通利动漫®
TONG LI ANIMATION
官方网址:www.tonglianimation.com

GRID HOUSE

User Guide

Remark: Photos are for your reference only, please regard the actual product as the truth.

⚠ Warning

- Please read this user guide carefully before operation to ensure the safe operation of this machine.
- Please keep this user guide in order to check when you need in the future.
- The machine frame and components are subject to change without further notice.

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CHAPTER 1 OPERATION

SECTION 1 HOW TO PLAY

1. Insert coins into coin slot,the music will be changed from demo music to game play music.
2. Use joystick to move claws above your selected object.When you move the joystick, the game time is countdown,and the light of [DESCEND] button is flashing.
3. Once you press [DESCEND] button or time's up(game play time is adjustable),the crane drives motor to lower down claws and then catch object.
4. If 'Catch in air' function is available,press [DESCEND] button again and the claws can catch item in the air.
5. After movement of catching,the claws rise up till it touches stop uping,then the claws move to exit area and release.

SECTION 2 GAME RULES

ITEM 1 DEMO STANDBY

Demo music is keeping playing for 2 minutes every 3 minutes when the machine is standby.
(Demo music is also able to be closed.)

ITEM 2 COINS IN

1. Coins v.s. plays by DIP SW setting.
2. If COIN pulse speed was lower than 10mms,the machine can't recognize the signal.
3. If the speed of inserting coin was over 150mms,the machine shows error code.
4. The machine will have sound effect of receiving coins when you insert coin. The counter of coin acceptor will add up.The cumulative unit is based on number of PLUSE which coin acceptor sends to the mainboard.
5. Display of inserting coins:
   If the setting is 1 coin 1 point,the displayer on control plate will accumulate 1.
   If the setting is 2 coins 1 point,the displayer will accumulate 1 after inserting 2 coins.
   When you insert the first coin,the game machine can only have sound effect,the counter of coin acceptor will accumulate it,but the displayer on control plate will not accumulate it till then the palyer inserts the second coin.

For example: 2 coins 1 play

6. Insert coins cumulative function: The 2 pcs coin acceptors in the machine is the same currency value,when setting from 'multiple coins play multiple times' to 'multiple coins play 1 time',the coins will be inserted to different coin acceptor,then the coins will accumulate each other.For example: If the currency value is 10RMB for 2 coin acceptors,and the program has been set to '2 coins play 1 time',if the player only have 2pcs 10RMB coins,he inserts to different coin acceptor, these 2pcs coin acceptor value will be accumulated each other to be 2 coins,so only play 1 time.

ITEM 3 SHAKING MACHINE TEST

1. When a tilt is installed in machine,it plays'Don't shake the machine' when players shake the machine.
2. When the claw arms are closing,the arms will open and move back to the home position when players shake the machine.

ITEM 4 SERVICE button

1. When standby, press[SERVICE] button to play free game, the number at" Score" display flashes and if player catch item, the prize meter will display the record of working.
2. Player can insert coin at free game status, the normal game can play till free game is over.
3. When press [SERVICE] button to play free game, only play 1 time, player should press[SERVICE] again to play free game after game is over.

SECTION 3 MACHINE FUNCTION ADJUSTMENT SETTING(DIP SW Setting)

DIP SW1		1	2	3	4	5	6	7	8
Demo Music	Open	ON							
	Close	OFF							
Standby	Fixed Adjustment		OFF						
Random Super Power One Time	ON			ON					
	OFF			OFF					
Claw Swing Prevention	ON				ON				
	OFF				OFF				
Credit Save	ON					ON			
	OFF					OFF			
Playin Save	ON						ON		
	OFF						OFF		
Air Catching object	ON							ON	
	OFF							OFF	
Free Play	ON								ON
	OFF								OFF

DIP SW2		1	2	3	4	5	6	7	8
Standby	Fixed adjustment	OFF							
Game Mode	Mode 4		ON	ON					
	Mode 3		OFF	ON					
	Mode 2		ON	OFF					
	Mode 1		OFF	OFF					
Claw Descen Delay	Random(0.4,0.8,1.2, 1.6sec)				ON				
	OFF				OFF				
Up-stop Delay	0.6Sec					ON	ON		
	0.4 Sec					OFF	ON		
	0.2 Sec					ON	OFF		
	OFF					OFF	OFF		
Prize-out	Right Front							ON	ON
	Right Back							OFF	ON
	Left Front							ON	OFF
	Left Back							OFF	OFF

CHAPTER 1 OPERATION

Game Modes:

Mode 1 (Normal)

1. The super power can be preset. When the number reaches to the preset value, there will be a super power, and no matter whether the toy is caught or not, it will start a new round again.
2. If the value of coin is not equal to the actual price of toy, the winning proportion will be recalculated.

