

DELUXE MOTION MODEL

OPERATOR'S MANUAL





1. SPECIFICATIONS	3
2. CONTACT INFORMATION	4
3. GENERAL SAFETY	5
4. MOTION SAFETY	7
5. GENERAL SETUP	9
6. MECHANICAL SETUP ILLUSTRATION	10
7. OPERATOR MENU SYSTEM	13
8. TROUBLESHOOTING GUIDE	21
9. ELECTRO- MECHANICAL ILLUSTRATIONS	36

NOTE: THIS MANUAL AND ITS CONTENTS MAY BE REVISED TO REFLECT THE MOST CURRENT INFORMATION. PLEASE CHECK FOR THE LATEST VERSION OF THE GAME MANUAL ON THE RAW THRILLS WEBSITE: WWW.RAWTHRILLS.COM

Operator's Manual Product Specifications

Electrical Power

	Game:	Air Compressor:
Domestic	120 VAC @ 60 Hz, 5 amps	120 VAC @ 60 Hz, 10 amps
International	240 VAC @ 50 Hz, 2.5 amps	240 VAC @ 50 Hz, 5 amps
Japan	100 VAC @ 50 Hz, 5 amps	120 VAC @ 60 Hz, 10 amps

Important Multi-Power Supply Notice: Jurassic Park Motion models are equipped with two independently switched and fused AC supply line cords. Make sure ALL power supply switches and line cords are turned "OFF" and disconnected before servicing. To prevent electrical hazards and overloading, do not use extension cords.

DC Power Fuse Guide

ELECTRICAL SAFETY NOTICE: Replace fuse with equivalent rating as specified. Do not replace fuse with a lower or higher rating than specified. Modifications to this device voids safety design and warranty.

RIO PCB FUSE GUIDE:

+5 VDC - 3 amp Slow Blow (RIO MCU, START BUTTON) +12 VDC - 5 amp Slow Blow (COIN DOOR, GUN MOUNT LED, PLAYER AREA BLOWER FAN) +12 VDC - AUDIO POWER USES A THERMAL FUSE, RIO F3

CABINET FUSE GUIDE:

(NOTE: FUSES ARE MOUNTED ON THE TOP LEFT SIDE OF THE PC COMPARTMENT. F1 IS LOCATED CLOSEST TO RIO PCB)

- F1 PLAYER 1 GUN POWER , (each gun coil is also fused separately on the gun harness, 2 amp SB)
- F2 PLAYER 2 GUN POWER , (each gun coil is also fused separately on the gun harness, 2 amp SB)
- F3 DINO HEAD BACKLIGHT, 5 amp Slow Blow (On Certain Models only)
- F4 JURASSIC PARK GATE LOGO, MOTION BASE, MARQUEE, 5 amp Slow Blow
- F5 BENCH LED T-MOLD, WOOFER, UNDER DASH SPEAKER BEZEL, 5 amp Slow Blow
- F6- CABINET COOLING FANS

Temperature32° to 100° Fahrenheit (0° to 38° Celsius) Humidity

Must not exceed 95% relative humidity or where visible condensation is present.

Cabinet Dimensions

Component	Height	Width	Depth
Assembled 55"	166.6 in. / 423.2		
Deluxe Motion	cm (w/ Dino	59.74 in. / 151.7 cm	90.75 in. / 230.5 cm
Model	Topper)		

Contact Information

For an authorized distributor near you, check the Raw Thrills website at www.rawthrills.com

Contact Betson Enterprise Headquarters or your local Betson office for sales, technical information, warranty or repair.

Betson Enterprises Headquarters

303 Paterson Plank Rd. Carlstadt, NJ 07072 (800) 524-2343 or (201) 438-1300 fax (201) 438-4837 www.betson.com



Safety

OPERATION

Before operating game, read this manual. Failure to properly install and operate this game could result in malfunction or accident. Operate the game in accordance with the manual.

TRANSPORTING

Cabinet is very heavy and contains fragile components. Use appropriate care when moving or transporting cabinet. Avoid rough handling.

HANDLING COMPONENTS

Many components are extremely sensitive to handling, environmental and Electrostatic Discharge (ESD) events especially the computer. Do not handle it roughly. Before servicing, call your distributor and inquire about the PC warranty. Use proper ESD procedures when servicing. Protect components from harmful environmental conditions, such as extreme temperatures, excessive moisture or other damaging effects.

DISCONNECT POWER

Always turn off ALL power and unplug ALL AC line cords on the unit before servicing or making adjustments, unless otherwise instructed. Installing or repairing components while power is on can damage the components and void the warranty.

GROUNDING

Avoid electrical shock. Do not plug in AC power until you have inspected and properly grounded the unit. Only plug into a grounded, three-wire outlet. Do not use a "cheater" plug or cut off the ground pin on the line cord.

ELECTRICAL SHOCKS

There is no isolation transformer in the cabinet. Disconnect AC power before servicing. However, be aware that lethal voltages can remain in the electronic components even when AC power is disconnected. Use extreme caution when servicing. Verify that there is a working ground connection. If the unit sustains water damage, cease using it immediately and unplug AC power.

LCD DISPLAY

Extremely high voltages exist in the LCD at all times. These high voltages exist even when the LCD is off and the AC line cord is disconnected. These voltages are extremely lethal and will cause death. The LCD contains no user serviceable parts. Do not attempt to service the LCD.

POWER SELECTOR

Before installing game, ensure the voltage on the PC is set properly. There is a 115/230 VAC selector switch that must be set for the correct voltage for your site.

CONNECTORS

Ensure all connectors mate properly. If connectors do not slip in easily, do not force them. Connectors are often keyed and only connect one way. Check for correct orientation. Positive locking connectors are commonly used and require a locking tab to be pressed down to unlock and free the connector.

COMPUTER

The computer contains sensitive components, including a hard drive. Do not handle it roughly. Call your distributor before servicing its internal components. Ask about warranty information as it relates to the PC. Do not turn the PC power switch on or off. It should remain permanently in the ON position. Cycle AC power on or off with the cabinet power switch. A dongle has been inserted into one of the USB ports. This is required for game play. Do not remove the dongle except for troubleshooting purposes.

POWER CORD

If the power cord is damaged or lost, replace it with an identical cord as supplied by the manufacturer or an authorized service agent. Do not use extension cords.

WATER JETS

Do not install or operate game within operating perimeter of a water jet. Do not clean equipment using water jet. Game must be installed in a manner that limits access to the rear portion of the cabinet to service personnel only. Do not allow liquids behind the game to avoid spills which could cause damage or present a hazardous condition.

VENTILATION

It is critical that the game is installed in a manner that allows for proper ventilation and air flow. Game must be installed so that there is a minimum amount of clearance between the wall or another game to allow good air circulation through the game cooling fan and vents.

HAZARD TO EPILEPTICS

A small portion of the population has an epileptic condition that may cause seizures. Affected persons experience seizures while watching some television pictures or playing certain video games. People who have not had seizures may still have an undetected epileptic condition. If anyone in your family has experienced epilepsy symptoms (seizures or loss of awareness), consult your physical before using video games. While children play video games, an adult should observe. Be alert to the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation or convulsions. If you or anyone experiences these symptoms, discontinue use immediately and consult your physician.

MANUAL

Keep this manual available and ready for use. If the game fails to function properly, turn off the machine and unplug the AC line cord. Contact your local distributor. Your warranty, when applicable, lasts 60 days from your purchase date. You may not reproduce this document or any of its contents without written authorization from Raw Thrills[™], Inc.

SPECIFICATIONS

For reasons such as performance, this product's specifications may change without notice. Federal patent, copyright and other intellectual property laws protect the content, devices and design of the game and its equipment.

FUSE REPLACEMENT

For continued safe and reliable operation of the electrical systems, use only specified fuse values. Fuse values can be found on the manual or the label posted nearby. . It is highly advisable to troubleshoot and determine what is causing the fuse to fail before power is re-applied. This should be handled only by an experienced technician.

