DROP THE HOOK

OPERATION MANUAL

The product received by client may vary slightly to the illustrations in the manual.
The specifications of the machine may change without prior notice due to product improvements.

Please read the manual before starting the machine and keep the manual safe for future reference.

SAFETY PRECAUTIONS

Before using the machine, read the following safety precautions thoroughly.

Be sure to observe the safety instructions since they are important for ensuring safe operation of the game.

⚠ CAUTION	This indicates risk that can lead to personal injury and/or property damage.

⚠ CAUTION
● When opening or closing the sliding glass door, avoid slamming the door. Careless handling of the glass door can result in damage to the game, door and may result in personal injury.
● When moving the machine, exercise caution and do not push on the glass doors. The glass doors on the game machine can break if excessive force is applied, thus causing possible danger to yourself and people around the machine.
● When installing the machine, set the leg levelers properly to make sure that the machine does not move easily. If the leg levelers are not set properly, the machine can move if a light pushing force is applied, endangering people around the machine.
● Never use the machine outdoors. If the machine is installed outside, rain and dust can cause a short circuit or electric shock.
● Route the power cord in such a way that people will not step on it and it will not be under other machines. Otherwise, internal wires can break and may cause a short circuit or electric shock.
● Do not use the power cord if it becomes damaged. If internal wires are exposed, replace the cord immediately; otherwise, a short circuit or electric shock can occur.
● Failure to supply the correct voltage may result in a fire.
● Take special care when handling metal surfaces as they may contain sharp edges.
● If you have to leave the machine unattended during maintenance, be sure to close all doors to prevent people from bumping into the machine or anyone getting injured by touching the inside of the machine.
● Never touch any moving parts during operation as they may cut or pinch fingers.

GAME SPECIFICATIONS

GAME DIMENSIONS: 49” (1245 mm) Wide x 42.5” (1080 mm) Deep x 80.5” (2045 mm) High

GAME WEIGHT: 536 lbs. (243 kg)

NOTICE

This machine allows for various adjustments to payout percentages. State and/or local regulations in your area may prohibit the use of this type of machine. Other State and/or local regulations may restrict certain types of prizes or limit the maximum value of a prize. Please be aware of all State and local regulations before operating this machine. NAMCO America, Inc. cannot be held responsible for actions taken as a result of failure to comply with State and local regulations.

WARRANTY

For warranty information, please contact your local authorized distributor.

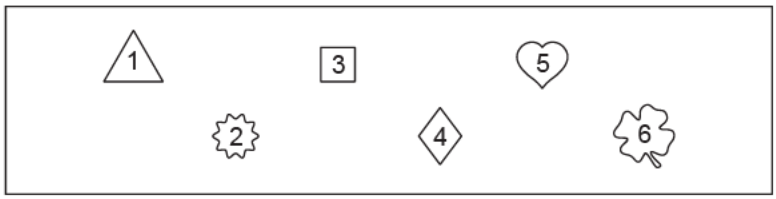
RF NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operating in a commercial environment. This equipment uses and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In which case, the user will be required to correct the interference at user's own expense.

TABLE OF CONTENTS

Section 1: HOW TO PLAY

1. Try to get the plunger into the target hole that represents the prize you want to win.



NOTE: EACH PRIZE HOOK HAS A MAXIMUM HANGING WEIGHT OF 15 kgs (~33 lbs)

2. Hold down the left button on the control panel to move the plunger to the right. When the plunger lines up to the target hole, release the left button.

3. Hold down the right button on the control panel to move the plunger forward towards the back of the machine. When the plunger lines up over the target hole, release the right button. Releasing the right button will automatically lower the plunger into the target hole.

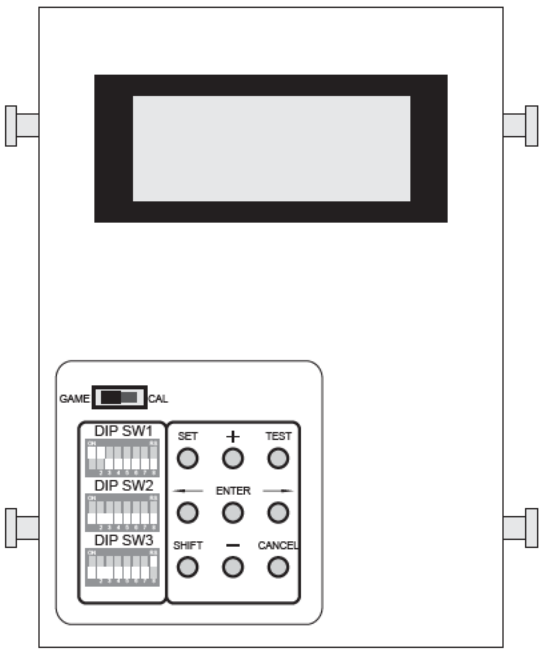
4. If the plunger successfully enters the target hole, the prize will drop from the hook into the prize-out area.

VOLUME ADJUSTMENT: The volume adjustment knob is located above the inside power switch.

Section 2: CALIBRATION

**** THE MACHINE MUST BE CALIBRATED IN ORDER TO FUNCTION PROPERLY. PLEASE TAKE CARE TO DO THIS CORRECTLY.****

Please make sure to follow this procedure for initial calibration, whenever the machine is first installed or moved to a new location.

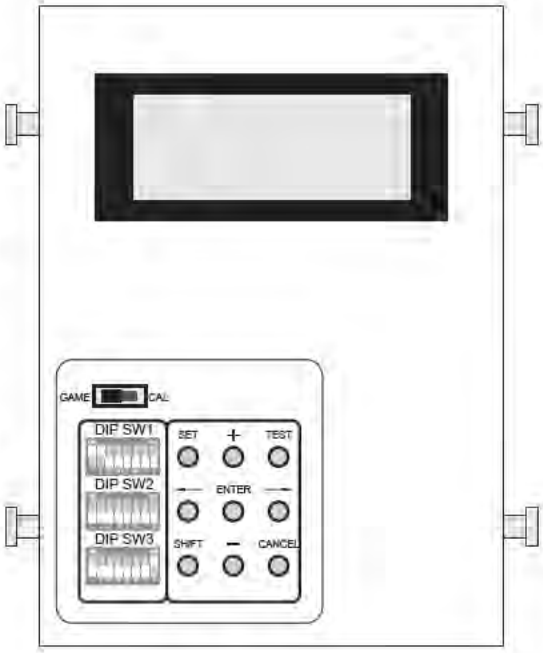


1. Before calibrating
   - A) Make sure the machine is on flat ground.
   - B) Leg levelers should be screwed down to avoid excessive shaking or triggering of the tilt sensor.
   - C) Turn on the power, wait of all initialization to end.
   - D) Move the switch on the Control Box to “CAL.”

2. Calibration procedure:
   - A) Using the Control Box, press the “SET” button until the display reads “Position No. 6”
   - B) Press the “→” and “←” button on the Control Box to move the plunger (left and right) directly over the sixth hole.

C) Wait until the plunger is not longer in motion and press the "+" and " —" button to further adjust the plunger (forward and backward) over the sixth prize hole.

