Set up and Service Manual

Version: PB-A-01





Please read this manual before operating your game.

Please keep this manual in good condition for future reference.



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Need parts or service, please contact us:

Injoy Motion Corp.



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Note:

• The product specifications are subject to change without notice.

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SGS

SGS Reference No: ED/2012/C0017C

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VERIFICATION OF COMPLIANCE to the requirements of EMC Directive 2004/108/EC

Verification Report No.	: ED/2012/C0017C	
Representative Model	: DIDO KART AIR-1	
Series Model(s)	: X AIR-Z (X=Street Racing Stars, DIDO KART, POWER BOAT & NEW GAME NAME : Z=1, 2, 4)	
Product Name	: AIR Series Motion Simulator	
Applicant	: Injoy Motion Corp.	
Address of Applicant	: 48, Yongping Street, Tucheng District, New Taipei City 236, Taiwan	
Test Report Number	: ED/2012/C0017	
Date of Tests	: December 25, 2012	
Date of Issue	: January 09, 2013	
Applicable Standards	: SGS Onsite Test Standard: 2012 EN 61000-6-2: 2005, EN 61000-6-4: 2007	

Conclusion

In the opinion of SGS, the equipment complies with the principle requirement of the above standards and following directive:

Electromagnetic Compatibility Directive 2004/108/EC

Note: The verification is only valid for the equipment and configuration tested and in conjunction with the test data described in the Test Report. The CE mark as shown below can be used, under the responsibility of the manufacture, after completion an EC Declaration of Conformity and compliances with all relevant EC Directives.

Authorized Signatory:

Jason L

SGS TAIWAN LTD. Jason Lin Technical Manager



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	INJOY MO	TION CORP.	
	No. 48, YONGPING New TAIPEI CITY 2 (Name	ST., TUCHENG DIST., 36, TAIWAN(R.O.C.) Address)	
We herewith declare	that the following designated	I product type:	
Product Type:	AIR SERIES MO	TION SIMULATOR	
Product Name:			
	X	AIR-Z	
(X=STREET R	ACING STARS, DIDO KART, F	OWER BOAT, ALLIED TA	NK ATTACK;Z=1,2,4)
Conform with the - LVD Directive: 2	essential requirement of the 006/95/EC	relevant European Direc	tive:
They are based on th	e following standards :		
Safety Reference • EN 60950-1:2006 requirements.	Standard: +A12:2011 - Information tec	hnology equipment – Sai	ety - Part 1: General
MANUFACTURER / IM	PORTER 人		

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1. General Information

1.1 Safety Notes

Please read the following instructions carefully before using the game.



Using separate power supply for this machine



Handling with care

The game contains glass and fragile electronic equipment, should be very careful when handling



Be sure to turn off the power before maintenance



Earth Connection To avoid electrical shock! Please use earth connection.



Using connectors properly Check direction before connect



Move PC with care

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1.2 Specifications

Size	218 x 112 x 235 cm
Weight	350 kg
Rate Power	USA : AC 100-120V, 50/60Hz, 1320W Europe : AC 220V, 50Hz, 1320W
Occupant weight limit	150 kg

2. Installation

50cm

2.1 Checklist

Number	Item (For 1 machine)	Quantity
1	TV cabinet	1
2	Cockpit	1
3	Light set	1
4	Service manual	1
5	Parts kit (screws, keys)	1

Note: This Machine must be installed indoor, need to maintain a distance of 50 cm with the wall. Make sure the unit stands are placed flat on the ground and the machine is not moving when playing.



Assembly Diagram

2.2 Installation



Note:

- 1. Remove 2 screws (A).
- 2. Open the case $\ensuremath{\mathbb{C}}$ until horizontal position $\ensuremath{\mathbb{B}}$.
- 3. Open case cover E , Take out tubes D and all connectors F.

Step2: Connecting the tubes

Move cockpit close to TV cabinet, and connect the tubes (56789) from TV cabinet to cockpit (56789) according to the same color.



(5)	Black Tube	8	No-color Tube
6	Orange Tube	9	Transparent-Blue Tube
7	Blue Tube		

Step3: Connecting the TV cabinet connectors (6(1)(18(19)(2)(2)(2)(2)) with cockpit connectors 16 17 18 19 20 21 22 23 by the same pin-number and the same name tag.