- This machine features moving parts and should only be serviced by a trained and experienced technician.
- Turn off all power and air supply before servicing the machine.
- Keep area around the machine clear and free of objects that present a trip hazard. Allow for plenty of room for players to safely enter and exit the machine.
- Observe ALL of the following guidelines to prevent injury, accident or damage.
 - Maximum of two persons on the machine at any time.
 - If a player fatigues or experiences motion sickness or is unable to continue the game for any reason, stop the game motion immediately by pressing the STOP button. Allow the person to rest and exit the game with assistance if needed.
 - Remain seated for the entire duration of the game. Do not stand or exit while the game is moving. Press the STOP button before exiting the game.
 - Keep hands and legs inside the game at all times while in motion. Remain in the game until game comes to a complete stop.
 - Do not attempt to reach for objects on the floor or near the game when it is moving. Stay clear and stand at a safe distance while game is in motion.
 - o Small children should always be accompanied by a parent or guardian.
 - Do not grab the gun to pull yourself up when exiting. The guns will move and can cause you to lose balance.
- The machine is equipped with safety features which the operator and the player need to be familiar with:
 - Motion STOP button is located between player 1 and 2 start buttons. This button will stop the motion feature once pressed.
 - Bellows around the moving part of the machine prevent access between the base and the moving part. Make sure that the bellows are not damaged or showing signs of excessive wear that could lead to failure. Replace the bellows when this occurs. Use only tamper proof screw fasteners as specified.
 - The machine is designed so that there is no unintended movement in the absence of a logic signal as might be experienced during a power outage. Make sure that the machine is safe to operate before turning power back ON.
- Critical parts should be maintained and inspected regularly for safe operation. If those critical parts are damaged, broken, or installed incorrectly, replace them or install correctly. Use only manufacturer's specified parts for continued safety and reliability. Call your distributor to order replacement parts.

SAFETY NOTICE:

Installing this product requires two individuals able to lift heavy objects safely. You may also be required to climb a ladder or step stool as part of the installation process. Make sure that you are familiar with the manual contents, game setup and operation before you begin the installation process. Do not push or pull the on the guns or decorative items such as the marquee or bench logo to move the game. Doing so can damage the gun mechanism or decorative items. Be aware of your surroundings and individuals around you during the installation process for your safety and the safety of others. Work only in an area with sufficient lighting and a clean and level surface.

Unpack Cartons

- 1. Place the shipping crates on a flat stable surface.
- 2. Cut the banding straps and remove the cardboard lids. Note: Strap brackets and fasteners are packed in a plastic back and secured to the crate with the banding straps. Set aside hardware bag for later use.
- 3. Lift off the large cardboard container surrounding the cabinet and any shipping cleats.
- 4. With at least two people and a dolly, remove the cabinet from the shipping pallet. See model specific assembly diagram. A fork lift or similar device might be required to lower the motion bench assembly from the pallet.
- 5. Remove the coin door key from the coin return chute.
- 6. Open the top coin door.
- 7. Locate the key for the top and bottom back doors and the cash box.
- 8. Remove the items inside cash box: AC power cable, a bag of screws and tools, marquee power cable, this manual.
- 9. Refer to detailed Mechanical Assembly instructions on the next page.

Check Electrical Settings (For Units Shipped From Different Location)

- 1. Verify the correct voltage in the nearest AC outlet.
- 2. Verify the AC outlet ground connection is present and working.
- 3. Open the lower back door of the monitor assembly.
- 4. Verify the voltage selector switch is set to correct AC voltage for all power supplies. This step is recommended if the unit has been moved or shipped from another locality.
- 5. Route the line cord so that the plug is near the AC outlet and out of the way of foot traffic.
- 6. Connect air supply hose to regulator. Air regulator is located in the compartment next to PC and electronics compartment. Do not turn on air supply until cabinet has been fully assembled.
- 7. Replace the lower back door of the monitor assembly.

Start Up Game

- 1. Plug in line cord to AC outlet.
- 2. Turn the power switch to ON.
- Check that none of the components are excessively hot or emitting foul odors. *If not, turn off AC power and disconnect line cord. Refer to the diagnostic section of this manual.*
- 4. Once software loads, you will be asked to calibrate the guns.

If not, enter the service menu by pressing the TEST button located on the bracket inside the top coin door.

Please refer to the following illustrations for cabinet assembly information.

-Main Cabinet Assembly: Dino Head Topper, Curtain Mountings Hardware, Mating Platform

-Curtain Assembly: Curtain and Roof Installation

-Final Assembly: LCD Cabinet and Motion Platform Mating







89@L9!>IF5GG=7D5F?!ACH€B <u>7IFH5=B5GG9A6@M</u>



Operator Menu System

Menu Interface

The Service Panel has two rocker type momentary ON buttons. Press the switch UP/DOWN toward the direction of the function you wish to perform. Pressing the TEST button at any point while the game is running will enter the diagnostic menu. This menu can be navigated with the service panel or the gun.

An on-screen message acknowledges changes or when you exit a selection without making a change.

At the bottom of each screen, there is a brief description of the highlighted menu option.

Navigating with Service Panel Switches



- TEST enters diagnostic system or select highlighted menu option
 SERVICE exit current menu
 - VOLUME DOWN moves down through menu or setting choices
 - VOLUME UP moves up through menu or setting choices

Navigating with Gun

- The menu interface can be navigated with the gun by aiming and shooting.
- Shooting the right side options will perform the indicated action.
- Shoot scroll up or scroll down to highlight menu options.
- Shoot select to enter the highlighted menu or perform the highlighted option.
- Shoot exit to return to the prior menu or exit the diagnostic system.

Operator's Manual Menu Screens and Descriptions

Main	Menu	
٠	Diagnostics	- verify game inputs and outputs are functional
٠	Pricing	 view and adjust various pricing and denomination options
٠	Game Adj	 setup and manage game parameters
٠	System Adj	 setup and manage system parameters
٠	Audits	- view various hardware and software information ie. collection and play data
•	Utilities	- reset tables, credits, audits. Perform factory reset and CRC software check.
٠	Gun Cal	 calibrate and verify gun functionality
٠	Game Vol	- adjust game and attract volume

• **Rumble Vol** - adjust seat vibration intensity

This document will be updated periodically to improve accuracy and usability. Please visit: rawthrills.com to get the latest version of this manual.

U Jurassic Park Arcade	
Motion Motion Bench SN: 0	05.22.2015 12:16:44
👼 Main Menu	
☆ Diagnostics	Scroll Up
× Pricing	(Vol +)
🗴 Game Adjustments	
🗴 System Adjustments	
🗴 Audits	Scroll Down
🗙 Utilities	(Vol-)
g Gun Calibration	
Attract Volume 25	Soloct
🔹 Coin Volume 50	(Test)
🔋 Game Volume 0	
🔹 Rumble Master Volume 0	*
	Exit
	(Service)
? Test the operation of the cabinet hardware.	

Main Menu

Diagnostics

Switch Tests

Periodic checks of all game inputs are key to maximizing earnings, customer enjoyment and safety.

Important Note: **Emergency Stop** and **Floor Mat** will prevent motion from working when active; pressed down. Both switches are "Inactive" during normal operation.



Main Menu

Diagnostics Sound Test SN: 0 Version Unknown 12.05.2014 10:21:00 Sound Tests 1000 Hz - Stereo (Both Left and Right Channels) Scroll Up 1000 Hz - Left Channel Only J (Vol +) 1000 Hz - Right Channel Only đ 100 Hz - Stereo (Both Left and Right Channels) ₫ 100 Hz - Left Channel Only Scroll Down ₫ (Vol -) 100 Hz - Right Channel Only ₫ **Rumble Trex Roar13** ₫ **Rumble Hit** ₫ Select Rumble CameraShake đ (Test) **Rumble TRex Roar15** J **Rumble Minigun** D **Rumble Freeze** J Back (Service) ? Play a 1000 Hz tone through both the left and right channels.

Scroll down to access additional audio test items: Rumble Electro, Rumble Shotgun, Rumble Hit Volume.

Ма	in Menu	
	Diagnostics	

Light Tests

Increase your game's curb appeal while also offering the best visual experience for players and prospective customers by making sure that all controlled lighting effects are working. Dino Head is available on certain models only.

