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## 1 INTRODUCTION

Thank you for purchasing the *IMotion!-iGO* “@Motion System” developed by *IMON* in cooperation with *IMotion!* for distribution in North America, South America and the United Kingdom. This manual will guide you through the setup, operation, and maintenance of *IMotion!-iGO* the ultimate multi-game motion system for arcade environments. This unit is different from any other arcade machine you have ever owned. *IMotion!-iGO* is a fully interactive coin-operated motion simulator that creates a virtual reality environment and provides a truly unique game experience for players. Capable of any motion through 2.5 degrees of freedom (also known as D.O.F.) movement (pitch, roll, and hybrid heave), this system enables realistic simulation needed for any software program. *IMotion!-iGO* is powered by electric motors, rather than higher maintenance pneumatic or hydraulic actuators that have been used to power most motion simulators in the past. The motion system is powered by *IMON*'s patented design; a powerful, mini-motion base platform with physics-based motion dynamics, known as the Hex-Glider. Players will experience realism like never before as they “feel” all the exciting action they see occurring on screen, in total synchronization with game play.

One of *IMotion!-iGO*'s most unique features is that the platform has the capability to run multiple games or motion rides on the same unit. Future titles will be easily and quickly added, giving the player many games to choose from by using our player-selectable menu.

Together, these factors combine to offer you the most advanced, economical and exciting motion arcade system available!



## 2 SPECIFICATIONS

### SPECIFICATIONS OF *IMotion!-iGO* @*MOTION SYSTEM*

Each *IMotion!-iGO* is composed of one complete unit, known as the **Motion Base**. The dimensions given are for *IMotion!-iGO* installed footprint.

- *IMotion!-iGO* @*Motion System* Unit
  - Minimum Installed Footprint
    - US: 65” x 49”
    - Metric: 1.66m x 1.26m

#### 2.1 *IMotion!-iGO* MOTION BASE

##### **IMotion!-iGO Motion Base Simulator**

<i>IMotion!-iGO</i> Motion Simulator	
Installed Dimensions / Weight (LxWxH)	<ul style="list-style-type: none"> <li>● 65” x 49”x 82” / 1,278 lbs</li> <li>● 166 x 126 x 209cm / 498 kg</li> </ul>
Shipping Dimensions (LxWxH)	<ul style="list-style-type: none"> <li>● 65” x 50” x 80” / 1100 lbs</li> <li>● 165 x 127 x 203 cm / 580 kg</li> </ul>
Motion system	<ul style="list-style-type: none"> <li>● 2.5 degree of freedom (D.O.F.) mini motion base: AC-powered, motor-driven actuators</li> </ul>
Control inputs/feedback	<ul style="list-style-type: none"> <li>● 2 button function flight joystick</li> <li>● 2 speed direction gear shifter</li> <li>● Motion stop switch</li> </ul>
Player Weight Limit	<ul style="list-style-type: none"> <li>● 220 lbs.</li> </ul>
Center of Gravity	<ul style="list-style-type: none"> <li>● Directly over Two Axis</li> </ul>
Motor Pedestal Dimension	<ul style="list-style-type: none"> <li>● Equilateral triangle, approx. 12” front</li> </ul>

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Motors	<ul style="list-style-type: none"> <li>● (3) 2 @ .54 Hp/ 1 @ .09 AC motors</li> </ul>
Power Requirements – Plugs located on rear of display cabinet as input 2.	<ul style="list-style-type: none"> <li>● See 2.4 Power requirements <b>USA &amp; EURO.</b></li> </ul>
Pad	<ul style="list-style-type: none"> <li>● Player Pad</li> </ul>
Chair	<ul style="list-style-type: none"> <li>● Deluxe Sports car seat</li> <li>● Additional speakers built into chair for surround sound effect</li> </ul>
Audio	<ul style="list-style-type: none"> <li>● In chair – 8 watts RMS x 2, 1 ohm</li> </ul>
Shipping Dimensions (L x W x H)	<ul style="list-style-type: none"> <li>● 70" x 50" x 92" / 1278 lbs</li> <li>● 177 x 127 x 234 cm / 580 kg</li> </ul>
Monitor Specifications	<ul style="list-style-type: none"> <li>● 32" VGA LCD Monitor</li> <li>● 15pin DB Connection</li> </ul>
Audio	<ul style="list-style-type: none"> <li>● 8 watts RMS x 2, 4 ohm</li> </ul>
Power Requirements <b>USA</b> , input at rear of panel.	<ul style="list-style-type: none"> <li>● Input 1: 110 VAC, 16 Amps, 50/60 Hz</li> </ul>
Power Requirements <b>EURO</b> , input at rear of panel.	<ul style="list-style-type: none"> <li>● Input 1: 220 VAC, 10 Amps, 50/60 Hz</li> </ul>
Computer System Specifications:	<ul style="list-style-type: none"> <li>● Windows XP Operating System</li> <li>● High Resolution Graphics Accelerator Card.</li> </ul>

### 3 INSTALLATION

#### 3.1 SERVICE KIT

The following items should be included with the shipment of your *IMotion!-iGO*:

<b>Service Kit</b>	
<i>Description</i>	<i>Qty</i>
<i>IMotion!-iGO</i> Operator's Manual	1
Cabinet access keys	5

#### 3.2 SET UP INSTRUCTIONS

##### 3.2.1 PRE-INSTALL PREREQUISITES / CAUTIONS

*IMotion!-iGO* is designed for indoor use only. To ensure trouble-free and safe operation, the following conditions are recommended by the factory:

1. The game must be located out of direct exposure to sunlight, high humidity, dust, salt mist, high heat, or extreme cold. If installed in an unusually hot location, allow additional clearance between ventilation slots in the game and any structure or object that would tend to restrict air circulation.
2. The motion system produces forces on the motion base, which may cause it to move around on the floor if not properly installed. Before operating the game, make sure the brackets are tightly installed. If you have questions regarding the suitability of any mounting or installation requirement, contact tech support at *IMON / IMotion!* before proceeding.



**WARNING!!!**

**AVOID FIRE HAZARD: Do not install in an area such that the game would be an obstacle in case of an emergency (i.e. near fire equipment or emergency exits.)**

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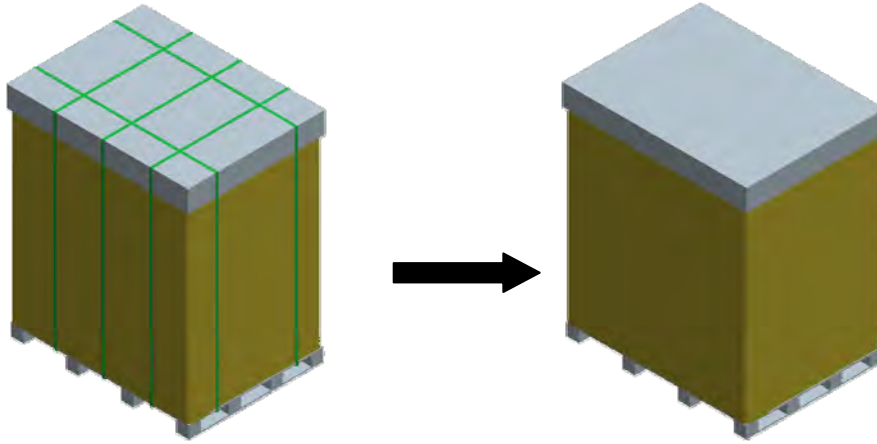
*IMotion!-iGO*

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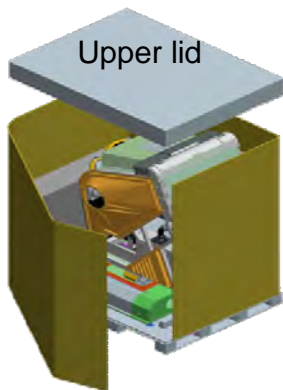
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**3.2.2 UNPACKING AND INSTALLING PROCEDURE OF *IMotion!-iGO***

Step 1: Cut Straps

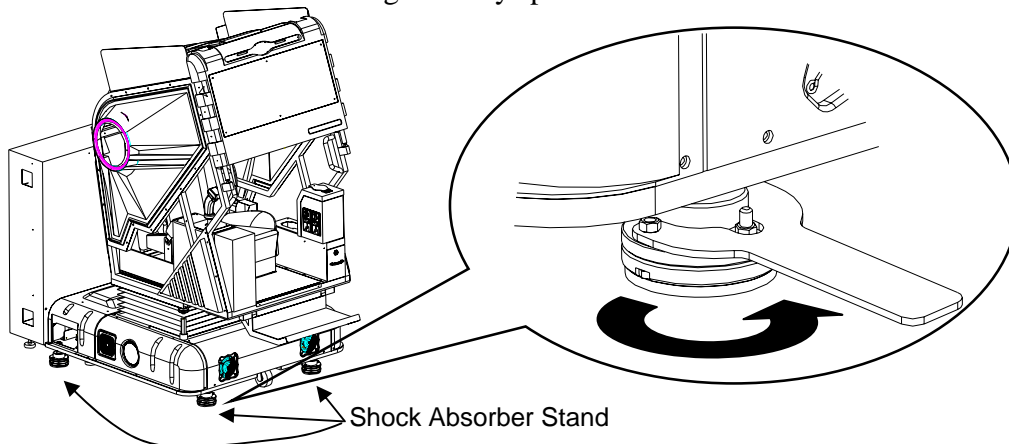


Step 2: Remove the cardboard box and the upper lid on the box. Release the screws locked on the side of the box. Remove the box, but **DO NOT DISCARD**. Save for possible repacking at a later time

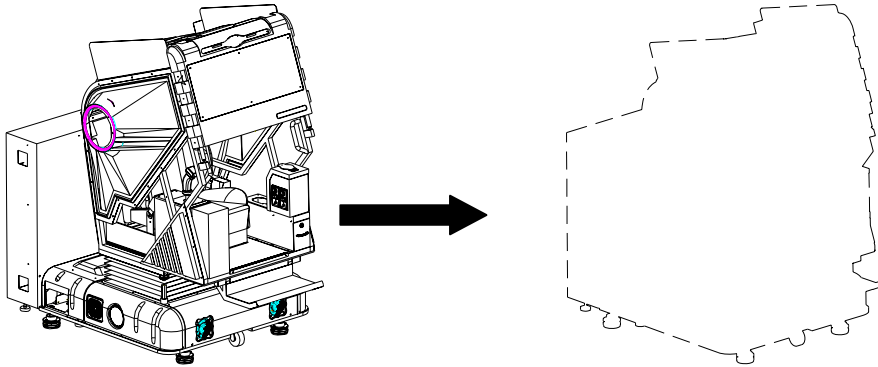


**Notice: Special wrench and 10mm Allen wrench are shipped with machine and attached on footrest.**

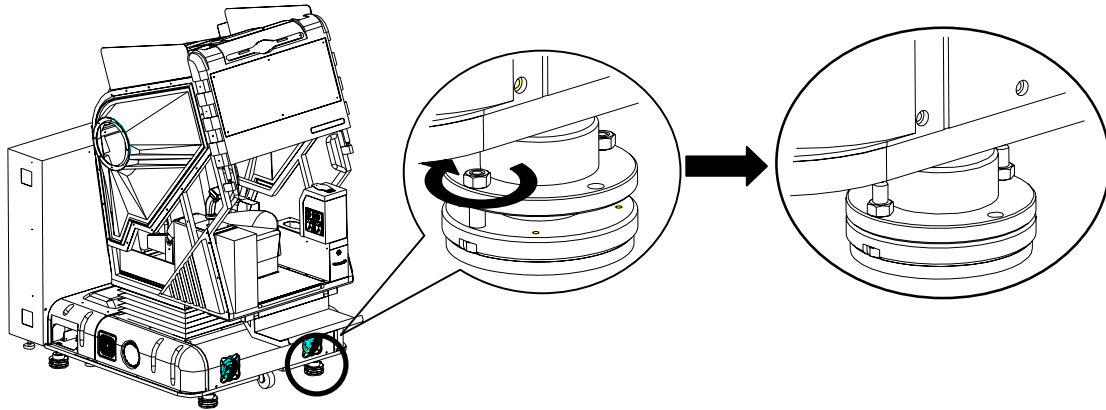
Step 3: ( Go to step 4 if you move machine by lifter ) Adjust four shock absorber stands up till the three wheels touch the ground by special wrench which is attached on footrest.



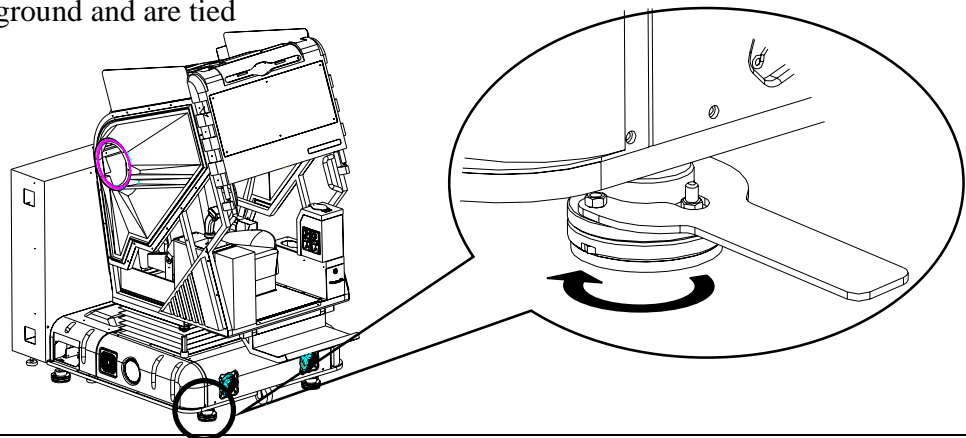
Step 4: Move machine to its position by its wheels or lifter.



Step 5: (After completing this step, go to step 7 if you move machine by lifter.) Tie up two screws on four shock absorber stands till there is no gap by 13mm wrench.



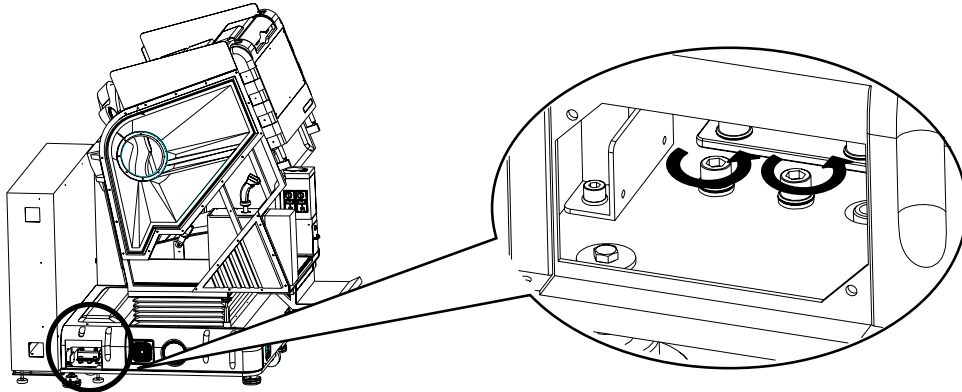
Step 6: Adjust four shock absorber stands down to ground by special wrench and make sure they touch the ground and are tied



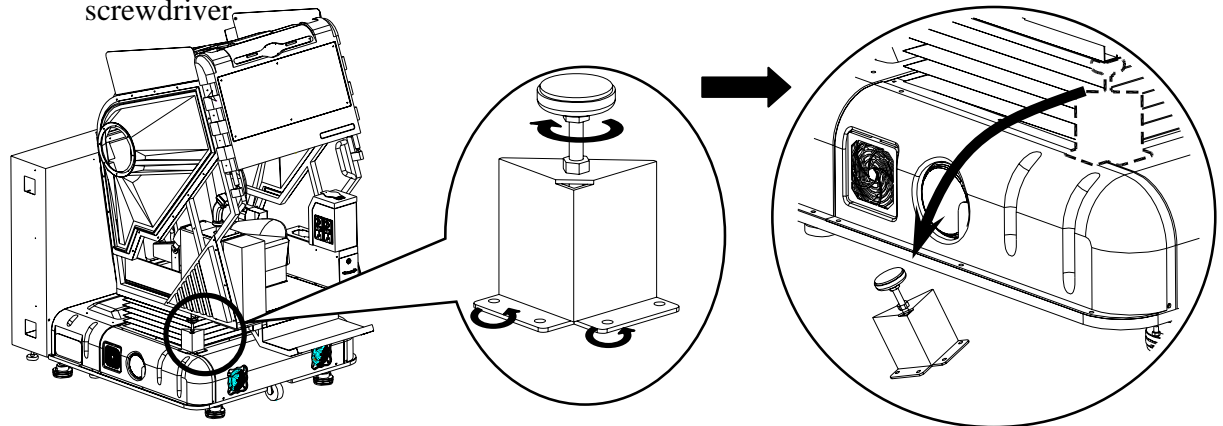


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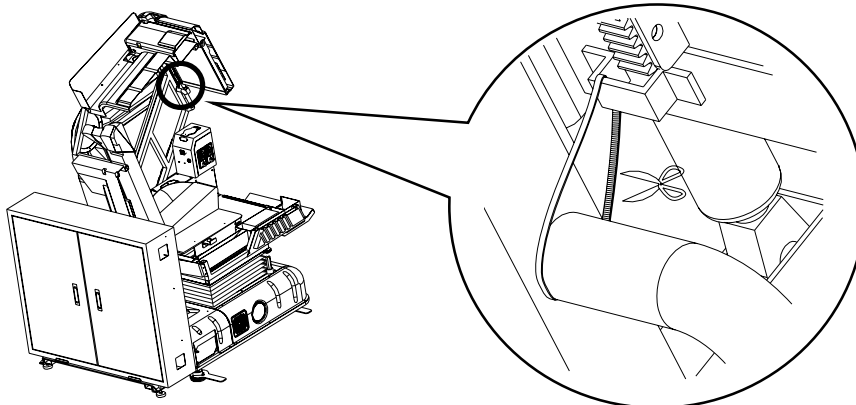
Step 7: Separate control box and base plate by loosening four screws by 10mm Allen wrench and make sure four adjustable stands of control box touch ground and level.



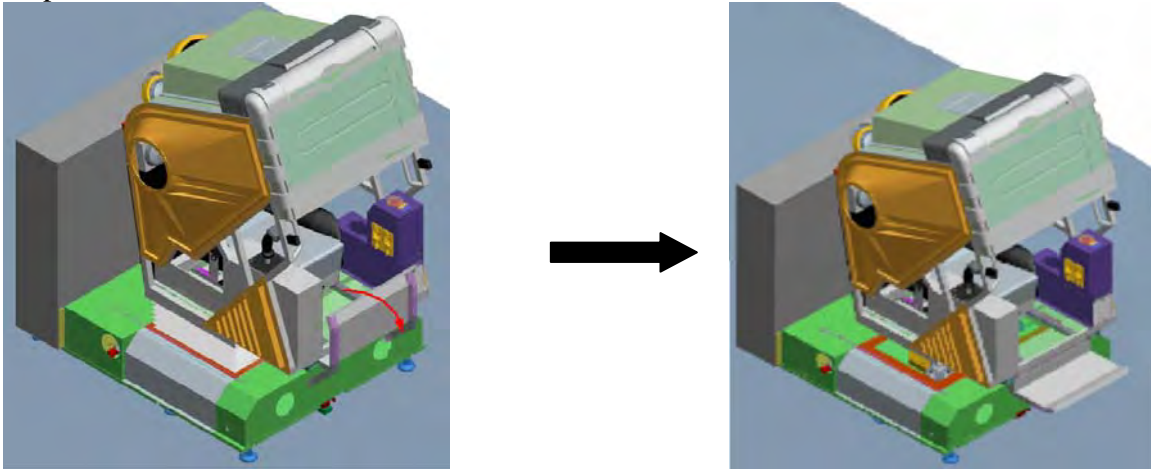
Step 8: Remove fixture by loosening screws between cockpit and base plate by 17mm wrench and screwdriver.



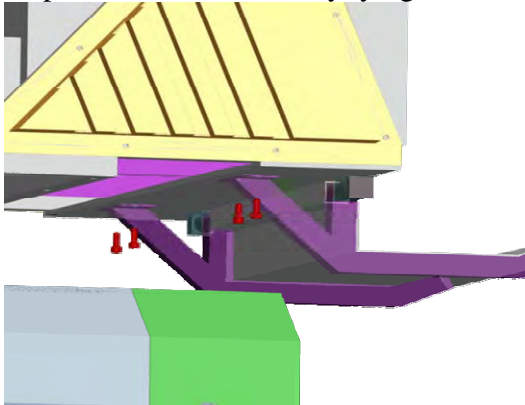
Step 9: Cut down the tie tapes which fix the monitor (Monitor will move upward automatically).



Step 10: Put down the footrest.



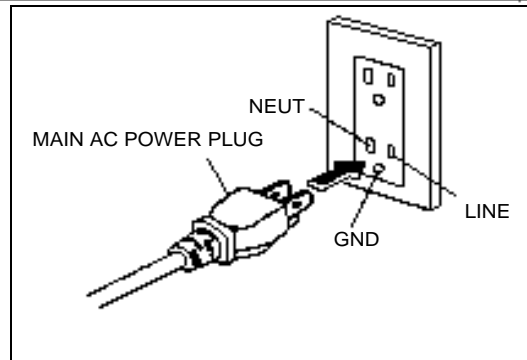
Step 11: Fix the footrest by tying screws.



**Do not plug the power until the all items are ticked in confirmation list.**

Confirmation List	
Item	Tick after confirmation
A. There is no gap on four shock absorber stands	
B. Separation of control box and base plate and make sure they are leveled	
C. Fixtures at both sides are removed	
D. Tie rapes which fix the monitor are cut down	
E. Footrest is fixed	
F. After item A~E are confirmed, plug the power.	