D) Press the "TEST" button to lower the plunger into the hole. If the plunger enters the hole it will make a "bing-bong" sound, and the plunger will go back up. If the plunger fails to enter the prize hole use the "+"," —", "→" and "←" buttons to make additional adjustments so the plunger is directly over the prize hole and press the "TEST" button again to lower the plunger. PLEASE MAKE SURE THAT THE PLUNGER IS IN THE CENTERMOST PART OF THE HOLE. AVOID HAVING THE PLUNGER TOUCH ANY OF THE SIDES WHEN IN THE HOLE.



E) Push the "ENTER" button for 2 seconds until there is a "ping" sound to store the location coordinates of the prize hole into the machine.

F) Move the switch back to "GAME" and wait for the plunger to go back to coordinates (0,0).

G) Move the switch again to "CAL."

H) Adjust DIP SW3-7 to the "ON" position and press the "SET" button until the display reads "Position No. 6." Hold down "SHIFT" and then press the "TEST" button and the plunger will move to prize hole 6 automatically but it will stop above it. The display will show "S<x, x>" with the save coordinates in place of x. This means the "Mechanical Inertia Correction" has completed correctly.

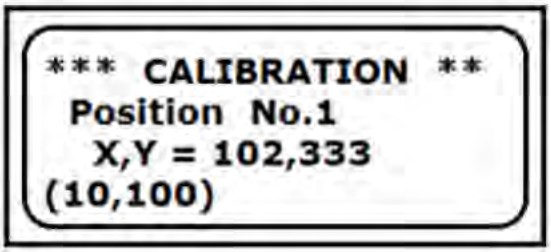
I) Return DIP SW3-7 back to the "OFF" position.

J) Hold down "SHIFT" and then press the "TEST" button to start auto-check on prize hole 6. Check that the plunger goes to the exact same place as the calibrated location or is only within one or two coordinate points off.

K) Repeat the procedure outlined in step 2. A) through 2. E) for prize holes 1 through 5 respectively.

L) Hold down "SHIFT" and then press the "SET" button to start the auto-check of all the prize holes.

M) If all is well, return the switch back to "GAME" and turn the power OFF and back ON to complete the calibration process.



In calibration mode, the display will assist you by showing which prize hole position you are attempting to calibrate, the currently stored coordinates of the prize hole [X,Y,= 102,333] and the current position of the plunger [(10,100)].

Section 2.1: AUTO TEST and CALIBRATION (Weekly Calibration test and adjustment)

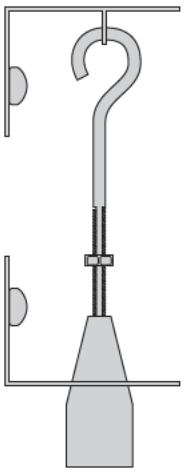
It is suggested that the operator perform this test every time the machine is collected or when weekly maintanence is performed.

1. Turn the power ON and wait for all initialization to end.
2. Move the Control Box switch to “CAL”
3. Press the “SHIFT” and ”SET” buttons simultaneously to enter “Auto Test Mode”. (If DIP SW3-6 is in the ON position, the security shutter test will also perform). Pressing the “CANCEL” button will exit the security shutter test but leave the game in calibration mode. Moving the control box switch back to “GAME” will exit the calibration test without saving any changes.
    A) AUTO TEST Explanation:
    Pressing the “SET” button steps through the different hole positions in turn.
        1. STEP 1: The plunger returns to the origin position, where the coordinates are (0,0)
        2. STEP 2: The plunger will move to the co-ordinates of the first hole.
        3. STEP 3: The plunger moves down.
        4. STEP 4: Check whether plunger goes inside the hole.
        5. STEP 5: The plunger moves up and back to the origin position.
        6. STEP 6: Moves to the next hole to continue testing.

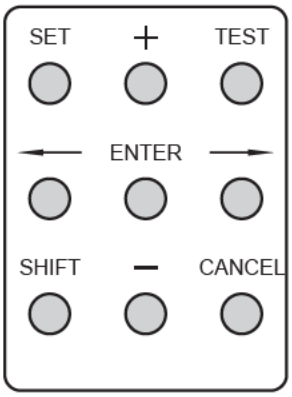
NOTE If the plunger does not successfully enter the hole during testing, auto test will pause and allow you to calibrate the hole. Follow the calibration procedure in 2 (A through E) in the previous page to calibrate the prize hole. Press the “SHIFT” and “SET” buttons to continue auto test.

Section 3: TILT SECURITY

This machine is equipped with a pendulum tilt sensor located on the plunger assembly. If a shake is detected during the downward movement of the plunger, an alarm will sound, an E8 error will display on the credit screen, the game will cancel and pause operation for approximately 30 seconds. Other machine adjustments can have the security shutter close upon tilt sensor activation. To adjust the sensitivity of the tilt sensor, simply rotate the pendulum to the desired height. The lower the pendulum, the less sensitive the sensor will be. Loosening the screws to raise or lower the brackets can also help with the sensitivity adjustment.



Section 4: GAME SETTINGS



1. With the game powered ON, push and hold the “SET” button on the control box to enter the Game Setting menu

2. Push the “SET” button to cycle through the various settings menu

COIN SETTING (adjust price per play)
GAME TIME SETTING (adjust maximum play time before plunger lowers)
BALL SETTING (adjust balls paid out per play for use with optional ball dispenser)
TICKET SETTING (adjust tickets paid out per play for use with optional ticket dispenser)
DEFLECTION SETTING (adjust overrun distance)
PRICE SETTING (adjust payout rate) *DIP SW3 - 8 MUST be ON to adjust prize payout settings.

3. Once in the desired settings menu, use the “ ← ” and “ → ” buttons to cycle through the various settings that can be adjusted.

4. Use the “＋” and “－” buttons to change the value.

5. After making changes to the value, press “ENTER” to confirm the change.

6. Push and hold the “SET” button to exit the Game Setting menu and return to regular operation.

GAME DEFAULT VALUES

COIN SETTING (C1: 1 Coin = 1 Play, C2: 1 Coin = 1 Play)
GAME TIME (30 Seconds)
BALL SETTING (C1: 1 Coin = 0 Ball, C2: 1 Coin = 0 Ball)
TICKET SETTING (0 Ticket/1 Play)
DEFLECTION SETTING (Backward = 10, Forward = 15)
PRICE SETTING (No.1 = 25 Plays, No.2 = 50 Plays, No.3 = 75 Plays, No.4 = 75 Plays, No.5 = 50 Plays, No.6 = 25 Plays)

COIN SETTING

The coin value range for C1 and C2 is 1 - 10, with 10 being the maximum coins per play.
The play value range for C1 and C2 is 1 - 10, with 10 being the maximum plays per coin.
The setting for a bill acceptor will be C2.

After making changes to the value, press “ENTER” to confirm the change.

GAME TIME SETTING

The game time adjustments are 20, 30, 40, 50, 60, 70, 80, and 90 seconds.

The game time is initiated when a player presses the left button on the control panel. Once the time expires, the plunger will automatically lower.

After making changes to the value, press “ENTER” to confirm the change.

BALL SETTING (for optional ball dispenser)

The coin value range for C1 and C2 is 1 - 20.
The ball value range for C1 and C2 is 0 - 10, with 0 being no balls being dispensed for any play.
The setting for a bill acceptor will be C2.

TICKET SETTING (for optional ticket dispenser)

The ticket value range is 0 - 10 tickets per play, with 0 being no tickets being dispensed.

After making changes to the value, press “ENTER” to confirm the change.