Jurassic Par	-Arade sic Park Arcade		Current Tim
,, 100. Iton	Light Tests		10.2015 10:17:2
2	Toggle P1 Start	Off	Scroll Up (Vol +)
	Toggle P2 Start	Off	
đ	Toggle Dino Head	Off	
J	Toggle JP Logo	Off	Scroll Down
Į	Toggle Motion Base Red	Off	(VOI-)
J	Toggle Dash T Mold Red	Off	
đ	Toggle Dash T Mold Green	Off _	Select
đ	Toggle Dash T Mold Blue	Off	(Test)
đ	Toggle Woofer Red	Off	
đ	Toggle Woofer Green	Off	
đ	Toggle Woofer Blue	Off	Back (Service)
?	Toggle All Lights	HE AL	
Y		In a strend	

Main Menu

Diagnostics

Watchdog Tests

The watchdog function is a critical part of making sure that the game is able to recover from a lock-up condition automatically. This is especially critical in unattended locations.



Main Menu

Diagnostics

Gun Vibration Tests

The gun mechanical feedback system is designed with unique features that enhance the player's experience. Verify that gun vibration special effects are functional.



Main Menu



Main Menu

Diagnostics

Motion Tests



Main Menu Diagnostics **Motion Self Tests** Jurassic Park Version Unknown Current Time: 12.05.2014 10:22:02 Motion Self Test Please do not sit or stand on game during test. Starting self test in 9 Pressure = 0 (0%) - No Pressure Stops: Button - Inactive Floormat - Inactive Fan - Inactive Back Automatic test of motion system ?

Main Menu

Diagnostics

Motion Calibration



• Stay clear of moving parts! Calibration and Self-Test is performed automatically. The game will move up/down and tilt without any further operator input until the selected action has been completed. Follow on-screen directions for most accurate results.

Main Menu

Diagnostics

Coin Meter Tests

This unit has a common meter for coin and DBV accounting. Replace with 5VDC meter only.



Main Menu

Pricing

Adjust game pricing and crediting parameters. Customize pricing for best location earnings.



Main Menu

Game Adjustments

Adjust in-game parameters. Customize in-game features to suit customer base and location.

Jurassik Park Arcade	
Jurassic Park Arcade Motion Motion Bench SN: 0	Current Time: 05.22.2015 12:24:23
🛠 Game Adjustments	
 Attract Sound Frequency Difficulty (Average time/credit) 1m:40s 	Scroll Up (Vol +)
 Hide Human Deaths Enable Weapon Models On 	
 Enable Friendly Fire Subtitles On (damage player; show X) 	Scroll Down (Vol -)
 Play Voice Over In Game Play Voice Over In Menus On 	Select
 Hide Attract On Button Press DB Mode Off 	(Test)
 QR Codes Enabled Name Entry On 	Back (Service)
? Adjust attract mode sound frequency.	

Main Menu

🗙 System Adjustments		
Set Serial Number	0	Scroll Up
Cabinet Type	Motion Bench	(Vol +)
Vibrate Guns	Dual Solenoid	
 Cabinet Motion 	On	
 Vehicle Motion 	On	Scroll Down
 Motion Pitch Percent 	50	
 Motion Tilt Percent 	50	
 Motion Height Percent 	50	Select
• Rumble	On	(Test)
Cabinet lights	On	
 Language 	English •	
 Set venue 		Back (Service)
2 Set Cabinet Serial Number	42 6	

Main Menu

Audits

Monitor game audits to make informed decisions in determining key game settings. ie. pricing, game length.



Main Menu

Utilities

Resetting Audit information is recommended whenever you change a game parameter in order to accurately track changes in earnings.



Main Menu

Gun Calibration

Maximize your game's earning potential by making sure that the guns are periodically calibrated and all switch inputs are functional.



MOTION SYSTEM TROUBLESHOOTING

Motion System Troubleshooting Guide

Warning: Review Safety section of this manual before accessing serviceable parts and making any adjustments to game.

Category	Торіс	Figure
General	Main Motion Inpsection & Troubleshooting Guide	TRS-1.1
Compressor & Air Supply	Pneumatic Supply Inspection	TRS-2.1
	Motion pressure errors reported on screen	TRS-2.1
	High Air Pressure	TRS-2.1
	Low Air Pressure	TRS-2.1.1
	No Alr Pressure	TRS-2.1.1
	Compressor inspection	TRS-2.2
	Compressor is very loud	TRS-2.2
	Compressor runs continuously	TRS-2.2
	Compressor does not turn on	TRS-2.2
Motion Functionality	Motion Platform Inspection	TRS-3.1
	General Air Leak Inspection	TRS-3.2
	Motion Platform Air Leak Inspection	TRS-3.2.1
	Motion Functionality Inspection Motion platform does not move at all Individual motion actuator does not move Individual motion actuator moves up, but not down Individual motion actuator moves down, but not up Motion software settings Individual motion actuator moves erratically Height sensor not responding Height sensor displays erratic values	TRS-3.3 TRS-3.3 TRS-3.3 TRS-3.3 TRS-3.3 TRS-3.3.1 TRS-3.3.2 TRS-3.3.2 TRS-3.3.2
Motion Speed	Motion Speed Troubleshooting Motion platform moves very fast Motion platform moves very slow Individual motion actuator moves very slow	TRS-4.1 TRS-4.1 TRS-4.1 TRS-4.1

Main Motion Inspection and Troubleshooting Guide



Pneumatic Supply Inspection

_

_



5

Low Air Pressure Troubleshooting



Compressor Inspection



.. .

Motion Platform Inspection

J

J

,



J

General Air Leak Inspection

_

_



-

Motion Platform Air Leak Inspection

_

_



.. .

_

_

Figure TRS-3.3



.. .

Motion Software Settings

_

_

Figure TRS-3.3.1



-

Motion Actuator Sensor Troubleshooting

_

Figure TRS-3.3.2



.. .

Motion Speed Troubleshooting

Note:



Licensing LLC. All rights reserved. Jurassic Park Arcade Game Software Copyright 2014 Raw Thrills, Inc. All rights reserved.

General Troubleshooting

Problem	Possible Cause	Solution
Game will not power up	Game not plugged in.	Plug game into outlet.
	Game not turned on.	Turn on main power switch.
	Game fuse is blown.	Check and replace fuse.
	No power to receptacle.	Test outlet and plug game into powered outlet.
	PC not turned on.	Turn PC power switch on. Ensure IEC cable tightly plugged in. Trace cable back to source to ensure continuity.
	PC BIOS set incorrectly.	See BIOS Settings chapter.
Screen not powering on with game	No AC power or bad video cable	Check loose or bad AC or video
		connection

NO VIDEO message	Video cables not plugged in properly PC did not power up	Reattach and/or tighten video cable to monitor. Reattach and/or tighten video cable to PC. Power cycle PC or game
	Faulty video cable	Replace video cable
	PC not turned on.	Turn PC power switch on.

No sound	Bad Connection from PC to RIO	Check connection ¼" stereo cable
	audio or bad speaker connection.	from PC to RIO and speakers.

Game does not load		
Hard drive test reports "bad" or		
"missing" files.		
Game fails to finish loading.	Hard drive failure	Recover hard drive.
After resetting, game still reports an		
error.		
Game suggests inserting a boot		
DVD.		
Erratic game mode or attract mode.		
WARNING!		
Data Files Corrupted.		
(Game Operation May Become		
Unstable.)		
Use "Test" Switch to Enter Test		
Mode		
and Run "File Test."		
Press Start To Continue.		

Game resets	Bad file or bad 5V RIO fuse.	Run File Test. Restore hard drive.
		Replace 5V fuse on RIO pcb.

Operator's Manual		
Problem	Possible Cause	Solution
Guns won't register or function poorly	Bad calibration	Calibrate guns.
	Dirty/damaged potentiometers	Inspect and or replace potentiomer
	Gun/pot. disconnected	Check gun/pot connections.
Coin meter does not click during Test	No pulse to meter	Check all wiring from meter to I/O board
	Faulty meter	Replace coin meter
Exits Test Mode every 3 seconds	Test button stuck in ON position	Slide or toggle button off after Test
		Menu appears
Develo Met Dresent	Densle mission and is succeeded	Find days do UCD as you action and
Dongle Not Present	Dongle missing or disconnected	Find dongle USB connection and
	Foulty LICD post	Connect dende to another USD part
	Faulty OSB port	connect dongle to another OSB port
Connect I/O Board or	USB cable disconnected	Check USB connection from PC to
I/O Board Missing		I/O board
		Try connecting to a different USB
		port
	Blown fuse	Verify 5V and 12V fuses are not blown
	No power to RIO board	Check for proper voltage (+5V, +12V) at RIO P2 connector
	Bad RIO Board	Replace RIO board with known functional board
	Missing Field/Earth Ground	Check AC line cord for missing or damaged ground plug or connection. Use only properly grounded AC power outlet.
Guns not vibrating	Bad fuse or 24VDC power supply.	Verify parts are bad by swapping
Seat subwoofer sound is weak	Low voltage on 12V power supply	Adjust nower supply voltage
Seat subwoojer sound is weak.	Volume set too low	Set Volume for desired vibration
	volume set too low.	effect.
Light feature is not lighting up.	Bad connection or damaged wires.	Replace or repair damaged wires or
	Bad fuse or power supply. SEE FUSE	connectors.
	CHART.	Replace bad fuse with correct value.