Number	Shape	Pin	Tag name
(16)		4	Motor
(17)	6 5 4 2 3 2 1 1	6	Coin Power
(18)	6 5 4 2 3 2 1 1	6	Tail light module
(19)		8	Coin cable
20		8	Free OP
21)		12	Bottom cable
22		14	AI0-3
23		16	Belt & Gear

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Step4: Use screws⁽¹⁾ to combine TV cabinet and cockpit together. Sort out all wires and then cover the cover⁽⁴⁾. Use screws⁽¹⁾ to fix it.



4	Cover
10	Phillips screws
(11)	SHCS M8*25L with
\bigcirc	double washer

Step5: Check Light set^① and open back cover^①. Put the light set on the TV cabinet and aligned it to the 4 bottom holes inside, then use Phillips screws to fix it.



Step6: Connect the power cable inside the light set and use Screw¹ to fix the cover¹.

Step7: Connect machine power (220V/8A, 110V/15A)



 When using power extension cord, the current capacity should be double.
 Every power loop only support 2 machine at max.

Coin Acceptor Setting

Step8: Pull up the slider of the coin acceptor and insert the coin into the coin acceptor. Release the slider to fix the coin acceptor.



Step9: Check the Coin Acceptor Setting. (Select "NO" on top switch, "SLOW" on bottom switch)

Placement for external plate

Step10: Put a plate on the floor and right under the drain valve.



Note: The air compressor tank drains water after machine power off. So it is necessary to put a container on the floor and right under the drain valve to catch the water. Generally, a plastic plate around 25x20x3(LxWxH)cm is suggested.

3. Game setting (Operator menu)

To access Operator Menu, after the Power is switched ON and the screen shows "insert coin", find the red Operator menu switch located inside the coin box, switch it to "I" position to enter.



Then you will see below screen.

	Operator Menu
	Coin Options
	Game Options
Down	Pedal Setting
	Language Setting
	System Time Setting
	Volume Setting
	Devices Test
	Software Upgrade
	Statistics
	Save & Exit

3.1 Coin Options

- 1. "Coins per Play" allows you to set how many coins it will take for a player to start a game. The factory default setting value is 4 coins per play.
- 2. "Coins per Continue" allows you to charge a different price for continue-play from the first game play. The factory default setting value is 4 coins per play.
- **3.** "*Currency Type*" is not to select the currency of a country, but allows selection of the forms of currency
- 4. "Coins per Pulse (Coin Acceptor 1)" allows you to adapt different currency acceptors. The default value is 1.
- 5. "Coins per Pulse (Coin Acceptor 2) (Figure 4-4)" allows you to adapt different currency acceptors. The default value is 1.
- 6. "Winner Continue" allows you to set up "insert coin to continue or free to continue" if Winner wants to continue game. This setup is for the single player mode.
- 7. "Winner Continue (Net)" allows you to set up "insert coin to continue or free to continue" if Winner wants to continue game. This setup is for the multi-player mode.

move to another selection	Coin Options	
	Coin per Play	5
Dave	Coin per Continue	5
Down	Currency Type	Coin
2	Coin per Pulse(Coin Acceptor 1)	1
-)	Coin per Pulse(Coin Acceptor 2)	1
	Winner Continue	Insert Coi
	Winner Continue(Net)	Insert Coi
	Coin Acceptor Training	
	Save & Exit	

3.2 Game Options

- 1. "Game Time" no function.
- 2. "Game Show Operation" Enable sets free game play. Click "+" or "-" button to "Enable" or "Disable" this function.
- 3. "Player Number" no function.

move to another selection	Game Options	
	Game Time	380 Se
Up	Game Show operation	Disable
Down	Player Number	1P
	Save & Exit	
	l	

3.3 Pedal Setting

Replacing the accelerator or the brake pedal potentiometer may refer to screen values to install. If the potentiometer values set exceed the safe range or dead zone after installation, the screen will show the error. Please re-set the potentiometer values within the safe range.



To calibrate the Pedal and Brake, follow the directions on the screen and go through these steps.

Step1: Hold the "Calibrate" button on the Panel to calibrate the pedal and brake. Release the Brake and Pedal, then press "Next" button.



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Step2: Press the Brake and Pedal to limit and then press "Next" button.

