



**Connect
4-in-a-Row
& WIN!**

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passion in fun out

FACTORY CONTACT INFORMATION



passion in ★ fun out



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P: 920.822.3951 X 1101

F: 920.822.1496

E: parts@baytekgames.com

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P: 920.822.3951 X 1102

F: 920.822.1496

E: service@baytekgames.com

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All games are proudly manufactured at our factory in Pulaski, Wisconsin, USA

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 for further assistance.

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WELCOME TO: CONNECT 4!

Congratulations on your Connect 4™ purchase!

Everyone young and old loves the nostalgic gameplay of Connect 4™, and Bay Tek has brought the spirit of family fun to your game room with this larger-than-life version of Hasbro's classic game of vertical checkers.

With its attractive presence, fun and competitive two-person game play, and the familiarity of the Hasbro brand, Connect 4™ is sure to be a big attraction!

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



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GAME SPECIFICATIONS

WEIGHT	
NET WEIGHT	940 LBS
SHIP WEIGHT	1015 LBS (1140 WITH STOOLS)
DIMENSIONS	
WIDTH	124"
DEPTH	108"
HEIGHT	122"
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
4.5 AMPS @ 115 VAC	4 AMPS @ 115 VAC
2.3 AMPS @ 230 VAC	2 AMPS @ 230 VAC

SAFETY PRECAUTIONS

 DANGER 
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.
 WARNING 
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.
 CAUTION 
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.
 ATTENTION 
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.
 IN CASE OF EMERGENCY 
UNPLUG THE POWER CORD. The power cord must be accesible at all times in case of an emergency.

SET UP GUIDE

Tools Needed:

- Drill with #2 square bit
- 9/16" socket and ratchet
- Ladder
- One or two extra people
- Packet of hardware (included)
- Cable trip guard (included)

Unpack the game parts and lay them out.

Begin by securing the metal legs to the lower section of the playfield with hex bolts and washers, leaving the top two bolts slightly loose to aid in adding the upper section.



Team lift the upper playfield section into place and secure with bolts and washers; tighten all.



Remove the back doors of the playfield control boxes and set them aside. (4 screws each)



SET UP GUIDE, CONT.

Secure the brackets on half checker lights in the pilot holes near the top corners of the top of the game with the included black wood screws.



Place the marquee face down and remove the screws holding the yellow bracket arms to the backside. Re-attach them in the pilot holes as shown with the flanges facing each other.

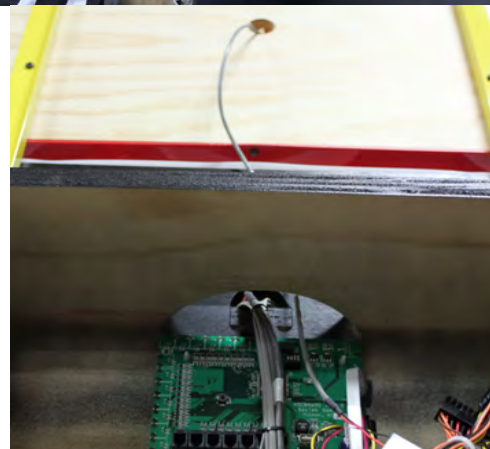
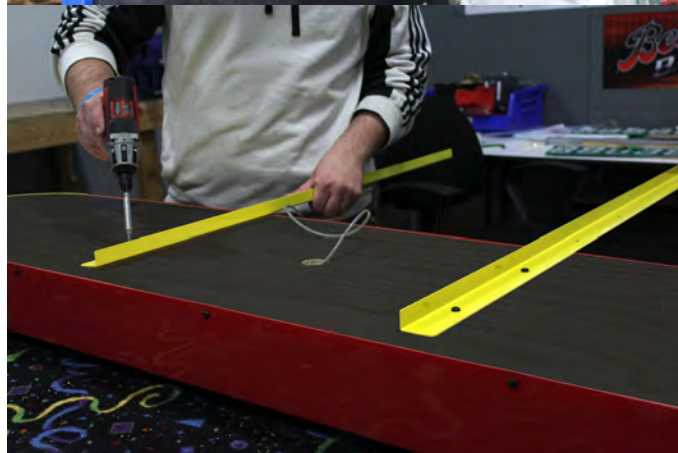


Secure the marquee brackets to the pilot holes on either side of the upper playfield control box with the included black wood screws. The bottom of the marquee will be about an inch above the half checker lights.

*the half checkers and marquee can be attached while the upper playfield is on the ground, but it will be heavier to lift onto the game

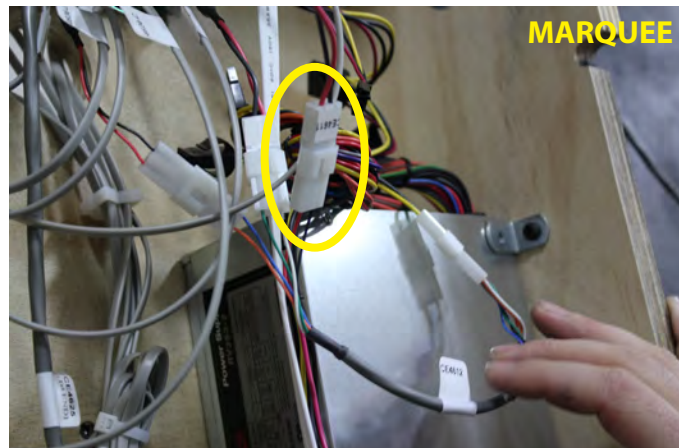


Insert the cables from both the half checkers and the marquee into the top hole of the upper playfield control box as shown.

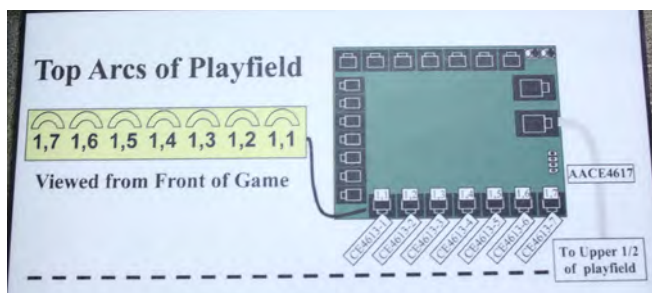


SET UP GUIDE, CONT.

Plug in the marquee cable (CE4623) to any one of the three housings on the power supply jumper (CE4612).



Insert each half checker cable 1-7 (CE4624) into its corresponding socket (for example, CE4624-1 is placed into socket #1). Refer to the wiring decal for a detailed diagram.



Lift the side wings into place. Insert the black self-tapping screws into the front holes, and secure to the back of the playfield with black wood screws.



front



back

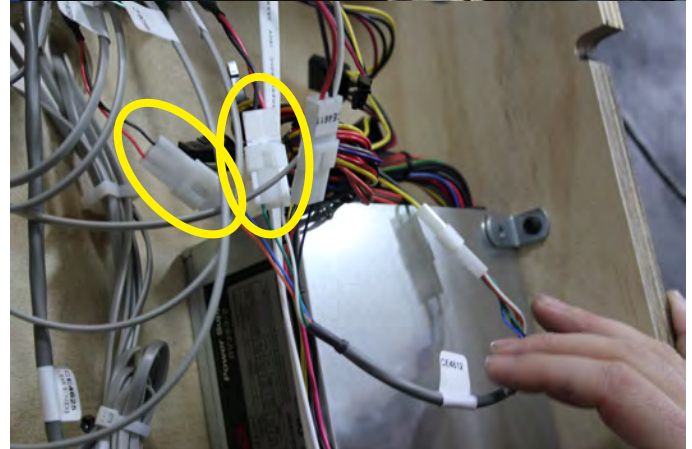


SET UP GUIDE, CONT.

Clip the side wing cables (CE4611) in the clamps along the top edge of the back of the playfield, and feed them through the top hole of the control box.



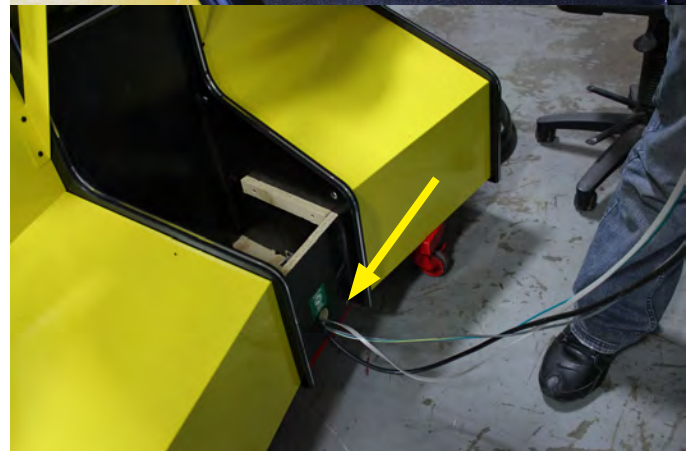
Plug the two ends of the side wing cables (CE4611) into the two remaining housings on the power supply jumper (CE4612) connected earlier to the .



Place the player console in front of the playfield, and remove the 4 screws holding the top of the central rear compartment.

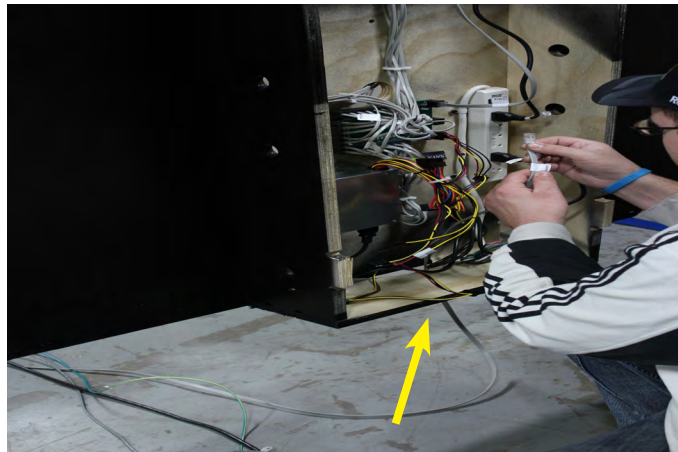


Remove the cables from the compartment, and feed all four through the hole; replace the top.

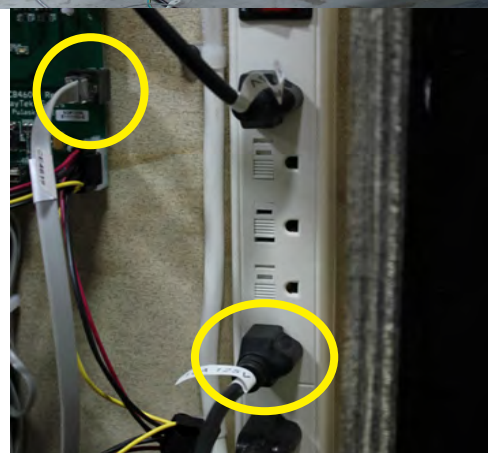


SET UP GUIDE, CONT.

Behind the playfield, feed the cables up through the hole in the bottom of the lower box.

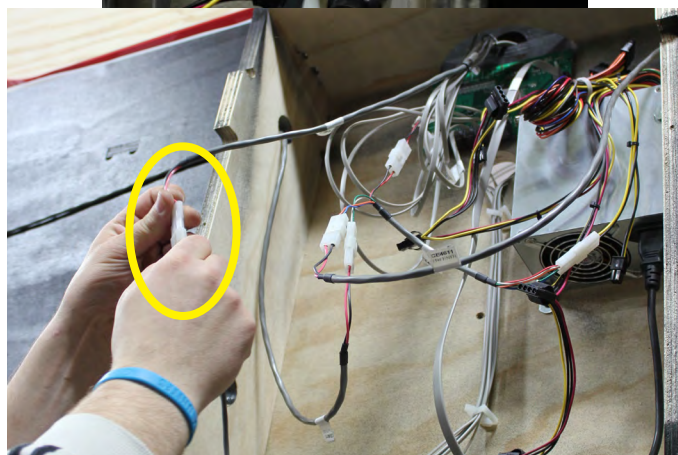


Insert the black power cable into the fourth outlet down on the power strip in the lower control box.



The **white phone cable** (CE4618) plugs into the **IN** socket on the light control circuit board in the lower control box.

The long gray round cable (CE4607) continues to the upper control box and plugs into the half checker cable two-pin housing (CE4625).



Be sure to feed the cables through the hole between the boxes.

