

# Big Dög!™

## ARCADE GAME MANUAL

### ! WARNING

Be sure to read this Operation Manual before using your machine to ensure safe operation.



© 2011 Bob's Space Racers Incorporated  
427 15<sup>th</sup> Street, Daytona Beach, Florida 32117  
Tel: (386) 677-0761 Fax: (386) 677-0794

**Table of Contents** (online viewers click on "Back to TOC" to return to the Table of Contents)

<b>MODEL VIEW</b> .....	<b>1</b>	<b>MAINTENANCE AND</b>	<b>.....19</b>
<b>IMPORTANT SETUP</b>		<b>TROUBLESHOOTING</b> .....	<b>10</b>
<b>INFORMATION</b> .....	<b>3</b>	Quick Troubleshooting Chart:.....	<b>12</b>
<b>INTRODUCTION</b> .....	<b>4</b>	<b>DETAILED</b>	
Overview and Technical Features:		<b>TROUBLESHOOTING AND</b>	
.....	<b>4</b>	<b>REPAIR</b> .....	<b>13</b>
Overview .....	<b>4</b>	<b>MECHANICAL REPAIR</b> .....	<b>14</b>
Features.....	<b>4</b>	Hammock Replacement.....	<b>14</b>
Game Play .....	<b>4</b>	Pivot Mechanism Ground Wires	
Maintenance .....	<b>4</b>	Replacement.....	<b>15</b>
<b>IMPORTANT SAFETY</b>		<b>ELECTRONIC / ELECTRICAL</b>	
<b>INFORMATION</b> .....	<b>5</b>	<b>REPAIR</b> .....	<b>16</b>
<b>SET UP</b> .....	<b>5</b>	Main P.C. Board Replacement..	<b>16</b>
<b>PROGRAMMING OPTIONS</b> .....	<b>6</b>	Score Sensor Replacement.....	<b>16</b>
Steps for Programming .....	<b>6</b>	Playfield Light Replacement.....	<b>17</b>
<b>GAME OPTION DETAILS</b> .....	<b>7</b>	<b>PARTS LIST</b> .....	<b>18</b>
<b>ERROR MESSAGES</b> .....	<b>9</b>	<b>PLUNGER BONE ASSEMBLY</b>	

[www.bobsspacracers.com](http://www.bobsspacracers.com)

May 2011

## MODEL VIEW

[Back to TOC](#)

## BIG DOG™ ARCADE GAME



BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

## SPECIFICATIONS

[Back to TOC](#)

### Power Supply Rating:

120VAC  $\pm$  10%, 60 Hz  $\pm$  3 Hz.

(Note: Please refer to the label on the game for the actual voltage).

### Power consumption:

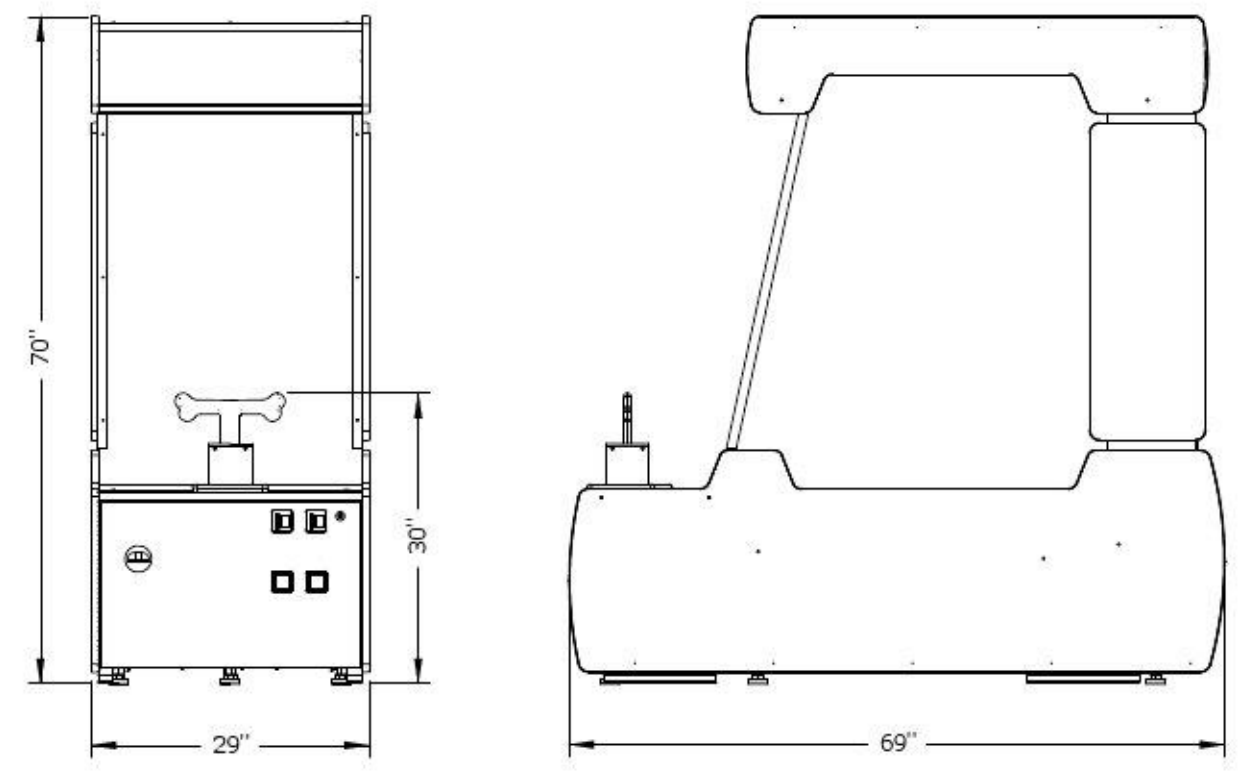
120 W (Min) to 150 W (Max)

### Dimensions:

75" L x 34" W x 76" H

### Weight:

597 lbs



## IMPORTANT SETUP INFORMATION

[Back to TOC](#)

**CENTER LEVELER ADJUSTMENT** – The center foot leveler adjustment is critical to the proper operation of the game. The purpose of this adjuster is to control cabinet vibration to prevent damage to electronic and other components in the game. When the adjuster is properly contacting the floor, any force from pressing down the bone that is transmitted through the pivot mechanism will be transmitted directly to the floor and NOT the bottom of the cabinet. It is important to make sure the weight of the game is equally distributed across all 5 legs to avoid rocking and damage.

**CENTER LEVELER**



To ensure the proper operation and longevity of your game, make sure that the center leveler located directly under the pivot mechanism is FULLY extended to the floor. If not, turn the adjusting nut until the leveler is making FULL contact as shown in the illustration.

**DOOR OPERATION** – It is important for the cabinet of the game to be squared up for the front door to open and close smoothly. The squareness of the cabinet is adjusted at the factory; however the floor may not be level where you are installing the game. Check that the space across the top edge of the door is even all the way across the front as shown in the illustration. If it is not, there is threaded adjustment rod inside the game to ensure that the game is square. Loosen and adjust the lower nut set in or out until the cabinet door operates smoothly and the space across the top is even.

