SPIDER 360™

1000 SERIES

2000 SERIES

Owners Manual

For All Order Inquiries Contact:
815-639-7676
www.spider360.com
P/N 44336 Rev. A

SPIDER 360™

Spider 1000 + Spider 2000 PURCHASE AND LICENSE AGREEMENT TERMS AND CONDITIONS

1.   General Provisions. These terms and conditions (this "Agreement") govern all orders from Spider 360's customer ("Buyer") to Spider 360 for, and sales and the grant of related licenses by Spider 360 to Buyer of, the Spider 360 product referred to as the "Spider 1000" or "Spider 2000" and its software (the "Product"). With respect to the Products, the terms and conditions of this Agreement shall (i) supersede any conflicting or additional terms contained in any advertisement, quotation, purchase order, confirmation, acknowledgment or other document or communication heretofore or hereafter between Buyer and Spider 360, and (ii) apply whether or not Spider 360 or Buyer or both specifically reference this Agreement in any document concerning any order for or sale of the Products, unless Spider 360 and Buyer expressly otherwise agree in a writing signed and delivered by each of them to the other which specifically references this Agreement by date and describes which terms and conditions of this Agreement are excepted and superseded. Spider 360's acceptance of any order by Buyer for a Product is expressly conditioned upon the applicability of this Agreement. All orders are subject to Spider 360's approval, including approval of credit terms. EXCEPT TO THE EXTENT LICENSED IN SECTION 2 BELOW, BUYER IS NOT ACQUIRING FROM SPIDER 360 ANY OWNERSHIP OR OTHER RIGHTS IN AND TO ANY OF THE SOFTWARE OR OTHER INTELLECTUAL PROPERTY USED TO OPERATE, OR COMPRISING ANY PART OF, THE PRODUCTS.   Unless otherwise specified by Spider 360, payment is due 30 days from the date of Spider 360's invoice. Shipments shall be F.O.B. Loves park, Illinois, and at the risk of Buyer after delivery to the carrier. Spider 360 will make all reasonable efforts to meet any shipment schedule specified in Buyer's purchase orders, but shall not be liable for failure to do so. In addition, Spider 360 shall not be liable for any damage to or loss of the Products or any delay in or failure to ship, deliver, service, repair or replace the Products arising from any circumstances beyond Spider 360's control. The Products are sold for installation and interconnection by Buyer or its customers and Spider 360 shall have no obligation in connection therewith.

2.   License Provisions. Subject to the terms and conditions of this Agreement, Spider 360 grants Buyer a non-exclusive license (referred to in this Agreement as the "License") to use the operating game software supplied as part of the Products ("Game Software"). Spider 360 is either (i) the owner of all rights in and to the Game Software, including, but not limited to, copyrights and trade secret rights, or (ii) a licensee of certain components of the Game Software and is authorized to include such components in the Products. This Agreement does not convey to Buyer ownership of any of the software in the Product and Spider 360 or Spider 360's licensors retain all title and ownership in such software and any modifications, updates or enhancements thereof. The Game Software shall only be used on a single Product at one time. Buyer shall not transfer or distribute the Game Software or the License to others, except that Buyer may transfer to only the customer purchasing or using the Product a sublicense for that Product only to use the Game Software embedded in the Product on the terms and conditions set forth herein. Except to the extent provided in the next sentence, neither Buyer nor its customers nor any subsequent transferees shall have any right to copy, reproduce, distribute, transmit, remove, download, decompile, reverse engineer or modify the Game Software, nor the right to remove, obstruct or alter copyright, patent, trademark and software license notices on or accompanying the Product or its Game Software. The owner and licensee of the Product shall have the right to copy for installation into the Product and to install into the Product updated Game Software that may be distributed to such owner and licensee from time to time by Spider 360. Neither the Products nor any of its Game Software shall be exported or re-exported in violation of any export provisions of the United States or any other applicable jurisdiction. Except to the extent expressly permitted under this Section 2, any attempt to sublicense, assign or transfer any of the rights, duties or obligations hereunder is void. In the case of the United States Government or an agency thereof as licensee, the following additional terms and notices apply:

Restricted Computer Software, as defined in the Rights in Data-General clause at Federal Acquisition Regulations 52.227_14; and as applicable,

RESTRICTED RIGHTS LEGEND

 Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227_7013.

Spider 360 may without notice or demand terminate the right to use the Game Software (or any part thereof) and may also disable use of the Game Software (or any part thereof) if Buyer or its customer or any subsequent transferee or other user of the Product breaches any of the terms and conditions of this Agreement or any other agreement between Spider 360 and any other owner/licensee of the Product in question (including without limitation any agreement governing or relating to any of the advertising programs referred to in Section 3 below). Upon termination of this License for any reason, Buyer or its customer or any subsequent transferee shall immediately delete the Game Software from the Product and return to Spider 360 any form of the Game Software which is capable of being returned. All restrictions regarding use of and protecting Spider 360's rights in the software in the Product survive termination of Buyer's or any subsequent owner's or user's right to use the Game Software. Spider 360 shall at all times while the Products are in use have and be granted access to the Product (whether electronically, including by modem or any other electronic data transmission and reception connector which comprises a part of each Product, or otherwise), at reasonable times and upon reasonable intervals, for the purposes of inspecting the Product, collecting usage information (including without limitation its location) and exercising and protecting Spider 360's rights in connection with the provisions set forth in this Section 2. Buyer shall not, and shall not permit any subsequent owner or user to, obscure, attach or remove any notice, informational plate or sticker affixed by Spider 360 to the Product or which Spider 360 creates to appear on any screen display of the Product. Buyer shall cause its customers and all subsequent transferees (if any) to be bound by the provisions of this Section 2 and Sections 3, 4 and 5 of this Agreement for the benefit of Spider 360 (Spider 360 shall be a third party beneficiary with the right of enforcement).
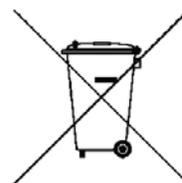
3.   Future Advertising. Neither Buyer nor any other person or entity is as a result of Buyer's purchase of the Product acquiring any license or other rights in and to the software (if any) in the Product which enables or may enable the Product to display advertising.   Spider 360 may (but is not hereby obligated to do so) enter into arrangements with the owner/ licensee of a Product pursuant to which the Product may display advertisements; provided, that in the event any such arrangements are made, then (i) any such license to use the software in the Product for any purpose other than game operation shall be terminable at will by Spider 360 and Sections 2, 4, 5 and 6 of this Agreement shall apply with respect to that

license (and for such purpose, the phrase "Game Software" as used in this Agreement shall also refer to the software of the Product to the extent used in connection with advertising displayed by the Product), and ii) Spider 360 shall not be liable to Buyer for, and Buyer shall indemnify and hold Spider 360 harmless against and shall upon request defend Spider 360 against, any claims, losses, damages, costs or expenses arising out of or in connection with any such advertising, including without limitation claims for infringement of copyright, trade name, trademark or service mark, and defamation claims.

4.   Warranty. Subject to the terms and conditions of this Section 4, for the applicable Warranty Period (as hereinafter defined), Spider 360 will repair or replace at its plant in Loves park, Illinois, any of the following parts of the Product which Spider 360 determines is defective in manufacture or workmanship under normal use and service: the Electronic Package; the darthead assembly (consisting of the spider, segments and matrix); and the cabinet and components of the cabinet.   "Electronic Package" means only (i) the power supply chassis and the parts mounted directly thereon, (ii) the main computer printed circuit board, (iii) to the extent installed by Spider 360, the modem (if any), and the light dimmer board. The "Warranty Period" starts on the date of purchase and means (i) one year with respect to the Electronic Package, (ii) one year for the monitor, (iii) one year with respect to the darthead assembly, and (iv) one year with respect to the cabinet and cabinet components. The Product will not be defective if it substantially fulfills the performance specifications. This warranty shall not apply to any of the Products or parts thereof repaired or altered by anyone but Spider 360, operated or installed contrary to instructions or contrary to this Agreement, or subjected to abuse, misuse, accident or improper environment. This warranty applies only for the benefit of the original purchaser of the Product and is not transferable. For this warranty to apply, Buyer must (i) give Spider 360 written notice of any warranted defect within 10 days after discovery and, in any event, not later than the date on which this warranty expires, and (ii) deliver the Product into Spider 360's possession within 15 days following the date on which the warranty claim notice is given to Spider 360. Any Product which is the subject of a warranty claim must be shipped to Spider 360 freight prepaid. Prior to repair or replacement, Spider 360 shall have the right to examine the part at Spider 360's plant in Loves Park, Illinois. If Spider 360 determines that this warranty is inapplicable, Spider 360 will notify Buyer, and labor and parts furnished at Buyer's request shall be paid for by Buyer at Spider 360's then current rates and prices. Spider 360 neither assumes nor authorizes anyone to assume for it any obligation or liability in connection with the Product which is not expressly provided for under this Agreement. Spider 360's liability under this warranty shall be limited to repairing or replacing warranted Products and the expense of the lowest transportation costs for return to Buyer or, if the Product in question cannot be repaired or replaced by Spider 360, to the return of the purchase price paid for the defective or nonconforming warranted Product in question; provided, that Buyer shall first return to Spider 360, and Spider 360 shall have the right to thereafter retain as its own property, those Products for which a refund of the purchase price is to be made. Notwithstanding anything to the contrary in this Section 4, Spider 360 does not warrant that the operation of the Game Software will be uninterrupted or error-free. THE WARRANTY SET OUT IN THIS SECTION 4 IS THE ONLY WARRANTY APPLICABLE TO THE ORDER OR THE PRODUCTS. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED.

5. Limitation of Liability. NEITHER SPIDER 360 NOR ITS DEALER OR REPRESENTATIVE, IF ANY, SHALL BE LIABLE, WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE, OR OTHERWISE, FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PURELY PECUNIARY DAMAGES OR FOR LOSS OF DATA OR FOR COSTS OF REMOVAL OR SHIPMENT. UNDER NO CIRCUMSTANCES SHALL SPIDER 360'S LIABILITY OR BUYER'S REMEDY FOR DAMAGES AGAINST SPIDER 360 EXCEED THE AMOUNT OF THE PURCHASE PRICE OF THE PRODUCTS WITH RESPECT TO WHICH CLAIM IS MADE. IN THE EVENT THAT SPIDER 360'S WARRANTY, IF ANY, OR ANY OTHER OBLIGATION OF SPIDER 360 APPLICABLE TO THE PRODUCTS FAILS OF ITS ESSENTIAL PURPOSE, BUYER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO RETURN OF OR CREDIT FOR SO MUCH OF THE PURCHASE PRICE AS IS APPLICABLE TO THE PRODUCTS WHICH ARE NONCONFORMING OR DEFECTIVE, PROVIDED SUCH PRODUCTS ARE RETURNED TO SPIDER 360 F.O.B. SPIDER 360'S PLANT IN LOVES PARK, ILLINOIS, U.S.A. NO ACTION ARISING OUT OF THE ORDER OR PERTAINING TO THE PRODUCTS IN QUESTION MAY BE BROUGHT BY BUYER MORE THAN ONE YEAR AFTER THE DATE OF SHIPMENT, OR, IN THE CASE OF WARRANTY CLAIMS, WITHIN ONE YEAR AFTER THE CLAIM WAS OR SHOULD HAVE BEEN DISCOVERED, BUT IN NO EVENT MORE THAN TWO YEARS AFTER PURCHASE. BUYER'S REMEDIES PROVIDED IN THIS AGREEMENT ARE ITS SOLE AND EXCLUSIVE REMEDIES.

6. Other Provisions. Upon Buyer's failure to pay or otherwise perform in accordance with this Agreement or any order governed by this Agreement, all amounts owing to Spider 360 by Buyer under the order in question and any other order or obligation of Buyer to Spider 360 shall, at Spider 360's option and without notice, become immediately due and payable. Any payment not received by Spider 360 on its due date shall be subject to a late charge of 1.5% per month until paid, unless applicable law limits this charge, in which event, the applicable late charge shall be the maximum monthly charge permitted by applicable law. Buyer shall pay Spider 360 all attorneys' and paralegal fees and all court costs and out-of-pocket disbursements incurred by Spider 360 to effect collection.   Spider 360's rights and Buyer's obligations under Sections 2, 3, 4, 5 and this Section 6 of this Agreement shall survive any termination of this Agreement. This Agreement is made in and it and all matters pertaining to the Products shall be governed by the internal laws (without reference to the conflicts of laws principles thereof) of the State of Illinois. The invalidity of any term contained in this Agreement shall not affect any other of the terms of this Agreement. The failure of any party to enforce or declare a default or breach with respect to any particular term or condition of this Agreement or any purchase order governed by this Agreement shall not be considered a waiver of that party's right to enforce or declare a default or breach with respect to any other term or condition or, on a subsequent occasion, with respect to that particular term or condition. Spider 2000 v1 --12/3/01

Table of Contents

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that of the receiver.

Consult the dealer or an experienced radio/TV technician for help.

Caution: Never place a Spider 360 Dart Machine in high traffic areas. Although Spider 360 boards use safety darts, they still do hurt when thrown at people. Take care that no accidents happen.

Section 1
The 1000 Series

Introduction

This Section contains features, basic terms, dimensions and assembly information for the Spider 1000 home dart machine.

If you encounter a problem that is not covered in this manual, or if you have any questions, contact Spider 360 at 1-815-654-7676 from 8 a.m. to 5 p.m. CST.

