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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!

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

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

3 INSTALLATION

3.1 SERVICE KIT

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

Service Kit	
Description	Qty
IMotion!-iGO 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.

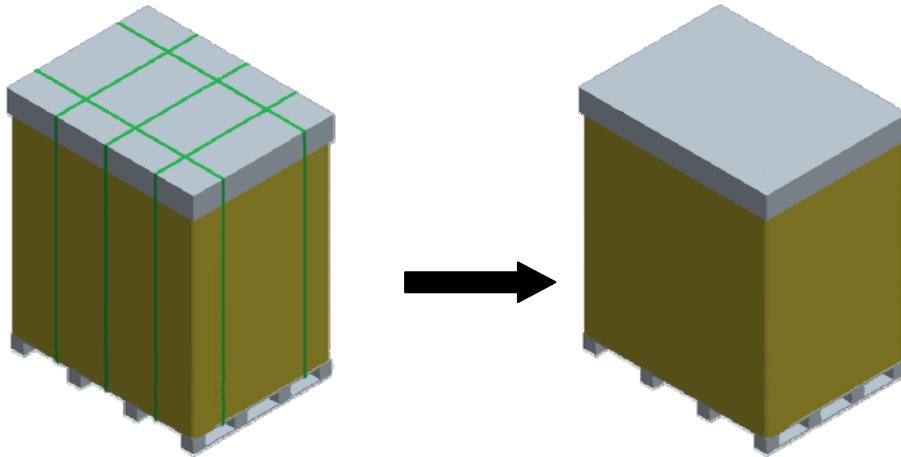


WARNING!!!

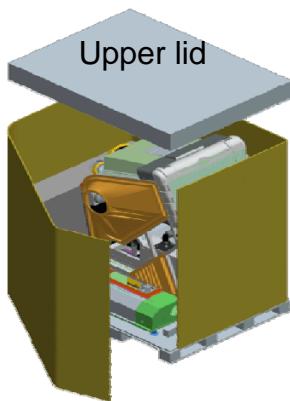
AVOID FIRE HAZARD: Do not install in an area such that the game would be an obstacle in case of an emergency (i.e. near fire equipment or emergency exits.)

3.2.2 UNPACKING AND INSTALLING PROCEDURE OF IMOTION!-iGO

Step 1: Cut Straps

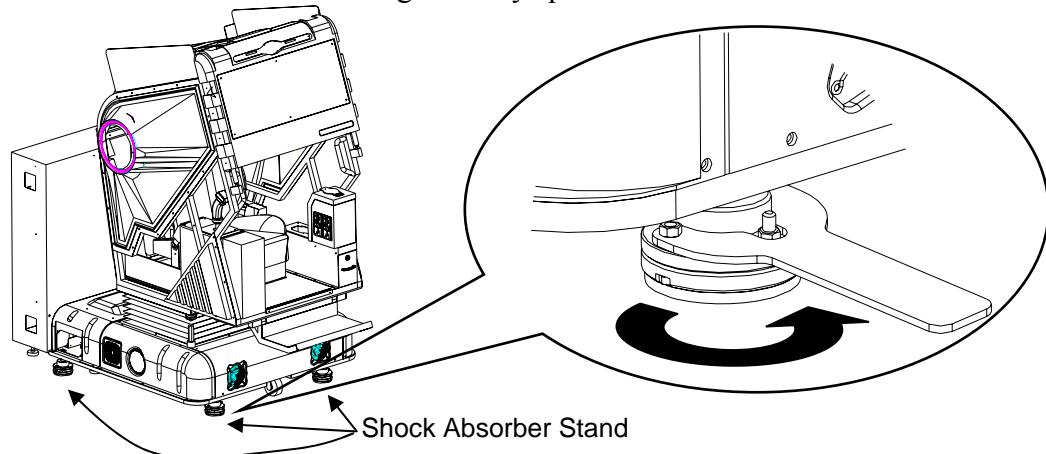


Step 2: Remove the cardboard box and the upper lid on the box. Release the screws locked on the side of the box. Remove the box, but **DO NOT DISCARD**. Save for possible repacking at a later time

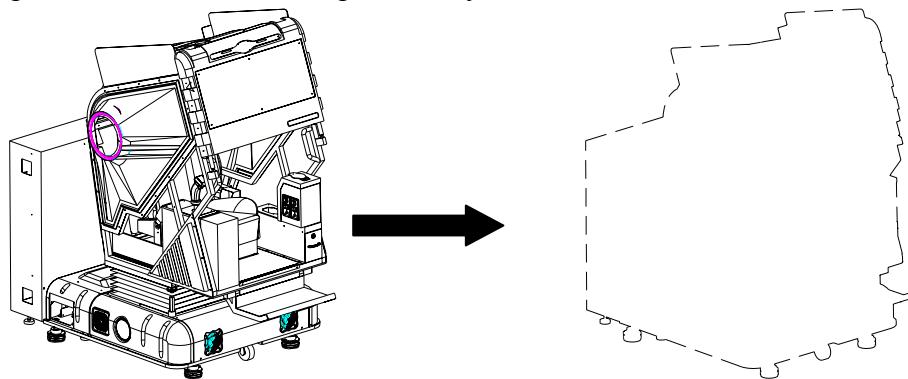


Notice: Special wrench and 10mm Allen wrench are shipped with machine and attached on footrest.

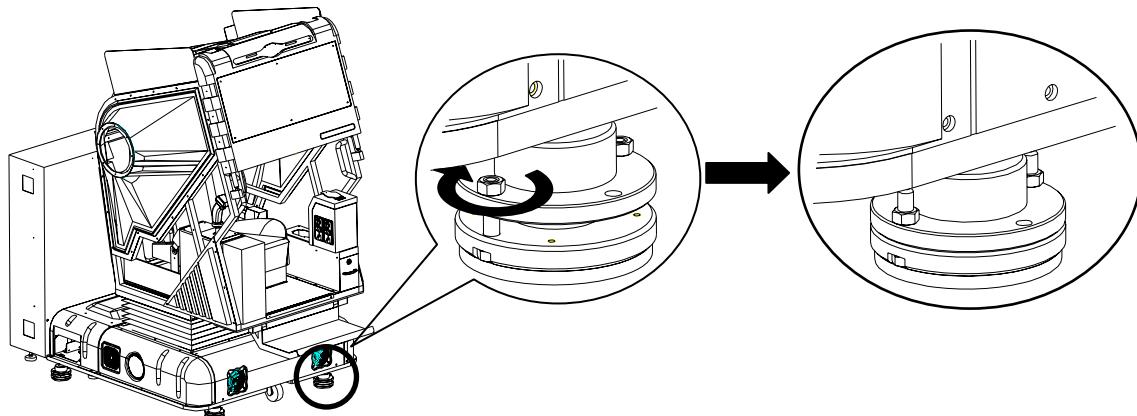
Step 3: (**Go to step 4 if you move machine by lifter**) Adjust four shock absorber stands up till the three wheels touch the ground by special wrench which is attached on footrest.



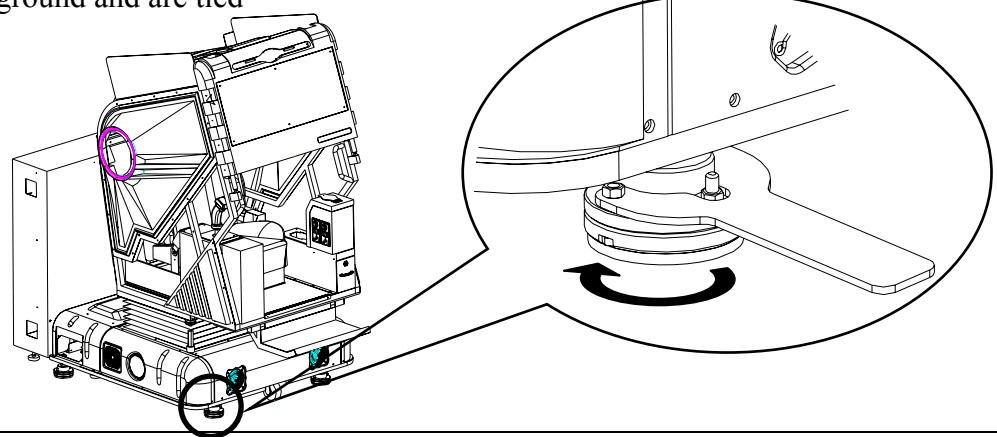
Step 4: Move machine to its position by its wheels or lifter.



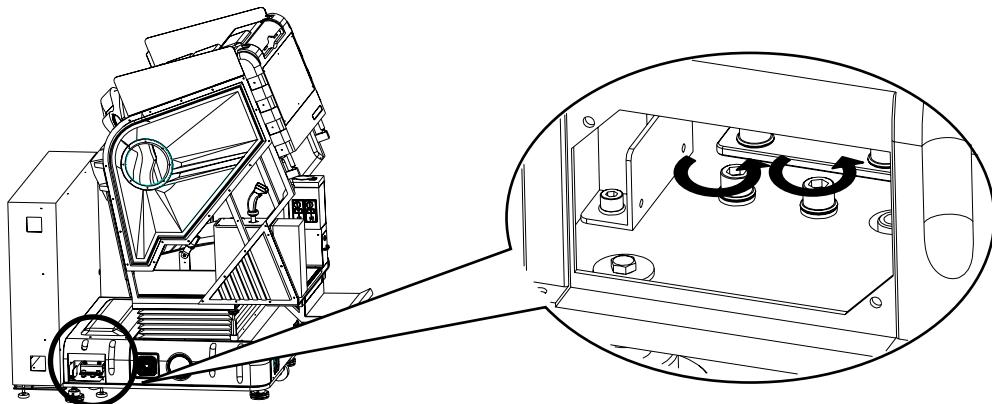
Step 5: (After completing this step, go to step 7 if you move machine by lifter.) Tie up two screws on four shock absorber stands till there is no gap by 13mm wrench.



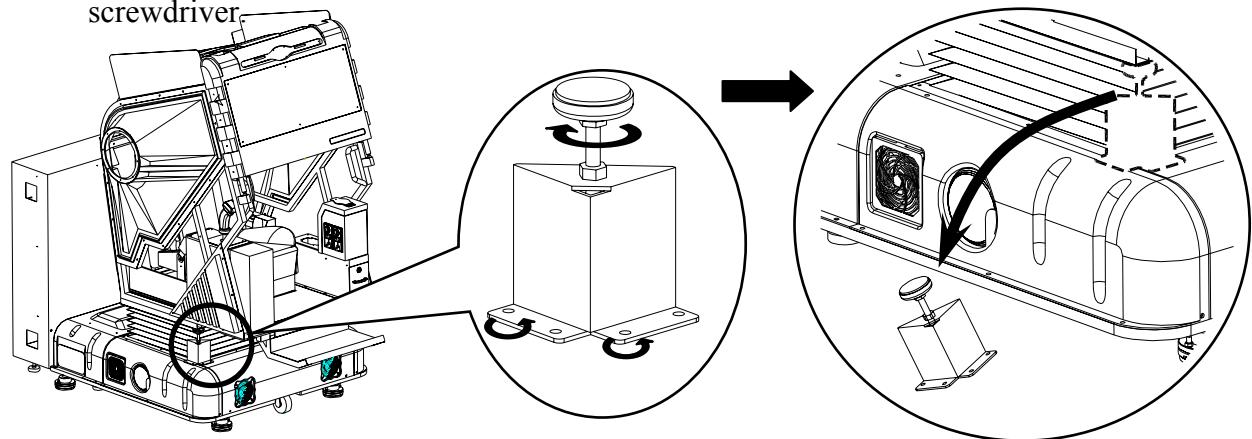
Step 6: Adjust four shock absorber stands down to ground by special wrench and make sure they touch the ground and are tied



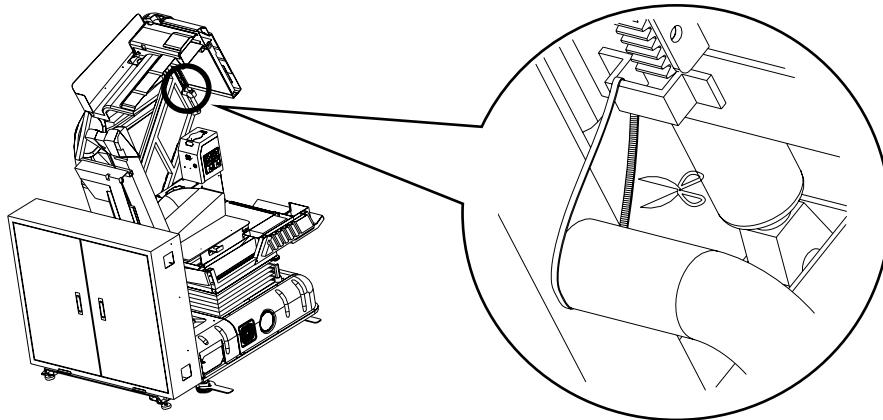
Step 7: Separate control box and base plate by loosing four screws by 10mm Allen wrench and make sure four adjustable stands of control box touch ground and level.



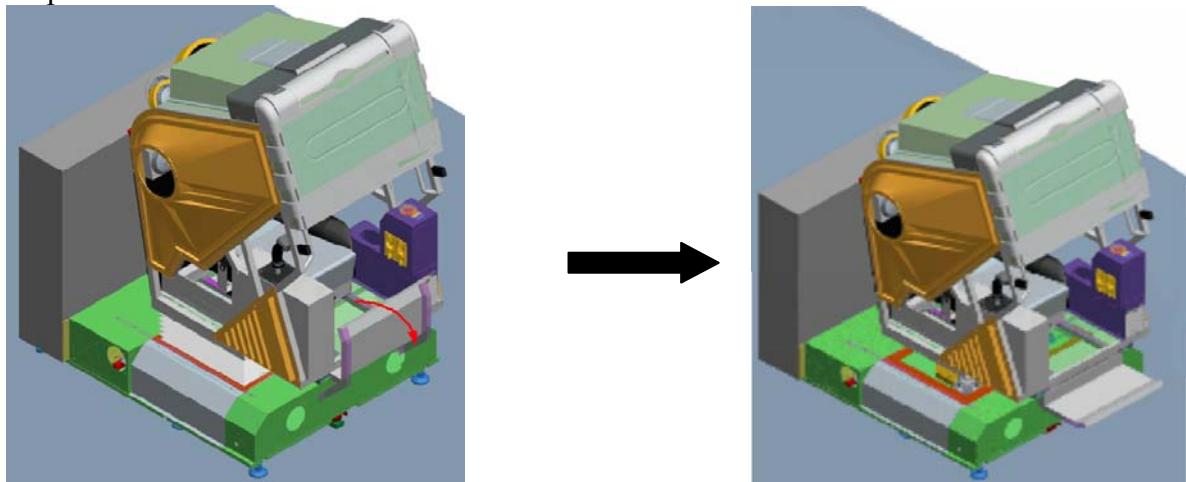
Step 8: Remove fixture by loosing screws between cockpit and base plate by 17mm wrench and screwdriver.



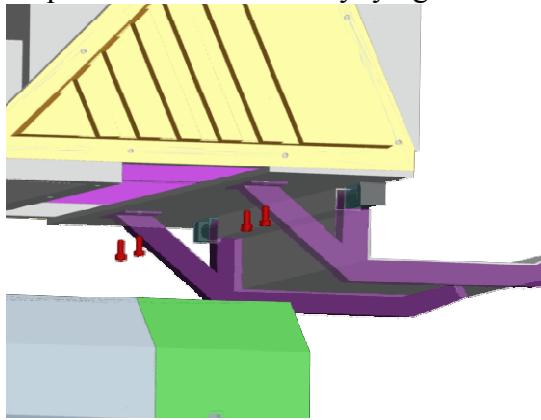
Step 9: Cut down the tie raps which fix the monitor (Monitor will move upward automatically).



Step 10: Put down the footrest.



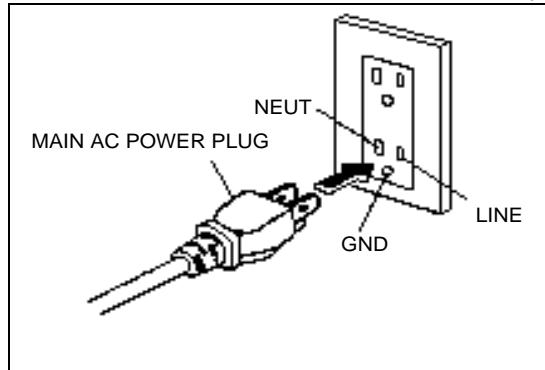
Step 11: Fix the footrest by tying screws.



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.

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

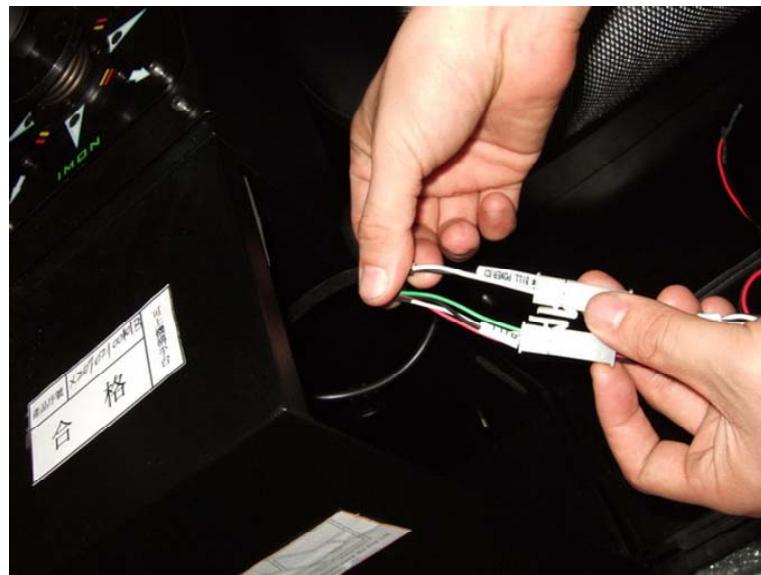


Fig. 3-2 Pull out the wires and connectors(BILL and BILL_POWER)

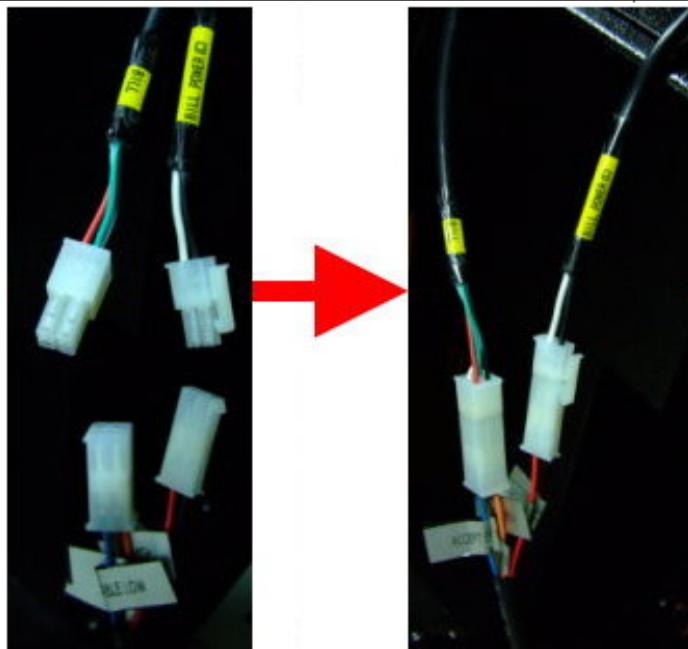


Fig. 3-3 Coinco MC 2600 series connector

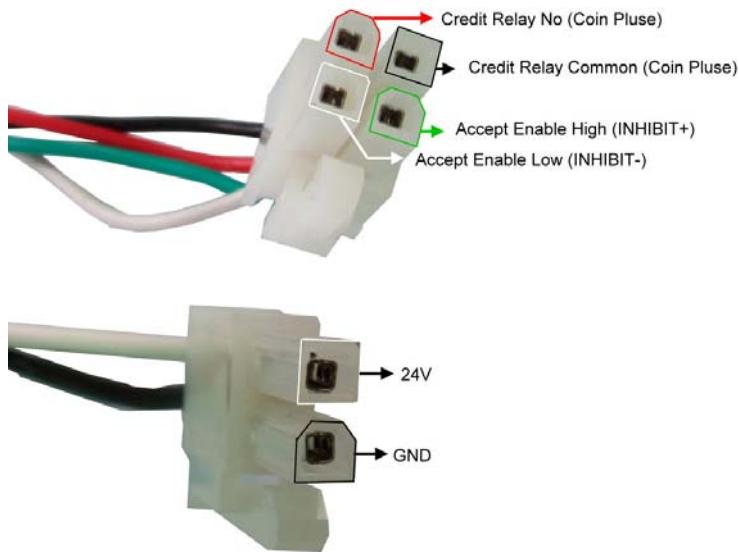


Fig. 3-4 The definition of the connector

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.

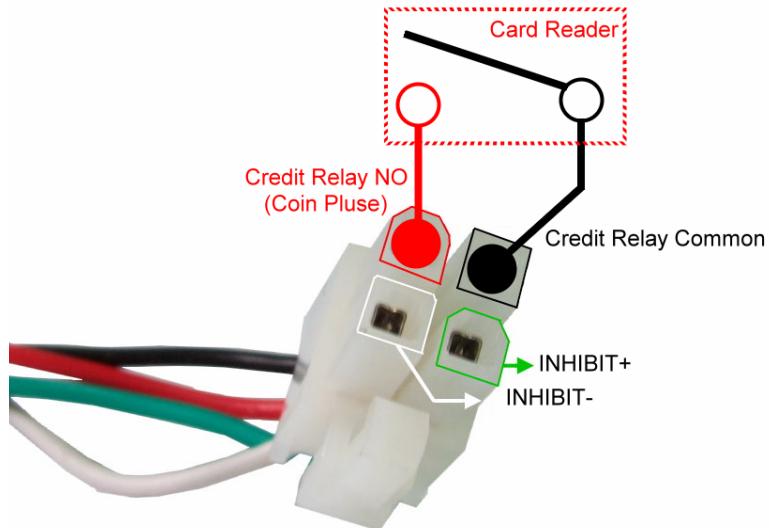


Fig. 3-5 The card reader connect

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).

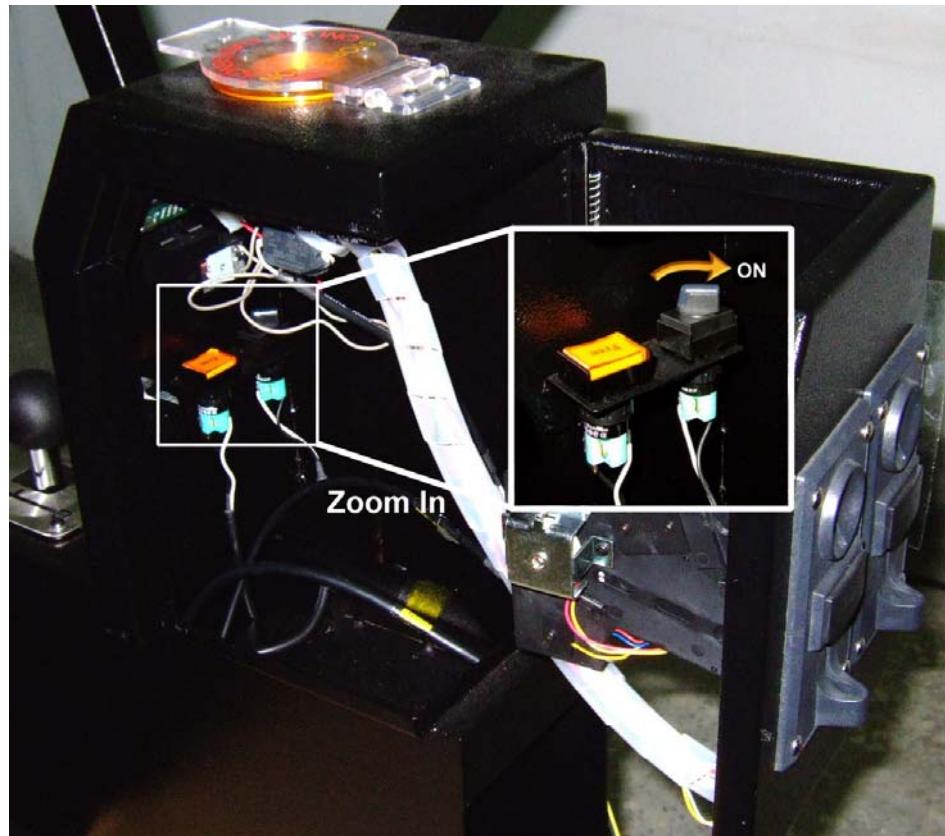


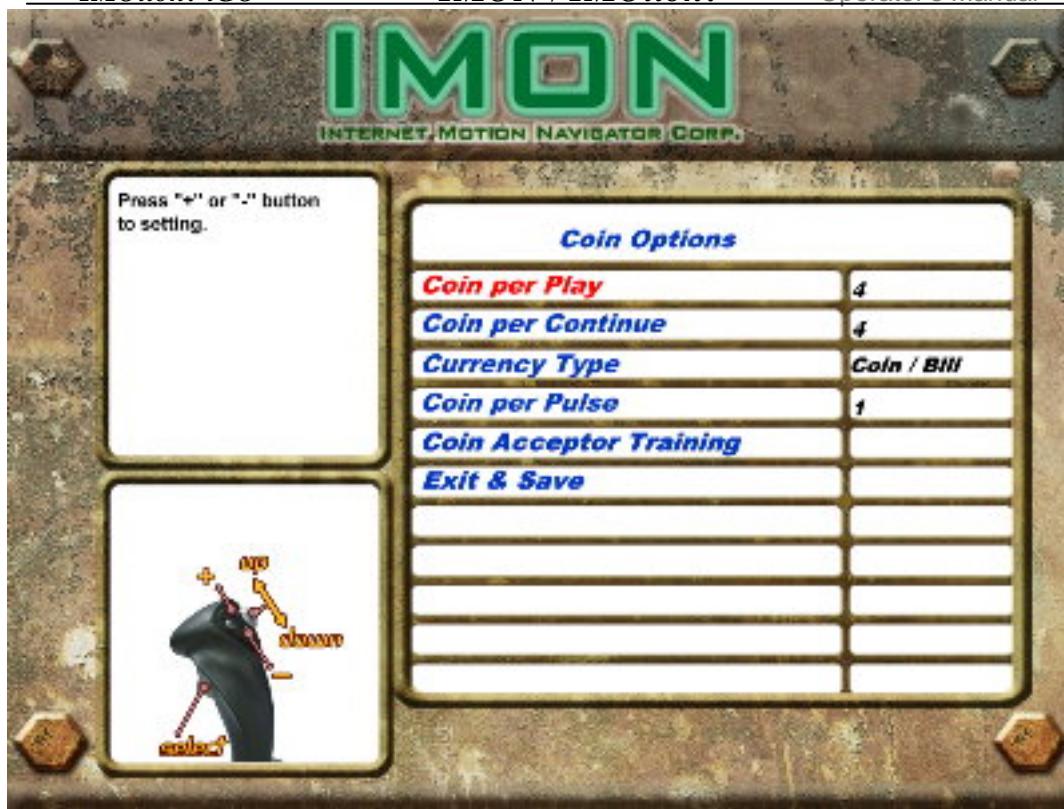
Fig. 4-1 Operator Switch



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

1. “*Coin 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. “*Coin 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. “*Coin 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).

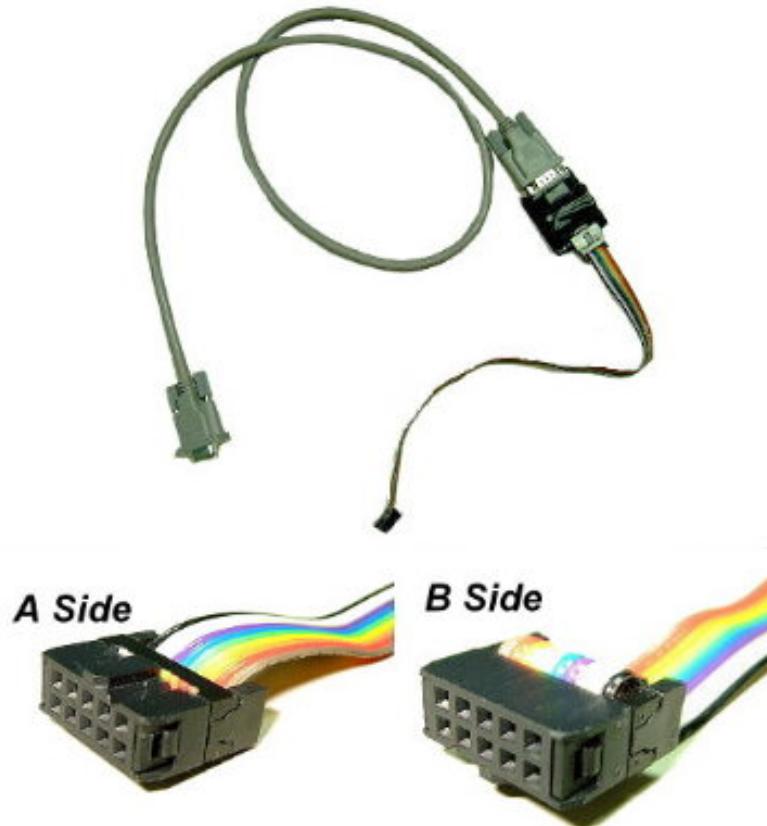


Fig. 4-4 Coin Training connector

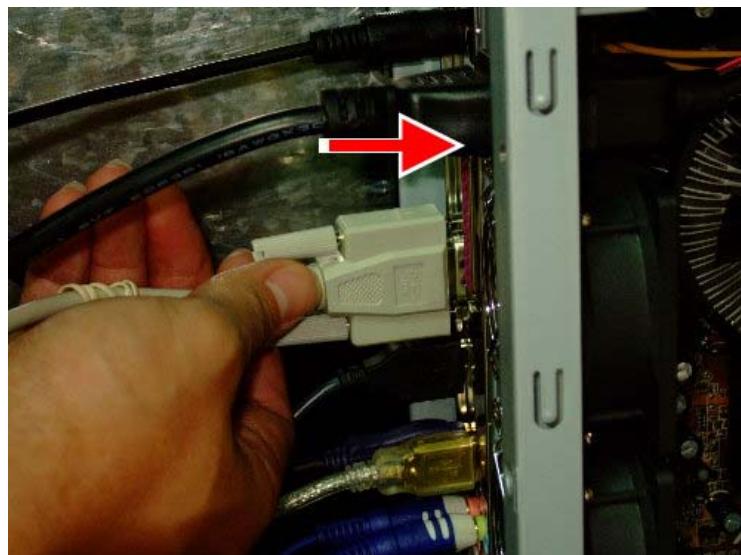


Fig. 4-5 RS232 port

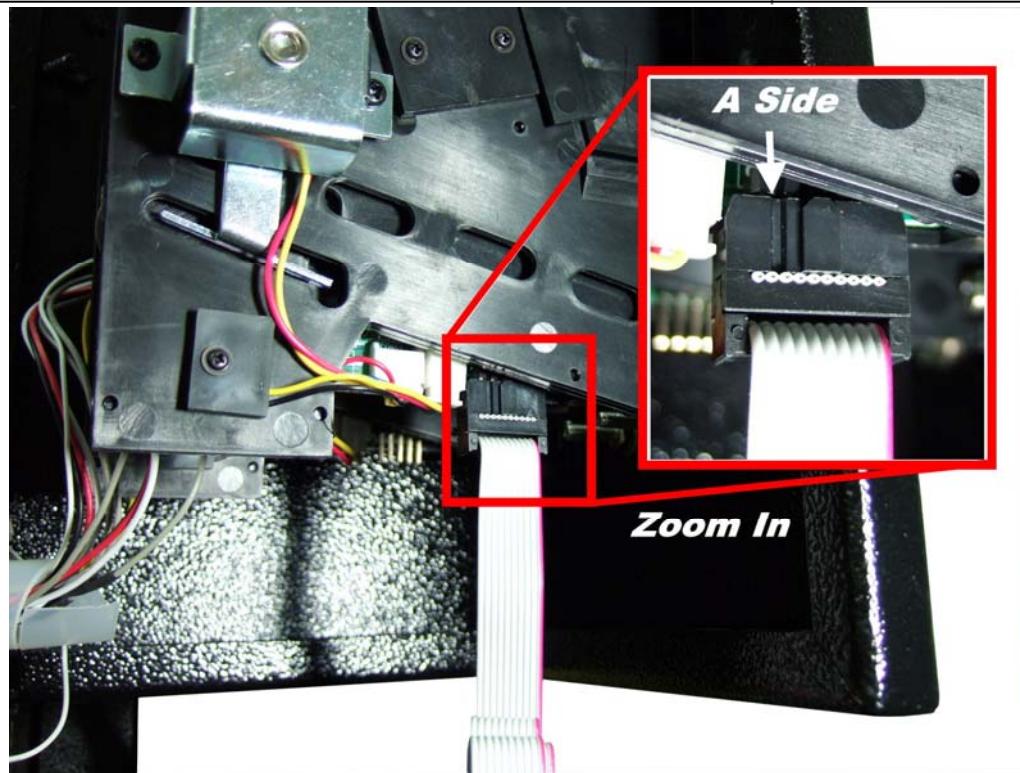


Fig. 4-6 Coin door

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

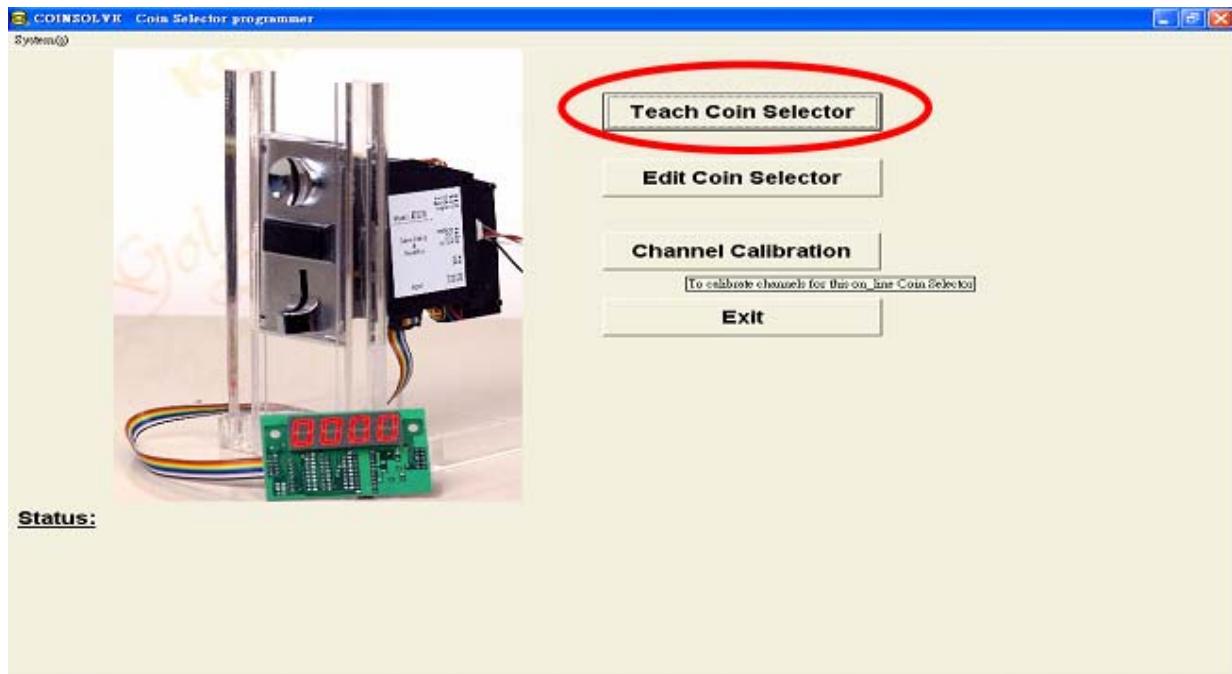


Fig. 4-7 Coin Training window

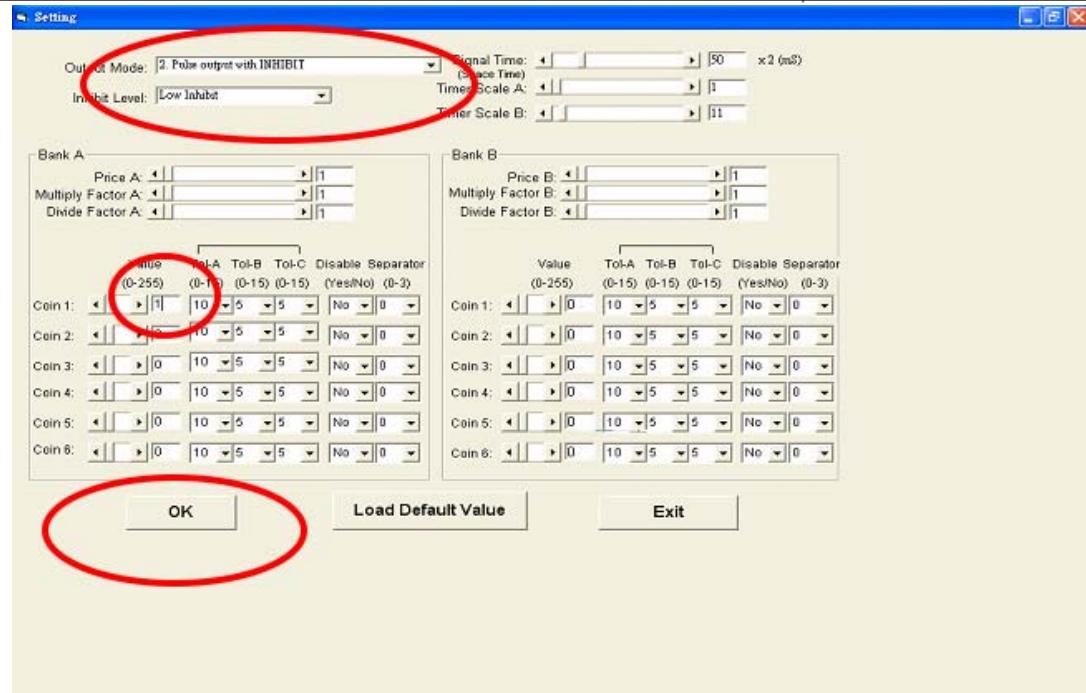


Fig. 4-8 Coin Training Setting

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 accepter. The system goes back to “Operator Menu”.

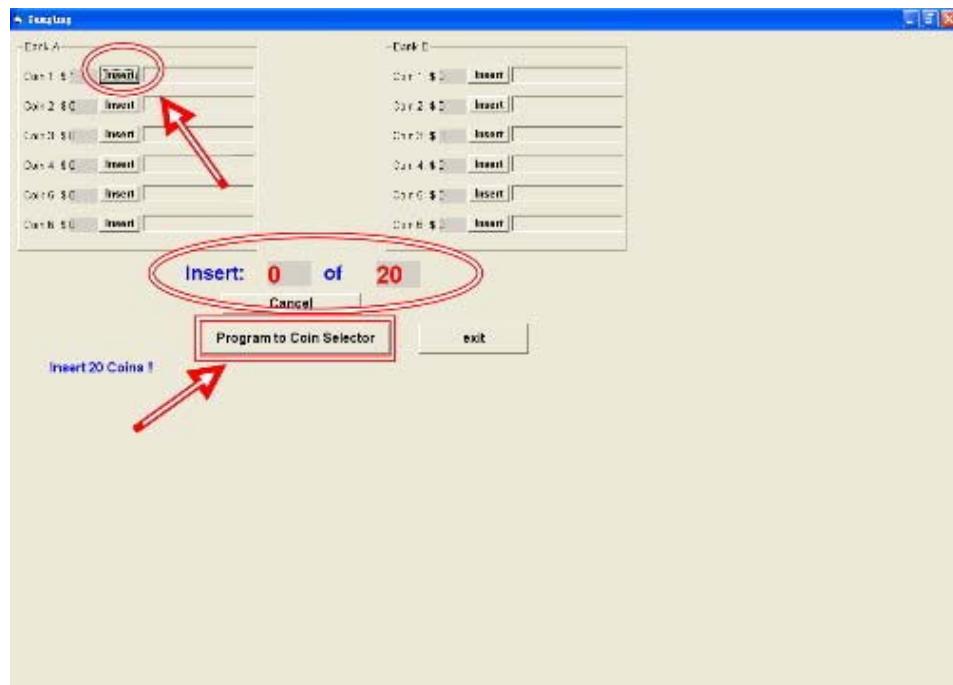


Fig. 4-9 Coin Training Sampling

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.

