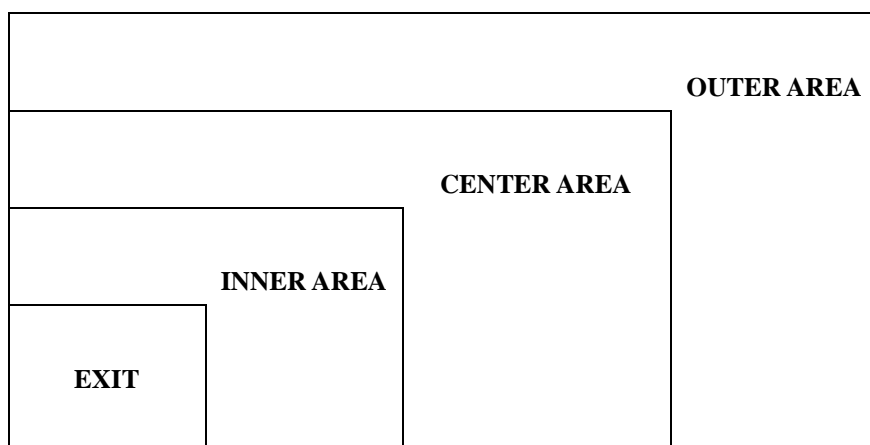


WMH-518 INSTRUCTION

※ FEATURES:

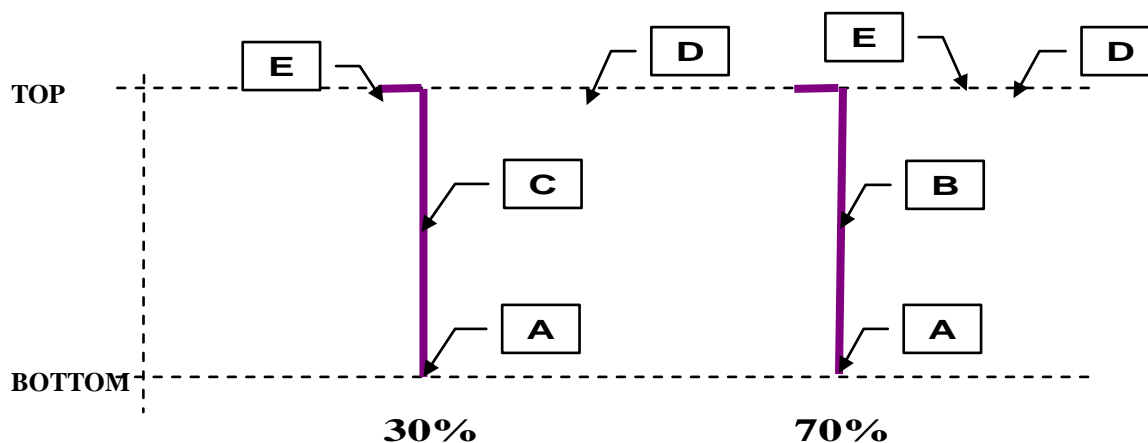
1. This program is able to adjust itself smartly the claw strength in accordance with the claw dropping area. There are 5 claw strength phases: **A** (VR1 setting or full power) , **B** (A power x 0.7) , **C** (E power x 1.2) , **D** (E power x 1.1) , **E** (VR2 setting) .
2. The playfield is divided in 3 areas



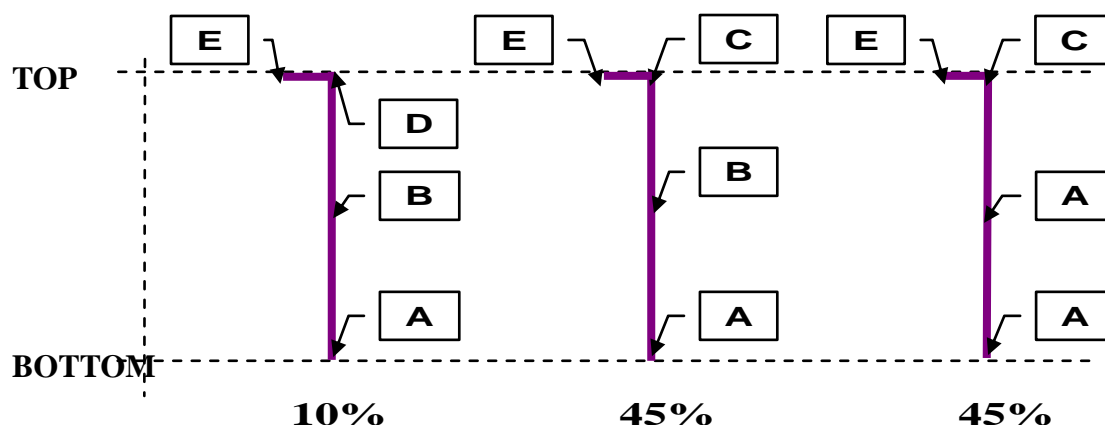
The claw strength auto-adjustment percentage depending on the dropping area:

