



Model E 650 ARA

**Electronic Dart Game
Instruction Manual**



Dart History

The first "dart" was most likely thrown by prehistoric man some 35,000 years ago. A sharpened antler attached to a wooden shaft allowed hunters to kill an animal from a distance, even as it ran. In one form or another, from spears, to arrows, to the present dart we use for games of skill, the art of throwing a pointed shaft with accuracy has been a part of almost every culture.

Later in history, Henry VIII of England and Charles VI of France were both avid enthusiasts of dart throwing games derived from warfare and archery contests.

The modern game evolved during the nineteenth century in English pubs. Often a barrel head was used as the target, with the centrally located cork becoming the bullseye. The term "cork" is still occasionally used today when referring to the bullseye.

At one time darts were considered a game of chance, and were actually illegal in England until 1908, when a Leeds innkeeper went to court to challenge the law. Fortunately he was able to demonstrate to the court's satisfaction that darts were indeed a game of skill.

Between the two World Wars playing darts for fun and relaxation became more and more popular in England. American servicemen stationed there in World War II often brought the game home with them, where it eventually became popular in the United States as well.



The Originator of Electronic Darts: Arachnid, Inc.

The high technology electronic dart games we play today bear little resemblance to the medieval versions that evolved from the pastimes of the royal courts.

Arachnid, Inc. invented the state-of-the-art technology that brought the popular pub game into the home, in the process earning a stellar reputation for quality and innovation, recognized today all over the world.

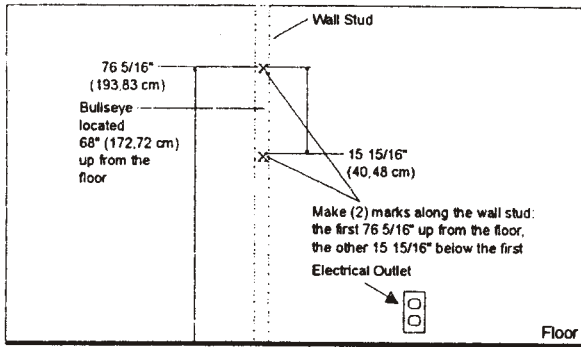
Your electronic soft-tip dart game is a precision engineered product manufactured with the highest quality materials, and is designed to provide years of action-packed fun to players of all skill levels and ages.

We suggest you take the time to read through this manual before playing.

Unpacking the Game



After unpacking the game, it is important to save the original box, all packaging, and receipts. These items will be needed if it ever proves necessary to return game to factory for service.



**Mounting the Game
(View Facing Wall)**

Mounting the Game



1. Choose a location to hang the board that is near an electrical outlet, and that has at least 10 feet of open floor space in front of the board.
2. Locate a wall stud, and place a mark 76 5/16" (193.83 cm) up from the floor along the stud (see illustration above). Place another mark 15 15/16 (40.48 cm) below the first mark. Drill a small pilot hole into each reference mark, then screw in a #10-16x1 3/4" long slotted truss-head mounting screw (provided) into each pilot hole until the screw head is protruding about 1/2" (12.7 mm) from the wall.
3. Line up the slotted mounting holes on the back of the game with the screw heads, then mount the game.
4. It may be necessary to adjust the screws until the board fits snugly against the wall. After the board is mounted, the bullseye should be 68" (172.72 cm) above the floor.
5. Place a toe line 97 1/2" (248cm) from the wall as a guide for throwing distance. In tournament play adhesive tape 2 feet long by 2 1/2 inches wide is used, but if not available, a strip of household masking tape will suffice.
6. The game is powered by an AC to DC adapter supplied with the game. To connect, insert the round barrel-type power plug into the lower left side of the dart board (as you face it) and the two-prong power adapter plug into an electrical outlet.