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)

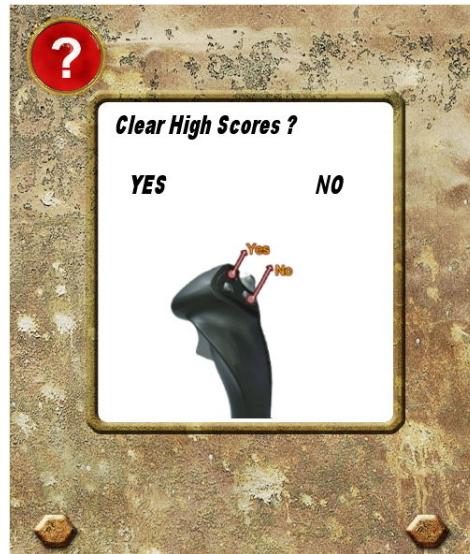


Fig. 4-12 “*Clear High Scores*” Window

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

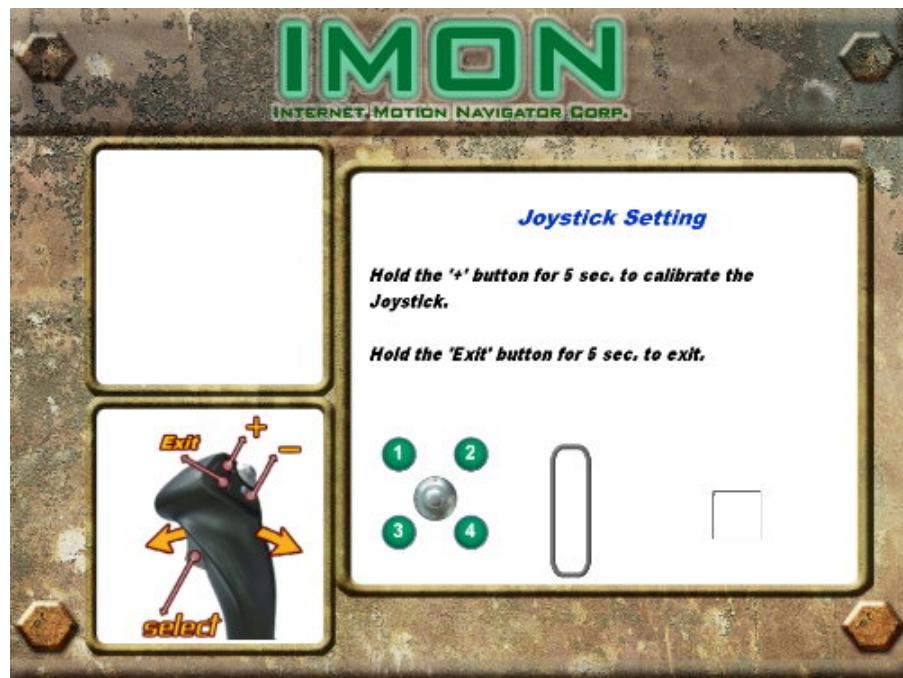


Fig. 4-12 “*Joystick Setting*” sub-menu

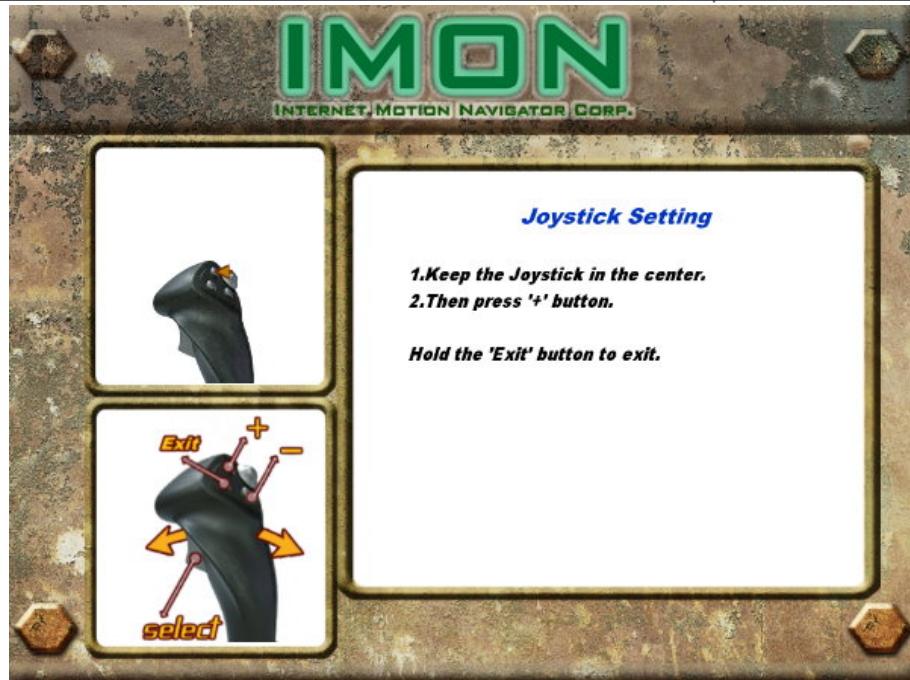


Fig 4-13 Joystick calibrate

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

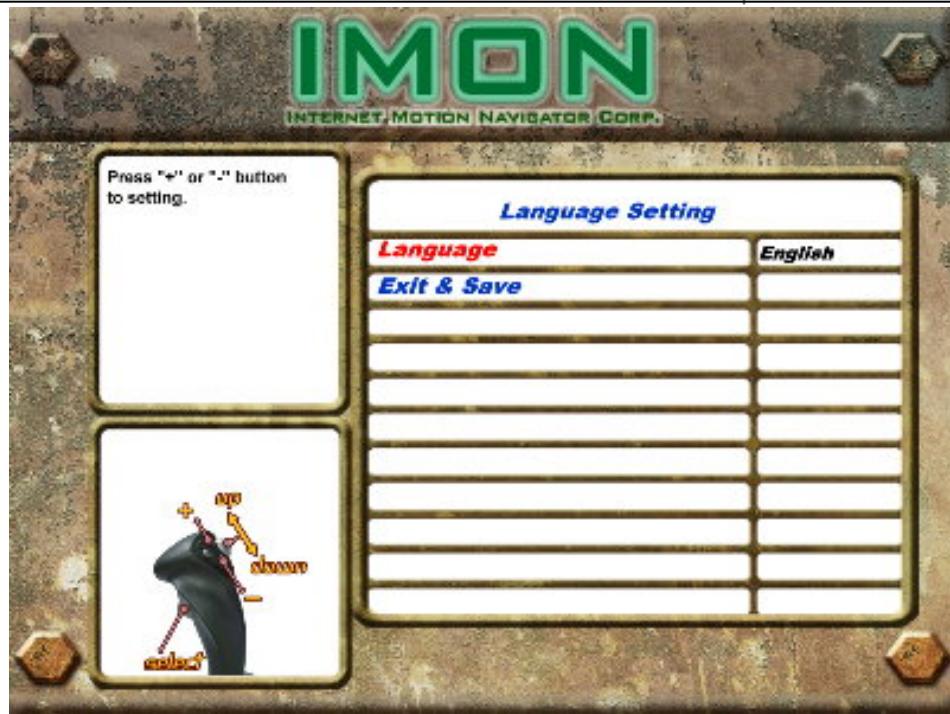


Fig. 4-13 “*Language Setting*” sub-menu

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

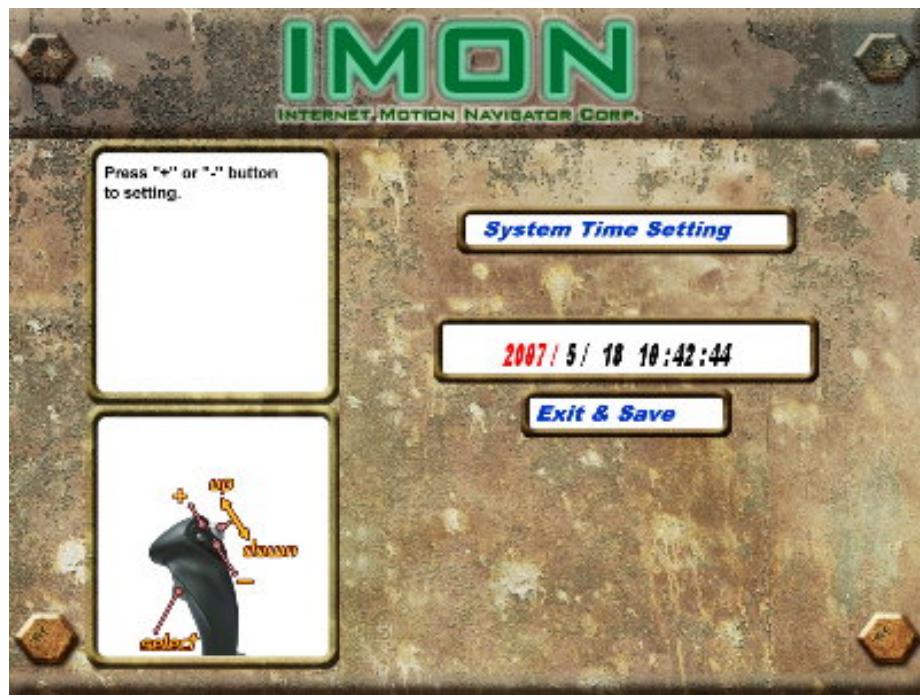


Fig. 4-14 “System time Setting” sub-menu

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

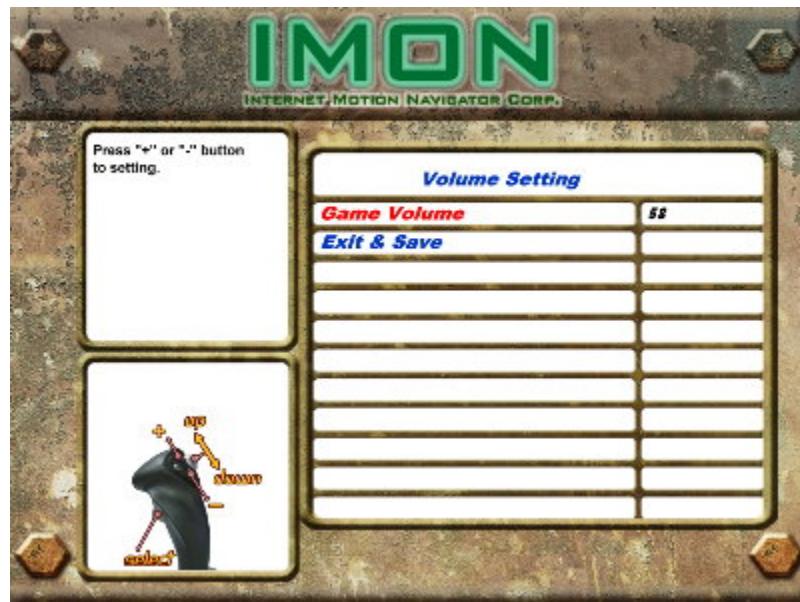


Fig 4-15 “**Volume Setting**” sub-menu

“**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.

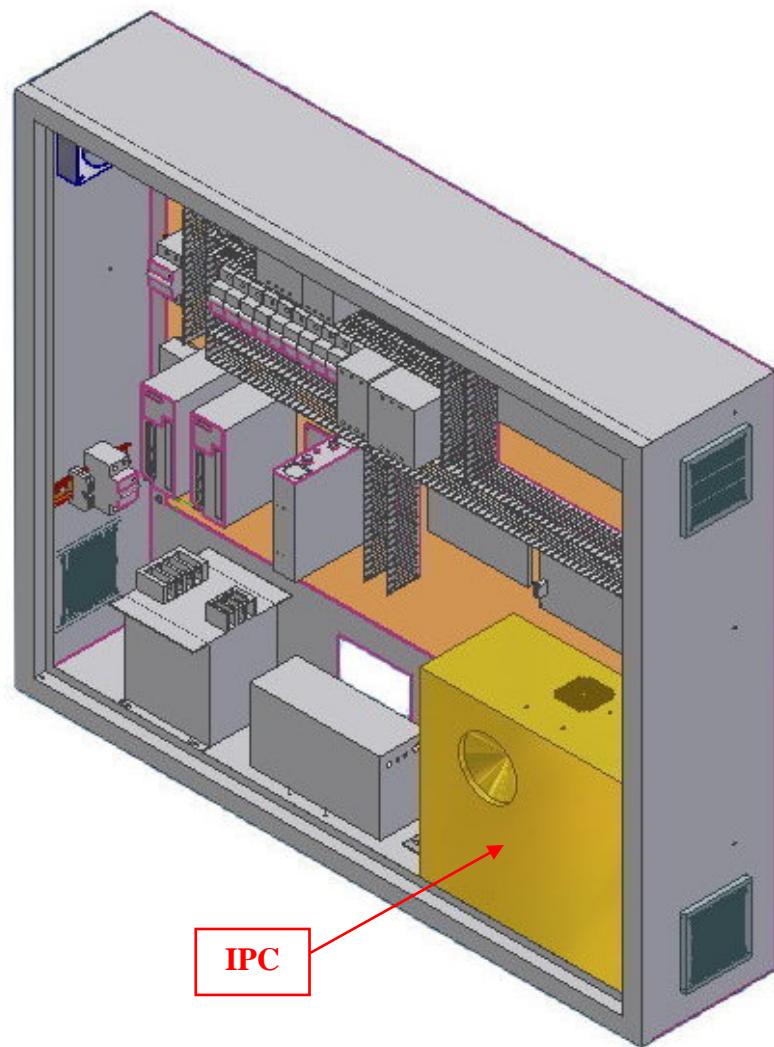


Fig. 4-17 locate the system's IPC

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.

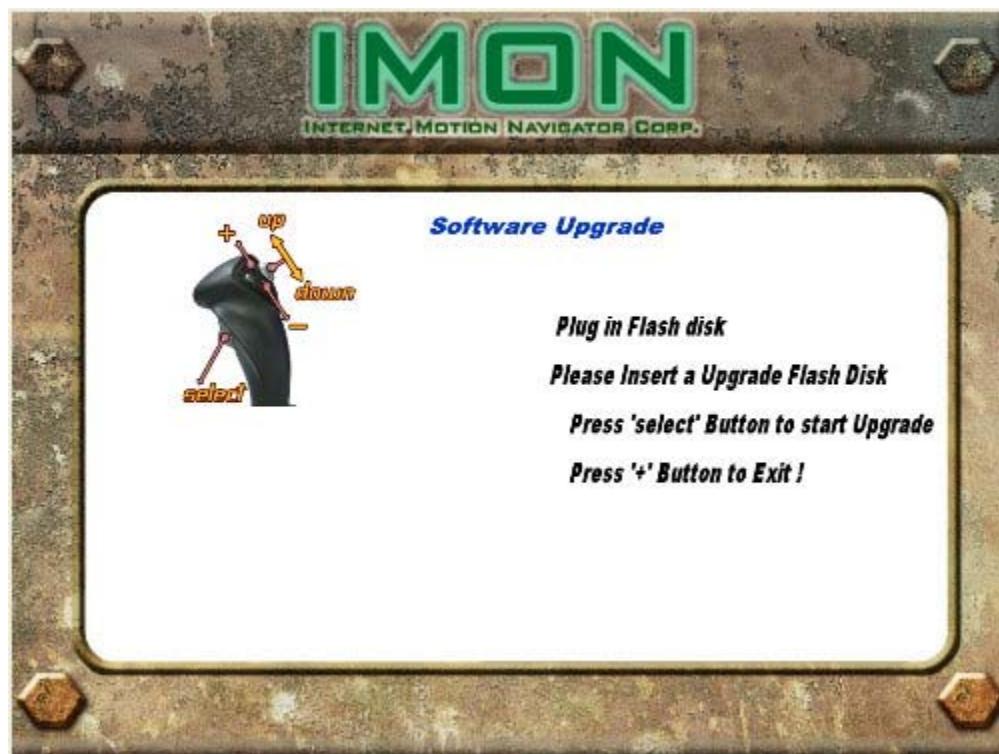
Fig. 4-18 “*Software Upgrade*” sub-menu



Fig. 4-19 “*Software Upgrading*” Window

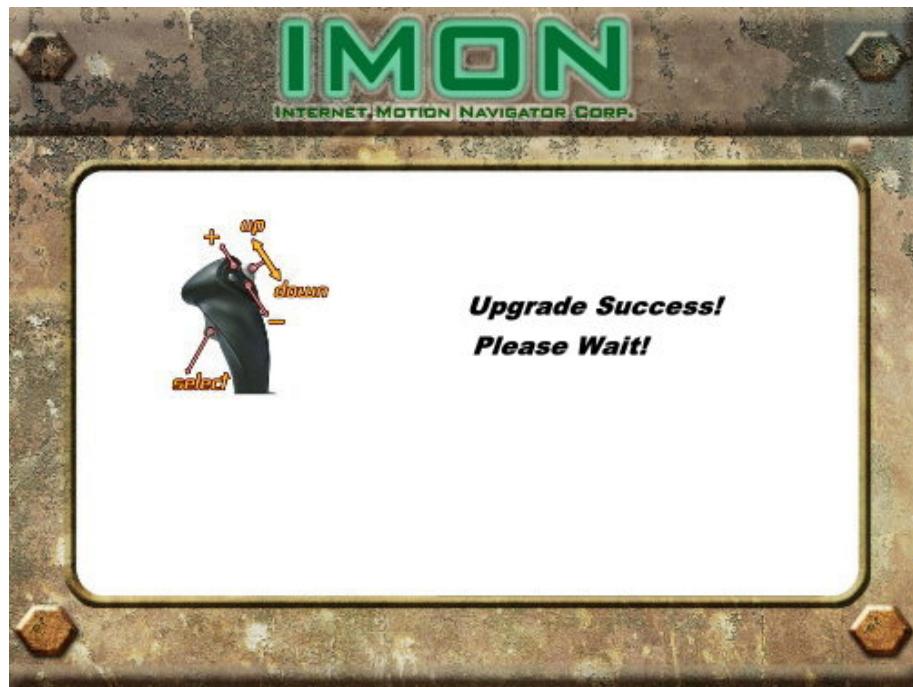


Fig. 4-20 “*Upgrade Success*” Window



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.

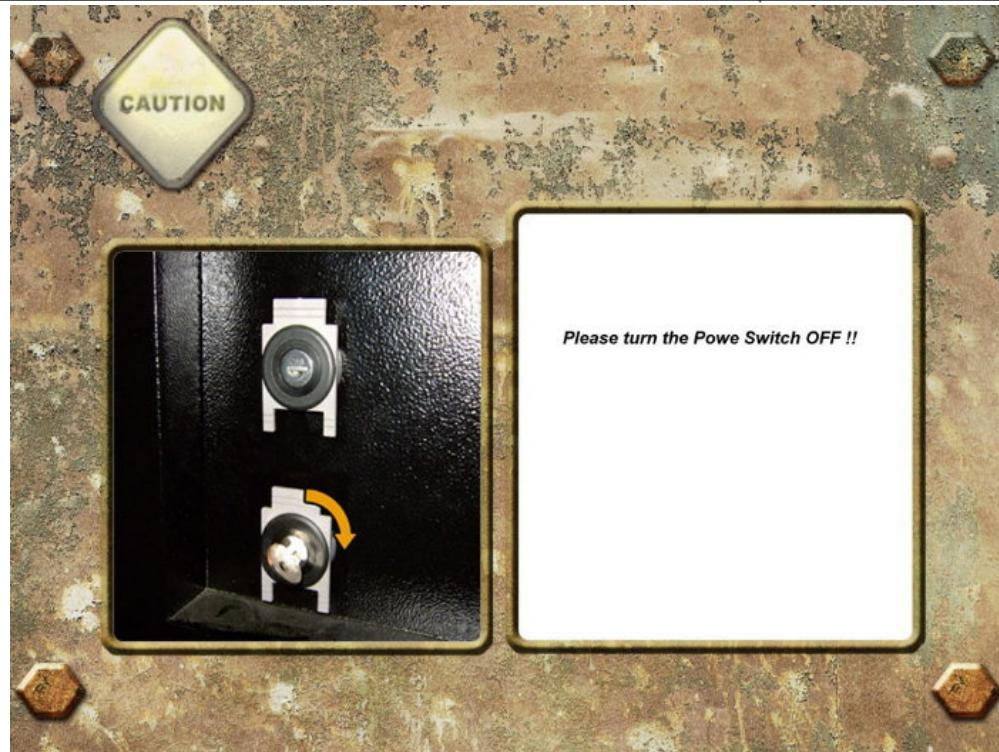


Fig. 4-22 “Shutdown System” Window

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

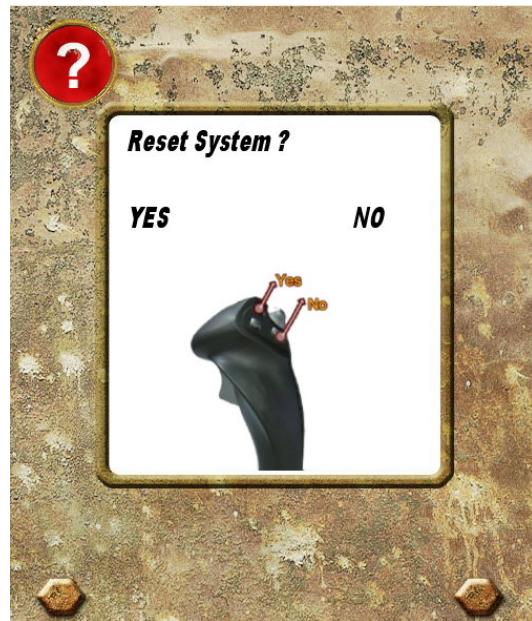


Fig. 4-23 Reset System window

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	CAUTION! 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 IMotion!-iGO .

5.2 MOTION BASE MAINTENANCE

5.2.1 CALIBRATION TEST PROCESURE

1. 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

Figure6-1 shows its external configure exposition, Fig.6-2 presents the layout of the control panel and Fig.6-3 indicates it's internal configure exposition.

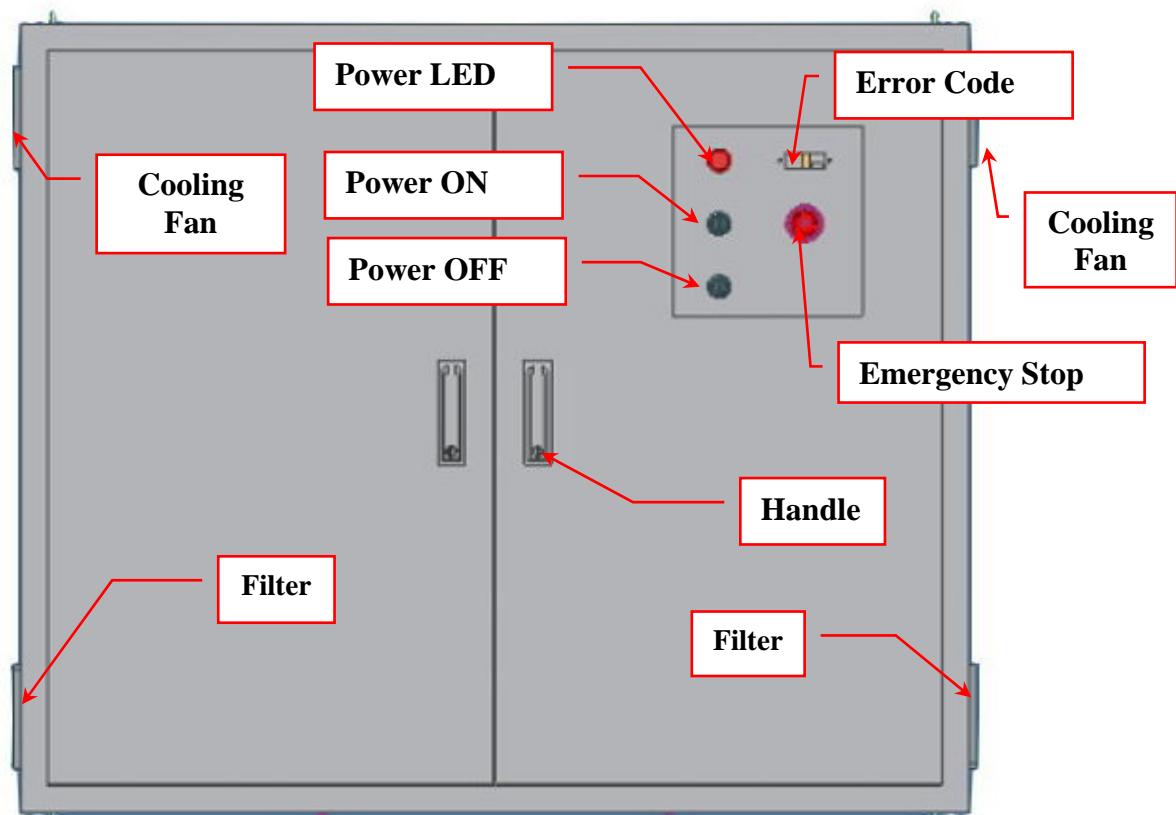


Fig. 6-1 Control panel box external configuration diagram

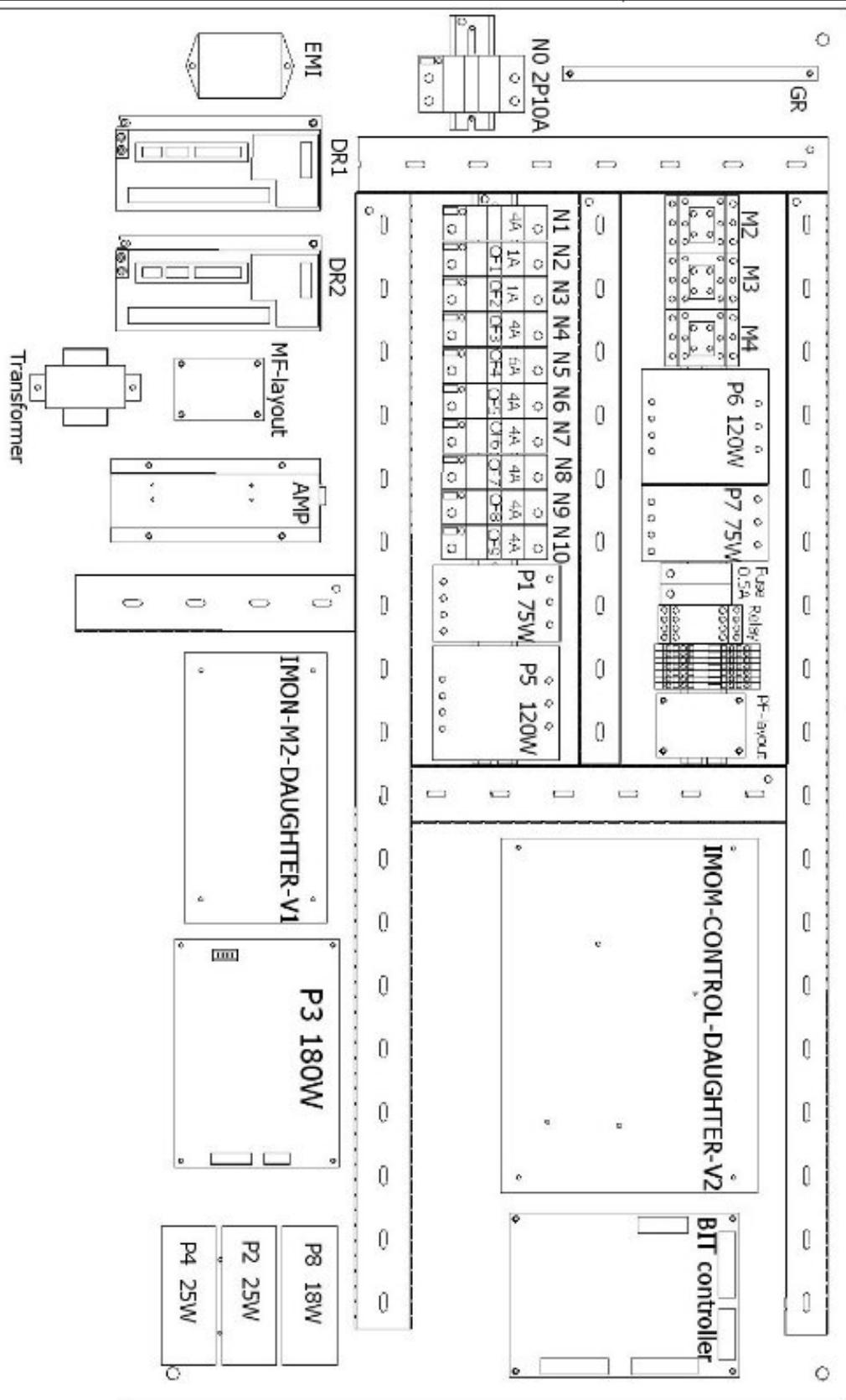


Fig. 6-2 Layout of the control panel

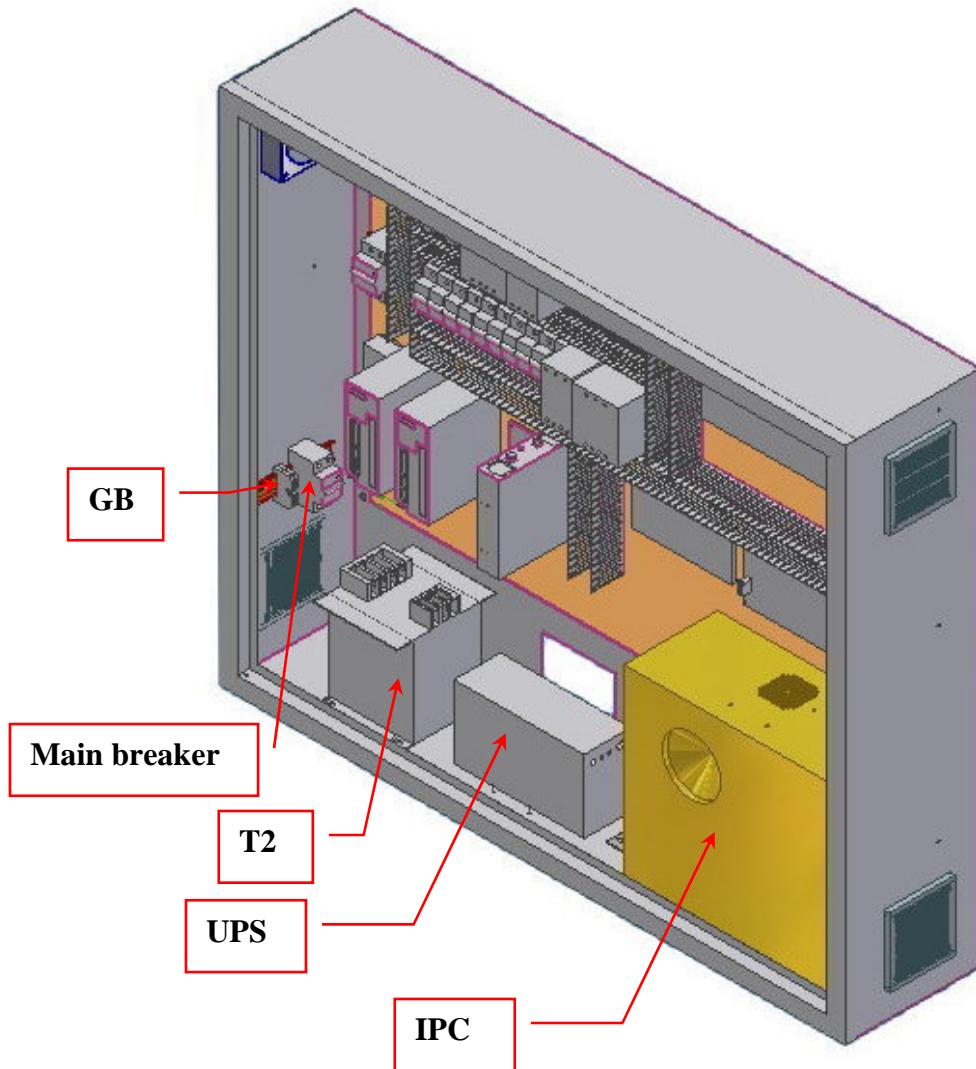


Fig. 6-3 the internal configuration diagram of control panel box

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

6.1.2 DEVICES DEFINITIONS OF CONTROL PANEL BOX

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

Device of control panel		
Name	Spec	Part NO.
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

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.

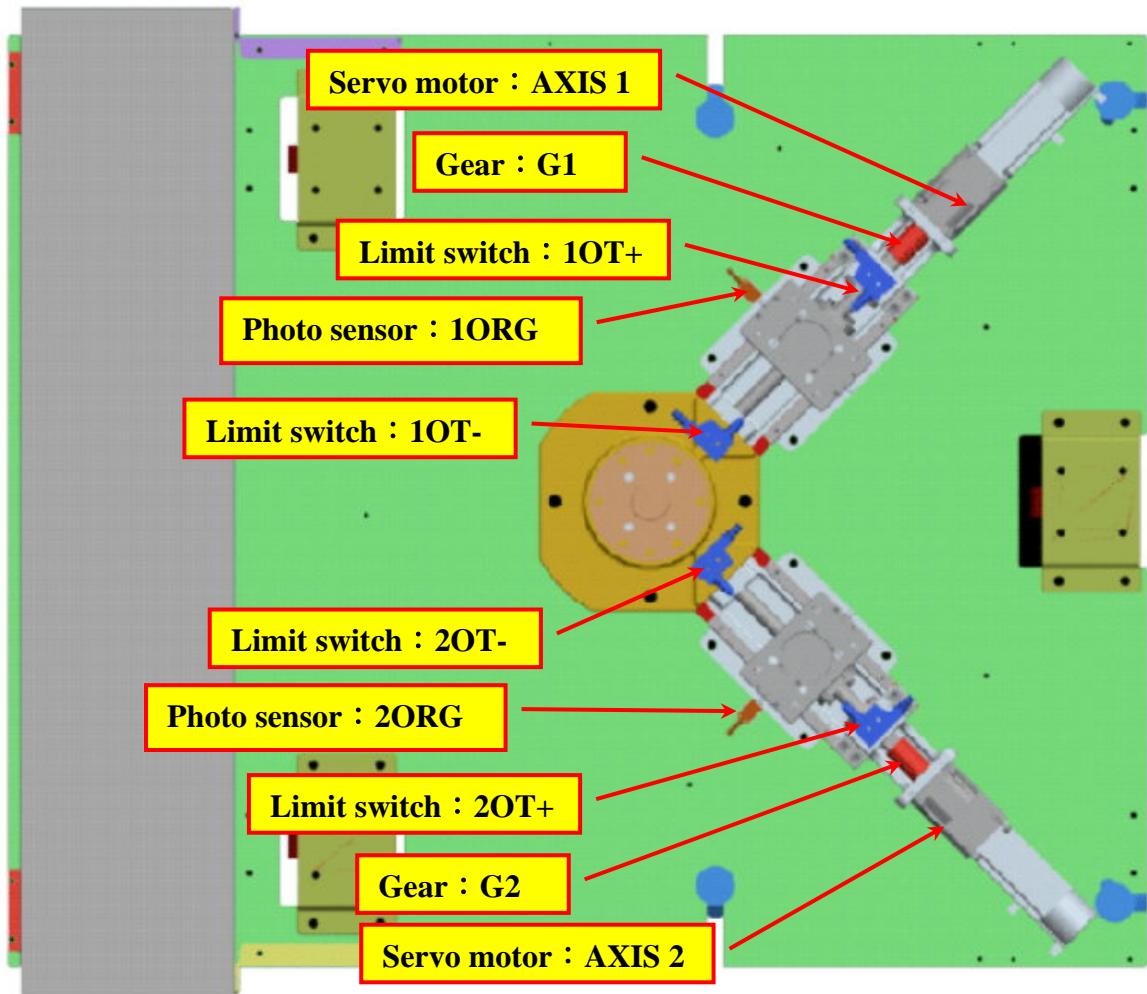


Fig. 6-4 Electric devices exposition on the base plate

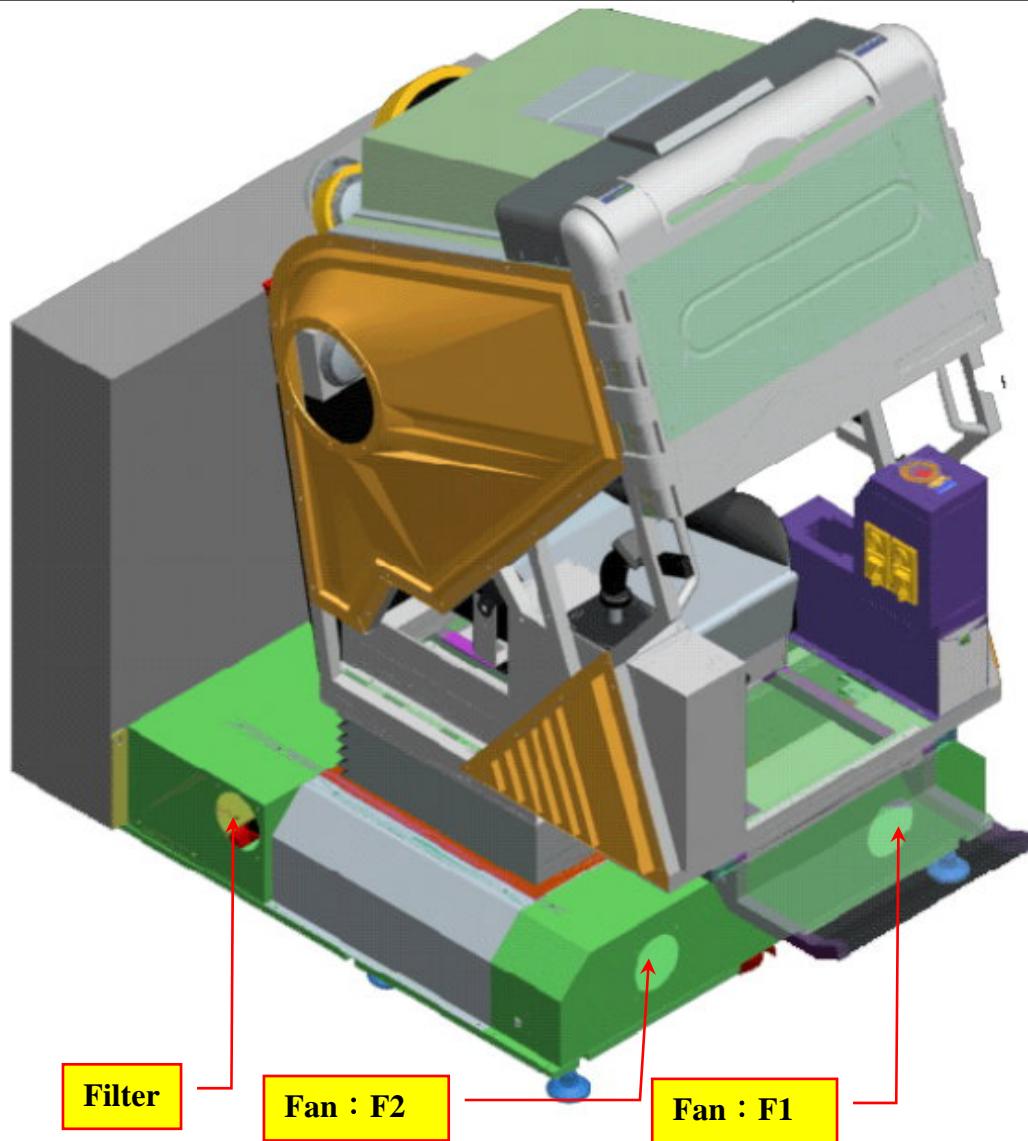


Fig. 6-5 Exposition of plinths' cooling fans and air filters

6.2.2 DEVICES DEFINITIONS ON BASE PLATE

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

Device of Base Plate		
Name	Spec	Part NO.
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.

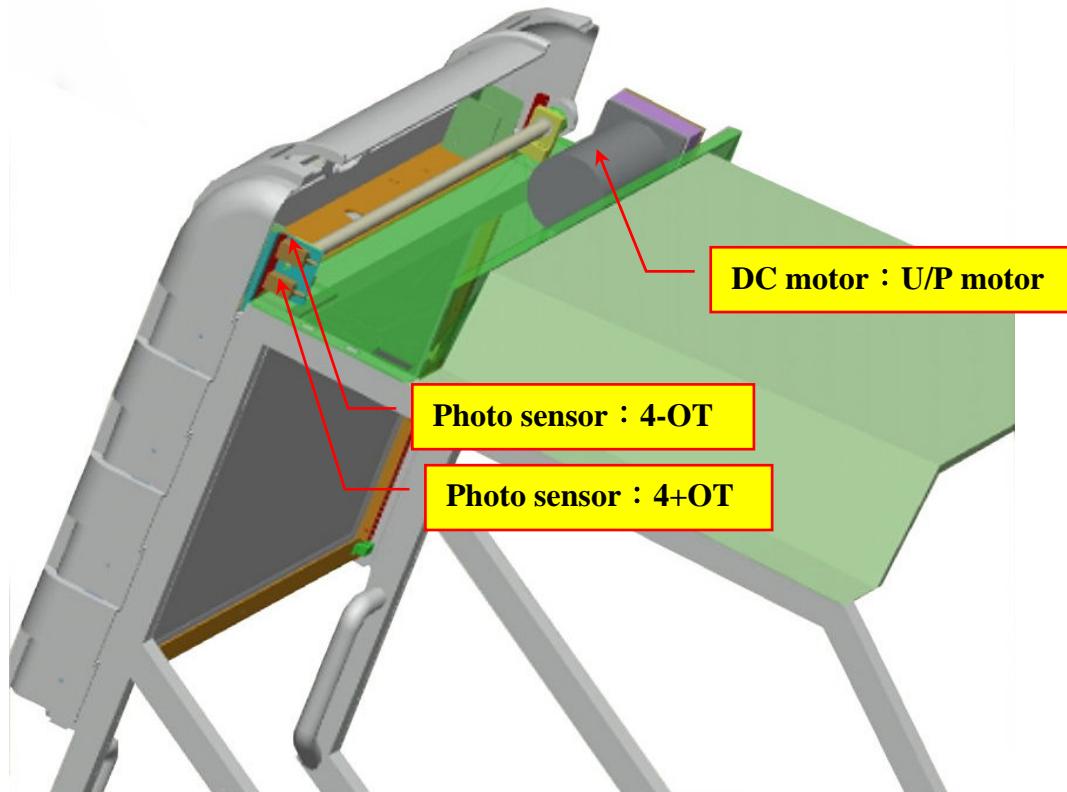


Fig. 6-6 Electric device exposition on the cockpit

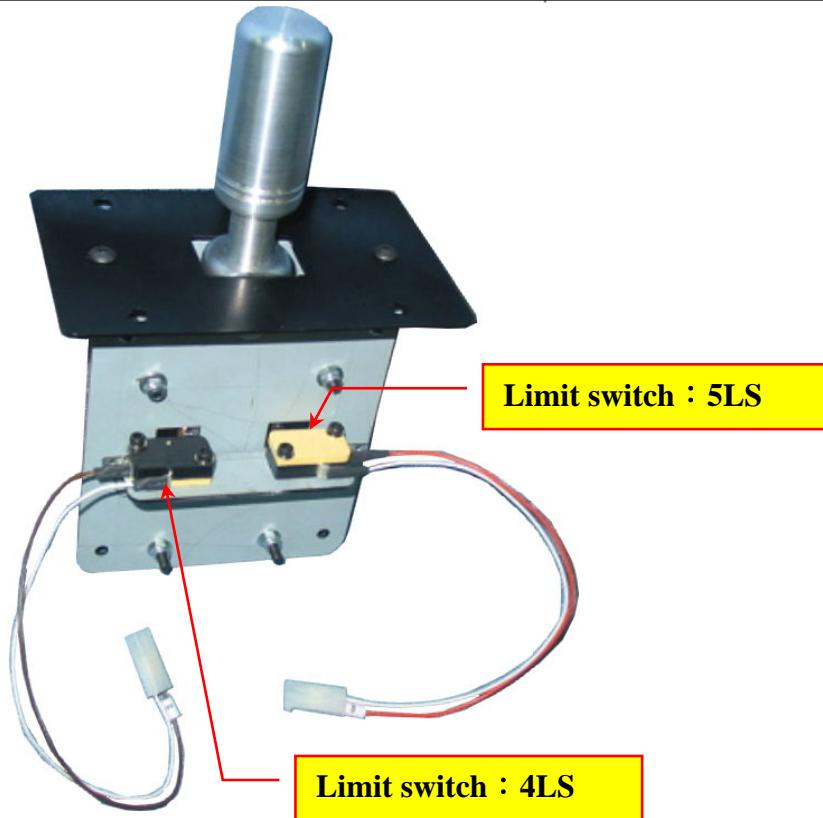


Fig. 6-7 Electric device exposition on the gear shifter

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

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 DOWN” (Fig. 6-9) about 5 seconds.
	ALE15	Press the button “1 UP” (Fig. 6-9) about 5 seconds.
2	ALE14	Press the button “2 DOWN” (Fig. 6-9) about 5 seconds.
	ALE15	Press the button “2 UP” (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

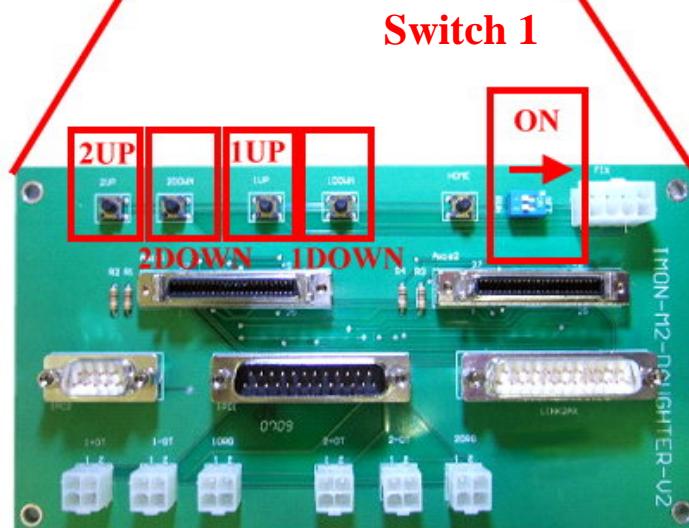
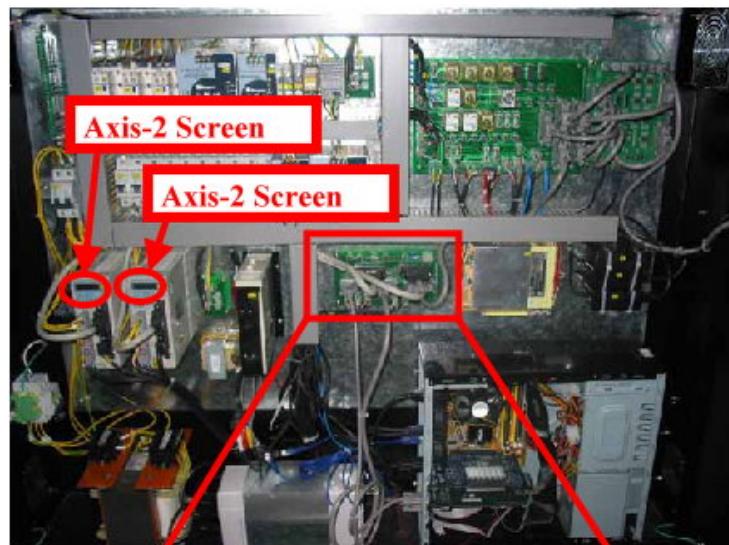


Fig. 6-9 IMON-M2-DAUGHTER-V2 Card

6.4.2 REREFENCE (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.

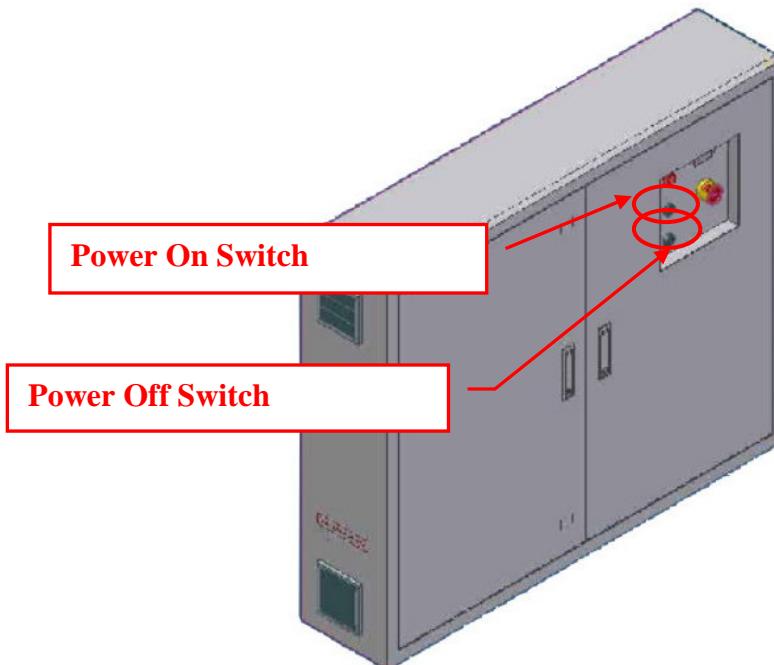


Fig. 6-10 Power Switch

6.5 SYSTEM ERROR CODE DEFINITION

Please refer to System Error Code Definition on page 51.