DEFLECTION SETTING

Each of the six target hole locations is stored in the machine after calibration. This setting adjusts the size of the target hole area to “protect.” If the plunger enters the “protected” area during gameplay and the machine has not reached the specified payout value, the plunger will move slightly out of the “protected” area when the last play button is released.

The backward value range is 0 - 50 steps.
The forward value range is 0 - 50 steps.

1 step = 0.46 mm.

It is recommended to not set the values too high as a noticeable shift will be seen.

PRICE SETTING

This setting adjusts the payout value for each target hole. Once a value is defined for a target hole, that target hole will be “protected” until the number of plays on that hole equals the defined value. Once that value has been reached, that hole will no longer be “protected” until after a a registered win. Once a win is registered, the target hole will become “protected” again until the defined value is reached. *DIP SW3 - 8 MUST be ON to adjust prize payout settings.

There are six target holes that need to have their payout values defined.

The payout value adjustments for each target hole are:
0, 25 50, 75, 100, 125, 150, 200, 250, 300, 350, 400, 500, 600, 700, 800, 900, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 9999

Section 5: OTHER FUNCTIONS

The following functions can be accessed when the game is in “Demo status”
(Machine is ON with 0 credits)

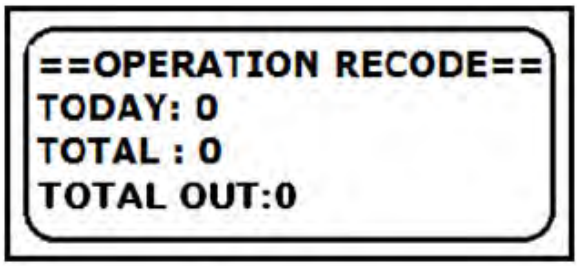
1. SERVICE CREDIT:
   A) By pressing the “TEST” button you will get one service credit for each press. The coin and play counters will not record any data. Also, the game will be in 100% skill mode. You can press the “CANCEL” button to clear any unused service credits.

2. OPEN PRIZE DOOR:
   A) While in Demo status, pressing the “—” button will unlock or lock the prize door. If the door isn’t locked after exiting the Demo status, the game will refer to the settings from DIP SW2-1 and DIP SW2-2 on the time the prize door remains open.

Section 6: BOOKKEEPING

While in Demo status, press and hold the “＋” button to show the OPERATION RECORD. Releasing the button will show “GAME/PRIZE data”

A) OPERATION RECORD:
LCD display:



Operation record display description:

1. [TODAY:x] This shows the total number of plays since the last power cycle.
2. [TOTAL:x] This shows the total number of lifetime plays on the machine.
3. [TOTAL OUT:x] This shows the total number of lifetime prizes dispensed.

B) GAME/PRIZE DATA:

Game/Prize Data display description:

1. [No.: x] This shows which hook number it is on.
2. [Price: x] This shows the total number of tries that must be played before the prize can be won.
3. [Game: x] This shows the number of attempts played on this hole.

4. [Prize: x] This shows the number of times the prize has been paid out.
5. [Err: x] This shows the number of times an error has occurred on this hole.

Button descriptions:

1. When the cursor is on “NO. x”
   A) Press the “ ← ” button to advance to the CLEAR RECORD screen.
   B) Press and hold the “SHIFT” button to enter the TOTAL ACCOUNT bookkeeping screens.
2. When the cursor is anywhere else.
   A) Press “CANCEL” to stop the check and return to demo mode or to cancel the adjustment.
   B) Press the “ ← ”or “ → ” button to move to another field.
   C) Press the “+” or “— ” button to move up/down the field or to increase or decrease the value of an adjustable field.
   D) Press the “ENTER” button to enter field adjustment or to allow an adjusted value to be saved.
   E) Press the “TEST” button to release the current prize hook.
   F) Press the “SHIFT” button to enter Total Account for the game.

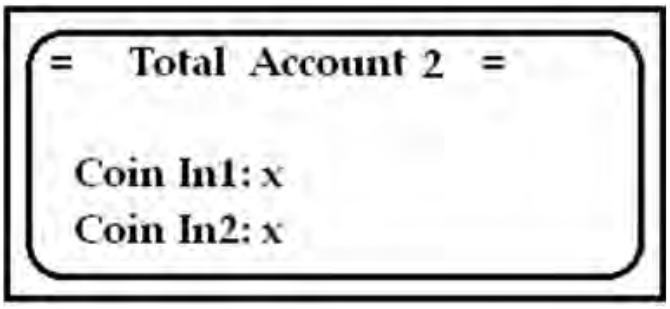
C) TOTAL ACCOUNT

Total Account 1 LCD display:

Total Account 1 display description:

1. [Game Play: x] This shows the total number of times the game has been played.
2. [Prize Out: x] This shows the total number of times any prize has been paid out.

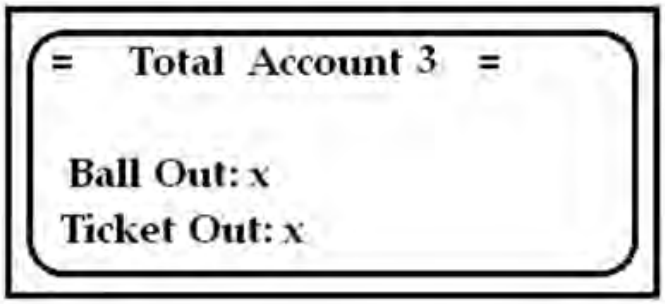
Total Account 2 LCD display:



Total Account 2 display description:

1. [Coin In1: x] Total coins inserted into “Coin 1.”
2. [Coin In2: x] Total coins (or DBA pulses) on “Coin 2.”

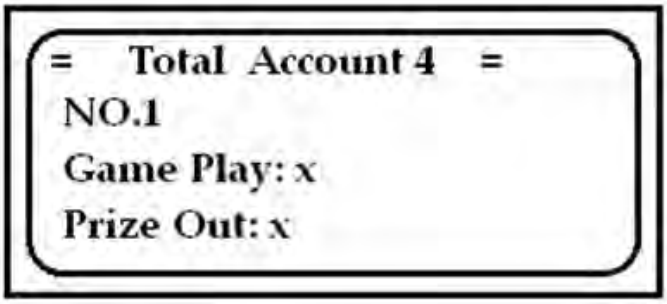
Total Account 3 LCD display :



Total Account 3 display description:

1. [Ball Out: x] This shows the total number of balls that have been paid out (if ball setting is in use).
2. [Ticket Out: x] This shows the total number of tickets that have been paid out (if ticket setting is in use).

Total Account 4 LCD display:



The next 6 displays will cycle through the bookkeeping for each Prize Hole. Each display is the exact same as the next but for Prize Holes 1-6.

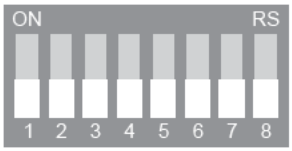
Total Account 4 display description:

1. [NO.1] No.1 Prize Hole Book Keeping.
2. [Game Play: x] This shows the total number of tries for Prize Hole 1.
3. [Prize Out: x] This shows the total number of times Prize Hole 1 has been paid out.