MECHANICAL AND ELECTRICAL DIAGRAMS



NOTE: P1 AND P2 GUN COIL FUSE: 2A SB. SEE FUSE CHART FOR ALL FUSING INFO.

TEST/SERVICE BRACKET

GRN YEL X2 - I FIELD GND BLK 2 GND 3 THUMB SW BRN DRO BRN GRN 4 TRIGGER SW BLK RED X2 BLK RED RED BLK X2 RED BLK
 8
 H/L
 S

 9
 GUN
 X-AXIS

 10
 GUN
 Y-AXIS

 111
 CDIL#1
 SIG

 122
 CDIL#2
 SIG

 13
 24V+
 CDIL
 POWER

 14
 N.C.
 N.C.
 N.C.
 GRN WHT GRN BLK BLK GRN BLK DRG YEL OR GRN YEL X2 T FIELD GND BLK BRN GR 2 GND 3 THUMB SW BRN VI 4 TRIGGER SW BKN VIU BLK RED X2 BLK RED RED BLK X2 GRN BLU GRN DRG BLK GRY BLK PNK 튄A/D GND 7 A/D 5V+ 8 A/D 5V+ 9 GUN X-AXIS 10 GUN Y-AXIS 11 COIL#1 SIG 11 COIL#1 SIG 12 COIL#2 SIG 13 24V+ COIL POWER 14 N.C.

> NOTE: FOR CONTINUED SAFETY USE ONLY SPECIFIED FUSE RATING.



USB MOTION CONTROLLER PCB (UMC)

MOTION CONTROL PNEUMATIC DIAGRAM

***NDTE: PLEASE SEE MECHANICAL ILLUSTRATION SECTION FOR DETAILED PART DESCRIPTION





-19 A' 3C"	D5FHBLA 69F	8 9G7 F ĐH€ B	e hm
%	8@L!>D!A 5=B756!5GGM	8@L!>D!A 5=B756!5GGM	%
&	8 @L!>D!ACH€B!D@5HCFA!:I@@!5GGM	8 @L!>D!ACH€B!D@5HCFA!:I@@!5GGM	%
I	8@L!>D!71FH5=B!FC8!5GGM	8@L!>D!71FH5=B!FC8!5GGM	%
(8 = B C SHC DD9F ! 5 GGM	8 - B C ! HC DD9F ! 5 GGM	%
)	8@L!>D!7CBB97HCF!D5B!5GGM	8@L!>D!7CBB97HCF!D5B!5GGM	%
*	*\$\$!\$%)-)!\$%	GHF5D!7CBB97HCF!8@L!>D	&

89@ L9!>IF5GG=7 D5F?!ACH€B : #35@5GG9A 6@M



∔19 A BC"	D5FHBLA 69F	8 9G7 F ÐH€ B	E HM
%	*\$% \$\$+'\$!\$%	5 GGMIK C C 8!A 5 ₽ 7 5 6!8 @L!>D	%
&	*\$%\$\$\$+\$)!\$%	A 5 - ₿ ! 7 5 6 ! F 95 F ! 8 C C F ! 5 GGM 8 @ L ! > D	%
-	*\$%\$\$+\$*!\$%	A 5 - B ! 7 5 6 ! @ 7 8 ! 8 C C F ! 5 GGM 8 @ L ! > D	%
(8@L!>D!))!@78!5GGM	8@L!>D!))!@78!5GGM	%
)	; <5 GdYU_Yf5ggYaV`m	GdYU_Yf5ggYaV`mfGiVkccZYfŁ	%
*	>D!8@L!GD95?9F!5GGM	>D!8@L!GD95?9F!5GGM	(
+	G9B GC F!D5 8!5 GGM	G9B GC F!D5 8!5 GGM	%
,	57 ƁciV`Y!∔o`Yh`GiV!5ggm	57 8ciVY!∎YhGiV!5ggm	%
_	GIF9!5AD!D76!6C5F8!5GGM	GIF9!5AD!D76!6C5F8!5GGM	%
%\$	8F - Ð! 7 C B B 97 HC F! 5 GGM	8 F Đ! 7 C B B 97 HC F ! 5 GGM	%
%%	75H&\$%&5@758	75H7CADF9GGCF!5GGM	%
%&	8@L!>D!F9; !: =@H9F!5 = F!5 GGM	8@L!>D!F9; !: -@H9F!5 = F!5 GGM	%
%	8@L!>DSF€S <ufxkufys5ggm< td=""><td>8@L!>D!F€5ggYaV`mfk#Acibh]b[D`UHYŁ</td><td>%</td></ufxkufys5ggm<>	8@L!>D!F€5ggYaV`mfk#Acibh]b[D`UHYŁ	%
%(*\$\$!\$\$-\$)!\$%/ **\$\$!\$\$-\$*!\$%	%"K8BM@CBGHF5D/%"6I7?@97@5GD	&
%)	*\$\$!\$\$, - %\$%	GYWif]b[BmcbGhfUdDUhY	(
%*	<d*\$\$)< td=""><td>< D** \$\$) D7 5 GGM</td><td>%</td></d*\$\$)<>	< D** \$\$) D7 5 GGM	%
%+	* \$\$!\$%*\$% \$%	F9H5	&
%	* \$\$! \$%* \$\$! \$%	8F Ð!D5B!8@L!>D	%
%	-)!(%)&!\$\$	-)!(%)&!\$\$!7<9FFMGK ++17<	&
&\$	* \$\$!\$%* % !\$%	6F57?9H@98!HAC@8!8@L!>D	&
&%	* \$\$!\$%* &, !\$%	D9H, !A 5FE 99!8@L!>D	%
&&	, &\$!\$\$\$%\$\$:5Bž‰\$J57ž%-#%)K	,
&'	, \$\$!\$\$\$%\$\$	‰\$a a K]fY∶Ub;iUfX	%%
&() \$\$!\$\$% +!\$%	%) \$K !&(J !DC K 9F !GI DD@M	&
&)) \$\$!\$\$% &!\$%	%) \$K !%) J !%\$5!8I 5@DC K 9F!GI DD@M	%
&*) \$\$!\$\$% ' !\$%	'&\$K !‰J!8I5@JC@HDG	%
&+) %%%? %	6F5GQ:H69!'#,C8!A7A75FF	%
&,	* \$*!\$%\$- +!\$%	; F5D< <i>≓</i> !@9:HKCC:9F!8@L!>D	%
&-	* \$*!\$%\$- , !\$%	; F5D< <i>寻</i> !F≑ <hkcc:9f!8@l!>D</hkcc:9f!8@l!>	%
'\$	* \$*!\$%%\$\$!\$%	8975@@78!G&9!8@L!>D	&
' %	* \$*! \$%\$- (!\$%	HF5BG@+HP!A5FE199!8@L!>D	%
' &	(\$7 A @98 GHF =Ð fK < ≠19Ł	(\$7 A @98 GHF Ð fK < + 19Ł	1
1.1	*\$%\$\$+',!\$%	D5B9@D7!5779GG8@L!>D	%
' (* \$*! \$%%\$%I \$%	8975@169@CK!GD95?9FG!8@L!>D	&
')	\$"&)!&\$`I%"&)`K_B;!6C@H	\$"&)!&\$1%"&) K =B; !6C @H	%
'*	: C 5 A ! G9B GC F ! H5 D9	: С 5А НБD91 5F	%
' +	* \$*!\$%\$- \$!\$%	8975@F≑ <ha5₽!756!8@l!>D</ha5₽!756!8@l!>	%
1	* \$*!\$%\$, -!\$%	8975@@9:HA5₽8!756!8@L!>D	%
' -	* \$\$! \$%) - %! \$%	6F57?9H65G9!A5+B756!8@L!>D	%