1. Measure the AC voltage line (LINE to GND and LINE to NEUT) and verify that it is 110~125VAC in America, 100VAC in Japan and 210~240VAC in Europe and West Asia. NEUT to GND voltage should be less than 1 VAC.



**NOTE:** This unit has single power cord! The motion base requires one dedicated 15-Amp circuit for 110~125VAC power source, 16-Amp for 100VAC power source and 10-Amp for 210~240VAC power source! No other appliance or game should be shared on this circuit.

2. Turn on the main power switch located on the back of the panel box power door. Use the key to turn on unit. Ensure that the unit is fully powered and the fans inside the base are operating properly.
3. Unit will perform self check after power is turned on.

### 3.2.3 DISMANTLING PROCEDURE

1. Turn off power switch by using the same key to turn unit off at the switch panel located in back on the right hand side of the Panel Box.
2. Unplug the power cables to ensure there is no electrical power reaching the *IMotion!-iGO* unit.
3. Lower monitor (if raised) and secure in the locked position.
4. After raising levelers to the up-most position, motion base is now ready for repacking.

### 3.2.4 REPACKING PROCEDURE

1. The motion base has a custom-built pallet for proper fit when transporting. Locate pallet and load the unit onto it using the reverse of unpacking procedure.

2. Repack the unit with foam and wrapping.
3. Repack the foot step with the wood stand. (Use a folk lift to lift up the unit, than place the wood stand under the foot step.)
4. Place the cardboard box on the pallet with all the nuts lock in place with the top cover back on the box.
5. Secure the cardboard box to the pallet using PVC banding straps.

### 3.3 STANDARD HANDLING PROCEDURES

1. Before replacing any electrical parts or parts on the motion system, turn the AC power off and unplug the game. Allow enough time for any stored electrical current to cease flowing through unit.
2. Do not attempt to repair or otherwise alter the computer assembly. Your service check should be restricted to only examination of the surrounding cables for loose connections. If you suspect there is a problem with the *IMotion!-iGO* computer system, contact *IMotion!* tech support before proceeding

**IMPORTANT: Do not plug in a keyboard or mouse unless instructed in the manual!!!**

3. **The display cabinet has components that produce high voltage and are dangerous for the untrained.** If a problem occurs with the monitor, only authorized personnel may perform repairs.
4. Use extreme care whenever handling the Game Pod on the motion base. Rough handling may adversely affect the convergence and projection of the 32" LCD display monitor. Repairs resulting from rough handling are not covered under the manufacturer's warranty.
5. Do not tamper with the original wiring configuration, or the positioning of ferrite shields and clamps. Alteration of game wiring may result in faulty operation and also void warranty.
6. Always return levelers to the extreme UP position before moving the unit.
7. For safety reasons, **always** handle the unit with at least two people during moving or installation.

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### 3.4 DOLLAR BILL ACCEPTOR INSTALLATION INSTRUCTIONS(only for American)

1. The *IMotion!-iGO* unit has been tested and configured for use with the Coinco MC 2600 series using housing connector (as shown in the below figure, Fig. 3-1, 3-2, 3-3). It is important to note that this system requires a bill acceptor that is 24 volt DC. Please do not modify wire or connectors by yourself. This will cause a serious problem. The definition of the connector is shown as below Fig. 3-2.

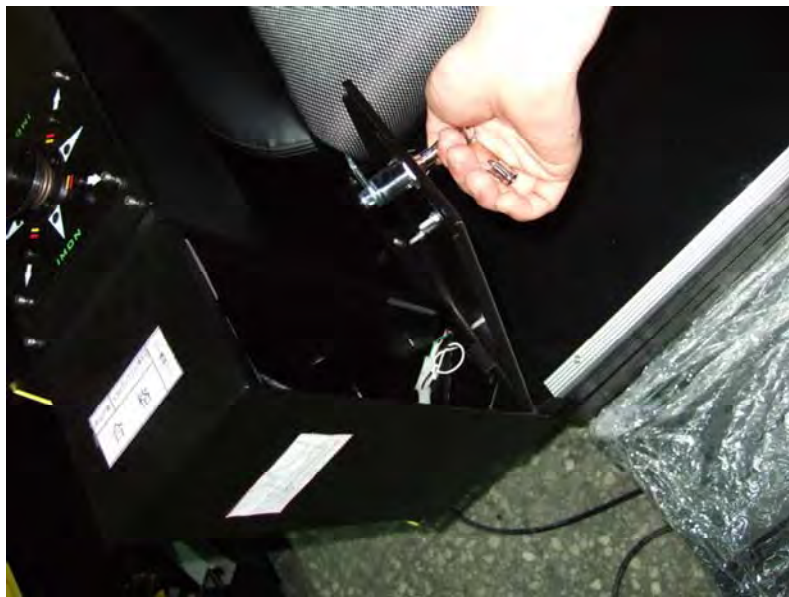


Fig. 3-1 Open Box at the left side of cockpit

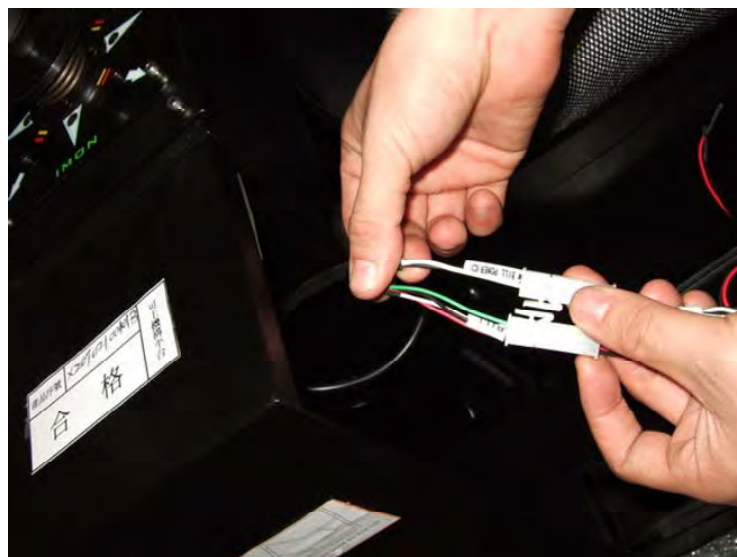


Fig. 3-2 Pull out the wires and connectors(BILL and BILL\_POWER)

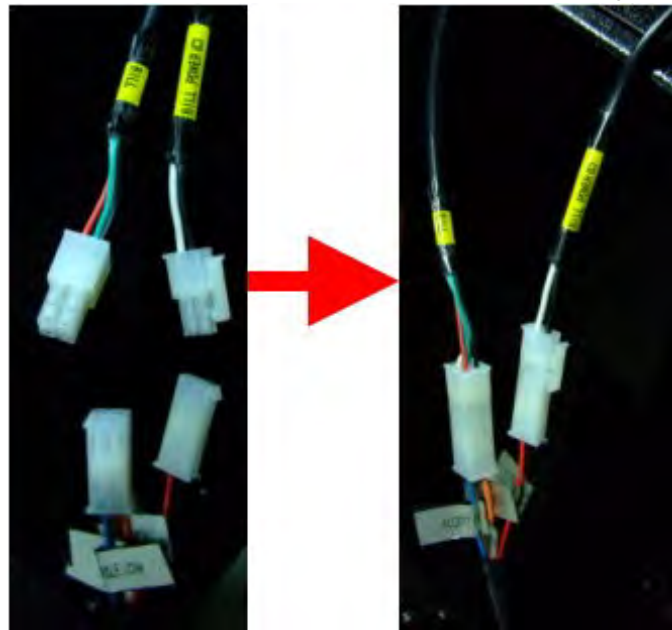


Fig. 3-3 Coinco MC 2600 series connector

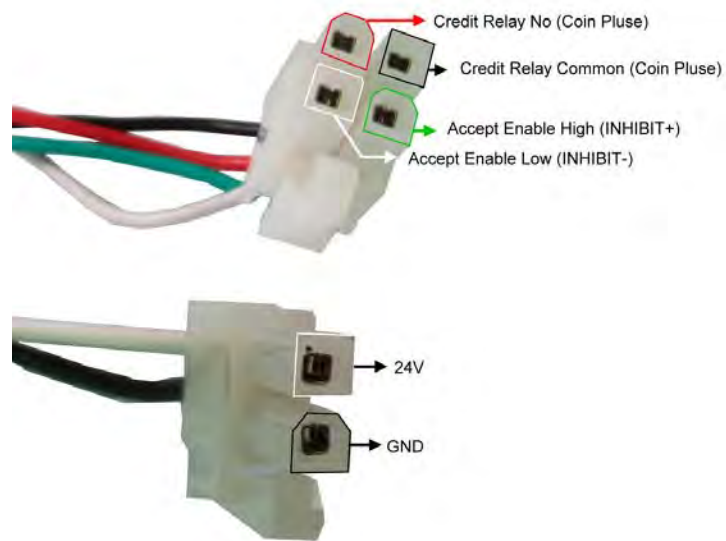


Fig. 3-4 The definition of the connector

### 3.5 COIN ACCEPTOR

The *IMotion!-iGO* unit has been tested and configured to work with the EU2-B model by Coinsolve Technology Company Ltd. For instructions setting the coin acceptor, see Section 4.3 in the Operator Menu.

**IMPORTANT: Any coin acceptor used with *IMotion!-iGO* must be 12 volt DC.**

### 3.6 CARD READER

The way of the card reader connect is shown as Fig. 3-3, and notice a following item:

1. The card reader contact is opened before swiping.
2. Contact is closed at least 80 ms after swiping.

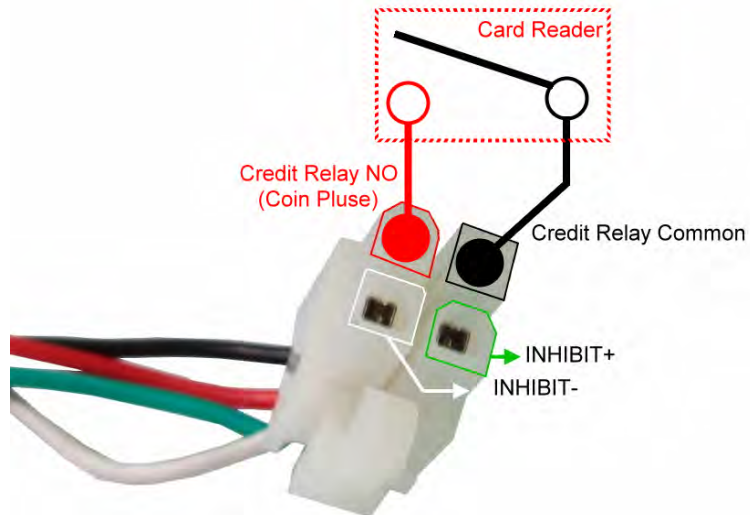


Fig. 3-5 The card reader connect

### 3.7 JOYSTICK

The joystick has been pre-calibrated by the factory. The joystick should not need manual re-calibration during normal operation, since your *IMotion!-iGO* features a unique automatic joystick calibration at start-up and shut-down. If joystick ever needs replacement, calibration may be necessary. The calibration procedure is described in Section 4.3.3.

## 4 *IMotion!-iGO* SYSTEM

### 4.1 INTRODUCTION

Your *IMotion!-iGO* is designed for simple installation as an easy “plug and play” motion system.

## 4.2 OPERATOR POWER PANEL

1. The Service Door is used to access the service area and power panel.
2. The Service Door is located at the rear of the motion base, behind the Game Pod.
3. The Service Door **must be locked** at all times and **accessed by authorized and trained personnel only.**

## 4.3 OPERATOR MENU

To access OPERATOR MENU, turn the main power back ON. Find the OPERATOR SWITCH located inside the coin box door and move to “ON” position (Fig.4-1). And continue in OPERATOR MENU mode.

From the OPERATOR MENU, you have direct access to game and operator settings. From sub-menus (listed below), you have access to general game controls. The definitions of select buttons are labeled in the figure below figure (Fig. 4-2).

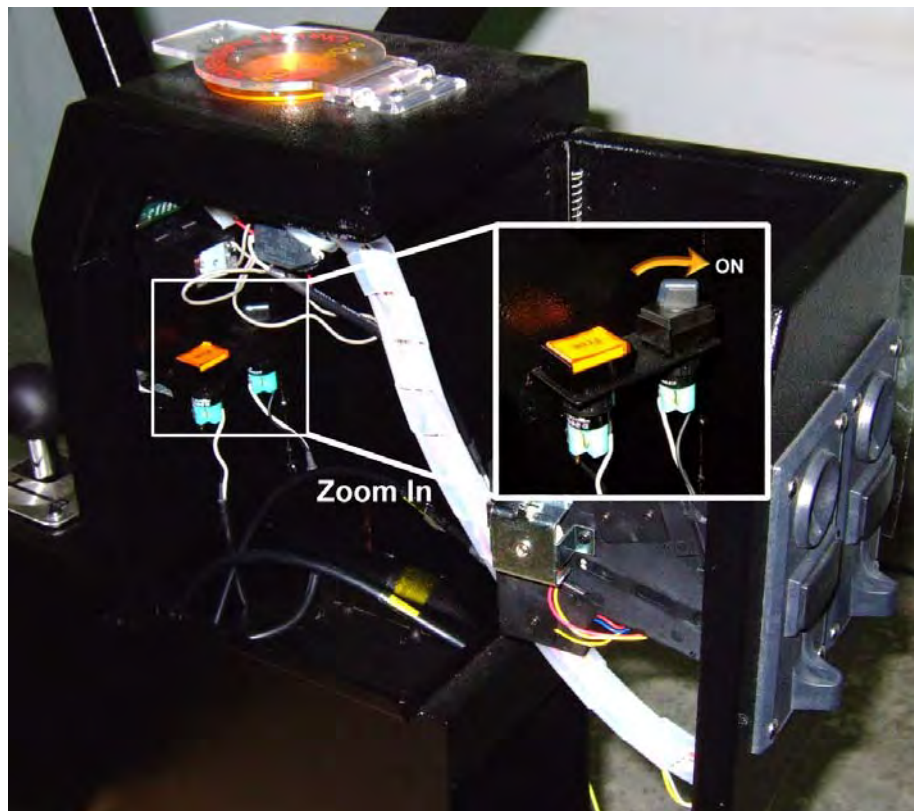


Fig. 4-1 Operator Switch





Fig. 4-2 Operator Menu

### 4.3.1 COIN OPTIONS

The “*Coin Options*” sub-menu (Fig. 4-3) allows you to set all coin options on your *IMotion!-iGO*.



Fig. 4-3 “*Coin Options*” sub-menu

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1. **“Coins per Play”** allow you to set how many coins it will take for a player to start a game. The factory default setting value is 4 coins per play.
2. **“Coins per Continue”** allow you to charge a different price for continue-play than starting game play. The factory default setting value is 4 coins per play.
3. **“Currency Type”** is not to select country's type of currency or denomination (does not matter if it is American, Canadian, Mexican or United Kingdom). This function lets you select what form of currency you wish to accept in your *IMotion!-iGO*. The factory default setting is Coin/Bill (combined into one setting) and the only other current setting is for Debit Cards. Coin acceptor is standard equipment. Bill acceptors may be purchased directly from Coinco or *IMotion!*.
4. **“Coins per Pulse”** allow you to adapt different currency acceptors that are pulse specific to your *IMotion!-iGO*. The default value is 1.
5. While you want training your Coin Acceptor, select **“Coin Acceptor Training”**. The training steps as follow:

**Step 1:** Open the coin door (Fig. 4-6) and the control panel box. Then connect the Coin Acceptor and the IPC RS232 port (Fig. 4-5) by using a coin training connector (Fig. 4-4).

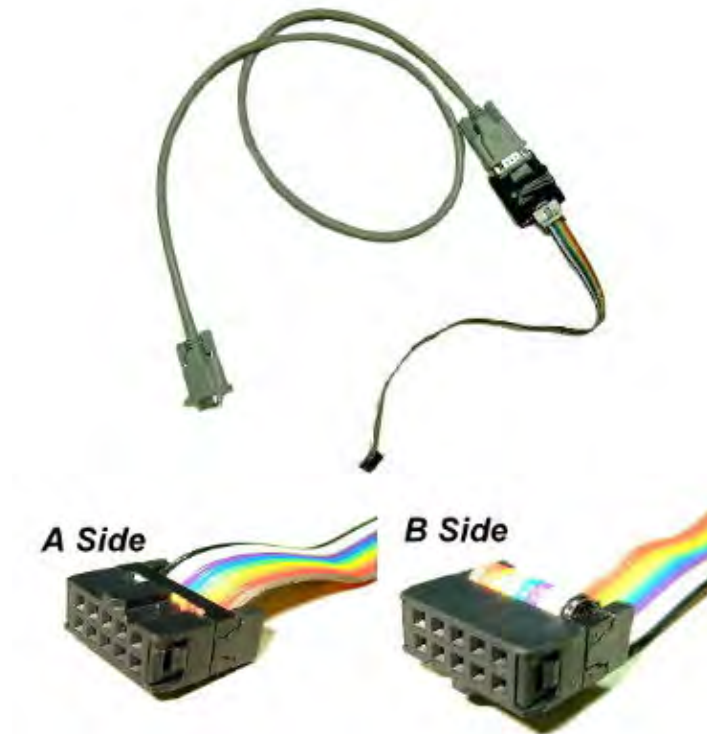


Fig. 4-4 Coin Training connector

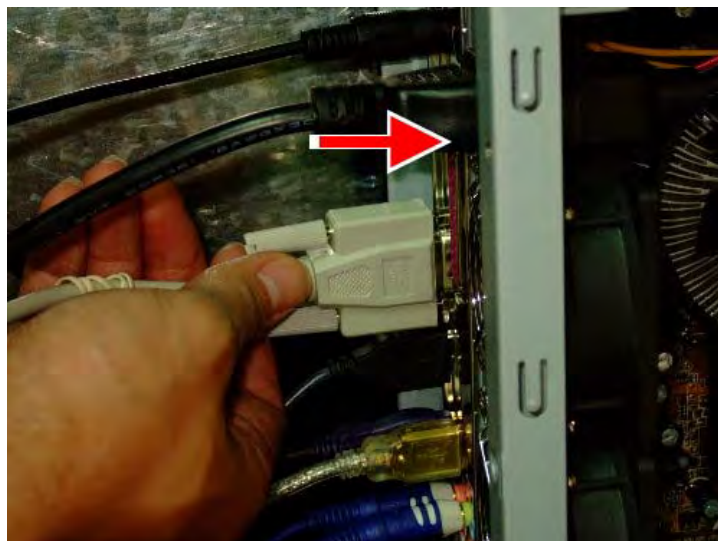


Fig. 4-5 RS232 port

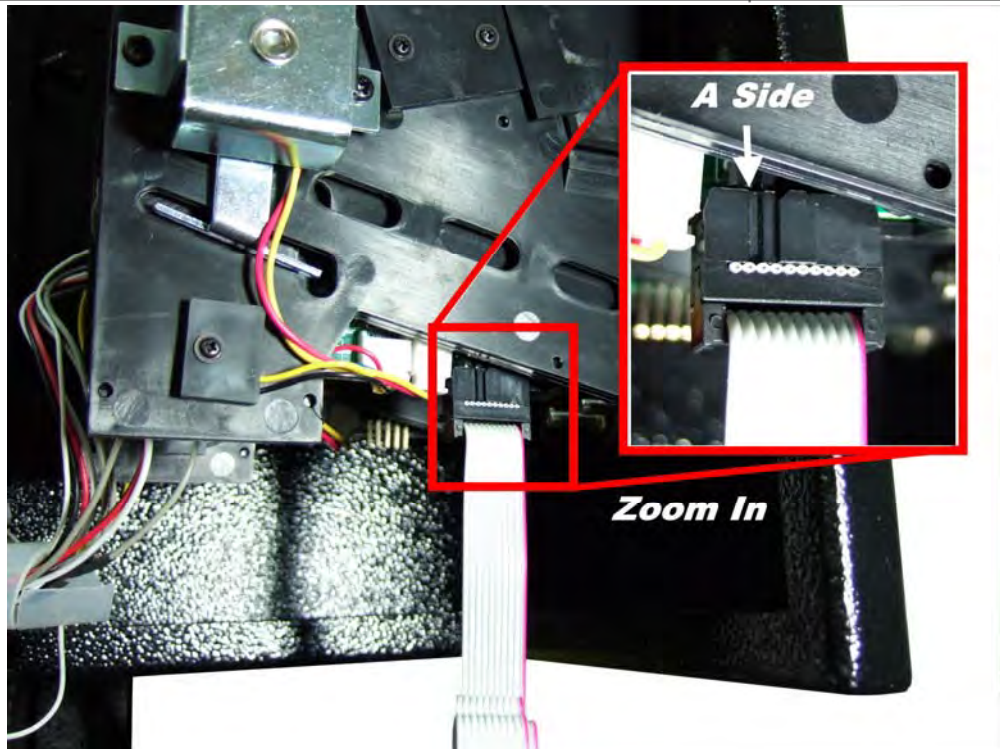


Fig. 4-6 Coin door

**Step 2:** System will click on *“Teach Coin Selector”* and System will set all parameter completion automatically. (Fig. 4-7 and Fig.4-8).