General Description

The Spider 1000 is an electronic dartboard modeled after Arachnid 360's Galaxy 2 commercial dartboard. Like the Galaxy 2, this machine offers players a wide variety of game choices to challenge all skill levels as well as automatic scoring and personal customizations.

1.1 Features of the Machine

Exciting graphics and impressive player feats makes winning that much sweeter! This section lists the more prominent features of the machine.

A. LCD Flat Screen Monitor

The color graphics on the new 19" LCD Flat screen monitor.

B. Heavy Duty Plastic Cabinet

A Roto Molded Linear Low Density Polyethylene (LLDPE) Cabinet. This makes the cabinet light yet Durable and Easy to clean.

C. LED Target Lamps

60 Watt Equivalent LED illumination that eliminates all shadows in the target area.

D. Lots of Game Choices

Over 40+ games including 6 types of X01 with all standard Opening and Closing options, 6 different variants of Cricket and 8 nonstandard fun games.

E. Automatic Player Change

The machine is equipped with automatic player change, which can be switched between manual and auto in the Setup Mode. If this option is used, the game will change players automatically at the end of each player's turn. The remove and throw darts delay time is also selectable.

F. Player Feats and Graphics

Exciting graphics and impressive player feats makes winning that much sweeter!

G. LeaderBoard Access

The LeaderBoard is a global ranking system based off your individual skill. You can see it displayed on the Spider 1000 dart game and mobile app (first 3 months for free, $1.99 ea. month thereafter).

1.2 Dimensions

This section contains everything you need to know in order to make sure this machine will fit anywhere you want to set it up.

Weight Boxed: 140 LBS
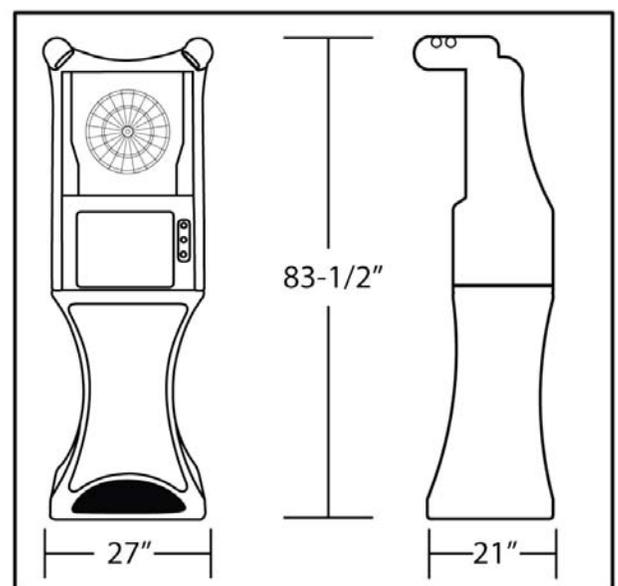
Weight Unboxed: 130 LBS
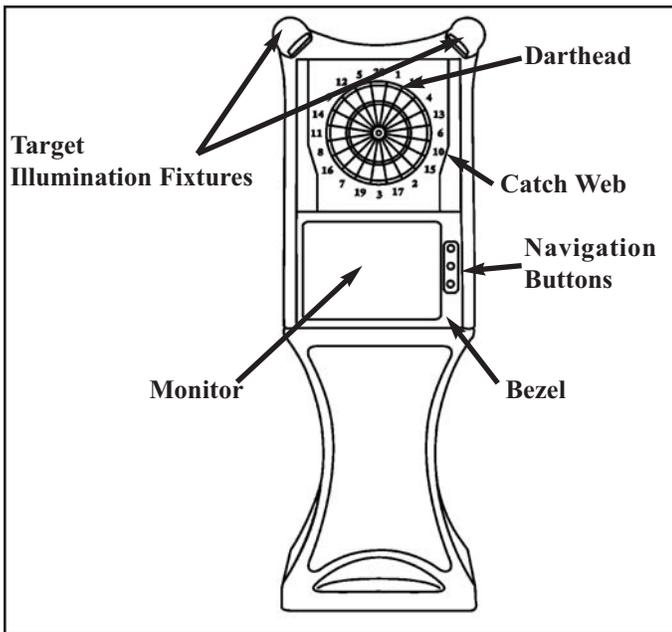
Boxed Dimensions: 40x30x45

Game Height: 83-1/2"

Game Width: 27"

Game Depth: 21"

For details on the electrical systems see **Chapter 4 Technical Discerption.**

Darthead

Target Illumination Fixtures

Catch Web

Navigation Buttons

Monitor

Bezel

1.3 Basic Terms

Darthead - The target at which players throw their darts.

Catch Web - The part around the target that catches any missed darts.

Target Illumination Fixtures - These 60W Equivalent LED Bulbs illuminate the target in Bright Warm light.

Navigation Buttons - Use the Up, Down and Enter buttons to navigate the menus of the Spider 2000.

**Monitor** - A 19" widescreen LED Monitor.

Bezel - This covers the monitor cavity on the cabinet.

Throw line Diagram

1.4 Assembly

Before you assemble your brand new Spider 1000, make sure you carefully remove it from the packing material and clear out a space in your home to set it up.

1. Insert the four set screws provided into the top of the lower cabinet.
2. Place the upper cabinet assembly on the lower cabinet.
3. Unlatch and open the Target Door.
4. Unlatch and flip down the monitor bezel.
5. Remove the monitor.
   a. Lift up on the monitor and lean it towards you. The top plate needs to clear the cabinet to properly remove the monitor.
   b. Unplug the HDMI and Power cables from the Ground Plane.
   c. Lay the monitor down on a flat surface. You may want to lay a towel in between the monitor face and the surface to protect the screen.
6. Secure the upper cabinet to the lower cabinet using the four wing nuts provided.
7. Insert the eye bolt into the hole provided on the back of the Spider 1000.
8. Secure the eye bolt to the back of the machine with a washer on the inside and outside and nut provided.
9. Locate a wooden wall stud behind the Spider 1000. We are going to use that to anchor the Spider 1000 to the wall. The drywall can be up to 5/8" thick in front of the wall stud.
10. Measure up from the floor 44" and mark the spot on the wall.
11. Drill 2-1/2" pilot hole with a 3/32" bit. 12.
12. Slide a washer up to the eyelet of the 3/16 x 2-3/16" Eye Lag Screw.
13. Secure the Eye Lag Screw and washer to the wall stud.
14. Connect the two Eye bolts together with the chain provided.
15. Replace and secure the monitor and monitor bezel.
16. Plug the power cord into a properly grounded wall outlet and into the back of the Spider 1000.

IMPORTANT: The Spider 1000 should not be operated until it is placed with its back against a wall in an area where bystanders will not get struck by a dart.
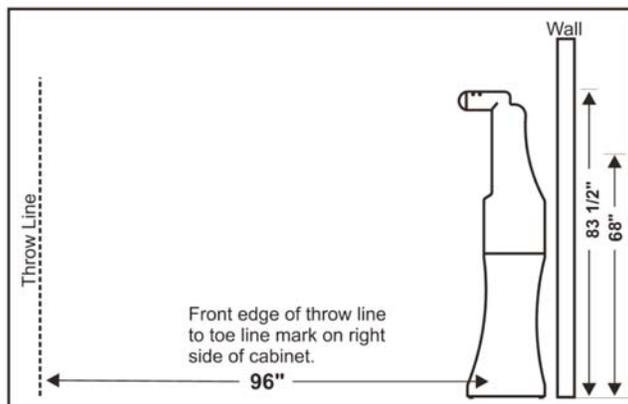
Section 2
The 2000 Series

Introduction

This Section contains features, basic terms, dimensions and assembly information for the Spider 2000 home dart machine.

If you encounter a problem that is not covered in this manual, or if you have any questions, contact Spider 360 at 1-815-654-7676 from 8 a.m. to 5 p.m. CST.

General Description

The Spider 2000 is an electronic dartboard modeled after Arachnid 360's Galaxy 3 commercial dartboard. Like the Galaxy 3, this machine offers players a wide variety of game choices to challenge all skill levels as well as automatic scoring and personal customizations.

2.1 Features of the Machine

Exciting graphics and impressive player feats makes winning that much sweeter! This section lists the more prominent features of the machine.

A. LCD Flat Screen Monitor

The color graphics on the new 19" LCD Flat screen monitor.

B. Light Yet Durable Plastic Cabinet

A Roto Molded Linear Low Density Polyethylene (LLDPE) Cabinet. This makes the cabinet light yet Durable and Easy to clean.

C. LED Target Lamps and Marquee

Tri-color LED illumination that eliminates all shadows, with eye catching visual effects. The marquee is a real eye catcher.

D. Lots of Game Choices

Over 40+ games including 6 types of X01 with all standard Opening and Closing options, 6 different variants of Cricket and 8 nonstandard fun games.

E. Automatic Player Change

The machine is equipped with automatic player change, which can be switched between manual and auto in the Setup Mode. If this option is used, the game will change players automatically at the end of each player's turn. The remove and throw darts delay time is also selectable.

F. Player Feats and Graphics

Exciting graphics and impressive player feats makes winning that much sweeter!

G. LeaderBoard Access

The LeaderBoard is a global ranking system based off your individual skill. You can see it displayed on the Spider 2000 dart game and mobile app (first 3 months for free, $1.99 ea. month thereafter).

H. Player Camera

There is a camera in the Marquee that points bat the throw line. The camera appears in every game you play.

2.2 Dimensions

This section contains everything you need to know in order to make sure this machine will fit anywhere you want to set it up.

Weight Boxed: 140 LBS
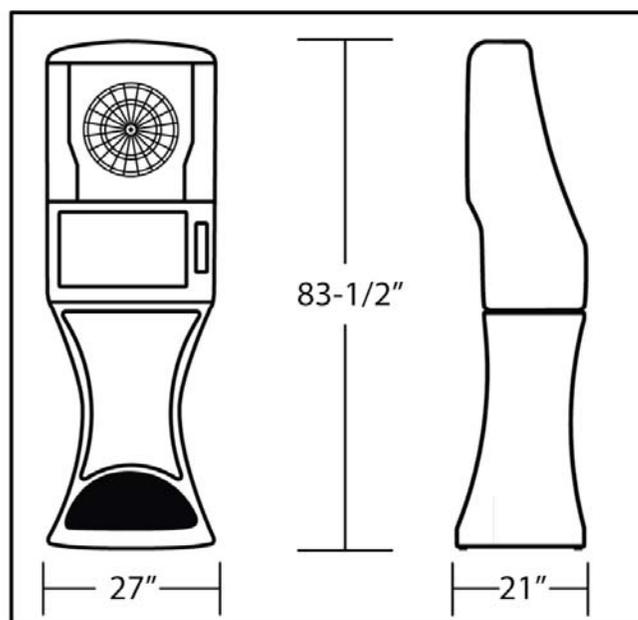
Weight Unboxed: 130 LBS
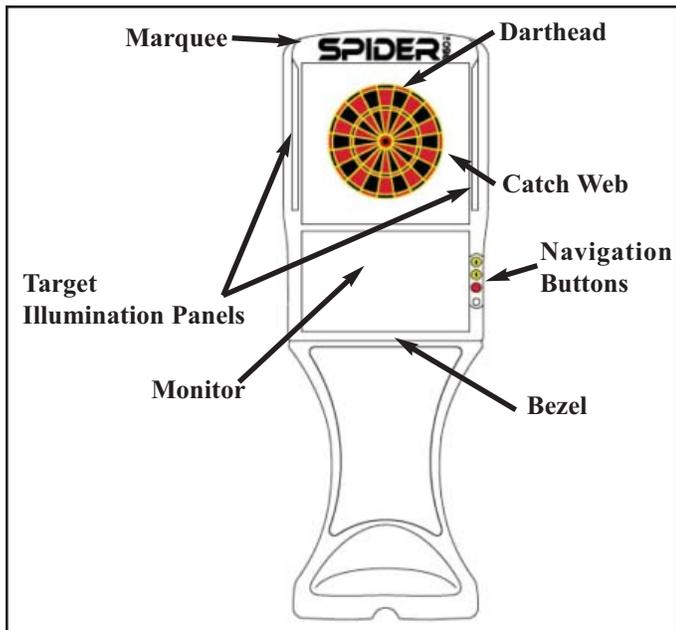
Boxed Dimensions: 40x30x45

Game Height: 83-1/2"

Game Width: 27"

Game Depth: 21"

For details on the electrical systems see **Chapter 4 Technical Discerption.**

2.3 Basic Terms

Marquee - The Marquee is designed to catch the eye of players and entice them into playing the game.

**Darthead** - The target at which players throw their darts.

Catch Web - The part around the target that catches any missed darts.

Target Illumination Panels - These LED panels illuminate the target in clear white light. They are also used in attract mode to catch the players eye.

Navigation Buttons - Use the Up, Down and Enter buttons to navigate the menus of the Spider 2000.

Monitor - A 19" widescreen LED Monitor.