Mode 2 (Give super power when no winning and renew.)

1. When the number reaches to the certain value of super power, If you keep inserting the coins, the machine will keep the powerful claw till you get the prize. After winning the prize, it will start a new round again

2.If the machine is in the standby mode,the number will be kept and accumulated when new players participate in this game.

3.This function can be adjusted.

4.If the value of coin is not equal to the actual price of toy,the winning proportion will be recalculated.

Mode 3(Vending Mode)

1.When the number reaches to the certain value of super power,there is no need to insers the coin anymore,and the machine will keep the powerful claw till youget the prize,After winning the prize,it will start a new round again.

2.In this mode, the LCD board shows the credits, the accumulated play times(Shown in terms of the number of coins) , the preset winning play times(Shown in terms of the number of coins)

3.When the play times reaches to the winning play times, the accumulated play times will be clear and start a new round again.

Mode 4

1. In this mode, players need to insert the certain number of coins at one time. When coin number reaches to the super power amount, there is no need to insert coins anymore, and players can keep playing till get the prize. After winning the prize, it will start a new round.

2. In this mode, the LCD board shows the credits, the accumulated play times(Shown in terms of the number of coins), the preset winning play times(Shown in terms of the number of coins)

3. When the play times reaches to the winning play times, the accumulated play times will be clear and start a new round again.

Display in Mode 1 and 2

Display in Mode 3 and 4

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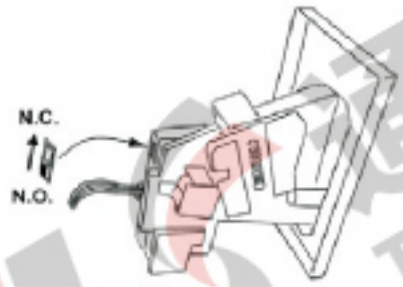
CHAPTER 2 SETTING

SECTION 1 CLAW POWER ADJUSTMENT

Method 1:

Adjust COIN 1 to N.C. then power on the machine. The display board shows [1.claw power voltage setting], this means ready to proceed with setting ups.

Coin 1 to N.C



In Setting
>:Exit
F/+.<> B/–.
Dorp..In Set

Method 1:

Press [TESTING] to power on the machine till the display board shows [SETTING], release the button and show [0] setting option, choose first option and enter claw power testing and setting. Then the LCD display [1.claw power voltage setting], press [DESCEND] and setting.

>:Power Set
>:C1=
F/+.<> B/–.
Dorp..In Set

Remark: (After finishing the claw power setting, please press [SERVICE] and exit, then continue other settings)

Hold joystick forward and back to choose C1–A5, press [DESCEND] to entry setting, then hold joystick right and left to adjust voltage value.

1. Point to C1, press [DESCEND] button into setting, the claw closed. The display panel shows voltage C1=40V, move joystick left and right to adjust voltage value (range: 0–48V).(C1 is the voltage calue from close claw up to before stop)

Example:

>:Power Set
>:C1=40
R/+.<> L/–.
Dorp..Exit

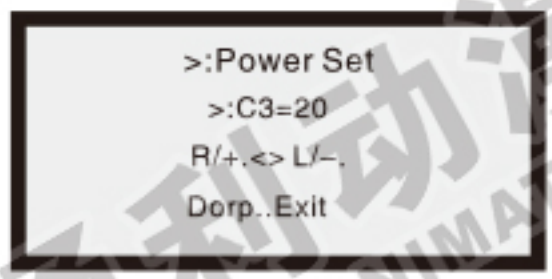
2. Point to C1, press [DESCEND] button into setting, the claw closed. he display panel shows voltage C2=15V， move joystick left and right to adjust voltage value (range: 0–48V). (C2 is the voltage value from close claw up to the crown block)

Example:

>:Power Set
>:C2=15
R/+.<> L/–.
Dorp..Exit

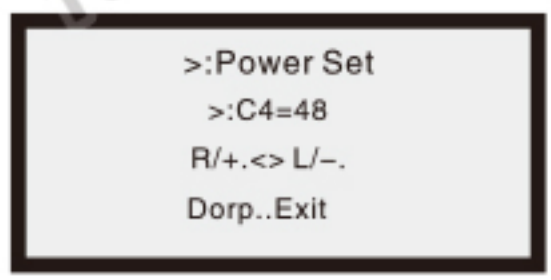
3. Point to C3, press [DESCEND] button into setting, the claw closed. The display panel shows voltage C3=20V, move joystick left and right to adjust voltage value (range: 0–48V).(C3 is the voltage value from close claw up to stop and return to the exit)

Example:



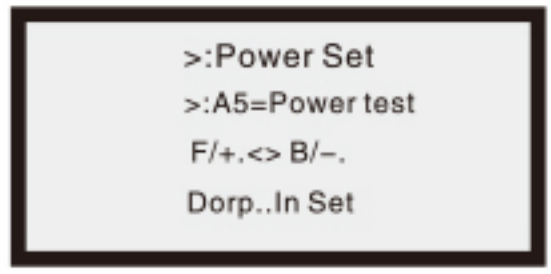
4.Point to C4, press [DESCEND] button into setting, the claw closed. The display panel shows voltage C4=48V (大力爪)，move joystick left and right to adjust voltage value (range: 0–48V). (C4 is the voltage value of supper power claw)

Example:



5.Point to A5, press [DESCEND] button. The display panel shows claw power=00, then move the joystick into demo game. Press control button, the crane starts demo game, the display panel shows claw power=40V, claw power=15V, claw power=20V (40V, 15V, 20V means the preset voltage value of C1, C2 and C3).

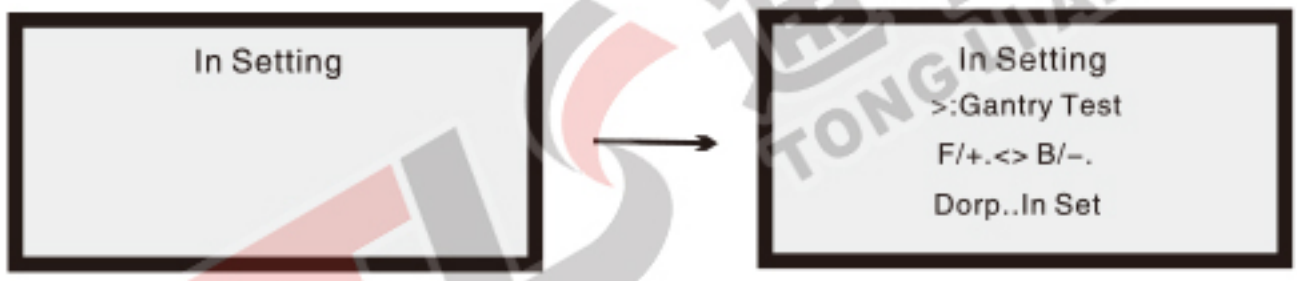
Example:



SECTION 2 MACHINE FUNCTION SETTING

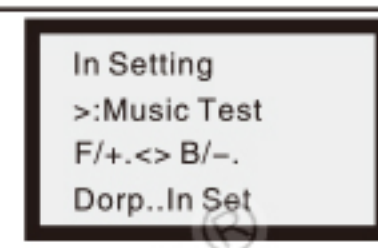
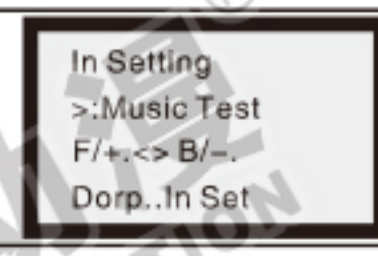
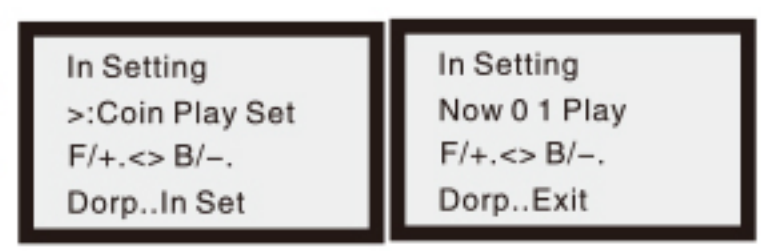
Enter in the TEST mode:

–– Hold [SERVER] SW while powering on the machine. The LCD display shows SETTING. Release from the [SERVER] SW, the LCD display will show [00], which means you are now in the TEST mode. Move the joystick forward or backward to select the testing items, Press [DESCEND] button to enter. The test items are shown as the following table. If quit test mode, just press [SERVER] SW to quit the items. Release [SERVER] test SW, the display is shown as below:

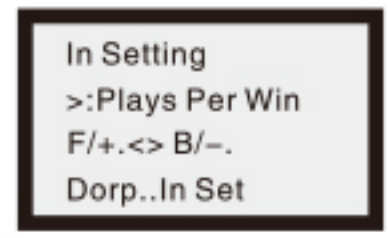
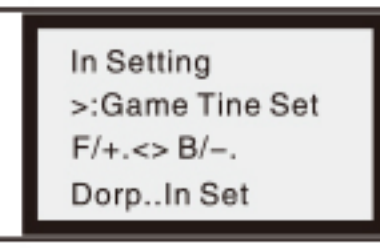
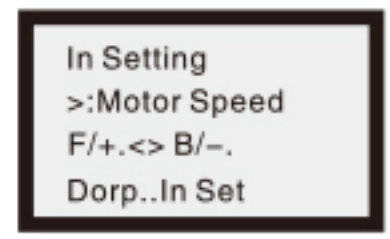
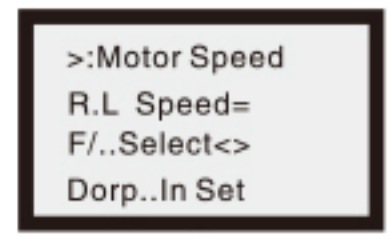
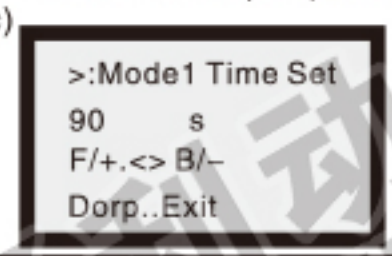
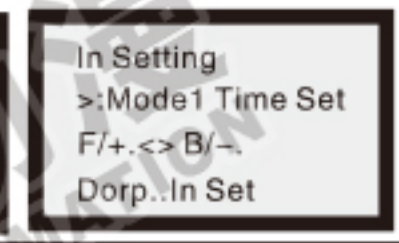
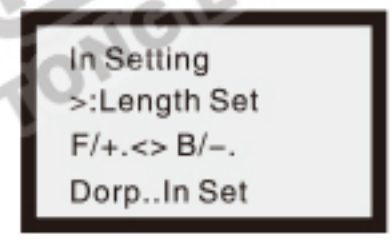
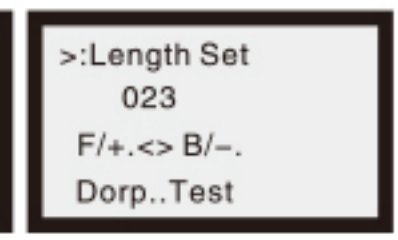
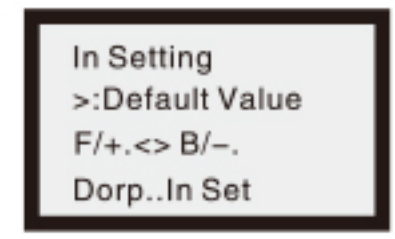


CHAPTER 2 SETTING

Test items

Item	Description	Introductions
0	Quit	Press [DESCEND]buttom to quit test mode.
1	Claw power test	Same as previous section 'CLAW POWER ADJUSTMENT
2	Crane test	The display panel shows as pictured at right. Move the joystick to control the crane, keep press [DESCEND] button and move the joystick downward at the same time, the claw will lower down. Keep press [DESCEND] button and move the joystick upward at the same time, the claw will rises up.
3	Display panel	LCD Screen Testing After entering, LCD shows[*], check if all characters are correct and no missing
4	DIP SW	DIPSW Testing(pictured at right) Adjust PCB DIP SW When switch it to ON, shown as [O] When switch it to OFF, shown as [X] DI POSW1 mean PCB Sw1 DI POSW2 mean PCB Sw2 Pictured at right means the first Pin of PCB SW1 is ON.
5	Music,Effects	Test number of sentences 01-12 
6	Crane auto test	Crane automatic test,reboot to quit. 
7	Coin insert setting	Shown as picture: Setting the amount of coins for each playing Move the joystick forward to set the single digits of coin amount Move the joystick left to set the ten digits of coin amount Range: 1–99 Press [DESCEND] to save and exit
8	Playing Times Setting	Shown as picture: Setting the playing times of each game Move the joystick forward to set the single digits of playing times Move the joystick left to set the ten digits of playing times Range: 1–99 Press [DESCEND] to save and exit 

