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# TABLE OF CONTENTS

FACTORY CONTACT INFORMATION .....	2
WELCOME TO: Full Tilt. ....	4
QUICK SET UP .....	5-7
MARQUEE HEIGHT ADJUST.....	8
HOW TO PLAY .....	9
HOW TO: REMOVE FRONT WINDOW .....	10
SPECIFICATIONS.....	11
SOFTWARE VERSION.....	11
SAFETY PRECAUTIONS .....	11
DIP SWITCH SETTINGS .....	12
MAIN MENU FUNCTIONS .....	13
GAME SETTINGS ADJUSTMENTS .....	14-20
WIRING DIAGRAMS.....	21-25
TROUBLESHOOTING GUIDE .....	26-31
POWER SUPPLY DIAGNOSTICS .....	32
HOW TO: ACCESS & REPLACE DISPLAYS .....	32
HOW TO: REPLACE TARGET SENSORS.....	33
BILL ACCEPTOR DIAGNOSTICS.....	34
PARTS LIST .....	35
DECAL PLACEMENT & ID .....	36
MAINTENANCE LOG .....	37
TECHNICAL SUPPORT .....	38
WARRANTY .....	39

# WELCOME TO: Full Tilt

## Congratulations on your Full Tilt purchase!

Gear up your game room with Full Tilt! With its quick, action-packed game play and attractive cabinet, Full Tilt will have players lining up to play again and again to win big tickets!

Please take a moment to read through this manual and be sure to contact our factory if you have any questions, or would like some more information.

Thank you for your purchase! Your business is important to us and we hope you enjoy this game as much as we do!

*Your Friends at Bay Tek Games*



## GAME INSPECTION

Inspect the game for any damaged, loose, or missing parts.

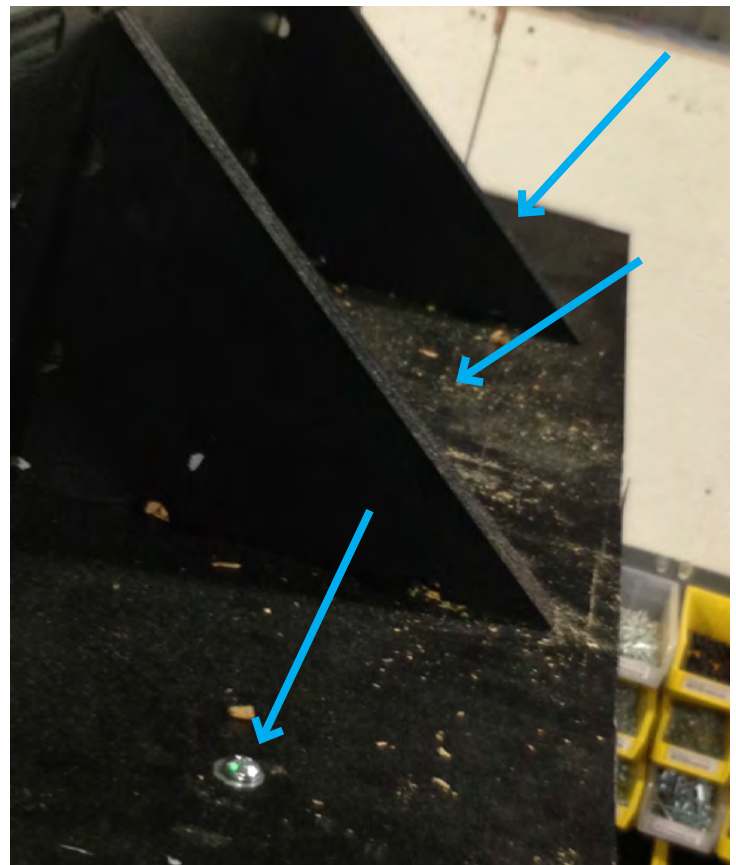
If damage is found, please contact your freight carrier first.

Then, contact Bay Tek Games' Service Department at 920.822.3951 or e-mail them at [service@baytekgames.com](mailto:service@baytekgames.com) for further assistance.

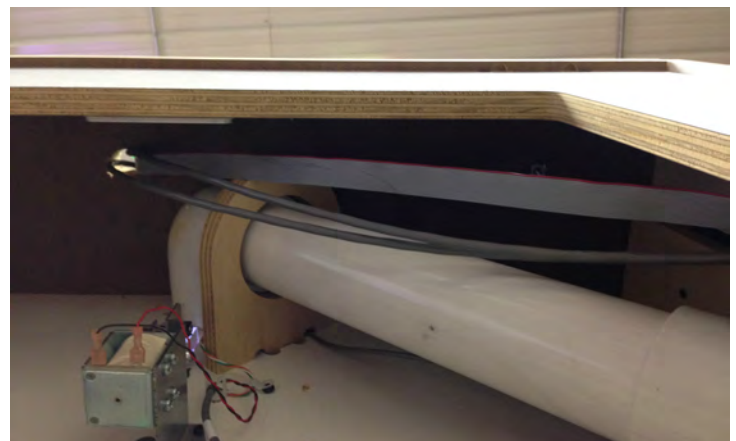
## QUICK SET UP

Place the game near its final location.

Set the marquee on top of the cabinet (using teamwork and a ladder) and secure it with included bolts (3 bolts total- hardware packet is in the cashbox).

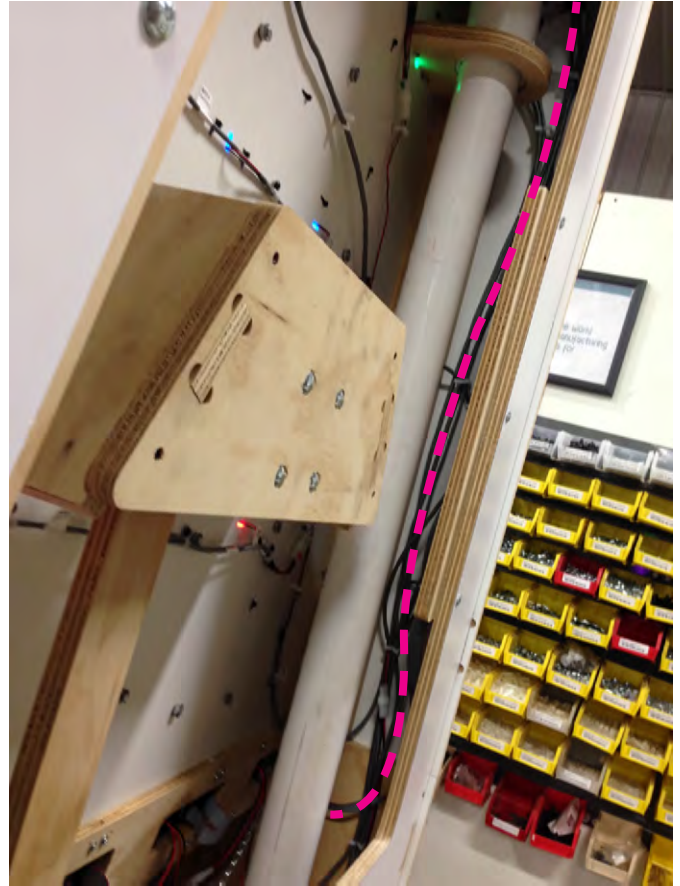


Insert the marquee cables (2 round grey, 1 grey ribbon) into the hole in the top of the cabinet.



## QUICK SET UP

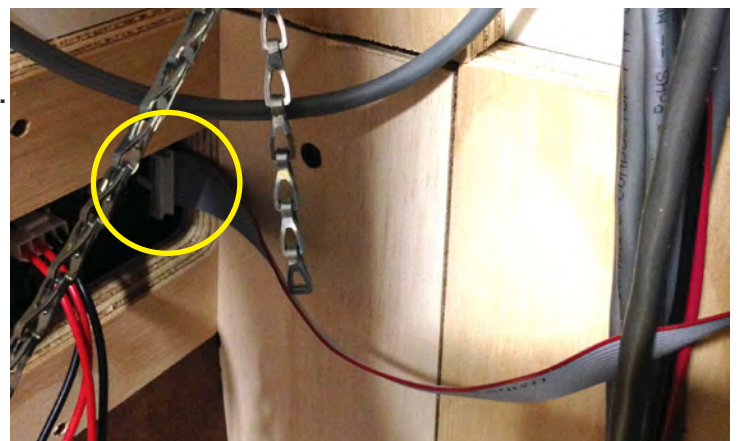
Run the marquee cables down the right side of the cabinet, clipping into the wire saddles behind the ball feed tube.



Plug the 3-pin housing into the cable shown.

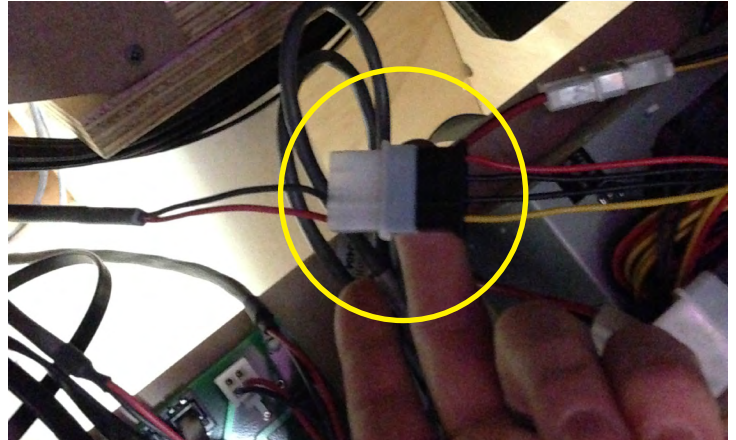


Plug the ribbon cable into the board shown.



## QUICK SET UP

Feed the final cable through to the front of the game and plug it in to the power supply cable as shown.



Close and lock the cabinet doors.

Using the power cable from the cashbox, plug the game into a standard electrical outlet and switch the power strip to the ON position.

# MARQUEE HEIGHT ADJUST

Full Tilt's marquee is adjustable to accommodate several ceiling heights. The Full Marquee gives the game a height of **109.5" (9' 1.5")**



**For 101.5" (8'5.5") Height:** Remove tallest gear by taking out the screws shown.



**For 94.75" (7'10.75") Height:** Remove smaller yellow gears as shown.



**For 89" (7'5") Height:** Omit marquee.

# HOW TO PLAY

Turn the wheel to direct the ball.



Navigate through the path of gears and obstacles.



Drop the ball into any target at the bottom...



WIN TICKETS!





# HOW TO: REMOVE FRONT WINDOW

Unlock all 4 locks in the corners of the window.  
Tip the window towards you from the top, then lift it out and set it aside.



