

# THE FAST AND THE FURIOUS™

## Operator's Manual 1.1



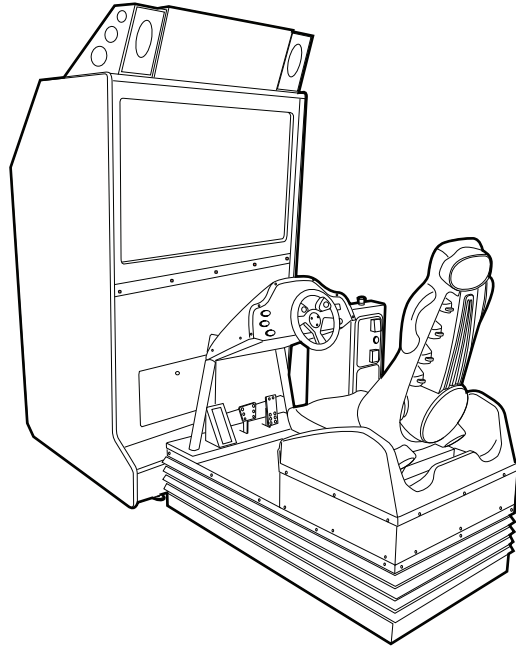
Prototype cabinets shown.  
Production versions may vary.

TsuMo™ Deluxe Motion-Base The Fast and the Furious™



Tsunami Visual Technologies, Inc.  
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# **THE FAST AND THE FURIOUS™**



# OPERATOR'S MANUAL

## 1.1

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## INTRODUCTION

Congratulations on your purchase of Tsunami Visual Technologies' "The Fast and the Furious" Deluxe! This Manual will guide you through the Setup, Operation and Maintenance of Motion System for Arcade Environments.

The "Fast and the Furious" Deluxe is different from any other Arcade Machines you have experienced; it is a fully interactive coin-operated motion simulator, capable of an awesome three degrees of freedom (pitch, roll and heave) movement. This System enables real life simulation of motion, needed by "The Fast and the Furious" Deluxe software. The Unit is powered by electric motors, rather than higher maintenance pneumatic or hydraulic actuators that have typically been used to power Motion Simulators in the past. The heart of the Motion System is Tsunami's patented Ballista™; a powerful, Mini Motion Platform which is based on real-time physics-based dynamics. Players will experience the game first-hand as they are jolted, moved, and bumped in synchronization with intense game play.

Direct questions and comments to:

Customer Support  
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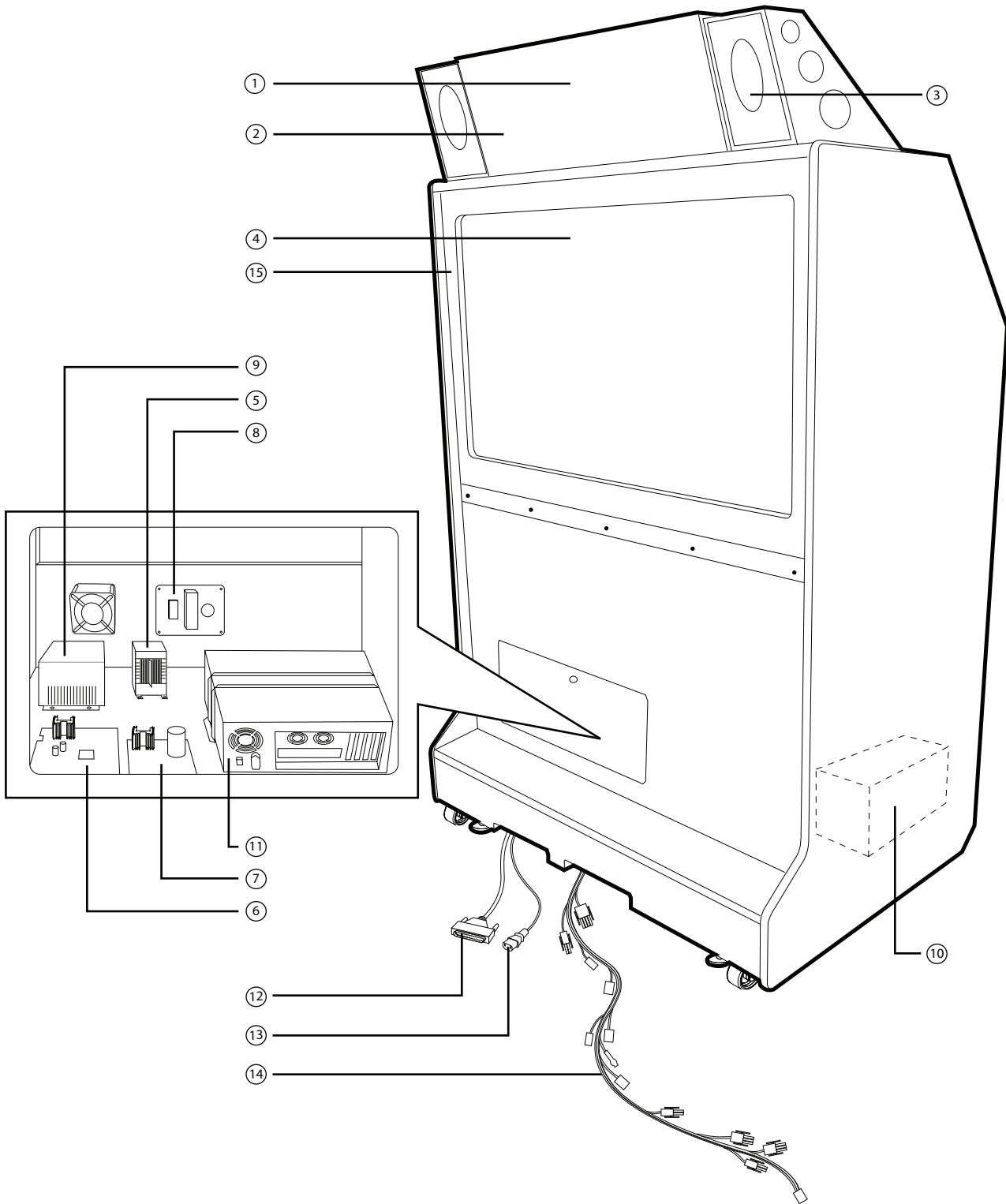
### **WARNING: HAZARD TO EPILEPTICS.**

A very small portion of the population has a condition which may cause them to experience epileptic seizures or have momentary loss of consciousness when viewing certain kinds of flashing lights or patterns that are present in our daily environment. These persons may experience seizures while watching some kinds of television pictures or playing certain video games. Peoples who have not had any previous seizures may nonetheless have an undetected epileptic condition.

If you or anyone in your family has experienced symptoms linked to an epileptic condition (e.g., seizures or loss of awareness), immediately consult your physician before using any video games.

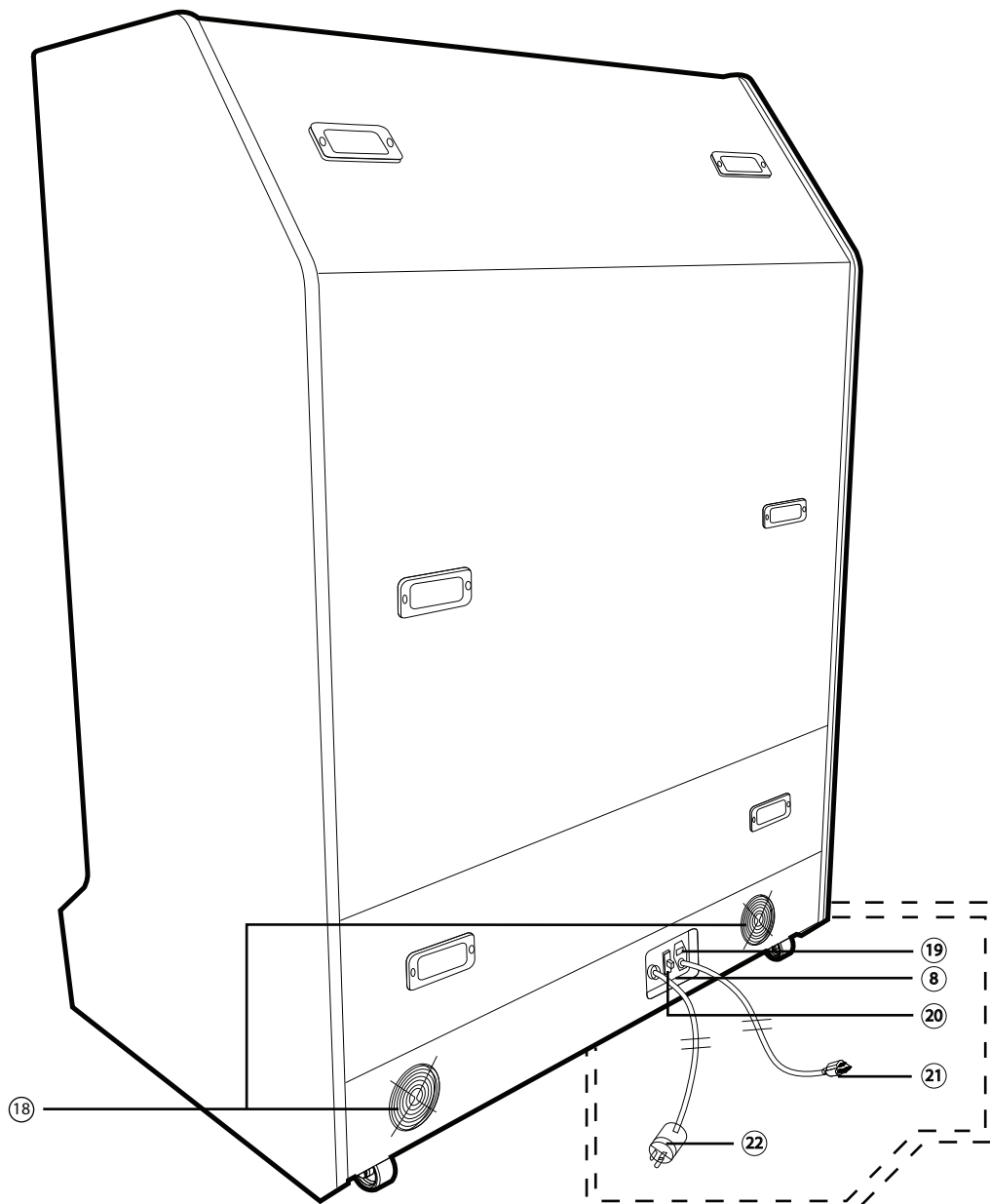
We recommend that parents observe their children while they play video games. If you or your child experience the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation, or convulsions, DISCONTINUE USE IMMEDIATELY and consult your physician.

# The Fast and the Furious™ Deluxe Display



- | # | Item Description<br>(Part Number)                  |
|---|--|
| ① | 55" The Fast and the Furious™ Marquee (GRA-0099-X) |
| ② | Marquee Glass, 3/16" (GLA-0001-X)                  |
| ③ | Speaker, Viper, Motion (ELC-0092-X)                |
| ④ | Monitor, 55" (CAB-0005-X)                          |
| ⑤ | Transformer (ELC-0110-X)                           |
| ⑥ | JAMA Board (CPU-0036-X)                            |
| ⑦ | H-BOOM Board (CPU-0037-X)                          |
| ⑧ | Main Power Switch Plate Assembly (ELC-0023-X)      |
| ⑨ | Power Supply (ELC-0066-X)                          |
| ⑩ | Transformer (ELC-0053-X)                           |
| ⑪ | Computer (CPU-9008-X)                              |
| ⑫ | Cable from D/A Card (CBL-0207-X)                   |
| ⑬ | AC Power to Power Distribution Box (CBL-0077-X)    |
| ⑭ | Main JAMMA Harness (CBL-0091-X)                    |
| ⑮ | Display Glass, 3/16" (GLA-0002-X)                  |

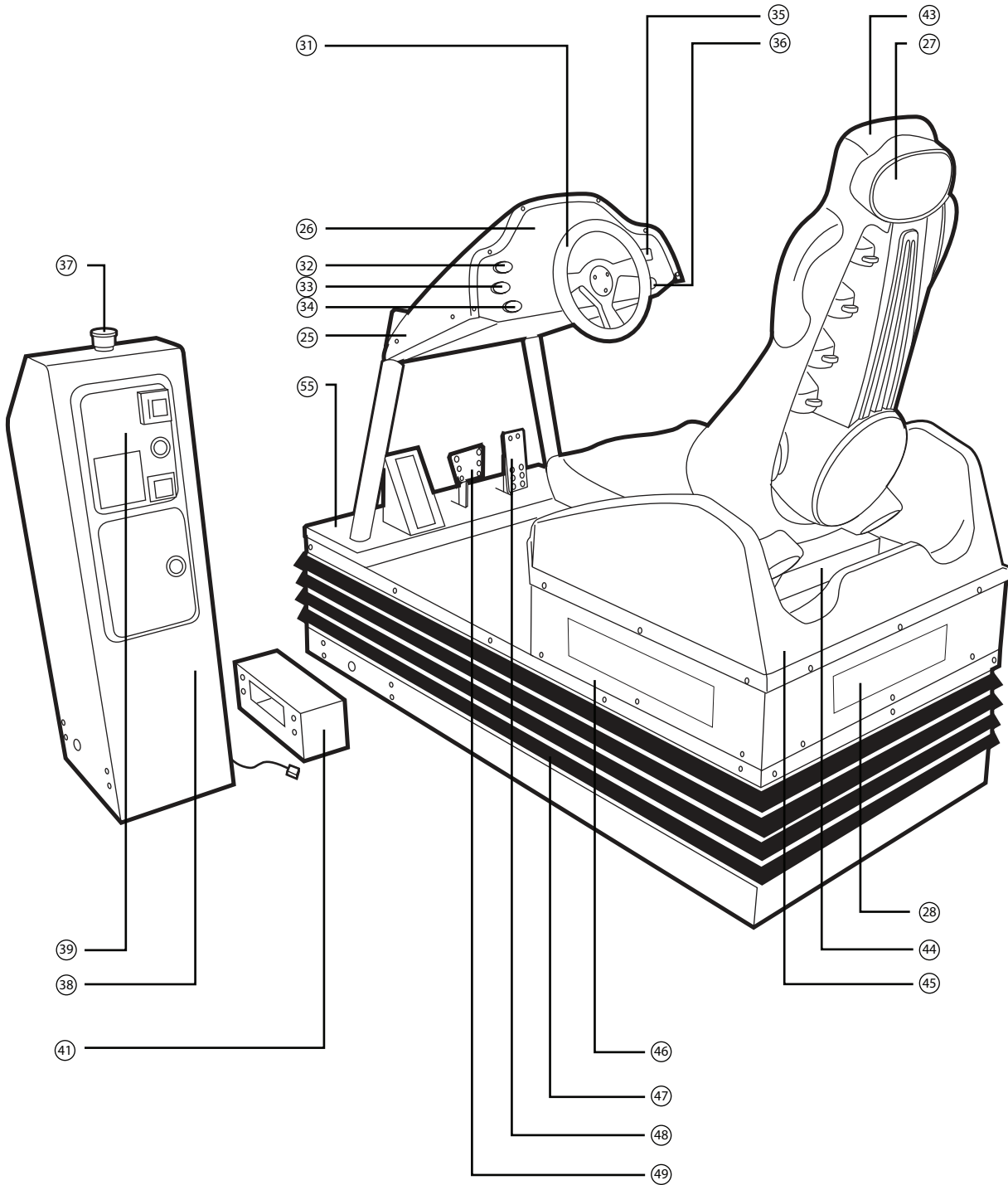
# The Fast and the Furious™ Deluxe Display Cabinet (Back)



Main Power Switch Plate Assembly

- | #  | Item Description<br>(Part Number)             |
|----|---|
| 8  | Main Power Switch Plate Assembly (ELC-0023-X) |
| 18 | Cooling Fan 115Vac (ELC-0072-X)               |
| 19 | Cabinet On/Off Switch                         |
| 20 | Motion Base On/Off Switch                     |
| 21 | Power Cable, Display Cabinet                  |
| 22 | Motion Base Power Cable                       |

# The Fast and the Furious™ Deluxe Motion Seat Assembly

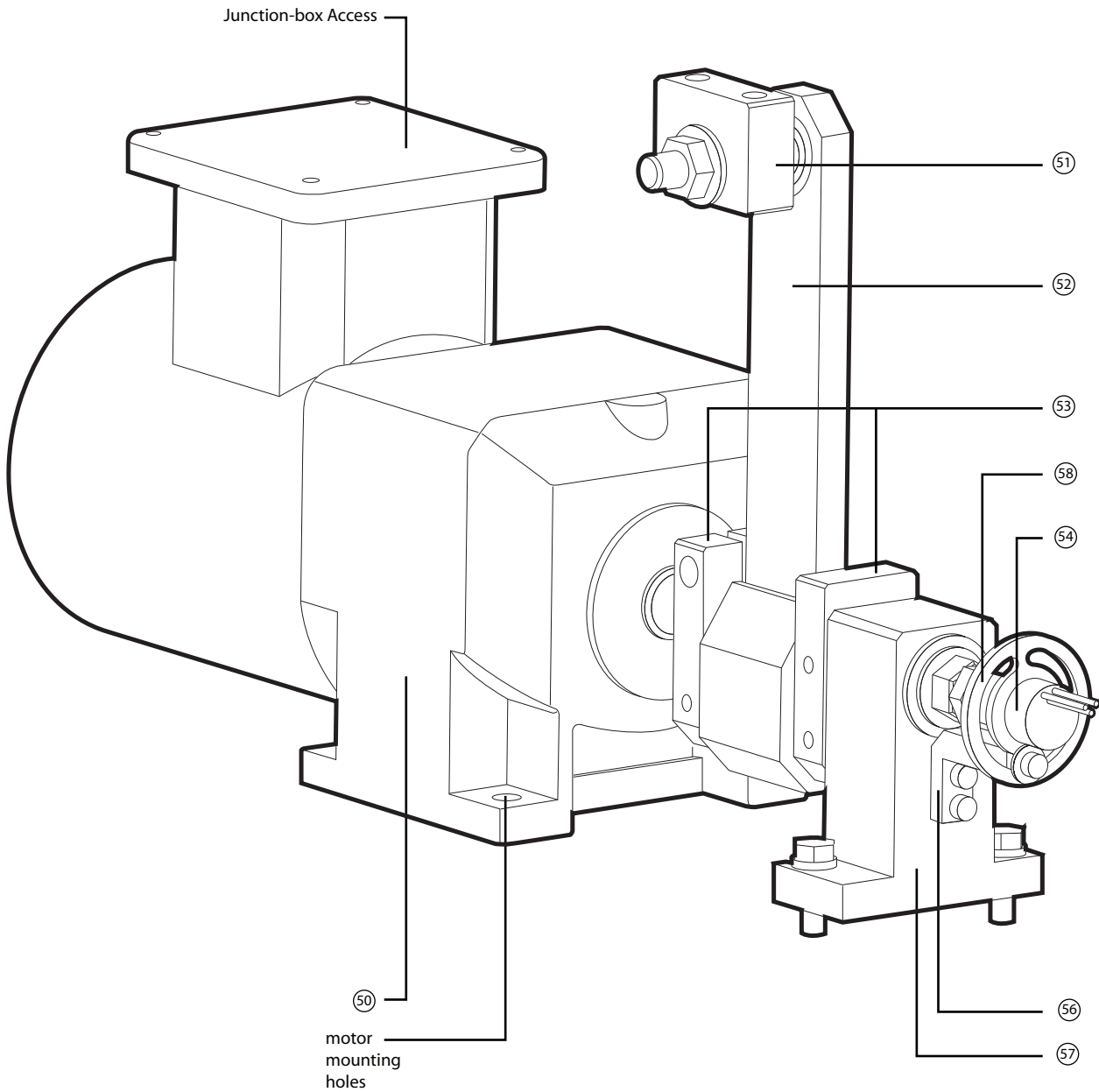


# Item Description  
(Part Number)

- ②5 Dash Cover (PLA-0061-X)
- ②6 Decal, FNF Control/Dash (GRA-0098-X)
- ②7 Decal, FNF Oval Seat (GRA-0102-X)
- ②8 Decal, Stand Back (GRA-0093-X)
- ③1 Steering Wheel Assembly (ELC-9010-X)
- ③2 View 1 Button (ELC-0104-X)
- ③3 View 2 Button (ELC-0105-X)
- ③4 View 3 Button (ELC-0106-X)
- ③5 Start/Nitro Button (ELC-0107-X)
- ③6 Tunes Button (ELC-0108-X)
- ③7 RED STOP Switch (ELC-0005-X)
- ③8 Coin Tower (SHT-0032-X)
- ③9 Coin Door Assembly (CAB-0014-X)
- ④1 Coin Tower Support (SHT-0034-X)
- ④3 Hi-back Chair Assembly (PLA-9020-X)
- ④4 Seat, Slide, TWT (SHT-9011-X)
- ④5 Fender (PLA-0060-X)
- ④6 Seat Box (SHT-0037-X)
- ④7 Bellow (PLA-0064-X)
- ④8 Gas Pedal Assembly (ELC-0027-X)
- ④9 Brake Pedal Assembly (ELC-0028-X)
- ⑤5 Pedal Bracket (SHT-0041-X)