Bezel - This covers the monitor cavity on the cabinet.
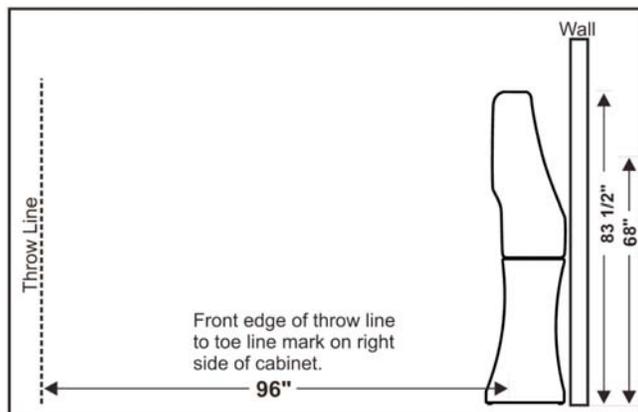
Throw line Diagram

2.4 Assembly

Before you assemble your brand new Spider 2000, make sure you carefully remove it from the packing material and clear out a space in your home to set it up.

1. Insert the four set screws provided into the top of the lower cabinet.
2. Place the upper cabinet assembly on the lower cabinet.
3. Remove the two phillips head screws securing the bezel to the cabinet using a phillips head screw driver.
4. Flip down the monitor and monitor bezel.
5. Secure the upper cabinet to the lower cabinet using the four wing nuts provided.
6. Insert the eye bolt into the hole provided on the back of the Spider 2000.
7. Secure the eye bolt to the back of the machine with a washer on the inside and outside and nut provided.
8. Locate a wooden wall stud behind the Spider 2000. We are going to use that to anchor the Spider 2000 to the wall. The drywall can be up to 5/8" thick in front of the wall stud
9. Measure up from the floor 44" and mark the spot on the wall.
10. Drill 2-1/2" pilot hole with a 3/32" bit.
11. Slide a washer up to the eyelet of the 3/16 x 2-3/16" Eye Lag Screw.
12. Secure the Eye Lag Screw and washer to the wall stud.
13. Connect the two Eye bolts together with the chain provided.
14. Close and secure the monitor and monitor bezel.

IMPORTANT: The Spider 2000 should not be operated until it is placed with its back against a wall in an area where bystanders will not get struck by a dart.

Section 3
Getting Connected

This section will help you get connected to the internet so you can register and get started playing!

3.1 Navigating the Menus

Use the Up ⓐ and Down ⓥ buttons to scroll through the screens and use the Red 🔴 button to select to menu you want. Incidentally, this is how you navigate all the menus. Keep that in mind.

3.2 Connecting to the Internet

In order to use some of the features of a Spider 360 Dart Machine, like LeaderBoard and software updates, you will need an Internet connection to the machine. There are 2 ways to do this, Ethernet and WiFi.

A. Ethernet Setup

Ethernet is our prefered method of connecting to the Internet. Here is how you do it:

1. Run an Ethernet cable from the router to the machine.
2. Plug the Ethernet cable into the Ethernet Port on the back of the machine.

3. Go into the Service Menu.
4. Select **Communications**.
5. Select **Connections Setup**. Choose **Ethernet**.
6. Make sure **Enabled** is toggled "YES".
7. Make sure **Internet** is toggled "YES".
8. Select **IP Setting**.
   ♦Auto (DHCP) will automatically find all the internet settings it needs. Recommended and easiest way.
   ♦Manual will require you to get the I.P. Address, Net Mask and other internet settings yourself.
9. Once all finished, select **Return to Previous Menu**.
10.Select **Perform Update.**

Note: Make sure **Enabled** *and* **Use Internet** *are set to "NO" in WiFi Setup.*

B. WiFi Setup

In general, Spider 360 does not recommend WiFi. The main reason is that WiFi is inherently slower than Ethernet. This will cause lag in video and other features. If this is your only option, however, here's how you do it.

1. Go into the Service Menu.
2. Select **Communications**.
3. Select **Connection Setup**. Choose **WiFi Setup**.
4. Make sure **Enabled** is toggled "YES".
5. Make sure **Internet** is toggled "YES".
6. Click on **Access Point**. This will scan the local area for any wireless access points.
7. Choose your access point/router. The signal strength and the security type will be listed by each access point.
8. The **Security Type** should be automatically assigned.
9. Enter in the **Security Key** or **Pass Phrase**.
   ♦WEP uses an **Encryption Key**. The key is ten (10) characters long and made out of the numbers 0-9 and the letters a-h.
   ♦WPA and WPA2 can use an **Encryption Key** like WEP, but they also have access to a **Passphrase**. This Passphrase can be any combination of letters (upper and lowercase) and numbers.
10.Select **IP Setting**.
   ♦Auto (DHCP) will automatically find all the internet settings it needs.
   ♦Manual will require you to get the I.P. Address, Net Mask and other internet settings yourself.
11. Select **Return to Previous Menu** once finished.
12. Once all finished, select **Return to Previous Menu**.
13. Select **Perform Update.**

Note: Make sure **Enabled** *and* **Use Internet** *are set to "NO" in Ethernet Setup.*

3.3 Software Updates

All Spider 360 Machines connected to the internet, check for software updates between 3 AM and 6 AM (local time) every morning. There is nothing you need to do except keep the machine connected to the internet. If the machine is not communicating properly, not connected at all or powered down, it cannot check for updates.

For the most part, the updates are nothing big. Usually just updating our server with the latest internet location of your machine. We will contact you if there are any major updates, like new games, and bug fixes.

Section 4
Operating the Machine

4.1 Power Up

Once the machine is assembled and set in place, connect the power cord to a wall outlet. **Note: The outlet must have an earth ground and be wired for the correct polarity.** The switch on the back of the machine controls the power for the entire machine (See **Section 2.4**).

4.2 Game Play

Upon power-up, the machine is ready for play. Players select their game and options using the on screen menus.

A. 01 Games

The 01 family of games are count-down games for 1 to 8 players. Each player starts with 301, 501, 701, 901, 1101 or 1501 points, depending on the game chosen. The first player to reach exactly zero, or the lowest score when the round limit is reached is declared the winner.

The 01 games are available with the following opening round options:

Open In: A hit on any numbered segment will begin the count-down process.

Double In: The player must hit any double or the bullseye to begin the count-down process.

Master In: The player must hit any double, triple or the bullseye to begin the count-down process.

The 01 games are available with the following final round options:

Open Out: Any segment that will bring the players score to exactly zero can be used to "take the game out."

Double Out: Any double that will bring the player to exactly zero must be used to "take the game out."

Master Out: Any double, triple or the bullseye that will bring the players score to exactly zero must be used to "take the game out."

Note: Under the 501 menu there is 501 Open In/Open Out Quickie and 501 Open In/Master Out Quickie. These games play the same as a normal 501 game with the same round options. The only difference is they have a round limit of 10.

B. Cricket Games

Cricket Games are all based off the traditional steel tip game of the same name. In most cases, the games in this family use numbers 15 through 20 and the bullseye. Read the descriptions to learn how each game is played.

Cricket/200   1 to 8 players

Cricket is a game of skill and strategy played with the numbers 15 through 20 and the bullseye. A player must "mark" each number three times before that number is "closed." A single counts one mark, a double two, and a triple three. Points are scored every time a player hits a number he has closed. Once all players have a number closed, no one can score points on that number. The first player to close all the numbers and the bullseye and have equal to or more points than all his opponents is declared the winner.

Maximum points scored by players may be governed by a preset spread limit in some games. Spread limits control the point spread between players in an effort to keep the better player from running up the score and over-extending the game. For example: If player "A" has 89 points, then player "B" cannot score more than 289 points under a 200 point spread limit. When a player reaches the spread limit, he is forced to try and close another number, as no further scoring is possible until the other player(s) add points to their score. Spread limits can be toggled off or on in the test/setup mode.

Double Down Cricket   1 to 4 players

In this game, the object is to be the first to "Double In", close all your Cricket numbers, and then "Double Down" for the win by hitting the Double 1. There is no scoring in this game and no Bullseyes. The first one to complete the challenge, Wins!

To start, you must hit 2 randomly selected doubles ranging from 2-14. Once "Doubled In", be the first to close all the Cricket (15-20). After you have closed your Cricket numbers, you will need to hit the double 1 to win! Any segment other than the Double 1 results in a "Bust".

Hammer Cricket   2 to 4 players

Hammer Cricket is a count-up game using a different Cricket number each round. There are two "Wild" rounds that display a random number between 12-20 or the Bull. Each round, the first dart scored is worth the segment hit, the second is worth two times the segment scored, and the third dart is worth three times the segment scored. If you miss all three darts the hammer falls and reduces your score by a triple of the segment for that round! During the final round the second and third darts are worth 3 and 5 times the number scored! In the event of a tie game there will be a final tie breaker round. If scores are still tied, the highest MPR wins the game. Hammer Cricket can be configured Masters (Triples only), or Open (Singles, Doubles or Triples).

Team Hammer   4 players

Team Hammer plays like Hammer Cricket with one major difference, four players compete as two separate teams. Each player tries to get as many points as possible. Points from both team members are added together into one score. When a player misses all three darts, his score and that of his team is reduced by a triple of the segment for that round! Team Hammer can be configured as Masters (Triples only), or Open (Singles, Doubles or Triples).

Cut-Throat Cricket   2 to 8 players

The object is to close all the numbers and have the lowest score. Once a player closes a number, additional marks will score points for opponents who have not closed that number. There is no point spread limit for this game.

Team Cricket   4 players

Team Cricket has two different sets of rules that can be used to play. To turn on the New Team Cricket rules, you will need to configure that option in the Setup Mode (see page 6 of this manual).

Both sets of rules are played with four players playing as two teams. Each player marks individually; however, team partners score together as a team. Both partners must have a number closed before either can score on that number.

In the **Traditional Rules,** to win, both teammates must have all the numbers and the bullseye closed and the team must have equal to or more points than their opponents.

In the **New Rules,** to win, a team needs only one player to have all the numbers and the bullseye closed. They still must have equal to or more points than their opponents.

A 400 point spread limit is the default for both sets of rules.

Wild Card Cricket   1 to 8 Players

Instead of the traditional numbers, this game will start with a random selection of six numbers from 7 through 20 (the bullseye will always be present). All numbers are "Wild" and will change at the end of each player's turn if not marked. Once a number is marked, it will remain the same throughout the rest of the game. A 200 point spread limit is the default.

Cricket Quickie   1 to 8 players

This game plays exactly like Cricket except this game only has a round limit of 10. Because of its short round limit it is also less expensive than regular Cricket. The final difference is that this game has no spread limit.

C. Other Games

Here are some other fun games to play. Each one has a different set of rules so please read their individual entries.

Speed Games

These two games allow a single player to compete against the clock.

Count Down

The clock times how long it takes to go from 901 to exactly zero. When a game is completed within the ten fastest times, an input screen appears, where the player adds their name to the Top Ten List.

Quick Cricket

The clock shows how long it takes to close the 15 through 20 and the bullseye. Three marks are required to close a number, as in regular Cricket. No points are scored for extra hits on closed numbers. When a game is completed within the ten fastest times, an input screen appears, where the player adds their name to the Top Ten List.

Count Up   1 to 8 Players

Count Up is a good game to begin learning darts, allowing the player to develop throwing technique without being distracted by strategy. Each player begins with zero points and tries to score the most points to win the game. All segments will score points and a winner is declared at the end of 8 rounds.

Gotcha! Open/Open   2 to 4 players

The object of the game is to be the first player to go from zero to exactly 301 points. Players may try to match their opponent(s) score at which time a bomb is detonated destroying the opponents score and setting it back to zero. If someone exceeds 301, the amount exceeded will be deducted from your original score for that turn. No matching bombs will be detonated.

There is also a "Master Out" option, requiring a double, triple, or bull to reach exactly 301 points and win the game.

Gotcha! Open/Master   2 to 4 players

Gotcha! Open/Master plays exactly as above except that it requires a double, triple, or bull to reach exactly 301 points and win the game.

Bermuda Triangle   1 to 8 players

Players shoot at a new number each round. The numbers used are 12, 13, 14, Double, 15, 16, 17, Triple, 18, 19, 20, Bull, and Double Bull. Hitting any segment of the current number accumulates points for the player. For example: The first number is 12. A single will score 12 points, a double 24, and a triple 36. When "Double" is the current target, any double will score. The same applies to "Triple" when it is the current target. When a player misses the current number with all three darts, their current total score is cut in half! The highest score at the end of the game wins.

Tic Tac Darts   2 Players

This is a variation of traditional Tic Tac Toe. The same nine square grid is used. The machine places the bullseye in the center square with randomly selected numbers in the other eight squares. Player "X" or player "O" claim a square by marking the number four times. Singles score 1 mark, doubles 2, and triples 3. The bullseye scores 1 mark; double bull (if used) will score 1 for the outer and 2 for the inner. The first player to get three squares in a row is declared the winner. In the event of a "Cats" game, where it is not possible to have three squares in a row, the game ends with player with the most points being declared the winner.

Shark Tank   2-4 Players

The survival Count-Up game! The last surfer still surfing wins the game. Players try to be the "Best Surfer" for the round. All segments are valid except Bulls. Bulls score 0 points.

Only one player can have the highest score each round. Each player below him has a bite taken out of their surf boards. The board can only be bitten 6 times before you are eaten and lose.

If the "Best Surfer"'s score is double or more than yours, the shark will take two bites from your board. If any player ties the top surfer, every player gets bitten. The game is over when all but one player is eaten.

Remember, you don't have to be better than the shark, just better than your friends.

D. Playing the Computer

On Spider 360 games, you can play against the computer. Simply select the number of players you want in the game. Using the minimal number of players (typically 1), the machine will ask if you want to play against Mark Darts

You can enable Mark Darts in games with multiple players also. In games with more than the minimal number of players, select the player you want Mark Darts to be, and then the Yellow Down Button. Select Enable Mark Darts and enjoy!