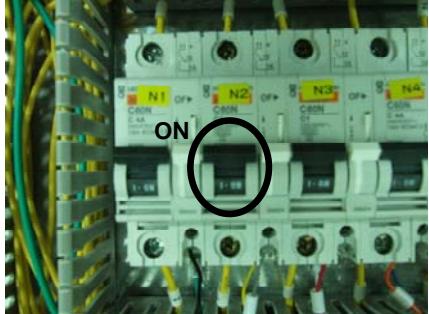
6.6 TROUBLESHOOTING LIST

Please refer to Troubleshooting List on page 79.

6.7 COMPONENT REPLACEMENT PROCEDURE LIST

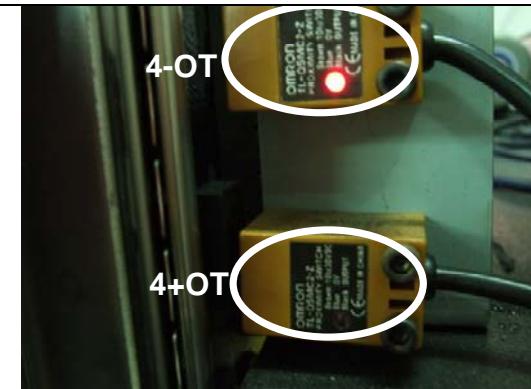
Please refer to Component Replacement Procedure List on page 105.

ERROR CODE NUMBER	PAGE
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.....	54
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).....	71
0020 FUSE (F3, F4) WAS BURNED(LCD MONITOR POWER).....	71
0021 FUSE(F5) WAS BURNED(MONITOR UP/DOWN MOTOR BRAKE)	72
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)	73
0026 SERVO MOTOR ALARM CODE.....	73
0027 TOUCH "1+OT" SENSOR.....	73
0028 TOUCH "1-OT" SENSOR.....	73
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.....	76

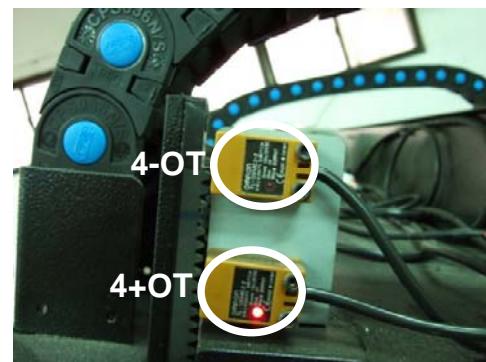
Error Code Number	Definition	Troubleshooting Guide
0002	Magnetic Contact (M3) Failure	<p>Turn Off N6 and N7 then Turn On Again. If the alarm persists, power Off system. Replace contact (M3). Please refer to Component Replacement Procedure List on page 105: Component#3 Magnetic Contact Replacement Procedure to complete replacement.</p> <p>*Contact IMON / IMotion! Tech support if problem persists.</p>
0003	Magnetic Contact (M4) Failure	<p>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.</p> <p>* Contact IMON / IMotion! Tech support if problem persists.</p>
0004	Circuit Breaker (N2) Off	<p>Possibility: N2 Broken</p> <ol style="list-style-type: none"> 1. 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. 2. 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"> (a) Turn On “N2”  <p>(b) Use volt meter to check. The meter reads “OL”, means that Circuit Breaker is bad.</p>

		 <p>(c) Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.</p>
0005	Circuit Breaker (N3) Off	<p>Possibility: N3 Broken</p> <ol style="list-style-type: none"> 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. 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).
0007	Circuit Breaker (N5) Off	<p>Possibility: N5 Broken</p> <ol style="list-style-type: none"> 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. 2. Switch N5 to “On” but N5 is not really “On”. Please follow steps and pictures as shown on error code 0004 as same as N2 check procedure to check this).
0008	Circuit Breaker (N8 or N9) Off	<p>Possibility: N8 or N9 Broken</p> <ol style="list-style-type: none"> 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. 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).
0009	Circuit Breaker (N10) Off	<p>Possibility: N10 Broken</p> <ol style="list-style-type: none"> 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. 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.

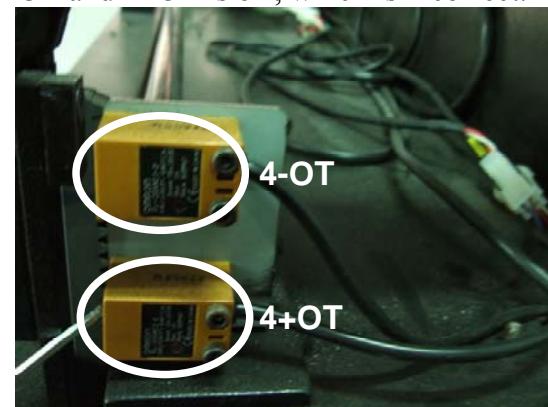
0012	LCD Monitor Up/Down Sensor or Relay A3 failure	1st Possibility: A3 Broken Please Power Off systems then replace relay A3. Please refer to Component Replacement Procedure List on page 105: Component#33 Replacement Procedure to complete replacement. If the problem persists, continue to 2 nd Possibility.
		2nd Possibility: Sensor Failure 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   (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. 



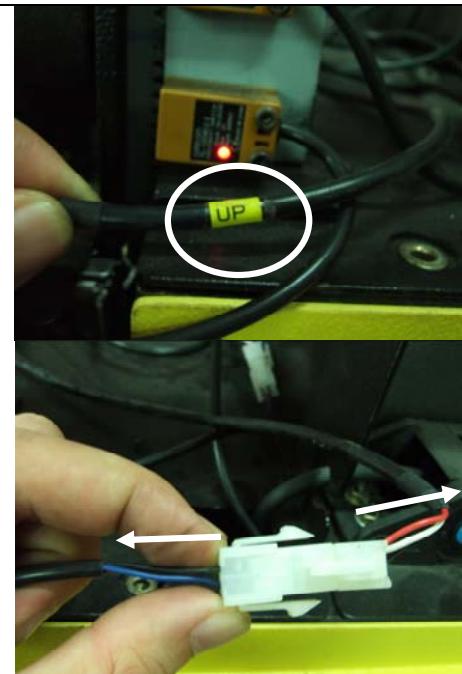
(c) While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct.



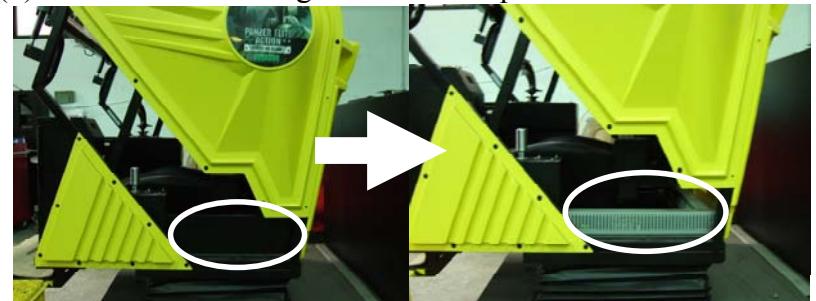
2. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.



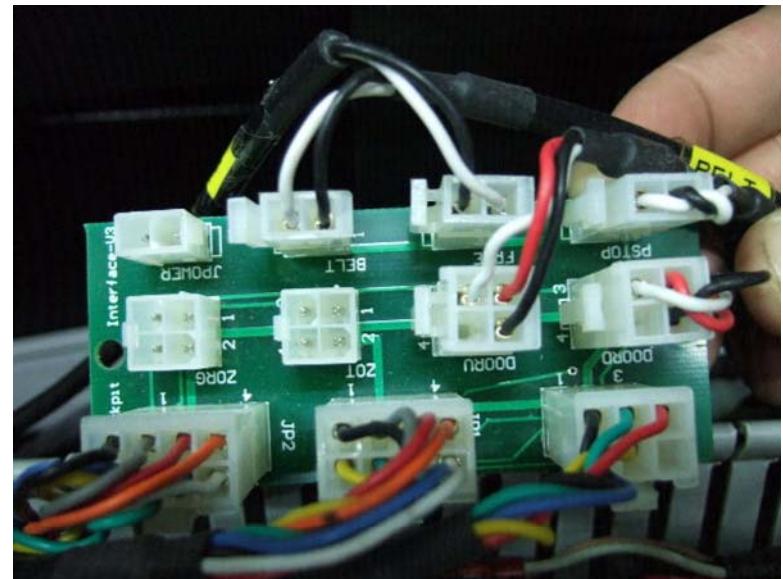
Please follow steps below to check connectors loose or not.
 (a) Check wire and connector (wire number is "UP") on top of cockpit. The wire should not be pulled out and connector should be well-connected.

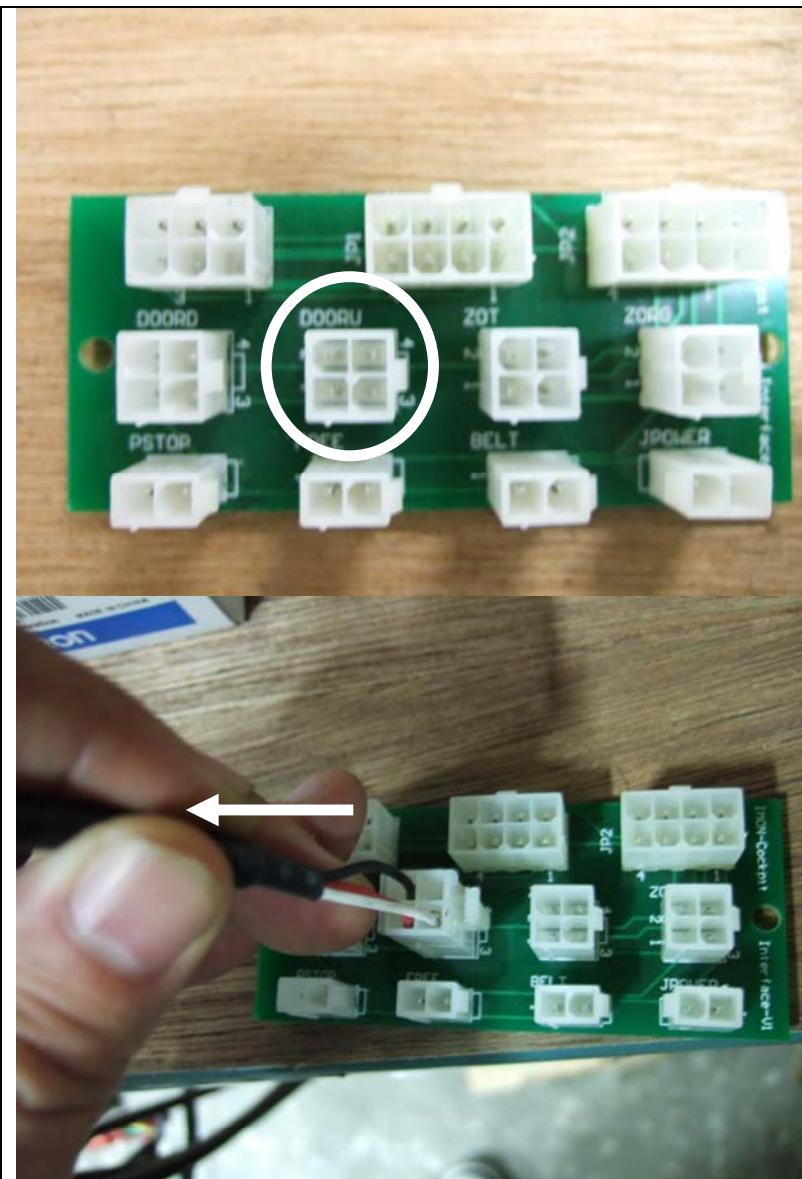


(b) Remove cover on right side of cockpit.

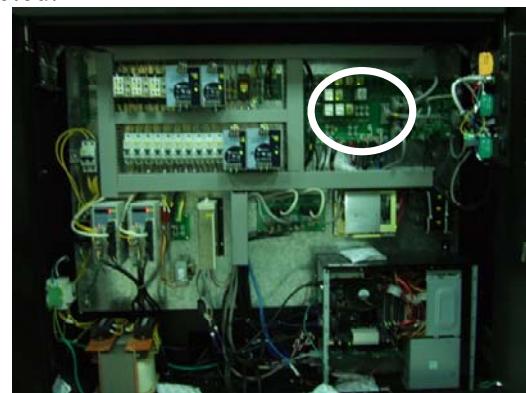


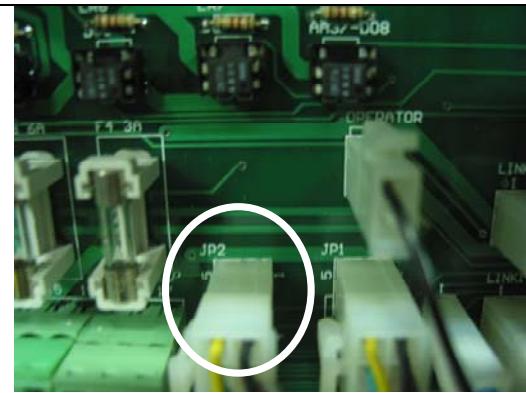
(c) Check wire and connector at cockpit (wire number is “DOORU”), The wire should not be pulled out and connector should be well-connected.



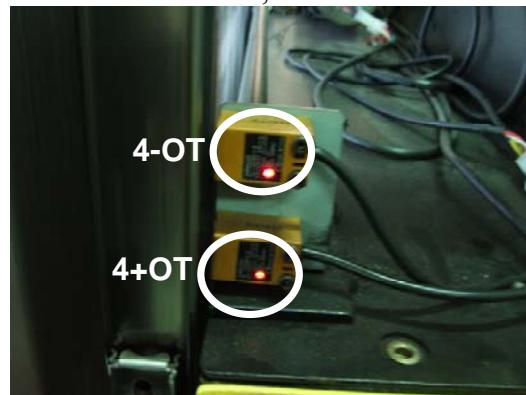


(d) Check wire and connector (JP2) in power box. The wire should not be pulled out and connector should be well-connected.





- (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.



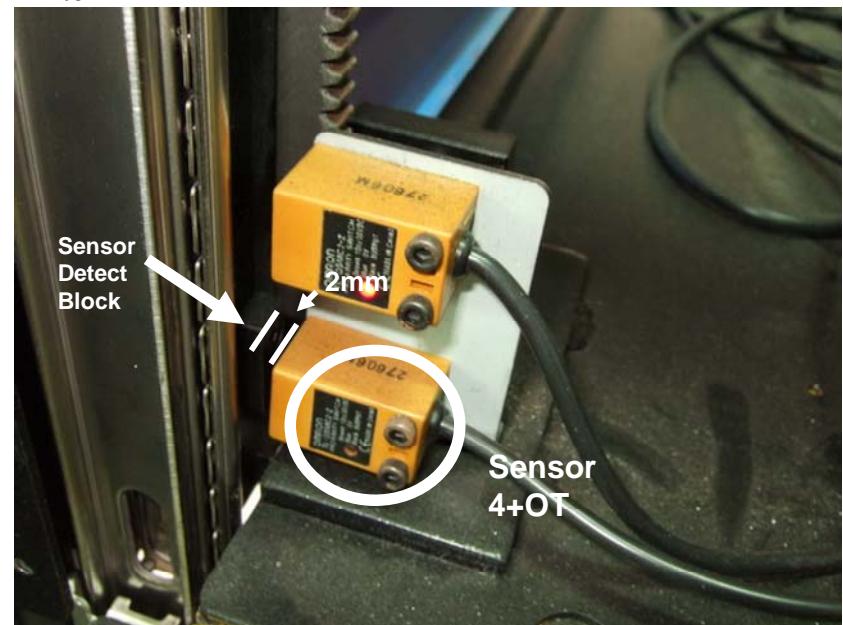
Please follow steps below to adjust sensor position.
(a) Move Monitor to top position.



(b) Loose the screws which fix the sensor



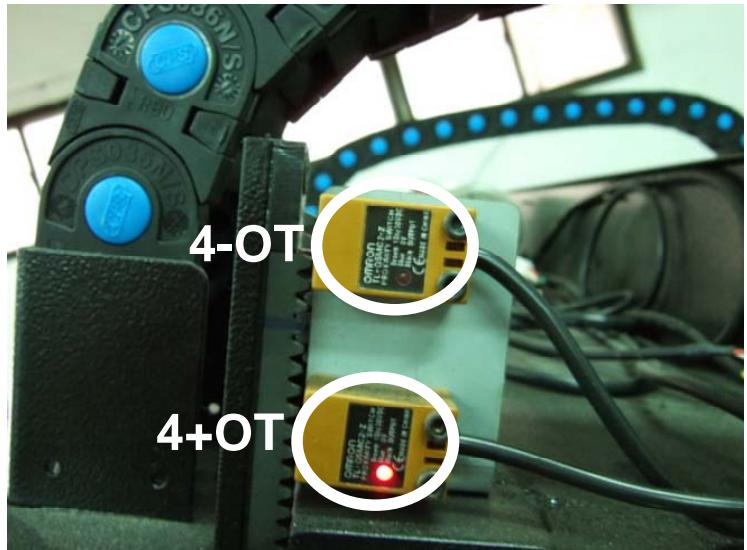
(c) Adjust the distance between sensor and sensor detect block to 2mm



(d) Fix the screws.

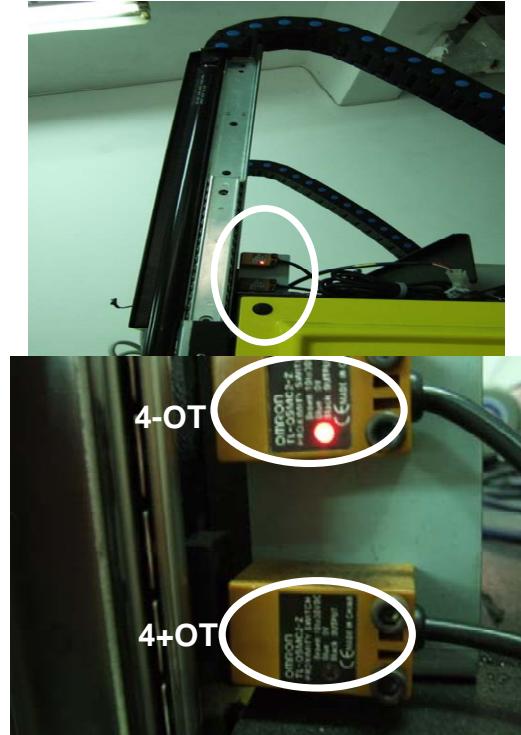


(e) Remove Monitor to bottom position. While Monitor is at down position, the LED light on sensor (4+OT) is on but LED light on sensor (4-OT) is off, which is correct, and complete adjustment.

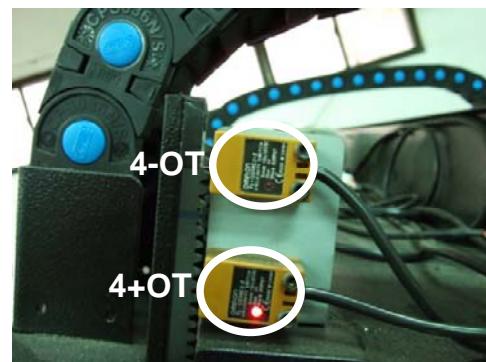
		 <p>4-OT</p> <p>4+OT</p>
		<p>(f) If the problem persists, continue to 3rd Possibility.</p> <p>3rd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</p> <p>Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105 : Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
0013	LCD Monitor Up/Down Sensor or Relay A4 failure	<p>1st Possibility: A4 Broken 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>2nd Possibility: Sensor Failure</p> <ol style="list-style-type: none"> 1. Remove covers on top side of cockpit. Follow steps below to check Monitor Up Sensor (4-OT) is working or not. <p>(a) Remove covers as shown below</p> 



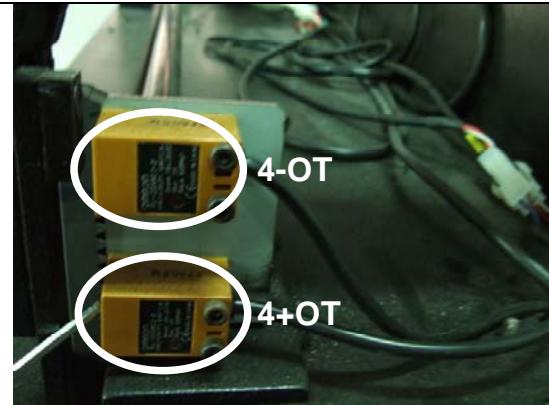
(b) While Monitor is at Up position, the LED light on sensor (4+OT) is off but LED light on sensor (4-OT) is on, which is correct.



(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.

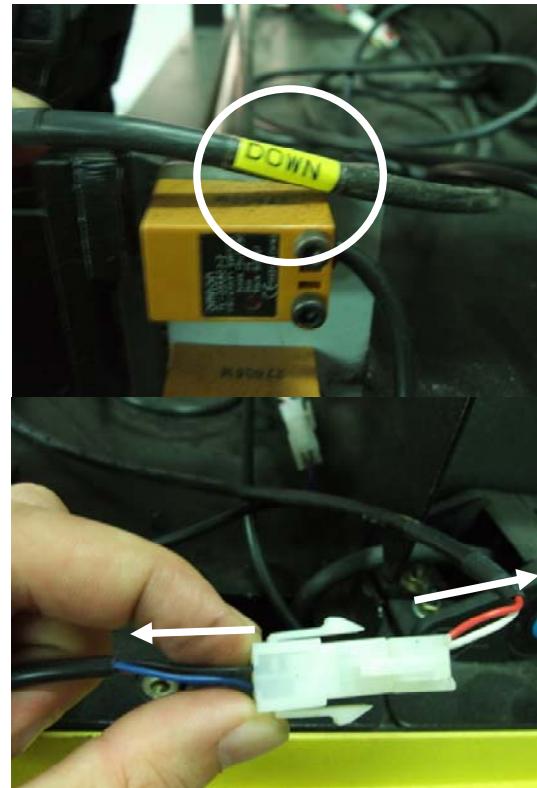


2. While Monitor is at top or bottom position, the LED light on sensor 4-OT and 4+OT is off, which is incorrect.

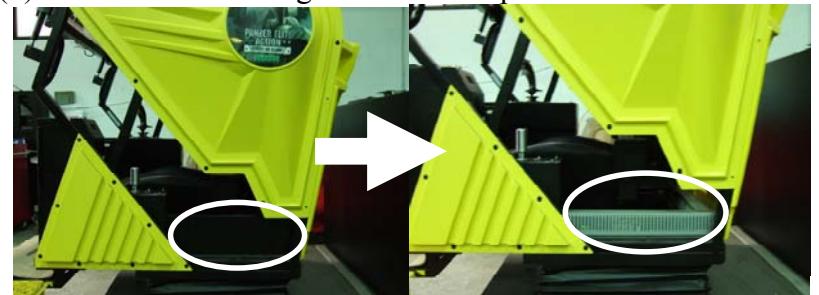


Please follow steps below to check connectors loose or not.

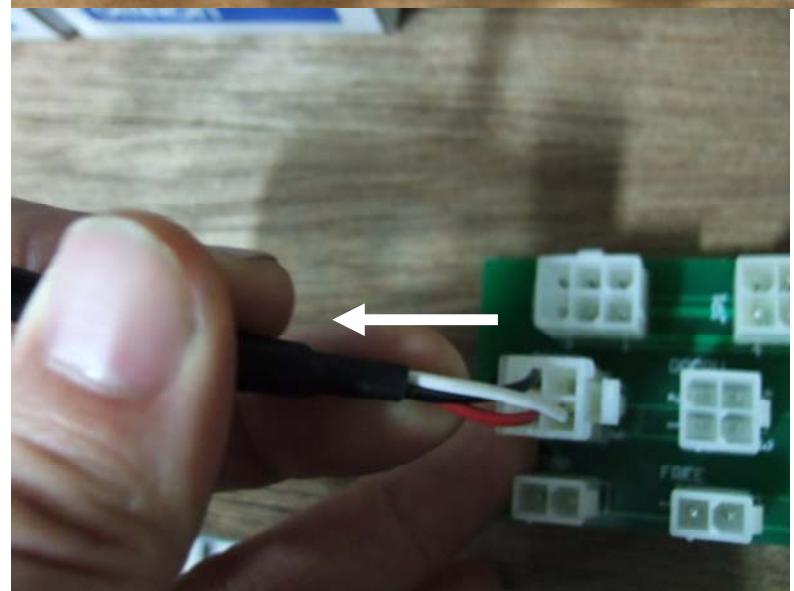
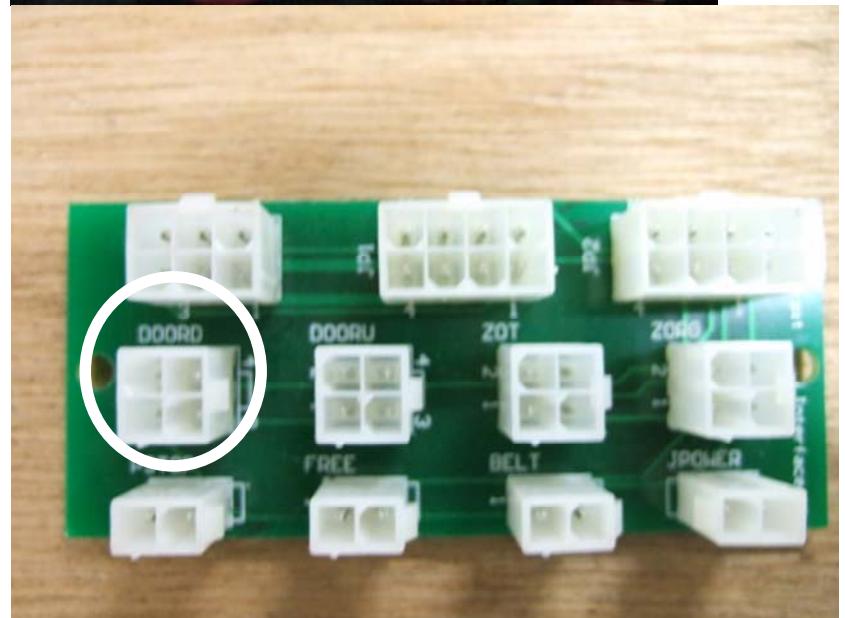
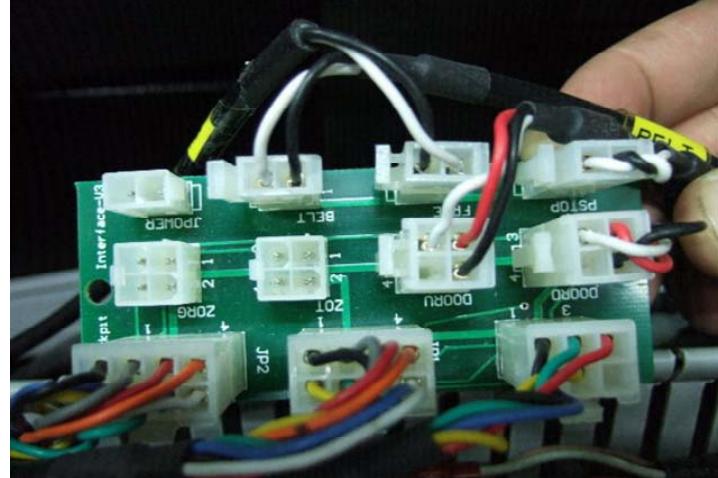
(a) Check wire and connector (wire number is “DOWN”) on top of cockpit. The wire should not be pulled out and connector should be well-connected.



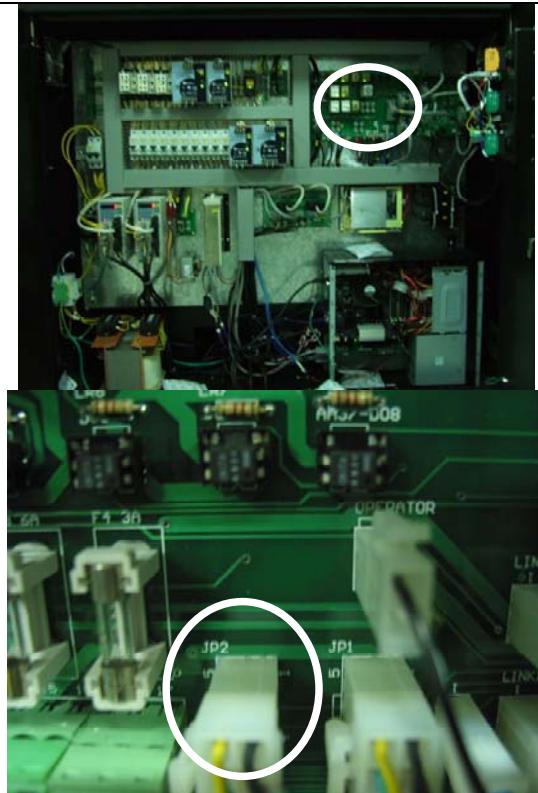
(b) Remove cover on right side of cockpit.



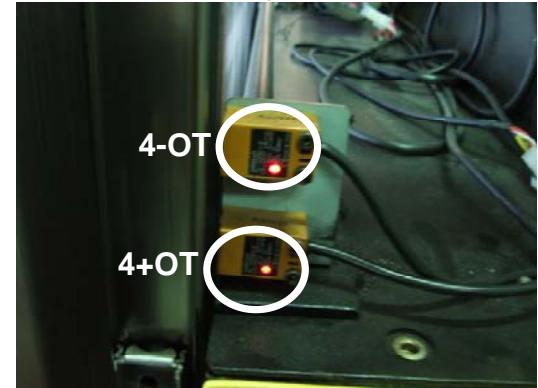
(c) Check wire and connector at cockpit (wire number is “DOORD”), The wire should not be pulled out and connector should be well-connected.



(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.



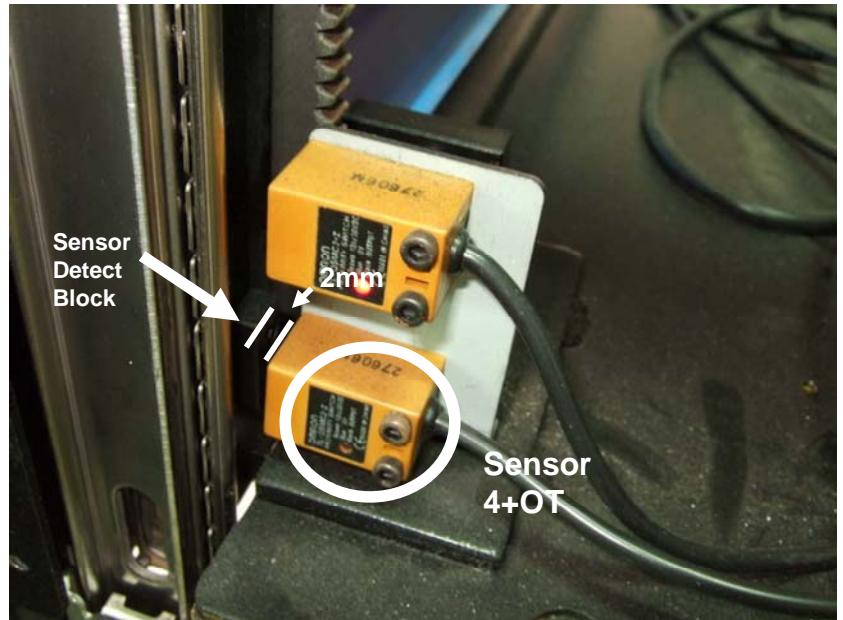
Please follow steps below to adjust sensor position.
(a) Move Monitor to top position.



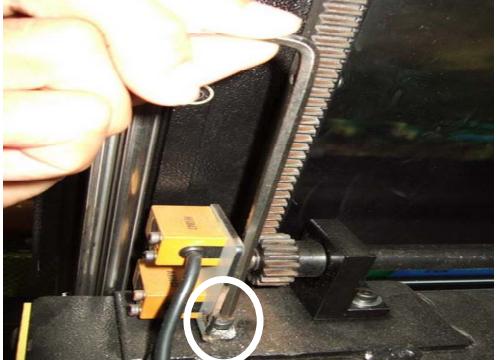
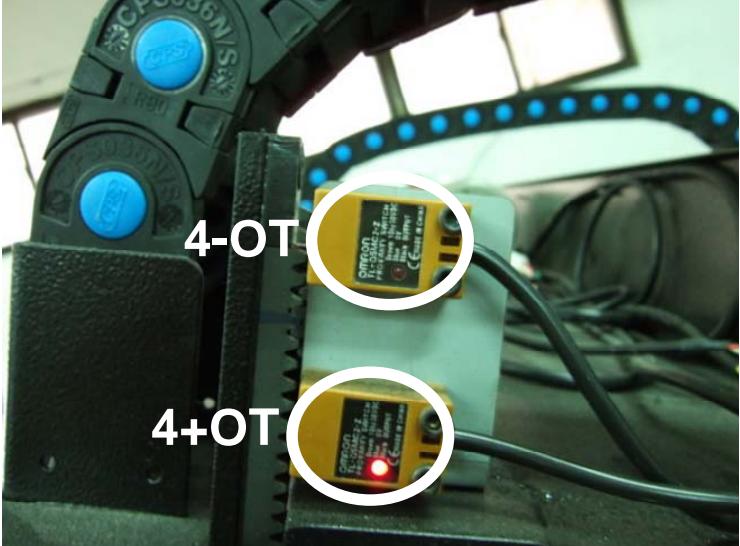
(b) Loose the screws which fix the sensor



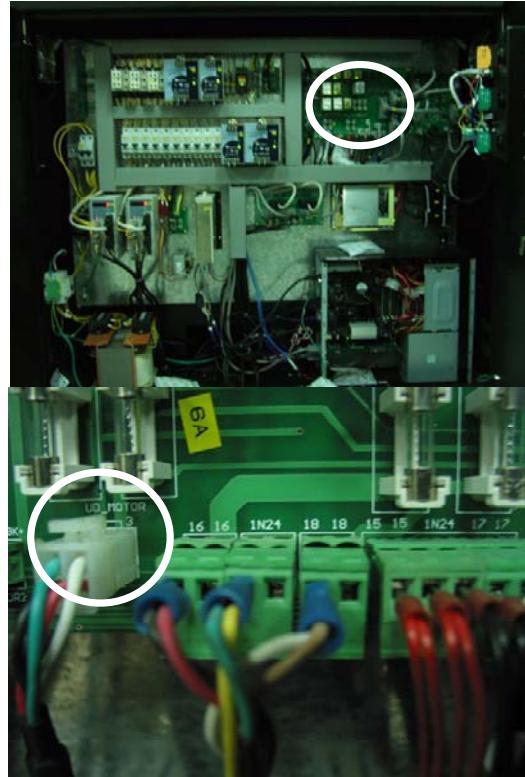
(c) Adjust the distance between sensor and sensor detect block to 2mm



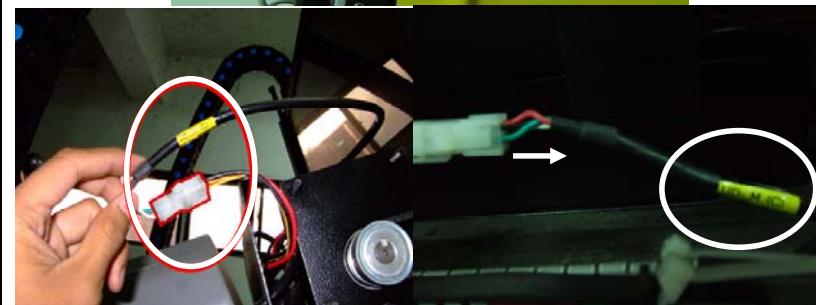
(d) Fix the screws.

		 <p>(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>  <p>(f) If the problem persists, continue to 3rd Possibility.</p>
		<p>3rd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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>
0014	LCD Monitor Up/Down Motor Brake Relay A5 Failure	<p>1st Possibility: A5 Broken 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 2nd Possibility.</p> <p>2nd Possibility: Check connectors (UD_MOTOR) Please follow steps and pictures below to check this. (a) Check the connector (UD_MOTOR) on IMON_CONTROL_DAUGHTER_V2 Card. The wire should</p>

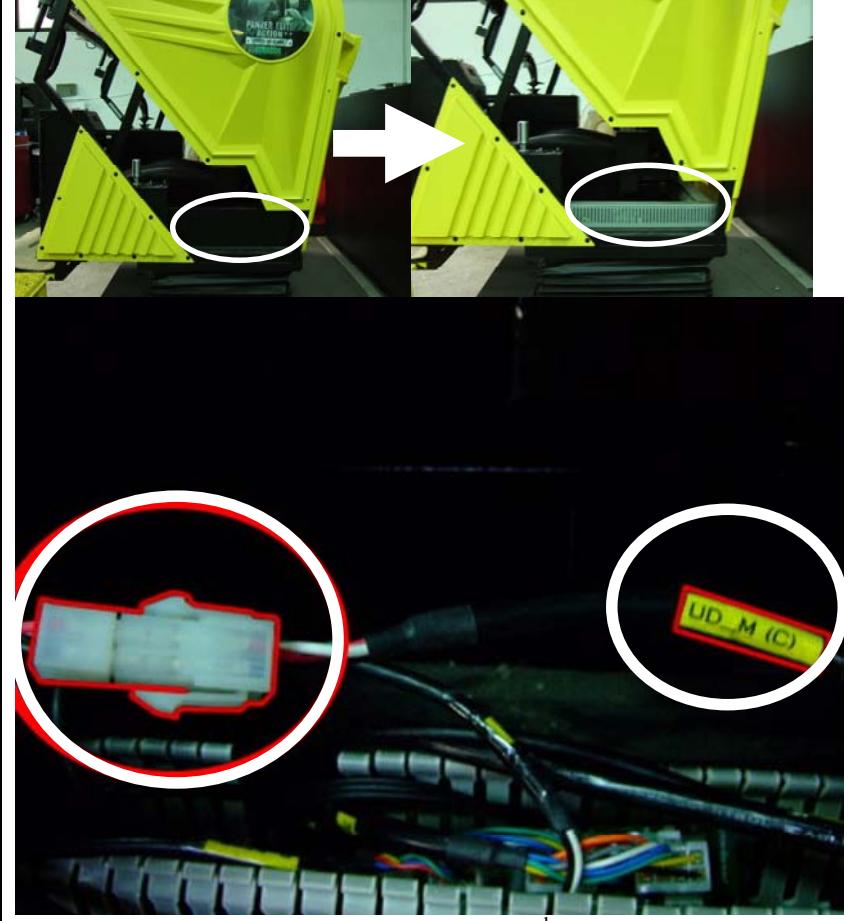
not be pulled out and connectors should be well-connected.

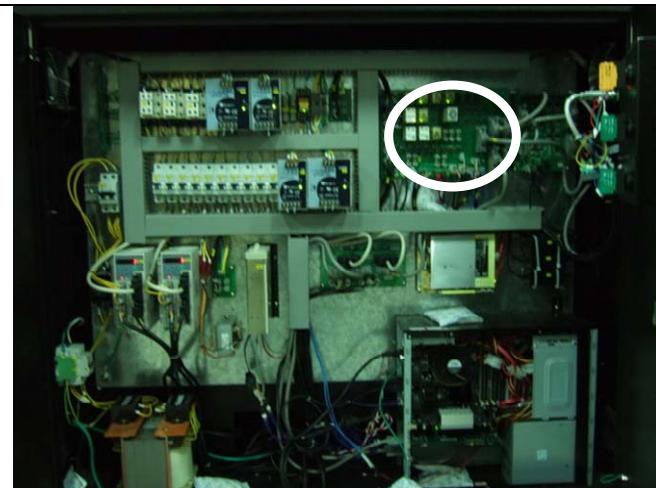


(b) Check the connector (UD_MOTOR) on the top side of cockpit. The wire should not be pulled out.

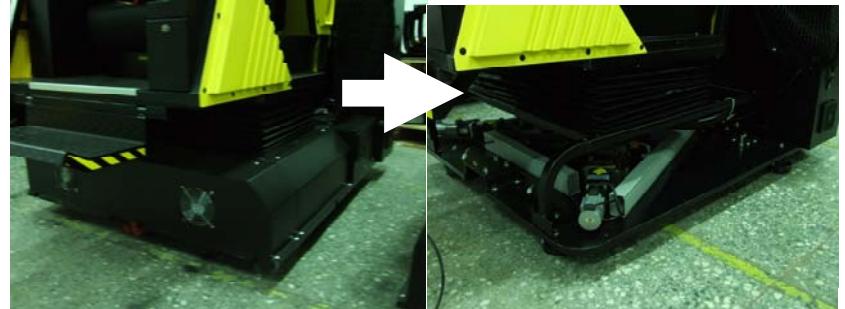


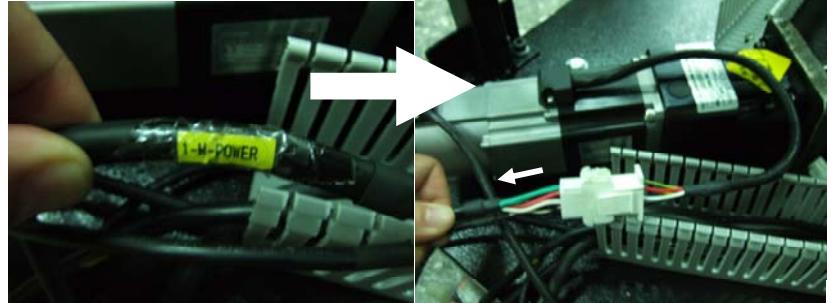
(c) Remove covers on right side of cockpit. Check connector (UD_MOTOR), which should not be pulled out and well-connected.

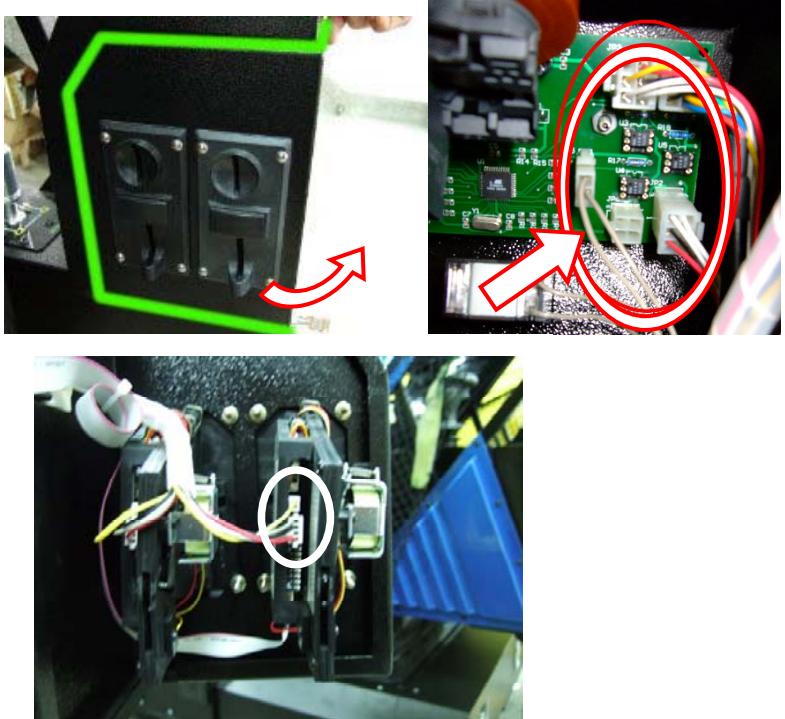
		
		<p>(d) If the problem persists, continue to 3rd Possibility.</p> <p>3rd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card(IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.</p>
0015	Servo Motor Brake Relay A6 Failure	<p>1st Possibility: A6 Broken 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 2nd Possibility.</p> <p>2nd Possibility: Connector Loose 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>



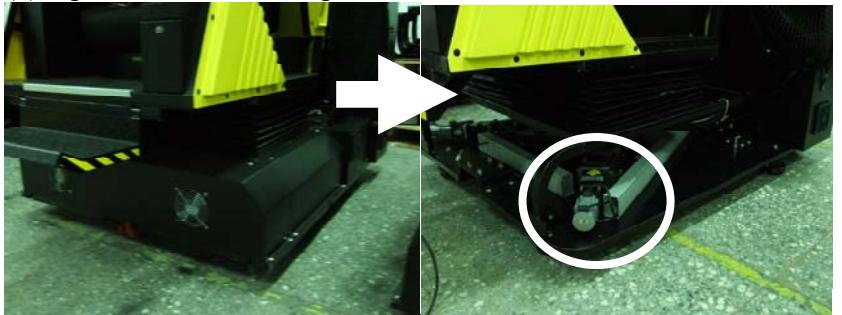
(b) Check the connector (1-M-POWER) on base plate (Open covers first). The wire should not be pulled out and connector should be well-connected.



