

**Program Version: NMENU169**

# **CRANE MACHINE**

## **OPERATING INSTRUCTIONS**

Please read this manual before use and keep it for future reference

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# Business methods

## Game method

1. Coin to the game after the score, the machine demo music into the game music, the hook button light starts flashing.
2. Move the rocker to drive the crane to the top of your chosen target and release the rocker when you start to move the rocker. LCD panel will countdown game time.
3. When you press the check mark button, or the game time has expired (game time can be adjusted), the crane will drive the motor to lower the paw and grab the object. Under the hook button light flashes rapidly.
4. If the program has set the function of "air extract", before the paw is not in the end, you can press the down button again to extract the air.
5. Catch the paw up After hitting the apex, the paw stops rising and moves to the exit to release the paw.

## Game rules

### DEMO standby

The machine will play standby music when unmanned, standby music will be played back according to the preset advertisement music interval

## Coin

1. How many settings can be set by the menu?
2. Coin signal is less than 20 milliseconds coin counting signal.
3. Coin coin speed is recommended to adjust to 20ms or more, coin signal selection is normally closed.
4. Coin Display Description:
  - If you set 1 for 1 point, the display on the coin operated board will increment by one
  - If you set 1 for 2 shots, you must cast 2 coin displays to accumulate 1. When the first coin is cast, the machine will only send out the sound of receiving coins, the coin counter will accumulate, but the LCD monitor will not accumulate Will accumulate, players must cast the first two coins to accumulate game scores.

## Shake platform

1. If the machine is installed foul device, when the player shaking the machine, the machine will issue a "warning" voice.
2. If the paw has clawed, when the machine detects the cradle foul, the machine will release the paw, and then directly back to the origin. If you set Shake Score, all scores are cleared.

# Machine function adjustment and precautions

## Into the function adjustment method:

Press and hold the function key on the motherboard during the game demo to enter the function adjustment menu. If the machine is in an error state, you must press and hold the function key on the main board to turn on the power switch or long press the setting to enter the function adjustment menu. Up, down, left and right keys to adjust the data, the next key to save and exit.

Item times	Project	Description
A basis Set	A1 Language Language	Can set the menu to display the text is Chinese or English, the default is Chinese
	A2 advertising music	Can be set on and off, when set to on, you can set the music interval, the range (0-30 minutes) is preset on, the interval is 0 minutes
	A3 several money a few games	Coin number range (1-20), Bureau number range (1-10), the default 1 currency 1 Bureau
	A4 coins reserved	Can be set on and off, when set to open the power will retain the remaining number of coins and the number of bureau, if set to off then do not keep, the default is on
	A5 game time	Range (5-60 seconds), preset 20
	A6 mode selection	<ol style="list-style-type: none"> <li>1. Weak grip mode: This mode does not appear to win the voltage, strong force to maintain strength after the weakened grip.</li> <li>2. The national mode: If the number of games reached the set probability of winning will be sent once the winning voltage, with or without winning, are re-calculated probability.</li> <li>3. Random mode: randomly set a prize within the probability of winning a prize.</li> <li>4. Probability Accumulation - Fixed: If the game reaches the set probability of winning, the winning probability will be sent once. If the light eye detects the winning, the probability is recalculated. If no winning is detected, the next game will still be strong. If The eyeball was not detected for three consecutive times and the probability was recalculated.</li> <li>5. Probability Accumulation - Random: The difference between the cumulative probability and the cumulative probability is to send the full claw randomly in the set probability of winning probability. The others are the same as 3.</li> <li>6. Trafficking mode: According to the set probability of winning, the LCD will show the number of times of holding the gift and the number of times it has been played. No coin will be dispensed when the winning probability is set, Win the voltage until winning the eye.</li> </ol>