# GAME SPECIFICATIONS

WEIGHT	
NET WEIGHT	450 LBS.
SHIP WEIGHT	500 LBS.
DIMENSIONS	
WIDTH	50"
DEPTH	33"
HEIGHT	109.5" MAX
OPERATING TEMPERATURE	
FAHRENHEIT	80-100
CELSIUS	26.7-37.8

POWER REQUIREMENTS			
INPUT VOLTAGE RANGE	100 to 120 VAC	/	220 to 240 VAC
INPUT FREQUENCY RANGE	50 HZ	/	60 HZ

MAX START UP CURRENT	OPERATING CURRENT
3 AMPS @ 115 VAC	2.7 AMPS @ 115 VAC
1.5 AMPS @ 230 VAC	1.35 AMPS @ 230 VAC

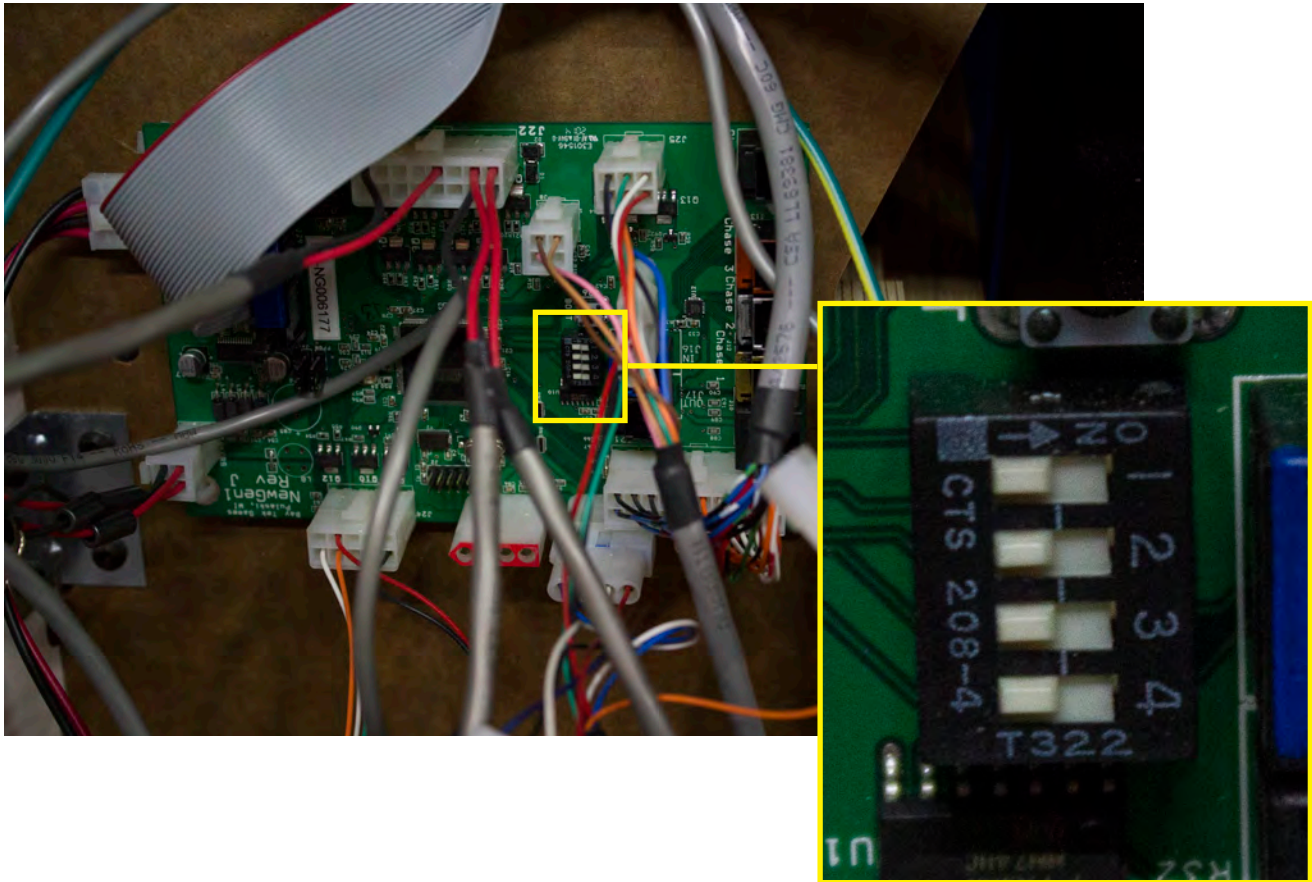
# SAFETY PRECAUTIONS

<b>NOTICE</b>	
Modifications to the mechanical, electrical and structural components of this game may void its compliance certifications.	
This appliance is suitable for INDOOR DRY locations only.	
<b>DANGER</b>	
DO NOT perform repairs or maintenance on this game with the power ON. Unplug the unit from the wall outlet or shut off the power strip located inside the cabinet.	
<b>WARNING</b>	
Use of flammable substances can cause sever burns or serious injury. Always use NON-FLAMMABLE solvents for cleaning. DO NOT use gasoline kerosene or thinners.	
<b>CAUTION</b>	
Lifting heavy objects can cause back, neck or other injuries. Be sure adequate lifting and moving devices are available when unloading, unpacking and moving this game.	
<b>ATTENTION</b>	
Be sure the electrical power matches the game requirements. See the serial number located on the back of the game cabinet. Always plug into a grounded circuit. If the supply cord is damaged, it must be replaced by an approved cord or assembly provided by the manufacturer. <b>A shielded power cable must be used for the game to retain EU/EMC compliance.</b>	
<b>IN CASE OF EMERGENCY</b>	
UNPLUG THE POWER CORD. The power cord must be accessible at all times in case of an emergency.	

# DIP SWITCH SETTINGS

The dip switch bank is located on the mainboard, inside the lower back door of the game.

\*factory default settings are highlighted below



SWITCH	DESCRIPTION	OFF	ON
1	32x16 Displays Configuration	standard configuration	+signal driver & resistor board
2	Stored Credits/Tickets Owed *New Jersey Settings		*
3	Marquee Display Invert**		
4	Scoring Display Invert**		

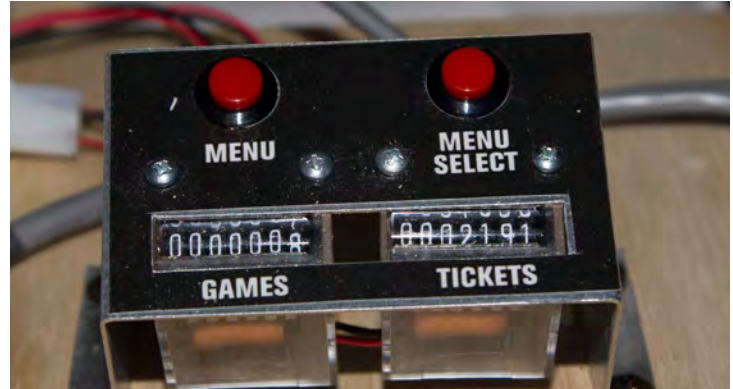
\*\*If either the Marquee or Score display is lighting up magenta, switch dip 3 or 4 to the ON position.

# MAIN MENU FUNCTIONS

Press and hold the MENU button to enter the game menu.

Scroll through each sub-menu with the MENU SELECT button.

Press MENU to move to the next sub-menu.



MENU	DESCRIPTION
N1	CREDITS PER PLAY
N2	GAME VOLUME
N3	ATTRACT VOLUME
N4	ATTRACT TIMING
N5	TICKET PATTERNS
N6	MERCY TICKETS
N7	1/2 TICKET
N8	FIXED TICKET PAYOUT
N9	STORED TICKETS/ CREDITS
N10	GAME TIMEOUT
N11	BONUS VALUE
N12	PROGRESSIVE
N13	PROGRESSIVE ADD
N14	PROGRESSIVE MAX
N15	DISPLAY
N16	DEMO MODE
N17	STATS
N18	STATS CLEAR
N19	SWITCH TEST
N20	BLOWER TEST
N21	SOLENOID DIAGNOSTIC
N22	FACTORY RESET
N23	TIMEOUT EXTRA BALL OPTION

“TICKET” showing on score display= low tickets.

**Red indicator on score screen/ message upon menu entry:**

“Check Sensors- See N19” indicates a switch is stuck closed.

“Game Timeouts- stuck ball?” indicates that multiple games have timed out in a row.

## N1- COINS/CREDITS PER PLAY

Scroll through the N1 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

0	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---

## N2- GAME VOLUME

Scroll through the N2 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

## N3- ATTRACT VOLUME

Scroll through the N3 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

## N4- ATTRACT TIMING

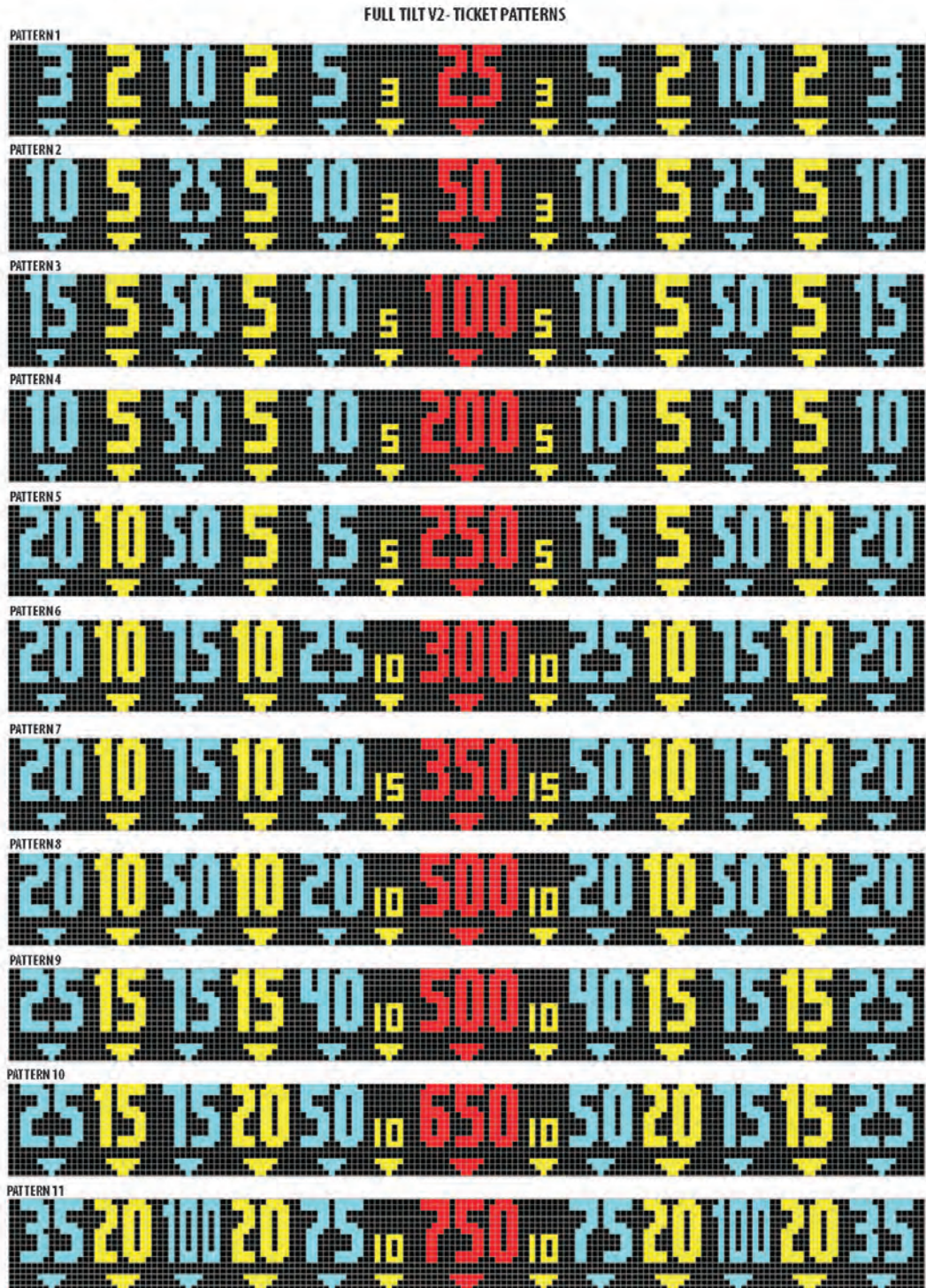
Scroll through the N4 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

This setting determines how often the attract loop audio is played.

