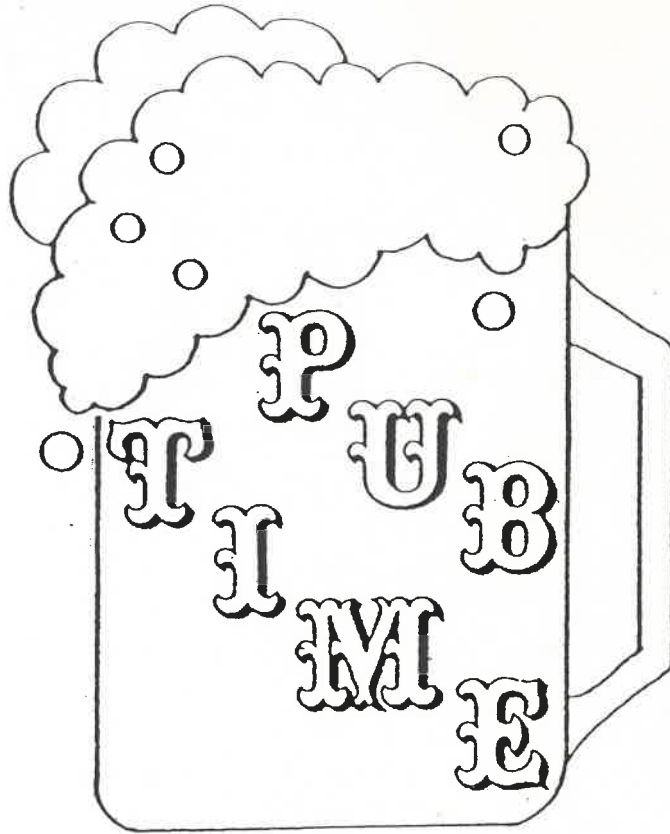




MERIT-NOMAC INDUSTRIES, INC.  
ALGONQUIN, IL  
BENSALEM, PA



OWNER'S GUIDE

&

TECHNICAL REFERENCE MANUAL

PUB TIME DARTS OWNERS GUIDE  
AND TECHNICAL REFERENCE MANUAL

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## INTRODUCTION

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Pub Time Darts is an electronic dart game which provides traditional play along with the convenience of computerized point scoring.

This manual provides the owner/operator with all the information needed to install, test and maintain the unit.

Although designed to be trouble free, additional assistance is available from your distributor or from MERIT-NOMAC INDUSTRIES, INC. (1-800-323-0449 or in Pa. 1-800-523-2760).

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THIS EQUIPMENT COMPLIES WITH THE REQUIREMENTS IN PART 15 OF FCC RULES FOR A CLASS A COMPUTING DEVICE. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA MAY CAUSE UNACCEPTABLE INTERFERENCE TO RADIO AND TV RECEPTION REQUIRING THE OPERATOR TO TAKE WHATEVER STEPS ARE NECESSARY TO CORRECT THE INTERFERENCE.

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## SITE PREPARATION

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In determining the location for your Pub Time Darts, consideration should be given to the location of a suitable electrical outlet. Since the game is a computerized device it should have a separate circuit if at all possible. If a separate circuit is not available care should be taken to provide clean and constant voltage. As a basic guideline, never connect the unit to a circuit which also supplies power to freezers, coolers or other high power consuming and electrical noise generating equipment.

The area required should be prominently located to attract attention but should not be located where games would be interrupted by employees or customers walking through the shooting area. A shooting line should be placed 8' from the face of the target.

