

# ***COASTAL TOY SOLDIER***

Software Version  
N288U2B1 & N28BU2B1

## **OPERATING MANUAL**



**46" 40" and 30" Models**

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# OPERATION

## How to Play

1. Insert coins/tokens into coin slot, the display shows credits and the crane plays game music.
2. Use joystick to move claws above your selected object. When you move the joystick, the game time is countdown, and 【DESCEND】 button light is flashing.
3. At pressing 【DESCEND】 button or time's up (game's playing time is adjustable), the gantry drives motor to lower down claws and then catch object.
4. If 'Catch in air' function is available, press 【DESCEND】 button before claw reaches in filed, the claws will catch item in the air.
5. After movement of catching (claws closes), the claws rise up till it touches Stop-Up SW. Then the claws move to exit area and releases.

## Game Rules

### **DEMO**

Play Demo music for 2 minutes every 3 minutes.

### **Coin In**

1. Coins v.s. plays: By Dip SW setting
2. If COIN pulse speed was lower than 10msec, the machine does not recognize the signal.
3. If coin speed is over 200 msec, the machine shows error code.

### **Shocking Machine**

1. When a tilt is mounted at machines, and players shock the machines, it plays "Don't Shock the Machine".
2. When the claw arms close and someone shocks the machines, the arms open and move back to the home position.

## DIP SW Setting

DIP SW1		1	2	3	4	5	6	7	8
When the DIP SW PIN #6 is setup on "Play till you win", the claw strength voltage	VR1 Adj. of Power	ON							
	+48V	OFF							
Position where claws open at the exit	Claws lower down then release object		ON						
	Claws release object at the top position		OFF						
Coin 1 & Coin 2 Linked Together	Yes			ON					
	No			OFF					
Adjustment of Credit Value	Inner Value				ON				
	DIP SW				OFF				
Bonus Plays (see bonus table) ( 4 pluses=\$1) when Dip SW1-4 if off	YES					ON			
	NO					OFF			
Claw moving to playfield when game begins	YES						ON		
	NO						OFF		
Reserved	FIXED							OFF	
At the moment the program sends strong strength on the basis of the setup winning percentage, the system will keep sending strongest strength to the claw until a prize is caught.	With								ON
	Without								OFF
<b>Default Setting</b>		<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>

**0 MAINTENANCE**

DIP SW1		1	2	3	4	5	6	7	8	
<b>Coin1 of method</b> (Coin Selector of Coin Pulse vs. Play)	8 : 1	ON	ON							
	6 : 1	OFF	ON							
	4 : 1	ON	OFF							
	2 : 1	OFF	OFF							
<b>Coin2 of method</b> (Bill Acceptor of Coin Pulse vs. Play)	4 : 1			ON	ON					
	3 : 1			OFF	ON					
	2 : 1			ON	OFF					
	1 : 1			OFF	OFF					
<b>Free Play</b>	YES					ON				
	No					OFF				
<b>Play till you win function</b> (Output Sensor must be included.)	With	<i>Will deduct 1 credit when win.</i>					ON			
	Without	<i>Will deduct 1 credit for each game.</i>					OFF			
<b>Ability to change the Inner-Values</b>	Yes							ON		
	No							OFF		
<b>Auto Test</b>	With								ON	
	Without								OFF	
<b>Default Setting</b>		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	

# MAINTENANCE

## TEST

### System Test:

COIN1 NC +COIN2 NC+POWER ON (or Service NC+POWER ON)

Enter the system Test, DISPLAY shows 0~3, then press button to confirm.

0 EXIT

1 Claw Setting (COIN1 NC +POWER ON can have Claw Setting)

2 Gantry Test (COIN2 NC +POWER ON can have Gantry TEST)

3 System Test F0 EXIT

;; F 1 DISPLAY and Light Test

;; F 2 DIPSW Test

;; F 3 Demo Sound

;; F 4 Auto Demo

;; F 5 REVESED

;; F 6 BACK TO DEFAULTL

;; F 7 Length of String adjustment

## AUTO PERCENTAGING SETTING

SET Play VS Coin Value: (\$0.01~9.99)

Set Prize Value: (\$00.01~99.99)

Set Win Percentage (Range: 01~99 %)

### How to Setup:

1. Tilt (NC) +Button (NC) + Turn Power ON

Display shows "P5" for setup auto percentage function.