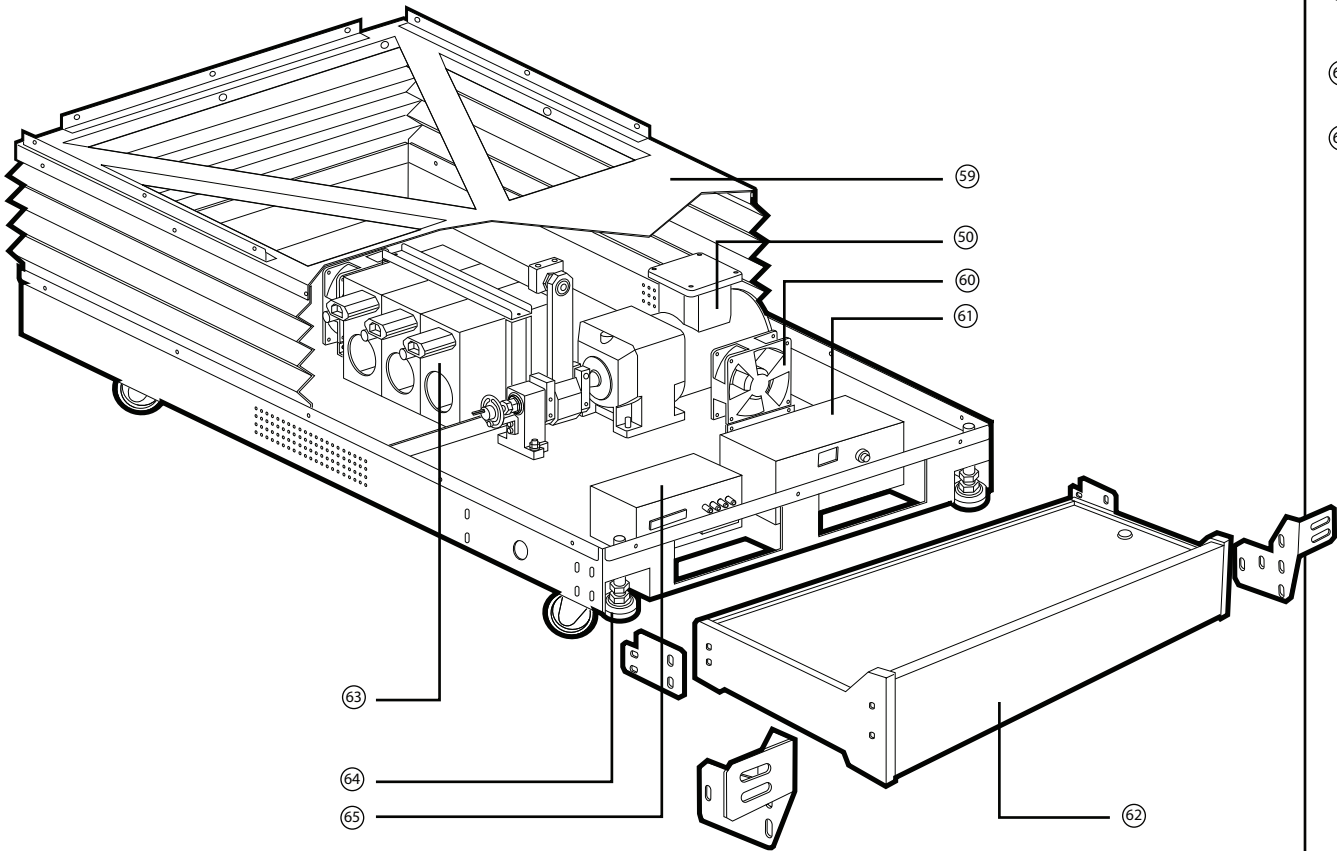


# Push Rod Assembly and Mounted Motor Assembly



- | #  | Item Description<br>(Part Number)  |
|----|--|
| 50 | Motor 1.5.8, 220v<br>(ELC-0009-X)  |
| 51 | Top Plate Mounting<br>Block  |
| 52 | Linkage, Motor,<br>Arm Right Hand<br>(MCH-0031-R)<br>Arm Left Hand<br>(MCH-0031-L) |
| 53 | Crank Shaft<br>Assembly<br>(MCH-0035-X)  |
| 54 | Potentiometer<br>(ELC-0101-X)  |
| 56 | Pot L-bracket<br>(MCH-0032-X)  |
| 57 | Bearing Block<br>(MCH-0036-X)  |
| 58 | Disk, Pot Alignment<br>(MCH-0034-X)  |

# The Fast and the Furious™ Motion Base



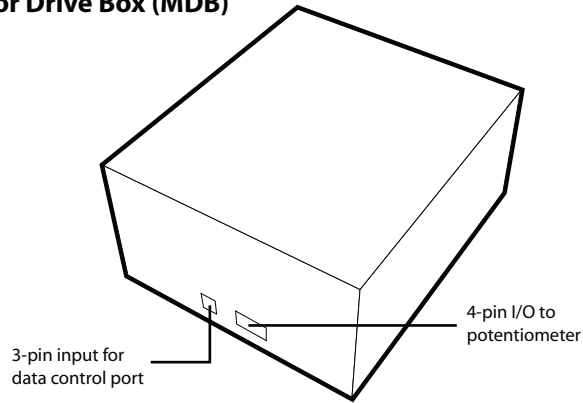
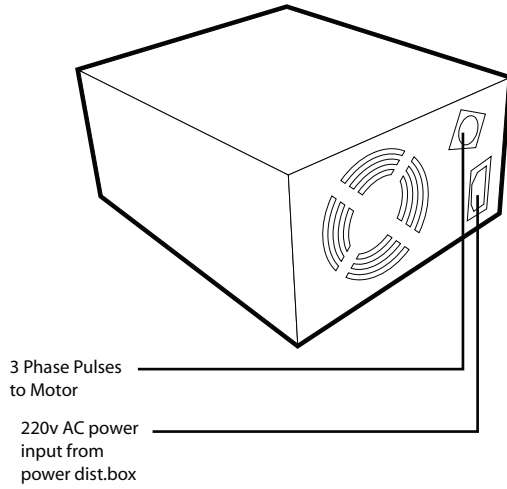
# Item Description  
(Part Number)

- 50 Motor (x3)  
(ELC-0009-X)
- 59 Deck  
(SHT-0036-X)
- 60 Cooling Fan  
220Vac  
(ELC-0071-X)
- 61 Power Distribution  
Box (PDB)  
(ELC-0001-X)
- 62 Spacer to Cabinet  
(XXX-XXXX-X)
- 63 Motor Drive  
Box (MDB)(x3)  
(ELC-0003-X)
- 64 Leveler  
(FNA-0015-X)
- 65 Data Distribution  
Box (DDB)  
(ELC-0002-X)

# Motor Drive and Distribution Boxes

# Item Description  
(Part Number)

63 Motor Drive Box (MDB)

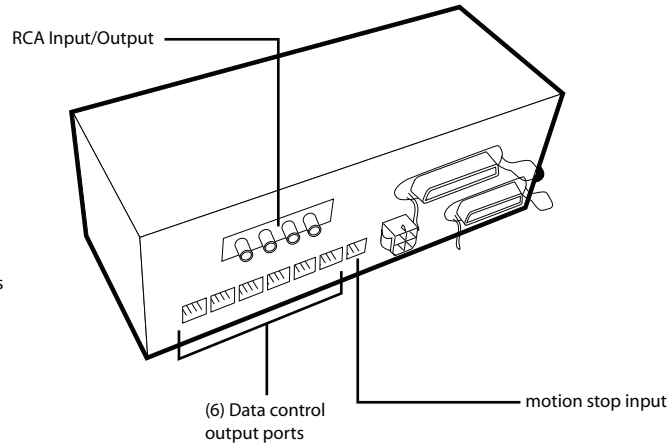
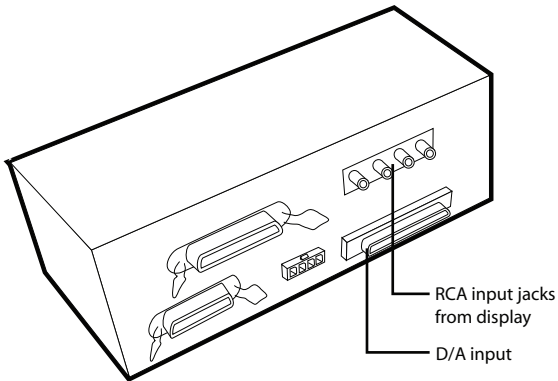


61 Power Distribution Box (PDB)  
(ELC-0001-X)

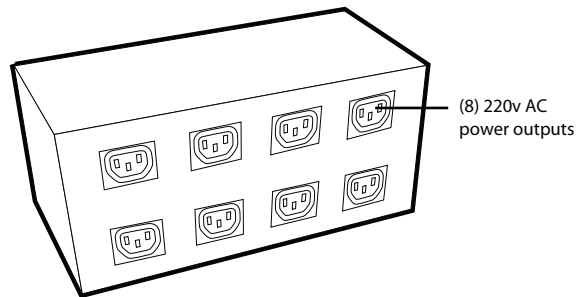
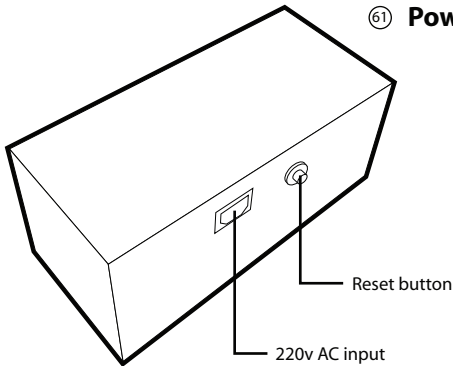
63 Motor Drive Box (MDB)  
(ELC-0003-X)

65 Data Distribution Box (DDB)  
(ELC-0002-X)

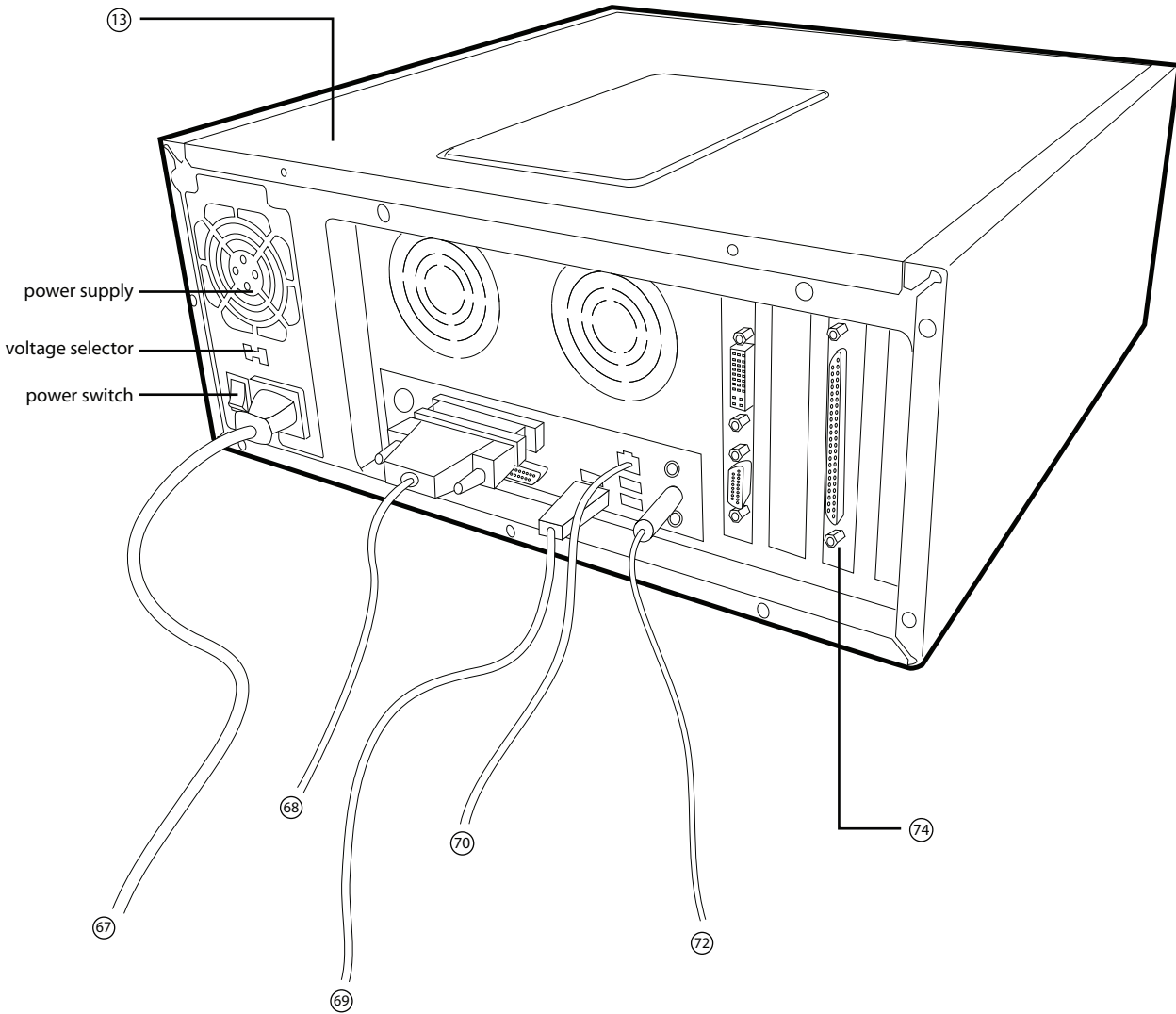
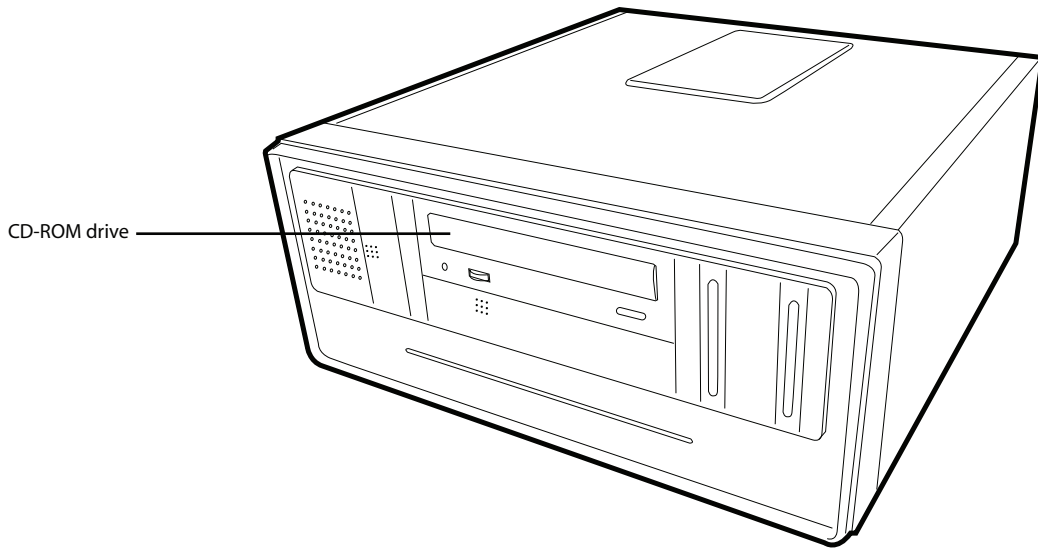
65 Data Distribution Box (DDB)



61 Power Distribution Box (PDB)



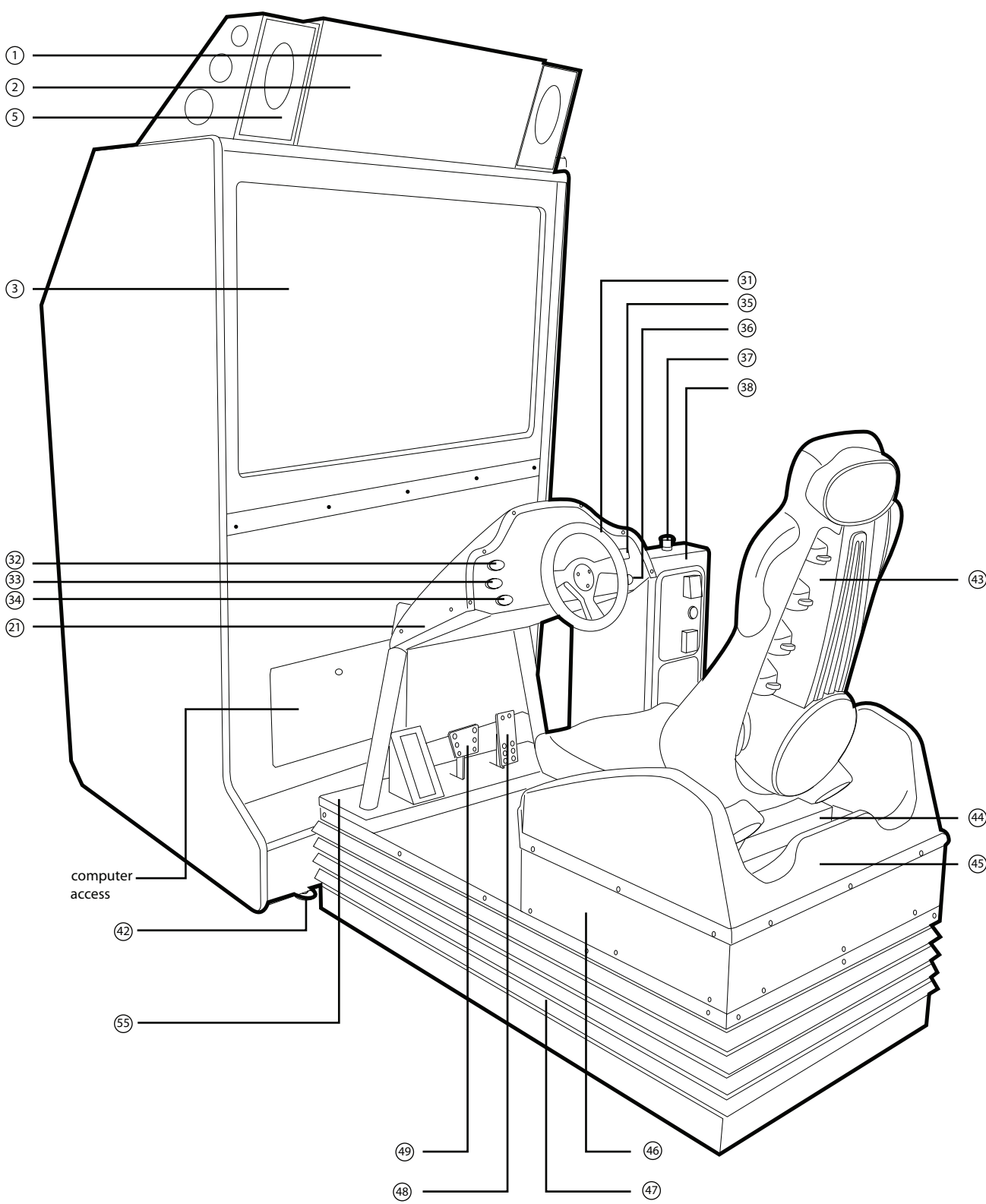
# The Fast and the Furious™ Deluxe Computer System