4.3 Tournament Mode

Tournament Mode allows you to access the same game format the Top Gun Challenge and The LeaderBoard, a Spider 360 run event.

A. Top Gun Challenge

Top Gun Challenge is a competitive dart ladder which displays the top ten (10) players in an attract screen. Players choose the match they want to play. They then enter their name into the ladder and they can challenge any one of the three players above their name.

Note: Both players must be present to play.

There are several ladders to choose from:

- ♦**301 Open In/Open Out**
- ♦**301 Double In/Double Out**
- ♦**Cricket/200**
- ♦**Chicago Style**
    - **-301 Open In/Open Out**
    - **-Cricket/200**
    - **-501 Open In/Open Out**

Every ladder is set to Best 2 out of 3 by default. This setting can be changed in a Spider 360 Dart Machines software under machine Setup.

Players need to continue to play Top Gun Challenge to stay on the list. By default, a player gets kicked off the list after 14 days. This is also adjustable.

B. The LeaderBoard

The LeaderBoard is a global ranking system based off any Spider 360 dart game and mobile app. Check your favorite App Store.

4.4 Service Mode

Service Mode is where you configure all the options that the Spider 360 Dart Machines have to offer.

To enter the Service Mode, select the Service Mode from the menu on the main screen.

A. Machine Setup Menu

Language Setup: Used to set the display language on the machine.

Time Settings Menu: Used to access current date and time and Hours of Operation time settings.

   Set Time/Date: Used to set the machine's clock and internal calendar.

Set Hours of Operation Times: This allows you to set a time when the machine will be on. At the time you set, the machine will "wake up" and stay "awake" until the time you set for it to "sleep".

Note: This does not power on the machine if its been turned off. This only "wakes" it from "sleep mode".

Set Idle Standby Delay: This allows you to tell the dartmachine to "go to sleep" after a specific amount of time. For everything else, it functions just like **Hours of Operation**.

More Machine Setup: Contains the following setup options.

Reset Menu:

Reset All: A one-step method of activating all the resets listed on this menu.

Reset to Factory Defaults: Resets all options to the original factory setting.

Reset Popularity Counters: Resets all the counters back to zero.

Clear Top Ten Score Lists: This menu lets you reset the top ten score screens for **Bermuda**, **Team Hammer Cricket**, **Hammer Cricket**, **Count Up**, **Quick Cricket** and **Count Down**.

Clear Casual Stats: Clears the game stats that have been accumulating on the machine. This will basically let you start fresh.

Adjust Volume: Allows you to adjust the speaker volume.

LED Lights Setup: This menu allows you to adjust the brightness of the LED panels. This is not available on the 1000 Series.

Target/Missed Dart Detector Setup: This menu allows you to configure various target and Missed Dart Detector settings.

MDD Enabled: You can turn ON or OFF the Missed Dart Detector.

B. Game Setup Menu

Bull Setting: Used to set the single or double bull for each individual game.

Round Limit Setting: Used to set round limits for each individual game.

Spread Limit Setting: Used to set Spread Limits on or off for Cricket games.

Feat Settings: This option lets you turn on/off feats.

Stat Ticker: The **Stat Ticker** keeps track of every players average for the game they are playing.

Show Stats During Games: Toggle the Stat Ticker ON or OFF.

X01 Stat: The **Stat Ticker** for X01 games can be configured to display PPD (Points Per Dart) or PPR (Points Per Round).

Top Gun Setup: These are the options for the Top Gun Challenge feature.

Enabled: Toggle this mode ON or OFF.

Best Of Games: Change the "Best of" setting between 2 of 3, 3 of 5, or 4 of 7.

Player Expiration (Days): Set the amount of days that a player can go without playing Top Gun Challenge before they are removed from the Top Gun Challenge list.

Clear Top Gun List: This deletes everyone on the Top Gun List. This option is used usually when moving the dartboard to another location or vendor.

More Game Setup: Used to access the following items:

Auto Player Change: Used to set auto player change ON or OFF.

Player Change Delay: Used to set the time, in seconds, allowed to remove darts between player turns.

Freeze Rule: Turns off and on the freeze rule.

Freeze Rule Bust: When this option is set to on, it will allow a player breaking the freeze rule to go bust instead of losing the game.

Backup Dart: Turns off and on the unthrow option in casual mode.

Handicap (X01): Turns off and on X01 handicapping. The percentage is used to determine the minimum starting score for the lowest player. (i.e., 40% of 301 is 121 or 60% of 301 is 181).

Handicap (Cricket): Turns off and on Cricket handicapping. You can choose how many spot marks to give the less skilled player.

New Team Cricket Rules: Turns ON and OFF the new rules for Team Cricket.

Enable Top Ten Lists: Turns ON or OFF the Top Ten Lists. The Top Ten Lists display the top ten players that have played that game. The current Top Ten Games are: Bermuda, Team Hammer Cricket, Hammer Cricket, and Count Up.

Use Large cameras in Offline Games: This turns ON or OFF the larger camera feeds in casual games. This is not available on the 1000 Series.

Show Camera in Offline Games: Turn ON or OFF the cameras for non-remote games. This is not available on the 1000 Series.

C. Communications

Connections Setup: This section is where we choose the type of device we are using to communicate with the league system.

Ethernet Setup: This setup is for using an ethernet cable and plugging directly into a router or the high-speed internet modem.

Enabled: Toggle this on or off to enable or disable Ethernet communications.

Use Internet: Toggled to YES, you are informing the Spider 360 Dart Machines that you want to use the Ethernet to talk to LeagueLeader.

IP Setting: This option allows you to choose whether to manually enter in Internet information or let it automatically find it for you.

IP Address: This is the address that your Galaxy 3 uses to access the Internet. If you chose **Manual** under **Auto/Manual**, you will need to set an IP Address by hand.

Netmask: Provided by your Internet provider.

Gateway: Provided by your Internet provider.

DNS Server 1: Provided by your Internet provider.

DNS Server 2: Provided by your Internet provider.

WIFI Setup: If you decide to use WIFI, this menu allows you to change the settings of your wireless network.

Enabled: Toggle this on or off to enable or disable WiFi communications.

Use Internet: Toggled to YES, you are informing your Spider 360 Dart Machine that you want to use the WiFi for updates.

Access Point: This is the name of the wireless access point connected your Spider 360 Dart Machine to.

Security Type: This is the security type for your wireless access point. You can choose either WEP, Galaxy WPA TKIP, WPA2 AES or None.

Note: Spider 360 Dart Machines will only work with the listed Security types. If the router isn't set to one of the security types listed, you will need to change the routers security type or use a different router.

Security Key: This is the "password" used when connecting to a secure wireless network. Both access point and Spider 360 Dart Machine must have the same key in order to work.

IP Setting: This option allows you to choose whether to manually enter in Internet information or let it automatically find it for you.

IP Address: This is the address that your Spider 360 Dart Machine uses to access the Internet. If you chose **Manual** under **Auto/Manual**, you will need to set an IP Address by hand.

Netmask: Provided by your Internet provider.

Gateway: Provided by your Internet provider.

DNS Server 1: Provided by your Internet provider.

DNS Server 2: Provided by your Internet provider.

View Outgoing Call Window: Used to set the time when a machine communicates with Arachnid 360 for an update. This is set to early in the morning as to not interrupted your play. To truly use this feature, you need to leave the machine on. The call window is defined by the beginning time and ending time set on this screen. This feature is requires that the machine has the correct time set.

View Last Update: From this menu, you can see when your Spider 360 Dart Machine last communicated.

View Call Log: This will display a report of what happened during the last communication to LeagueLeader.

Clear Last Update Time: Clears the call log.

Perform Update: Used to force the machine to call out immediately.

D. Reports

Game Popularity Counter: Displays a history of machine usage. Shows all games on the machine, the number of times each game was played and the number of credits collected toward each game.

E. Diagnostics

Abort In Progress Game: Stops any game that is currently running.

Collect Diagnostic Data: This is used to gather software and device data that may help troubleshoot a problem. Only use if you are instructed to by Cue and Case Technical Support.

Target Test: Starting with the Double 20, this will ask you to tap various segments. The segment you hit will make a positive sound if it is the correct segment and a negative sound if it is wrong. This will help you find stuck segments as well as making sure all the segments score properly.

LED Test: Technicians can use this to test the LED's on the side panels. It will scroll through the various colors.

Test Internet Connection: Run this test to check if the machine has internet connection and is communicating with Arachnid 360.

Restart Software: Used to exit the Software Update Menu and reboot the Spider 360 Dart Machine's software.

Section 5
Technical Description

Below are technical descriptions of the many parts within the Spider 360 Dart Machines .

5.1 Operating Conditions

The following is the Operating Conditions for the Spider 360 Dart Machines machines in the United States.

Power Draw

Spider 1000 - 4.1A @ 120V~50/60 Hz
Spider 2000 - 3.9A @ 120V~50/60 Hz

<u>Warning: Make sure the voltage on the power supply is set correctly for the area you are in.</u>

5.2 Hardware

PC Board: Raspberry Pi
RAM: 1024MB DDR3
Hard Drive: Micro SSD
Monitor: 19" Wide LCD Monitor
**Power Supply:**
TI:
IOB:
Dart Head:

Note: If the power cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

5.3 Darthead

The darthead assembly consists of (from front to back): the spider and segments, a matrix cushion, and the switch matrix. This assembly is resting on two screws at the bottom and is secured by means of six spider retaining latches.


Matrix Cushion
Matrix
Wooden Backboard
Target and Segments
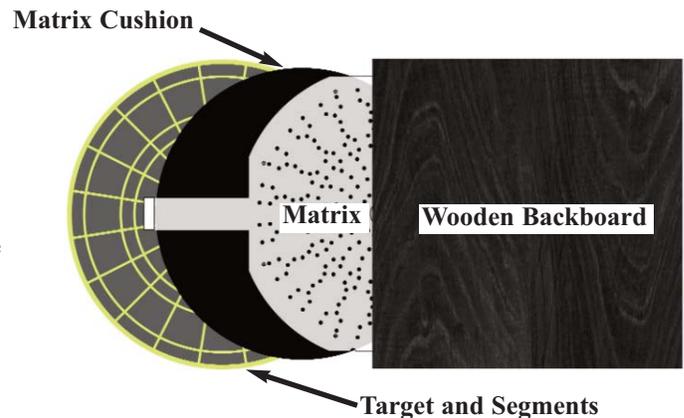
5.4 Target Interface Board

The switch matrix is connected to the Target Interface Board via the 19 pins of J1. For troubleshooting purposes, it is important to know which pins on J1 will give a particular score. Check **Section 5: Troubleshooting** for more information.

The Spider 360 Dart Machines use an accelerometer to detect when a segment was missed.

5.5 Target Interface Board Basics

The Target Interface Board (TI Board) controls the sensors for the darthead as well as the Missed Dart Detector (MDD).
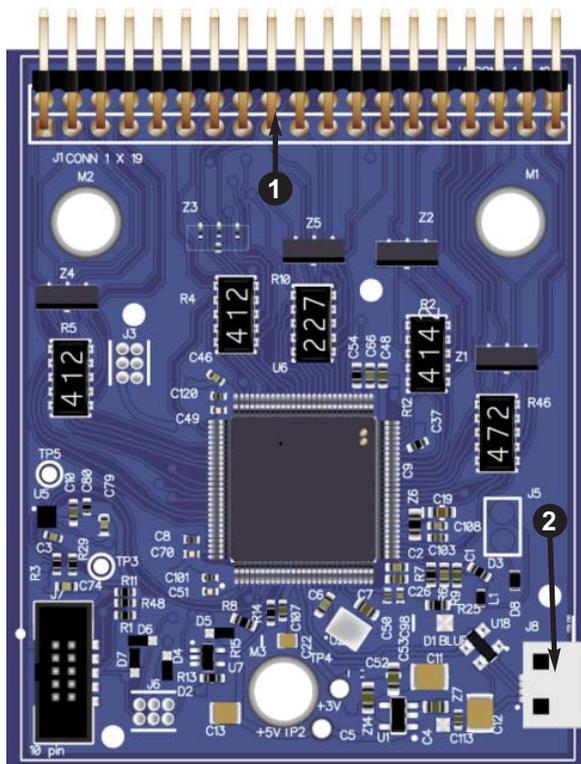
1. The connector, designated J2, is where the Darthead Switch Matrix Membrane is plugged into the Target Interface Board.
   ♦ The Switch Matrix Membrane is plugged into the front row of pins.
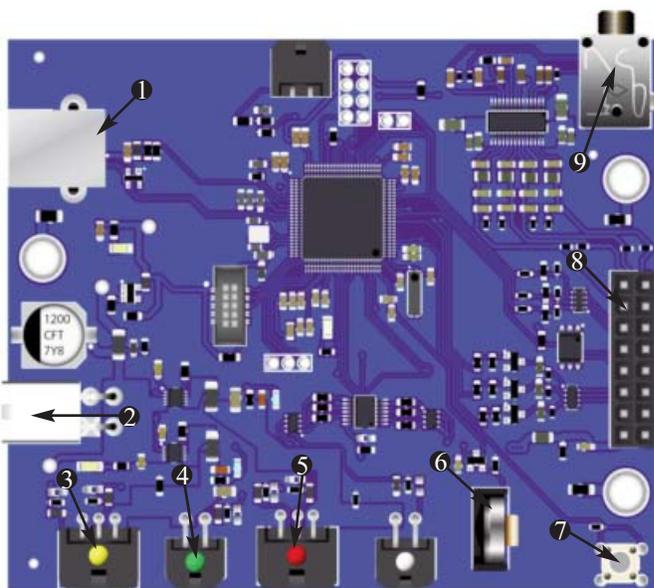2. This USB port connects to the Control Board (Raspberry PI).