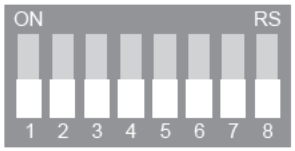
Total Account 5 = Prize Hole No. 2 Bookkeeping
Total Account 6 = Prize Hole No. 3 Bookkeeping
Total Account 7 = Prize Hole No. 4 Bookkeeping
Total Account 8 = Prize Hole No. 5 Bookkeeping
Total Account 9 = Prize Hole No. 6 Bookkeeping

Section 7: DIP SWITCH SETTINGS

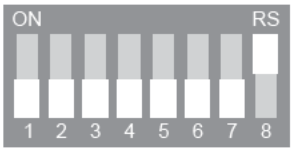
DIP SW1



DIP SW2



DIP SW3

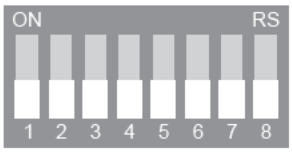


DIP SW1				1	2	3	4	5	6	7	8
Game calibration check after every power on	Check all target holes			ON	ON						
	Randomly checks one hole			ON	OFF						
	No check			OFF	ON						
				OFF	OFF						
Coin Counter Meter Mode	1	Coin Meter 1	Coin 1/Coin 2			ON					
		Coin Meter 2	Ticket								
	2	Coin Meter 1	Coin 1			OFF					
		Coin Meter 2	Coin2								
Free Play*	Yes						ON				
	No						OFF				
Super Ball Dispenser	Yes							ON			
	No							OFF			
Ticket	Yes								ON		
	No								OFF		
Demo Music	Yes									ON	
	No									OFF	
Keep credit after power off and on	Yes										ON
	No										OFF

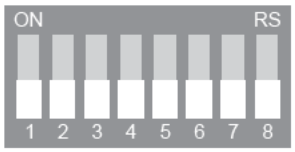
DIP SW1	1	2	3	4	5	6	7	8
Default Setting	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

*If Free Play mode is turned ON, the game becomes skill only. Payout settings no longer apply.

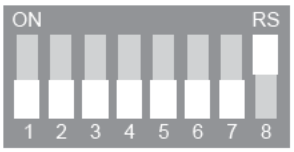
DIP SW1



DIP SW2



DIP SW3



DIP SW2		1	2	3	4	5	6	7	8
Amount of time the prize door stays unlocked after a prize is won and claimed	180 seconds	ON	ON						
	120 seconds	ON	OFF						
	60 seconds	OFF	ON						
	30 seconds	OFF	OFF						
Waiting time of prize out door when prize is not taken out	10 minutes			ON	ON				
	5 minutes			ON	OFF				
	3 minutes			OFF	ON				
	1 minute			OFF	OFF				
Super ball pay out failure notice	No error is displayed					ON			
	Error is displayed Needs to be cleared					OFF			
Security shutter open	On prize win only						ON		
	Regular operation						OFF		
DIP SW2		1	2	3	4	5	6	7	8
Default Setting		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

DIP SW3		1	2	3	4	5	6	7	8
Security shutter test on every power ON	Yes						ON		
	No						OFF		
Mechanical Inertia Correction *	Correction on							ON	
	Correction off							OFF	
Prize payout values **	Adjustable								ON
	Locked (can't adjust)								OFF
DIP SW3		1	2	3	4	5	6	7	8
Default Setting		OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

*This option must be ON during Calibration but OFF during regular operation

**DIP SW3 - 8 MUST be ON to adjust Prize Payout settings.

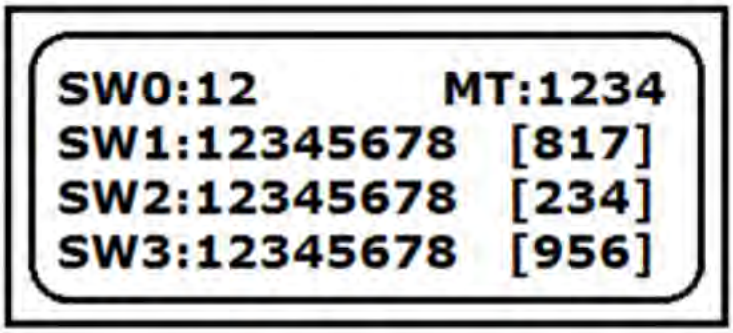
Section 8: I/O TEST

Turn the power ON while pressing the “TEST” button. When LCD says “Test Mode” release button to enter I/O Test.
Push “TEST” to move to the next Test item.
The tests will run in the following order:

“LCD AND LAMP TEST”
“SW0 (DIP SW, BUTTONS TEST)”
“KEY CODE(Sensor Test)”
“X-Y-Z MOTOR TEST”
“PRIZE AND DOOR TEST”
“TICKET TEST”
“SOUND TEST”

1. “LCD AND LAMP TEST” All LCDs, LEDs and Lamps should be flashing

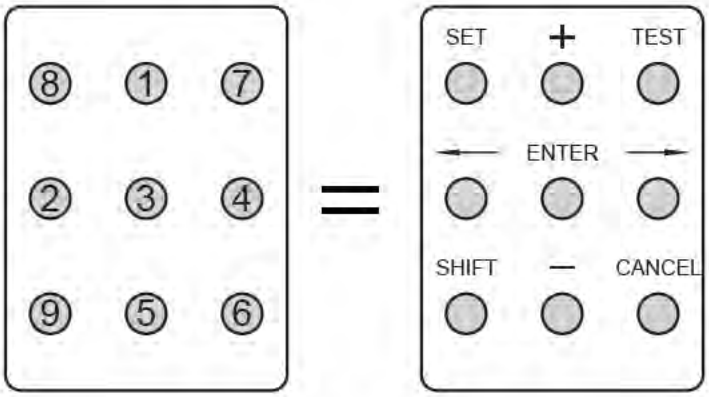
2. “SW0 (DIP SW, BUTTONS TEST)” Display shows which Dip Switches are on or off and tests buttons and switches on the control panel.



SW0 = Game-Cal Sliding Switch (1 = the switch is set to Game, 2 = the switch is set to CAL)

SW1, SW2, and SW3 are the Dip switch settings

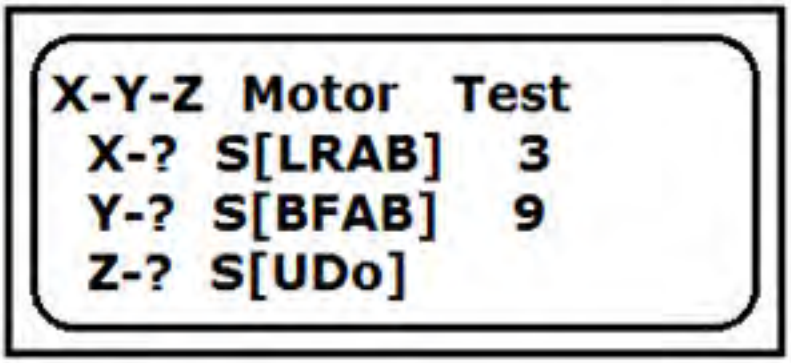
This represents the button grid on the control panel (pushing “SET” will flash “8” on the LCD display)



3. “KEY CODE(Sensor Test)” The Key Code test is used for manufacturing test and Debug only.