# Item Description  
(Part Number)

- ① Computer (CPU-9008-X)
- ⑥7 Power Cable (CBL-0127-X)
- ⑥8 DB25 Cable to H-BOOM (CBL-0090-X)
- ⑥9 USB Cable (CBL-0031-X)
- ⑦0 Network Cable (optional) (CBL-0032-X)
- ⑦2 Sound Card to Amp Cable for Front Speakers (CBL-0130-X)
- ⑦4 PCI DA Card (CPU-0008-X)

# The Fast and the Furious™ Deluxe Component Call-Out



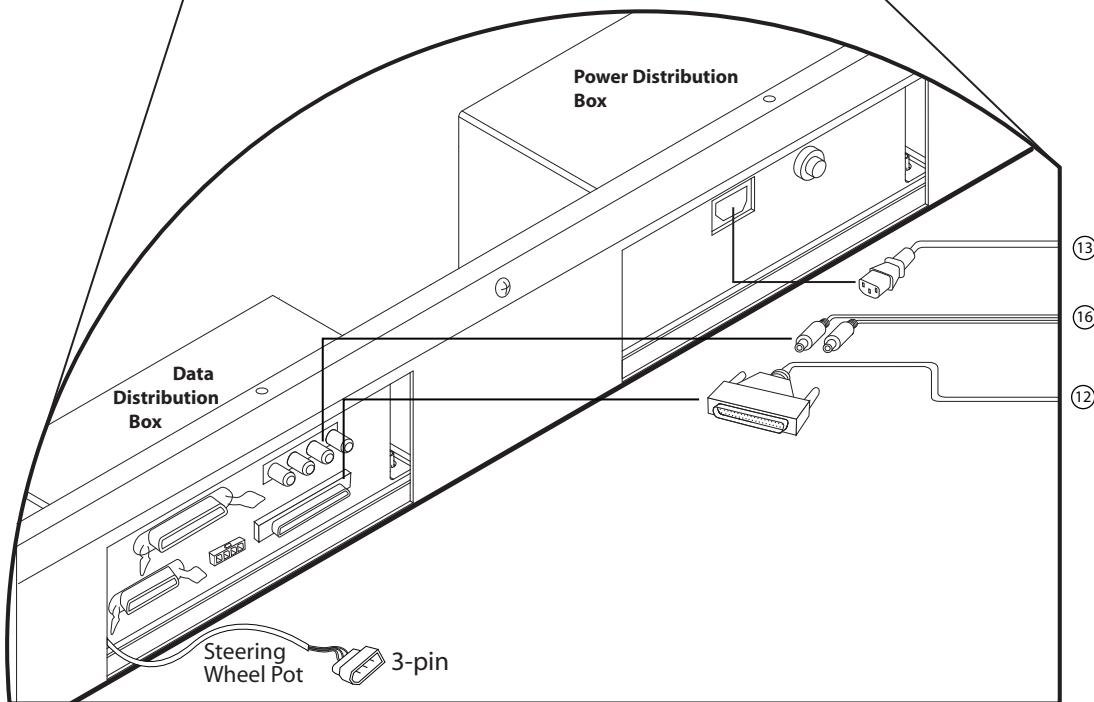
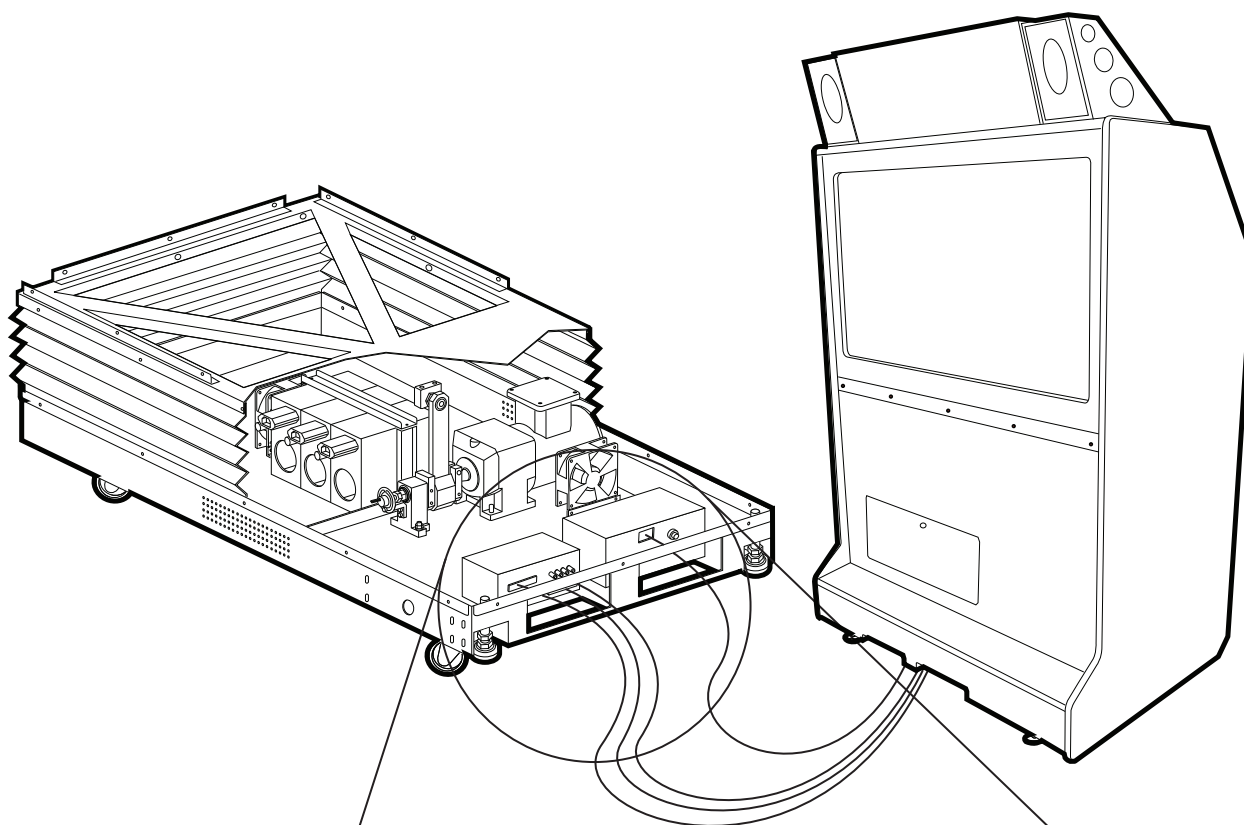
# Item Description  
(Part Number)

- ① 55" The Fast and the Furious™ Marquee (GRA-0099-X)
- ② Marquee Glass
- ③ Speaker, Viper, Motion (ELC-0092-X)
- ④ Monitor, 55" (CAB-0005-X)
- ⑤ Dash Cover (PLA-0061-X)
- ③① Steering Wheel Assembly (ELC-9010-X)
- ③② View 1 Button (ELC-0104-X)
- ③③ View 2 Button (ELC-0105-X)
- ③④ View 3 Button (ELC-0106-X)
- ③⑤ Start/Nitro Button (ELC-0107-X)
- ③⑥ Tunes Button (ELC-0108-X)
- ③⑦ RED STOP Switch (ELC-0005-X)
- ③⑧ Coin Tower (SHT-0032-X)
- ④③ Hi-back Chair (PLA-9020-X)
- ④② Leveler (FNA-0015-X)
- ④④ Seat, Slide, TWT (SHT-9011-X)
- ④⑤ Fender (PLA-0060-X)
- ④⑥ Seat Box (SHT-0037-X)
- ④⑦ Bellow (PLA-0064-X)
- ④⑧ Gas Pedal Assembly (ELC-0027-X)
- ④⑨ Brake Pedal Assembly (ELC-0028-X)
- ⑤⑤ Pedal Bracket (SHT-0041-X)

# Cabinet to Motion Base Cable Connection

# Item Description  
(Part Number)

- ⑫ D/A Conversion Cable (CBL-0207-X)
- ⑬ AC Power to Power Distribution Box (CBL-0077-X)
- ⑯ RCA Audio Cables



# Data Distribution Box (DDB) Cable Connection

# Item Description  
(Part Number)

12 D/A Conversion Cable from Display Cabinet (CBL-0207-X)

16 RCA Cable to Main JAMMA Harness

61 Power Distribution Box (PDB) (ELC-0001-X)

63 Motor Drive Boxes (MDB) (ELC-0003-X)

65 Data Distribution Box (DDB) (ELC-0002-X)

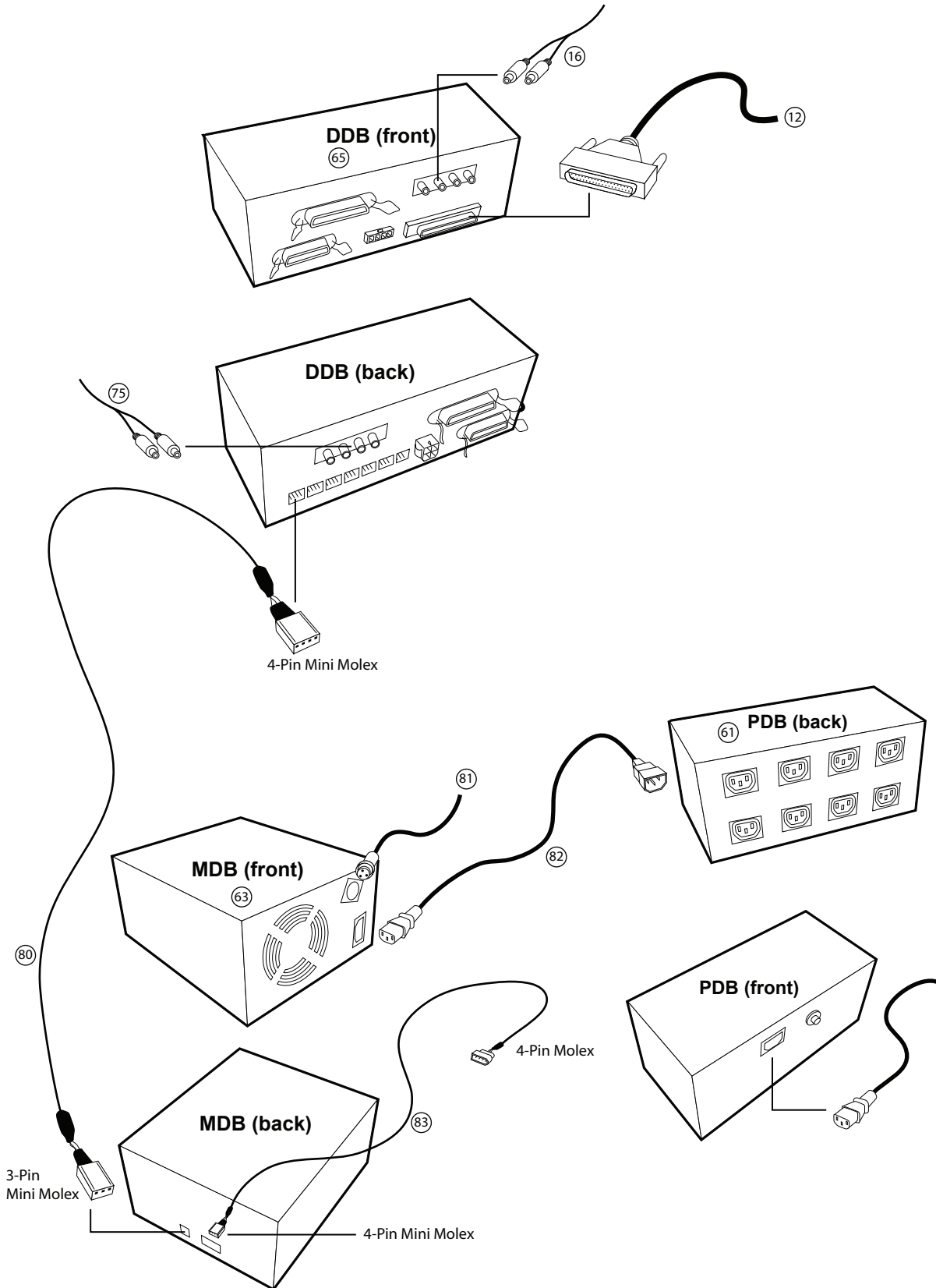
75 RCA Audio Cables to Rear Speakers

80 Data Control Cable (CBL-0056-X)

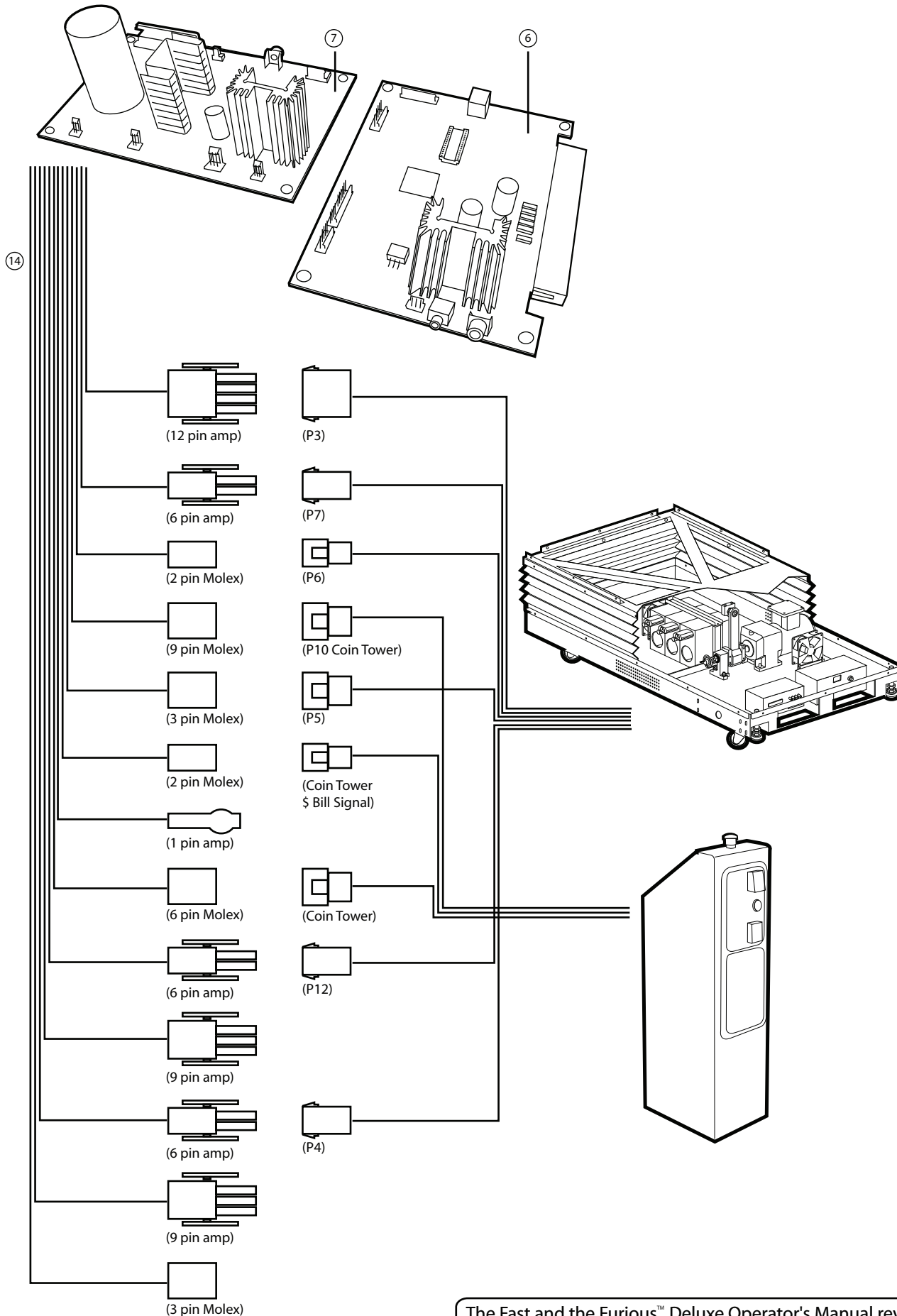
81 Power Cable to Motor (CBL-0059-X)

82 Power Cable from PDB (CBL-0055-X)

83 4-pin Molex Cable from MDB to Pot (CBL-0058-X)



# JAMMA & H-BOOM Board to Motion Base

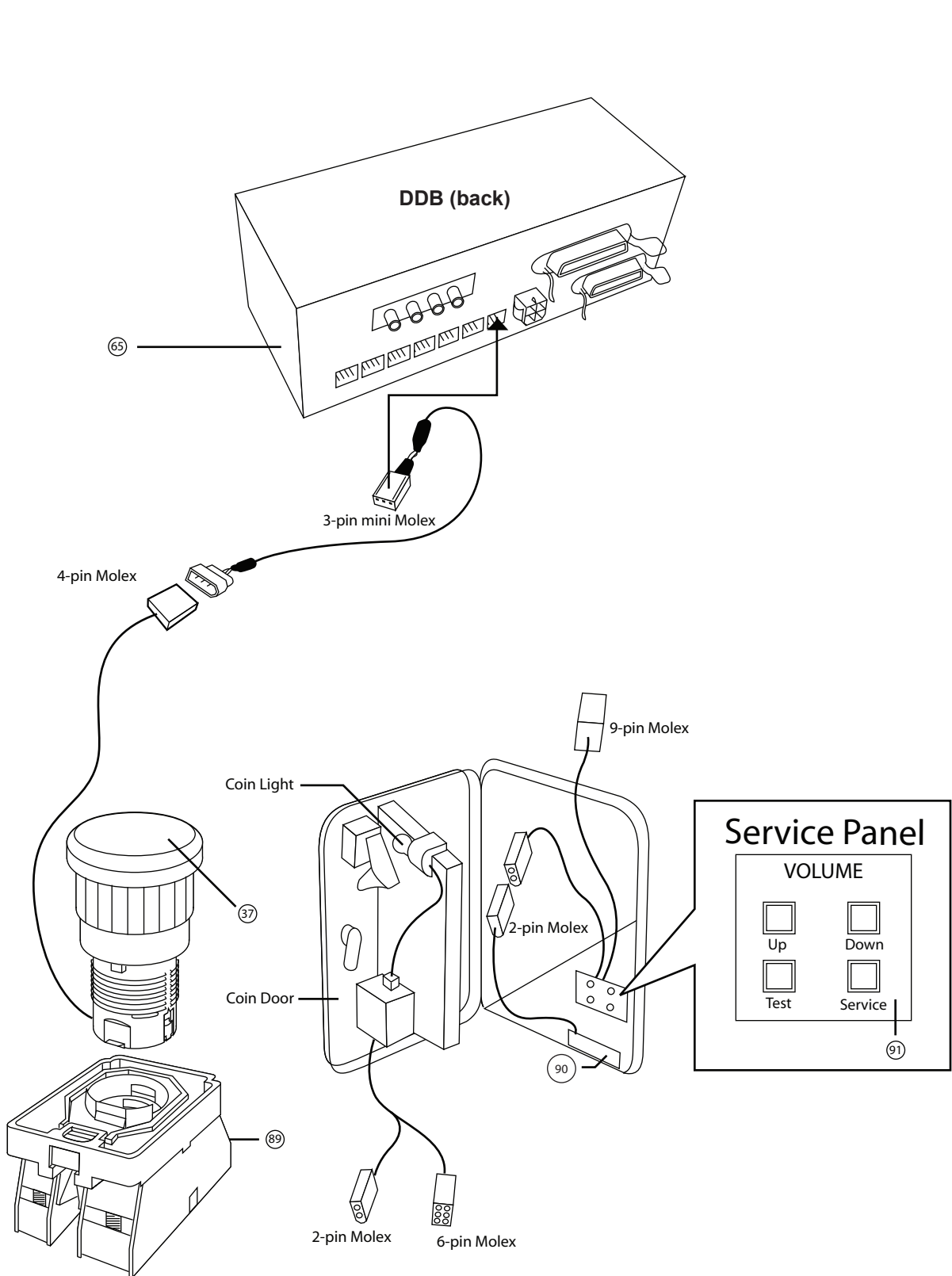


# Item Description  
(Part Number)

- ⑥ JAMMA Board (CPU-0036-X)
- ⑦ H-BOOM Board (CPU-0037-X)
- ⑭ Main JAMMA Harness (CBL-0091-X)