A Basic Settings	A7 probability of winning	Range: (1-250), preset 10nning
	A8 gift exit location	Can be set as left front corner or left rear corner, preset left rear corner
	A9 caught the air	Can be set on and off, the default is on
	A10 background music	Can choose to play music in standby
	A11 game music	Can choose to play music when the game
	A12 Light level	Can be set to be normally open (N.O.) or normally closed (N.C.), preset normally open (N.O.)
	A13 gift ticket	1. cancel donated this is the default value, did not install the machine must be selected 2. winning gift range 1-50 3. Unwonned gift range 1-50 Give away each board
	A14 shake the clear points	Select On and Off, the default is on, shake the machine will clear the score
	A15 menu direction	Selectable on and off, will change the direction of the menu selection
B grip voltage setting	B1 automatically adjusts grip	The doll into the claws, press the hook button can automatically set the grip
	B2 test grip voltage	Cycles can be repeated test whether the grip voltage is normal, the test does not require coins, the test is not ideal can automatically adjust or manually set the claw force.
	B3 strong grip voltage	Range: 13V-48V, preset 27V
	B4 weak grip voltage	Range: 2.0V-20V, preset 5V
	B5 weak grip voltage	Range: 4.5V-30V, preset 12.8V
	B6 jackpot voltage	Range: 4.5V-48V, preset 35V
	B7 strong support time	Range: 0.1-3 seconds, the default 0.8 seconds, paw grabbing items after the weakening claw time
	B8 weakness to maintain time	Range: 0.1-3, preset 0.2, paw grabbing items after the weakening claw time
	B9 strong weakening	Range: 0-1 0 = weak claw time later weak claw 1 = bump weaker claw
	B10 release line length adjustment	Range: 0.5-10 seconds, preset 2.2 seconds, the key can test the length
	B11 continuous strong error	Range: 0-50 times 0 means no alarm, preset 0, continuous cumulative number of claws, more than the number of machines will be reported "crab overheating"
	B12 Claw speed	Claws claw speed, the greater the slower the number
	B13 rise delay	After the paws are clawed, they rise again after a delay.
	B14 drop delay ratio	According to set the ratio of the time to extend the strong grip, extend the time set for the B15 plus a strong grip time
	B15 drop delay time	Random extension of time. It is related to the ratio set by B14

C motor speed setting	C1 before and after the speed	Range: 1 (fast) -10 (slow) preset 2
	C2 speed around	Range: 1 (fast) -10 (slow) preset 2
	C3 up and down speed	Range: 1 (fast) -10 (slow) preset 2
D test	Test Crane micro-moving eye	Can test the microswitch and photoeye levels of the crane, indicated by 0 and 1 respectively) -10 (slow) preset 2
E factory test	Used for factory aging machines	Press the rocker before entering the test, press the hook button to exit, automatic cycle test Crane's operation
F data clear	Used for factory aging machines	The option is to clear the entry currency and the prize record
	The current number of F2 is cleared	The selection is to clear the game's board number
	3 Probability settlement cleared	The choice is to clear the current probability settlement
G free mode		Can be set on and off, set to open for free games, shutdown need to reset
H Restore factory settings		If you select Yes, you can restore all settings of the machine to the factory defaults
I check		Can see the currency, the prize, the probability of settlement statistics
J voice test		Can test whether the voice module works

## Fault code description:

error code	Fault description	Check the timing	Processing method
Upper limit fault	Line failure	1. POST 2 game 3.Factory test	1. Check when the closing line, the stop SW is opened correctly. 2. Check if SW is faulty. 3. Sky train air joints whether there is a bad situation. 4. Motherboard J1 loose loose contact with the situation. 5. motherboard failure.