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IMPORTANT : WHENEVER POSSIBLE THIS EQUIPMENT SHOULD BE  
ASSEMBLED ON LOCATION. TRANSPORTING AN ASSEMBLED GAME CAN  
RESULT IN DAMAGE OR MISSALIGNMENT OF INTERNAL PARTS CAUSED BY  
EXCESS STRESS ON THE CABINET.  
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PART No 1 --- PUTTING THE SECTIONS TOGETHER  
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- 1 - REMOVE (4) BOLTS, (4) WASHERS AND (4) NUTS FROM THE BAG OF HARDWARE.
- 2 - UNLOCK AND REMOVE THE REAR DOOR OF THE TARGET SECTION CABINET.
- 3 - WHILE FEEDING THE LIGHT CABLE THROUGH THE LARGE MATING HOLE, PLACE THE LIGHTING HOOD ON TOP OF THE TARGET SECTION SO THAT THE FLUORESCENT LIGHT IS ABOVE THE DART TARGET.  
\* IF CRICKET OPTION IS APPLICABLE, REFER TO ADDITIONAL ASSEMBLY INSTRUCTIONS FOR DELUXE GAMES (on Page 3) ENCLOSED IN THIS MANUAL.
- 4 - LINE UP THE HOLES IN THE LIGHTING HOOD WITH THE HOLES IN THE TARGET SECTION AND INSERT THE BOLTS THRU THE HOLES.
- 5 - SLIDE A WASHER AND THREAD A NUT ONTO EACH BOLT. BEFORE TIGHTENING THE NUTS MAKE SURE THAT THE LIGHTING HOOD LOOKS LEVEL - THEN TIGHTEN THE NUTS.
- 6 - LIFT THE ASSEMBLED TARGET AND LIGHT UNIT ONTO THE CABINET BASE (IT WILL BE EASIER IF TWO PEOPLE ARE USED FOR THIS).
- 7 - REMOVE THE REMAINING (4) BOLTS, (4) WASHERS AND (4) NUTS FROM THE BAG OF HARDWARE. NOTE THAT A SPARE WASHER IS INCLUDED AND SHOULD BE LEFT OVER AFTER ASSEMBLY.
- 8 - LINE UP THE HOLES IN THE CABINET BASE WITH THE HOLES IN THE TARGET AND LIGHT SECTION AND INSERT THE BOLTS THRU THE HOLES.
- 9 - SLIDE A WASHER AND THREAD A NUT ONTO EACH BOLT. BEFORE TIGHTENING THE NUTS MAKE SURE THAT THE TWO SECTIONS LOOK LEVEL THEN TIGHTEN THE NUTS.
- 10 - THE DART GAME CAN BE LEVELED TO COMPENSATE FOR AN UNEVEN FLOOR BY ADJUSTING THE (4) LEVELING FEET UNDER THE CABINET BASE.

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A D D I T I O N A L I N F O R M A T I O N & A S S E M B L Y  
I N S T R U C T I O N S F O R D E L U X E P U B T I M E  
\*\*\*\*\* D A R T G A M E S \*\*\*\*\*

Your overhead display module has been shipped unmounted from the cabinet hood. In order to install it, follow these instructions.

- 1 - Remove the overhead module from its shipping position.
- 2 - Mount the hood onto the target section.
- 3 - Run the power and ribbon cables for the Cricket module up through the hood and into the module as shown in Fig. #1. Plug in the power cable first and then the ribbon cable.

NOTE : THE RIBBON CABLE IS KEYED SO THAT IT ONLY FITS ONE WAY. DO NOT FORCE IT IN BACKWARDS AS THIS WILL RESULT IN DAMAGE TO THE PC BOARDS.

