

TM

Operator's Manual



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Marvel: Contest of Champions™

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Safety

Operation

Before operating game, read this manual. Failure to properly install and operate this game could result in malfunction or accident. Operate the game in accordance with the manual.

Transporting

The cabinet is very heavy. Because the monitor is high, the cabinet is also very top-heavy. Use appropriate care when moving or transporting cabinet. It contains fragile glass and electronic components. Avoid rough handling.

Handling Components

Many components are extremely sensitive to handling, environmental and Electrostatic Discharge (ESD) events—especially the computer. Do not handle it roughly. Before servicing, call your distributor and inquire about the PC warranty. Use proper ESD procedures when servicing. Protect components from harmful environmental conditions, such as extreme temperatures, excessive moisture or other damaging effects.

Disconnect Power

Always turn the power off and unplug the unit before servicing or making adjustments unless otherwise instructed. Installing or repairing components while power is on can damage the components and void the warranty.

Grounding

Avoid electrical shock. Do not plug in AC power until you have inspected and properly grounded the unit. Only plug into a grounded, three-wire outlet. Do not use a “cheater” plug or cut off the ground pin on the line cord.

Electrical Shocks

There is no isolation transformer in the cabinet. Disconnect AC power before servicing. However, be aware that lethal voltages can remain in the electronic components even when AC power is disconnected. Use extreme caution when servicing. Verify that there is a working ground connection. If the unit sustains water damage, cease using it immediately and unplug AC power.

Monitor

The monitor contains no user serviceable parts. Do not attempt to service the monitor.

Power Cord

If the power cord is damaged or lost, replace it with an identical cord as supplied by the manufacturer or an authorized service agent.

Surge Suppressor

It is recommended that you plug your game’s power cord into a surge suppressor to help protect from power surges that may damage sensitive electronic components.

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Water and Other Liquid Sources

Do not install game near sprinkler or other water jet sources. Do not use water jet to clean game. Keep minimum clearance behind game and wall for proper ventilation but also prevent access of liquid from spills and sprays from entering ventilation holes.

Connectors

When servicing machine, ensure all connectors mate properly. If connectors do not slip in easily, do not force them. Connectors are often keyed and only connect one way. Check for correct orientation.

Computer

The computer contains sensitive components, including a hard drive. Do not handle it roughly. Call your distributor before servicing its internal components. Ask about warranty information as it relates to the PC. Cycle AC power on or off with the cabinet power switch.

A dongle has been inserted into one of the USB ports. This is required for game play.

Do not remove the dongle except for troubleshooting purposes.

Tempered Glass Warning

When handling the LCD display glass cover take special care and set the glass down softly on a flat surface free of debris. The edge of the glass is sensitive to hard impact. Shattered glass from the monitor can travel long distances and cause bodily injury. Use proper procedures when handling broken materials.

Hazard to Epileptics

A small portion of the population has an epileptic condition that may cause seizures. Affected persons experience seizures while watching some television pictures or playing certain video games. People who have not had seizures may still have an undetected epileptic condition. If anyone in your family has experienced epilepsy symptoms (seizures or loss of awareness), consult your physical before using video games. While children play video games, a parent should observe. Be alert to the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation or convulsions. If you or your child experiences these symptoms, discontinue use immediately and consult your physician.

Manual

Keep this manual available and ready for use. Please check our website www.rawthrills.com for the latest information regarding this and other Raw Thrills products. If the game fails to function properly, turn off the machine and unplug the AC line cord. Contact your local distributor. You may not reproduce this document or any of its contents without written authorization from Raw Thrills, Inc.

Specifications

For reasons, such as performance, this product's specifications may change without notice. Federal patent, copyright and other intellectual property laws protect the content, devices and design of the game and its equipment.

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Product Specifications

Electrical Power

United States, International, and Japan

Operating AC Current: 5/2.5 Amps

Voltage: 115/230 ~ VAC 50/60Hz

Dimensions

43" Cabinet w/Marquee

Height: 96.00" (244cm)

Width: 47.00" (120cm)

Depth: 35.00" (89cm)

43" Cabinet w out/Marquee

Height: 83.00" (211cm)

Width: 47.00" (120cm)

Depth: 35.00" (89cm)

Operating Temperature

50 °F to 104 °F

(10 °C to 40 °C)

Operating Humidity

Must not exceed 95% relative humidity

Fuse Replacement Guide

NOTE: FOR CONTINUED PROTECTION AGAINST
FIRE AND ELECTRICAL DAMAGE, USE ONLY
SPECIFIED FUSE TYPE AND VALUE.