Adjusting the Missed Dart Sensitivity

The Spider 360 Dart Machines 's Missed Dart Detector is intergraded into the Target Interface Board. It uses an accelerometer to detect when a dart has missed the target. You can adjust the sensitivity by:

1. Go into the Service Menu.
2. Select **Machine Setup**.
3. Select **More Machine Setup**.
4. Select **Target/Missed Dart Detector Setup**.
5. Select **Adjust Missed Dart Sensitivity**.

5.6 IOB Basics

This section describes the basic layout of the IOB. The IOB or Input/Output board controls the various external devices in the dartboard such as the Target Interface Board, the target LED's and the Marquee.

1. This USB B-Type port is used to connect the IOB to the Control Board (Raspberry PI).

2. This is the power connector for the IOB.

3. Plug for the Left Target Illumination Panel.

4. Plug for the Marquee on the top of the machine.

5. Plug for the Right Target Illumination Panel.

6. Battery for keeping the IOB's settings.

7. The Reset Button will reset the IOB.

8. Plug for the Main Wire Harness. The lights are controlled through here.

9. This is the audio jack for the Spider 360 Dart Machines.

5.7 Ground Plane Layout

Main Power Supply Connector

To Power Supply

To Power Supply

To Monitor

To Control Board

HDMI

Control Board (Raspberry PI)

To IOB

Audio Jack

Ethernet

To Back Pannel

To Camera (2000 Series Only)

To IOB

To Back Pannel

To Target Interface

To Left LED (2000 Series Only)

To Marquee (2000 Series Only)

To Right LED (2000 Series Only)

Input Output Board (IOB)

Audio Jack

To Control Board

To Buttons/Audio Speaker

Section 6 Troubleshooting

The Spider 360 Dart Machines were built to last. That said, the machines do have electronics and certain parts will wear out over time. Here are a few of the most basic issues you may run into.If there is an issue you can't handle, please feel free to call Techsupport at 1-800-435-8319.

6.1 Maintaining the Darthead

Problem	Probable Cause	What to Check
Scoring issues.	Stuck segment.	Dirt, broken tips, dust, general grime can all cause segments to not move correctly. Causing one or more miss scoring issue.
	Target Interface USB cable not plugged in correctly.	A USB cable runs from the Target Interface Board to the Control Board. If this isn't connected all the way, weird scoring can happen
	Sensor Matrix not connected to Target Interface Board	The Sensor Matrix is the semi-transparent plastic sheet that plugs into the top of the Target Interface Board. If this isn't connected all the way, weird scoring can happen.

6.2 Issues With Power

Problem	Probable Cause	What to Check
Machine won't come on.	The Machine is not getting power.	Make sure the power cable is firmly plugged into a working outlet as well as plugged into the back of the machine.
	Make sure the Master Power Switch is set to ON.	You can tell this by looking at the back of the machine or by feel. The top of the switch should be pushed in.
	The fuse is blown.	You will know right away if the fuse is blown. The clear cylinder will have charred or blackened.
	The power supply is malfunctioning.	Under the Ground Plane is the power supply.

6.3 Lighting

Problem	Probable Cause	What to Check
Target/Marquee Lights are not on.	Machine has no power.	Refer to the section "Machine won't come on." in this chart.
	Lights aren't plugged in.	The target lights are connected to the IOB by a wire harness. Check to make sure everything is plugged in.
	Possible bad LED Strip.	If everything has power and is plugged in, the last resort will be to order a new Target Light Fixture.
	Possible IOB issue.	The IOB should have a blinking blue LED in the center of it. On a working machine, it should blink once a second. If it's faster, solid or not on at all, and everything else is correct, order a new IOB.

6.4 Camera

Problem	Probable Cause	What to Check
No Camera	Camera Pushed out of the Camera Opening in the Marquee.	Stray darts or manually poking at the camera can potentially damage the camera itself.
	Lost Connection to the Control Board.	Check the USB Cable inside the cabinet. Reseat the USB Cable and then reboot.

6.5 Video

Problem	Probable Cause	What to Check
Blank Screen	Power Related Issues.	Refer to the section "Machine won't come on." in this chart.
	Monitor is turned off.	The monitor itself has a power switch. If you are inside the cabinet, it's possible to accidentally turn it off.
	Video cable isn't connected all the way.	Make sure the video cable is firmly plugged into the Control Board and the monitor.
	Control Board isn't producing a signal.	There is a red LED on the Control Board. That tells us if the that board is on and functioning or not. If it's off, check all connections and power. If everything checks out but still no signal or LED on the Control Board, get a new Control Board.
Weird Graphics	Check Monitor	Try swapping with another monitor or TV. Make sure everything is plugged in to be sure. z
	Check Control Board	If it'ss not the monitor, the only other thing it could be is the Control Board. Same troubleshooting as above.

6.6 Communication

Problem	Probable Cause	What to Check
No Internet (Ethernet)	Ethernet Unplugged	Make sure the Ethernet cable is plugged into the back of the machine and the router. You may also want to open the cabinet and make sure the Ethernet extension is plugged in.
	Blocking FTP Traffic	Some providers and/or routers limit certain communication. We use FTP to send information. Make sure this isn't blocked.
	Bandwidth Limitation	Bandwidth can be limited in a number of ways (internet data plan, provider limits, hardware limits, etc.,). If you are able, check the bandwidth you are currently using and make sure its not being reduced.
	Hardware Malfunctions	Pinched/Cut Ethernet Cable. Malfunctioning Router/Switch/Modem.

Problem	Probable Cause	What to Check
No Internet (WiFi)	WiFi Settings are Wrong	Recently get a new router? Did you make sure the access point was changed on the machine? Check all of your settings in Service Menu>Communications>Communications.
	Blocking FTP Traffic	Some providers and/or routers limit certain communication. We use FTP to send information. Make sure this isn't blocked.
	Bandwidth Limitation	Bandwidth can be limited in a number of ways (internet data plan, provider limits, hardware limits, etc.,). If you are able, check the bandwidth you are currently using and make sure its not being reduced.
	Hardware Malfunctions	Malfunctioning Router/Switch/Modem/Control Board.
	Signal Degradation	WiFi is only a radio signal and can be interfered with easier than Ethernet. Everything the signal needs to pass through will cause signal loss. Metal is also a big factor.

Extended Troubleshooting

The previous charts gave you a quick run down on some basic issues and what to look for. The following pages expand on that and add in some more complicated fixes.

6.1 Maintaining the Darthead

Inevitably, during the course of several months of play, a tip from a dart will get broken and lodged into the dart board. Owners of previous electronic dartboards know how to fix and maintain their dartboards.

This section will explain how to remove broken dart tips, clean the matrix and segments and how to test the Target Interface Board (TI).

A. Removing Broken Tips

Each segment of either darthead on a Spider 360 Dart Machine has a back to it. So when you break a tip, all you have to do is push the tip through the hole. Because the segment is capped, the broken tip can't fall anywhere and interfere with the electronics. To do this, you will need a sturdy tool that will fit through the segment hole. A dart tip won't work.

A lot of times the tip has enough material sticking out of the hole where you can simply pull out the tip with a pair of pliers.

B. Disassembling the Darthead

Maintaining dartheads means that sometimes you will need to get at the inner workings of the darthead: the segments, the Matrix Cushion and matrix.

1. Remove Catch Web from the darthead.
   a. On the 1000 Series, you will need to open the Target Door and remove the four wingnuts.
   b. On the 2000 Series, remove the four screws from the front.
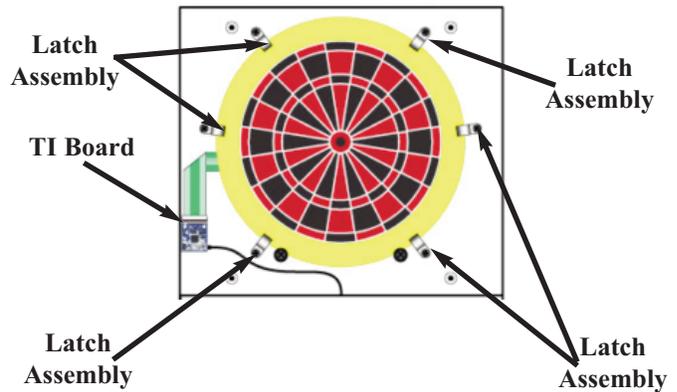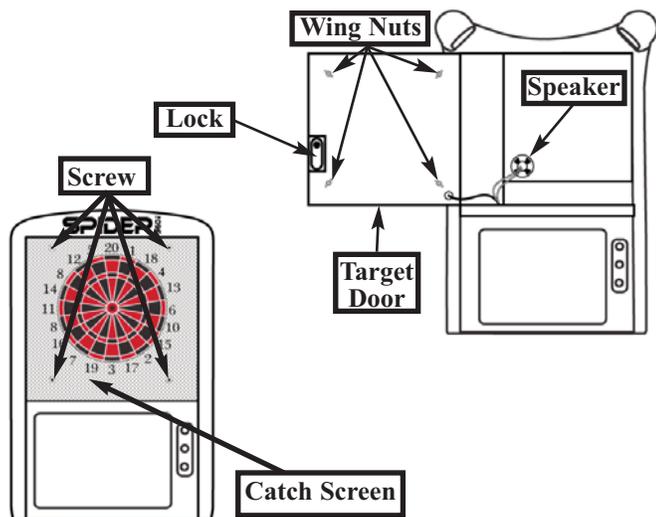
2. Unplug the Matrix ribbon cable from the Target Interface (TI) Board.
3. Turn the Latch Assemblies so that they are no longer holding the darthead to the back board. Start with the upper left Latch Assembly and end with the lower left Latch Assembly

Note: You will want to hold the darthead to the backboard while you perform step four (4). The darthead could be damaged if it were to fall.

4. Carefully remove the darthead.
5. Lay the darthead on a flat surface. At this point you may want to mark which end is the 20.
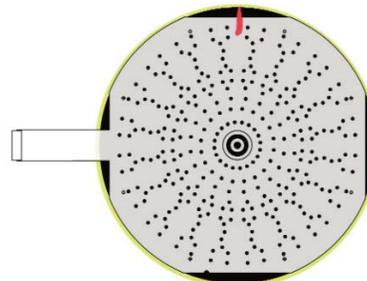
6. Use a clean damp cloth to wipe down the matrix and Matrix Cushion.
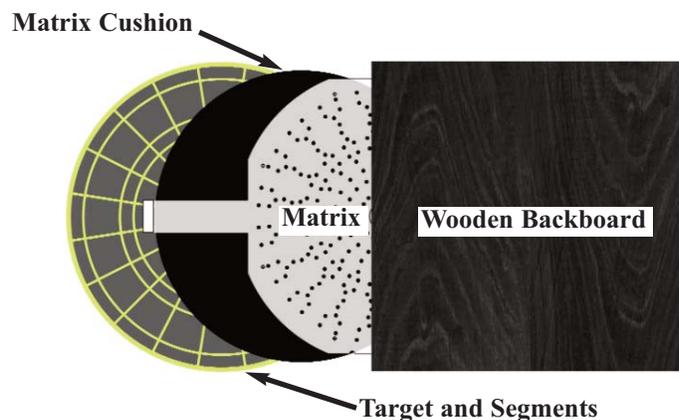
7. Remove the backs of each segment and dump its contents (if any) into the garbage.
8. Check over the segments and clean up any broken plastic.
9. Wipe down the sides of the segments. Make sure they are completely free of debris and are dry before replacing them in the web.
10. Reassemble the darthead and do the opposite side.

Note: Make sure you get the darthead in the correct order. If the any of the pieces are misaligned or out of sequence, the players will have difficulty scoring.

We suggest performing darthead maintenance before each season. This will reduce the amount of service calls you are likely to get. However, it really all depends on the amount of play the dartboard receives at each location.

If its a location that is heavy into dart leagues, you might want to perform maintenance more often.

C. Testing the Target Interface Board

The 15" switch matrix is connected to the Target Interface Board (TI Board) at the 38 pin connector J1. The matrix plugs into the front nineteen (19) pins.

Pin 1   **J1**
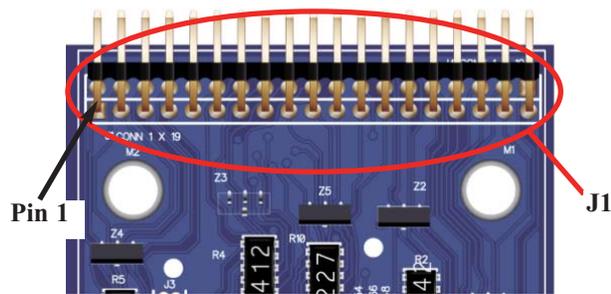
The first step is to remove the web on the darthead.