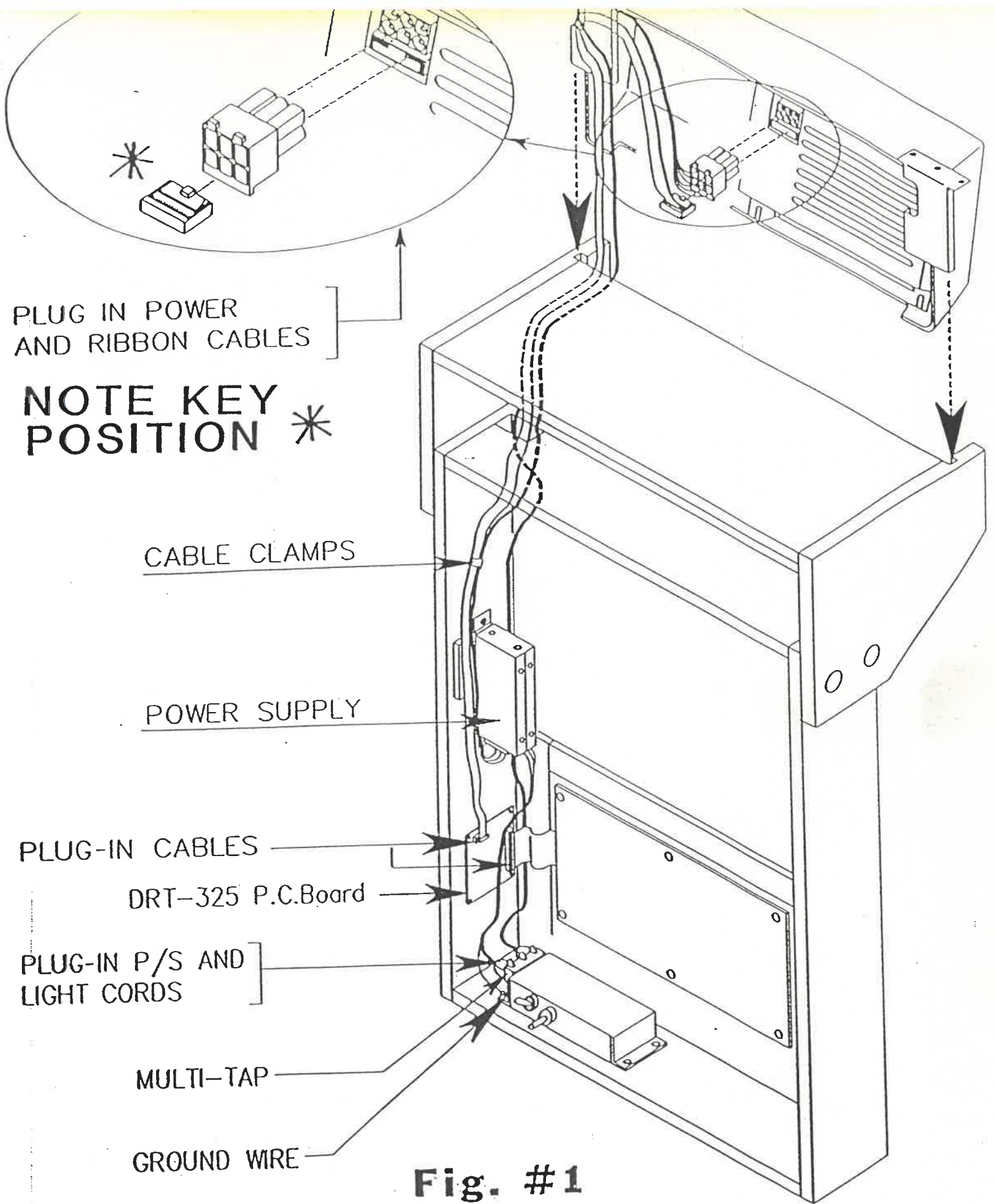
- 4 - Loosen the side mounting brackets, then move them outward so that you can slide the Cricket module in place as shown in Fig. #1. The module should slide right in without being forced. Make sure that the module is centered before retightening the screws.
- 5 - Reinstall the hood plexiglass bracket. For additional security, install two screws through the holes in the top of each side bracket and into the top of the hood.

SERVICE NOTES :

Your CRICK-KIT module PC Board has been designed to be removed easily for service. To remove, just disconnect the two cables and remove the two screws at the bottom edge of the PC Board cage. Then slide it down and out. To reinstall, slide the unit up so that the back PC Board goes in front of the upper bracket. Put the screws in and check the display alignment before tightening.

A test sequence has been added and may be activated by pressing the PLAYER CHANGE button while turning on power to the game. This test will step through each segment and lamp on the main display board and overhead display board. When this sequence is completed a target test becomes active with the name of each segment being displayed in the temporary score window after that segment is pressed. To exit test mode turn the game off, then just turn it on again.

THE CRICK-KIT MODULE PC BOARDS ARE SERVICED AS ONE UNIT - DO NOT REMOVE THE FLEXIBLE CONNECTORS IN ORDER TO DISCONNECT THE PC BOARDS.



## Cricket Module Installation And Service

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PART No 2 - HOOKING UP THE INSIDE CABLES