Lower limit error	Line fault	Factory test	<ol style="list-style-type: none"> <li>1. Check if the thread of the reel is in disorder.</li> <li>2. Check if the down stop SW is faulty.</li> <li>3. Sky train air joints whether there is a bad situation.</li> <li>4. Motherboard J1 loose loose contact with the situation.</li> <li>5.Motherboard failure.</li> </ol>
Optical eye failure	Light eye board signal failure	At boot time	<ol style="list-style-type: none"> <li>1. Please check whether the sensitivity of the optical eye board is too high. Please adjust the sensitivity VR so that the optical eye board LED is in a "dark" state.</li> <li>2. J5 electric eye line is off.</li> <li>3. Light eye board failure.</li> <li>4. Motherboard failure.</li> </ol>
Front limit fault	SW stop before failure	<ol style="list-style-type: none"> <li>1. When starting up</li> <li>2 game</li> <li>3.Factory test</li> </ol>	<ol style="list-style-type: none"> <li>1. Check before stopping SW is faulty.</li> <li>2. sky car group air joints if there is bad contact situation.</li> <li>3. Motherboard J1 loose loose contact with the situation.</li> <li>4.Motherboard failure.</li> </ol>
Rear limit fault	After stop SW fault	<ol style="list-style-type: none"> <li>1. When starting up</li> <li>2 game</li> <li>3.Factory test</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the stop SW is faulty.</li> <li>2. sky car group air joints if there is bad contact situation.</li> <li>3. Motherboard J1 loose loose contact with the situation.</li> <li>4. Motherboard failure.</li> </ol>
Left limit fault	Left stop SW fault	<ol style="list-style-type: none"> <li>1. When starting up</li> <li>2 game</li> <li>3.Factory test</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the stop SW is faulty.</li> <li>2. sky car group air joints if there is bad contact situation.</li> <li>3. Motherboard J1 loose loose contact with the situation.</li> <li>4. Motherboard failure.</li> </ol>
Overheated paws	Over the set continuous strength	At the end of this game	<ol style="list-style-type: none"> <li>1. Please check if the photo-eye board is working properly.</li> <li>2. If there is no light eye plate, clear is set to 0.</li> <li>3. When the number of consecutive strong error reports is not set to zero, the machine continues to output strong jaws more than the set number of times to report the error. Or set the value of consecutive strong times larger.</li> <li>4.Motherboard failure.</li> </ol>

Give a mistake	Points give the wrong A and B	At the end of this game	<ol style="list-style-type: none"> <li>1. Please check whether the lottery machine is working properly.</li> <li>2. If the machine is not equipped with lottery machines, please set to "cancel donation."</li> <li>3. Check the connection between the lottery machine and the motherboard.</li> <li>4. Ticket machine ticket.</li> <li>5. Motherboard failure.</li> </ol>
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## Simple troubleshooting:

classification	Problems	Check and eliminate methods
Coin	Money into the coin, the machine will send coins to receive the sound, but did not increase the number of LCD screen	<ol style="list-style-type: none"> <li>1. Please check the A3 coin mode is set to 1 vote 1 play, if not, the number of coins will be displayed in the lower right corner, when the vote after the set value will increase the number of 1.</li> <li>2. Coin Please select the normally closed level</li> <li>3. Motherboard failure.</li> </ol>
	The coin can not go inot increase the number of LCD screen	<p><b>Comparison of money Road:</b></p> <ol style="list-style-type: none"> <li>1. Please check whether the sampled coin in the money path matches the coin you are trying to put in.</li> <li>2. can adjust the sensitivity of money, to relax.</li> <li>3. Please check the connection of Money Road and motherboard, the power supply is correct for DC12V.</li> <li>4. Money Road fault.</li> </ol> <p><b>Multi-currency money:</b></p> <ol style="list-style-type: none"> <li>1. Sampling memory problems, please follow the instructions attached to money Road reset.</li> <li>2. Please check the connection between the money channel and the motherboard, and if the power supply is correct, supply 12VDC.</li> </ol>
	Claws will not open when clamped back to the exit	The weak holding voltage is set too low. Please adjust the weak holding voltage depending on the size and weight of the item.