**FRONT DOOR**



**ADJUSTMENT ROD**



## INTRODUCTION

[Back to TOC](#)

### **Overview and Technical Features:**

#### **Overview**

Thank you for purchasing the new Big Dog™ arcade game from Bob's Space Racers®. Your new game will provide you and your customers with years of fun and satisfaction. Bob's Space Racers® products are the result of years of arcade and gaming experience.

#### **Features**

**CABINET DESIGN** – The cabinet has been manufactured from only the best marine grade laminated plywood, powder coated heavy gauge steel and other available materials. All materials going into this game have been thoroughly tested to assure only the finest quality and best results for our customers. All materials are carefully selected to provide the best possible performance for which they are designed.

**ENGINEERING** - Your new Big Dog™ game has been designed and engineered using state of the Art 3D solid modeling technology. This assures the best possible design possible. Advanced structural analysis is used to determine the strength and durability of key components to assure years of reliability.

**ELECTRONICS** - The electronics incorporated are proven industrial grade components. Combined with state of the art software design, the implementation is second to none. Combining an elegant design with rock solid reliability, you can be confident that your game will last for years of service.

**PROGRAMMABILITY** - The game incorporates unique self adjusting difficulty levels to aid all players in achieving good play results regardless of their skill level. This helps to make the game more fun and competitive for people of all ages, yet keeps the net earnings consistent regardless of player skill.

**COLORFUL GRAPHICS** - The look and feel of the game has been tailored to fit a wide variety of players, from the youngest kids to adults. The resulting broad player appeal will help to maximize your earnings.

#### **Game Play**

1. The player begins by inserting enough money into the game to earn a credit and automatically start the game.
2. The game will briefly instruct the player before beginning the game. (If the player is impatient and pushes the bone button down, the instructions will be bypassed and the game will begin).
3. (Once the game begins, the player will be using or pushing down on the bone handle to launch balls into the Dog's mouth.) When the player pushes down on the bone handle, the balls inside the game will be thrown up into the air and into the mouth of the Dog character.
4. The object of the game is to "Feed the Dog". As the player feeds the dog, the food passes through and accumulates points.
5. If the player can feed the dog 40 balls before the specified amount before time runs out, they win the big Bonus Ticket Prize. If not, they win a pre-determined amount of tickets based on how many balls they did get through the dog's belly in the allotted time.

#### **Maintenance**

Due to the physical play of the machine, some periodic maintenance is required.

**CLEANING** - Clean the outer surfaces of the game with a commercial spray type cleaner. DO NOT however, use glass cleaner or commercial sprays on the marquee graphic panel. Use a good quality spray type furniture polish to keep the game looking good.

Vacuum the inside of the game occasionally to help keep the dust and ticket debris off of all the optical sensors.

**NOTE: Refer to the weekly preventative maintenance schedules to avoid unnecessary game wear and keep the game in its best condition.**



BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

## IMPORTANT SAFETY INFORMATION

[Back to TOC](#)

**WARNING: Unplug the game from the AC wall receptacle when servicing this product. Failure to do so could result in serious injury to yourself or others.**

Use only a GROUNDED AC receptacle. Failure to do so could result in improper operation or damage to the game and could void your warranty. If you are unsure that your AC receptacle is properly grounded, have a qualified electrician perform this check for you.

Always be sure power to the game is turned off when doing even routine maintenance. Otherwise moving parts could activate unexpectedly causing injury.

This product is heavy, necessitated by the design. When moving this game, be sure you have adequate help. Use a suitable dolly or hand truck where practical. Use back support when needed.

## SET UP

There is very little to do in the way of set-up in the game.

1. Be sure that the game is on a level surface. If the game is rocking on the floor adjust the legs to remove the rocking of the game. It is very important that the weight is distributed evenly to all the legs. This will help avoid damage or unnecessarily large amounts of weight and pressure on only one or two of the legs.
2. Be sure to plug the game into the proper A.C. GROUNDED receptacle. Do not use long extension cords unless absolutely necessary and if so, be sure it is a heavy duty cord of at least 16 Ga. and no longer than 20 ft. Check the label on the back of the game to make sure the power requirements of the game match that of your location.
3. Turn the game on and check to be sure there are no unusual sounds and that everything appears to be working correctly.

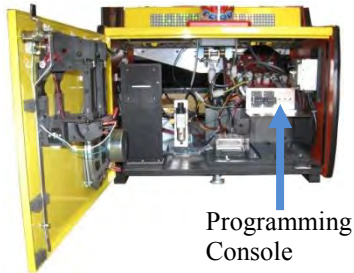
# PROGRAMMING OPTIONS

[Back to TOC](#)

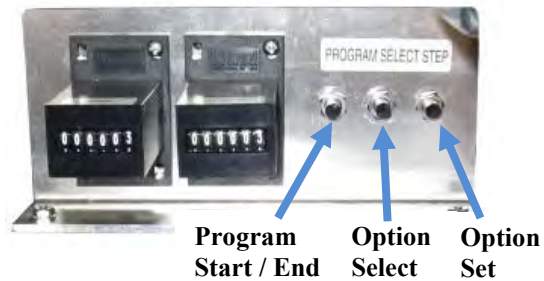
The game option settings are readable only by the game operator for the purpose of customizing the game to suit their location.

## Steps for Programming

The Programming Console is located inside the front coin door assembly.



Programming Console



Program Start / End    Option Select    Option Set

1. Press the "PROGRAMMING" button once to enter the programming mode. The game display will show the first option and option setting as shown below.



Program Start Button



First game Option

Option Setting

2. Press the "SELECT" button to scroll through the various options that are on the left-hand display.

### Various Options Displayed

Volume	Automatic Difficulty
Coins Per Credit	Minimum Tickets
Attract Mode	Balls Per Ticket
Game Type	Bonus Ticket Value
Game Difficulty	Reset

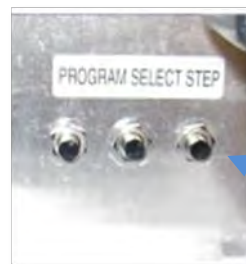
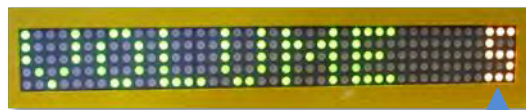


Option Select Button

3. Press the "STEP" button to scroll through the various settings for each option that are shown on the right-hand display.

### Option Settings with Default Settings ( )

<b>Volume:</b> [VOLUME] 1-6 (5)	<b>Minimum Tickets:</b> [MINTX] 0-9 (3)
<b>Coins Per Credit:</b> [COIN/CR] 1-8 (1)	<b>Balls Per Ticket:</b> [BPT] 0-9 (6)
<b>Attract Mode:</b> [ATTRACT] 0-9 (5)	<b>Bonus Ticket Value:</b> [JVAL] 0-500 (250)
<b>Game Type:</b> [GAME] BELY-SCR (BELY)	<b>Reset:</b> [RESET] 0-1 (0)
<b>Game Difficulty:</b> [DIFF] AUTO, EASY, NORM, HARD, EXP, PRO. (AUTO)	



Option Settings Button

4. Press the "PROGRAMMING" button once again to EXIT the programming mode. Your display will read "Version x.xx" and save all of the new values to the games memory.