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- 1 - LOCATE THE FOUR (4) PIN PLUG ON THE END OF THE COIN MECH WIRING HARNESS. (FOR GAMES WITH DUAL OUTPUT FOR DIFFERENT COINAGE ON EACH SIDE REFER TO STEP #5.)
- 2 - SLIDE THE COIN MECH WIRING HARNESS THROUGH THE OPENING IN THE FRONT RIGHT CORNER OF THE TARGET SECTION.
- 3 - OPEN THE DUAL COIN MECH DOOR AND LOCATE THE FOUR (4) PIN RECEPTICLE ON THE END OF THE COIN MECH WIRING HARNESS WHICH IS ATTACHED TO THE DUAL COIN MECHS.
- 4 - PLUG IN BOTH CONNECTORS. BECAUSE THEY ARE KEYED CONNECTORS, THEY WILL ONLY CONNECT IN ONE WAY.
- 5 - FOR GAMES WITH DUAL OUTPUT FOR DIFFERENT COINAGE ON EACH MECH FOLLOW STEPS 1 THRU 4. THIS WILL SUPPORT YOUR FIRST COIN MECH. LOCATE THE SECOND COIN MECH WIRING HARNESS (A BLACK AND WHITE TWISTED CABLE) IN THE COIN BOX.
- 6 - SLIDE THIS WIRING HARNESS BACK THROUGH THE SAME HOLE IN WHICH THE FIRST COIN MECH WIRING HARNESS HAS BEEN ROUTED.
- 7 - PLUG THE TWO (2) PIN PLUG INTO THE CONNECTOR AT J7 ON THE SOLDER SIDE OF THE LOGIC BOARD.
- 8 - LOCATE THE FLUORESCENT LIGHT CABLE (A WHITE LAMP CORD TYPE WIRE) WHICH GOES THROUGH THE LARGE HOLES IN THE LIGHTING AND TARGET SECTIONS.
- 9 - PLUG THE CONNECTOR ON THE END OF THE FLUORESCENT LIGHT CABLE INTO THE RECEPTICLE ON THE SIDE OF THE POWER SUPPLY. IF A GREEN GROUND WIRE IS APPLICABLE AND ATTACHED TO THE WHITE CORD, REMOVE ONE OF THE POWER SUPPLY MOUNTING SCREWS AND REINSTALL WITH THE GROUND WIRE ATTACHED BY MEANS OF THE EYELET ON THE END OF THE GROUND WIRE.
- 10 - INSTALL AND LOCK THE REAR DOOR OF THE TARGET SECTION CABINET.

## WARRANTY AND SERVICE

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All Pub Time Dart Games are warranted by Merit-Nomac, Inc. for a period of 6 months. This warranty covers defects in material and workmanship (both electrical and mechanical) but does not cover damage due to physical abuse or attempted repair by untrained service personnel.

Should a problem occur, service and troubleshooting must be performed by a qualified service technician familiar with microprocessor based equipment. In order to quickly process equipment in need of repair (when a qualified technician is not available) it should be returned to your distributor and not directly to Merit-Nomac Inc. Following this procedure will return your equipment to operation in the shortest time possible.

## MAINTAINENCE

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The light bulbs on the Display Board can be replaced by :

- 1 -- Remove rear door.
- 2 -- Locate the defective bulb location.
- 3 -- Twist lamp socket counter-clockwise to remove.
- 4 -- Remove and replace with a new #73 bulb.

The light bulbs for the push button switches can be replaced by :

- 1 -- Remove rear door.
- 2 -- Locate the defective bulb location.
- 3 -- Pull out the microswitch/bulb assembly.
- 4 -- Remove and replace with a new #161 bulb.
- 5 -- Replace the microswitch/bulb assembly by snapping it back into place.

The fluorescent bulb can be replaced by :

- 1 -- Remove the plastic bulb cover.
- 2 -- Remove and replace with a new 'F15T 8 CW' bulb.
- 3 -- Replace the plastic bulb cover.



## TARGET MAINTAINANCE

Stuck segments can be caused by excess pressure on the target matrix switch. If a stuck segment occurs, it may be caused by the overtightening of the wing nuts which secure the matrix switch back board assembly. This may be checked by opening the back door of the cabinet and insuring that the wing nuts are only lightly finger tightened. It may be necessary to loosen matrix switch back board assembly and reseal it, insuring that the alignment is correct and that the wing nuts are only lightly finger tightened.

Broken dart tips may sometimes be pushed into the cavity behind a target segment. If a broken tip becomes wedged between the back of a segment and the rubber target backing mat (causing a stuck segment) it will be necessary to remove the matrix switch back board assembly. Open the back door and remove the four wing nuts. Carefully remove the back board and clean out all broken dart tips. Reassemble, being careful not to overtighten the wing nuts.

The wood cabinet, plexiglass display panel, operation panel and front base decal should all be cleaned with a damp cloth or a mild detergent. The plexiglass display panel may be cleaned with a solution for use on plexiglass or acrylic surfaces. The area surrounding the target may be cleaned with a damp cloth. The target segments should not require any care.

### GAME PLAY FOR STANDARD GAMES (DOMESTIC)

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For each coin inserted, one player will appear in each "PLAYER" display up to four players. Coins inserted past the maximum four players will not be retained for use. The "SELECT" button will be flashing, allowing the player to choose the game to be played. As the "SELECT" button is pressed, the game number will be displayed in the game window, to correspond with the games numbered on the instruction panel. After the player has selected the game to be played, the game may be started by pressing the "PLAYER CHANGE" button. Once this button has been pressed, the game is locked in until it has been played through.