Fig. 4-7 Coin Training window

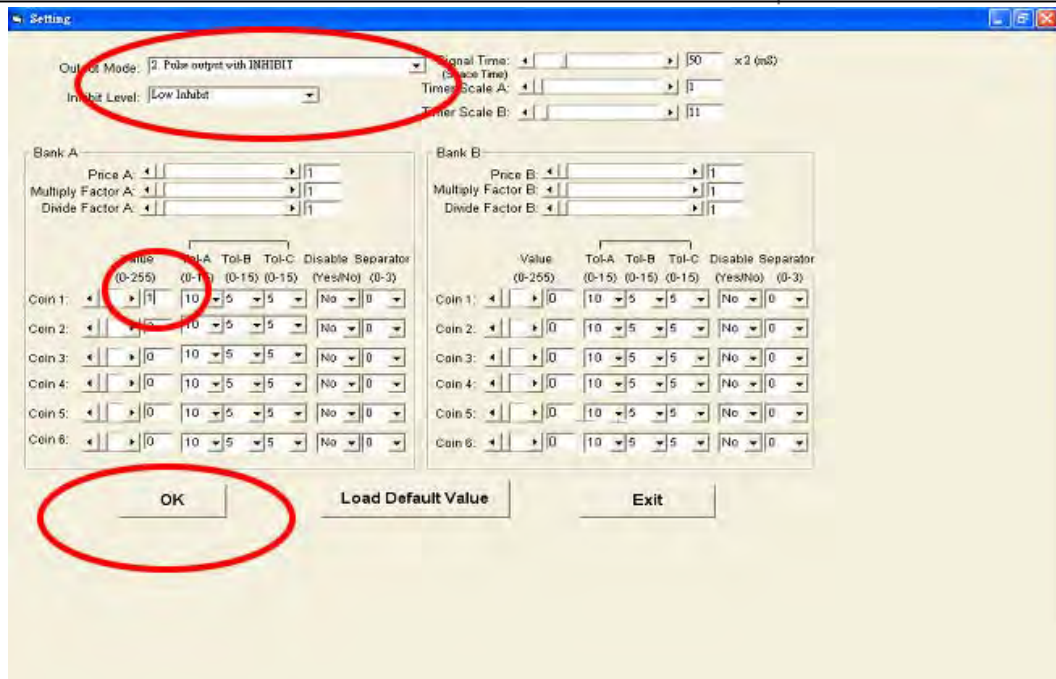


Fig. 4-8 Coin Training Setting

**Step 3:** For complete accuracy and proper function, you will need to insert the coin **20 times**. When finished, please press “**Select**” button on the Joystick to download parameter into coin acceptor. The system goes back to “Operator Menu”.

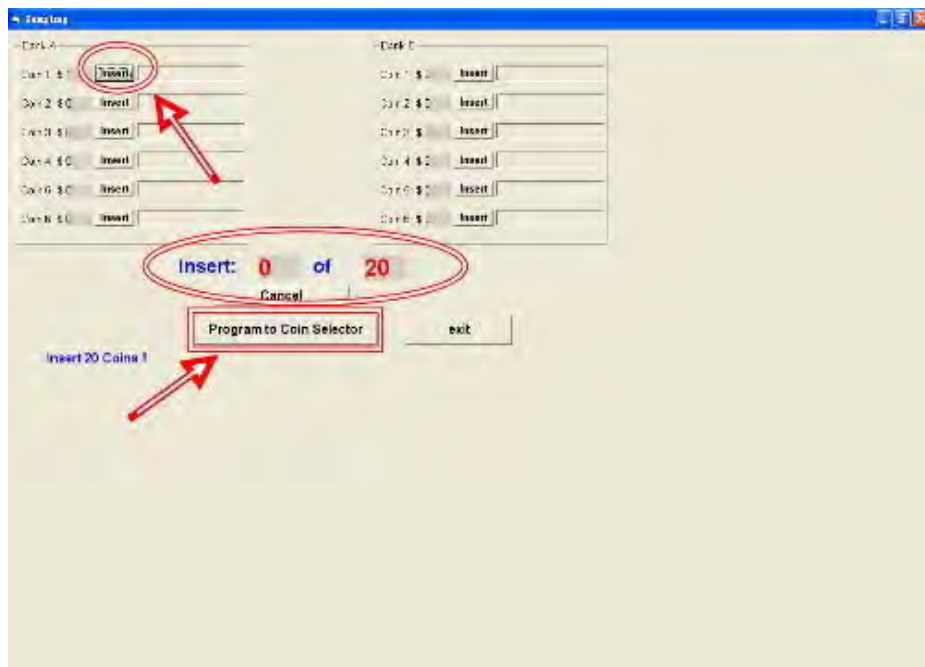


Fig. 4-9 Coin Training Sampling

**4.3.2 GAME OPTIONS**

“*Game Options*” section offers settings that you can adjust for each individual software title which is installed on your *IMotion!-iGO*.



Fig. 4-10 “*Game Options*” sub-menu

1. “*Game Select*” using the “+” or “-” button to select individual game title for adjustment of settings.
2. The “*Game Enabled*” setting determines whether or not the game will be available from the multi-game menu as a player-selectable title.
3. “*Game Time*” can be adjusted using the “+” or “-” buttons, in increments of 15 seconds. Factory default settings are 3 minutes of game time.
4. “*Continue Time*” can be adjusted using the “+” or “-” buttons, allowing players extra time after play ends to insert additional coins to continue, adjustable in increments of 1 second.
5. “*Continue Timer Length*” adjusts the amount of time the player has to continue playing after their game has ended. This can be adjusted by using the “+” or “-” buttons.

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6. “*Driving Control*” setting determines the joystick control mode is “**Easy**” or “**Advanced**”.
7. “*Violence Level*” setting the “**Red Level**” which is to include soldiers in the game or only tanks in the game by choosing “**Green Level**”.
8. “*Bonus Time*” giving player bonus time while they achieve a mission.
9. “*Clear High Scores*” to clear the information on the score board.

6.1 In “**Easy**” mode, the user can use *joystick handle* to move the gun/cannon sight to target the enemies and then the tank body will automatically follow the target with some delay. The gear shift is used to control the forward/backward direction of the leader tank in “**Easy**” mode.

6.2 In “**Advanced**” mode, the user can use *hat switch* to move the gun/cannon sight to target the enemies and the left/right direction of leader tank is controlled by the *joystick handle*. Also the gear shift is used to control the forward/backward direction of the leader tank in “**Advanced**” mode.



Fig. 4-11 joystick

10. “*Violence Level*” setting can adjust the game mode
11. “*Clear High Scores*” will erase all high scores and replace with the default settings.(Fig. 4-12)

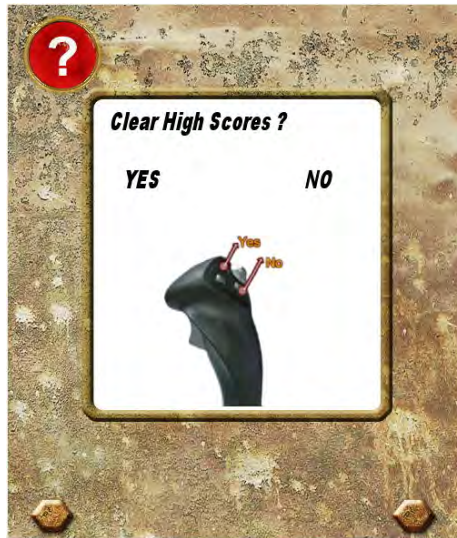


Fig. 4-12 “Clear High Scores” Window

- 12. “Coin Count” shows accumulated counts of coins having been thrown in. This item can’t be chosen or reset.
- 13. “FreePlayKey Count” shows accumulated counts Free Play Key has been pressed. This item can’t be chosen or reset.

### 4.3.3 JOYSTICK SETTING

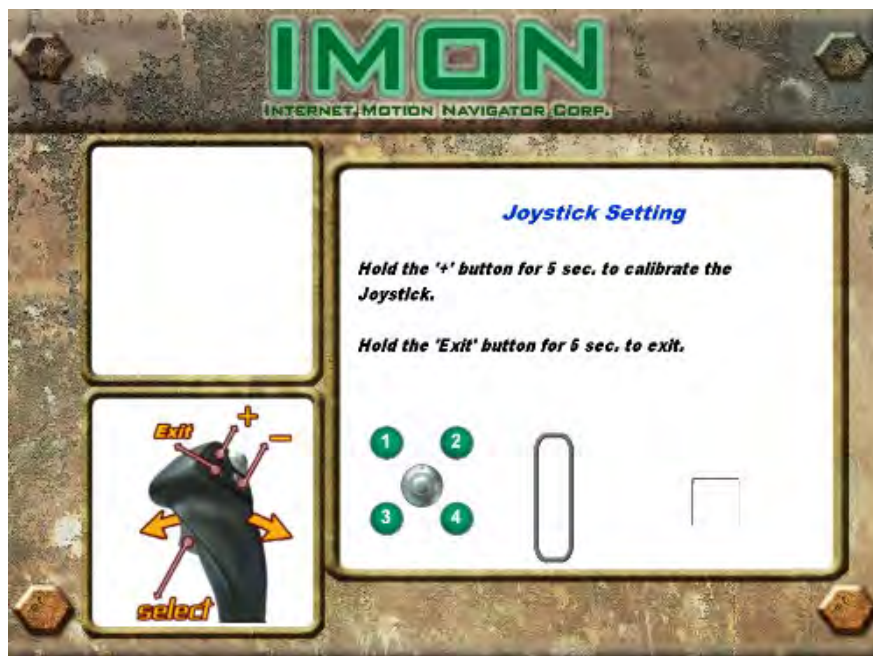


Fig. 4-12 “Joystick Setting” sub-menu





Fig 4-13 Joystick calibrate

To calibrate the joystick, follow the directions on the screen, using these steps:

**(REMEMBER, these steps are only necessary after replacing joystick)**

1. Hold the “+” button on the Joystick to calibrate the joystick.
2. Keep the joystick in the center, and then press the “+” button.(Fig. 4-13)
3. Turn the joystick a round completely, and then press the “-” button.
4. Then Press the “select” button to exit Joystick Setting menu.
5. You may need to go back to the beginning of procedure and repeat from step 1.
6. If you want to leave the joystick setting during process, hold the “Exit” button.

#### 4.3.4 LANGUAGE SETTING



Fig. 4-13 “*Language Setting*” sub-menu

Language can be adjusted using the “+” or “-” buttons to change game language. Currently, the choices of language are English and Russian.

### 4.3.5 SYSTEM TIME SETTING



Fig. 4-14 "System time Setting" sub-menu

Setting the system time can be accomplished using the "Up" or "Down" to choose, followed by the "+" or "-" buttons to change date or time. Time is displayed in 24 hour or military time.

### 4.3.6 VOLUME SETTING

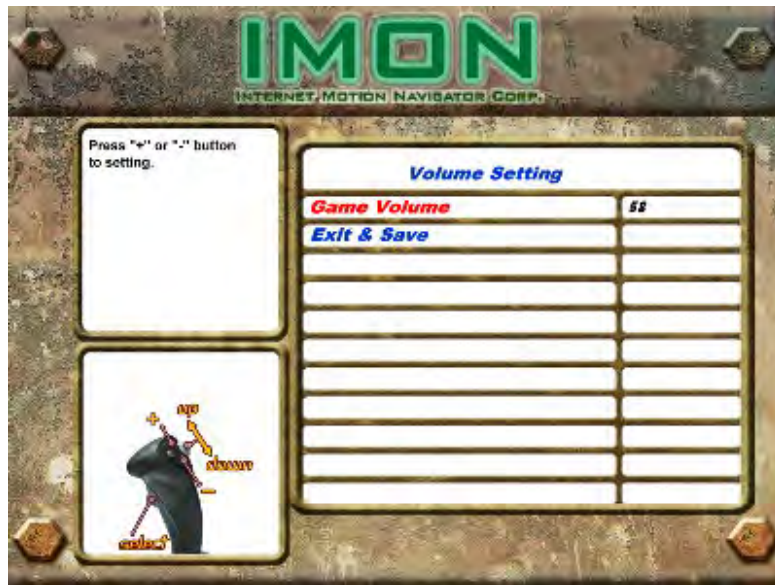


Fig 4-15 “Volume Setting” sub-menu

“Volume setting” can adjust the system volume. Or you can adjust the volume on the Amplifier in the control panel Box.

### 4.3.7 DEVICE TEST



Fig. 4-16 “Device Test” sub-menu

“Device Test” can test whether “Coin Acceptor, Passenger STOP, Seat Belt” can work or not.

### 4.3.8 SOFTWARE UPGRADE

Any software upgrades and/or new software game titles will be downloaded to your ***IMotion!-iGO*** through the use of USB Flash Disk provided by your distributor or IMotion!. The following explains this simple procedure, found in the Operator Menu.

1. Locate the system's IPC (Industrial PC): Referring to Fig. 4-17, open the rear Service Door of the Control Panel Box, you can see the IPC is at the lower right corner.

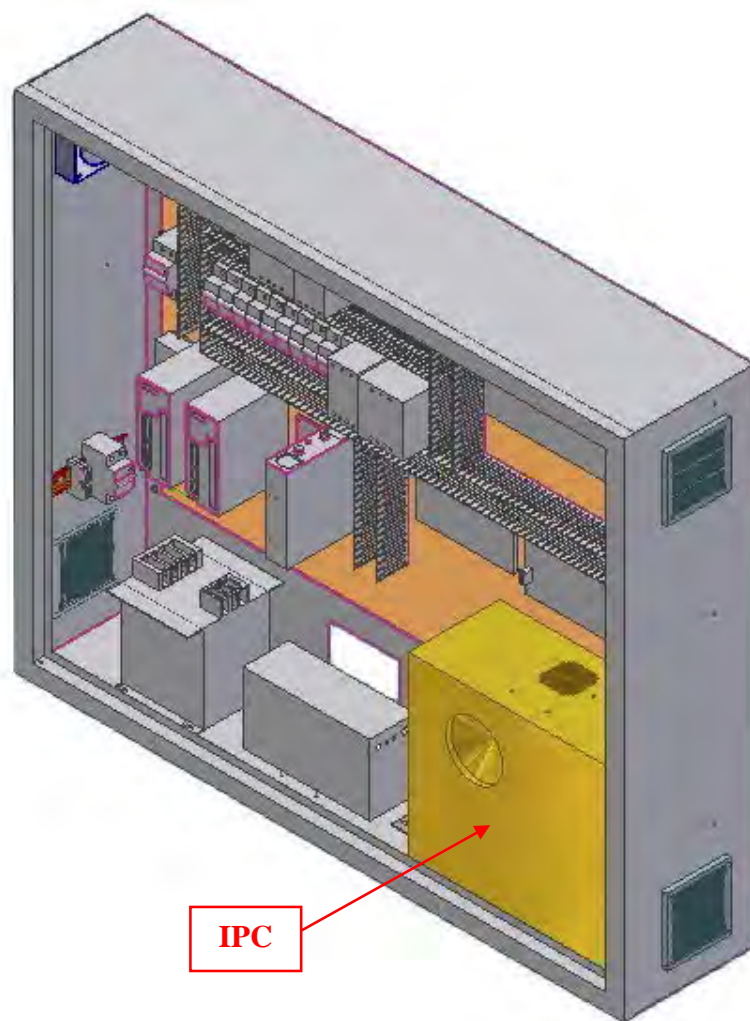


Fig. 4-17 locate the system's IPC

2. Plug in the USB Flash Disk. (Only use the USB Flash Disk provided by IMotion! or your distributor to upgrade/download the software. The USB Flash Disk from unauthorized sources might seriously damage the system.)
3. On Operator Menu (please refer to Fig. 4-2), press the “*select*” button on the joystick to select “*Software Upgrade*” sub-menu.
4. Press the “*select*” button on the joystick (Fig. 4-18), and your software system will begin to upgrade/download the software automatically.
5. Progress will be indicated on screen and you will be notified when download is complete (Fig. 4-19, Fig 4-20). (If you didn't plug the USB Flash Disk onto the IPC, it will display an “*Upgrade fails*” window (Fig. 4-21).)
6. If you wish to cancel upgrade process, press the “+” button to exit “*Software Upgrade*” sub-menu.



Fig. 4-18 “*Software Upgrade*” sub-menu



Fig. 4-19 "Software Upgrading" Window



Fig. 4-20 "Upgrade Success" Window



Fig. 4-21 Upgrade fails

#### 4.3.9 SHUTDOWN SYSTEM

**IT IS HIGHLY RECOMMENDED THAT THE PROPER SHUTDOWN PROCEDURE FOR X2™/iGO BE FOLLOWED BY INDIVIDUALLY POWERING DOWN THIS UNIT.**

1. Highlight the “*Shutdown System*” in the operator menu (please refer to Fig. 4-2).
2. Press the “*select*” button on the joystick to choose to Shutdown, so computer can systematically close (Fig.4-22).
3. Finally, turn the “*power switch*” on the rear back door panel to the OFF position with the key. Now unit is properly shutdown.



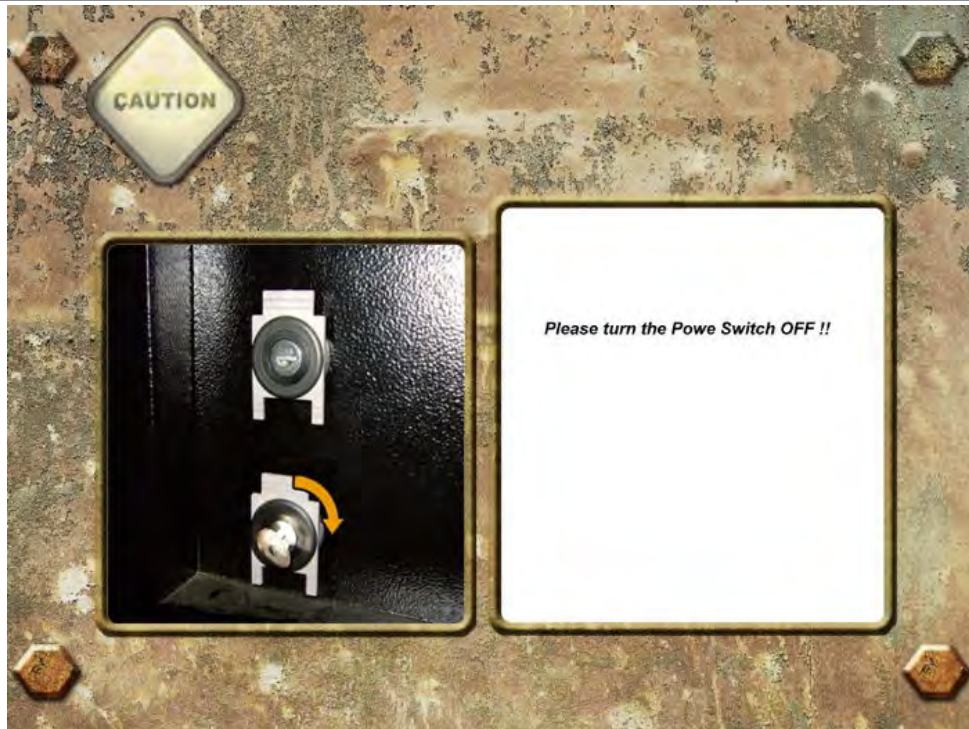


Fig. 4-22 “*Shutdown System*” Window

#### 4.3.10 STATISTIC

The information related to playing game is given.

1. “Coin Count” to show the amount coins is inserted.
2. “Free Play Count” to show the amount times of Free Play has been pressed.
3. “Total Play” to show the amount times of game has been played (Total Play = Starts + Continues).
4. “Starts” to shows the amount of start times.
5. “Continues” to shows the amount of continue times.
6. “Average Time per Credit” to show the average time per one coin.
7. “Average Time per Player” the show the average time per one player.
8. “Clear Statistic” to clear information in “Statistic” (all value is zero after clear)



Fig. 4-23 "Statistic" window

#### 4.3.11 RESET

If you do not like the value which you set, Please select Reset and press "select" button, and then system will ask you "YES" or "NO". If you press "YES", and then all



Fig. 4-23 Reset System window

### 4.3.12 EXIT

To exit “**Operator Menu**”, turn the “**Operator Switch**” inside the coin door to the OFF position (Fig 4-24). The program will enter game mode immediately and resume by loading game on screen.

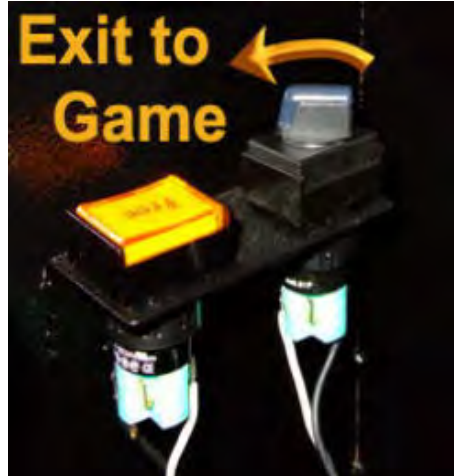


Fig. 4-24 Operator Switch

#### 4.4 PLAYER GAME SELECT MENU

When more than one game or attraction is enabled on *IMotion!-iGO*, players can choose which game or attraction they want to play. The graphic below details this screen. Game selection is made by moving the joystick right or left, pulling the trigger to start the game when the desired attraction is in the center of the screen.