	89@L9!>IF5GG=7[
: @	@ACH€BD@5H

∔1 9Α ΒC"	D5FHBIA 69F	8 9G7 F ÐH€ B	e hm
%	8@L!>D!ACH€B! D@5HCFA!5GGM	>D!8@L!ACH€B!D@5HCFA!5GGM	%
&	8@L!>D!G95H756!5GGM	8 @L!>D!G95 H7 56!5 GGM	%
I.	8@L!>D!7D!J5I@H5GGM	8@L!>D!7D!J5I@H5GGM	%
(*\$\$!\$%*'(!\$%	8-5ACB8!D@5H9!@9:H7CJ9F!8@L! >D	%
)	*\$\$!\$%*')!\$%	8-5-ACB8!D@5H9!F≑ <h7cj9f! 8@L!>D</h7cj9f! 	%
*	*\$\$!\$%*' *!\$%	8-5ACB8!D@5H9!79BH9F!7CJ9F! 8@L!>D	%

D5F?!ACH€B <u>CFA 5GG9A6@</u>M



∔¶9A BC"	D5FHBLA 69F	8 9G7 F €)H€ B	e hm
%	* \$&!\$\$\$' ' !\$%	K 9@8A 9BH65G9!:F5A 9	%
&	* \$\$!\$%(\$) !\$%	Acibh]b[ˈDːUhYːlː5WhiUhcf:6UgY	,
ı	, \$\$!\$\$\$) \$!\$%	7 cbh]G]b[`Y`7 cbjc`ih]cb`5]fGdf]b[ž%#(`BDHž7`UadYX`D'UhYg f&"%]b`\Y][\hz	(
() ++-?%-	DIG HC!7CBB97H: +HB; !:CF!%#(″</td <td>,</td>	,
))++-?'))	Dig\!hc!7cbbYWhHVY`:]hh]b[`Zcf5]fžFYXiW]b[`7cbbYWhcfZcf%#(´´´ I`'#, ´´`HVY`C8	(
*)*(,?+(7 @95 F"‰a-8 L"&) C 8 ! DC @M F 9H≿ 5 B 9 H 69 L &(″@	(
+	*\$\$!\$%) %+!\$%	6fUW_Yh! 7 ? 8 A Ub]Zc X / `J U`j Yg	%
1	A (?6' ' \$!\$, !\$(!87 ‰J	A 5B≑C @8!GH5H€ B	%
-	%&% H%&	Bc]gYFYXiWhjcb`Al:::@9Ff1#, BDHA5@9Ł	&
%\$)\$+,)?&'%	AYX]ia !DfYggifY 6fUgg'H∖fYUXYX D]dY :]hh]b[ž'#, A5@9`L*#(:9A5@9!<9L!F98I7-B; !6IG<-B;	%
%%)\$+,)?&&%	GH99@<9L!GC7?9HD@; !"&)!ADH	(
%&) ++-?%%	DIG HC!7CBB97H: ∔HB; !"&)H 69'L`"", BDHA 5@9!BM@CB</td <td>%</td>	%
%	((*\$)?&''	GH99@<<9L!GC 7 ? 9H.D@ ; !''' , !B.DH	&
%(* \$\$!\$%&%+!\$%	Acibh]b[`D`UhY'!`8]ghUbWY`GYbgcf	(
%)	G\Ufd`; D&M\$5(%G?\$:	8)gHUbWYAYUgif]b[`GYbgcf'lb]h!'AYUgif]b[`8)gHUbWY.'('!''\$`Wa` fБbU`c[`CihdihŁ	(
%*) \$\$!\$\$%((! \$'	Achijcb 7 cbhfc``D7 6	%
%+	* \$\$!\$%* % !\$%	A C HC F! 7 C B HF C @D7 6! 6F 5 7 ? 9H	%
%	7 UV`Y`7`Ua dS+)\$	7 U`Y`7 `Uad`' #(´´žGWfYk `Acibh	(
%-	* \$\$!\$%*%(!\$%	6F57?9H@98!G-89!ACH€B!65G9!8@L!>D	&
&\$	*\$'!\$\$)('!\$%F98)! <c`y`hyux`d`udjW</c`y`hyux`d`u	(
&%	* \$\$!\$%* %) !\$%	6F57?9H@98!F95F!ACH€B!65G9!8@L!>D	&
&&	* \$\$!\$%* %* !\$%	F9H5 ₽9F!65G9!ACH€B!65G9!8@L!>D	
&'	* \$% \$\$+&) ! \$%	6chtca ïDUbY``! ï6UgY∵fUa Y	%
&(&(\$&) H*)	@ck!DfcZ]Y'H\fYUXYX!GhYa`7UghYfZ&‴I`%\%#%*``Dc`mdfcdm`YbY` K\YY`Z''#, `!%*`GhYaZ''\$\$``V''`7UdUW]mn0G\Yd\YfX`_7\$\$&\$*\$)NB! DC@\$%1??ŁQ	(
&)	@Y[`@YjYYf%\$&`I`'`\$W\	%#&!% 1 °(‴@Y b[h\	+
&*	*\$\$!\$%*' ' !\$%	D@5H9!@9;!@9J9@9F!8@L!>D	+
&+	- ‰* (5 * &(5``cmGhYY``GY`ZI@cW_]b[`G\ci`XYfGWfYk`%#&‴G\`Xf8]Už%'`@G\`Xfž '#,`'!%``H\fXžK`#DY``YhfA_WA_UghYf7_Uff`&&*(5*&(Ł	(
&,	9F 6&\$&) 7	6iadYfGH@6UgYžBYcdfYbYž&l%#&‴o⊈&‴K ž&‴<`fP7´'9`GdYW]U`` DfcXiWhg`,9F6!&\$&)!7ŁAWAUghYf7Uff`,-'\$*?%*	ı
&-)*(,?+() * (, ? +('! "%&-& 'L "&) C 8 'H 69	%
'\$) * (, ? +() * (, ? +('! '"‰=8 'L '"&) C 8 'H 69	%
' %)*(,?+() * (, ? +('! "%&=8 'L "'&) C 8 'H 69	%
' &) * (, ? +() * (, ? +('! '"‰=8 'L '"&) C 8 'H 69	%
• •)*(,?+%) * (, ? +%! "&) & L "" , C 8 H 69	%
' (*\$'!\$\$+(+!\$%	; FC %) \$%&%5	,
')	* \$&!\$\$\$' (!\$%	K 9@8A 9BHD@5HCFA!:F5A 9	%
۰ *	* \$\$! \$%&&% \$%	6fUW_Yh!`6i a dYf`Grcd	,
' +) \$\$!\$\$\$+&!\$%	&(7 A `@ ₇ <hf 98="" `@98="" `g+f="" td="" ₽<=""><td>(</td></hf>	(
۰,	* \$\$!\$%*, &!\$%	F9H5=B9F!@CB; !FI669F!G?=FH8@L!>D	(
' -	*\$\$!\$%*,'!\$%	F9H5 ₽39F!G <cfhfi669f!g? ₽h8@l!="">D</cfhfi669f!g?>	ı
(*		8.