### GAME PLAY FOR STANDARD GAMES (INTERNATIONAL)

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After inserting coins, the temporary score display will show the number of credits on the game. The "SELECT" button will be flashing, allowing the player to choose the game to be played. As the "SELECT" button is pressed, the game number will be displayed in the game window, to correspond with the games numbered on the instruction panel. After the player has selected the game to be played, the amount of players may be selected by pressing the "START/PLAYER CHANGE" button for each player. If 20 seconds passes once this button has been pressed, the game is locked in until it has been played through. Any unused credits will be saved for use in the next game.

### GAME PLAY FOR DELUXE GAMES (DOMESTIC & INTERNATIONAL)

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After inserting coins, the temporary score display will show the number of credits on the game. The "SELECT" button will be flashing, allowing the player to choose the game to be played. As the "SELECT" button is pressed, the game description will be displayed in the Cricket enclosure, and the game number will be displayed in the game window, to correspond with the games numbered on the instruction panel. After the player has selected the game to be played, the amount of players may be selected by pressing the "START/PLAYER" button for each player. If 20 seconds passes once this button has been pressed, the game is locked in until it has been played through. Any unused credits will be saved for use in the next game.

## GAME INSTRUCTIONS

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301 -- Each player will start with a score of 301 points. Each dart thrown will decrease the player's score, provided that it was a scoring dart. Players must try to reach zero points exactly. If a player goes below zero, he will "BUST" and retain his score from the beginning of that round.

301 MASTERS -- Plays the same as "301" except players must reach zero by scoring a "DOUBLE", "TRIPLE", or "BULLSEYE" on their last dart.

301 DOUBLE IN - DOUBLE OUT -- Same as 301, except players may not begin scoring until they score a "DOUBLE" or "BULLSEYE". a "DOUBLE" is obtained by scoring a dart in the outermost ring of the target. Players must reach zero by scoring a "DOUBLE" on their last dart.

501 -- Plays the same as "301" except players start with 501 points.

EXACTA -- Players start with a zero score. The game will pick and display a random score between 250 and 350. Each player must throw at least 2 scoring darts per round and after 5 rounds the player closest to the displayed random score wins the game.

HIGH SCORE -- Players start with a zero score. After seven rounds, the highest score wins the game.

ODD AND EVEN -- Players One and Three must shoot at the numbers 1 through 19 in progressive order. Players Two and Four must shoot at numbers 2 through 20. First player to hit all their numbers is the winner.

BASEBALL -- Players shoot at the sector of the current "inning" (round). All other sectors are ignored. A single is worth one point, a double is worth two points, a triple is worth three points and a Bullseye is worth four points. The highest score after 9 "innings" (rounds) wins.

SHANGHAI -- Players start with a zero score. Each round, players try to hit consecutive sectors from 1 to 20. A "SHANGHAI" (three consecutive numbers in one round; one each of a single double and a triple) is an automatic winner. Otherwise, the highest score after seven rounds wins the game.

## GAME INSTRUCTIONS

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CRICKET -- Two players or two teams may only play. Players use the overhead display to monitor numbers as they are closed and use the lower display to show points which are scored after a number is closed. Players shoot at 15 thru 20 and Bullseye. A number is CLOSED by scoring three MARKS in that number. TRIPLES score 3 MARKS, DOUBLES score 2 MARKS, SINGLES score 1 MARK. Additional hits on a closed number will score points only if the opponent is still open on that number. The first Player to close all 6 numbers, the Bullseye AND have the highest score wins the game.