※ Claw strength changes sketch:

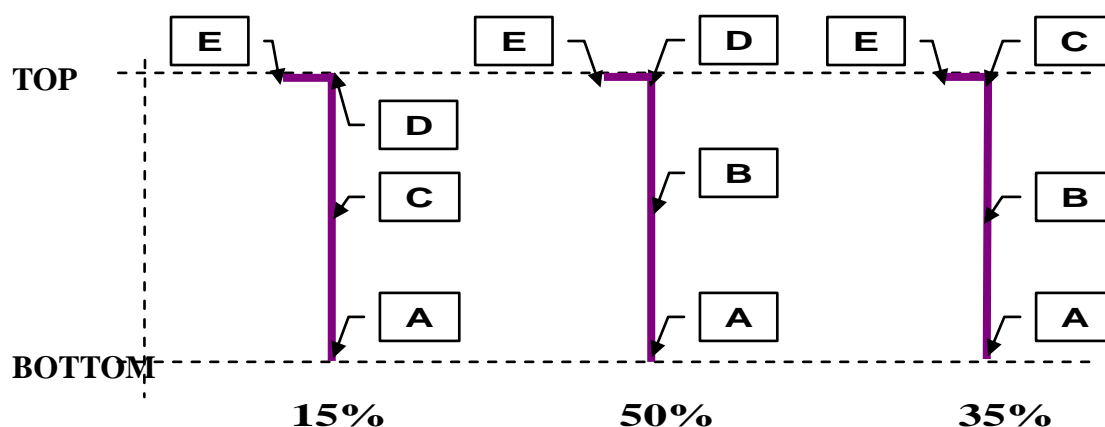
◆ 【 INNER AREA 】 claw strength changes sketch:



◆ **【CENTER AREA】** claw strength changes sketch:



◆ **【OUTER AREA】** claw strength changes sketch:



3. In addition to the DIP SW for simple setting, there is a LCM display to make changes to the settings. This system is easy and clear to setup. No more EPROM exchanges because of new programming.
4. Game plays are being registered for clear book keeping.
5. Just input the coin's value, the averaged cost of the merchandise and the profit rate and the program will calculate itself the timing to send full claw strength. And the calculation is on random basis so the games are more dynamic.
6. All recorded data during game plays are safe even after power is off.
7. Super power can be sent just one time or until win, depending on DIP SW setup. If set to "until win", every time the player fails to catch a prize, the game will keep sending out super power. The operator must also set by DIP SW if he wants the "super power until win" feature to be "play till win" (keep playing without having to insert coins) or not (player must insert coins for every play, but before anyone wins, the super power will remain for each play).

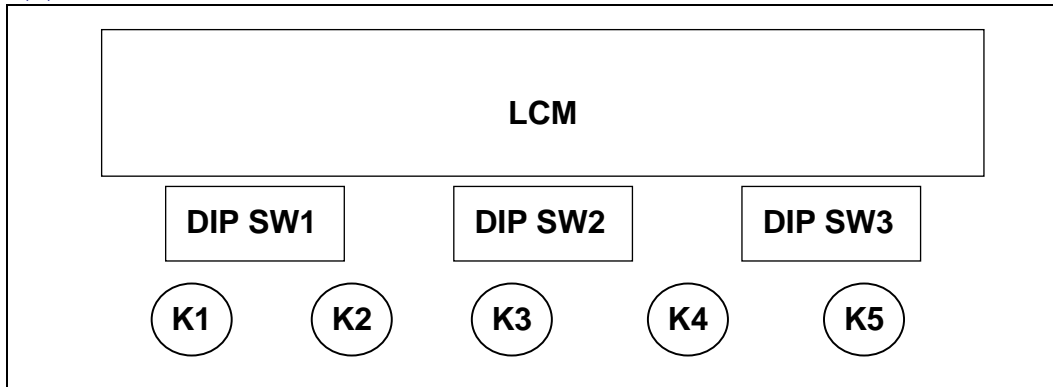
- 8. Using AP8942A IC.**
- 9. Press 【K5】 SW and power on the machine to reset memory and the LCM appears “CLEAR PCB RAM”. All data at RAM is reset, including bookkeeping and percentage**