≢19 A BC	D5 F HB I
%	* \$&! \$\$\$&- ! \$%
&	; i b A YWA 5g
	* \$\$!\$%* \$) ! \$%
(*\$\$!\$%*\$*!\$%
)	*\$\$!\$%(+-!\$%
*	* \$\$! \$%(, \$! \$%
+	*\$*!\$%\$(&!\$%
1	%\$Wa @98 Ghf]
-	%\$Wa @98 Ghf]
%\$	* \$\$! \$%* \$, ! \$%
%%	*\$\$!\$%*'\$!\$%
%&	* \$\$! \$%* &- ! \$%
%	* \$\$! \$%* \$- ! \$%
%(* \$\$! \$%* \$+! \$%
%)	* \$\$! \$%* ' % \$%
%*	*\$*!\$%\$-)!\$%
%+	*\$*!\$%\$!\$%
%	, \$\$!\$\$\$)!\$%
%	+\$&!\$\$\$%!\$%
&\$	+\$&!\$\$\$%]\$%
&%	+\$&!\$\$\$*&!\$%

E HM A 69F J5I@H7C-Ð!8CCF % >D!; I B!A 97 <!5 GGM & ggm ; I B!A C I BH6F57?9H8@L!>D & 7 C J 9F!; I B!A C I BH65 G9!8@L!>D & >D!))!; I B!65G9!75D & >D!))!DC @W7 5F6!; I B!65G9 & 8975@; IB!ACIBH65G9!>D!)) & d fF 98 Ł . &) Wa : YI]V Y @98 Ghf]d fF 98 Ł "d fb@ 9Ł &) Wa : `YI]V `Y @98 Ghf]d fK \]hYŁ % 7 C J 9F!@9: HGI DDC FH6F57?9H8@L!>D % 57 FM@=7!7 D!7 C J 9F!8@L!>D & GHMF9B9!@98!GHF=Ð!8@L!>D & % 7 C J 9F!F ≑ < HGI DDC FH6F57?9H8@L!>D 6F57?9H; IB!ACIBHGIDDCFH8@L!>D & & FI 669F!D58!7D!8@L!>D 8975@7C -B!J5I@H8@L!>D & 8975@7CBHFC@D5B9@8@L!>D % A €!K €Hk 7C ₽8CCF! 66<8 % <Udd.@Uf[YFcibX6ïYDig\Vihhcbk]h\ @cW_]b[@Uad\cXYfff'J87K\]hY@98Łž % "% +; c`X`AG!GH5FH <Udd.@Uf[YFcibXFYXDig\Vihhcbk]h\ @cW_]b[@Uad\cXYff*J87K\]hY@98½ź "%,+;cXAG!GH5FH % <Udd.`AYX]ia FcibX`MY``ck Dig\Vihhcb k]h\@cW_]b[@Uad\c`XYfff*J87`K\]hY % @9812"% +; c`X A G! GHC D

89@ L9!>IF5GG=7 D5F?!ACH€B 7 C B H F C @ D 5 B 9@# J 5 I @ H 5 G G 9A 6@M



∔1 9Α BC"	D5FHBLA 69F	8 9G7 F ĐH€ B	E HM
%	* \$% \$\$+' ' ! \$%	5GGMIKCC8!G95H756!8@L!>D	%
&	* \$% \$\$+' +!\$%	D5B9@D58898!G95H657?!8@L!>D	%
I.	: C 5 A !7 I G< € B !G95 H 65 7 ?!D5 8	: C 5 A !7 I G< € B !G95 H 65 7 ?!D5 8	%
(7 C J 9F!7 I G< € B!G95 H 65 7 ?!D5 8	7 C J 9F!7 I G< € B!G95 H65 7 ?!D5 8	%
)	* \$\$! \$%* %% \$%	6F57?9HG95HD5B9@8@L!>D	(
*	*\$%\$\$+'*!\$%	D5B9@D58898!G95H65G9!8@L!>D	%
+	: C 5 A ! 7 I G< € B ! G95 H 65 G9! D5 8	: C 5 A ! 7 I G< € B ! G95 H 65 G9! D5 8	%
1	7 C J 9F!7 I G< € B!G95 H 65 G9!D5 8	7 C J 9F!7 I G< € B!G95 H 65 G9!D5 8	%
-	5GH&6!(Dfc 6UggG\U_YfHUWh]Y H1UbgXiWYfz(C∖a z)\$K UhhgfFA GŁ#%\$\$K UhhgfA UIŁ	&
%\$	(*')	6c`H8ck b J]VfUh]cb!8Ua d]b[A ci bh fA WA UghYf!7Uff * (, +)?' -' Ł	*
%%	* \$\$! \$%* %&! \$%	6F57?9H:FCBHG95H8@L!>D	&
%&	* \$\$! \$%* % ! \$%	6F57?9HG95H756!HCD!8@L!>D	&
%	* \$\$! \$%* &(! \$%	HF ∔ !G95 H7 5 6!65 G9!8 @L!>D	%
%(* \$\$! \$%* &+! \$%	7 C J 9F!7 56@9!G95H7 56!8@L!>D	%
%)	*\$% \$\$+' (!\$%	5779GG18CCF1G95H75618@L1>D	&
%*	*\$\$!\$%*&*!\$%	57FM@=7!K=B8CK!G95H756!8@L!>D	%
%+	* \$\$! \$%* &) ! \$%	6F57?9H7CFB9F!G95H756!8@L!>D	&
%	*\$\$!\$%% (!\$%	7 @Ð!@98!HA C @8	(
%	*\$\$!\$%(,%1\$%	>D!))!DC @W7 5F6!G95H65G9	&
&\$	&)7A!K< ≠1 9!@98!GHF€	&)Wa : YI]VY @98 Ghf]d fK \]hYŁ	&
&%	%%\$7A!F; 6!@98!G+F ₽	*\$7A!K< ≠+9 !@98!GHF⊕	&
&&	@98!HAC@8!(\$-B	@98!HAC @8!(\$=B	&
&'	* \$*!\$%\$-' !\$%	8975@F95F!G95H756!8@L!>D	%
&(* \$*!\$%\$- &!\$%	8975@F≑ <hg-89!g95h756!8@l!>D</hg-89!g95h756!8@l!>	%
&)	* \$*!\$%\$- % \$%	8975@@9:HG-89!G95H756!8@L!>D	%
&*	* \$\$!\$%) &*!\$%	; F=@@!KCC:9F!>D!))	%
&+	&!%% !\$\$!\$\$!\$\$,ïKccZYfz̈(C∖ažDc`mlA]WU7cbY	%
&,	:C5A BGI@5H€B	:C5A BGI@5H€B	&
&-	* \$' !\$\$+(- !\$%	>D!8-€HCFH€B!; 5H9!@C; C!J57:CFA	%

89@L9!>IF5GG=7 D5F?!ACH€B <u>G95H7565GG9A6@M</u>





(%&)

%





++19A BC"

%

&

*

+

,

-



∔19 Α BC"	D5FHBLA 69F	8 9G7 F ÐH€ B	E HM
%	* \$\$! \$%* \$&! \$%	6F57?9H7IFH5₽B!8@L!>D	&
&	* \$\$! \$%* \$' !\$%	6F57?9H7IFH5-B!FC8!8@L!>D	(
i	* \$\$! \$%* +&! \$%	DJ7!"+)L‰@!D⊕99!B⊕D@9!G7<,\$!ADHADH	(
(* \$\$! \$%* ++! \$%	DJ 7 !"+) !H≮F 95 8 98 ! 7 5 D!: DH	(
)	* \$\$! \$%* +*! \$%	DJ 7 !"+) !H< F 95 8 98 ! 7 C D@B; !: DHI : DH	(
*	*\$\$!\$%*\$(!\$%	6F57?9H7IFH5-B!:FCBH8@L!>D	%
+	* \$*! \$%\$+&! \$%	7IFH5=B!@9:H8@L!>D	%
I	*\$*!\$%\$+'!\$%	7 FH5 =B!F≑ <h8@l!>D</h8@l!>	%
-	*\$*!\$%\$+%\$%	7 I FH5 -₽!HC D!8@L!>D	%
%\$	* \$\$! \$%* +' ! \$%	DJ 7!"+) L') @ !7 GHC A	&
%%	"+)!jY`Wfc!UX\Yg]jY!gff]d!V`UW_! <cc?< td=""><td>"+)!J9@7FC!58<9G=J9!657?!6@?!<cc?< td=""><td>%</td></cc?<></td></cc?<>	"+)!J9@7FC!58<9G=J9!657?!6@?! <cc?< td=""><td>%</td></cc?<>	%
%&	*\$\$!\$%*+(!\$%	DJ 7 !"+) L) , @ !7 I GHC A	%
%	* \$\$! \$%* +) ! \$%	DJ 7 !"+) !Hk F 95 8 98 ! 9@6C K !: DH : DH	&
%(* \$\$!\$%* +, !\$%	") \$!9A H7 C B8I 井DĐ9!&' "+) @	&