Display on Programming Exit

## GAME OPTION DETAILS

[Back to TOC](#)

Below is detailed information for the operation of each of the programming options.

### VOLUME:

This option controls the sound volume from the speaker on the front door of the game. The range for this option is **1-6** (6 being the loudest). The default value for this option is 5.

### COINS PER CREDIT (COIN/CR):

This option determines how many coins are needed to earn a credit. Each credit will automatically start a game. The range for this option is **1-8**; the default value for this option is 1.

**NOTE:** There is no "free play" option for this game. If free play is desired, set the game to 1 coin per credit and install a momentary contact push button to start the game.



BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

## ATTRACT MODE (ATTRACT):

This option determines how often an audible barking sound will be heard from the game. The range for this option is **0-9** (minutes). Setting a **0** shuts the attract mode off. The default value for this option is **5**.

## GAME TYPE (GAME):

This game has the option of being set for 2 different types of game play. The first game option is the **BELY** (Fill the Belly) mode. In this game, the player tries to fill the Dog's belly before time runs out.

The second game option is the **SCR** (Best Score) mode. In this game, the player tries to get the highest score possible before time runs out. In this version, the belly never fills up and the ball gate remains open.

**NOTE: We recommend the Fill the Belly mode of play, but supply both versions to allow the operator more than one type of game play for special applications.**

The default value for this option is **BELY** (Fill the Belly mode).

## GAME DIFFICULTY (DIFF):

This option determines how hard the game is for the player to play. The range for this option is as follows:

**AUTO** - Automatic difficulty

**EASY** - The easiest setting. Used for small children

**NORM** - Normal difficulty

**HARD** - For mostly adult clientele

**EXP** - For all adult clientele

**PRO** - For professional grade players

The default value for this option is **AUTO**.

**AUTOMATIC DIFFICULTY** - Whenever practical, we highly recommend using the automatic difficulty setting. This mode is provided to help the game operator and customer alike. The way the game works is that it always begins at the highest degree of difficulty. The game then monitors the score progress in relationship to the time left on the game. If the game determines that a player cannot win based on their score and time left, the game will automatically give the that player more time to give them a chance to win. The game will do this twice during the course of the game. The adjusted time is visible to the game player on the time left indicator.

This mode is used to aid players of a lesser degree of skill. It is intended to make the game fairer to less talented players, yet keep the amount of winners consistent. By helping the less skilled players to win, the win percentages are kept consistent, but not excessive since payout percentages are based on the skilled player to begin with.

## MINIMUM TICKETS (MINTX):

This option determines the minimum amount of tickets the player will receive for playing regardless of score. The range for this option is **0 - 9**, the default value for this option is **3**.

## BALLS PER TICKET (BPT):

This determines how many balls must be scored to pay out 1 ticket. The range for this option is **0 - 9**. The default value for this option is **6**. (1 ticket for every 6 balls scored).

**BONUS TICKET VALUE (JVAL):** This option determines the amount of bonus tickets paid out if the player wins the game. The range for this option is **0-500**. The default value for this option is **250**.

**NOTE: When the game is won, the bonus ticket value is paid out, and any other ticket payouts for the game are ignored.**

**ALERT: If the games BONUS TICKET VALUE (AKA Jackpot Value or JVAL) has been set to a value of 0, no tickets are awarded but a free game is awarded as the prize for scoring the jackpot. If you want tickets to be offered you must set the BONUS TICKET VALUE (AKA Jackpot Value or JVAL) to at least a value of 10.**

BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

**RESET:** *(Default programming value - reset)*

This option is used as a convenient way of quickly re-setting all of the programming values to their factory default. This is also a handy option to try if the game memory has somehow been corrupted. The value for this option is **0-1**. The default value for this option is **0** (off). Change to **1** to reset the values.

STANDARD ARCADE OPTIONS	
VOLUME	5
COIN/CR	1
ATTRACT	5
GAME	BELY
DIFF	AUTO
MINTAX	3
BPT	6
JVAL	250
RESET	0

**ERROR MESSAGES**[Back to TOC](#)

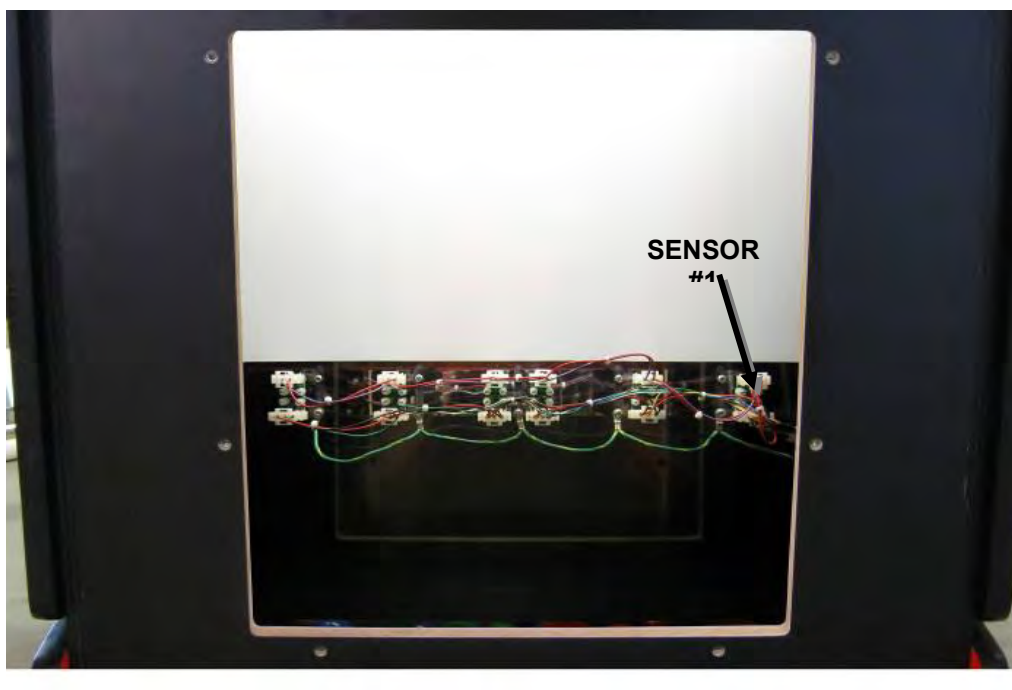
If the game displays a **GET HELP** message, press the programming button to read the error messages.

BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

## **SEN (Sensor error)**

This message displays the score sensor that is faulty. The sensors are numbered 1 thru 6 from the left-hand side of the game as viewed from the front.



## **MAINTENANCE AND TROUBLESHOOTING**

[Back to TOC](#)



## WARNING

For your safety and to reduce risk of damage to your game read the Important Safety Information on page 5 before attempting any troubleshooting procedure.