4. “X-Y-Z Motor Test”
   Test Explanation:
   To move the motors in test;
   X-axis = “→” or “←” (Left or Right)
   Y-axis = “+” or “—” (Front or Back)
   Z-axis = “+” or “—” with “SHIFT” pushed (High or Low)

   Motor Test
   LCD display



   A) “X-? S[LRAB] 3”

   1. The question mark will actually be an R or L indicating the test direction of the X axis, R= moving Right, L= moving Left, while the motor is moving between the Right and Left sensor.
   2. “S[LRAB]”: L,& R,is the sensor status of X axis, L= Left Sensor activated R = Right Sensor activated , A and B will show that the encoder is running.
   3. “3” is the Coordinate value of the X axis.

   B) “Y-? S[BFAB] 9”

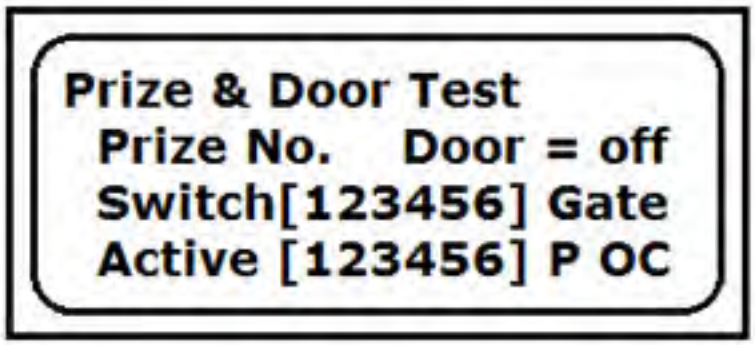
   1. The question mark will actually be an B or F indicating the test direction of the Y axis, B= moving Backward, F= moving Forward, while the motor is moving between the Back and Front sensor.
   2. “S[BFAB]”: B,& F,is the sensor status of Y axis, B = Back Sensor activated F = Front Sensor activated, A and B will show that the encoder is running.
   3. “9” is the Coordinate value of Y axis.

   C) “Z-? S[UDo]”

   1. The question mark will actually be an U or D indicating the test direction of the Z axis, U= moving Upward, D= moving Downward, while the motor is moving between the Up and Down sensor.
   2. S[UDo]:U, D and o are sensor status of Plunger (Z axis), U=Upper Sensor activated, D=lower Sensor activated, o= perception of thrust.

3. “Prize, Door & Hook Test”
   Use “+” or “—” to open or close the Security Shutter.
   Use “SET” to lock and unlock prize door.
   Use “ ← ” or “ → ” to select the hooks. Push “ENTER” to activate the hook test.
   P1 LEDs will be on. Step through each position by pressing Playpanel Button 1.

   Prize, Door and Hook test
   LCD display:



   A) “Prize No.” represents the prize hook selected
   B) “Door” represents the Prize door status. “On” is OPEN, “Off” is Closed.
   C) “Switch [123456]” indicates the status of each Hook, if it shows a number the Hook is up, a '—' indicates the Hook is down.
   D) “Active [123456]” is the status of the motor of each Hook. If it shows a number the hook motor is currently operating, a '—' indicates the motor is idle.
   E) “Gate P OC” in the lower right corner represents the status of the Security Shutter. A ‘P’ = the Shutter is moving, an 'O' = the Shutter is in the Open position, a 'C' = Shutter is in the Closed Position.

4. “TICKET TEST” Displays the status of the ticket and ball dispenser.

5. “SOUND TEST” Plays each sound in game. Use “ ← ” and “ → ” to toggle sounds and “ENTER” to play each sound.

6. Turn the power OFF and ON to return to Attract Mode.

Section 9: ERROR CODE EXPLANATION

LED Display	LCD ERRxx	LCD Message	Faulty Cause
E0	Err0	Up Time Out	Plunger fails to return to original “up” (Z axis) position 1) Top sensor not responding. 2) Motor set of plunger not working. 3) Driving PCB W110822 connector JP1 disconnected.
E1	Err1	Down Time Out	Plunger fails to move to the “down” (Z axis) position 1) Lower Z axis sensor not responding and driving PCB W110822 VR1’s push power is over adjusting. 2) Motor set of plunger not working. 3) Driving PCB W110822 connector JP1 disconnected.
E2	Err2	Right Time Out	Plunger fails to move to the “right” (X axis) position 1) Right sensor on X axis not responding. 2) Motor set of X axis not working. 3) Driving PCB W110822 connector JP1 disconnected. 4) Power on to test, right side of X axis shows negative value, X axis orientatin A/B is opposite.
E3	Err3	Left Time Out	Plunger fails to move “left” (X axis) to original position 1) Left sensor on X axis not responding. 2) Motor set of X axis not working. 3) Driving PCB W110822 connector JP1 disconnected.
E4	Err4	Back Time Out	Plunger fails to move “back” (Y axis) towards player 1) Back sensor on Y axis not responding. 2) Motor set of Y axis not working. 3) Driving PCB W110822 connector JP1 disconnected.
E5	Err5	Front Time Out	Plunger fails to move “forward” (Y axis) to back of machine 1) Front sensor on Y axis not responding. 2) Motor set of Y axis not working. 3) Driving PCB W110822 connector JP1 disconnected. 4) Power on to test, front side of Y axis shows negative value, Y axis orientation A/B is opposite.

LED Display	LCD ERRxx	LCD Message	Faulty Cause
E7	Err7	Position No.? Error!	Orientation testing wrong (adjust DIP SW1-1, DIP SW1-2 power on testing) 1) Plunger movement is not smooth. 2) Orientation value setting is not correct. 3) Push a little distance then causes fault, W110822 VR1 push power adjustment is too weak. 4) Normal orientation pushes out error, lower Z axis sensor drops off without responding, or driving PCB W110822 connector JP1 PIN25 disconnected.
E8	Err8	Tilt Error!	Tilt sensor activated 1) Machine has tilted or has been shaken. 2) Tilt sensor is too sensitive.
E9	Err9	Coin Sw Err! xx	Coin SW connect error (power on testing), connect error coin number will display, as COIN SW does not adjust to N.O.
EA	Err10	Gantry Driver Err!	Driving PCB W110822 error 1) Main PCB W110823 connector J11 disconnected. 2) Driving PCB W110822 connector JP1 or JP3 disconnected.
EB	Err11	Meter Err! 123-	Coin meter broken. 1) Main PCB W110823 coin meter connector J7 disconnected 2) Coin meter disconnected or removed. [123-] Explanation: Coin meter no.1: Coin 1 or Coin 1 + Coin 2. Coin meter no.2: Coin 2 or ticket. Coin meter no.3: Prize out number. Coin meter no.4: Not used
EC	Err12	Door Open or Prize	Prize door is open 1) Prize door switch is broken. 2) Prize door stopper is broken. 3) Main PCB W110823 connector J4 (Door SW) is disconnected. 4) Security shutter driving PCB W120103 connector J1 disconnected. Prize in prize area has not been claimed 1) Prize remains in prize area. 2) Prize sensor not responding or light reflections sheet has fallen off. 3) Main PCB W110823 connector J11 (Prize Sensor) is disconnected.