# Data Distribution Box (DDB) to Coin Tower



# Item Description  
(Part Number)

37 RED STOP Switch  
(ELC-0005-X)

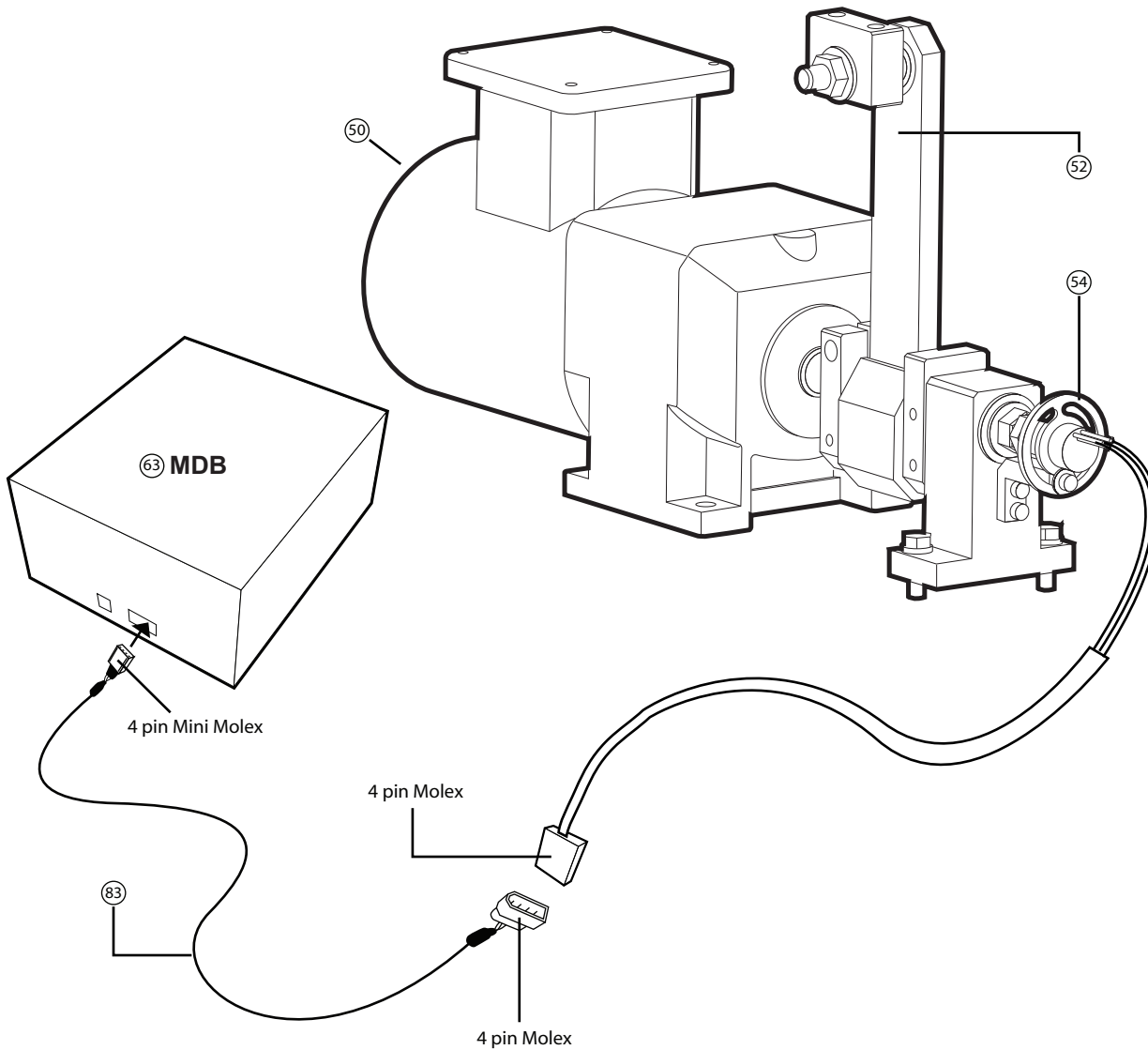
65 Data Distribution  
Box (DDB)  
(ELC-0002-X)

89 Contact Block  
and Switch  
(ELC-0012-X)

90 Coin Meter Cable

91 Service Panel  
(ELC-0063-X)

# Motor Drive Box (MDB) to Potentiometer (POT)



# Item Description  
(Part Number)

50 Motor 1.5.8, 220v  
(ELC-0009-X)

52 Linkage, Motor,  
Arm Right Hand  
(MCH-0031-R)  
Arm Left Hand  
(MCH-0031-L)

54 Potentiometer  
(ELC-0018-X)

63 Motor Drive Boxes  
(MDB)  
(ELC-0003-X)

83 4-pin Molex Cable  
from MDB to Pot  
(CBL-0058-X)

# Motor Power

# Item Description  
(Part Number)

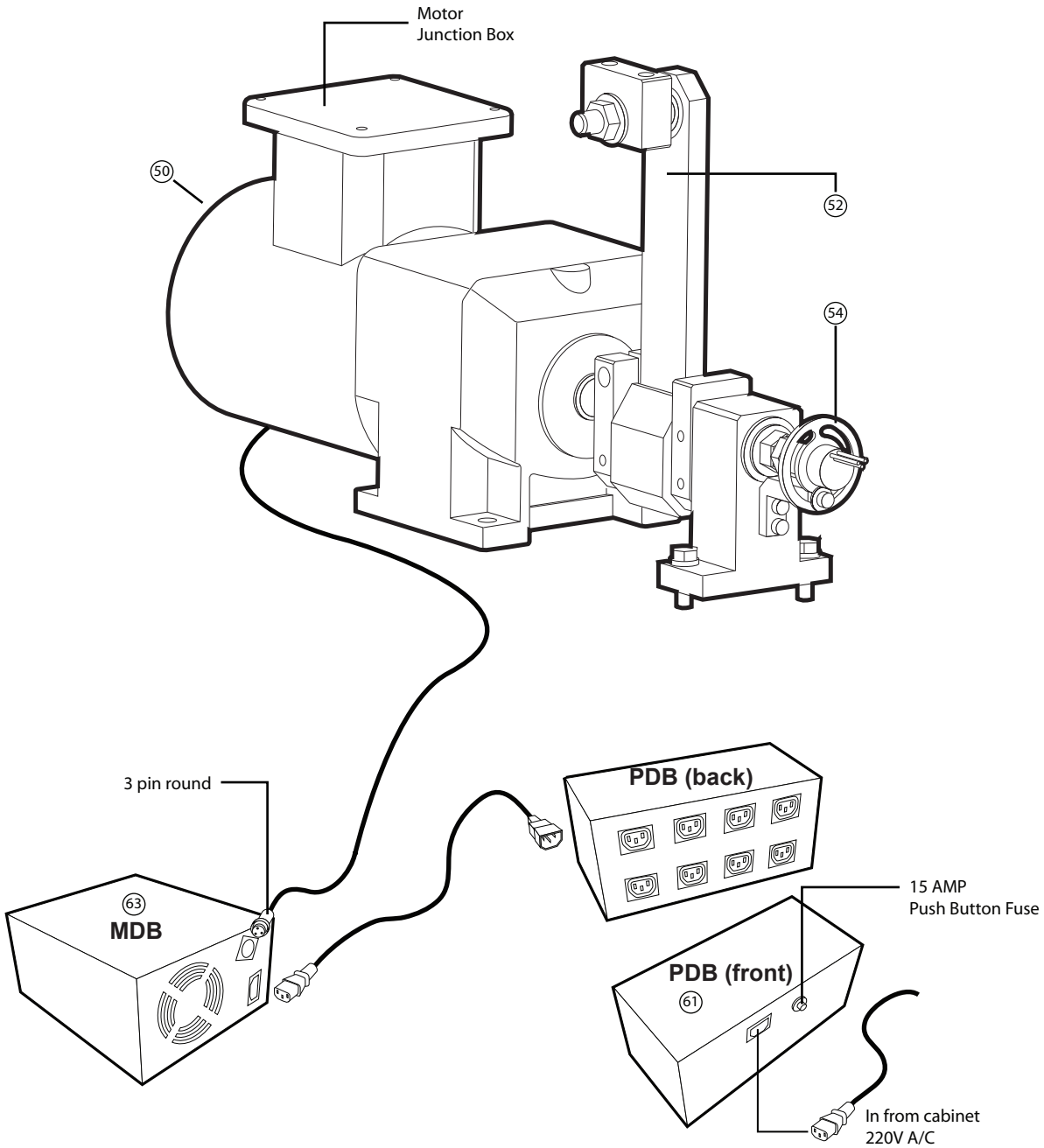
⑤① Motor 1.5.8, 220v  
(ELC-0009-X)

⑤② Linkage, Motor,  
Arm Right Hand  
(MCH-0031-R)  
Arm Left Hand  
(MCH-0031-L)

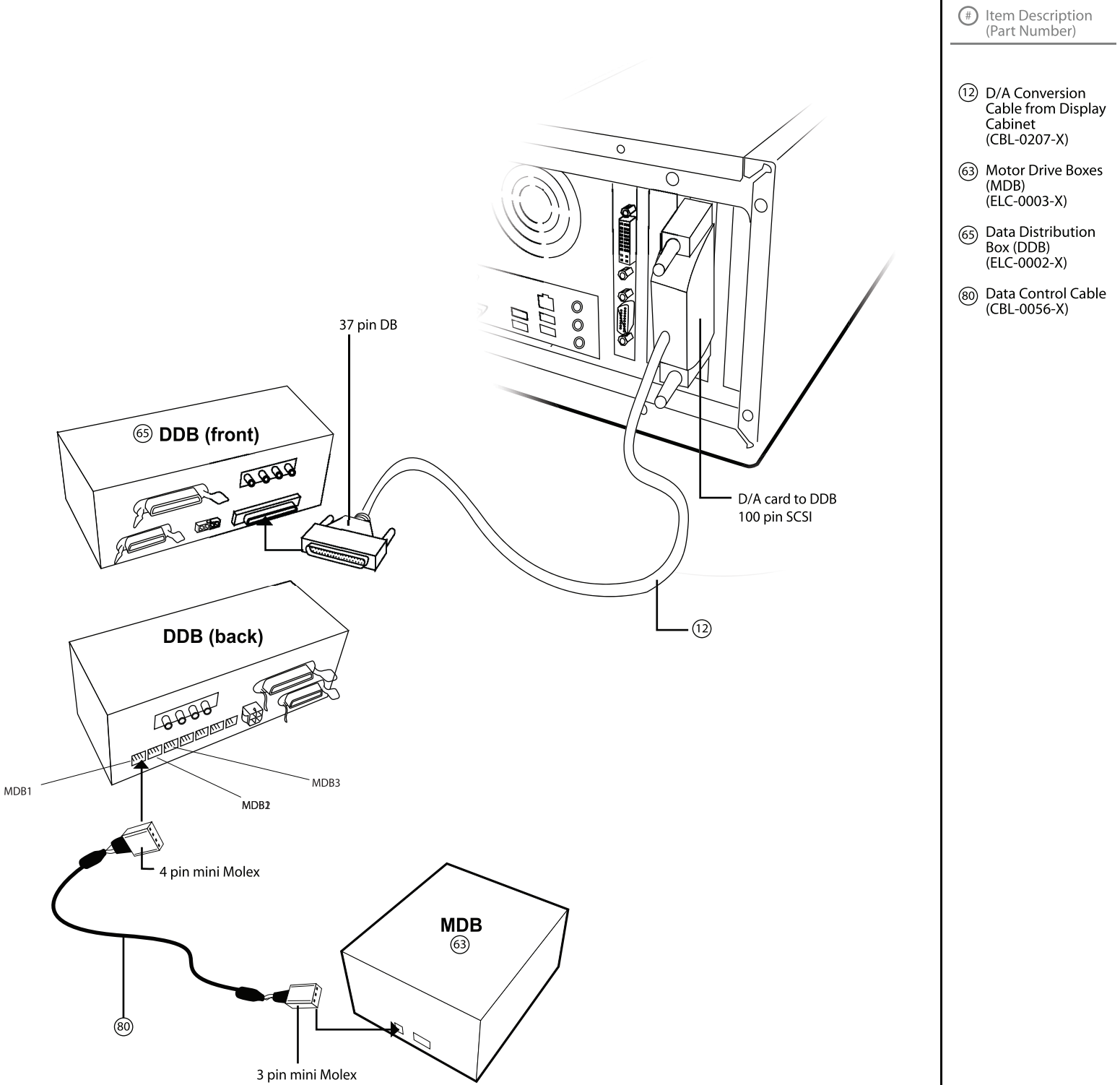
⑤④ Potentiometer  
(ELC-0018-X)

⑤① Power Distribution  
Box (PDB)  
(ELC-0001-X)

⑤③ Motor Drive Boxes  
(MDB)  
(ELC-0003-X)

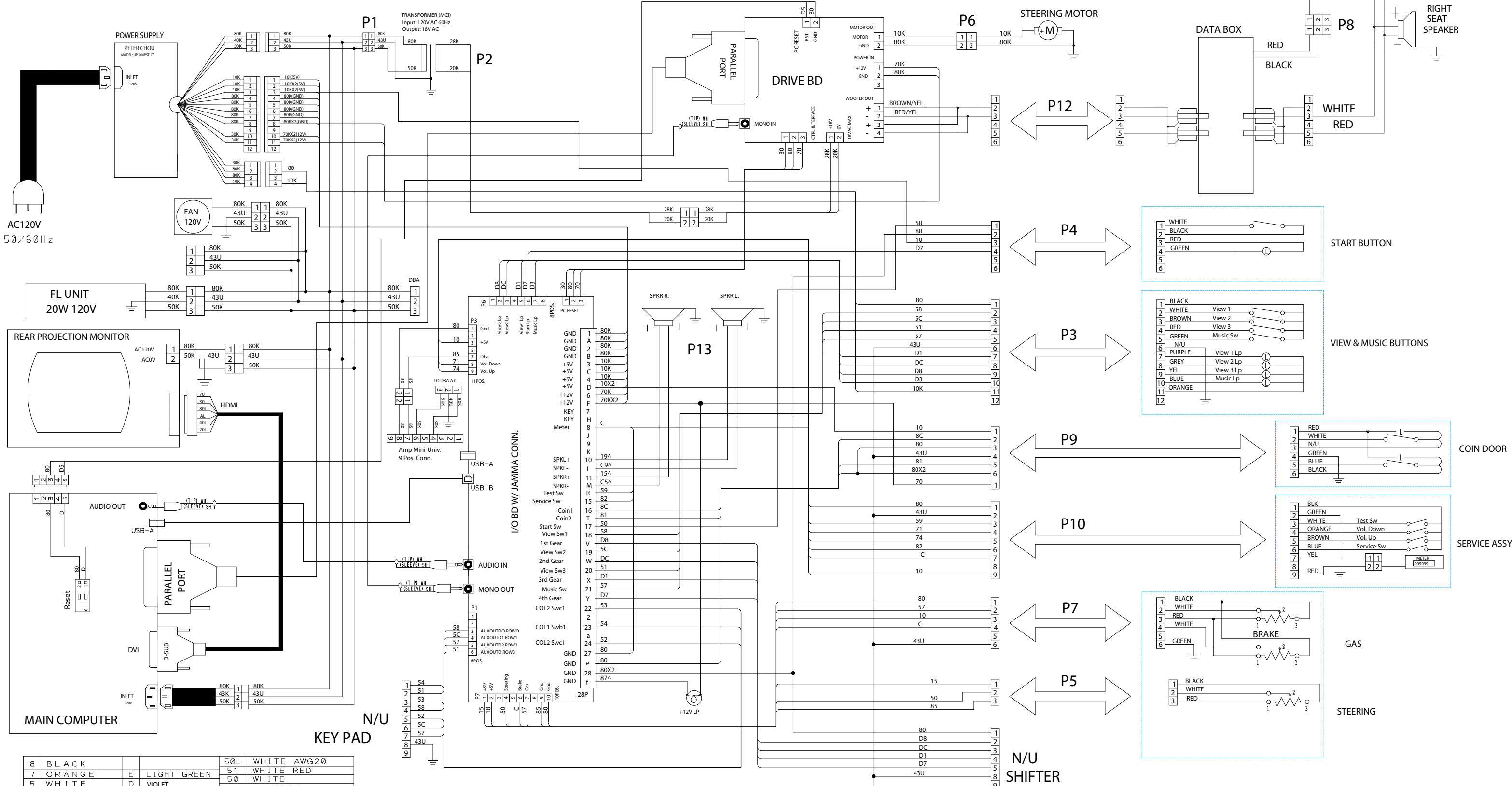


# D/A Card to Motor Drive Boxes (MDB)

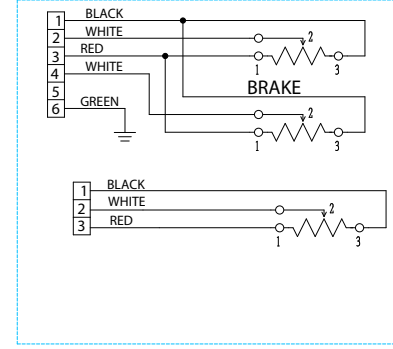
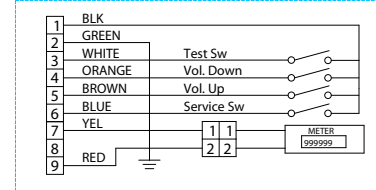
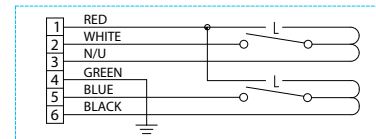
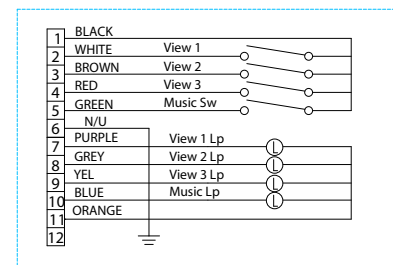
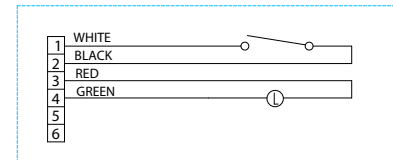


- | #  | Item Description<br>(Part Number)                      |
|----|--|
| 12 | D/A Conversion Cable from Display Cabinet (CBL-0207-X) |
| 63 | Motor Drive Boxes (MDB) (ELC-0003-X)                   |
| 65 | Data Distribution Box (DDB) (ELC-0002-X)               |
| 80 | Data Control Cable (CBL-0056-X)                        |

# FAST AND THE FURIOUS DELUX, WIRING DIAGRAM



Wire Color	Pin	Color	Pin	Color
8	BLACK	E	LIGHT GREEN	50L
7	ORANGE	D	VIOLET	51
5	WHITE	C	BROWN	50
4	GREEN	B	SKY BLUE	EXAMPLE
3	YELLOW	A	PINK	U
2	BLUE	9	GRAY	AWG16 UL1015
1	RED			K
				L
				AWG20 UL1007
				AWG22 UL1007



N/U SHIFTER

## ELECTRICAL CABLES BETWEEN DISPLAY CABINET AND MOTION BASE

	<b>TSUNAMI PART #</b>		<b>DESCRIPTION:</b>
1	CBL-0005-X	<b>P-1</b>	CABLE TO: TRANSFORMER'S PRIMARY WINDING
2	CBL-0006-X	<b>P-2</b>	CABLE TO: TRANSFORMER'S SECONDARY WINDING
3	CBL-0007-X	<b>P-3</b>	CABLE TO BUTTONS: 1-2-3 & TUNES
4	CBL-0010-X	<b>P-4</b>	CABLE TO START BUTTON
5	CBL-0011-X	<b>P-5</b>	CABLE TO: STEERING POTENTIOMETER
6	CBL-0012-X	<b>P-6</b>	CABLE TO: 20Vdc STEERING MOTOR
7	CBL-0013-X	<b>P-7</b>	CABLE TO: GAS & BRAKE PEDAL
8	CBL-0014-X	<b>P-8</b>	CABLE TO: EMERGENCY STOP BUTTON
9	CBL-0023-X	<b>P-9</b>	CABLE TO: COIN DOOR & MECHANICAL COIN COUNTER.
10	CBL-0026-X	<b>P-10</b>	CABLE TO: SERVICE PANEL (INSIDE THE COIN DOOR).
11	CBL-0030-X	<b>P-11</b>	CABLE, 120VAC TO DB ACCEPTOR (FROM SW. POWER SUPPLY).
12	CBL-0035-X	<b>P-12</b>	CABLE TO: DATA BOX, SOUND INPUT (RCA PLUGS).
13	CBL-0036-X	<b>P-13</b>	CABLE TO: DISPLAY CABINET TOP SPEAKERS (LEFT & RIGHT).
14	CBL-0037-X	<b>P-14</b>	CABLE FROM: DATA BOX, SOUND OUTPUT TO CHAIR SPEAKERS.
15	CBL-0039-X	<b>P-15</b>	CABLE TO: SHIFTER
16	CBL-0040-X	<b>P-16</b>	CABLE TO: KEYPAD

## INSTALLATION

### Installation Kit

The following items should be included with the shipment of the “Fast and the Furious”, Deluxe Unit.