## TROUBLESHOOTING PHILOSOPHY

When troubleshooting any product, certain general guidelines should be followed.

1. Always check to be sure that your game is turned on. Be sure that all of the fuses in the game are functional and check to see that the AC voltage is in the proper operating range for your game.
2. Check to be sure that all of the game harnessing is plugged in properly and that all of the pins are firmly seated in the connectors. It is always possible that a harness can be damaged by rough shipping or moving.
3. Check game harnessing to be sure that none of the wires have become damaged. Using a handheld multi-meter, check continuity of the wires to make sure they are not broken.
4. Check for obvious damage to any P.C. Boards or electrical components.
5. If you have multiple games or multiple parts on a game, change or exchange the parts and see if the problem goes away or moves to another location. This way you can quickly eliminate certain parts as being the problem with the game.
6. When changing electronic or electrical components, ALWAYS turn off and unplug the game.
7. Check to see that all power supplies are delivering the specified voltages to the P.C. Boards and components as shown in the manual.

## TROUBLESHOOTING

If the rubber ball hammock does not move, be sure to check the following for possible problems in this order:

1. Check game for proper power source at game and main fuse.
2. Check to be sure that you are supplying at least 90 PSI of clean compressed air to the game and that the pressure regulator is set for 90 PSI (pounds per square inch). The air line must be connected to the pressure regulator inside the game.
3. Check all wiring connections and ground wires inside lower cabinet.
4. Check hand option is set to 1.
5. Check that the Push button assembly LED sensor boards are working properly. There are 2 boards on the button assembly. Each one has a test LED on it. Slowly push the button down and you should notice that the left sensor LED should flash off and back on when the button is pushed down slowly. The sensor on the right hand side should also flash the same way as the button is pushed down further. If one of the sensors LED's do not flash when the button is moved slowly, one of the sensors is either dirty and needs cleaned; or faulty and must be replaced. Both sensors must be working for the game to function properly. On a rare occasion a faulty board might be the cause.
6. If the protector diode to the air valve is bad, the air valve will not work correctly. To test for proper operation of the diode, disconnect the connector to the air valve. Disconnect the other end of the harness at the Main P.C. Board. Insert a test meter into the connector that plugs into the air valve and do a diode check. If the diode is bad, replace the diode.

BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

7. If the diode checks O.K., apply 12 volt DC to the 2 pin connector of the air valve. This should fire the air valve. If it does not, the air valve is bad. If it does fire, then there is a problem with the Main P.C. board and it should be replaced.

**NOTE: IT IS POSSIBLE THAT A BAD DIODE CAN CAUSE DAMAGE TO THE MAIN P.C. BOARD. IF REPLACING THE DIODE DOES NOT FIX THE PROBLEM, REPLACE THE MAIN P.C. BOARD ALSO.**

**COMPONENT PARTS ARE NOT SERVICED SEPARATELY. THEY MUST BE PURCHASED AS COMPLETE PARTS.**

If the game displays a "GET HELP" message on the display, press the PROGRAMMING button to check for error messages. (See the ERROR MESSAGES section on page 10 for explanations).

For detailed servicing and repair information see the full the full repair section of this manual.

### ***Quick Troubleshooting Chart:***

[Back to TOC](#)

Symptom	Possible Problem	Solution
---------	------------------	----------



BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

	<b>Power</b>	<b>Power</b>
Sound Problems -No sound -Low Sound -Intermittent Sound	Low Volume Faulty speaker harnessing Faulty speaker Faulty sound board or sound board harnessing Faulty Main P.C. Board	Check Volume Control and adjust as necessary Check connections and/or repair harnessing Check and/or replace speaker Check connections or Replace Sound Board Check and/or repair or replace Main P.C. Board
Game does not take or add money correctly	Coin switch out of adjustment Coin mech dirty or improperly adjusted Faulty Coin switch Faulty coin switch harness or connector Improperly programmed electronic mech Game improperly programmed Faulty Front Panel Board Faulty Main P.C. Board or component	Re-bend coin switch wire Clean and adjust mech as necessary Check and/or replace switch Check and/or repair harnessing Reprogram or replace electronic mech Check programming options and adjust Repair and/or replace Front Panel Board Repair and/or replace Main P.C. board
Ticket Dispenser not working properly, or no tickets being dispensed	No tickets in the game Tickets jammed in dispenser Ticket dispenser sensor blocked with debris Poor connection on the ticket dispenser Game improperly programmed Faulty ticket dispenser Faulty ticket dispenser harnessing Repair and/or replace Front Panel Board Faulty Main P.C. Board	Refill ticket dispenser and press the reset button Clear ticket jam Clean off sensor Check and/or replace- connectors Check ticket programming options Replace dispenser Check and/or repair harnessing Faulty Front Panel Board Replace or repair Main P.C. Board
Game will not start	Game power off Main fuse blown Ground wire broken or loose Power Supply problem or failure Faulty P.C. board or component	Check on/off switch and power cord Check and/or replace fuse as necessary Replace or tighten faulty ground wire Check Power Supply output and connections Repair and/or replace main P.C. board
Game stops or is stopped with nothing displayed	The power connector is disconnected. Possible faulty connection or short circuit.	Reconnect the connector securely. Check all circuitry for faulty connections or short circuits.
Game resets when hit	Ground wire broken or loose Check AC plug in at power supply	Replace or tighten faulty ground wire Insert A.C .power plug into power supply and secure
Balls will not launch into the air	Hand Program option set wrong Ground wire broken or loose Low or no air pressure Ball hammock broken Faulty valve harness or solid state relay Faulty main P.C. board	Set or reset Hand Program option to 1 Replace or tighten faulty ground wire Check air supply to game (90 PSI) Replace ball hammock Check valve harness and solid state relay Replace P.C. board
Dog Bone must be hit very hard to launch balls	Hand Program option set wrong	Set or reset Hand Program option to 1

## DETAILED TROUBLESHOOTING AND REPAIR

[Back to TOC](#)

## WEEKLY MAINTENANCE SCHEDULE

BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

1. Clean game, clean glass and Plexiglas inside and out.
2. Check balls for wear and tear. Replace as required. Ball Kit (100 assorted color): (Part #MX800450)
3. Clean inside Dogs mouth and Belly (Sensors and mirror).
4. Inspect display LED boards for proper attachment and operation.
5. Check the hammock for wear and tear (see pictures below).

### Hammock Version 2: (PART #) MX800463



6. Check hammock is secure and nuts and bolts are tight.
  - a. Tighten Bolt first.
  - b. Affix and tighten the nut down once bolt is tightened.
  - c. Adjust bolt tightness by releasing the nut slightly than tighten the bolt and re-tighten the nut.
7. Check power supply for loose hardware.
8. Check all grounding wires and connections.
9. Check speaker conditions and mounting.
10. Check coin mechanism's condition and mounting.
11. Check all electrical and mechanical components for wear.  
Be sure all components are tightened and properly adjusted.
12. Check that wiring in the game is properly secured and is not located in areas damage could occur.