WMH-W518 DIP SW

PROGRAM: W518A101

MAIN BOARD: W100411

※ DIP SW on the LCM



LCM DIP SW1		1	2	3	4	5	6	7	8
DEMO MUSIC	YES	ON							
	NO	OFF							
Claw dropping position at EXIT	Low		ON						
	Up		OFF						
When to deduct credit	Upon dropping			ON					
	Claw closing			OFF					
Catching in the air	YES				ON				
	NO				OFF				
Reserved						OFF			
Keep CREDIT after power off	YES						ON		
	NO						OFF		
DEMO every 5 minutes	YES	Claws will not close						ON	
	NO							OFF	
Reserved									OFF

LCM DIP SW2		1	2	3	4	5	6	7	8
Send full power until win with or without inserting more coin	YES	ON							
	NO	OFF							
Play until win	YES		ON						
	NO		OFF						
Operation mode	Button			ON					
	Joystick			OFF					
Sending full power when reach Win rate	Continually				ON				
	ONCE				OFF				
Reserved						OFF			
Reserved							OFF	OFF	OFF

LCM DIP SW3		1	2	3	4	5	6	7	8
Opening Time of Prize door	3 minutes	ON	ON						
	2 minutes	OFF	ON						
	1 minutes	ON	OFF						
	1 minutes	OFF	OFF						
Reserved				OFF	OFF	OFF	OFF	OFF	OFF

1. Send full power until win with or without inserting more coins:

With: when full power is sent and no prize is won, the credit will still be deducted. The player must insert more coins or having more credit to play again with full power. All following game plays will keep sending full power until a prize is won. The next following game will send regular claw power.

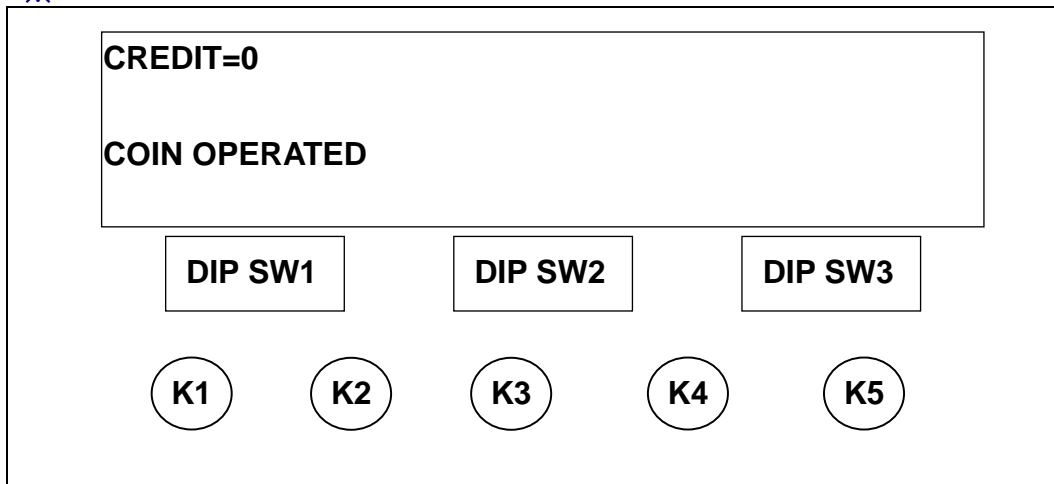
Without: when full power is sent and no prize is won, the credit will not be deducted until a prize is won. The next following game will send regular claw strength.

2. PLAY TILL WIN MODE:

1. In every game play the credit will be deducted until the player wins a prize.
2. Tilt will not be detected.
3. The system will check the prize sensor all the time. If before the claw lowers down, a prize has been detected out, the actual game will be of regular strength.
4. When “play till win” is set to YES, the other settings related to the win frequency will be invalid.
5. When “play till win” is set to NO, the other setting related to the win percentage will be valid.

WMH-W518 LCM

※ LCM



- **Display explanation: stand by LCM**

CREDIT=0:

COIN OPERATED:

- **How to operate the buttons:**

K1: SELECT for main menu

K2: SELECT for sub menu

K3: + 1 to the value

K4: - 1 to the value

K5: CONFIRM, SAVE, QUIT

※ LCM feature operation:

※ Press **【K1】** to enter into the main menu to select, push **【K1】** to switch to different main menu, there are four main menu: 1. Operation Records, 2. Game Setup, 3. Claw Strength Setup, 4. Percentage setup.

※ Press **【K2】** to enter into the sub menu to select, push **【K2】** to switch to different sub menus, Press **【K5】** to enter into the selected sub menu.

※ Adjust the setup values with **【K3】** to add 1 to the value or press **【K4】** to deduct 1 to the value. Holding the push buttons to accelerate the increase or the decrease.

※ Press **【K5】** to confirm (save) the new value. Press **【K2】** to switch to the next sub menu or press

【K1】 to resume the main menu. **CAUTION: leaving the new value pressing 【K2】 or 【K1**

】 without previously pressing 【K5】 , the amendment will not be saved.