CHAPTER 2 SETTING

Item	Description	Introductions
9	Adjusting times of super power	Shown as picture: After entering, the single digits value is flashing Move the joystick upward to add value Move the joystick downward to decrease value Move the joystick left to set single digits, ten and hundred. Example: Adjust times of super power is 135 1. The flashing value of single digits is 0, move the joystick upward to add and stop at 5. 2. Move the joystick left to set ten digits, number 1 is flashing, move the joystick upward to add and stop at 3. 3. Move the joystick left to set hundred digits, number 0 is flashing, move the joystick upward to add and stop at 1. 4. Finish setting, press [DESCEND] to save and exit. 5. Range: 1–999, default value is 10. 
10	Game time(sec)	Move joystick to forward which is can plus numbers,move joystick to back which is can reduce numbers,descend button is confirm to quit.(Default values is 60 sec after returning to zero range is 10–90 sec.) 
11	Adjusting speed of motor for front & back,left & right,up & down	After entry, the display panel shown as right 1. Front and back motor speed adjustment 2. Left and right motor speed adjustment 3. Upward and downward motor speed adjustment 4. Move the joystick upward to adjust value 5. Four values available for adjustment 00: Default value, the fastest speed 01: Fast speed 02: Normal speed 03: Slow speed 04: Slowest speed Remark: Default value is 00, fastest speed is not  
14	Choosing gift and selling interval time adjustment (sec)	Move joystick to forward which is can plus numbers,move joystick to back which is can reduce numbers,descend button is confirm to quit.(Default values is 90 sec after returning to zero,range is 1~90 sec)  
18	Claw despoiling length adjustment	The claw despoiling length,joystick–forward and back can adjust value,press descend button whenn you finish adjusting,can test length,stop after the length is enough,and press desceng button for winding up.(Default values is 18 after returning to zero,range is 1~99.)  
21	RAM return to Zero	After perss descend button,display panel shows default value,and then reboot,and sweep away all information,all setting return to default value. 

CHAPTER 3 TROUBLE–SHOOTING

SECTION 1 TROUBLE-SHOOTING

Items	Description	Check and Solving
Coin in	When the insert coin in the coin acceptor,machine make a sound to reminder,and displayer shows the point,but can not play.	1.Please check the coin in mode whether is Coins v.s. Plays,set values is changed,please modify your required set values. 2.If can not modify, it's possible the main board is error, please send the main board back to our company for fixing.
	Coin/token can not insert	Comparison expression coins acceptor: 1.Please check the sample coin from coin acceptor. 2.Adjust the sensitivity and loose it. 3.Check the PIN,whether DC 12V is input correctly. 4.Coin acceptor error. Multi-coin coin acceptor: 1.Sampling memory is error,please reset it follow the manual. 2.Please Check the PIN,whether DC 12V is input correctly.
Claw power	Claw return to exit after closing, but cannot closing after open.	1.Claw power voltage of C3 is too low,please adjust to higher base on the goods' size and weight.
	Claw is closing once machine start	1.The coil maybe short out,please change it. 2.Main board is broken.
	Claw can not close	1.Please check the coiling of claw whether is fall off. 2.Main board is broken.
Crane	Claw can not return to home position	1.Power off and reboot the machine,if the trouble is still, please check stop-back SW or stop-left SW,it's possible SW is stuck,hear whether is click,and check line whether is fall off. 2.Check if the air-plug of crane set is connect well? 3.Main board is broken.
	Can not move to forward or back by joystick operation	1.Front SW and Back SW of joystick whether is error or line whether is fall out. 2.Check J5 of P.C.B whether is connect well. 3.Stop-forward SW or stop-back SW of crane whether is broken or stuck. 4.Front and back motor is broken or line fall out,the gear is not mesh. 5.Check J9 of P.C.B whether is connect well. 6.The connector between crane and the machine whether is normal.
	Can not move to left or right by joystick operation	1.Left and right SW of joystick whether is error or line whether is fall out. 2.Check j5 of P.C.B whether is connect well. 3.Stop–Left SW of crane whether is broken or stuck. 4.Front and back motor is broken or line fall out the gear is not mesh. 5.Check j9 of P.C.B whether is connect well. 6.THE connector between crane and the machine whether is normal.