**NOTE: IF COMPONENTS CONSTANTLY COME LOOSE A THREAD LOCKING COMPOUND IS RECOMMENDED.**

## MECHANICAL REPAIR

[Back to TOC](#)

### Hammock Replacement

A common service on this game will be occasional replacement of the ball hammock.

BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

**NOTE: THE MATERIAL USED IN THIS GAME HAS BEEN CAREFULLY SELECTED FOR MAXIMUM PERFORMANCE AND RELIABILITY. USE OF ANY OTHER MATERIAL WILL ADVERSELY AFFECT THE PERFORMANCE OF THE GAME AND COULD ACTUALLY DAMAGE COMPONENTS OF THE AIR LEVER ASSEMBLY. USE OF ANY MATERIAL OTHER THAN THAT SUPPLIED BY BSR GAMES, WILL CONSTITUTE A BREACH OF WARRANTY QUALIFICATIONS AND WILL VOID YOUR WARRANTY ON THOSE RELATED COMPONENTS.**

1. To replace the hammock, remove the 3 screws that hold the window retainer bracket to the top of the control panel and remove the bracket.

2. Remove the front window assembly by lifting straight up on it and then tilting it out from the bottom.

3. Remove the 5 screws that hold the front of the hammock to the lever assembly.

4. Remove the 5 nuts and bolts that hold the rear of the hammock to the metal shelf.

5. Install the new hammock to the metal shelf. Be sure that the reinforcement strip is facing up so that it clamps the hammock material to the shelf. Tighten the bolts securely, but not so much as to excessively distort the reinforcement strip.

6. Attach the front of the hammock to the lever assembly with the 5 bolts. After tightening bolts place and tighten the nuts on the back side accordingly to double lock the fasteners.

- A) Hammock placed against lever assembly.
- B) Aluminum angle bracket with rubber facing the plastic strips.
- C) Use only BSR complete assembled hammocks as replacement parts.

7. Tighten the nuts and bolts securely, but not so much as to excessively distort the reinforcement strip.

8. Test the unit for proper operation including the proper operation of the release lever.

**NOTE: IT IS CRITICAL TO THE OPERATION OF THE GAME THAT THIS INSTALLATION IS FOLLOWED CORRECTLY. IF YOU HAVE ANY CONCERNS, PLEASE CALL OUR SERVICE DEPARTMENT BEFORE PROCEEDING.**



**FRONT WINDOW**

**WINDOW RETAINER BRACKET**



**LEVER ASSEMBLY**

**HAMMOCK**

**METAL SHELF**

### ***Pivot Mechanism Ground Wires Replacement***

1. Remove A.C. power to the game.

2. Unlock and open front door.

3. Remove the nut from the top left corner of coin box.

4. Remove the nut from the pivot mechanism towards the front near the hammock.

5. Replace the nut (9) and reattach nut. **DO NOT OVERTIGHTEN THIS NUT!**

6. Remove the nut from the pivot mechanism under counter.

7. Replace the nut (8) and reattach nut. **DO NOT OVERTIGHTEN THIS NUT!**

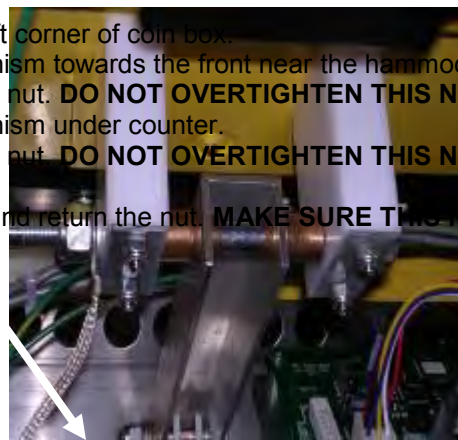
8. Reattach the nut from the top left corner of coin box and return the nut. **MAKE SURE THIS NUT IS TIGHT!**

9. Close the front door.

10. Reconnect A.C. power to the game.



**BRAIDED GROUND WIRES**



**MAKE SURE THIS NUT IS TIGHT!**

**DO NOT OVERTIGHTEN THE PIVOT MECH NUTS AND BOLTS. THEY ARE MEANT TO BE LOOSE.**

## ELECTRONIC / ELECTRICAL REPAIR

[Back to TOC](#)



### **Main P.C. Board Replacement**

1. MAKE A NOTE OF ANY CUSTOM SETTINGS YOU MAY HAVE IN THE GAME PROGRAMMING.
2. Turn off AC power and unplug the game.



**A.C.  
POWER**



**MAIN  
BOARD**

3. Carefully remove all of the connectors from the Main P.C. Board.

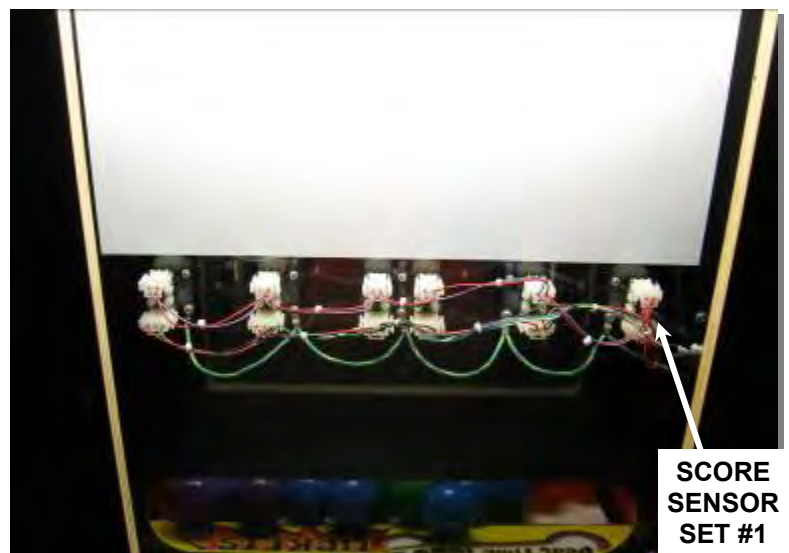
**DO NOT ALLOW THE BOARD TO BEND WHEN REMOVING OR INSTALLING THE CONNECTORS.**

4. Replace board by removing the 4 screws located at each corner.
5. Once the new board is in place re-place the 4 screws into their proper places.
6. Reattach the connectors to the Main P.C. Board.
7. Plug in the game and turn on AC power.
8. Make sure the custom settings are configured the way you originally intended.
9. Play a few games to check for proper operation.

### **Score Sensor Replacement**

**IMPORTANT: CHECK TO SEE WHAT SENSOR NEEDS TO BE REPLACED BEFORE PROCEEDING. WHEN THE GAME SAYS "GET HELP" PRESS THE PROGRAMMING BUTTON TO SEE WHAT SENSOR IS BAD. THE SENSORS ARE NUMBERED #1-#6, WITH #1 BEING ON THE LEFT HAND SIDE AS VIEWED FROM THE FRONT.**

1. Turn off AC Power and unplug the game
2. Open the back of the game by removing the 8 retaining screws around the edge of the opening.
3. Carefully remove the rear panel and set on floor.
4. Replace the sensor pair by removing the connectors and the retaining fasteners.



