

## DIP SWITCH SETTINGS - PROGRAM 4888-XX

DIP SWITCH BANK 1		OFF	ON	
CRICKET COST DISABLED	1	•		INCREASE CRICKET COST BY 1 CREDIT, EXTEND ROUND LIMIT 10 ROUNDS
NO STATISTICS DISPLAYED IN WIN MODE	2		•	STATISTICS DISPLAYED IN WIN MODE
MISSED DART DETECTION/AUTOMATIC PLAYER CHANGE ACTIVATED	3		•	MISSED DART DETECTION/AUTOMATIC PLAYER CHANGE DEACTIVATED
SPLIT BULLSEYE IN CRICKET GAMES	4		•	SOLID BULLSEYE IN CRICKET GAMES
SOLID CRICKET BULLSEYE 50 POINTS (\$1-4 OFF)	5		•	SOLID CRICKET BULLSEYE 25 POINTS (\$1-4 OFF)
SPLIT BULLSEYE ALL GAMES BUT CRICKET	6		•	SOLID BULLSEYE ALL GAMES BUT CRICKET
SOLID BULLSEYE VALID FOR '01 DOUBLE IN/OUT	7	•		SOLID BULLSEYE NOT VALID FOR DOUBLE IN/OUT
TARGET ALARM OFF	8		•	TARGET ALARM ON
DIP SWITCH BANK 2		OFF	ON	
SET FOR FIXED OVERHEAD DISPLAY	1		•	SET FOR VARIABLE OVERHEAD DISPLAY
SET WILD & CRAZY CRICKET SEGMENT RANGE TO 7 THROUGH 20	2	•		SET WILD & CRAZY CRICKET RANGE TO 1 THROUGH 20
BONUS MATCH FEATURE DISABLED	3		•	BONUS MATCH FEATURE ENABLED
IDLE MODE PROMOTIONAL CREDIT (FREE PLAY) DISABLED	4		•	IDLE MODE PROMOTIONAL CREDIT (FREE PLAY) ENABLED
TEAM GAME COSTS ARE DEFAULTED	5	•		TEAM 301 AND 501 GAMES COST 1 CREDIT PER PLAYER
SOLO CHALLENGER® NO EXTRA CREDIT	6	•		SOLO CHALLENGER® ADDS 1 CREDIT
TEAM '01 FROZEN PLAYER GOING OUT - OPPOSING TEAM WINS (NDA RULES)	7		•	TEAM BUSTS, PLAYER LOSES 1 TURN (EUROPEAN RULES)
TEAM CRICKET - EITHER PLAYER CLOSES TO WIN	8	•		TEAM CRICKET - BOTH PLAYERS CLOSE TO WIN

## GAME OPTIONS AND ROUND LIMITS TABLE

	ROUND LIMITS TABLE			
	NONE	CRIC	ALL	LONG
301	NONE	NONE	10	15
501	NONE	NONE	15	20
701	NONE	NONE	20	25
801	NONE	NONE	25	30
901	NONE	NONE	25	30
1001	NONE	NONE	25	30
Hi-Score	7-10	7-10	7-10	7-10
Burma Road	9	9	9	9
321	15	15	15	15
Shanghai	7	7	7	7
Baseball	9	9	9	9
Crazy Cricket	NONE	20/30	20/30	25/35
Pick It Cricket	NONE	20/30	20/30	25/35
Cricket*	NONE	20/30	20/30	25/35
No-Score Cricket*	NONE	10/20	10/20	15/25

\*DIP Switch 1-1 Off/On

GAMES	POSSIBLE OPTIONS
301/501/ 701/801/ 901/1001	Double In/Out* Masters Out* Team* '01 Equal Darts™
Hi-Score	NONE
Burma Road	Wild & Crazy
321	Double In/Out Masters Zap Team†
Shanghai	NONE
Baseball	NONE
Cricket Crazy Cricket Pick-It Cricket	No-Score* Team* Cut Throat* Wild & Crazy*

\*All '01 options can be combined except Masters Out cannot be combined with Double In or Double Out.

†All Cricket options can be combined except No-Score cannot be combined with either the Cut Throat or Team options.

\*Can only be combined with Crazy Cricket.



merit industries, inc.

# MERKUR POWER PLUS

## SITE PREPARATION

In determining the location for your MERKUR™ POWER PLUS dart game, consideration must 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 circuit is not available, care should be taken to provide a clean and constant voltage. As a basic guideline, never connect the unit to a circuit that also supplies power to freezers, coolers or other high power-consuming and electrical-noise-making equipment.

The game should be prominently located to attract attention, but not where games will be interrupted by people walking through the playing area. The play area must extend approximately 8' from the front of the machine to accommodate the throw line.

## SET-UP AND INSTALLATION

### *Floor Model Installation*

1. Locate and remove the plastic bag stapled to the top of the base section. This bag contains the game keys.
2. Locate the Velcro hook on the base of the cabinet. The Velcro hook is holding the target section in its fold-down position. Pull the target section up until the Velcro latch on the target section door separates from the Velcro hook on the base section. Continue pulling the target section up until it locks into its upright position. Refer to Figure 7.
3. Use a #564 key to unlock the target door. On the upper, right corner of the target door you will see a safety hook holding the door in its closed position. Push the hook upward to release the target door. Inside, stapled to the floor of the target section, you will find a plastic bag with three threaded knobs. Place the knobs and washers in the holes provided as shown in Figure 9.
4. Close the target section door.

5. Using the key provided, open the coin box door.
6. Remove the line cord from the coin box and attach it to the receptacle on the back of the cabinet. See Figure 7.
7. Locate and remove the bag of hardware inside the coin box. This hardware is used to secure the game to the wall. Refer to the instructions contained within the bag to properly install the hook needed for your application.
8. Move the game into position. Adjust the levelers until the game does not rock and is stable. Attach the safety chain from the game to the wall hook installed in step 7.
9. Set the floor mark for the throw line. In the U.S.A., the throw line should be placed 8 feet from the face of the target. In some European countries, the throw line distance is placed 2.44 meters or 2.37 meters from the face of the target. Consult your local rules for throw line distances. The throw line decal can be found in the coin box.
10. Plug the power cord into the wall outlet. Power up the game.

### *Disassembly of Target from Base*

If you decide to move the game to a different location and you do not have access to a large van or vehicle, you may need to disassemble the target from the base. In those circumstances, follow the steps below.

1. Unplug and remove the power cord from the back of the game. Store the power cord for future use.
2. With the game in the upright position, open the control panel door. Disconnect the target lamp power cord from the power supply. Unhook the light power cord from the clips

holding it in place to the back of the cabinet. Also disconnect the main wiring harness or harnesses that may connect between the target and base sections. Close and lock the control panel door.

3. Unlock and open the target section door. Carefully pull the target lamp power cord and other wiring harnesses up into the target compartment. Next, remove the large black assembly knobs and washers. Store the knobs outside of the target section for future use. Carefully close and lock the target section door. Remove all keys from the target door lock.
4. Locate the anti-tip bracket on the rear of the cabinet (see Figure 7). Pull upwards on the bracket while folding the top section down. Make sure that the top unit is resting on the metal support bracket and that the Velcro loop on the target section securely aligns with the Velcro hook on the base section.
5. Standing at the back facing the folded down target section, place one hand on the target section and apply a small amount of force forward to hold the section in place. With your other hand, take the hinge pin that is bent to form a handle and pull outward. (See Figure 8.) Make sure that the hinge pin is fully removed. Repeat the same procedure for the other hinge pin.
6. You are now ready to remove the target section. Lift the target section upward slightly and position it over the safety base hook. Place the target section, **HINGE END ONLY**, on the floor.

**NOTE:** DO NOT REST THE TARGET SECTION ON HOOD END. REST IT ON THE HINGE END ONLY. FAILURE TO DO SO COULD DAMAGE CABLES OR OVERHEAD DISPLAY.

### ***Reassembly of Target to Base***

1. The reassembly of the target section is very similar to that of disassembly. Position the target section so that it is resting on the metal bracket of the base. Align the hinges of the target section with the base section hinge pins. Install the hinge pins, locking them into position. Refer to Figure 8.

**NOTE:** YOU MAY HAVE TO LIFT THE TARGET SECTION SLIGHTLY TO ALLOW THE HINGE PINS TO MOVE FREELY INTO THE LOCKED POSITION.

2. Open the base control panel door.
3. Make sure that the hinge pins are in the locked position. Next swing the target section up into its upright position.
4. Very carefully open the target section front door. Place the large black assembly knobs and washers into the hole that they were removed from during disassembly. (Refer to "Floor Model Installation", step 3.)
5. Locate the overhead light power cable in the control panel section. Feed your overhead light power cable down into the base and reconnect it to the power supply. Also reconnect the main harness or harnesses that interconnect between the sections.
6. Close all doors and reconnect the power cord to the back of the game. Reposition the game to the wall and reconnect the safety chain to the wall. Plug your power cord into the wall outlet and turn on the power.

### ***Wall Mount Installation***

Your dart game is designed for permanent mounting to any wall constructed in accordance with standard building codes. Installing your dart cabinet is not difficult but the following steps must be followed.

Your game comes equipped with a mounting bracket which attaches to the wall. The complete assembled cabinet weighs 85 pounds and is supported by the

mounting bracket. The unit attaches to the bracket by means of four carriage bolt spacers, extending from the back of the cabinet.

If you aren't familiar with how to locate wall studs or if you run into a questionable type of wall construction - GET HELP!!

The following instructions are recommended as one method of installing your dart game. If you have a special situation, or a different method, we remind you that the cabinet will only be as stable as the wall is and the way that the bracket attaches to the wall.

**NOTE: BE SURE THAT THE AREA BEHIND THE WALL DOES NOT CONTAIN WIRES OR PIPES THAT MAY BE DAMAGED BY THE BRACKET FASTENERS.**

There must be a minimum 9 1/2" clearance on both sides of the game to allow for door opening and access to the coin mech.

REFER TO FIGURES 10, 11 and 12 FOR STEPS 1 THROUGH 8.