Claw force	Clamps on the grip after boot	<ol style="list-style-type: none"> <li>1. The paw coil may have been short-circuited, please replace.</li> <li>2. The motherboard is faulty.</li> </ol>
	Will not clip	<ol style="list-style-type: none"> <li>1. Check the winding of the pawls for poor contact or loss.</li> <li>2. Main board failure or power failure.</li> </ol>
Crane	Can not be homing	<ol style="list-style-type: none"> <li>1. Turn off the power and turn it on again. If it still does not return to the home position, please check the front stop SW, then stop the SW, and the left stop SW is normal. The SW may be stuck. You can press and release it to hear the sound of "Tika" . Check the connection is off.</li> <li>2. Check if the middle connector of the overhead line is loosely connected.</li> <li>3. motherboard is faulty.</li> </ol>
	Joystick operation can not be forward or backward	<ol style="list-style-type: none"> <li>1. Rocker before and after the SW is faulty or the terminal is off.</li> <li>2. Check the motherboard connection rocker socket is loose or not plugged in.</li> <li>3. Crane stop before SW or stop SW after failure or stuck.</li> <li>4. before and after the motor failure or line off, or gear can not mesh.</li> <li>5. Check the line connecting the crane board is loose or not plugged in.</li> </ol>
	Rocker operation cannot be left or right	<ol style="list-style-type: none"> <li>1. Left or right of the joystick, if the right SW is faulty or the wire ends fall off.</li> <li>2. Check the motherboard connection rocker socket is loose or not plugged in.</li> <li>3. Crane left stop SW is faulty or stuck.</li> <li>4. The left and right motor malfunctions or the end of the wire is disengaged, or the gear cannot be engaged.</li> <li>5. Check the line connecting the crane board is loose or not plugged in.</li> </ol>
Under the hook	Press the hook after the claw will not hook, until the end of the game countdown automatically under the hook	<ol style="list-style-type: none"> <li>1. Check the hook button is normal.</li> <li>2. Check if the wiring is loose or fall off.</li> </ol>
	Under the hook button is normal, but can not be ticked	<ol style="list-style-type: none"> <li>1. Check if the upper and lower motor wire ends fall off.</li> <li>2. Check if the upper and lower motors are faulty or the gear engagement is normal.</li> <li>3. Check the winding is normal.</li> <li>4. Whether the cable connecting the motherboard to the motherboard is loose or not plugged in.</li> </ol>
	Press the hook when the paw does not go or next point that catch and return	<ol style="list-style-type: none"> <li>1. Check if the reel is caught.</li> <li>2. Stop SW is easy to touch or malfunction.</li> </ol>