Step3: After finishing the calibration, press the "Exit" button to exit.



3.4 Volume setting

"Game Volume" can adjust the system volume, suggestion 75~85. "Idle Movie Volume" can adjust Idle Movie volume, suggestion 15~35.

to change the setting values	Volume Setting	
	Game Volume	75
Down	Idle Movie Volume	15
* <u></u>		
	-	

3.5 Device Test

When into device test, 5 airbags will be aerated, and we can check the their conditions.



Check if all device work properly as well.



3.6 Save & Exit

After the setup is completed, please select "Save & Exit", and then select "Yes". Lastly, switch red Operator menu switch to "O" position and turn OFF the machine. Then wait for 30secs and turn ON machine power.



3.7 Free Key

Open coin box, press "Free Key" button allows you to play game for free once.



3.8 System Recovery



Step1: When the screen shows "insert coin", Use the key specified for recovery switch and turn it right.

Step2: Turn the machine off, wait for 30 seconds

Step3: Turn on the power, and you will see screen as below. When recovery is in progress, do not turn off the power, or the system will be destroyed permanently.

Progress Indicator				
0%	25%	50%	75%	100x
Statistics				
Percent complete	31		- 1.1	
Speed (MB/min)	1667		~	
HB copied	1556		1	7
HB remaining	3321		1	
Time elapsed	0:56			/
Time remaining	1/59		1/	
Details				
Connection type	Local			
Source Partition		232 HB, 8203 HB wood	XP Embedds	
Target Partition				
Current file	12094 WinStart.exe			

Step4: If success, will see screen as below.



Step5: Turn the key left and take it out.

Step6: Turn the machine off, wait for 30 seconds

Step7: Turn on the power. <Finish>

4. Trouble shooting

4.1 Error code

EC001

Description	The steering wheel fails in automatic calibration.	
	(The steering wheel does not rotate.)	
Check steps		Troubleshooting
1. Check out if the belt is		1. If the belt is come off, please check out the
broken o	r come off.	reason.
		2. If the belt is broken or wear out, please
		replace it with the new one with the same specifications.
2. Check out	t if the 24V	1. Check out if the cockpit card connector is off.
power su	pplier is out of	2. Replace the 24V power supplier.
WOIK.		
3. Check ou power is	connected to	1. If there is a 24VDC power connected to the cockpit card but there is no output to the
the cock	oit card.	motor, please replace the cockpit card.
4. Check out card has	t if the cockpit output when	2. If a voltage is transmitted to the motor and the motor does not rotate, please change the
the mach	nine is booting	motor.
up.	0	
5. The cockp order.	bit card is out of	Replace the cockpit card

EC002

Description	The automatic calibration of the steering wheel is done, but the value is wrong.	
	Check steps	Troubleshooting
 Check out if the potentiometer pins of the steering wheel are connected inversely. (Measure the potentiometer resistance values on feet 2 and 3 with an electric meter. The potentiometer resistance increases as the steering wheel moves clockwise, and decreases as the steering wheel moves counterclockwise.) 		If the changes in the potentiometer resistance are reversed, please swap foot 1 and foot 3. If there is no change in the potentiometer resistance, please replace the potentiometer.
2. The cockpit card breaks down.		Replace the cockpit card.

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EC003

Description The cockpit card can not t	ne recognized	
Description The cockpit card carrier be recognized.		
Check steps	Troubleshooting	
1. Check out if the USB port of the IPC motherboard is out of order.	Replace the USB connector to the other USB port.	
2. Check out if the USB signal line malfunctions.	Replace the USB signal line.	
3. The cockpit card malfunctions.	Replace the cockpit card.	

EC004

Description The communication of the	Cockpit Card USB is disrupted.
Check steps Troubleshooting	
1. Check out if the USB signal line malfunctions.	Change the USB signal line and check out if the ground wire of the motor is fixed on the plate.
2. The cockpit card malfunctions.	Replace the cockpit card.

EC005

Description Pedal calibration error	
Check steps	Troubleshooting
 Use an electric meter to check out if the pedal potentiometer exceeds the dead zone. (The resistance value varies from maximum to minimum or from minimum to maximum when the pedal is press.) 	Make sure the pedal potentiometer does not exceed the dead zone, re-enter the game operation menu to calibrate again.
 Use an electric meter to check out if the pedal potentiometer is normal. (The resistance value will increase or decrease when the pedal is pressed.) 	Change the potentiometer of the pedal, and enter the game operation menu to calibrate again.