89@L9!>IF5GG=7 D5F?!ACH€B @7 8 5 GG9A 6@M

=	D5FHBLA 69F	8 9G7 F ÐH€ B	e hMi
	\$\$!\$%&\$!\$%	6F57?9H:F5A9! <cf₽n))@78!5@9bg< td=""><td>&</td></cf₽n))@78!5@9bg<>	&
	* \$\$! \$%&\$) ! \$%	6F57?9H:F5A9!J9FH))@78!5@-9BG	&
	%S))\$S]adYf]U`SUggmSUga)) ‴?CFH9? @78 5GGM	%
	* \$\$! \$%% +! \$%	6F57?9HACIBH))@78!CD9B!:F5A9	(
	* \$\$!\$%%,!\$%	; @5GG(< <i>-9</i> @8!))@78	%
	* \$\$!\$%) - ' !\$%	GHFIH@78!>D!8@L	&
	* \$\$! \$%) - &! \$%	@78!G=89!6F57?9H>D!8@_	&
	ZcUa HJdY!∖cfn	"&) L ")\$L (+"+(@; ∶C 5A H5D9	&
	ZcUa HJdY!jYfh	"&) L ")\$ L &- "\$\$@ :С5А НБD9	&





HC [•]8 F ⊕ [•]D5 B

89@1L9!>1F5GG=7 D5F?!ACH€B <u>5 F GIVGH9A 5 GG9A 6@M</u>

∔19 A BC"	D5FHBIA 69F	8 9G7 F ÐH€ B	E HM
%	7?8!K ' \$\$\$!, B!K !:%	F9; I@5HCF#: =@H9F1:7?8!K'\$\$\$!,B!K1:%	%
&	7?8!6''\$	6F57?9H:CF!7?8!K '\$\$\$	%
I.) ++-?‰*	DIG HC!7CBB97H585DH9F!'#, "!H69!C8'L'%#("BDHA5@9</td <td>&</td>	&
() %\$)) ? %(,	DIG HC!7CBB97HKM9?!:∔HBB;!'#,″!H69?C8</td <td>%</td>	%
)) %%%? &' (DIG HC!7CBB97H-\$!9@6CK!'#, "H69!C8!%#("BDHA5@9</td <td>%</td>	%
*	* +% ? +&	<cg9!7cid@b; !="" #(<="" td=""><td>%</td></cg9!7cid@b;>	%
+	"&) =8 'L '"", C 8 '7 @95 F ' DC @MH 69'!`)	"&) =8 `L `"",C 8 `7 @95 F `DC @MH 69``!`A 7 _) * (, ? +%	%
1	"&) =8 'L '"", C 8 '7 @95 F ' DC @MH 69!%	"&) =8 `L `"",C 8 `7 @95 F `DC @MH 69'!`A 7 ౖ) * (, ? +%	%
-	"&) =8 'L '"", C 8 '7 @95 F ' DC @MH 69'!`&	"&) =8 `L `"",C 8 `7 @95 F `DC @MH 69'!`A 7 ౖ) * (, ? +%	%
%\$	"&)=8 'L '",C 8 '7 @95 F ' DC @MH 69'!'	"&) =8 `L `"",C 8 `7 @95 F `DC @MH 69``!`A 7 _) * (, ? +%	%
%%	"&)=8 L`"",C8 7 @95 F` DC@MH 69'!("&) =8 'L '"" , C 8 '7 @95 F DC @MH 69'! ') * (, ? +%	%
%&	* \$\$! \$%* &% \$%	6F57?9H8F⊕!7CBB97HCF!8@L!>D	%
%) %\$)) ?)	DI G HC !7 C B B 97 H: +++B; !6F 5 GG! #, "</td <td>%</td>	%

89@L9!>IF5GG=7D5F?!ACH€B 7 C A DF9GGC F5GG9A6@M

			_
∔−9A BC"	D5 FHBI A 69F	8 9G7 F	EHM
%	75H&\$%&5@758	75H7CADF9GGCF!5GGM	%
&	* \$\$! \$%* '&! \$%	6F57?9H7CADF9GGCF!8@L!>D	%
	* \$% \$\$+&, !\$%	D5B9@47CADF9GGCF!8@L!>D	%
(* \$\$! \$%* +% \$%	7 CADF9GGCF!H5B?!6F57?9H>D! 8@L	&
)	DfY ZY ffY X `K]X Y `: K `\$"&)	%#(‴:@5HK 5G<9F	(
*	<: 6C @H\$"&)!&\$ %") \$"+)!B	%#(!&\$`L`%)\$@_`<<`6C@H	(
+	<: 6C @H\$"&)!&\$ \$"+) \$"+)!B	%#(!&\$`L`"+) @ `<<`6C @H	*





89@L9!>IF5GG=7D5F?!ACH€B <u>A5B:C@85GG9A6@M</u>

+19 A BC"	D5 FHBI A 69F	8 9G7 F ÐH€ B	E HM
%	* \$\$! \$%) %+! \$%	6fUW_Yh!7?8AUb]ZcX7JU`jYg	%
&	A (?6' ' \$!\$, !\$(!87 ‰J	A 5B≑C @8!GH5H€ B	%
	%&% H%&	Bc]gY'FYXiWhjcb'Al::@9F'fl#, 'BDH A5@9Ł	&
() ++- ?%\$-	DIG HC!7CBB97H:+HB; !:CF!%#("</td <td>(</td>	(
))\$+,)?&'%	AYX]ia !DfYggifY`6fUggiH\fYUXYX`D]dY :]hh]b[ž'#,`Å5@9`L'%#(`:9A5@9I<9L! F98I7=B; !6IG<-B;	%
*)\$+,)?&&%	GH99@t<9L!GC7?9HD@t;!"&)!ADH	(
+) ++-?%%	DIG HC!7CBB97H: +H+B; !"&)H 69℃<br "", BDHA5@9!BM@CB	%
,	((*\$)?&''	GH99@<<9L!GC7?9HD@+;!''',!BDH	&

%

*

ø

89@L9!>IF5GG=7D5F?!ACH€B G9BGCFD5B9@5GG9A6@M

*

++19 A BC"	D5 FHBI A 69F	8 9G7 F ÐH€ B	e hmi
%	*\$% \$\$+')!\$%	D5B9@1G9BGCF!KCC8!8@L!>D	&
&	* \$*!\$%\$- *!\$%	8 97 5 @ G9B GC F ! D5 B 9@ 8 @ L ! >D	&
'	* \$\$!\$%) - +!\$%	98; 9!DFC H97 HC F!G9B GC F!D5 B 9@48 @L!>D	&
(* \$\$! \$%* &&! \$%	75H7 G9BGCF!D5B9@48@L! D	&
)	*\$\$!\$%) - *!\$%	<=B; 9!G9BGCF!D5B9@48@L!>D	&
*	*\$\$!\$%)-,!\$%	F9H5 +B9F!G9BGCF!D5B9@8@L!>D	&

% &

&

R

(%)

89@L9!>IF5GG=7`D5F?!ACH€B 7 C B B 97 HC F`D5 B`5GG9A 6@M

∔19 Α ΒC"	D5FHBIA69F	8 9G7 F ÐH€ B	e hM
%	* \$\$!\$%) - (!\$%	D5B!7CBB97HCF!8@L!>D	%
&	* \$\$! \$%* &\$! \$%	GIDDCFH7CBB97H6F57?9H8@L!>D	%



∔19 Α BC"	D5FHBIA69F	8 9G7 F ÐH€ B	e hm
%	* \$\$!\$%* &' !\$%	D@5H9!GD95?9F!8@L!>D	%
&	&!%%\$!\$\$!\$\$!\$\$\$)"&):i``FUb[Y`GdYU_Yf	%
I.	* \$' !\$\$) ' , !\$%	@98`GdYU_Yf`6YnY``!`A]XfUb[Y`f()`WaŁ	%
(* \$\$!\$\$* +' !\$%	GdYU_Yf; f]``!`)!%#(″	%
)	- +) &* 5 \$))	6`]bX`F]jYh8caYXž%#, ~~8]Už"%, ~1"&)\$~ AUhYf]U``H_ž6`UW_	(
*) \$\$!\$\$%&)!\$%	@98 Grfjd f() Wa ŁF; 6	%
+	*\$*!\$\$*)\$!\$%	88(&`GdYU_Yf`6YnY``A]ffcf`fl@YZh/``F][\hL	%