**NOTE: If operator disabled some game in the Operator Menu, the game will not be selected in the “GAME SELECT” menu.**

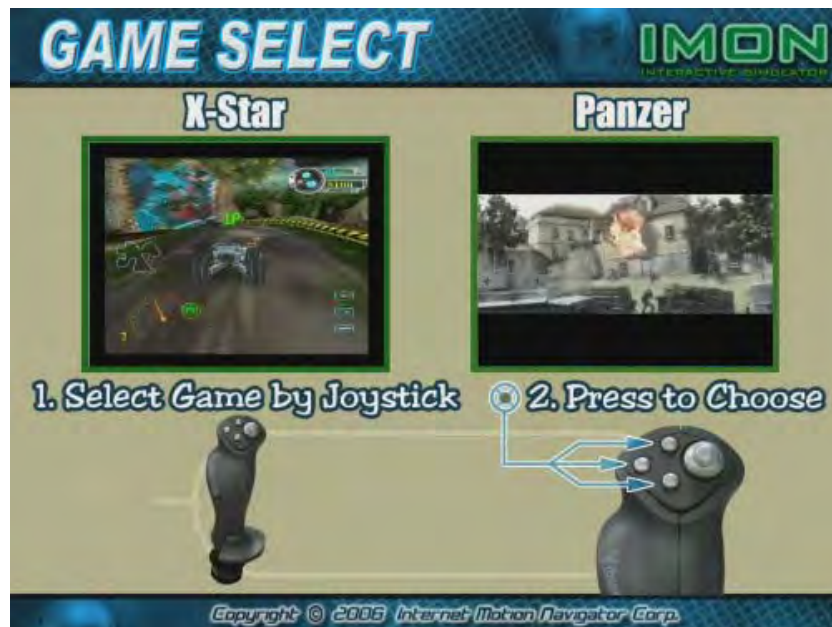


Fig. 4-25 “GAME SELECT” Menu

## 5 MAINTENANCE AND DIAGNOSTIC

**(VERY IMPORTANT! Failure to follow proper maintenance/inspection schedule can void one-year manufacturer warranty)**

### 5.1 INSPECTION SCHEDULE

Item	Task	Frequency	Comments
Game Pod	Visually inspect for any marks, cracks, etc. Clean and/or repair as necessary.	Daily	<b>CAUTION!</b> Use only mild detergent cleaning solutions approved for use on Plexiglas. Do not use chemical solvents or any cleaners containing abrasives or harsh chemicals.
Motion Test	Unit will automatically perform homing procedure (returning to center position) during start-up	Daily	This function will move the unit forward to the most extended position and then back to level position for player to get in and out of the unit.
Cooling Fans	1) Verify that the two fans located in power panel and at the base of the Game Pod are working. Clean all ventilation grills/filters.  2) Verify that all fans within the computer are working properly. Clean all ventilation grills/filters.  3) Verify that the four fans on both sides of the Power Panel and base are functional.	Monthly	It is essential to maintain proper ventilation to the display cabinet, the motion base, and the computer. Failure to do so may cause overheating and decrease the performance and/or the life span of your <b>IMotion!-iGO</b> .

### 5.2 MOTION BASE MAINTENANCE

#### 5.2.1 CALIBRATION TEST PROCEDURE

- Unit will automatically perform a System Test any time power is turned on.



**WARNING!!!**

**PREVENT INJURY OR DEATH: Never open any of the control boxes or power boxes. These boxes are 110V/220V and attempts to improperly service by unqualified technicians may cause serious injury or death. Call tech support or bring to local distributor.**

**For recommended safe handling, the power must be off for at least 60 seconds prior to moving or servicing.**

**For safest handling, unplug IMotion!-iGO's main power plug.**

## 6 TROUBLESHOOTING

### 6.1 LAYOUT OF THE CONTROL PANEL BOX UNIT

#### 6.1.1 FIGURE REPRESENTATION

Figure 6-1 shows its external configuration exposition, Fig. 6-2 presents the layout of the control panel and Fig. 6-3 indicates its internal configuration exposition.

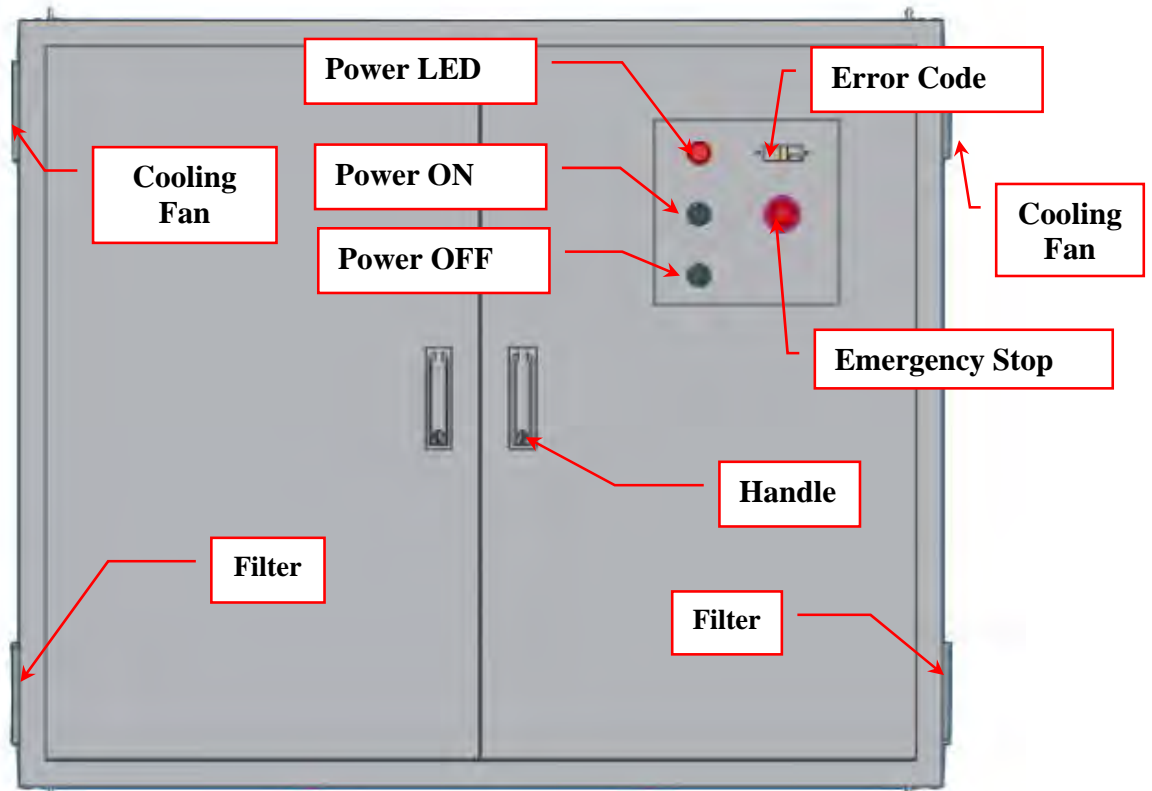


Fig. 6-1 Control panel box external configuration diagram

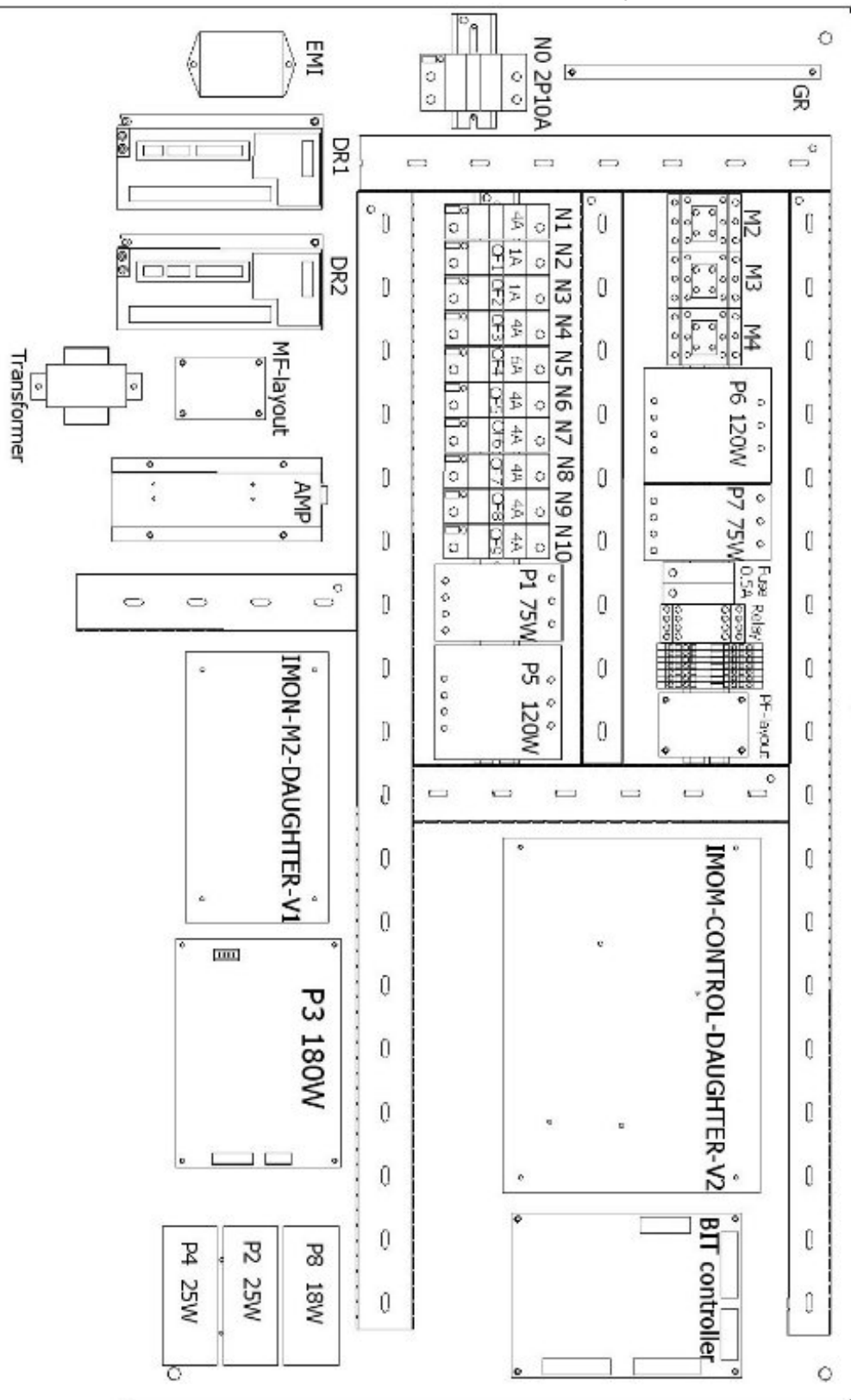


Fig. 6-2 Layout of the control panel

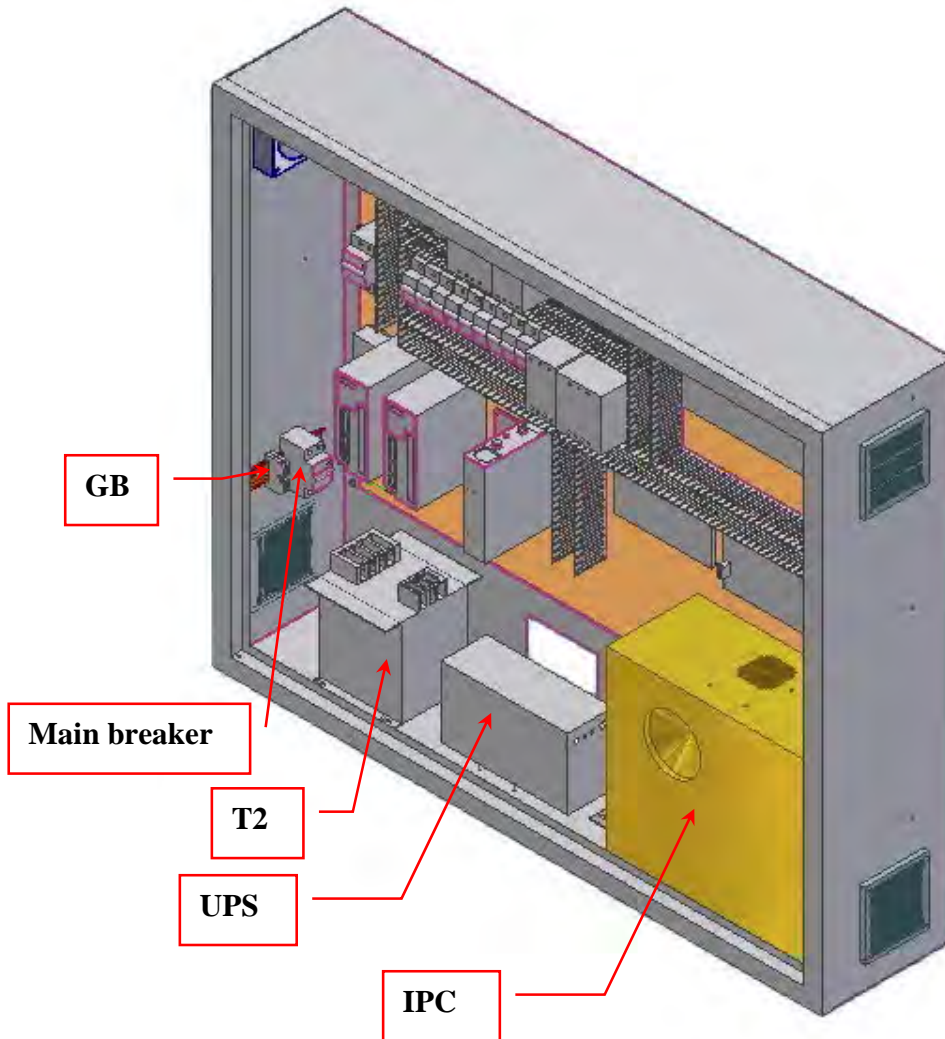


Fig. 6-3 the internal configuration diagram of control panel box

**Note: A transformer is required in the case that the power source is 100V-120V.**



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**6.1.2 DEVICES DEFINITIONS OF CONTROL PANEL BOX**

The devices definitions of Control panel box are listed in the following Table.

<b>Device of control panel</b>		
<b>Name</b>	<b>Spec</b>	<b>Part NO.</b>
EMI Filter	110/250VAC 50~60HZ 10A	EMI
Ground Bar	21 PORTS	GR
No fuse breaker	2P16A	N00
No fuse breaker	2P10A	N0
No fuse breaker	1P4A	N1
No fuse breaker	1P1A	N2
No fuse breaker	1P1A	N3
No fuse breaker	1P4A	N4
No fuse breaker	1P6A	N5
No fuse breaker	1P4A	N6
No fuse breaker	1P4A	N7
No fuse breaker	1P4A	N8
No fuse breaker	1P4A	N9
No fuse breaker	1P4A	N10
Magnetic contact	Coil power 24VDC/ Three main contacts a / Auxiliary contact 1a1b /220VAC 5A	M2
Magnetic contact	Coil power 24VDC/ Three main contacts a / Auxiliary contact 1a1b /220VAC 5A	M3
Magnetic contact	Coil power 24VDC/ Three main contacts a / Auxiliary contact 1a1b /220VAC 5A	M4
Auxiliary contact	2a	
Auxiliary contact	Auxiliary contact for breaker/1a1b	OF
RELAY	AC220V/2a2b	A0
Socket for relay	For relay	A0
Socket for fuse	1P10A	F0
Fuse	0.5A ~ 6A	F0
Switch with key	22φ/1a1b	POWER ON
Switch with key	22φ/1a1b	POWER OFF
Push button	22φ/1a1b	EMERGENCY STOP
Pilot	Green/24VDC	POWER LED
Terminal	4 Ports	TB

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Grounding terminal	2 Ports/Green	GB
Power supply	I/P : 100~240VAC 2.0A 50~60HZ O/P : 24VDC 3.0A 72W	P1
Power supply	I/P : 100~240VAC 0.7A 50~60HZ O/P : 12VDC 2.08A 25W	P2
Power supply	I/P : 100~240VAC 2.5A 50~60HZ O/P : 24VDC 6.0A 12V 3.0A 180W	P3
Power supply	I/P : 100~240VAC 0.7A 50~60HZ O/P : 12VDC 2.08A 25W	P4
Power supply	I/P : 100~240VAC 5.0A 50~60HZ O/P : 24VDC 5.0A 120W	P5
Power supply	I/P : 100~240VAC 5.0A 50~60HZ O/P : 24VDC 5.0A 120W	P6
Power supply	I/P : 100~240VAC 2.0A 50~60HZ O/P : 24VDC 3.0A 72W	P7
Power supply	I/P : 100~240VAC 0.5A 50~60HZ O/P : 12VDC 1.5A 18W	P8
Fan	230VAC/50~60HZ/17W	FAN
Filter	Plastic Fan Filter Kit	FILTER
Amplifier	2.1 Channels /3W+3W / SUB 10W	AMP
BIT Controller	Micro-controller	BIT
Transformer	30VA/ INOUT 210-220-230 / OUTPUT 110V	T1
Transformer	1800VA/ INPUT 0-100-120/ OUTPUT 0-220	T2
UPS	450W/ 1 Minute /Input 200~240VAC/Output 200~240VAC	UPS
Servo amplifier	3 Phase /220VAC/400W	DR1
Servo amplifier	3 Phase /220VAC/400W	DR2
Control board	IMON-Control-Daughter-V2	IMON-Control-Daughter-V2
Fan PCB	4 Channels	PF-LAY OUT
Fan PCB	4 Channels	MF-LAY OUT
LED PCB	Display	ALARM CODE
Daughter board	Daughter board for motion card	IMON-M2-DAUGHTER-V1

## 6.2 ELECTRIC DEVICES ON THE BASE PLATE

### 6.2.1 FIGURE REPRESENTATION

Figure 6-4 shows the looks of the electric devices on the base plate, Fig.6-5 shows the looks of plinths' cooling fans and air filters.

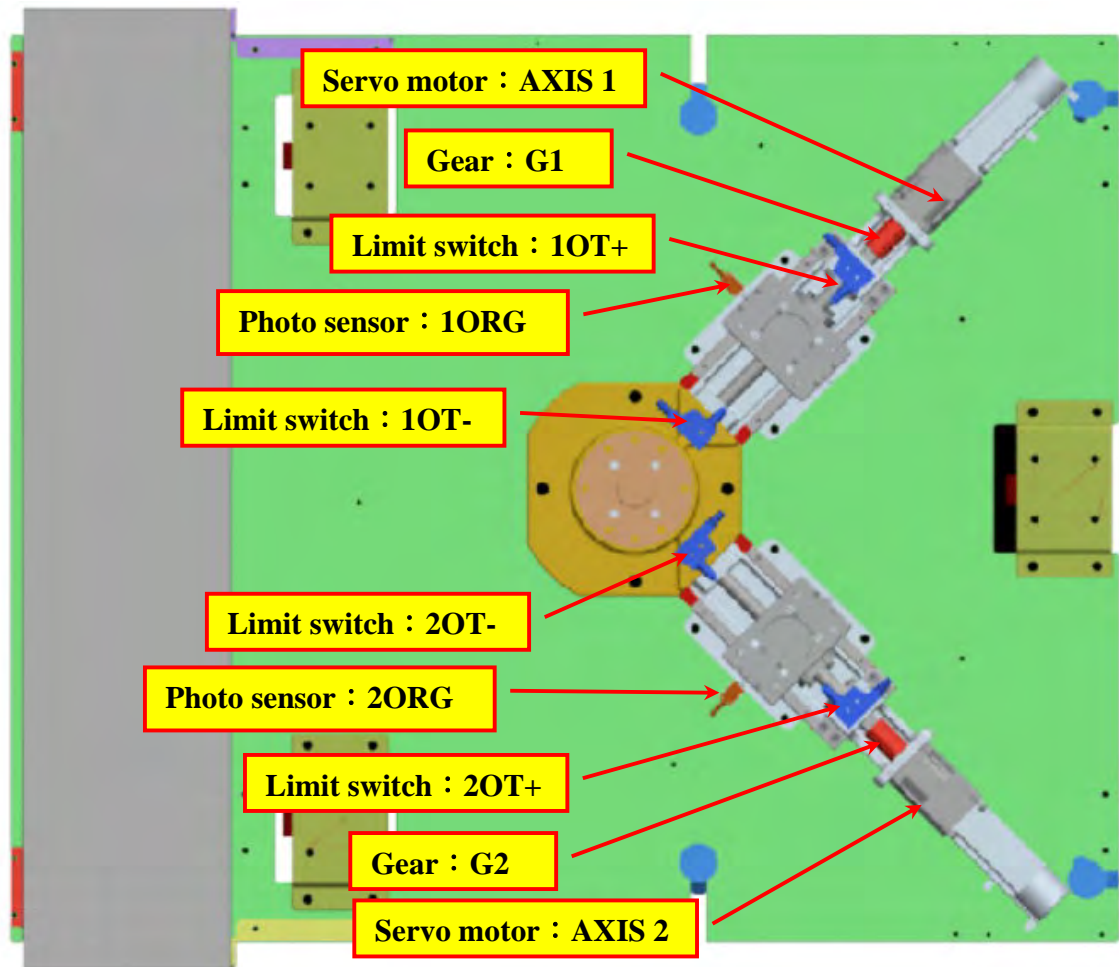


Fig. 6-4 Electric devices exposition on the base plate

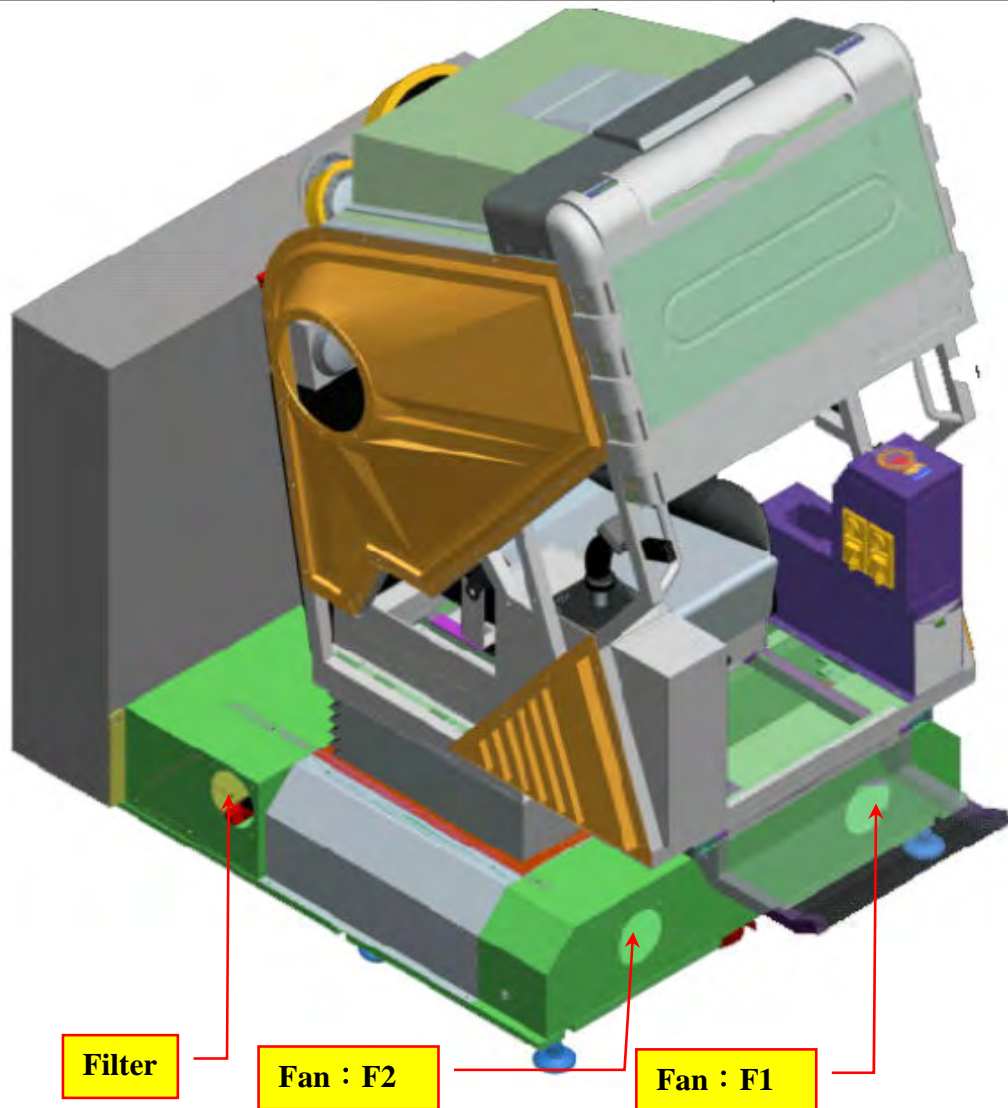


Fig. 6-5 Exposition of plinths' cooling fans and air filters

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**6.2.2 DEVICES DEFINITIONS ON BASE PLATE**

The devices definitions of Base Plate are listed in the following Table.