Description	Qty
Operator's Manual	1
Connecting Box (Coin Tower to Motion Base).	1
Bridge (Wood Box, Interconnects Display Cabinet & Motion Base)	1
L/R-Bridge Bracket, Display Cabinet	2
L/R-Bridge Bracket, Motion Base	2
Bridge, Mounting Hardware (Nuts & Bolts)	8

### Unpacking Notes & Procedure

1. Unpacking the MOTION BASE.
  - a. Remove the fasteners holding the plywood sheet in place.
  - b. Lower the plywood sheet and use it as a ramp.
  - c. Raise the levelers located on the undersides of the motion base.
  - d. Using the ramp roll the motion base off of the pallet.
  - e. Keep your pallet for future use in case that you need to transport the Unit.
  
2. Unpacking the DISPLAY CABINET.
  - a. Cut shipping straps and remove packaging material.
  - b. Gently slide or lift the Cabinet off the pallet. (**Forklift is the preferred method**).

### Pre-Install Cautions



**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.)**

The “Fast and the Furious” Deluxe was designed for indoor use only. To ensure trouble-free and safe operation the following conditions must be met:

1. The game must not be exposed to direct 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. During Game operation forces are produced which may cause the Motion Base to travel if not properly installed. Before operating the game make sure that the Z-Bracket which connects the Motion Base to the Display Cabinet is properly mounted and firmly secured.

## **Set-Up Procedure**

1. After the Display Cabinet and the Motion Base are safely removed from the packaging, move the Cabinet and the Motion Base to the chosen spot and you can start the set-up process.
2. The Motion Base is very heavy therefore it is easier to move the Display Cabinet to the Motion Base.

### **Connecting the Coin Tower to the Motion Base**

1. Coin Tower Assembly is a left or a right attachment.
2. Line up Coin Tower Assembly as shown. **(See appendix 2-3)**
3. Wire Coin Door Assembly as shown. **(See appendix 2-12)**
4. Fasten Coin Tower Assembly with provided hardware (which is located in the Cash Box),

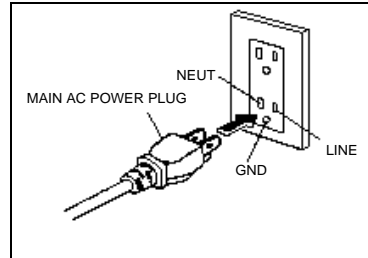
### **Connecting of the Display Cabinet to the Motion Base**

1. Push or pull the Display Cabinet close to the Motion Base (about 15" apart) and open the front access door on the Display Cabinet.
2. Connect all Electronic Cables between the Motion Base and Display Cabinet.
3. Before Installing the Z-Bracket (Sheet Metal Interconnect Bridge) between the Motion Base and Display Cabinet, make sure that you turn Power ON and you thoroughly test the Unit.
4. If everything is functional, fasten Z-Bracket with the provided Hardware.
5. Lower the levelers (x6) which will lift the Casters from the floor. After the Casters are lifted off the floor lock them in place with the jam nut.

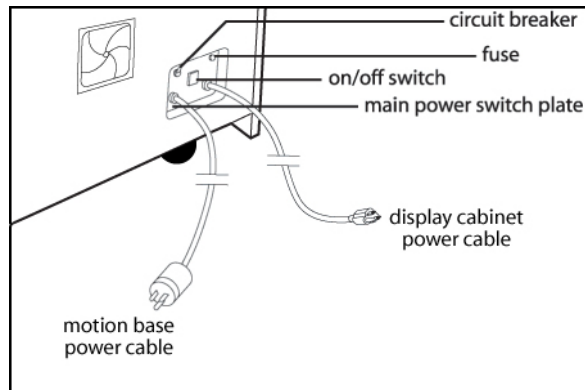


## Plugging inputs one and two in to Power Outlets

1. Measure the AC line voltage (LINE to GND and LINE to NEUT) and verify that it is between 110 and 125 VAC. NEUT to GND voltage should be less than 1 VAC.



2. Plug in power cables, located on the rear of the display cabinet.



## **Tear-Down Procedure**

1. Turn the Power Switch OFF (which is located on the Switch Plate on the bottom right corner at the back of the Display Cabinet).
2. Unplug both Power Cables to ensure there is no power flowing through the Unit.
3. Detach Coin Tower Assembly.
4. Disconnect Coin Tower Electrical Cables.
5. Store Assembly Hardware and Bracket.
6. Detach connecting Z-Bracket from both Motion Base and Display Cabinet.
7. Disconnect Electrical Cables between Motion Base and Display Unit.
8. Open the access door on the Display Cabinet, secure and store all cables inside.
9. Raise levelers on the Motion Base lowering the caster wheels to the floor.
10. After raising levelers, both Display Cabinet and Motion Base are ready for repacking.

## **Repacking Motion Base**

1. The Motion Base is delivered on a custom-built pallet. Locate the pallet.
2. Roll the Motion Base onto pallet.
3. Refasten ramp to shipping position.
4. Cover and wrap Motion Base to prevent damage.

## **Repacking Cabinet**

1. Lift or slide the Cabinet on to a pallet.
2. Fasten the Cabinet to the pallet with ratchet straps.
3. Cover and wrap Cabinet to prevent damage.

## Standard Handling Procedure

1. Before replacing any electrical part or parts on the Motion System, turn the AC power off and unplug the game and **wait five minutes to avoid shock.**
2. Do not attempt to repair or otherwise alter the Computer Sub-Assembly. User service is restricted to examination of the surrounding cables for loose connections. If a problem within the Computing System is suspected, contact Tsunami. **Do not plug in a keyboard or mouse.**
3. The Display Cabinet has components that produce high voltage. If a problem occurs with the Monitor, **only authorized personnel must perform repairs.**
4. 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.
5. Always return levelers to the extreme up position before moving unit.
6. Always separate the Display Cabinet from the Motion Base before moving the unit.

## DBA Installation

The "Fast and the Furious" Deluxe Unit have been tested to work with the Mars 2400 series DBA's.

1. The Coin Door has a removable plate for a DBA.
2. Remove the plate and fasten the DBA.
3. With your DBA you should have a 9-pin connector and extension harness with a line for AC power and two bare signal lines.
4. Disable Coin Mech two and wire the bare signal lines to Coin Mech's two signal lines.
5. Ground the DBA to the Coin Door.
6. Test in the functionality in the "Input Diagnostics" test page accessed from the "Diagnostics Console" by the Service Panel.

## **DBA Configuration**

1. The DBA will come pre-configured for short pulse lengths by default. With this setting, a DBA set for 4 pulses per dollar will only get 2 of its pulses translated to The Fast and the Furious Deluxe signal Controller Card. To fix this problem, the DBA needs to be configured to send long pulses instead. This is done with a sheet of paper the size of a dollar bill that Mars calls a configuration coupon. Refer to the Mars Service Manual for instructions on configuring with a coupon

## **Fast and the Furious Game, Test Procedure:**

1. Turn on the Main Power Switch which is located on the Switch Plate at the back bottom right corner of the Display Cabinet and ensure that the Unit is powered and the fans inside the base are operational.
2. Pull up the red Motion Stop Button and verify that the motion seat moves to a level position.
3. Perform a Steering and, I/O Buttons and Motion Diagnostics to ensure functionality of the Unit.

## **Game Networking**

**NOTICE: To link two games together, use the crossover cable provided in the spare parts bag. Use of another cable other than the one shipped with the game could void warranty or cause games not to link. Use network cables which are at least CAT5 grade.**

## **Networking Considerations**

Each FNF game comes with a crossover network cable. This cable is specifically designed to connect two games directly to each other.

**If you are linking more than two games, you must purchase 1 regular CAT5 cable per game and a NETWORK SWITCH (NOT a hub).** A linking kit, including these parts, is also available from your distributor.

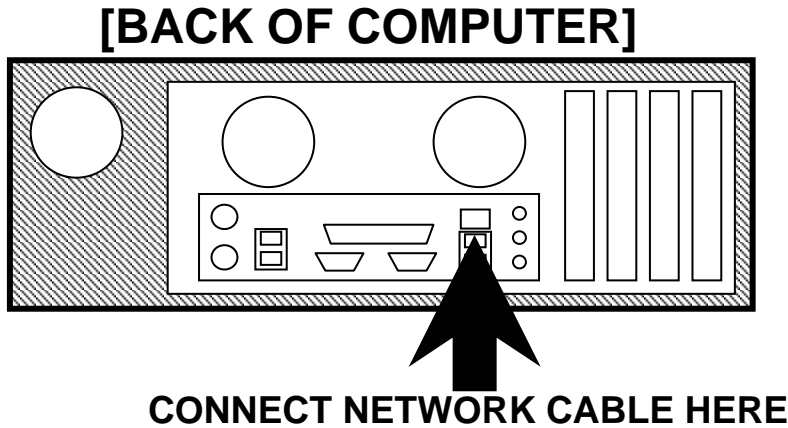
Take care to protect exposed game wiring from general foot traffic around the game. Use a conduit or wire way to protect the cables as needed.

Please mark linking cables for your game if other such cables are in the vicinity to avoid confusion. Network cables are not marked or coded.

Avoid routing the network cables near sources of heat, moisture or electrical energy such as neon lights, compressor motors, transformers etc.

## **Networking Setup (2 games)**

1. Remove the network cable from the spare parts bag inside the cashbox.
2. If you are linking two games, connect each end of the cable to network jack behind each PC:



3. Neatly route the cable through the notch on the back of the cabinet.
4. Use the DIP switch diagram below for enabling link feature and master/slave configuration. The DIP switch is located on the JAMMA I/O board. The JAMMA I/O board is mounted inside the back of the cabinet.
5. Reset all games simultaneously and verify that link is successful. If not, check the DIP switch settings and make sure that the network cable is connected properly and secured. Please refer to the Game Troubleshooting Guide on this manual for more details.

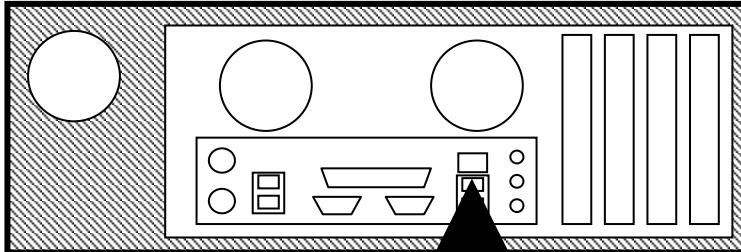
**DIP SWITCH DIAGRAM:**

DIP SW#	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
<b>PLAYER 1 / MASTER</b>	OFF	OFF	OFF		ON	ON	OFF	ON
<b>PLAYER 2</b>	ON	OFF	OFF		ON	ON	OFF	ON

**Networking Setup (3 or more games)**

1. Get a regular (NOT crossover) CAT5 cable for each machine, 12' or longer depending on your physical configuration. Also, get a networking switch (NOT hub).
2. Connect one end of each cable to the back of each game's PC network port:

**[BACK OF COMPUTER]**



**CONNECT NETWORK CABLE  
HERE**

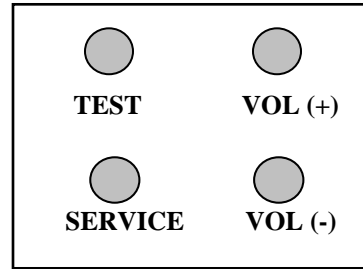
3. Connect the other end of each cable to the networking switch.
4. On each game, neatly route the cable through the notch on the back of the cabinet.
5. Use the DIP switch diagram below for enabling link feature and master/slave configuration. The DIP switch is located on the JAMMA I/O board. The JAMMA I/O board is mounted inside the back of the cabinet.
6. Reset all games simultaneously and verify that link is successful. If not, check the DIP switch settings and make sure that the network cable is connected properly and secured. Please refer to the Game Troubleshooting Guide on this manual for more details.

**DIP SWITCH DIAGRAM:**

DIP SW#	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
<b>PLAYER 1 / MASTER</b>	OFF	OFF	OFF		ON	ON	OFF	ON
<b>PLAYER 2</b>	ON	OFF	OFF		ON	ON	OFF	ON
<b>PLAYER 3</b>	OFF	ON	OFF		ON	ON	OFF	ON
<b>PLAYER 4</b>	ON	ON	OFF		ON	ON	OFF	ON
<b>PLAYER 5</b>	OFF	OFF	ON		ON	ON	OFF	ON
<b>PLAYER 6</b>	ON	OFF	ON		ON	ON	OFF	ON
<b>PLAYER 7</b>	OFF	ON	ON		ON	ON	OFF	ON
<b>PLAYER 8</b>	ON	ON	ON		ON	ON	OFF	ON

## **SETUP AND TEST MENU**

Locate the *Service Button Panel*. It is mounted inside the coin door area on top of the cash box vault. Press the **TEST** button to access the **Test Menu**.



Menu Navigation:

Button	Action
<b>Test</b>	<b>Enter Operator Screen</b>
<b>Start Button</b>	<b>Enter/Select Item Sub-Menu</b>
<b>Vol. (+) or View 1 Button</b>	<b>Scroll up thru Menu items</b>
<b>Vol. (-) or View 3 Button</b>	<b>Scroll down thru Menu items</b>
<b>Service or Tunes</b>	<b>Exit to previous Menu</b>

## **MAIN MENU**

The Test Main Menu appears when the **TEST** button is pressed.

<p><b>Test Main Menu</b></p> <ul style="list-style-type: none"> <li>Diagnostics</li> <li>Game Audits</li> <li>Adjustments</li> <li>Utilities</li>   <li>Calibration</li> <li>Volume</li> <li>Messages</li> <li>Exit</li> </ul>	<p><b>Version Information</b></p> <p>Date : July 2 2004</p> <p>Version: 0.0.0</p> <p>Build: 1</p> <p>Machine ID: 1</p> <p>JUSB Ver.: Debug 7f</p>
<p>Press Volume +/- or View 1/3 to Select                  Press Test or Start to Activate                  Press Service or Tunes to Exit</p>	

## **Diagnostics Menu**

From the *Main Menu*, select **Diagnostics** and enter to view options.



<p><b>Diagnostics Menu</b></p> <p>Switch Test          DIP Switch Test          Sound Test          Wheel Test          Monitor Test          Lamp Test          Coin Meter Test          Watchdog Test</p> <p>Exit</p>	<p><b>Diagnostics</b></p>
<p>Press Volume +/- or View 1/3 to Select          Press Test or Start to Activate          Press Service or Tunes to Exit</p>	

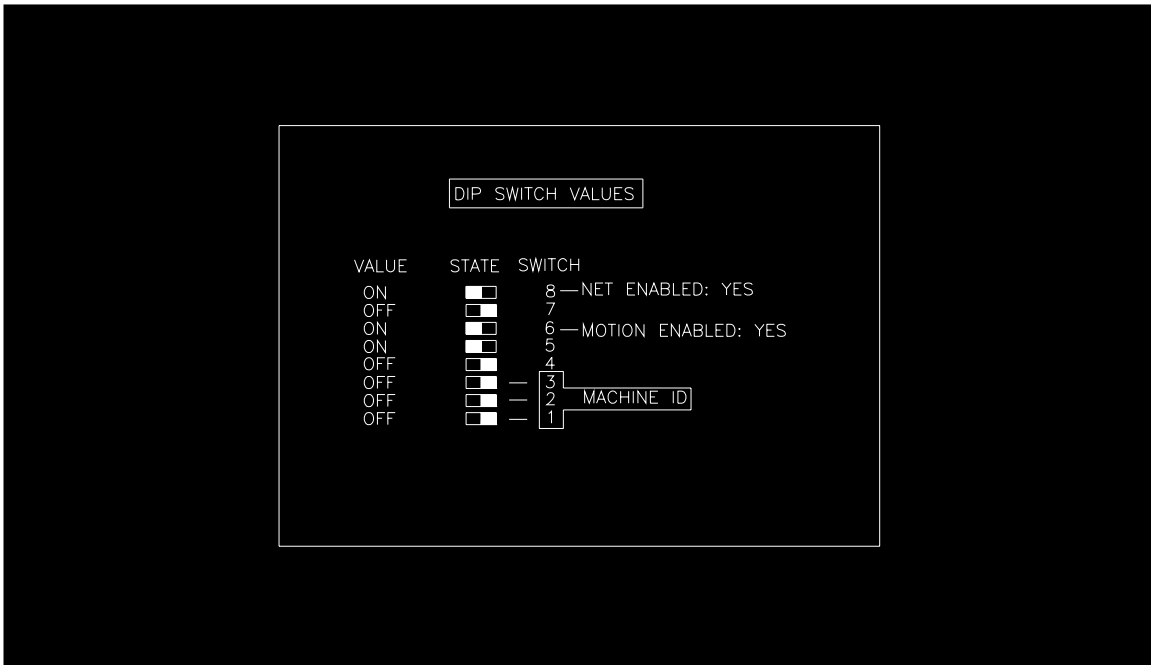
**Switch Test**

From the **Diagnostics** select and enter **Switch Test**. Verify proper switch input function using this menu. Each switch activated will be indicated on the test screen in corresponding yellow box and will be accompanied by a switch active sound indicator. Verify pot value for min, center and max are correct. If not, proceed to Calibration section of this manual. Press and hold the **Service Button** for three seconds to return to the **Diagnostics Menu**.