※ **50 seconds standing by in any screen will automatically resume to the previous screen or menu:**
values setting -> sub-menu -> main menu -> stand by screen -> regular game play.

※ Instruction to set up on the LCM display

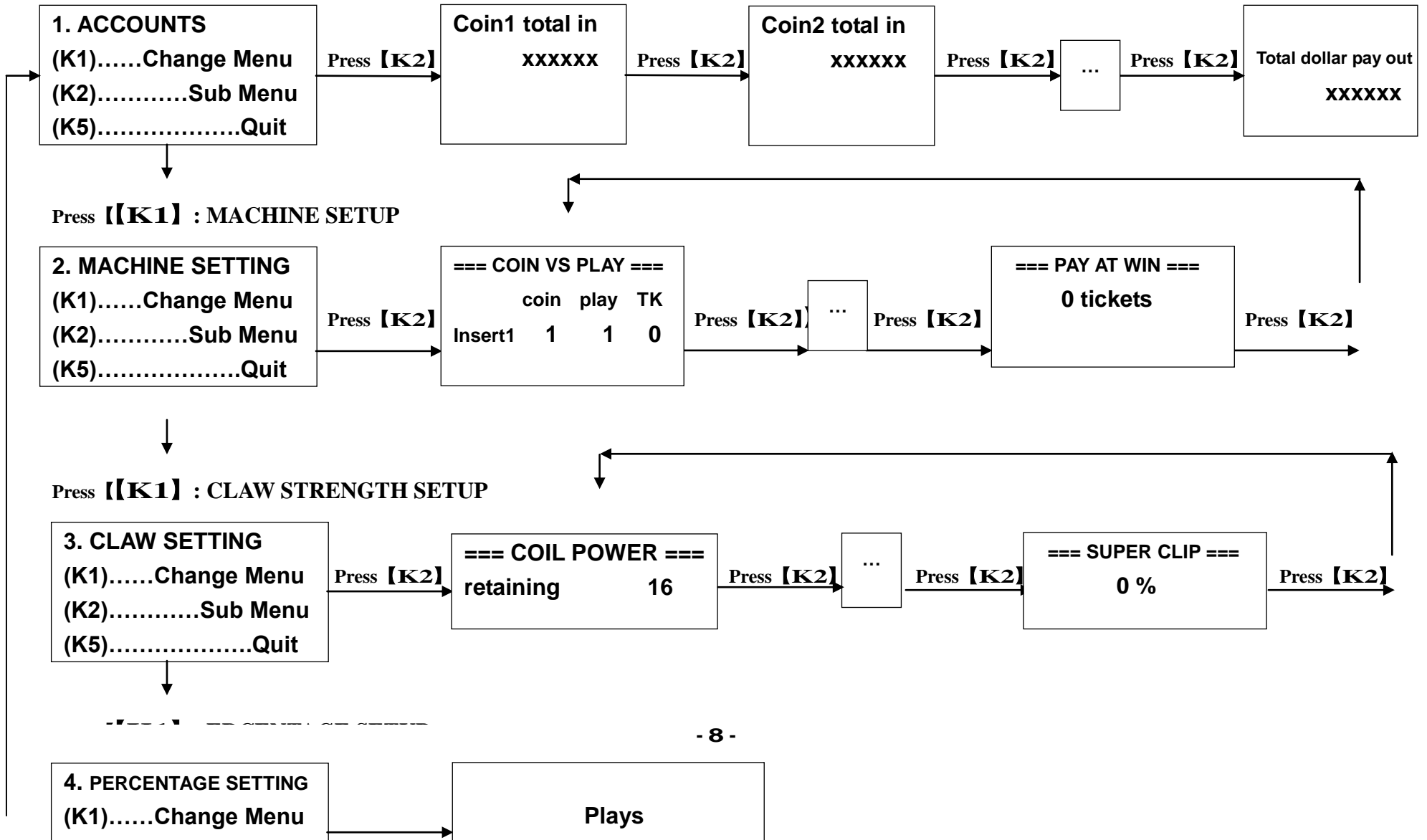
* MAIN MENU

* SUB MENU

Press **[K1]** : OPERATION RECORD

Press **[K2]**

1



※ LCM setup introduction:

Main menu1	Page	Sub menu displays	Explanation	
ACCOUNTS	1	Coin1 total in 0	Coin mech #1 total coins inserted	
	2	Coin2 total in 0	Coin mech #2 total coins inserted	
	3	Total game 0	Total number of games played	
	4	Total test 0	Total number of free games plays(games for test)	
	5	Catches out 0	Total prizes out	
	6	Tickets out 0	Total tickets out	
	7	Dollar in 0	Total money (\$) in	
	8	Dollar pay out 0		