<b>Device of Base Plate</b>		
<b>Name</b>	<b>Spec</b>	<b>Part NO.</b>
Servo motor	3 Phase/ 220VAC / 400W with brake DC24V	AXIS 1
Servo motor	3 Phase/ 220VAC / 400W with brake DC24V	AXIS 2
Gear	Gear ratio 1/5	G1
Gear	Gear ratio 1/5	G2
Limit switch	1a1b	1OT+
Limit switch	1a1b	1OT-
Limit switch	1a1b	2OT+
Limit switch	1a1b	2OT-
Photo sensor	24VDC/1a	1ORG
Photo sensor	24VDC/1a	2ORG
Fan	AC Fan 230VAC	F1
Fan	AC Fan 230VAC	F2
Filter	Plastic fan filter kit	FILTER

### 6.3 COCKPIT ELECTRIC UNIT EXPOSITION

#### 6.3.1 FIGURE REPRESENTATION

Figure 6-6 shows the looks of the electric devices on the cockpit, Fig.6-7 shows the looks of the limit switch of the gear shifter.

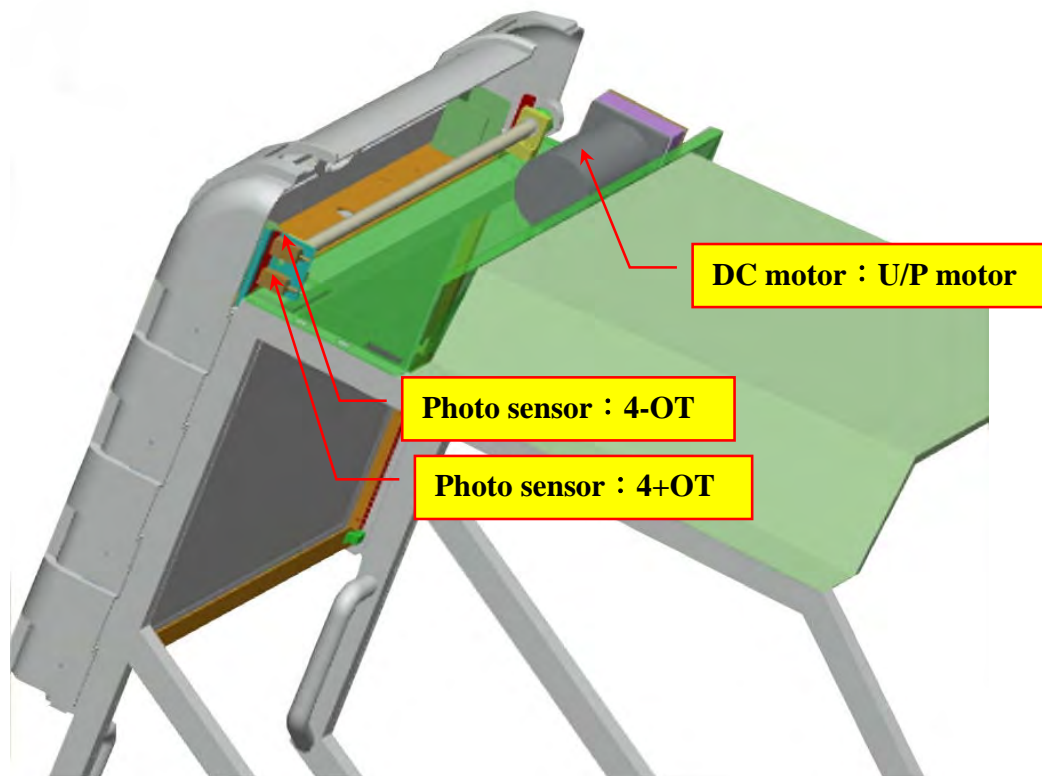


Fig. 6-6 Electric device exposition on the cockpit

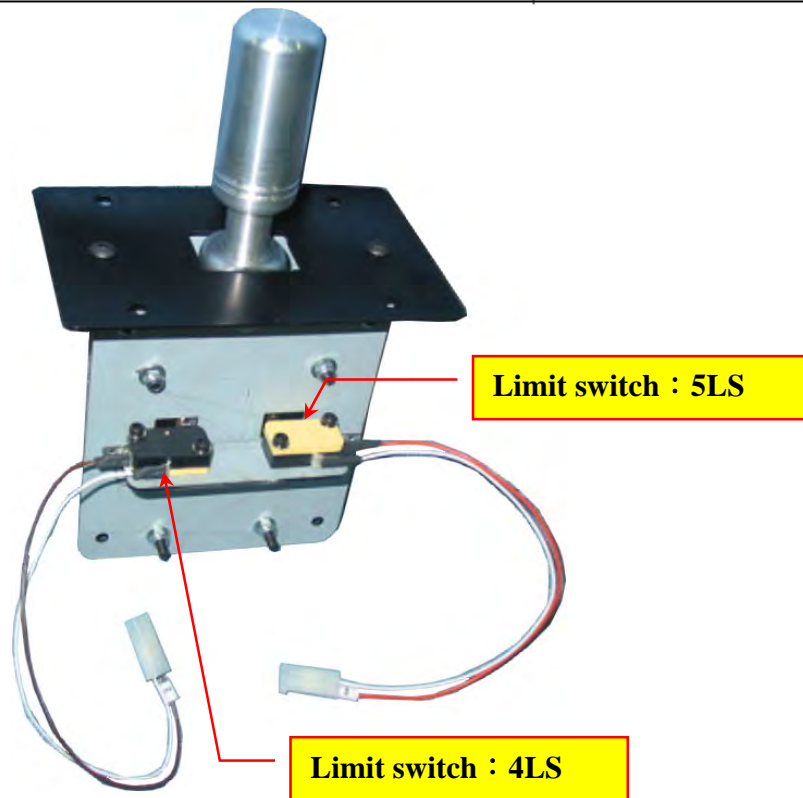


Fig. 6-7 Electric device exposition on the gear shifter

### 6.3.2 DEVICES DEFINITIONS ON COCKPIT

The devices definitions of the cockpit are listed in the following Table.

Device of cockpit		
Name	Spec.	Part NO.
DC motor	DC24V 65W 4.5A rpm.1800	U/D MOTOR
LCD	32"	LCD
Photo-sensor	24VDC/1B	4+OT
Photo-sensor	24VDC/1B	4-OT
Coin accepter	12VDC/Plus output	COIN 1
Coin accepter	12VDC/Plus output	COIN 2
Counter	12VDC/4 Digits	C1
Bill	24VDC/1a /Plus output	BILL
Speaker	4"/150W	SP1
Speaker	4"/150W	SP2
SUB	SUB/ 3"+3"	SP3
Joystick	USB Joystick	JOYSTICK

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Gear shifter	USB Gear Shifter	GEAR SHIFTER
Limit switch	1a1b/ For gear shifter	4LS
Limit switch	1a1b/ For gear shifter	5LS
Push button	16mm/ Green/ 1A1B	FREE
Select switch	16mm / 1A1B	OPERATOR MENU
Push button	1a	PASSENGER STOP
Coin display	PCB	IMON-DOUBLE COIN-V1.1
Extend board	PCB	IMON-COCKPIT INTERFACE-V1

## 6.4 REFERENCE

### 6.4.1 REFERENCE (1): Over Travel recovery procedure

**Symptom** : The cockpit leans.

**Possible Cause** : Axis\_1 or axis\_2 is over traveled.

**Error Elimination** :

**Step 1** : Turn off the power.

**Step 2** : Please wait for 90 seconds.

**Step 3** : Adjust the switch 1 to be ON as shown in Fig. 6-9.

**Step 4** : Turn on the power as shown in Fig. 6-10.

**Step 5** : Please see the alarm code on the servo amplifier screen (Fig. 6-8), then follow the below list to eliminate the error.

Axis No.	Alarm Code	Elimination Method
1	ALE14	Press the button "1 UP" (Fig. 6-9) about 5 seconds.
	ALE15	Press the button "1 DOWN" (Fig. 6-9) about 5 seconds.
2	ALE14	Press the button "2 UP" (Fig. 6-9) about 5 seconds.
	ALE15	Press the button "2 DOWN" (Fig. 6-9) about 5 seconds.

**Step 6** : Turn OFF the power.

**Step 7** : Please wait for 90 seconds.

**Step 8** : Adjust the switch 1 to be OFF as shown in Fig. 6-9.

**Step 9** : Turn ON the power.



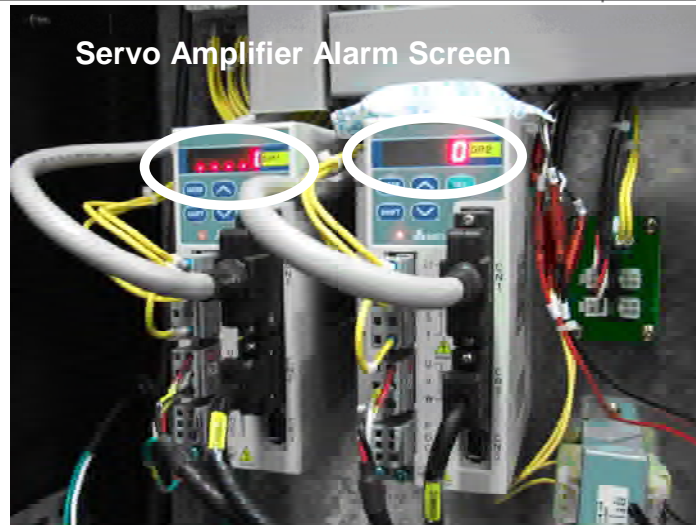


Fig. 6-8 Motor Servo Amplifier

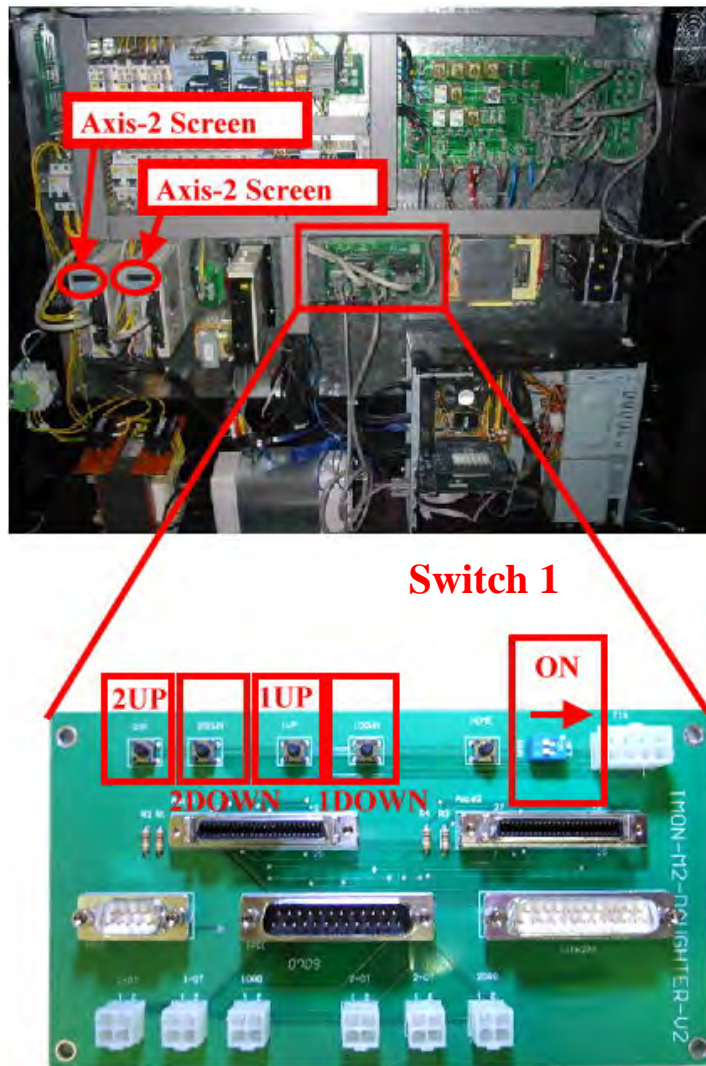


Fig. 6-9 IMON-M2-DAUGHTER-V2 Card

#### 6.4.2 REREFERENCE (2): *IMotion!-iGO* startup and shutdown procedure

##### Power On Procedure :

**Step 1:** Please wait for over 3 minutes before last power off.

**Step 2:** Power On by turning Power on switch , the system will home and IPC will be on in 30 seconds.

**Step 3:** Error Code shows"0000".

##### Power Off Procedure :

**Step 1:** System only can be power off after enter the game.

**Step 2:** The IPC will be off after Power Off the system.

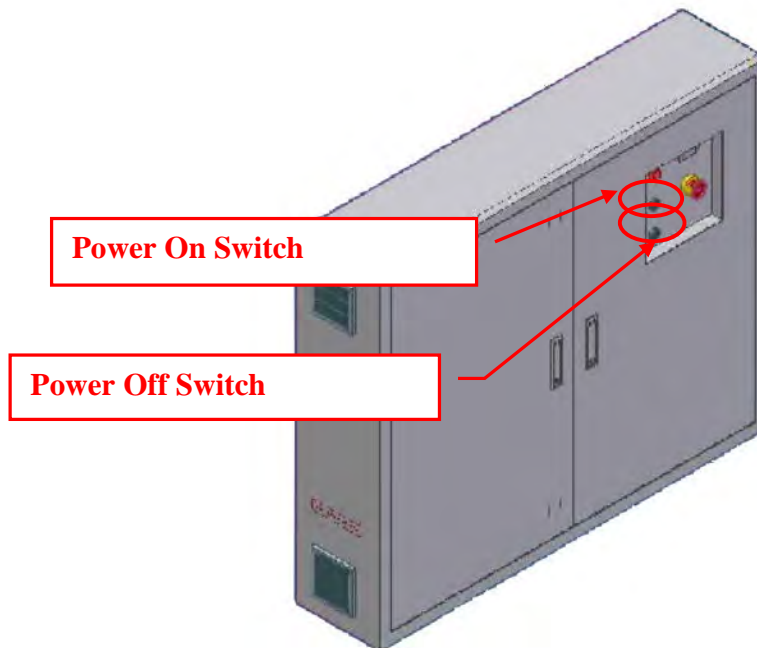


Fig. 6-10 Power Switch

#### 6.5 SYSTEM ERROR CODE DEFINITION

Please refer to System Error Code Definition on page 51.

#### 6.6 TROUBLESHOOTING LIST

Please refer to Troubleshooting List on page 79.

#### 6.7 COMPONENT REPLACEMENT PROCEDURE LIST

Please refer to Component Replacement Procedure List on page 105.

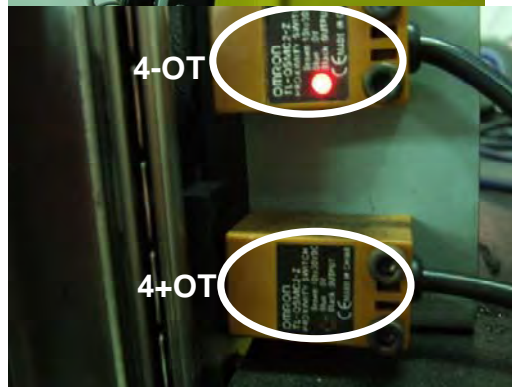
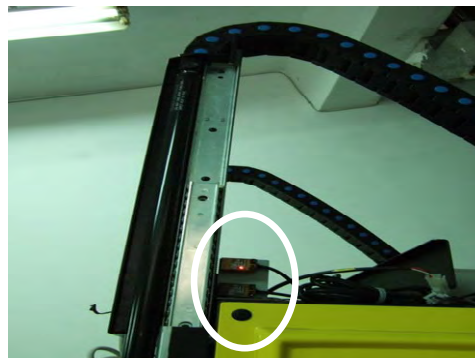
<b>ERROR CODE NUMBER</b>	<b>PAGE</b>
0002 MAGNETIC CONTACT (M3).....	52
0003 MAGNETIC CONTACT (M4) .....	52
0005 CIRCUIT BREAKER (N3) OFF.....	53
0007 CIRCUIT BREAKER (N5) OFF.....	53
0008 CIRCUIT BREAKER (N8 OR N9) OFF.....	53
0009 CIRCUIT BREAKER (N10) OFF.....	53
0012 LCD MONITOR UP/DOWN SENSOR OR RELAY A3 FAILURE.....	53
0013 LCD MONITOR UP/DOWN SENSOR OR RELAY A4 FAILURE.....	60
0014 LCD MONITOR UP/DOWN MOTOR BRAKE RELAY A5 FAILURE.....	66
0015 SERVO MOTOR BRAKE RELAY A6 FAILURE.....	68
0016 PR2_2 FAILURE.....	70
0017 PR3_2 FAILURE.....	70
0019 FUSE (F2) WAS BURNED (COIN ACCEPTOR POWER).....	70
0020 FUSE (F3, F4) WAS BURNED(LCD MONITOR POWER).....	71
0021 FUSE(F5) WAS BURNED(MONITOR UP/DOWN MOTOR BRAKE) .....	71
0034 FUSE (F6) WAS BURNED(ORG SENSOR).....	72
0022 FUSE (F7) WAS BURNED(MONITOR UP/DOWN SENSOR) .....	72
0023 FUSE (F8) WAS BURNED(MONITOR UP/DOWN MOTOR) .....	72
0026 SERVO MOTOR ALARM CODE.....	72
0027 TOUCH "1+OT" SENSOR.....	72
0028 TOUCH "1-OT" SENSOR.....	72
0029 TOUCH "2+OT" SENSOR.....	73
0030 TOUCH "2-OT" SENSOR.....	73
0032 MOTION CARD FAILURE.....	73
0033 HOMING FAILURE.....	73
0035 MOTOR ENCODER FAILURE.....	75

Error Code Number	Definition	Troubleshooting Guide
0002	Magnetic Contact (M3) Failure	Turn Off N6 and N7 then Turn On Again. If the alarm persists, power Off system. Replace contact (M3). Please refer to Component Replacement Procedure List on page 105: Component#3 Magnetic Contact Replacement Procedure to complete replacement. <b>*Contact IMON / IMotion! Tech support if problem persists.</b>
0003	Magnetic Contact (M4) Failure	Power Off system. Replace contact (M3). Please refer to Component Replacement Procedure List on page 105: Component#4 Magnetic Contact Replacement Procedure to complete replacement. <b>* Contact IMON / IMotion! Tech support if problem persists.</b>
0004	Circuit Breaker (N2) Off	<p><b>Possibility: N2 Broken</b></p> <ol style="list-style-type: none"> <li>N2 will remain in “On” position. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</li> <li>Switch N2 to “On” but N2 is not really “On”. Please follow steps and pictures below to check this.                             <ol style="list-style-type: none"> <li>Turn On “N2”                                     <div data-bbox="694 1234 1109 1545" data-label="Image"> </div> </li> <li>Use volt meter to check. The meter reads “OL” , means that Circuit Breaker is bad.                                     <div data-bbox="694 1659 1118 1973" data-label="Image"> </div> </li> </ol> </li> </ol>

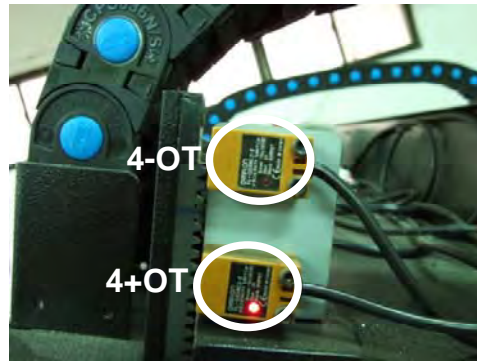
		(c) Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.
<b>0005</b>	Circuit Breaker (N3) Off	<p><b>Possibility: N3 Broken</b></p> <ol style="list-style-type: none"> <li>1. N3 remains in “On” position. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</li> <li>2. Switch N3 to “On” but N3 is not really “On”. Please follow steps and pictures as shown on error code 0004 (as same as N2 check procedure to check this).</li> </ol>
<b>0007</b>	Circuit Breaker (N5) Off	<p><b>Possibility: N5 Broken</b></p> <ol style="list-style-type: none"> <li>1. N5 remains in “On” position. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</li> <li>2. Switch N5 to “On” but N2 is not really “On”. Please follow steps and pictures as shown on error code 0004 as same as N2 check procedure to check this).</li> </ol>
<b>0008</b>	Circuit Breaker (N8 or N9) Off	<p><b>Possibility: N8 or N9 Broken</b></p> <ol style="list-style-type: none"> <li>1. N8 or N9 remain in “On” position. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</li> <li>2. Switch N8 or N9 to “On” but N8 or N9 is not really “On”. Please follow steps and pictures as shown on error code 0004 as same as N2 check procedure to check this).</li> </ol>
<b>0009</b>	Circuit Breaker (N10) Off	<p><b>Possibility: N10 Broken</b></p> <ol style="list-style-type: none"> <li>1. N10 remains in “On” position. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</li> <li>2. Switch N10 to “On” but N10 is not really “On”. Please follow steps and pictures as shown on error code 0004 as same as N2 check procedure to check this.</li> </ol>
<b>0012</b>	LCD Monitor Up/Down Sensor or Relay A3 failure	<p><b>1<sup>st</sup> Possibility: A3 Broken</b></p> <p>Please Power Off systems then replace relay A3. Please refer to Component Replacement Procedure List on page 105: Component#33 Replacement Procedure to complete replacement.</p> <p>If the problem persists, continue to 2<sup>nd</sup> Possibility.</p>
		<p><b>2<sup>nd</sup> Possibility: Sensor Failure</b></p> <ol style="list-style-type: none"> <li>1. Remove covers on top side of cockpit. Follow steps below to check Monitor Up Sensor (4+OT) is working or not.                     <ol style="list-style-type: none"> <li>(a) Remove covers as shown below</li> </ol> </li> </ol>



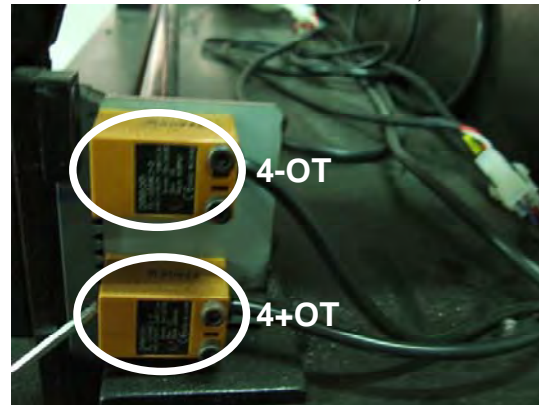
(b) While Monitor is at Up position, the LED light on sensor (4+OT) is off but LED light on sensor (4-OT) is on, which is correct.