LED Display	LCD ERRxx	LCD Message	Faulty Cause
ED	Err13	Ticket Err! -??	Ticket dispenser error 1) There aren't enough tickets to dispense. 2) Setting is set for ticket payout but no dispenser is installed or dispenser is broken. 3) Main PCB W110823 connector J9 Prize Sensor is disconnected.
EE	Err14	Gate Error!	Security shutter error 1) DIP SW2-6 ON. Security shutter is open or is not completely closed. 2) Security shutter sensor is not responding or is broken. 3) Main PCB W110823 connector J4 is disconnected. 4) Security shutter driving PCB W120103 connector J1 is disconnected. 5) Motor set of security shutter is broken.
EF	Err15	Data Error!	Data error 1) There is a change in the software (ROM). 2) Settings have been corrupted and should be reset.
EL	Err16	Ball Err! -??	Ball dispenser error 1) Ball dispenser is empty. 2) Ball dispenser is not installed or is broken. 3) Main PCB W110823 connector J9 is disconnected.
EP			Prize hooks are empty.

Section 10: MACHINE RESTORE

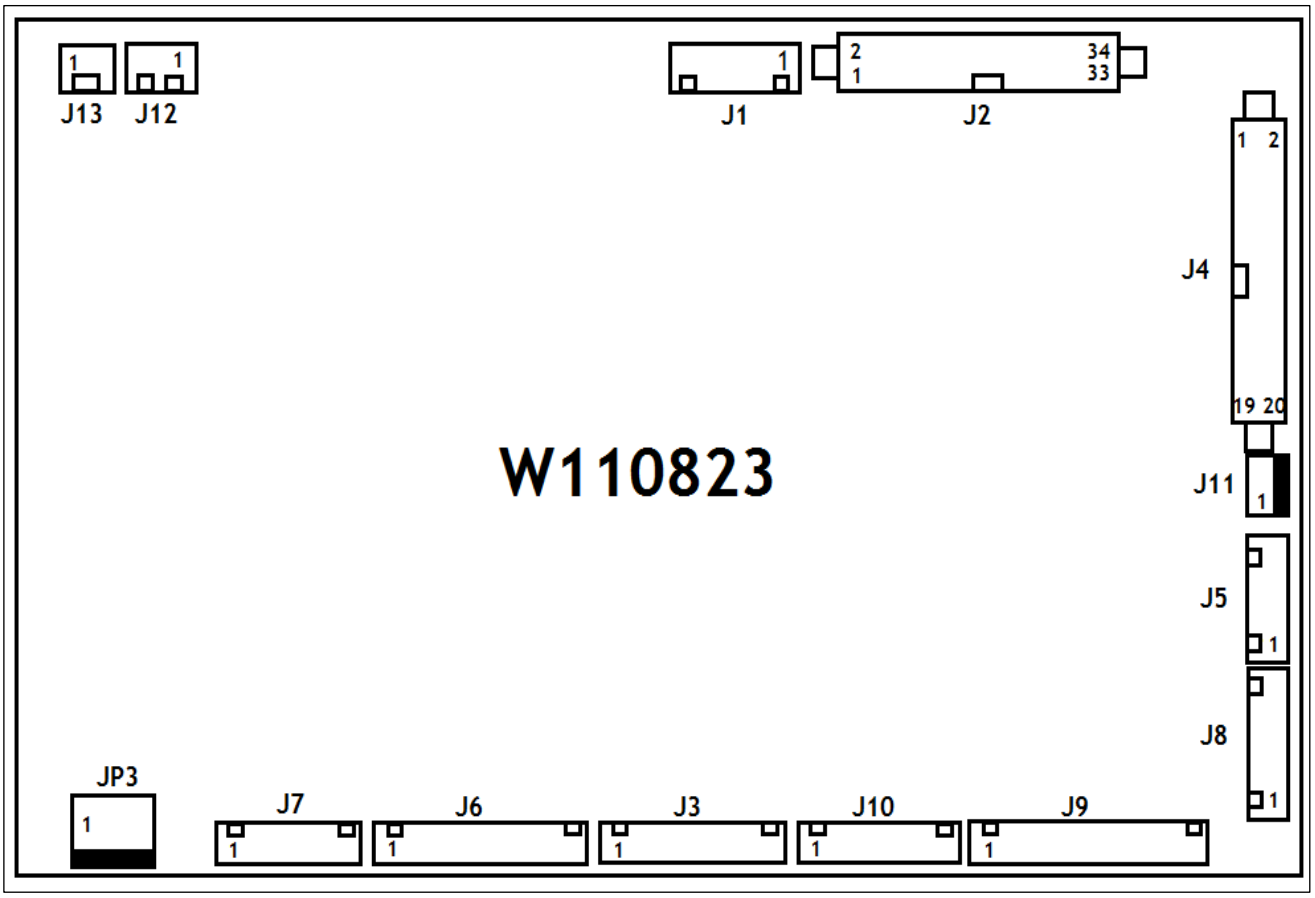
Holding down the "SHIFT" and "CANCEL" buttons while powering the machine ON will restore the machine to factory default settings. Release the "SHIFT" and "CANCEL" buttons when the LCD screen on the control box displays "MEMORY CLEAR OK!" or when the credit display shows "CL."

Section 11: PARTS LIST

Item	Part No.	Description
1	G-GQ51-TAU0837-12V	Electromagnet (TAU-0837, DV12V, 0.5A)
2	G-GG01-001	Counter (7D12VCL)
3	G-GH02-BR1NWC	Power Switch (R210-1-C5L-BR1NWC)
4	G-VR01-01K	Sound VR (1K, 16K1-B1K L25KC/57)
5	G-GH01-SM-05S-01A0	Switch with short plate (SM-05S-01A0-Z)
6	G-GS10-1522Y	Motor (DC12V-27GAD-1522Y)
7	G-GS10-2910T	Motor (DC12V-HN-35GAJ-2910T)
8	G-GH01-PIS-04D0	Switch with long plate (VM-PIS-04D0-Z)
9	G-GA-LPS-075-12	Power Supply (LPS-75-12, 6.2A)
10	ASW-OP-M183MXB-05	Sensor (Square type, M183xB-BK + Harness 5 cm)
11	G-CD05-YB10A1	AMI Filter (115/250V 10A, YB10A1)
12	G-GR01-030-10A-HI	30mm fuse (10A, fast type)
13	G-GR01-020-10A-HI	20 mm fuse (10A, fast type)
14	G-GR15-CQ207D	Fuse Stand (CQ-207D)
15	G-GW10-DP-D60S2-WE	Button (White 60mm)-DP
16	G-GH01-PIF-00D0	Switch 3 PIN (VM-PIF-00D0-Z)
17	G-SP04-10W-8	4” Speaker (8O 10w)
18	PCB-W110823	Main PCB
19	Q-SEN-BPA-3C2A-48C04	Sensor (BPA-3C2A-48C04C)

Section 12: WIRING DIAGRAMS

Main PCB W110823



J1 2.5mm 5PIN RS232 land line to W1108 22 J1 2.5mm 5PIN (PIN TO PIN 1 by 1)
J2 34PIN connector to W110716 JP1 34PI N connector (PIN TO PIN 1 by 1)

J3	color	2.5 PIN	NOTE
1		GND	Button
2		Forward SW	
3			
4		Left SW	
5			
6			
7			
8		Button light (-)	
9		F Button LED(+)	
10		R Button LED(+)	

J5	color	2.5 PIN	NOTE
1		5V	connect W060306 (Iron box)
2			
3		GND	
4		GND	
5		OA	
6			
7			
8			