CHAPTER 3 TROUBLE-SHOOTING

Items	Description	Check and Solving
Claw descending	Can not descend after pressing button,it will auto to descend after the game time is over.	1 .Check [Descend]button is normal or not. 2.[Descend] button wire is connected well or not. 3.Check the JS of P.C.B whether is connect well.
	【Descend】button is in normal status,but can not lower dowm.	1. Check the wire of up-motor and down-motor is well connected 2.Check the motor of up and down whether is broken or the gear meshing whether is normal. 3.Check the coiling is normal or not. 4.Check the Jg PIN of P.C.B is connect crane well or not. 5.Main board is broken.
	After pressing [Descend]button, claw can not lower down or only lower down a bit,also the claw close and return to home position.	1.Check the reel is entangled or not. 2.Stop-down SW whether is easy to affect or broken.
	Press [Descend],claw return to home position without reaching to the gifts.	1.Check coiling whether is too short. 2.Check reel is entangled or not. 3.Stop-down SW whether is easy to trigger or broken.
Claw fetching	When return to exit,can not open claw after fetching	1.Check stop-back and stop-left whether is broken or the line is fall off or not.
	After fetching,the crane return to home position while claw can not rise up.	1.Check stop-up SW whether has been triggered or not. 2.Stop-up SW whether is broken or fall out. 3.Main board is broken.
	After fetching,the crane stops moving while claw can not rise up.	1.Check the motor of up and down whether is broken or line is fall out. 2. Stop-up SW whether is broken or fall out. 3. Main board is broken.

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CHAPTER 3 WIRING DIAGRAM

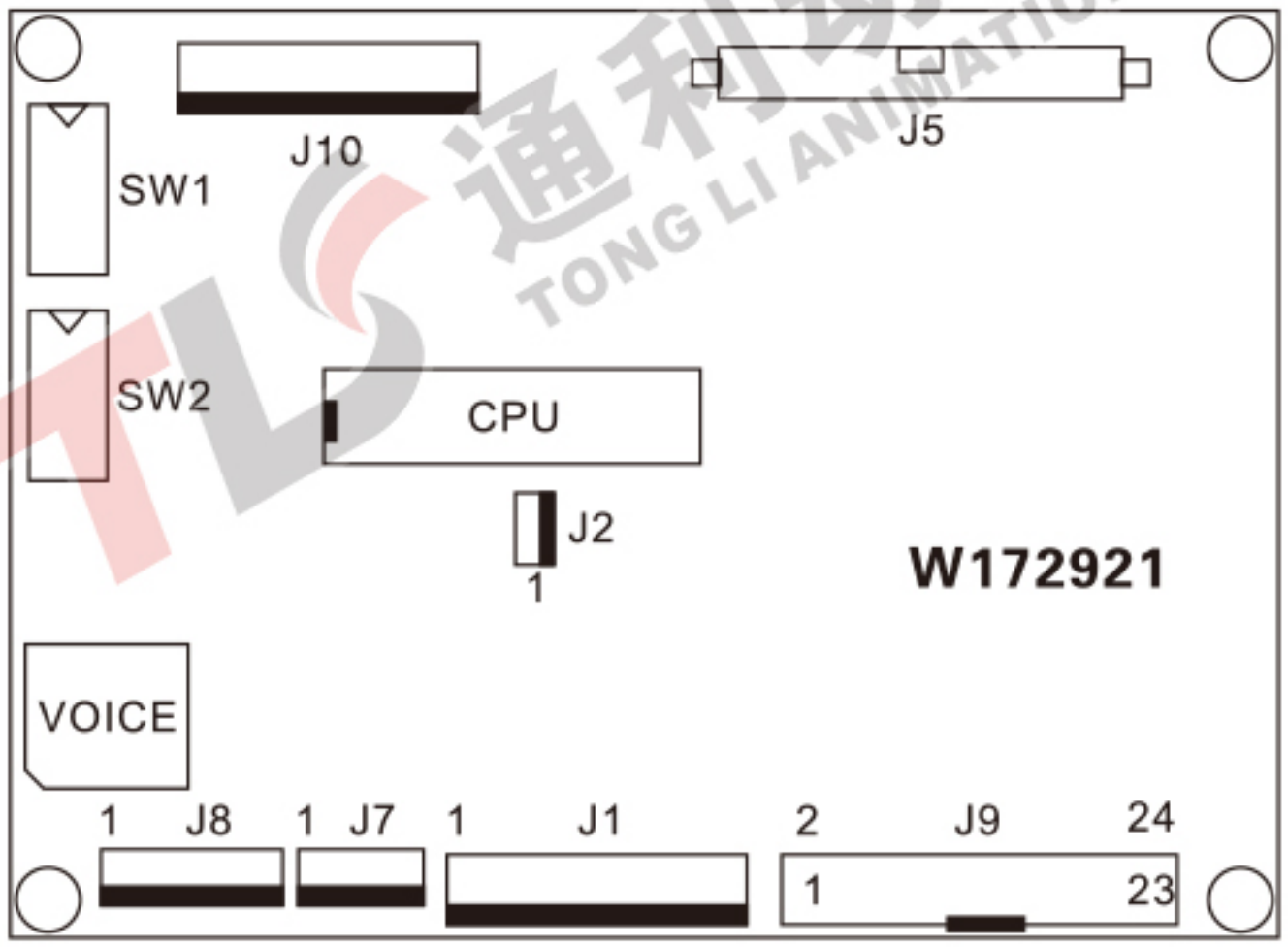
SECTION 2 ERROR DESCRIPTION AND SOLUTIONS