30 sec	1 min	5 min	10 min	15 min	0 (off)
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# N5- TICKET PATTERNS

Scroll through the N5 menu with the “MENU” button.  
 Make your selection with the “SELECT” button.  
 The factory settings are highlighted below.



\*Center bonus value can be changed in the N11 menu.

Setting the game to a new ticket pattern will override previously selected bonus values.  
 Changing the ticket pattern will also reset N12, N13 and N14 to default values.

## N6- MERCY TICKETS

Scroll through the N6 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>0</b>	1	2	3	4	5
----------	---	---	---	---	---

## N7- 1/2 TICKET DISPENSE

Scroll through the N7 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

Enabling 1/2 ticket dispense will make the game dispense 1 paper ticket for every 2 tickets won.

<b>DISABLED</b>	ENABLED
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## N8- FIXED TICKET PAYOUT

Scroll through the N8 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

Fixed ticket payout sets all targets to the designated ticket value.

<b>0 (off)</b>	1	2	3	4	5	6	7	8	9	10
--------------------	---	---	---	---	---	---	---	---	---	----

## N9- STORED TICKETS/ CREDITS

Scroll through the N9 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

Enabling stored tickets and credits will save tickets and credits owed in the case of a power outage.

<b>OFF</b>	ON
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## N10- GAME TIMEOUT

Scroll through the N10 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>30</b> SEC	<b>60</b> SEC	<b>90</b> SEC	<b>120</b> SEC	<b>NO</b> (OFF)
------------------	------------------	------------------	-------------------	--------------------

**\*N10 MUST BE SET TO NO(OFF) FOR WASHINGTON STATE COMPLIANCE**

## N11- BONUS VALUE

Scroll through the N11 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>ADJUSTABLE IN INCREMENTS OF 50</b>			
<b>25</b>	TO	<b>999</b>	<b>500</b> DEFAULT

\*Center bonus value can be changed in the N11 menu.  
Setting the game to a new ticket pattern (N5) will override previously selected bonus values.  
When PROGRESSIVE (N12) is enabled, this setting becomes the minimum jackpot value.

## N12- PROGRESSIVE

Scroll through the N12 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>DISABLED</b>	ENABLED
-----------------	---------

When PROGRESSIVE is enabled, N11 setting becomes the minimum jackpot value.  
If the ticket pattern is changed in N5, the minimum progressive value will default to the bonus setting defined in the selected ticket pattern.



## N13- PROGRESSIVE ADD

Scroll through the N13 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
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Progressive value will grow by this amount with every game played.  
Changing the ticket pattern in N5 will reset this value back to the default of 1.

## N14- PROGRESSIVE MAX

Scroll through the N14 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>ADJUSTABLE IN INCREMENTS OF 50</b>			
<b>50</b>	TO	<b>1000</b>	<b>750</b> DEFAULT

This is the highest number the progressive jackpot will reach.  
Changing the ticket pattern in N5 will reset this value back to the default of 750.

## N15- TICKETS/POINTS DISPLAY

Scroll through the N15 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

<b>TICKETS</b>	POINTS
----------------	--------

## N16- DEMO MODE

Scroll through the N16 menu with the “MENU” button.  
Make your selection with the “SELECT” button.  
The factory settings are highlighted below.

NORMAL MODE	1 CREDIT MAX
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## N17- STATISTICS

Press the SELECT button in N17 to scroll through the following:  
AVERAGE TICKETS PER GAME  
TOTAL GAMES / TOTAL TICKETS  
INDIVIDUAL TARGET HITS (displayed above each target)

## N18- STATISTICS CLEAR

Press and hold the SELECT button to clear the statistics.  
Display will read “STATISTICS CLEARED” when done.

## N19- SWITCH TEST

N19 displays any switches that are closed  
Only one closed switch will display at a time.

A	B	C	D	E	F	G	H	I	J	K	L	M	P*	BLANK
---	---	---	---	---	---	---	---	---	---	---	---	---	----	-------

\*P= Playfield Ball Release

## N20- BLOWER TEST

Use this function to test the performance of the blower.



## N21- SOLENOID DIAGNOSTIC

Upon entering this menu, the ball release solenoid will engage, dropping a ball into the playfield. Solenoid will remain open for 3 seconds, and then disengage.

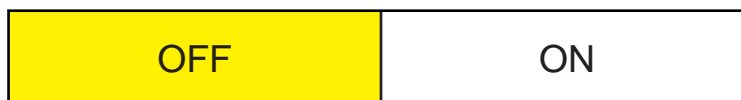
## N22- FACTORY RESET

Press and hold the SELECT button to reset the game to factory settings. Display will read "DEFAULTS RESET" when done.

## N23- TIMEOUT EXTRA BALL OPTION

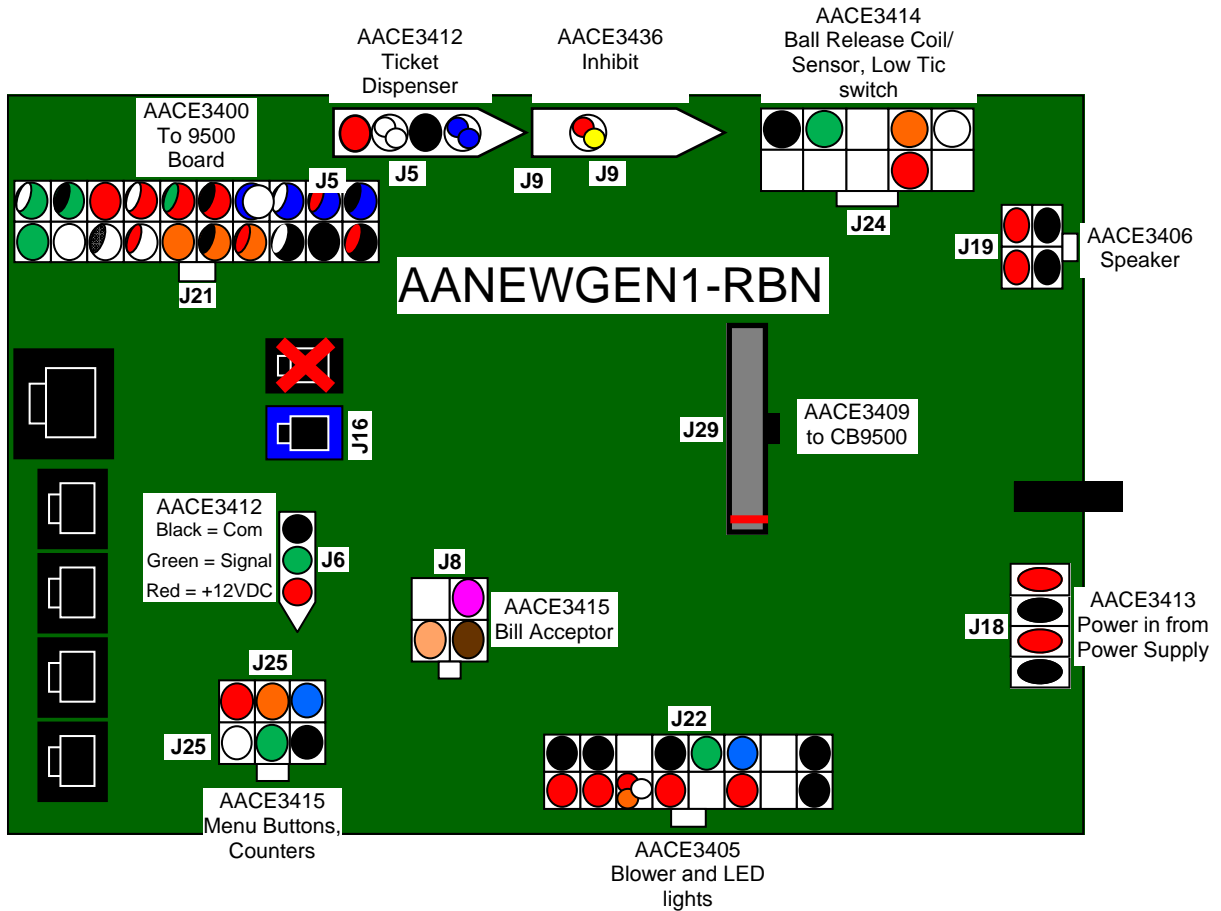
Scroll through the N24 menu with the "MENU" button.  
Make your selection with the "SELECT" button.  
The factory settings are highlighted below.

The game can be enabled to release an extra ball upon coinup if a ball is left on the playfield after a previous game timeout (or if the ball sensor malfunctions).



# WIRING DIAGRAMS

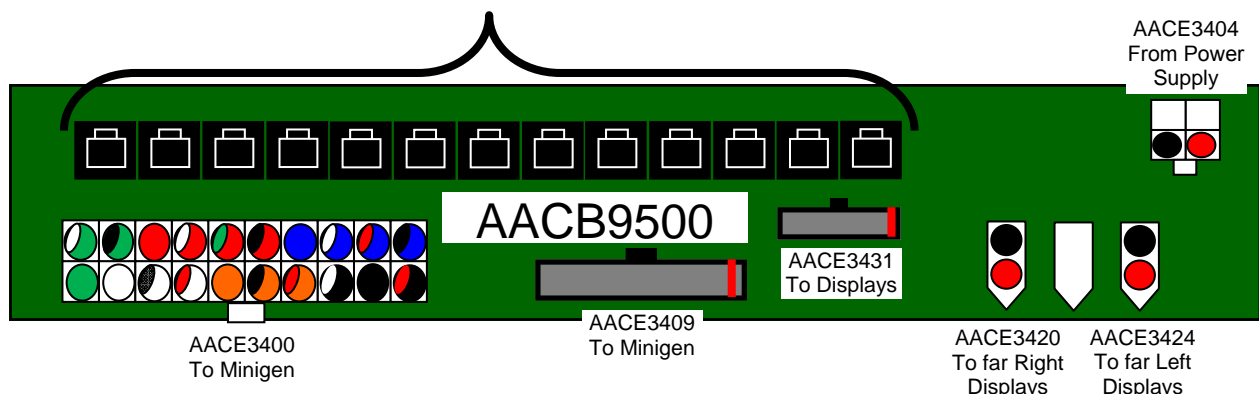
## MINIGEN BOARD PINOUT & TARGET SENSORS