2. Tilt (NO) + Button (NO)

Display "00" in flashing:

Use Joystick and button to adjust

### Function Code:

00 Exit

01 SET Play VS Coin Value

02 Set Prize Value

03 Win Percentages

04 Automatic calculate the times of super power (Qty of wins)

## Bonus Play Table

CREDIT	PLAYS
\$1	1
\$2	3
\$3	4
\$4	6
\$5	7
\$6	9
\$7	10
\$8	12
\$9	13
\$10	15
\$11	16
\$12	18
\$13	19
\$14	21
\$15	22
\$16	24
\$17	25
\$18	27
\$19	28
\$20	30
\$21	31
\$22	33
\$23	34
\$24	36
\$25	37
\$26	39
\$27	40
\$28	42
\$29	43
\$30	45

■ Internal setting :

TIEM	Description	Instruction	
<b>01</b>	COIN1 – quantity of pay-out tickets after inserting coins (coin selector 1)	0~9	0
<b>02</b>	COIN2 – quantity of pay-out tickets after inserting coins (coin selector 2)	0~9	0
<b>03</b>	COIN1 – quantity of Inserted coins (coin selector 1)	1~99	1
<b>04</b>	COIN1 – quantity of game’s credits (coin selector 1)	1~99	1
<b>05</b>	COIN2 – quantity of Inserted coins (coin selector 2)	1~99	1
<b>06</b>	COIN2 – quantity of game’s credits (coin selector 2)	1~99	1
<b>07</b>	Quantity of pay-out tickets with winning prizes	0~9	0
<b>08</b>	Quantity of pay-out tickets without winning	0~9	0
<b>09</b>	Reserved		
<b>10</b>	Game time	0~5 = 5 5~99 Sec.	50
<b>11</b>	Reserved		
<b>12</b>	Reserved		
<b>13</b>	Catching in Air	0~1 0=NO 1=YES	
<b>14</b>	Super Power Frequency	0~1 0=Fixed 1=Random	
<b>15</b>	If Sensor is out of Service	0~1 0=Machine not working, 1=Machine working	
<b>16</b>	Reserved		
<b>17</b>	Reserved		
<b>18</b>	Reserved		
<b>19</b>	DEMO Music	0~1 0=Open 1=Off	0
<b>20</b>	Shaking machine-sound	0~1 0= Open 1=Off	0
<b>21</b>	Reserved		
<b>22</b>	Reserved		