1. Remove the four (4) Screws holding the web in place.
2. Remove Catch Web from the darthead.

Matrix Ribbon

Target Interface Board
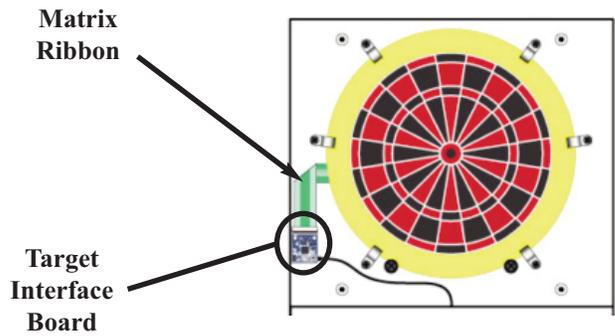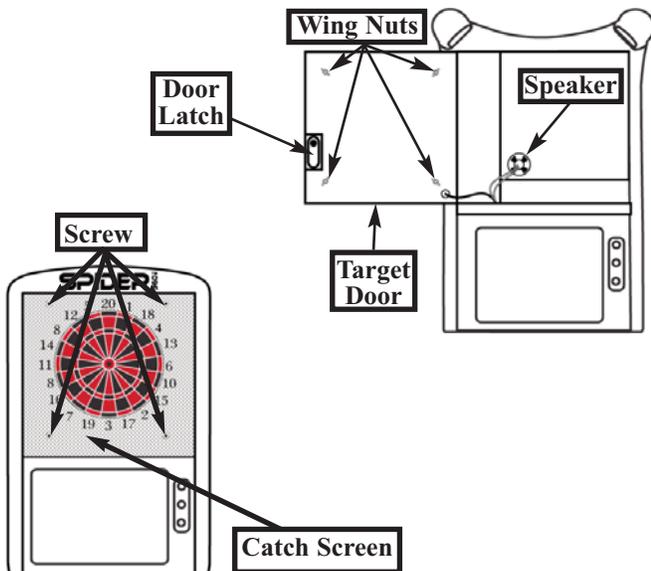
3. Unplug the matrix ribbon cable from the Target Interface (TI) Board.

Warning: The pins on the Target Interface board can be bent when excessive force is used to remove the matrix ribbons.

Don't unplug the matrix by pulling on the ribbon. Unplug it using the connectors.

4. Go into the **Service** menu on your Spider 360 Dart Machine.
5. Select **Diagnostics**.
6. Select **Target Test**.
7. Use a jumper and the chart below to test the individual pin combinations.

If you follow the chart below, keeping in mind where the Pin 1 positions, you will get the results you are looking for. More information on where pin 1 is can be found by refering to the diagram **TI Board Top View** on this page or **Section 3.6** on page 4.

Leg/Cg	ef	ee	ed	m	l	k	j
e	xfd	fd	fd	fd	xem	em	em	em
f	xi	i	i	i	xk	k	k	k
g	xef	ef	ef	ef	xej	ej	ej	ej
h	xm	m	m	m	xl	l	l	l
i	xeh	eh	eh	eh	xee	ee	ee	ee
eh			v	v				
ei	xe	e	e	e	xek	ek	ek	ek
ej	xel	el	el	el	xf	f	f	f
ek	xh	h	h	h	xei	ei	ei	ei
el	xeg	eg	eg	eg	xg	g	g	g
em	xj	j	j	j	xed	ed	ed	ed

Matrix Pinout

Note: Only use the pins in the same row when testing the Target Interface Board. Nothing bad will happen. Your readings will just be inaccurate.

6.2 Issues With Power

Having trouble getting the machine to turn on? Maybe its shutting down in the middle of a game? These are all issues likely related to power.

A. Proper Playing Environment

One thing you need to make sure of, is your wall outlet properly grounded and otherwise configured? The game will have problems if the outlet it gets power from isn't set up correctly. Unfortunately, we really cant tell you how to fix that particular problem.

Some things to try though, there are Outlet Testers you can get that plug into the wall outlet. It will tell you if there is a ground wire or not. It will also indicate if there are other, more simplistic, problems.

If you are uncomfortable testing your power by yourself, you may need to contact an electrician. Especially if the power problems with the machine occur frequently.

B. What to Check First

Machine not coming on at all? Here are a couple of things to check first:

1   Check the Power Cord. Make sure the power cord is plugged into a properly configured outlet (See **Section A** above) and make sure the power cord is plugged into the back of the machine.

2   Make sure the Master Power Switch is set to ON. You can tell this by looking at the back of the machine or by feel. The top of the switch should be pushed in.

3   Lastly, check the fuse. You will know right away if the fuse is blown. The clear cylinder will have charred or blackened.

Intact Fuse   **Blown Fuse**
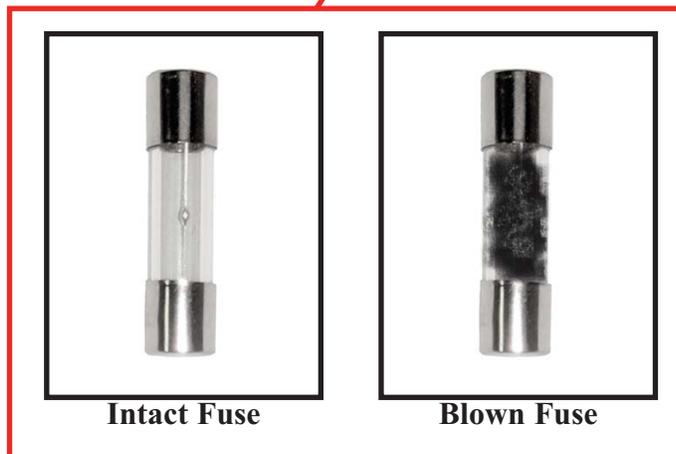
C. The Power Supply

If nothing has power and the steps in the last section didn't help (See Section **B**), then you'll need to replace the Power Supply.

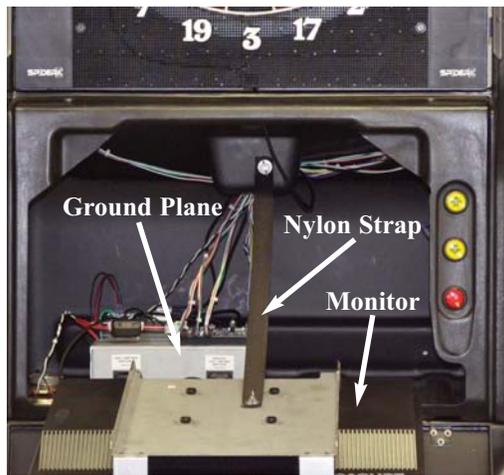1.   Remove the power cable from the back of the machine.

2.   Remove the bezel and monitor.
      ♦On the 1000 series you will want to completely remove these. It makes it easier to access the inner cabinet.
      ♦On the 2000 Series, you can leave the bezel and monitor attached. They will not be in the way.

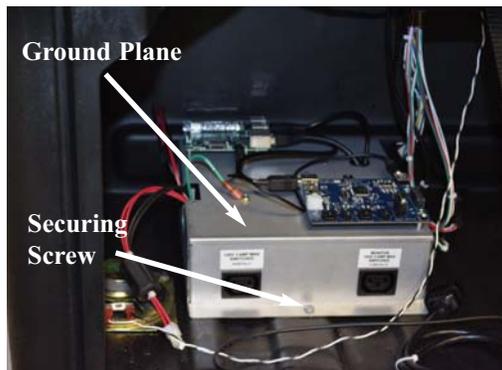With the monitor down, you now have access to the Ground Plane.
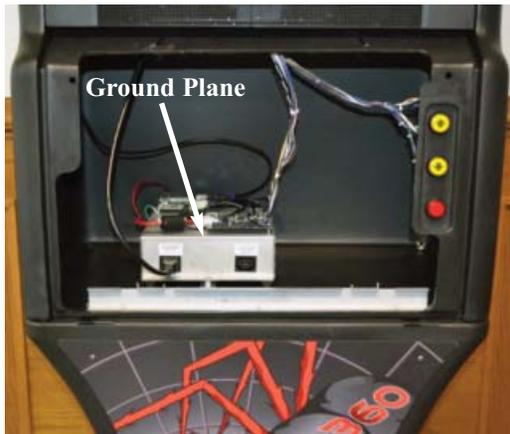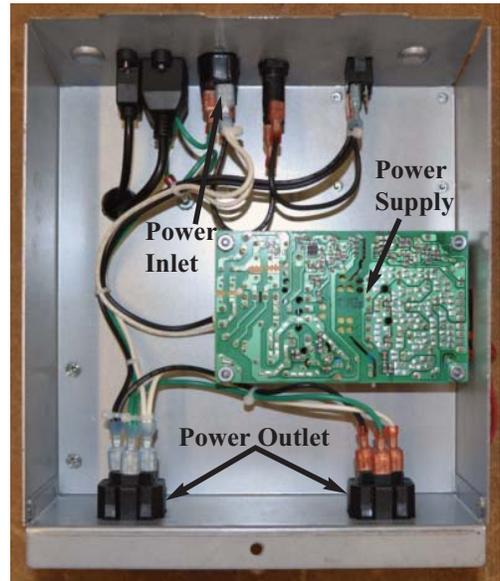
1000 Series Cabinet

2000 Series Cabinet

5. Disconnect all the wires from the Ground Plane. You do not have to remove the wires or cables that connect the IOB and the Control Board.
6. Remove the screw that secures the Ground Plane to the cabinet.

7. Remove the entire Ground Plane from the cabinet.

8. Turn the Ground Plane to access the Power Supply.

9. Use a ⁵⁄₁₆" nut driver to remove the four (4) nuts from the power supply.
10. Reverse the above steps to install the new power supply.

6.3 Lighting

Both Dart Machines use two (2) LED sources to illuminate the target so that you can play even in a darkened environment. The Marquee on the Spider 2000 is for show. We use LED's because they give off a lot of illumination with little heat and use less power.

You will know right away if any of the LED lights are malfunctioning. There will not be any illumination from them.

A. What to Check First

There are essentially three (3) places to check in case you have no illumination:

1. The IOB controls, and supplies power to, the lights. Reseat the connectors while the dart machine is unplugged.
2. Make sure the wires connecting the lights to the IOB are intact and connected (See Step 1 above).
3. The last point is at the LED's themselves. on the Spider 1000, make sure the bulbs aren't "burned out". On the Spider 2000, make sure the connections are good. The following instructions will help:

B. Checking the Harness Connections

If you are having issues with the lights, checking the connections here would be a good start.
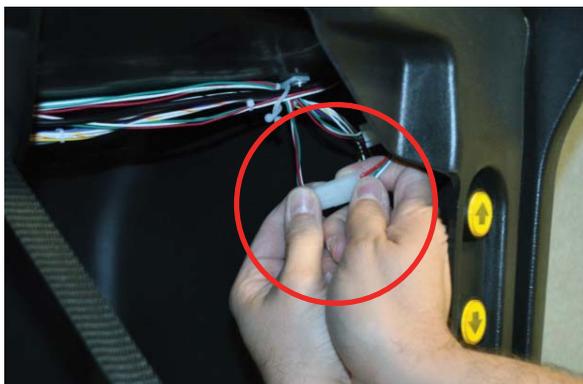
Spider 1000

The Target Lights for the Spider 1000 are connected to the IOB on the right hand side. The harness is routed to the right and then up on the right hand side of the cabinet.

Spider 2000

Each Target Light Assembly of the Spider 2000is connected to the main harness by two connectors. One per LED strip. Each harness should have one bundle of wires marked by a colored wire tie. Be sure to connect the harnesses with the same color wire tie together.

C. Replacing a Target Lights

Spider 1000

The target lights for the Spider 1000 are two (2) 60W equivalent light bulbs. To replace, unscrew them from the fixtures and replace.

Note: If you use incandescent, the max wattage is 40W.

Spider 2000

Replacing the Target Light Fixture on either side are essentially the same.
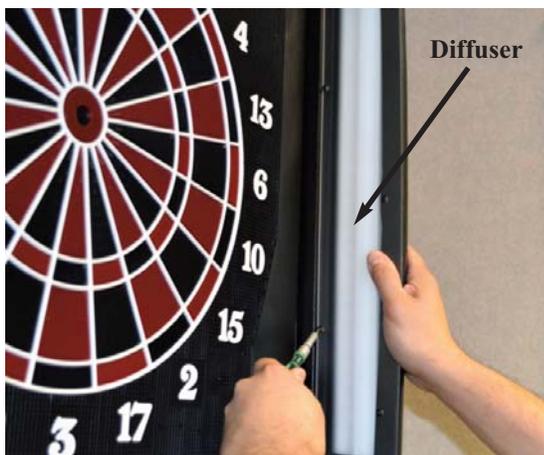
Diffuser

1. Unplug the Spider 2000 from the wall.
2. Using a phillips head screwdriver, remove the two (2) screws securing the bezel to the cabinet.
3. Remove the bezel.
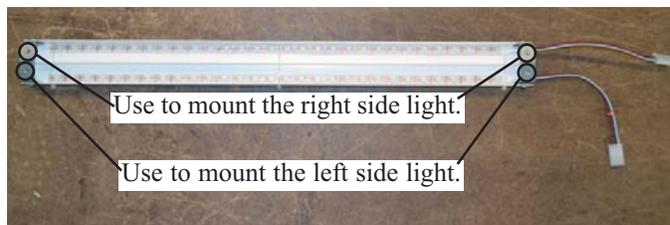4. Unplug the light fixture from the main harness.

5. Remove the semitransparent diffuser in front of the Target Light Fixture you are replacing.
6. Remove the screws holding the light fixture in place.