1. Find the location of a wall stud by using a stud finder, a joint in the wall board or paneling or by measuring in multiples of 16" from any known stud. Once you think you've found it, a good way to make sure is to tap in a small finishing nail about 2" above the floor. If the stud is there, you should hit it after putting the nail in about 1/2" to 3/4".
2. Measure up 68" from the floor on the mounting stud and mark the wall with a pencil.
3. Using the nail that you used before, drive it in just to make sure that you're still lined up on the stud. If you aren't, go 1/2" either way until you hit it.
4. Open the front door of the cabinet and remove the locking bolt from the mounting bracket. Close and lock the front door.
5. Remove the mounting bracket from the back of the cabinet. Place the bracket against the wall with the center (threaded) hole directly over the mark you made in step 2. Now mark the upper hole with a pencil.
6. Remove the nail and place the bracket on the wall. Put a lag screw through the top hole and into the wall. Tighten the screw far enough so that the bracket swings slightly.
7. With the bracket not moving and level, mark the holes shown in Figure 12. Swing the bracket to the side and install (4) Molly bolts into the outer holes. Then, install and tighten all remaining screws.
8. Slide the cabinet onto the wall bracket. Make sure it is secure and won't fall down.
9. Install the Ultrasonic Transducer assembly (Player Change Sensor) as shown in Figure 5:
  - (a) Route the transducer cable through the large hole in the center of the hood assembly.
  - (b) Secure the Ultrasonic Transducer assembly to the lamp hood using the (2) #10 - 24 wing nuts (HW3253) provided.
  - (c) Connect the transducer cable to J9 on the STG01 board.
10. Mount the left and right expansion brackets and the wood filler as shown in Figure 5:
  - (a) Mount the left bracket (MW4028) to the hood using (2) carriage bolts and wing nuts.
  - (b) Slide the wood filler into place between the left and right brackets on top of the game.
  - (c) Mount the right bracket (MW4029) to the hood using (2) carriage bolts and wing nuts.

11. Using (4) #10-24 wing nuts (HW3253), mount the overhead display to the brackets installed in step 10.
12. Route the overhead display wire up through the hole in the wood filler and down through the slot on the left, top of the machine. Connect the wire to the 3-pin female connector on the power supply.
13. Route the ribbon cable from J7 on the STG01 board up through the overhead display and over the top of the game. Connect the other end to the connector on the top, left side of the game.
14. On games equipped with the linear power supply, attach the line cord to the AC power supply at the base of the cabinet. Tighten the cable lock assembly so that the cord is secured to the game.
15. Attach the price decal above the control panel, as shown in Figure 13.
16. Proceed to Section 3 - Testing Your Game.

### ***Disconnecting the Cancel Game Feature***

If the Cancel Game feature is not needed, you may disable the option by following the steps given below.

1. Open the target section door.
2. Locate the cancel game switch assembly on the left side of the cabinet.
3. Disconnect one or both of the wires attached to the Cancel Game switch. This will disable the cancel game feature.
4. Close the target section door.

## GAME OPERATION

### Target Alarm

If darts are thrown while the game is in idle mode, the target alarm will sound and the overhead light will go off (for a few minutes). This feature can be disabled by turning off DIP switch 1-8.

### Clearing Credits

To clear credits, first power off the game. Next, press and hold the PLAYER CHANGE button while turning the game back on. When the "STUC BUTTON" message appears on the overhead, release the PLAYER CHANGE button and the credits will be cleared.

### Free Play

A 2-pin connector is provided on the main harness to allow you to enable free play. See Figures 1 and 2 for the location of the connector.

If you wish to enable free play, you will need (2) .062 male Molex pins, a connector housing and .18 gauge wire. Insert the Molex pins into the connector housing and attach it to the existing 2-pin connector on the main harness. Loop the wire as seen in Figure 3. Free play mode is enabled as long as the connection is made.

If you want the ability to enable/disable free play without having to connect and disconnect the wires, Merit suggests you insert a switch. To do this, simply cut the looped wire and solder the ends to the switch (see Figure 3).

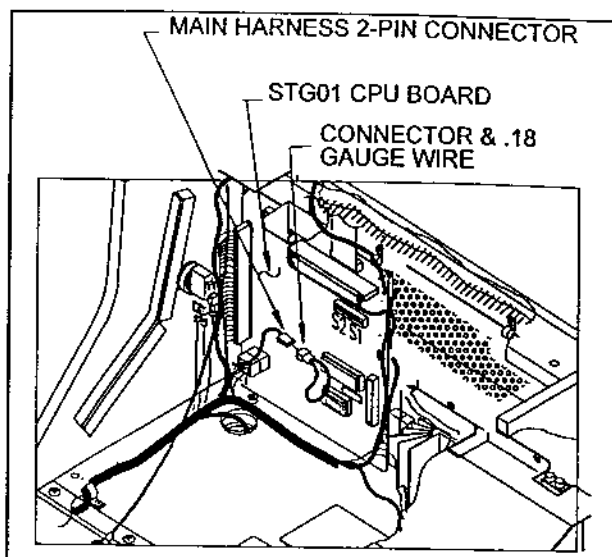


Figure 1 - LOCATION OF "FREE PLAY" CONNECTOR ON MAIN HARNESS (UPRIGHT MODEL)

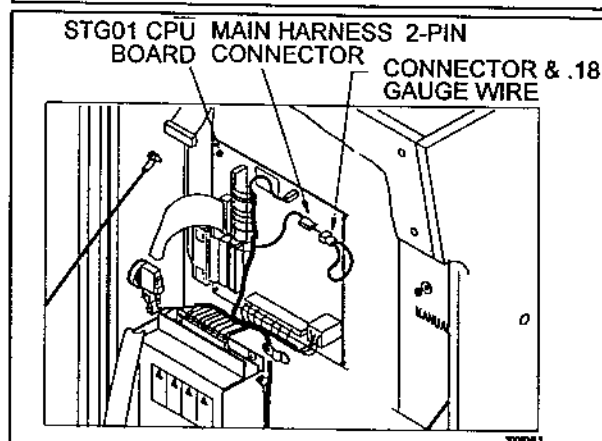


Figure 2 - LOCATION OF "FREE PLAY" CONNECTOR ON MAIN HARNESS (WALL MOUNT MODEL)

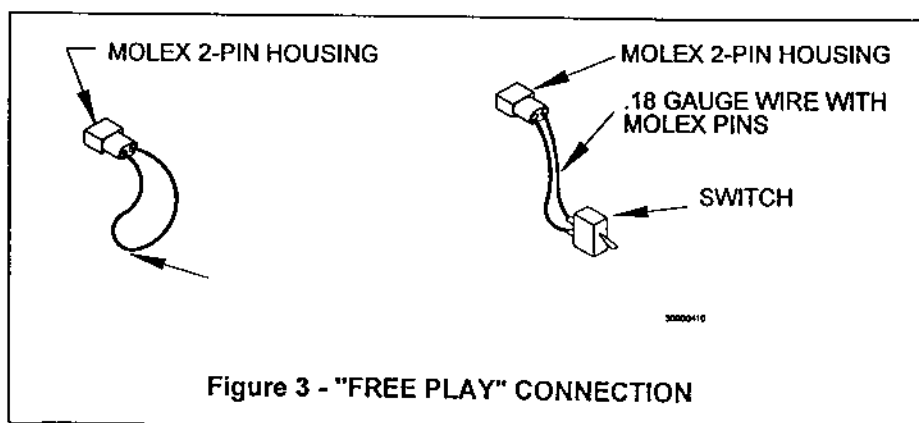


Figure 3 - "FREE PLAY" CONNECTION

## DIP SWITCH SETTINGS - PROGRAM 4888-XX

DIP SWITCH BANK 1		OFF	ON	
CRICKET COST DISABLED	1	•		INCREASE CRICKET COST BY 1 CREDIT, EXTEND ROUND LIMIT 10 ROUNDS
NO STATISTICS DISPLAYED IN WIN MODE	2		•	STATISTICS DISPLAYED IN WIN MODE
MISSED DART DETECTION/AUTOMATIC PLAYER CHANGE ACTIVATED	3		•	MISSED DART DETECTION/AUTOMATIC PLAYER CHANGE DEACTIVATED
SPLIT BULLSEYE IN CRICKET GAMES	4		•	SOLID BULLSEYE IN CRICKET GAMES
SOLID CRICKET BULLSEYE 50 POINTS (\$1-4 OFF)	5		•	SOLID CRICKET BULLSEYE 25 POINTS (\$1-4 OFF)
SPLIT BULLSEYE ALL GAMES BUT CRICKET	6		•	SOLID BULLSEYE ALL GAMES BUT CRICKET
SOLID BULLSEYE VALID FOR '01 DOUBLE IN/OUT	7	•		SOLID BULLSEYE NOT VALID FOR DOUBLE IN/OUT
TARGET ALARM OFF	8		•	TARGET ALARM ON
DIP SWITCH BANK 2		OFF	ON	
SET FOR FIXED OVERHEAD DISPLAY	1		•	SET FOR VARIABLE OVERHEAD DISPLAY
SET WILD & CRAZY CRICKET SEGMENT RANGE TO 7 THROUGH 20	2	•		SET WILD & CRAZY CRICKET RANGE TO 1 THROUGH 20
BONUS MATCH FEATURE DISABLED	3		•	BONUS MATCH FEATURE ENABLED
IDLE MODE PROMOTIONAL CREDIT (FREE PLAY) DISABLED	4		•	IDLE MODE PROMOTIONAL CREDIT (FREE PLAY) ENABLED
TEAM GAME COSTS ARE DEFAULTED	5	•		TEAM 301 AND 501 GAMES COST 1 CREDIT PER PLAYER
SOLO CHALLENGER® NO EXTRA CREDIT	6	•		SOLO CHALLENGER® ADDS 1 CREDIT
TEAM '01 FROZEN PLAYER GOING OUT - OPPOSING TEAM WINS (NDA RULES)	7		•	TEAM BUSTS, PLAYER LOSES 1 TURN (EUROPEAN RULES)
TEAM CRICKET - EITHER PLAYER CLOSES TO WIN	8	•		TEAM CRICKET - BOTH PLAYERS CLOSE TO WIN

## GAME OPTIONS AND ROUND LIMITS TABLE

	ROUND LIMITS TABLE			
	NONE	CRIC	ALL	LONG
301	NONE	NONE	10	15
501	NONE	NONE	15	20
701	NONE	NONE	20	25
801	NONE	NONE	25	30
901	NONE	NONE	25	30
1001	NONE	NONE	25	30
Hi-Score	7-10	7-10	7-10	7-10
Burma Road	9	9	9	9
321	15	15	15	15
Shanghai	7	7	7	7
Baseball	9	9	9	9
Crazy Cricket	NONE	20/30	20/30	25/35
Pick It Cricket	NONE	20/30	20/30	25/35
Cricket*	NONE	20/30	20/30	25/35
No-Score Cricket*	NONE	10/20	10/20	15/25

\*DIP Switch 1-1 Off/On

GAMES	POSSIBLE OPTIONS
301/501/ 701/801/ 901/1001	Double In/Out* Masters Out* Team* '01 Equal Darts™*
Hi-Score	NONE
Burma Road	Wild & Crazy
321	Double In/Out Masters Zap Team†
Shanghai	NONE
Baseball	NONE
Cricket Crazy Cricket Pick-It Cricket	No-Score* Team* Cut Throat* Wild & Crazy†

\*All '01 options can be combined except Masters Out cannot be combined with Double In or Double Out.