		 
		<p>(c) If the problem persists, continue to 3rd Possibility.</p> <p>3rd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</p> <p>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>1st Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</p> <p>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>If the problem persists, continue to 2nd Possibility.</p> <p>2nd Possibility: BIT Control Card Failure</p> <p>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>1st Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure</p> <p>Replace Control Card (IMON-CONTROL_DAUGHTER). Please refer to Component Replacement Procedure List on page 105 :Component#28 Control</p>

		<p>Card(IMON-CONTROL-DAUGHTER-V2) Replacement Procedure. If the problem persists, continue to 2nd Possibility.</p> <p>2nd Possibility: BIT Control Card Failure 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>1st Possibility: Coin Acceptor power connector disconnect Connect power connector as shown below. (JP1~JP5)</p>  <p>If the problem persists, continue to 2nd Possibility.</p> <p>Possibility: Fuse Broken 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 3rd Possibility.</p> <p>2nd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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>
0020	Fuse (F3, F4) was burned (LCD Monitor Power)	<p>1st Possibility: Fuse Broken 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.</p>

		If the problem persists, continue to 2 nd Possibility. 2nd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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.
0021	Fuse(F5) was burned (Monitor Up/Down Motor Brake)	1st Possibility: Fuse Broken 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 nd Possibility. 2nd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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.
0034	Fuse (F6) was burned (ORG Sensor)	1st Possibility: Fuse Broken 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 nd Possibility. 2nd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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.
0022	Fuse (F7) was burned (Monitor Up/Down Sensor)	1st Possibility: Fuse Broken 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 nd Possibility. 2nd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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.
0023	Fuse (F8) was burned (Monitor Up/Down Motor)	1st Possibility: Fuse Broken 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 nd Possibility.
		2nd Possibility: Motor is stuck while it is moving Up/Down Please verify there is noting to stop motor (or monitor tilt) and monitor moves upward/downward smoothly. If any, Please remove it. If the problem persists, continue to 3 rd Possibility.
		3rd Possibility: Control Card (IMON-CONTROL_DAUGHTER Board) Failure 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.
0026	Servo Motor Alarm Code	Refer to Reference (2) on page 50 to reset system.
0027	Touch "1+OT" Sensor	Refer to Reference (1) on page 48 to reset system.
0028	Touch "1-OT" Sensor	Refer to Reference (1) on page 48 to reset system.
0029	Touch "2+OT" Sensor	Refer to Reference (1) on page 48 to reset system.
0030	Touch "2-OT" Sensor	Refer to Reference (1) on page 48 to reset system.
0032	Motion Card Failure	Please replace new Motion Card. Please refer to Component Replacement Procedure List on page 105: Component#31 Motion Card Replacement Procedure to complete replacement.
0033	Homing Failure	1st Possibility: 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. (a) Open covers on base plate  (b) Adjust the distance between ORG sensor and sensor detect block to 2mm.

Sensor
Detect
Block

2mm

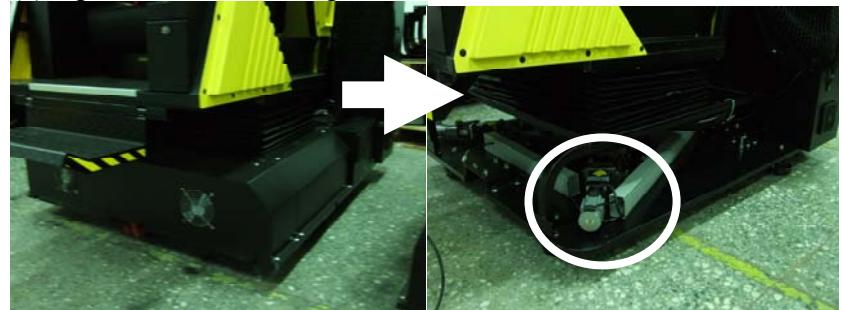
ORG

(c) If the problem persists, continue to 2nd Possibility.

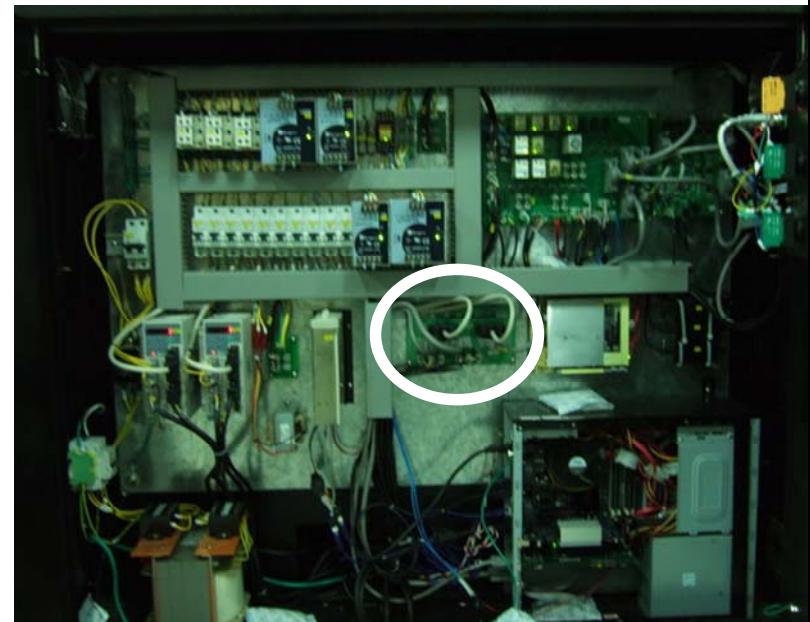
2nd Possibility: Connector Loose

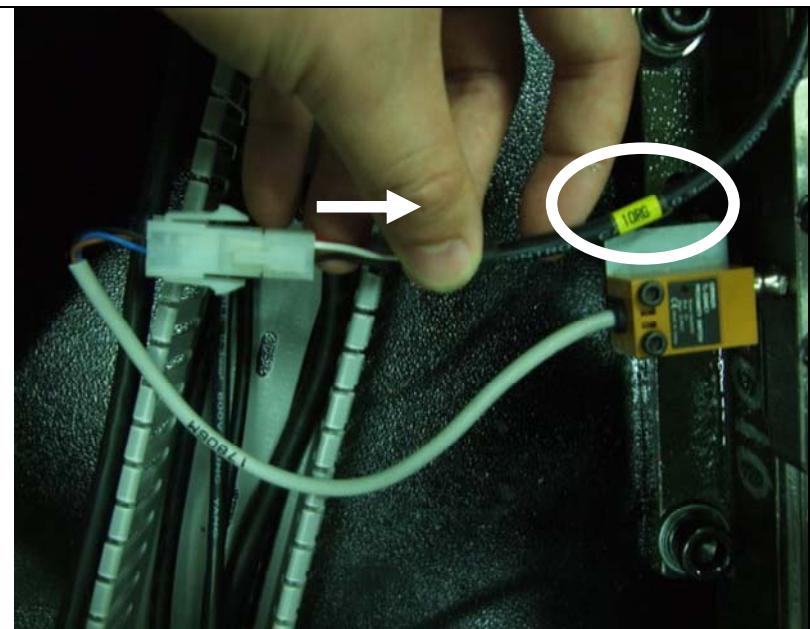
Please follow steps below to check this.

(a) Open covers on base plate.

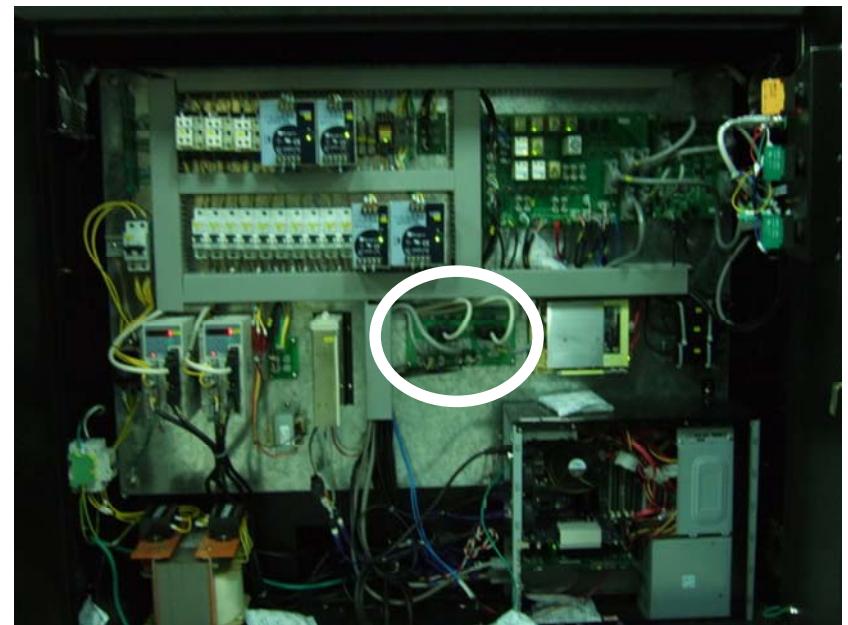


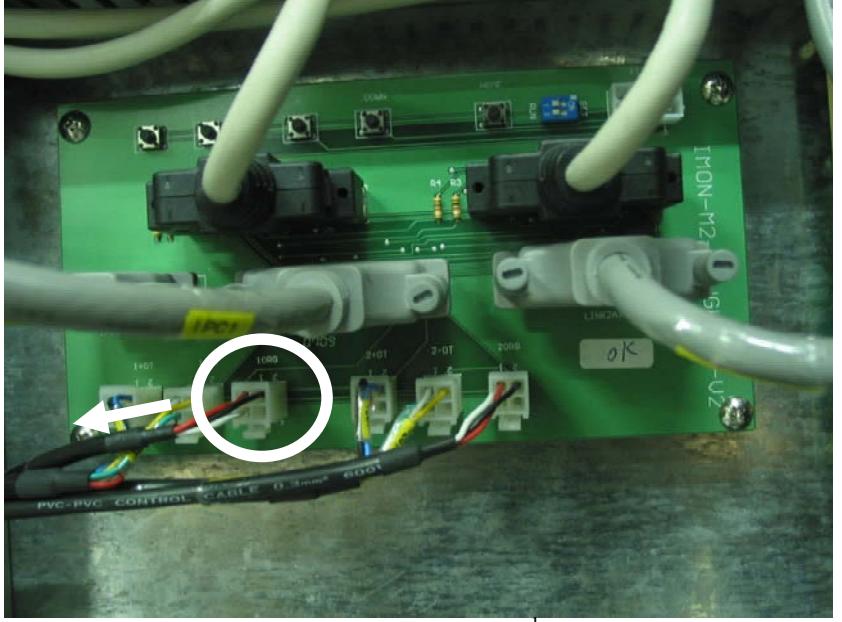
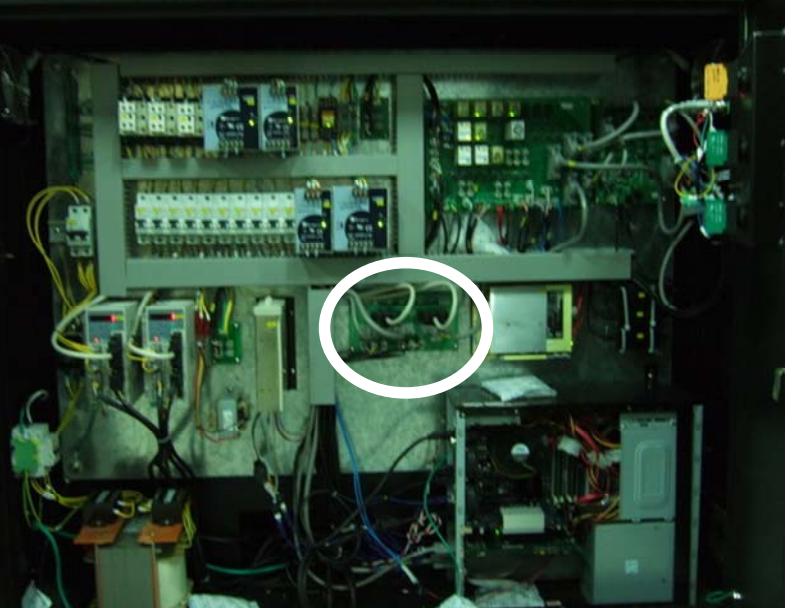
(b) Check the connector and wire (Wire number is ORG). The wire should not be pulled out and connector should be well-connected.

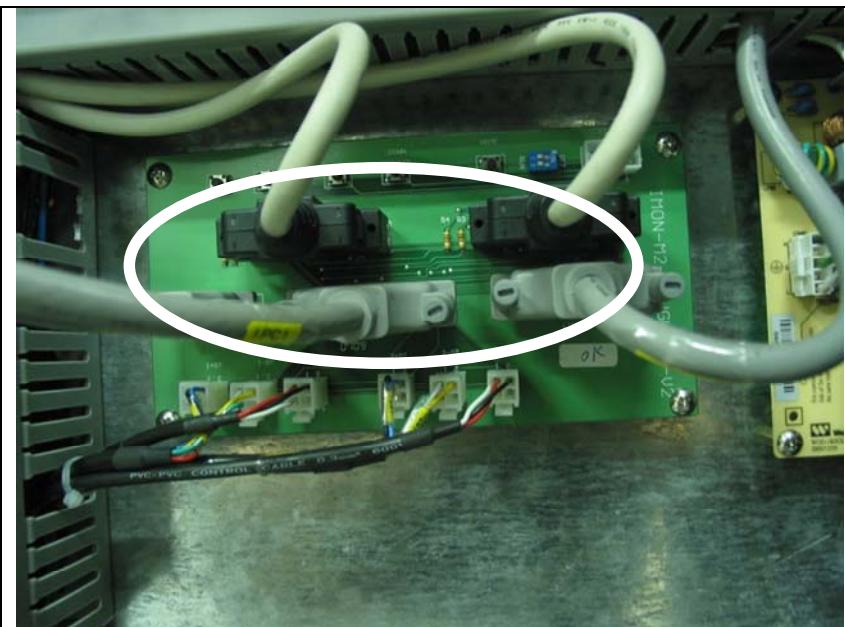




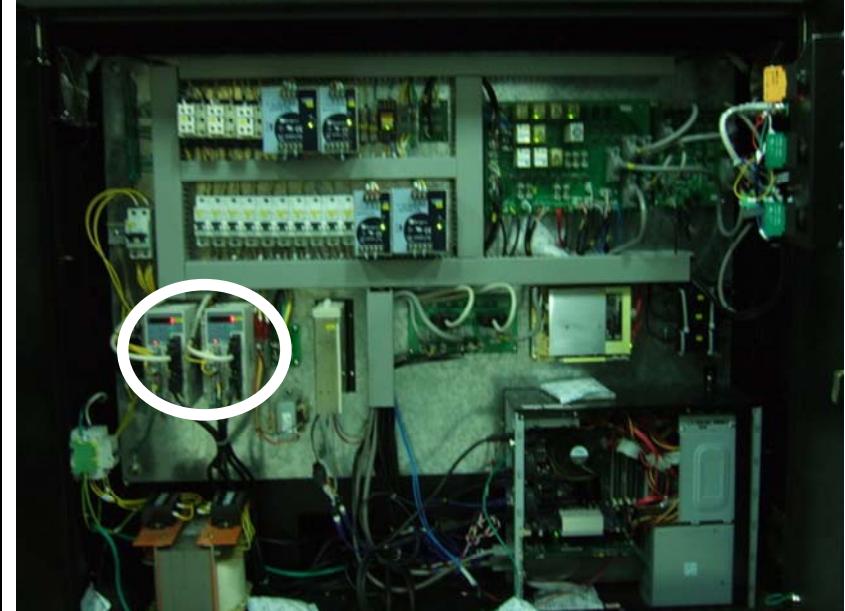
(c) Check connector on 2-Axis Card (wire number is and 2ORG1ORG). The wire should not be pulled out and connectors are well connected.

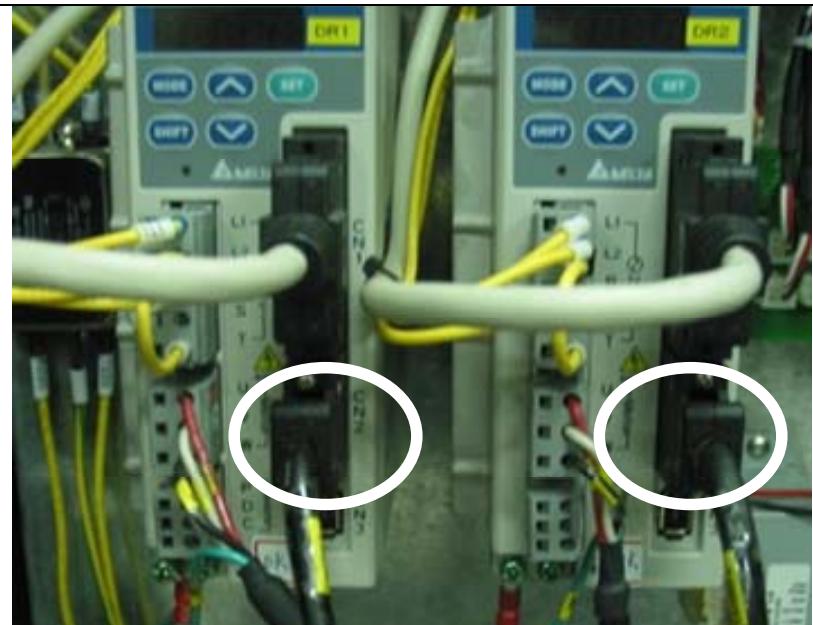


		
		<p>(d) If the problem persists, continue to 3rd Possibility.</p> <p>3rd Possibility: ORG Sensor Broken Replace ORG Sensor. Please refer to Component Replacement Procedure List on page 105: Component#21 ORG Sensor Replacement Procedure to complete replacement.</p>
0035	Motor Encoder Failure (Ignore this because the system is not affected by this error code)	<p>1st Possibility: Ignore this if system is working well.</p> <p>2nd Possibility: 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.



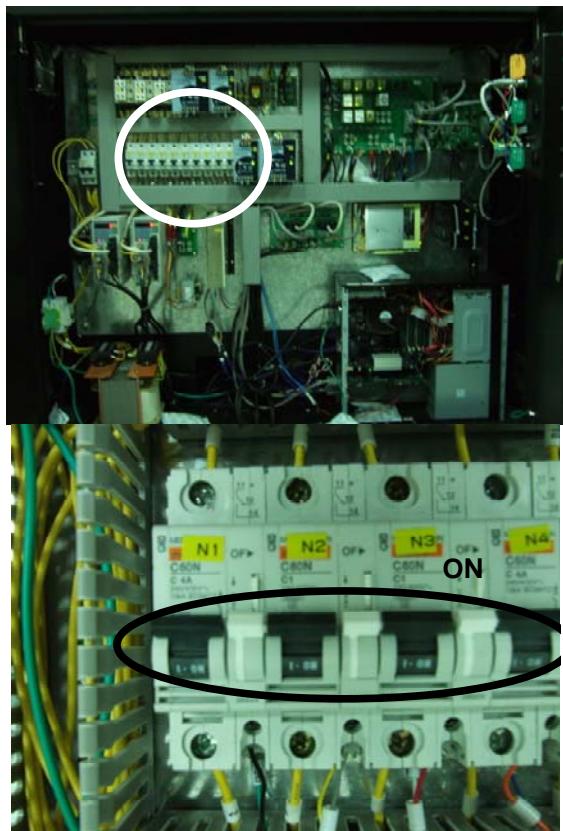
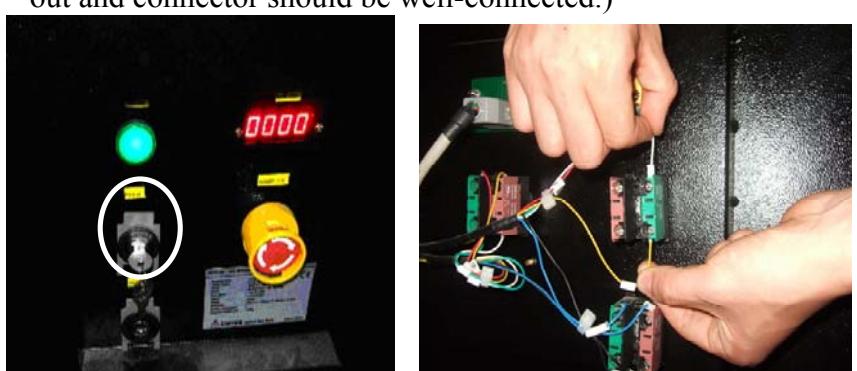


*Please refer to "Troubleshooting" on page 79, if the problems are not included in "Error Code Definition".

TROUBLESHOOTING LIST**PAGE**

I ----Power Failure.....	80
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XX ----Operator Switch did not work after switching	103
XXI ----FreeKey not work.....	103

Manual

Number	Symptom	Troubleshooting Guide
I	Power Failure	<p>1. Check all Circuit Breakers (N0~N10) are at “ON” position as shown below.</p>  <p>2. Check the Power Switch connectors and wires on back side panel of control box are well-connected. (Wires should not be pulled out and connector should be well-connected.)</p>  <p>3. If P1 indicator is On, which means the system receives power. Two conditions are given, Please follow them.</p>

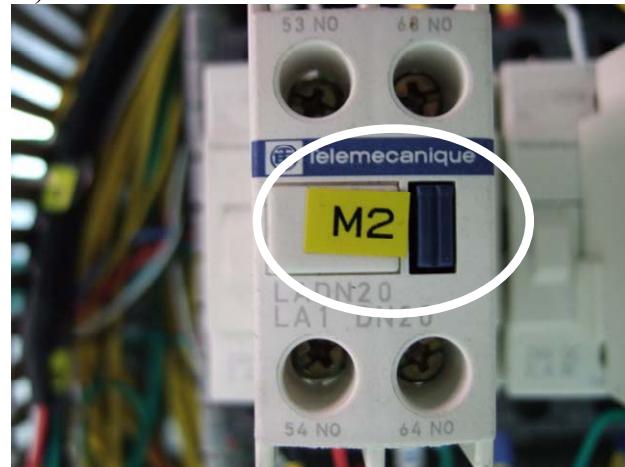
Manual

**Condition 1: P1 has power (P1 indicator is on)**

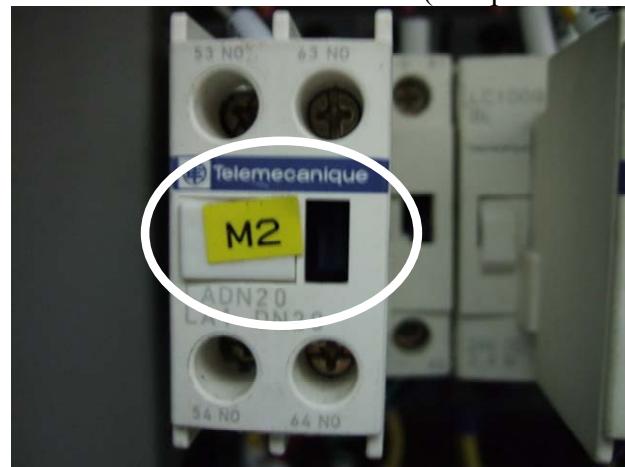
1. Check Magnetic Contact (M2) is working or not.

Please follow steps below to check this.

- (a) The picture below show M2 is not active. (The pad is not sucked in)

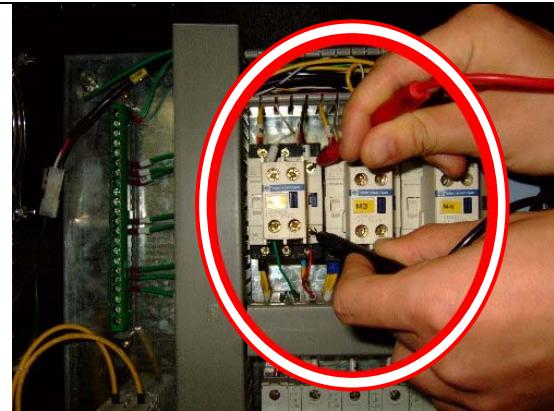


- (b) The picture below shows M2 is active. (The pad is sucked in)



- (c) If M2 is not active, use voltammeter to check 24 VDC on M2 as shown below.

Manual

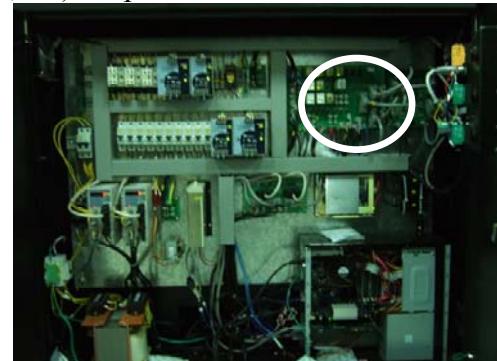


(d) If there is power (24VDC) to M2, Please replace a new Magnetic Contact (M2). Please refer to Component Replacement Procedure List on page 105: Component#3 Magnetic Contact Replacement Procedure to complete replacement.

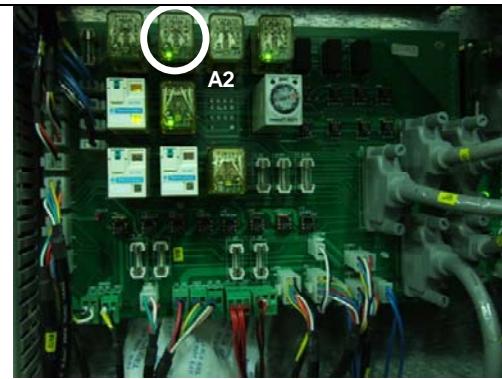
2. Check PR1 indicator is on or not.
(a) Check indicator of PR1 as shown below



(b) If PR1 indicator is off but A2 is on as shown below, Please replace PR1. Please refer to Component Replacement Procedure List on page 105: Component#33 Relay (A1~A5, PR1~PR3, T2). Replacement Procedure.



Manual



3. If the problem persists, please replace Control Card Please refer to Component Replacement Procedure List on page 105: Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement Procedure.

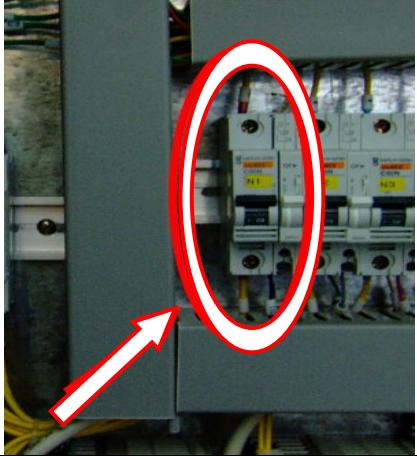
Condition 2: P1 has no power (P1 indicator is off)

1. Check that P1 receives power (220) VAC or not. Please follow steps and pictures below to check this.
- (a) Use voltammeter to check N and L on P1.

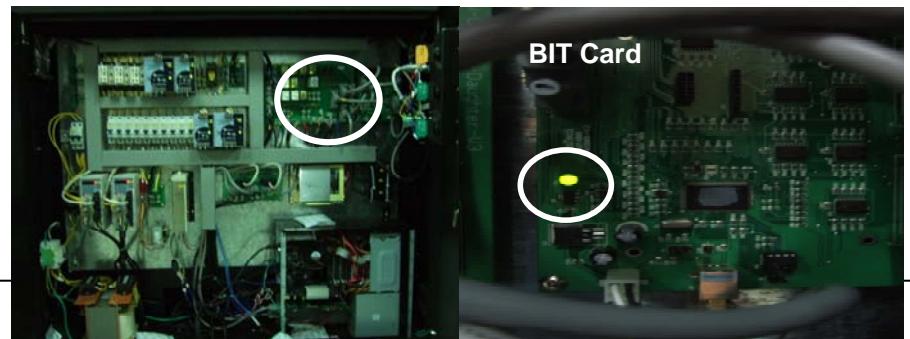


- (b) If there is power (220 VAC), replace P1. Please refer to Component Replacement Procedure List on page 105: Component#1 Power Supply Replacement Procedure.
- (c) If there is no power (220VAC), power off the system. Replace N1. Please refer to Component Replacement Procedure List on page 105: Component#2 Circuit Breaker Replacement Procedure to complete replacement.

Manual

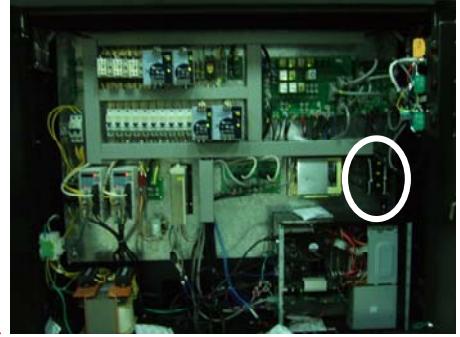
		
II	After power on, system is not Homing, IPC is not "ON"	<p>Condition 1: System with UPS (Serial number from 20602030001B~X20702100070B has UPS.)</p> <p>1. Check Circuit Breaker (N4) is on or not (Turn on it if it was off).</p> 

2. Please check the Power supply indicator of the BIT control card is on or not.

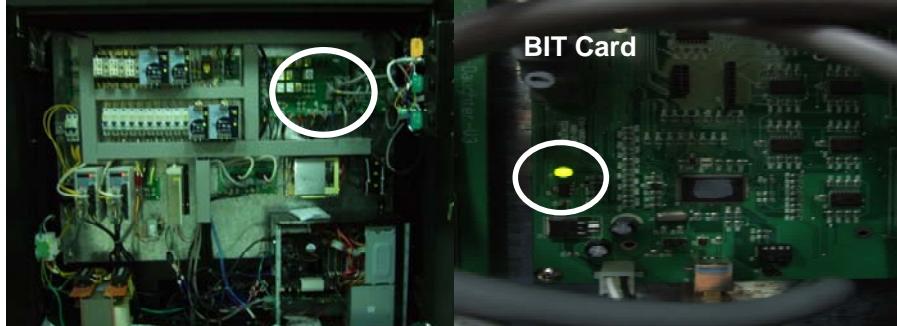
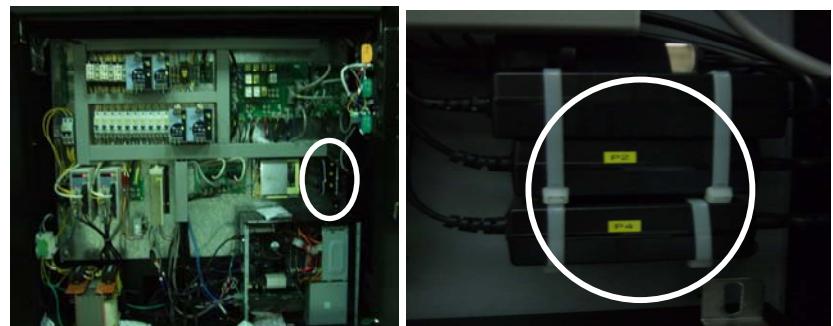
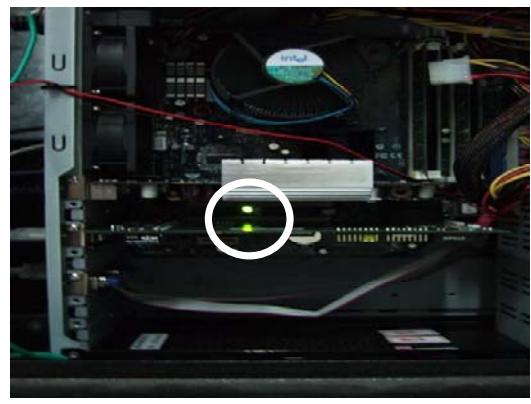


3. If indicator on BIT card is not on, please check power supply (P2) is on or not.

Manual

		 
		<p>4. If P2 is off, check UPS is on or not. If it is not, replace UPS.</p> 
	<p>5. If UPS is on, replace Power Supply (P2). 6. If UPS and P2 are on, 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> <p>Condition 2: System without UPS (Serial number after X20702100070B has no UPS).</p> <p>1. Check Circuit Breaker (N4) is on or not (Turn on it if it is off).</p> 	

Manual

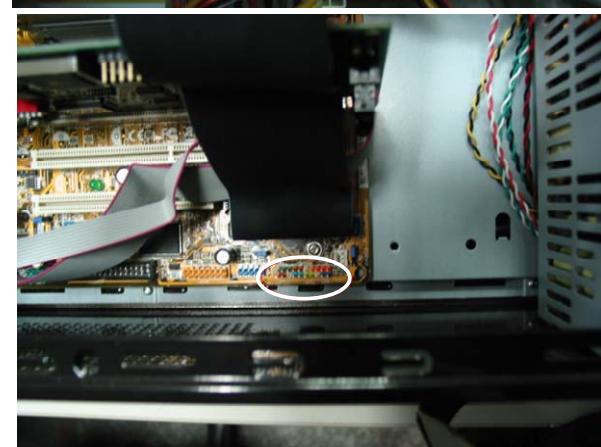
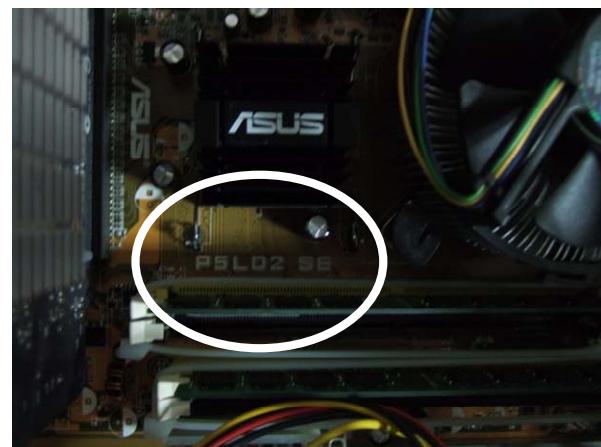
		<p>2. Check the Power supply indicator of the BIT control card is on or not.</p> 
III	After power on, motion base is Homing, but IPC was not ON	<p>3. If indicator on BIT card is not on, check power supply (P2) is on or not.</p>  <p>4. If P2 is not on, replace P2.</p> <p>5. If P2 is on, replace BIT control card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.</p> <p>1. Please check the power indicator in IPC is on or not. Please follow steps and pictures to check this.</p> <p>(a) Check indicator on IPC Motherboard Card is on or not</p>  <p>(b) If indicator is not on, check power plug.</p>

Manual

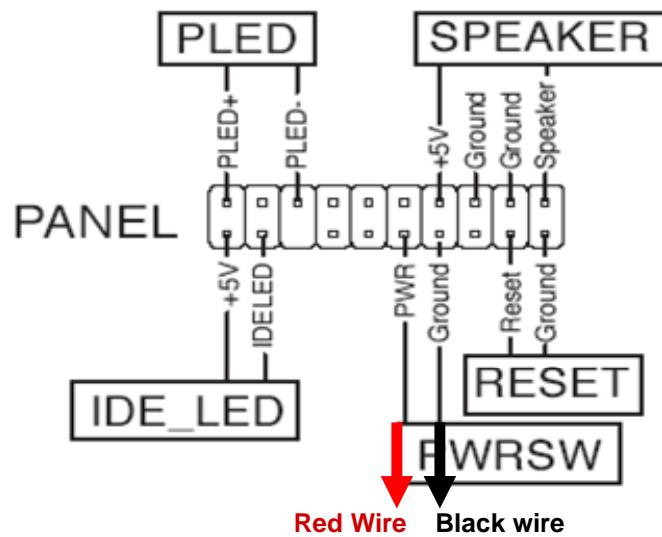


2. If the power supply indicator is on, please check IPC trigger loose or not. Because of the different Motherboard, check the Motherboard Serial Number first. Follow the number to connect trigger.

(a) Serial Number: P5LD2 SE



Manual



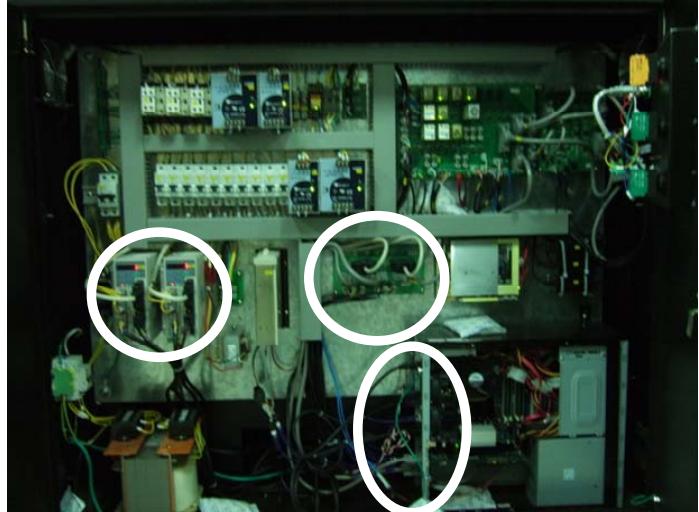
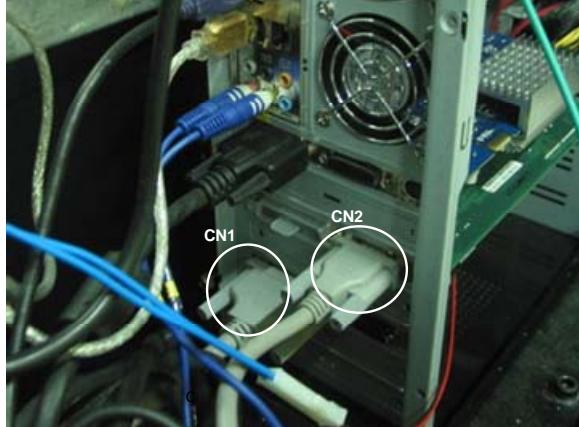
(b) Serial Number: AIMB 562 (Remove VGA Card, Motion Card and Power Supply first in order to inspect the power on trigger)



Manual

		 
IV	After power on, system is not Homing, or after Homing, system is still tilt.	<p>1. Please check all connectors as shown below</p>

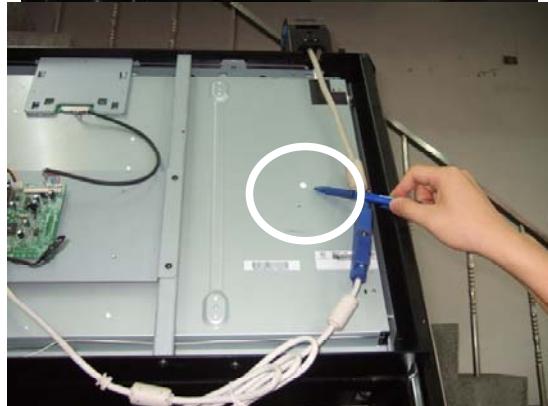
Manual

		  
V	After start, IPC turn ON, LCD monitor still dark.	<p>2. System touched OT sensor. Refer to Reference (1) on page 55 to solve problem.</p> <p>1. Check power supply P3 indicator. If P3 indicator is off, replace Power supply P3.</p>

Manual



2. If there is sound, check the light is on or not on back side of monitor. Remove covers first (Disconnect LED connector) then go to check.

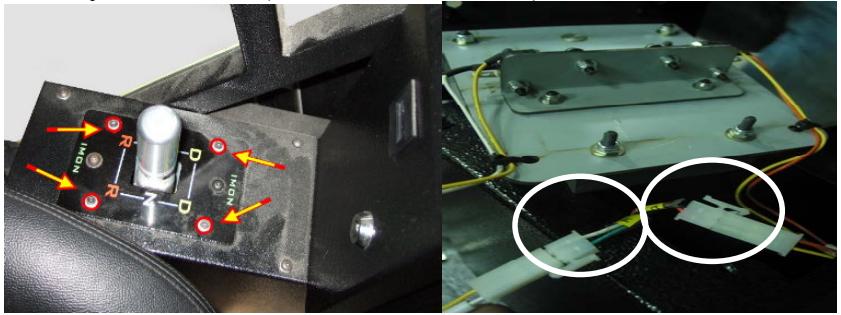
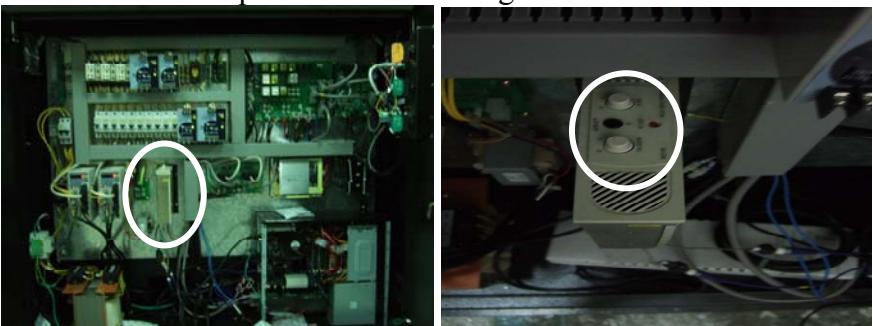


2. If the light is on, check signal connector.

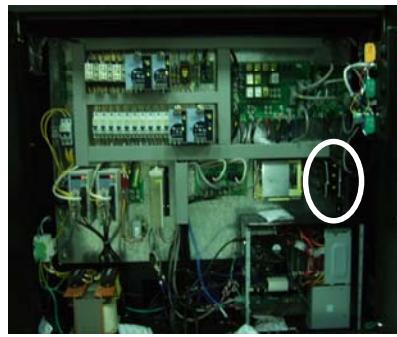
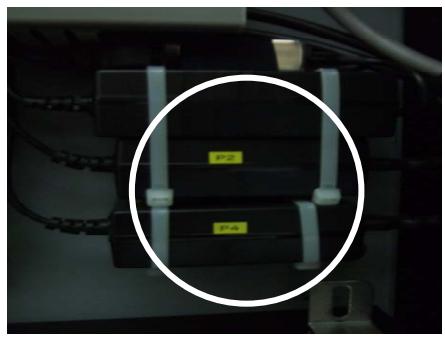


3. If P3 and signal connectors are all right, Replace LCD monitor Control Card. Please refer to Component Replacement Procedure List on page 105: Component#18 Replacement Procedure to complete replacement.