# P U B T I M E D A R T S

## STANDARD GAME

### DIP-SWITCH SETTINGS

OFF

301 MASTERS \$.25

DART ALARM ON

NOT USED

5 MINUTE LIMIT

REMOVE DART PAUSE  
CONTROL



1

2

3

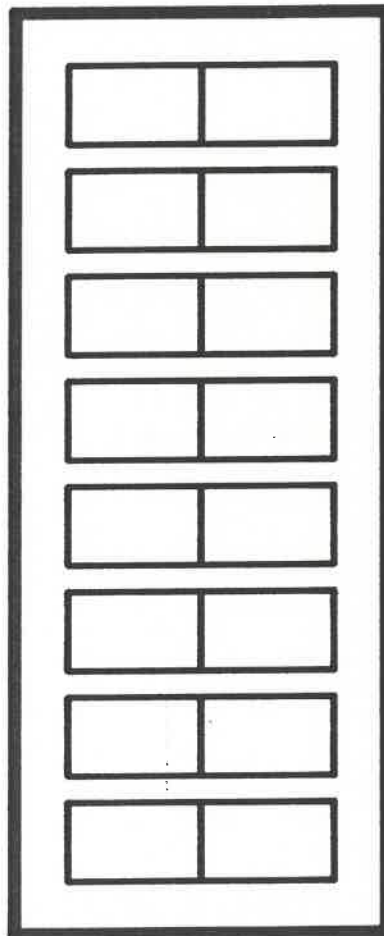
4

5

6

7

8



ON

301 MASTERS \$.50

DART ALARM OFF

NOT USED

NO ACTIVITY LIMIT

REMOVE DART PAUSE  
CONTROL



#### NOTE:

- 1) SWITCH 5-6-7-8 OFF DEFAULT 6 SECONDS.
- 2) ONLY ONE OF SWITCHES 5-6-7-8 NEEDS TO BE "ON".
- 3) FACTORY SET AT 6 SECONDS.

[5500/0024 rev - 10/14/87]

US/STANDARD

# P U B T I M E D A R T S

PROGRAM # 9278-02

## DIP-SWITCH SETTINGS

OFF

ON

301 MASTERS - 1 COIN

1



301 MASTERS - 2 COINS

SINGLE BULLSEYE ON  
GAMES 1 - 7

2



DOUBLE BULLSEYE ON  
GAMES 1 - 7

NOT USED

3



NOT USED

NOT USED

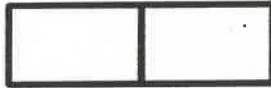
4



NOT USED

NOT USED

5



NOT USED

NOT USED

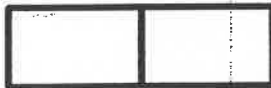
6



NOT USED

8 SECOND REMOVE  
THROW DELAY

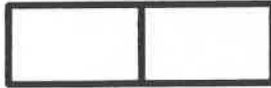
7



4 SECOND REMOVE  
THROW DELAY

SINGLE BULLSEYE  
ON CRICKET

8



DOUBLE BULLSEYE  
ON CRICKET

[5500/0022 rev - 9/15/87]

US/DELUXE

PUB DARTS DARTS -- SPARE PARTS LIST

PART NO.	DESCRIPTION
NSA2201	PUSH BUTTON
NLB2044	LIGHT BULB #161 FOR SWITCHES
NGL2402	DART TARGET LEXAN - CATCH RING
NGL2405	LEXAN CONTROL PANEL
NGL2403	PANEL PLEXIGLASS SCORING DARTS
NDS2102	TARGET SPIDER
NDS0915	**RED BULLSEYE SEGMENT PACK (6 EACH - OUTER RED BULLSEYE) (6 EACH - INNER BLUE BULLSEYE)
NDS0911	**BLUE SEGMENT PACK (10 EACH - BLUE INNER SINGLE) (10 EACH - BLUE TRIPLE) (10 EACH - BLUE OUTER DOUBLE) (10 EACH - BLUE DOUBLE)
NDS0912	**RED SEGMENT PACK (10 EACH - RED INNER SINGLE) (10 EACH - RED TRIPLE) (10 EACH - RED OUTER DOUBLE) (10 EACH - RED DOUBLE)
NDS0913	**CATCH RING SEGMENT KIT (4 EACH - BEIGE SEGMENTS) (12 EACH - BEIGE SCREW CAPS)
NSA2303	MATRIX SWITCH & WOOD ASSEMBLY
NHW2306	GUM RUBBER SHEET
NSA2501	PUB TIME LOGIC BRD.
NSA2505	AUDIO PC BRD.
LB1125	LIGHT BULB #73
NSC2005	7 SEGMENT L.E.D.

\*\*INDIVIDUAL PARTS ARE NOT AVAILABLE

PUB TIME DARTS -- SPARE PARTS LIST

PART NO.	DESCRIPTION
NSA2521	POWER POWER SUPPLY
NEC1905	FUSE - 1 AMP - SLO BLO
NEC1906	FUSE - 2 AMP - SLO BLO
NEC1907	FUSE - 3 AMP - SLO BLO
NEC2011	15" LIGHT FIXTURE 50/60 Hz
LB2100	FLOURESCENT BULB 15"
NHW2084	DUAL COIN REJECTOR MECH "25" CENTS