7. Slide the Target Light Fixture out of the opening.
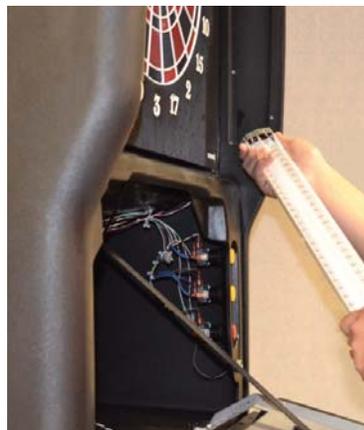

8. Install the new Target Light Fixture.

Use to mount the right side light.

Use to mount the left side light.

   a. Use the mounting holes toward the outside of the cabinet when installing.
   b. Connect the Target Light Fixture into the main harness. Make sure to match up the wire tie colors (ie., orange to orange)

9. Reinstall the diffuser and power the machine back on.

D. Replacing the Marquee (2000 Series Only)

The Marquee Light Fixture is setup differently than the Target Lights. To reach the Marquee LED Fixture, you'll need to remove the Marquee Face to get to it.

1. Remove the power cable from the back of the machine.
2. Using a phillips head screwdriver, remove the two (2) screws securing the bezel to the cabinet.
3. Remove the bezel.
4. Press down the two (2) tabs at the top of the monitor and pull forward.
   - The monitor should be held in place by a nylon strap.
   - This is to allow you access to the cabinet without letting the monitor dangle and possibly get damaged.
5. Unplug the Marquee from the IOB.
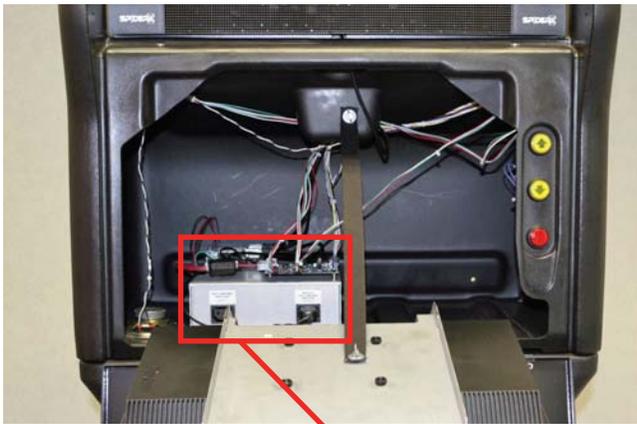
6. Unplug the Camera from the Control Board. It will be easier to remove and replace the marquee.

Note: The diagram on page 11 shows can help you choose the right cable.
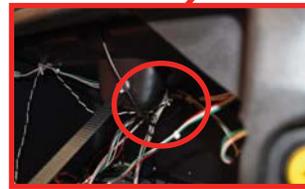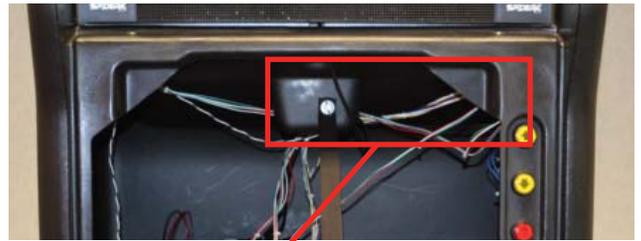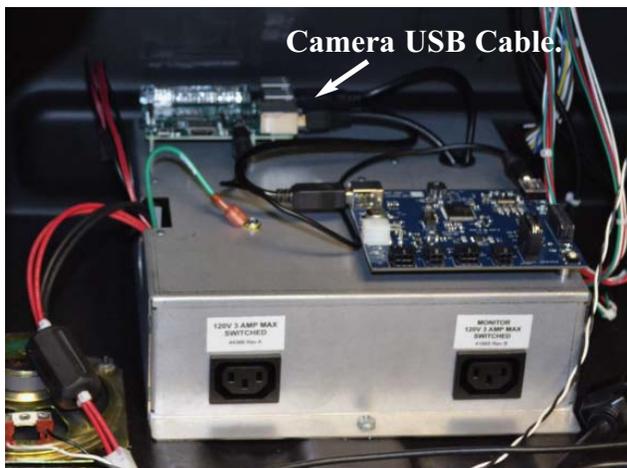

Camera USB Cable.

7. Remove the Marquee Harness and Camera USB Cable from the wire clip. You can find that towards the back of the machine.
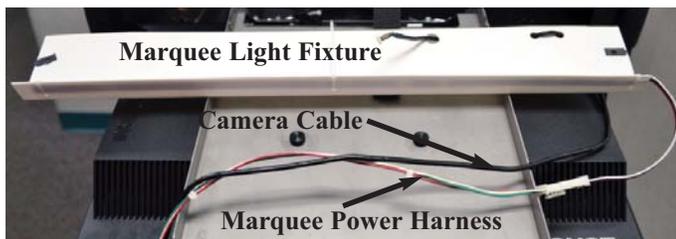

8. Remove the Marquee Face Plate.

9. Remove the Access Hatch behind the Marquee.
   a. Its located on the back of the machine right behind the marquee.
10. Remove the two (2) mounting screws and the Marquee Light Fixture.

Marquee Light Fixture

Camera Cable

Marquee Power Harness
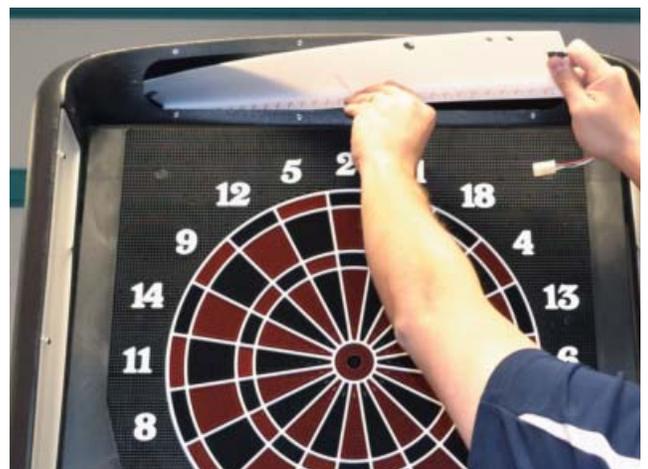
If removed properly, you should have the entire power harness and Camera Cable out still attached to the Marquee Light Fixture. This way is definitely easier than trying to remove wires separately.

11. Remove the Camera Cable from the Marquee Light Fixture.
    a. Take note of how it is connected to the Marquee Light Fixture. You will have to attach the Camera Cable to the new fixture.

Marquee Light Fixture

Marquee Fixture Wire Harness

Marquee Power Harness
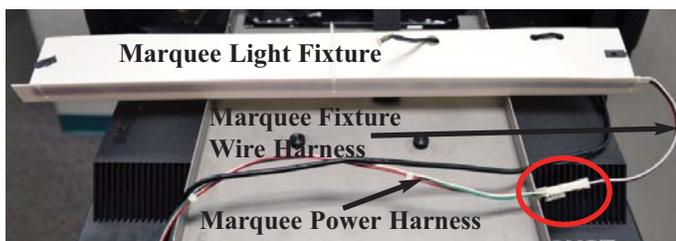
12. Disconnect the Marquee Power Harness from the Marquee Fixture Harness.
13. Attach the Camera Cable and Marquee Power Harness to the new Marquee Light Fixture.
    a. Remember how they were attached to the old Marquee Light Fixture.

Marquee Light Fixture

Camera Cable and Wire Harness

14. Insert both the Camera Cable and Marquee Power Harness through the opening for the marquee.

15. Using the Access Hatch we opened in step 9, feed the rest of the cabling and wires down the side of the machine.

16. Close the Access Hatch.
17. Reconnect the Power Harness and USB Cable.
18. Secure the Marquee Light Fixture to the cabinet.
    a. There is a wire tie attached to the front of the Marquee Light Fixture. Use this to hold the fixture close top the cabinet as you secure it to the cabinet.

Marquee Light Fixture

Wire Tie

Camera Cable

19. Restore power to the machine to verify the Marquee Lights work.
20. Re connect the Camera to the USB Camera Cable and reattach the Marquee Face Plate to the machine.

6.4   The Camera (2000 Series Only)

The Camera is located in the Marquee, above and slightly left of, the "R" in SPIDER. If the Camera is malfunctioning, you will not be able to go online.

A. What to Check First

There are essentially three (3) places to check in case you have no Camera:

1. The Control Board controls, and supplies power to, the Camera. Reseat the connector while the Spider 2000 is unplugged.
2. Make sure the cable connecting the Camera to the Contrl Board is intact and connected (See Step 1 above).
3. The last point is at the Marquee. Make sure the connection is good.

Camera

Marquee

B. Replacing the Camera

The Camera is mounted directly to the marquee. This makes it easy to swap out.

1. Remove the power cable from the back of the machine.
2. Remove the Marquee Face Plate.

3. Unplug the Cable from the Camera.

4. Remove the Camera from the Marquee using a ³⁄₁₆" nut driver.
   - Be careful. The nut is plastic.
   - There is a rubber "O" ring under the camera. Leave it there. That acts as a standoff for the Camera.

5. Mount the Camera onto the Marquee.

Warning: Do not over tighten. You want the camera to be snug but if you tighten too much, you may DAMAGE the camera board.

6. Plug the USB Cable into the new cable. The end is keyed and only goes in one way.

Caution: The pins in the camera can be bent. The end only plugs in one way. DO NOT FORCE IT.

7. Reattach the Marquee Face Plate.8
8. Reconnect power to the machine.

C. Replacing the Camera Cable

The Camera runs from behind the Marquee Light Fixture down to the Control Board. The basic steps of this were covered in **Section 5.3 D Replacing the Marquee** on page 19.

Follow those instructions except for replacing the Marquee Light Fixture. Replace the Camera Cable instead.

5.5 Video and 5.6 Communication

The chart on page 13 covers all the most common issues. Anything more will likely need to be trouble shot with techsupport.

Section 7
Parts Listing

The numbers listed are Spider 360 part numbers. Please use the Spider 360 numbers when placing an order. Some descriptions are followed by a number in parentheses. This number is the quantity used in that assembly.

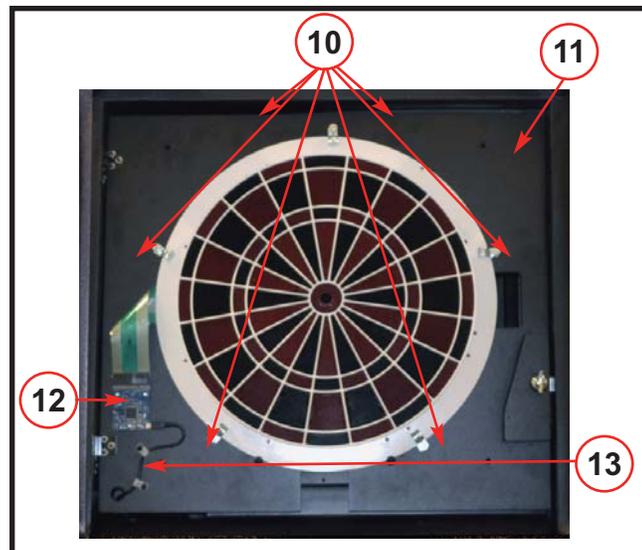# A - 44423 Spider 1000 Upper Cabinet Assembly WRB

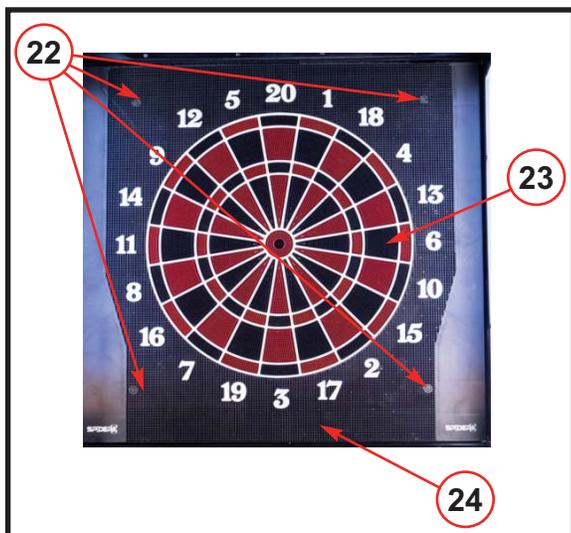| Part#	Ref#	Description
44415	1	Upper Cabinet Spider 1000
43075	1	Speaker (Not Shown)
44431	1	LED Bulb, 60W Equivalent
44396	1	Ethernet Cable (Not Shown)
44424	2	Target Assembly WRB
41676	3	Push Button - Up/Down (black/yellow) (2)
44369	4	Push Button Lamp LED (3)
19131	4	Push Button - Player Change (black/red)
43516	5	LED Monitor VGA/HDMI
44126	5	Monitor Power Cable (Not Shown)
44349	5	Monitor HDMI Cable (Not Shown)
44442	6	Bezel Spider 1000
44355		Ground Plane Assembly 120V (Inside Cabinet)
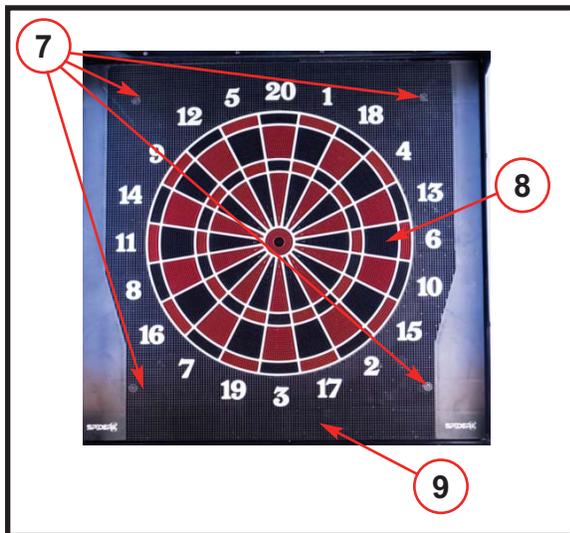
44424 Spider 1000 Target Assembly