## ERROR CODE

Error Code	Description	Checking timing	Trouble shooting
<b>Er 00</b>	CPU Error	When switch on the machine	<ol style="list-style-type: none"> <li>1. Change U1 CPU</li> <li>2. PCB is out of service.</li> </ol>
<b>Er 01</b>	Error while up the winding cord	<ol style="list-style-type: none"> <li>1. When switch on the machine</li> <li>2. When play the game</li> <li>3. Auto Demo</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the up-stop SW is loose?</li> <li>2. Check if up-stop SW is out of work?</li> <li>3. Check if the air-plug of the gantry set connects well?</li> <li>4. PCB is fault.</li> </ol>
<b>Er 03</b>	Error while down the winding cord	When auto demo	<ol style="list-style-type: none"> <li>1. Check if the string at the winding wheel is smooth?</li> <li>2. Check if up-stop SW is out of work?</li> <li>3. Check if the air-plug of the gantry set connects well?</li> <li>4. PCB is fault.</li> </ol>
<b>Er 0E</b>	SENSOR is out of service		<ol style="list-style-type: none"> <li>1. Check whether sensitivity of sensor is too high? Please adjust the sensitivity-VR to make sure the LED of Sensor is in Dark status.</li> <li>2. Check J5 sensor harness is connected well?</li> <li>3. Sensor is fault.</li> <li>4. PCB is fault</li> </ol>
<b>Er 05</b>	Stop-Forward SW or Stop-back SW Error	<ol style="list-style-type: none"> <li>1. When switch on the machine</li> <li>2. When play the game</li> <li>3. Auto Demo</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the stop-forward SW or stop-back SW is out of work?</li> <li>2. Check if the air-plug of the gantry set connects well?</li> <li>3. PCB is fault.</li> </ol>
<b>Er 06</b>	Stop-Left SW Error	<ol style="list-style-type: none"> <li>1. When switch on the machine</li> <li>2. When play the game</li> <li>3. Auto Demo</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the Stop-Left SW is out of work?</li> <li>2. Check if the air-plug of the gantry set connects well?</li> <li>3. PCB is fault</li> </ol>
<b>Er 07</b>	Coin1 Meter disconnectio		<ol style="list-style-type: none"> <li>1. Check if the J5 PIN connects well?</li> <li>2. Check if the Meter is out of work? Check if the Pin connects well?</li> <li>3. PCB is fault.</li> </ol>
<b>Er 08</b>	Coin2 Meter disconnectio		
<b>Er 09</b>			
<b>Er 10</b>	Prize Mater dis connection		
<b>Er 22</b>	Cabinet size check Error when power on		<ol style="list-style-type: none"> <li>1. Check if the stop-front SW or stop-back SW is out of work?</li> <li>2. Check if the air-plug of the gantry set connects well?</li> <li>3. Check the J4 Pin on the board connect well?</li> <li>4. PCB is fault</li> </ol>

## TROUBLE SHOOTING

Items	Description	Check and Maintenance
Coin In	No credit after coin in	<ol style="list-style-type: none"> <li>1. Check if the Coins vs. Plays is correct.</li> <li>2. If Coins vs. Plays can't be adjusted, it's possible main board problem. Please send the main board back for repair.</li> </ol>
	Coins/tokens cannot be inserted into coin slot	<p>Comparative Coin Mech:</p> <ol style="list-style-type: none"> <li>1. Check the sample coin at the coin mech.</li> <li>2. Loose the coin mech sensitivity.</li> <li>3. Check if DC12V input to coin mech.</li> <li>4. Coin mech breakdown.</li> </ol> <p>Multi-Coin Mech:</p> <ol style="list-style-type: none"> <li>1. Adjust the coin mech data based on manual.</li> <li>2. Check if DC12V input to coin mech.</li> </ol>
Claw Power	Claw open after hitting upper-stop switch	VR2 is too low. Adjust VR2 higher according to objects dimension and weight.
	Claw is close after power on	<ol style="list-style-type: none"> <li>1. Claw coil burned.</li> <li>2. Main board is out of service</li> </ol>
Gantry	Claw doesn't close	<ol style="list-style-type: none"> <li>1. Check if the CW at the fuse board burned?</li> <li>2. Check if the black wire at claw coil connects well.</li> </ol>
	Don't return to its home position	<ol style="list-style-type: none"> <li>1. If power off and on again, the gantry still does not return to its home position, then check if stop-back SW (Gantry &amp; Assembly I No. 23) or stop-left SW (Gantry &amp; Assembly I No. 21) are in proper position. Also check if their connecting wires are properly connected.</li> <li>2. Check if the air-plug of the gantry set connects well?</li> <li>3. PCB is out of service.</li> </ol>
	Don't move either forward and/or backward by joystick operation	<ol style="list-style-type: none"> <li>1. Check if the forward/back motor fuse (FB) at the fuse board is burned?</li> <li>2. Check if J5 connecting pin of P.C.B. is properly connected.</li> <li>3. Check if stop-front SW (Gantry &amp; Assembly I No. 22) or back-stop SW (Gantry &amp; Assembly I No. 23) is in proper position. Also check if their connecting wires are properly connected.</li> <li>4. Check if Front/Back motor is out of function or if its wires are properly connected. Also check if its shaft pinion is properly positioned.</li> <li>5. Check if J9 connecting pin of P.C.B. is properly connected.</li> <li>6. Check if all connecting pins of gantry are properly connected to the machine.</li> </ol>