Main menu2	Page	Sub menu displays	Explanation
MACHINE SETTING	1	== COIN VS PLAY == coin play TK Insert1 1 1 0	<p>=== Coins setting ===</p> <p>1. Coin: number of coins 1~20. 2. Play: number of plays 1~20. 3. TK: number of ticket payout upon coins inserted: 0~9. 4. Insert1: coin mech1, Inster2: coin mech 2.</p>
	2	== COIN VS PLAY == coin play TK Insert2 1 1 0	
	3	=== GAME TIME === 50 seconds	<p>1. GAME TIME: Unit: Seconds 10~99, 2. 0~9 not available.</p>
	4	TILT'S SENSIBILITY = 1	TILT'S SENSIBILITY: smaller is the number, higher is the sensibility 1~10, "0" (zero) is not available.
	5	= ATTRACT MUSIC = on 3 minute off 10 minute	<p>=== Demo music time setting ===</p> <p>1. Based on DIP SW setup. 2. if DIP SW is set to without attract music. This setting is invalid. 3. "ON" stands for the music playing time: 1~20 minutes.</p>

			4. “OFF” stands for the break time between 2 attract music plays: 1~90 minutes. The setting example represents playing 3 minutes attract music every 10 minutes.
	6	== PAY AT LOSS == 0 tickets	=== Tickets payout === 1. PAY AT LOSS: tickets out upon loss 0~10
	7	=== PAY AT WIN === 0 tickets	=== Tickets payout === 1. PAY AT WIN: tickets out upon winning 0~50.

Main menu3	Page	Sub menu displays	Explanation
CLAW SETTING	1	== COIL POWER== retaining 16	=== Coil power (VR1 & VR2) setting === 1. retaining : VR2 power : 10~42V
	2	== COIL POWER== pick up 40	2. pick up : VR1 power : 10~42V
	3	== COIL POWER== High Strength 42	3. HIGH STRENGHT : Super Power: 10~42V 4. Bigger is the value, stronger is the power.
	4	==SUPER CLIP === SUPER CLIP 0 %	== SUPER CLIP === Super clip : how often the full power will be sent : 0~ 50 %. If set to 0, VR1 is the only claw power during catching.

※ Claw strength setup instruction:

- a. Press **【K1】** to select main menu #3 : “CLAW SETTING”. Press **【K2】** to enter into the sub menu. LCM will show screen to adjust claw strength. Press **【K5】** to VR1 & VR2 setting.
- b. VR2 (retaining) : the cursor is stopping on VR2. Press **【K3】** to increase the value. Press **【K4】** to decrease the value. Press **【DROP】** push button to close the claw. The voltage change of VR2 will alternatively act with the “dropping skill”. Press **【DROP】** push button again to open the claw or press **【K5】** to save the new value and the cursor will jump to VR1 setting.
- c. VR1 (pick up) : the cursor is stopping on VR1. Press **【K3】** to increase the value. Press **【K4】** to decrease the value. Press **【DROP】** push button to close the claw. The voltage

change of VR1 will alternatively act with the “dropping skill”. Press **【DROP】** push button again to open the claw or press **【K5】** to save the new value and the cursor will jump to VR2 setting.

d. High Strength : the cursor is stopping on High Strength. Press **【K3】** to increase the value.

Press **【K4】** to decrease the value. Press **【DROP】** push button to close the claw. Press **【DROP】** push button again to open the claw or press **【K5】** to save the new value and the cursor will jump to High Strength setting.

f. Super clip: the cursor is stopping on Super clip. Press **【K3】** to increase the value. Press **【K4】** to decrease the value. This value is the appearance rate of the full power during catching. Press **【K5】** to save the new value.

g. When claw is closed over 15 seconds and any push button has been pressed, it will open itself.

※ Super Power Setting Instruction:

Press **【K1】** to select main menu #4 “PERCENTAGE SETTING”, Press **【K5】** to enter into the sub menu. Press **【K3】** to increase the value. Press **【K4】** to decrease the value. Press **【K5】** to save the new value.