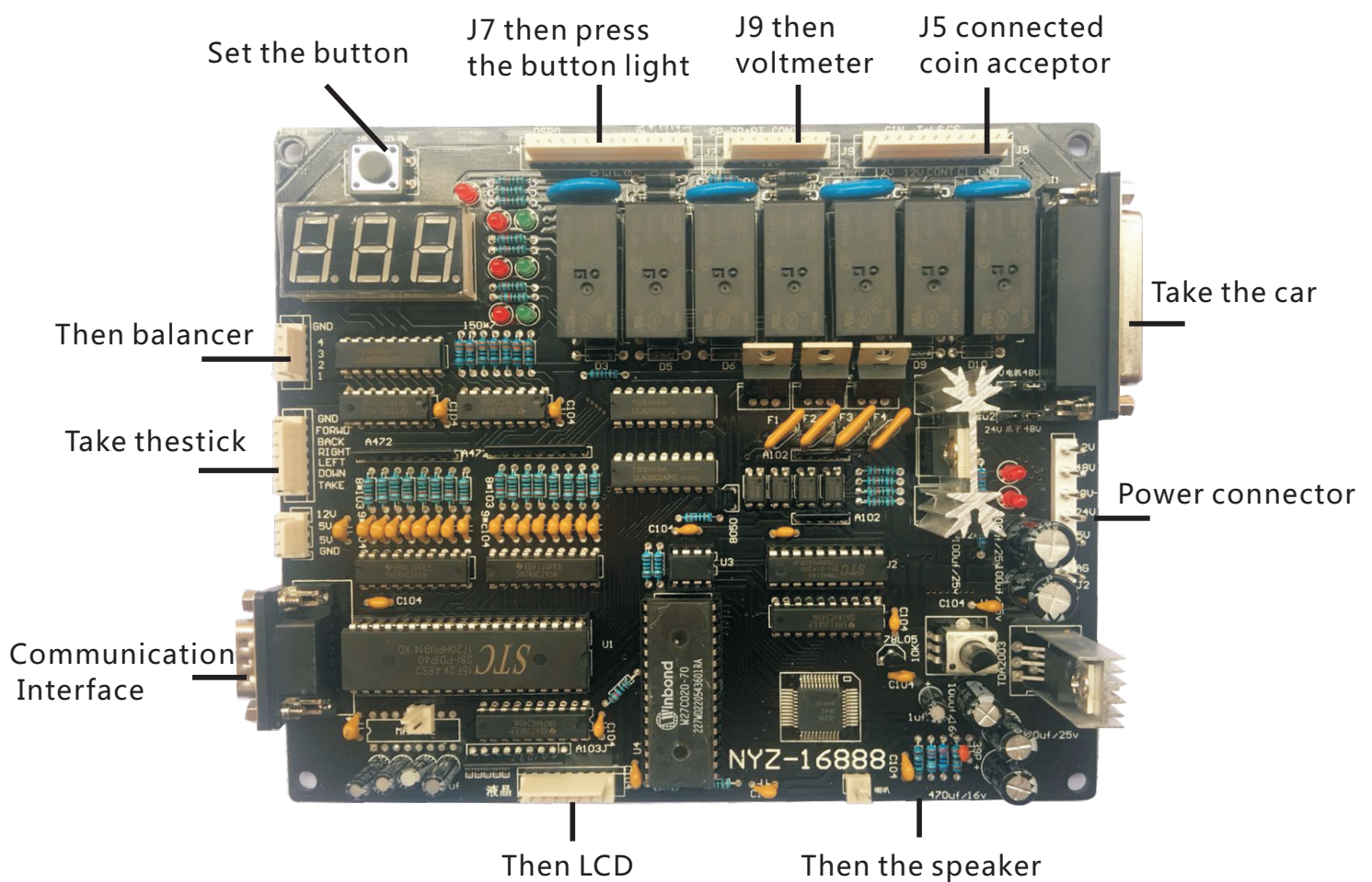
	Press the hook, the claws did not arrive at the accumulation of goods to catch the return line	<ol style="list-style-type: none"> <li>1. Check if the winding is too short.</li> <li>2. Check if the reel is caught.</li> <li>3. Is it easy to touch or malfunction when stopping the SW?</li> <li>4. The adjustment of the length of the payout line is too short and may be adjusted properly.</li> </ol>
Take things	After taking the goods back to the exit without claws	<ol style="list-style-type: none"> <li>1. Check before and after the stop SW or left stop SW is faulty or the terminal is off.</li> <li>2. Check the connection of crane car line is loose or not plugged in.</li> </ol>
	Paw does not rise after taking the goods, the crane is homing	<ol style="list-style-type: none"> <li>1. Check whether the stop of the SW has been activated by mistake.</li> <li>2. Stop SW whether the fault or the terminal is off.</li> </ol>
	After the paw does not rise, the crane does not move	<ol style="list-style-type: none"> <li>1. Check the upper and lower motor is faulty or fall off.</li> <li>2. Stop SW whether the fault or the terminal is off. The motherboard is faulty.</li> </ol>

## Wiring instructions:

### ● Motherboard 1 socket location map

# Motherboard 1 wiring instructions

## Motherboard 1 socket location map



# ● Motherboard 1 interface wiring diagram

## J5 wiring diagram

1	GND
2	GND
3	GND
4	Coin 1
5	Coin 2
6	
7	Out of the table
8	12V
9	12V
10	Into the table
11	12V
12	Eye signal

## Remote bar wiring diagram

1	GND
2	before
3	Rear
4	right
5	left
6	Under the hook
7	

## Crane wiring diagram

1	Front and rear motor +	14	Front and rear motor -
2	Motor around +	15	Motor around -
3	Up and down the motor +	16	Up and down the motor -
4	Paw coil +	17	Paw coil -
5	After the stop SW	18	GND
6	Stop before the SW	19	GND
7	NC	20	GND
8	Left stop SW	21	GND
9	Stop SW	22	GND
10	Under the hook SW	23	GND
11	NC	24	GND
12	NC	25	NC
13	NC	26	NC