†All Cricket options can be combined except No-Score cannot be combined with either the Cut Throat or Team options.

†Can only be combined with Crazy Cricket.



## TESTING YOUR GAME

Merit's Scorpion™ 9000 has built-in tests to allow you to individually test all aspects of the game's operation, without actually playing all the games.

### Power Up Tests

On power-up, the game performs internal tests on the ROM and RAM. If the ROM fails, the lamps and displays will flash slowly; if the RAM fails the lamps and displays will flash quickly.

- If a button is stuck, "STUCK BUTTON" will flash in the score display.
- A jammed coin mech will flash "COIN#" for the mech that is jammed.
- If a target segment is stuck, the segment number will be shown in the Temporary Score display and "TARGET" will be flashed in the player score display.

These problems must be corrected before the machine will continue.

### Operator-selectable Tests

To enter test mode the game must be in the Idle Mode or Game Select Mode. Start the test mode by pressing the "TEST" button on the main CPU board or on the inside of the coin mech door.

Upon entering Test Mode, the Temporary Score display will proceed with a numeric cycle test from "111" to "999." When it's finished, "coin" will appear in the display. "coin" indicates the first sub-test under Test 00; this test will begin unless the PLAYER SELECT button is used to select a different test.

#### Test Descriptions

#### Test 00 - Custom Coin Setup/Books Display

This test allows the operator to change coin mech coin/credit settings, change game price settings and review the bookkeeping information. Press the Solo Challenger® button to select a sub-test.

##### Custom Coin Setup/Books Sub-Tests

- **A - Mechanical/Electronic mech Coin/Credit Setup**
- **B - Custom Counter Setup**
- **C - Game Pricing/Happy Hour Pricing Setup**

- **D - '01 Options Pricing**
- **E - Current Books Count\***
- **F - Lifetime Books Count\***
- **G - Game/Solo Challenger® Popularity**
- **H - Set Player Change Delay**
- **I - Bonus Credits Awarded**
- **J - Promotional Credits Awarded**
- **K - Free Play Credits**
- **L - 01/Cricket Round Limits Setup**
- **M - Hi-Score/Lo-Score Round Limits Setup**
- **N - 321 Round Limits**
- **O - 3-Dart Out Shot Indicator**
- **P - Lo-Score Enable/Disable**
- **Q - Date Setup\*\***
- **R - Clock Setup\*\***
- **S - Happy Hour Setup\*\***
- **T - Machine ID number**

\*The books are shown two at a time, to step through them, press the "TEAM" button.

#### Sub-Test A - Mechanical/Electronic Mech Coin/Credit Setup

When the test button is pressed, the Temporary Score display will show "coin" to indicate mechanical mech coin setup. The 100's digit of the Player 1 display shows the number of coins, the 10's and 1's digits show the corresponding number of credits. Player 2 shows the coins and credits for the second mechanical mech. The Player 5, 6, 7 and 8 displays show the coins and credits for the 4 electronic mechs. Pressing target segments while in this test will change the values, which allow from 1 to 9 coins and 1 to 99 credits for each mech. For the coin values, pressing a single segment will add 1 to the count. For the credit values, pressing a single segment will add 1 to the count, a double segment will subtract 1 from the count and the triple segment will add 10 to the count. The target segment table below shows which segments to press for each mech:

Mech	Display	Coins	Credits
Mechanical 1	Player 1	Target segment 1	Target segment 11
Mechanical 2	Player 2	Target segment 2	Target segment 12
Electronic 1	Player 5	Target segment 5	Target segment 15
Electronic 2	Player 6	Target segment 6	Target segment 16
Electronic 3	Player 7	Target segment 7	Target segment 17
Electronic 4	Player 8	Target segment 8	Target segment 18

When a correct segment is pressed, the associated display data is updated and the corresponding Player's number lamp is lit.

### Special Coin/Credit Setting (US version only)

The coin input value can be set to 0 for the special 3 credits for \$1 input. This setting will force the credit value to 1 and it cannot be changed as long as the coins are set to 0. With this setting, the first and second coins entered will each give 1/2 credit and the third and fourth coins will each give a full credit, making the base credit cost 33 cents.

### Sub-Test B - Custom Setup for Counter

After setting the coin/credit values, press the Solo Challenger® button to access the counter setup.

The Temporary Score display will show "cntr" to indicate counter setup.

The Custom Counter Setup allows the mechanical meter to count up to 10 base units (of money) per coin entered. For example, assume that a game has 2 mechs, a quarter and a half dollar. The quarter would be the base unit. For each quarter entered, the meter should be incremented once; for each half dollar, the meter should be incremented two times.

The counters are assigned as follows:

Player 1	Mechanical Mech 1
Player 2	Mechanical Mech 2
Player 5	Electronic Mech input 1
Player 6	Electronic Mech input 2
Player 7	Electronic Mech input 3
Player 8	Electronic Mech input 4

You can increment the counter for each mech by pressing one of the following associated single target segments:

Segment 1	Mechanical Mech 1
Segment 2	Mechanical Mech 2
Segment 5	Electronic Mech input 1
Segment 6	Electronic Mech input 2
Segment 7	Electronic Mech input 3
Segment 8	Electronic Mech input 4

### Sub-Test C - Game Pricing/Happy Hour Pricing Setup

The Temporary Score display will show "COS" to indicate game pricing setup mode. To select a game

to be priced, press that game's button. The corresponding game lamp will light and "Std" will appear in the Player 1 display (indicating standard pricing) and "HH" will appear in the Player 3 display (indicating happy hour pricing). The name of the game you select will appear in the Player 5 through 8 displays. The current game price, in credits per player, will appear in the Player 2 display and the current happy hour pricing will be shown in the Player 4 display. Each game can be priced from 1 to 9 credits per player. Pressing the single 1 segment on the target will increase the standard cost by 1. Pressing target segment 10 increments the happy hour pricing by 1. The price will return to 1 when the target is pressed again at a count of 9. Pricing defaults are as follows:

301	1CR
501	2CR
701	2CR
801	3CR
901	3CR
1001	3CR
Hi-Score	1CR
Burma Road	1CR
321	2CR
Shanghai	1CR
Baseball	1CR
Cricket	2CR
Pick-It Cricket	2CR
Crazy Cricket	2CR
No-Score Cricket	Always 1 credit less than cricket.

The happy hour prices will become active at the pre-set times if you have a RAM clock installed.

### Sub-Test D - '01 Options Pricing

The Temporary Score display will show "01" and the Player and 2 displays will show "OPTiOn"; the Player 3 and 4 displays will show "S Cost"; the Player 5, 6 and 7 displays will show "1 CrEdIt". Press the TEAM button to toggle the cost between 1 and 0.

### Sub-Test E - Current Books Count

The Temporary Score display will show "cur1" to indicate that you are in the current coin counts mode. The current coin counts will be shown on the player score displays. Coin mech 1 count is shown in the Player 1 and 2 displays. Coin mech 2 count is shown in the Player 5 and 6 displays. Press the TEAM button to show the next set of counts, which will be indicated by "cur2" on the display. Press the TEAM

button again to show the third set of counts, indicated by "cur3" on the display.

#### *Sub-Test F - Lifetime Books Count*

The Temporary Score display will show "LIF1" to indicate that you are in the lifetime coin counts mode. The lifetime coin counts will be shown on the player score displays. Coin mech 1 count is shown in the Player 1 and 2 displays. Coin mech 2 count is shown in the Player 5 and 6 displays. Press the TEAM button to show the next set of counts, which will be indicated by "LIF2" on the display. Press the TEAM button again to show the third set of counts, indicated by "LIF3" on the display.

**NOTE: THE CURRENT, LIFETIME AND GAME POPULARITY COUNTERS ARE MONITORED BY ERROR CORRECTION SOFTWARE. IF THE COUNTERS ARE CORRUPTED FOR ANY REASON, THE SOFTWARE WILL DETECT AND STORE THE ERROR. IF THE "CURRENT" AND "LIFETIME" COIN COUNTS ARE FLASHING, AN ERROR WAS DETECTED. ALL THE COUNTERS ARE RESTARTED FROM THE POINT OF THE ERROR.**

#### *Sub-Test G - Game/Solo Challenger® Popularity*

The TEMPORARY SCORE display will show "POP" to indicate the Game/Solo Challenger® Popularity mode. The game popularity displays the number of times each game was played. You select each game by pressing that game's button. The corresponding game lamp will light. The Player 1 and 2 displays represent the number of times the game shown in the Player 5 and 6 displays was played. The Player 3 and 4 displays represent the number of times a Solo game was played.

#### *Sub-Test H - Set Delay*

This sub-test allows you to set the delay for all player changes (button press (BTN) and Automatic Player Change (APC)). The player displays 3 through 4 will show "btn dEL Ay- —," and the player displays 5 through 8 displays will show "-x- SEC ONd S—" ("x" being the number of seconds for which the delay is set) indicating you are in set delay mode.

The delay for the APC can be set to ½, 1, 2, 4, 6 or 8 seconds. The delay for the BTN press player change can be set to 2, 4, 6 or 8 seconds. To change the delay length press the single 1 target segment. The delay will increase 2 seconds for each segment press. Pressing the PUB/321 button will switch to the

APC delay; pressing the '01 button will switch to the BTN delay.

#### *Sub-Test I - Bonus Spin*

The "Bonus Spin" feature provides a random match feature at the end of each game. A randomly selected number is compared to the 1's digit of all players' scores. Credits equal to the cost of the game are awarded for each matching digit. DIP switch S2-3 controls this feature.

The Player 1, 2, and 3 displays will show "bonus CrEdit" to indicate you are in the Bonus Spin feature. The bonus credits awarded while the bonus spin feature was activated will be shown in the Player 5 and 6 displays.

#### *Sub-Test J - Promotional Credits Awarded*

This feature automatically supplies a free credit after the machine has been in idle mode for approximately 30 minutes. The operator can remove the credit by pressing the cancel button or disable the promotional credit feature, altogether, by toggling DIP switch S2-4.

The Player 1, 2, 3 and 4 displays will show "IdLE CREdITS" to indicate that you are in the Promotional Credit mode. The number of idle credits awarded while the feature was enabled is shown in the Player 5 and 6 displays.

#### *Sub-Test K - Free Play Credits*

The Temporary Score display will show "cred" to indicate that you are in the Free Play Credits sub-test. The Player 1, 2, 3 and 4 displays will show "in Free Play." The number of credits used while the game was in free play mode are shown in the Player 5 and 6 displays.