(c) While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct.

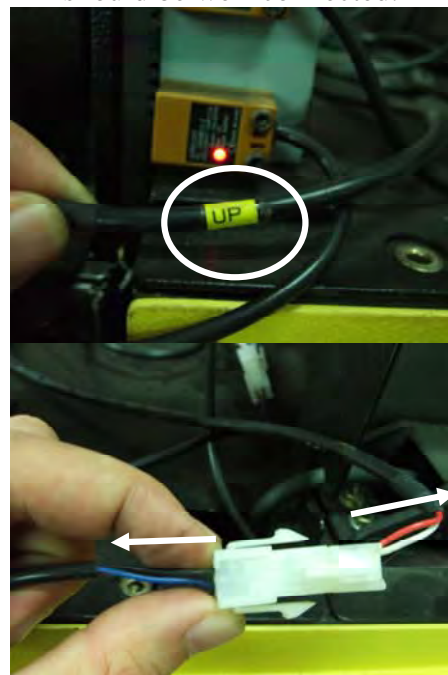


2. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.

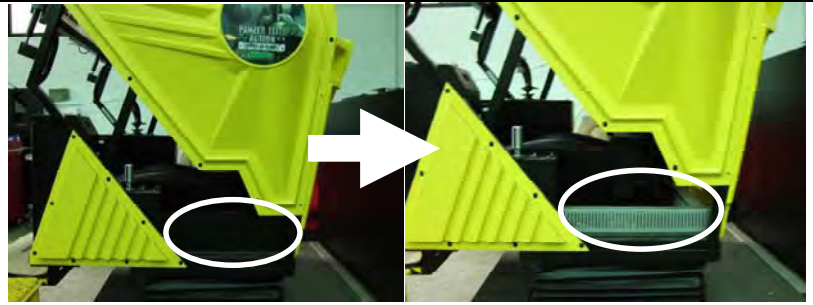


Please follow steps below to check connectors loose or not.

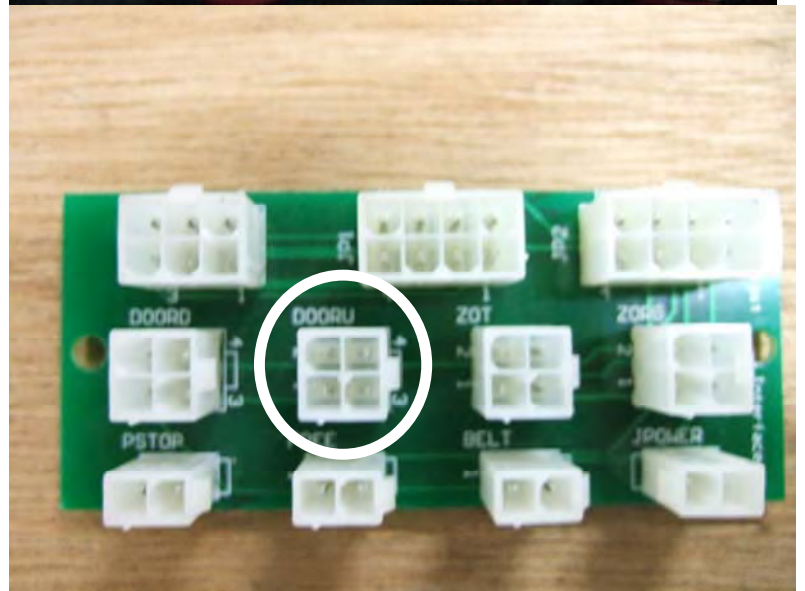
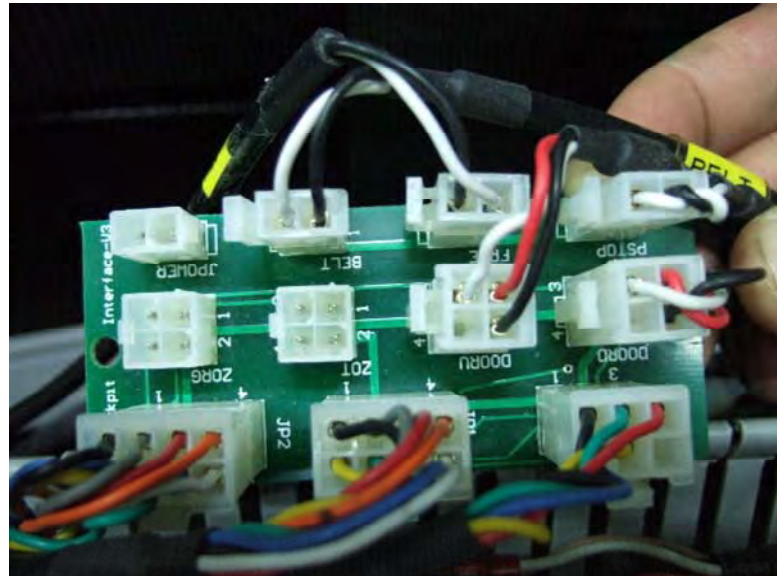
(a) Check wire and connector (wire number is "UP") on top of cockpit. The wire should not be pulled out and connector should be well-connected.



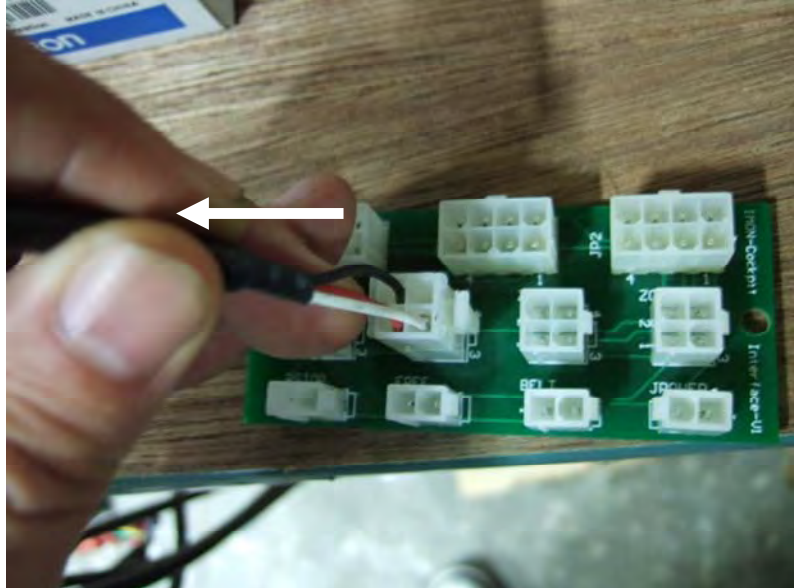
(b) Remove cover on right side of cockpit.



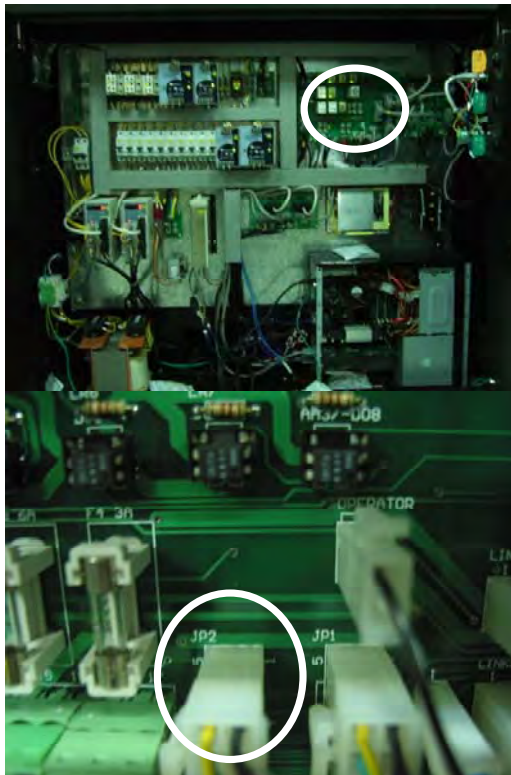
(c) Check wire and connector at cockpit (wire number is "DOORU"), The wire should not be pulled out and connector should be well-connected.





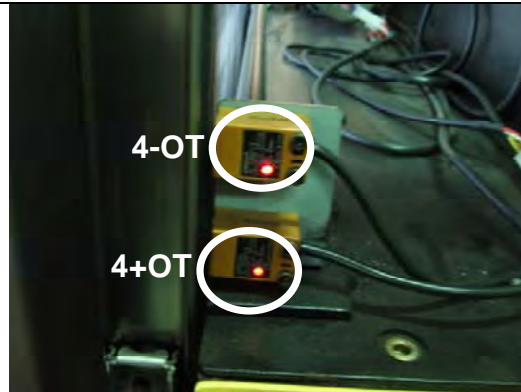


(d) Check wire and connector (JP2) in power box. The wire should not be pulled out and connector should be well-connected.



(e) If all connectors and wires above are well-connected. Replace sensor. Please refer to Component Replacement Procedure List on page 105: Component#24 Monitor Up/Down Sensor Replacement Procedure to complete replacement.

3. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.

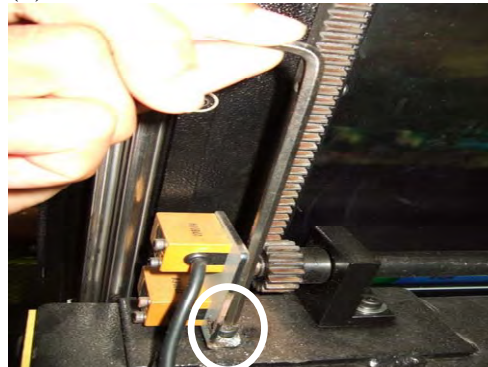


Please follow steps below to adjust sensor position.

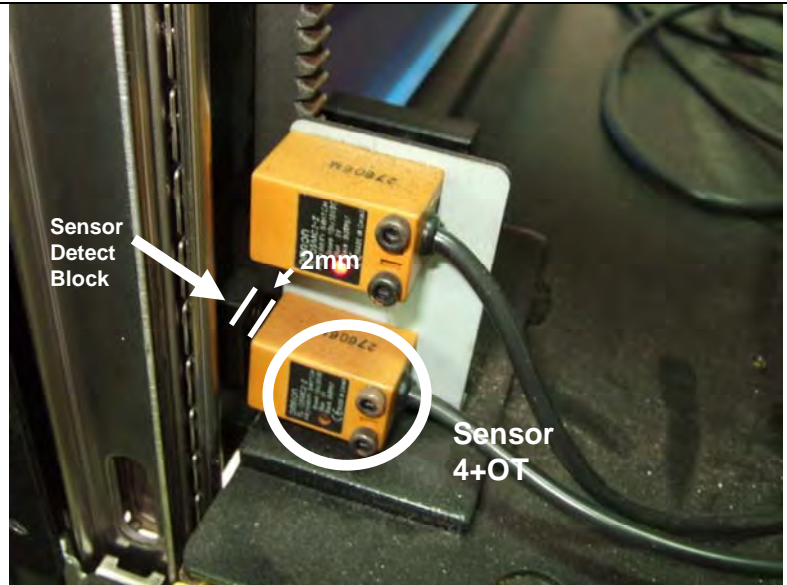
(a) Move Monitor to top position.



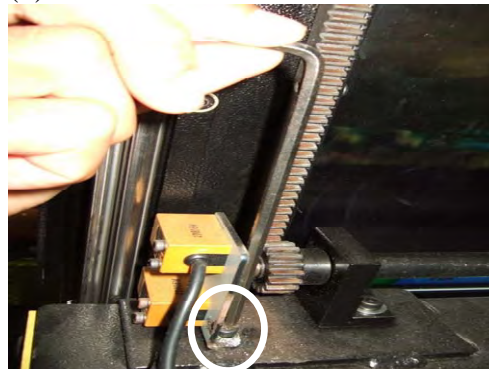
(b) Loose the screws which fix the sensor



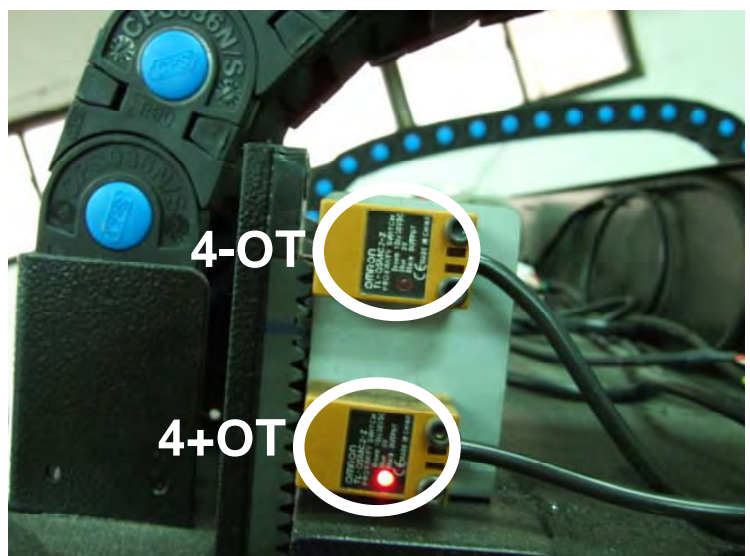
(c) Adjust the distance between sensor and sensor detect block to 2mm






(d) Fix the screws.

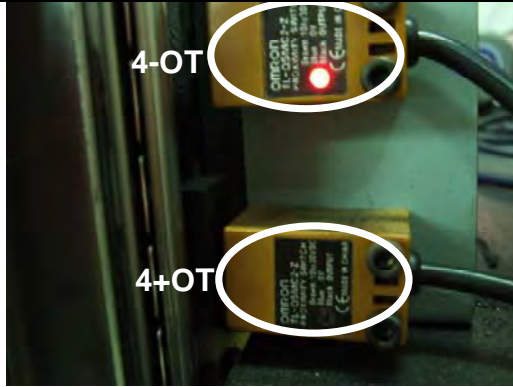


(e) Remove Monitor to bottom position. While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct, and complete adjustment.

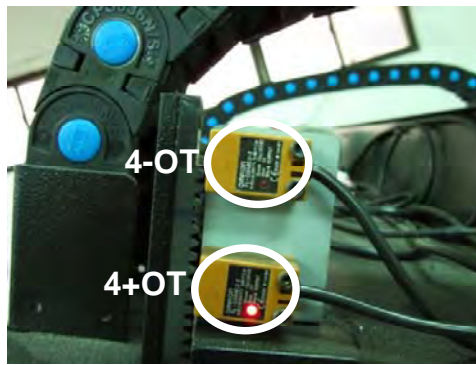


(f) If the problem persists, continue to 3<sup>rd</sup> Possibility.

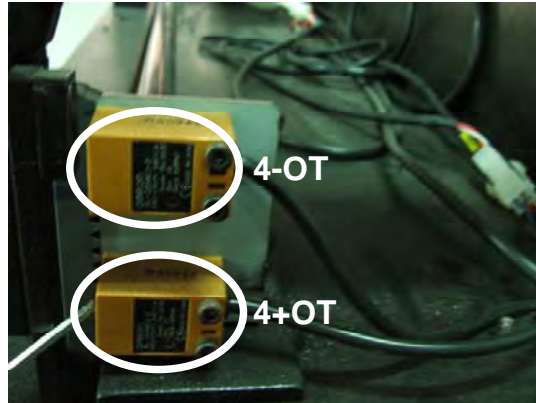
		<p><b>3<sup>rd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>                  Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0013</b></p>	<p>LCD Monitor Up/Down Sensor or Relay A4 failure</p>	<p><b>1<sup>st</sup> Possibility: A4 Broken</b>                  Please Power Off system then replace relay A4. Please refer to Component Replacement Procedure List on page 105: Component#33 Replacement Procedure to complete replacement.</p> <p><b>2<sup>nd</sup> Possibility: Sensor Failure</b>                  1. Remove covers on top side of cockpit. Follow steps below to check Monitor Up Sensor (4-OT) is working or not.                  (a) Remove covers as shown below</p>   <p>(b) While Monitor is at Up position, the LED light on sensor (4+OT) is off but LED light on sensor (4-OT) is on, which is correct.</p> 



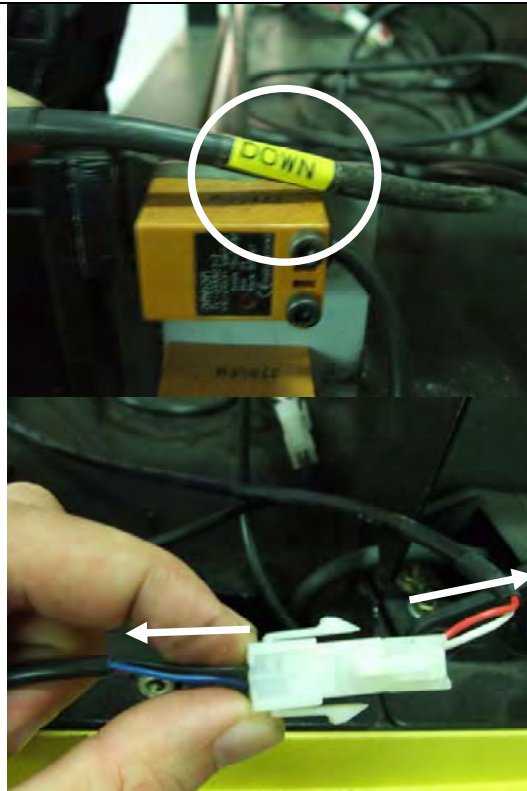
(c) While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct.



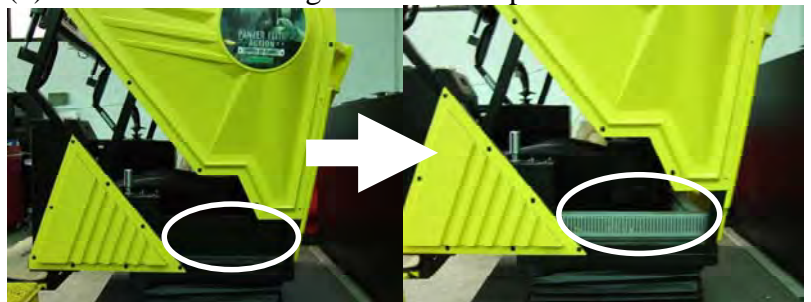
2. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.



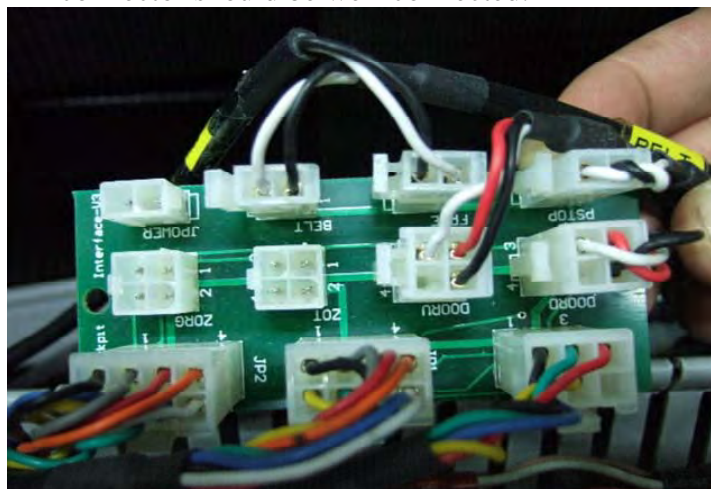
Please follow steps below to check connectors loose or not.  
(a) Check wire and connector (wire number is “DOWN”) on top of cockpit. The wire should not be pulled out and connector should be well-connected.