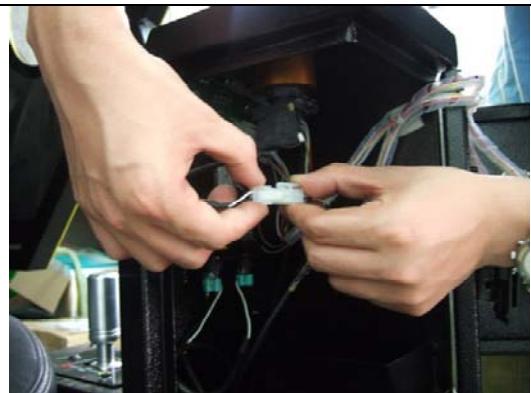
Manual

		4. Replace LCD monitor. Please refer to Component Replacement Procedure List on page 105: Component#22 Replacement Procedure to complete replacement.
VI	Joystick failure	<p>1. Verify connectors (Remove screws first)</p>  <p>2. Please go to the <u>Operator Menu</u>→<u>Joystick Setting</u> to calibrate the Joystick, refer to "Operator Menu".</p> <p>3. If the calibration fails, please change a new one. Please refer to Component Replacement Procedure List on page 105: Component#5 Replacement Procedure to complete replacement.</p>
VII	Gear Shifter failure	<p>1. Verify connectors (Remove screws first)</p>  <p>2. Please go to the <u>Operator Menu</u>→<u>Joystick Setting</u> to test the Gear Shifter, refer to "Operator Menu".</p> <p>3. If the calibration fails, please change a new one. Please refer to Component Replacement Procedure List on page 105: Component#6 Gear Shifter Replacement Procedure to complete replacement.</p>
VIII	After start, no sound	<p>1. Adjust volume from Operator Menu/Volume Setting to check it, refer to "Operator Menu".</p> <p>2. Check Audio amplifier volume setting is not zero.</p>  <p>3. Verify speaker connector.</p>

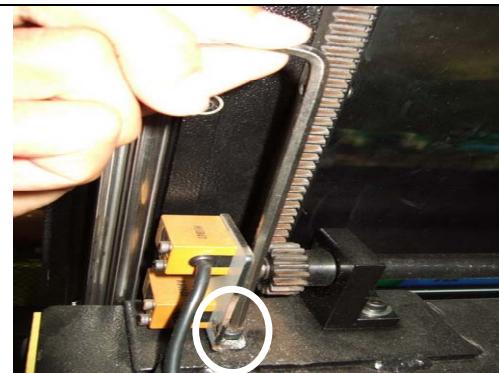
Manual

		  <p>4. Check Power Supply P4 indicator is on or not. If not, replace it.</p>
		  <p>5. Replace amplifier. Please refer to Component Replacement Procedure List on page 105: Component#13 Replacement Procedure to complete replacement. 6. Replace new speaker. Please refer to Component Replacement Procedure List on page 105: Component#12 Replacement Procedure to complete replacement.</p>
IX	Emergency STOP button didn't work while playing game	<p>1. Make sure Emergency Stop button is not stuck.</p>  <p>2. Reconnect connector.</p>

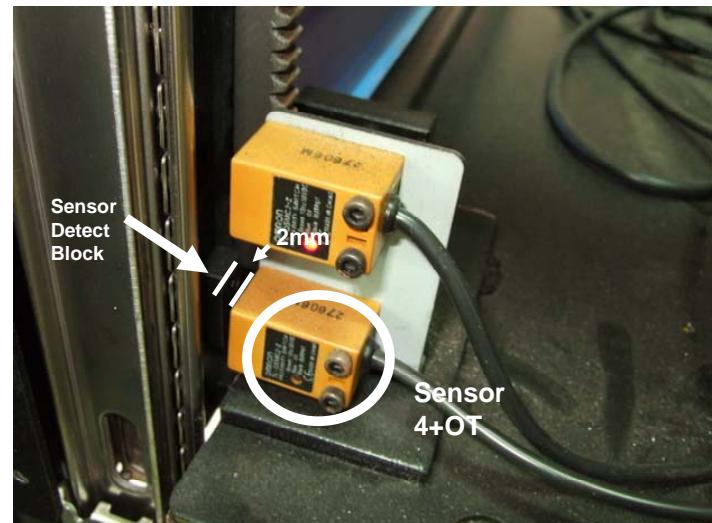
Manual

		 <ol style="list-style-type: none"> 3. Please Enter the <u>Operator Menu</u> → <u>Device Test</u> to check Emergency STOP button is good or not, refer to "Operator Menu". 4. If the Emergency STOP button test fails. Please refer to Component Replacement Procedure List on page 105: Component#16 Emergency Stop Button Replacement Procedure to complete replacement. 5. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.
X	Jump out the game right away after enter the game	<ol style="list-style-type: none"> 1. Disconnect Emergency Stop Button connector and play game again. 2. If it is ok, please replace Emergency Stop Button. Please refer to Component Replacement Procedure List on page 105: Component#16 Emergency Stop Button Replacement Procedure to complete replacement. 3. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.
XI	LCD monitor can not reach top or bottom	<ol style="list-style-type: none"> 1. Verify the sensor is not affected by anything. 2. Please follow steps below to adjust sensor position. (a) Monitor is at top position.  (b) Loose the screws which fix the sensor

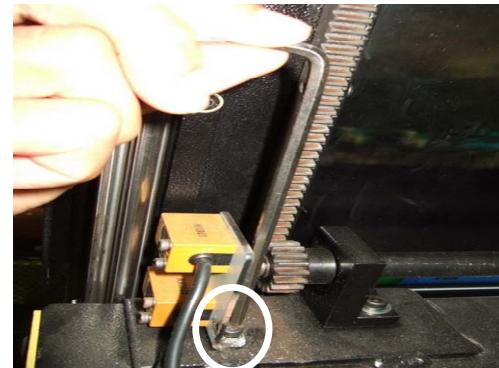
Manual



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

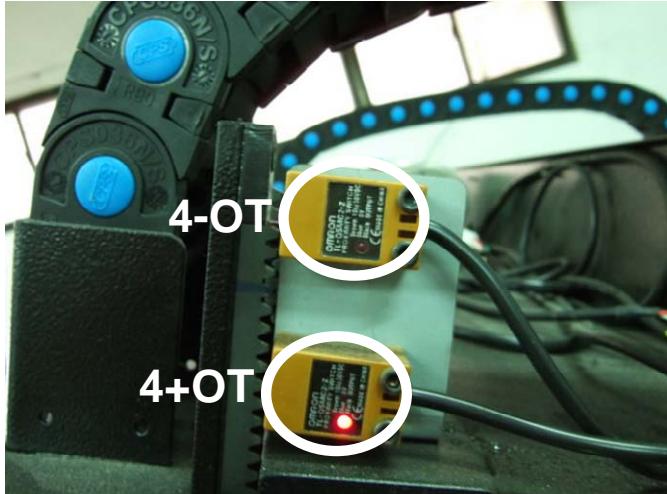
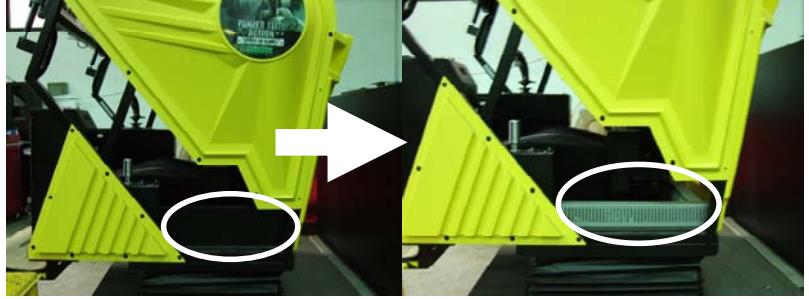
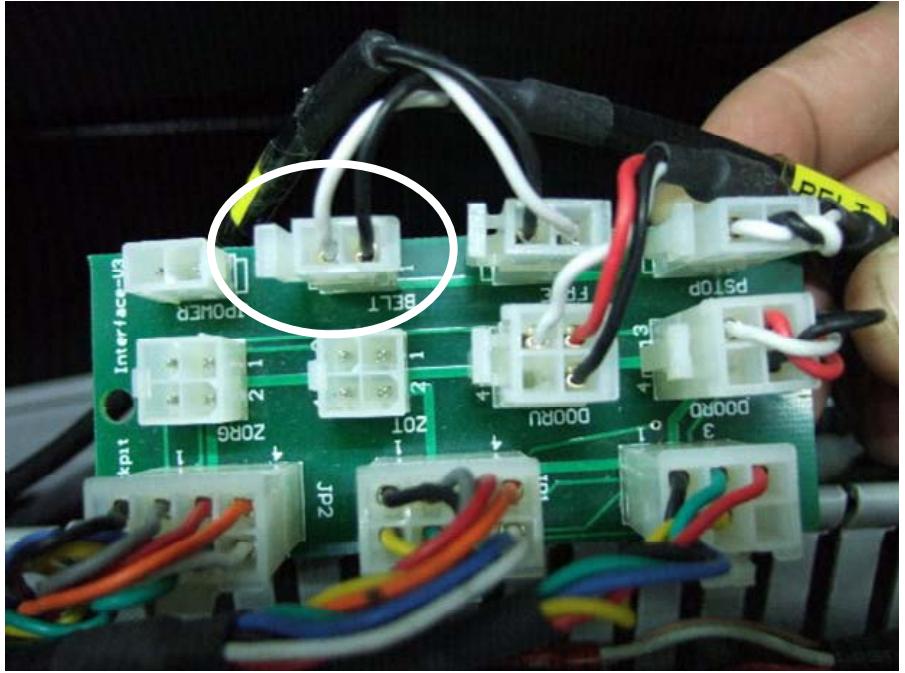


(d) Fix the screws.



(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

Manual

		
XII	After inserting coins , the seatbelt is not fasten, but screen is going downward directly	<p>1. Verify connectors (Belt).</p> <p>(a) Remove cover on right side of cockpit.</p>  <p>(b) Check wire and connector at cockpit (wire number is “BELT”), The wire should not be pulled out and connector is well-connected.</p> 

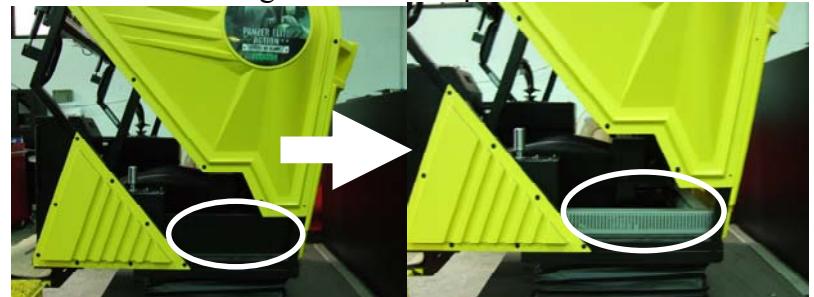
Manual

		<p>(c) Remove cover on left side.</p>  <p>(d) Check connector (Wire number: BELT). The wire should not be pulled out and well-connected.</p>  <ol style="list-style-type: none"> 2. Please Enter the <u>Operator Menu</u>→<u>Device Test</u> to check the Seat Belt is good or not, refer to "Operator Menu". If test fails, please change a new one. Please refer to Component Replacement Procedure List on page 105: Component#14 Seat Belt Replacement Procedure to complete replacement. 3. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.
XIII	After inserting coins, fasten the seatbelt, but the screen is not going downward directly	<p>1. Verify connectors (Belt).</p> <p>(a) Remove cover on left side.</p>  <p>(b) Check connector (Wire number: BELT). The wire should not be pulled out and well-connected.</p>

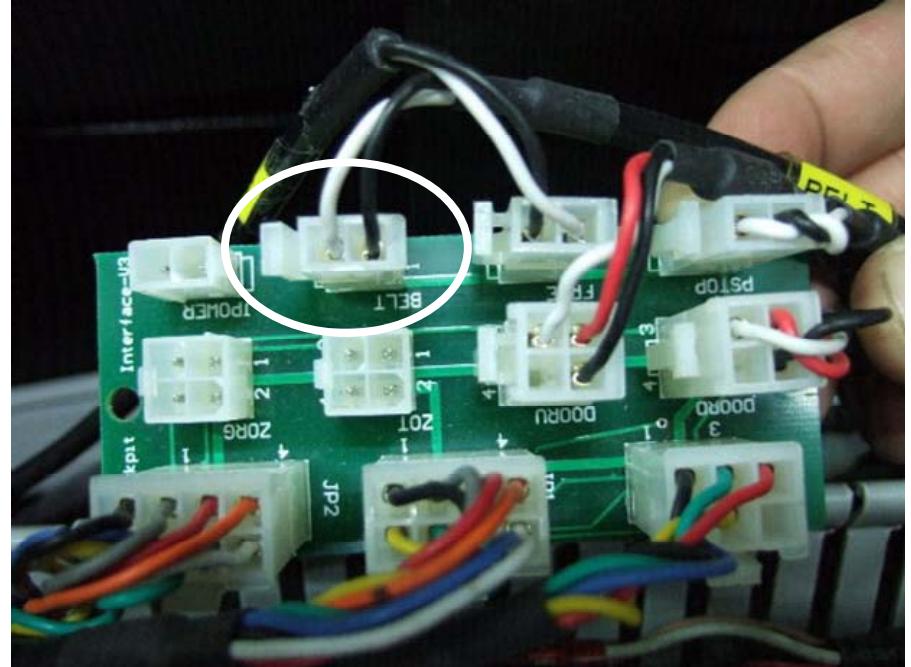
Manual



(c) Remove cover on right side of cockpit.

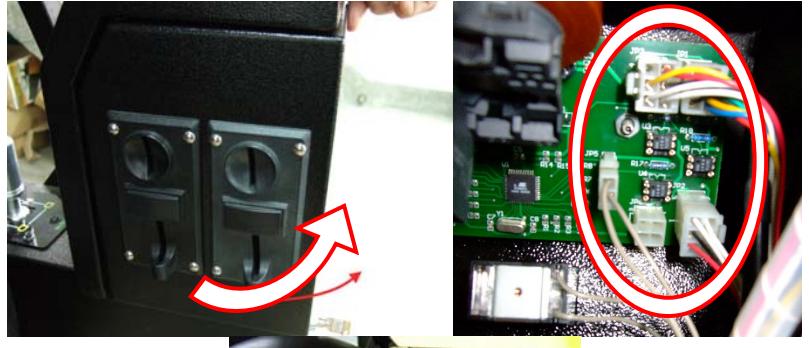
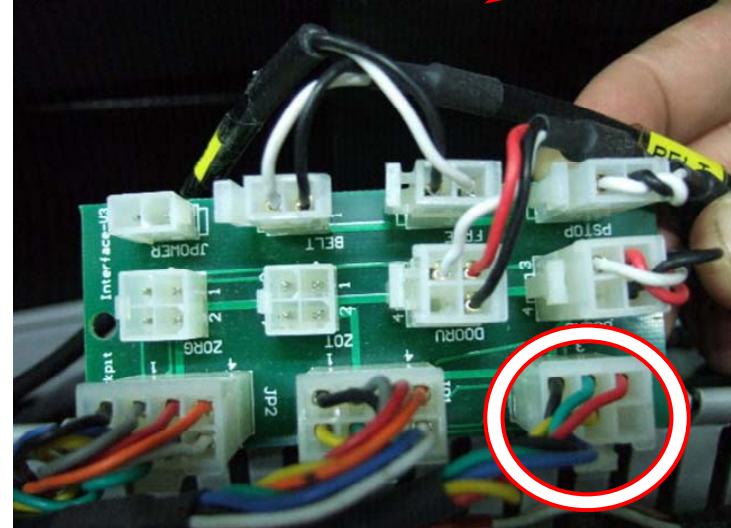


(d) Check wire and connector at cockpit (wire number is "BELT");
The wire should not be pulled out.



2. Please Enter the Operator Menu→Device Test to check the Seat Belt is good or not, refer to "Operator Menu". If test was failed, please change a new one. Please refer to Component Replacement Procedure List on page 105: Component#14 Seat Belt Replacement Procedure to complete replacement.

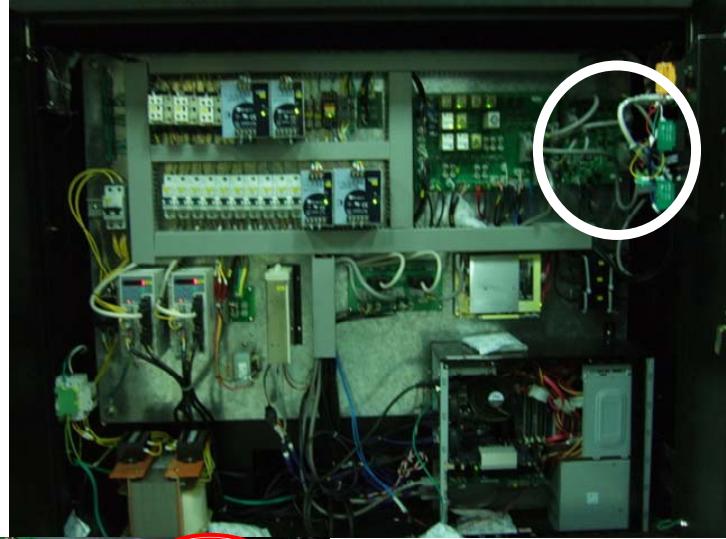
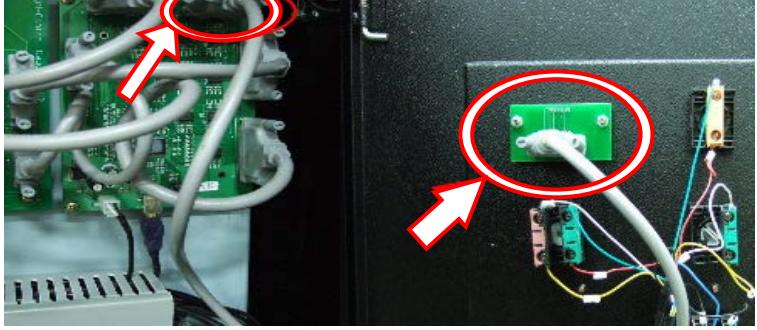
Manual

		3. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 BIT Control Card Replacement Procedure to complete replacement.
XIV	Can't insert coins	<p>1. Make sure coin is correct. 2. Enter Operator Menu/Device Test to test it fails or not, refer to "Operator Menu" 3. Verify connectors (Disconnect and connect again)(JP1~JP5) and Coin</p>    <p>3. If both coin acceptor fail, Please replace Control Card. Please refer</p>

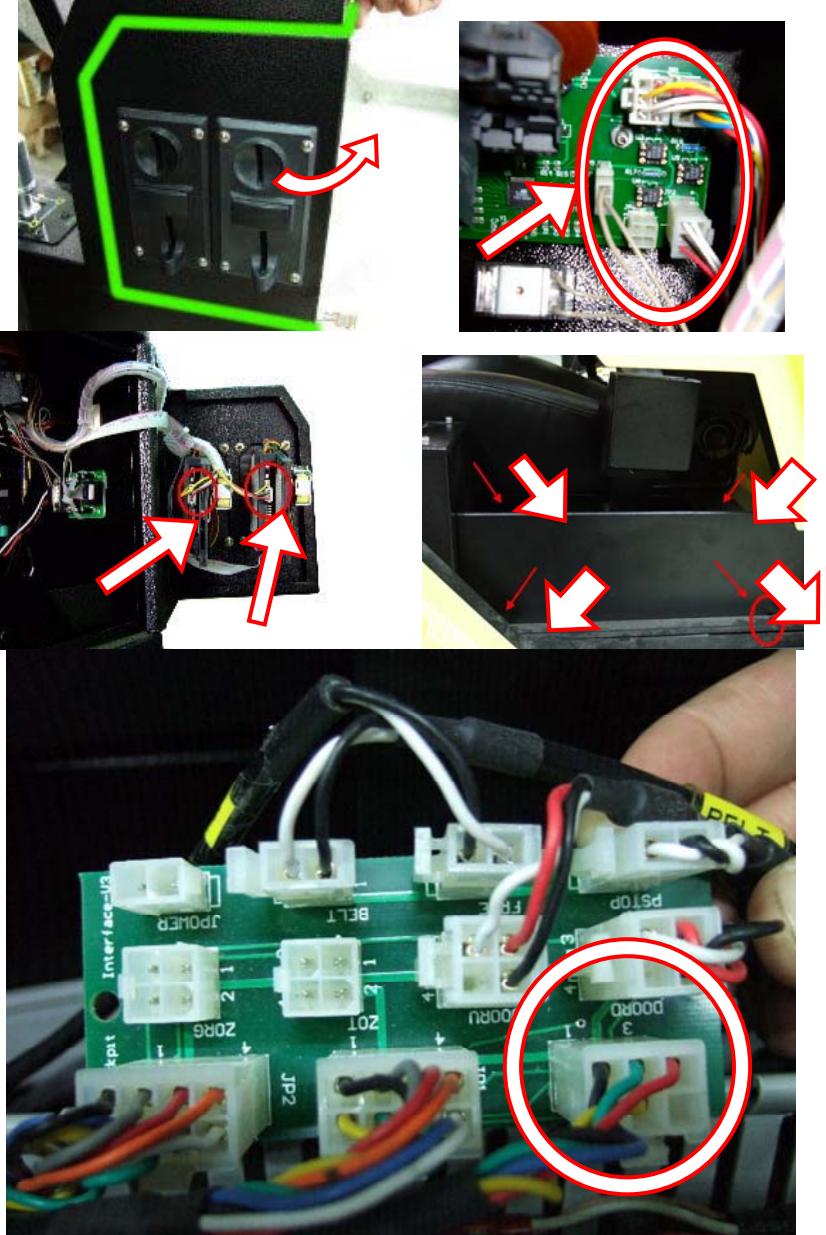
Manual

		<p>to Component Replacement Procedure List on page 105: Component#8 Coin Acceptor Control Card Replacement Procedure to complete replacement.</p> <p>4. If only one, Please replace a new coin acceptor. Please refer to Component Replacement Procedure List on page 105: Component#7 Coin Acceptor Replacement Procedure to complete replacement.</p>
XV	LED on the screen is not shinning	<p>1. Remove cover to verify connectors (Disconnect and connect again).</p> 

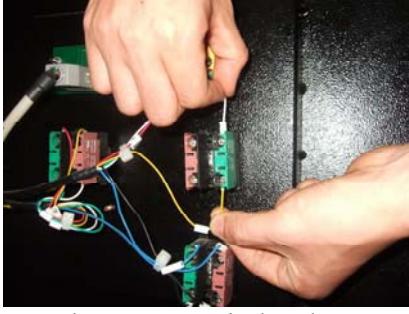
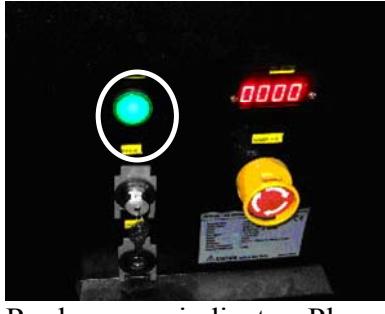
Manual

		 <p>2. Replace LED driver or LED. Please refer to Component Replacement Procedure List on page 105: Component#17 LED and LED Driver Replacement Procedure complete replacement.</p>
XVI	Error Code Screen is not on	<p>1. Verify connector J7 on BIT Control Card (Disconnect and connect again).</p>   <p>2. Replace screen. Please refer to Component Replacement Procedure List on page 105: Component#11 LED Error Code Screen Replacement Procedure to complete replacement.</p>
XVII	Coin Acceptor Screen is not on	<p>1. Verify connector (Disconnect and connect again) (JP1 and Coin).</p>

Manual

		
XVIII	Power "ON" or "OFF" switch not work	<p>2. Replace screen. Please refer to Component Replacement Procedure List on page 105: Component#8 Coin Acceptor Control Card Replacement Procedure to complete replacement.</p> <p>1. Verify Power "On" and "Off" connectors. The wire should be not pulled out and connectors should be well-connected.</p> 

Manual

		 <p>2. Replace new switch. Please refer to Component Replacement Procedure List on page 105: Component#10 Power Switch Replacement Procedure to complete replacement.</p>
XIX	Power On Indicator is not on	<p>1. Verify Power On indicator connectors. The wire should be not pulled out and connectors should be well-connected.</p>  <p>2. Replace new indicator. Please refer to Component Replacement Procedure List on page 105: Component#9 Power On Indicator Replacement Procedure to complete replacement.</p>
XX	Operator Switch did not work after switching	<p>1. Open cover to verify connector (Disconnect and connect again)</p>  <p>2. Replace new Operator Switch. Please refer to Component Replacement Procedure List on page 105: Component#15 Replacement Procedure to complete replacement.</p> <p>3. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 Replacement Procedure to complete replacement.</p>
XXI	FreeKey not work	<p>1. Open cover and check connectors (Disconnect and connect again).</p>

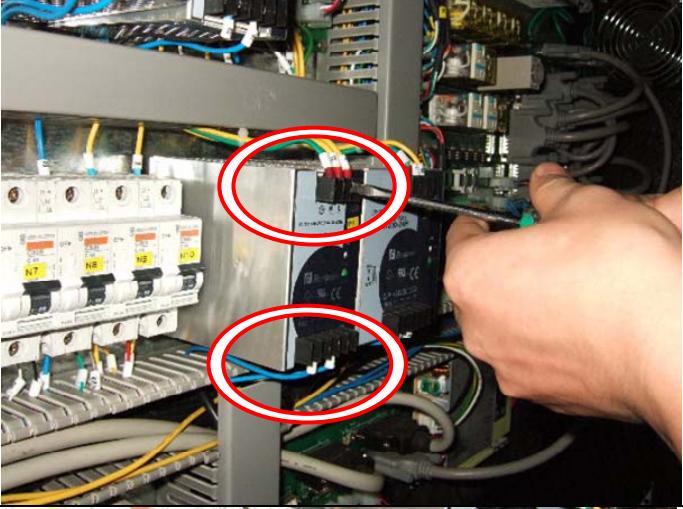
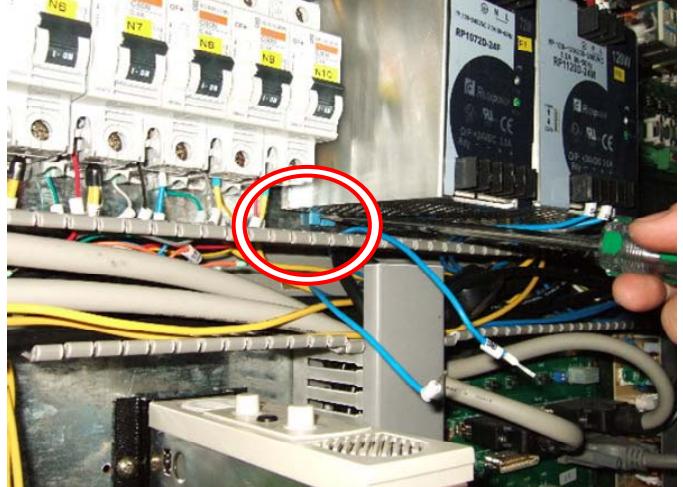
Manual

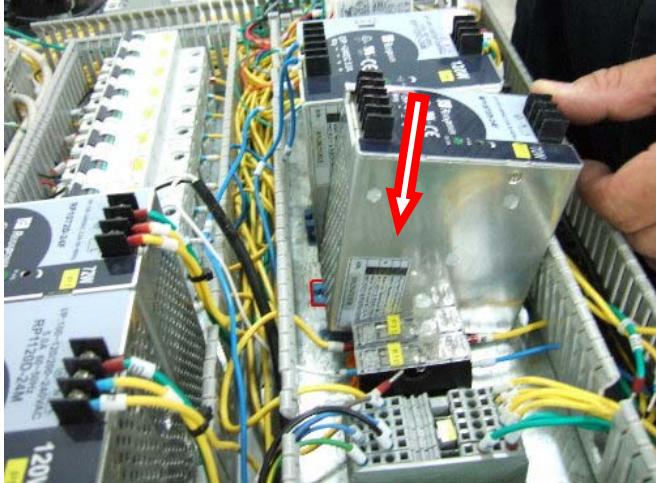
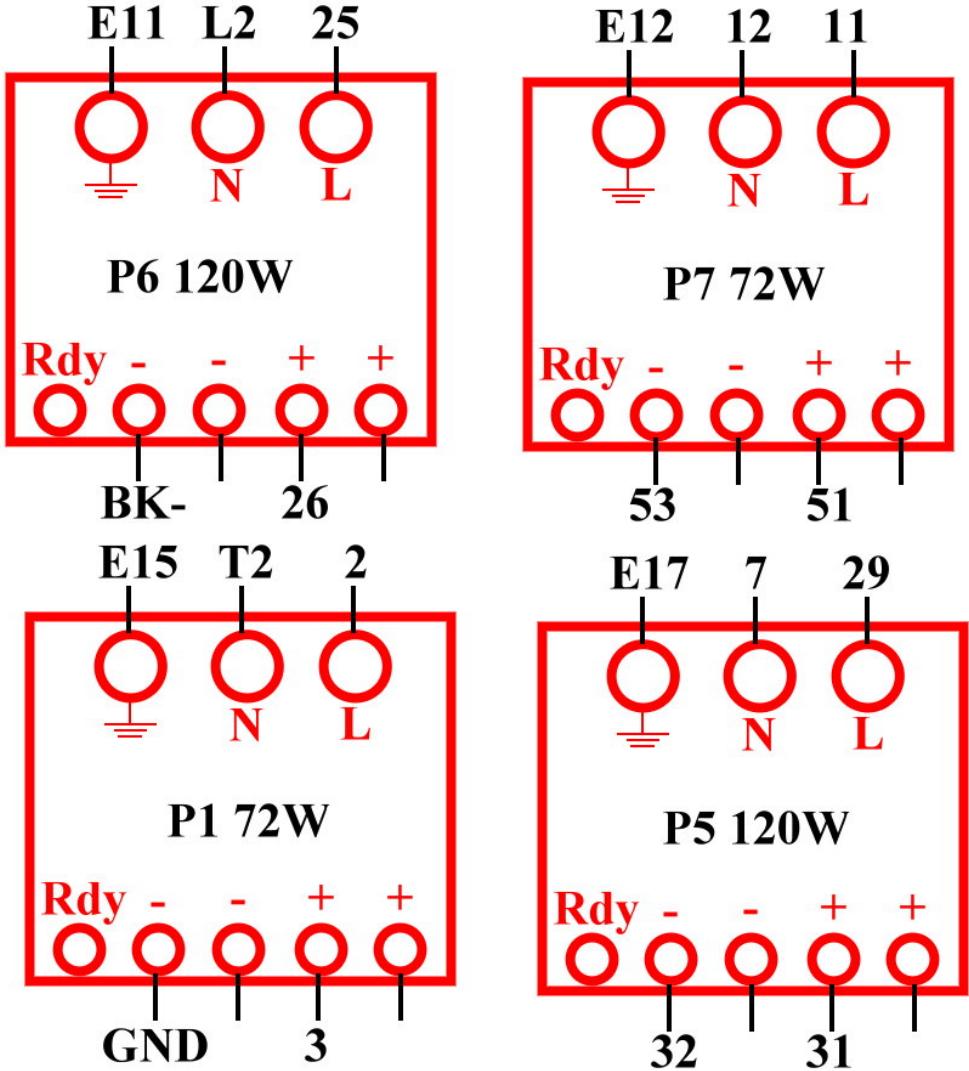
		
		<ol style="list-style-type: none">2. Go to OperatorMenu to test it.3. Replace new FreeKey button Please refer to Component Replacement Procedure List on page 105: Component#15 FreeKey button and Operator Switch Replacement Procedure to complete replacement.4. Replace BIT Control Card. Please refer to Component Replacement Procedure List on page 105: Component#29 Replacement Procedure to complete replacement.

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Component#1 Power Supply Replacement Procedure (For example, P7; P1, P5, P6 can be replaced by same procedure)

Step	Diagrams	Guide
1		Remove wires on Power Supply(P7)
2		Using screwdriver to pull the tenon in order to remove Power Supply
3		Pull out the Power Supply

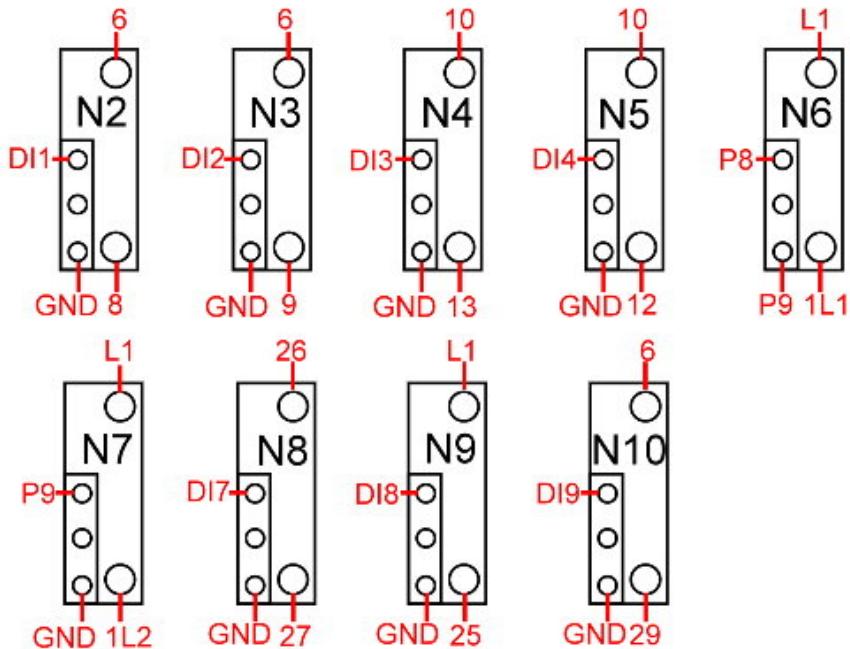
4		a. Replace new Power Supply b. Push the Power Supply all the way down to the bottom then fix it c. Connect all wires as shown in step 5
5	<p>*This is the detail wire connection of power supply (P1, P5, P6 and P7). E11, L2, 25... and so on are wire number. Please connect wires by following these diagrams.</p> 	

Component#2 Circuit Breaker Replacement Procedure (For example, N2; N3-N10 can be replaced by same procedure)

Step	Diagrams	Guide
1		Remove all wires
2		<ul style="list-style-type: none"> a. Using screwdriver to pull out the tenon b. Remove Circuit Breaker
3		<ul style="list-style-type: none"> a. Replace new Circuit Breaker b. Push Breaker all the way down to bottom then fix it c. Connect all wires as shown in step 4

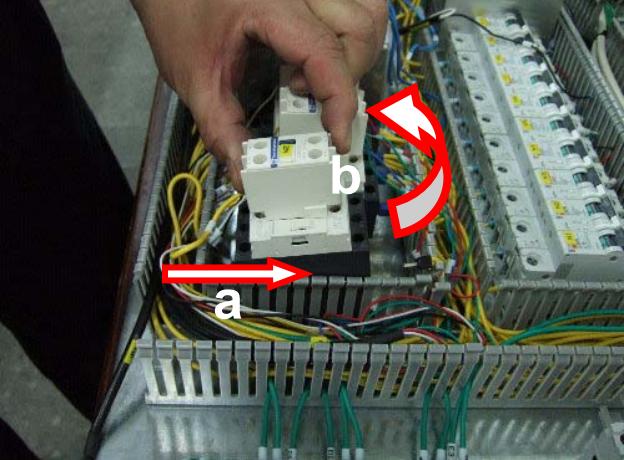
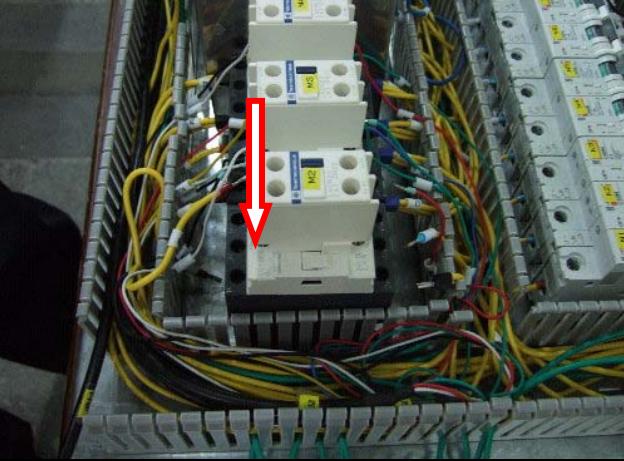
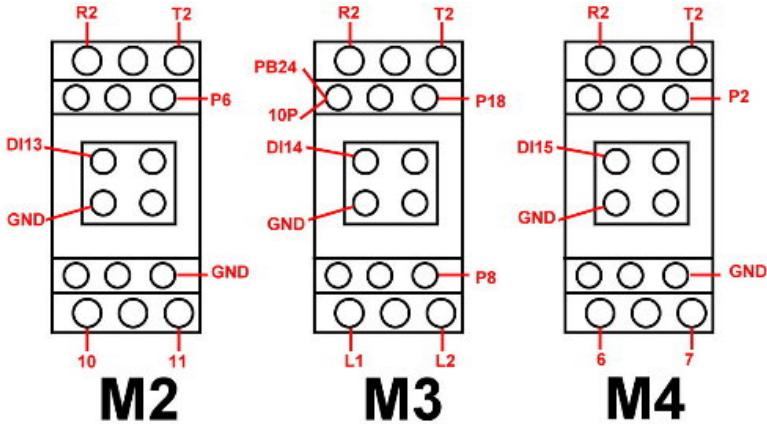
4

*This is the detail wire connection of Circuit Breaker (N2-N10). 6, DI1, GND... and so on are wire number. Please connect wires by following these diagrams.

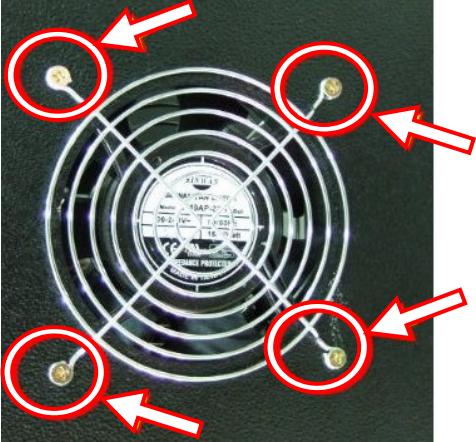
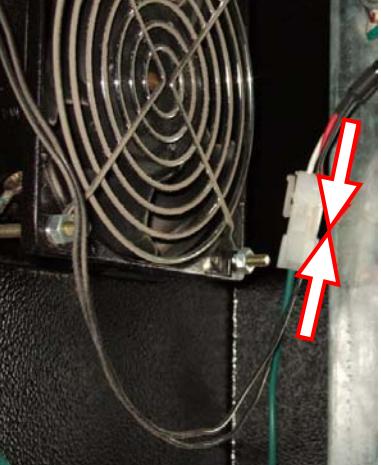


Component#3 Magnetic Contact Replacement Procedure (For example, M2; M3 and M4 can be replaced by same procedure)

Step	Diagrams	Guide
1		Remove all wires

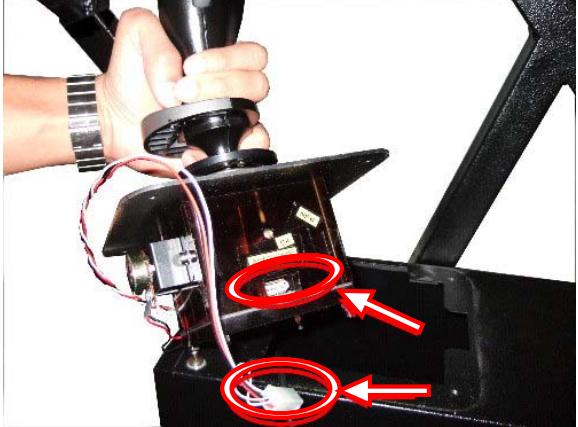
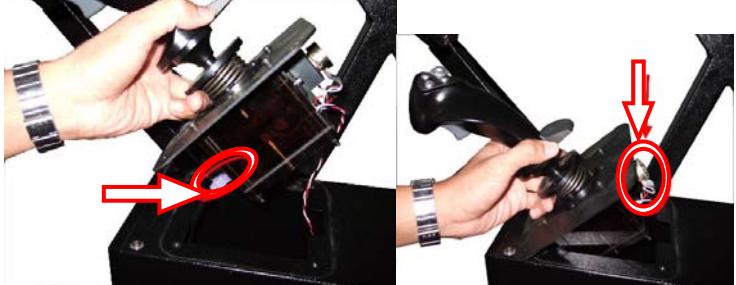
2		a. Push Contact forward b. Pull Contact up then remove it
3		a. Replace new Contact b. Push Contact all the way down to bottom then fix it c. Connect all wires as shown in step 4
4	<p>*This is the detail wire connection of Magnetic Contact (P1, P5, P6 and P7). E11, L2, 25... and so on are wire number. Please connect wires by following these diagram</p> 	

Component#4 Fans Replacement Procedure

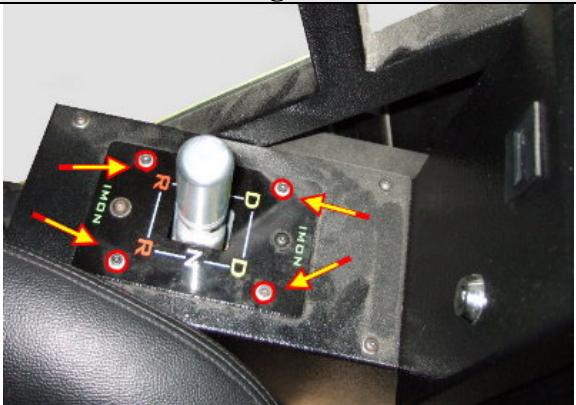
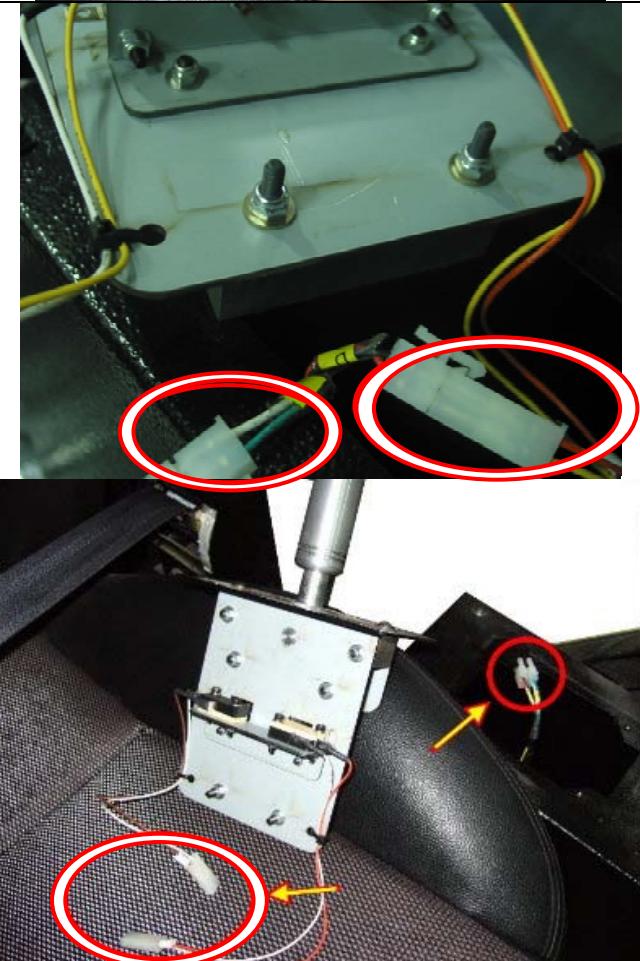
Step	Diagrams	Guide
1		Remove screws
2		1. Disconnect connector of Fan 2. Replace new Fan
3		Fix Fan by tying up screws and connect connector of Fan

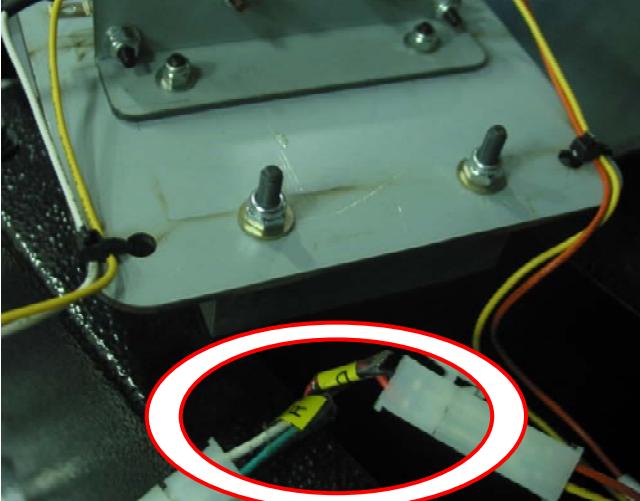
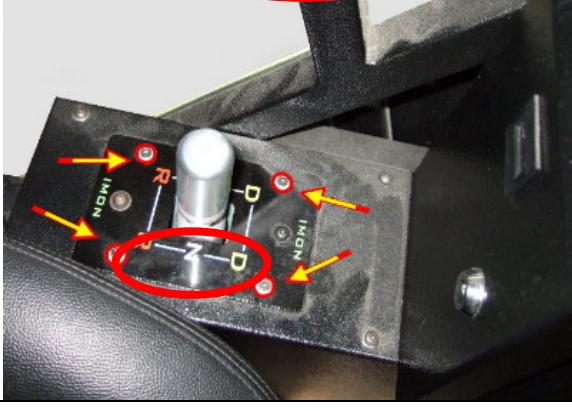
Component#5 Joystick Replacement Procedure

Step	Diagrams	Guide
1		Remove screws
2		Pull out Joystick Notice: Be careful, do not damage the Joystick and USB connector
3		Remove two connectors of Joystick