### Scoring Sensor Boards Inputs 13 total

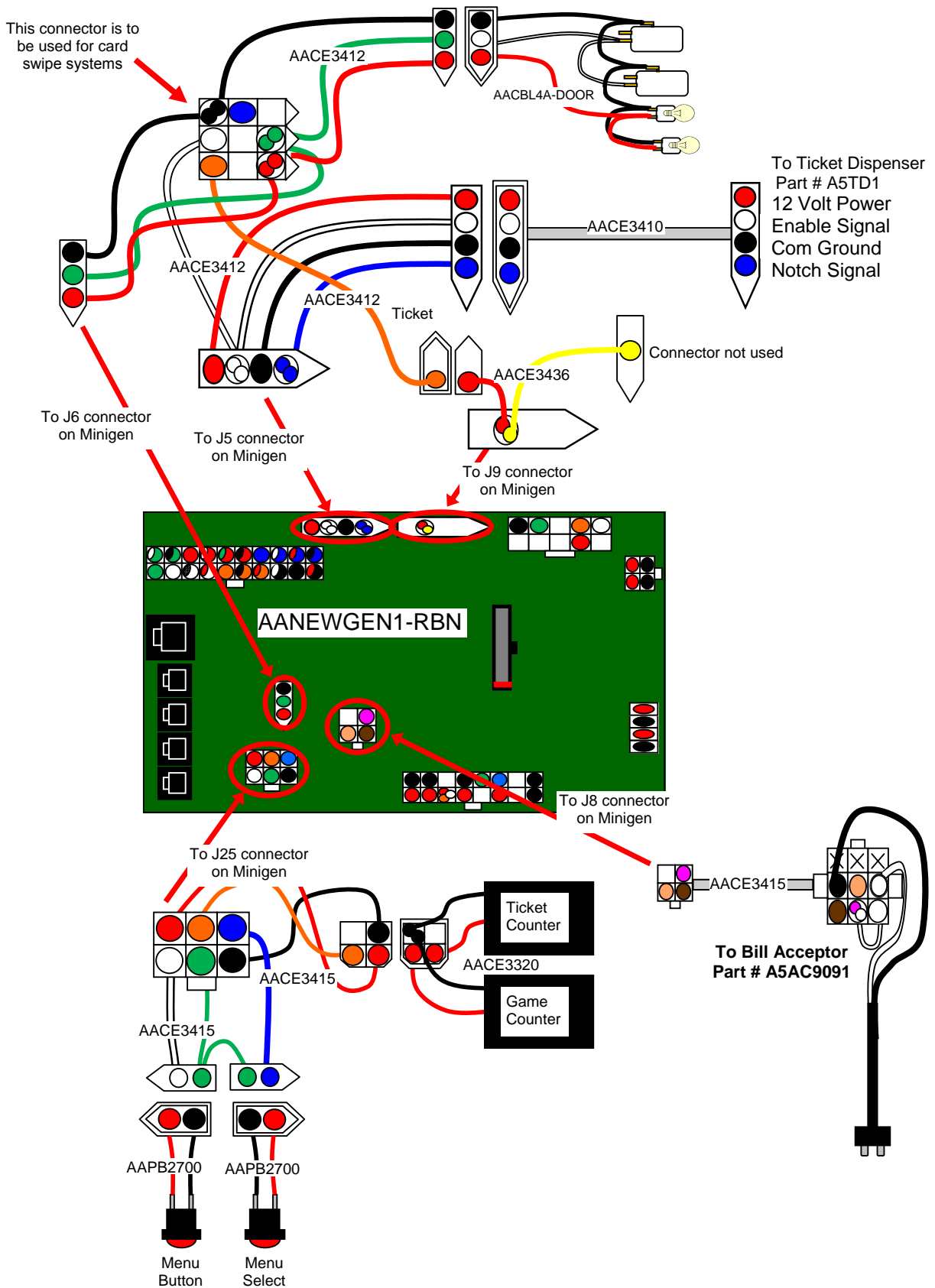
#### AACB3400

Refer to Score Sensor Troubleshooting for more Info



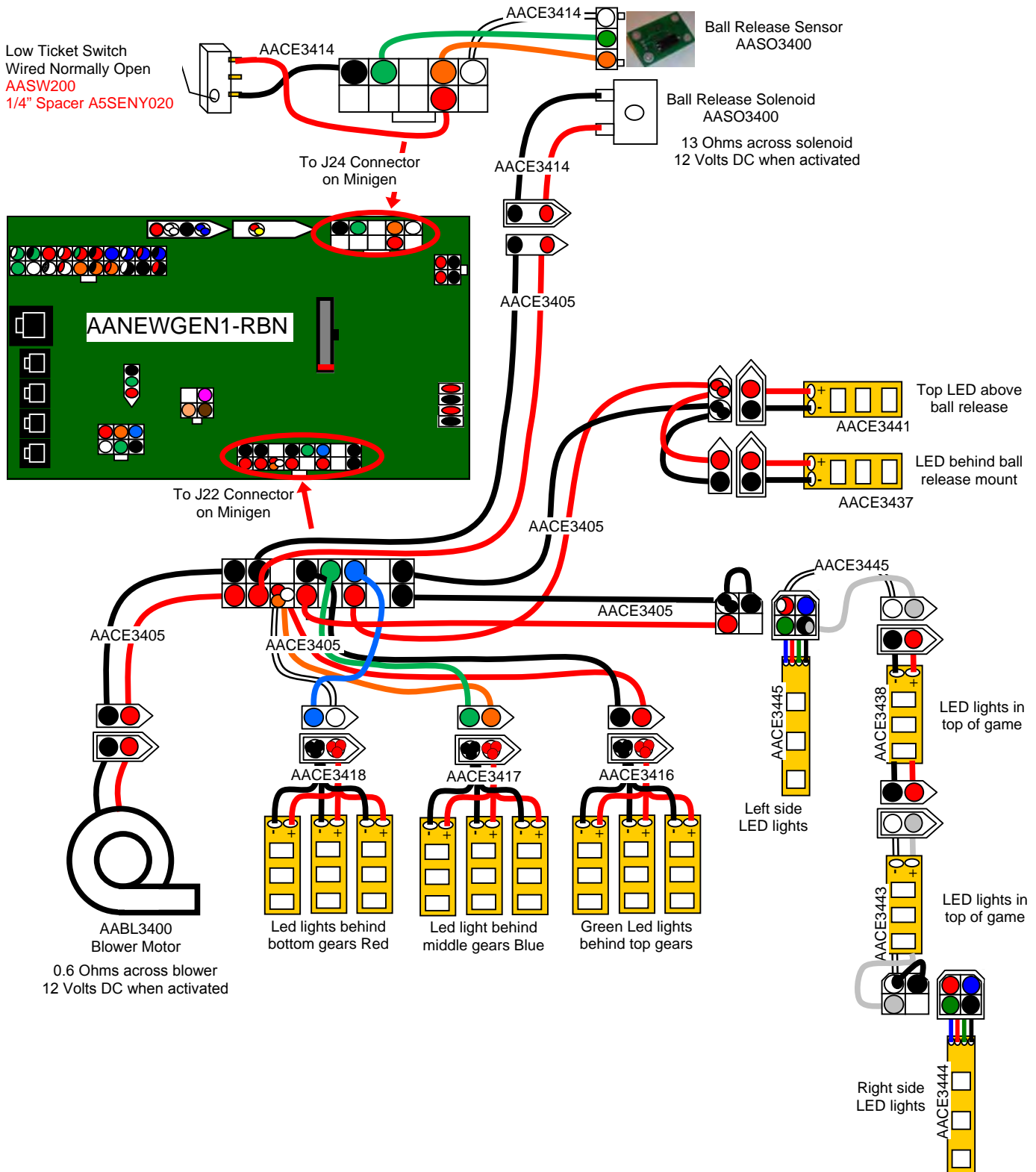
# WIRING DIAGRAMS

## COIN MECH, TICKET DISPENSERS, MENU BUTTONS



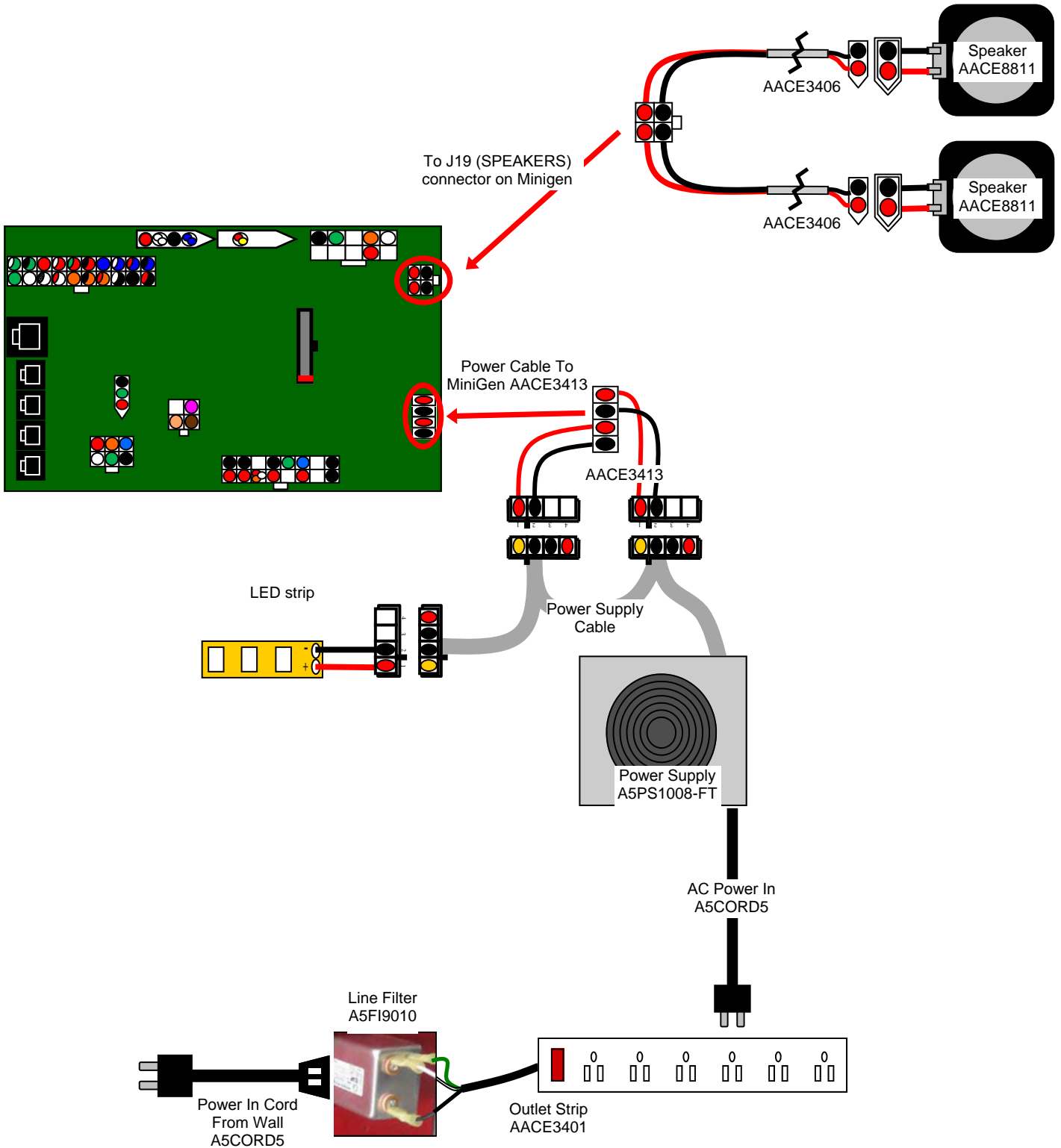
# WIRING DIAGRAMS

## BLOWER, LOW TICK SWITCH, BALL RELEASE SENSOR & SOLENOID, LEDS



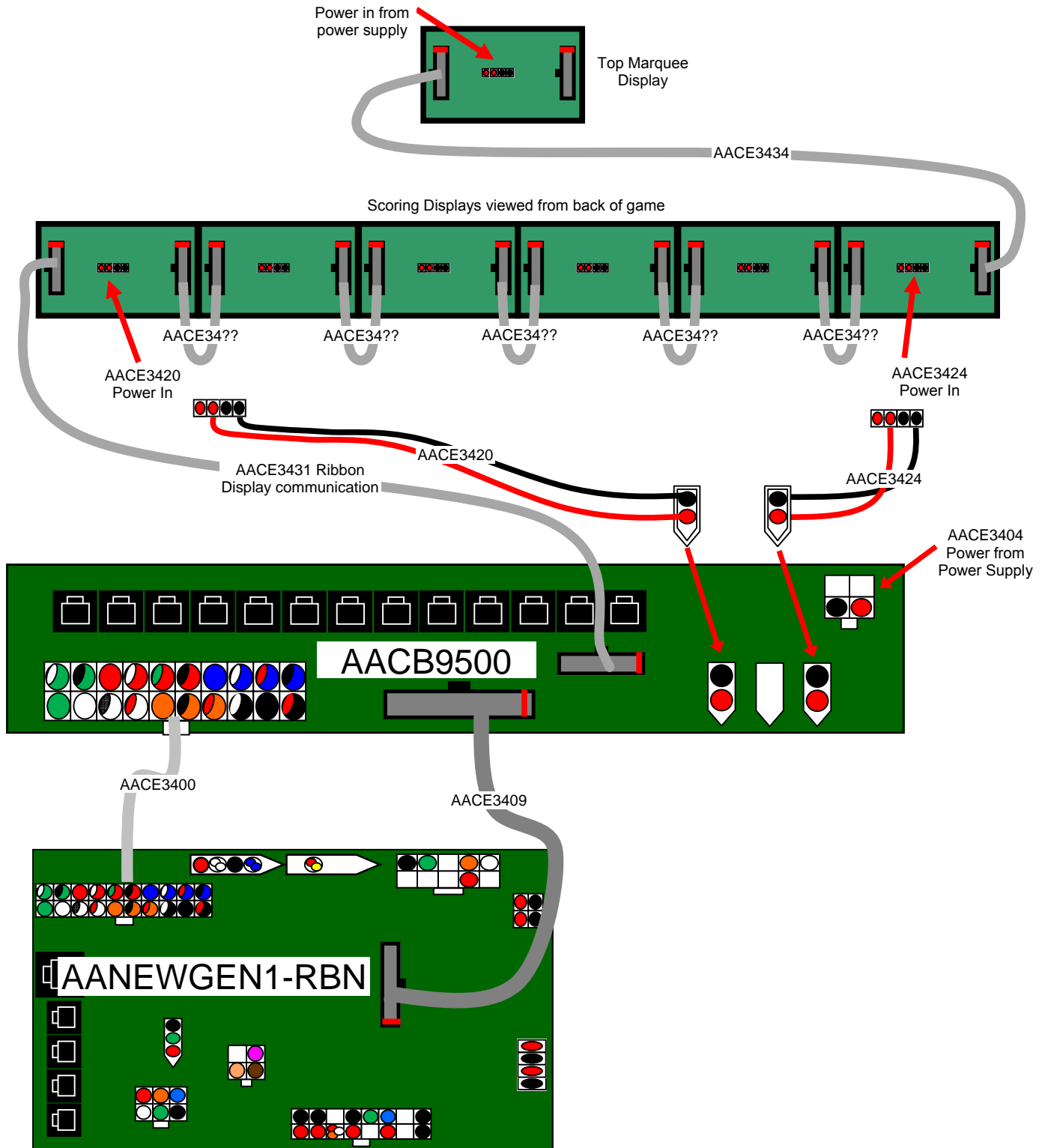
# WIRING DIAGRAMS

## POWER SUPPLY, SPEAKER, LED LIGHTING



# WIRING DIAGRAMS

## DISPLAYS & DRIVER BOARDS






# TROUBLESHOOTING GUIDE

## Troubleshooting Strategy

Use common sense and a systematic method of troubleshooting to determine the exact problem, probable cause and remedy. Use the process of elimination to find the faulty component. Always check for the simple and obvious causes first such as unplugged, loose or broken wires and bad sensors, bent, pinched, stuck or jammed components.

Problem	Probable Cause	Remedy
<b>No power to the game. No lights on at all.</b>	Unplugged. Circuit breaker tripped. Power strip faulty. Faulty cable/power supply	Check wall outlet. Reset power strip breaker switch or building circuit breaker. Change plug position, replace if needed. See Power Supply diagnostic below.
<b>AC Light and Bill Acceptor on, but everything else off.</b> (Power Supply not ON)	Power supply unplugged. Rocker Switch. Power supply shutting down because of 12 V overload. Faulty power supply.	Insure unit is plugged into power strip. Make sure rocker switch is set ON. (-) See power supply diagnostics to isolate bad component. A bad motor or 12 volt short would cause this.  See Power Supply Diagnostic below.
<b>Dollar Bill Acceptor not functioning.</b>  Ensure Bill Acceptor is set to "Always Enable"	Check for power to Bill Acceptor. Dirt or debris in acceptor slot. Pinched, broken, or disconnected wiring.  Bill acceptor problem.	Acceptor should cycle stacker at game power up. If not, check cable connections. Refer to "How to Clean Bill Acceptor" Or clean with bill reader cleaning card. (A5CC9000) Check wiring from bill acceptor to Minigen Board. (AACE3413) Repair or replace wiring harness. Check J9 connector on Minigen Board Make sure wires are secure in connectors.  Refer to troubleshooting section of dollar bill acceptor manual included with this game or the diagnostics label of the back of the unit.
<b>Game not coin-ing up.</b>	Ensure game makes sound when coin switch is triggered.  Game set to large amount of credits per game.  Faulty Minigen Board	Check coin switches—both should be wired normally open. If one switch is "closed" the other will not work either. Check wiring to Minigen board. (AACBL4A-DOOR, AACE3412)  Check Game Setup Menu. Ensure Coins/Credits per Game is set. Default = 4.  Replace Minigen (AANEWGEN1-RBN)
<b>Game only coins up one play no matter how much coins/dollars inserted.</b>	"Demo Mode" Enabled in menu.	Enter menu and cycle to N16 and set to "Normal Mode"


# TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
<b>All Displays show nothing at all on power on.</b>	Power cable unplugged from displays or Display Driver Board Communication Cable unplugged from first board in series  Faulty signal cable from Minigen to DDB. Faulty first display board  Faulty Display Driver Board Faulty Minigen Board	There are multiple power cables to apply power to displays. Check cable #'s: Check ribbon cable CE3431 from DDB to display and ribbon cable CE3409 from Minigen to DDB Check CE3400  If first display is faulty, the others will not work Replace DDB (AACB9500) Replace Minigen (AANEWGEN1-RBN)