**SCORE  
SENSOR  
SET #1**



BOB'S SPACE RACERS® INC.

BIG DOG™ ARCADE MANUAL V1.0

5. Be sure the new sensors are installed correctly and fastened securely

DO NOT USE METAL FASTENERS AS THEY COULD DAMAGE THE SENSOR BOARDS. USE ONLY THE PLASTIC FASTENERS SUPPLIED.

More of these fasteners can be obtained through our service department.

**\*SPECIAL NOTE – SENSORS MAY ONLY BE DIRTY AND MAY NOT BE BAD. TRY CLEANING SENSORS AND REFLECTIVE AREAS TO CORRECT THE PROBLEM BEFORE REPLACING THEM.\***

## ***Playfield Light Replacement***

1. Turn off AC Power and unplug the game
2. Open the back of the game by removing the 8 retaining screws around the edge of the opening.
3. Carefully remove the rear panel and set on floor.
4. Remove the bad bulb by unsnapping the retainer clip from the holder and pressing the red lock on the fixture itself.
5. Install the new bulb
6. Assemble in reverse order.



**PLAYFIELD  
LIGHTS**



**PLAYFIELD  
LIGHTS  
(REAR)**

**NOTE: BE SURE BOTH THE RED „LIGHT RELEASE BUTTONS“ AND RETAINER CLIP ARE FULLY ENGAGED TO PREVENT THE BULB FROM FALLING OUT OF THE FIXTURE AND CAUSING DAMAGE.**



**PARTS LIST**[Back to TOC](#)**MECHANICAL PARTS**

E0800043	Bulb attachment clip
E0800044	Bulb retaining clip
EX800433	Grounded. Jumper braided
M0005012	Clevis pin
M0800036	Cash Box
M0800202	Ticket bin
M0009606	Lock, 103 key 1 1/4" thread
M0009607	Lock, 103 key 3/4" thread w/st cam
MX800461	Pivot Mechanism Air Assembly – DP AIR
MX800417	Dog Head Assembly
PX800478	Cylinder Assembly Pivot Mech, DP AIR
W0800084	Adjustable Foot
W0800408	Front window retaining Bracket
W0800460	Front window, Acrylic 1/4"
W0800461	Window, 1/4" Tempered Glass SIDE
W0800482	Plate, Support PD Bd. DP
WX800481	Plunger Bone Assembly

**ELECTRONIC / ELECTRICAL PARTS**

E0025100	12 volt mechanical counter
E0800015	Momentary contact push button
E0800040	Workhorse 6 Electronic Ballast
E0800041	PLL Compact Fluorescent Bulb
E0800042	Compact Fluorescent Bulb Socket
E0800070	6" x 9" Speaker
E0800154	Sensor, receiver
E0800165	Sensor, transmitter
E0800224	Mini Shunt connector
E0800402	Main P.C. Board
EX033525	Board Assy. Sensor, DP, PK and TRL
EX800157	Display P.C. Board (LED)
EX800415	Solid State Relay DPAIR
EX800450	Power Supply, 200 Watts, Dual ON/OFF
M0800204	Ticket dispenser (Deltronics 1275)

**CONSUMABLE PARTS**

MX800463	Hammock rubber V2-DP
MX800450	Ball Kit, 100 assorted color balls

**GRAPHICS / DECALS**

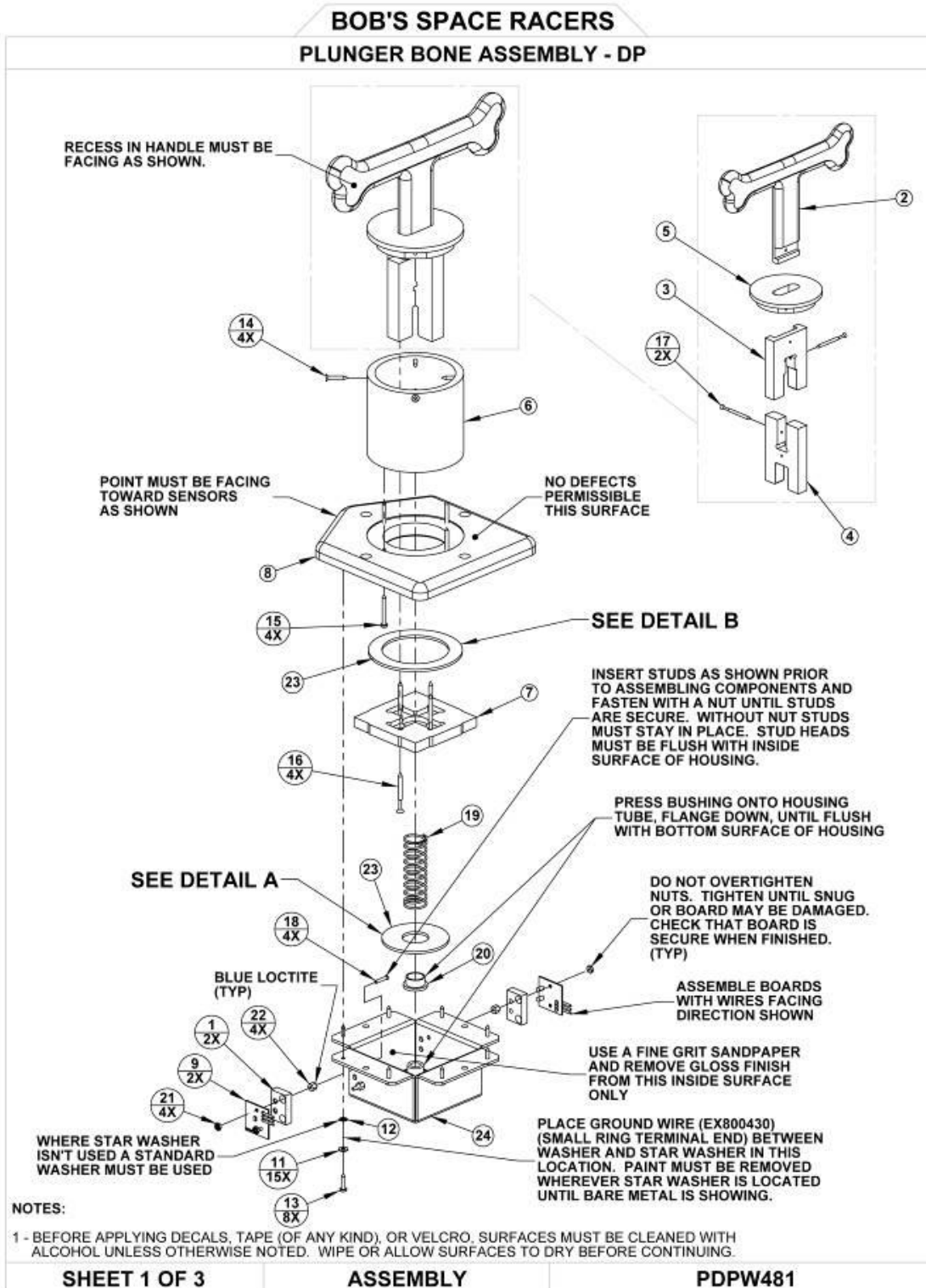
A0800412	Cabinet paw decal
A0800413	Bonus decal
A0800421	Marquee decal
A0800422	Time left display panel decal
A0800423	Score display panel decal