Description	Checking time	Solutions
Paying out error or motor of up and down error	1.When machine start 2.When playing 3.Auto demo	1.When the crane takes up claw, check if the stop-down SW is loose. 2.Check if stop-up SW is working well. 3.Check if the air-plug of crane set is well connected. 4.Check if the up-motor and down-motor are working well. 5.Mainboard error.
Take-up error or motor of up and down error	When auto demo	1. When the crane takes up claw, check if the stop-up SW is loose. 2. Check if stop-up SW is working well. 3. Check if the air-plug of crane set is well connected. 4. Check if the up-motor or down-motor is working well. 5. Mainboard error.
Prize-out sensor error	Detect during adjusting DIP SW2 J5 to 'ON'	1.Please check whether the sensitivity of electric drainage is too high or not?Please adjust VR and LED to be'dim' status. 2.Please check whether JS fall down or not? 3.Electric eye is error. 4.Main board is error.
Stop-front or stop-back SW error; motor of front or back error	1.When machine start 2.When playing 3.Auto demo	1. Check if stop-forward or stop-back SW is working well. 2. Check if the air-plug of crane set is well connected. 3. Check if the up-motor or down-motor is working well. 4. Mainboard error.
Stop-left SW error; motor of left or right error	1.When machine start 2.When playing 3.Auto demo	1. Check if stop-left SW is working well. 2. Check if the air-plug of crane set is well connected. 3. Check if the left-motor or right-motor is working well. 4. Mainboard error.
Coin 1 meter error or disconnected	Check anytime	1.Check if the J5 PIN is well connected. 2.Check if the meter is error or PIN is disconnected. 3.Mainboard error.
Coin1 insert coin signal over 150mms	Check when coin insert	1.Coin acceptor error. 2.Player is phishing. (COIN1,COIN2 signal is less than 10mms, will not be confirmed to be a coin insert signal.)
Coin2 insert coin signal over 150mms		
PCB error	when machine starts	Replace a new mainboard

CHAPTER 4 WIRING DIAGRAN

SECTION 1 MAINBOARD W170921

Host machine board CONNECTOR location plan



W120206 J5 34PIN				
1	X		2	X
3	X		4	X
5	X		6	X
7	X		8	X
9	X		10	X
11	X		12	X
13	Prize-out Meter		14	X
15	X		16	Coin acceptor +12V
17	COIN 1 Meter		18	X
19	+12		20	COIN 1 Signal
21	+12		22	X
23	Descend light 12V		24	Coin acceptor GND
25	Shaking Alarm		26	SENSOR signal
27	Test		28	+12V sensor
29	Joystick Forward		30	GND sensor
31	Joystick Left		32	Joystick Back
33	Descend Button		34	Joystick Right

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CHAPTER 4 WIRING DIAGRAN

W120206 J1		
1	GND	
2	GND	
3	GND	
4	+5V	
5	+5V	
6	+12V	
7	+12V	
8	+24V	
9	+24V	
10	+48V	

W120206 J9				
1	Claw+		2	X
3	Claw-		4	X
5	X		6	Stop-down SW NO
7	X		8	Stop-up SW NC
9	X		10	Stop-left NO
11	X		12	Stop–front and stop–back NO
13	GND		14	GND
15	GND		16	GND
17	X		18	Left and right motor-
19	X		20	Left and right motor+
21	Front and back motor+		22	Up and down motor-
23	Front and back motor–		24	Up and down motor+

W120206 J7		
1	Sound VR1	1K VR
2	Sound VR2	
3	Sound VR3	
4	SP-	
5	SP+	

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CHAPTER 5 LCD DISPLAY WIRING DIAGRAM

LCD display 12864 (obverse) and PIN

LCD display 12864 pin details:

J1	Color	PIN Name	Description	Instruction to connect with mainboard W170921 J10
1	BLACK	VSS	Module Power GND	Connect to mainboard J10 Pin 1
2	RED	VDD	Module Power Anode	Connect to mainboard J10 Pin 2
3	BROWN	VO	LCD Driver Voltage Input	Connect to mainboard J10 Pin 3
4	GREEN WHITE	RS(CS)	Parallel Order/ Data Select Signal, Serial Chip Select Signal	Connect to mainboard J10 Pin 4
5	PINK	R/W(SID)	Parallel Read-write Selection Signal, Serial Data Port	Connect to mainboard J10 Pin 5
6	YELLOW	E(CLK)	Parallel Enable Signal,Serial Digital Synchronometer	Connect to mainboard J10 Pin 6
7	ORANGE	DB0	Data 0	Connect to mainboard J10 Pin 7
8	GREEN	DB1	Data 1	Connect to mainboard J10 Pin 8
9	DARK BLUE	DB2	Data 2	Connect to mainboard J10 Pin 9
10	PURPLE	DB3	Data 3	Connect to mainboard J10 Pin 10
11	GRAY	DB4	Data 4	Connect to mainboard J10 Pin 11
12	WHITE	DB5	Data 5	Connect to mainboard J10 Pin 12
13	BLACK WHITE	DB6	Data 6	Connect to mainboard J10 Pin 13
14	BROWN WHITE	DB7	Data 7	Connect to mainboard J10 Pin 14
15	SPARE PIN	PSB	Parallel/ Serial Port Select: H-Parallel, L-Serial	
16	SPARE PIN	NC	Spare PIN	
17	SPARE PIN	RET	Reset, Low Level available	
18	SPARE PIN	NC	Spare PIN	
19	DARK BLUE WIHTE	LED_A	Backlight Anode (LED+5V)	Connect to mainboard J10 Pin 15
20	PURPLE WHITE	LED_K	Backlight Cathode (LED-0V)	Connect to mainboard J10 Pin 16

MAINTENANCE

Dear Customers:

Thanks for your purchasing from Tong Li!We will constantly improve our quality and service,and provide you better quality, high-efficiency,professional products and after-sales service.For protect your legitimate rights and interests,please read this manual detail,and knowing our service content ,if the products and accessories were broken without according to this manual,we will not responsible for warranty,and only provide products and accessories for value.

1.Guarantee term.

Guarantee period of crane machines electronic components is 12 months from the purchasing. (Base on the PI date.).

2.The situation without guarantee.

After you purchase this product,if the machines were broken by below reasons,we can not provide guarantee according to this term,and will provide you service for value.

(1)The whole machine or the parts is over the guarantee period.

(2)LCD monitor surface is scuffing,weeping,fracture by human error.

(3)User breached this manual,install,keeping and use wrongly causes to broken.

(4)Fixing by person without our comapny authentication,user fixed(Wrong operation,scuffing,knock mark by human error, water-dampness,supply improper voltage.) causing to broken.

(5)No purchase and guarantee voucher.

(6)Guarantee and purchase voucher are modified by human.

(7)The model and number are not match with matter.

(8)The machine broken due to using the accessories without our authentication

(9)The machine broken due to natural disaster(earthquake,fire).

3.Service type.

(1)Once the products are broken down,please notice to us at once.

(2)Products breakdown maintenance,please must send the unserviceable component to us,and provide the related purchasing voucher.

4. Reminder

(1) The accessories during the fixing are belong to our company.

(2) The service for value is containing cost of labor and fixing material.

5.Service and support.

(1)Please review our website www.tonglianimation.com to get the latest information.

(2)Technical support and after-service tel:86-20-23885899

Memo

通利动漫®
TONG LI ANIMATION

Product name: GRID HOUSE

Company name:Guangzhou Tong Li Animation Technology co.,ltd.

Address:H19 Startoon City,No.143 Yingxing East Road,Donghuan Street,Panyu,Guangzhou.China

Version:Ver1.0

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