J4 20PIN connector to Target SW/LED and Gate

P#	color	PIN	P#	color	PIN
1		GND (Prize out door SW)	2		GND LED(-)
3		(Not used)	4		Target 1 LED (+)
5		(Not used)	6		Target 2 LED (+)
7		(Not used)	8		Target 3 LED (+)
9		(Not used)	10		Target 4 LED (+)
11		(Not used)	12		Target 5 LED (+)
13		Prize out door SW	14		Target 6 LED (+)
15		W120103 J1-6	16		W120103 J1-4
17		W120103 J1-7	18		W120103 J1-5
19		W120103 J1-3	20		GND LED

J6	color	2.5 PIN	NOTE
1		DP (Res)	
2		A	W991907-PIN1
3		B	W991907-PIN2
4		C	W991907-PIN3
5		D	W991907-PIN4
6		E	W991907-PIN5
7		F	W991907-PIN6
8		G	W991907-PIN7
9		GND(Res)	
10			W991907-PIN9
11			W991907-PIN10
12		(Not used)	
13		(Not used)	

J7	color	2.5 PIN	NOTE
1		12V	Coin meter
2		Meter 1-Coin	
3		Meter 2-Ticket	
4		Meter 3-Prize	
5		Meter 4 (Not used)	
6		GND (Not used)	

J8	color	2.5 PIN	NOTE
1		12V (Not used)	Coin 1
2		+12V	
3		X	
4		COIN1 Signal	
5		GND(Not used)	
6		GND	
7		Bill Acceptor +12V	Coin 2 Bill acceptor
8		COIN2+12V	
9		Bill Acceptor Inhabit Signal	
10		COIN2/ Bill Acceptor Signal	
11		Bill Acceptor GND	
12		COIN2/ Bill Acceptor GND	

J10	color	2.5 PIN	NOTE
1		Door Stopper(+)	Door Stopper/Tilt
2		Door Stopper(+)	
3		Door Stopper(-)	
4		Door Stopper(-)	
5		GND (Not used)	
6		X	
7		Tilt	

J9	color	2.5 PIN	NOTE

J11	color	2.5 PIN	NOTE

1		Ball's Motor(-)	Ball Dispenser
2		X	
3		Ball's Motor(+)	
4		X	
5		Ball sensor OUT	
6		Ball sensor GND	
7		GND(Not used)	
8		+12V	Ticket Dispenser
9		Entropy Ticket Sensor	
10		General Ticket Sensor	
11		X	
12		SW	
13		GND(Not used)	
14		GND	

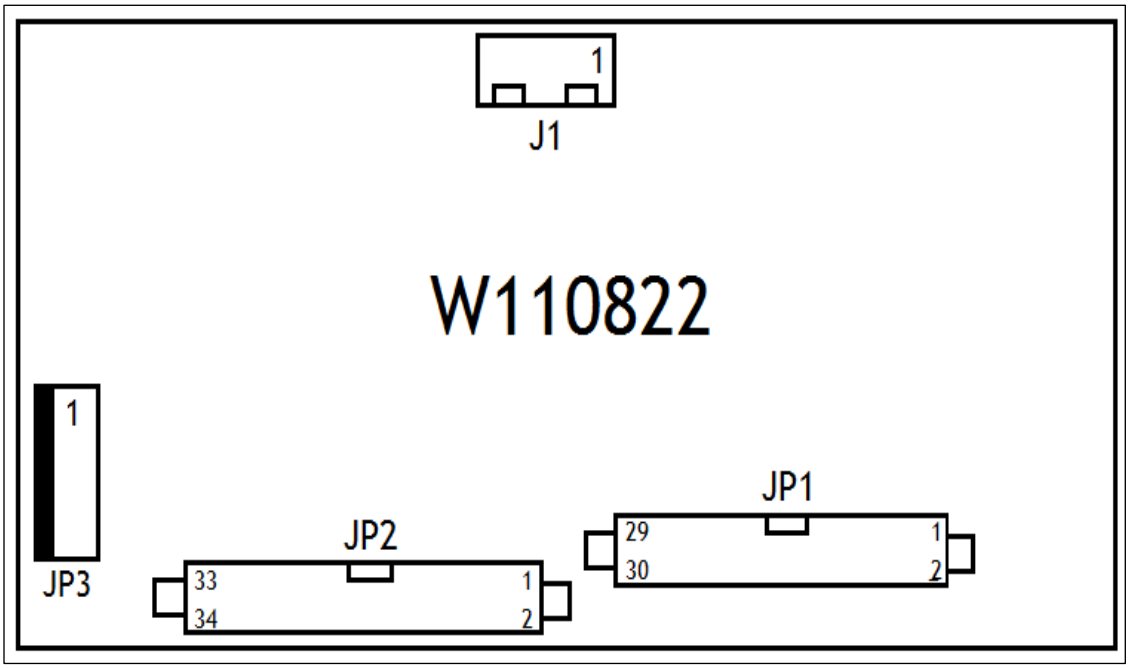
JP3	color	3.96 PIN	NOTE
1		12V	DC 12V POWER PIN
2		12V	
3		GND	
4		GND	

1		GND	Prize out Sensor
2		Enit Sensor Signal	
3		12V	

J12	color	2.5 PIN	NOTE
1		O (OUTPUT)	Land Volume VR1K
2		I (INPUT)	
3		G (GND)	

J13	color	2.5 PIN	NOTE
1		Speaker —	Speaker
2		Speaker +	

PLUNGER/HOOK DRIVING PCB W110822



J1 2.5mm 5PIN RS232 Land Line to W110823 J1 2.5mm 5PIN (PIN TO PIN 1 by 1)

JP1 30PIN Connector to Plunger					
P#	color	PIN	P#	color	PIN
1		X axis Motor (+)(L/R)	2		X axis Motor (-)(L/R)
3		Y axis Motor (+)(F/B)	4		Y axis Motor (-)(F/B)
5		Z axis Motor (+)(U/P)	6		Z axis Motor (-)(U/P)
7		L-SENSOR(Home position)	8		X axis Orientation X-A SENSOR(Level)
9		R-SENSOR	10		X axis Orientation X-B SENSOR(Vertical)
11		5V	12		5V
13		GND	14		GND
15		B-SENSOR(Home position)	16		Y axis Orientation Y-A SENSOR(Level)
17		F-SENSOR	18		Y axis Orientation Y-B SENSOR(Vertical)
19		5V	20		5V
21		GND	22		GND
23		U-SENSOR(Home position)	24		(Not used)
25		D-SENSOR	26		(Not used)
27		U/D SENSOR 5V	28		5V (Not used)
29		U/D SENSOR GND	30		GND (Not used)