EC006

Description Brake calibration error	
Check steps	Troubleshooting
 Use an electric meter to check out if the brake potentiometer exceeds the dead zone. (The resistance value varies from maximum to minimum or from minimum to maximum when the pedal is press.) 	 Make sure the brake potentiometer does not exceed the dead zone, re-enter the game operation menu to calibrate again. Change the brake potentiometer, and enter the game operation menu to calibrate again.
 2. Use an electric meter to check out if the brake potentiometer is normal. (The resistance value will increase or decrease when the pedal is press.) 	Change the brake potentiometer, and enter the game operation menu to calibrate again.

EC007

Description Automatic calibration of the steering wheel fails.		
Check steps	Troubleshooting	
1. Use an electric meter to check out Replace the wheel potentiometer.		
if the wheel potentiometer is	(Please note if the wheel	
normal.	potentiometer exceed the dead zone	
(The resistance value will increase	the wheel potentiometer is to be	
or decrease when the steering	replaced.)	
wheel turns left and right.)		
2. The cockpit card malfunctions.	Replace the cockpit card.	

4.2 General issues

Problem	Solution	
No power	Make sure the power connector is connected and have correct voltage. Make sure all switches are "ON".	
	Check the distribution switch is "ON".	
PC can not recognize token	Reconnect the token and restart.	
	Change token to another USB port.	
	Contact Injoy Motion Corp. to change token.	
	Using a separate power supply	
PC shut down	Make sure the computer power cord and switch work properly.	
suddenly	Reconnect RAM, VGA card	
	Change the PC power supply.	
PC Crash	Restart the PC.	
Machine overheat	Check all fans work properly.	
Machine overheat	Ensure no objects block the vents.	
	Remove stuck coins.	
Can not insert coin	Go to operator menu check coin setting.	
	Reinstall reference coin.	
Can not recover	Make sure recover USB disk is connect to the PC.	
system	Contact Injoy Motion Corp. to change the Hard Disk.	
	Check wire connecting between cockpit card and OP switch.	
Can not enter operator menu	Recover the system	
	Contact Injoy Motion Corp. to change the cockpit card.	
Free Key not	Check wire connecting.	
functional	Contact Injoy Motion Corp. to change the cockpit card.	

4.3 Display

Problem	Solution
No screen	Update VGA driver.
	Check screen wire connecting.
	Check VGA card wire connecting.
	Contact Injoy Motion Corp. to change the VGA card.
	Contact Injoy Motion Corp. to change the LCD.
No screen and no sound	Ensure PC power input is correct. Ensure PC power switch is "ON" Restart the PC.
	Recover the system
	Contact Injoy Motion Corp. to change the Hard disk.
Lag problem	Update VGA driver and restart the PC.
	Contact Injoy Motion Corp. to change the VGA card.
Resolution is not right	Change resolution to1280x768.
LCD abnormal	Contact Injoy Motion Corp. to change the LCD.

4.4 Sound

Problem	Solution
No sound	Go to operator menu change volume setting. Adjust amplifier volume.
	Check wire connecting.
	Contact Injoy Motion Corp. to change the amplifier.
Poor sound	Contact Injoy Motion Corp. to change the amplifier.

4.5 Control

Problem	Solution
START / VIEW Button failure	Change micro switch.
	Check wire connecting.
	Contact Injoy Motion Corp. to change the cockpit card.
	Check motor wire connecting.
	Contact Injoy Motion Corp. to change the motor.
Wheel failure	Change the potentiometer.
	Contact Injoy Motion Corp. to change the cockpit card.
Gear pot working	Check wire connecting and micro switches.
g	Contact Injoy Motion Corp. to change the cockpit card.
	Go to operator menu check pedal setting and do calibration.
Pedal and brake not working	Change the potentiometer.
	Contact Injoy Motion Corp. to change the cockpit card.
Airbag not working in the game.	Go to operator menu device test and check if all airbags work fine.
	Make sure the power switch of the air compressor is ON.
	Check if air compressor works properly.
	Check the 12V on the SSR card near the cockpit card.
	Contact Injoy Motion Corp. to change air compressor or SSR card.