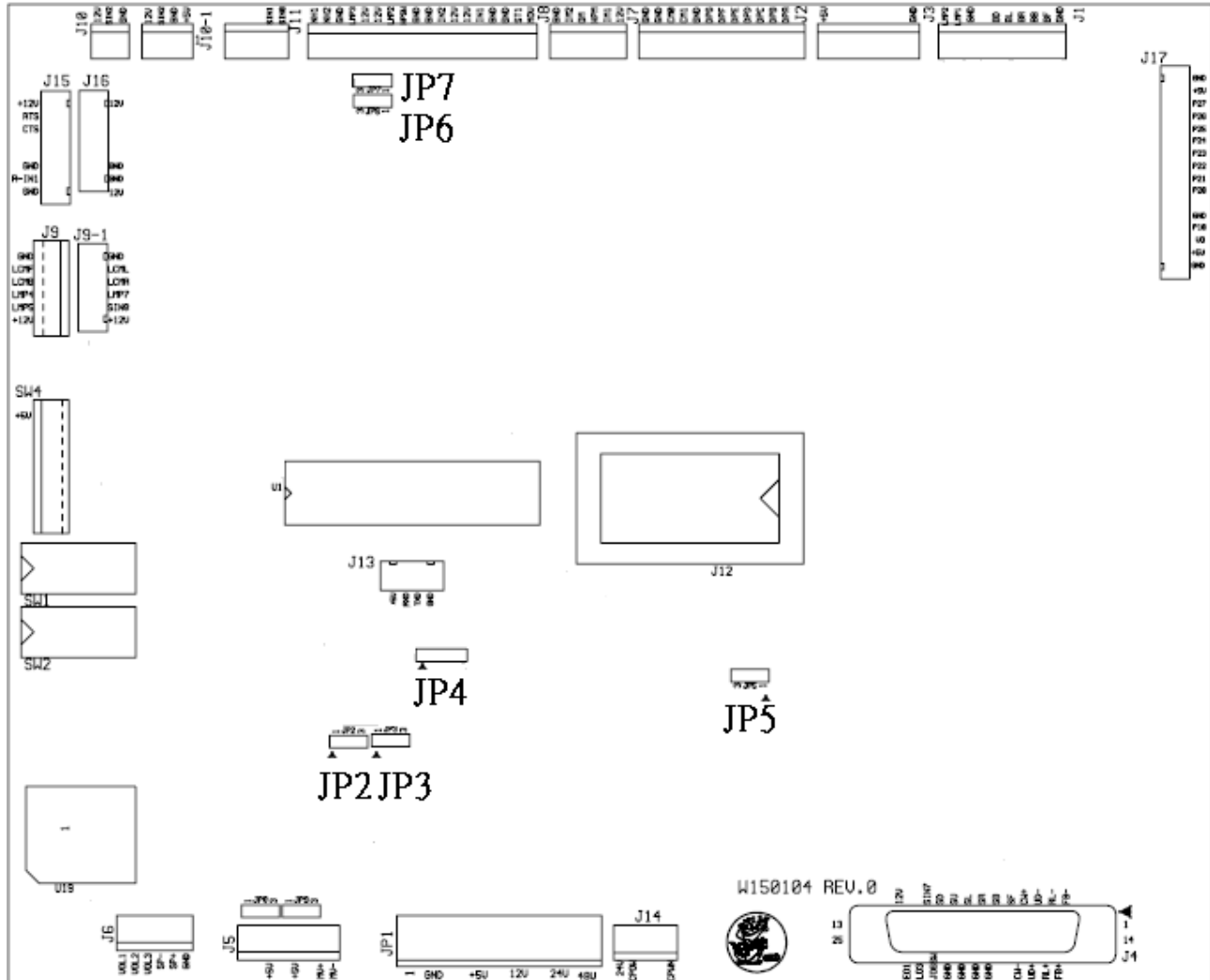
- Does not move to left and/or right by joystick operation
1. Check if the left/right motor fuse (LR) at the fuse board is burned?
  2. Check if left and/or right SW is out of function or if their wires are properly connected.
  3. Check if J5 connecting pin of P.C.B. is properly connected.
  4. Check if stop-left SW (Gantry & Assembly I No. 21) is in proper position.
  5. Check if Left/Right motor is out of function or if its wires are properly connected. Also check if its shaft pinion is properly positioned.
  6. Check if J9 connecting pin of P.C.B. is properly connected.
  7. Check if all connecting pins of gantry are properly connected to the machine