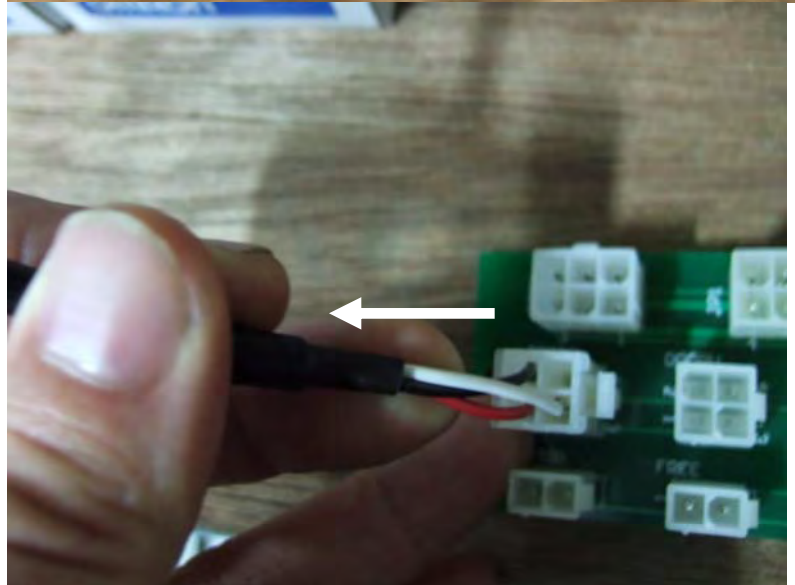
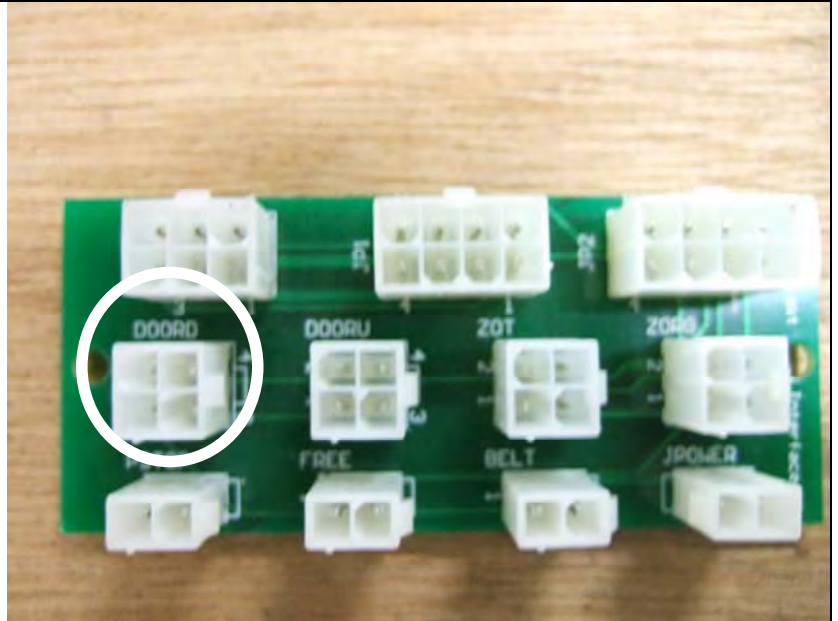


(b) Remove cover on right side of cockpit.

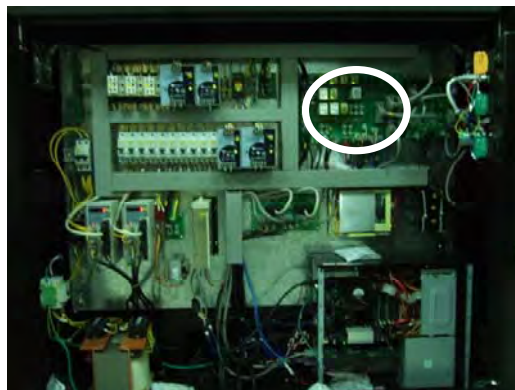


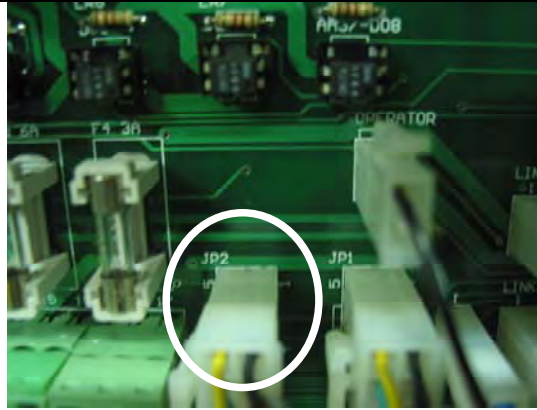
(c) Check wire and connector at cockpit (wire number is "DOORD"), The wire should not be pulled out and connector should be well-connected.





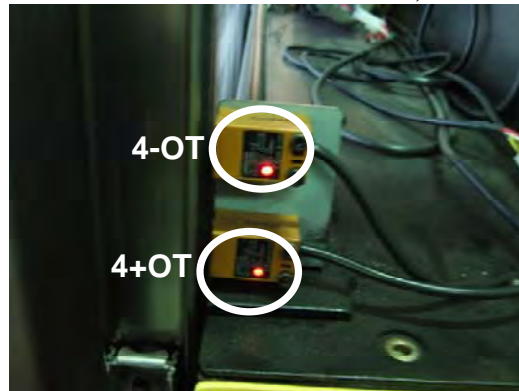
(d) Check wire and connector (JP2) in power box. The wire should not be pulled out and connector should be well-connected.





(e) If all connectors and wires above are well-connected. Replace sensor. Please refer to Component Replacement Procedure List on page 105: Component#24 Monitor Up/Down Sensor Replacement Procedure to complete replacement.

3. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.



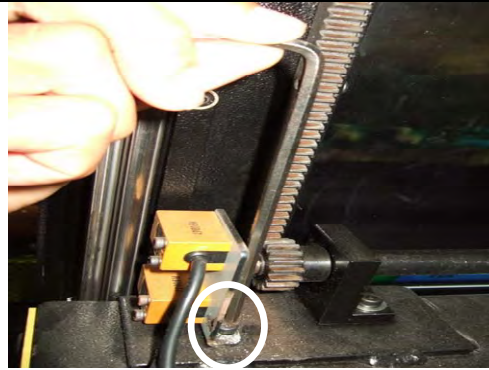
Please follow steps below to adjust sensor position.

(a) Move Monitor to top position.

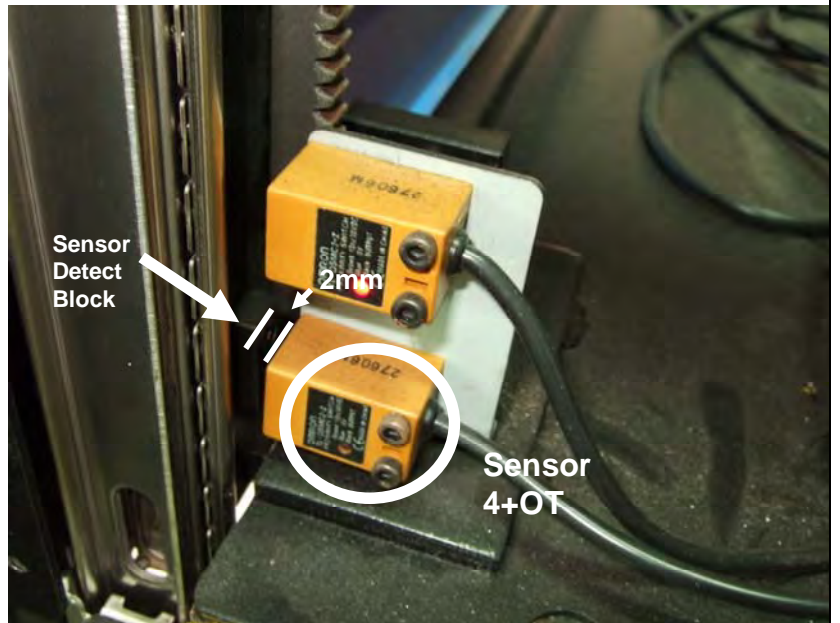


(b) Loose the screws which fix the sensor

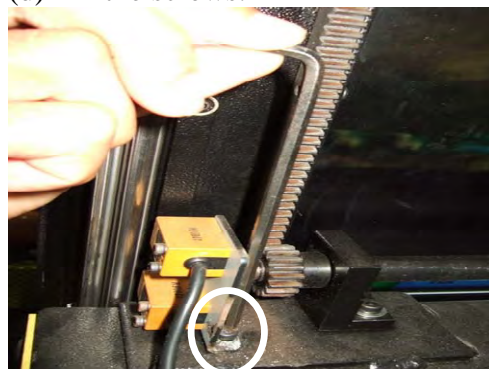




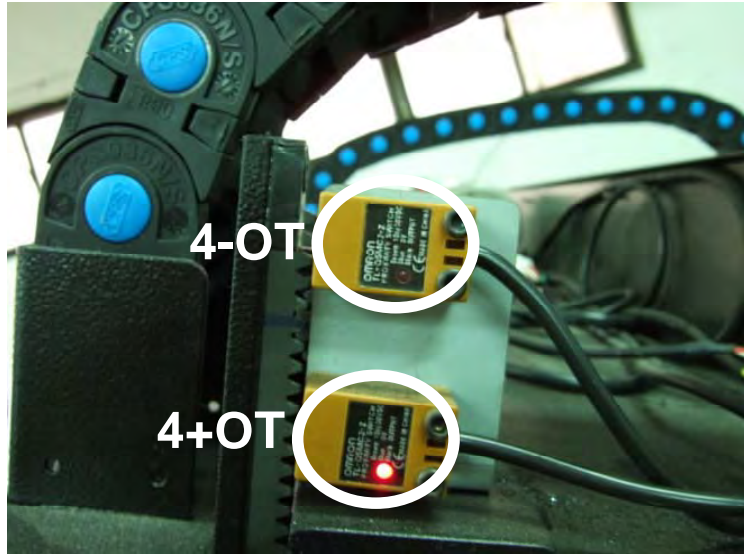
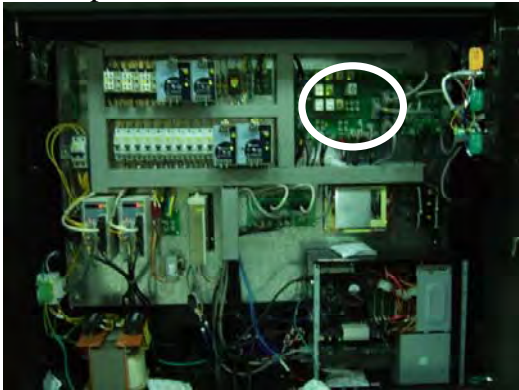
(c) Adjust the distance between sensor and sensor detect block to 2mm



(d) Fix the screws.

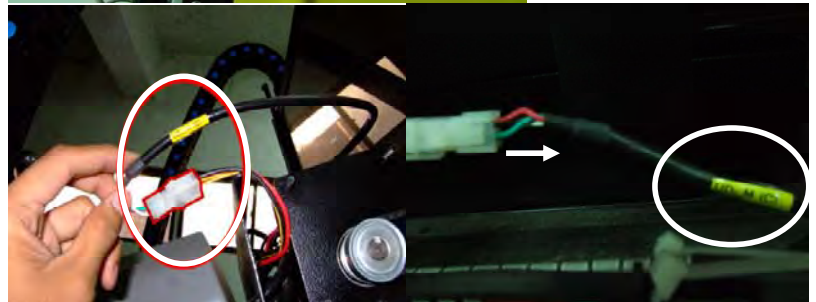


(e) Remove Monitor to bottom position. While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct, and complete adjustment.

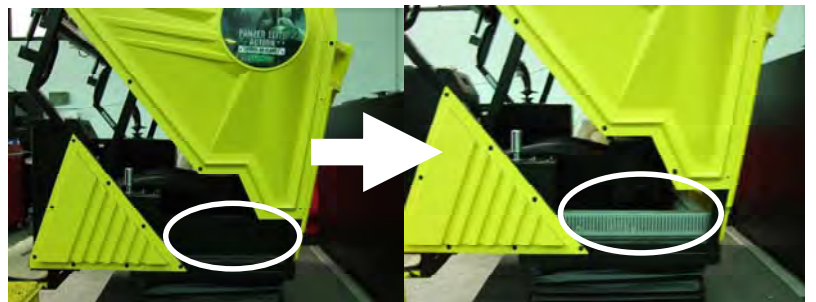
		 <p>(f) If the problem persists, continue to 3<sup>rd</sup> Possibility.</p> <p><b>3<sup>rd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>          Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card(IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0014</b></p>	<p>LCD Monitor          Up/Down Motor          Brake Relay A5          Failure</p>	<p><b>1<sup>st</sup> Possibility: A5 Broken</b>          Please Power Off system then replace relay A5. Please refer to Component Replacement Procedure List on page 105: Component#33 Replacement Procedure to complete Replacement.          If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Check connectors (UD_MOTOR)</b>          Please follow steps and pictures below to check this.          (a) Check the connector (UD_MOTOR) on IMON_CONTROL_DAUGHTER_V2 Card. The wire should not be pulled out and connectors should be well-connected.</p> 

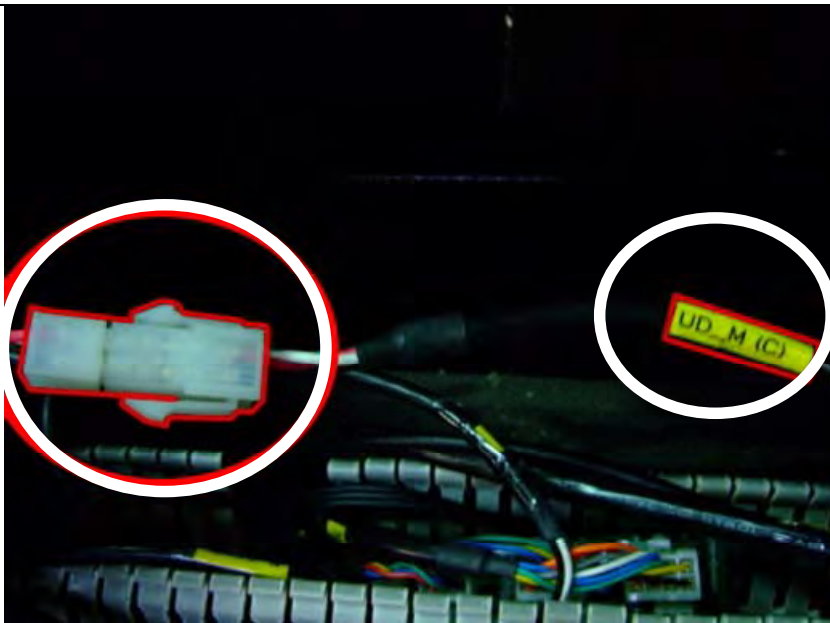
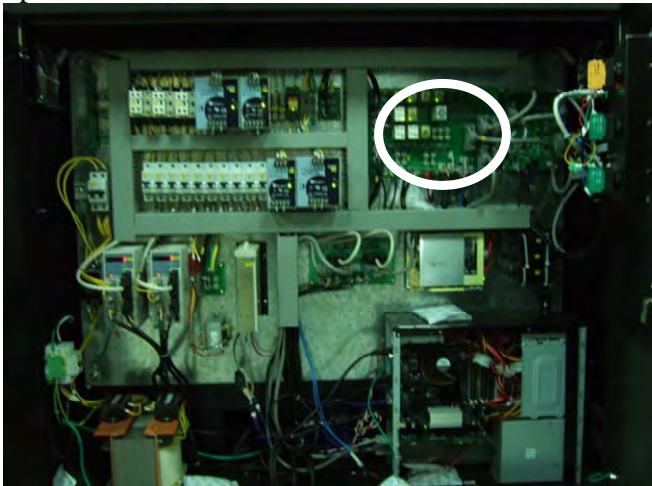


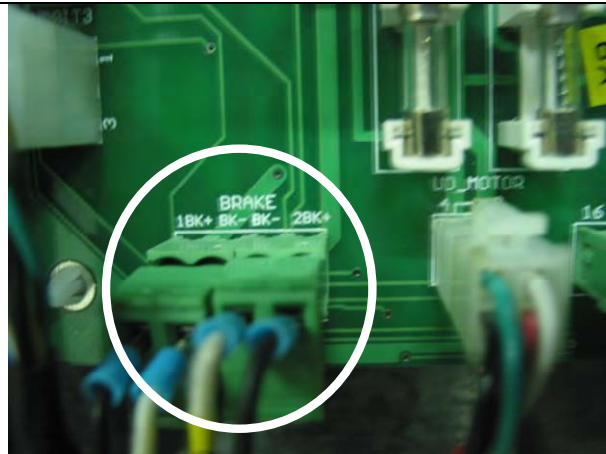
(b) Check the connector (UD\_MOTOR) on the top side of cockpit. The wire should not be pulled out.



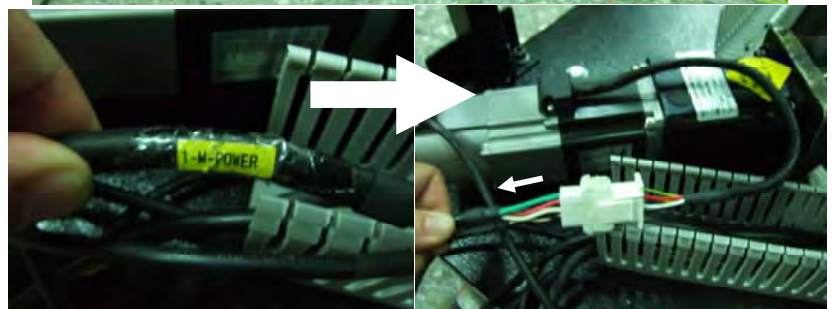
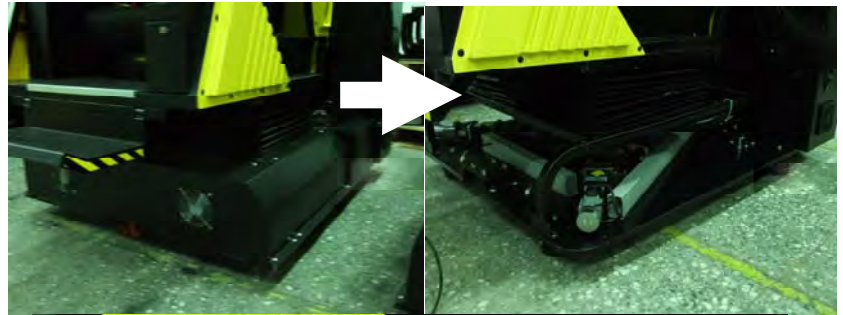
(c) Remove covers on right side of cockpit. Check connector (UD\_MOTOR), which should not be pulled out and well-connected.



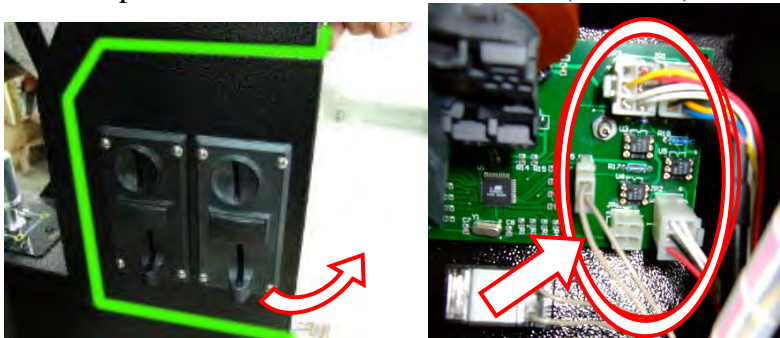
		 <p>(d) If the problem persists, continue to 3<sup>rd</sup> Possibility.</p> <p><b>3<sup>rd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>                  Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0015</b></p>	<p>Servo Motor                  Brake Relay A6                  Failure</p>	<p><b>1<sup>st</sup> Possibility: A6 Broken</b>                  Please Power Off system then replace relay A6. Please refer to Component Replacement Procedure List on page 105: Component#33 Replacement Procedure to complete replacement.                  If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Connector Loose</b>                  Please follow steps and pictures below to check this.                  (a) Check connector (1BK+BK-BK-2BK+) on IMON-CONTROL-DAUGHTER-V2 Card. The wire should not be pulled out and connectors should be well-connected.</p> 

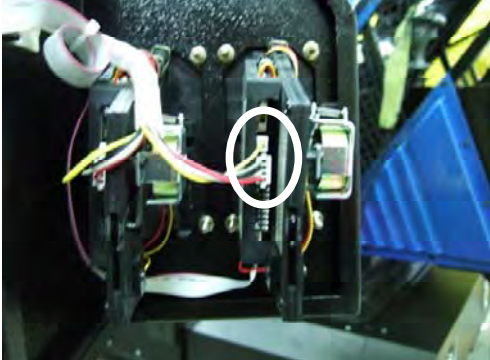


(b) Check the connector (1-M-POWER) on base plate (Open covers first). The wire should not be pulled out and connector should be well-connected.