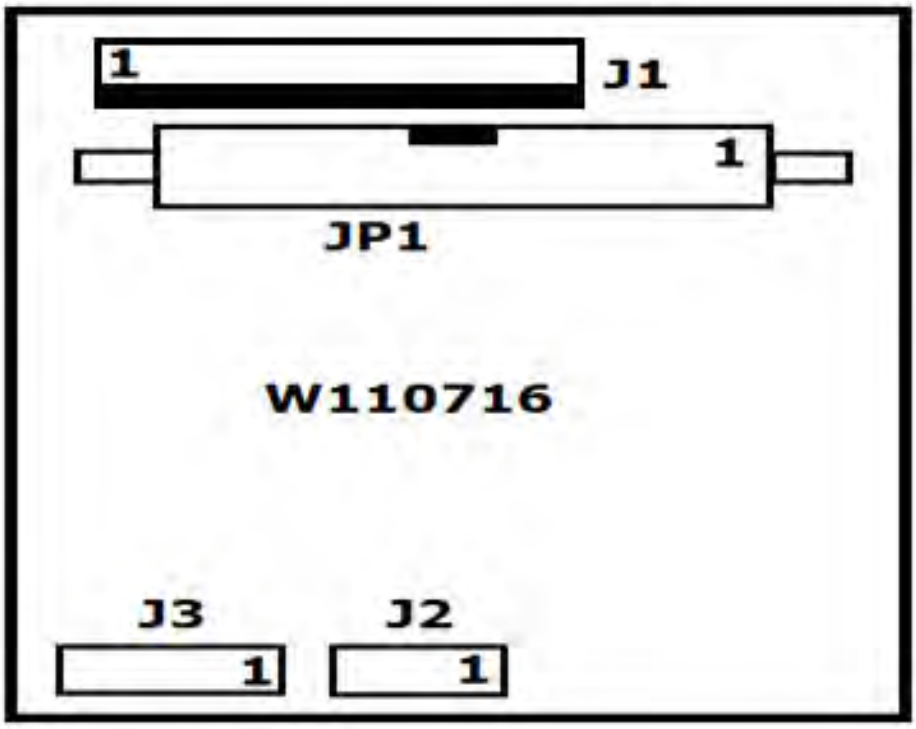
JP2 34PIN Connector to hooks					
P#	color	PIN	P#	color	PIN
1		1st Hook (+)	2		1st Hook SW
3		1st Hook (-)	4		SW GND
5		2nd Hook (+)	6		2nd Hook SW
7		2nd Hook (-)	8		SW GND
9		3rd Hook (+)	10		3rd Hook SW
11		3rd Hook (-)	12		SW GND
13		4th Hook (+)	14		4th Hook SW
15		4th Hook (-)	16		SW GND
17		5th Hook (+)	18		5th Hook SW
19		5th Hook (-)	20		SW GND
21		6th Hook (+)	22		6th Hook SW
23		6th Hook (-)	24		SW GND
25		(Not used)	26		(Not used)
27		(Not used)	28		(Not used)
29		(Not used)	30		(Not used)
31		(Not used)	32		(Not used)
33		NC(Empty Pin)	34		NC(Empty Pin)

JP3	color	3.96 PIN	NOTE
1		GND	Plunger motor control power PIN
2		GND	Hook Power PIN
3		+12V	Plunger motor control power PIN
4		+12V	Hook Power PIN

W110822 Explanation:

VR1: This is for the technician to make Z axis Plunger push adjustment. It could cause damage to parts, motor, or PCB. THIS ADJUSTMENT SHOULD ONLY BE CARRIED OUT BY AN EXPERIENCED TECHNICIAN!

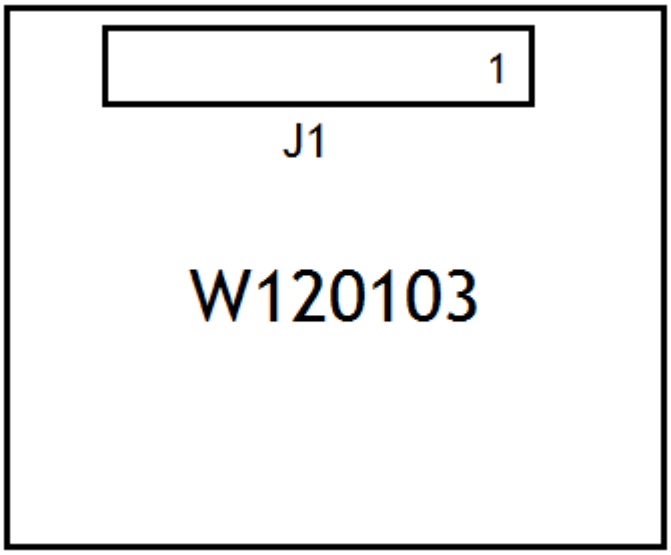
SETTING PCB W110716 (BACK)



JP1 34PIN Connector from W110823 J2 (PIN TO PIN 1 by 1)
J1 2.54mm 16PIN to LCD 2.54mm 16PIN (Please note pin direction)

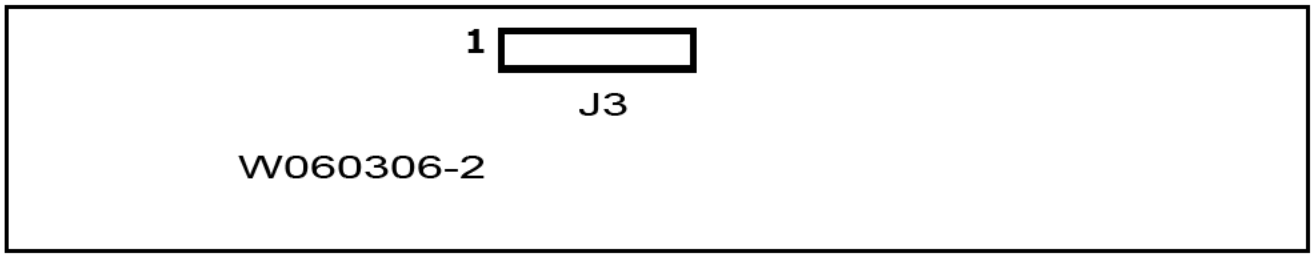
J1	Color	2.54 PIN	NOTE		LCD	color	2.54 PIN	NOTE
1		LED-	Connect 20*4 LCD	<---------->	16		LED_K	Connect W110716-J1
2		LED+		<---------->	15		LED_**A**	
3		D7		<---------->	14		D7	
4		D6		<---------->	13		D6	
5		D5		<---------->	12		D5	
6		D4		<---------->	11		D4	
7		D3		<---------->	10		D3	
8		D2		<---------->	9		D2	
9		D1		<---------->	8		D1	
10		D0		<---------->	7		D0	
11		E		<---------->	6		E	
12		R/W		<---------->	5		R/W	
13		RS		<---------->	4		RS	
14		VO		<---------->	3		VO	
15		5V		<---------->	2		VDO	
16		GND		<---------->	1		VSS	

SECURITY SHUTTER DRIVING PCB W120103



J1	color	2.5 PIN	NOTE
1		12V	DC12 POWER PIN
2		GND	
3		GND	Connect W110823 J4-19
4		Shutter Control Signal 1	Connect W110823 J4-16
5		Shutter Control Signal 2	Connect W110823 J4-18
6		Shutter Open Signal	Connect W110823 J4-15
7		Shutter Close Signal	Connect W110823 J4-17
8		5V	SHUTTER SENSOR
9		Shutter Open Sensor	
10		GND	
11		5V	
12		Shutter Close Sensor	
13		GND	
14		X	
15		Shutter Motor (+)	SHUTTER MOTOR
16		Shutter Motor (-)	

IRON BOX DETECTIVE PCB W060306-2 (OPTION)



J3	color	2.54 PIN	
1		+5V	Connect W110823 J5 Pin 1
2		+5V	
3		OA	Connect W110823 J5 Pin 5
4		OB	
5		CA	Connect W110823 J5 Pin 3 GND
6		CB	
7		GND	Connect W110823 J5 Pin 4 GND
8		GND	Iron Box SW COM
9		SA	Iron Box SE
10		SB	

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