<b><u>SWITCH TEST</u></b>																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6" style="text-align: left; padding: 5px;"><b><u>Wheel /Pedal Info</u></b></th> </tr> <tr> <td style="width: 20%;"></td> <td style="width: 20%;">Input Device</td> <td style="width: 20%;">Pot Value</td> <td style="width: 10%;">Min</td> <td style="width: 10%;">Center</td> <td style="width: 10%;">Max</td> </tr> <tr> <td></td> <td>Wheel</td> <td><input style="width: 100%;" type="text"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Gas</td> <td><input style="width: 100%;" type="text"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Brake</td> <td><input style="width: 100%;" type="text"/></td> <td></td> <td></td> <td></td> </tr> </table>						<b><u>Wheel /Pedal Info</u></b>							Input Device	Pot Value	Min	Center	Max		Wheel	<input style="width: 100%;" type="text"/>					Gas	<input style="width: 100%;" type="text"/>					Brake	<input style="width: 100%;" type="text"/>			
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### **DIP Switch Test**

From the **Diagnostics Menu** select and enter **DIP Switch Test**. Verify correct DIP switch settings. Please refer to Appendix n. Press the Tunes Button to return to **Diagnostics Menu**.



### **Sound Test**

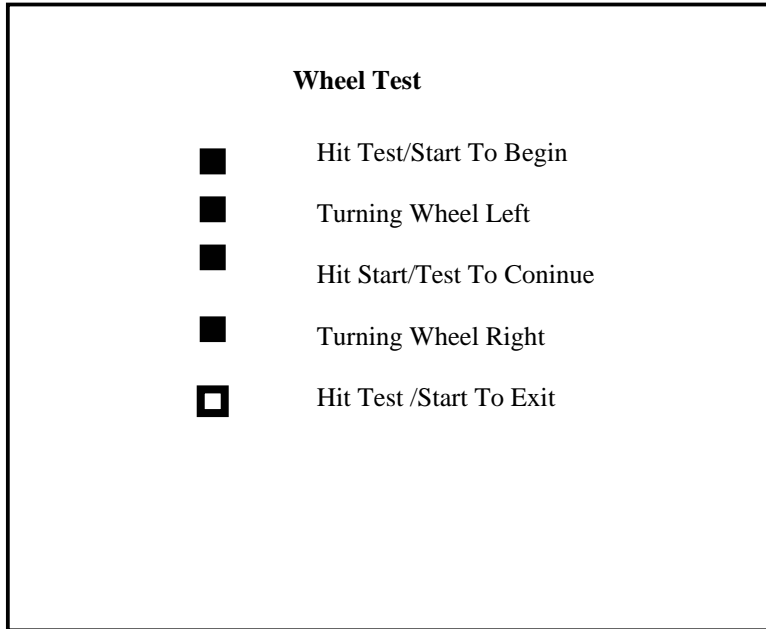
From the **Diagnostics Menu** select and enter **Sound Test**. Verify that marquee, cabinet and seat sound volume and quality are good. Press the Tunes Button to return to **Diagnostics Menu**

<p><b>Sound Test Menu</b></p> <p>Change Music Change Effect</p> <p>Play 100Hz Test Play 1000Hz Test</p> <p>Set Pan Center Set Pan Left Set Pan Right</p> <p><b>Exit</b></p>	<p><b>Sound Test</b></p> <p>Current Music Track:</p> <p>Current Sound Effect:</p>	<p><b>Note:</b> Use Pan functions to test left/right speakers separately.</p> <p>Use 100-1Khz test to verify subwoofer sound quality.</p> <p>Go to Volume section to adjust sound level.</p>
<p>Press Volume +/- or View 1/3 to Select Press Test or Start to Activate Press Service or Tunes to Exit</p>		

## **Wheel Test**

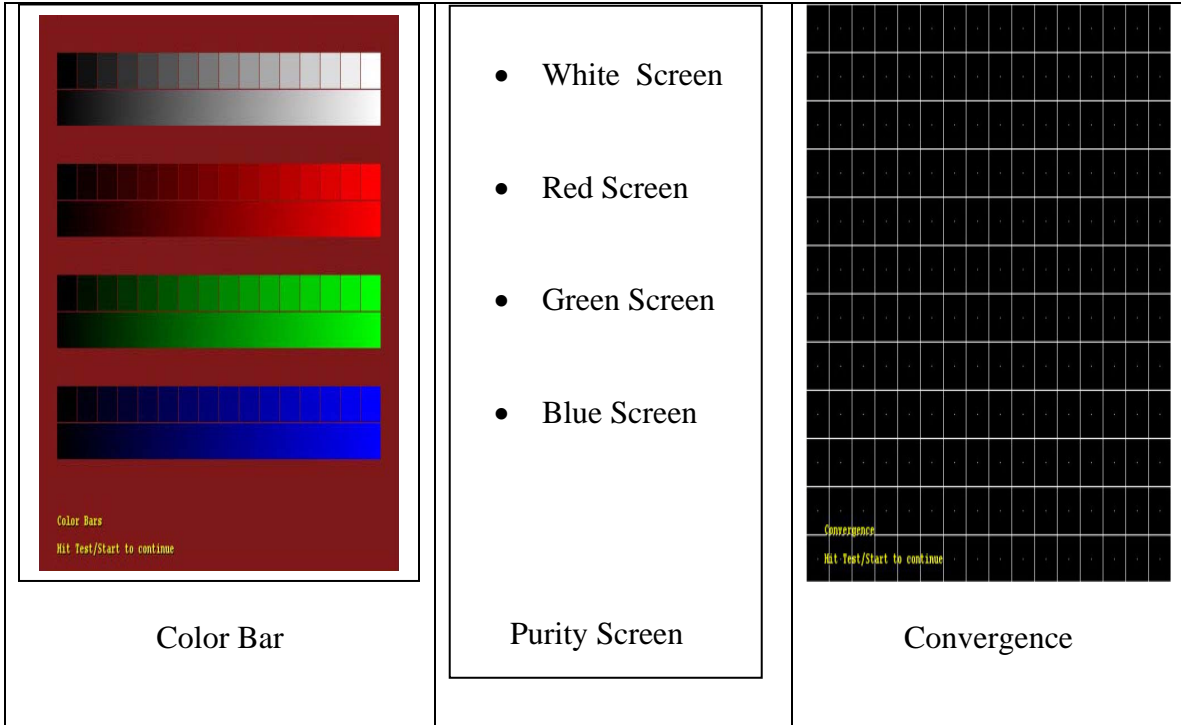
Caution: Begin by placing the wheel at center position. The steering wheel moves automatically during the wheel test. Stay clear of the wheel!

From the **Diagnosics Menu** select and enter **Wheel Test**. Verify proper wheel force feedback function using this menu. Follow the screen instruction carefully.



## **Monitor Test**

From the **Audio/Video Options** menu, select and enter **Color Bars & Purity**. Verify correct color and purity for Red, Blue and Green screens. Use the convergence screen to also verify linearity. See Appendix n.



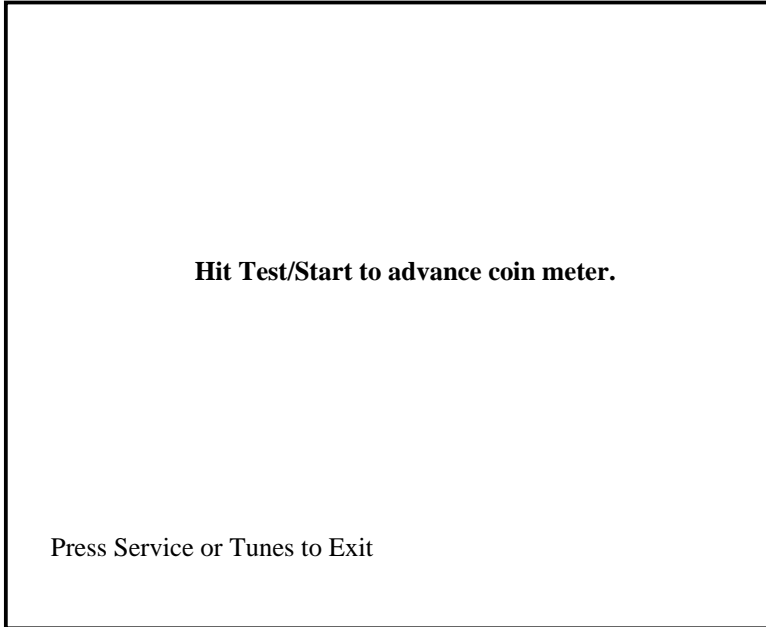
**Lamp Test**

From the **Diagnosics Menu** select and enter **Lamp Test**. Use View1 or View 3 to select the lamp and press Start to activate that lamp. Verify that ALL lamps are working.

<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Lamp Test Menu</b></p> <p>ALL Lamps ON              ALL Lamps OFF              1 Lamp ON              2 Lamp ON              3 Lamp ON              Tunes Lamp ON              Start Lamp ON</p> <p>Exit</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> <p>Press Volume +/- or View 1/3 to Select              Press Test or Start to Activate              Press Service or Tunes to Exit</p> </div>	<div style="border: 1px solid black; height: 150px; margin-top: 10px;"> <p style="text-align: center;"><b>Lamp Test</b></p> </div>	<p><b>Note:</b></p> <p>Lamp function could also be verified using Switch Test.</p> <p>Please check the coin door lamps as part of your game diagnostic check.</p>
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### **Coin Meter Test**

From the ***Diagnostics Menu*** select and enter ***Coin Meter Test***. Advance the meter once using by pressing Start.  
Press the Tunes Button to return to ***Diagnostics Menu***.



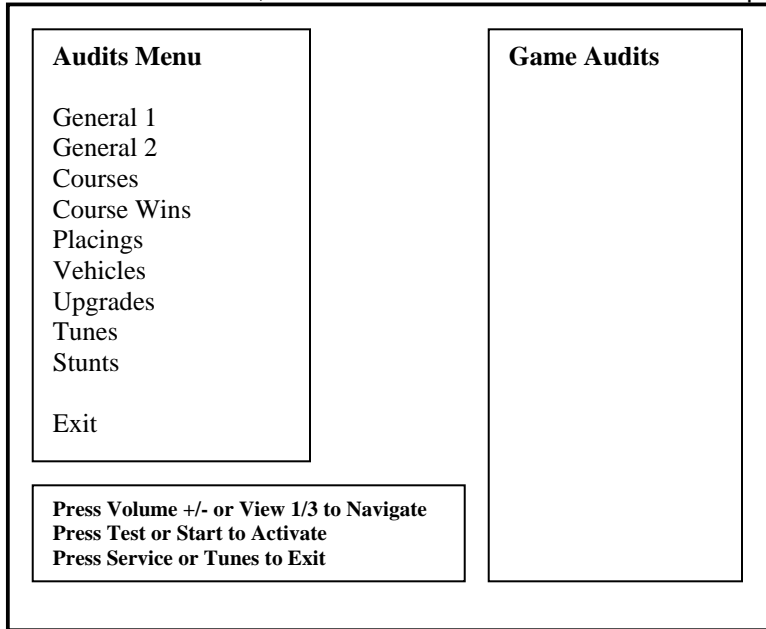
### **Watchdog Test**

From the ***Diagnostics Menu*** select and enter ***Watchdog Test***. The game will reset in approximately 6 seconds.  
The watchdog feature allows the PC to monitor normal game software and hardware operation.



## **Game Audits**

From the **Main Menu**, select **Game Audits** and enter to view options.



### **Note:**

- Use game audit screens to assess game performance.
- Use information to determine options such as game difficulty and free game award to maximize game earnings.
- Use information to detect possible intermittent problems.

### **General 1 Audits**

From the **Audits Menu**, select **General 1** and enter to view general game statistics. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p><b><u>General 1</u></b> General 2 Courses Course Wins Placings Vehicles Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>General Audits</b></p> <p>Time Game On Time Game Played Average Time Per Game</p> <p>Games Played Games Started Game Continued Game Timed Out Free Games PIN Games Link Games</p> <p>Boot Ups Test Mode Entries Unfinished Games</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Activate</p>	

### **General 2 Audits**

From the **Audits Menu**, select **General 2** and enter to view additional general game statistics. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 <b><u>General 2</u></b> Courses Course Wins Placings Vehicles Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>General Audits</b></p> <p>Auto Games Manual Games</p> <p>1<sup>st</sup> Person Cam Game Behind Cam Game Behind Cam High Game</p> <p>Coindrops Coindrops Slot 0 Left Coindrops Slot 1 Right Coindrops Slot 2 DBV</p> <p>Current Credits Current Coins</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

## **Course Audits**

From the **Audits Menu**, select **Courses** and enter to view individual information on each course. View how many times each course is selected, as well as its popularity by overall percentage. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 General 2 <b><u>Courses</u></b> Course Wins Placings Vehicles Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>Course Selects/Percentage</b></p> <p>Time Square Mojave ChinaEZ Malibu Central Park Ghetto Golden Gate New England Hollywood SF Tour ChinaEX MDrive</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Slect Press Service or Tunes to Exit</p>	

## **Course Wins Audit**

From the **Audits Menu**, select **Courses Wins** and enter to view individual win and overall percentage information on each course. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses <b><u>Course Wins</u></b> Placings Vehicles Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>Course Wins/Percentage</b></p> <p>Time Square Mojave ChinaEZ Malibu Central Park Ghetto Golden Gate New England Hollywood SF Tour ChinaEX MDrive</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	



### **Placings Audit**

From the **Audits Menu**, select **Placings** and enter to view individual count for each standing and percentage information. Use this information to determine game difficulty adjustments to properly reward players and maximize game earning performance. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses Course Wins <b><u>Placings</u></b> Vehicles Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>Placings/Percentage</b></p> <p>1<sup>st</sup> Place 2<sup>nd</sup> Place 3<sup>rd</sup> Place 4<sup>th</sup> Place 5<sup>th</sup> Place 6<sup>th</sup> Place 7<sup>th</sup> Place 8<sup>th</sup> Place</p> <p>Avg. Place:</p> <p>Longest Winning Streak: Longest Lose Streak: Current Win Streak: Current Lose Streak:</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Vehicles Audit**

From the **Audits Menu**, select **Vehicles** and enter to view individual count for each vehicle selection and percentage information. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses Course Wins Placings <b><u>Vehicles</u></b> Upgrades Tunes Stunts</p> <p>Exit</p>	<p><b>Vehicle Selects/Percentage</b></p> <p>Supra 350Z Firebird Eclipse S2000 RX 8 Skyline RSX GTO EVO RX 7 Charger Corvette 240SX Pershing 500 Spyder 738 RPG 360 AKX 470</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Upgrade Audit**

From the **Audits Menu**, select **Upgrades** and enter to view individual count for each vehicle feature upgrade selection and percentage information. Press the Tunes Button to return to **Main Menu**.

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses Course Wins Placings Vehicles <b><u>Upgrades</u></b> Tunes Stunts</p> <p>Exit</p>	<p><b>Upgrades/Percentage</b></p> <p>Nitro Spoiler Decal Tires Ground Effects Engine</p> <p>Upgrade Users:</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Tunes Audit**

From the **Audits Menu**, select **Tunes** and enter to view individual count for each tune selection and playtime information. Press the Tunes Button to return to **Main Menu**

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses Course Wins Placings Vehicles Upgrades <b><u>Tunes</u></b> Stunts</p> <p>Exit</p>	<p><b>Tunes (Time in Each)</b></p> <p>Asia Spin Off Put the Tires Up DNB Fire It Up Lets Ride Outlaw Breaks Sweeps</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

## **Stunts Audit**

From the **Audits Menu**, select **Stunts** and enter to view individual count for each stunt performed. Press the Tunes Button to return to **Main Menu**

<p><b>Audits Menu</b></p> <p>General 1 General 2 Courses Course Wins Placings Vehicles Upgrades Tunes <b><u>Stunts</u></b>  Exit</p>	<p><b>Stunts</b></p> <p>Wheelies Side Wheelies Flips Helis Rolls Vaults End Over Ends Spin Outs Slides Resets Bumps Landing Spins Nitros Manual Spins</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Activate Press Service or Tunes to Exit</p>	

## **Adjustment Menu**

From the **Main Menu**, select **Adjustment Menu** and enter. The Adjustment Menu allows you to customize the game. Each variable will change an aspect of the game play and appearance. Optimizing these settings should result in continued high player interest and game earnings. You can monitor the affects of these options by comparing audit information before and after the changes have been implemented. Press Start to Select. Press Tunes or Service to

<p><b>Adjustments Menu</b></p> <p>Pricing Freeplay 1<sup>st</sup> Place-Free Race Start Time Bonus Checkpoint Time Bonus Attract Audio Speed Measurements Starting Line Girls Game Difficulty Max Credits Multiplay Win Gets Free Game Max Name Length Exploding Cars Plays For High Score Reset Exit</p>	<p><b>Preference And Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

Exit.

## **Price Menu**

From the **Adjustment Menu**, select **Pricing** and enter. The Pricing Menu allows you to customize the pricing options and currency acceptor credit settings. Please note that if the acceptor is not present, the price setting will not have an effect on the game. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Pricing Menu</b></p> <p>Money Unit Coin Value Coins Per Bill Pulse Coins Per Credit Credits to Start Credits to Continue</p> <p>Exit</p>	<p><b>Credit Options</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Money Unit Menu**

From the **Pricing Menu**, select **Money Unit** and enter. Select the currency which applies to the games location and press Start to select. Press Start to Select. Press Tunes or Service to

<p><b>Select Currency</b> USD US Dollars AUD AUS Dollars CAD CAN Dollars EUR Euros GBP British Pounds DEM Deutschmarks FRF French Franks JPY Japanese Yen ITL Italian Lire CHF Swiss Franks BRL Brazilian Reals DKK Danish Kroner MXN Mexican Pesos RUR Russian Rubles KRW Korean Won CNY Chinese Won</p> <p>Cancel</p>	<p><b>Credit Options</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

Exit.

### **Coin Value Menu**

From the **Pricing Menu**, select **Coin Value** and enter. Choose the coin value based on the currency selected and the coin acceptor type or setting. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Coin Value</b> 0.01 USD 0.05 USD 0.10 USD 0.25 USD 0.50 USD 1.00 USD 2.00 USD 5.00 USD 10.00 USD 20.00 USD 50.00 USD 100.00 USD Exit</p>	<p><b>Credit Options</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Coin Per Bill Pulse Menu**

From the **Pricing Menu**, select **Coin per Bill Pulse Menu** and enter. Choose the equivalent coin value based on the bill acceptor currency type or settings. Press Start to Select. Press Tunes or Service to Exit.

<b>Coin Per Bill Pulse?</b> 1 2 3 4 5 10 20 25 50 100  Exit	<b>Credit Options</b>
<b>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</b>	

### **Coin Per Credit Menu**

From the **Pricing Menu**, select **Coin per Credit Menu** and enter. Choose the number of coins required to earn one credit. Press Start to Select. Press Tunes or Service to Exit.

<b>Coin Per Credit</b> 1 2 3 4 5 6 7 8 9 10  Cancel	<b>Credit Options</b>
<b>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</b>	

### **Credit To Start Menu**

From the **Pricing Menu**, select **Credit To Start Menu** and enter. Choose the number of credits required to start one game. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Credits to Start</b></p> <p>1 2 3 4 5 6 7 8 910</p> <p>Cancel</p>	<p><b>Credit Options</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Free Play Menu**

From the **Adjustment Menu**, select **Free Play** and enter. Select whether the game should be in Free Play Mode. On this mode, a game may be started by simply pressing Start button. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Free Play Activate?</b></p> <p>Yes No</p> <p>Cancel</p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **1<sup>st</sup> Place Free Race Menu**

From the **Adjustment Menu**, select **1<sup>st</sup> Place Free Race** and enter. The player wins a free race for a 1<sup>st</sup> place overall finish during a single of networked race game. Press Start to Select. Press Tunes or Service to Exit.