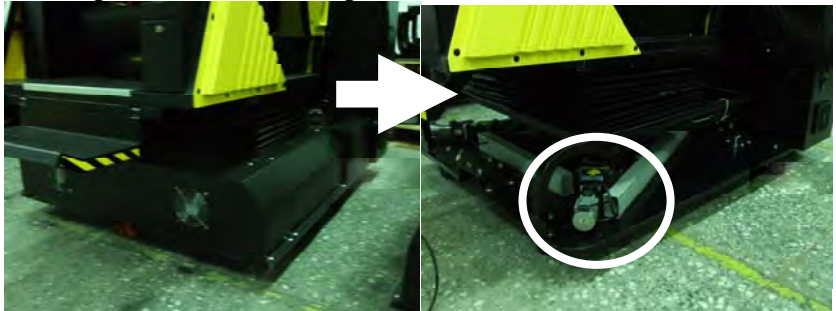
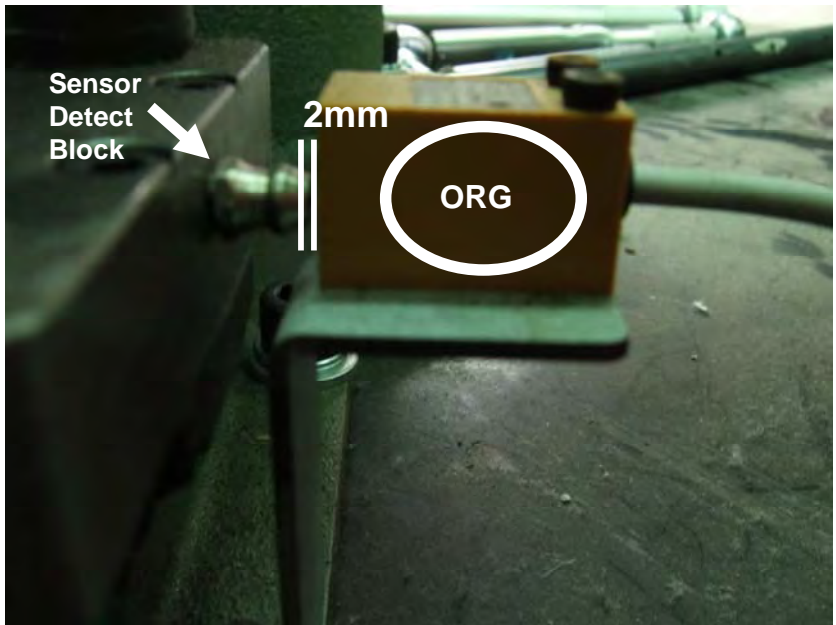
(c) If the problem persists, continue to 3<sup>rd</sup> Possibility.

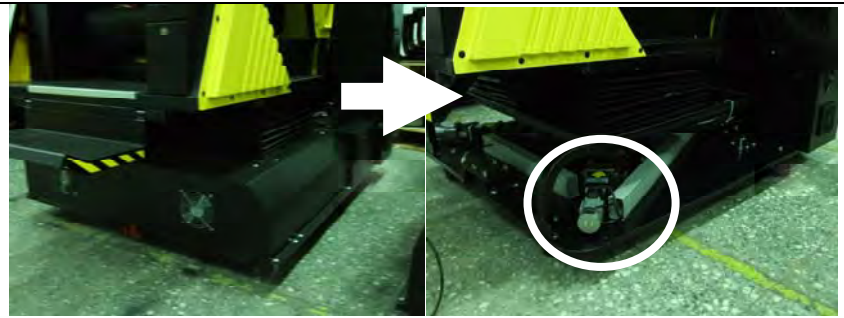
		<p><b>3<sup>rd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>                  Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card(IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
0016	PR2_2 Failure	<p><b>1<sup>st</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>                  Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card(IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.                  If the problem persists, continue to 2<sup>nd</sup> Possibility.</p>
		<p><b>2<sup>nd</sup> Possibility: BIT Control Card Failure</b>                  Replace BIT Control card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.</p>
0017	PR3_2 Failure	<p><b>1<sup>st</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b>                  Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.                  If the problem persists, continue to 2<sup>nd</sup> Possibility.</p>
		<p><b>2<sup>nd</sup> Possibility: BIT Control Card Failure</b>                  Replace BIT Control card. Please refer to Component Replacement Procedure List on page 105: Component# 29BIT Control Card Replacement Procedure to complete replacement.</p>
0019	Fuse (F2) was burned (Coin Acceptor Power)	<p><b>1<sup>st</sup> Possibility: Coin Acceptor power connector disconnect</b>                  Connect power connector as shown below. (JP1~JP5)</p> 

		 <p>If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F2 (2A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 3<sup>rd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0020</b></p>	<p>Fuse (F3, F4) was burned (LCD Monitor Power)</p>	<p><b>1<sup>st</sup> Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F3 (6A), F4 (3A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0021</b></p>	<p>Fuse(F5) was burned (Monitor Up/Down Motor Brake)</p>	<p><b>1<sup>st</sup> Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F5 (1A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>

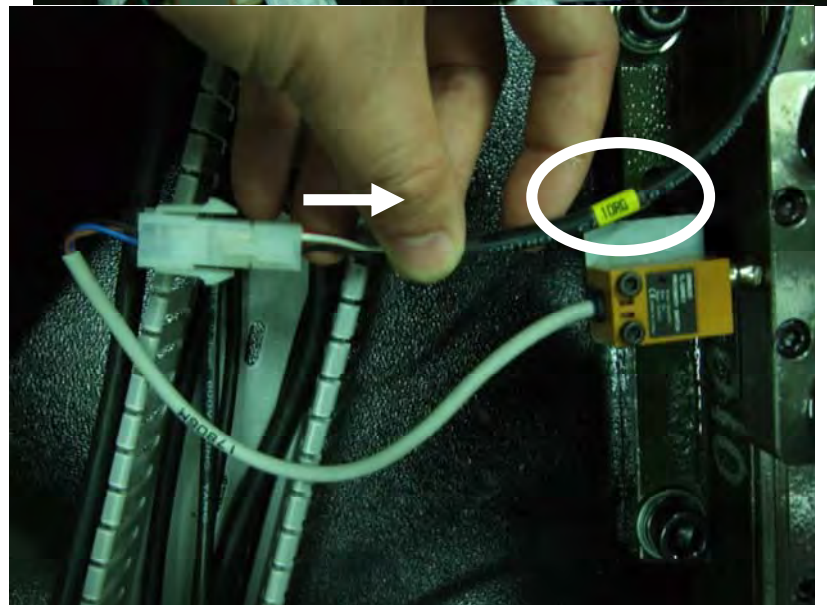
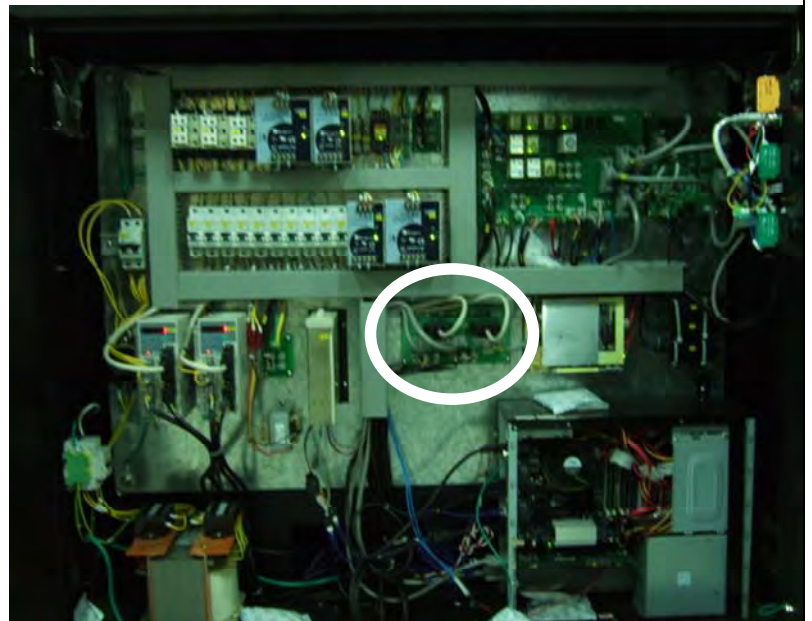
<p><b>0034</b></p>	<p>Fuse (F6) was burned (ORG Sensor)</p>	<p><b>1<sup>st</sup> Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F6 (1A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0022</b></p>	<p>Fuse (F7) was burned (Monitor Up/Down Sensor)</p>	<p><b>1<sup>st</sup> Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F7 (0.5A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0023</b></p>	<p>Fuse (F8) was burned (Monitor Up/Down Motor)</p>	<p><b>1<sup>st</sup> Possibility: Fuse Broken</b> Please Power Off system then replace same specification Fuse (F8 (6A)). Please refer to Component Replacement Procedure List on page 105: Component#32 Fuse (F1~F8) Replacement Procedure to complete replacement. If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility: Motor is stuck while it is moving Up/Down</b> Please verify there is nothing to stop motor (or monitor tilt) and monitor moves upward/downward smoothly. If any, Please remove it. If the problem persists, continue to 3<sup>rd</sup> Possibility.</p> <p><b>3<sup>rd</sup> Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</b> Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
<p><b>0026</b></p>	<p>Servo Motor Alarm Code</p>	<p>Refer to Reference (2) on page 50 to reset system.</p>
<p><b>0027</b></p>	<p>Touch "1+OT" Sensor</p>	<p>Refer to Reference (1) on page 48 to reset system.</p>
<p><b>0028</b></p>	<p>Touch "1-OT" Sensor</p>	<p>Refer to Reference (1) on page 48 to reset system.</p>



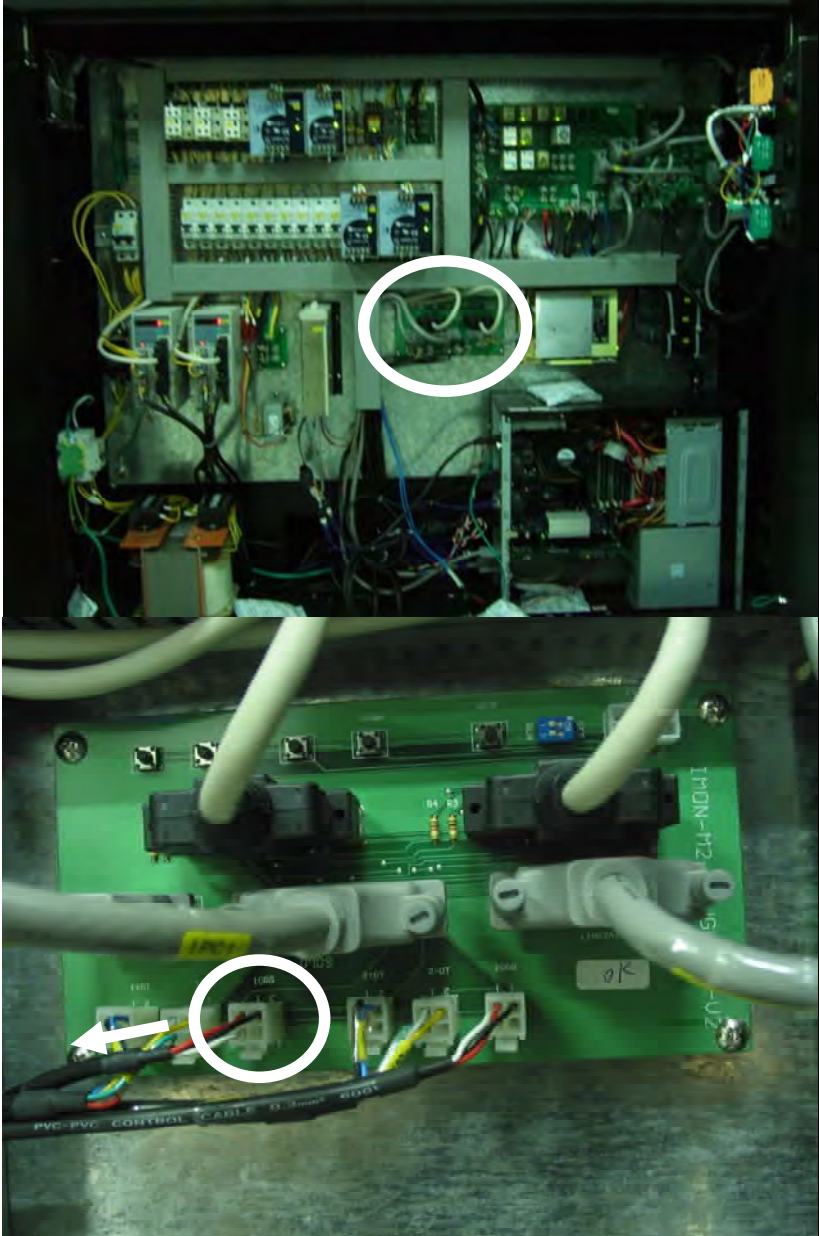
<p><b>0029</b></p>	<p>Touch "2+OT" Sensor</p>	<p>Refer to Reference (1) on page 48 to reset system.</p>
<p><b>0030</b></p>	<p>Touch "2-OT" Sensor</p>	<p>Refer to Reference (1) on page 48 to reset system.</p>
<p><b>0032</b></p>	<p>Motion Card Failure</p>	<p>Please replace new Motion Card. Please refer to Component Replacement Procedure List on page 105: Component#31 Motion Card Replacement Procedure to complete replacement.</p>
<p><b>0033</b></p>	<p>Homing Failure</p>	<p><b>1<sup>st</sup> Possibility:</b> ORG Sensor Position is incorrect.                      The indicator of ORG sensor is on while the system at home position. If is it not, please follow steps below to adjust sensor.</p> <p>(a) Open covers on base plate</p>  <p>(b) Adjust the distance between ORG sensor and sensor detect block to 2mm.</p>  <p>(c) If the problem persists, continue to 2<sup>nd</sup> Possibility.</p> <p><b>2<sup>nd</sup> Possibility:</b> Connector Loose                      Please follow steps below to check this.</p> <p>(a) Open covers on base plate.</p>

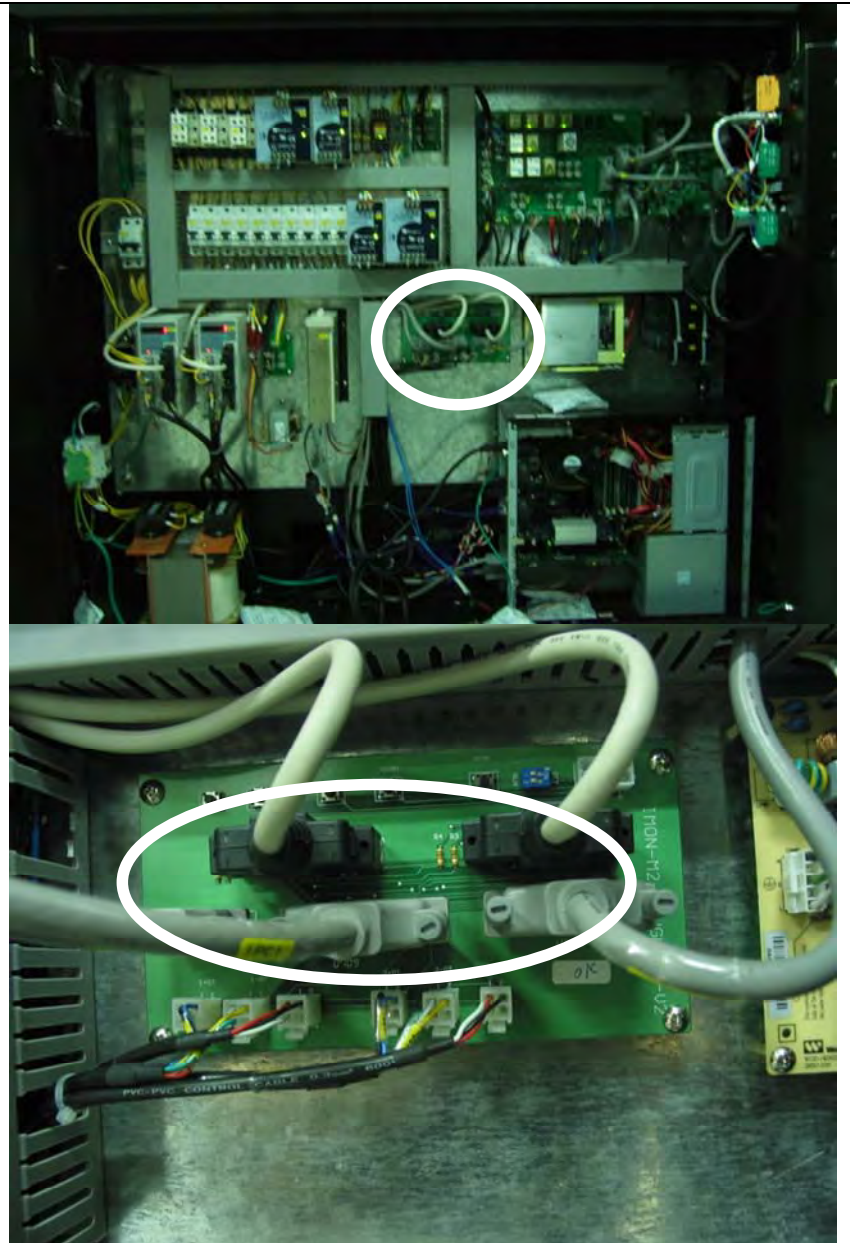


(b) Check the connector and wire (Wire number is ORG). The wire should not be pulled out and connector should be well-connected.

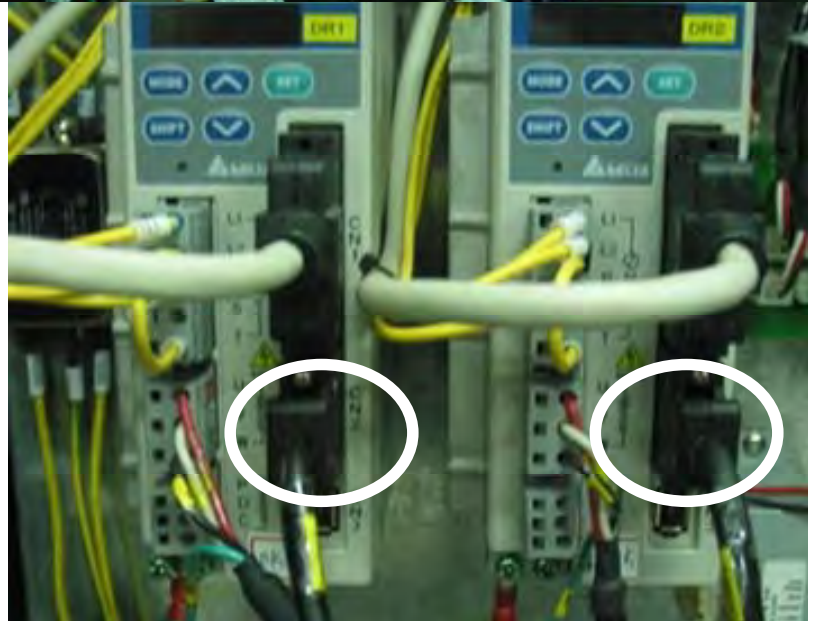
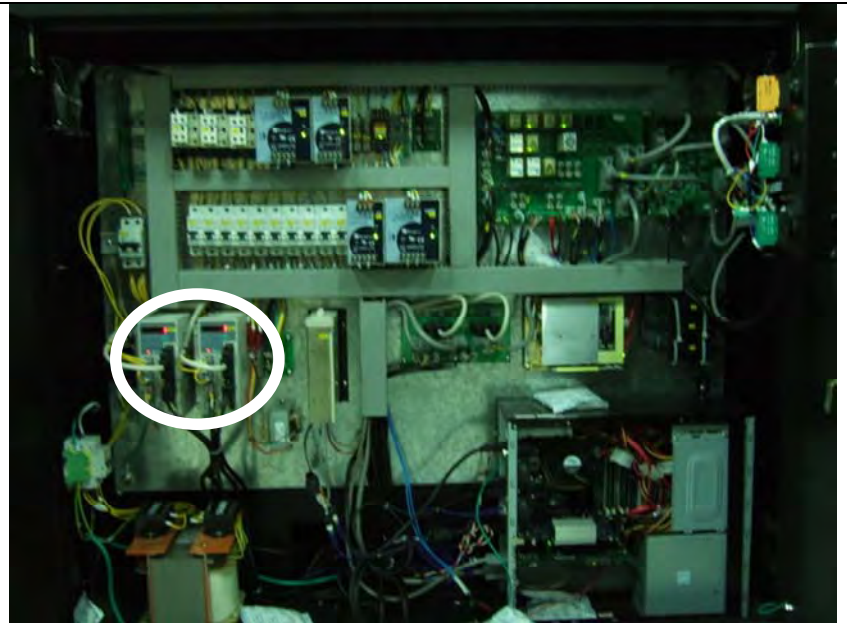


(c) Check connector on 2-Axis Card (wire number is and2ORG1ORG). The wire should not be pulled out and connectors are well connected.

		 <p>(d) If the problem persists, continue to 3<sup>rd</sup> Possibility.</p> <p><b>3<sup>rd</sup> Possibility:</b> ORG Sensor Broken          Replace ORG Sensor. Please refer to Component Replacement Procedure List on page 105: Component#21 ORG Sensor Replacement Procedure to complete replacement.</p>
<p><b>0035</b></p>	<p>Motor Encoder Failure (Ignore this because the system is not affected by this error code)</p>	<p><b>1<sup>st</sup> Possibility:</b> Ignore this if system is working well.</p> <p><b>2<sup>nd</sup> Possibility:</b> The alarm can be clear by rebooting system. If the error always appears, please follow steps below to eliminate it.</p> <p>(a) Check the connectors on 2-Axis Card are well-connected.</p>



(b) Check Servo Amplifier Connector (CN2) is well-connected.



**\*Please refer to "Troubleshooting" on page 79, if the problems are not included in "Error Code Definition".**