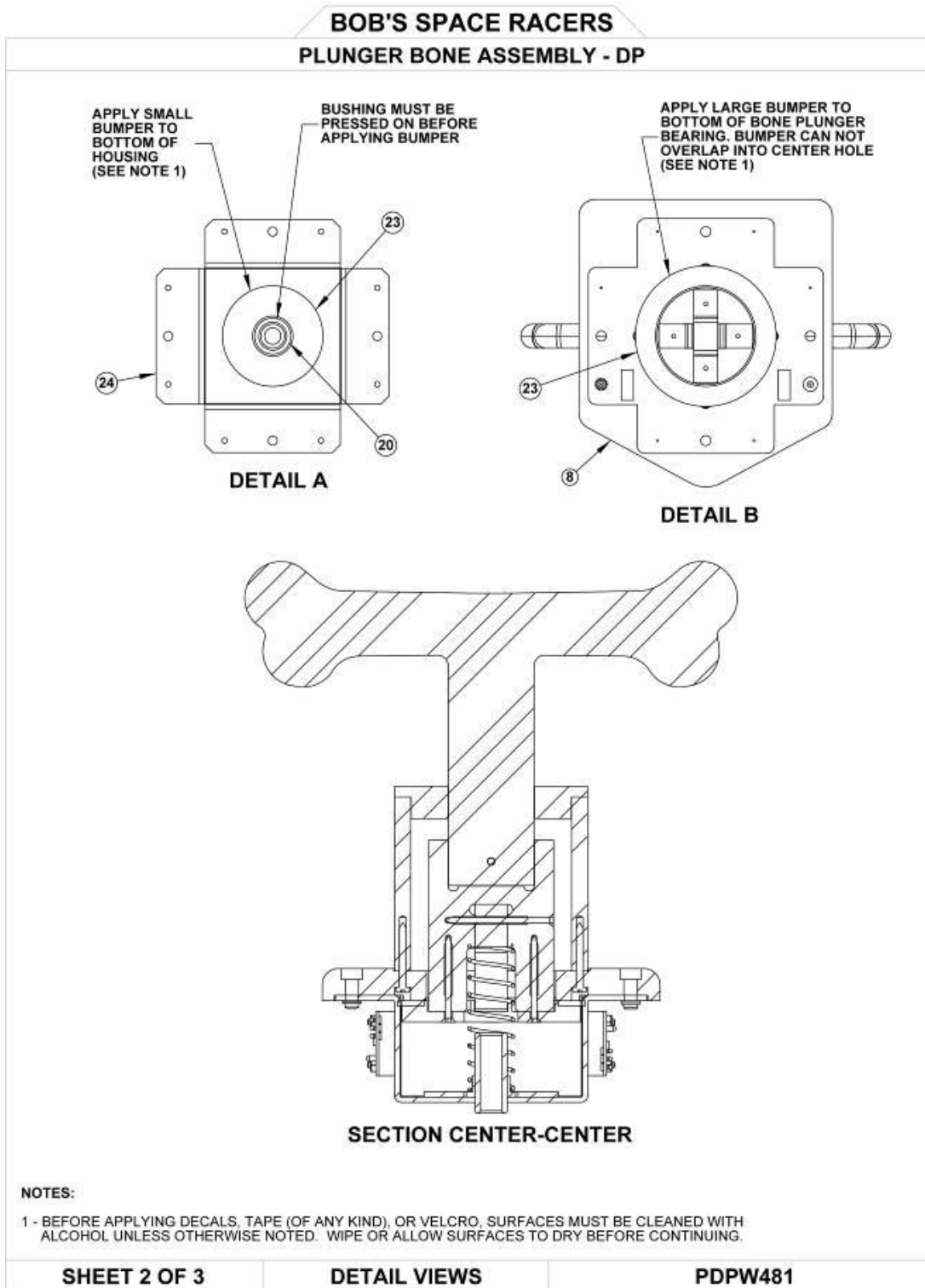
**SPECIALTY GRAPHICS / DECAL KITS**

- Custom Complete Kit
  - Paws
  - Body Parts
  - Control Panel
  - Top
  - Mouth and Belly (New Size)
  - Program Options
  - Time / Ball Score
  - Bone Bonus Tickets

# PLUNGER BONE ASSEMBLY

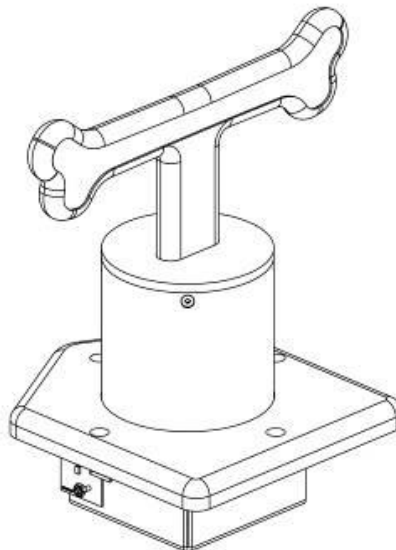
[Back to TOC](#)