Main menu:4	Page	Sub menu displays...	EXPLANATION
PERCENTAGE SETTING	1	Plays 10	<p>===Super Power Setting ===</p> <p>Setting Range: 6~999.</p> <p>1. Plays: # of play time will send super power.</p>

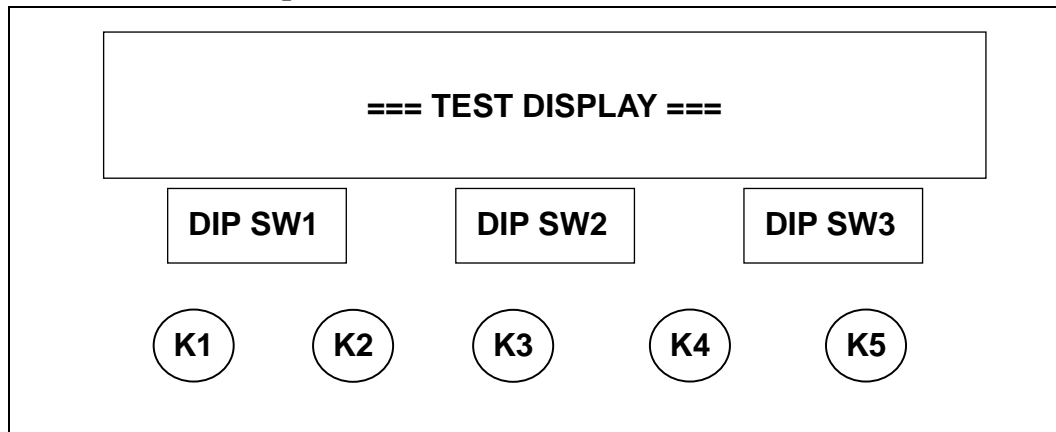
WMH-W518 PCB TEST & RESET

1. To enter into TEST mode : Push “TEST” SW and turn power ON. Display show 『PP』 .

Release “TEST” SW, 『00』 will be a flashing on display and means it is in TEST menu.

Using Joystick to select Test item 『02』 and push “Drop” button to enter. It has to turn power off to leave “TEST Mode” after entering each test item.

2. LCM buttons operation instruction



3. How to operate the push buttons:

K3, K4: Increase or decrease Item Number.

K5: Enter Test item or Exit.

3. TEST ITEMS

ITEM	TEST DESCRIPTION	
01	TEST LCM	
02	TEST PCB DIPSW	Test main PCB DIP SW (Press 【DROP】 push button to quit this test item)
03	TEST VOICE	
04	TEST MUSIC	
05	TEST W041158	Test LCM(Press 【DROP】 push button to quit this test item)
06	TEST METER OUT	
07	TEST PAY TICKET	
08	TEST PAY BALL	
09	TEST PAY CAPSULE	

10	CLEAR PCB RAM	Reset all data in RAM including book keeping and percentage setting
11	CLEAR ACCOUNT	Book keeping reset
12	CLEAR PERCENTAGE	Percentage reset

WMH-W518 Test & Trouble Shooting

1. Auto Test model: Push “TEST” SW and turn power ON. Display show 『PP』 . Release “TEST” SW, 『00』 will be flashing on display and means it is in TEST menu. Using Joystick to select Test item 『03』 and push “Drop” button to enter. It has to turn power off to leave “TEST Mode” after entering each test item.
2. To enter into GANTRY TEST mode : Push “TEST” SW and turn power ON. Display show 『PP』 . Release “TEST” SW, 『00』 will be flashing on display and means it is in TEST menu. Using Joystick to select Test item 『03』 and push “Drop” button to enter. Display show 『a0』 It has to turn power off to leave “TEST Mode” after entering each test item.