## Balancer interface wiring diagram

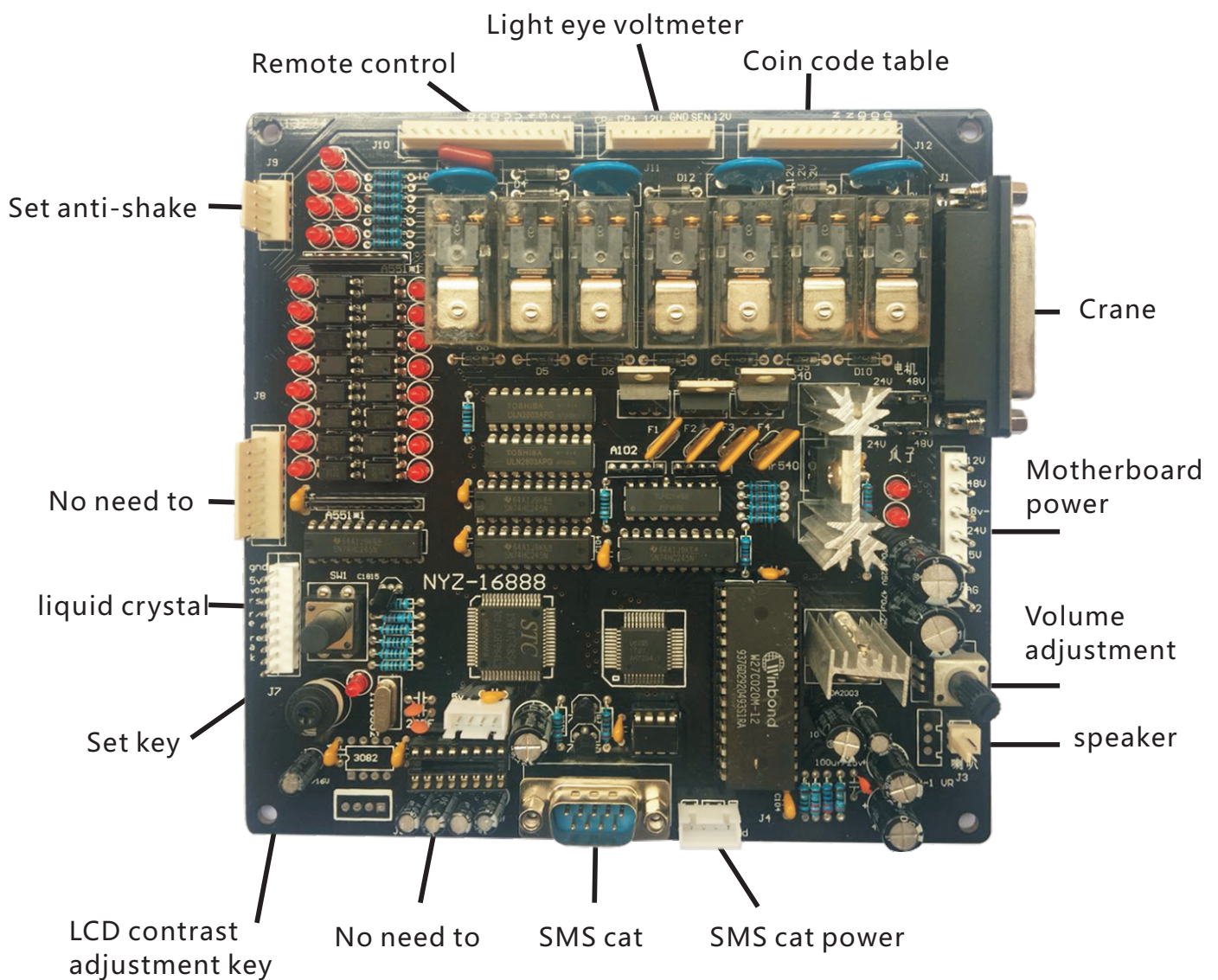
1	GND
2	test
3	Balance the signal
4	
5	Coin 1