**BOB'S SPACE RACERS  
PLUNGER BONE ASSEMBLY - DP**

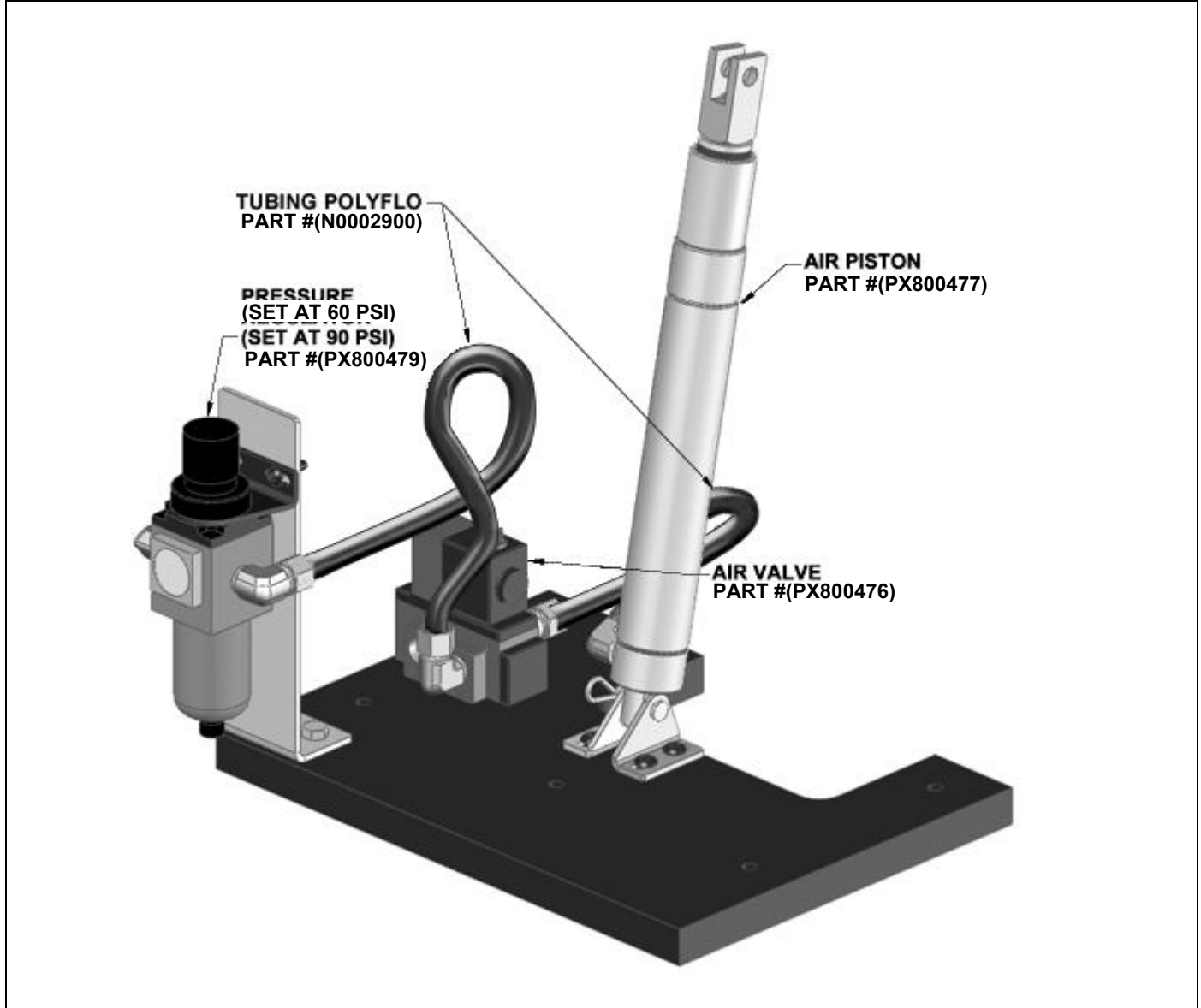
ITEM	PART #	DESCRIPTION	UOM	QTY
1	CX800419	BUTTON SENSOR SPACER - DP AIR & CEC	EA	2
2	CX800550	HANDLE BONE PLUNGER - DP	EA	1
3	CX800551	BLOCK MAIN PLUNGER - DP	EA	1
4	CX800552	BLOCK "H" PLUNGER - DP	EA	1
5	CX800553	BLOCK GUIDE PLUNGER - DP	EA	1
6	CX800554	CAN BONE HANDLE PLUNGER - DP	EA	1
7	CX800555	BEARING GUIDE BONE PLUNGER - DP	EA	1
8	CX800556	BEARING BONE PLUNGER - DP	EA	1
9	EX033525	BOARD ASSY SENSOR DOG POUNDER PK & TRL	EA	2
10	EX800430	GROUND JUMPER BUTTON ASSEMBLY - DP AIR	EA	1
11	H0000200	WASHER FLAT #8 USS ZINC	EA	15
12	H0001623	WASHER EXTERIOR STAR #8	EA	1
13	H0002500	SCREW WOOD SCRLX 8 X 3/4"PH	EA	8
14	H0002600	SCREW WOOD SCRLX 8 X 1"FH	EA	4
15	H0003100	SCREW WOOD SCRLX 8 X 1 1/2"PH	EA	4
16	H0003310	SCREW WOOD SCRLX 8 X 2"FH BLACK	EA	4
17	H0003500	SCREW WOOD SCRLX 8 X 2 1/2"FH	EA	2
18	H0800032	STUD 6-32 X 3/4" PEM	EA	4
19	H0800066	SPRING COMPRESSION .082/1.125/4.000 MW	EA	1
20	H0800067	BUSHING BRONZE FLANGE 3/4" SHAFT	EA	1
21	H0800122	NUT NYLON LOCK JAM 6-32	EA	4
22	H0800129	STANDOFF HEX 6-32 X 1/4 X 5/16 ALUM	EA	4
23	M0800475	BUMPER RING BUTTON SET ADHESIVE 1S	EA	1
24	W0800454	HOUSING BUTTON WELDMNT - DP P&T	EA	1



## PIVOT MECHANISM ASSEMBLY – DP AIR

[Back to TOC](#)

PIVOT MECHANISM AIR ASSEMBLY – DP AIR				
ITEM	PART #	DESCRIPTION	U/M	QTY
1	CX800418	PANEL MOUNTING AIR CYLINDER – DP AIR	EA	1
2	H0003100	SCREW WOOD SCRLX 8 X 1 ½" PH	EA	2
3	H0006600	BOLT HEX ¼" X ¾"	EA	2
4	H0010570	NUT NYLON LOCK 10-32	EA	2
5	H0011996	INSERT WOOD KNOCK-IN ¼-20THREAD	EA	6
6	H0014700	ALLEN BUTTON HEAD 10-32 X ¾	EA	2
7	H0800118	ALLEN BUTTON HEAD ¼-20 X 1" BLACK	EA	4
8	N0001001	ELBOW 90 – 3/8" POLY Z 1/8" MIP BRASS	EA	1
9	N0002900	TUBING POLYFLO 3/8" BLACK	INCH	30
10	PX800476	VALVE ASSEMBLY PIVOT MECH	EA	1
11	PX800477	AIR CYLINDER ASSEMBLY PIVOT MECH	EA	1
12	PX800479	FRL ASSEMBLY – DP AIR	EA	1
13	W0800472	BRKT FRL MOUNTING	EA	1
14	W0800491	AIR CYLINDER N0003400 BRKT MTG PIVOT	EA	1





## PREVENTATIVE MAINTENANCE SCHEDULE

[Back to TOC](#)

- Inspect Game Balls for any breaks or tears and remove damaged balls as necessary. (weekly)
- Remove front glass and clean the Dogs belly checking for debris on sensors and mirror. (weekly)
- Inspect Hammock for any wear and tears that could develop from loose hardware. Check to assure that the bolts & nuts are tight and secure on unit. (monthly) At this time also check that no balls have rolled under the hammock and become trapped there. (As this could potentially cause the hammock to bind and start to tear from game play.)
- Remove and clean Game Balls. (monthly)\*\*\*
- Inspect all grounding wire connections to assure that they are secure and in place.
- Inspect speaker mounting hardware and make sure that the speaker is secure and in place. (monthly)
- Check the power supply and electronic boards to make sure they are secure and in the proper place. (monthly)
- Check to make sure that the coin mechs. And mounting hardware are secure and in place for smooth operation and consistent revenue generation. (weekly/minimum)

\*\*\*This process of preventative maintenance will tremendously cut down on the amount of dust and debris the game dispenses on the sensors and playfield. This will assure consistent operation and better presentation to your players.