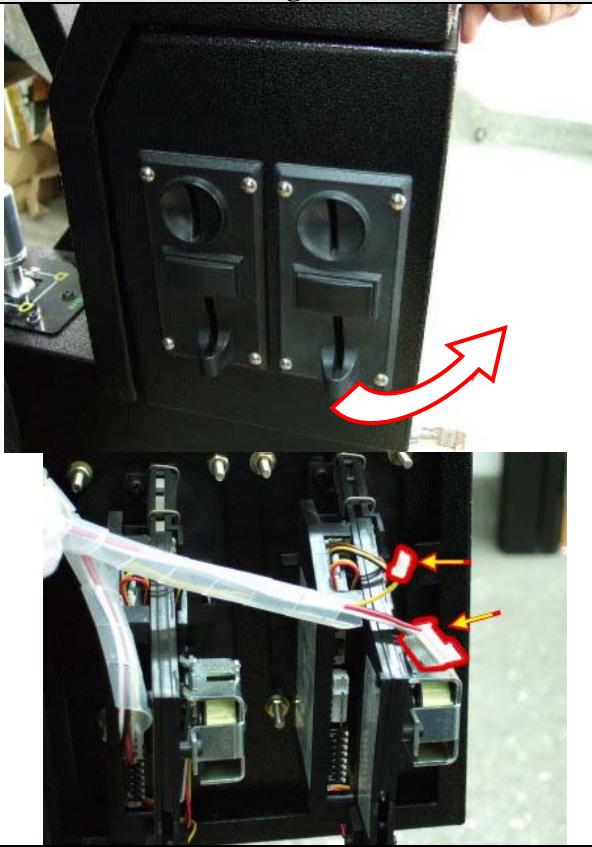
4		Install new Joystick and connect connectors
5		<p>Put the Joystick into the opening</p> <p>Notice: Do not damage the Joystick</p>
6		Fix Joystick by tying up screws

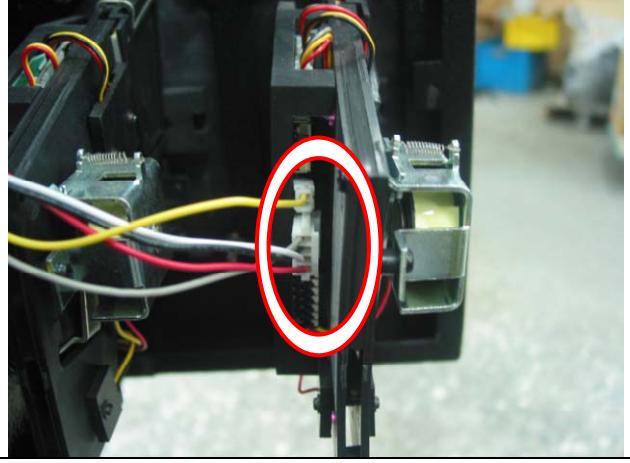
Component#6 Gear Shifter Replacement Procedure

Step	Diagrams	Guide
1		Remove screws
2	 <p>Notice: Be careful, do not damage Gear Shifter</p>	Remove Gear Shifter and disconnect two connectors (D and R)

3		<p>1. Install new Gear Shifter and connect connector (D and R) 1. Put the Gear Shifter to original position</p>
4		<p>Fix the Gear Shifter Notice: "D" should face forward</p>

Component#7 Coin Acceptor Replacement Procedure

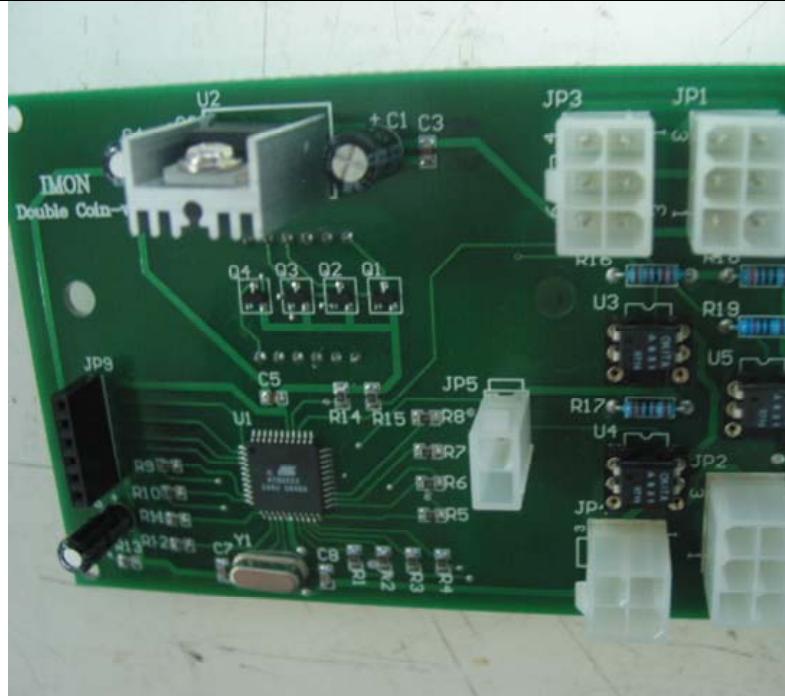
Step	Diagrams	Guide
1		Open the Coin Box, and then remove the connector on the Coin Acceptor
2		Remove screws and nuts Notice: Please keep screws and nuts

3		<ol style="list-style-type: none">1. Replace new coin acceptor2. Fix Coin Acceptor
4		<p>Connect all connectors</p> <p>Notice: Please do not mismatch connector direction</p>

Component#8 Coin Acceptor Card Replacement Procedure

Step	Diagrams	Guide
1		<ol style="list-style-type: none"> 1. Open the Coin Box 2. Remove the screws which fixed Coin Acceptor Card
2		<ol style="list-style-type: none"> 1. Remove Card 2. Disconnect connectors <p>Notice: Please watch for the plastic mat of the back of the control card</p>

3



Replace new Card

Notice:**Please connect JP1-JP5**

4



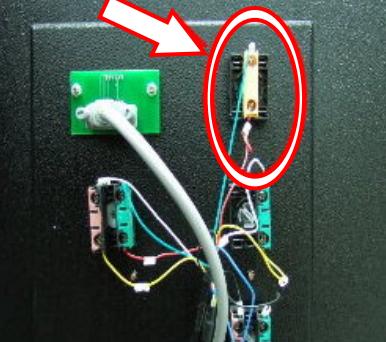
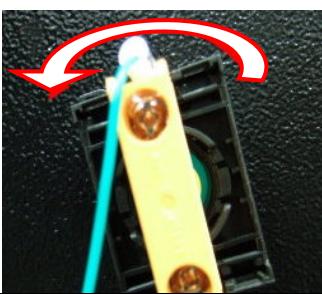
a. Connect all connectors

Notice:**Please do not mismatch connectors**

b. Fix the Card

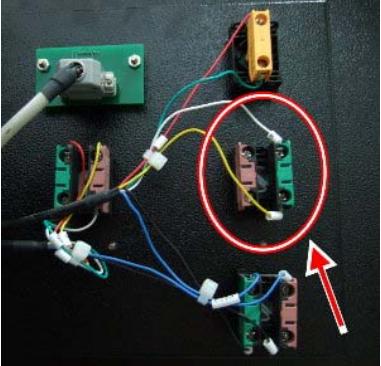
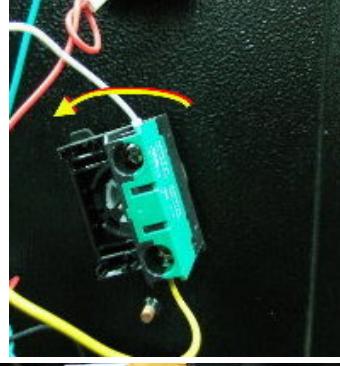
Notice:**Please watch for the plastic mat of the back of the control card**

Component#9 Power Supply Indicator Replacement Procedure

Step	Diagrams	Guide
1	  	Turn the LED node on the control panel to left, and then pull up it.
2		Push LED, turn to left then pull out LED.
3		Replace new LED

4		<p>3. Lift the LED on the node, push LED then turn LED to right to lock 4. Put the node into lampshade</p>
---	--	---

Component#10 Power Switch Replacement Procedure

Step	Diagrams	Guide
1	  	<p>Remove the power on “switch contactor” on the back of left door of the electric control panel. Please follow the below removal procedure.</p> <ul style="list-style-type: none"> (1) Fig. 1a shows the location of the “switch contactor”. (2) Turn left the “switch contactor” as shown in Fig. 1b. (3) Pull out the “switch contactor” as shown in Fig. 1c. (4) Remove the nut of the switch as shown in Fig. 1d. (5) Remove the switch as shown in Fig. 1e.

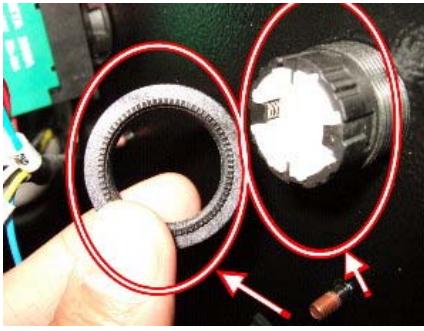
	 	<p>Fig. 1d</p> <p>Fig. 1e</p>	
2	 	<p>Fig. 2a</p> <p>Fig. 2b</p>	<p>Replace a new power switch Please follow the below installation procedure.</p> <p>(1). Replace a new power switch as shown in Fig. 2a</p> <p>(2). Fasten the nut of the power switch as shown in Fig. 2b.</p> <p>(3). Pull in the node, and then turn it right to lock the node. The figure as shown in Fig. 2c, 2d</p>



Fig. 2c

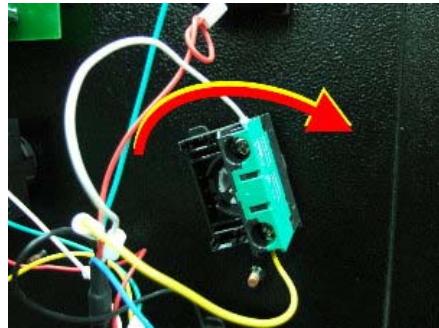
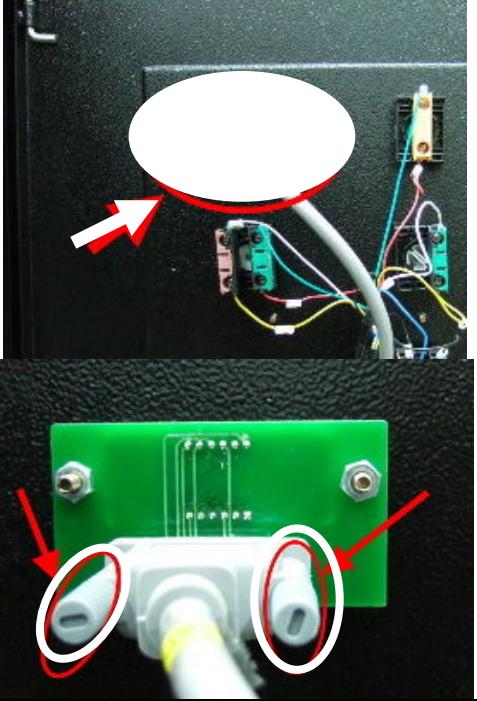
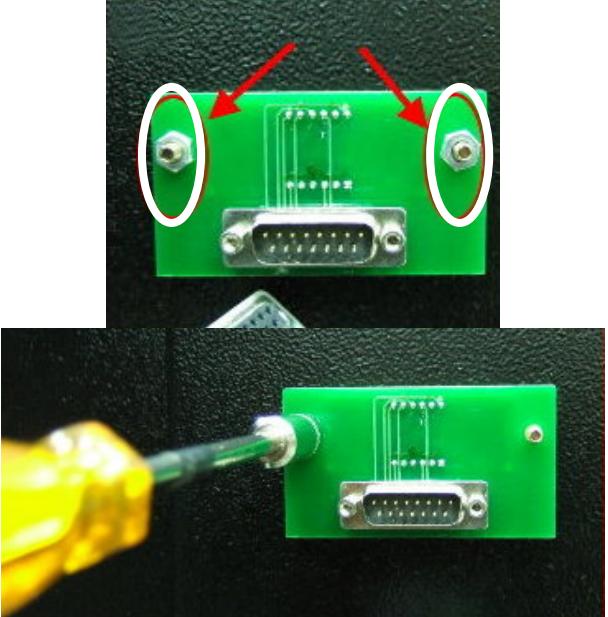
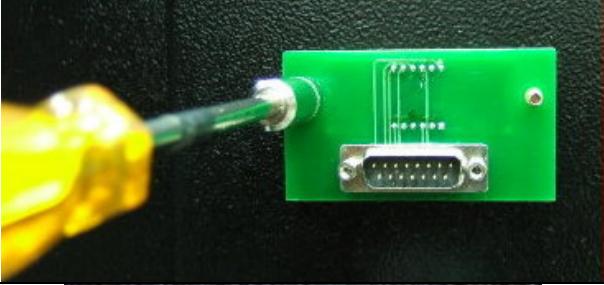
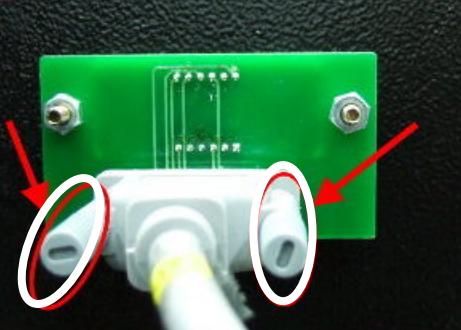


Fig. 2d

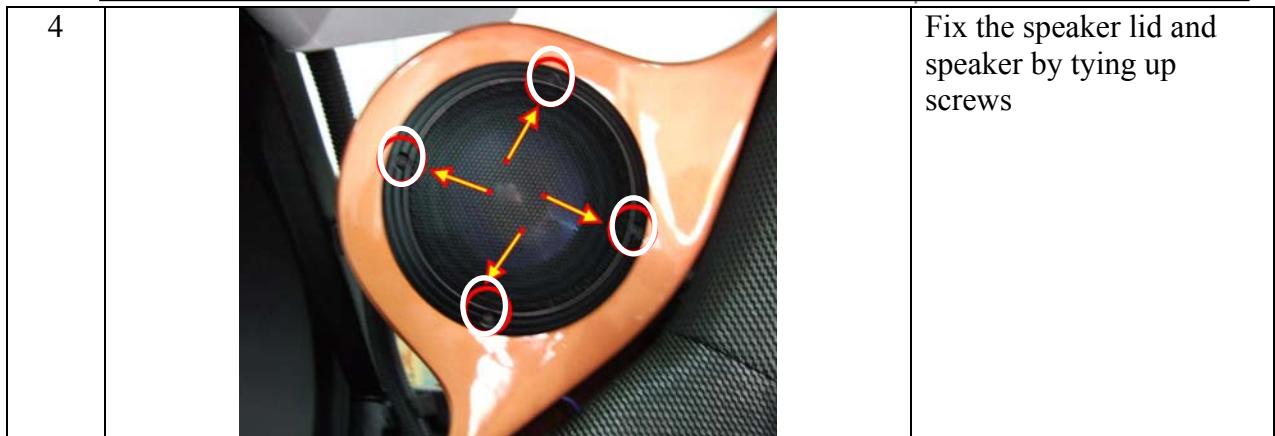
Component#11 LED Error Code Screen Replacement Procedure

Step	Diagrams	Guide
1		Remove Error Code Screen signal connector
2		Remove screws
3		Replace a new Screen

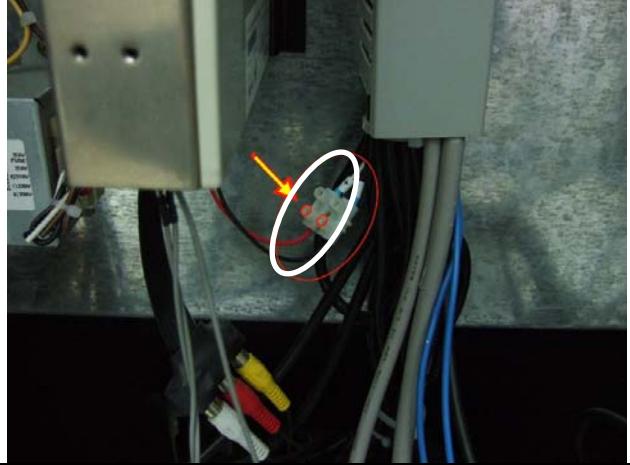
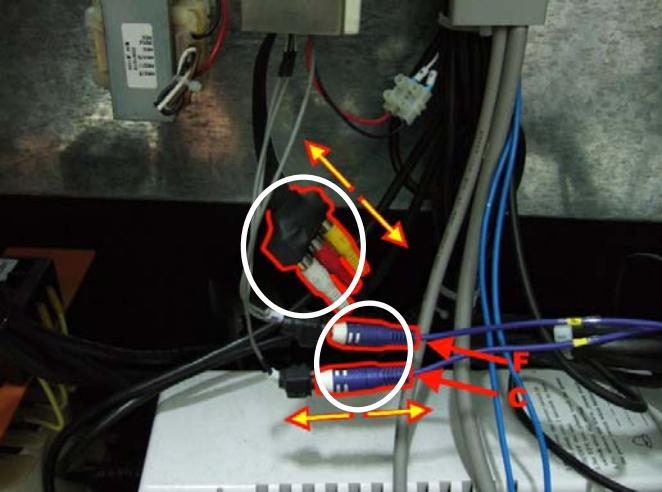
4			Fix Screen by tying up screws
5			Connect connector and tie it up

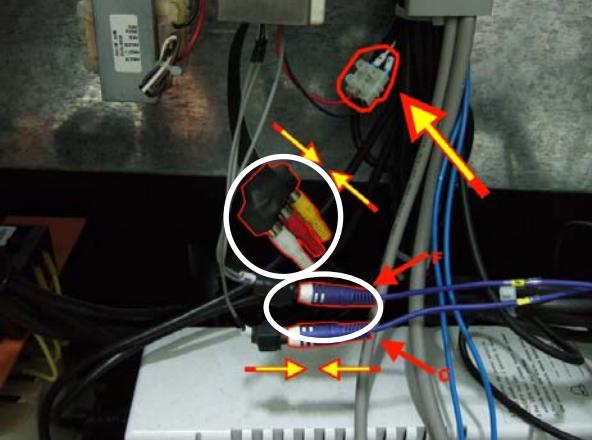
Component#12 Speaker Replacement Procedure

Step	Diagrams	Guide
1		<p>Remove screws</p> <p>Notice: Be careful the lid and the weight of the speaker, don't pull apart the signal wire</p>
2		<ol style="list-style-type: none"> Take out speaker Pull out signal wire
3		<ol style="list-style-type: none"> Remove the tap on the signal wire and disconnect it Install a new speaker. Connect the signal wire, and then use tap to cover the metals part.

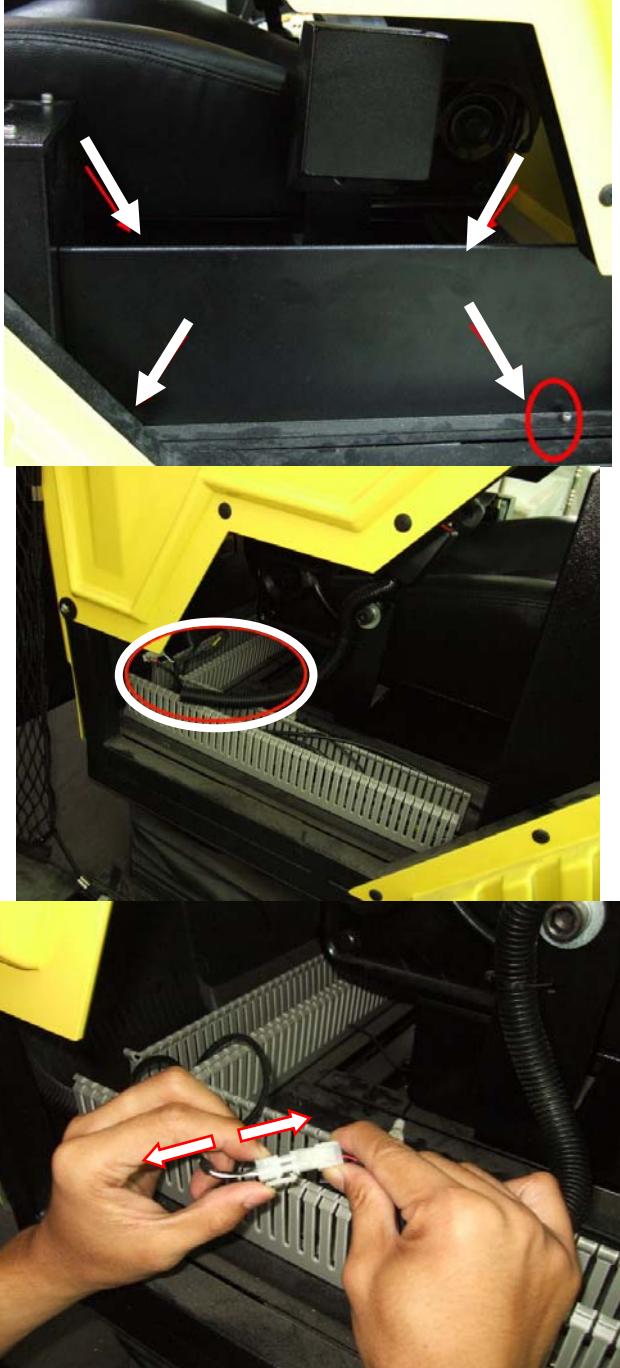


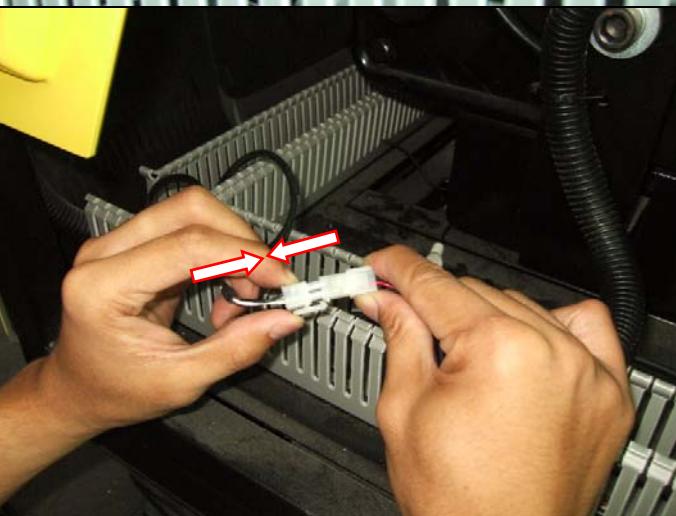
Component#13 Amplifier Replacement Procedure

Step	Diagrams	Guide
1		Use Slotted Screwdriver to loosen the power wires of the Amplifier
2		<ol style="list-style-type: none"> 1. Pull out the signal wire 2. Pull out the AV wire

3		<ol style="list-style-type: none"> 1. Remove screws 2. Replace a new amplifier
4		<ol style="list-style-type: none"> 1. Connect signal and Av wires 2. Connect power wire and fix it <p>Notice: Do not mismatch the AV wire (follow the color of wires)</p>

Component#14 Seat Belt Replacement Procedure

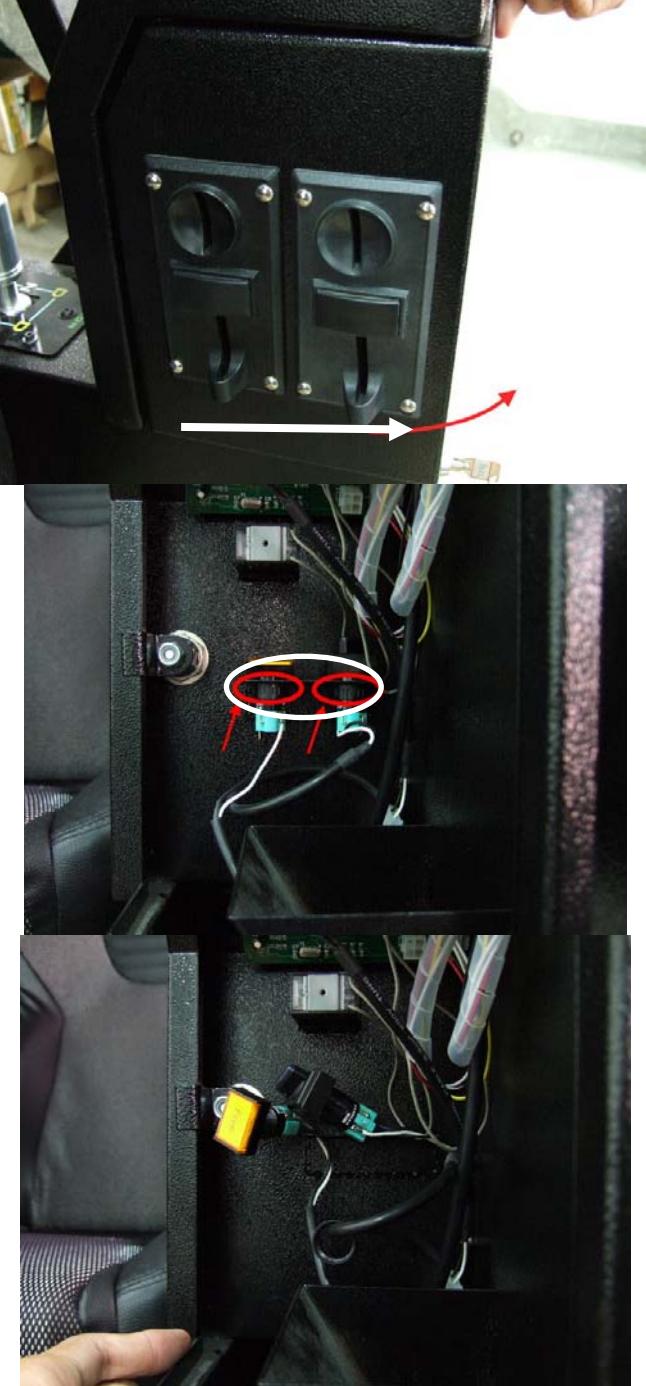
Step	Diagrams	Guide
1		<ol style="list-style-type: none">1. Open the cover at the side of the cockpit2. Find the connector of the Buckle3. Disconnect signal wires <p>Notice: Keep screws</p>

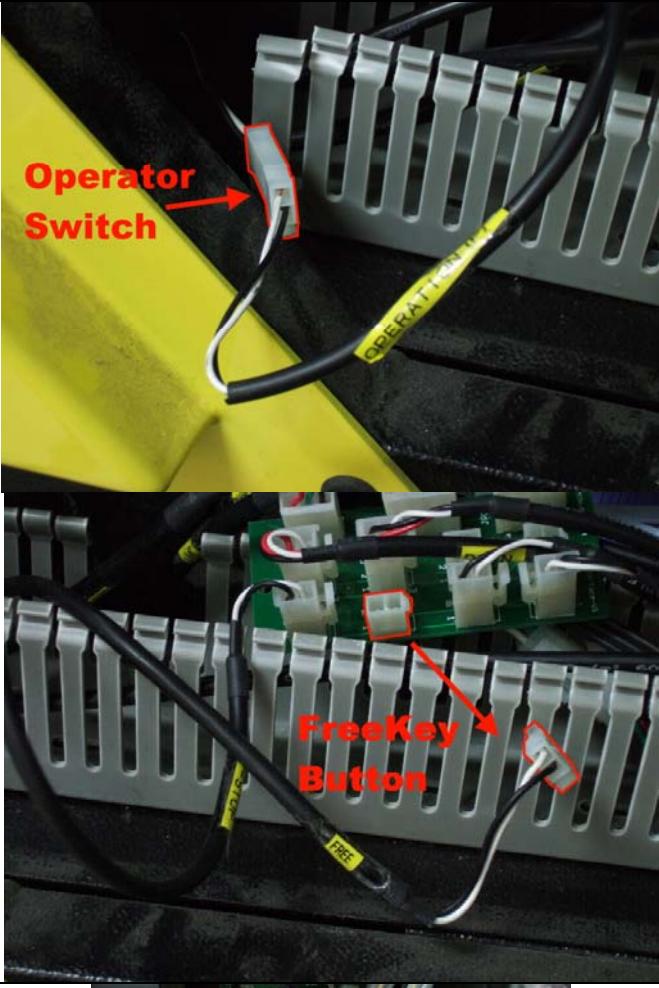
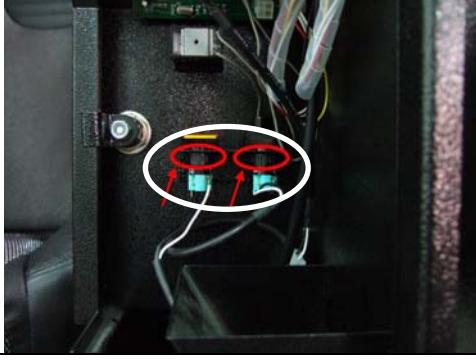
2		1. Remove screws 2. Replace a new seat belt 3. Fasten the Buckle with a hexangular wrench.
3		Connect signal connector
4		Close the wiring ducts, and then fasten the cover at the side of the cockpit

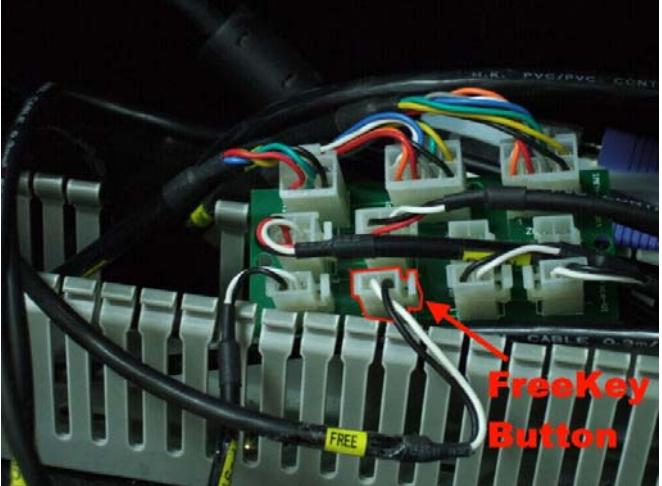
If the retractor damages, please follow the steps below:

1		<ol style="list-style-type: none"> Unfasten the retractor with a hexangular wrench. Replace a new retractor
2		Fix the retractor
3		Close the wiring ducts, and then fasten the cover at the side of the cockpit

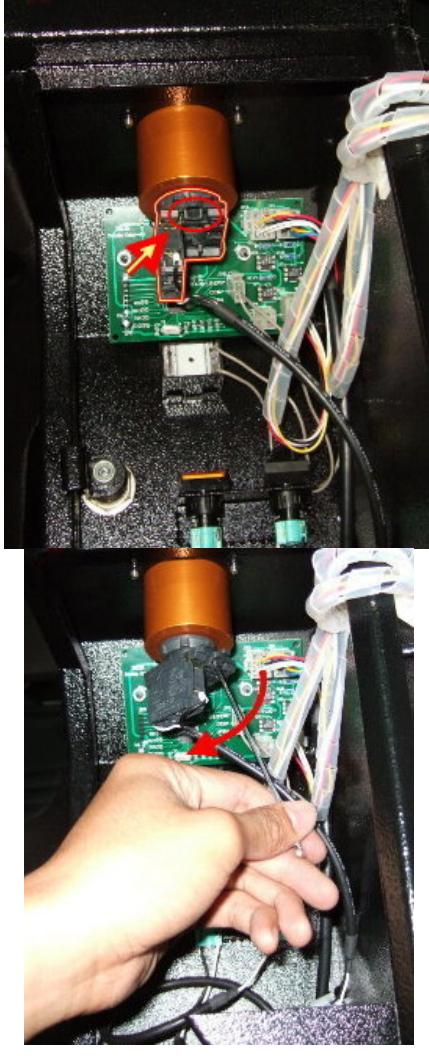
Component#15 FreeKey Button and Operator Switch Replacement Procedure

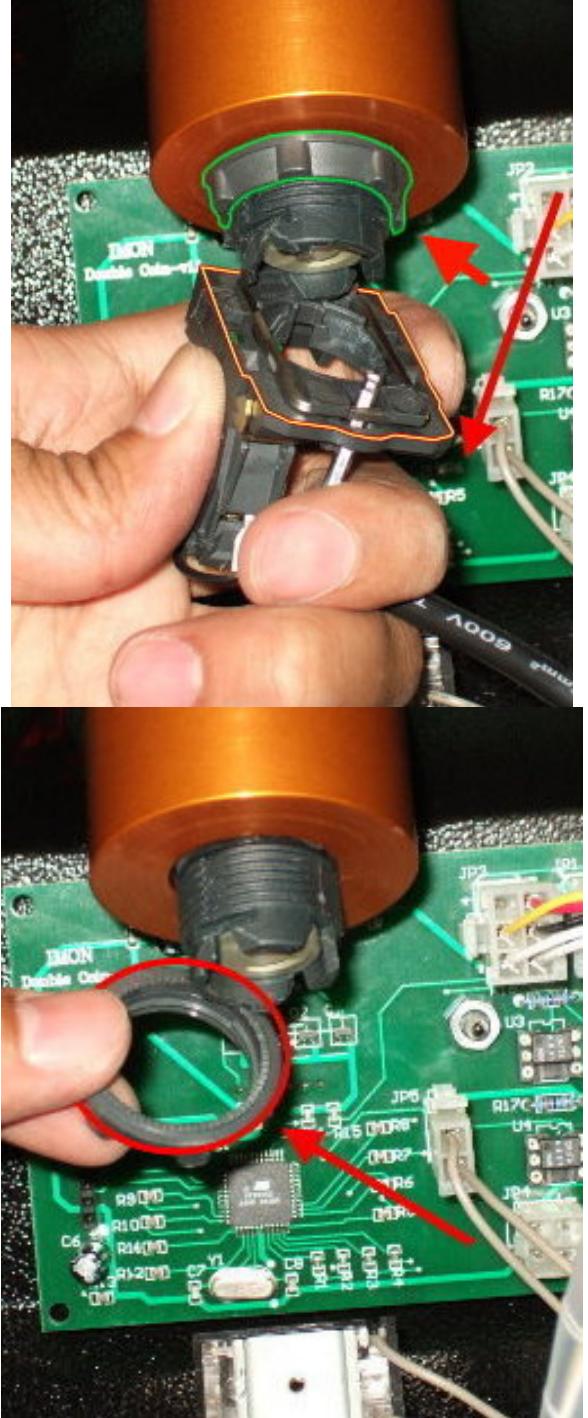
Step	Diagrams	Guide
1		Open the coin box, and then loosen the nuts of the Freekey button and the Operator Switch

2		Open the cover at the side of the cockpit
3		<ol style="list-style-type: none"> 1. Open cable trail, pull out Operator Switch connector 2. Disconnect Operator Switch or FreeKey button connector
4		Replace new Operator Switch or Freekey button

5		1. Connect Operator Switch and Freekey button switch 2. Cover cable trail up
6		Close the wiring ducts, and then fasten the cover at the side of the cockpit

Component#16 Emergency Stop Button Replacement Procedure

Step	Diagrams	Guide
1		Open coin box
2		Use Slotted Screwdriver to pry the node of the emergency stop button, then pull out the node

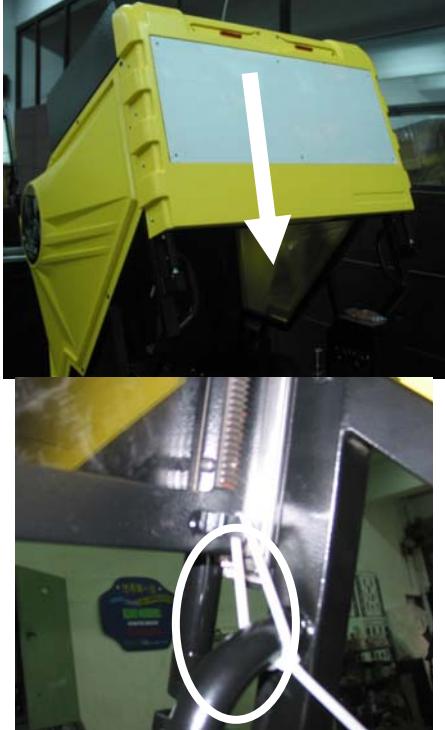
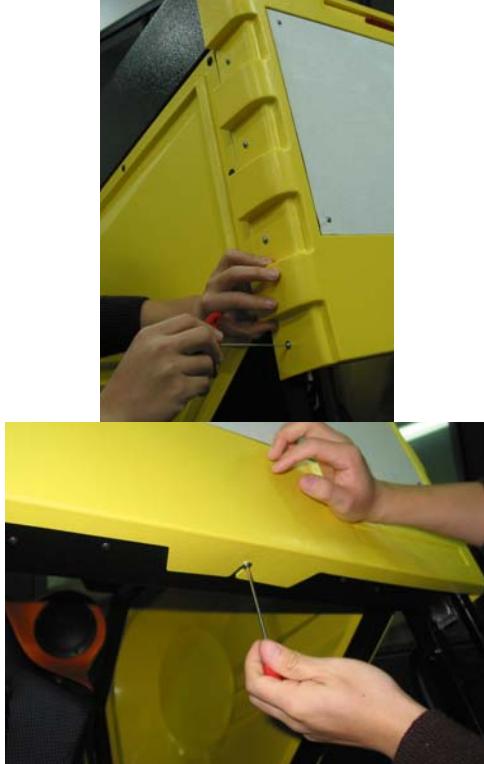
3		<ol style="list-style-type: none">1. Remove the fixed nut of the button2. Replace a new button
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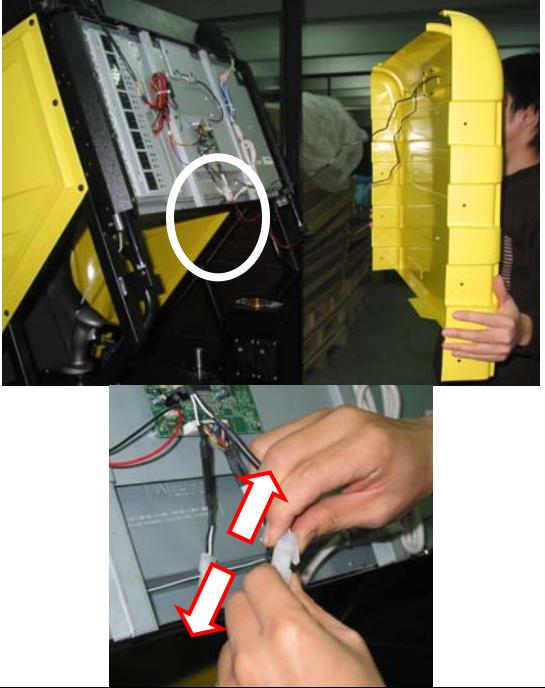
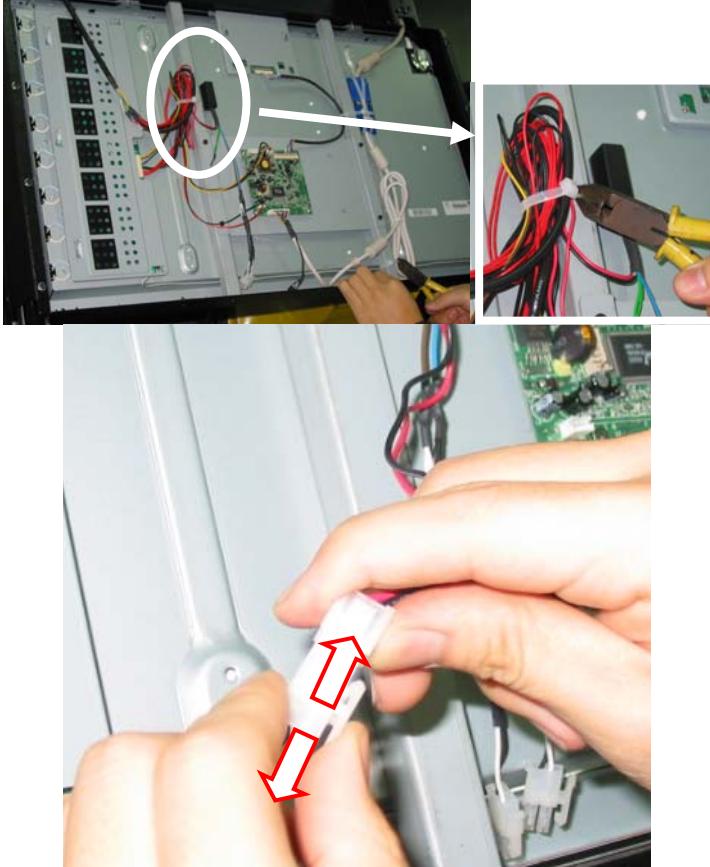
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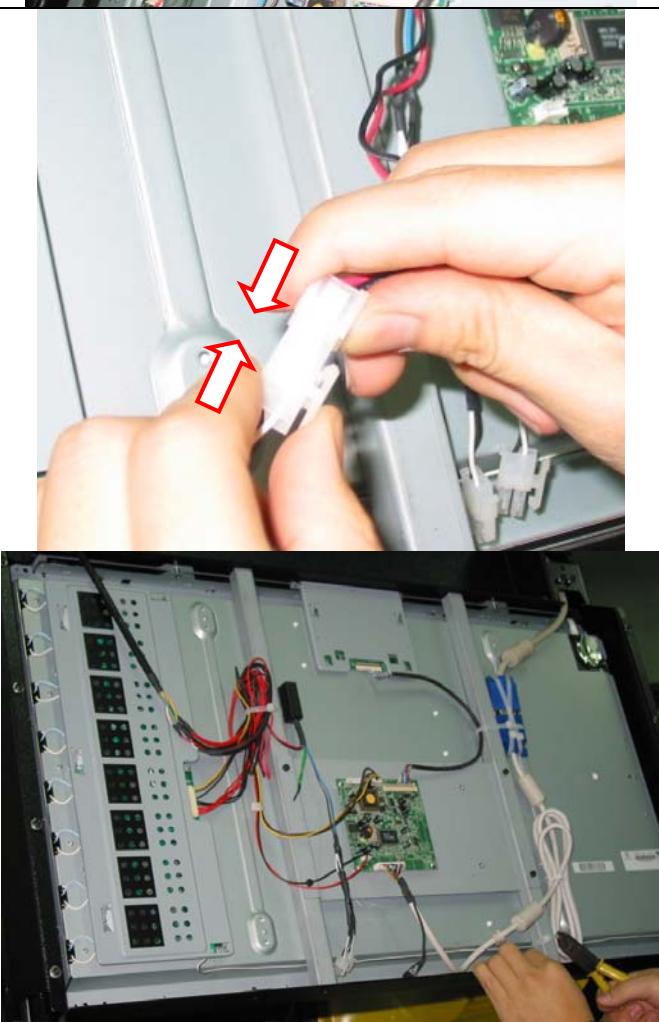