#### *Sub-Test L - 01/Cricket Round Limits Setup*

This sub-test allows you to adjust the round limits for all '01 and Cricket games. The temporary score display will show "All" "NONE," "CrIC" or "LONG" and the player displays 1 through 4 will show "SEL Ect Ed- ---" and player displays 5 through 8 will show "rnd -tA bLE ---" indicating you are in round limits mode, table "ALL". You now have access to 4 tables: NONE (no round limit for '01 and Cricket games), CRIC (round limits for Cricket games, but not '01 games), ALL (round limits for both '01 and Cricket games) and LONG (round limits for Cricket and '01

games are extended). To change tables, press the single 1 target segment. The next table name will appear in the temporary score display. See the Round Limits Table on page 6 for complete game/round information.

#### *Sub-Test M - Hi-Score/Lo-Score Round Limits Setup*

The Player 1, 2, 3 and 4 displays will SHOW "HI-SCORE HAS" and the Player 5, 6 and 7 displays will show "# roundS" to indicate Hi-Score/Lo-Score Round Limits Setup mode. The round limit value will be shown in the Player 5 display. Press the single 1 segment to change the round limit (it can range from 7 to 10 rounds, with the default being 8 rounds).

#### *Sub-test N - 321 Round Limits*

The temporary score display will show "10" or "15," the player displays 1 through 4 will show "— ROU NdS —" and the player displays 5 through 8 will show "— IN- 321 —" indicating that you are in the 321 Round Limits sub-test. This feature will display the number of rounds for the game 321. Pressing the TEAM button will toggle the rounds between 10 and 15.

#### *Sub-test O - 3-Dart Out Display*

The temporary score display will show "On" or "Off," player displays 1 through 4 will show "3-d Art ——" and the player 5 through 8 will show "— Out S——" to indicate that you are in the 3-Dart Out display sub-test. This feature will display suggested 3-dart out shots once a player's score is under 181. Use the TEAM button to toggle this feature on and off.

#### *Sub-test P - Lo-Score Enable/Disable*

This sub-test allows Lo-Score to be enabled/disabled if DIP switch 2-1 is set to the "OFF" position (set for fixed overhead display).

The temporary score display will show "-ON-" or "-OFF," player displays 1 through 4 will show "Lo- Sco re- ——" and player displays 5 through 8 will show "— — PLA yEd." Indicating that you are in the Lo-Score Enable/Disable sub-test.

#### *Sub-Test Q - Date Setup*

The Temporary Score display will show "dAtE" to indicate the date setup mode. The date, month and

year are shown in the Player 1, 2 and 3 displays, respectively.

Use the '01 game button to select the "date" field, the '01 Equal (Pub Game) button to select the "month" field and the 321/Shanghai/Baseball button to select the "year" field. When one of these button is pressed, an indicator (a raised "c") is displayed in the active field and the corresponding player lamp is lit. Use the Double In button to increment the value of the selected field; use the Double Out button to decrement the selected field.

#### *Sub-Test R - Clock Setup*

The Temporary Score display will show "CLOC" to indicate clock setup mode. The hour, minutes and day of the week are shown in the Player 1, 2 and 3 displays, respectively.

Use the '01 game button to select the "hour" field, the '01 Equal (Pub Game) button to select the "minutes" field and the 321/Shanghai/Baseball button to select the "day" field. When one of these buttons is pressed an indicator will appear in the active field and the corresponding player lamp is lit. Use Double In/Double Out to increment/decrement the selected field. (For the day of the week, 1=Sunday and 7=Saturday.)

**NOTE:** IF A RAM CLOCK IS NOT INSTALLED THIS FEATURE WILL NOT FUNCTION. THE MESSAGE "NO CLOC" WILL APPEAR ON THE DISPLAY.

#### *Sub-Test S - Happy Hour Setup*

The Temporary Score display will show "HHx." The "x" indicates the day of the week (1-7). The default setup for the happy hour timer is 17:00 (5 PM). The starting time appears in the Player 1 and 2 displays and the ending time appears in the Player 5 and 6 displays. If the starting time is greater than, or equal to, the ending time the feature is considered inactive.

Use the "TEAM" button to step through the timers for each day of the week. Use the '01 game button to select the "starting time hours" field, the '01 Equal (Pub Game) button to select the "starting time minutes" field, the 321/Shanghai/Baseball button to select the "stopping time hours" field and the Hi-Score/Lo-Score button to select the "stopping time minutes" field.

Use the Double In button to increment the value in the selected field and the Double Out button to decrement the value.

**NOTE:** IF A RAM CLOCK IS NOT INSTALLED THIS FEATURE WILL NOT FUNCTION.

Once all of the sub-tests of the Custom Coin Setup/Books display test have been performed, press the "PLAYER CHANGE" button to select the remaining tests. Each press of the button will initiate a different test, starting with test 01 and ending with test 16.

#### Test 01 through Test 10 - 7 Segment Display, LED and Lamp Tests

Run tests 01 through 10 to check each of the game's displays/LEDs/lamps. Each numbered test will light a different row/display. If a bulb is out, directions for changing it can be found in the maintenance section of the manual.

#### Test 11 - Target Test

The TEMPORARY SCORE display will show "11" to indicate that you are in the Target Test mode. Touch any segment. When a closure is detected on a segment, a tone will sound. When the segment is released another tone will sound. The Player 5 and 6 displays will show "TARGET." The Player 2 display will show the value of the segment you pressed. The '01 lamp indicates a single, the Equal (Pub Game) lamp indicates a double and the 321/Shanghai/Baseball lamp indicates a triple.

#### Test 12 - Button/Lamp Test

The button/lamp test will illuminate the lamp corresponding to each button pressed. The Player 1, 2, 5 and displays will show "button tEST."

**NOTE:** THE START/PLAYER CHANGE BUTTON WILL ALWAYS ILLUMINATE AND SOUND A TONE WHEN PRESSED.

#### Test 13 - Missed Dart/Auto Player Change Test

The missed dart detector test will illuminate the '01 lamp and the Player 1 lamp when a missed dart is detected. The automatic player change will flash the '01 Equal (Pub Game) and Player 2 lamps when a person is detected in front of the machine. The Player 1, 2 and 3 displays will show "tap test-," the Player 5, 6 and 7 displays will show "a.p.c. test" and the Player 4 display will show "-hi" or "-lo" if the missed dart detector/automatic player change

feature is enabled. The display will show "NU" if the feature is disabled.

**NOTE:** The Player 4 display will show "-hi" when the ultrasonic unit is turned "OFF" DURING APLAYER'S TURN, and "-lo" when the unit is turned "ON."

#### Test 14 - DIP Switch Test

The Temporary Score display will show "DIP" to indicate the test. The DIP switch settings will be shown with vertical bars on the Player score displays. Switch bank 1 is shown in the Player 1 and 2 displays (with switch 1 to the left) and switch bank 2 will be in the Player 5 and 6. A vertical bar on top indicates the switch is on; a vertical line on the bottom indicates the switch is off displays (switch 1 on the left).

#### Test 15 - Program Version Display

"Prog" will be displayed in the Temporary Score display indicating program version and the program version number, including current revision level, will appear in the Player 1, 2, 3 and 4 displays.

#### Test 16 - Coin Mechs Test

This allows the operator to test the coin mechs without adding credits. When a coin is deposited the coin song is played and the mech number is displayed on the overhead, but no credits are added.

### CLEARING BOOKS/RESET MODE

To clear books or reset default settings, an option button is pressed along with the TEST button(s). Both buttons must be pressed simultaneously. Refer to the table below:

BUTTONS	RESULTS
Test + Double Out	Clears Current Books
Test + Masters Out	Clears Lifetime & Current Books
Test + Team	Resets Factory Default Settings
Test + Double In	Resets Happy Hour Start/Stop Settings

NOTE: ADDITIONALLY, HOLDING IN THE PLAYER CHANGE BUTTON WHEN POWERING UP THE GAME WILL CLEAR ALL CREDITS AND COIN COUNTERS, ABORT ANY ACTIVE GAMES AND RESET THE IDLE MODE DISPLAY.

## MAINTENANCE

### *Bulb Replacement*

To replace the light bulbs for REMOVE DARTS and THROW DARTS:

1. Unlock and open the target section door.
2. Locate the defective bulb.
3. Pull the bulb to remove it.
4. Replace with a GE #161 bulb.

To replace the light bulbs for the Push-button Switch or Coin Lamp:

1. Unlock and open the control panel or coin mech door.
2. Locate and remove the defective bulb.
3. Replace with a GE #161 BULB.

To replace the bulbs in the overhead display:

1. Loosen the 6 screws that secure the bezel to the frame and slide it off the chassis.
2. Locate the defective bulb.
3. Pull the bulb to remove it.
4. Replace with a GE #79 bulb.
5. Replace the bezel and secure with screws.

### *Target Maintenance*

#### *Removing Broken Tips*

Broken tips can sometimes be pushed into the cavity behind a segment and cause the segment to stick. If this happens you will have to remove the target matrix switch assembly to remove the tip.

1. Open the target door section.
2. Carefully remove the backboard and clean out all broken tips.
3. Reassemble the backboard assembly, making sure the latches are secure.

#### *Cleaning the Cabinet*

The cabinet, Lexan display and front base panel should all be cleaned with a damp cloth and mild detergent. The Lexan can be cleaned with a solution for Plexiglas or acrylic surfaces.

NOTE: NEVER SUBMERGE THE TARGET OR SEGMENTS IN WATER.