GANTRY TEST

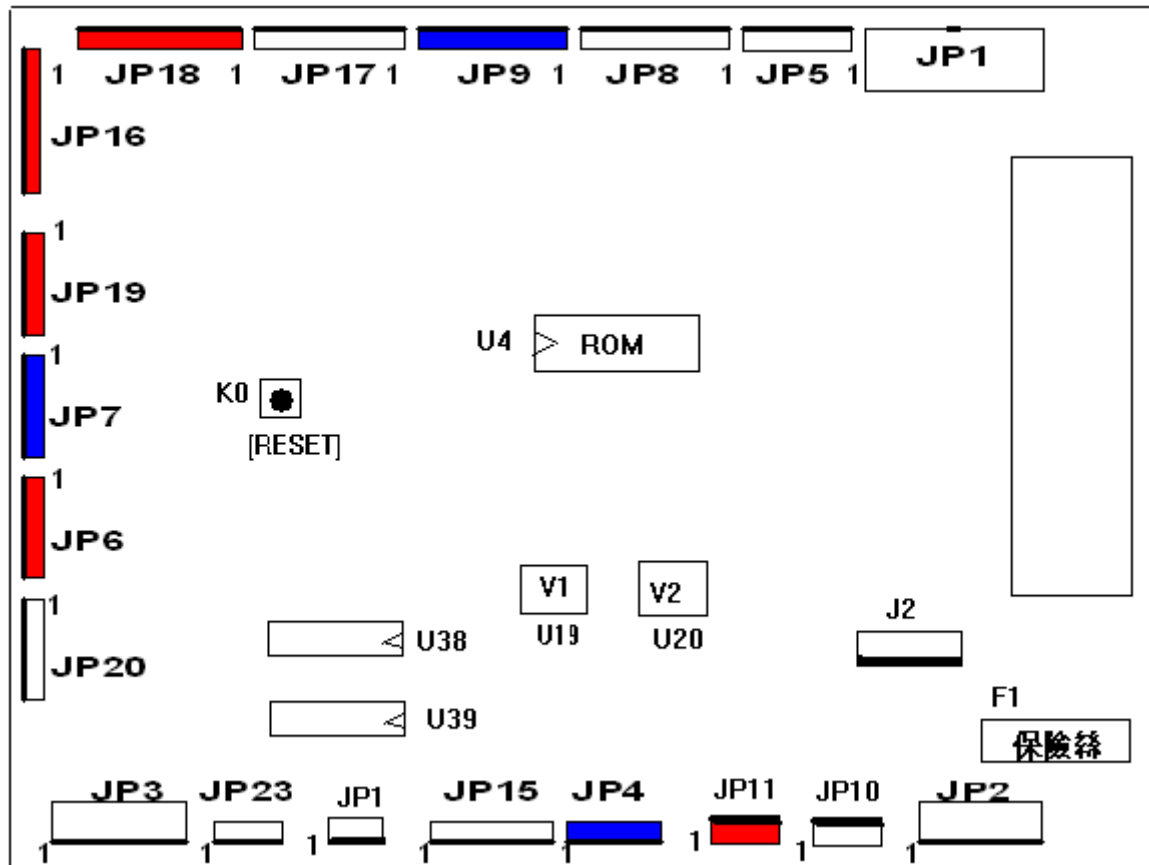
Joystick or push buttons operation	TEST items	Display showing...
【Forward】	Gantry moving forward	-F
【Backward】	Gantry moving backward	-b
【Left】	Gantry moving left	L-
【Right】	Gantry moving right	r-
【DROP】 + 【Forward】	Raise string up	U-
【DROP】 + 【Backward】	Lower string down	d-
【DROP】 + 【Left】	Close claw with VR1	-1
【DROP】 + 【Right】	Close claw with VR2	-2

TROUBLE SHOOTING

CODE	ERROR DESCRIPTION
01	String unable to be raised up

02	Machine is inclined (Tilt activated within more than 3 seconds)
03	String unable to be lowered down
04	Up-down motor blocked over 3 seconds
05	Left-right motor blocked over 3 seconds
06	Forward-backward motor blocked over 3 seconds
07	Front stop SW is faulty when machine is on self test mode after power On.
91	COIN1 meter breakdown
92	COIN2 meter breakdown
93	Prize out meter breakdown
94	Ticket out meter breakdown
99	Prize Door is opened

WMH-W518 wiring diagram



JP2	color	Connector
1	Black	GND
2		GND
3	Green	+24V input
4	Green	+24V input
5	Grey	+48V input
6		+48V input

JP11	color	Connector
1		+5V
2		+12V
3		Prize sensor signal
4		GND

JP12	color	Connector
1		RESERVED
2		
3		
4		

JP4	color	Connector	Super card pin
1	Black	Connected to super card	#7 pin GND
2	Green		#2 pin D0
3	Yellow		#3 pin D1
4	Orange		#4 pin D2
5	Red		#5 pin D3
6	Brown		#6 pin D4
7			
8	Blue		#1 pin +12V

JP15	color	Connector
1	Brown	Joystick – Forward SW
2	Red	Joystick – Backward SW
3	Yellow	Joystick – Left SW
4	Orange	Joystick – Right SW
5	Green	DROP SW
6		
7	Pink	TEST SW
8		
9	Blue	TILT
10	Black	GND , SW & push COM point
11	Black	GND , TILT COM point
12	Black	GND , TEST SW COM point
13	Purple	DROP button light
14		

JP21	color	Connector
1		Reserved
2		
3		
4		
5		
6		
7		
8		
9		
10		

JP23	color	Connector
1	Purple	Speaker 1 +
2	Blue	Speaker 2 +
3	Black	Speaker 1, 2 -
4	Black	Volume VR3
5	Red	Volume VR2

JP20	color	Connector
1	Red	Connected to LCM(W121023) 1 to 1
2	Orange	
3	Yellow	
4	Green	
5	Blue	
6	Purple	
7	Grey	
8	White	
9	Pink	
10	Bn/Oe	
11	Rd/Bk	
12	Oe/Bk	
13	Yw/Bk	
14	Gn/Rd	
15	Be/Oe	
16	Pe/Yw	