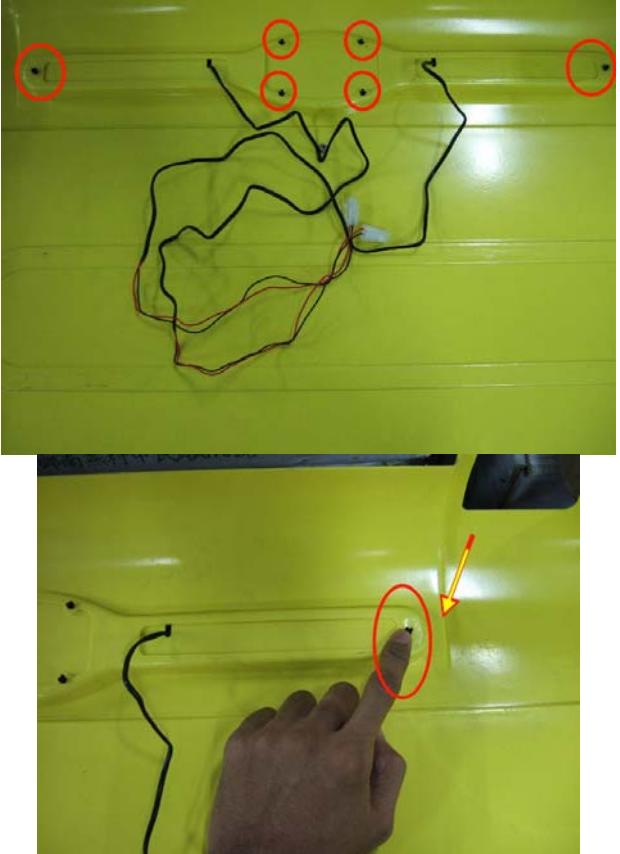
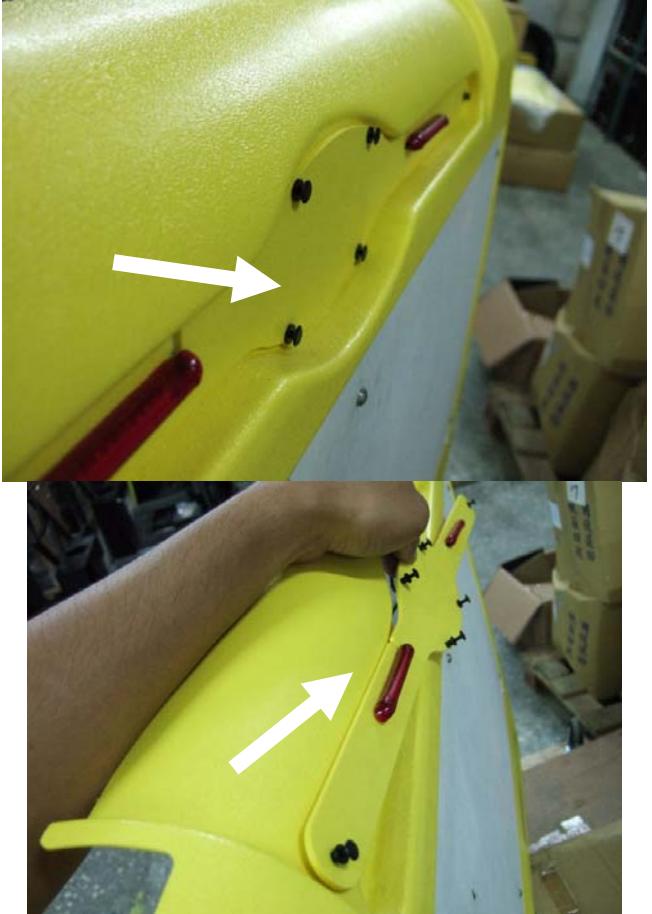
Notice the idiot-proof of the button while installing

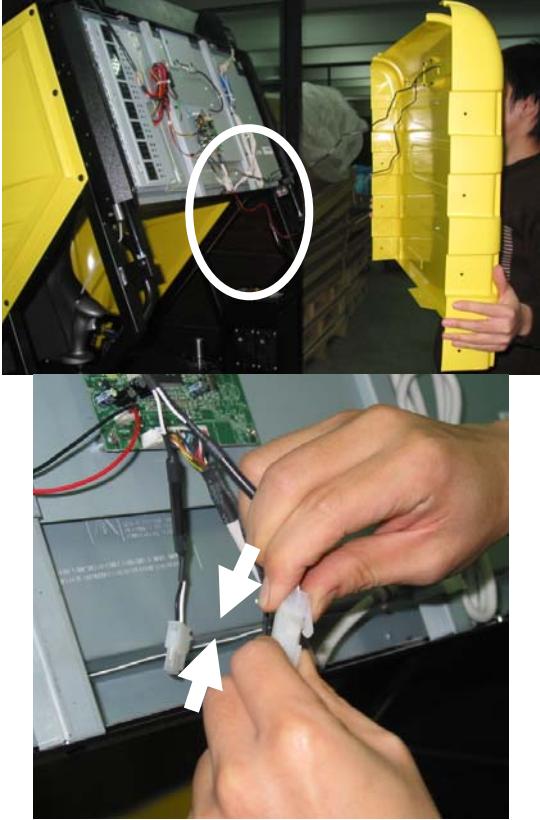
Component#17 LED and LED Driver Replacement Procedure

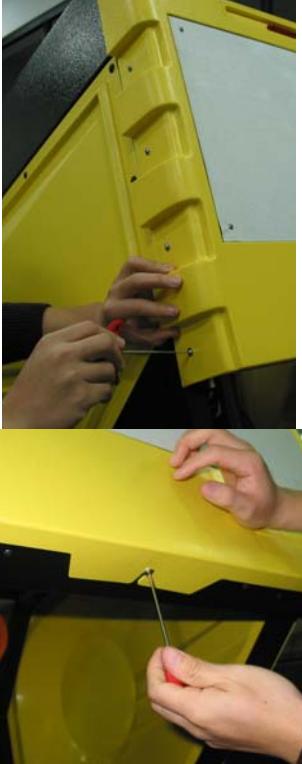
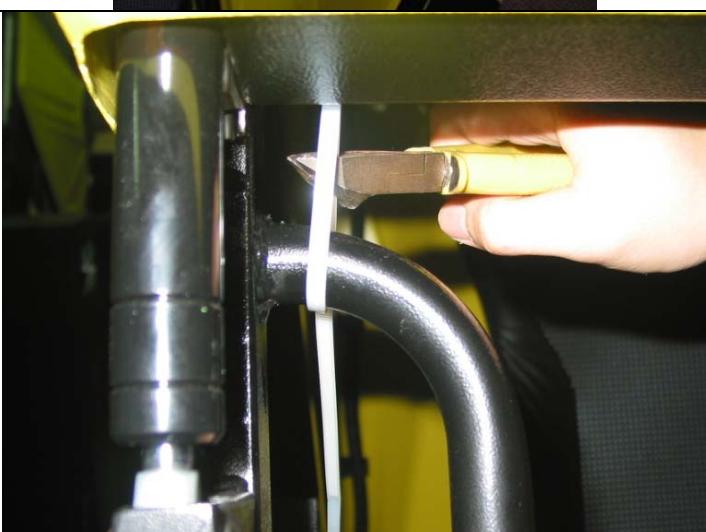
Step	Diagrams	Guide
1		Power Off the system then pull downward the LCD monitor and fix it with a cable tie
2		Remove casement of the LCD monitor

3		Disconnect LED connectors
4		Pull out the LED driver and LED power wire. Disconnect connectors

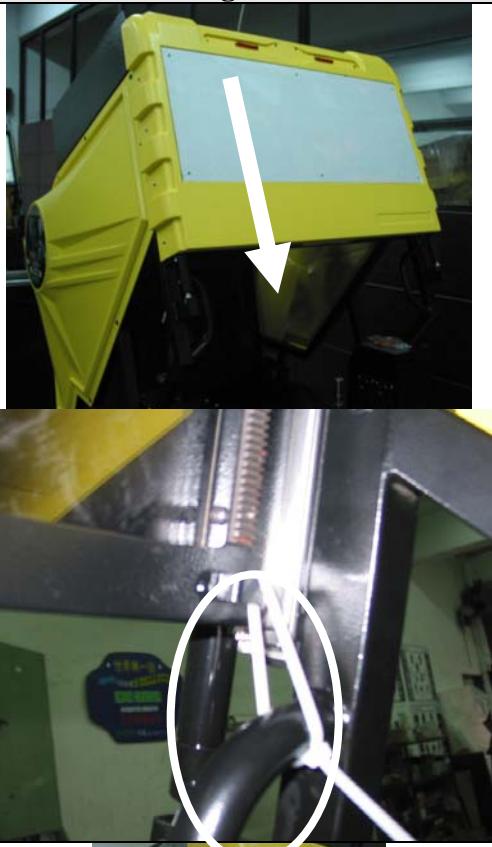
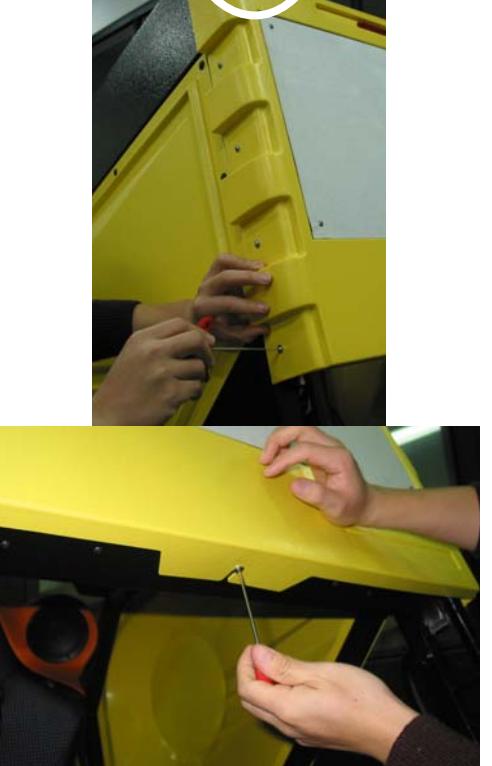
5		<ol style="list-style-type: none">1. Remove LED driver2. Replace a new LED driver and stick it on the cover
6		Connect all connectors

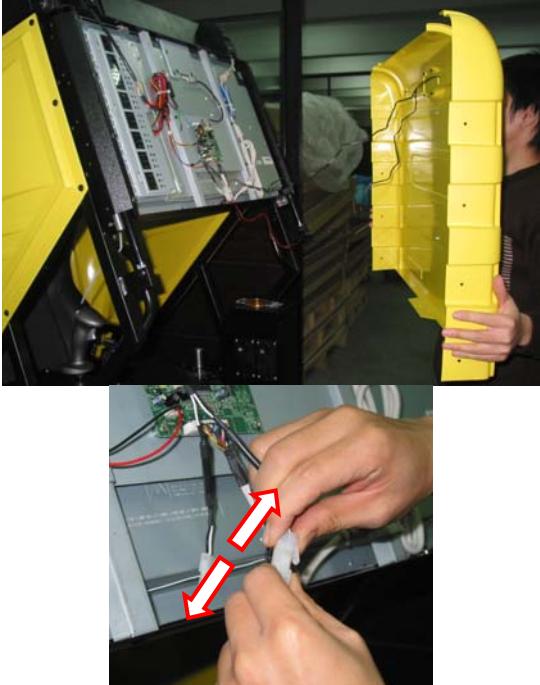
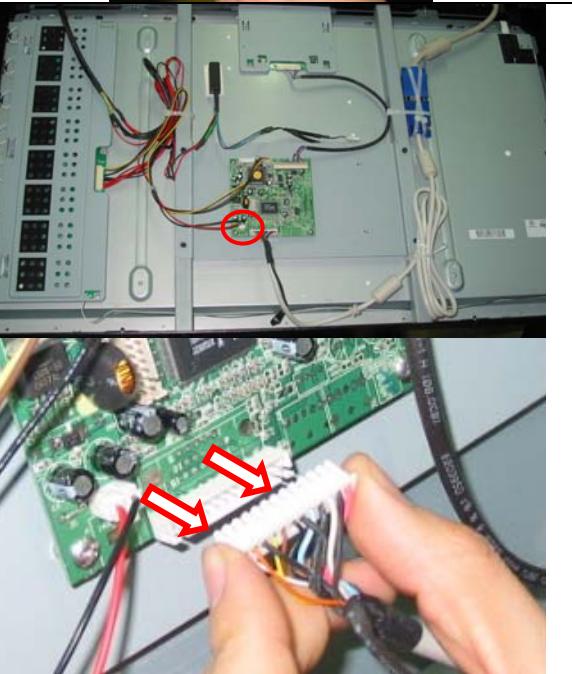
7		Pull out the screws of the fixed LED board by hand.
8		Dismantle the LED board

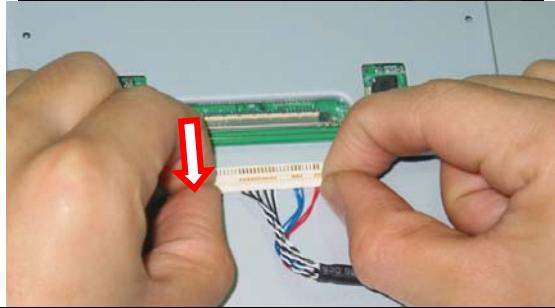
9		Remove the LED, and stick a new LED
10		Fix the LED board
11		a. Install casement b. Connect connectors

12		Fix the LCD casement
13		Cut the cable tie down

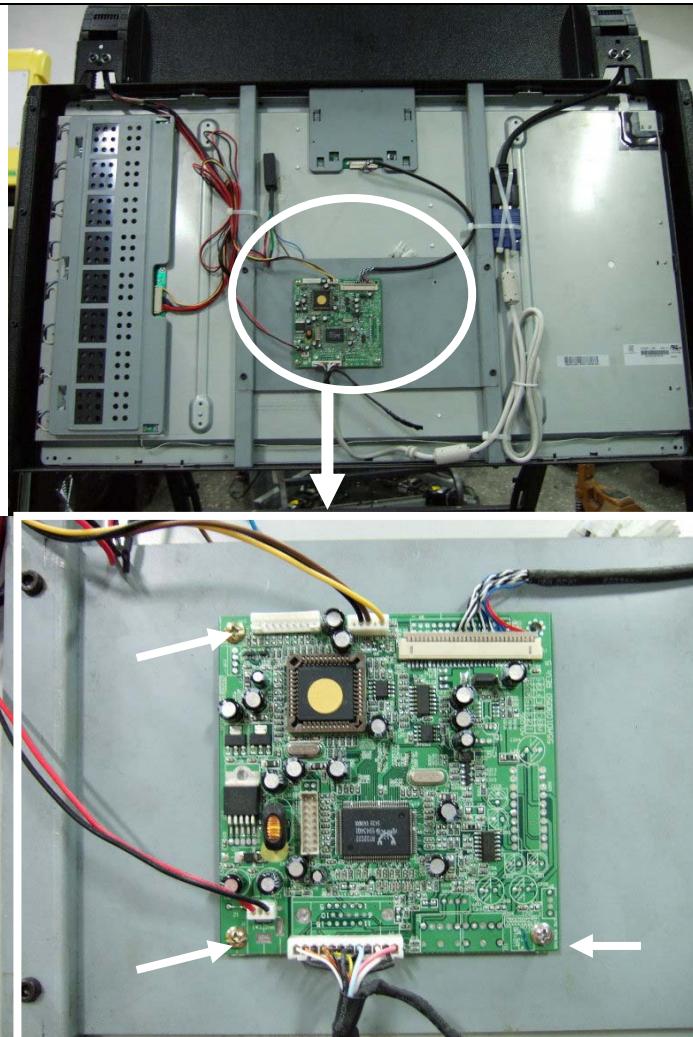
Component#18 LCD Control Card Replacement Procedure

Step	Diagrams	Guide
1		Power Off the system then pull downward the LCD monitor and fix it with a cable tie
2		Remove casement of the LCD monitor

3		Disconnect LED connectors
4		<p>Disconnect connectors of control board</p> <p>Notice: Be careful while removing connectors</p>
		



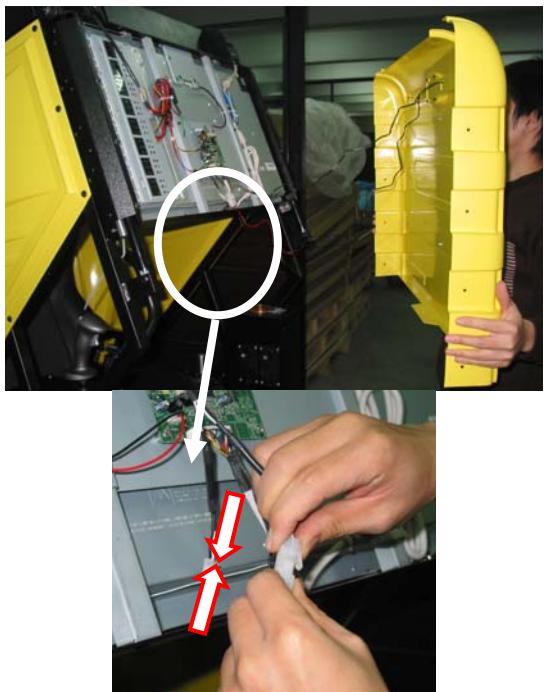
5



1. Use Phillips Screwdrivers to fasten the LCD control card
2. Connect all connector of the control card

Notice:
Be careful while removing connectors

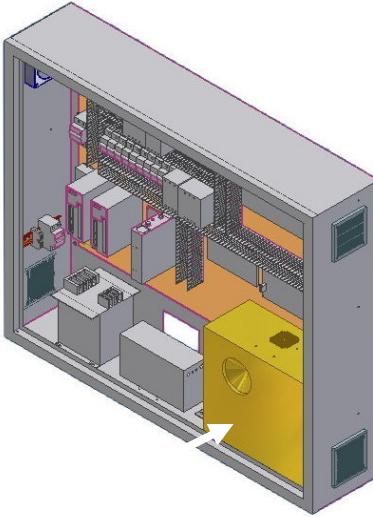
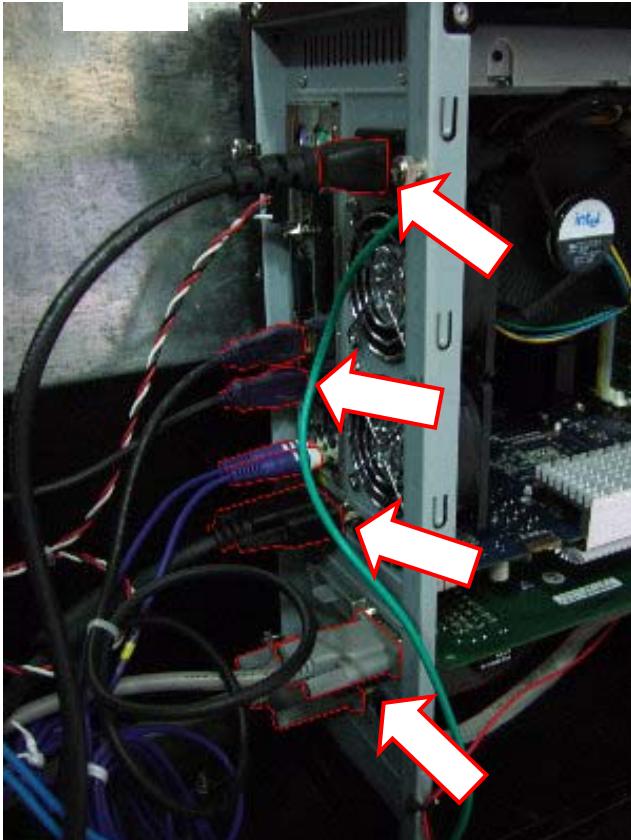
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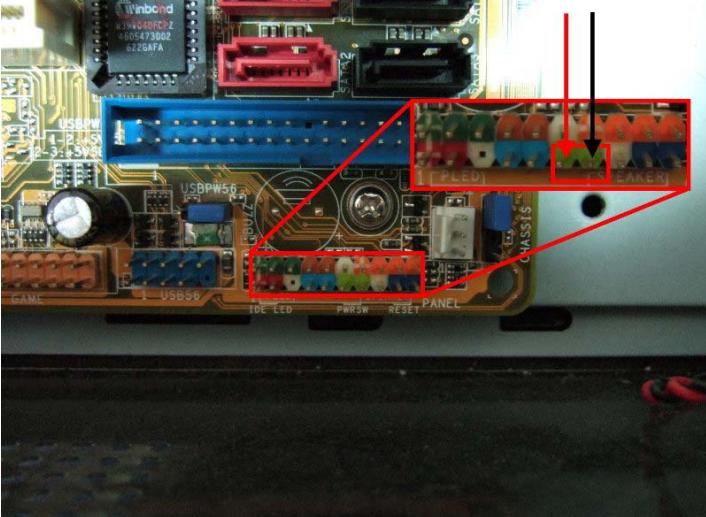
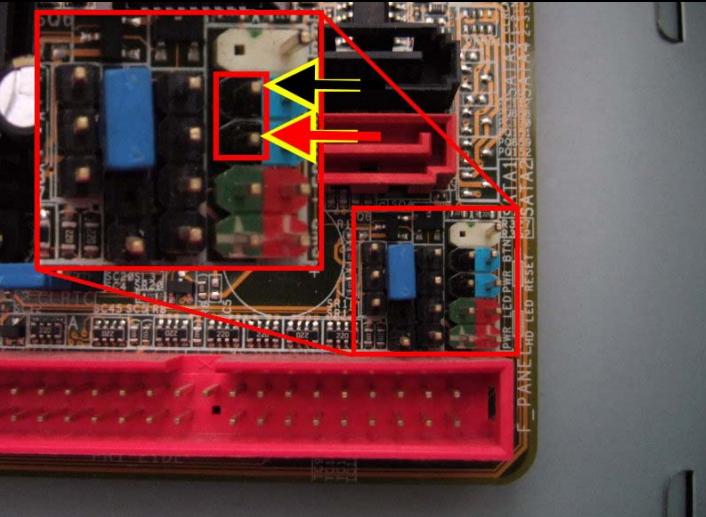


- a. Install LCD casement
- b. Connect LED connectors

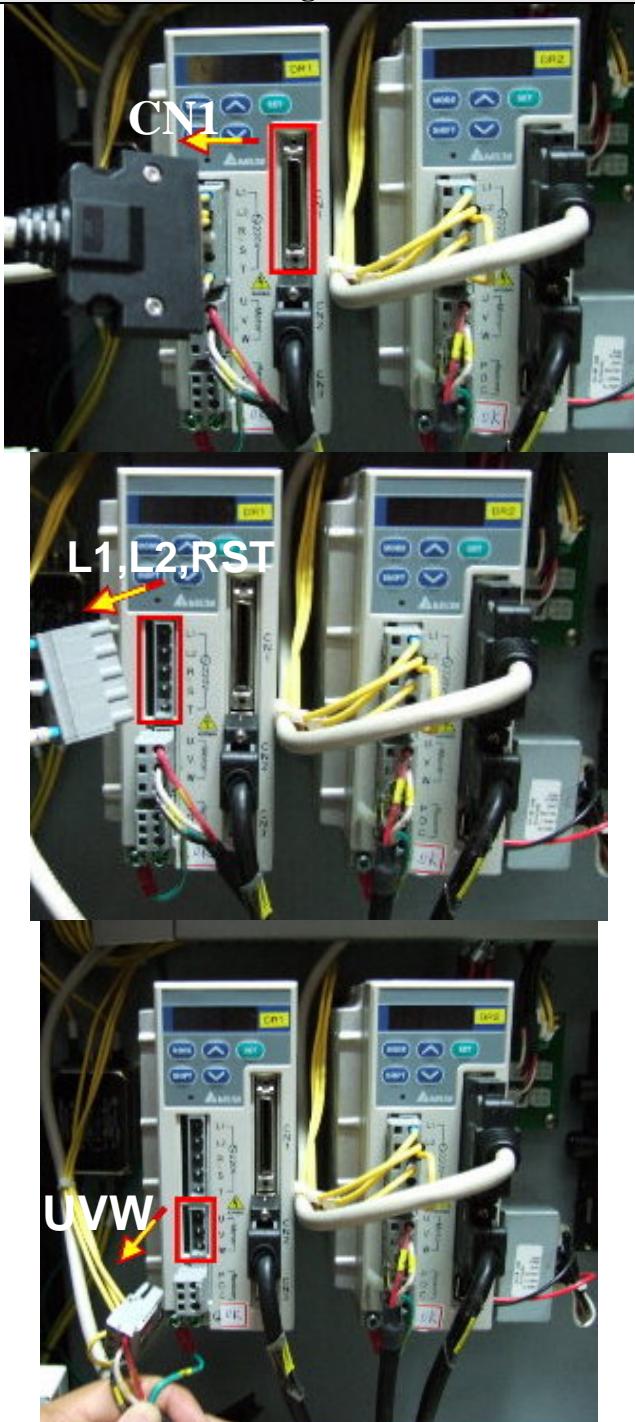
7		Fix the LCD casement
8		Cut the cable tie down

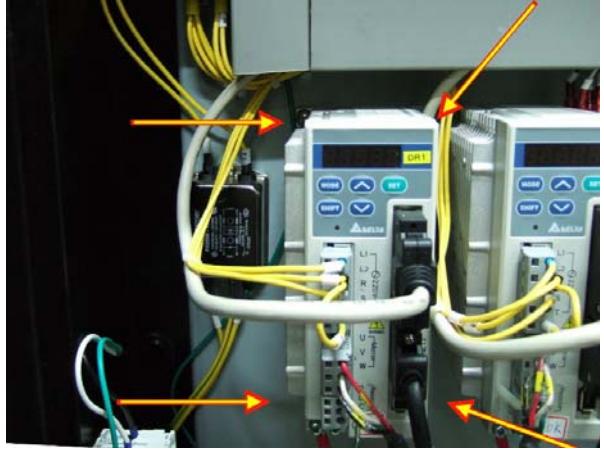
Component#19 IPC Replacement Procedure

Step	Diagrams	Guide
1	 	<ol style="list-style-type: none">1. Power off system2. Remove all connectors on IPC3. Remove IPC power on signal wire4. Remove IPC5. Install a new IPC6. Connect all connectors

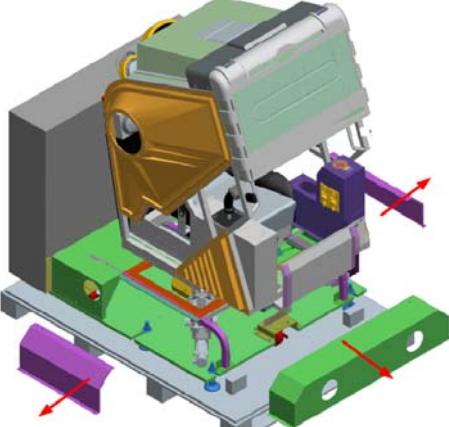
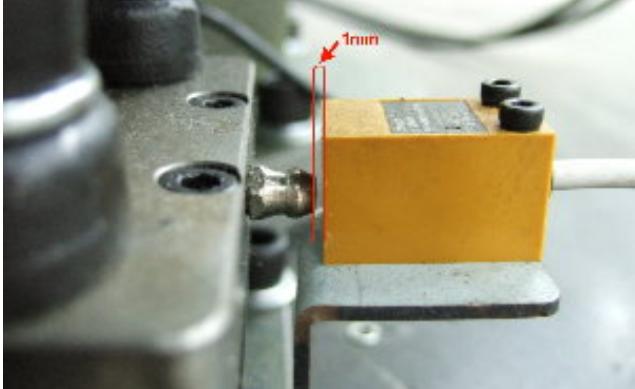
2	 	Connect IPC power on signal wire Mother board Serial Number:P5LD2-SE
		Connect IPC power on signal wire Mother board Serial Number:P5LD2-VM

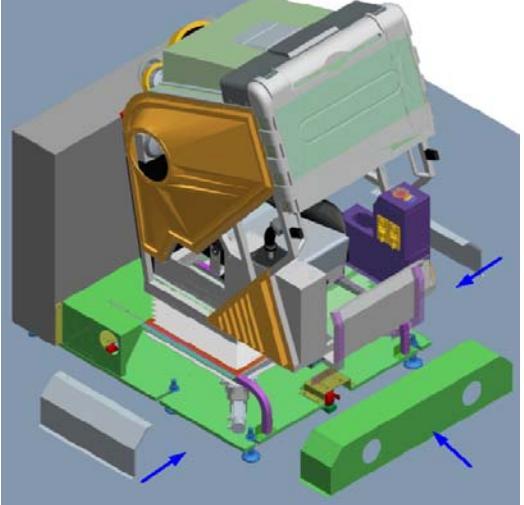
Component#20 Motor Servo Amplifier Replacement Procedure

Step	Diagrams	Guide
1		Remove all connector (CN1,CN2,UVW,L1L2RS T,Green wire)

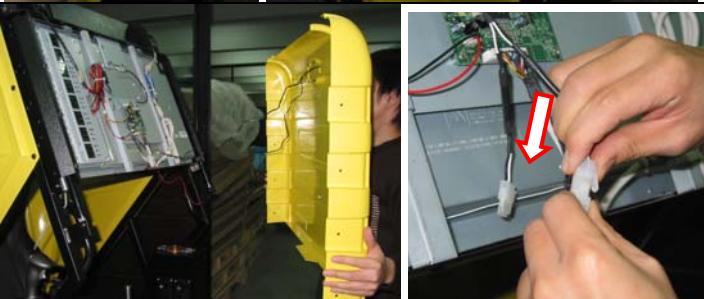
	 	
2		<ul style="list-style-type: none">a. Remove servo amplifierb. Replace a new onec. Fix itd. Connect all connectors <p>Notice: All connectors must be fast</p>

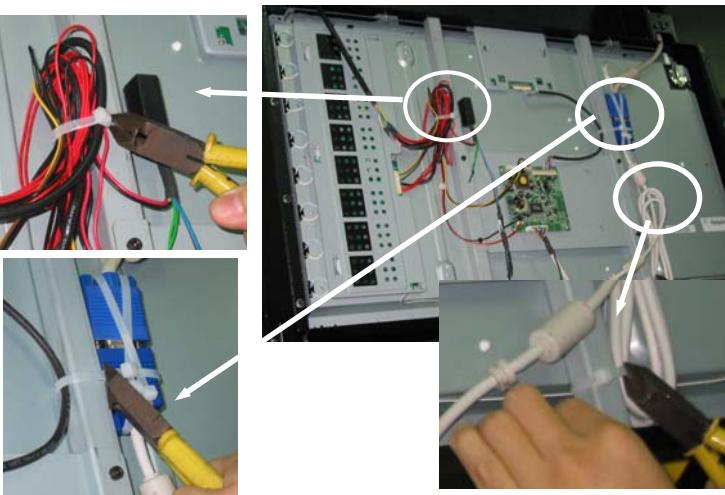
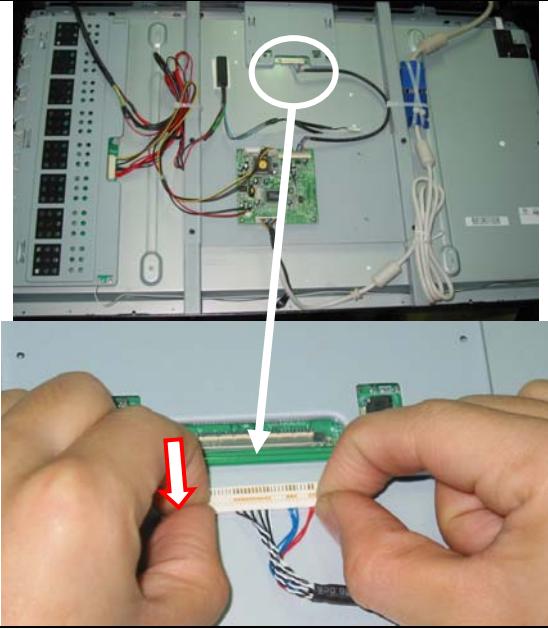
Component#21 ORG Sensor Replacement Procedure

Step	Diagrams	Guide
1		Remove the front, the left and the right plate covers, but DO NOT DISCARD . Save for reassembly after removing from pallet
2		a. Remove ORG Sensor b. Replace a new sensor but don't fasten it
3		Adjust the sensor position. The gap is 1mm.

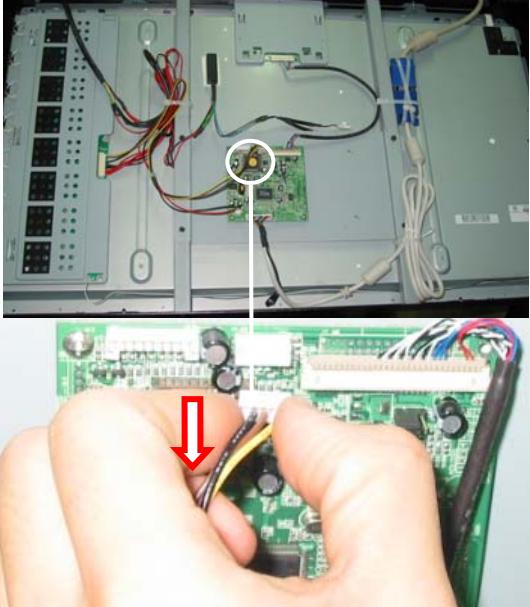
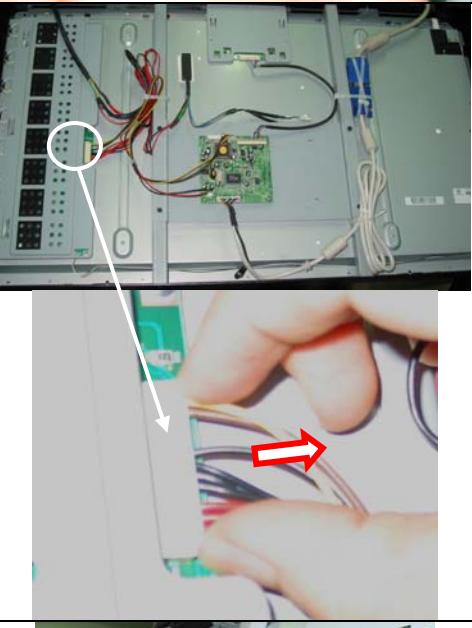
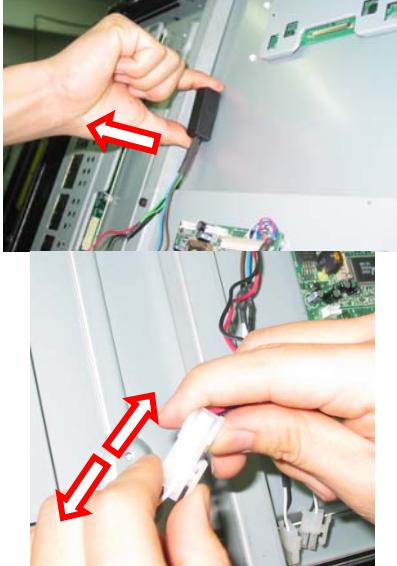
4		Connect Fans' connectors and install all covers
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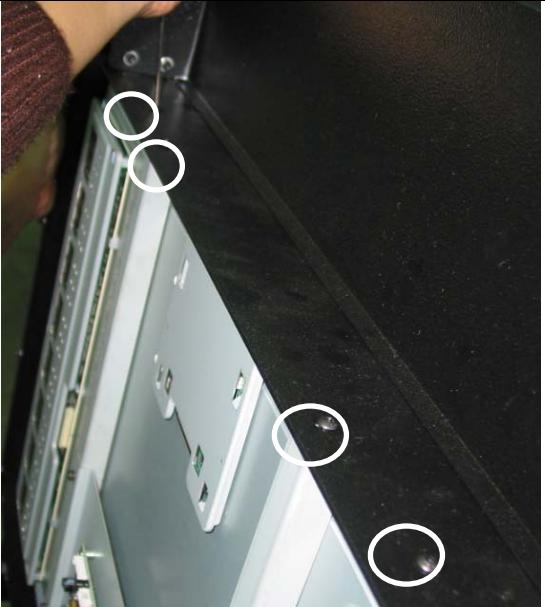
Component#22 LCD Monitor Replacement Procedure

Step	Diagrams	Guide
1		Power Off the system then pull downward the LCD monitor and fix it with a cable tie
2		Remove casement Notice: Be careful while removing casement
3		

4		Cut cable tie down as shown in picture
5		<p>Disconnect all connectors</p> <p>Notice: Be careful while removing connectors</p>

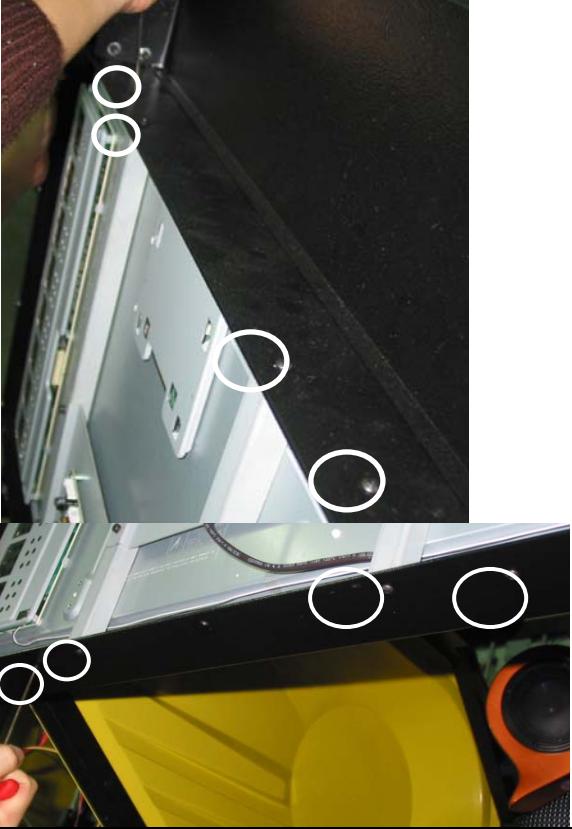
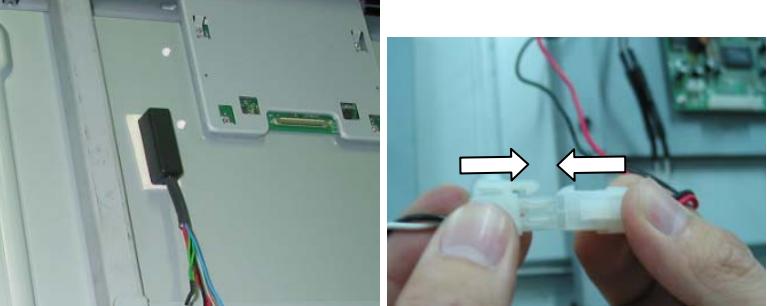
6		<p>Disconnect all connectors</p> <p>Notice: Be careful while removing connectors</p>
7		<p>Disconnect all connectors</p> <p>Notice: Be careful while removing connectors</p>

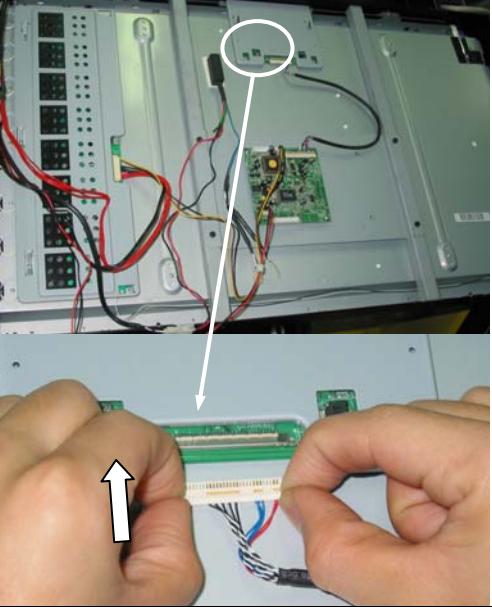
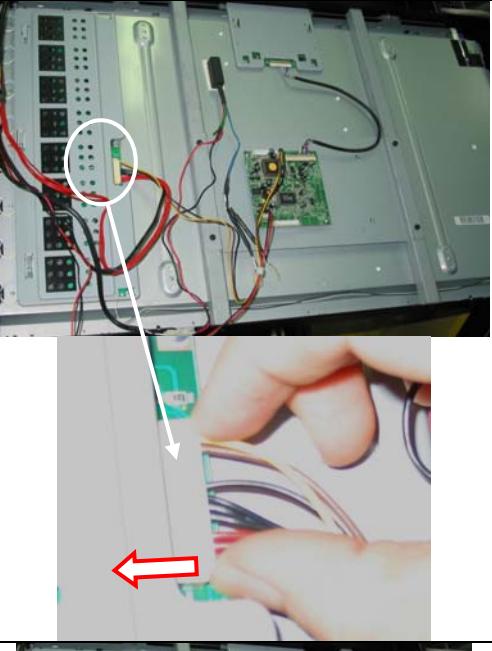
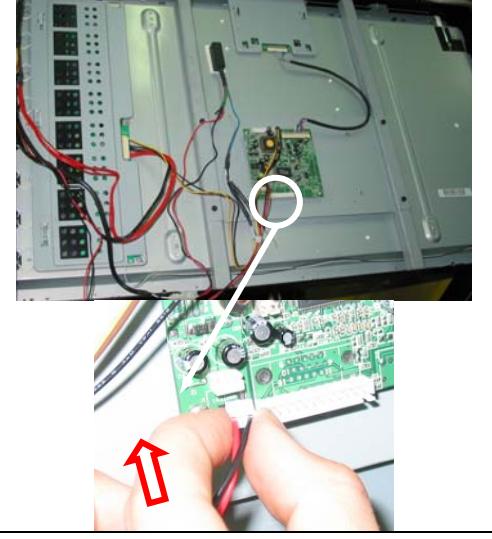
8			<p>Disconnect all connectors</p> <p>Notice: Be careful while removing connectors</p>
9			<p>Disconnect all connectors</p> <p>Notice: Be careful while removing connectors</p>
10			<ol style="list-style-type: none"> 1. Remove LED driver 2. Disconnect LED connector

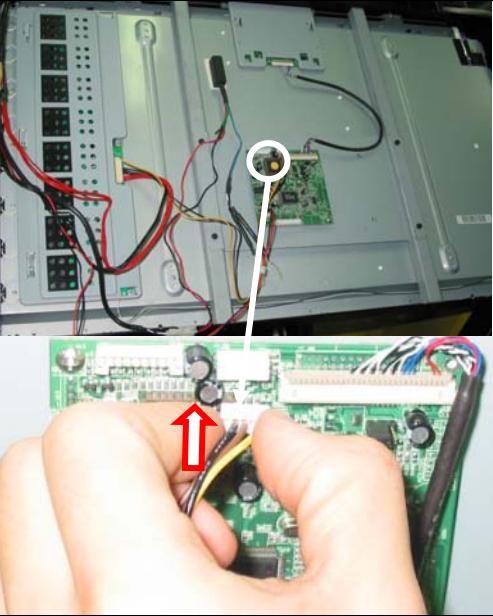
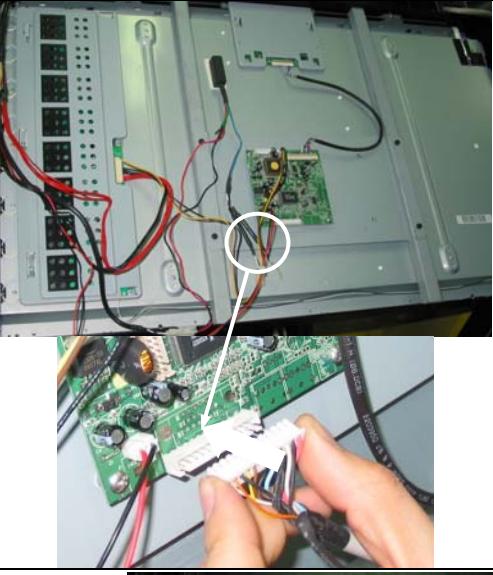
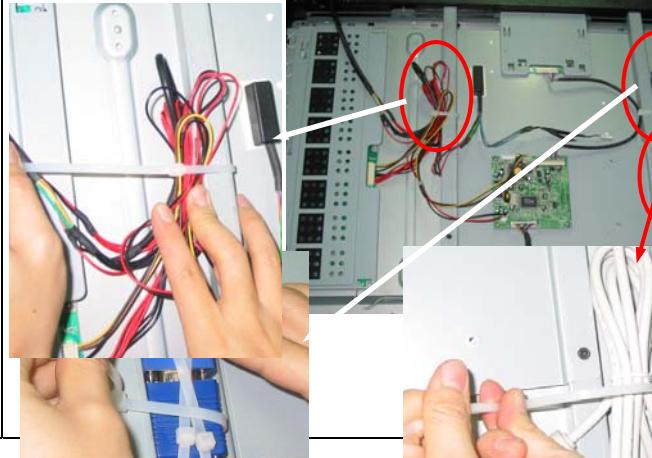
11		Put the wires to the outside of the frame
12		Remove screws
13		Remove screws

14		Dismantle the base of the LCD control card Notice: Do not damage the electric board
15		Dismantle the LCD monitor carefully Notice: Be careful while removing monitor
16		Please check if the Acryl plank has the dirt or scoring or not. If the Acryl plank has the dirt, please clean it. If the Acryl plank has the scoring, replace a new one. Notice: Do not score it
17		<ol style="list-style-type: none"> 1. Take out the new LCD monitor. 2. Tear off the LCD protect film. Notice: Please protect the LCD monitor, don't squeeze or scoring it. If the LCD monitor has dust, please clean it

18	 	<p>Install monitor</p> <p>Notice: Put it at proper position and push it into the frame</p>
19		<p>Fasten the base of the LCD control card</p>

20		Fix the monitor
21		<p>1. Stick LED driver 2. Connect the signal connector of the driver (<u>black and red lines</u>) the power connector of the driver (<u>black and white lines</u>). </p> <p>Notice: If the tape of the driver is broken, please stick a new tape, and then stick the driver on the back of the LCD monitor</p>

22		Connect all connectors Notice: Be careful while connecting connectors
23		Connect all connectors Notice: Be careful while connecting connectors
24		Connect all connectors Notice: Be careful while connecting connectors