GENERAL GAME OPERATION



- 1) Insert the round barrel-type power plug into the lower left side of the dart board (as you face it) and the two-prong power adapter plug into an electrical outlet.
- 2) Press **POWER** button to turn on game.
- 3) The dartboard will play a welcoming melody.
- 4) Press **GAME MENU** button repeatedly to select game. The selection is showed at 1st player score display.
- 5) To go immediately to popular games cricket or 301 without scrolling through game options, press **GAME MENU** and then **GAME MENU** & either **CRICKET** or **301** simultaneously.
- 6) Press **GAME OPTIONS** to select the designed options or difficulties of the game for all players. The selection is shown at 2nd player score window.
- 7) For handicap playing, first press **# OF PLAYERS** button to select which players receive handicap mode and then press **PLAYER HANDICAP** button to select handicap option. Repeat the above steps for each player.
- 8) Press **# OF PLAYER** button to select how many players are included in the game (For handicap mode, do not follow this step). The selection is shown at 3rd player score window. If players are more than 4, they have to share their score windows. For cricket games, if players are more than 2, they have to share the upper cricket bulbs while the lower cricket bulbs would only show the highest cricket score status among all players. One mark is indicated by a green light, two by an amber light, and three by a red (when number is closed). If all players close the same segment, then the red light will blink to signify the 'closing status'.
- 9) You can play against the computer. Press **SOLO PLAY** button repeatedly to select the skill level of computer player. Only one computer player can be involved during a game. Example: If you choose 4 players and computer mode, players 1, 2 and 3 are human players and player 4 is computer. There are five levels of computer player for your selection.

Code	Level
L1	Novice
L2	Beginner
L3	Intermediate
L4	Advanced
L5	Pro

- 10) If all selections have been confirmed, press **START GAME** to start a game.
- 11) If a dart thrown on the board scores but does not stick on the board, press **BOUNCE OUT AMEND** button to eliminate the score gained by this dart.
- 12) If a player finishes the game first, the score window displays "-1-" (rank 1). The same rule is applied for other ranks.
Press the "miss dart" button to register the missing darts in each throw.

- 13) During the game, press **VOLUME CONTROL** button to select the volume of sound or mute. There are 4 choices for your selection.
 Hi (High)
 Nor (Medium)
 Lo (Low)
 Off (Off)
- 14) If the game is left unattended for over 10 minutes it will temporarily shut off. To resume and turn the game on again simply press any button or segment.
- 15) Press and hold **POWER** button for 2 seconds to shut off game.

GAME INSTRUCTIONS :

No.	Game	Difficulties / Options
G01	301	6
G02	501	6
G03	601	6
G04	701	6
G05	801	6
G06	901	6
G07	GOTCHA!	2
G08	Quick Cricket	3
G09	Cricket	3
G10	Shanghai	12
G11	Cut Throat Cricket	3
G12	Scram Cricket	1
G13	Double Only Cricket	3
G14	All Fives	5
G15	Double Down	1
G16	Forty One	1
G17	High Score	10
G18	Ace	6
G19	Killer	11
G20	Count-up	9
G21	Round The Clock	12
G22	Shoot Out	10
G23	Bermuda Triangle	1
G24	Over	3
	Total	132

G01 301 (OPTIONS : L01, L02, L03, L04, L05, L06)

Each player begins with 301 points, and must reach exactly zero to win. The score of each dart thrown is subtracted from the beginning score of each round. Exceeding zero causes the player to "Bust", and the score returns to what it was before that round. There are six options for the game, namely.

Option Code	L01	L02	L03	L04	L05	L06
START / END	Single In / Single Out	Single In / Double Out	Double In / Single Out	Double In / Double Out	Single In / Expert Out	Double In / Expert Out

Single In : The player can hit any segment on their first dart to start.

Single Out : The player can hit any segment on their last dart to finish the game.

Double In : The player must hit a double or double bullseye on their first dart to start.

Double Out : The player must hit a double or double bullseye on their last dart to finish the game. (Reaching a score of 1 will "Bust" since it is not possible to double out with 1 point.)

Expert In : The player must hit a double, a triple or double bullseye on their first dart to start.

Expert Out : The player must hit a double, a triple or double bullseye on their last dart to finish the game. (Reaching a score of 1 will "Bust" since it is not possible to double or triple out with 1 point.)

G02 501 (OPTIONS : L01, L02, L03, L04, L05, L06)

This game is played the same as 301 except a player starts with 501 points.

Option Code	L01	L02	L03	L04	L05	L06
START / END	Single In / Single Out	Single In / Double Out	Double In / Single Out	Double In / Double Out	Single In / Expert Out	Double In / Expert Out

G03 601 (OPTIONS : L01, L02, L03, L04, L05, L06)

This game is played the same as 301 except a player starts with 601 points.

Option Code	L01	L02	L03	L04	L05	L06
START / END	Single In / Single Out	Single In / Double Out	Double In / Single Out	Double In / Double Out	Single In / Expert Out	Double In / Expert Out

G04 701 (OPTIONS : L01, L02, L03, L04, L05, L06)

This game is played the same as 301 except a player starts with 701 points.