JP6	color	Connector
1	Black	GND
2	White	Coin mech1 COIN signal
3	Green	Coin mech1 inhibit signal
4		
5	Red	+12V
6	Red	+12V
7	We/Bk	Coin mech2 COIN signal
8	Green	Coin mech2 inhibit signal
9		
10	Black	GND

JP7	color	Connector
1		GND
2		Coin mech3 COIN signal
3		Coin mech3 inhibit signal

6	White	Volume VR1
----------	--------------	-------------------

JP3	color	Connector
1	Yellow	+12V input
2		+12V input
3	Red	+5V input
4	Red	+5V input
5		+5V input
6	Black	GND
7	Black	GND
8		GND

4			
5		+12V	
6		+12V	
7		Coin mech4 COIN signal	
8		Coin mech4 inhibit signal	
9			
10		GND	

JP19	color	Connector
1	Bn/Oe	Connected to LCM (W041158) 1 to 12
2	Rd/Bk	
3	Oe/Bk	
4	Yw/Bk	
5	Gn/Rd	
6	Be/Oe	
7	Pe/Yw	
8	Gy/Rd	
9	We/Bk	
10	Pk/Be	
11	Black	
12	Brown	

JP17	color	Connector
1		Reserved
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

JP16	color	Connector
1	Black	Connected to CREDIT display board (W991907)
2	Brown	
3	Red	
4	Orange	
5	Yellow	
6	Green	
7	Blue	
8	Purple	
9		
10		
11		
12		
13	Rd/Bk	
14	Oe/Bk	

JP9	color	Connector
1		Reserved
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

JP18	color	Connector
1		Reserved
2		
3		
4		
5		
6		
7		
8		

JP8	color	Connector
1		
2		
3	WE	
4	RD	
5		
6		
7	BK	GND / Solenoid valve
8		Prize door Solenoid valve+
9		

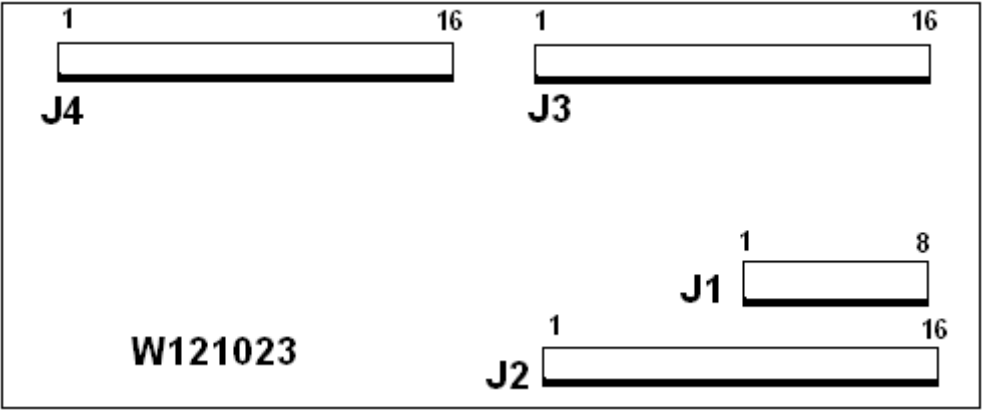
9		
10		
11		
12		
13		
14		
15		
16		

10		
11		
12		

JP5	color	Connector
1	Rd/Bk	+12V output
2	Oe/Bk	COIN1 counter meter
3	Yw/Bk	COIN2 counter meter
4	Gn/Rd	Prize out meter
5	Bl/Bk	COIN3 counter meter
6		
7		
8		

JP1	color	Connector
1	Bn/Oe	Forw-backw motor +
2		
3	Brown	Forw-backw motor -
4		
5	Red	Left-right motor +
6		Left-right motor limit switch sensor signal
7	Rd/Bk	Left-right motor -
8		F-B motor limit switch sensor signal
9	Orange	Up-down motor +
10	Be+Pe	SW COM point
11	Oe/Bk	Up-down motor -
12	Grey	SW COM point
13	Pk/We	Claw power +/voltmeter +
14	Black	Lower stop SW
15	Yw/Bk	Claw power - /voltmeter -
16	Pink	Upper stop SW
17		
18	Pe/Yw	Left-right stop SW
19		
20	Be/Oe	Forward、 Backward stop SW
21		
22		+12V
23		
24		+12V

W121023 wiring diagram



W100411		W121023 TO Dual LCM	
JP20		J2	
1		1	
2		2	
3		3	
4	Connect to W121023 J2 1 to 1	4	Connect to W100411 JP20 1 to 1
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

W121023		W121023	
J3		J4	
1	Outside LCM 1 to 1 (16*2 LCM)	1	Inside LCM 1 to 1 (16*2 LCM)
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	