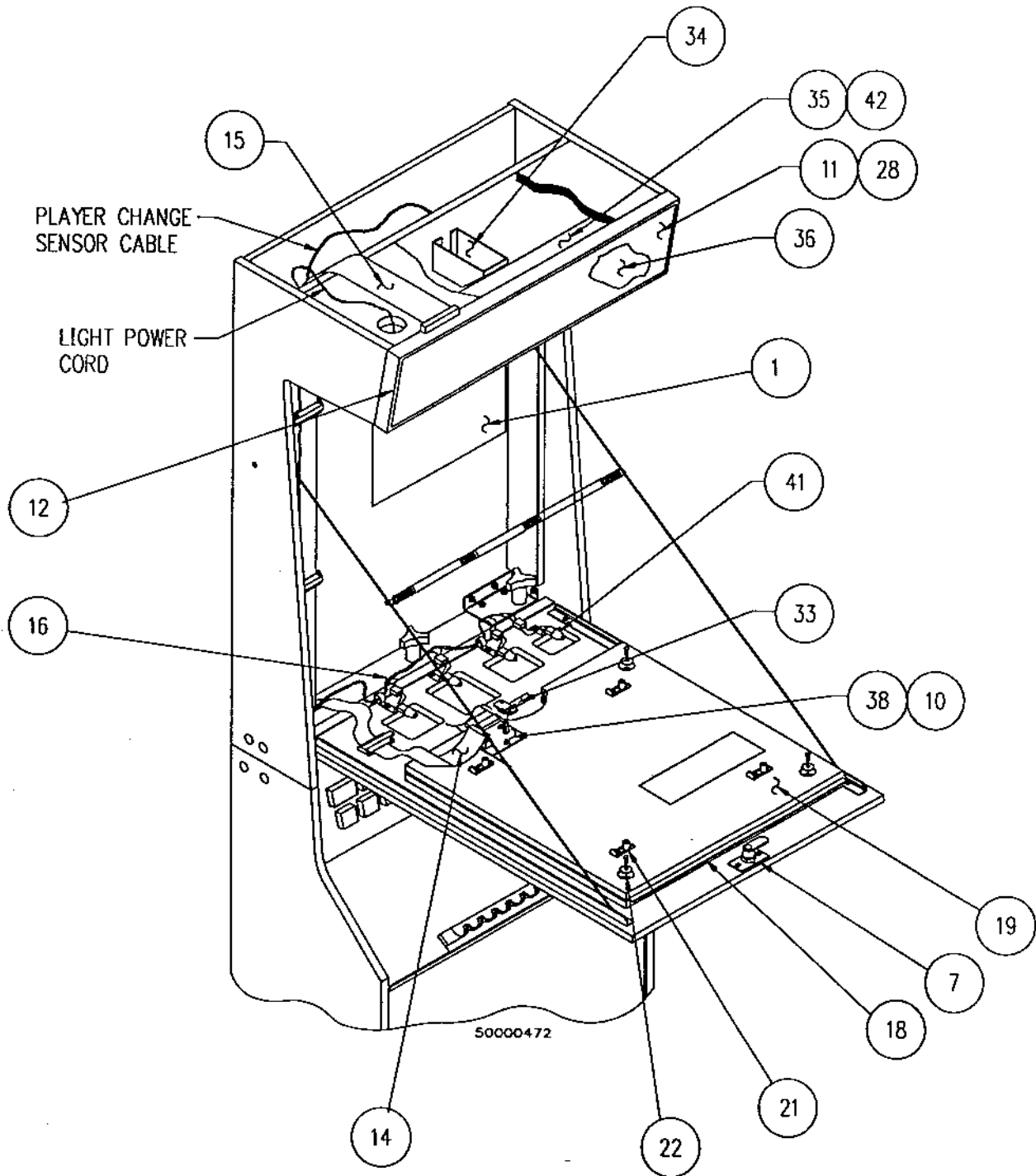


Figure 4 - OVERHEAD AND TARGET SECTIONS - INTERNAL VIEW (FLOOR MODEL)

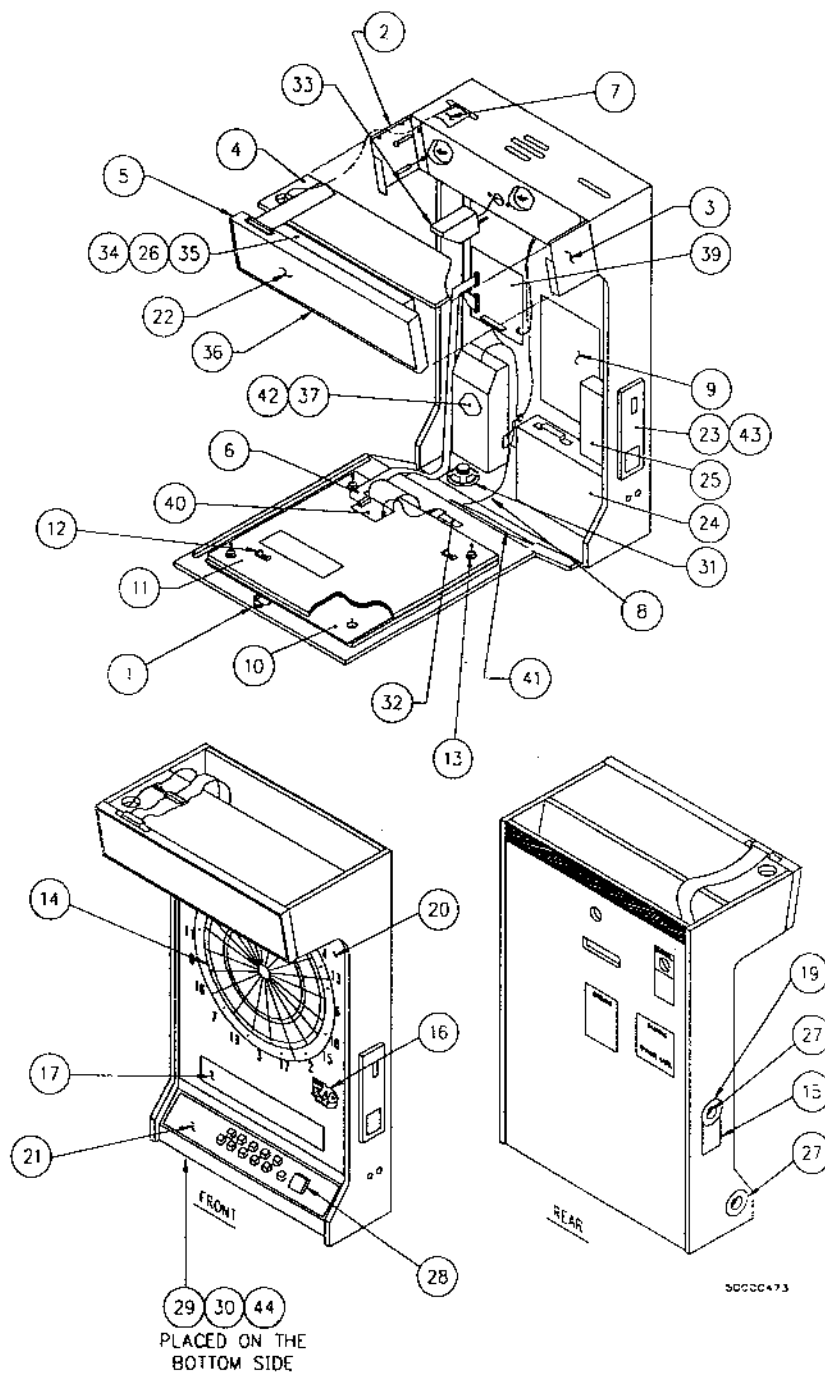


Figure 5 - OVERHEAD AND TARGET SECTIONS - INTERNAL VIEW (WALL MOUNT MODEL)



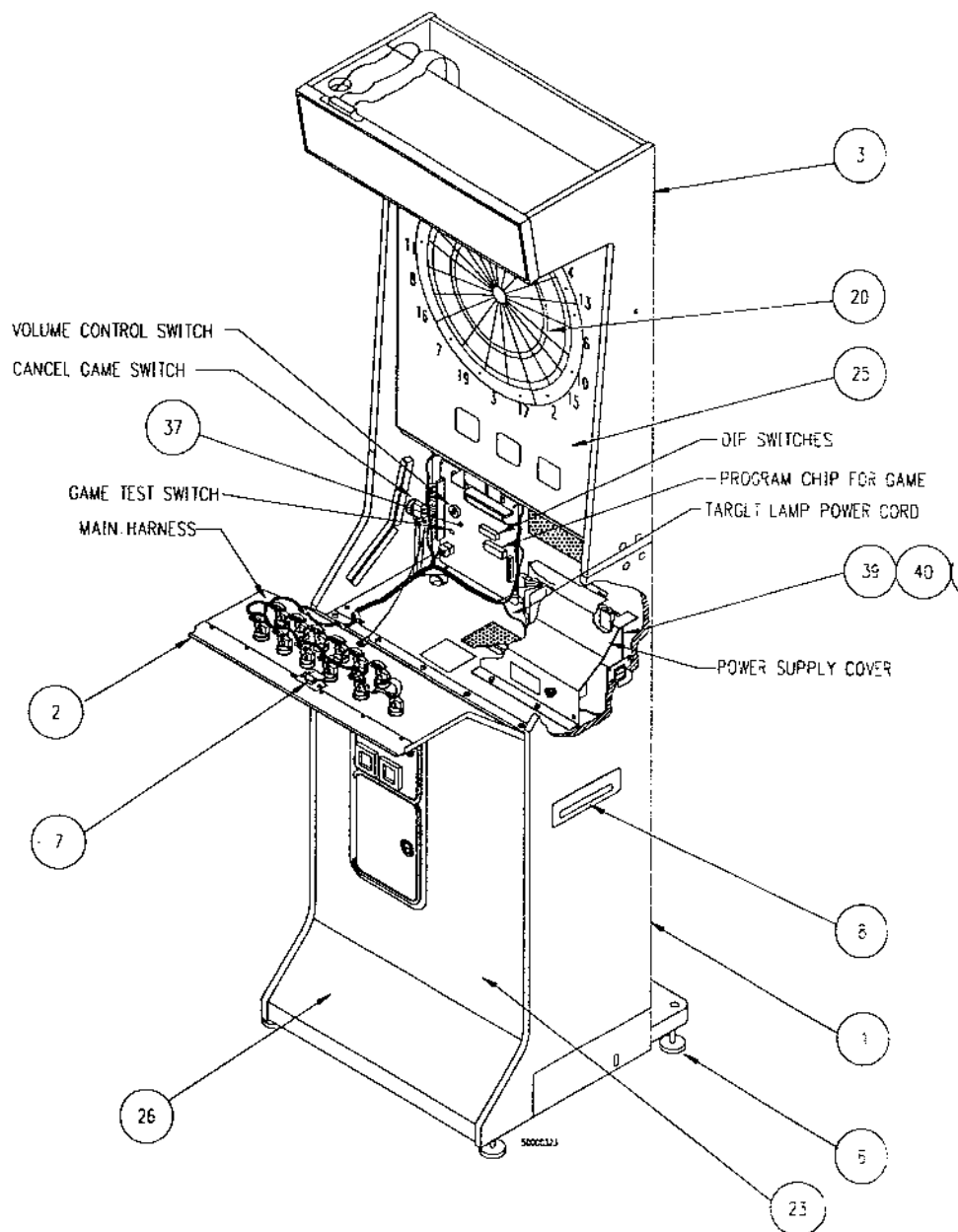


Figure 6 - CONTROL PANEL SECTION - INTERNAL VIEW (FLOOR MODEL)