<p><b>First Place Wins Free Race?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Start Time Bonus Menu**

From the **Adjustment Menu**, select **Start Time Bonus** and enter. Select the amount of time in seconds given to the player to reach the first check point. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Start Bonus Time?</b></p> <p>30 seconds 40 seconds 50 seconds 60 seconds 70 seconds <b>80 seconds</b> 90 seconds 100 seconds 110 seconds 120 seconds</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	



### **Checkpoint Bonus Time Menu**

From the **Adjustment Menu**, select **Checkpoint Bonus Time** and enter. Select the amount of time in seconds given to the player to reach the next check point after reaching a check point. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Check Point Bonus Time?</b></p> <p><b>30 seconds</b> 40 seconds 50 seconds 60 seconds 70 seconds 80 seconds 90 seconds 100 seconds</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Attract Audio Menu**

From the **Adjustment Menu**, select **Attract Audio** and enter. Select whether audio is active/playing in attract mode. Press Start to Select. Press Tunes or Service to Exit

<p><b>Turn On Attract Mode Audio?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Speed Measurement Menu**

From the **Adjustment Menu**, select **Speed Measurement** and enter. Select which unit is to be used to measure car speed. Choose MPH or Miles per Hour. Choose KPH or Kilometers per Hour. Press Start to Select. Press Tunes or Service to Exit

<p><b>Speed Measured In?</b></p> <p>MPH KPH</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Starting Line Girls Menu**

From the **Adjustment Menu**, select **Starting Line Girls** and enter. Starting line girls feature can be activated or deactivated by selecting yes or no. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Activate Starting Line Girls?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

**Note:**

The starting line crowd can be removed for certain locations which may consider this feature not suitable or appropriate.

### **Game Difficulty Menu**

From the **Adjustment Menu**, select **Game Difficulty** and enter. The default difficulty level is 5. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Game Difficulty Level?</b></p> <p>1 Easier 2 3 4 <b>5</b> 6 7 8 9 10 Harder Cancel</p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

**Note:**

Please reference the game Audit information to determine the appropriate difficulty setting for your location. Compare changes in game statistics and game revenue before and after the change.

### **Max Credits Menu**

From the **Adjustment Menu**, select **Max Credits** and enter. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Max Number Of Credits?</b></p> <p>10 15 20 25 <b>30</b> 35 40 45 50</p> <p>Cancel</p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Multiplay Win Gets Free Race Menu**

From the **Adjustment Menu**, select **Multiplay Win Gets Free Race** and enter. Winner of a networked game wins a free race if active. Default setting is No. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Multiplay 1<sup>st</sup> Wins Free Race?</b></p> <p>Yes <b>No</b></p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Wheel Stiffness Level Menu**

From the **Adjustment Menu**, select **Wheel Stiffness** and enter. Select wheel stiffness level. Default setting is 0.20. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Wheel Stiffness Factor?</b></p> <p>0.00 Less Stiff 0.10 <b>0.20 Default</b> 0.30 0.40 More Stiff</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Max Name Length Menu**

From the **Adjustment Menu**, select **Max Name Length** and enter. This refers to the number of allowable characters when entering player names. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Maximum Name Length?</b></p> <p>3 4 5 6 7</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

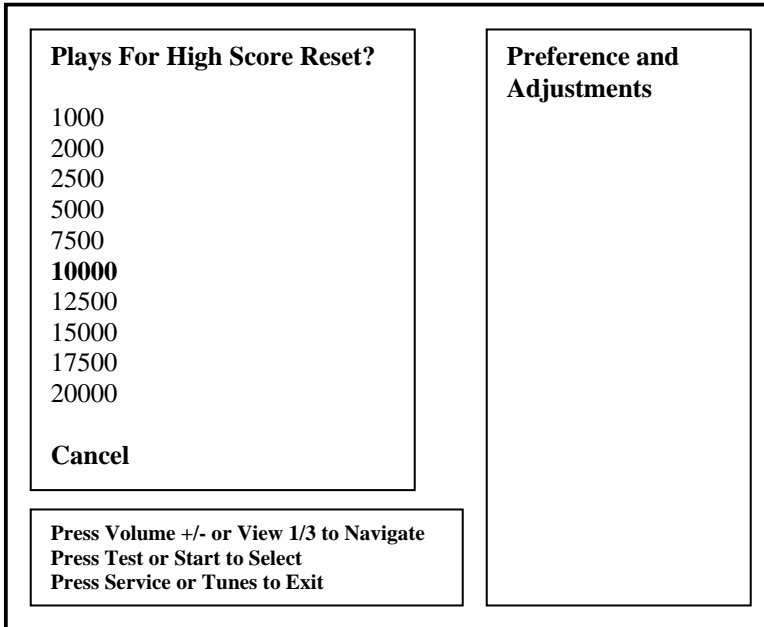
### **Exploding Cars Menu**

From the **Adjustment Menu**, select **Exploding Cars** and enter. Exploding cars apply only to Drone Cars during high speed collisions. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Exploding Cars?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Preference and Adjustments</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

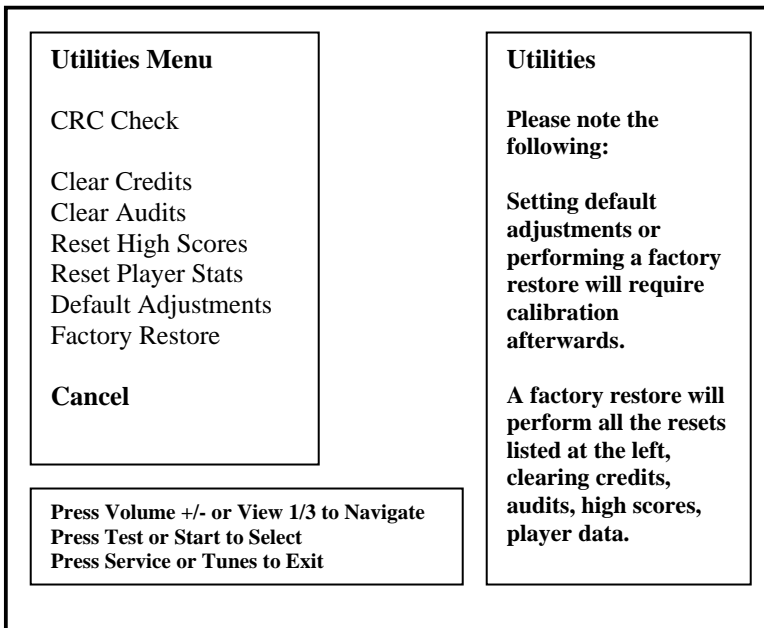
### **Plays for High Score Reset Menu**

From the **Adjustment Menu**, select **Plays for High Score Reset** and enter. Select the number of plays before high score table is reset. Press Start to Select. Press Tunes or Service to Exit.



### **Utilities Menu**

From the **Test Main Menu**, select **Utilities** and enter. The Utilities Menu contains tools which the operator could use to manage game adjustments or reset key game and player score and statistic information. The option to perform a game factory restore can also be accessed.



#### **Note:**

- Information will be permanently erased by Clear or Reset functions.
- It is often ideal to perform a factory restore when the game is being moved to a new location.
- Record your game audit information if performing any of the above functions.

### **CRC Check Menu**

From the **Utilities Menu**, select **CRC Check** and enter. Performing CRC check verifies the integrity of the software. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Perform CRC Check?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p><b>Please note the following:</b></p> <p><b>Setting default adjustments or performing a factory restore will require calibration afterwards.</b></p> <p><b>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Clear Credit Menu**

From the **Utilities Menu**, select **Clear Credits** and enter. Performing Clear Credit will delete any remaining credits posted. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Clear Credits?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p><b>Please note the following:</b></p> <p><b>Setting default adjustments or performing a factory restore will require calibration afterwards.</b></p> <p><b>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Clear Audit Menu**

From the **Utilities Menu**, select **Clear Audit** and enter. Performing Clear Audit will delete all audit information found on the Audit Menu. Please record them if you ever need to reference the information. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Clear Credits?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p><b>Please note the following:</b></p> <p><b>Setting default adjustments or performing a factory restore will require calibration afterwards.</b></p> <p><b>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Clear High Scores Menu**

From the **Utilities Menu**, select **Clear High Scores** and enter. Performing Clear High Score will clear the all high score tables. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Clear High Scores?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p><b>Please note the following:</b></p> <p><b>Setting default adjustments or performing a factory restore will require calibration afterwards.</b></p> <p><b>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	



### **Clear Player Stats Menu**

From the **Utilities Menu**, select **Clear Player Stats** and enter. Performing Clear Player Stats will clear all player information, including PIN, car upgrades and money earned. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Clear Player Stats?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p>Please note the following:</p> <p>Setting default adjustments or performing a factory restore will require calibration afterwards.</p> <p>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Set Default Adjustments Menu**

From the **Utilities Menu**, select **Default Adjustment** and enter. Performing Default Adjustment setting will restore game adjustments back to its manufacturer recommended settings. The game will need to be re-calibrated. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Set Default Adjustments?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p>Please note the following:</p> <p>Setting default adjustments or performing a factory restore will require calibration afterwards.</p> <p>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Factory Restore Menu**

From the **Utilities Menu**, select **Factory Restore** and enter. Performing Factory Restore will restore game adjustments back to its manufacturer recommended settings and clear all audit information. The game will need to be re-calibrated. Press Start to Select. Press Tunes or Service to Exit.

<p><b>Really Perform Factory Restore?</b></p> <p>Yes No</p> <p><b>Cancel</b></p>	<p><b>Utilities</b></p> <p><b>Please note the following:</b></p> <p><b>Setting default adjustments or performing a factory restore will require calibration afterwards.</b></p> <p><b>A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.</b></p>
<p>Press Volume +/- or View 1/3 to Navigate Press Test or Start to Select Press Service or Tunes to Exit</p>	

### **Calibration Menu**

From the **Test Main Menu**, select **Calibration** and enter. Making sure that the wheel, gas and brake are all properly calibrated is the easiest way to make sure that your driving game could maximize its earning potential. Follow the screen instructions carefully. Verify proper calibration on the Switch Test screen. Check and make sure that the minimum, center and maximum values correspond to the actual position of the control.

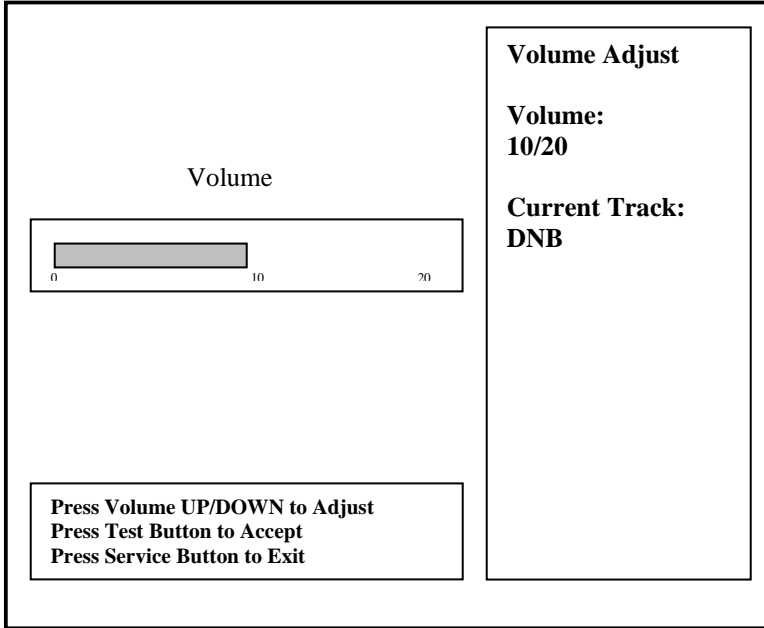
<p><b>Calibration</b></p>	
<input type="checkbox"/>	Turn Wheel To Center Hit Test/Start
<input type="checkbox"/>	Turn Wheel Left Then Hit Test/Start
<input type="checkbox"/>	Turn Wheel Right Then Hit Test/Start
<input type="checkbox"/>	Push and Release Gas Then Hit Test/Start
<input type="checkbox"/>	Push and Release Gas Then Hit Test/Start
<input type="checkbox"/>	Hit Test/Start to Exit

**Note:**

- If the game requires constant re-calibration, check the controls for mechanical wear or damage. Replace if necessary.
- Normal wear and tear of the controls means that calibration should be part of the games scheduled maintenance.

### **Volume Menu**

From the **Test Main Menu**, select **Volume** and enter. This refers to the game volume while in play. Use the Volume Up/ Volume Down button on the service panel to adjust volume level. Press Start to Select. Press Tunes or Service to Exit.

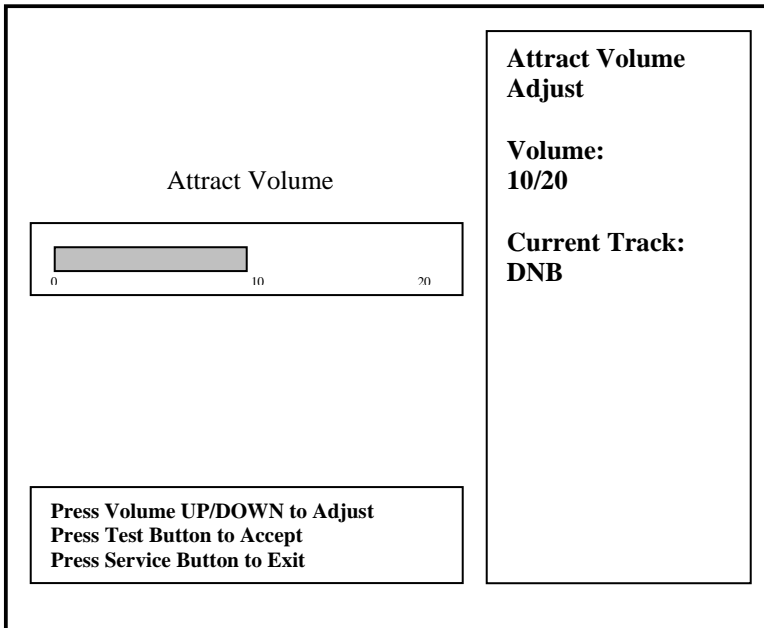


**Note:**

- Adjusting the volume while in attract mode only affects the attract volume and the not the actual game volume.
- Adjustment to game volume must be done while on Volume Adjust screen or while on game mode.
- Adjust volume levels relative to location and environment.

### **Volume Menu**

From the **Test Main Menu**, select **Attract Volume** and enter. This refers to the attract mode volume. Use the Volume Up/ Volume Down button on the service panel to adjust volume level. Press Start to Select. Press Tunes or Service to Exit.



## SPECIFICATIONS

Specifications for “The Fast and the Furious” system are broken into two halves: the **Motion Base** and the **Display Cabinet**.



**Note: Specifications are subject to change without prior notification.**

### The “Fast and the Furious” Deluxe Motion Base

The Fast and the Furious Motion Base Specs	
Chair	<ul style="list-style-type: none"> <li>• High-back chair</li> <li>• Additional speakers built into chair for surround sound effect</li> </ul>
Audio	<ul style="list-style-type: none"> <li>• In chair x 2</li> <li>• 8 watts RMS x 4, 4 ohm</li> </ul>
Installed Dimensions / Weight (LxWxH)	<ul style="list-style-type: none"> <li>• 65” x 42” x 72” / 1250 lbs</li> <li>• 165 x 107 x 183 cm / 498 kg</li> </ul>
Shipping Dimensions (LxWxH)	<ul style="list-style-type: none"> <li>• 65” x 45” x 80” / 1100 lbs</li> <li>• 165 x 114 x 203 cm / 566 kg</li> </ul>
Motion system:	<ul style="list-style-type: none"> <li>• 3 degree of freedom (DOF) Mini Motion Base: 220 Vac- 3 phases, powered, Motor-driven Actuators</li> </ul>
Control Inputs and Outputs/feedback:	<ul style="list-style-type: none"> <li>• Active Steering Wheel Assembly</li> <li>• 5 dash Buttons/Switch</li> </ul>
Player Weight Limit	300 lbs.
Motors	(3) 220Vac, 50/60Hz, 1/2 Hp 3phase
Power Requirements – Plug is located on front of the Motion Base.	Motion Base Power: 220 Vac, 50/60 Hz, 12A
	PC System with D/A Converter Card Jamma PCB with USB and Parallel Port H-Boom PCB (Sound Amplifier & Power Steering Control)

## The Fast and the Furious Deluxe Display Cabinet

The Fast and the Furious Cabinet Specs	
Monitor Specifications	<ul style="list-style-type: none"> <li>• 52" Rear Projection, Mitsubishi</li> <li>• DVI to HDMI</li> </ul>
Audio	<ul style="list-style-type: none"> <li>• Below Marquee</li> <li>• 8 watts RMS x 4, 4 ohm</li> </ul>
Installed Dimensions / Weight (LxWxH)	<ul style="list-style-type: none"> <li>• 26" x 41" x 77" / 550 lbs</li> <li>• 66 x 104 x 196 cm / 250 kg</li> </ul>
Shipping Dimensions	<ul style="list-style-type: none"> <li>• 37" x 47" x 84" / 610 lbs</li> <li>• 93 x 119 x 213 cm / 276 kg</li> </ul>
Power Requirements <b>USA</b> , 2 inputs at rear of Cabinet.	Input 1: 120 VAC, 5 Amps, 50/60 Hz Input 2: 120 VAC, 10 amps, 50/60 Hz
Computer System Specifications:	<ul style="list-style-type: none"> <li>• Windows XP Embedded Operating System</li> <li>• High Resolution Graphics Accelerator Card.</li> </ul>
Marquee Panel	<ul style="list-style-type: none"> <li>• The "Fast and the Furious" Artwork</li> <li>• Fluorescent back-lit</li> </ul>



**Note: This unit has 2 separate power cords! The motion base requires one dedicated 20-amp circuit! No other appliance or game should be shared on this circuit.**

## Maintenance/Diagnostics

### Inspection Schedule

Item	Task	Frequency	Comments
Display Cabinet and Marquee Plexiglas	Visually inspect for fingerprints, smudges, etc., and wipe clean.	Daily	<b>CAUTION!</b> Use only mild detergent solutions approved for use on Plexiglas. Do not use chemical solvents or cleaners containing abrasives.
Bellows, motion base	Visually inspect for tears, rips, and loose or missing retainer fasteners. Replace if damaged.	Daily	The bellows is important for player safety and prevents debris from getting inside the motion system mechanisms.
Resting motion inspection.	Visually inspect game, make sure it is not moving in attract mode. Make sure Motion-Stop is up!	Daily	This is very important for the life expectancy of your motion base. With the Motion-Stop up, during attract mode the Motion Base should hold its position. If it moves while in attract mode, give immediate attention and check troubleshooting guide!
Fasteners	Visually inspect for loose or missing retaining fasteners. Replace if damaged.	Weekly	Fasteners are important for the stability of the machine. Also, missing fasteners encourage vandalism and theft.
Motion Diagnostics (Bellows up, function test only)	See section 4.3.7, Motion Diagnostic sub-menu and perform functions.	Weekly	Tests for motor functionality if the movement of the seat and what is displayed on screen do not match, please perform Motion Diagnostic test with Bellows down.
Motion Diagnostics (Bellows down)	See section 4.3.7, Motion Diagnostic sub-menu and perform functions.	Every Two Months	Visually inspect motion and components for alignment and wear.
Steering controls and dash buttons	1) Inspect items for loose or damaged parts. Replace if needed. 2) Select input diagnostics menu from the Operator Console and test all buttons and calibration. If calibration is off, re-calibrate.	Weekly	Regular diagnostics will prolong the operational life of your Fast and the Furious in addition to enhancing feel of the game. Calibration of the components is critical. Out of calibration controls will not allow the game to function properly.
Connecting Brackets/	Verify the bolts are tight. If not, tighten.	Weekly	The powerful jolts may cause the unit to "travel" after consecutive usage if it not bolted to the floor. Make sure it stays in the desired/original location.