Option Code	L01	L02	L03	L04	L05	L06
START / END	Single In / Single Out	Single In / Double Out	Double In / Single Out	Double In / Double Out	Single In / Expert Out	Double In / Expert Out

G05 801 (OPTIONS : L01, L02, L03, L04, L05, L06)

This game is played the same as 301 except a player starts with 801 points

Option Code	L01	L02	L03	L04	L05	L06
START /	Single In /	Single In /	Double In /	Double In /	Single In /	Double In /
END	Single Out	Double Out	Single Out	Double Out	Expert Out	Expert Out

G06 901 (OPTIONS : L01, L02, L03, L04, L05, L06)

This game is played the same as 301 except a player starts with 901 points

Option Code	L01	L02	L03	L04	L05	L06
START /	Single In /	Single In /	Double In /	Double In /	Single In /	Double In /
END	Single Out	Double Out	Single Out	Double Out	Expert Out	Expert Out

G07 GOTCHA! (OPTIONS : L01, L02)

Each player begins with 0 points and must reach 301 exactly to win. Players can "Bomb" other players, which reduces their score to zero. This happens when the shooting player equals another player's score with any dart thrown. Therefore it is possible to bomb 3 players in 1 turn. Example:

Player 1's score is 20

Player 2's score is 50

Player 3's score is 30

Player 4 is up. The first dart thrown hits the 20 – Player 1 gets bombed and goes to zero.

The Second dart hits the 10 (score is now 30) – Player 3 gets bombed and goes to zero. The

third dart hits a 20 (total score is now 50) – Player 2 gets bombed and goes to zero.

If a player exceeds 301 points that player will bust and the following occurs.

In single player game, no "Bombs" will go off.

L01 : The player's score reverts to what it was before and darts were thrown in that round.

L02 : That score is also reduced by the number of points that were of 301.

G08 QUICK CRICKET (OPTIONS : L01, L02, L03)

Quick Cricket is played with the numbers 15 through 20 and the bullseye. The first player marks a number three times & 'open' all the number is the winner. Marks are indicated in the tri-colored lights scoring system at the bottom of the board. One mark is indicated by a green light, two by an amber light, and three by a red (when number is closed). Doubles count as two marks, and triples as three. No score is required in this game.

L01 : hit & 'open' the numbers 15-20 and bullseye at any order.

L02 : hit & 'open' the number 20 first, then in order 'open' numbers 19, 18, 17, 16, 15 & bullseye.

L03 : hit & 'open' the bullseye first, then in order 'open' numbers 15, 16, 17, 18, 19 & 20.

G09 CRICKET (OPTIONS : L01, L02, L03)

Cricket is similar to the Quick Cricket. in addition, player scores points by hitting his "opened" cricket number. (15 through 20 and bullseye). No score can be made for the number that has been closed by all the players. The winner is the first player to close all the numbers and have the highest score among all players.

L01 : hit & 'open' the numbers 15-20 and bullseye at any order.

L02 : hit & 'open' the number 20 first, then in order 'open' numbers 19, 18, 17, 16, 15 & bullseye.

L03 : hit & 'open' the bullseye first, then in order 'open' numbers 15, 16, 17, 18, 19 & 20.

G10 SHANGHAI (OPTIONS : L01, L02, L03, L04, L05, L06, L07, L08, L09, L10, L11, L12)

The score windows display the target number for each round. The target number varies with round and starts from 1 through 2, 3, 4, ..., 20 to bullseye. The player gets scores on a hit of target number. Throw 3 darts for each number and the player who gets the most scores wins. There are 3 levels of difficulty and player can score at any right segments (single X1, Double X2, Triple X3) for level L; and only double, triple will count for level X.

Also players can select super Shanghai (Level P) as a complementary option. The rules are the same as above except various doubles and triples must be hit as specified by the computer. The computer will display the chosen "double" or "triple" and display the number at the scoring window.

Option Code	L01	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11	L12
Target No.Start from	1	5	10	15	1	5	10	15	1	5	10	15
Level	L	L	L	L	X	X	X	X	P	P	P	P

G11 CUT THROAT CRICKET (OPTIONS : L01, L02, L03)

Cut Throat Cricket is played the same as Cricket except when a player closes a number and begins scoring, the scores are given to all opponents that do not have that number closed. The winner is the first player that closes all the numbers and has the lowest or equal score.

L01 : hit & 'open' the numbers 15-20 and bullseye at any order.

L02 : hit & 'open' the number 20 first, then in order 'open' numbers 19, 18, 17, 16, 15 & bullseye.

L03 : hit & 'open' the bullseye first, then in order 'open' numbers 15, 16, 17, 18, 19 & 20.

G12 SCRAM CRICKET

Scram Cricket is a variation of Cricket. The game consists of 2 rounds. In the first round, player 1 has to 'close' 15-20 and bullseye, whilst player 2 attempts to get as many scores as he can by hitting the numbers that are still open. Round 1 will be finished if all numbers have been closed. For round 2, the reverse is practiced. The one with the most scores is the winner.

G13 DOUBLE ONLY CRICKET (OPTIONS : L01, L02, L03)

Double Only Cricket is played the same as Cricket except that a double of each cricket number must be hit before a player can go further with that number. Once a double is hit, that number is opened. That double together with the other doubles, triples and singles of that number count.

For example, to start the 20's each player has to hit double 20 to open this number. Afterward, a single 20 would close the number, or a double would close and score 20 points, similarly a triple would close and score 40 points. It is impossible to close a number with one dart.

L01 : hit & 'open' the numbers 15-20 and bullseye at any order.

L02 : hit & 'open' the number 20 first, then in order 'open' numbers 19, 18, 17, 16, 15 & bullseye.

L03 : hit & 'open' the bullseye first, then in order 'open' numbers 15, 16, 17, 18, 19 & 20.

G14 ALL FIVES (OPTIONS : L01, L02, L03, L04, L05)

Each round each player has to score a total divisible by 5. And every divisible '5' counts one point. For instance 2, 8, 5 with a total 15, player can get 3 points as 15 divided by 5 is three.

There will be no point if

- the round (3 darts) total scores is not divisible by 5
- any dart is missed even though the sum of other darts is divisible by 5.

The first player who gets scores of 51 or above will be the winner.

Option Code	L01	L02	L03	L04	L05
Goal score	51	61	71	81	91

G15 DOUBLE DOWN

The game starts with a base score of 60 for each player. The player has to score by hitting the active segments of the current round.

Round	1	2	3	4	5	6	7	8	9
Active segment	15	16	Double	17	18	Triple	19	20	Bullseye

For instance the 1st round, the player must throw for the 15 segment. The player will score on correct hit. If no 15's are hit, the player's score will be cut by half. The next round is 16 and so on. For double and triple, the player has to hit any double or triple and the same rule will be applied.

G16 FORTY ONE

This game is the same as the Double Down except

- the sequence is reversed from 20 to 15

Round	1	2	3	4	5	6	7	8	9	10
Active segment	20	19	Double	18	17	Triple	16	15	Bullseye	'41'

- an additional round of 41 points is included before bull's eye and a player has to get score sum of 41 for this round.

G17 HIGH SCORE (OPTIONS : L01, L02, L03, ..., L10)

High score is a simple game. The player who has the highest score after the game is the winner. Each player starts the game with zero points and adds to their score with each throw.

Option Code	L01	L02	L03	L04	L05	L06	L07	L08	L09	L10
No. of Round	3	4	5	6	7	8	9	10	11	12

G18 ACE (WITH OPTIONS OF L01, L02, L03, L04, L05, L06)

Ace is a practice game to increase accuracy. A random number will appear for each player for each turn. A player must hit the number shown to score points. Point values are as follows: Single segment=1 point, double=2 points, triple=3 points, single bullseye = 4 points, double bullseye = 6 points. No score will be gained if the desired number is missed. The player with the highest score wins.

Option Code	L01	L02	L03	L04	L05	L06
No. of Round	5	6	7	8	9	10

G19 KILLER (OPTIONS : L01, L02, L03, ..., L11)

To start this game, players have to select their own number by throwing a dart at a particular segment and the number selected will be used for the player throughout the game. Players may not share the same number in one game. A player has to first hit a double of his number to become a killer. A killer can then kill the other players by hitting the segments of other player's number. The last surviving player with lives will be the winner. The cricket bulbs represent the number of survivals.

From L01 to L07 : a life is killed by hitting their segment numbers regardless single, double, triple.

Option Code	L01	L02	L03	L04	L05	L06	L07
No. of life	7	8	9	10	11	12	13

L08, L09, L10, L11 : a life can only be killed by hitting a double

Option Code	L08	L09	L10	L11
No. of Life	3	5	7	9

G20 COUNT-UP (OPTIONS : L01, L02, L03, ..., L09)

Score will be accumulated for each dart, the first player who reaches or goes over the set point will be the winner.