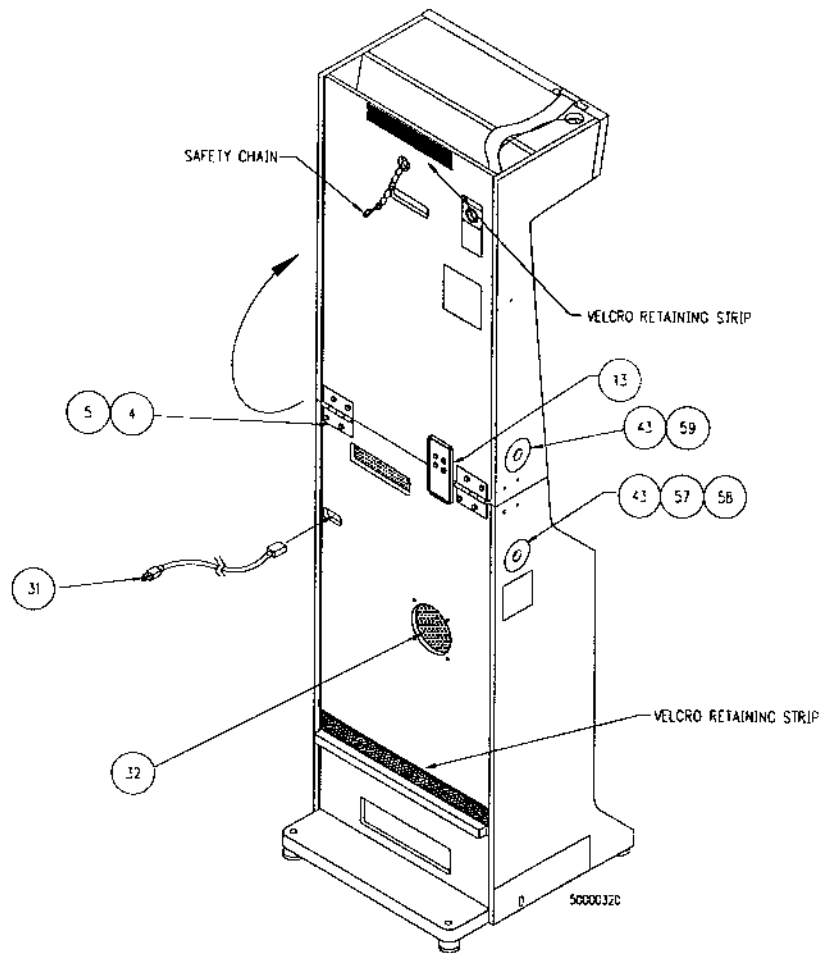


Figure 7 - REAR VIEW OF GAME  
(FLOOR MODEL)

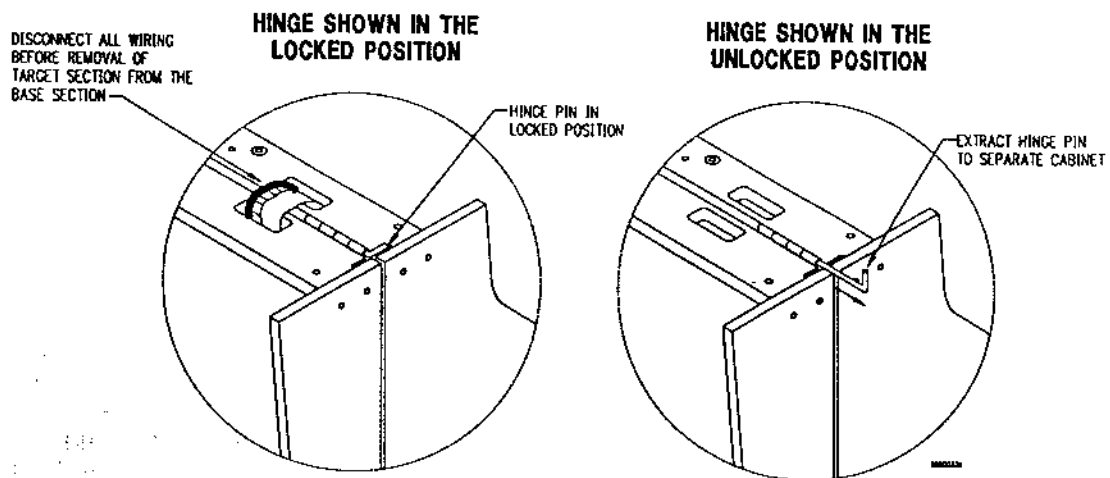


Figure 8 - TARGET SECTION HINGE IN LOCKED & UNLOCKED POSITIONS  
(FLOOR MODEL)

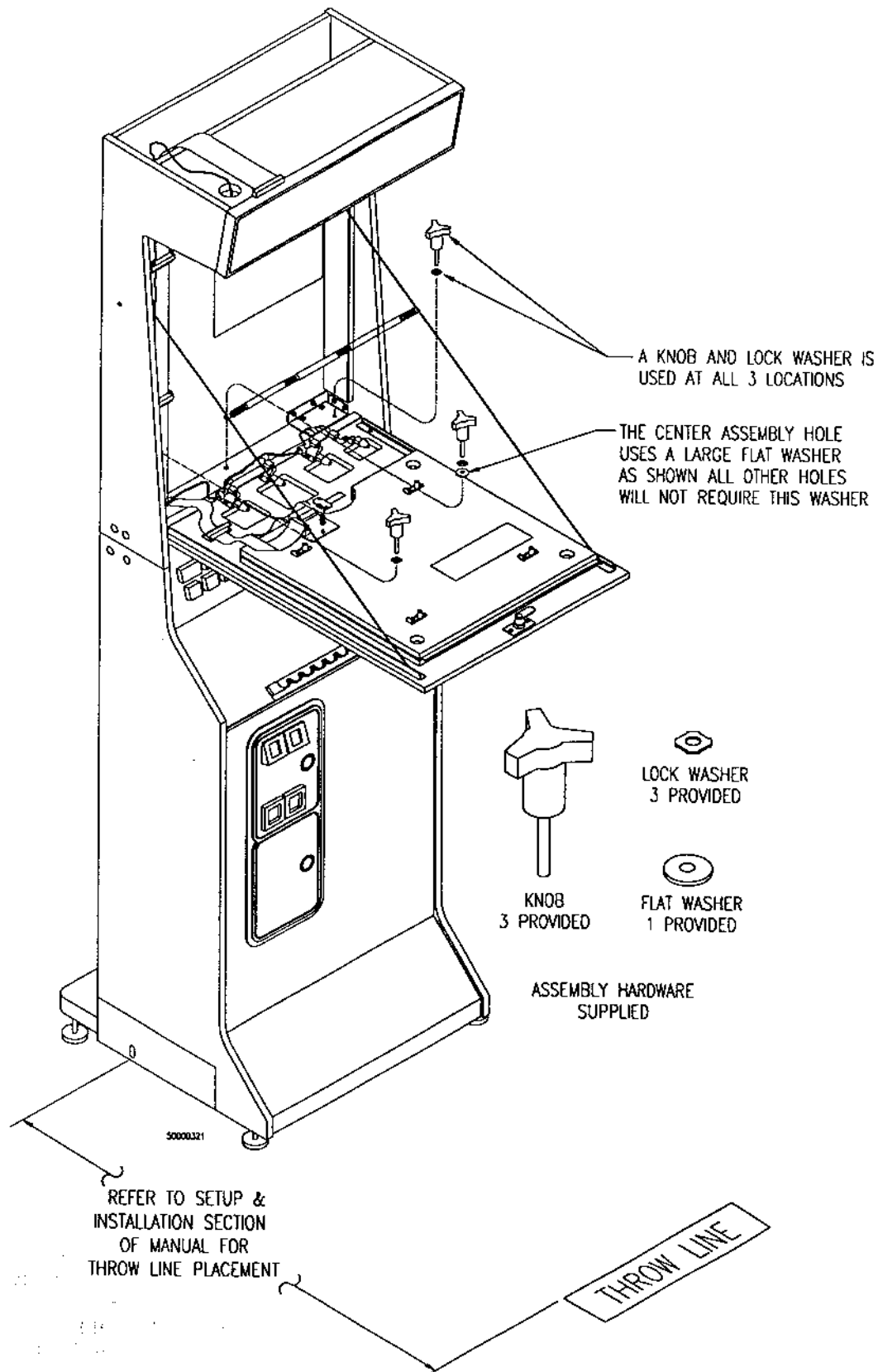


Figure 9 - INTERNAL VIEW - TARGET SECTION  
(FLOOR MODEL)

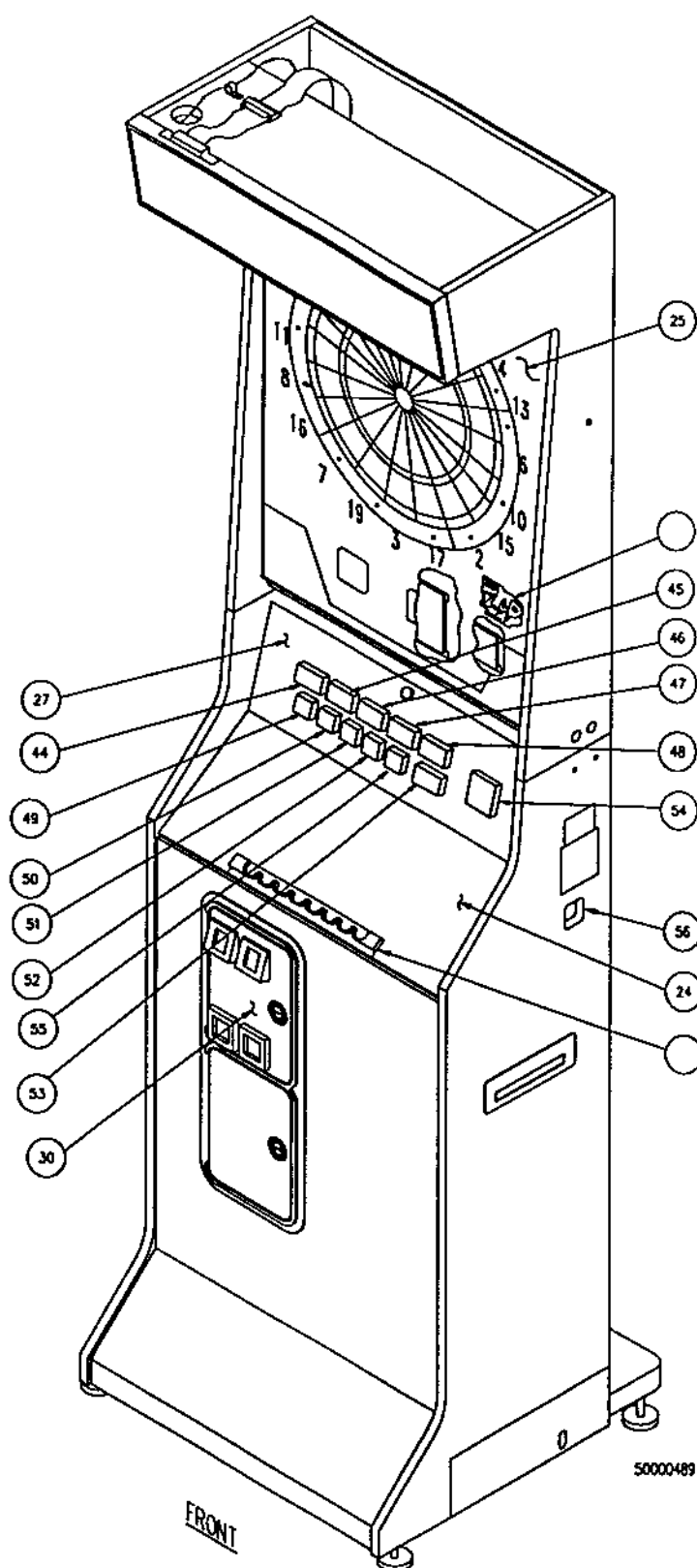
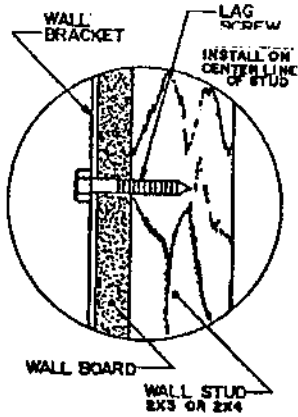
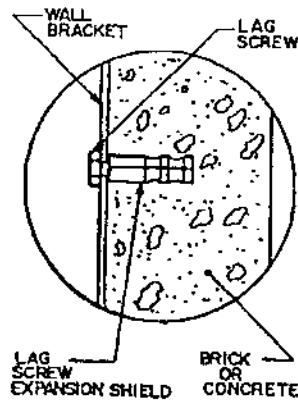


Figure 10- FRONT VIEW (FLOOR MODEL)

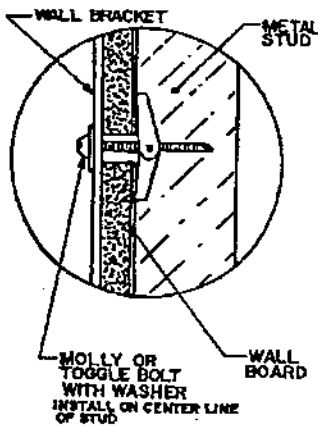
WOOD STUDDED WALLS



BRICK/CONCRETE WALLS



METAL STUDDED WALLS



CINDER BLOCK WALLS

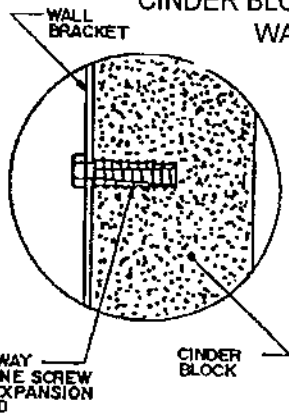


Figure 11 - WALL STUDS

INSTRUCTIONS FOR HOLLOW WALL ANCHORS:

1. DRILL A 5/16" HOLE
2. INSERT ANCHOR AND TIGHTEN (STEPS 1 & 2)
3. PLACE SCREW AND WASHER THROUGH HOLE IN WALL BRACKET AND TIGHTEN (STEP 3)

FOR USE WITH HOLLOW WALLS ONLY

INSTRUCTIONS FOR PLASTIC OR LEAD EXPANSION ANCHORS:

1. DRILL AS REQUIRED
2. HAMMER ANCHOR FLUSH TO WALL (STEP 1)
3. USE A #10x 1" LONG SHEET METAL SCREW W/WASHER (if needed). PUT THROUGH HOLE IN WALL BRACKET & TIGHTEN (STEP 2)

FOR USE WITH CINDER BLOCK, BRICK OR CONCRETE WALLS ONLY

Figure 12 - MOLLY BOLTS

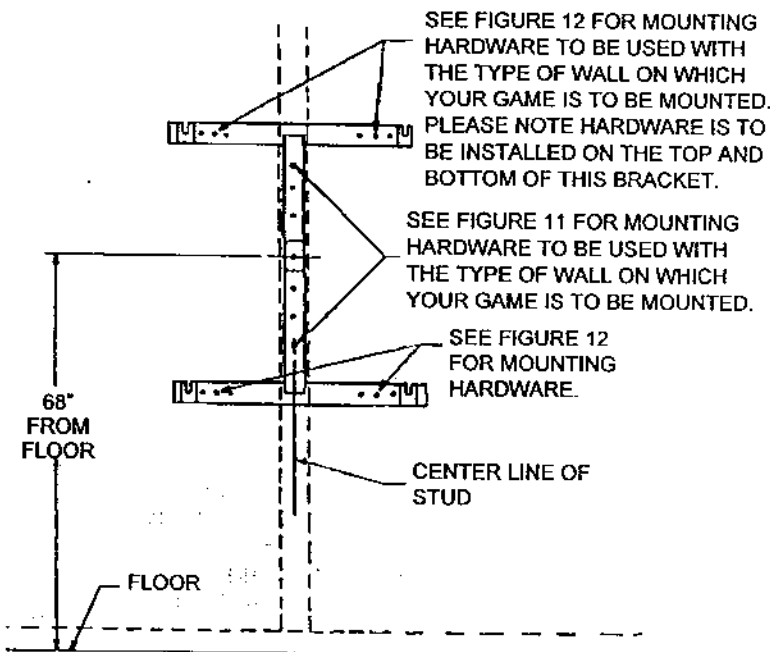


Figure 13 - WALL BRACKET

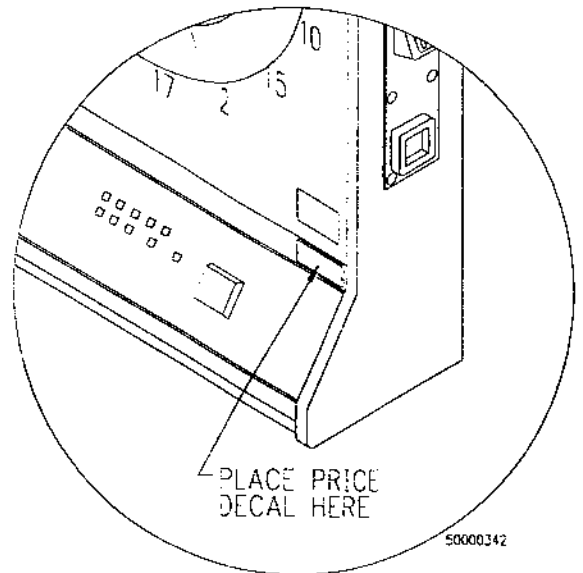


Figure 14 - LOCATION OF PRICE DECAL

**PARTS LIST - MERKUR POWER PLUS***Floor Model*

<b>CABINET AND HARDWARE PARTS</b>		
1	WD2836-01	CABINET, U/R D2, BASE
2	MW1728	CONTROL PANEL, U/R D2
3	WD2831-01	CABINET, U/R D2, TARGET
4	HW8991	HINGE, U/R D2
5	HW8992	HINGE PIN SCORPION FOLD-DOWN
6	HW8960	LEG LEVELER, 3/8-16"
7	HW8716	LOCK, FLAT, STR, #564, 1-7/16
8	HW8986	FACE PLATE LEAGUE SLOT ABS
10	HW8933	STANDOFF, BLIND HOLE, 1/4"
11	SB1958-04	OVERHEAD, SCORPION 9000
12	HW8985	ENCLOSURE, OVERHEAD, PLASTIC
13	MW1723	BRACKET, ANTI-FOLD
<b>HARNESSES AND CABLES</b>		
14	EC2185	CABLE, RIBBON, CPU TO MATRIX, 27"
15	SA1554	CABLE, RIBBON, CPU TO OVERHEAD, 2X20 59"
16	SB1596-01	HARNESS, TARGET SECTION
<b>ACCESSORIES</b>		
x	SB1646-01	BAR DART PACK W/WHITE TIPS
x	SB3000	KIT, SAFETY CHAIN HARDWARE
<b>TARGET PARTS</b>		
18	HW8012	TARGET MAT, RUBBER, NEOPRENE 093
19	SA8705	MATRIX/WOOD ASSEMBLYSMTGT-S
20	SB1502	SPIDER W/SEGMENTS, SMTGT-S, BLACK-4 COLORS
x	DS2004	CATCH RING SEGMENT, SMTGT-XS, BLACK
x	DS2009	CATCH RING CAP, BLACK
x	DS0075	SPIDER, SMTGT-S, BLACK
21	HW6366	MATRIX MOUNTING POST, KNURLED
22	HW5250	TARGET SPACER, FLATWASHER
<b>SEGMENT KITS FOR BLACK SPIDERS</b>		
x	DS5080	SEGMENT KIT ALL, SMTGT-2 RED
x	DS5081	SEGMENT KIT ALL, SMTGT-2 BLUE
<b>DECALS AND DISPLAYS</b>		
23	GL1715	DECAL, BASE, MERKUR
24	GL1734-25	DECAL, INSTR., POWER PLUS - GER
25	GL1714	DECAL, TARGET, MERKUR, UR D2
26	GL1708	DECAL, FOOT RAMP, U/R D2
27	GL1703-04	DECAL, CONTROL PANEL, U/R D2, MERKUR
28	GL2631	PLEXI, DISPLAY, POWER PLUS MERKUR
57	GL1726	DECAL, CANCEL GAME INSTRUCTIONS, GER
58	GL1711	DECAL, CANCEL GAME BUTTON, GER
59	GL1745-08	INSTRDCL, EQUALIZER/PPD/HPR, ENG

COIN MECHS (WITHOUT HARNESSING)		
30	SB1957-02	COIN DOOR ASSY, E/CREJ RDY
X	HW8724	LOCK, FLAT, STR, #106, 1-7/16"
ELECTRICAL/ELECTRONIC COMPONENTS		
31	EC2002	CORD, POWER, EUR
32	SB1637	SPEAKER ASSEMBLY, 6", U/R D2
33	SB1441-02	TRANSDUCER ASSY, PIEZO, 7.0"LEADS (MICROPHONE ASSEMBLY)
34	SB1905	TRANSDUCER ASSY, ULTRASONIC (PLAYER CHANGE SENSOR)
35	SB1508	LAMP ASSY, F15T8CW, 240V, CL79 (OVERHEAD LIGHT ASSEMBLY)
36	TA10018-01	PRINTED CIRCUIT ASSEMBLY, 8 PLAYER PLUS TESTED
37	TA10021-01	PRINTED CIRCUIT ASSEMBLY, MAIN CIRCUIT BOARD
38	SA1786	PRINTED CIRCUIT ASSEMBLY, TARGET MICROPHONE INTERFACE (RDP28 BOARD)
39	EC7533	SWITCH MODE P/S, DART
40	SB1573-02	FILTER ASSEMBLY, POWER ENTRY, #10 LUG
X	SA10009-01	ASSY, MOV/SURGE ARRESTOR
LAMPS AND SWITCHES		
41	LB1150	BULB T 3-1/4", 14V, GE #161 (10 PACK - SWITCHES & COIN MECHS)
42	LB2100	LAMP, FLUORESCENT, 15", F15T8CW
43	SW3044	PB ASSY, SMRD, BLK, BLANK
44	SW1565	*PBBODY, RECTANGULAR, RED, 301-1001
45	SW0001-02	*PBBODY, RECT, RED, 321KO/PUB GAME
46	SW1569	*PBBODY, RECT, RED, SHAN/BASEBALL
47	SW1585-02	*PBBODY, RECT, RED, HISCR/BRMARD
48	SW1582-02	*PBBODY, RECTANGULAR, RED, CRICKET/CRAZY CRICKET/PICK-IT CRICKET
49	SW1583-04	*PBBODY, SMALL SQUARE, YEL, DOUBLE IN/WILD & CRAZY CRICKET
50	SW1984-02	*PBBODY, SMALL SQUARE, YEL, DOUBLE OUT/NO SCORE CRICKET
51	SW1985-02	*PBBODY, SMALL SQUARE, YEL, MASTER/CUT THROAT CRICKET
52	SW1608-02	*PBBODY, SMALL SQUARE, YEL, TEAM
53	SW1652	*PBBODY, RECT, YEL, SOLO, MERKUR
54	SW1623	*PBBODY, FLUSH MOUNT, LARGE SQUARE, RED, PLAYER CHANGE
55	SW1986-02	*PBBODY, SMALL SQUARE, YEL, 01-EQ/SPOT
56	SW4024	SWITCH, ROCKER, DPST, 250V (ON/OFF SWITCH)
*PBBODY = PUSH-BUTTON BODY		

## MERKUR POWER PLUS PARTS LIST

## Wall Mount Model

CABINET AND HARDWARE PARTS		
1	HW8716	LOCK, FLAT, STR, #564, 1-7/16"
2	MW4028	BRACKET, HOOD, LEFT, WD2
3	MW4029	BRACKET, HOOD, RIGHT, WD2
4	WD2821	COVER, HOOD EXTENSION
5	HW8985	OVERHEAD ENCLOSURE
HARNESSES AND CABLES		
6	EC2184	CABLE, RIBBON, 2 x 12, 39"
7	SA1555	CABLE, RIBBON, 2 x 20, 38"
8	SB1939-01	HARNESS, MAIN, WD3
ACCESSORIES		
x	GL4075	DECAL, "BULL STARTS HERE"
x	SB1646-01	BAR DART PACK W/ WHITE TIPS
x	SB1893-01	HARDWARE ASSEMBLY PACK
TARGET PARTS		
10	HW8012	TARGET MAT, RUBBER, NEOPRENE 093
11	SA8705	MATRIX/WOOD ASSEMBLYSMTGT-S
12	HW6366	MATRIX MOUNTING POST, KNURLED
13	HW5250	TARGET SPACER, FLATWASHER
14	SB1502	SPIDER W/SEGMENTS, SMTGT-S, BLACK-4 COLORS
x	DS2004	CATCH RING SEGMENT, SMTGT-XS, BLACK
x	DS2009	CATCH RING CAP, BLACK
x	DS0075	SPIDER, SMTGT-S, BLACK
SEGMENT KITS		
x	DS5080	SEGMENT KIT ALL, SMTGT-2 RED
x	DS5081	SEGMENT KIT ALL, SMTGT-2 BLUE
DECALS AND DISPLAYS		
15	GL1726	DECAL, CANCEL GAME INSTRUCTIONS GER
17	GL1003-15	INSTR, SOLO/SPOT/HO/PPD, BLK, ENG
19	GL1711	DECAL, CANCEL GAME BUTTON
20	GL2764	DECAL, TARGET, MMERK, WD2
21	GL2730-20	INSTRDCL, POWER PLUS, GER
22	GL2631	PLEXI, DISPLAY, POWER PLUS MERKUR
X	GL1746-05	DECAL, PPD/HPR
COIN MECH PARTS		
23	HW8291	E/CREJ, SGL, FR/PLATE, 1/2/5DM
24	MW4022	COIN BOX, PT2W
25	MW4023	COVER, COIN BOX, MECHANICAL COIN REJECTOR, WD2
LAMPS AND SWITCHES		
26	LB2100	LAMP, FLUORESCENT, 15" F15T8CW
27	SW3044	PB ASSEMBLY, SMALL ROUND, BLACK, BLANK
28	SW1623	*PBBODY, FLUSH MOUNT, LARGE SQUARE, RED, PLAYER CHANGE
*PBBODY = PUSH-BUTTON BODY		



ELECTRICAL/ELECTRONIC COMPONENTS		
29	EC2002	CORD, POWER, EUR
30	EC2005	LATCH, POWER CORD
31	SA4084	SPEAKER ASSEMBLY, 4"
32	SB1441-04	TRANSDUCER ASSY, PIEZO, 7.0" LEADS, 3-PIN CONN (MICROPHONE ASSEMBLY)
33	SB1905	TRANSDUCER ASSY, ULTRASONIC (PLAYER CHANGE SENSOR)
34	TA10018-01	PRINTED CIRCUIT ASSEMBLY, 8 PLAYER PLUS TESTED
35	SB1508	LAMP ASSY, F15T8CW, 240V, CL79 (OVERHEAD LIGHT ASSEMBLY)
36	SB1958-12	OVERHEAD POWER PLUS, MERK, 340V
37	EC7533	POWER SUPPLY, SW, 110V, +5/+12
38	SB1588-02	POWER ENTRY ASSEMBLY, WG, 240V, RELAY
39	TA100021-01	PRINTED CIRCUIT ASSY, AIN CIRCUIT BOARD
40	SA1786	PRINTED CIRCUIT ASSY, TARGET/MICROPHONE INTERFACE (RDP28 BOARD)
41	SA1808-01	PRINTED CIRCUIT ASSY, PUSH-BUTTON CONTROL PANEL, WD3 (RDP31 BOARD)
44	SW4024	SWITCH, ROCKER, DPST, 250V (ON/OFF SWITCH)
X	SA10009-01	ASSY, MOV/SURGE ARRESTOR

**TROUBLESHOOTING** (MERIT CUSTOMER SERVICE 1-800-445-9353)

PROBLEM	ACTION
No sound, overhead display or overhead light.	Check AC outlet for power. Check for blown fuse.
Sound and overhead display function, but no overhead light.	Check fluorescent tube. Check lamp starter
No power up sound or overhead display, but overhead lamp turns on.	Check all connectors to power supply, AC input, +5V, and +12V outputs. +5V output must be >5.2V Check power connections to J1 on the STG01 board.
Power-up sound & overhead lamp function, but no overhead display.	Check 40-wire ribbon cable from STG01 to the overhead PC board for proper fit. Replace the overhead unit as necessary.
No sound.	Adjust volume control R25 on STG01 board. Check the connections to the speaker. Check for the presence of +12V on the power supply. Replace STG01 board or the speaker as necessary.
RAM reset on every power-up.	Replace the RAM Replace the STG01 board as necessary.
No push-button lamps light.	Check proper connection of lamp connector J4 on STG01. Check black common wire loop to each lamp. Check for presence of +12V. Replace the STG01 board as necessary.
Individual overhead LEDs do not light.	Check the LED. Use a multimeter. Replace the driver IC as necessary.
Some or no buttons or coin inputs work on the STG01 board.	Check proper connection of switch connector J3. Check green common wire loop to each switch. Check each switch for functionality. Replace STG01 board as necessary.
Coin jam display.	Check the coin switch mechanism for a possible jammed coin. Check the actual coin switch for jammed lever. Ensure that the switch wiring connects the normally open contacts.
Stuck segment display.,	Check that the nuts holding the target back board are finger tight. Check for broken tips wedged between a segment and the spider. Check for broken tips stuck behind a segment.
No missed darts detected, auto player change not working.	Switch position 3 on DIP switch 1 must be ON; check for correct DIP switch settings. RDP28 has not been properly connected to STG01 for missed darts; also check microphone connection. Check ultrasonic cable connection to J9 of STG01.
Player change works but no missed darts are detected.	Check the microphone connections to the RDP28 board. Check for correct DIP switch settings.
Automatic player change does not work.	Check for correct DIP switch settings. Is the cable from the ultrasonic transducer connected correctly to J9 on STG01? Replace the ultrasonic transducer. Replace the STG01 board.
Only some missed darts are detected.	Replace the RDP28 board.

## Merit Limited Warranty for Coin Operated Dart Machines

Merit Industries, Inc., warrants the Scorpion™ 9000 dart machines to be free from defects in material and workmanship for a period of twenty-four months from the date of delivery or twenty-five months from the date of shipment from its facilities, whichever occurs first. The warranty covers all major components except the coin mechanism, which is governed by the original manufacturer's warranty.

Consumables such as fuses, light bulbs, switches, line cords and target rubber mats are warranted for a period of six months from the date of delivery or seven months from date of shipment, whichever comes first

Failure or damage due to misuse, vandalism, excessive or intentional abuse, operation outside specified conditions (including but not limited to improper electrical power source), normal wear and tear, fire, water damage, acts of God, acts of war and civil unrest, are specifically excluded. Damage resulting from improper servicing by unqualified personnel is also excluded. Cabinet damage resulting from normal wear and tear or customer/user abuse is not included

Merit products are carefully inspected and thoroughly tested prior to packing and shipment. Any damage discovered upon receipt of goods, whether obvious or concealed, must be reported immediately to the delivering carrier and claims made directly to them. Merit assumes no responsibility for damages once the product has left its facilities, and any disputes regarding transportation damage must be resolved with the shipping company(s).

Merit will repair or replace, at its option, any component, part or subassembly that fails under warranty, provided that the failed item is returned, shipping charges prepaid, to Merit's repair facility and Merit is notified of the failure within the warranty period. Merit reserves the right to request the serial numbers of the item and/or game which has failed, and copies of sales invoices, bills of lading or other documents as required to determine the validity of the warranty coverage

Merit's obligation shall be limited to repair or replacement, as stated above, and shall specifically exclude any liability for consequential damage or loss of earnings.

Merit may, at its discretion, provide replacement parts under warranty prior to receiving defective items without incurring any ongoing obligation to extend such accommodations.

The above terms and conditions constitute the sole obligation, written or implied, of Merit Industries under its warranty coverage.

### FCC WARNING:

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 INTERFERENCE TO RADIO AND TV RECEPTION REQUIRING THE OPERATOR TO TAKE WHATEVER STEPS ARE NECESSARY TO CORRECT THE INTERFERENCE.