<b>One Display shows nothing.</b>  Displays are wired in series. If one is faulty, all the others later in the chain will not work.	Disconnected, loose or broken wires.  Swap one display with another to verify faulty display.  Top marquee display is same as the lower 6 displays. This can also be swapped to verify a display problem.	Check connections on power cables and ribbon cables ( ) Replace confirmed faulty display  If top marquee display is not working—verify ribbon cable is plugged into the far right socket of far right display board. (When viewed from the back) Refer to “Display Driver Board and Display Wiring Diagram”
<b>Displays are garbled.</b>	A problem with one display is affecting the others.  Disconnected, loose or broken wires.  Isolate faulty display.	Unplug the output from the 1st display to the 2nd. If the 1st display is now ok, then the problem display is later in the chain.  Check connections and swap small jumper ribbon cables to verify they are ok. ( ) Replace display ( )
<b>Marquee Display not working.</b>	Disconnected, loose or broken wires.  Top marquee display is same as the lower 6 displays. This can also be swapped to verify a display problem.	Check power and ribbon cable connections. Verify voltage to top display. ( ) If top marquee display is not working—verify ribbon cable is plugged into the far right socket of far right display board. (When viewed from the back) Refer to “Display Driver Board and Display Wiring Diagram”

# TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
<b>No Sound</b>	<p>Volume set to zero in menu.</p> <p>Disconnected, loose or broken wires.</p> <p>Faulty speaker.</p> <p>Faulty Minigen Board</p>	<p>Enter Machine Setup Menu and verify: Game Volume &amp; Attract Volume is not zero</p> <p>Check connections and reseat audio cable from speakers to MiniGen board. (AACE8811, AACE3406)</p> <p>Replace speaker. (AACE8811)</p> <p>Replace Minigen (AANEWGEN1-RBN)</p>
<p><b>Menu Buttons do not work.</b></p> <p>Press and hold 5 seconds.</p>	<p>Disconnected, loose or broken wires.</p> <p>Faulty button.</p> <p>Faulty Minigen board.</p>	<p>Check connections from pushbutton to AANEWGEN1-RBN board. Cables # AAPB2700 and AACE3415</p> <p>Test button and replace. (AAPB2700)</p> <p>Replace AANEWGEN1-RBN board.</p>
<p><b>Cabinet Lighting does not work.</b></p> <p>There are 2 different types of cabinet lighting</p>	<p><b>12 Volt White LED's</b></p> <p>Faulty cable. Disconnected, loose or broken wires. Individual LED strip out</p>	<p>These LED's receive power directly from power supply</p> <p>Refer to "Blower, Low Ticket Switch, Sensor, &amp; LED Lights Wiring Diagram"</p> <p>Identify LED strip, check soldered wires, replace if needed.</p>
<p><b>12 Volt White LED's &amp; Colored LED's that change color</b></p>	<p><b>Colored LED's</b></p> <p>Faulty cable. Disconnected, loose or broken wires. Individual LED strip out</p> <p>Entire section of LED's do not work</p>	<p>These LED's receive power from Minigen Board</p> <p>Refer to "Communication, Speaker &amp; LED Wiring Diagram"</p> <p>Identify LED strip, check soldered wires, replace if needed.(AACE3416, AACE3417, AACE3418, AACE3437, AACE3441, AACE3445, AACE3438, AACE3443, AACE3444)</p> <p>Check main jumper cable (AACE3405) Replace Minigen (AANEWGEN1-RBN)</p>
<b>Low Tickets message on Display</b>	<p>Tickets are empty in ticket tray</p> <p>Faulty cable. Disconnected, loose or broken wires.</p> <p>Faulty low ticket switch.</p> <p>Faulty MiniGen Board</p>	<p>Load tickets into tray. Ensure tickets hold down micro switch wire.</p> <p>Check connectors from low ticket switches to MiniGen board. Check for continuity. (AACE3414)</p> <p>Inspect switch and replace if needed. (AASW200)</p> <p>Replace Minigen Board. (AANEWGEN1-RBN)</p>

# TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
<p><b>Tickets do not dispense or Wrong amount dispensed.</b></p> <p>Check for the correct amount of tickets showing on Monitor</p>	<p>Tickets won on displays do <b>not</b> match tickets coming out of game.</p> <p>Opto Sensor on ticket dispenser dirty.                      Faulty ticket dispenser.                      Notch on tickets cut too shallow.                      Faulty cable. Disconnected, loose or broken wires.</p> <p>Check ticket meter in game and verify meter is counting all tickets</p> <p>Faulty Main Board.</p>	<p>Blow dust from sensor and clean with isopropyl alcohol.</p> <p>Replace with working dispenser to isolate the problem. (A5TD1)</p> <p>Flip tickets and load upside-down to have large cut notch toward opto sensor.</p> <p>Check connectors from ticket dispensers to MiniGen board. Check for continuity.                      Cables AACE3410, AACE3412</p> <p>If meter is clicking the same number as the tickets are coming out, then game is thinking it is doing the right thing - see below.</p> <p>Replace MiniGen board. (AANEWGEN1-RBN)</p>
	<p>Tickets won on displays do match tickets coming out of game.</p> <p>Game is thinking it is doing the correct thing.</p> <p>Settings in Menu are incorrect.</p> <p>Ticket Dispenser being affected by non-standard elements.</p>	<p>Enter Menu and check certain areas:                      Ticket Patterns                      Mercy Tickets                      1/2 Tickets Dispense                      Fixed Ticket Payout                      Bonus Value</p> <p>Replace ticket dispenser. (A5TD1)                      Check for static charge affecting dispenser.                      Check for possible electronic noise affecting ticket dispenser.</p>
<p><b>Ball Does Not Score</b></p> <p>Ball sensors are located under the plexi dividers in front of game.</p> <p>They connect to the Display Driver Board</p> <p><b>Enter menu and select "Switch Test" this will show if a sensor is blocked</b></p>	<p>Dirty Ball Sensor</p> <p>Faulty Sensor Board</p> <p>Bad cable or Driver Board</p>	<p>Blow dust from sensor and clean with isopropyl alcohol.</p> <p>Swap cable to different socket on Display Driver Board                      If the same sensor is not scoring, then sensor or cable is faulty.</p> <div style="text-align: center;">  </div> <p>If a different sensor is now not scoring, then the problem is following the socket on the Display Driver Board. Inspect cable AACE3400, inspect sockets on DDB and replace Display Driver Board (AACB9500) or Minigen Board (AANEWGEN1-RBN)</p>
<p><b>Ball scores wrong.</b></p>	<p>Ball does not score at all.</p> <p>A sensor is scoring too soon.</p> <p>Interference from external source</p>	<p>Refer to "Ball Does Not Score" section.</p> <p>A weak sensor may score by itself. Isolate sensor which is scoring and replace. (AACB3400)</p> <p>Check for neon lights or spotlights that may be shining down into sensors.</p>

# TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
<p><b>Ball does not Release</b> Enter Menu and select "Solenoid Diagnostic"</p> <p>Check for 12 Volts DC at solenoid when engaged</p> <p>Solenoid should have 13 Ohms across leads.</p>	No 12 Volts on solenoid in test when engaged.	Inspect cable from solenoid to MiniGen board. (J22) Cable part #'s: AACE3405, AACE3414 Replace Minigen board. (AANEWGEN1-RBN)
	Yes - 12 Volts on solenoid in test, but solenoid still doesn't engage.	Inspect linkages on solenoid and ensure solenoid is not jammed. Replace solenoid. (AASO3400)
<p><b>Ball Release stays Open all the time</b></p> <p>Check for 12 Volts DC at solenoid when engaged</p>	No 12 Volts on solenoid.	Inspect linkages on solenoid and ensure solenoid is not jammed.
	Yes - 12 Volts on solenoid.	Inspect cable from solenoid to MiniGen board. (J22) Cable part #'s: AACE3405, AACE3414 Replace main board. (AANEWGEN1-RBN)
<p><b>Ball Releases Twice per Game.</b></p> <p>Sensor at ball release will allow a free game if it does not "see" the ball.</p>	Sensor is located behind ball as it is sitting at ball release.	Clean sensor with clean cloth.
	Disconnected, loose or broken wires.	Inspect cable from Minigen Board to sensor. (AACE3414)
	Faulty sensor.	Replace sensor. Part # AABD5010
<p><b>Ticket Meter does not work.</b></p> <p>Ticket meter will click as tickets come out of game and notch is "seen" by dispenser.</p>	Ensure correct number of tickets are being dispensed.	Check ticket values, refer to Tickets not dispensing troubleshooting section.
	Disconnected, loose or broken wires.	Check connections and reseat J5 on Minigen board. Cables # AACE3415 and AACE3320
	Faulty counters.	Replace counters. AACE3320
<p><b>Game Meter does not work.</b></p> <p>Game meter will click at start of game.</p>	Game meter will count at the start of a game.	If a \$5 bill is inserted, it will click once, play a game, and click again at the start of the next game, etc..
	Disconnected, loose or broken wires.	Check connections and reseat J5 on Minigen board. Cables # AACE3415 and AACE3320
	Faulty counters.	Replace counters. AACE3320

# TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
<p><b>No Ball Up Top at Ball Release</b></p> <p>The ball should always be up at top of game, waiting for game to be coined up.</p>	<p>Ball is stuck on playfield.</p> <p>Ball is stuck near sensors or the return path down to blower.</p> <p>Ball is stuck in tube.</p> <p>If blower is working. Ball is physically stuck in tube</p>	<p>Check for ball obstructions on gears, platforms.</p> <p>Remove sensors (refer to "How to Replace Ball Sensors" section, and inspect path. Remove any obstructions.</p> <p>Ensure blower is working. It should be cycling periodically since it knows the ball is not up top. Refer to "Blower not working" section.</p> <p>Remove tube and find obstruction. The tube is larger than the ball, and it should not be stuck unless some other obstruction is also in tube.</p>
<p><b>Blower not working.</b></p> <p>Enter Menu and select "Blower Test"</p> <p>Check for 12 Volts DC at blower when engaged</p> <p>Blower should have 0.6 Ohms across leads.</p>	<p>No 12 Volts on blower in test when engaged.</p> <p>Yes - 12 Volts on blower in test, but blower still doesn't work.</p>	<p>Inspect cable from blower to MiniGen board. (J22) Cable part #'s: AACE3405</p> <p>Replace Minigen board. (AANEWGEN1-RBN)</p> <p>Inspect blower to ensure nothing is jamming blower fan.</p> <p>If resistance is OK - replace Minigen Board. (AANEWGEN1-RBN)</p> <p>If resistance is very large -Replace blower(AABL3400)</p> <p>If resistance is zero - Replace blower. (AABL3400) and Minigen Board.(AANEWGEN1-RBN)</p>
<p><b>Blower going all the time.</b></p> <p>Enter Menu and select "Blower Test"</p> <p>Check for 12 Volts DC at blower when engaged</p> <p>Blower should have 0.6 Ohms across leads.</p>	<p>No 12 Volts on blower in test when engaged.</p> <p>Blower runs even after test is exited.</p> <p>Faulty blower may have damaged Minigen Board.</p>	<p>If blower is running all the time, and there is no 12 volts to blower, please call Baytek and we will patent this amazing feat and make millions.</p> <p>Unplug blower cable from harness and check resistance – 0.6 Ohms on blower.</p> <p>If resistance is OK - replace Minigen Board. (AANEWGEN1-RBN)</p> <p>If resistance is zero - Replace blower. (AABL3400) and Minigen Board.(AANEWGEN1-RBN)</p>

# POWER SUPPLY DIAGNOSTICS

1.) Verify AC power to game. Check power strip in front door.

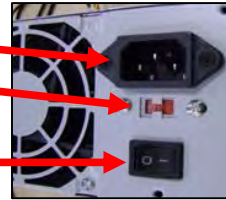
The rocker switch should be illuminated.



3.) Check connection to power supply.

4.) Ensure Power Supply switch is set to 115V (or 230V)  
(Some model power supplies may not have this)

5.) Ensure Power switch is on.



6.) Ensure fan is turning.

- If power supply fan is turning and there is no 12 Volt out, then replace power supply. (AAPS1008-FT)
- If power supply fan is not turning, there may be a 12 volt short somewhere else in cabinet that is not allowing the power supply to turn on.

Unplug all harnesses that are plugged into power supply so that is all by itself and turn on.

If it still has no 12 volts, then the power supply is faulty, replace power supply. (AAPS1008-FT)

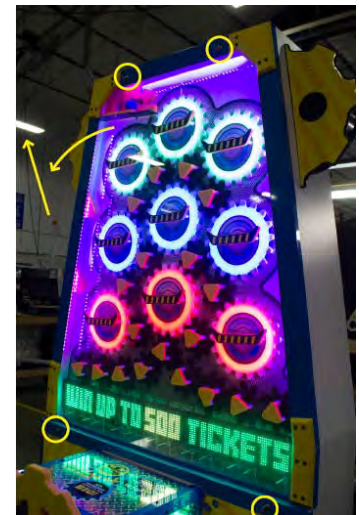
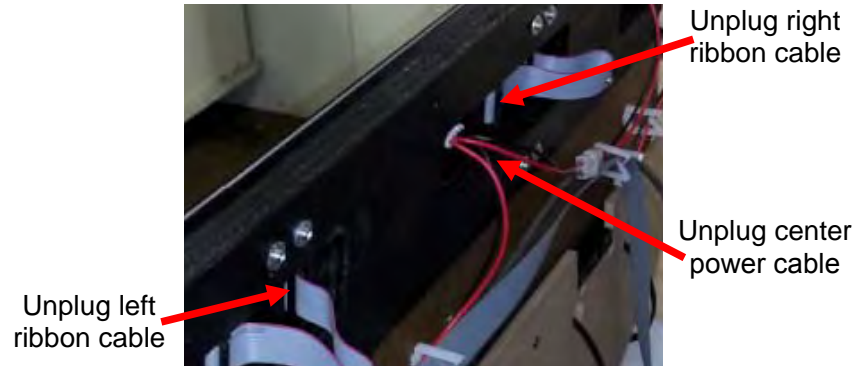
If there is 12 volts, then connect one harness at a time until power supply goes off.  
Then troubleshoot that harness and find short.

If it appears a circuit board is causing the problem, then leave the power in plugged into the board, but unplug all the outputs on that board. Turn game on, and if power supply comes on ok, then one of the output connectors are the fault. Plug the output connectors from that board in one at a time until problem is found.