25		<p>Connect all connectors</p> <p>Notice: Be careful while connecting connectors</p>
26		<p>Connect all connectors</p> <p>Notice: Be careful while connecting connectors</p>
27		<p>Tidy the LDC monitor connector, and then bind the lines with the cable tie.</p>

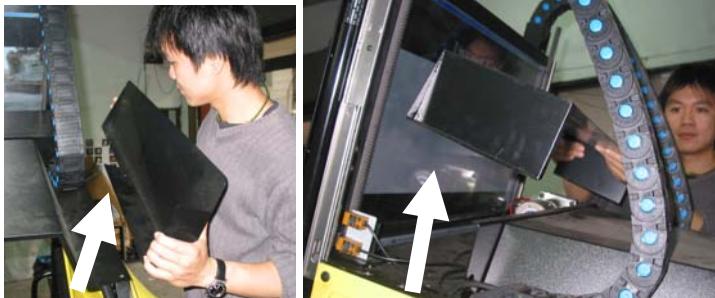
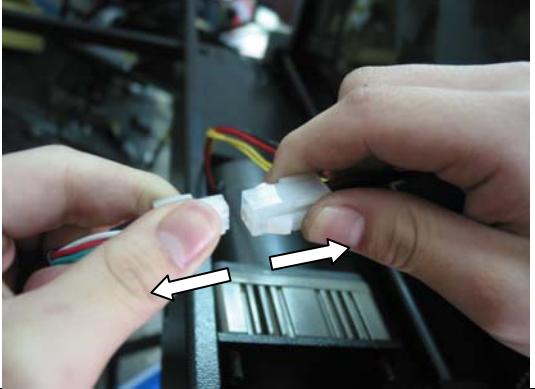
28		<ol style="list-style-type: none">1. Connect LED connectors2. Install casement
29		Fix casement
30		Cut cable tie down

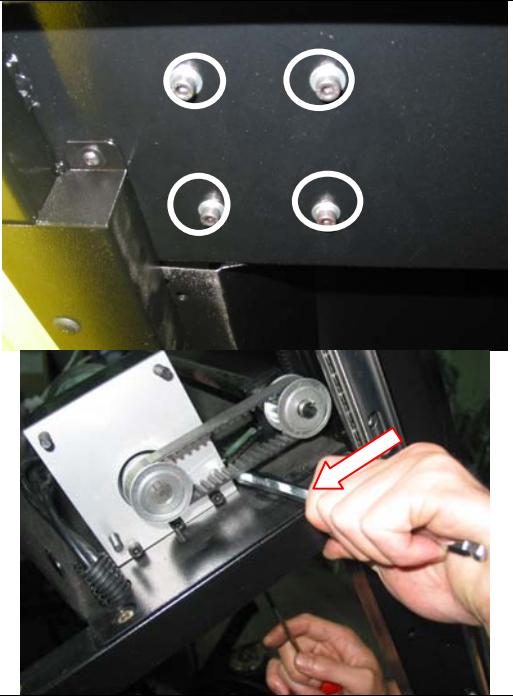
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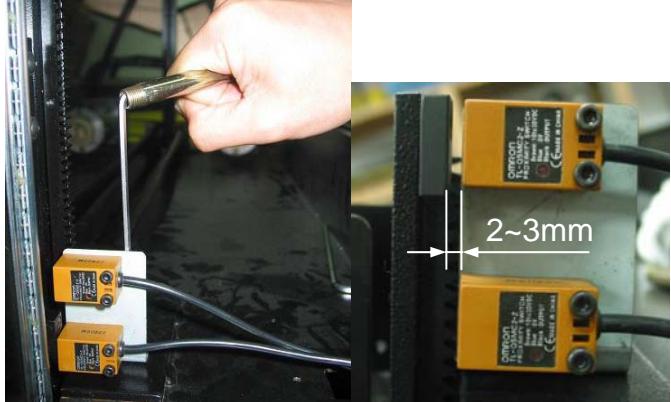
Push the monitor upward

Component#23 Monitor Up/Down Motor Replacement Procedure

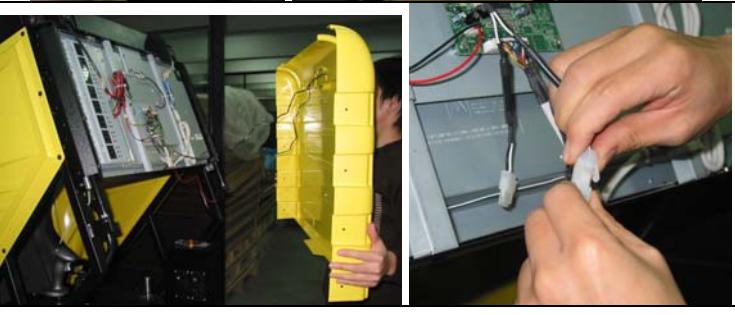
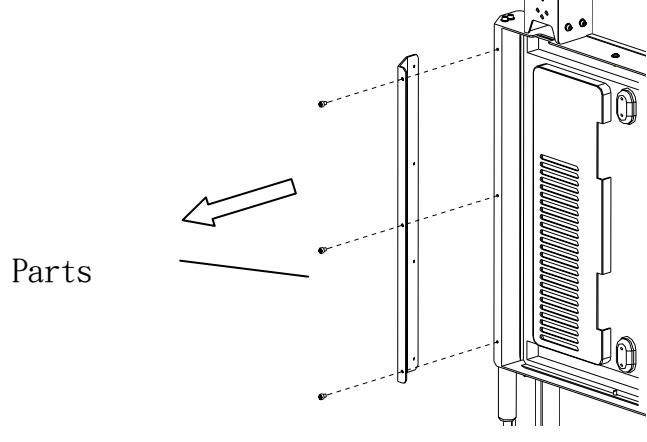
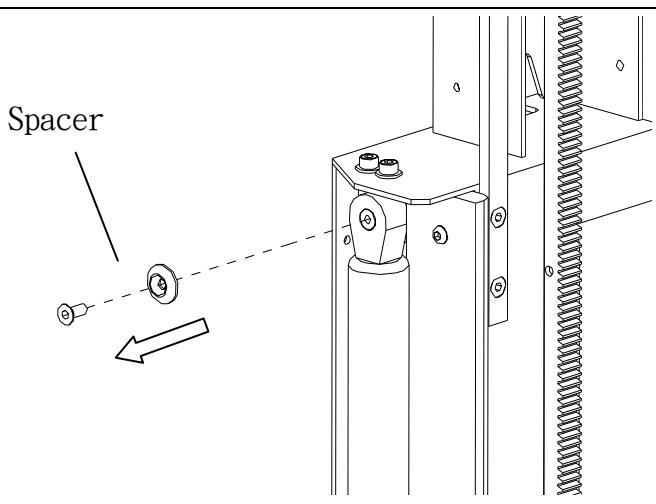
Step	Diagrams	Guide
1		Remove covers
2		a. Remove motor screws b. Remove motor belt and motor
3		1. Disconnect motor connector 2. Replace a new motor and connect connector
4		Install motor belt

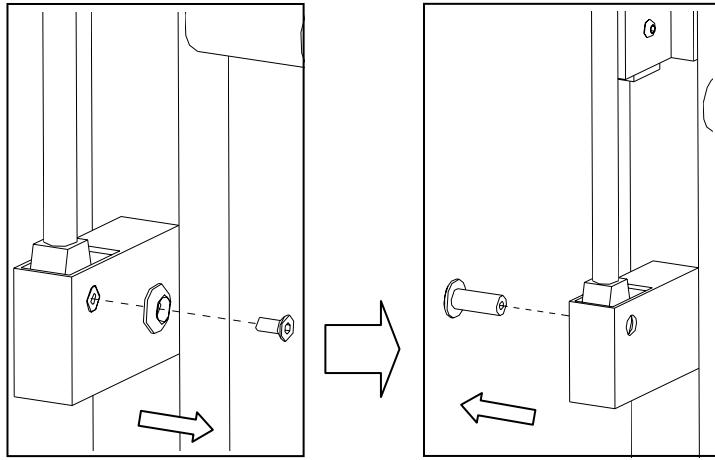
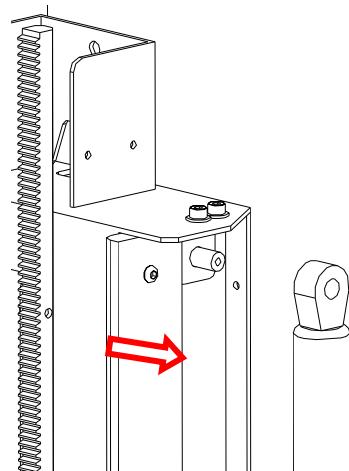
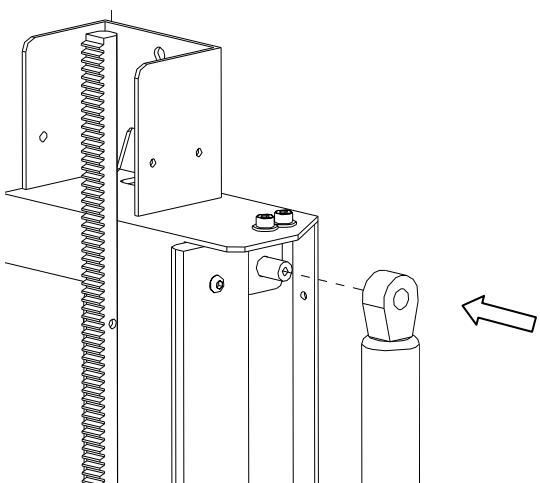
5		<ol style="list-style-type: none"> 1. Lock the screws, but please don't fasten the screws. 2. Use wrench to stretch the belt, and then stretch the screws.
6		Power ON the system then make sure it goes up/down smoothly
7		Cover up

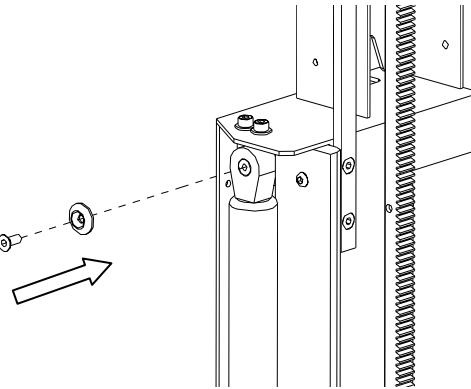
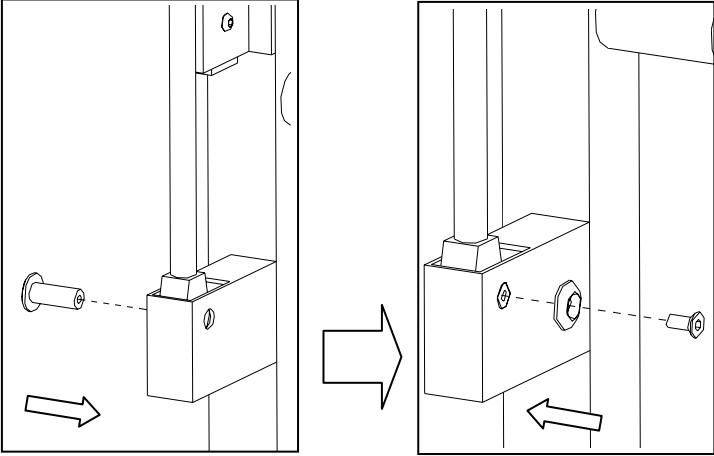
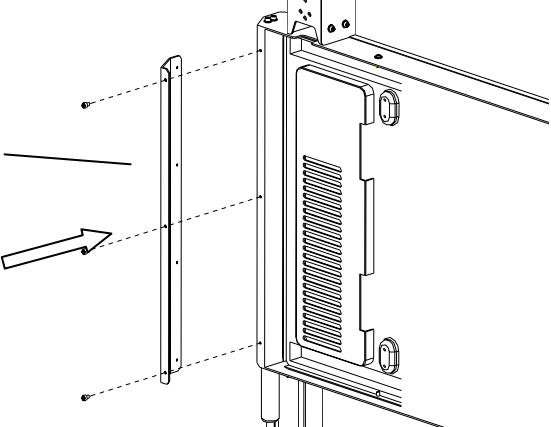
Component#24 Monitor Up/Down Sensor Replacement Procedure

Step	Diagrams	Guide
1		Remove covers
2		Remove sensor
3	 <p>2~3mm</p>	<ol style="list-style-type: none"> Replace a new sensor, and then locking it, but please don't fasten it. Adjust the gap between the sensor and LCD monitor to 2~3mm

Component#25 Gas Spring Replacement Procedure

Step	Diagrams	Guide
1		Remove screws
2		Disconnect LED connectors and remove casement carefully
3		Remove parts
4		Remove screw and spacer on the top of gas spring

5		<ol style="list-style-type: none"> 1. Remove screw and spacer on the bottom of gas spring 2. Pull out the fixture
6		Remove gas spring (Top side first)
7		Install new gas spring (Bottom side first)

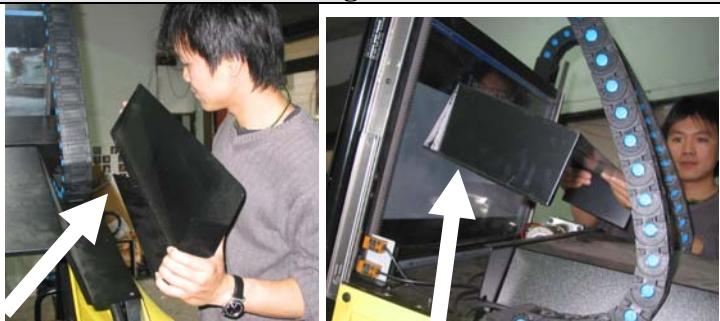
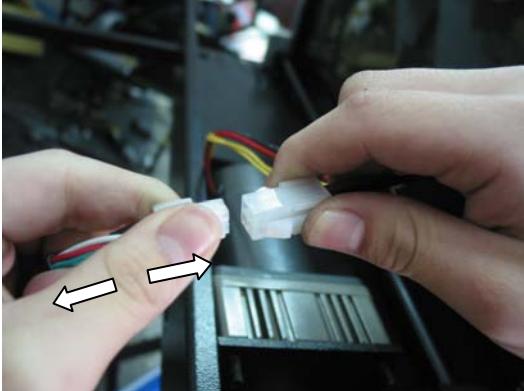
8		Install spacer and fix the top of gas spring
9		<ul style="list-style-type: none"> a. Install the fixture b. Install spacer and fix the top of gas spring c. Replace gas spring on the other by same procedure
10		Fix the parts
11		<ol style="list-style-type: none"> 1. Connect Led connectors 2. Install monitor casement

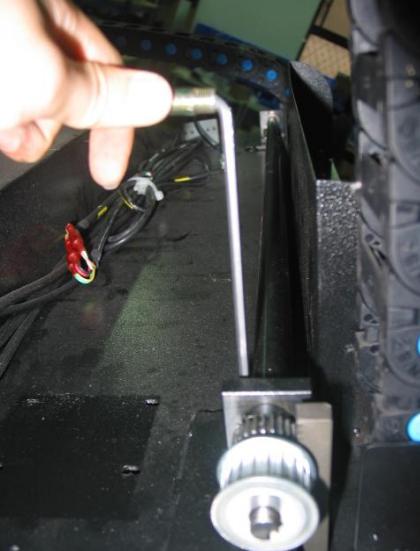
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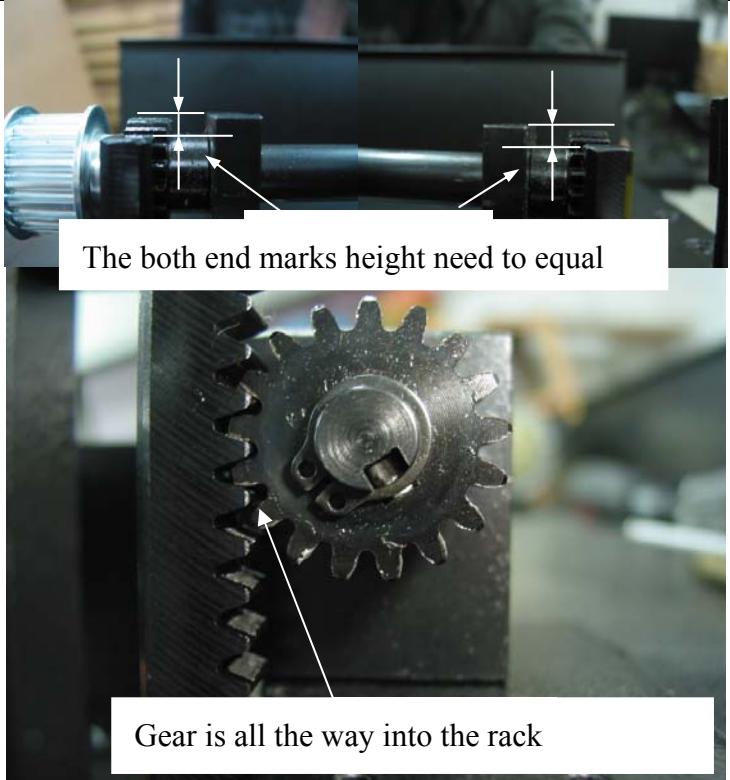
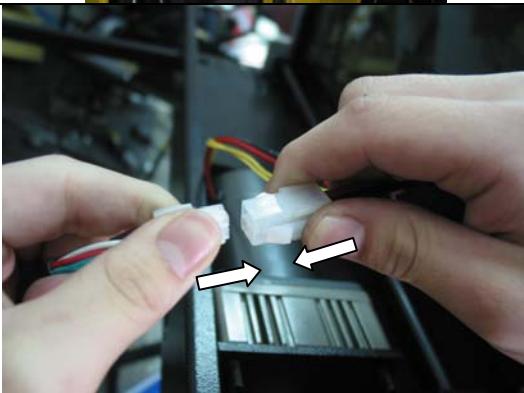


Fix the casement

Component#26 Rack Replacement Procedure

Step	Diagrams	Guide
1		Remove covers
2		a. Pull the monitor down to bottom b. Fix it by using cable tie
3		a. Remove motor screws b. Remove motor and motor belt
4		Disconnect motor connector

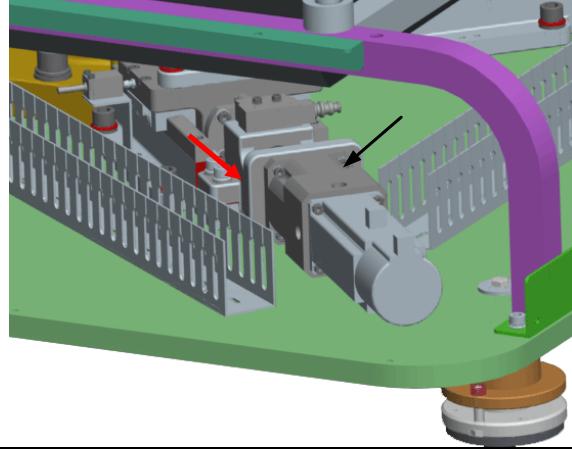
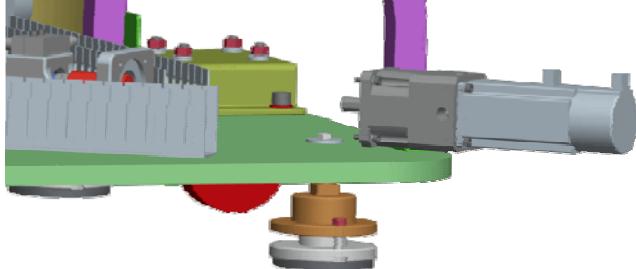
5		Dismantle the transmission
6		Dismantle two racks Notice: Do not scratch the faceplate
7		Install new racks Notice: Do not scratch the faceplate

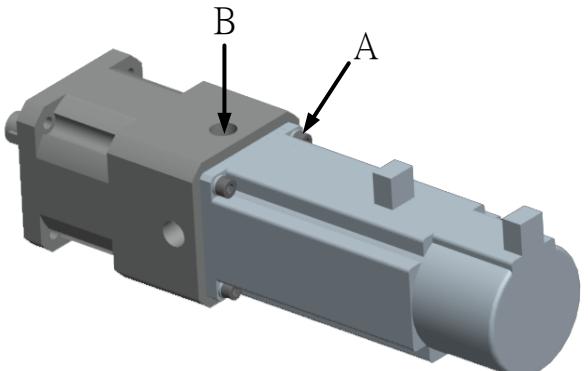
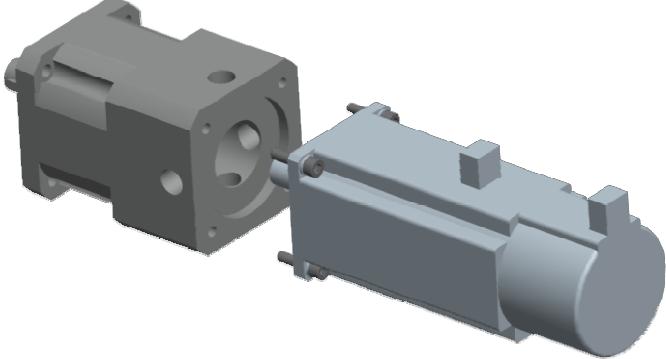
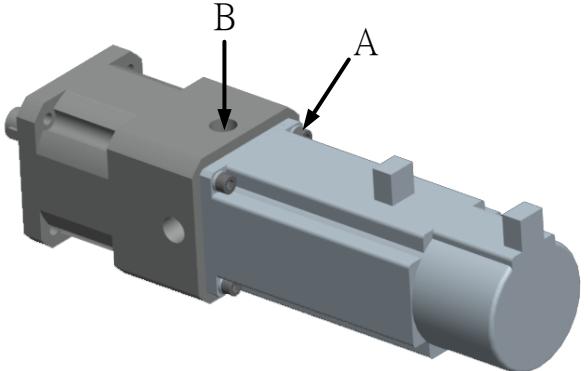
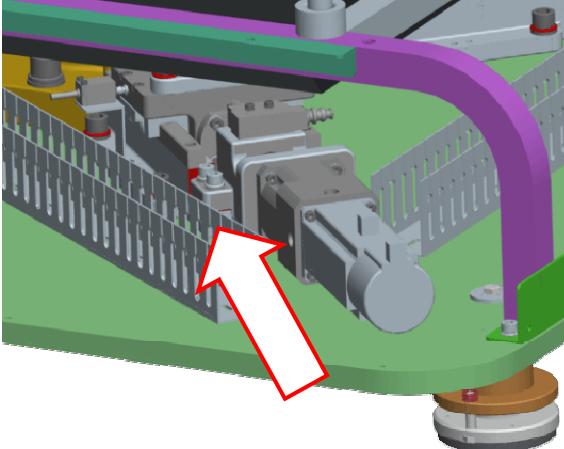
8		<ol style="list-style-type: none"> 1. Installing new transmission then lock it by the screw, but don't fasten it 2. The height between gears and racks on left side and right should be equal 3. Make sure the gear is all the way into the rack then tie it up
9		<ol style="list-style-type: none"> 2. Cut cable tie down 3. Move monitor upward
10		Connect motor connector

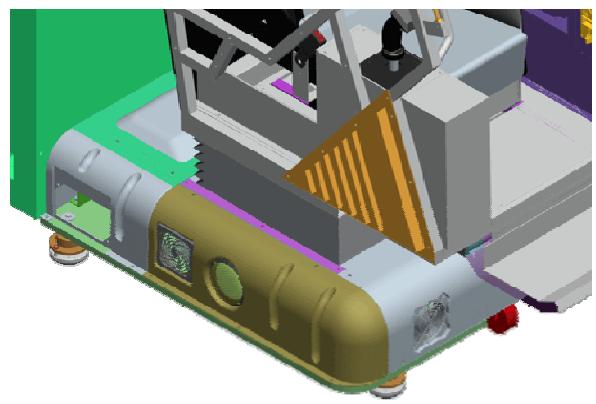
11		Install motor belt
12		<p>a. Lock the screws, but please don't fasten the screws.</p> <p>b. Use wrench to stretch the belt, and then stretch the screws.</p>
13		Power ON the system then make sure it goes up/down smoothly
14		Install covers on both sides

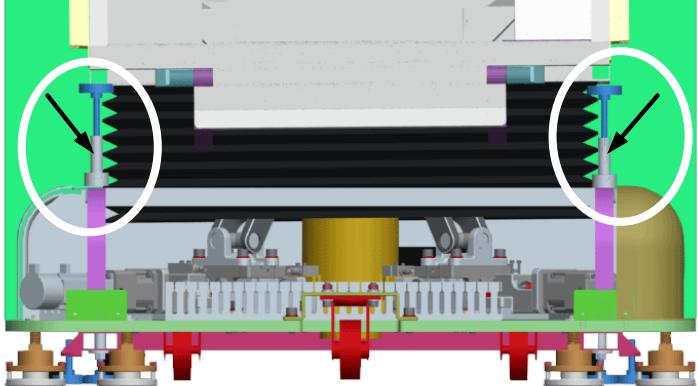
Component#27 Servo Motor Replacement Procedure

Step	Diagrams	Guide
1		Remove the covers on the side
2		<ul style="list-style-type: none"> a. Remove cover on the front side b. Disconnect connector of fan
3		<p>Installing a safety stand</p> <p>Notice: The safely stand must be installing, in order to prevent the cockpit to fall down</p>

4		Disconnect connectors
5		Remove motor by loosing screws
6		Remove motor

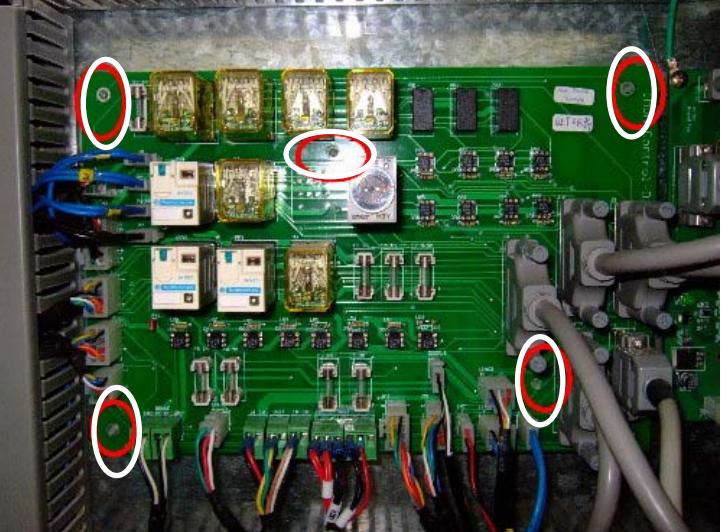
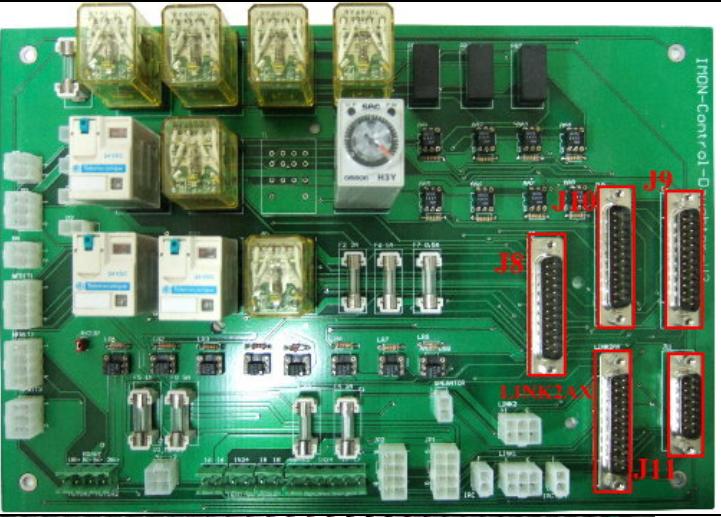
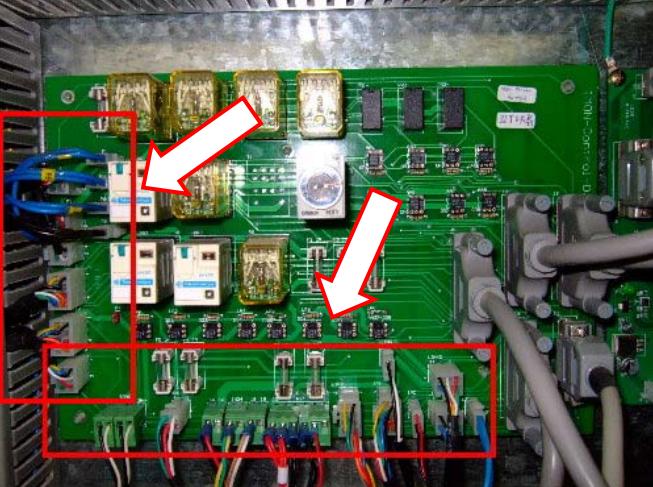
7		Remove screws on A and B Notice: Make sure all screws are removed then disassembly motor
8		Remove motor
9		Assembly motor by tying up screws on A and B Notice: Make sure all screws are tied
10		Install the motor

11		Connect all connectors
12		<p>Install all covers</p> <p>Notice: Make sure the connectors of fan are connected</p>

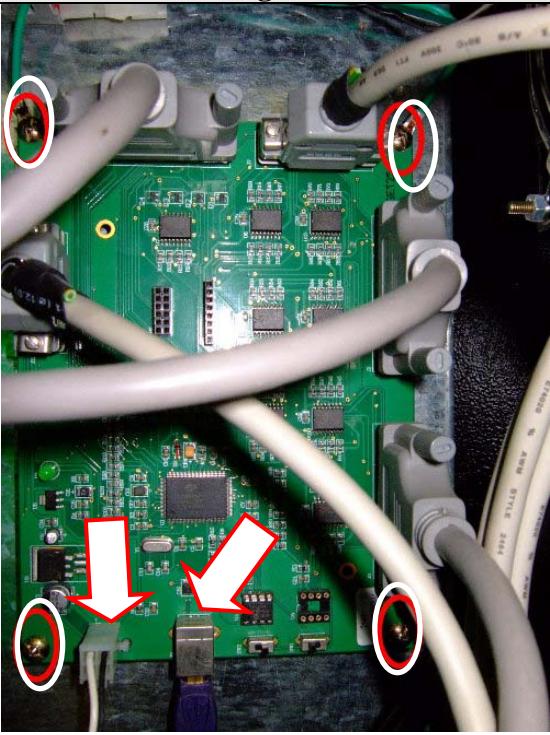
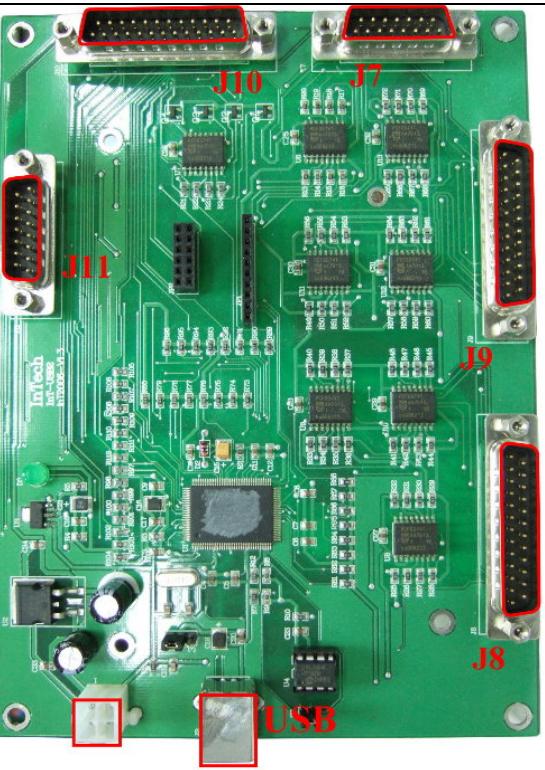
13		Remove safety stand
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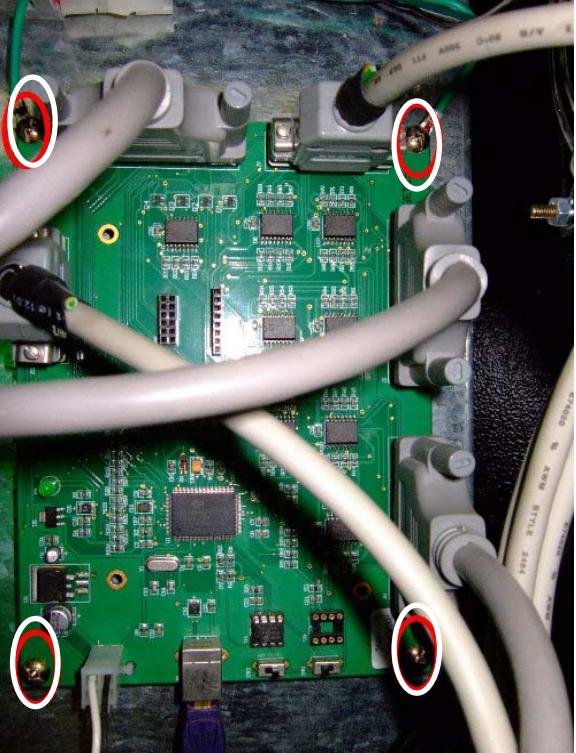
Component#28 Control Card (IMON-CONTROL-DAUGHTER-V2) Replacement procedure

Step	Diagrams	Guide
1		Remove wires carefully
2		Remove connectors

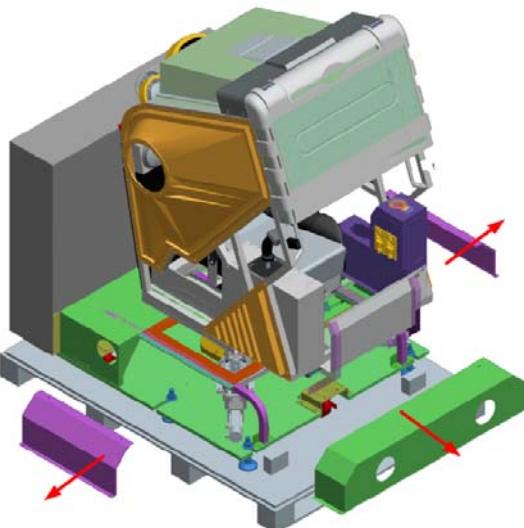
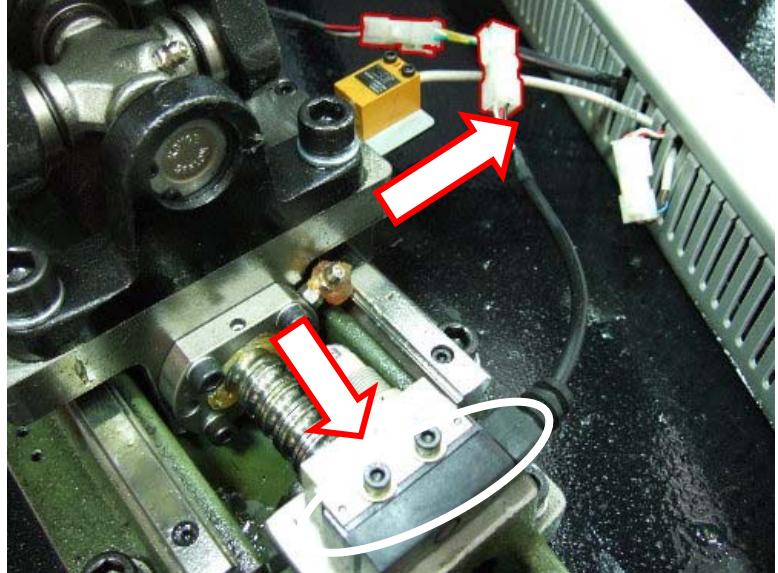
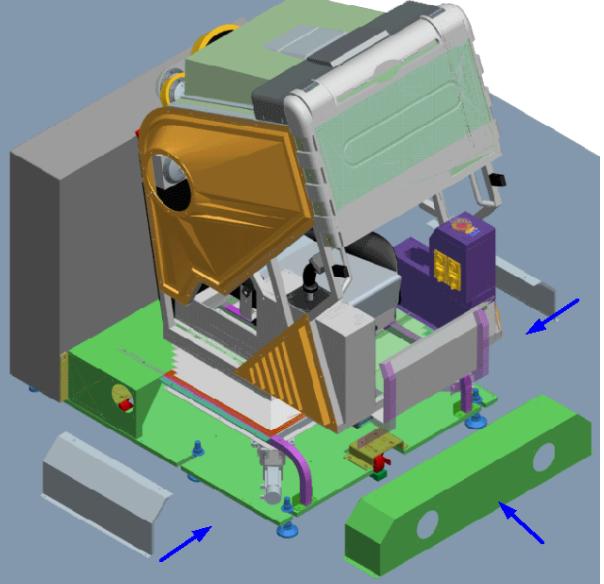
3		Remove Control Card by loosing screws
4		Replace a new one
5		<p>Connect all wires and connectors</p> <p>Notice: Follow the wire and connector number to match the Control Card</p>

Component#29 BIT Control Card Replacement Procedure

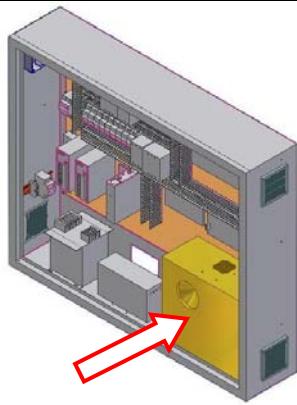
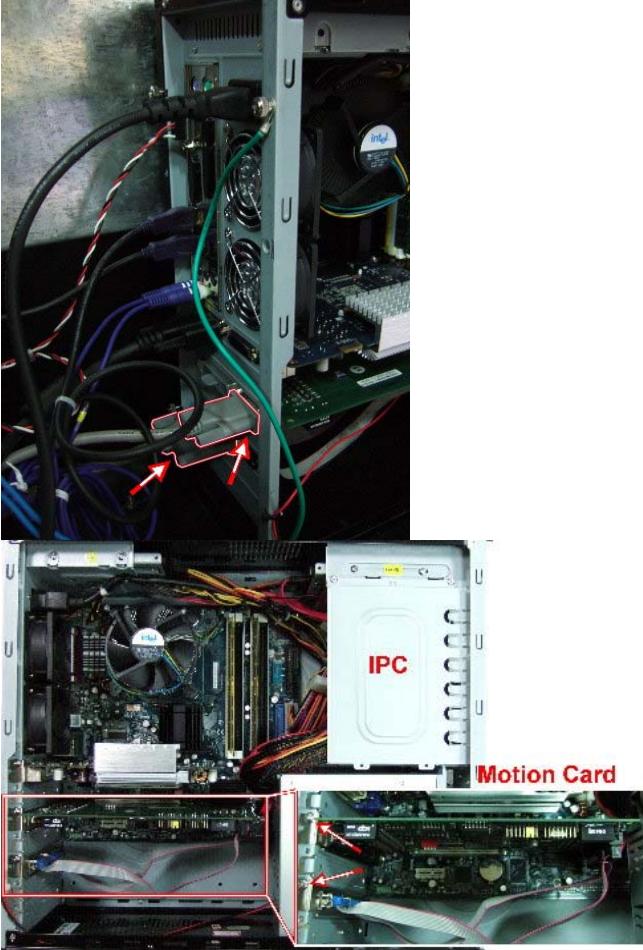
Step	Diagrams	Guide
1		a. Remove connectors b. Remove USB and Power connector c. Remove BIT card
2		Replace a new BIT card

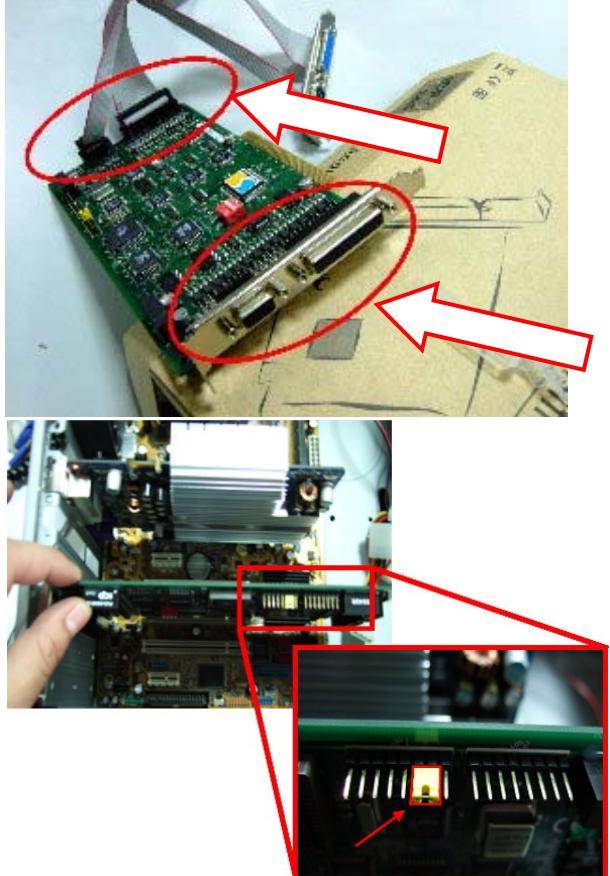
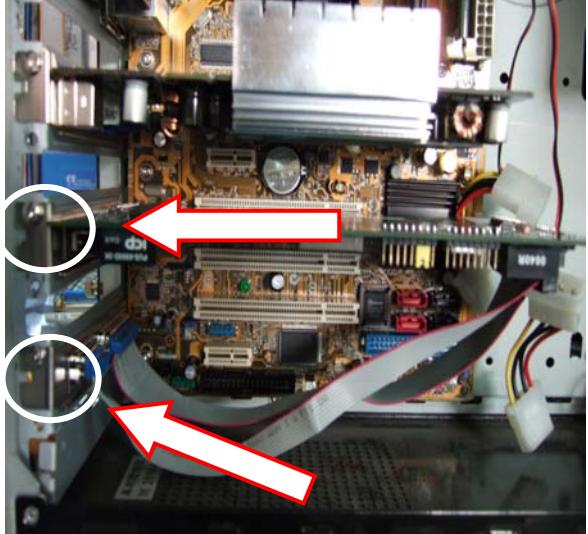
3		<ul style="list-style-type: none">a. Fix the BIT card and ground wireb. Connect USB and Power connectorsc. Connect all connectors (Fig. 1) <p>Notice: Make sure all connectors are tied</p>
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Component#30 OT Limited Switch Replacement Procedure

Step	Diagrams	Guide
1		Remove the covers on the side
2		<ul style="list-style-type: none"> a. Disconnect OT Limited Switch connector b. Remove it c. Replace new OT switch d. Connect connector
3		<p>Install all covers</p> <p>Notice: Make sure the connectors of fan are connected</p>

Component#31 Motion Card Replacement Procedure

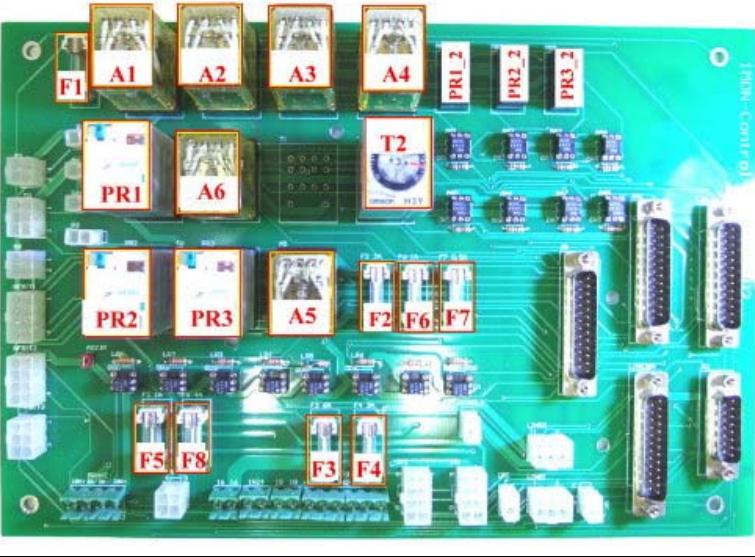
Step	Diagrams	Guide
1		Pull IPC out
2		a. Remove screws which fix the Motion Card b. Remove Motion Card and connectors

3		<p>Install a new Motion Card and connect connectors. Make sure the jumper on Motion Card is in correct position.</p>
4		<p>Fix the card by tying up screws.</p>

Component #32 Fuse (F1~F8) Replacement Procedure

Step	Diagrams	Guide
1		Left and remove Fuse
2		Push Fuse into the socket
3		IMON CONTROL DAUGHTER V2 Layout

Component #33 Relay (A1~A6, PR1~PR3 and T2) Replacement Procedure

Step	Diagrams	Guide
1		Left and remove relay
2		Push relay into the socket
3		IMON CONTROL DAUGHTER V2 Layout