89@1L9!>IF50G=7 D5F?!ACH€B GD95?9F 5GG9A 6@M



	7 F!D <a !'="" !7<="" \$"+)="" &i="" g`\$"%="" i="" th=""><th>%\$!'&L"+)@6@?!HD!6<</th><th>(</th>	%\$!'&L"+)@6@?!HD!6<	(
	AG <lbih\$"%\$!'&!gb< th=""><th>%\$!'&`<9L`BIH</th><th>(</th></lbih\$"%\$!'&!gb<>	%\$!'&`<9L`BIH	(
	** [*] ***********************		%
a	÷ < H98 K C C	:9F 5 GG9A 6@	M

∔19 Α BC"	D5FHBLA 69F	8 9G7 F ÐH€ B	e hm
%	*\$'!\$\$\$'-!\$%	%(")!]bKccZYf7cbY	%
&	*\$, !\$\$\$&)!\$%	GdYU_Yf; f]``!`*")]bfBcaYŁ	%
	, \$+!\$\$\$\$&!\$&	KccZYfGdYU_Yfz*")]b(`c\ag	%
() \$\$!\$\$\$&) !\$%	@98°@[\hGhf]dž; < GdYU_YfUggm	%
)	7 F!D <a \$"+) \$"+)!7<="" &="" g`\$"%!'="" td=""><td>%\$!' &L"+) @ `6@?!HD!6<</td><td>(</td>	%\$!' &L"+) @ `6@?!HD!6<	(
*	A G <lbi \$!'="" &!g!b<="" h\$"%="" td=""><td>%\$!' &`<9L`BI H</td><td>(</td></lbi>	%\$!' &`<9L`BI H	(
+			%



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	603-00760-01	JP-DINO-MARQUEE-PAN-VACFORM	1
2	606-01084-01	JP Dino Marquee Translite	1
3	600-01580-01	JP Dino Marquee PETG	1
4	500-00162-01 (20 CM)	White Flexible LED Tape, w/ FOAM	2
5	500-00162-01 (25 CM)	White Flexible LED Tape, w/ FOAM	2
6	500-00162-01 (30 CM)	White Flexible LED Tape, w/ FOAM	2
7	500-00162-01 (35 CM)	White Flexible LED Tape, w/ FOAM	3
8	500-00162-01 (40 CM)	White Flexible LED Tape, w/ FOAM	3
9	500-00162-01 (45 CM)	White Flexible LED Tape, w/ FOAM	1
10	500-00162-01 (50 CM)	White Flexible LED Tape, w/ FOAM	2
11	500-00162-01 (65 CM)	White Flexible LED Tape, w/ FOAM	1
12	600-01473-01	JP-55-STRUT-DINO-HEAD	1
13	600-01474-01	JP-55-COVER-STRUT	2
14	600-01581-01	JP-55-BRACKET-FRONT-DINO-HEAD	2

JURASSIC PARK-55-ENVIRONMENTAL JP-DINO-MARQUEE ASSEMBLY



ITEM NO	D. PART NUMBER	DESCRIPTION	QTY.
1	603-00749-0	603-00749-01-DISTORTION-ASSY	1
2	601-00718-01	JP-GATE-LOGO-VACFORM-PANEL	1
4	600-01579-01	JP-55-BRACKET-GATE-LOGO	1
5	60CM-WHITE-LED-STRIP	60CM-WHITE-LED-STRIP	3
6	30CM-WHITE-LED-STRIP	30CM-WHITE-LED-STRIP	2











89@L9!>IF5GG=7.D5F?!ACHEB ACHCF7CBHFC@@9FD765GG9A6@M

∔1 9A BC"	D5FHBLA 69F	8 9G7 F ÐH€ B	e hMi
%) \$\$!\$\$%((!\$'	Ach]cb⁻7cbhfc`⁻D76	%
&	* \$\$!\$%*% !\$%	ACHCF!7CBHFC@D76!6F57?9H	%
I	7 UV`Y '7 `Ua dS+) \$	7 U`Y 7 `Uad'' #(~žGWfYk Acibh	(



89@1L9!>1F5GG=7D5F?!ACH€B <u>5ADD765GG9A6@M</u>

∔19 A BC"	D5FHBIA69F	8 9G7 F ÐH€ B	e hmi
%	* \$\$! \$%* %+! \$%	GIF9!5AD!D76!6F57?9H	%
&) \$\$!\$\$% %\$%	GIF9!5AD!6C5F8	%





89@1L9!>1F5GG=7D5F?!ACH	€ B
F€!; I B!GI 6K C C :	9F
<u>D7 6!5 GG9A 6@M</u>	

∔19 A BC"	D5FHBIA 69F	8 9G7 F ĐH€ B	e hMi
%	*\$\$!\$%)\$%	F€`Acibh]b[`DùlhY`fk#'Ach]cb` 7cbhfc``D76Ł	%
&) \$\$!\$\$\$(\$!\$%	F€!VcUfX	%
1) \$\$!\$\$% (!\$%) Jž) 5 °Gk]hWN]b[FY[i`Uhcff1%&J`]bdihL	%

0 /G E /// 1 3 004 D31 I M CTR D			
57 B @9HD @5H9 5 GG9A 6@M			
	r		_
∔19 A BC"	D5 FHBI A 69F	8 9G7 F ÐH€ B	e hm
%	*\$\$!\$%,(!\$%	57 8ciVY!∌YhDUhY	%
&	DckYfəbƳh FYWYdhUWY	–97 `5dd`]UbWY ÷b`YhžGWfYk!cb`Acibh]b[ž ∶fcbhGJXYžEi]W_!WcbbYWhž%\$5	&
ı	H!*%%%\$5	%\$5.7]fWt]n6fYU_Yf2CbUd!]oʻhmdYž ∶igY∖c`XYfghmYž%dc`Y`fGW\ifhYf . ((\$("\$\$\$(Ł	%
(H!*%%)5)5!7]fWI]n6fYU_Yf2ïCoUd!]ommdY2 :igY\cXYfgmnY2ï%dcYifGW\ifhYf . ((\$("\$\$\$+Ł	%
)	F]b['UbX GdUXY' Hcb[i Y HY fa]bU`	F]b[`UbX`GdUXY`Hcb[iY`HYfa]bU``f(,` GMfYkŁ	(
*	% ' &!' ' !%&	57!GK ++17 %)5AD!%2)J!<9=65B8!9@97H</td <td>&</td>	&



(%)

89@191>1E5GG=7D5E?1ACHEB

Operator's Manual NOTES:

Motion Maintenance				
Interval	Item	Details		
	Inspect safety bellows.	Make sure the safety bellows are fully secured and are not damaged (cuts, breaks, etc.) in any way.		
	Inspect cabinet ventilation.	Verify that all cabinet fans are running. Verify that no obstructions block the ventilation fans or holes.		
Daily / Often	Inspect leg levelers.	Verify that all leg levelers are fully extended and that the cabinet is secured in place.		
	Inspect motion platform fasteners.	Verify that no fastener on the motion platform is loose. Inspect the power cords for cracks or other		
	Inspect cabinet AC power cords.	issues, replace if any abnormalities. Verify that the AC power cords are fully seated in the cabinet AC plug receptacles.		
	Discard water in drip tray.	If in a humid location (>50%RH), you may need to empty the drip tray more often. Do not let drip tray overflow!		
	Vorify process actings	Verify that the digital pressure gauge (test menu) matches the analog gauge on the filter/regulator. Verify that the filter/regulator pressure is within the acceptable range.		
Weekly	Verify automatic compressor water discharge solenoid.	Verify that when the compressor motor starts running, the automatic compressor water discharge solenoid opens for a few seconds. When the solenoid opens, you will hears a loud burst of air expelled into the drip tray.		
	Verify "Motion Stop" button.	Using the test menu, verify that the "Motion Stop" button is working properly.		
	Inspect all cabinet fasteners.	Verify that no fasteners are loose.		
Every 6 Months	Inspect compressor air intake filter - replace as needed.			
	Inspect filter/regulator filter - replace as needed.			
	Replace compressor air intake filter.	Replace if 12 or more months have elapsed since last replacement.		
Every 12 Months	Service filter/regulator.	Replace filter and clean plastic water bowl if 12 or more months have elapsed since the last servicing.		
	Inspect compressor, repair as needed.	See the guide: "Troubleshooting - Compressor Inspection"		

