circuit Breaker
AC input


2P Coin
1P Coin
1P Ticket
2P Ticket
DC12V
CN6
CN7
CN9
CN8
CN16
P1
2P Ticket counter
CN15
1P Ticket counter
CN11
2P Coin counter
CN10
1P Coin counter
CN12
2P Service key
CN14
1P Service key
CN5
Potentiometer
1P Backstage signal
CN2
2P Backstage signal
CN3
SM1
Dip Switch
LED1
SM2
Dip Switch
SM3
SM4
SM5
SM6
VR1
1P SERVICE
2P SERVICE
TEST MODE
Volume

8. TROUBLE SHOOTING

8-1 Machine can not boot, no electricity

Please check if AC power cable is connected well.

Cable connected well

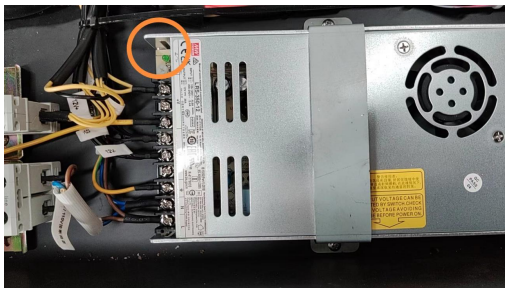
Poor connection: re-plug the cable (picture 1)

(Picture 1)

Please check whether the power supply cable is connected well

If cable is connected well, but the LED light of the power supply is off, then power supply has problem (Test way: Please use the multimeter to check if the power supply has output voltage) (picture 2)

Poor connection: re-plug the cable (picture 1).



(Picture 2)

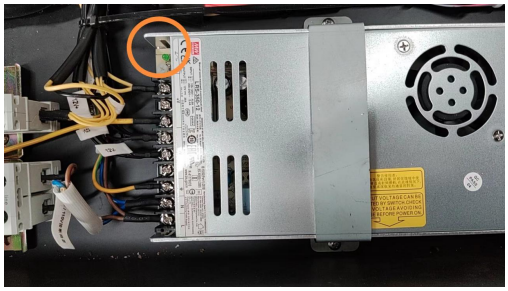
8-2 Power on machine, LED light is working, but it doesn't function.

Check whether the SMPS power cable is connected well

Cable connected well

Poor connection: re-plug the cable

If the power supply indicator is on, there is a main board problem. Please contact the manufacturer for maintenance (picture 3)



(Picture 3)

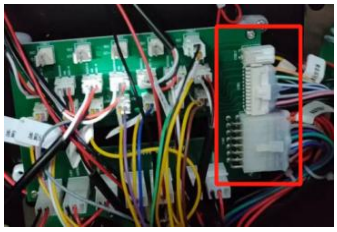
8-3 Machine can accept coins and has sound effects, but the solenoids do not jump.

Please check the control board under the dispenser whether the cable is connected well.

Cable connected well

Please use a multimeter to check if there is a 24V output from the 24V supply voltage. If not, it might has problem, please contact the manufacture for maintenance.

Poor connection: re-plug the cable.



9. ERROR CODE

Code	Meanings	Solving
E0	The coin acceptor has problem	Check if the wire or acceptor itself is damaged.
E1	The current of the solenoid coil is overloaded.	Check if the solenoid coil is short-circuited.
E2	The game storage data is abnormal.	1. Restart the machine. 2. Replace the mainboard.
E3	24V power supply is absent or the solenoid sensor plug is disconnect.	Check if the 24V power supply is damaged.
E4	More than 4 pieces solenoids are broken.	1. Check the coil running status and cable connection. 2. Check the optical input status and cable connection.
E5	Solenoids have abnormal optical sensor recognition.	1. Check the coil running status and cable connection. 2. Check the optical input status and cable connection.
E6	The screw motor runs abnormally.	1. Check the motor functionality and wire connectivity. 2. Inspect the status of the encoder optical sensor input and ensure proper cable connection.
E7	Optical sensor runs abnormally.	1. Verify the motor functionality and wire connectivity. 2. Inspect the status of the encoder optical sensor input and ensure proper cable connection.
E8	The DIP switch settings of the two devices are different in battle mode.	Set the DIP switches on both the 1P and 2P boards to be consistent.
E9	Mainboard damage.	Please contact the supplier and replace the mainboard.
HE	Equipment does not draw the ticket.	1. Check the ticket box if it is out of tickets. 2. Check if the motor is operating well and if the wires are connected properly. 3. Check the ticket dispenser optical sensor.