Items	Description	Check and Maintenance
Claw Descending	Don't lower down by [Descend] button operation, but only until time's up	<ol style="list-style-type: none"> <li>1. Check if [Descend] button is functioning properly.</li> <li>2. Check if connecting wires of [Descend] button are properly connected.</li> <li>3. Check if J5 connecting pin of P.C.B. is properly connected.</li> </ol>
	Don't lower down, but the [Descend] button is in normal condition	<ol style="list-style-type: none"> <li>1. Check if Up/Down motor wires are properly connected.</li> <li>2. Check if Up/Down motor is out of function. Also check if its shaft pinion is in proper position.</li> <li>3. Check if J9 connecting pin of P.C.B. is properly connected.</li> <li>4. Main board break down</li> </ol>
	Don't lower down or only down a bit and close up in the air then it returns to its home position	<ol style="list-style-type: none"> <li>1. Check if winding cord is stuck.</li> <li>2. Check if stop-down SW is functioning properly</li> </ol>
	Don't fully lower down	<ol style="list-style-type: none"> <li>1. Check if winding cord is of proper length?</li> <li>2. Check if winding cord is stuck.</li> <li>3. Check if stop-down SW is functioning properly</li> </ol>
Claw Grabbing	Don't open when reached to exit door after seizing	<ol style="list-style-type: none"> <li>1. Check if stop-back or stop-left SW is out of function or if their wires are properly connected.</li> <li>2. Check if the gantry wire connecting to J9 connecting pin of P.C.B. is properly connected.</li> </ol>
	Don't rise up after seizing and is returned back to its home position	<ol style="list-style-type: none"> <li>1. Check if stop-up SW is hit by something.</li> <li>2. Check if stop-up SW is in proper position and in normal function.</li> <li>3. Main board breaks down.</li> </ol>
	Don't close up and not be returned to its home position, either	<ol style="list-style-type: none"> <li>1. Check if the up/down motor are out of function or if their wires are properly connected.</li> <li>2. Check if stop-up SW is functioning properly.</li> <li>3. Main board break down.</li> </ol>

# WIRING DIAGRAM

## MAIN BOARD W150104

- Main board CONNECTOR position



<b>W150104 3.96mm (JP1) POWER SUPPLY</b>	
1	GND
2	GND
3	GND
4	+5V
5	+5V
6	+12V
7	+12V
8	+24V
9	+24V
10	+48V

<b>W150104 2.54mm (J11)</b>		<b>W9833 JP3</b>	
1		1	IN2
2		2	IN4
3		3	EN04
4		X	
5		4	EN05

<b>W150104 2.54mm (J5)</b>	
1	VR23
2	VR13
3	VR11
4	VR12
5	VR21
6	VR22
7	Voltmeter +
8	Voltmeter -

<b>W150104 2.54mm (J14)</b>		<b>W040316 JP1</b>	
1		1	
2		2	
3		3	
4		4	
5		5	

<b>W150104 2.54mm (J6)</b>	
1	Speaker VR 1
2	VR2
3	VR3
4	SP-
5	SP+

<b>W150104 2.54mm (J10)</b>	
1	GND
2	PRIZE SENSOR SINGAL
3	12V

<b>W150104 2.54mm (J7)</b>	
1	12V

2	COIN1 Meter
3	
4	Prize Meter
5	COIN2 Meter

W150104 2.54mm (J1)	
1	GND
2	Joystick -- Front SW(N.O.)
3	Joystick -- Back SW (N.O.)
4	Joystick -- Right SW (N.O.)
5	Joystick -- Left SW (N.O.)
6	Descend SW (N.O.)
7	
8	GND
9	Descend button lamp
10	lamp 2