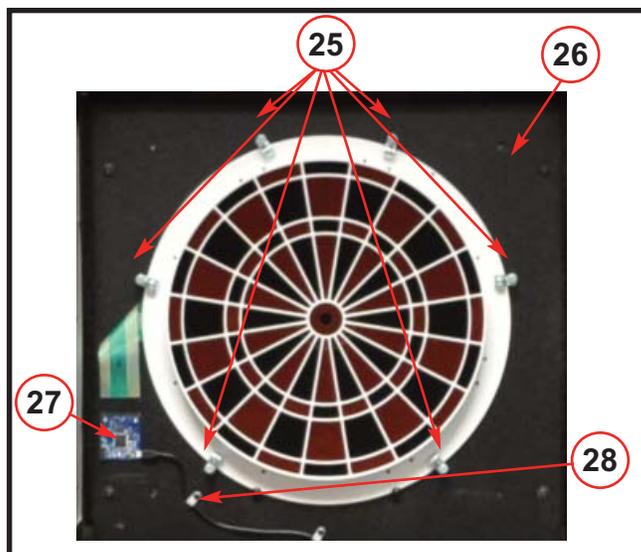| Part#	Ref#	Description
43925	7	15" Web Mounting Hardware Kit
43614	8	15" White/Black/Red Spider and Segments Assembly
28258	8	15" Matrix Cushion
12575	8	15" Switch Matrix
44439	9	15" Web Spider 1000
43170	10	15" Darthead Retaining Bracket Assembly (5)
41658	11	Target Back Spider 1000
44346	12	TI (Target Interface) Board
44352	13	TI Board USB Cable

B - 44332 Spider 2000 Upper Cabinet Assembly

Part#	Ref#	Description
44368	14	Upper Cabinet Spider 2000
43146	14	Access Cover (Not Shown) (1)
43075	14	Speaker
44396	14	Ethernet Cable (Not Shown)
44353	15	Marquee Assembly
44365	15	Marquee LED Strip w/Bracket
44192	15	Player Camera
43239	15	Player Camera Cable
44342	16	Target Assembly WRB
44362	17	Dartboard LED PCB W/Bracket (2)
43130	17	Dartboard LED Diffuser (2)
41676	18	Push Button - Up/Down (black/yellow) (2)
44369	19	Push Button Lamp LED (3)
19131	19	Push Button - Player Change (black/red)
43516	20	LED Monitor VGA/HDMI
44126	20	Monitor Power Cable (Not Shown)
44349	20	Monitor HDMI Cable (Not Shown)
44392	21	Bezel Spider 2000
44355		Ground Plane Assembly 120V (Inside Cabinet)

44342 Spider 2000 Target Assembly

Part#	Ref#	Description
43209	22	15" Web Mounting Screws (4)
43614	23	15" White/Black/Red Spider and Segments Assembly
28258	23	15" Matrix Cushion
12575	23	15" Switch Matrix
44391	24	15" Web Spider 2000
43170	25	15" Darthead Retaining Bracket Assembly (6)
43941	26	Target Back
44346	27	TI (Target Interface) Board
44352	28	TI Board USB Cable

44424 White/Black/Red (WBR) Spider and Segments Assembly

Part#	Ref#	Description
41590	29	Alignment Pin (2)
42036	29	Alignment Pin Screw (2)
29268	30	15" Spider White
18069	31	15" Segment, Double Red (10)
19079	31	15" Segment, Double Black (10)
21408	32	15" Segment, Outer Single Red (10)
22518	32	15" Segment, Outer Single Black (10)
23628	33	15" Segment, Triple Red (10)
24738	33	15" Segment, Triple Black (10)
25848	34	15" Segment, Inner Single Red (10)
26958	34	15" Segment, Inner Single Black (10)
29078	35	15" Segment, Outer Bull Red
27148	36	15" Segment, Inner Bull Black
35845	37	15" Spring, Inner Bull

44424
Y/B/R Spider & Segments

28258
15" Matrix Cushion

12575
15" Switch Matrix
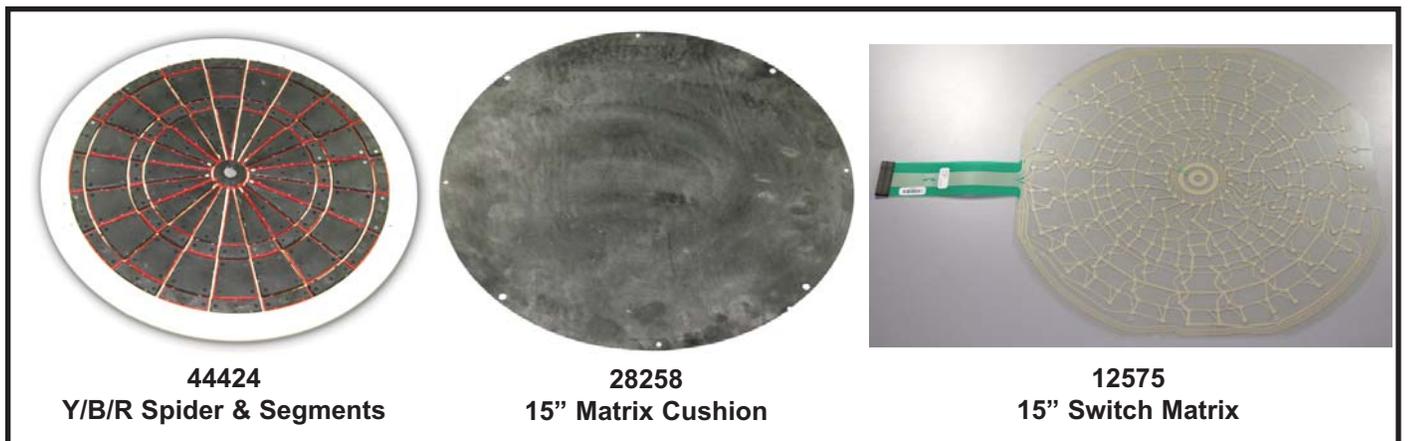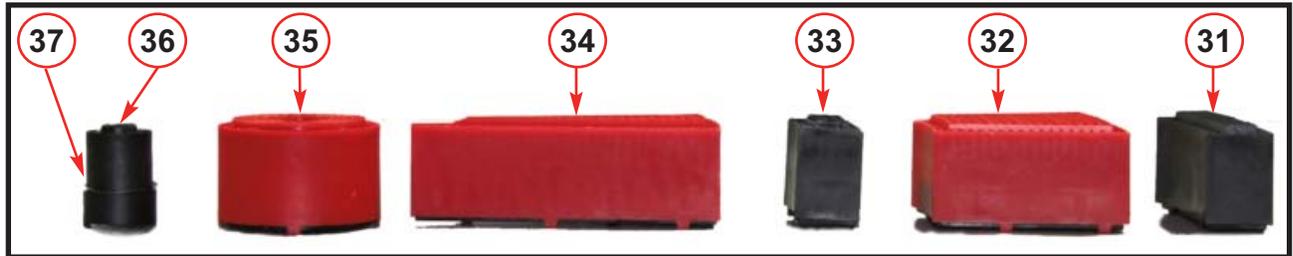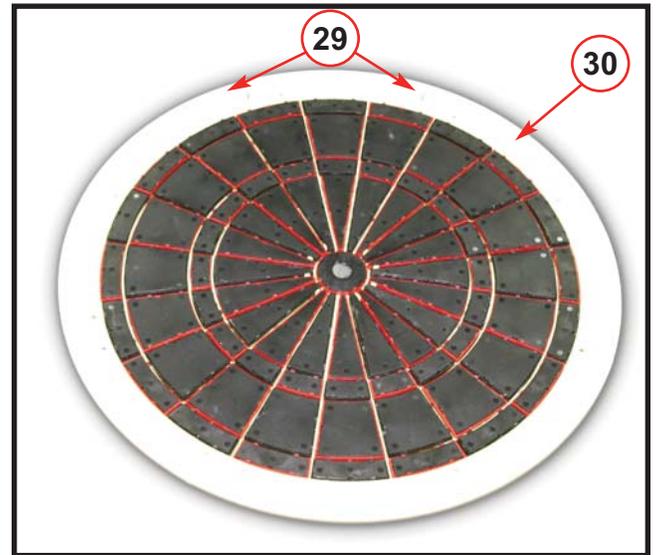
44355　　　Ground Plane Assembly Spider 1000 and Spider 2000
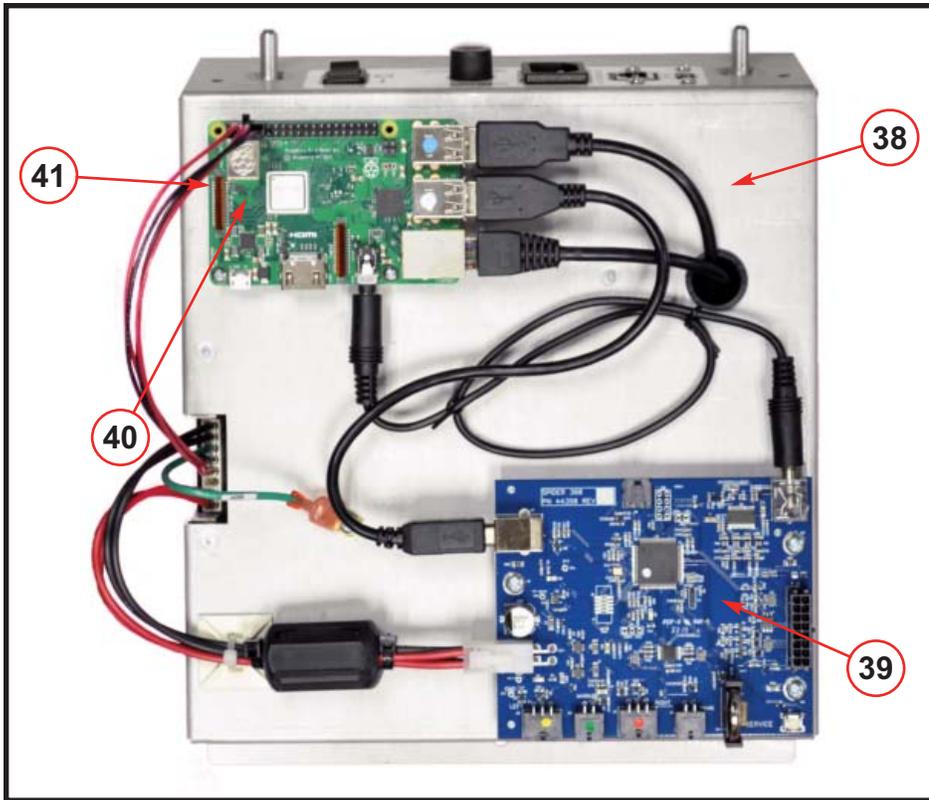
Part#	Ref#	Description
44556	38	Ground Plane Bracket
44323	38	Power Supply
44390	39	Input/Output Board (IOB)
44322	40	Raspberry PI Motherboard
44357	41	SD Memory Card

C -　44334 Spider 1000 Base Assembly
　　　44416 Spider 2000 Base Assembly
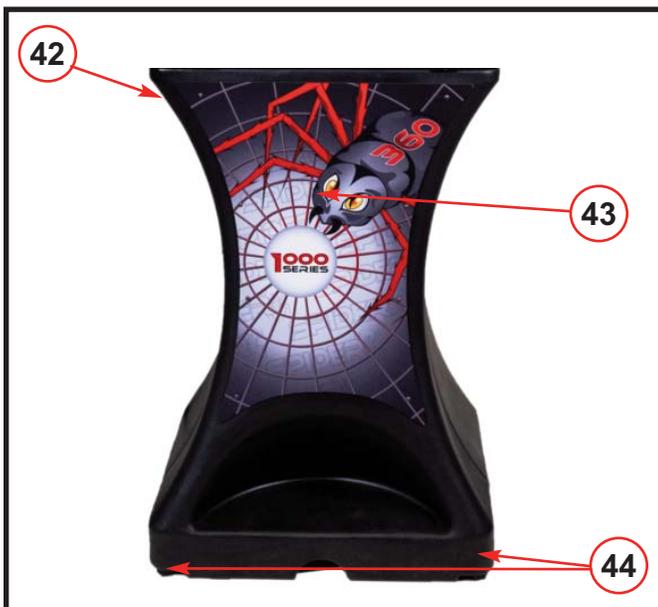
Part#	Ref#	Description
44337	42	Lower Cabinet Spider 1000/Spider 2000
43845	43	Advert Plate 1000
44407	43	Advert Plate 2000
42416	44	Leveler (4)