





Service Manual

Software Version HP-1.07

May 25, 2007

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You can get this game at www.magic-play.eu You can get this game at www.magic-play.eu

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New Game Registration

REGISTERING YOUR NEW GAME ENTITLES YOU TO AN EXTENDED WARRANTY*
ADD 3 MONTHS TO THE WARRANTY OF THIS GAME BY COMPLETING AND
SUBMITTING, BY FAX OR MAIL, THIS FORM.

Game Name (one game per card):	Date:
Game Serial Number (located on the back of the cabinet):	Game Location Type Please Check One:
Game Owner/Operator Company Name:	Family Fun Center
Caraa Ouraan/Onaratan Addraga	Sports Bar
Game Owner/Operator Address:	Bar
Compa Outro al/On author Oit //Otata/7in	Restaurant
Game Owner/Operator City/State/Zip:	
	Laundromat
Game Owner/Operator Phone Number:	Movie Theatre
	Mall
Game Owner/Operator Fax Number:	Other (please specify)
Game Owner/Operator E-Mail Address:	1
Game Location Name and Address:	
	l

*NOTE: Extended warranty only applies if ALL boxes on this form are complete. One game per form. Extended warranty does not apply to used or close-out games.



Bay Tek Games Inc. 1077 East Glenbrook Drive Pulaski, WI 54162 Fax: 920.822.8936

Phone: 920.822.3951 www.baytekgames.com

Thank you for your purchase of a Horse Play.

Our Vision

We Aspire To Be The Best In The World At

Developing And Manufacturing

Coin Operated Games For Our Customers.



Record this information for future reference:

Serial number:			
(Located on the inside of the rig	ht side front door)		
Date of installation:			
Installed by:			
			_

Service: 920.822.3951 EXT. 1102

Parts: 920.822.3951 EXT. 1107

For 24 hour pricing and ordering please visit us on the web at

www.baytekgames.com



Operation and Set Up



CAUTION: Electrical Shock Hazard. Do not perform repairs or maintenance on this game with power ON. Unplug the unit from the wall outlet or shut off power at the power strip inside the cabinet.



CAUTION: Electrical Shock Hazard. Always plug game into a grounded circuit.



CAUTION: Use of flammable substances can cause severe burns or personal injury.

Always use non-flammable solvents for cleaning parts and surfaces of this game. Do not use flammable substances such as gasoline, kerosene or thinners.

How The Game Works

Horse Play is a game of skill and good aim. The player shoots black rubber balls attempting to knock out the horse's teeth. Each knockout increases the number of tickets won and dispensed at the end of the game.

The player can win additional bonus tickets. If they knock down all 6 teeth with 3 or less balls the teeth will reset. After the teeth reset and they knock down all 6 teeth again with the remaining shots the player will win bonus tickets in addition to the tickets won for knocking over all 6 teeth.

The teeth must be knocked fully backward. Hitting the teeth and slightly moving them will not score a hit. There is a 2.5 second delay before each ball can be shot. If the game does not register a shot after three minutes, the game ends and all credits clear.

NOTE: The score table (Standard or Fixed), which is determined by setting the dipswitches, should match the Knock Down Tickets decal on the game Panel (Pictured Above). Additional sets of numbers are included with this manual. See Programming Section.

The owner can set the number of balls per coin, coins per play, ticket payout, free play and more.



Service Connection

Air Compressor Requirements:

- Approximately 20 gallon tank
- 2 horsepower
- 5-6 cubic feet per minute at 90 PSI

Bay Tek's parts department offers a 20 gallon compressor; order part number A5AC1003. A 3/8"-1/2" pipe reducer for the air hose connection is included, but customers must supply any other needed fittings and piping.

All Bay Tek games are 110V or 220V(optional) and draw 2-3 amps at startup. Outlets should be rated for 20 amps or higher.

IMPORTANT: Be sure that the electrical power outlets match the game requirements. See outlet labeling at rear bottom of game cabinet.

Unpacking, Assembly, and Installation

Hardware

The installation kit consists of:

(16) 1/4 - 20 x 1-1/2" Bolts and plain washers

 (16) 5/16" Lock washers
 (54) #10 x 5/8 Black wood screws

 (4) #10 - 24 x 1/2 Black self-tapping screws

 (2) #10 - 32 Nylon Locknuts

(1) Square bit (driver)
(4) A5BK7004 brackets (yellow)
(1) 3/8" to 1/2" Pipe Reducer

(1) Owner's Manual (6) #8 Black screws

(1) A5AC7002 Frosted Acrylic



Inspect hardware package to insure all needed material is there and identified.

1. Inspect the game for any damaged, loose or missing parts. If damage is found please contact the carrier first. Then contact Bay Tek at: service@baytekgames.com, or phone (920) 822-3951 to order replacement parts.

Assembly



CAUTION: Lifting Hazard. Lifting heavy objects can cause back, neck and other injuries. Be sure adequate lifting and moving devices are available when unloading, unpacking and moving this game.

The game is shipped with four primary cabinet assemblies, stools and metal ball screens. The cabinets are identified as the Target (rear) cabinet, Ramp (middle) cabinet, Shooting (front) cabinet and the Marquee.

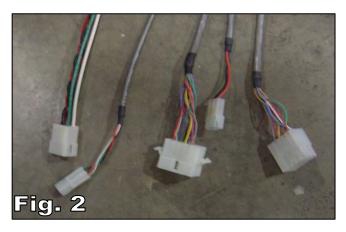
- 2. Place the rear cabinet near or at its final location.
- 3. Open the rear cabinet door, uncoil the power cord and feed the cord through the hole under the door opening. Do not plug the power cord into the wall outlet at this time.

- 4. Uncoil other wiring cables.
- 5. Place the middle cabinet in front of and close to the rear cabinet. Feed the white phone cable from the rear cabinet through the middle cabinet. Plug the middle cabinet power cable into the power strip located on the back wall of the rear cabinet. See Figure 1. Plug the lights and target cable connectors into the matching connectors from the middle cabinet.

NOTE: The cables in the middle cabinet are universal cables therefore the number and color of wires does not matter. Match connector size only. See Figure 2

6. Using the #8 black screws attach the ticket plate box to the middle cabinet.

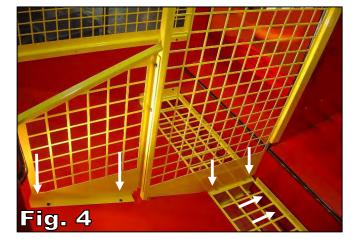




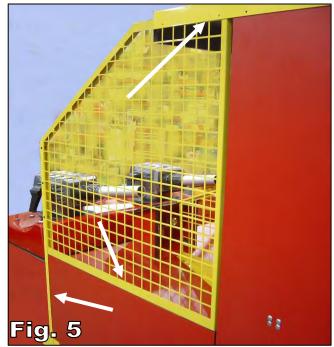
7. Push the middle and rear cabinets together. Be careful not to pinch any wiring. Secure with two yellow brackets and four 1/4-20 x 1-1/2" bolts and plain washers. See figure 3.



- 7. Installing the middle metal screens.
- a. Install the middle screen by placing it over the two threaded studs on the ball grate. Secure with two #10-32 nylon locknuts. See Figure 4.
- b. Attach the rear vertical frame of the middle screen to the cabinet with four black #10 x 5/8" wood screws.
- c. Attach the front of the screen to the sloped surface with two black $\#10 \times 5/8$ " wood screws.
- d. The grates in the bottom of the middle cabinet attach to the rear cabinet with six black #10 x 5/8" wood screws.



- 8. Installing the outside metal screens. See Figure 5. The outside screens are marked left and right. Place the screens on the middle cabinet frame and push tight up against the rear cabinet.
- a. Secure the vertical legs of the screens to the front of the middle cabinet with sixteen black #10 x 5/8" wood screws. Secure the screen to the horizontal edge of the cabinet with six black #10 x 5/8" wood screws through holes on the inside of the screen frame.
- b. Install the two yellow top rails which overlap the tops of the outside screens and the rear cabinet. Attach the front of the rails to the screens using four black #10-24 x 1/2" self-tapping metal screws. At the back of each rail, use a 1/4-20 x 1-1/2" bolt with a plain washer screwed into recessed nuts in the rear cabinet. Continue with six #10 x 5/8" wood screws in the remaining holes.





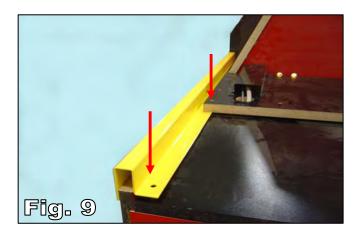
- 9. Installing the Marquee.
- a. Position the marquee on top of the yellow rails and pass the power cord and wire bundle through the hole and into the rear cabinet. Plug the power cord and speaker wire into connectors in the rear cabinet.



- b. Secure the marquee to the rear cabinet with four $1/4-20 \times 1-1/2$ " bolts and plain washers screwed into recessed nuts. See Figure 6.
- c. Secure the marquee to the middle screen with two #10 x 5/8" wood screws.



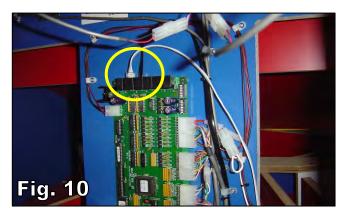
d. Attach the marquee to the yellow rails using four $\#10 \times 5/8$ " wood screws.



- 10. Install the shooting cabinet.
- a. Tip the cabinet to align and install the dowel pins in the stool bases with holes in the bottom of the cabinet.
- b. Position the front cabinet near the middle cabinet. Uncoil and pull the air hose through the middle cabinet and out the hole in the bottom of the rear cabinet.

NOTE: The cables in the middle cabinet are universal cables therefore the number and color of wires does not matter. Match connector size only.

c. Plug all cable connectors from the middle cabinet into plugs in the front cabinet. Plug the white phone cable into left cable socket on the main board.



- 11. Push the front and middle cabinets together. Be careful not to pinch any wiring.
- 12. Lock the front and middle cabinets together with two connecting plates. Secure each plate with two 1/4 20 x 1-1/2" bolts and plain washers.
- 13. At the rear of the cabinet, attach the air hose to the building's air supply or portable air compressor. Set the air pressure at the regulator for 70 PSI (4.83 bars). See Service Connections.
- 14. Fill the ticket tray in the front door panel. The 'Low' Ticket light will illuminate when there is approximately a 1/2" stack of tickets left in the ticket dispenser bin.



- 15. Plug in the power cord into the wall outlet and turn on the power strip at the bottom of the rear cabinet.
- 16. Place the 12 black balls, shipped with this game, in the return chute.

NOTE: The game is shipped with balls loaded in the lift tube. In the event new balls must be loaded, the easiest way is to drop them down the gun barrel. Sixteen (16) balls are needed in the lift tube.

- 17. Test the game. If something is not working properly, review the troubleshooting section first. If the problem cannot be resolved, contact the Bay Tek service department at: service@baytekgames.com, or phone (920) 822-3951.
- 18. Once everything is set and working properly, close and lock the front and rear door panels.
- 19. Clean all surfaces of the game with mild soap and water. Do not use solvents to clean the game decal surfaces. The game is now ready to play.

Sounds

An audio chip provides music and other sound effects as play progresses to enhance the visual effects of the game. A volume control is located on the inside of the front door panel.

Counters

Two counters are mounted on the inside of the front door panel. One counter tracks the number of games played and the other counter tracks the total number of tickets dispensed. The counters cannot be reset.

Rubber Balls

The black rubber balls are coated with Teflon® to increase the life of the ball. While very durable, the coating will eventually wear off and the rubber material will then begin to wear rapidly. As the balls wear down they will not provide a good seal in the firing tube and poor firing and miss-fires will occur. This can be corrected somewhat by increased air pressure to the fire cylinder but at some point it will be necessary to replace the balls due to wear.

NOTE: The game is shipped with balls loaded in the lift tube. In the event balls must be loaded, the easiest way is to drop them down the gun barrel. Sixteen (16) balls are needed in the lift tube.

Ball Removal



WARNING: The ball chute air cylinder can pinch, cut or sever fingers during ball removal.

Insure air pressure is OFF and system pressure is released before attempting to remove balls from the lift system.

Turn off the air supply shut off valve located in the front cabinet. Release the air system pressure by firing the gun once. Remove the spring from the pawl that supports the balls in the tube and pull the pawl back out of the way. Use a short stick to push the balls out into the chute where they can be removed.



Programming Section

Programmable Options

The number of coins required for each game credit, free play, number of balls per credit, tickets payout, etc., are programmable by dipswitches located on the main circuit board.

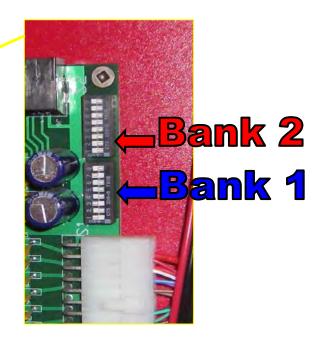
The main circuit board is located on the inside back wall of the cabinet. Be sure power is off before setting these switches.

Factory Default Settings

Factory Settings Bank 1							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8
ON	OFF	ON	OFF	OFF	OFF	ON	OFF
Factory Settings Bank 2							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Function	Factory Setting	Chart
Ticket Payout Select	Standard Payout	1
Standard Ticket Patterns	Pattern 6	2
Bonus Ticket Amount	25 Tickets	4
Coins Per play	1 Coin	5
Attract Mode	Enabled	6





IMPORTANT: Power must be OFF to the game when setting dipswitches. Turn OFF the power strip inside the cabinet. Set the dipswitches to the desired settings, wait 30 seconds and then turn ON power at the power strip.

Ticket Payout Select - Standard Ticket Patterns

Chart	BANK 2 DIP 6					
1	Ticket Payout Select	1				
	Allows you to choose between a standard table or a fixed table.	OPTIONS	Dip 6			
	FACTORY DEFAULT SETTING: STANDARD Note: In the Fixed Ticket Mode the player may	fixed	on			
	play the bonus round if it is achieved, but no bonus tickets will be won.	Standard	OFF			

Chart	BANK 1 DIP 1 - DIP 2 - DIP 3								
2		Standard Ticket Patterns							
			Standard Ticket Patterns					Dip 2	Dip 3
			Teeth	Tickets	Teeth	Tickets			
	16		0-1	1	4-5	3	off	off	off
	If you choose the		2-3	2	6	4			
	standard ticket payout,		Teeth	Tickets	Teeth	Tickets			
	you may now choose the	(72)	0-1	1	4-5	5	off	off	on
	ticket pattern you wish to		2-3	2	6	6			
	use.	770 T	Teeth	Tickets	Teeth	Tickets			
		[55]	0-1	2	4-5	6	off	on	off
	FACTORY DEFAULT		2-3	4	6	8			
	<u>SETTING: 6</u>		Teeth	Tickets	Teeth	Tickets			
			0-1	3	4-5	5	off	on	on
	If you choose a different		2-3	4	6	6			
	pattern you will need to		Teeth	Tickets	Teeth	Tickets			
	contact Bay Tek games	5	0-1	3	4-5	7	on	off	off
	for a replacement score		2-3	5	6	9			
	sheet.		Teeth	Tickets	Teeth	Tickets			
	3.1331.		0-1	4	4-5	8	ON	OFF	ON
			2-3	6	6	10			
			Teeth	Tickets	Teeth	Tickets			
			0-1	4	4-5	12	on	on	off
			2-3	8	6	16			

Ticket Payout Select - Custom Ticket Patterns (V1.07)

Chart	BANK 1 DIP 1 - DIP 2 - DIP 3								
2.5	Standard Ticket Patterns								
			Standard Ticket Patterns				Dip 1	Dip 2	Dip 3
			Teeth	Tickets	Teeth	Tickets			
	Marian ala anno de a		0-1	3	4-5	9	off	off	off
	If you choose the		2-3	6	6	12			
	standard ticket payout,		Teeth	Tickets	Teeth	Tickets			
	you may now choose the	172	0-1	3	4-5	15	off	off	on
	ticket pattern you wish to		2-3	6	6	16			
	use.		Teeth	Tickets	Teeth	Tickets	off	on	
		[55]	0-1	6	4-5	18			off
	FACTORY DEFAULT		2-3	12	6	24			
	SETTING: 6		Teeth	Tickets	Teeth	Tickets			
		45)	0-1	9	4-5	15	off	on	on
	If you choose a different		2-3	12	6	18			
	pattern you will need to		Teeth	Tickets	Teeth	Tickets			
	contact Bay Tek games	(G)	0-1	9	4-5	21	on	off	off
	for a replacement score		2-3	15	6	27			
	sheet.		Teeth	Tickets	Teeth	Tickets			
			0-1	12	4-5	24	ON	OFF	ON
			2-3	18	6	30			
			Teeth	Tickets	Teeth	Tickets			
			0-1	12	4-5	36	on	on	off
			2-3	24	6	48			

Fixed Ticket Payout - Bonus Ticket Amount Select - Credit per Game

Chart	BANK 1 DIP 1 - DIP 2 - DIP 3 Fixed Ticket Payout Select						
3							
	If you choose the fixed ticket	Fixed Tickets	Dip 1	Dip 2	Dip 3		
	payout you may now choose the pattern you wish to use.	1	off	off	off		
		2	off	off	on		
	A fixed payout will award the same	3	off	on	off		
	amount of tickets regardless of the	4	off	on	on		
	number of teeth knocked over.	5	on	off	off		
	Note: The player may play the bonus round if it is achieved, but no bonus tickets will be won.	6	on	off	on		
		7	on	on	off		
		8	on	on	on		

Chart	BANK 1 DIP 4 - DIP 5 - DIP 6									
4	Bonus Ticket Amount Select									
	You can set the number of bonus	Bonus Tickets	Dip 4	Dip 5	Dip 6					
	tickets won in the bonus round of the game.	25	OFF	OFF	OFF					
		50	off	off	on					
	FACTORY DEFAULT SETTING:	75	off	on	off					
	<u>25</u>	100	off	on	on					
	Note: In the Fixed Ticket Mode	150	on	off	off					
	the player may play the bonus	200	on	off	on					
	round if it is achieved, but no	250	on	on	off					
	bonus tickets will be won.	300	on	on	on					

Chart	BANK 2 DIP 1 - DIP 2 - DIP 3						
5	Credit	s per Play	1				
		Credits	Dip 1	Dip 2	Dip 3		
	Allows you to set the number of	1 COIN	OFF	OFF	OFF		
	coins/credits per game. You can also choose to use the free play which will allow game play	2 coins	off	off	on		
		3 coins	off	on	off		
	without inserting a credit.	4 coins	off	on	on		
		5 coins	on	off	off		
	FACTORY DEFAULT SETTING: 1 COIN	6 coins	on	off	on		
		Free Play	on	on	off		
		8 coins	on	on	on		

Attract Mode - Clear EEprom - Not Used

Chart	BANK 1 DIP 7		
6	ATTRACT MODE		
	When the game is not being played the attract mode will play selected tracks from the audio	OPTIONS	Dip 7
	software.	Enabled	ON
	FACTORY DEFAULT SETTING: ENABLED	disabled	OFF

Chart BANK 2			
7	Clear EEprom		
	Allows you to clear any unused credits and		Dip 7
	tickets owed. 1. Turn game OFF 2.Set dip to ON	enabled	on
	3. Turn game ON, wait 10 seconds 4. Turn game OFF 5. Turn dip OFF FACTORY DEFAULT SETTING: DISABLED	Disabled	OFF

Chart	BANK 1 DIP 8		
8	Not Used		
	This dip is not used and should remain in the	OPTIONS	Dip 8
	OFF position.	enabled	on
	FACTORY DEFAULT SETTING: DISABLED	Disabled	OFF

Chart	BANK 2 DIP 4 - DIP 5 -	DIP 8		
9	9 Not Used			
	These dips are not used and should remain in	OPTIONS	Dip 4,5,8	
	the OFF position.	enabled	on	
	FACTORY DEFAULT SETTING: DISABLED	Disabled	OFF	

PREVENTIVE MAINTENANCE SECTION

Maintenance Chart

Use the following maintenance chart as a guide only. Actual maintenance intervals will depend on usage and environmental conditions at the location of the game.

Keep a log of all inspections, even if no problem exists, with date and time of inspection, action taken. A sample Repair Record is located at the end of this manual.

IMPORTANT: Do not use cleaning solvents on game graphics. Use only a mild soap solution and dry with a clean lint free cloth.

IMPORTANT: Use glass cleaner and a soft clean cloth to clean all the acrylic and metal surfaces on the game. Use an anti-static cleaner polisher on the black ramp surface to protect it and keep it slippery. **IMPORTANT:** The game should be shut OFF for cleaning and maintenance.



CAUTION: Use of flammable substances can cause severe burns or personal injury.

Always use non-flammable solvents for cleaning parts and surfaces of this game. Do not use flammable substances such as gasoline, kerosene or thinners.

TASK	DAILY	WEEKLY	MONTHLY
Fill ticket tray.			
Empty coin box.			
Play the game to ensure it is working properly.	\		
Inspect air system to ensure pressure is set between 40-50 PSI	>		
Clean outside surfaces and stools. Balls leave black marks on surfaces.			
Inspect the game for physical damage. Repair as needed.			
Inspect game lighting, replace lamps as needed.			
Clean outside surfaces.			
Clean the ticket dispenser with compressed air. Clean the opto sensor using a cotton swab and isopropyl alcohol.			
Clean and vacuum ball track.			
Check to ensure correct number of balls are present.			
Check all hardware for tightness.			
Check balls for wear.			>
Non-filtered air pump: drain water from hoses.			
Clean gun barrels with compressed air.			

PROBLEM	PROBABLE CAUSE	REMEDY
No power to the game.	a. Unplugged. b. Blown fuse c. Outlet strip or building circuit breaker tripped. d. Bad power supply.	 a. Check wall outlet. b. Check transformer fuse (220v applications only). c. Check voltage at outlets. Try to determine cause then reset the circuit breaker. d. See power supply diagnostic. Replace if faulty. (A5PS1001)
No Audio	a. Volume too low.b. Loose wire.c. Defective Potentiometer.d. Main circuit board malfunction.	a. Increase the volume at the volume control at the inside of the front door panel. b. Check audio cable connections to speaker, volume control and main circuit board. c. Replace pot. (A5PO1K) d. Replace main board with board from another Gen 5 game if possible to isolate the problem to the main circuit board.
Orange low ticket light on.	a. Ticket tray empty.b. Faulty low ticket switch.c. Broken/loose wires.	a. Load tickets. Make sure ticket stack rests on top of wire actuator of switch.b. Replace switch. (AASW200)c. Check cable connections from switch to main circuit board.
Teeth will not reset. Game will only try to reset teeth once. Then it will error out and not try again until game powered down, then on.	a. In-line fuse blown.b. Motor faulty.c. Linkage problem.d. Power game off and then back on and see if it turn the 1st time.	a. Replace fuse located in the wiring near the main circuit board. b. Replace motor. (AAMO3901) c. Inspect the linkage between the reset arm and gear motor. Check connector cam setscrew, ensure it is tight. d. If it turns that 1st time – then refer to "teeth reset bar rotates multiple times" section.

PRO	BLEM	PROBABLE CAUSE	REMEDY
Teeth reset bar rotates up multiple times.		a. Motor home sensor dirty or faulty. b. White cam is dirty or too far away from sensor. c. Faulty/broken wires. d. Faulty main board.	a. Clean sensor, replace if necessary. (AABD5010) b. Clean cam. Measure 5 Volts DC when cam is away from sensor, and it drops to 0 Volts when cam is covering sensor. c. Check cable connections from sensor to main circuit board. d. Replace main board with board from another Gen 5 game if possible to isolate the problem to the main circuit board
Game does not score.		a. Teeth opto's dirty, misaligned, or faulty. b. Faulty/broken wires.	a. Clean, align, or replace opto boards. (AASE3900) b. Check cable connections from sensors to main circuit board. Look at where there are 2 wires crimped to one terminal. Ensure both wires are making connection with the terminal.
Game does not coin up.	Coin switch problem	a. Coin switch faulty.b. Bad connection or broken coin switch wire.c. Faulty main board. a. Reset motor problem.	a. Check that coin actually triggers switch. Replace switch if necessary. (A5SW4000) b. Check connections from coin switch to main circuit board. c. Replace main board with board from another Gen 5 game if possible to isolate the problem to the main circuit board. a. Refer to "Teeth do not reset" section.
	Teeth sensor or motor problem.	b. Teeth sensor problem.c. Motor home position sensor dirty or faulty.	b. Refer to "Game does not score" section c. Clean opto sensor and white cam that the sensor looks at. Replace sensor if necessary. (AABD5010)

PROBLEM	PROBABLE CAUSE	REMEDY
		a. Check air line, air compressor. Ensure gauge on air line input is working.
		b. Adjust compressor to output 90 PSI. Adjust game air pressure to 50 – 55 PSI.
No air blast out of cannon.	a. No air pressure.b. Incorrect air pressure.c. Trigger not working.d. Boom valve faulty.e. Bad connection or broken wire.f. Faulty main board.	c. Check trigger button, wires to main board. Replace switch (A5PB7100) by removing barrel from gun, reach inside and remove right handle. Switch is then accessible. d. Check for 12 Volt DC pulse at boom valve. Replace boom valve (A5VA7100) if pulse is present. Check wire continuity back to main board if no pulse.
		e. Check connections from boom valve and trigger to main circuit board.
		f. Replace main board with board from another Gen 5 game if possible to isolate the problem to the main circuit board.
		a. Check and reset dipswitches for proper setting.
	a. Ticket Pattern or other ticket dipswitches set wrong.	b. Clean with compressed air or wipe with isopropyl alcohol on a cotton swab.
Wrong number of tickets dispensed.	b. Dirty opto-sensor on ticket dispenser. c. Many tickets in memory. If ticket meter is counting the tickets coming out, then reset tickets owed.	c. Loop tickets and let dispenser run. Or remove memory chip from main board. Position U3. Leave chip out of board and turn power on game. The game can run fine with this chip removed.
	d. Faulty ticket dispenser. e. Main circuit board malfunction.	d. Replace with spare working dispenser. e. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.

TROUBLESHOOTING GOIDE AND DIAGNOSTIC SECTION				
PROBLEM	PROBABLE CAUSE	REMEDY		
		a. Check both sides of game. Ensure both sides have at least 25 balls.		
	a. Not enough balls in flex tube.	b. Check for debris in ball return chute. Ensure lifter is operating correctly.		
	b. Balls stuck in return chute or flex tube.	c. Look down barrel of gun. The ball to be fired next should be directly in front of nozzle. This		
	c. Ball height in flex tube not adjusted correctly.	position can be adjusted by bending flex tube. If ball is too high – bend flex tube. If ball is		
Balls misfire or shoot 2 at a time.	d. Ball gate (cup lifter) broken.	too low – straighten flex tube.		
	e. Pawl spring is not holding the ball above lit cylinder.	d. Ensure cupped ball gate has 2 rods coming down. One attached to lift cylinder, one as a guide. If		
	f. Balls worn. Does not have a tight seal in cannon.	one is broken, replace gate. (A5GA7100)		
		e. Replace pawl and spring. (A5PA7100 and A5SP7100)		
		f. Old balls do not shoot properly. Replace balls. (AABALL-ALL)		
		a. Turn off air. Remove air hoses to ball lift cylinder. If water drains out, an air dryer/filter must be added to air system.		
		b. Replace pawl (A5PA7100) and/or spring.(A5SP7100)		
	a. Water and/or Oil in the air line.	c. Replace ball lift cylinder. (A5BL7101)		
Dall lift andicadar is not lifting one all the	b. Pawl / Spring combination jamming balls.	d. To increase lift up speed – Follow the air line from the		
Ball lift cylinder is not lifting up all the way.	c. Defective ball lift cylinder.	bottom of the lift cylinder to the blue Mac valve. Loosen the lock		
	d. Mac Valve improperly set.	nut on the screw that corresponds to this air line.		
	e. Defective Mac Valve.	Increase air flow by turning screw clockwise. Adjust slightly, firing the cannon 3 times before further		
		adjustments. Once set correctly, re-tighten lock nut.		
		e. Replace Mac Valve. (A5VA7103)		

PROBLEM	PROBABLE CAUSE	REMEDY
Ball lift cylinder is not dropping down all the way.	a. Water and/or Oil in the air line.b. Ball gate (cup lifter) broken.c. Defective ball lift cylinder.d. Mac Valve improperly set.e. Defective Mac Valve.	a. Turn off air. Remove air hoses to ball lift cylinder. If water drains out, an air dryer/filter must be added to air system. b. Replace ball gate. (A5GA7100) c. Replace ball lift cylinder. (A5BL7101) d. To increase down speed – Follow the air line from the top of the lift cylinder to the blue Mac valve. Loosen the lock nut on the screw that corresponds to this air line. Increase air flow by turning screw clockwise. Adjust slightly, firing the cannon 3 times before further adjustments. Once set correctly, re-tighten lock nut. e. Replace Mac Valve(A5VA7103)
Tickets do not dispense.	a. Ticket tray empty due to faulty low ticket sensor switch or broken/loose wires. Sensor switch stuck or switch wire bent out of position. b. Faulty cable to dispenser. c. Dirty opto-sensor or paper dust buildup in ticket dispenser. d. Notch on tickets too shallow. e. Ticket dispenser faulty. f. Main circuit board malfunction.	a. Fill ticket tray. Replace low ticket sensor switch. Repair wiring. Clean ticket tray of dirt and loose tickets or debris. Bend switch wire to correct position under tickets. b. Check wiring continuity from dispenser to main board. Check for pinched, broken or disconnected wires. Replace as necessary. c. Clean with compressed air and if necessary wipe sensor with isopropyl alcohol on a cotton swab. d. Flip tickets and load upsidedown to have large cut notch toward opto sensor. e. Replace dispenser with spare working dispenser. f. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.

Power Supply Troubleshooting

Use the following procedure to check the power supply for Gen 5 games. Check the small green LED light on the power supply circuit board. If the light is out there is a short somewhere. If the light dims, there is an overload in one of the circuits such as a bad motor. Turn power OFF. Disconnect all 12 volt output wires only. Turn power ON. Green LED Light Green LED Light comes ON. remains OFF. Replace Power Supply. Turn power OFF. Unplug all outputs from the Gen 5 Circuit Board. Reconnect the 12 volt output wires to the Power Supply. Turn power ON. Green LED Light Green LED Light Short in Main Board comes ON. remains OFF. - Replace. That cable or related Green LED Light Turn power OFF. component is shorted out. remains OFF. Reconnect the outputs See Jumper Cable Pin-Outs at the Main Circuit to see which component Board one at a time. might be at fault. Wait 3 minutes Green LED Light between tests to turn dims. power ON. A related component such as a solenoid is causing an overload. See Jumper Cable Pin-Outs That cable is OK. Green LED Light to see which component comes ON. might be at fault.

Service and Repair Section



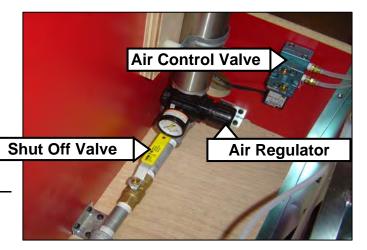
CAUTION: Static electricity could harm circuit boards and processor chips. Always ground yourself by cable or by touching metal surfaces prior to removing or servicing electronic equipment in this game. Avoid working on carpeted surfaces.



CAUTION: Electrical Shock Hazard. Do not perform maintenance or repair of this equipment with power ON. Unplug the unit from the wall outlet or shut off power at the power strip inside the cabinet.

Lift Cylinder Control Valve Replacement

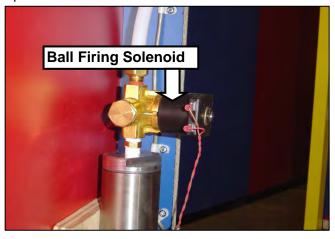
The directional control valve and solenoid are replaced together.



Firing Solenoid Replacement

Shut off power to the game at the power strip located in the rear 'target' cabinet.

- 1. Remove the two wire clips from the solenoid.
- 2. Remove the hex nut holding the solenoid to the quick release valve.



3. Install the new solenoid and re-attach the wires. It doesn't matter which wire is attached to which terminal.

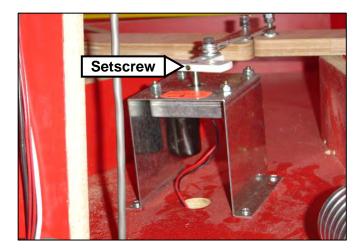
Turn on the power and test the unit.

- 1. Shut OFF air pressure at the air shut-off valve or the air regulator. Release system pressure by firing the guns.
- 2. Disconnect the three air lines in to and out of the control valve.
- 3. Disconnect the wiring connector from the solenoid. Remove the mounting screws and remove from the game.
- 4. Install the new plug, re-attached the wire connector from the solenoid and re-attached the air lines.
- 5. Return power and air pressure to the game and test by firing the gun several times to insure that the balls are being loaded properly into the lift tube.

Service and Repair Section

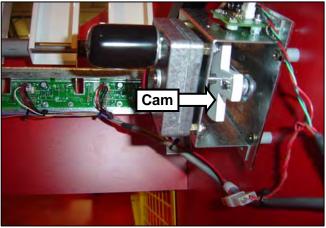
Ball Sorter Gear Motor

The ball sorter gear motor assembly, in the middle cabinet, oscillates the paddles for the ball return chutes to keep the balls from becoming jammed in the chutes. Replace as follows.



- 1. Remove the four bolts and washers from the two connector plates holding the front and middle cabinets together. Slide the front cabinet away from the middle cabinet slightly to gain access to the gear motor assembly.
- 2. Pull the two wires up out of the hole in the frame to expose the connector. Unplug the connector.
- 3. Remove the setscrew holding the connector cam assembly to the gearbox shaft and pull the cam off the shaft.
- 4. Remove the four locknuts that secure the gear motor assembly to the frame.
- 5. Install the new gear motor assembly with the four locknuts. The hole in the connector cam is flat on one side so the gearbox shaft may have to be rotated slightly to allow the cam to be installed. Secure with the setscrew.
- 6. Reconnect the wire connector.
- 7. Slide the two cabinets together, being careful not to pinch any wiring, and secure with the two connector plates.

Teeth Reset Gear Motor Replacement

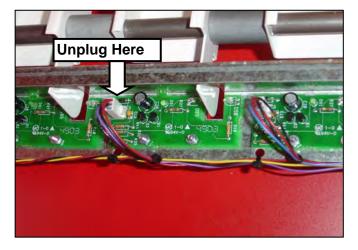


- 1. Open the access door in the rear cabinet and unplug the gear motor wiring at the connector.
- 2. Pull the tooth reset arm downward to manually rotate the connector cam to gain access to the setscrew. Loosen the setscrew and remove the cam from the shaft.
- 3. Remove the four locknuts mounting the motor/gearbox assembly in the mounting frame. Remove the gear motor assembly from the game.
- 4. Install the new gear motor and secure with the four locknuts.
- 5. Install the connector cam assembly onto the motor shaft and secure with the setscrew. The hole in the connector cam is flat on one side so the gearbox shaft may have to be rotated slightly to allow the cam to be installed. Secure with the setscrew.
- 6. Reconnect the wire connector.

Service and Repair Section - Circuit Boards

Target Score Sensors

The score sensors are mounted to a small circuit board and consist of an emitter and a detector on opposite sides of the target flag. To replace the sensor board.



- 1. Open the access door of the rear cabinet and unplug the sensor wiring at the connectors on the sensor circuit board.
- 2. Unbolt the sensor boards.
- 3. Replace the sensor boards and reconnect the wire cables.
- 4. Test the sensors by moving the tooth so the tooth flag no longer blocks the sensors and scores a hit.

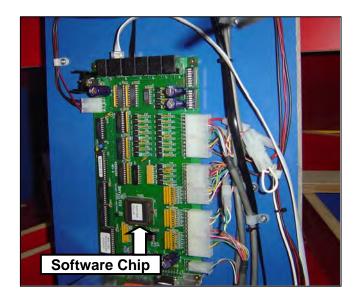
Main Circuit Board

Replacing the main Gen 5 circuit board.

- 1. Carefully unplug all wiring connectors.
- 2. Remove the four Phillips head screws at the four corners of the board and remove the board from the mounting panel.
- 3. Before installing the new board, check to be sure that the dipswitches are set in the same position as the old board.

NOTE: If swapping the circuit board with a spare Gen 5 board for testing purposes, be sure to also swap out the software chip. Use extreme care to prevent static electricity and to prevent bending socket pins.

- 4. Install the board and reconnect the wiring connectors and the white display cable.
- 5. Re-test the game.

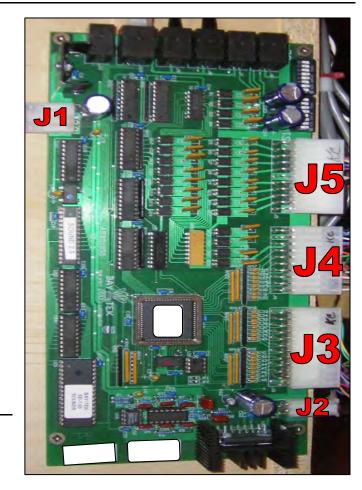


Electrical Drawing Section

Important

Power must be OFF to the game before removing any cable from the main board. Turn OFF the power strip inside the game.





12. Volt Jumper Cable (J1)

BLK 12V Input	RED 12V Ground	BLK 12V Ground	RED 12v Input

Volume Cable (J2) Connector

RED		GRN
Left Audio	R	ight Audio
Output	1	Output
BLK	T	WHT
	Ri	WHT ight Audio

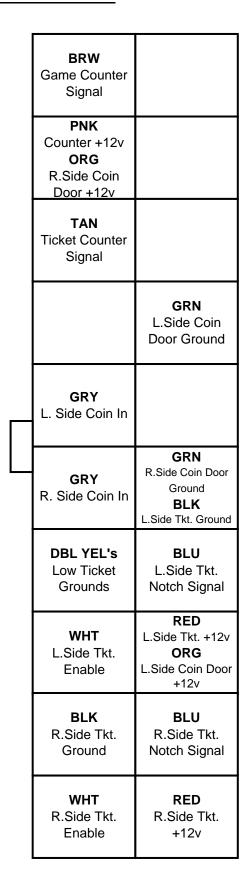
(J3) Connector			
WHT L. Side Trigger Ground	GRN R. Side Trigger Ground		
RED L. Side Trigger Input	BLK R. Side Trigger Input		
WHT R. Side Low Ticket Signal	GRN L. Side Low Ticket Signal		
TAN Unused	ORG Unused		
GRY Unused	PNK Unused		
RED Tooth #1 Input	WHT Tooth #2 Input		
BLU Tooth #3 Input	BRW Tooth #4 Input		
GRN Tooth #5 Input	BLK Tooth #6 Input		
YEL R. Side Tooth Reset Motor Sensor Input	PUR L. Side Tooth Reset Motor Sensor Input		



0							
						RED de Rack	
	RED R.Side Rack				BRW L.Side Motor		
	BRW R.Side Motor		BLK R.Side Low Tkt.		BLK L.Side Low Tkt.		
	L						
			1 00				
		DBL OF Tooth		DBL W Tooth		DBL (
	DBL YE			DBL P Tooth	_	DBL I	_
				GRN L.Side Reset Motor Sensor		GRN R.Side Tooth Sensor	

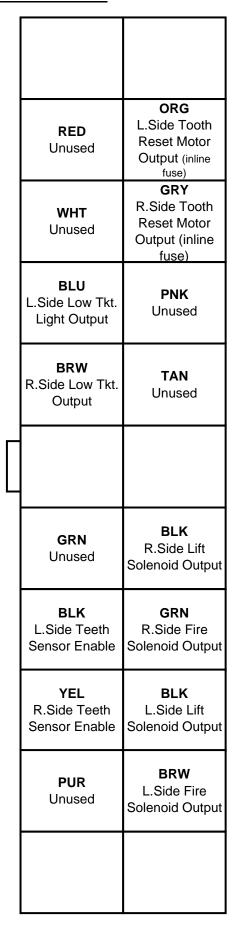
The cables and connectors used in the ramp "middle" section are universal therefore the number and color of wires does not matter. Match size of connector only. Below is a diagram showing the Inputs to that cable from the target cabinet.

Jumper Cable (J4) Connector



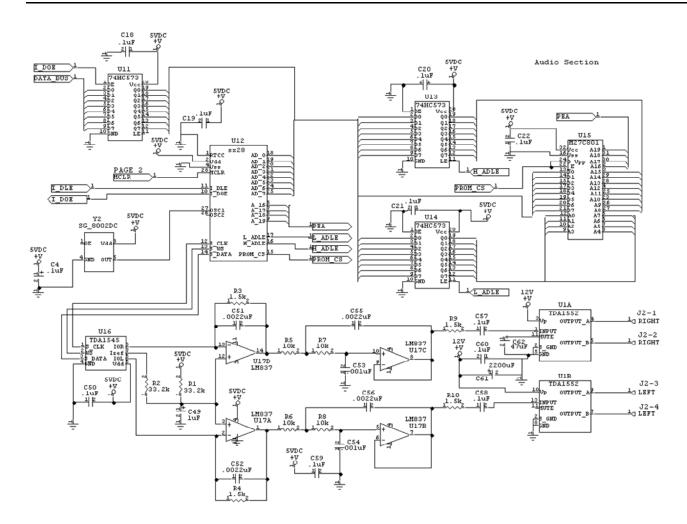


Jumper Cable (J5) Connector

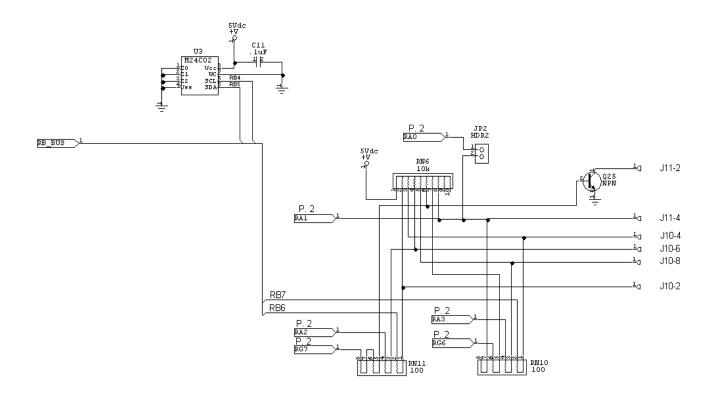




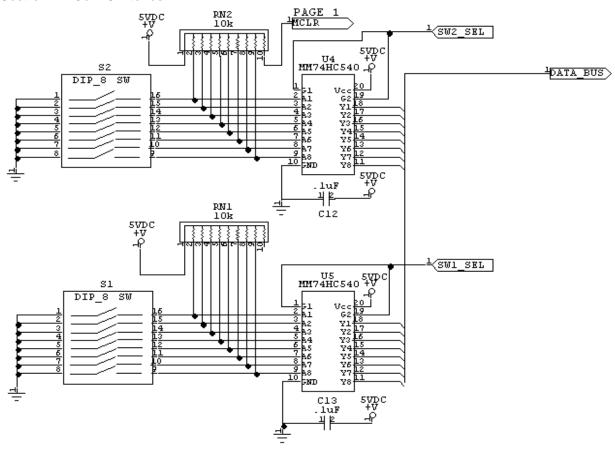
Gen 5 Main Board Schematics



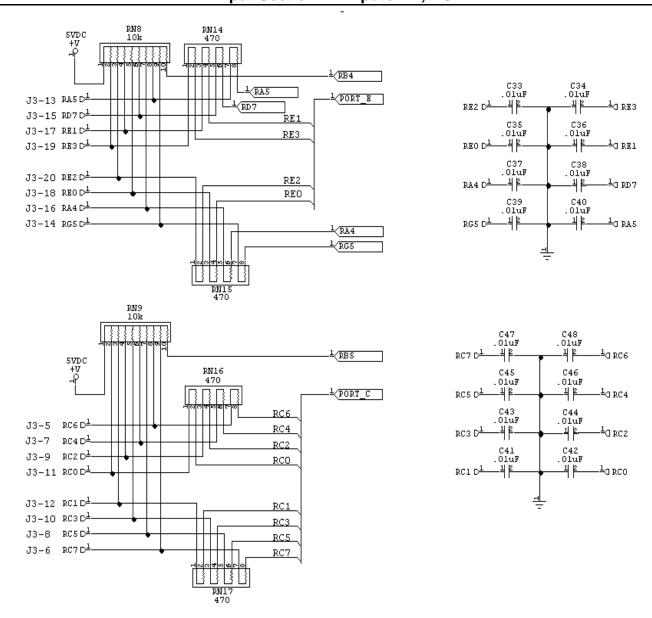
Communications - Serial EEprom



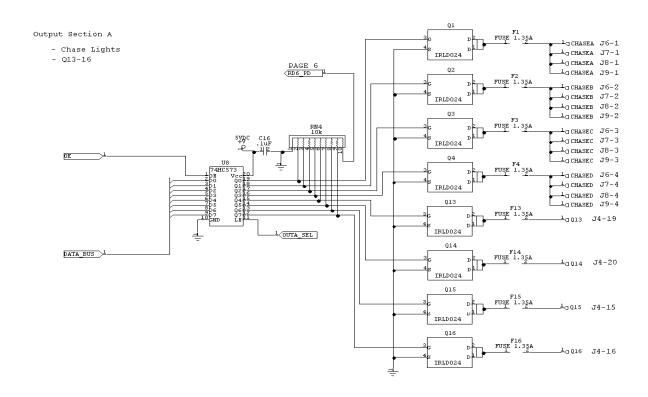
Input Section A - Con. Switches



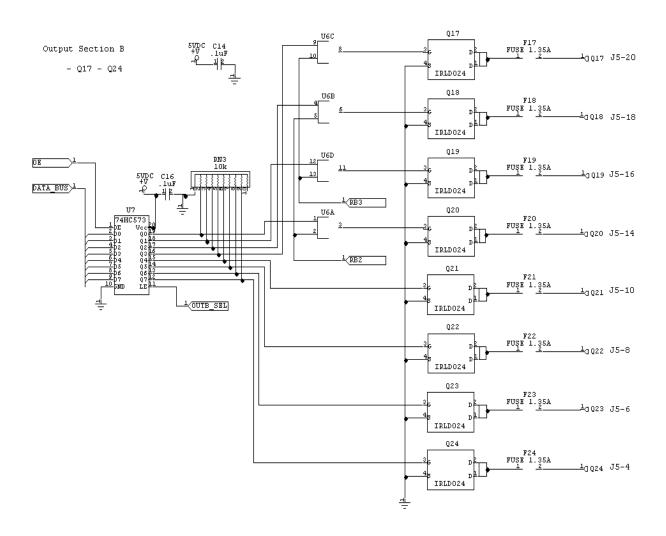
Input Section B - Inputs RE, RC



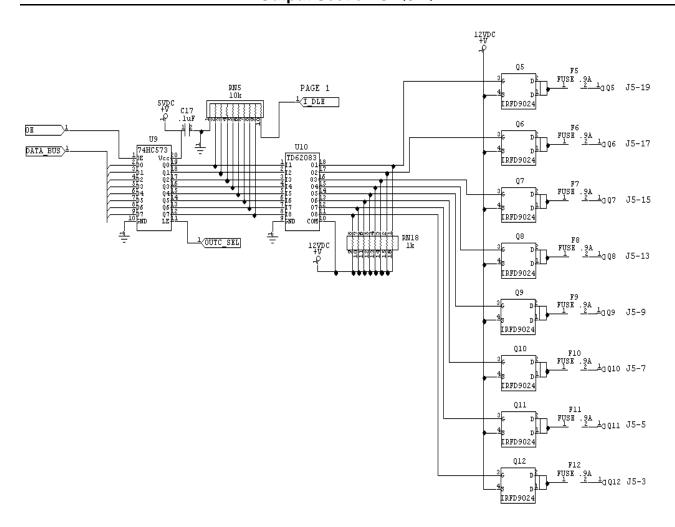
Output Section - Chase lights Q13-Q16



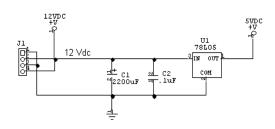
Output Section B Q17-Q24

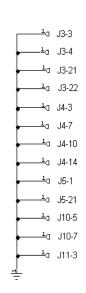


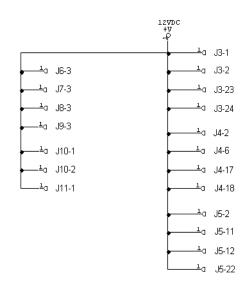
Output Section C Q5-Q12



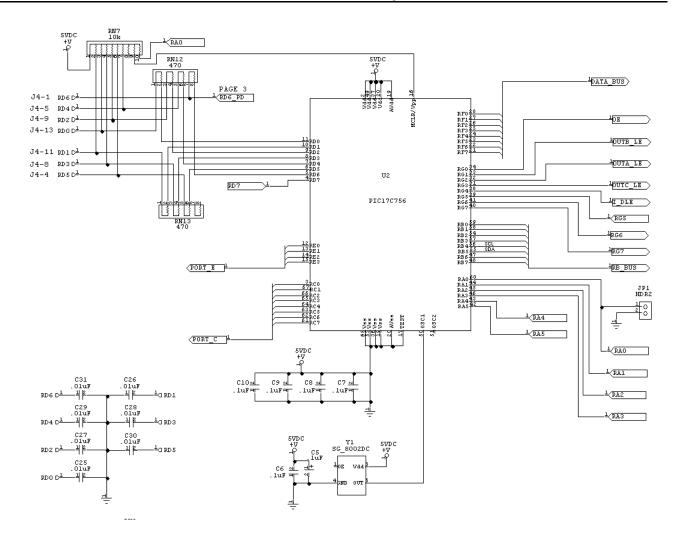
Power Section







Processor Section - Input RD



Technical Support- Know Your Options!

Excellent Customer Service is very important to Bay Tek! We know that keeping your games in great operating condition is important to your business. When you need us, we are here to help. You can call us for free technical assistance, and you can count on us to have parts on-hand to support your game. When you do need us, it's important that you know what to expect. We offer options that fit your needs.



Call us M-F 8am-5pm CST at (920) 822-3951 ext 1102



Fax us at (920) 822-1496

Electronics / Circuit Boards:

- Repair & Return If you have Circuit Board issues with your Bay Tek game, you can send the board to us and we'll repair it right away. Most items sent to us are repaired and returned to you within one day. This option is your best value as we offer this fast turn-around service at the most reasonable price.
- Advance Replacement If you have Circuit Board issues with your Bay Tek game, but you don't have time to send in your board for repair, give us a call and ask for an Advance Replacement. We'll send you out a replacement board that same day. This is your best option when you need to get your game up and running as quickly as possible! When you get your new board, just repackage the defective board in the same box and send it back to us. We make it easy by including a UPS Return-Shipping label for you to put on the box.
- Spare Parts Take matters into your own hands and purchase new spare Circuit Boards for your Bay Tek games. Many of our games share the same main-board electronics. This means you can buy one set of spare electronics to support many of your Bay Tek games. Spare boards allow you to get your game up and running the quickest and provide you a valuable troubleshooting option. Call our technicians to get recommendations for what you should keep on hand for spare parts!



Email us 24 hours a day at service@bay-tek.com

Also order parts online at www.bay-tek.com



Send parts to 1077 E Glenbrook Dr Pulaski, WI 54162

Technical Support:

"You" are the best tool for troubleshooting! Your abilities to understand the game and your skills to repair the game are invaluable to us! If you need help, give us a call. It's not easy to diagnose a game remotely by phone, but our technicians do a great job. They'll need your help to perform some troubleshooting steps and convey to them exactly what's happening with your game. Be sure to have your game Serial Number when you call in.

Returns & Credits:

Sometimes the issue isn't what it seemed to be. If you chose the Advance Replacement option and now need to return that circuit board, just give us a call to get Return Authorization. You will be credited for the cost of the board and charged only the bench fee for our processing and retesting that board. If you choose the Repair and Return option, we'll test your board before we begin. If no problems are found, you will only be charged the bench fee.

Note: Bench fees apply regardless of whether the repair was your choice or a recommendation from a Bay Tek technician. It's a small price to pay for trouble-shooting the issues with your game.

You can count on our Technical Team for service and support! BAY TEK

Warranty Information

Bay Tek Games Inc. warrants to the original purchaser that the game will be free of defects in workmanship and materials for a period of (6) months from the date of installation.

Bay Tek Games Inc. will, without charge, repair or replace at it's option defective product or component parts upon notification to the factory service department.

Warranty replacement part(s) will be shipped immediately via ground service, along with a Return Material Authorized (RMA) number for the return of defective part(s). Defective parts must be shipped back to Bay Tek Games unless otherwise instructed.

This warranty does not apply in the event of any misuse or abuse of the product, or as the result of any unauthorized repairs or alterations.

The warranty <u>does not</u> apply if the serial number decal is altered, defaced, or removed from its original position.

Should your game need servicing, determine the serial number from the decal on the back of the cabinet or the logic unit, and call **920.822.3951** or email to:

SERVICE@BAYTEKGAMES.COM

Repair of NON-Warranty Units

Should your game need servicing, determine the serial number from the decal on the back of the cabinet or the logic unit, and call **920.822.3951** or email to:

SERVICE@BAYTEKGAMES.COM

An estimate of the repair charges will be quoted to you for approval.

You can proceed in one of two ways:

1. Request the immediate shipment of advanced replacement part(s).

You will receive the part(s) with an RMA for the return of the faulty part(s). You must return the faulty parts in **14 days** to avoid additional charges.

2. Send in the defective part(s) for repair or replacement.

Please include the following information:

Name Address

Phone Number

Serial Number

Purchase Order Number

or Signed Authorization to perform

service

Repair and returned parts will be shipped back using the same mode of transportation in which they were received. Repairs are warranted (30) days from the date installed into service.

Repair Record

Make copies of this page for the future

Game	Serial Number

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Repair Record

Make copies of this page for the future

Game Serial Number

Replacement Parts - Horse Play

Always use genuine Bay Tek replacement parts. For 24 hour pricing and ordering visit our web site at www.baytekgames.com.

	WWW.baytekgames.com.
Description	Part #
FRONT CABINET ASSY	
	A5BA7103
	A5BL7101
	A5VA7103
	A5BO7100
· · · · · · · · · · · · · · · · · · ·	A5CO7005
	A5BU7100
	A5GR7100
	AASW7100
	A5CB2050
	A5TD1
	AAEP-HP
	AAMC-HP
	AAMB5A
	A5ST-RED
STOOL BASE/PEDESTAL	A5SB3502
RED STOOL SEAT	A5ST-RED
DECALS	
FACEPLATE MARQUEE, HORSEPLAY	A5FP7900
SIDE DECAL, 2 PER FRONT SIDE	A5DC7901
·	A5DC7902
	A5DC7903
	A5DC7904
,	
BUFFER ASSY	
PRESSURE GAUGE	A5PG7100
	A5RE7100
	A5RE7101
The state of the s	A5VA7100
300 17.1212	
MIDDLE CABINET ASSEMBLY	
	A5GR7001
	A5LA9050
	A5PA7001
	A5FA7001
	ASFA7003
INSTRUCTION PANEL FACEPLATE	A5FP79U3
TARGET CABINET ASSY	
	A5FP7901
· · · · · · · · · · · · · · · · · · ·	
	A5BA7901
	A5TO7900
	AASE3900
IEETH RESET MOTOR	AAMO3901