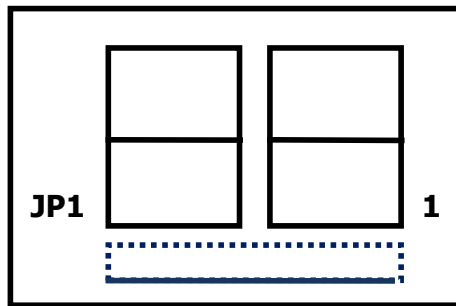
W150104 2.54mm (J2)		W991907 JP1	
1	X		X
2		1	
3		2	
4		3	
5		4	
6		5	
7		6	
8		7	
9	X	8	X
10		9	
11		10	
12	X	11	X
13	X	12	X

W150104 2.54mm (J8)	
1	TILT SW (N.O.)
2	DOOR TEST
3	GND
4	GND
5	COIN1
6	12V
7	12V
8	COIN2
9	GND
10	GND
11	HPSW
12	HP
13	12V
14	12V
15	SSR
16	GND

<b>17</b>	<b>Coin Inhibit input +</b>
<b>18</b>	<b>Coin Inhibit input -</b>

<b>W150104 2.54mm (J4)</b>			
<b>1</b>	<b>Forward/Back Motor +</b>	<b>14</b>	<b>Forward/Back Motor -</b>
<b>2</b>	<b>Left/Right Motor -</b>	<b>15</b>	<b>Left/Right Motor +</b>
<b>3</b>	<b>Up Down Motor -</b>	<b>16</b>	<b>Up Down +</b>
<b>4</b>	<b>Claw Power+</b>	<b>17</b>	<b>Claw Power -</b>
<b>5</b>	<b>X</b>	<b>18</b>	<b>X</b>
<b>6</b>	<b>STOP FORWARD/BACK</b>	<b>19</b>	<b>GND</b>
<b>7</b>	<b>X</b>	<b>20</b>	<b>GND</b>
<b>8</b>	<b>Stop-Left / Right SW (N.O.)</b>	<b>21</b>	<b>GND</b>
<b>9</b>	<b>Stop-UP SW (N.C.)</b>	<b>22</b>	<b>GND</b>
<b>10</b>	<b>Stop-Down SW (N.O.)</b>	<b>23</b>	
<b>11</b>	<b>X</b>	<b>24</b>	
<b>12</b>	<b>X</b>	<b>25</b>	<b>X</b>
<b>13</b>	<b>12V</b>		

## DISPLAY W991907



<b>J1</b>	<b>Color</b>		<b>2.54 Pin -- connect W120206</b>
<b>1</b>	<b>Brown</b>	<b>A</b>	<b>Connect to Main Board J5 Pin 1</b>
<b>2</b>	<b>Red</b>	<b>B</b>	<b>Connect to Main Board J5 Pin 2</b>
<b>3</b>	<b>Orange</b>	<b>C</b>	<b>Connect to Main Board J5 Pin 3</b>
<b>4</b>	<b>Yellow</b>	<b>D</b>	<b>Connect to Main Board J5 Pin 4</b>
<b>5</b>	<b>Green</b>	<b>E</b>	<b>Connect to Main Board J5 Pin 5</b>
<b>6</b>	<b>Blue</b>	<b>F</b>	<b>Connect to Main Board J5 Pin 6</b>
<b>7</b>	<b>Purple</b>	<b>G</b>	<b>Connect to Main Board J5 Pin 7</b>
<b>8</b>		<b>DP</b>	<b>Connect to Main Board J5 Pin 10</b>
<b>9</b>	<b>White</b>	<b>COM4</b>	<b>Connect to Main Board J5 Pin 9</b>
<b>10</b>	<b>Pink</b>	<b>COM3</b>	<b>Connect to Main Board J5 GND</b>
<b>11</b>		<b>COM2</b>	
<b>12</b>		<b>COM1</b>	