4.6 Link

Problem	Solution		
	Make sure cable is good. Contact Injoy Motion Corp. to Change the cable.		
Can not link	Make sure no duplicate IP address.		
	Make sure no duplicate computer name.		
	Make sure all software is the same version.		

Main Parts



1	PC	(5)	Extension card
2	Air compressor	6	Transformer (only for 220V machine)
3	Cockpit card	\bigcirc	Pneumatic valve
4	Power supply	8	Input AC power

4.7 Technical Support

Service center: Injoy Motion Corp. Phone: +886-2-2267-6317 Fax: +886-2-2267-5906 Time: 9:00AM~6:00PM (GMT+8), Monday to Friday E-mail: <u>support@injoymotion.com</u>

When you contact technical support, please provide the following information so that we can understand the situation and solve your problem as soon as possible, thank you for your cooperation:

1 Machine serial number
2、Software version
3、Error code
4. Problem Description
5. Any changes to the system

Appendix A: How to change potentiometer in pedal module



1. Remove potentiometer:

- Step1: Loosen and remove screw⁽¹⁾.
- Step2: Take off gear 2 .
- Step3: Loosen screw 3.
- Step4: Take off gear (4).

Step5: Loosen and remove the washer (5).

Step6: Take out potentiometer.

2. Install potentiometer:

Step1: Put in potentiometer⁶. Step2: Placed Washer⁵ and fix it.



Step3: Use meter to measure resistance value between pin2 and pin3 of the potentiometer, and make sure 1.6Kohm for pedal, 2.6Kohm for brake.



Step4: Install gear⁽⁴⁾. Step5: Fix screw⁽³⁾.



Step6: Install gear (2), and make sure gear (4) close to second tooth of the gear (2).



Step7: Install screw(1) and fix it.



Step8: Use meter to measure resistance value between pin2 and pin3 of the potentiometer. <Finish>

Release accelerator should be 1.6 Kohm Press the accelerator should be 3.2 Kohm

Release the brake should be 2.6 Kohm Press the brake should be 3.5 Kohm



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Appendix B: How to connect tubes

1. Insert

A. Insert the tube to the end.



B. Finish



2. Pull out

A. Push the releasing ring in front of the quick coupler.



B. Pull out the tubes



Appendix C: How to change airbag

A. Introduction B. Change Airbag no.1~4 C. Change Airbag no.5

A. Introduction



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B. Change Airbag no.1~4 (Take changing airbag no. 3 for example)

Step1: Use solid object to support the motion base.



Step2: Remove 2 airbag screws.



Step3: Remove 4 fixation screws.



Step4: Remove the tube (refer to Appendix B) .



Step5: Remove 2 airbag screws and quick coupler.



Step6: All Components are as below.







Step8: Install 4 fixation screws.



Step9: Install 2 airbag screws. <Finish>



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C. Change Airbag no.5

Step1: Remove 4 seat fixation screws.



Step2: Remove the seat.



Step3: Remove 2 airbag screws.



Step4: Open the seat base, and find the airbag 5.



Step5: Remove 2 fixation screws.



Step6: Remove the tube and screws, and change airbag.



Step7: After changing, lock 2 airbag screws, tube, and 2 fixation screws.



Step8: Cover the seat base, tighten 2 airbag screws.



Step9: Install the seat back. <Finish>

Appendix D: Clean the drain valve



Follow the steps below to clean the pathway inside the drain valve:



1. Remove the metal piece

2. Remove the body-part



3. Remove 4 screws



4. Remove the core-part



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5. Clean the two-way valve inside



6. Install the core-part



7. Install 4 screws



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8. Install the body-part



9. Install the metal piece <Finish>



Appendix E: Connection for coin accepter

LINE-AP-COIN is the main cable for the coin accepter. There are three branches for LINE-AP-COIN:



1. "Coin-P" input power 12V to the coin accepter.

Connector assignment: Pin1: 12VDC (red) Pin2: ground (black) Pin3: none Pin4: none



2. "Coin-Ex" output credit signal from the coin accepter

Connector assignment: Pin1: credit pulse Pin2: ground (black)

3. "Count" output coin count to the counter

Connector assignment: Pin1: coin count Pin2: 12VDC (red)





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