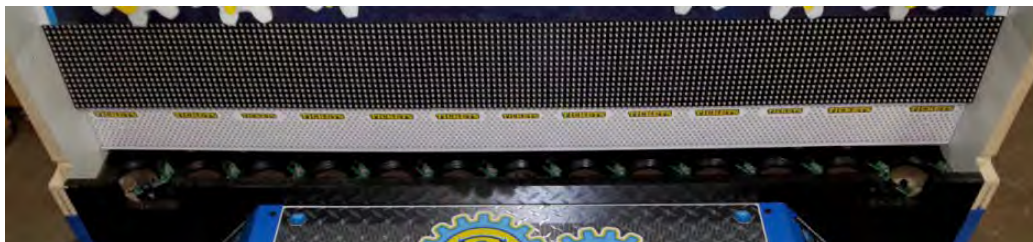
# HOW TO: ACCESS & REMOVE DISPLAYS

Unlock all 4 locks in the corners of the window.

Tip the window toward you from the top, then lift it out and set aside.



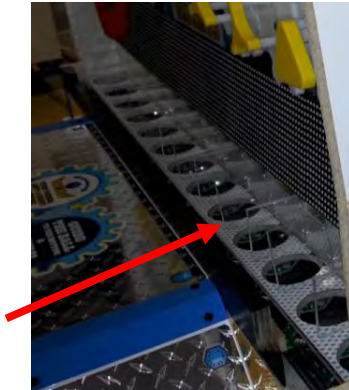
Unscrew 4 screws holding display in place and remove from front of game.



# HOW TO: REPLACE TARGET SENSORS

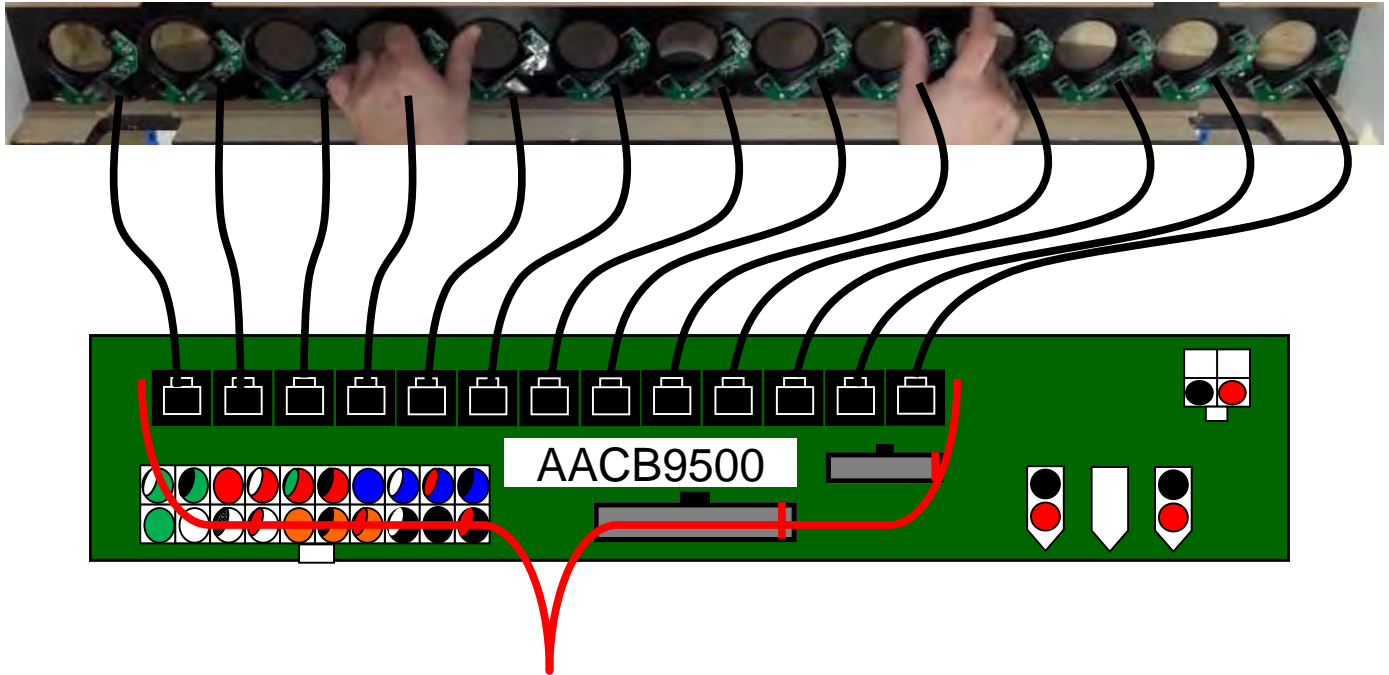
Unlock all 4 locks in the corners of the window.  
Tip the window toward you from the top, then lift it out and set aside.

Remove silver #2 square head screws in plastic divider and carefully remove from game.



The sensors are now accessible for cleaning and swapping boards.  
If needed, the entire wood platform with all sensors mounted can be removed from cabinet.

Cables are all labeled individually , but replacement cable is AACE3419-13 it is long enough for any sensor



Scoring Sensor Circuit boards Inputs 13 total  
Part # AACB3400



# BILL ACCEPTOR DIAGNOSTICS

**Note: There are many different models and brands of Bill Acceptors that are used on redemption games. Your Bill Acceptor may differ from the unit shown.**

Determine if Bill Acceptor has power:

Turn game ON—The bill acceptor should make noise as stacker cycles and green lights on outside bezel should flash.

If NO power:

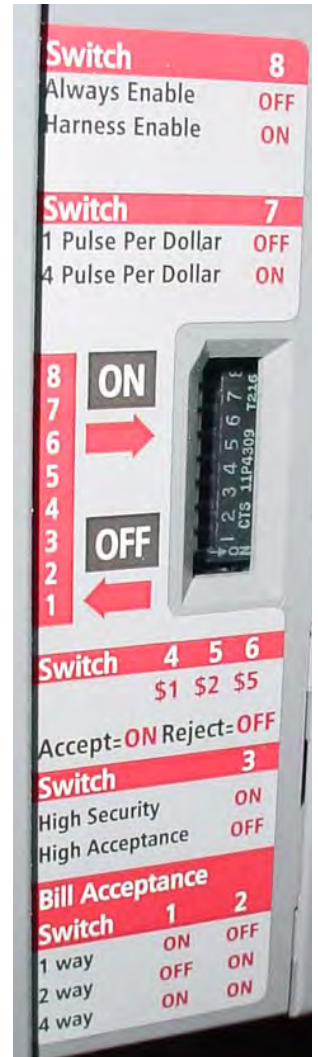
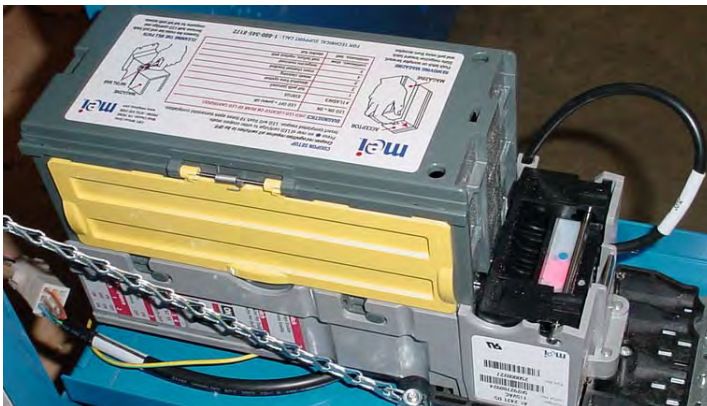
Use meter to measure 110 AC voltage at cable going into Bill Acceptor from power strip.

If power is OK:

Clean Bill Acceptor path to make sure there is nothing jamming unit.

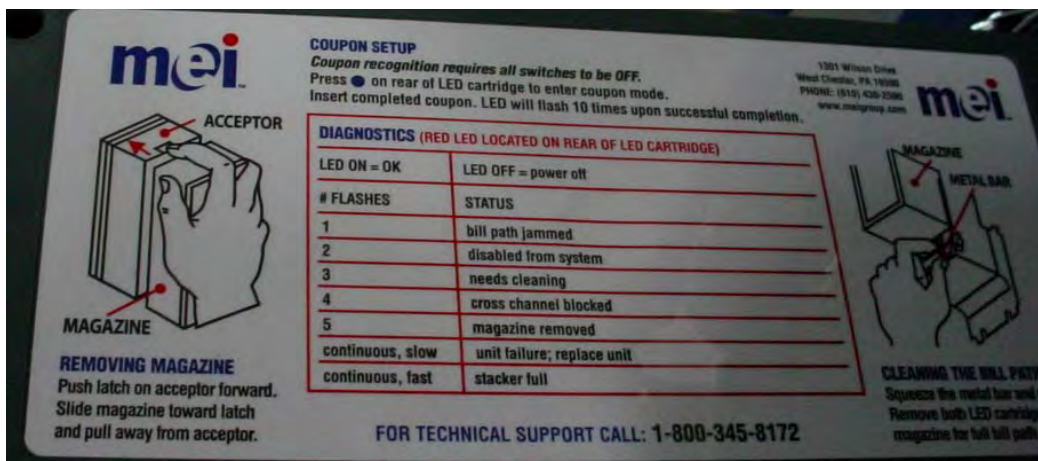
Check dipswitch settings on side of acceptor.

**Make sure switch # 8 is OFF for Always Enable**



## ERROR CODES

Count the number of flashes on front bezel of Bill Acceptor and follow chart for repair.