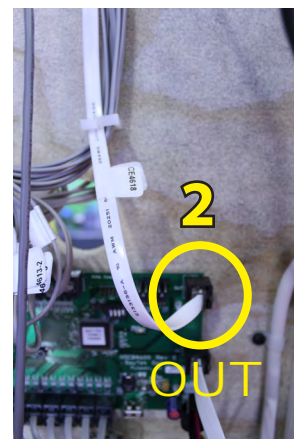
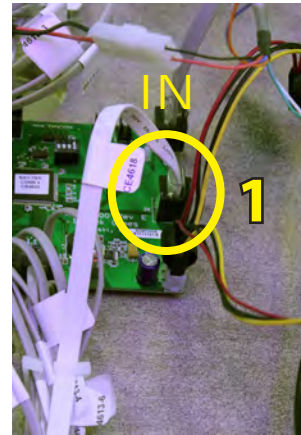
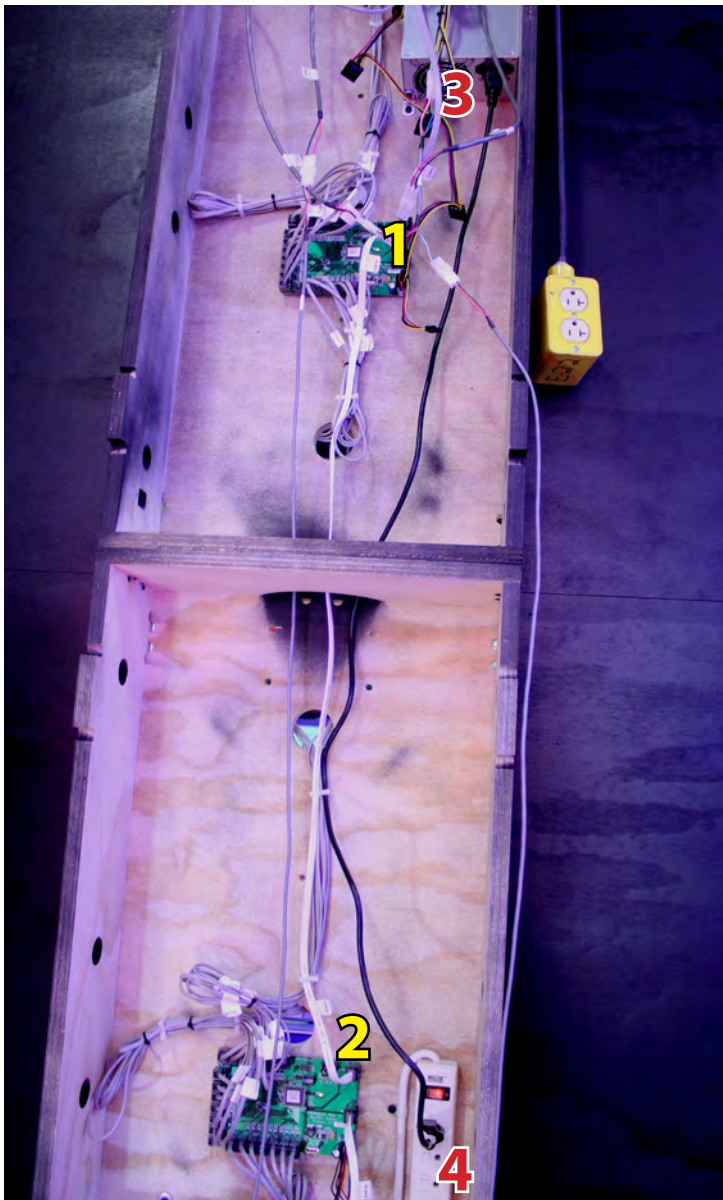
The **green ground wire** plugs into the short ground wire on the line filter box.



SET UP GUIDE, CONT.

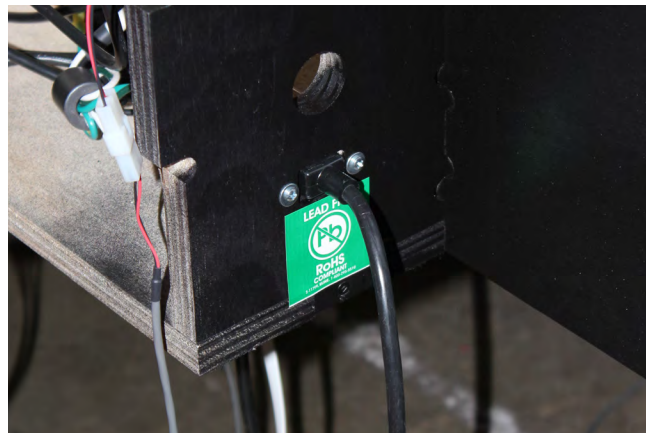
Connect the two halves of the playfield by plugging in the cables shown; one **white phone cord** (CB4618) between the two control boards, one **black power cord** between the upper power supply and the lower power strip. Refer to the wiring decals for detailed diagrams.

Be sure to feed the cables through the hole between the boxes.



SET UP GUIDE, CONT.

Plug the power cable into a standard electrical outlet and power on by flipping the power strip switch located in the lower playfield control compartment.



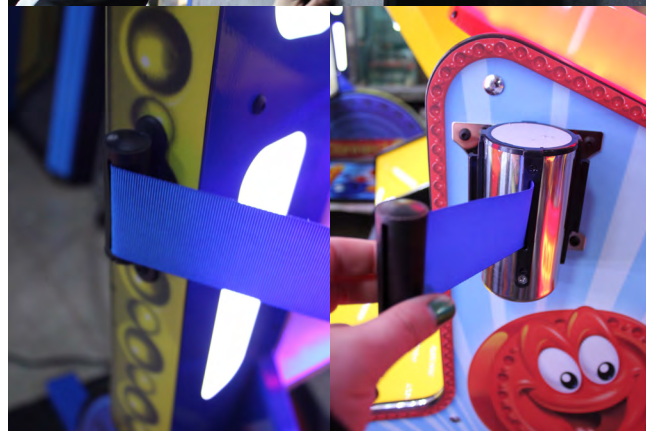
After the game powers up and everything is functioning correctly, cover the cables between the player console and the playfield with the included trip guard.



Replace the back doors, securing with 4 screws each.



Secure the retractable ropes on the console to the clips on the side wings.



Congratulations! You're ready to
Connect 4!

HOW TO PLAY

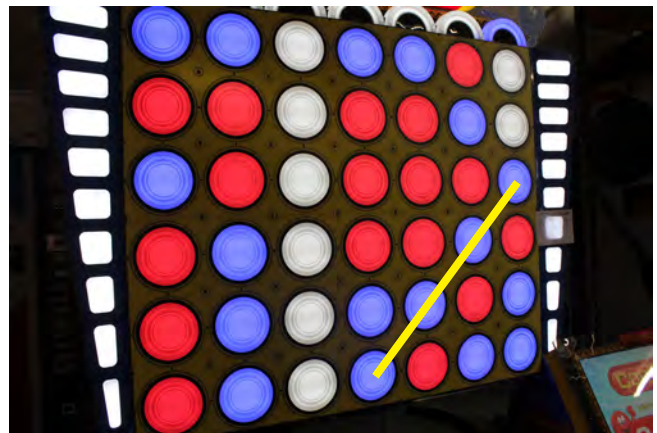
Pick a color and insert credits to play against the game or a friend



Move your chip left and right at the top of the grid with the arrow buttons, and hit the big button to drop your chip before the time runs out!



Be the first to align 4 of your chips horizontally, vertically, or diagonally to win and enter the bonus round.



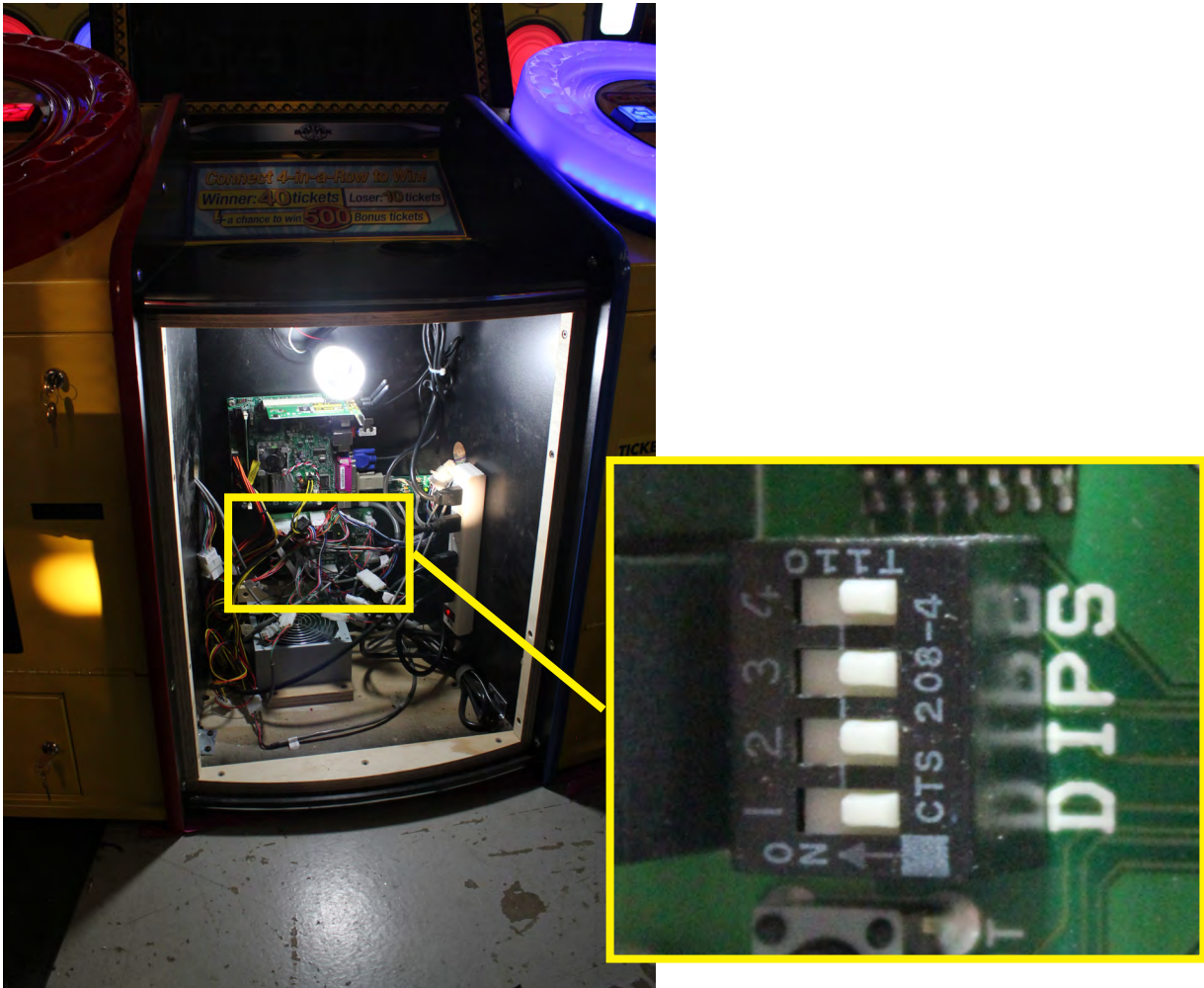
In the bonus round, win up to 500 tickets by hitting the stop button to stop the moving light on the target!



DIP SWITCH SETTINGS

The dip switch bank is located on the mainboard, inside the center of the player console.

*factory default settings are highlighted below



SWITCH	DESCRIPTION	ON	OFF
1	unused		
2	unused		
3	Jersey Shore (credit lockout/tickets owed)		
4	unused		

MAIN MENU FUNCTIONS

Press the **MENU BUTTON**, located inside the cabinet below the red player station, to enter the Main Menu.

Scroll through the menu with the **MENU BUTTON**, and make your selections with the **MENU SELECT*** button.



Connect 4 Main Menu
Game Setup
Statistics Menu
Diagnostic Menu
Exit Menu

PC SW Version = 1.00
Minigen SW Version = NONE

* to clear credits, press the Menu Select button while not in the menu.

GAME SETUP MENU



Coins/Credits per Game	Number of credits per game, per player	0	1	1 (card swipe)	2	4	6	8						
Time Per Turn	Seconds allowed per chip drop before auto-drop	6	8	10	12	20	30	60						
Tickets	Tickets awarded to winner/ loser/ draw	5/1/1 6-10 avg	10/5/5 10-14 avg	20/5/10 15-20 avg	30/10/15 22-26 avg	40/10/20 27-30 avg	50/10/25 31-35 avg	50/20/25 36-40 avg						
		60/20/30 41-45 avg	80/30/40 55-60 avg	80/40/40 61-65 avg	100/40/50 70-75 avg									
Jackpot Value	Tickets awarded for a bonus win (requires artwork change)	500												
Double Tickets	Pays out one physical ticket for every 2 tickets won	OFF				ON								
Use Coupons	Changes the wording on the monitors from "tickets" to "coupons"	OFF				ON								
CPU Difficulty	Changes game intelligence in one-player mode	1 (EASY)	2	3	4	5 (NORMAL)	6	7	8	9 (HARD)	AUTO-ADJUST			
Game Volume	Volume of game while in play	0	1	2	3	4	5	6	7	8	9	10	11	12
Attract Volume	Volume of game while not in play	0	1	2	3	4	5	6	7	8	9	10	11	12
Bonus Type	Changes game play of bonus round	ONE HIT BONUS					BONUS DISABLED							

STATISTICS MENU



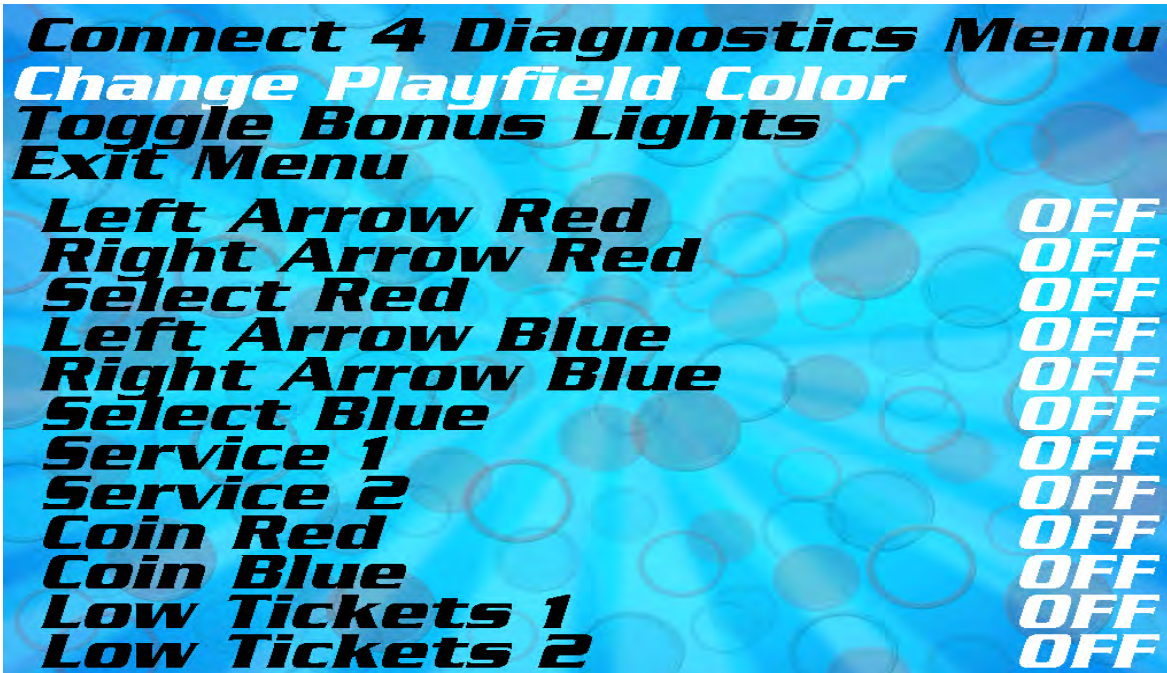
Total Games	Displays how many games have been played
Average Time per Game	Displays how long the average game lasts
Total Red Games	Displays how many games were played on the red side
Total Blue Games	Displays how many games were played on the blue side
Total Tickets	Displays how many tickets the game has given out
Average Tickets per Game	Displays an average value of tickets dispensed per game (includes bonus tickets)
Total CPU Games	Displays how many single-player games have been played against the computer
Total CPU Wins	Displays how many times the computer beat the player
Total CPU Losses	Displays how many times the player beat the computer
Total CPU Draws	Displays how many times the player and the computer tied
CPU Win Percentage	Displays a percentage of CPU wins out of total single-player games
Bonus Round Plays	Displays how many times the bonus round was played, single- and two-player
Bonus Tickets	Displays the total number of tickets dispensed from the bonus round
CPU Easy Total Games*	Displays how many times the computer played as "easy"
CPU Easy Total Wins*	Displays how often the computer won against the player in "easy"
CPU Normal Total Games*	Displays how many times the computer played as "normal"
CPU Normal Total Wins*	Displays how often the computer won against the player in "normal"
CPU Hard Total Games*	Displays how many times the computer played as "hard"
CPU Hard Total Wins*	Displays how often the computer won against the player in "hard"

* When the game is set to auto-adjust, this will help you determine the skill-level of your clientele. The largest number will occur in the skill-level most of your players fall into.

Press the "Menu Select" button 5 times to clear the statistics.

ALL statistics in this menu will be reset to 0.

DIAGNOSTIC MENU



Change Playfield Color	Selecting this diagnostic will light up the playfield in solid red, blue, and white to test for dim or burned out LED circuit boards
Toggle Bonus Lights	Selecting this diagnostic will turn the bonus value lights on and off to test for dim or burned out LED circuit boards
Left Arrow Red	<p>When any of these inputs are activated, it will show ON in the right column.</p> <p>This is useful to determine if the inputs are functioning correctly.</p>
Right Arrow Red	
Select Red (drop)	
Left Arrow Blue	
Right Arrow Blue	
Select Blue (drop)	
Service 1	
Service 2	
Coin (mech) Red	
Coin (mech) Blue	
Low Ticket Switch 1 (Red)	
Low Ticket Switch 2 (Blue)	

HOW TO: Change Ticket Patterns

Default Ticket Pattern for \$1.00 per play, 1 cent ticket value.

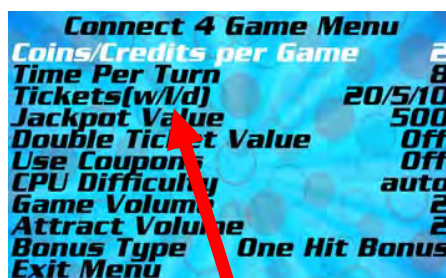
Winner receives 50 tickets
Loser receives 20 tickets
Tie Game (Draw) Player receives 25 tickets



A5DE4662-50/20
36 - 40 Tickets per Game

Average tickets paid out per game will vary depending on:

- Single players or Head-to-Head Play:
Two player games will average more tickets being paid out.
One player games will average less tickets being paid out.
- CPU Difficulty Setting:
When playing against computer, most players loose.
- Skill of Individual Player



Please allow game a 2 week time period at a specific pattern to set a good baseline before an attempt at changing ticket patterns.

w/l/d = Win/Lose/Draw - Tickets won if a player wins, losses, or ties.

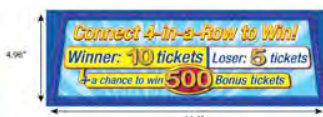
Instructions:

- Enter menu and cycle to "Game Menu"
- Use Menu Select button to cycle through "Tickets(w/l/d)" to desired value.



A5DE4662-5/1

6-10 Tickets per Game



A5DE4662-10/5

10-14 Tickets per Game



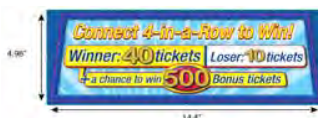
A5DE4662-20/5

15-20 Tickets per Game



A5DE4662-30/10

22-26 Tickets per Game



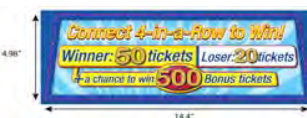
A5DE4662-40/10

27-30 Tickets per Game



A5DE4662-50/10

31-35 Tickets per Game



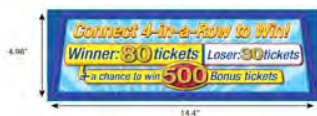
A5DE4662-50/20

36-40 Tickets per Game



A5DE4662-60/20

41-45 Tickets per Game



A5DE4662-80/30

55-60 Tickets per Game



A5DE4662-80/40

61-65 Tickets per Game



A5DE4662-100/40

70-75 Tickets per Game

Note: The numbers listed at the bottom of each pattern are estimated payouts per game based on customer feedback and may vary depending on the skill of the individual player.

Please use these numbers as a guide only. For more info: Please call Parts & Service (920) 822-3951

HOW TO: Replace Player Button Switches

Player Station Pushbuttons can be accessed from the player station front door—reaching up underneath the player station.

The switches must be removed first before button can be removed and /or replaced.

**Important: The switches do not pull straight off!
They must be given a slight twist, then removed—as follows:**

Left and Right Buttons:

To Remove Switch:

Original Locked Position



Twist to Unlock



Un-Locked Position Ready to Remove

To Install Switch:

Un-Locked Position Insert Switch



Twist to Lock



Final Locked Position

Center Drop Button:

To Remove Switch:

Original Locked Position



Twist to Unlock



Un-Locked Position Ready to Remove

To Install Switch:

Un-Locked Position Insert Switch



Twist to Lock



Final Locked Position

HOW TO: Update Software

Needed for Software Update:

- #2 Square bit screwdriver
- One USB motherboard software
- One USB stick for MiniGen board

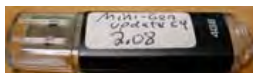
Installation Instructions:

Overview – This software upgrade consists of 2 steps:

- MiniGen software loading.
- Motherboard software installation.

MiniGen Software loading - NOTE: Game power must remain ON for this procedure.

- 1) Locate the USB stick with the MG designator for MiniGen Board.



- 2) Access the control panel in the lower middle front of the game. Remove the 12 square headed screws and remove plexi.



- 3) Insert the USB stick into the main board controller as shown here:



- 4) To trigger your file to load, press the small pushbutton next to the dipswitches.

NOTE: The file will load quickly; you will notice that the USB stick will flash, audio will reset after about 1 second, and the game will return to normal operating condition.



Motherboard Software Installation

- 1) Power down your game and disconnect the main power plug.
- 2) Locate USB software stick with the PC designator for Motherboard.
- 3) Remove existing USB stick and install the new USB stick with PC program.



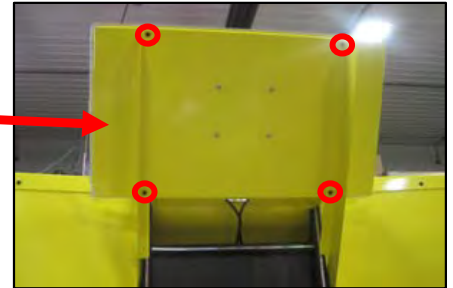
If you have any questions or need further assistance please contact Bay Tek Games. You may reach our Service Team at 920-822-3951 ext. 1102

HOW TO: Remove Monitor

1.) Remove Monitor Frame -

Remove 4 screws in back of monitor support.

Remove 3 nuts under center cabinet area where main board is located.



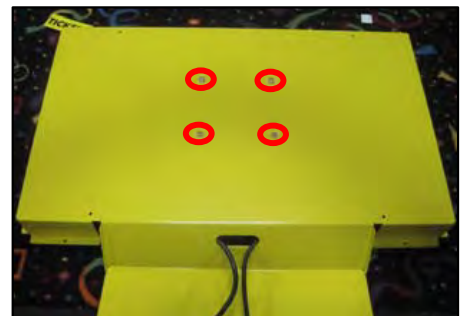
2.) Remove Plexi-

Remove 7 screws from front plexi to access monitor menu buttons to fix blurry, bright, or dim video.



3.) Remove monitor from metal frame-

Remove 4 bolts to remove monitor.



DIAGNOSTICS: Motherboard Power Supply

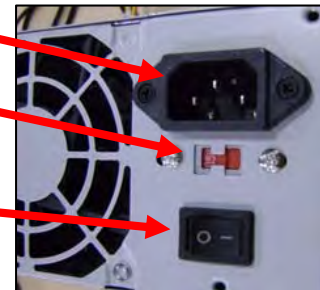
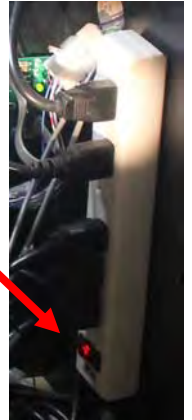
Monitor not coming on?

1.) Verify AC power to front of game.
Check power strip in bottom front of game for light ON inside rocker switch.
If light is not ON, remove back panel of cabinet and check AC power in and Power Strip in that location.

2.) Check AC power connection to power supply.

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

4.) Ensure Power switch is on.

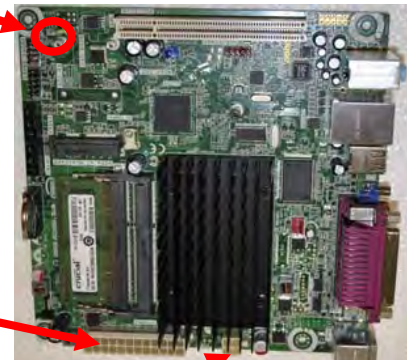


5.) Examine top left corner of motherboard. There is green LED ON.
If LED is not ON, replace power supply. (AAPS4600)

6.) Check connections from power supply.
Make sure these 2 connections are secure.

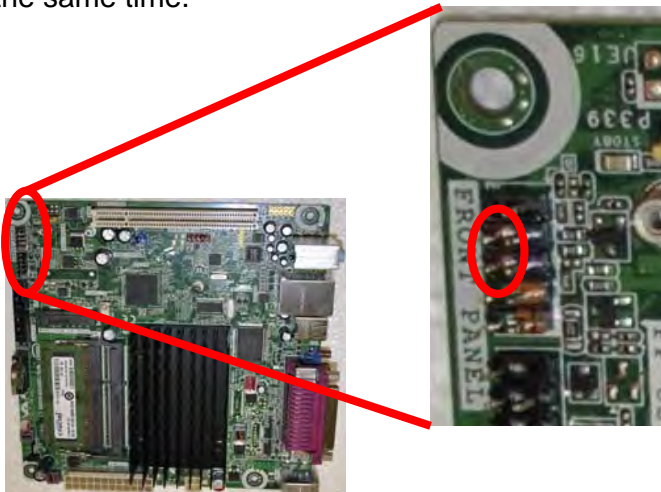
7.) **“Jump Start” Motherboard:**

If green LED is ON, but monitor is not ON, you may start motherboard by quickly touching these 2 red pins at the same time.



Large power supply connection

2 Black and 2 yellow wires
(12 Volts DC)



DIAGNOSTICS: Dollar Bill Acceptor

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.

First 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:

Due to the different models and brands of Bill Acceptors that are used:
Examine Bill Acceptor and determine if acceptor is 12 Volt DC or 110 VAC
Use meter to measure voltage at cable going into Bill Acceptor.



If power is OK:

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

Enter DBA Diagnostics Mode -

Important—Do not hold button down too long or Bill Acceptor will enter programming mode.

If accidentally entered programming mode by mistake—Unplug game and plug back in.

To enter Diagnostic Mode, press and hold the Diagnostic Button on the back left corner of the DBA for **1-3 seconds.**

The lights above the bill slot will flash the code.

ERROR CODES

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

FLASHING CODE	DESCRIPTION	CORRECTIVE ACTION
LEDs off	Power off	Turn on power
LEDs on	Acceptor is OK	
1 flash	Bill path blockage	Un-jam bill path
2 flashes	Stacker jam	Un-jam stacker
3 flashes	Cassette is full of bills	Empty the cassette
4 flashes	Cassette is removed	Replace the cassette
5 flashes	Acceptor is defective	Replace the acceptor
6 flashes	Acceptor not enabled	See service manual
10 flashes	Configuration Mode	Power down to exit
Rapid flashing during operation	Stringing attempt detected; or sensors dirty	Clean the sensors

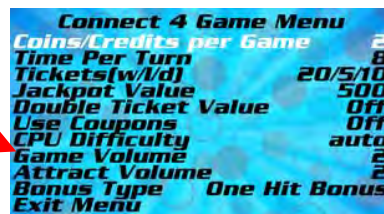


TROUBLESHOOTING GUIDE

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.

Symptom	Probable Cause	Remedy
No power to the game. No lights on at all. No light on front power strip.	Unplugged. Circuit breaker tripped. Power strip in back of game is faulty. Faulty cable/power supply.	Check wall outlet, power cord to back of game (A5CORD5) Line Filter (A5FI9010) Reset power strip breaker switch or building circuit breaker. Remove back wood panel, change plug position, replace if needed. Refer to AC Power to Game Section.
AC Light and Bill Acceptor on. But everything else off. (Power Supply not ON)	Power supply unplugged. Rocker Switch on power supply is Off. 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. Refer to Monitor/Motherboard Power Supply Diagnostics section.
LED cabinet lighting not working.	LED's under player stations and on rear playfield should turn on with the associated power supplies.	Refer to "Back of Game LED Wiring" section and "Lights under Player Station Wiring" section.
No Audio	Volume too low. Loose wire. Faulty main Board Faulty motherboard	Increase the volume by pressing Menu button, scroll to "Game Volume" and adjust. Check audio cable connections from motherboard to main board to speakers. Check audio cable connections from speaker(AACE8811), cable(AACE4604), main circuit board(AANEWGEN1-PJ), cable(A5CEAU010), motherboard (AAMB7) Replace Main Board. (AANEWGEN1-PJ) Main board amplifies sound from motherboard. Replace Motherboard. (AAMB7) Motherboard creates sound. Cable can be removed from motherboard to MP3 player to test for sound amplification. If the MP3 player works, then motherboard is faulty.



TROUBLESHOOTING GUIDE

Symptom	Probable Cause	Remedy
<p>Tickets do not dispense.</p> <p>Swap cable from one output on main board to the other to verify cable/dispenser problem or main board problem.</p>	<p>Ticket tray empty due to faulty low ticket switch or broken/ loose wires. Switch stuck or switch wire bent out of position.</p> <p>Faulty cable to dispenser.</p> <p>Dirty opto-sensor or paper dust buildup in ticket dispenser</p> <p>Notch on tickets too shallow.</p> <p>Ticket dispenser faulty.</p> <p>Main circuit board malfunction.</p>	<p>Fill ticket tray. Replace low ticket switch(AASW200). Repair wiring. Clean ticket tray of dirt, loose tickets or debris. Bend switch wire to correct position under tickets.</p> <p>Check wiring continuity from dispenser to main board (AACE4606, AACE4605, AACE4600) Check for pinched, broken or disconnected wires. Replace as necessary.</p> <p>Clean with compressed air and if necessary wipe sensor with isopropyl alcohol on a cotton swab.</p> <p>Flip tickets and load upside-down to have large cut notch toward opto sensor.</p> <p>Replace dispenser with spare working dispenser (A5TD1)</p> <p>Replace main board if possible to isolate the problem to the main circuit board. (AANEWGEN1-PJ)</p>
<p>Wrong number of tickets dispensed.</p>	<p>Ticket Pattern set wrong.</p> <p>Dirty opto-sensor on ticket dispenser.</p> <p>Many tickets in memory. If ticket meter is counting the tickets coming out, then reset game.</p> <p>Notch on tickets cut too shallow.</p> <p>Faulty ticket dispenser.</p> <p>Main circuit board malfunction.</p>	<p>Enter menu and cycle to Game Menu. Verify correct settings for Ticket Patterns, Jackpot Value, and Double Ticket Value</p> <p>Clean with compressed air or wipe with isopropyl alcohol on a cotton swab.</p> <p>Turn game off, wait 10 seconds, and turn game back on.</p> <p>Flip tickets and load upside-down to have large cut notch toward opto sensor.</p> <p>Replace with spare working dispenser (A5TD1).</p> <p>Swap cable from one output on main board to the other to verify cable/dispenser problem or faulty main board. (AANEWGEN1-PJ)</p>
<p>Menu buttons do not work.</p>	<p>Stuck pushbutton.</p> <p>Cable problem.</p> <p>Faulty pushbutton.</p>	<p>Inspect pushbutton to make sure it is not stuck. Check continuity on connector.</p> <p>Check cable from pushbutton to main board. (AAPB2700 & AACE4608)</p> <p>Replace pushbutton. (AAPB2700)</p>

TROUBLESHOOTING GUIDE

Symptom	Probable Cause	Remedy
<p>Dollar Bill Acceptor not functioning.</p> <p>Caution – 110 Volts AC</p> <p>Cable can be moved between left and right sides to isolate problem to DBA.</p>	<p>Ensure bill acceptor has 110 Volts AC.</p> <p>Dirt or debris in acceptor slot.</p> <p>Ensure acceptor dipswitch is set to “always enable”</p> <p>Pinched, broken, or disconnected wiring.</p> <p>Bill acceptor problem.</p>	<p>Acceptor should cycle stacker at game power up. If not, check cable connections to power strip.</p> <p>Clean with bill reader cleaning card(A5CC9000)</p> <p>There are dips on side of acceptor. Set to “always enable”, not harness enable</p> <p>Check wiring from bill acceptor to main board. Repair or replace wiring harness. (AACE4626, AACE4627, AAACE4602)</p> <p>Refer to troubleshooting section of dollar bill acceptor manual included with this game or the diagnostics label of the back of the unit.</p>
<p>Monitor not working.</p> <p>Power down, wait 10 seconds and power up again.</p>	<p>Error on screen at power up.</p> <p>Display stops at "No bootable device - insert boot disk and press any key"</p> <p>Re-Boot game to see if problem still exists.</p>	<p>Flash drive unplugged from board or faulty.</p> <p>Re-seat and try power on to game again.</p> <p>Insert USB stick in different slot on motherboard</p> <p>Replace USB software stick.</p> <p>Replace motherboard. (AAMB7)</p>
	<p>Monitor says “NO SIGNAL” for 5 seconds after power-up. Then dark.</p>	<p>Refer to Monitor/Motherboard Power Supply Diagnostics Section</p>
	<p>Monitor has nothing at all on power up.</p> <p>Power cable unplugged from monitor.</p> <p>Faulty monitor.</p>	<p>Ensure power is plugged into back of monitor, down to power strip.</p> <p>Replace monitor. (A5MO2200)</p>

TROUBLESHOOTING GUIDE

Symptom	Probable Cause	Remedy
Monitor problems	Blurry Monitor - Too bright, or dim.	Monitor will have to be removed from game, and adjusted from front of screen. Refer to "How to Remove Monitor" Section Use menu buttons to access monitor adjustment
Both sides do not coin up. Menu buttons do not work.	Communication between motherboard and main board disrupted. I/O Aux Board may be faulty, wires disconnected from main board, or not receiving 12 VDC power.	Refer to Motherboard to MiniGen Board Communication troubleshooting section for details on cable connections. Check I/O Aux Board for any disconnected wires. Ensure phone cable is plugged into blue socket on main board.
Game does not coin up. Note: To clear Credits: Press Menu Select button while not in menu.	One of coin switches jammed, or held down. Short in coin door harness. There should be 5 Volts between grey and green wires. Switch faulty in coin mech. Disconnected, loose or broken wires. Mini-Gen Main Board faulty.	If one coin switch is "closed" the other one will not work either. Unplug white molex from door, and jump between grey and green wires to simulate coin-up. Unplug one coin switch at a time and verify coin switch is wired normally open. Replace coin mech if coin is always rejected. (A5CM-...) Check connectors. Check for continuity. (AACE4601, AACE4602, AACBL4A-DOOR) Replace main board. (AANEWGEN1-PJ)
Low tickets displays on monitor.	Stack of tickets not resting properly on either of the low ticket switches Faulty switch. Faulty wire or connection. Faulty main board.	Adjust stack of tickets so they hold both the switch actuators down. Replace low ticket switch. (AASW200) Check for proper connection from switch to main board. Check continuity. (AACE4605, AACE4606, AACE4600) Replace main board. (AANEWGEN1-PJ)

TROUBLESHOOTING GUIDE

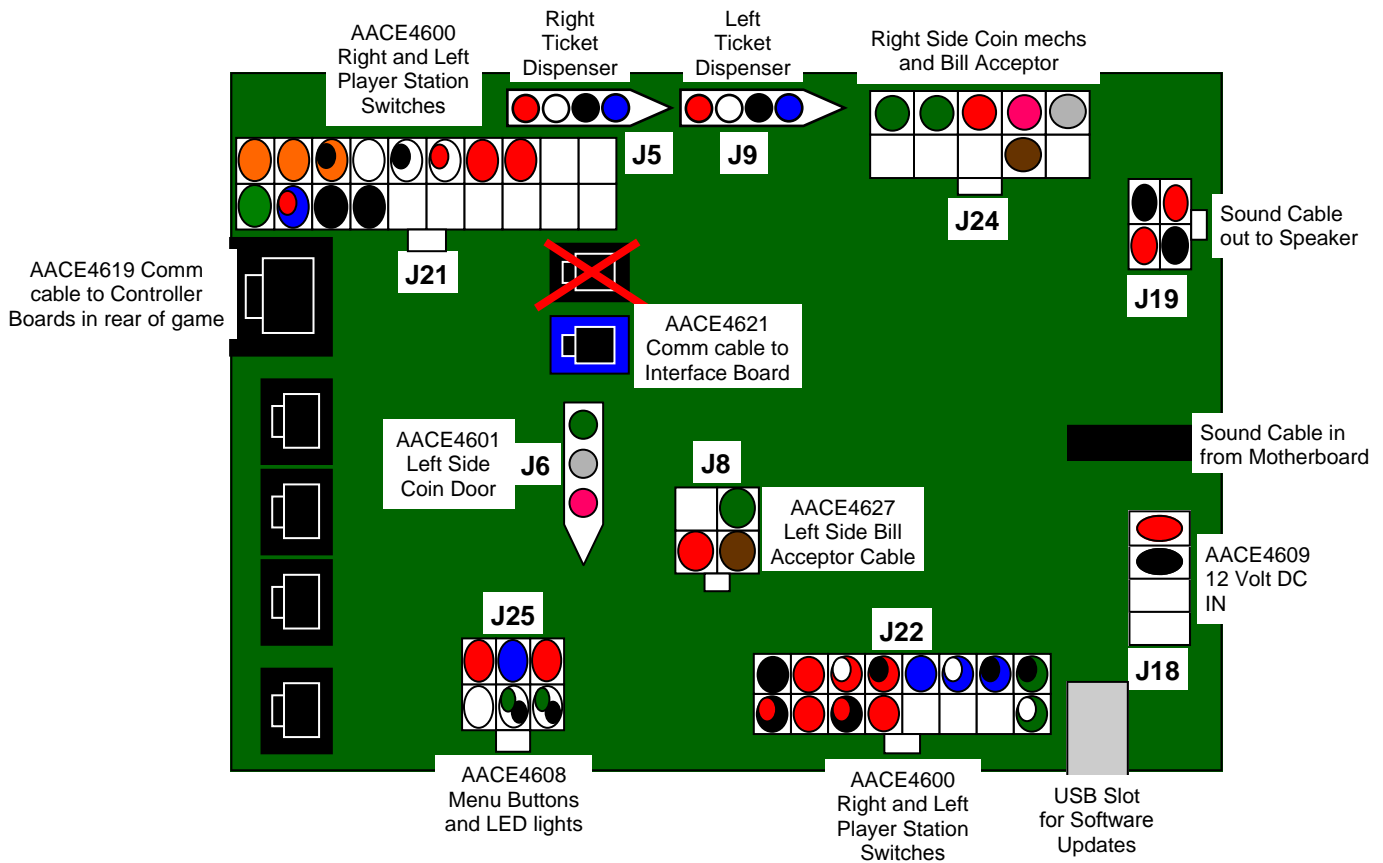
Symptom	Probable Cause	Remedy
Bonus Lights do not come on at end of game.	Bonus Feature not enabled in menu. Faulty cable from bonus light boards in top back of game to main board in front of game. Faulty center bonus light board Power comes into this board. Faulty main board.	Enter menu and set "Bonus Type" to "One Hit Bonus" Check wiring continuity from light boards to main Board. (AACE4625, AACE4607, AACE4600) Check for pinched, broken or disconnected wires. Replace as necessary. Replace center bonus light board. (AACB4602) Refer to Back of Game Wiring Diagram. Replace main board. (AANEWGEN1-PJ)
All Bonus Lights stay ON.	Surface mounted transistor blown on main board caused by 12 Volt dead short on one of the bonus light circuit boards.	Locate 12 Volt short. Refer to Back of Game Wiring Diagram. Repair cable (AACE4624) or replace bonus light board (AACB4602) Replace main board. (AANEWGEN1-PJ)
Some Bonus Lights stay ON.	Faulty bonus light circuit board.	Refer to Back of Game Wiring Diagram. Replace bonus light board (AACB4602)
Arc Light Boards do not come on, or stay on.	Cable is plugged into wrong socket. Faulty cable from Arc Light Board to Controller Board. Faulty arc light boards. Faulty Controller Board.	Refer to Back of Game Wiring Diagram, and Connect Four Playfield Wiring Diagram for proper connection. Ensure cable is secure, swap cable to isolate problem. Replace as needed. (AACE4624) Swap arc light boards to isolate problem, replace if needed. (AACB4603) Ensure Dip's 3 & 4 are ON for top board. Swap boards to isolate problem, replace if needed. (AACB4600)
Purple or Pink lights on playfield.	Dipswitches set wrong on Controller Boards RGB Light Board Faulty One of power supplies is faulty. Controller Board faulty.	Refer to Connect Four Playfield Wiring Diagram - make sure that 2 lower boards have Dip 4 ON, and top board has Dip 3 & 4 ON Refer to Target Wiring Example- Cables can be swapped into different sockets to isolate problem to rear controller board or front RGB Light Board. Refer to AC Power to Game - If one power supply is faulty, it will not power RGB board correctly. Replace power supply if needed. (AAPS4600) Refer to Back of Game Wiring Diagram, and Connect Four Playfield Wiring Diagram - Controller boards can be swapped to isolate problem. (Make sure dips are set correctly) Replace controller board if needed. (AACB4600)

TROUBLESHOOTING GUIDE

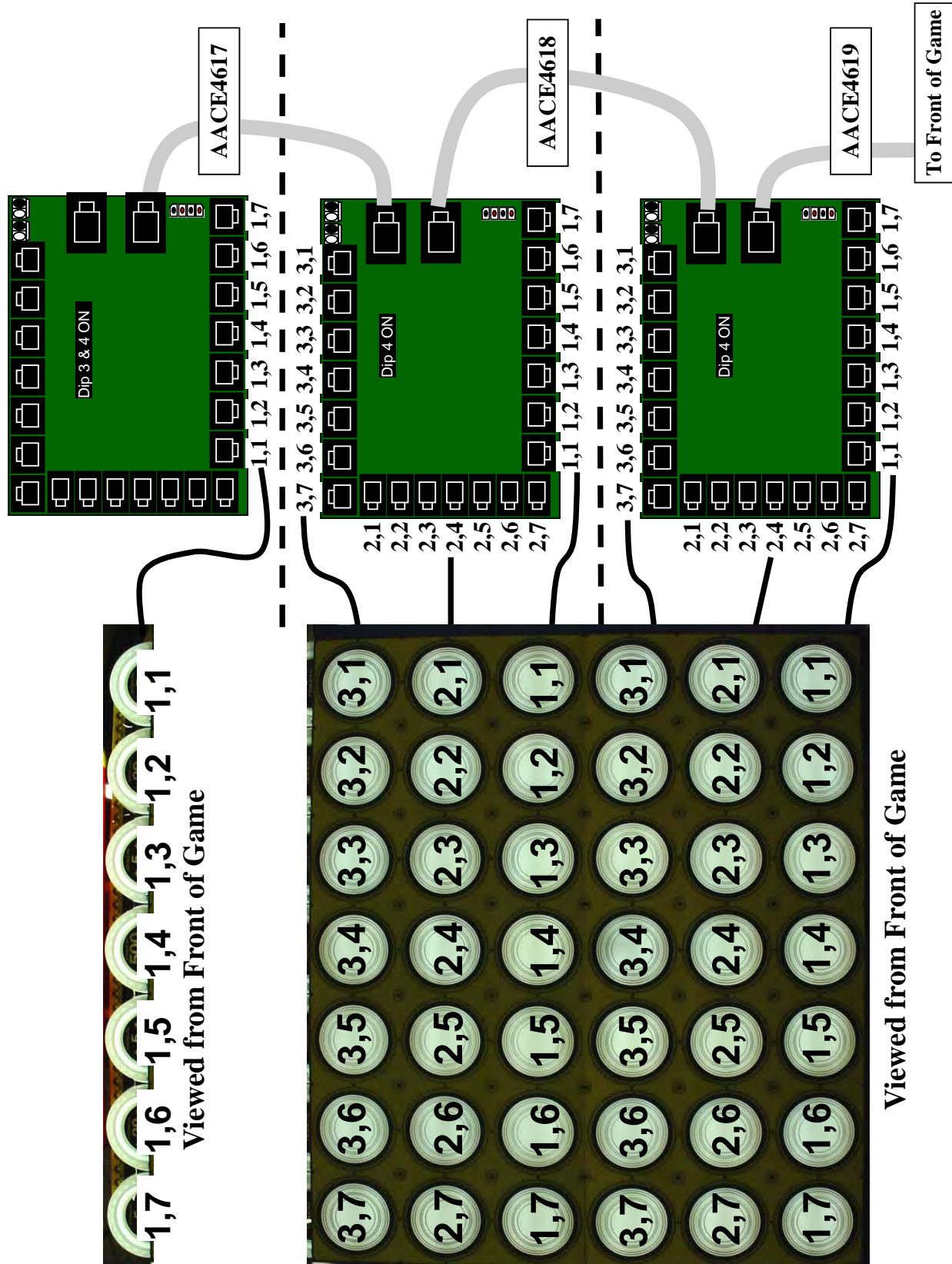
Symptom	Probable Cause	Remedy
Lights under player stations do not light up.	LED strip under faulty Faulty Cable Faulty Main Board	Remove plastic cover and examine LED strip. Check cables from LED strips to main board. (ACE4620, ACE4621, ACE4608) Replace main board. (AANEWGEN-PJ)
Lights under player stations stay on all the time.	Surface mounted transistor blown on main board.	Replace main board. (AANEWGEN-PJ)
Lights under Arrow & Drop Pushbutton do not come on. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Light under button should be ON in attract, flashing when coined up, and during players turn, and off during computers turn.</div>	Burnt out LED bulb. Faulty Cable Faulty Main Board	Replace switch/bulb assy. (A5PB460x) Check cables from pushbutton to main board. (ACE4603, ACE4600) Refer to Left and Right Player Stations, Counters Wiring Diagram Swap ACE4600 cable molex connectors from left and right to isolate problem to one side. Replace main board. (AANEWGEN-PJ)
Lights under Arrow & Drop Pushbutton stays on.	Surface mounted transistor blown on main board.	Replace main board. (AANEWGEN-PJ)
Arrow & Drop Pushbuttons do not work.	Pushbutton itself is broken or stuck down Faulty Cable Faulty Main Board	Refer to “How to Replace Player Station Switches” to remove switch to inspect. Check cables from pushbutton to main board. (ACE4603, ACE4600) Refer to Left and Right Player Stations, Counters Wiring Diagram Replace main board. (AANEWGEN-PJ)
Meters do not work. Game counter clicks at start of each game. Ticket counter clicks as tickets come out of game.	The 2 wires crimped together may be faulty Faulty Cable. Faulty Main Board.	Inspect crimp to ensure good connection. Check cables from counters to main board. (ACO1000, ACE4603, ACE4600) Replace main board. (A5NEWGEN1-PJ)

MAIN BOARD WIRING

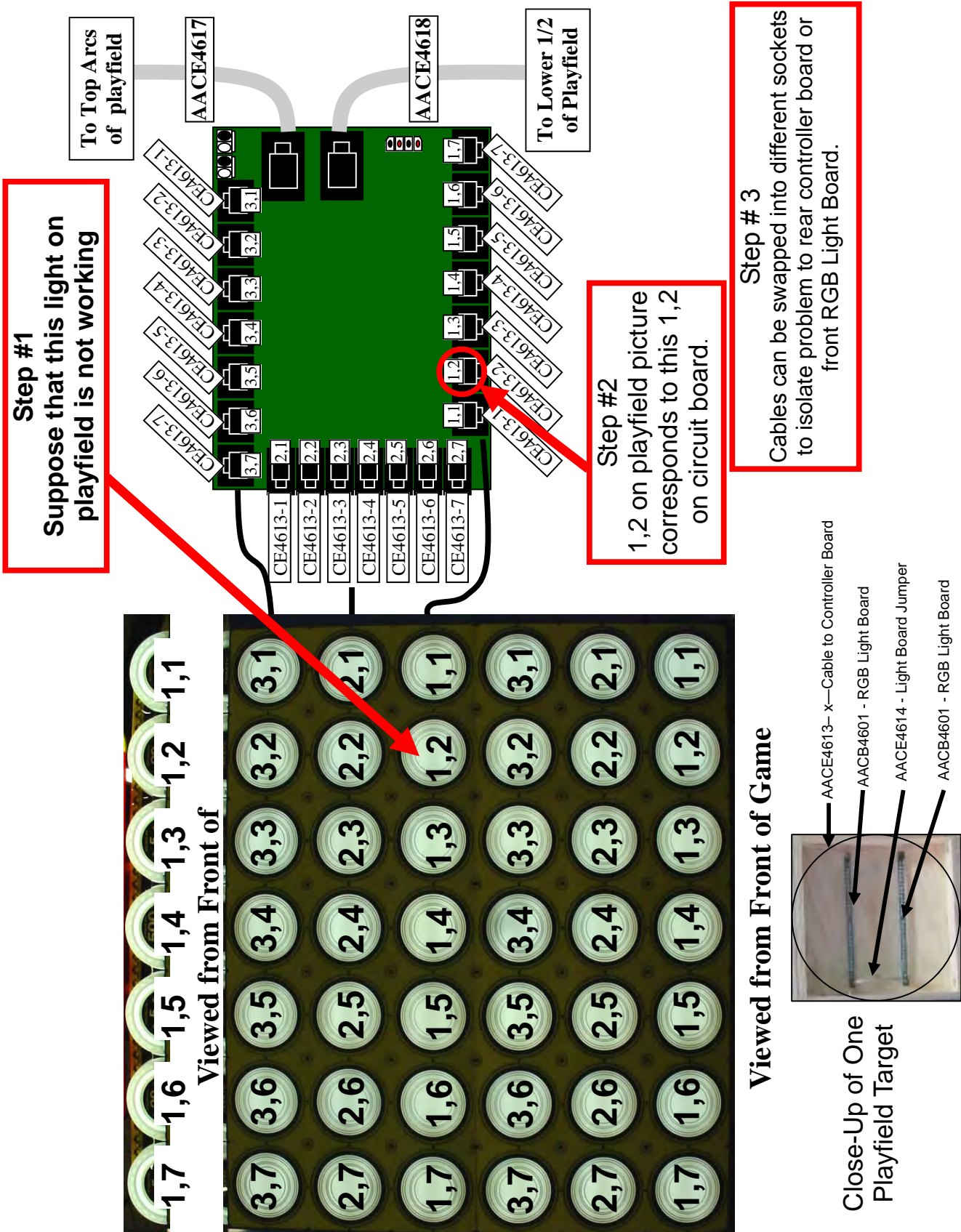
AANEWGEN1-PJ



PLAYFIELD WIRING



PLAYFIELD WIRING EXAMPLE



WIRING DIAGRAMS

COIN DOORS AND TICKET DISPENSERS

Right Side Player Station

Right Side Coin Switches and Lights

To Ticket Dispenser
Part # A5TD1
Red= 12 Volt Power
White=Enable Signal
Black= Com Ground
Blue= Notch Signal



To J5 on Main Board

AACBL4A-DOOR

AACE4602

To J24 on Main Board

AACE4626

To Bill Acceptor on Right Side

To Ticket Dispenser
Part # A5TD1
Red= 12 Volt Power
White=Enable Signal
Black= Com Ground
Blue= Notch Signal

AACE4061

To J9 on Main Board

To J6 on Main Board

AACE4061

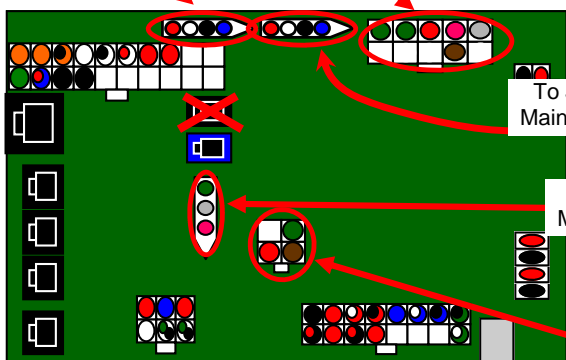
AACBL4A-DOOR

To J8 on Main Board

AACE4627

To Bill Acceptor on Left Side

AACE4626



Left Side Player Station

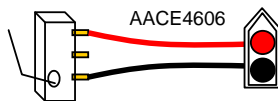
WIRING DIAGRAMS

LOW TICKET SWITCHES, SPEAKERS, MENU BUTTONS



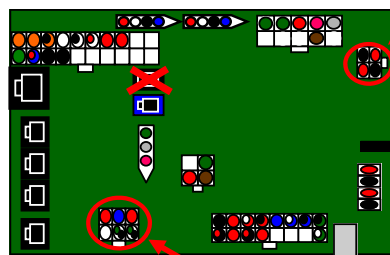
To AACE4600 - to J21 Connector
Right Side Low Ticket Switch

Low Ticket Switch
Wired Normally Open
A5SW200

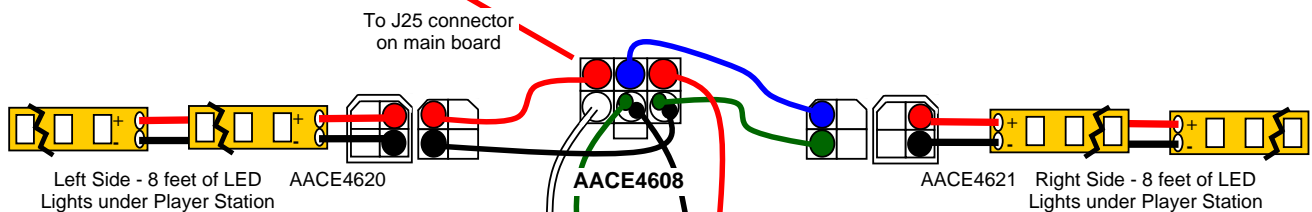


To AACE4600 - to J21 Connector
Left Side Low Ticket Switch

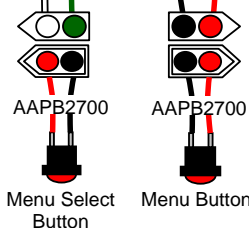
Low Ticket Switch
Wired Normally Open
A5SW200



Phono Jack A5CEAU010 brings sound from Motherboard to Mini-Gen to be amplified.



Left Side Player Station

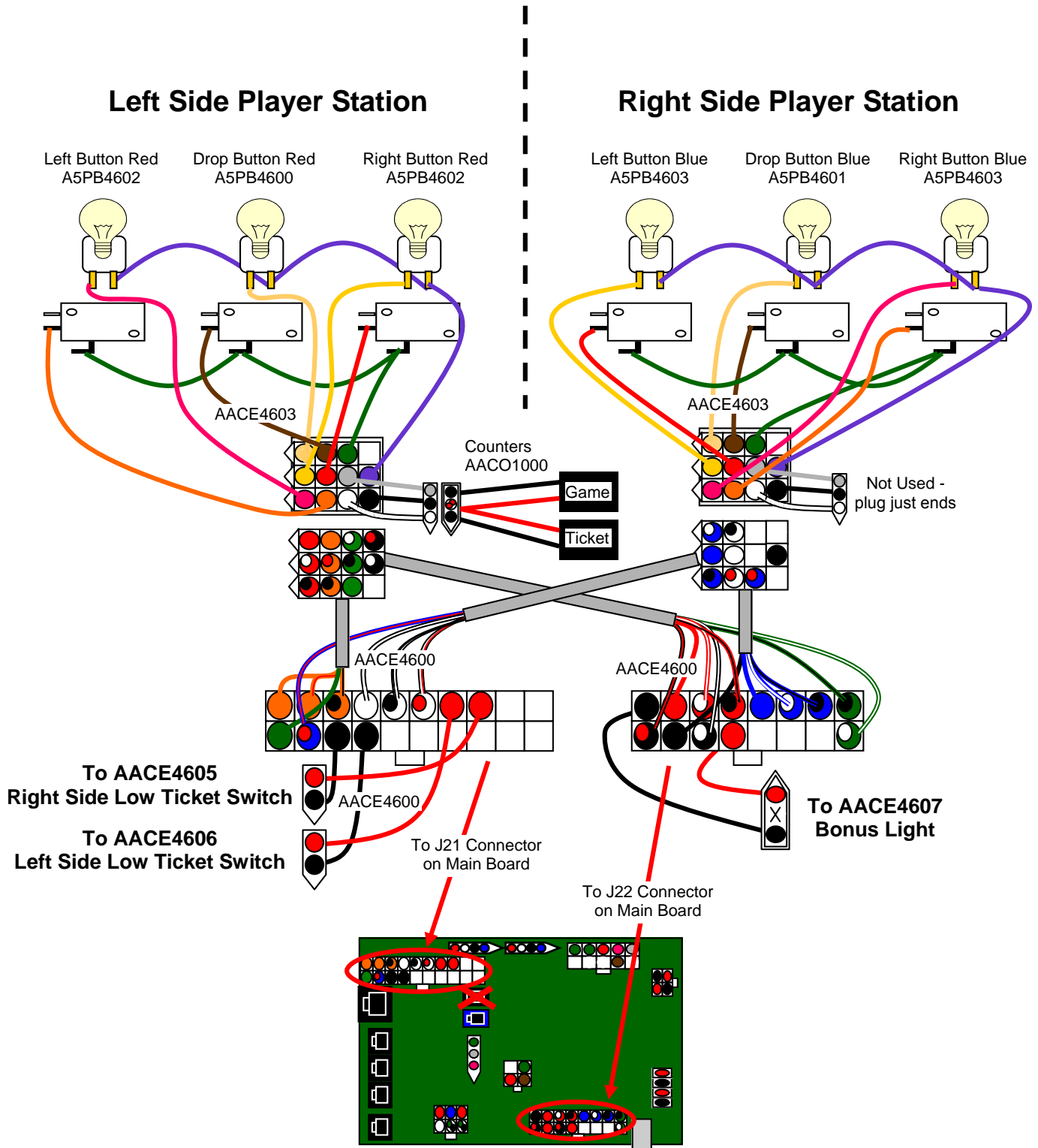


Right Side Player Station

PLAYER STATION LIGHTS

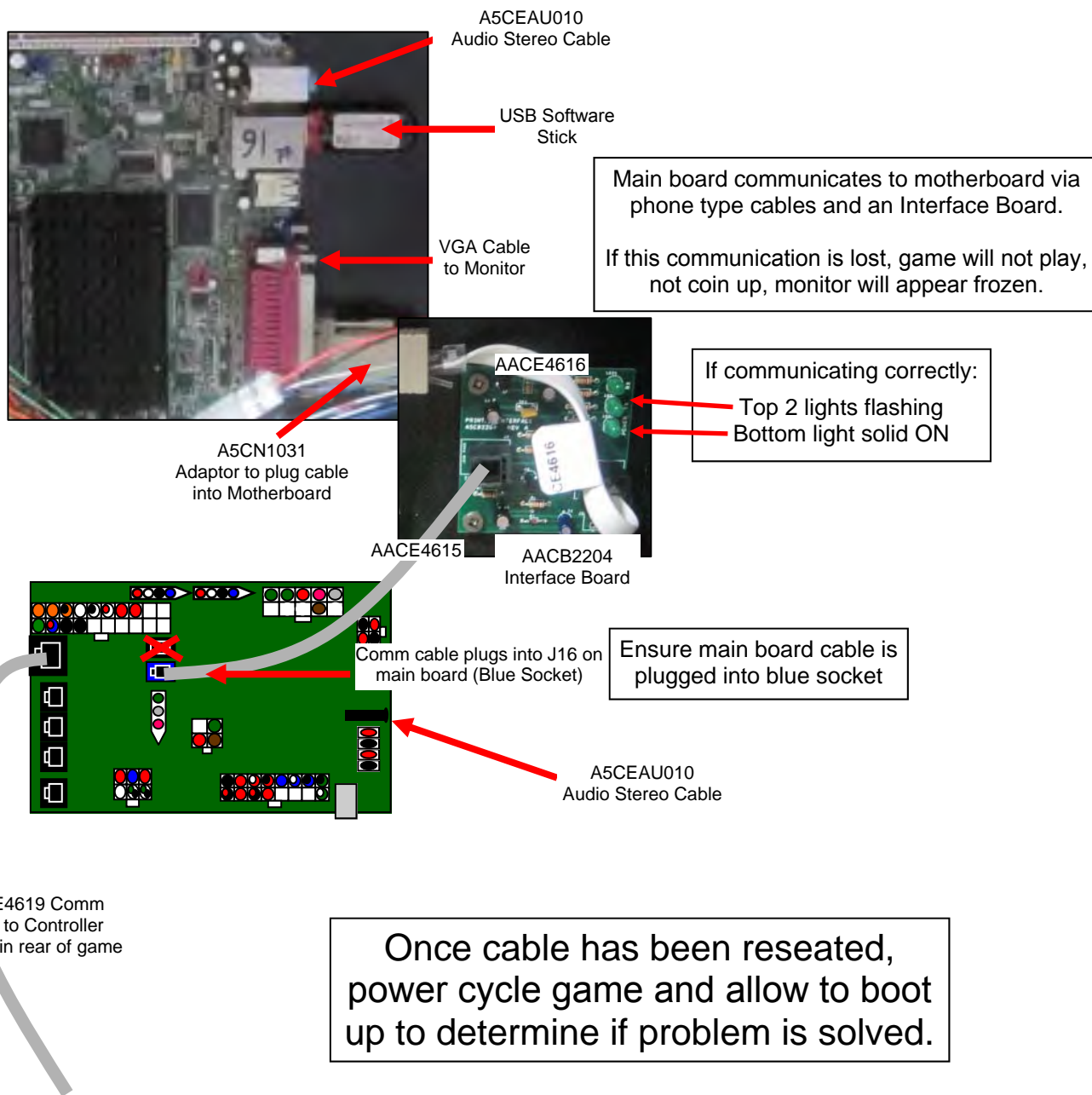
WIRING DIAGRAMS

PLAYER STATION BUTTONS AND COUNTERS



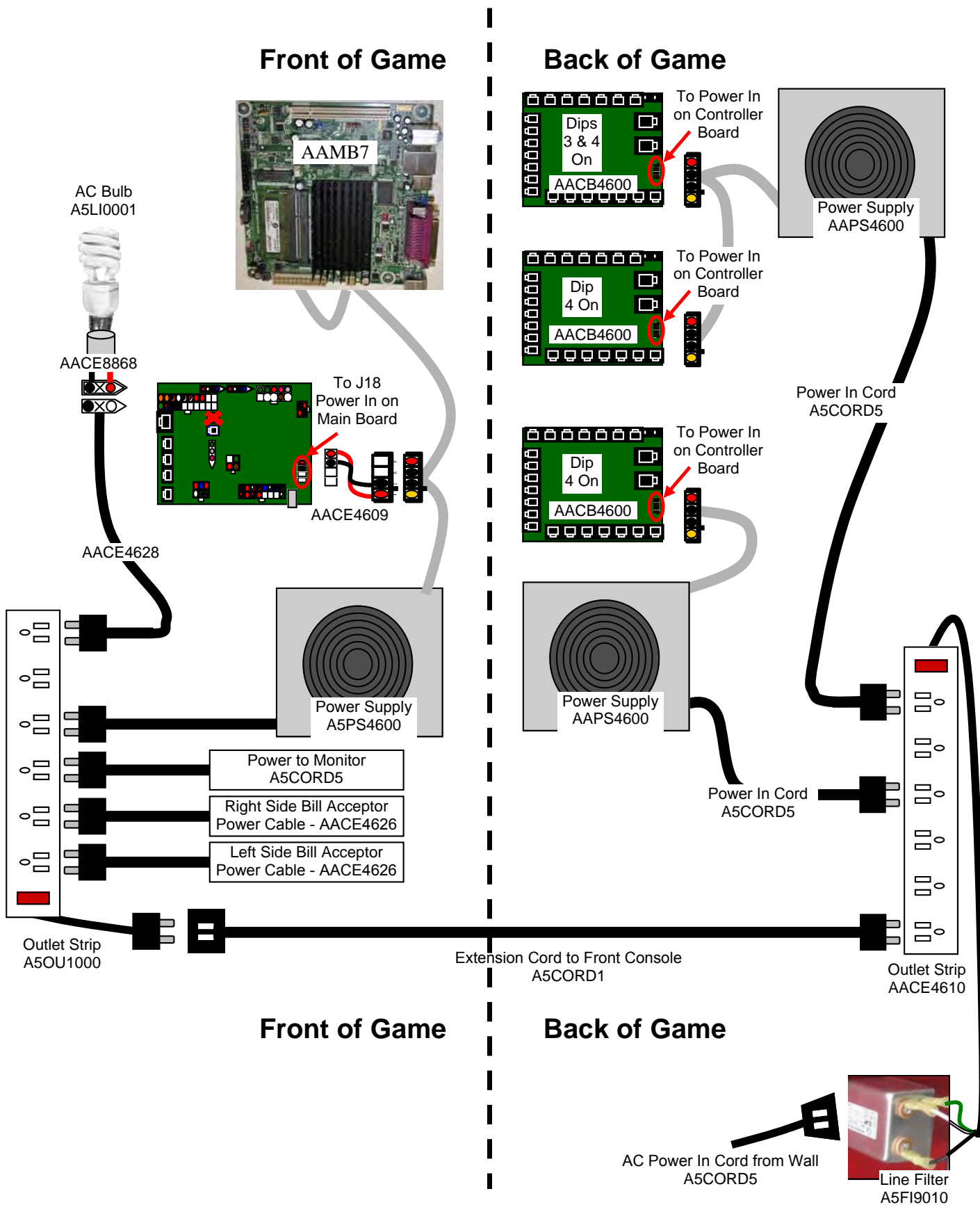
WIRING DIAGRAMS

MOTHERBOARD TO MINIGEN COMMUNICATION



WIRING DIAGRAMS

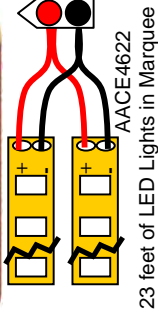
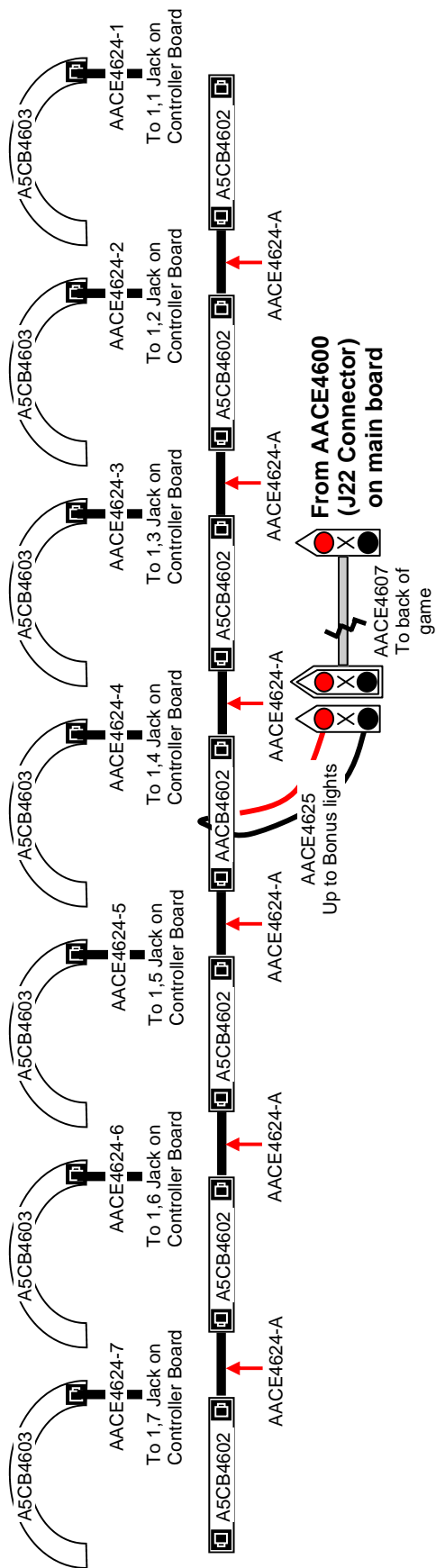
AC POWER TO GAME



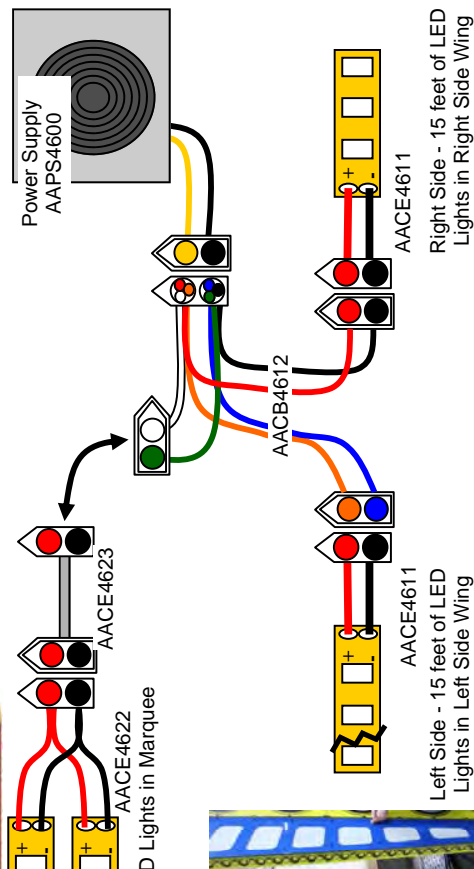
WIRING DIAGRAMS

CONSTANT-ON LED WIRING

HALF-CHECKERS



23 feet of LED Lights in Marquee



Right Side - 15 feet of LED Lights in Right Side Wing

Left Side - 15 feet of LED Lights in Left Side Wing

SIDE WINGS & MARQUEE

PARTS LIST

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
A5CB8020	Cash Box	DECALS & PLEXI	
A5FI9010	Inline Filter	A5DC9950	Yellow Tickets Decal
A5LI0001	120V 60HZ Fluorescent Light	A5DE4650	Top Marquee Decal
W5TM1316	13/16 Black/Silver T-Molding	A5DE4651	Number 4 Marquee Decal
A5CN1031	Adapter	A5DE4652	Half Checker "5" Ticket Decal
A5PB4600	Jumbo Red Drop Button	A5DE4653	Half Checker "20" Ticket Decal
A5PB4601	Jumbo Blue Drop Button	A5DE4654	Half Checker "500" Ticket Decal
A5PB4602	Red Arrow Scroll Button	A5DE4655	Checker Insert Decal
A5PB4603	Blue arrow Scroll Button	A5DE4656	Monitor Frame Decal
AACO1000	Counters	A5DE4657	Front Console Decal
A5PL9097	Blanking Plate	A5DE4658	Left Console Decal
A5PL9995	Ticket Dispenser Blanking Plate	A5DE4659	Right Console Decal
A5PL9998	Coin Door Blanking Plate (No Holes)	A5DE4660	Player Station Decal
A5TT4100	Ticket Tray	A5DE4661	Game Board Hub Decal
AASW200	Low Ticket Switch	A5DE4662	Game Console Instruction Decal
A5OU1000	Outlet Strip	A5DE4663	Wing Strip Decal
AAPB2700	Push Button	A5DE4664	Red 500 Bonus Checker Decal
A5MO2200	22" Widescreen Monitor	A5DE4665	Blue 500 Bonus Checker Decal
A5TD1	Ticket Dispenser	A5DE4667	Checker Grid Decal
AAPS4600	Power Supply	A5DE4672	Front Edge Trim Decal
CIRCUIT BOARDS		A5DE4673	Back Edge Trim Decal
AACB2204	Interface Board for Printer	A5DE4674	Checker Insert Shim Decal
A5CB4601	Game Board Light (84 Per Game)		
A5CB4602	Bonus Light Boards (6 Per Game)		
A5CB4603	Arc Boards (7 Per Game)		
AACB4600	Controller Board (3 per Game)		
AACB4602-1	Main Bonus Light Board		
AANEWGEN1-PJ	Mini Gen1 With Phone Jack		
AAMB7	Main Board		

PARTS LIST

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
CABLES		AACE4614	Playfield Board Jumpers
A5CEAU010	Audio Stereo Cable	AACE4615	Mini Gen to Printer Board Jumper
AACBL4A-DOOR	Door Cable	AACE4616	MB7 to Printer Board Jumper
AACE4600	LED Player Consol Light Cables	AACE4617	Aux Board Jumper
AACE4601	Red Door Cables	AACE4618	Aux Board Jumper
AACE4602	Blue Door Cables	AACE4619	Mini Gen to Aux Board Jumper
AACE4603	Red & Blue Player Button Cables	AACE4620	Red Checker LED Cable
AACE4604	Mini Gen to Speaker Cable	AACE4621	Blue Checker LED Cable
AACE4605	Left Low Ticket Cable	AACE4622	Connect 4 Marquee Lights
AACE4606	Right Low Ticket Cable	AACE4623	Marquee Light Jumper
AACE4607	Bonus Light Marquee Power Cable	AACE4624-1	Bonus Marquee Light Board Jumpers
AACE4608	Menu Button Cable	AACE4624-2	Bonus Marquee Light Board Jumpers
AACE4609	Mini Gen Power Cable	AACE4624-3	Bonus Marquee Light Board Jumpers
AACE4610	Power Strip Cable Assembly	AACE4624-4	Bonus Marquee Light Board Jumpers
AACE4611	Wing Lights	AACE4624-5	Bonus Marquee Light Board Jumpers
AACE4612	Wing & Top Marquee Power Jumper	AACE4624-6	Bonus Marquee Light Board Jumpers
AACE4613-1	Playfield Light Cables	AACE4624-7	Bonus Marquee Light Board Jumpers
AACE4613-2	Playfield Light Cables	AACE4625	Bonus LED Power Cable
AACE4613-3	Playfield Light Cables	AACE4626	DBA Power Cable
AACE4613-4	Playfield Light Cables	AACE4627	DBA Jumpers
AACE4613-5	Playfield Light Cables	AACE4628	Light Socket Power Cable
AACE4613-6	Playfield Light Cables	AACE8811	Speaker Assembly With Cable
AACE4613-7	Playfield Light Cables	AACE8868	Fluorescent Light Cable Assembly

PARTS PICTURES



A5CB4601



A5CB4602



A5CB4603



AACB2204



AACB4600



AACB4620-1



AAMB7



AANEWGEN1-PJ



AACE8811



AAPB2700



A5DE4662-5/1



A5DE4662-10/5



A5DE4662-20/5



A5DE4662-30/10



A5DE4662-40/10



A5DE4662-50/10



A5DE4662-50/20



A5DE4662-60/20



A5DE4662-80/30



A5DE4662-80/40



A 5



A5CO4600



A5PB4600



A5PB4601



A5PB4602



A5PB4603

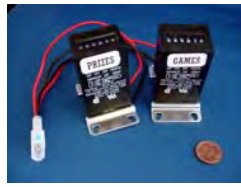
PARTS PICTURES



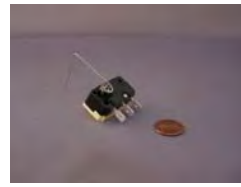
A5OU1000



AACE8868



AACO1000



AASW200



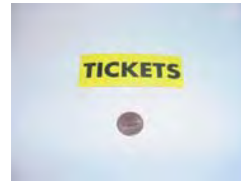
A5CEAU010



A5CB8020



A5CORD1



A5DC9950



A5FI9010



A5LI0001



A5LK2000



A5LK5001



A5BR4600



A5CA4600



AACBL4A-DOOR



A5TT4100



A5PL9097



A5PL9995



A5TD1



AAPS4600



AACE4600



AACE4601



AACE4602

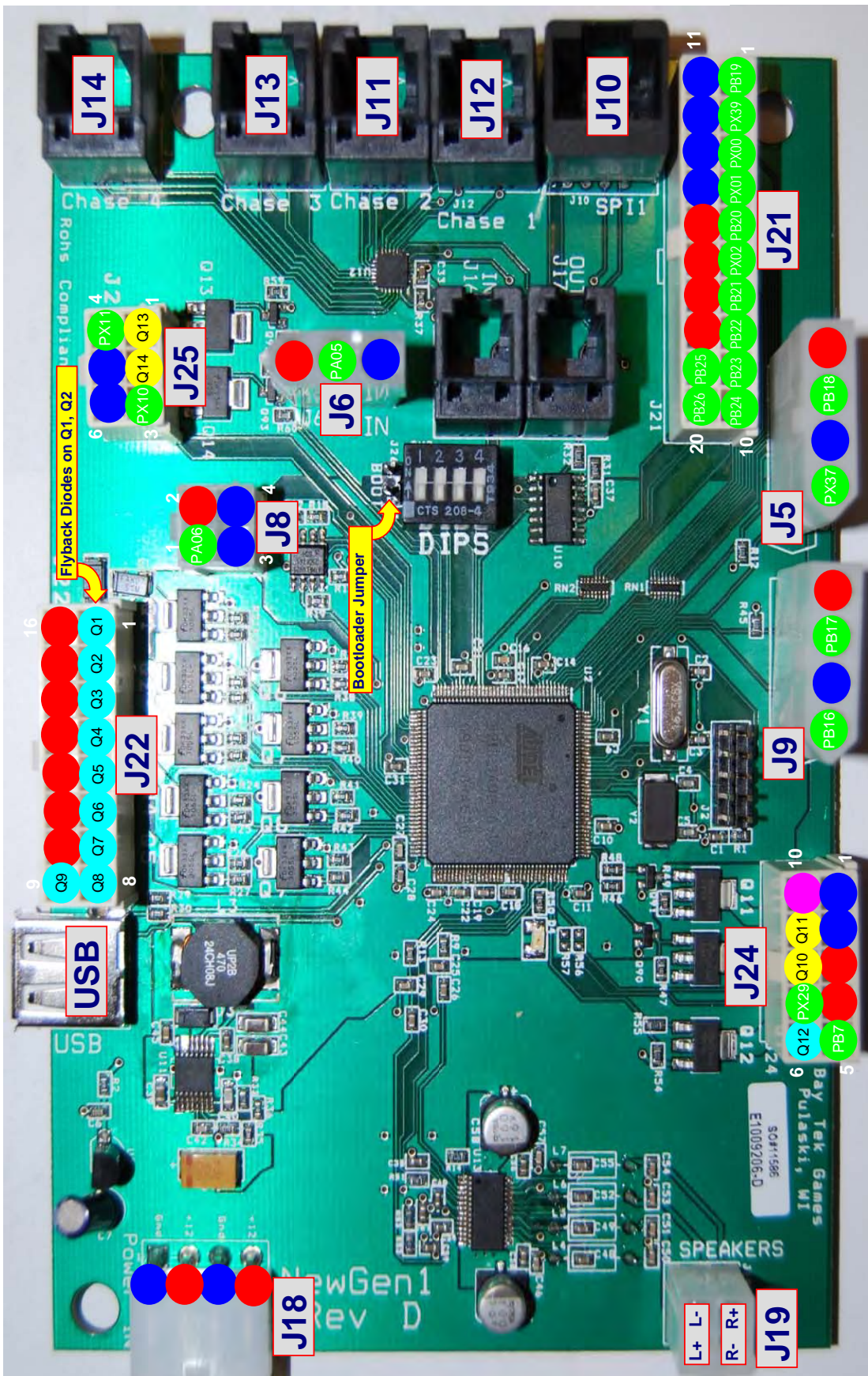


AACE4603

DECAL IDENTIFICATION



MAINBOARD PINOUT



- SPI Out - Display - (J10)**
 - Pin 1 & Pin 3 - +12V
 - Pin 2 - SCLK_BUS2
 - Pin 4 - SMOSI_BUS2
 - Pin 5 & Pin 7 - Ground
 - Pin 6 - SCS2_BUS2
 - Pin 8 - SMISO_BUS2
- Chase Lights (J11,J12,J13,J14)**
 - Pin 1 - Chase Output
 - Pin 2 - Chase Output
 - Pin 3 - +12V
 - Pin 4 - Chase Output
 - Pin 5 - Chase Output
 - Pin 6 - +12V

- Ground**
- +12V**
- Low Side Driver**
- High Side Driver**
- +3.3V TTL Logic**
- +3.3V**

MAINBOARD PINOUT GUIDE

BayTek Connect 4 NEWGEN1 Hardware REV D Pinout - Version 1

Low Side Driver
High Side Driver
TTL Input/Output
LED Constant Current Drive
+12 Volts
Ground

Pin Type	Purpose	Ref	Pin #
LOWSIDE #1, w diod	Upper White Bonus Lights	J22	1
LOWSIDE #2, w diod	Arrow Left ButtonLamp Station #1	J22	2
LOWSIDE #3	Arrow Right ButtonLamp Station #1	J22	3
LOWSIDE #4	Select ButtonLamp Station #1	J22	4
LOWSIDE #5	Arrow Left ButtonLamp Station #2	J22	5
LOWSIDE #6	Arrow Right ButtonLamp Station #2	J22	6
LOWSIDE #7	Select ButtonLamp Station #2	J22	7
LOWSIDE #8	Mechanical Counter #1	J22	8
LOWSIDE #9	Mechanical Counter #2	J22	9
+12 Volts		J22	11
+12 Volts		J22	12
+12 Volts		J22	13
+12 Volts		J22	14
+12 Volts		J22	15
+12 Volts		J22	16
+12 Volts		J22	17
+12 Volts		J22	18
+12 Volts		J22	19
+12 Volts		J22	20

Pin Type	Purpose	Ref	Pin #
Ground		J24	1
Ground	Coin Ground Station #2	J24	2
+12 Volts		J24	3
+12 Volts	Coin Door Power Station #2	J24	4
PB7	Coin Input Station #2	J24	5
LOWSIDE #12	Lower White Bonus Lights	J24	6
PX29	DBA Input Station #2	J24	7
HIGHSIDE #10		J24	8
HIGHSIDE #11		J24	9
3.3V		J24	10

PX37	Ticket Notch #1	J5	1
Ground	Ground for Ticket Dispensor	J5	2
PB18	Ticket Motor #1	J5	3
+12 Volts	Power for Ticket Dispensor	J5	4

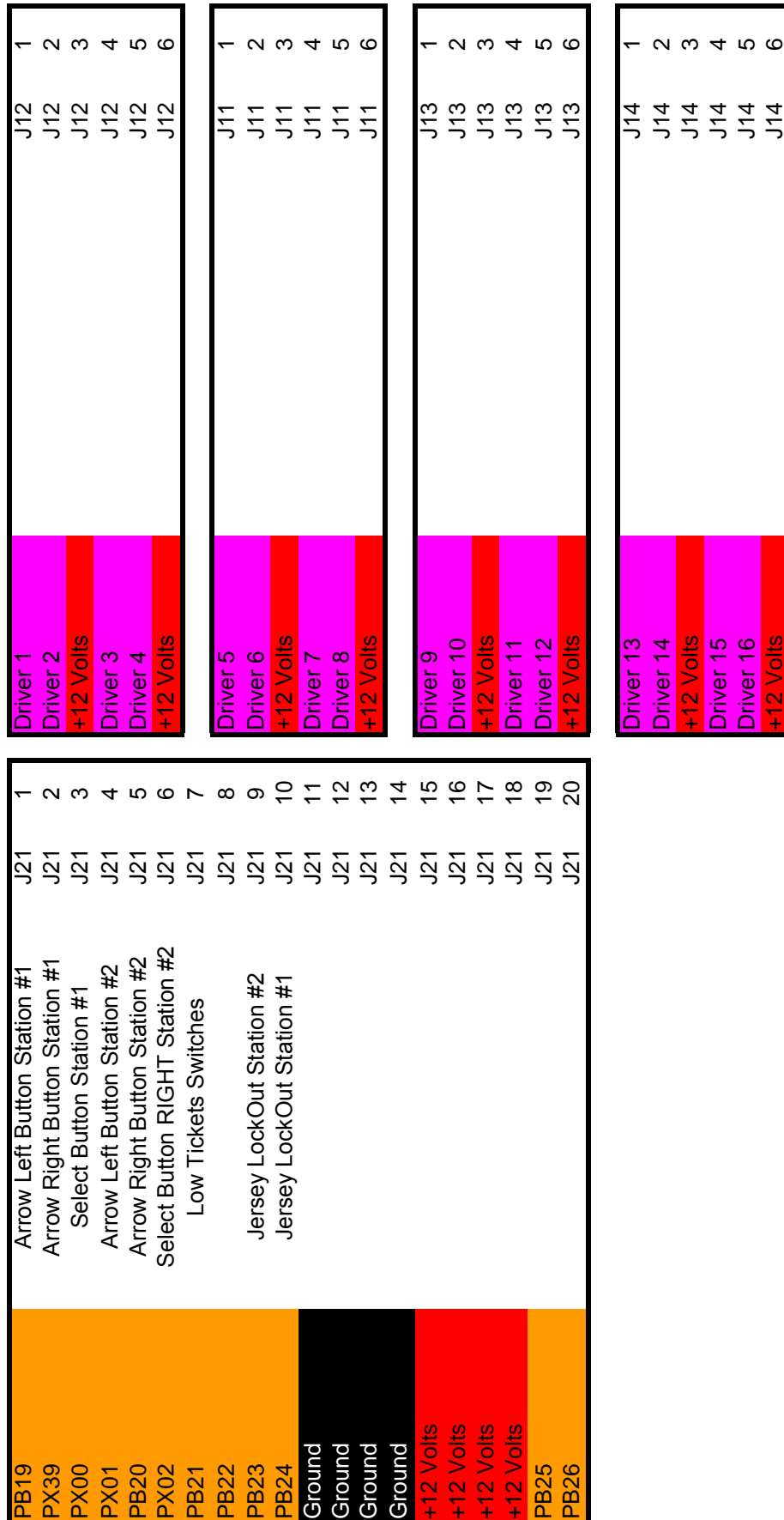
PB16	Ticket Notch #2	J9	1
Ground	Ground for Low Ticket Switch	J9	2
PB17	Ticket Motor #2	J9	3
+12 Volts	Power for Ticket Dispensor	J9	4

PA06	DBA Input Station #1	J8	1
+12 Volts		J8	2
Ground		J8	3
Ground		J8	4

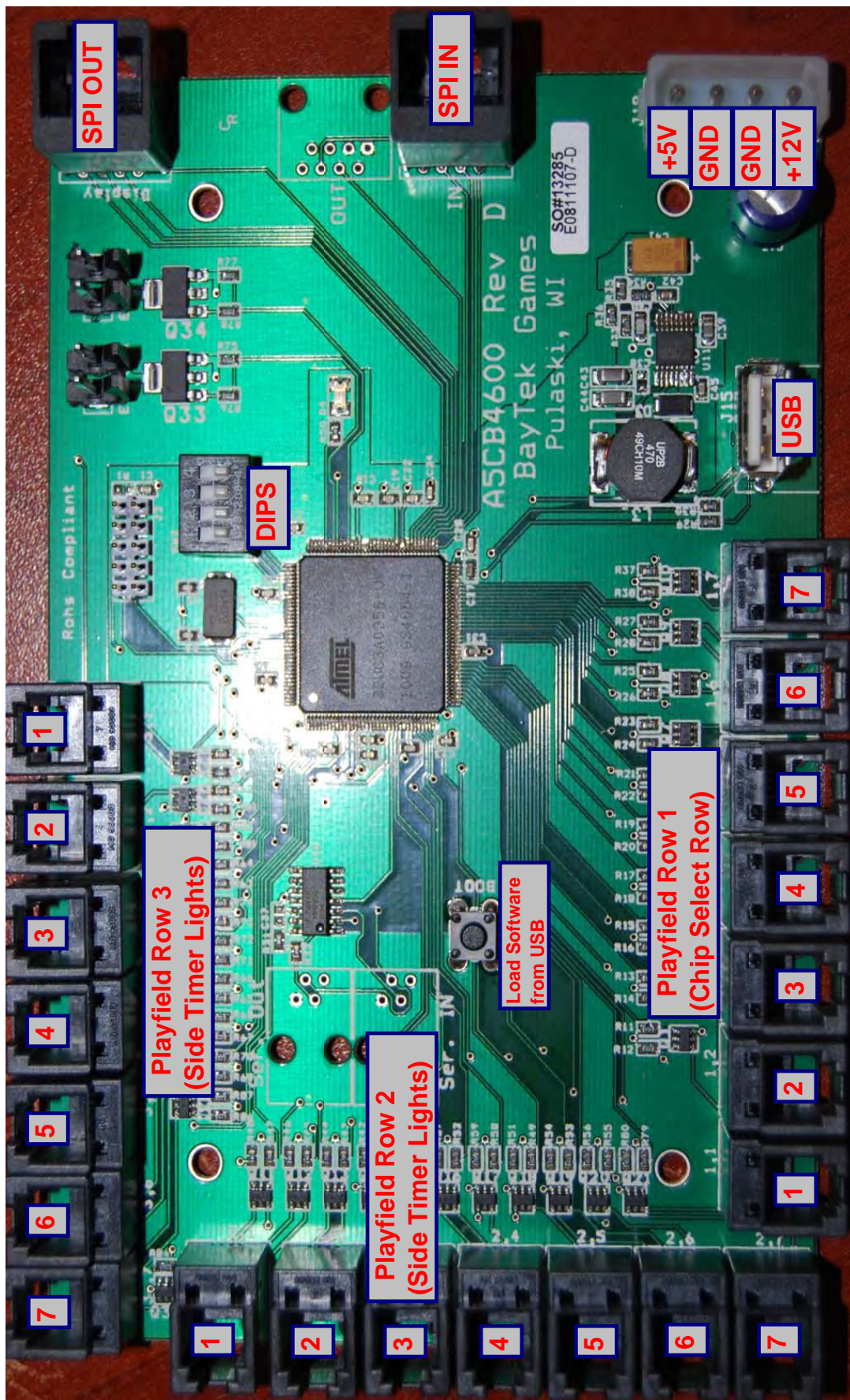
HIGHSIDE #13	LED Glow Station #1	J25	1
HIGHSIDE #14	LED Glow Station #2	J25	2
PX10	Service Button #1	J25	3
PX11	Service Button #2	J25	4
Ground		J25	5
Ground		J25	6

+12 Volts	Coin Door Power Station #1	J6	1
PA05	Coin Input Station #1	J6	2
Ground	Coin Ground Station #1	J6	3

MAINBOARD PINOUT GUIDE



CB4600 BOARD PINOUT (LIGHT CONTROL)



SPI OUT PINOUT

- Pin 2 SCK
- Pin 4 MOSI
- Pin 5 GND
- Pin 6 SS
- Pin 7 GND
- Pin 8 MISO

SPI IN PINOUT

- Pin 2 SCK
- Pin 4 MISO
- Pin 5 GND
- Pin 6 SS
- Pin 7 GND

PORT 1,2,3 PINOUT

- Pin 1 12V +
- Pin 2 Red LEDs
- Pin 3 White LEDs
- Pin 4 Blue LEDs

** Playfield rows are numbered as viewed from the back of the game from left to right

*** DIP 3 needs to be ON for use on the Chip Select and Timers

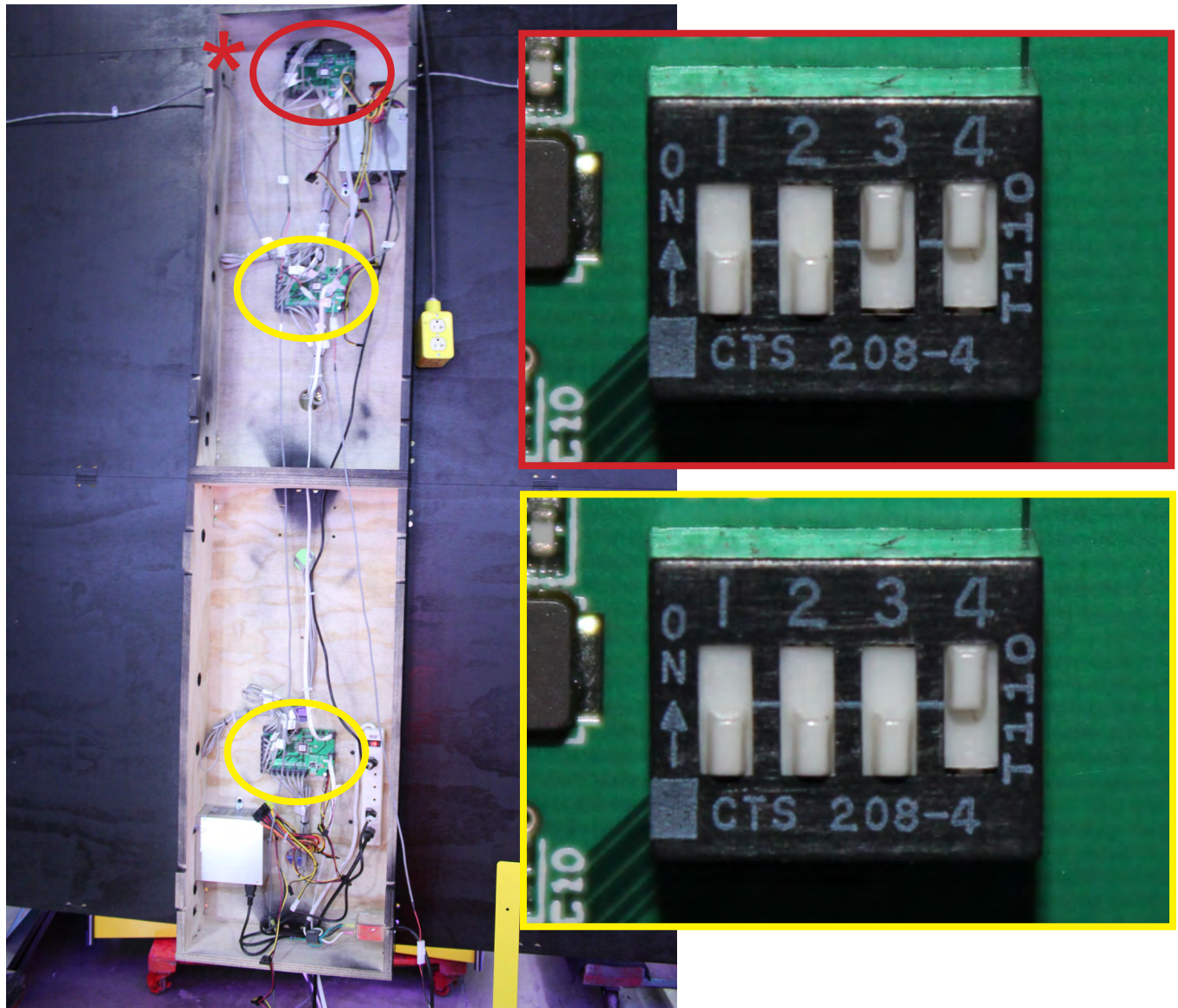
CB4600 BOARD DIPS

These dip banks are located on the light controller boards inside the control boxes on the back of the playfield.

*factory default settings are highlighted below

DIP	DESCRIPTION	ON	OFF
1	Test Mode		X
2	Not Used		
3	Chip Select Board	*	X
4	LED Board Type	RBW	RGB

*Dip 3 should be ON for the very top board- it controls the chip topper.



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

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.