Option Code	L01	L02	L03	L04	L05	L06	L07	L08	L09
Set point	100	200	300	400	500	600	700	800	900

G21 ROUND-THE-CLOCK (OPTIONS : L01, L02, L03, L04, L05, L06, L07, L08, L09, L10, L11, L12)

Hit in strict order of 1, 2, 3, ..., until 5, 10, 15 or 20, straight, double or triple depending on the difficulty. The first player to reach the last score will be the winner. If the wrong number is hit in the round, that player's turn is over. Players start their next turn with the next correct number in the sequence. The computer will display the number that the player has to hit.

Option Code	L01	L02	L03	L04	L05	L06
Last Number	5	10	15	20	5	10
Valid Segments	Not Specified	Not Specified	Not Specified	Not Specified	Only Double	Only Double

Option Code	L07	L08	L09	L10	L11	L12
Last Number	5	10	15	20	5	10
Valid Segments	Only Double	Only Double	Only Triple	Only Triple	Only Triple	Only Triple

G22 SHOOT OUT (OPTIONS : L01, L02, L03, ..., L10)

The computer will randomly display a score for the player to hit. One correct hit scores one mark. The first player who hits 11, 12, 13, ..., 20 marks depending on the level of difficulty is the winner. If a player does not hit the board within 10 seconds, that dart will be regarded as missed and it will automatically change to another dart for the player to hit. The cricket bulbs represent the number of target left.

Option Code	L01	L02	L03	L04	L05	L06	L07	L08	L09	L10
Goal Mark	11	12	13	14	15	16	17	18	19	20

G23 BERMUDA TRIANGLE

Each round calls out a designated number or area to hit. They are:

Round 1 – 12	Round 6 – 16	Round 10 – 19
Round 2 – 13	Round 7 – 17	Round 11 – 20
Round 3 – 14	Round 8 – Triple (any)	Round 12 – Bullseye
Round 4 – Double (except double bullseye)	Round 9 – 18	Round 13 – Double Bullseye
Round 5 – 15		

Points are accumulated by any segment of the designated number for each round. For example: In the first round a player must hit a 12. A single 12 = 12 points, a double 12 = 24 points, and a triple 12 = 36 points. In round 4 a player can choose any double, (all three darts can hit a different double and score), and in round 8 a player can choose any triple. If a player misses the designated number or area with all three darts in any round, the player's total score is cut in half. The winner is the player with the highest score.

G24 OVER (OPTIONS : L01, L02, L03)

In this game, each player tries to get high score in 3 darts. Once the score is higher than the highest score (Leader Score), that score will be regarded as 'Leader Score' and the player will be leader. The leader would not lose any life. If not becoming a leader, the player will lose a life.

If a leader does not want to challenge and keeps his leader's score, he can press Next Player Button and skips his turn. A leader can also choose to proceed to challenge his own leader's score but he will also loss lives if his scores is lower than the leader's score. The cricket bulbs represent the number of survivals.

A player who plays up to zero life will be out.

Option Code	L01	L02	L03
No. of Life	5	6	7

Trouble Shooting



At Arachnid, Inc. we are proud of being the originator of the electronic dart board, so we build our boards to be rugged and durable. However, with the delicate electronics in our game, and with the high usage the game may receive, there is a chance that a problem may eventually occur.

No power

POOR OUTLET CONNECTION. Check the power cord to make sure that it is properly plugged in. Check the circuit breaker (or fuse) in the home to verify that there is power to the electrical outlet.

Game will not score or no sound

Check to see if a segment is stuck. Also be sure that all the buttons are not stuck.

Stuck Segment

If a segment is stuck, player 2 window will display exactly which segment is stuck and player 3 window will display "Err".

03 : single segment #3

=03 : double 3 segment

≡03 : triple 3 segment

This is usually caused by a broken tip. A long tip that sticks out from the segment surface may be pulled out with pliers. A short tip that is broken off flush with the segment surface can be pushed through the hole into the game without damaging the electronics in the darthead. Push the tip with an object that is smaller in diameter than the tip.

Electrical storms, power line surges, rolling brown outs, broadcast radio/TV transmitters :

NOTICE

Under extreme electrical interference, the dart game can show erratic behavior and can fail to continue to perform.

To restore game to normal operation disconnect all power sources from the game unit. Unplug adapter and wait for 3 seconds. Reconnect power source.

Cleaning the Game



The Arachnid, Inc. dart board will provide many hours of fun if cared for properly. Do not use spray cleaners, or cleaners that contain ammonia, acetone, or other harsh chemicals as they may cause damage. Instead, we suggest regular dusting with a damp cloth. Use a mild detergent and damp cloth for more vigorous cleansing. It is a good idea to first test cleaning solutions on an inconspicuous area of the game. Note: Spilling liquids onto the game, exposure to weather, or user abuse (such as dropping the game) can result in permanent damage, and are not covered by the warranty.

Warranty



DMI Sports, Inc. warrants this game to be free from defects in material and workmanship for 1 year by the original purchaser of the unit.

This warranty covers manufacturing defects only, not normal wear and tear. The manufacturer can service malfunctions due to normal wear and tear for a fee. This warranty does not apply to products damaged through accidents, misuse, or neglect. Your warranty is void if service is attempted by anyone other than the manufacturer. All display lights and transformers are limited to a 1-year warranty. DMI Sports, Inc. reserves the right to make inspection and determination of all warranty claims.

IT IS IMPORTANT TO SAVE THE ORIGINAL BOX, ALL PACKAGING, AND RECEIPTS! These items are required if it ever proves necessary to return the game to the factory for service. Customer will be responsible for all freight charges if any product is returned to the factory whether or not a valid warranty claim exists.

Do not return your game to the store where purchased, as they are not equipped to handle repairs. All warranty or repair requests require a return authorization number provided by the factory or an authorized service center. In all cases, resolution of valid warranty claims, shall be limited to repair or replacement of defective product. No credit will be issued.

DMI Sports, Inc.
375 Commerce Drive
Fort Washington, PA 19034
Phone: 215-283-0153
Customer Service : 800-423-3220
Fax: 215-283-9573

WARNING:

Young people should be supervised by an adult.
Darts are not a child's toy. Not suitable for children
under 3 years of age. May cause injury if used
improperly. All spectators and players must stand
behind dart shooter. Please read instructions carefully.

Reference
Regulatory notices

DECLARATION OF CONFORMITY

Manufacturer's Name: DMI Sports, Inc.

Manufacturer's Address: DMI Sports, Inc.
375 Commerce Drive
Fort Washington, PA 19034
USA

Declares that the product
Product Names: DARTRON-X, CRICKETRON-X, SUPERTRON-X, CRICKETPRO,
CRICKET TECH, CRICKET MASTER, CRICKETMAX, CRICKETACE,
DARTBLASTER, CRICKET 6, TECHNOTRON-X
CRICKET SUPER 10, CRICKET SUPER 15, CRICKET SUPER 20
CRICKET 4, CRICKET SUPER 8

Model Numbers: 1550, 1554, 1650, 1654, 1750, 1754, 1850, 1854, 1950, 2000, 2050
2500, 2554, 2700, 3500, 475, 485, 505, 510, 515, 525, 555, 655 (1)

Product Accessories 6 volt 300ma adaptor. (2)
9 volt 800ma adaptor. (2)
6 volts 4 C cell clip on battery pack.

conforms to the following Product Specifications:

Safety: EN 71 Teil 1, 07.89
Toy Directive 88/378/EEC EN 71 Teil 2, 01.94
EN 71 Teil 3, 01.95
HD 271 S1, 05.87

EMC: EN61000-3-2
EMC Directive 89/336/EEC EN61000-3-3
EN55022
EN1000-4-2
EN1000-4-3
EN1000-4-4

Supplementary Information:

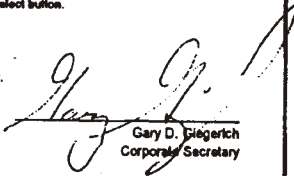
The product herewith complies with the requirements of the Toy Directive 88/378/EEC and the EMC Directive 89/336/EEC, and carries the CE marking accordingly.

Notice:

Under the extreme electrical interference conditions of these tests the dart game can show erratic behavior and can fail to continue to perform.
To restore normal game operation disconnect all power sources from the game unit. Unplug adaptor and/or remove batteries and/or adaptor and batteries. Push the select button.
Reconnect power source and press the select button again.

- (1) The product was tested with an Arachnid Model 1850.
(2) Product accessories listed under third party Declaration of Conformity.

Fort Washington, PA USA
May 28, 1999


Gary D. Giegerich
Corporate Secretary

European Contact: Contact the manufacturer, DMI Sports, Inc., directly at the above address.
USA Phone number: 215-283-0153

DMI Sports, Inc. Technical Memorandum Number 980501-2
Document Revision Letter: E Dated: May 26, 1999

Covered under one or more of the following patents:
4057251, 4824121, 4561660, 5318319, 5116063, 5366230, 5114155,
4974857 D328726