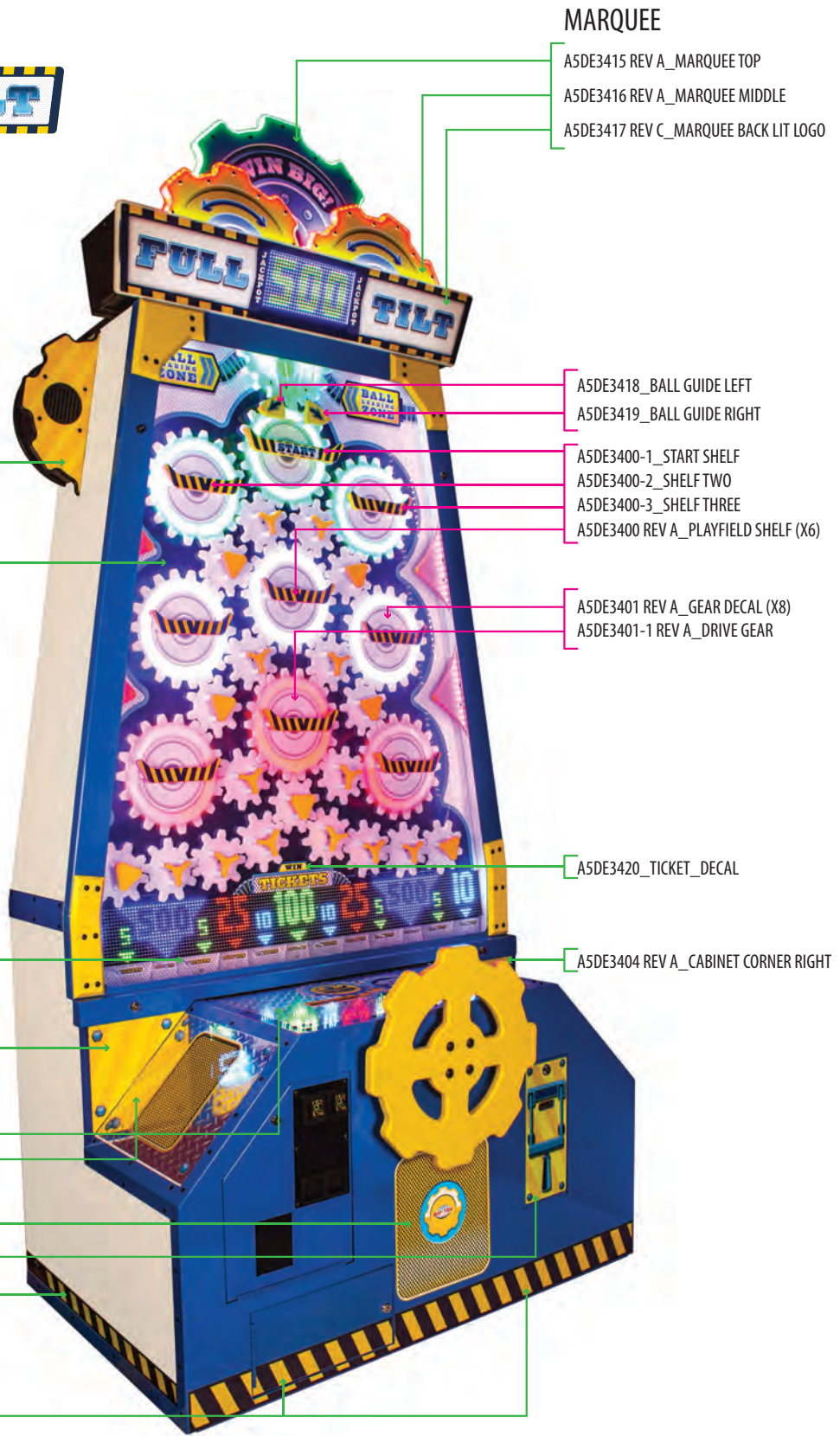
# PARTS LIST

<b>PART #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>DESCRIPTION</b>
A5CB1499	Cash Box	AACE3435	Cable for Full Tilt
A5BA2901	2" Blue Ball	AACE3436	J9 Connector Jumper, Inhibit Signal
A5SW200	Low ticket Switch	AACE3437	Top Middle PF LED
A5LK2001	A05 Key Code	AACE3438	Marquee LED Jumper
A5LK5001	644 Key Code	AACE3439	Marquee Little Gear Light
A5LK5002	H95 Key Code	AACE3440-1	LED stick in Marquee
W5TM4002	13/16" T-Molding	AACE3441	LED light behind Ball Release
A5SP9101	Extension Spring (Centering Wheel)	AACE3442	Marquee, Big Gear Light
A5SP9107	Solenoid Spring	AACE3443	LED lights in top of Game
A5BK1013	Push Button/Counter Bracket	AACE3444	Right Side Playfield LED Stick
A5BURU040	Wheel Playfield Stop Bumpers	AACE3445	Left Side Playfield LED Stick
A5FI9010	Inline Filter	AACE8811	Speaker Assembly With Cable
A5TU0012	Speaker Tube Mount	AAPB2700	Push Button
A5PL9097	Blanking Plate, Replaces Bill Acceptor	A5TD1	Ticket Dispenser
A5TT4101	Ticket Tray	AABL3400	12VDC Blower
A5CORD5	AC Computer Cord	AASO3400	Solenoid Assembly
AACBL4A-DOOR	Door Cable	AAPS1008-FT	Power Supply Assembly With Cable
AACE3320	Counter Assy Ticket & Game	A5DE0042	Menu, Volume Pot Decal
AACE3400	Communication, Minigen to Display Driver	A5DE3401	Gear Decal (8 Per)
AACE3401	Outlet Strip Cable	A5DE3401-1	Drive gear Decal
AACE3402	Stick Light Power	A5DE3402	Target 1 Decal
AACE3404	Power in to Display Driver Board	A5DE3402-1	Target 2 Decal
AACE3405	Cable to Blower, Solenoid, Lights	A5DE3403	Left Corner Cabinet Decal
AACE3406	Cable to Speaker	A5DE3404	Right Corner Cabinet Decal
AACE3409	Ribbon, Minigen to Display Driver	A5DE3405	Top Cabinet Diamond Plate Decal
AACE3410	Cable to Ticket Dispenser	A5DE3406	Top Side Cabinet Diamond Plate Decal
AACE3412	Cable to Coin Door, Ticket Dispenser	A5DE3407	Right Speaker Decal
AACE3413	12 Volt Power into Minigen	A5DE3407-1	Left Speaker Decal
AACE3414	Cable to Lo Switch, Ball Sensor, and Solenoid	A5DE3408	Front Center Cabinet Decal
AACE3415	Cable to Menu, Counters	A5DE3409	Bottom Cabinet Decal
AACE3416	Green LED's behind Top Gears	A5DE3410	Ticket Spitter Decal
AACE3417	Blue LED's behind Middle Gears	A5DE3411	Left Side Bottom Cabinet Decal
AACE3418	Red LED's behind Bottom Gears	A5DE3412	Right Side Bottom Cabinet Decal
AACE3419-13	Score Sensor Cable	A5DE3413	Playfield Decal
AACE3420	12 V to Display from Display Driver Board	A5DE3415	Top Marquee Decal
AACE3423	Marquee 12 Volts	A5DE3416	Middle Marquee Decal
AACE3424	12 V to Display from Display Driver Board	A5DE3417	Marquee Backlit Logo Decal
AACE3427	Stick Lights	A5DE3418	Left Ball Guide Decal
AACE3428	Stick Lights	A5DE3419	Right Ball Guide Decal
AACE3429	Cable for Marquee	A5DE3420	Ticket Decal
AACE3430	Cable for Marquee	AACB3400	Ball Score Sensor
AACE3431	Ribbon Cable from Display Driver Board to Display	AABD5010	Ball Sensor on Top
AACE3432	Green LED's in Marquee	AACB9500	Display Driver Board
AACE3433	Red LED's in Marquee	A5LD1050	Display Module Board
AACE3434	Ribbon Cable to Marquee Display	AAANEWGEN1-RBN	New Gen1 Main Board with Ribbon Cable

# DECAL ID & PLACEMENT



DECAL DIAGRAM



**MARQUEE**

- A5DE3415 REV A\_MARQUEE TOP
- A5DE3416 REV A\_MARQUEE MIDDLE
- A5DE3417 REV C\_MARQUEE BACK LIT LOGO

- A5DE3407-1 REV B\_SPEAKER LEFT
- A5DE3407 REV B\_SPEAKER RIGHT
- OPPOSITE SIDE - NOT VISIBLE*

- A5DE3413 REV C\_PLAYFIELD DECAL

- A5DE3418\_BALL GUIDE LEFT
- A5DE3419\_BALL GUIDE RIGHT
- A5DE3400-1\_START SHELF
- A5DE3400-2\_SHELF TWO
- A5DE3400-3\_SHELF THREE
- A5DE3400 REV A\_PLAYFIELD SHELF (X6)

- A5DE3401 REV A\_GEAR DECAL (X8)
- A5DE3401-1 REV A\_DRIVE GEAR

- A5DE3420\_TICKET\_DECAL

- A5DE3402 REV A\_TARGET DECAL 1
- A5DE3402-1\_TARGET DECAL 2
- NOT VISIBLE IN PICTURE*

- A5DE3404 REV A\_CABINET CORNER RIGHT

- A5DE3403 REV A\_CABINET CORNER LEFT

**DIAMOND PLATE DECALS**

- A5DE3405 REV A\_CABINET TOP
- A5DE3406 REV A\_CABINET TOP SIDES (X2)
- RIGHT SIDE NOT VISIBLE IN PICTURE*
- A5DE3408\_CABINET FRONT CENTER
- A5DE3410\_TICKET SPITTER DECAL
- A5DE3411\_CABINET SIDE BOTTOM LEFT
- A5DE3412\_CABINET SIDE BOTTOM RIGHT
- RIGHT SIDE NOT VISIBLE IN PICTURE*
- A5DE3409 REV A\_CABINET BOTTOM
- A5DE3409-1\_COIN DOOR



# TECHNICAL SUPPORT

Excellent customer service is very important to Bay Tek Games!

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. We offer options that fit your needs.

## Electronics / Circuit Boards - Repair Options

**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 two days. 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 in for repair, give us a call and ask for an Advance Replacement. We'll send you a replacement board that same day (pending availability). 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 (not available for international shipments). This is your best option when you need to get your game up and running as quickly as possible!

**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!

## 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, you know you can call us. 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.

## Returns, Credits, & Fees:

**NOTICE!** ALL ITEMS being sent to Bay Tek Games for repair or return, etc. require prior Return Authorization! Bay Tek Games will provide a Product Return Form with an authorizing Ticket Number for each item to be returned. Please be certain to include this document with all shipments!

**Late Fees and Non-Return Fees** - Advance Replacement and Warranty Replacement items require the defective items to be returned by Bay Tek games promptly to avoid Late Fees. We expect items to be returned with 10 working days. Late fees are invoiced monthly. Late fees are non-refundable under any circumstance! Any item not returned within 90 days will be invoiced in full as a replacement part.

**Bench Fees** - Bench fees will apply for each electronic item returned to Bay Tek Games (this includes unused Advance Replacement items). This charge covers our cost to inspect, evaluate and retest each item. Please note that returned items that do not pass our tests will be charged accordingly as replacement items or advance replacements.

**Restocking Fees** - Unused items returned for credit will be credited minus a restocking fee. Items must be returned within 30 days of purchase in order to qualify for any credit amount. No shipping charges will be credited.

## WARRANTY

Bay Tek Games warrants to the original purchaser that all game components will be free of defects in workmanship and materials for a period of 6 months from the date of purchase. If you fill out the registration card in the cashbox of the game, Bay Tek will add another 3 months to your warranty, free of charge.

Bay Tek Games will, without charge, repair or replace defective component parts upon notification to the parts/service department while the game is under warranty.

Warranty replacement parts will be shipped immediately, via ground service, along with a Product Return Form for the return of defective parts.

Defective parts must be shipped back to Bay Tek Games unless otherwise instructed. Items not returned to Bay Tek Games will be invoiced as replacement parts.

This warranty does not apply in the event of any misuse or abuse to the product, or as a result of any unauthorized repairs or alterations. The warranty does not apply if any serial number decal is altered, defaced, or removed from its original position.

 **ATTENTION** 

In order to maintain the safety & compliance certifications of this game, **ONLY** approved parts may be used. For approved replacement parts, refer to the parts list in this manual.

Should you need your game serviced, determine the serial number from the decal placed on the front of this manual, or locate it on the back of the game. Then contact our Service Department at: 920.822.3951 or e-mail: [service@baytekgames.com](mailto:service@baytekgames.com)

## NON-WARRANTY

Options and estimated charges will be provided to you for your approval.

Please remember that any items being sent to Bay Tek Games must include prior return authorization from our Parts & Service Department.

This approval will include a Product Return Form which is required to be included with any incoming shipments. Repaired parts will be shipped back using the same method in which they were received.

Repairs are warranted for 30 days from the date of return shipment.