<p>Pushrod Assembly</p>	<p>1) Check the entire Push Rod Assembly and Tri-Plate for loose hardware.                  2) Check Rod End connections for signs of wear.                  3) If any of these items are worn excessively stop the motion base immediately and contact Tsunami Support.</p>	<p>Monthly</p>	<p>Continuing to run the Fast and Furious under these faulty conditions may cause severe damage to the motion base and may void the warranty.</p>
<p>Cooling Fans</p>	<p>1) Verify that the fans in the CPU area on the back of the Display Cabinet are working. Clean ventilation grills/filters.                  2) Verify that the fans in the Computer are working. Clean ventilation grills/filters.                  3) Verify that the fans in the tray of the motion base are working.                  4) If any of the fans quit working, re-check the connection or replace immediately.</p>	<p>Monthly</p>	<p>It is essential to maintain proper ventilation to the display cabinet, the motion base, and the computer. Failure to do so may decrease the performance and/or the life span of your Re-volt Deluxe.</p>

### Calibration Test Procedure

1. Refer to Section 4.3.7 “Motion Diagnostics” from the “Operator Console” menu.
2. Run through the diagnostic testing from operator console to test motors. Ensure that the chair comes to rest in a level position after exercising all motors.
3. Select the “Motion Test” feature to cycle the chair through its 6 degrees of freedom.

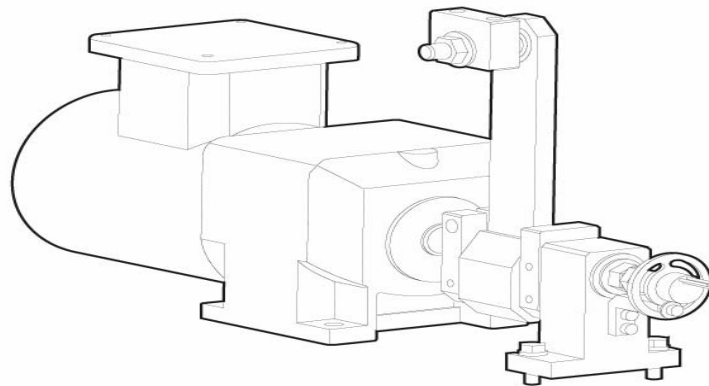
### Removal and Replacement of Bellows (skirt)

1. Removal of Bellows
  - a. Remove Fasteners holding the bellows in place.
  - b. Move Bellows down.
2. Replacing Bellows

- a. Lift Bellows into place.
- b. Line up Bellow holes and refasten.

## Motor and Potentiometer Assembly Calibration

1. Remove Bellows.
2. On your Display Unit, activate the Motor Calibration Menu. Run the Motion Diagnostics routines. Ensure on-screen menu indicates motors are in the center position.
3. Look at the Motors and verify that the Push Rod mechanisms are at the lowest point in their vertical travel. (See figure below.)



4. If adjustment is required,
5. With the Push Rod assembly / Bell Crank at minimum loosen (Do not remove) the two (2) screws that attach the Pot assembly bracket to the frame.
6. Rotate the bracket (Pot assembly) slightly clockwise or counter clockwise to adjust the angle of the bell crank.



**WARNING:**  
**PREVENT INJURY: Secure all loose articles of clothing, jewelry, and hair; they could get caught in the actuator(s).**

7. Verify that the Bell Crank is still at its lowest vertical position.



8. Refasten pot bracket.



**NOTE: Make sure the bell crank direction is correct to the diagram on the previous page.**

9. Proceed to the next motor-pot assembly and repeat procedure until all 3 are calibrated.



**If there are repeatability, drift errors, or if the motor does not respond to the motion diagnostics test, contact Tsunami Support for assistance.**

10. Test the motion system by performing “Motion Test” feature found in the “Motion Diagnostics” sub-menu in the “Operators Console”. Verify that when awaiting coin-up, the player seat is level (front-to-back, and left-to-right).
11. Re-install the bellows.

## Potentiometer Assembly Replacement

1. Turn off power to your Re-volt Deluxe.
2. Remove Potentiometer connector and both bolts on the Potentiometer Assembly bracket.
3. Replace with new Potentiometer Assembly.
4. Calibrate Motor and Potentiometer Assembly.

## Push Rod Assembly Replacement

1. Turn of power to your Revolt Deluxe.
2. Remove two bolts fastening the bearing block to the tray.
3. Loosen the Bell Crank bolt on the motor shaft and use a mallet or puller to disengage the Bell Crank. **Pay attention not to lose the motor KEY (Long rectangular piece of metal on the motor shaft).**
4. Remove the top part of the Push Rod from the Tri-Plate by removing the nut and lock washer that is on the inside portion of the Tri-Plate.
5. Remove the two bolts the Push Rod assembly to the tri plate. The Push Rod Assembly may now be removed.

6. Reinstall top portion of Pushrod to Tri-Plate. Install lock washer and nut.
7. Tighten the Bell Crank bolt using a torque wrench to 75 ft/lbs, and visually inspect the crease on the Bell Crank.
8. Fasten bearing block to tray.
9. Calibrate Motor and Potentiometer Assembly.

## Drive Box Replacement



### **WARNING**

**PREVENT INJURY OR DEATH: Never open any of the control boxes or power boxes. These boxes are 220V and attempts to improperly service may cause serious injury or death. For safe handling, the power must be off for at least 60 seconds prior to handling. For safest handling, unplug main power plug.**

1. Ensure that you have powered down your Re-volt Deluxe. To be sure that no power is left in control boxes, you must wait 1 minute after powering down before working with these boxes. You may wish to unplug your game for extra safety.
2. Your control boxes have 4 wires going to them. First, there is a main power cable. Second, there is a power cable that goes to the motor (braided metal cable) and finally there are 2 data cables.
3. You must remove all 4 of these cables first. Ensure that you grab the connectors, not the cables.
4. Unscrew all bolts on the drive box clamp and lift box out of place.
5. Replace with new box and secure drive box clamp.
6. Plug cables back into their respective places. Make sure the cables come straight out of the connector to ensure proper connection. Failure to do so may cause the motor to spin constantly.
7. Turn power on.

## **GENERAL TROUBLESHOOTING GUIDE**

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
<b>Game will not power up.</b>	Game not plugged in.	Plug game into Outlet Receptacle.
	Game not turned on.	Turn ON main power switch
	Game fuse is blown	Check Circuit Breaker.
	No power to receptacle.	Plug game into powered receptacle.
	PC power switch is OFF	Turn PC power switch ON.
	PC BIOS set wrong.	See Appendix B.
<b>“No Signal” Message</b>	Video Cable not secure.	Check and secure Video connector.
	PC not turned ON.	Turn ON power to PC.
<b>No video display.</b>	No power to Video Display.	Check power to Video Display. <i>Game will not power up.</i>
<b>No sound.</b>	Audio cable not connected.	Check audio cable connection.
	Speaker not connected.	Check speaker connection.
<b>“I/O Board Missing”</b>	USB connector not connected.	Check USB connector from PC to I/O board. Perform Hard Drive Recovery
<b>Game will not load.</b>	New Hard Drive installed.	Power cycle by un-plugging game. Perform Hard Drive Recovery
	Hard Drive data corrupted.	Perform Hard Drive Recovery.
<b>Game Freezes</b>	Secure Dongle Loose	Secure and Tighten Dongle
	Poor Ventilation	Check Fan Operation and Airflow
	USB cable loose	Remove and Reinsert USB both ends of cable
	Failing or Bad Power Supply	Check Power Supply Output or Replace With Known Good.
	Corrupted Hard Drive	Perform CRC Check. Re-Image if bad.
<b>Game Resets.</b>	Low DC voltage.	Check for proper voltage(+5V,+12V)
	Door lamp is wrong rating.	Use only 5volt lamps.
	Cabinet/PC temperature is too high.	Check that Vents and Fans are functioning and not obstructed.
	Hard Drive data corrupted.	Perform Hard Drive Recovery..
<b>Not Linking</b>	DIP Switch Set Wrong	Refer to Networking Setup Section.
	Network Cable Bad	Check Connection or Replace
	Game Operator Settings Not The Same.	Make Sure All Settings Are The Same Between Linked Games
<b>No Wheel Feedback</b>	Bad Wheel Driver Board	Replace With Known Good To Verify
	Bad Fuse on Wheel Driver Board	Replace Fuse On Wheel Driver With The Same Value Fuse
	Parallel Cable Loose	Secure and Tighten Parallel Cable
	Loose Electrical Connection	Check Connection To Motor and Wheel Driver Board
	Bad Transformer Fuse	Replace With Same Value Fuse

**Warning:** Do not connect or disconnect any cables or connectors on this game with the power on. This could potentially damage the game.

## **Troubleshooting the Motion Base**

<b>Symptom</b>		<b>Possible Cause</b>	<b>Guide</b>
<b>There is no power to the Motion Base</b>	(1)	Base not plugged in	Make sure that the Power Cord is plugged in to the Motion Base (220VAC). Make sure that the 12A (Display Cabinet) Power Cord is plugged in to the wall outlet.
<b>None of the Fans are working</b>	(2)	Tripped Breaker (Back of cabinet)	Check the Breaker Switch at the rear of the Display Cabinet (not tripped).
<b>Unit does not respond to Motion Test Program</b>	(3)	Thrown Breaker (Main breaker at the wall)	Check the Breaker Switch at the wall.
<b>Unit does not initialize when Red Stop Switch is activated.</b>	(4)	No Voltage output at the Transformer's Secondary Winding	Check the power input to the Transformer's Primary Winding. Check power output at Transformer's Secondary Winding.
	(5)	Tripped Breaker (Back of the Cabinet)	Check the Breaker Switch at the front of the Motion Base (on the PDB, push button type).
<b>No power to any of the Motors.</b>	(1)	Stop Switch cable not connected properly	Inspect Stop cable connections at the Red Stop Switch and at the Data Distribution Box.
<b>There is Power to the Motion Base and the Fans are running.</b>	(2)	RED STOP switch is defective	Check continuity across the Stop Switch.
	(3)	Stop Cable is faulty	Make sure that the Cable has good continuity.
<b>Motors DON'T respond.</b>	(1)	Loose or faulty cable (CBL-0107-X)	Check the 37pin DB cable at the Computer (far right card slot). Check the cable at the Motion Base.
<b>There is Power to the Motion Base and there is power to All Motors.</b>	(2)	Loose or faulty cable (CBL-0056-X)	Check cables from Data Distribution Box to Motor Drive Boxes.
	(3)	D/A Card loose inside Computer Case.	Reseat the card. Call Tsunami Visual Technologies for technical assistance.
	(4)	Faulty Data Distribution Box (DDB)	Call Tsunami Visual Technologies for technical assistance.
<b>SOME of the Motors are not responding.</b>	(1)	Faulty, Motor or defective Drive Box (MDB)	Connect the suspected Box to a Motor that is proven to work. If the good Motor will not work with the suspected MDB then your MDB is defective.
<b>There is Power to the Motors however some of the Motors do not respond.</b>	(2)	Loose or faulty cable (CBL-0107-X)	Check the 37pin DB Cable at the Computer (far right card slot). Check the Cable at the Motion Base, at the Data Distribution Box.
	(3)	Loose or faulty cable (CBL-0056-X)	Check Cables from Data Distribution Box to Motor Drive Boxes.
	(4)	Loose power cords (CBL-0055-X) (CBL-0059-X)	Check Power Cords going from the Power Distribution Box to the Motor Drive Box. Check the Power Cable going to the Motor (silver braided cable).
	(5)	Defective Motor	Check to see if Motor Shaft will rotate by hand (with no power to the Motor). If it will not, your Motor is bad. If it will rotate, then see (6) in this section.

	(6)	Faulty Motor Cable (CBL-0059-X)	Check continuity across the lines. The three voltage lines should have continuity. Then check the continuity from the Voltage Lines to Ground Line. Replace if faulty.
<b>Motion Base moves during attract mode.</b>	(1)	Bad positioning devise (POT) BLA-9005-X	Disable Motion Base. Call Tsunami Visual Technologies for replacement.
<b>Motor cannot find home position.</b>	(1)	Bad positioning devise (POT)	Disable Motion Base. Call Tsunami Visual Technologies for replacement.
<b>Appears to move out of control.</b>	(2)	(POT) wired to the wrong Motor Drive Box.	Usually happens to a pair of Motors. At the Motors that are out of control, switch the POT-s or cables going to the POT-s.
	(3)	Motor wired to the wrong Motor Drive Box.	Usually happens to a pair of Motors. Switch the silver Motor power cables at the Motor Drive Box.
	(4)	Belt to pot is loose, or missing.	Tighten Belt, or replace it.
	(5)	(POT) wired wrong.	Compare the wiring of the suspected bad POT to the wiring of the other POTS.
	(6)	Pulley to Motor or POT is loose.	Reset setscrews on the pulley. If not repairable, call Tsunami Visual Technologies for replacement.
	<b>Fans do not work.</b>	(1)	Loose Cable.
<b>Motors are functional.</b>	(2)	Defective Power Supply	Call Tsunami Visual Technologies for replacement.
	(3)	Defective Fan	Check to see if Voltage is getting to the Fan. Call Tsunami Visual Technologies for replacement.
	(4)	Bad connection	Loose connector at the Fan.
	(5)	Loose or faulty cable (CBL-0027-X)	Check if Voltage is getting to the Fans.
	<b>Player Seat is not at level before starting game.</b>	(1)	Motor Potentiometer Assembly is out of calibration.
<b>Steering does not respond.</b>	(1)	Faulty connection, cabling from Steering Controller PCB.	Check the cables from the controls, through the base, through the Cabinet to the H-Boom PCB for a loose connection. Check Parallel Cable Connection between PC and H-Boom PCB. Make sure that Dongo is present.
	(3)	Faulty H-Boom PCB.	Call Tsunami Visual Technologies for assistance or replacement.
<b>Steering POT isn't stable.</b>	(1)	Set screw on the bushing that couples the POT to the Steering is loose.	Tighten the set screws on the bushing
	(2)	Bad POT on the Steering	Call Tsunami Visual Technologies for replacement.
	(3)	Faulty cabling	Unplug POT from the Steering. Call Tsunami Visual Technologies for assistance or replacement.

<b>No Credit when coin is inserted</b>	(1)	Faulty Coin Door connection	Check the wiring from the Coin Door to the Jamma PCB.
	(2)	Faulty coin door	Check to Coin Mechanism and Coin Switch.
	(3)	Computer is Hung.	Reboot the Computer
	(4)	Reestablish USB connection	Reboot the Computer
<b>No response from Service Panel.</b>	(1)	Faulty service panel connection.	Check the wiring from the service panel to the Jamma PCB.
	(2)	Faulty service panel buttons	Check continuity through the Service Panel buttons
	(3)	Re-establish USB connection	Reboot the Computer
<b>No Sound.</b>	(1)	No power getting to the amplifier.	Check power coming into the H-Boom PCB.
	(2)	Loose cables	Check Audio Cable coming out of the Computer's Sound Port.
	(3)	Volume turned down in software	Go to operator's council sub menu Volume Controls, and adjust the volume.
	(4)	Gain turned down on the amplifier	Adjust gain to desired volume using the Rotary Knob on the Amplifier.
	(5)	Game has crashed, (Screen locks up, or no screen when this happens)	Reboot. Call Tsunami Visual Technologies if problem persists.
	(6)	Bad Amplifier	Amplifier is receiving power and signal input but there is no sound.
	(7)	Loose cables to Speakers	Check cabling to speakers; make sure they are attached correctly.
<b>Marquee Light doesn't come on.</b>	(1)	No power getting to the fixture	Check power coming into the fixture.
	(2)	Defective Fluorescent Tube.	Reseat the Tube. Replace Tube.
	(3)	Bad fixture	Call Tsunami Visual Technologies for replacement.
<b>No Video.</b>	(1)	No power getting to the Monitor.	Check power coming into the Monitor.
	(2)	Loose cables	Check the cable coming out of the Video Card on the Computer, to the Monitor, for a loose connection.
	(3)	Game has crashed, (Screen locks up, or no screen when this happens)	Reboot. Call Tsunami Visual Technologies if problem persists.
	(4)	Monitor board fails.	Call Tsunami Visual Technologies for replacement.
<b>Cabinet won't power up.</b>	(1)	Check the Ac Power Input on the 15A Circuit	At the back of the Cabinet verify that the Power Cord is plugged in to the Wall Power Outlet.

## **Appendix A: Hard Drive Recovery**

**NOTICE:** “Fast and the Furious” is shipped with a recovery CD (Compact Disc). Hard drives have been known to occasionally fail for many reasons. Follow the procedure below to restore data on the hard drive if a disk failure should occur. Use extreme care when performing the following procedure and avoid rough handling of PC or CD. Please check the Troubleshooting Guide section of this document. Have the recovery CD ready before you begin.

The following are some symptoms which may indicate a possible bad hard drive:

- Hard Drive Test reports “bad” or “missing” files. Please refer to Trouble Shooting section of the Manual.
- The game fails to finish loading.
- A boot error is reported after game is power cycled or reset.
- The game is looking for a boot CD to be inserted.
- Erratic game or attract mode.

**Note:** It is important that the USB cable from PC and power is connected to the I/O board before you proceed.

### Hard Drive Recovery Procedure:

1. Open the Cabinet rear Panel to access the PC.
2. Press the button on the CD drive to open CD tray.
3. Carefully insert the Recovery Disk into the tray.
4. Press the button on the CD drive to close the CD tray.
5. Turn OFF the PC by pressing the power button once.
6. Turn ON the PC by pressing the power button once.
7. Disk recovery process will begin automatically.
8. A message at the top of the screen will prompt you to remove the disk when process is over. Press the CD drive button to open tray. Remove the recovery disk and store safely.
9. Turn OFF the PC by pressing the power button once.
10. Turn ON the PC by pressing the power button once.

**Note:** Do not interrupt power or reset the game during the following process!

11. The game will begin to initialize and load. It will typically take about five minutes to complete.
12. The hard drive Recovery Process is complete when the game enters attract mode.
13. Proceed with control calibration and make necessary game adjustments. Please refer to Setup and Test section of this Manual.

## **Appendix B: Power Management Setting (BIOS)**

**NOTE:** Fast and Furious is shipped with the correct BIOS settings. Any changes made to the BIOS other than what is described below may adversely affect game functionality.

**This BIOS setting allows the PC to automatically power up when AC power is detected. This eliminates the need to manually turn the PC ON after a power disruption.**

Procedure:

1. Turn game *OFF*.
2. Connect a PS/2 or USB keyboard to the PC.
3. Hold the DELETE key while turning the PC *ON*.
4. On the **BIOS** menu screen, use the DOWN arrow to scroll down to **Power Management Setup**. Hit ENTER key once.
5. On the **Power Management Setup** menu, use the DOWN arrow to scroll down to **After AC Power Lost**.
6. Use the (+) button to change **After Power Lost** setting to: [**Power ON**].
7. Hit F10.
8. Hit Enter to Save and Exit.
9. PC will reset and begin to load game.



# Limited Warranty

**TsuMo Deluxe Motion-Base – “The Fast and the Furious”**

**Tsunami Visual Technologies, Inc.** ("Seller") Warrants only to the initial purchaser of its products that The items listed below are free from defects in material and workmanship under normal use and service for the **WARRANTY PERIOD SPECIFIED:**

## **6 Months**

No other parts of seller's products are warranted.

Warranty periods are effective from the initial date of shipment from seller to buyer.

Seller's sole liability shall be, at its option, to repair or replace products which are returned to seller during the warranty periods specified, provided:

1. Seller is notified promptly upon discovery by purchaser that stated products are defective.
2. Such products are properly packaged and then returned freight prepaid, to seller's facility.

This warranty does not apply to any parts damaged during shipment and/or due to improper handling, or due to improper installation or usage, or alteration. In no event shall the seller be liable for any anticipated profits, loss of profits, loss of use, accidental or consequential damages or any other losses incurred by the customer in connection with the purchase of a Tsunami Visual Technologies, Inc. product.

## **Warranty Disclaimer**

Except as specifically provided in a written contract between seller and purchaser, there are no other warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose.