

SERVICE MANUAL



WILLY
CRASH
Mini

**PLACE SERIAL NUMBER
LABEL HERE**

BAY★TEK
entertainment

FACTORY CONTACT INFORMATION



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

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WELCOME TO WILLY CRASH MINI

Congratulations on your purchase!

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 Entertainment



GAME INSPECTION

Please inspect the game for any damaged, loose, or missing parts.

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

Then, contact Bay Tek Entertainments' Service Department at
(920) 822-3951 Ext. 1102

Or email us at baytek.service@thevillage.bz for further assistance.

GAME SPECIFICATIONS

WEIGHT

NET WEIGHT	300 lbs.	136 kg
SHIP WEIGHT	345 lbs.	157 kg

GAME DIMENSIONS

WIDTH	34 1/2"	88 cm
DEPTH	48"	122 cm
HEIGHT	96"	244 cm
	81" without marquee artwork	

OPERATING TEMPERATURE

FAHRENHEIT	45 - 80 F
CELSIUS	7.2 - 26.7 C

SHIPPING DIMENSIONS

PALLET	52"x 36"x 78" 345lbs. class 125
--------	---------------------------------













POWER REQUIREMENTS

INPUT VOLTAGE	115 VAC	230 VAC
INPUT FREQUENCY	60 Hz	50 Hz

MAX OPERATING CURRENT

2.0 AMPS @ 110 VAC
1.2 AMPS @ 220 VAC

SAFETY PRECAUTIONS

	NOTICE	
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.		
	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. A shielded power cable must be used for the game to retain EU/EMC compliance.		
	IN CASE OF EMERGENCY	
UNPLUG THE POWER CORD. The power cord must be accessible at all times in case of an emergency.		

WILLY CRASH MINI GAME SETUP

The game will arrive on one pallet. Please inspect the pallet for shipping damage and report immediately to the freight company if any damage is found.

Unbox the pallet and remove the cardboard box from the top of the player console. This is the marquee.

Please unbox the marquee and proceed to assembly instructions.



Tools Needed:

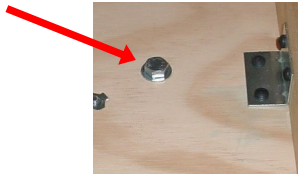
1 step ladder (4-6 foot) # 2 Square bit 7/16" Wrench
9/16" Open End Wrench (to adjust leg levers)

Remove the keys from the small plastic bag taped to the top console.



Unlock the front door using a H95 key.

Remove the shipping bolt using a 9/16" wrench.



Unlock the coin box door using a E00 key.

Remove the hardware kit from the coin box.

(The power cord is coiled in the rear of the cabinet)

Close and lock coin box door, remove key to allow the front door to close fully.



Unlock and remove the lower back door using a H95 key.

Remove the shipping bolt using a 9/16" wrench.

Route the power cord down through the hole in the bottom of cabinet and out to the back of the game.

Replace the lower back door.



WILLY CRASH MINI GAME SETUP

Install marquee by feeding light power cable through the hole in the top of the cabinet as the marquee is placed on top of the game.

Remove the 3 bolts, lock washer, and washers from the hardware kit.

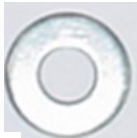
Install from the lower cabinet up into the marquee.



A5BOHH060



A5WASI020

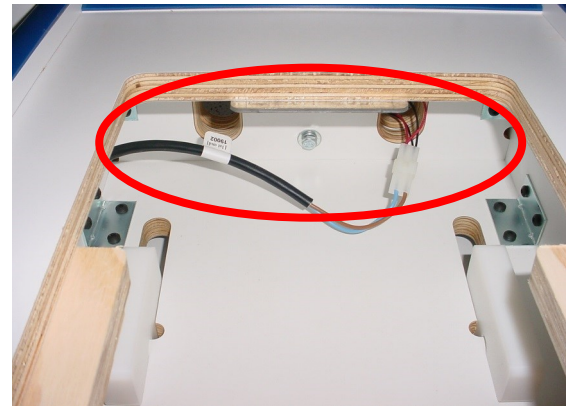


A5WAFLO60

Tighten using a 7/16" wrench.

Plug the 4 pin connector into the game harness.

Peel the protective plastic film from the marquee artwork, and apply the bonus ticket value desired to the white outline as shown.



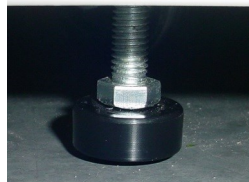
Using a ladder, position the marquee artwork on top of the game and secure using 8 of the black # 2 square drive screws from the hardware kit. (4 per side)



Position game in final position in game room.

Lock wheels to prevent game movement.

Lower 2 front leg levelers using 9/16" wrench to further prevent game movement.



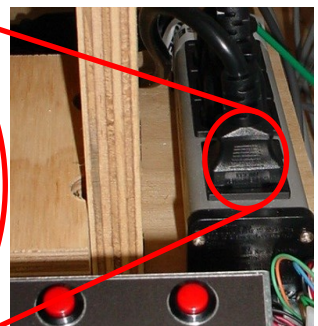
Power on game:

Open the front door and turn on the rocker switch on the power strip along the right side of cabinet..

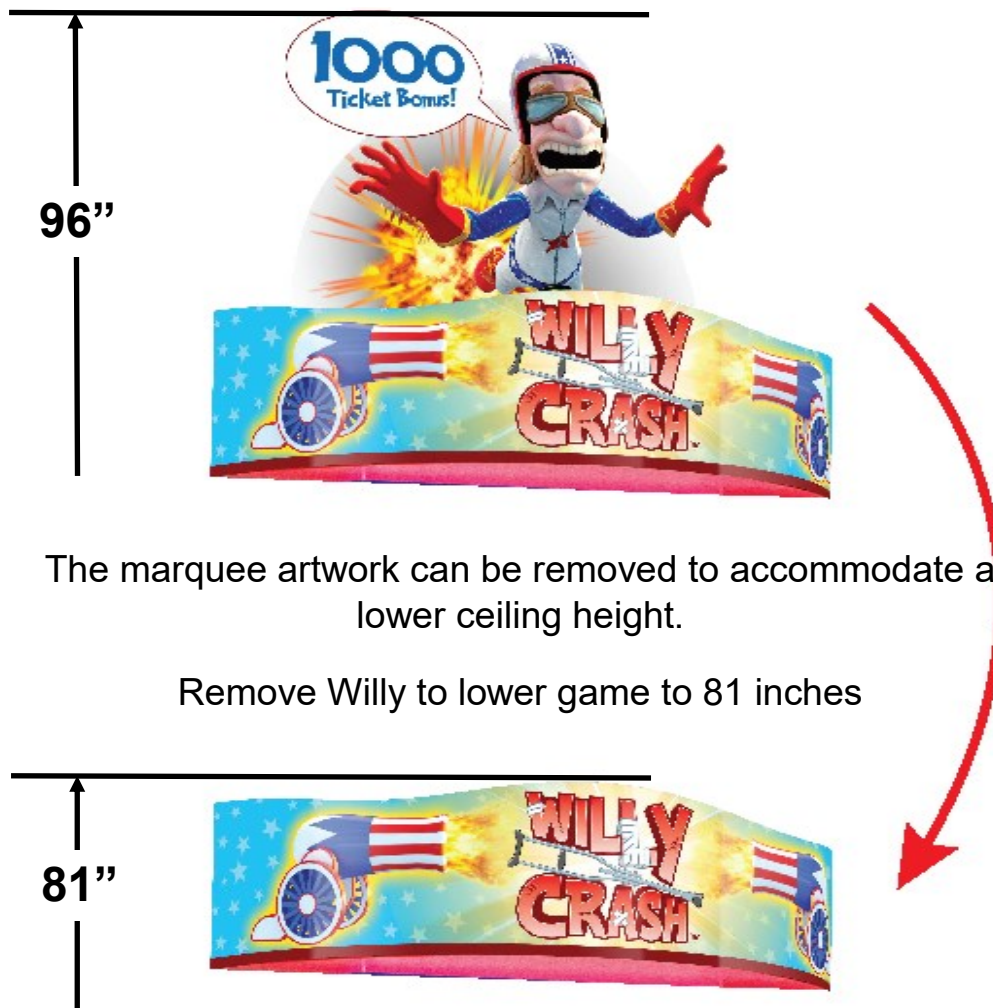
The rocker switch is located behind the 1st power cord on the strip

The game is now set up and ready for play!

Enter menu to adjust settings to your location specific price per play and ticket payout.



ADJUSTABLE MARQUEE



AVAILABLE BLANKING PLATES



A5PL4200 DBA Plate for 12V Upstacker Bill Acceptor



A5PL9998 Plate used instead of Coin Mechanisms



A5PL8900 Plate used instead of Bill Validator



A5PL9995 Plate used instead of ticket dispenser

CARD SWIPE SYSTEM INSTALLATION

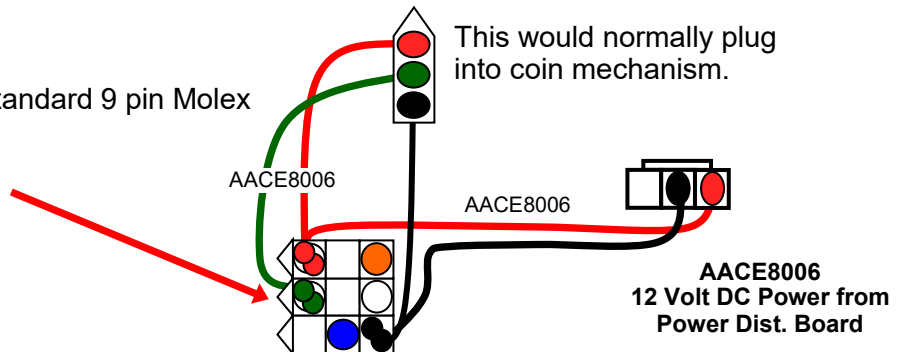
The Willy Crash game is pre-wired with a UCL (Universal Card Link) connector to accept Card Swipe systems from many different manufactures.

Please follow these instructions to make full use of this capability.

Option #1:

Card swipe systems may come with a standard 9 pin Molex connector. This is the UCL connector.

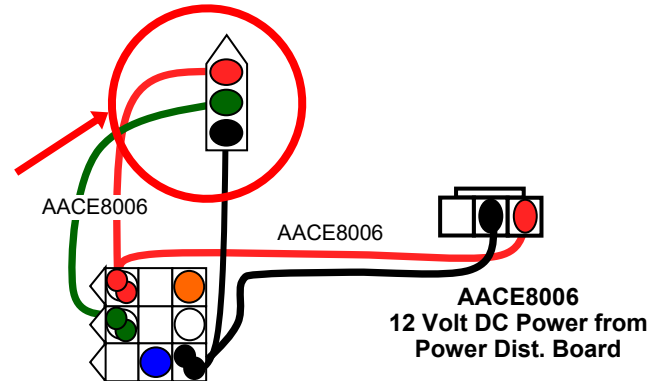
Simply plug this connector into your card swipe reader.



Option #2:

If your card swipe systems does not have a standard 9 pin Molex connector, then you will have to splice wires into the AACE8006 harness.

Black wire is ground. (common)
Green wire is coin signal.
Red wire is +12 Volts DC



Notes:

- Many card swipe systems have a voltage threshold that can be adjusted in the card swipe menu. Please set this "Game Drive Threshold" to 2 Volts.

Menu Changes

Enter menu, go to "Game" Menu

Set "Game Mode" to desired option

Go to "Payout" Menu

Verify "Credits" set to 1

Verify "Card Reader" set to "Enabled"

Check dipswitches on the I/O Aux Board in the front of game. Verify Dipswitch # 5 ON

HOW TO PLAY

Motherboard and Graphic Card will provide high resolution video to the monitor.

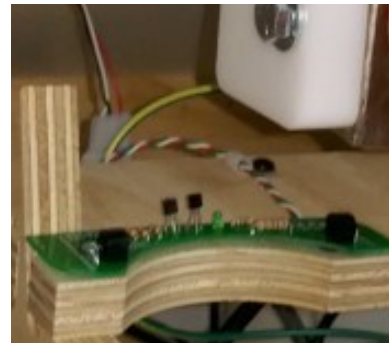
Time your launch to shoot Willy into the air, aiming to land on a building.



Timing is controlled by the plunger.
Press plunger down to launch Willy from the cannon!



As the plunger is pushed, it blocks a sensor that triggers the software to launch the video cannon.



Collect tickets!

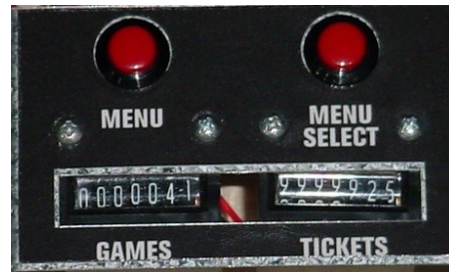


MAIN MENU FUCTIONS

The Menu and Menu Select buttons are located inside the front door.

Hold the MENU button down for 1 second to open the main menu on the monitor.

Press MENU to scroll through the options, and MENU SELECT to change the settings.



MAIN MENU

Clear Tickets & Credits	Press the MENU SELECT button 3 times to clear credits and tickets owed	
Volume & Attract Menu	Press MENU SELECT to enter the Volume & Attract Menu	
Game Menu	Press MENU SELECT to enter the Game Menu	
Payout Menu	Press MENU SELECT to enter the Payout Menu	
Statistics Menu	Press MENU SELECT to enter the Statistics Menu	
Diagnostics Menu	Press MENU SELECT to enter the Diagnostics Menu	
Reset Factory Defaults	Press MENU SELECT button 3 times to reset factory defaults	
Mute	ON (No sound from game)	OFF
Exit	Press MENU SELECT button to exit menu	

*** Default settings are highlighted in yellow

Software versions are shown on the bottom of the main menu screen.

If one shows "Not Found" then the circuit board is not communicating to motherboard.

Door Board Version: Not Found

MAIN MENU

Clear Tix & Credits: [3x]
 Volume & Attract Menu >>
 Game Menu >>
 Payout Menu >>
 Statistics Menu >>
 Diagnostics Menu >>
 Reset Factory Defaults: Reset
 Mute: OFF
 Exit
 PC Version: 1.0.6
 Door Board Version: 1.7
 Light Board Version: 1.3

PC Version: 1.0.6
 Door Board Version: 1.7
 Light Board Version: 1.3

VOLUME AND ATTRACT MENU

Scroll through the options by pressing the “MENU” button.

Change selection with the “SELECT” button.

Scroll to “BACK” and press the “SELECT” button to go back to the main menu.

Default settings are highlighted in yellow below.

VOLUME & ATTRACT SETTINGS MENU

Attract Volume: 4
Game Volume: 6
Jackpot Volume: 8
Attract Timing: 3

[Back](#)

ATTRACT VOLUME

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Sets the volume level of the attract loop when the game is not being played.
“0” means the volume is off.

GAME VOLUME

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Sets the game’s playing volume. “0” means the volume is off.

JACKPOT VOLUME

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Sets the volume level of the celebration when Willy lands on a rooftop.
“0” means the volume is off.

ATTRACT TIMING

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Sets the time in minutes between attract sound cycles.

GAME SETTINGS MENU

GAME SETTINGS MENU

Scroll through the options by pressing the “MENU” button.
Change selection with the “SELECT” button.
Scroll to “BACK” and press the “SELECT” button to go back to the main menu.

Game Mode: Tickets
Repeat Reward: 4
Cannon Speed: Auto
Bonus Building: Normal

Default settings are highlighted in yellow below.

[Back](#)

GAME MODE

Tickets	Points	Coupons
---------	--------	---------

“Tickets” means the game will pay out tickets, and show the word “Tickets” on screen.
“Points” means the game will pay out tickets, and show the word “Points” on screen.
“Coupons” means the game will pay out tickets, and show the word “Coupons” on screen.

REPEAT REWARD

Disable	2	3	4	5	6
---------	---	---	---	---	---

Sets the number of repeat plays needed before Willy changes his helmet/outfit.
“Disable” means no change.

CANNON SPEED

Auto	Easy	Normal	Hard
------	------	--------	------

Sets the speed of the cannon movement. “Auto” means the speed varies.
“Easy” is a constant slow speed. “Normal” is a constant medium speed.
“Hard” is a constant fast speed.

BONUS BUILDING

Auto	Easy	Normal	Hard	Very Hard	Move After Win
------	------	--------	------	-----------	----------------

Sets the location of the “Bonus Building”
“Auto” adjusts the building location depending on the number of games played since the last win.
“Easy” sets the 3rd building as the Bonus Building.
“Normal” sets the 4th building as the Bonus Building.
“Hard” sets the 5th building as the Bonus Building.
“Very Hard” sets the 6th building as the Bonus Building.
“Move After Win” moves the Bonus Building to the right after a win.

PAYOUT MENU

PAYOUT SETTINGS MENU

Scroll through the options by pressing the "MENU" button.
Change selection with the "SELECT" button.
Scroll to "BACK" and press the "SELECT" button to go back to the main menu.

Default settings are highlighted in yellow below.

Credits: 1
Card Reader: Disabled
Bonus Building: 1000
Large Building: 100
Medium Building: 35
Small Building: 25
Alley Value: 5
Fixed Tickets: Disabled

[Back](#)

CREDITS

0	1	2	3	4	5	...	17	18	19	20
---	---	---	---	---	---	-----	----	----	----	----

Sets the amount of credit pulses needed to start a game. "0" will be free play.

CARD READER

ENABLED	DISABLED
---------	----------

"ENABLED" will show "Swipe Card to Play" verbiage on the screen.

BONUS BUILDING

100	250	500	1000	1500	2000	2500
-----	-----	-----	------	------	------	------

Sets the amount of tickets for the Bonus Building

LARGE VALUE BUILDING

10	20	30	...	80	90	100	110	120	...	230	240	250
----	----	----	-----	----	----	-----	-----	-----	-----	-----	-----	-----

Sets the amount of tickets for building 3 and 5

MEDIUM VALUE BUILDING

5	10	15	...	25	30	35	40	45	...	140	145	150
---	----	----	-----	----	----	----	----	----	-----	-----	-----	-----

Sets the amount of tickets for building 2 and 6

SMALL VALUE BUILDING

1	2	3	...	23	24	25	26	27	...	23	24	25
---	---	---	-----	----	----	----	----	----	-----	----	----	----

Sets the amount of tickets for building 1 and 7

ALLEY VALUE

1	2	3	4	5	6	7	...	24	25	26
---	---	---	---	---	---	---	-----	----	----	----

Sets the amount of tickets for the alleys between the buildings

FIXED TICKETS

Disabled	1	2	3	4	5	...	28	29	30
----------	---	---	---	---	---	-----	----	----	----

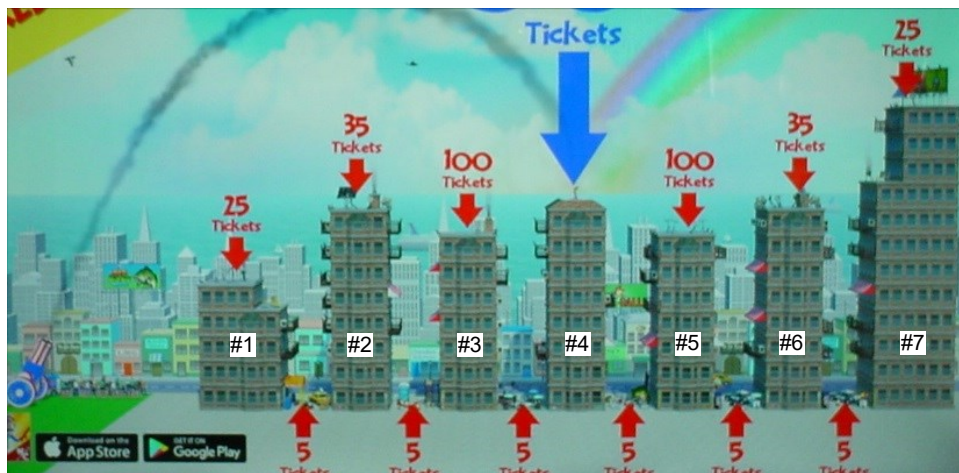
Sets every ticket value to be the same, if desired. "Disabled" will use the above menu settings

TICKET PATTERNS

These are estimates of Average Tickets per Game using the shown ticket values for building and alleys.

Change ticket values in the “Payout Menu” to change your individual payout percentages.

	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7
Bonus Building Value	1000	1500	500	500	100	100	1000
Large Value Building	100	150	100	75	25	10	100
Medium Value Building	35	75	75	50	10	5	35
Small Value Building	25	50	50	25	5	3	25
Alley Value	5	25	20	5	3	1	5
Recommended Cost per Play	\$1.00	\$2.00	\$1.50	\$0.75	\$0.50	\$0.25	\$1.50
Average Tickets per Game	30-40	50-60	40-50	20-30	10-20	3-5	40-50



Note:

“Large Value Building” corresponds to buildings #3 and #5
“Medium Value Building” corresponds to buildings #2 and #6
“Small Value Building” corresponds to buildings #1 and #7

GAME STATISTICS MENU

GAME STATISTICS MENU

Scroll through the options by pressing the "MENU" button.
Change selection with the "SELECT" button.
Scroll to "BACK" and press the "SELECT" button to go back to the main menu.

Total Games: 0
Total Tickets: 0
Average Tickets: 0
Bonus Winners: 0

Reset Stats: Cleared
Back

Total Games - Reports the actual games played since last reset

Total Tickets - Reports the actual tickets dispensed since last reset

Average Tickets - Reports the current average tickets per game since last reset

Bonus Winners - Reports the number of bonus winners since last reset

Reset Stats - Press the menu select button 3 times to reset statistics

DIAGNOSTICS MENU

GAME DIAGNOSTICS MENU

Scroll through the options by pressing the "MENU" button.
Change selection with the "SELECT" button.
Scroll to "BACK" and press the "SELECT" button to go back to the main menu.

Plunger Input: Off
Low Ticket Input: On
Credits On DB: 0
Tickets On DB: 0

Ticket Dispenser: Test
Test Monitor Light: Red

Back

Plunger Input - Blinks ON when plunger is down, and sensor beam is blocked.
LED on sensor board will light on when blocked.

Low Ticket Input - Normally ON, shows Off when tickets are sitting on top of the low ticket switch in the ticket tray. (Unless dipswitch # 5 is on)

Credits on DB - Shows the amount of credits currently on the game.

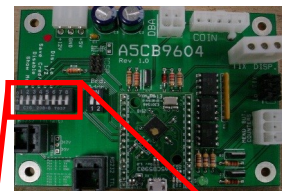
Tickets on DB - Shows the amount of tickets to be dispensed on the game.

Ticket Dispenser - Press MENU SELECT to test dispense a ticket from the ticket dispenser.

Test Monitor Light - Press MENU SELECT to cycle through various colors showing around the perimeter of the monitor. Red, green, blue, yellow, cyan, purple, white

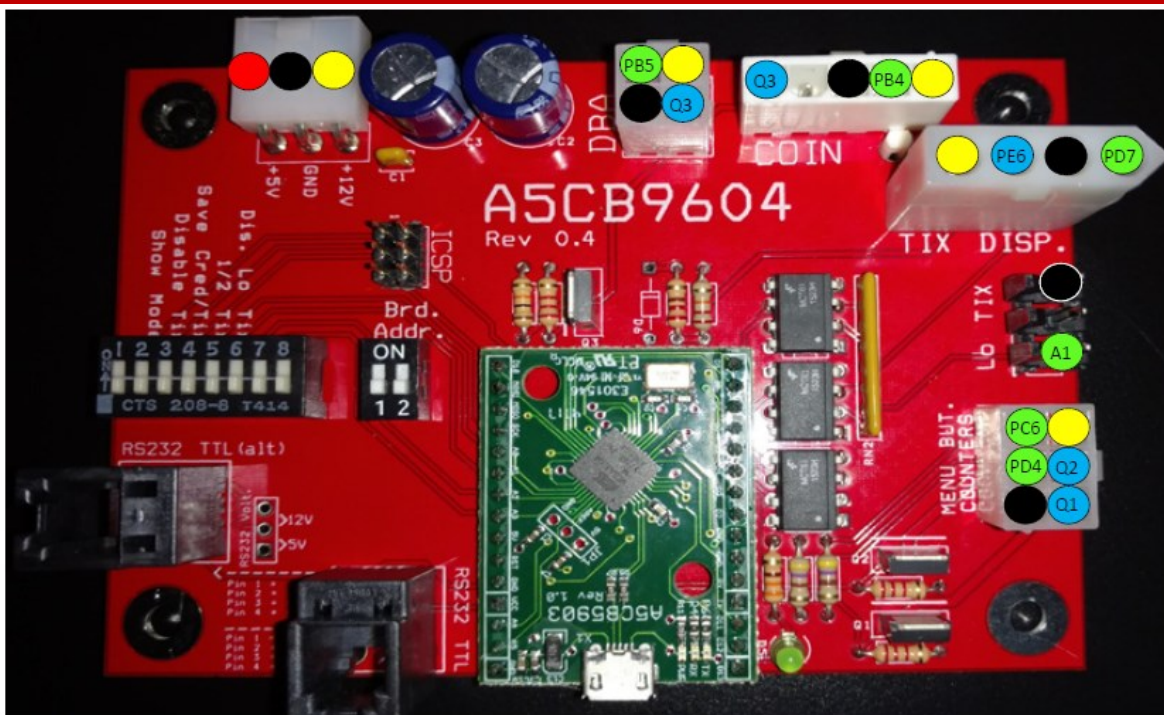
DIPSWITCH SETTINGS

SWITCH	DESCRIPTION	ON	OFF
1	SHOW GAME Does not dispense tickets and clears all accumulated credits		X
2	AMUSEMENT ONLY Does not dispense tickets		X
3	NJ LOCKOUT Saves tickets owed and unused credits after a power loss		X
4	1/2 TICKET PAYOUT Dispenses 1/2 the amount of tickets as shown on screen. It will round up odd amounts of tickets		X
5	DISABLES LOW TICKET INPUT Disables the low ticket message on screen. This option should be enabled when using a card swipe system		X
6	NOT USED		
7	NOT USED		
8	NOT USED		



Note:
UP is ON

DOOR BOARD PINOUT



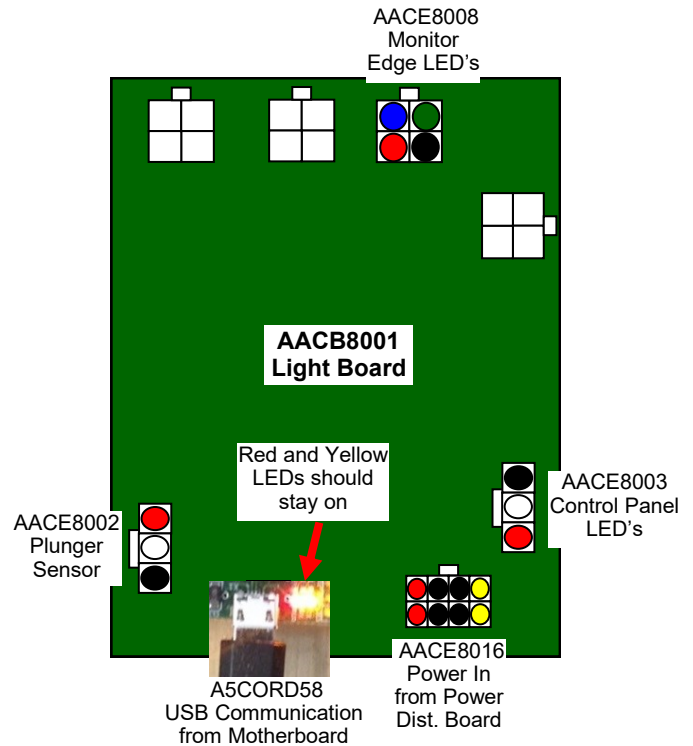
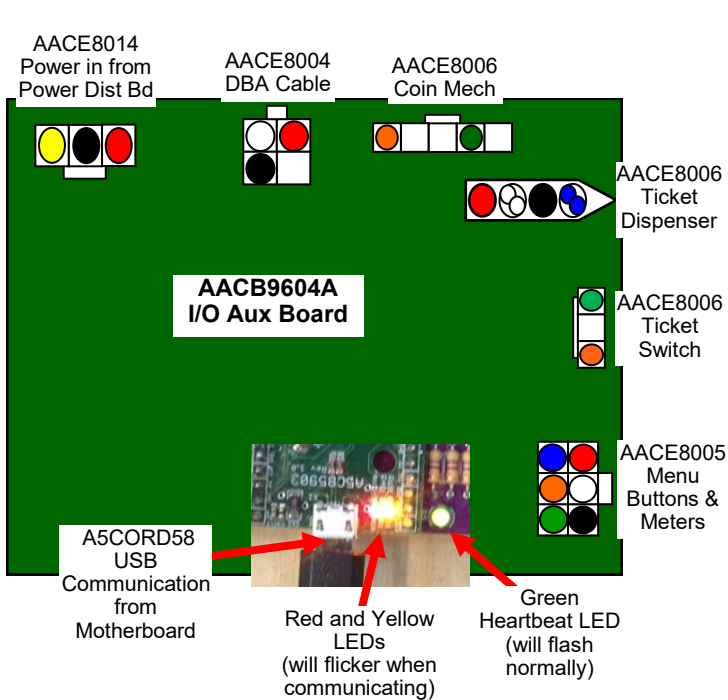
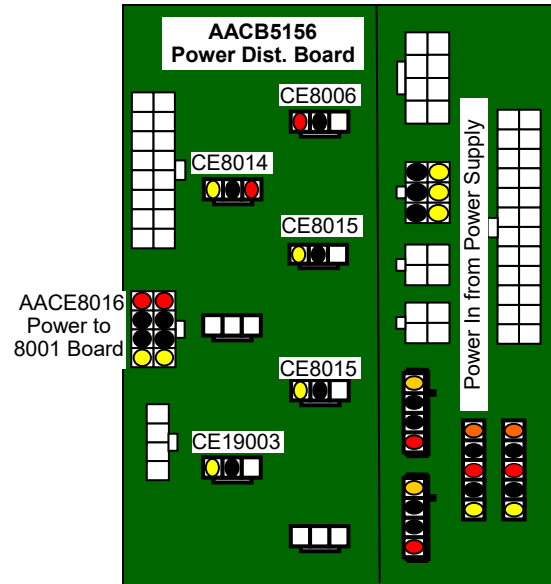
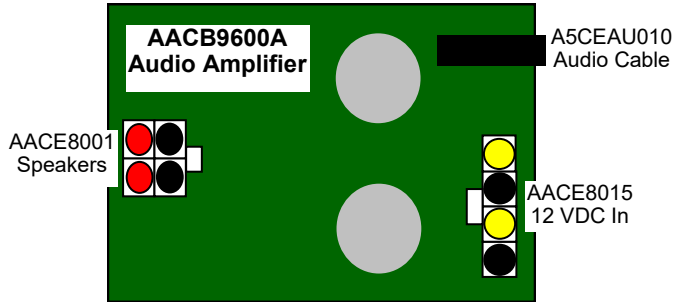
Outputs:

Q1 (PD1) Game Counter
Q2 (PD0) Tickets Counter
Q3 (PD6) Coin Lockout
PE6 Ticket Enable

Inputs:

PD4 Menu Button
PC6 Select Button
PD7 Ticket Notch
PB4 Coin In
PB5 DBA In
D15 (A1) Low Ticket Switch Input

CIRCUIT BOARD LAYOUT MINI

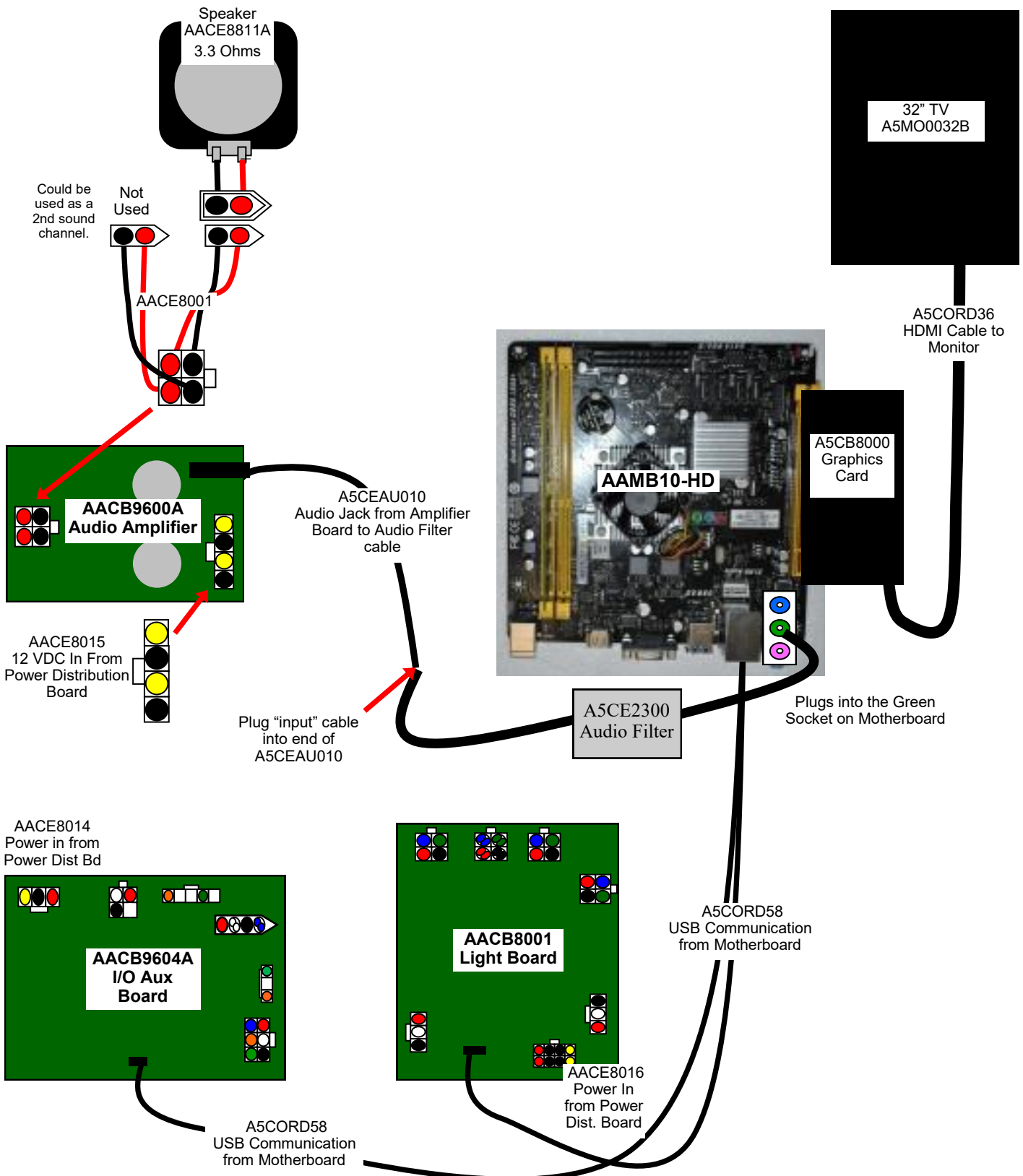


COIN MECH, MENU AND COUNTER



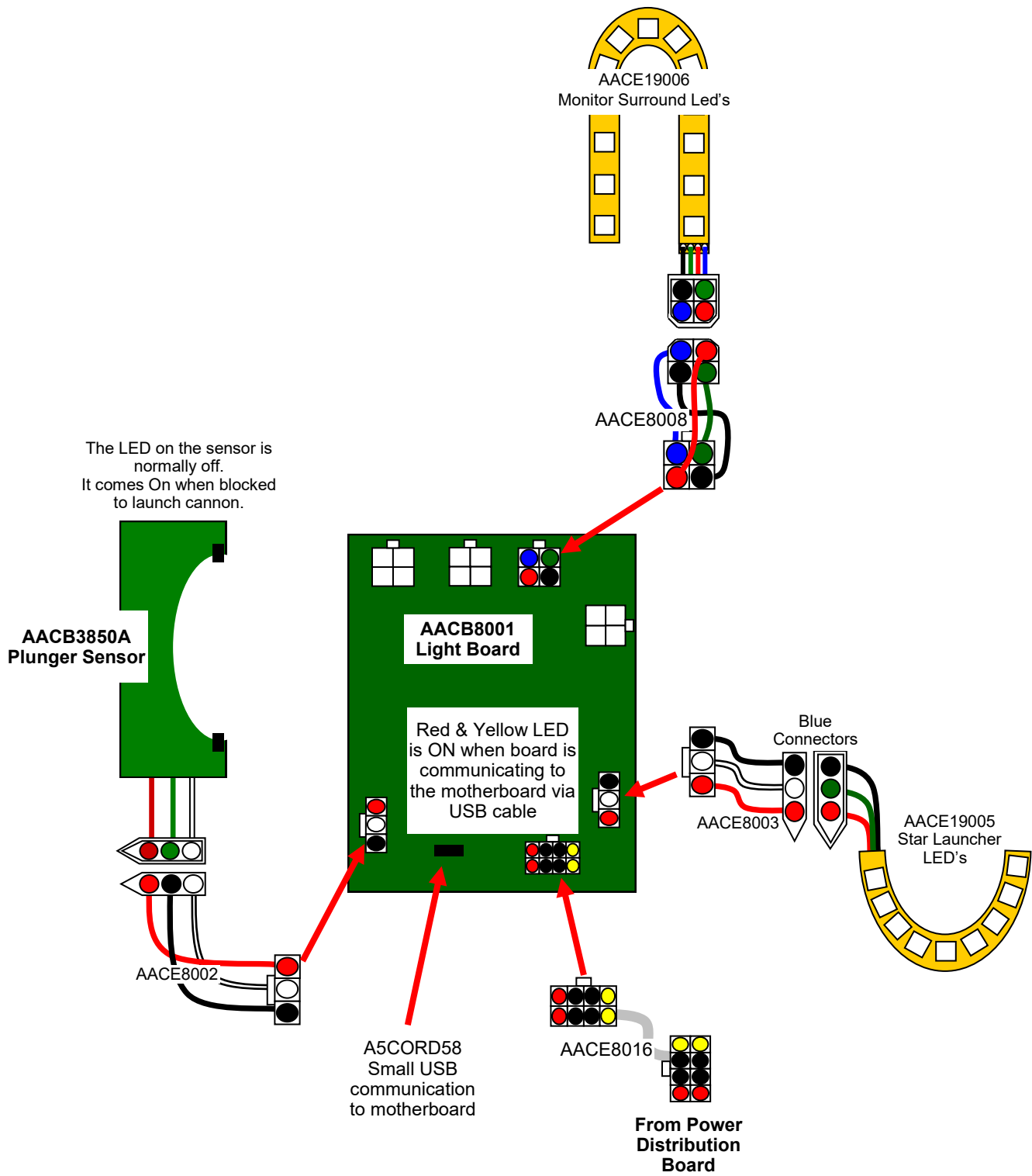
WIRING DIAGRAM

SPEAKERS AND MOTHERBOARD COMMUNICATION



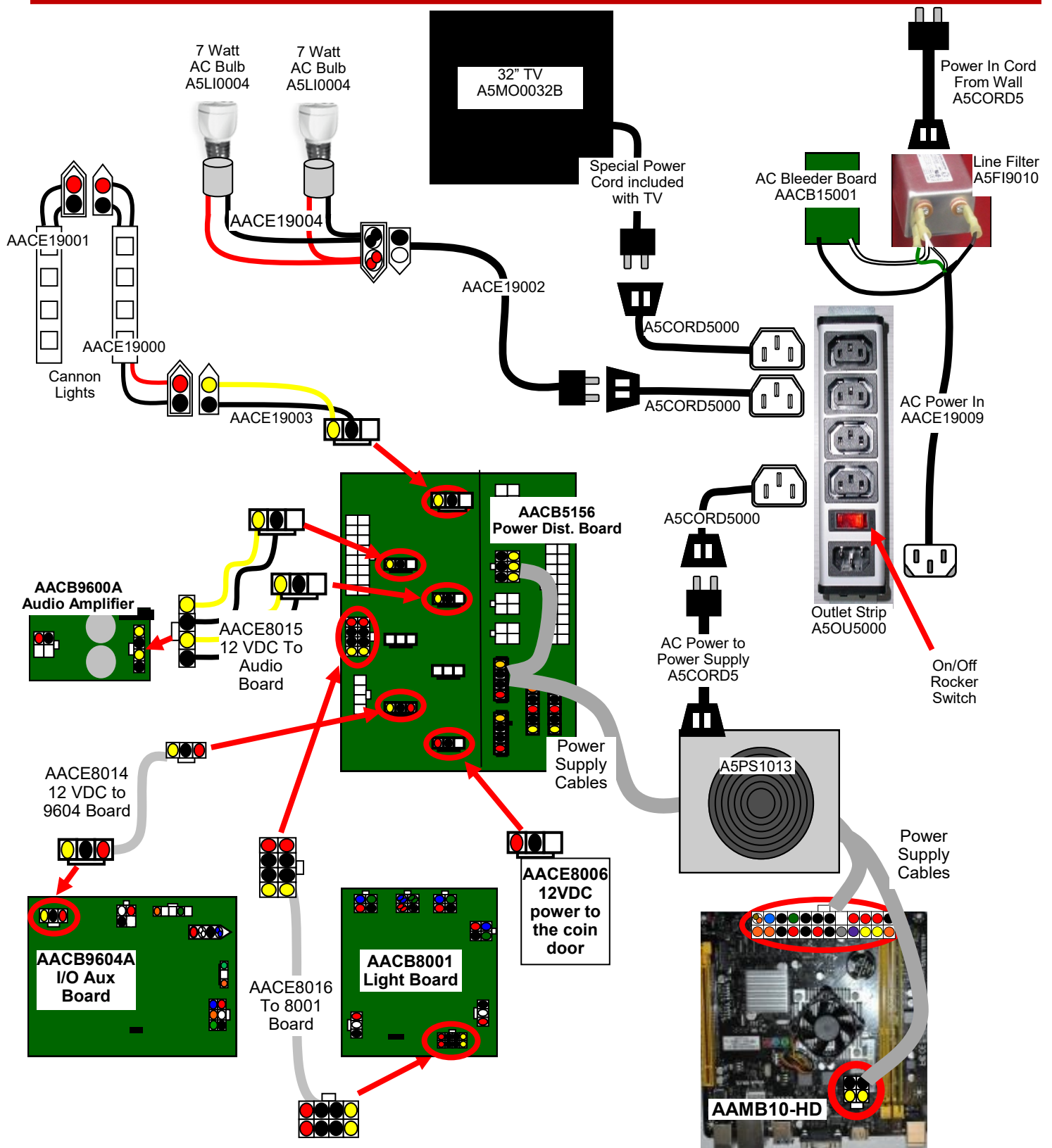
WIRING DIAGRAM

SENSORS AND LEDS



WIRING DIAGRAM


AC IN AND POWER SUPPLY



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.

Troubleshooting Chart		
Problem	Probable Cause	Remedy
No power to the game. No lights on at all.	Unplugged. Circuit breaker tripped. Line Filter faulty. AC Bleeder Board faulty. Power strip faulty. Faulty cable/power supply	Check wall outlet. Reset power strip breaker switch or building circuit breaker. Check power switch on outlet strip. (part # A50OU5000) Replace Line Filter (Part # A5FI9010) If this board has a short, the game will pop circuit breaker. Swap positions, replace if needed A5OU5000 Refer to wiring diagram. Check cable AACE19009. Refer to Power Supply diagnostic section
Monitor on, but everything else off. (Power Supply not ON)	Power supply unplugged. Rocker Switch. Power supply shutting down because of 12 V overload. Faulty power supply. Faulty Power Dist Board	Ensure unit is plugged into power strip. Make sure rocker switch is ON.  See power supply diagnostics to isolate bad component. A bad motor or 12 volt short would cause this. See Power Supply Diagnostic section. Replace Power Distribution Board (AACB5156)
Dollar Bill Acceptor not functioning. Ensure Bill Acceptor is set to "Always Enable" Important : Only 12 Volt DBA is to be installed. Model # AE 2454 U5E Part # A5AC9101	Check for power to Bill Acceptor. Dirt or debris in acceptor slot. Pinched, broken, or disconnected wiring. Bill acceptor problem. Part # A5AC9101	Acceptor should cycle stacker at game power up. If not, check cable connections. Clean with bill reader cleaning card (A5CC9000) Check wiring from bill acceptor to I/O Aux Board. (AACE8004) Replace wiring harness. Check connector on I/O Aux 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.
Meters do not work. Game meter will click at the beginning of the game. Ticket meter will click as tickets come out of game and notch is "seen" by dispenser.	Ensure correct number of tickets are being dispensed Disconnected, loose or broken wires. Faulty counter.	Check ticket values in menu. Test Ticket Dispense in Diagnostic menu. Refer to Tickets not dispensing troubleshooting section. Check connections to I/O board. Cables # AACE8005 and AACO1020 Replace counter. AACO1020.


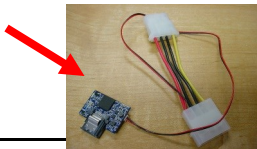

TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
Game not coining up.	<p>Check for I/O board USB cable communication.</p> <p>Ensure game makes sound when coin switch is triggered.</p> <p>Game set to large amount of credits per game.</p>	<p>Refer to “I/O Aux Board Issue” diagnostic Section.</p> <p>Check coin switches—both should be wired normally open. If one switch is “closed” the other will not work either. Check wiring to I/O Board. (AACBL4A-DOORA, AACE8006)</p> <p>Check Game Setup Menu. Ensure Coins/Credits per Game is set. Default = 4.</p>
Menu Buttons do not work.	<p>Swap menu buttons.</p> <p>Pinched, broken, or disconnected wiring</p> <p>Main board faulty.</p>	<p>Replace button if problem stays with button.(AAPB2700)</p> <p>Inspect crimp to ensure good connection.</p> <p>Check connections from menu buttons to I/O Aux board.</p> <p>Check continuity on wires. (AAPB2700, AACE8005)</p> <p>Replace I/O Board. (AACB9604A)</p>
No Sound Motherboard creates sound, Audio board amplifies it.	<p>Volume set to zero in menu.</p> <p>Ensure “Mute” is set to OFF</p> <p>Disconnected, loose or broken wires.</p> <p>Faulty speaker.</p>	<p>Enter Volume & Attract Settings Menu and verify: Game Volume & Attract Volume is not zero</p> <p>Check connections and reseal audio cable from motherboard to Audio Amplifier board to speakers. Cables # AACE8811A, AACE8001, A5CE2300 and A5CEAU010 to green socket. Ensure 12 volts at CE8015 cable from power supply.</p> <p>Unplug audio jack (A5CE2300) from motherboard, plug into MP3 or phone. Music should be amplified and comes out of Speaker. If Yes - then motherboard is faulty. If No - then Audio Amplifier may be faulty.</p> <p>Replace speaker. AACE8811</p>
Marquee Lights are not on. (7 Watt 110/220 VAC)	<p>Faulty Light Bulb</p> <p>Faulty Cable</p> <p>Faulty outlet strip</p>	<p>Replace bulb. Part # A5LI0004 (7 Watt LED 110/220 VAC)</p> <p>Check for proper connection from bulb to Power Strip. Check continuity. (AACE19004, AACE19002, A5CORD5000)</p> <p>Swap power cord into next socket. Replace strip (A5OU5000)</p>
LED's around monitor do not work.	<p>Faulty Cable</p> <p>No USB communication</p> <p>Faulty LED</p> <p>Faulty Light Board</p>	<p>Check for proper connection from Light Board to LED strips. Check continuity. (AACE8008, AACE19006)</p> <p>Refer to “Light Board Wiring Diagram”</p> <p>Ensure the A5CORD58 is connected to the motherboard USB socket. Red and yellow LED's should be on.</p> <p>Replace LED strip AACE19006</p> <p>Replace Light board if needed. (AACB8001)</p>
LED's around star on plunger do not work.	<p>Faulty Cable</p> <p>No USB communication</p> <p>Faulty LED</p> <p>Faulty Light Board</p>	<p>Check for proper connection from Light Board to LED strips. (AACE8003, AACE19005) Refer to Light Board Wiring Diagram</p> <p>Ensure the A5CORD58 is connected to the motherboard USB socket. Red and yellow LED's should be on.</p> <p>Replace LED strip AACE19005</p> <p>Replace Light board if needed. (AACB8001)</p>

TROUBLESHOOTING GUIDE

Problem	Probable Cause		Remedy
Tickets do not dispense or Wrong amount dispensed. Check for the correct amount of tickets showing on Monitor	Tickets on monitor does not match tickets coming out of game.	Opto Sensor on ticket dispenser dirty. Faulty ticket dispenser. Notch on tickets cut too shallow. Faulty cable. Disconnected, loose or broken wires. Enter Diagnostic menu and test Dispenser Check dipswitches on I/O Aux Board Faulty I/O Board	Blow dust from sensor and clean with isopropyl alcohol. Replace with working dispenser to isolate the problem. (A5TD1) Flip tickets and load upside-down to have large cut notch toward opto sensor. Check connectors from ticket dispensers to Newgen board. Check for continuity. Cables AACE8006 There are many options that affect ticket payout using the dipswitches. Refer to Dip Switch Setting page. Replace I/O Board. AACB9604A
	Tickets on monitor do match tickets coming out of game.	Settings in Menu are incorrect.	Enter Menu and check certain areas: Payout Menu Tickets per building Fixed tickets Refer to Dip Switch Settings for other options.
Low Tickets message on monitor	Tickets are empty in ticket tray Faulty cable. Disconnected, loose or broken wires. Faulty low ticket switch. Faulty I/O Board	Load tickets into tray. Ensure tickets hold down micro switch wire. Check connectors from low ticket switch to I/O Aux board. Check for continuity. (AACE8006) Inspect switch and replace if needed. (AASW200) Check dipswitches on I/O Board, Replace I/O Board if needed. AACB9604A	
Plunger does not fire cannon Bottom of plunger is not breaking the opto beam.	Inspect assembly for physical obstruction Disconnected, loose or broken wires. Enter Diagnostic Menu to see if game recognizes sensor. Faulty sensor.	Ensure arm is breaking the beam. The LED on the board will come ON when beam is blocked. Check connections from opto sensor to I/O board. (Cable # AACE8002, AACB3850A) Sensor should flash ON quickly when plunger is pushed. Replace sensor. AACB3850A	
Cannon is firing all by itself Opto Sensor is blocked, dirty, or faulty.	Faulty sensor.	Ensure the LED is OFF and opto beam is not blocked by plunger arm. Clean emitter and detector on sensor board. Replace the sensor board. AACB3850A	

TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
Monitor not working. Power down, wait 5 minutes and power up again. The monitor should turn on with game power. Use remote control to turn on the monitor in case it is turned off.	Monitor shows "No Signal"	Monitor HDMI cable unplugged from video card. (A5CORD36) The game will not boot up with the monitor disconnected Faulty or loose RAM on motherboard Large power connector unplugged on motherboard Small power connector unplugged on motherboard Faulty power supply - Refer to Power Supply diagnostic section Faulty Graphics Card - Replace Graphics Card (A5CB8000) Faulty motherboard - Replace faulty board. (AAMB10-HD) 
	Monitor has nothing at all on power up.	Power cable unplugged from monitor. Faulty monitor. Ensure power is plugged into back of monitor, down to power strip. Replace monitor. (A5MO0032B)
	Error on screen at power up. Re-Boot game to see if problem still exists.	Display shows "Kernel panic – unable to mount root" Display shows "ASROCK Setup Utility Menu" Faulty or loose RAM, faulty software, faulty motherboard No SATA drive in motherboard. Check for power connector 
I/O Aux Board Issue Game does not coin up, and has no other functions.  <div> Red and Yellow LEDs Green Power LED </div>	Green power LED should be flashing. Red and Yellow LED's should be flashing. Faulty I/O Aux Board.	If it is off, then check 12 & 5 Volts DC coming into board on cable AACE8014 from Power Distribution Board. If solid on, then it is not communicating with the motherboard. Check A5CORD58 USB cable. Swap cable with the light board. If they are off, it is not communicating with the motherboard. Check A5CORD58 USB cable. Swap cable with the light board. Replace I/O Aux board Replace if needed. Part # AACB9604A
Cannon LED's do not work.	Faulty Cable Faulty LED	Check for proper connection from Power Supply to LED strips. Check continuity. (AACE19003, AACE19000, AACE19001) Replace LED strip AACE19000 or AACE19001

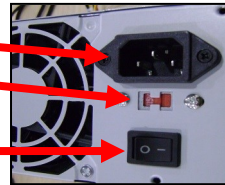
POWER SUPPLY DIAGNOSTICS

1.) Verify AC power to game. Check power strip in front door. The rocker switch should be illuminated.



2.) Check connection to power supply.

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



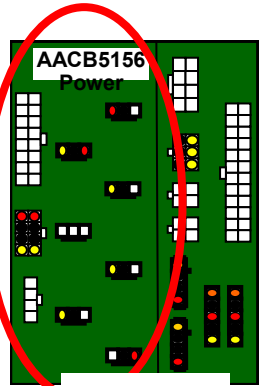
4.) Ensure Power switch is on.

5.) Ensure fan is turning.

- If power supply fan is turning and there is no 12 Volt out:

Check power supply cables to the Power Distribution Board.

This board takes the power in, and directs it to the different 12 volt loads.



AACB5156
Power Dist.
Board

Unplug all power out connectors from the left side of the Power Distribution Board.

Turn on game and if it boots correctly, plug one cable in at a time until the issue is found.

Replace power supply if this board is not receiving 12 volts. (A5PS1013)

- If power supply fan is not turning, then continue to "Verify Power to Motherboard"

Verify Power to Motherboard

The motherboard will turn on power supply.

If your game has no 12 volts, it may be the motherboard not turning on.

Also - there may be a 12 volt short somewhere in cabinet that is not allowing the power supply to turn on.

Minimize load on power supply and isolate short

Unplug the power supply cables going to the Power Distribution Board.

This will leave the power supply, motherboard, and monitor left plugged in together.

If power supply, motherboard, and monitor now turn on:

Plug in the Power Distribution Board to power supply, but unplug all of the outputs from the board.

Turn on game and verify the 12 volts is good.

Then plug in one component at a time to power supply to locate short.

If power supply still does not power on, then replace power supply (A5PS1013), or replace motherboard. (AAMB10-HD)

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. Standard DBA is MEI # AE2454-U5E Part # A5AC9101 Only use 12 Volt DC Bill Acceptor

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:

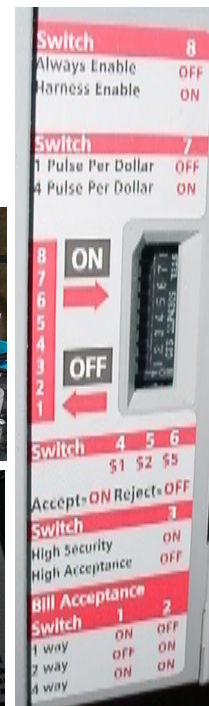
Use meter to measure 12 VDC voltage at cable going into Bill Acceptor from front I/O Aux Board

If power is OK:

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

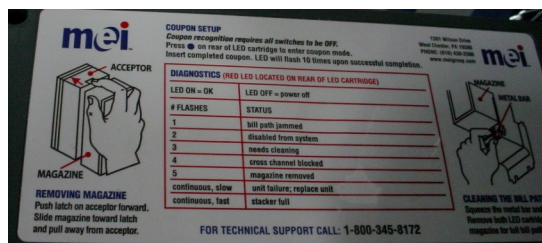
Check dipswitch settings on side of acceptor.

Make sure switch # 8 is OFF for Always Enable



ERROR CODES

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



HOW TO UPDATE SOFTWARE

New Software Installation:

The hard drive contains all the information about the game: Credits per play, ticket pattern, etc. Be sure to check this information after finishing installing new software.

Turn off game by flipping the power switch on the power strip.

Locate hard drive on motherboard.

Press tab on far side of hard drive and gentle remove from motherboard.

Unplug power supply jumper connector and remove old hard drive from unit.



Install new hard drive by gently pushing straight onto motherboard until it “clicks”. Turn the game back on by flipping the power switch on the power strip.

Note: The I/O boards will automatically be updated by the motherboard software.

USB CABLE COMMUNICATION ISSUE

It is possible that a USB communication issue may develop where the motherboard does not see the door board or the light board.

The symptom may be fixed by unplugging the USB cable that is not communicating from the motherboard, and plug into a different socket. If the board starts working, first replace the USB cable itself.

If the issue persists, follow the instructions below to remedy.

First - make sure the SATA drive software is version 1.0.5.

This is written on the SATA itself, or is shown at the bottom of the game menu.

If the version is lower than 1.0.5, purchase a new SATA drive, part # AAHD1900-WC

Tools Needed:

USB Keyboard USB Mouse

Instructions:

Ensure the new SATA drive software has replaced the existing software on the motherboard.

Power on the game and enter the menu.

The software versions should show:

PC Version: 1.0.5

Door Board Version: 1.7

Light Board Version: 1.3

If they show correctly, the software has loaded completely, and no further action is required.

Test play the game, the update is complete.

If they do not show correctly, an I/O board is not communicating at power up and is not receiving the software update.

To fix:

Turn the game on and enter the menu.

Unplug the USB cable that is not communicating from the motherboard, and plug into a different socket. It should start communicating, and the Aux version will show on the screen.

Play the game and ensure everything is working correctly.

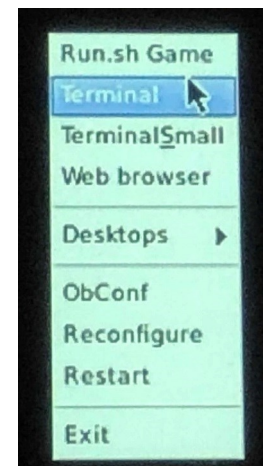
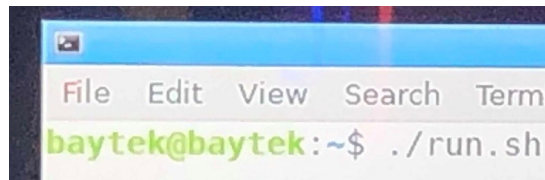
Grab a keyboard and mouse, and press the Alt key and F4 key at the same time.

This will close the game program.

Right click with the mouse anywhere on the screen
and select "Terminal"

Using the Keyboard, type `./run.sh`

Press Enter



The game should reboot automatically. Enter the menu and check the software version again.

Test play the game, the update is complete.

HOW TO REMOVE MONITOR



Tools Needed:

2 Square bit screwdriver
7/16" Wrench

Philips Screwdriver bit
2 people

Instructions:

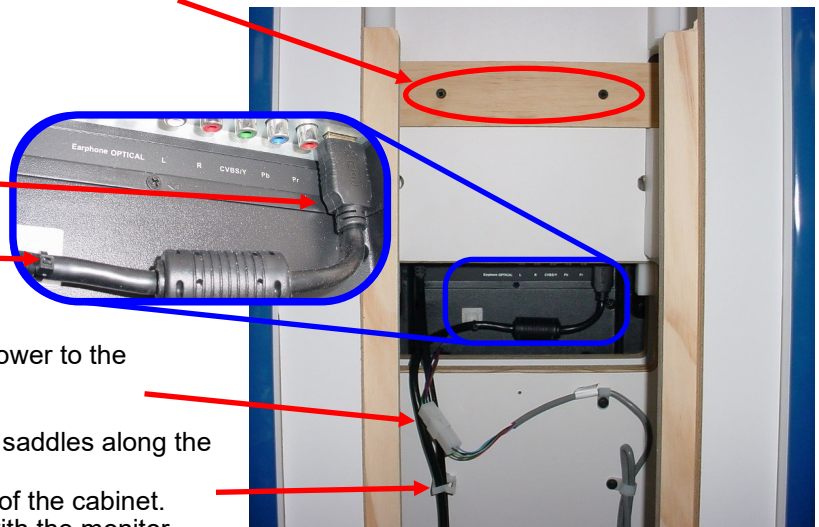
Unplug the game's power cord from the wall.
Unlock and remove the upper back door of the game,



Remove the 2 screws using a # 2 square bit, and remove the wood block . Save for later installation.

Unplug the HDMI cable from the monitor.

Carefully snip the plastic zip tie holding HDMI cable to the monitor.
The HDMI cable can now be left in the rear of the cabinet.



Unplug the 4 pin square connector which supplies power to the monitor surround lights.

Unclip the monitor power cable from the plastic wire saddles along the length of the cable.

Unplug this from the power cable in the bottom rear of the cabinet.
This monitor power cable will come off the cabinet with the monitor housing.

Remove the marquee:

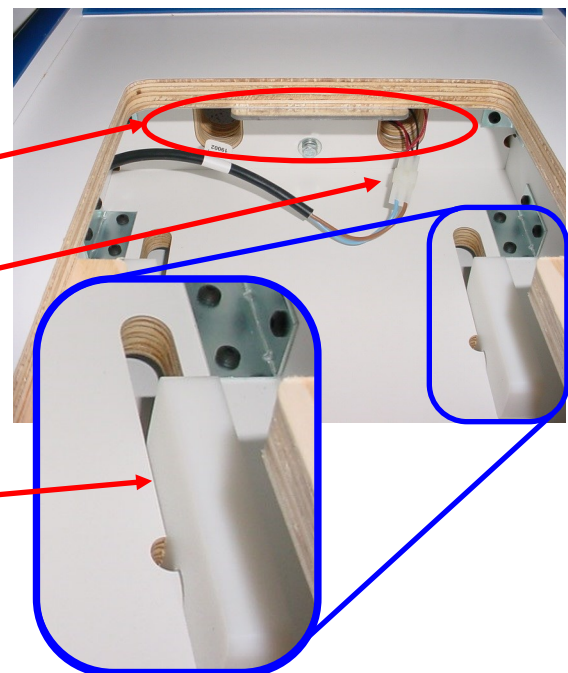
In the upper rear of the cabinet:
Remove the 3 bolts using a 7/16" wrench. Save for later installation.

Unplug the AC light bulb power by disconnecting the 2 pin Molex plug.

Carefully lift the marquee from the top of game and set aside for later installation.

Using 2 people, carefully lift upwards on the monitor housing.
Lift up a few inches to allow the white plastic locking tabs to clear, then pull away from the cabinet.

Place monitor housing face down on soft surface.



HOW TO REMOVE MONITOR

Swap front plexi:

With the monitor housing face up on soft surface, remove the 24 small screws using a Phillips screwdriver bit.

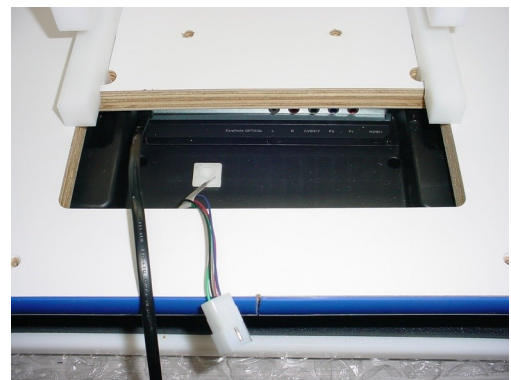
Transfer the front plexi to the new monitor housing sent. It's a good idea to clean both surfaces with a tack cloth.

Once the plexi is swapped, the new monitor can be installed on the cabinet.



Helpful hints when re-assembling the cabinet:

- 1.) Feed the 4 pin connector and the new monitor power cable through the hole before seating the wood housing back in place,
- 2.) Using 2 people, feed the monitor power cord into the hole in the cabinet as you install the monitor housing to the cabinet. Place the white plastic locking tabs fully into the guides and push the monitor down to lock in place. Re-install the wood block to further secure the monitor.
- 3.) Plug the HDMI cable into the bottom of the new monitor. Install a new plastic zip tie to secure the HDMI cable in place.
- 4.) Feed the new monitor's power cable through the wire saddles and plug back into AC power.
- 5.) Re-install marquee by feeding light power cable through the hole in the top of the cabinet as the marquee is placed on top of the game.
- 6.) Re-install the 3 bolts using a 7/16" wrench.



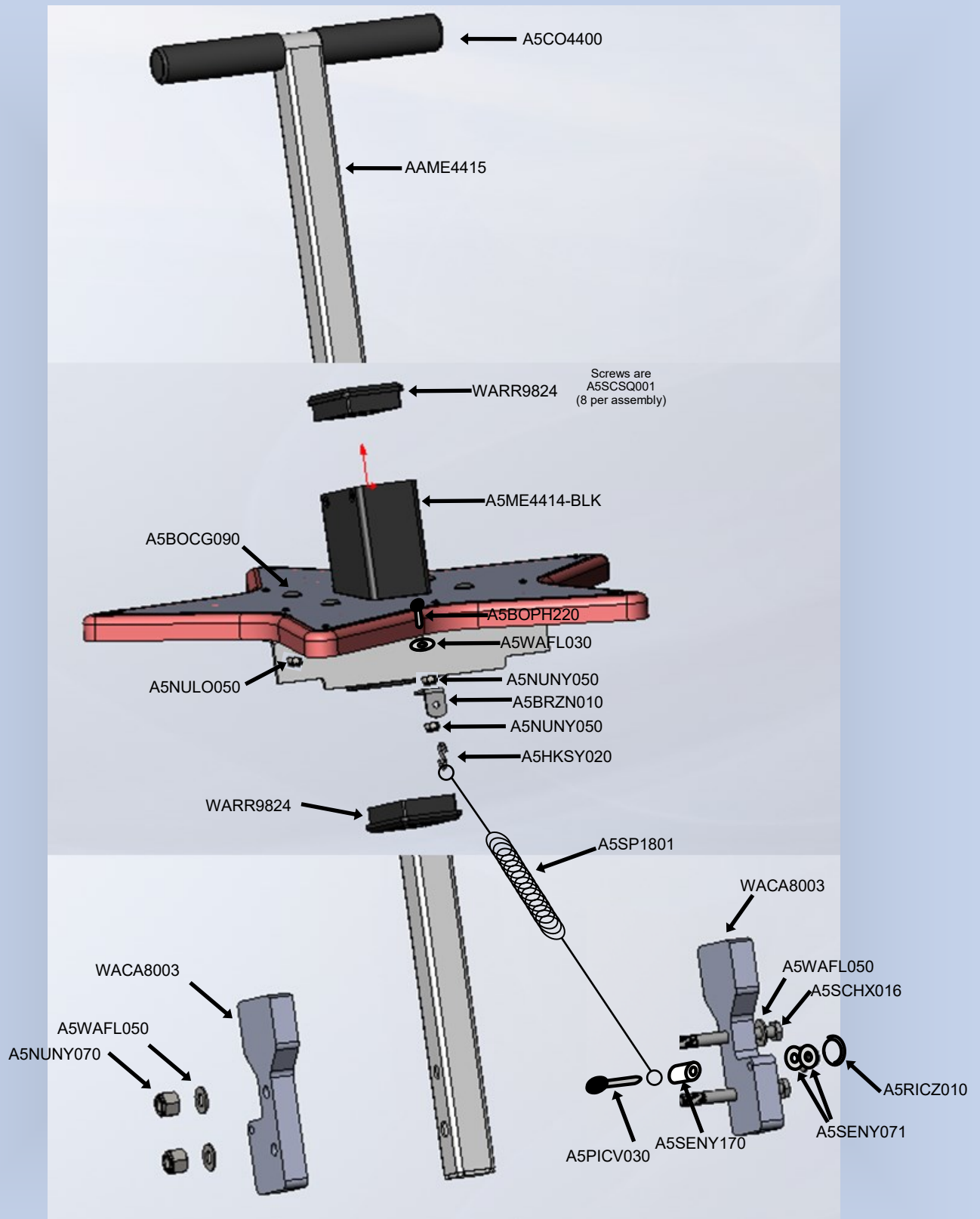
MONITOR SETTINGS

The 32" Full HDTV used in Willy Crash Mini includes a remote control to access the menu.

- Set screen options as shown:



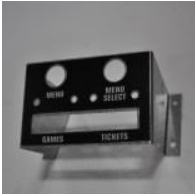
HANDLE ASSY EXPLODED VIEW



PARTS LIST

PART #	DESCRIPTION	PART #	DESCRIPTION
AABK1013	Bracket, Pushbutton/Counters	A5CORD5	Cord, Ac Computer Cord, 6.5'
A5BK9999	Bracket, Power Supply Mounting	A5CORD5000	Cord, Power Adapter, 1ft
A5BURU075	Bumper, Rubber, 2 1/4 X 2 5/8, Black	A5CORD58	Cable, USB, Male A To Micro, 3ft
A5CA1005	Caster, Swivel/Lock	A5CE2300	Cable, Audio Isolator
A5CB8020	Cash Box	A5CEAU010	Cable, Audio Stereo, 3.5mm, 2ft
A5CO4400	Cover(Grip), Slide On, Handle	AACE1710	Cable, 4" Door Ground Cable
A5FI9010	Line Filter	AACE8001	Cable Assy, Speaker Power
A5HO1003	Holder For Light Bars	AACE8002	Cable Assy, Plunger Sensor
A5LI0004	Light, 7w Led Bulb, 110/220v	AACE8003	Cable Assy, 5v Addressable Light Power
A5LK2001	Lock, Cash Box, A05/E00 Key Code	AACE8004	Cable Assy, DBA
A5LK5002	Lock, 7/8", H95 Key Code	AACE8005	Cable Assy, Menu/Select/Counters
A5OU5000	Outlet Strip, 4 Outlet	AACE8006	Cable Assy, Coin Door/Ticket Disp
A5PL0010	Plug, Finish, Fits 1" Tube Od	AACE8008	Cable Assy, Monitor Lights Power
A5PL4200	Plate, Upstacker Bill Acceptor Plate	AACE8014	Cable Assy, Door Bd To Pwr Dist
A5PL8900	Plate, Bill Validator Blanking Plate	AACE8015	Cable Assy, Audio Board Power
A5PL9998	Plate, Blanking, No Holes, Coin Door	AACE8016	Cable Assy, Power To Light Board
A5SP1801	Spring, W/Loop Ends	AACE8021	Cable Assy, Coin Door To Hinge
AASW200	Low Ticket Switch	AACE8022	Cable Assy, Ticket Dispenser To Hinge
A5TA2002	Tape, UHMW	AACE19000	Cannon Led Stick Light
W5HG1025	Hinge, 16" Double Bend	AACE19001	Cannon Led Stick Light
W5HG1065	Hinge, 5-75, Single Bend	AACE19002	Marquee Light Socket Power Cable
W5KE5000	Keeper, Lock	AACE19003	Cannon Lights Power
W5TM4002	T-Molding, 7/8" Blue	AACE19004	Marquee Light Sockets
WAWM0036	Handle Bearing Guide	AACE19005	Addressable Star Light
A5DE0042	Decal, Menu/Volume Decal	AACE19006	RGB Monitor Light
A5DE19000	Decal, Marquee Back, Polycarb	AACE19007	Ground Stud To Door Hinge
A5DE19001	Decal, Cannon Wrap, .060 Petg	AACE19008	Ticket Dispenser Ground To Hinge
A5DE19002	Decal, Star, .060 Petg	AACE19009	Line Filter
A5DE19003	Decal, Control Panel, .060 Petg	AACE8020	Cable Assy, T-Handle To Ground Stud
A5DE19004	Decal, Right Side	AACE8811A	Cable Assy, Speaker
A5DE19005	Decal, Left Side	AACO1020	Counter Assy, No Feet
A5DE19006	Decal, Outer Door	AAPB2700	Menu Push Buttons
A5DE19007	Decal, Inner Door	A5GC8000	Graphics Card, N1050-1sdv-E5cm
A5DE19008	Decal, Marquee Front, Petg	A5MO0032B	Monitor, 32" TV
A5DE19009	Decal, Monitor Cover, Petg	A5PS1013	Power Supply, EVGA 500
A5DE19010	Decal, Speaker Cover	A5TD1	Ticket Dispenser, Entropy
A5DE8023	Decals, Bonus Values Sheet	AACB15001	AC Bleeder Board
A5ME2035	Metal, Ticket Tray	AACB9600A	PCB, Audio Amplifier Board
A5ME4182	Metal, Cashbox Guide		
A5ME4414-BLK	Metal, Handle Guide Assy, Black	AACB3850A	Sensor Board, Alley Track
A5ME4415	Metal, T-Handle, Nickel plated	AACB5156	Power Dist. Board
A5ME5508	Metal, Graphics Card Bracket	AACB8001	Light Driver Board
AACBL4A-DOORA	Cable, Double Coin Door	AACB9604A	Door Interface Board
A5CORD36	Cord, 8' HDMI To HDMI	AAMB10-HD	Mother Board, W/Hard Drive

PARTS PICTURES



A5BK1013



A5BK9999



A5BURU075



A5CA1005



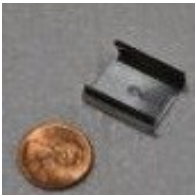
A5CB8020



A5CO4400



A5FI19010



A5HO1003



A5LI0004



A5LK2001



A5LK5002



A5OU5000



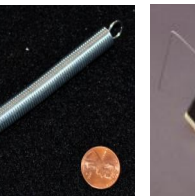
A5PL4200



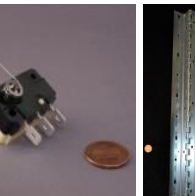
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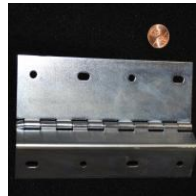
A5PL9998



A5SP1801



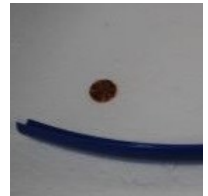
A5SW200



W5HG1025



W5HG1065



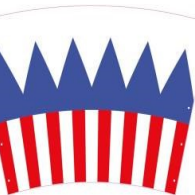
W5KE5000



W5TM4002



A5DE19000



A5DE19001



A5DE19002



A5DE19003



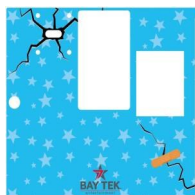
A5DE19004



A5DE19005



A5DE19006



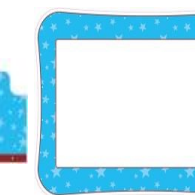
A5DE19007



A5DE19008



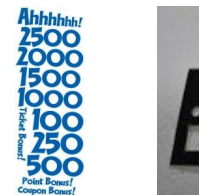
A5DE19009



A5DE19010



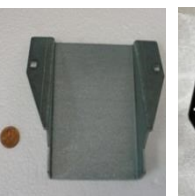
A5DE8023



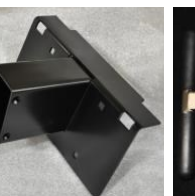
A5DE0042



A5ME2035



A5ME4182



A5ME4414-BLK



A5ME4415



A5ME5508



A5RICZ010

PARTS PICTURES



AACBL4A-DOORA



A5CORD36



A5CORD5



A5CE2300



A5CEAU010



AAACE1710



AAACE8001



AAACE8002



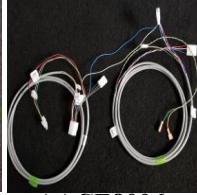
AAACE8003



AAACE8004



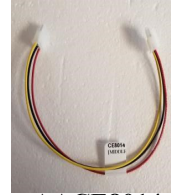
AAACE8005



AAACE8006



AAACE8008



AAACE8014



AAACE8015



AAACE8016



AAACE8021



AAACE8022



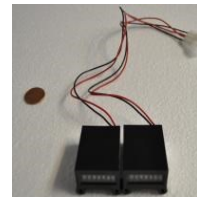
AAACE19001



AAACE8020



AAACE8811A



AAACO1020



AAPB2700



A5PS1013



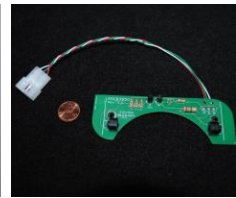
A5TD1



AACB9600A



AACB5156



AACB3850A



AAMB10-HD



AACB9604A

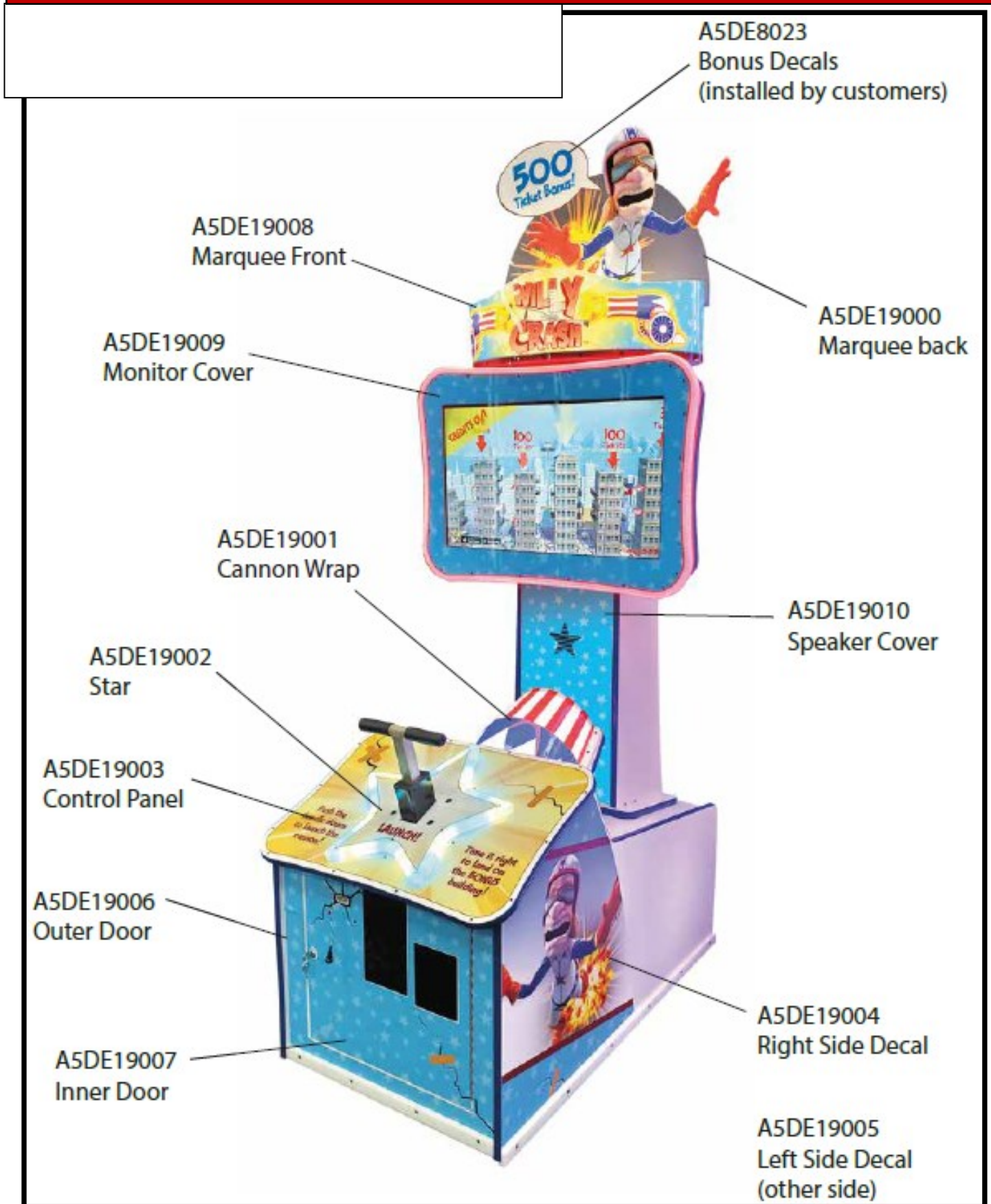


AACB8001



A5MO0032B

DECAL DIAGRAM



REPAIR/MAINTENANCE LOG

If you need to make repairs or order replacement parts it is a good idea to keep a log. Below is a chart you can use to track repairs and maintenance.

[illegible]

NOTES

[illegible]

TECHNICAL SUPPORT

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

Electronics / Circuit Boards:

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:

Sometimes the issue isn't what it seemed to be. If you need to return a circuit board, just give us a call to get Return Authorization. You will be credited for the cost of the board and charged only the bench fee for our processing and retesting that board.

Note: Bench fees apply regardless of whether the repair was your choice or a recommendation from a Bay Tek Entertainment technician.

It's a small price to pay for troubleshooting the issues with your game.

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

WARRANTY OPTIONS

Bay Tek Entertainment warrants to the original purchaser that the game will be free of defects in workmanship and materials for a period of 12 months from the date of shipping.

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

New, purchased parts have a 30 day warranty.

Any labor expended is not included in this warranty.

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

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 the serial number decal is altered, defaced, or removed from it's original position.

Should you need your game serviced, determine the serial number from the decal on the back of the game cabinet or main board, and call **920.822.3951 Ext. 1102**
or e-mail to: service@baytekent.com