## Voltmeter wiring

1	
2	
3	
4	
5	
6	
7	
8	Voltmeter +
9	Transformer -

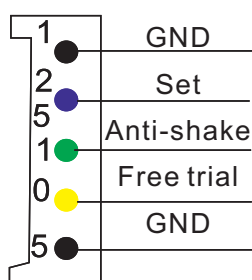
## Motherboard 2 wiring instructions

### ● Motherboard 2 socket location map

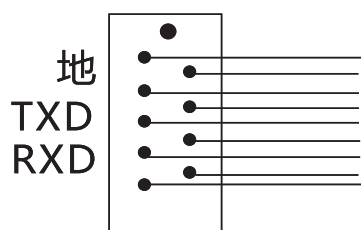


# Motherboard 2 wiring diagram

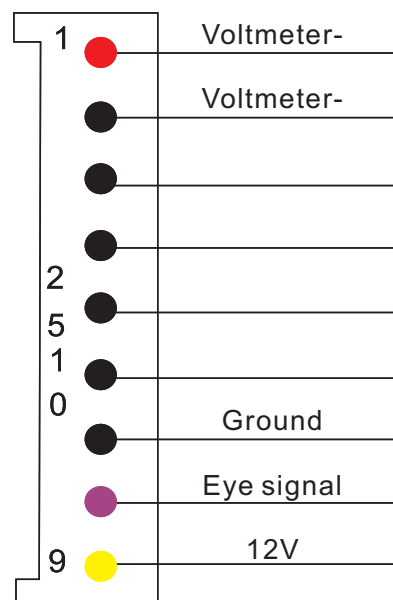
## J9Set anti-shake



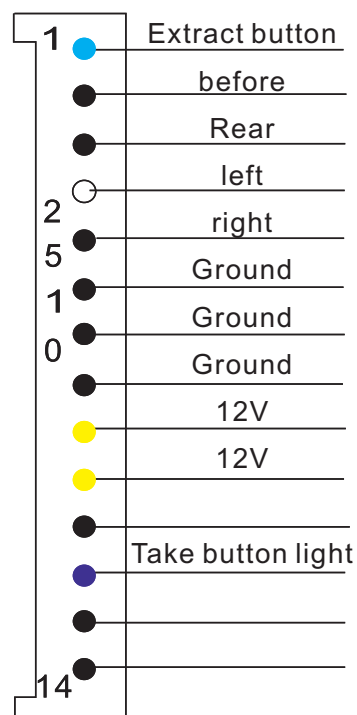
## J5 SMS cat



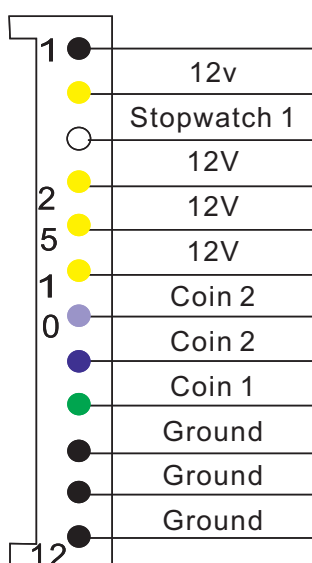
## J11 Light eye voltmeter



## J10 Joystick button

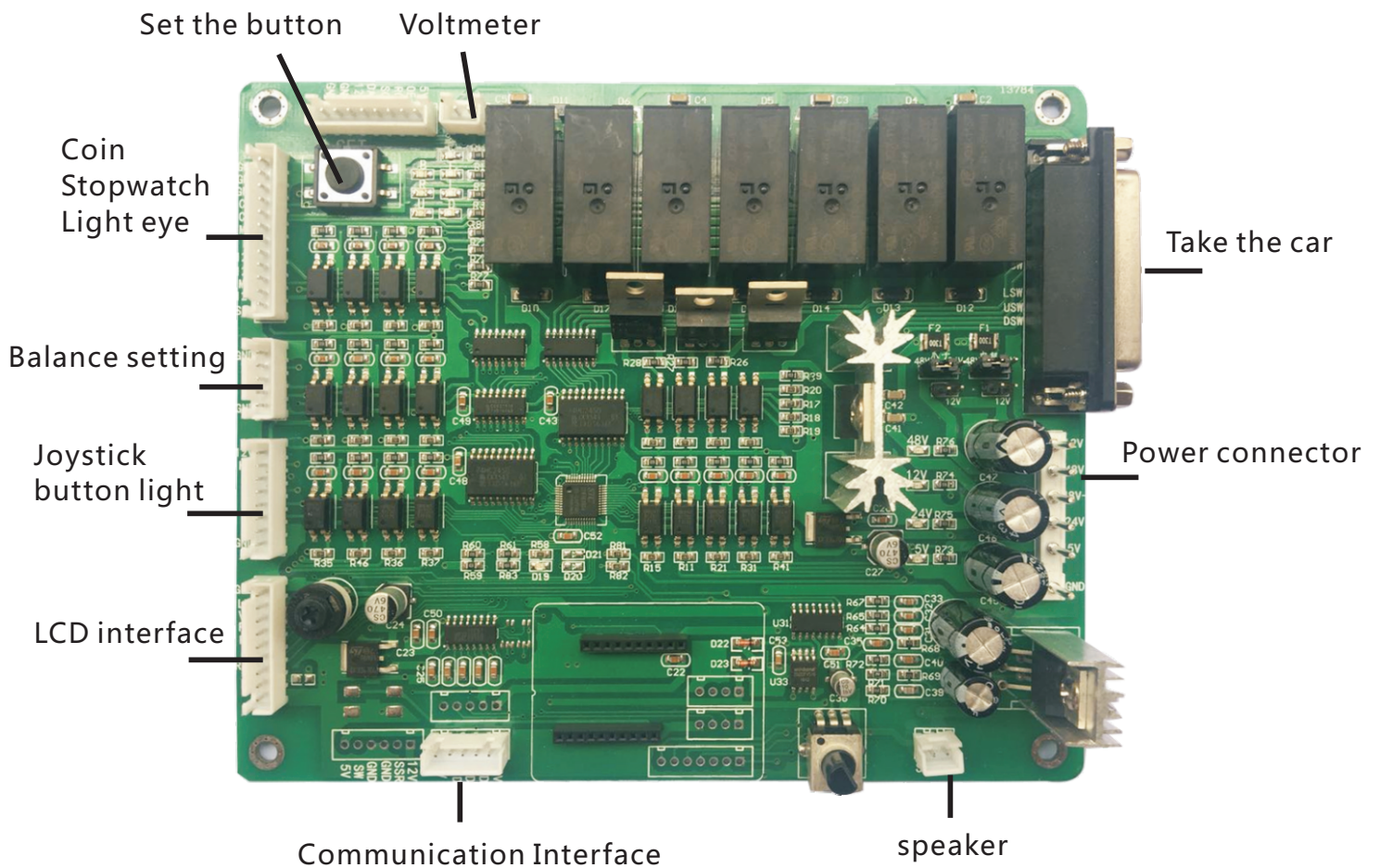


## J12Coin code table



## Motherboard 3 wiring instructions

- Motherboard 3 socket location map



## ● Motherboard 3 interface wiring diagram

### Coin code table interface

1	GND
2	GND
3	GND
4	Coin 1
5	Coin 2
6	Out of the table
7	
8	12V
9	12V
10	Into the table
11	12V
12	Eye signal

### Joystick wiring diagram

1	GND
2	before
3	Rear
4	right
5	left
6	Under the hook
7	Key light
8	+ 12V

### Crane wiring diagram

1	Front and rear motor +	14	Front and rear motor -
2	Motor around +	15	Motor around -
3	Up and down the motor +	16	Up and down the motor -
4	Paw coil +	17	Paw coil -
5	After the stop SW	18	GND
6	Stop before the SW	19	GND
7	NC	20	GND
8	Left stop SW	21	GND
9	Stop SW	22	GND
10	Under the hook SW	23	GND
11	NC	24	GND
12	NC	25	NC
13	NC	26	NC

### Set the balance interface

1	GND
2	Set
3	Balance the signal
4	Service key
5	GND

### Voltmeter interface

8	Voltmeter +
9	Transformer -