Please see unit for specified fuse labeling. Abbreviations:

5A 250V	5A, 250VAC Fast Acting 3AG Fuse	Littlefuse 031205.MXP (or equivalent)
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Setup

Unpack Materials

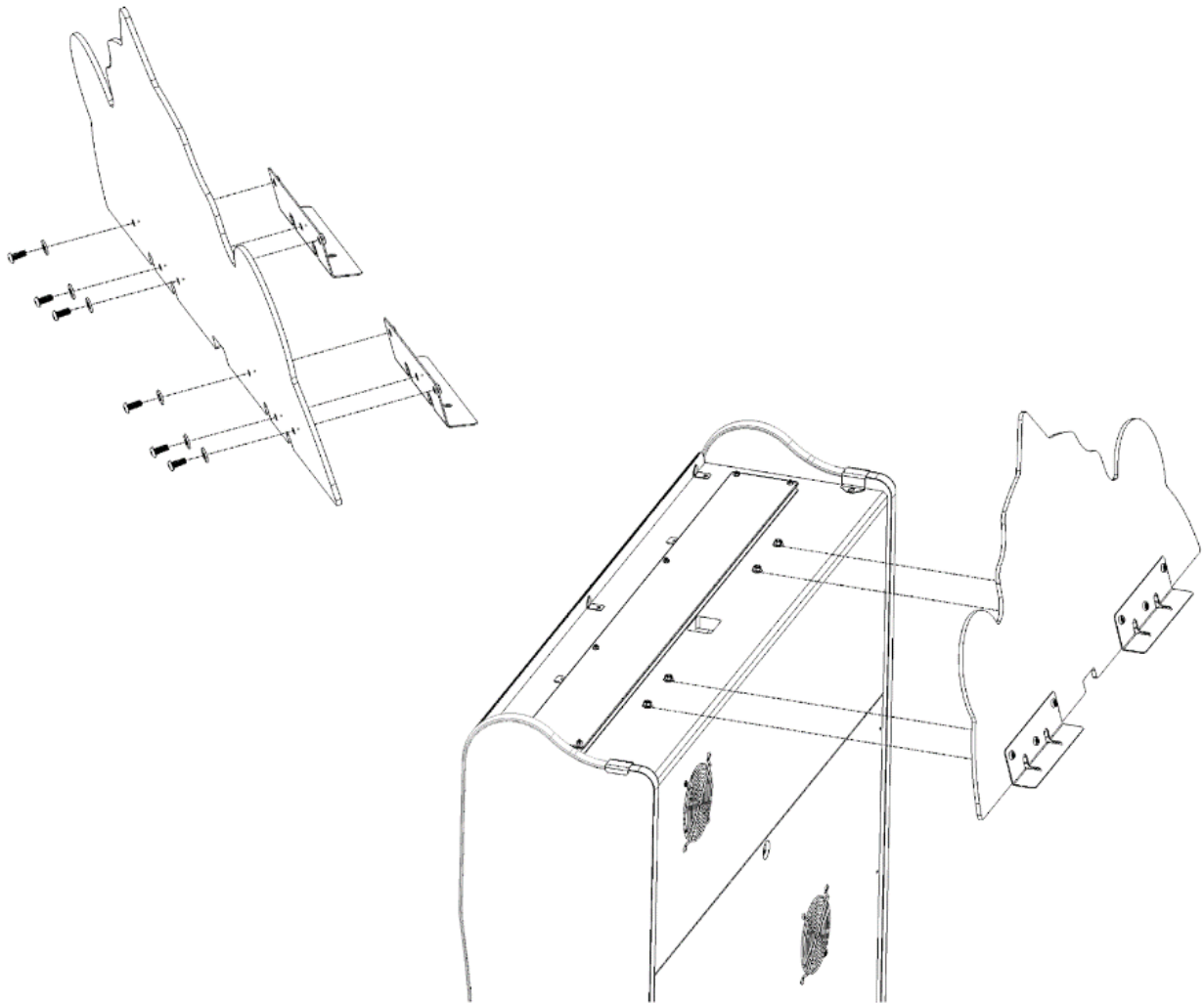
1. Place the shipping crate on a flat, stable surface.
2. Cut the banding straps and remove the cardboard lid.
3. Lift off the large cardboard containers surrounding the cabinet assembly and remove any shipping cleats.
4. Remove the coin door key from the coin return slot.
5. Open the top coin door.
6. Locate the keys for the back doors, the cash box door, and the card dispenser doors.
7. Open the cash box door and remove the cash box.
8. Check for shipping damage to the following:
 - Marquee and monitor
 - Cabinet decals
9. Check the AC line cord for visible signs of damage.

Pay particular attention to the plug and line cord insulation.

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Cabinet Assembly

1. Place cabinet in desired floor location
2. Locate the upper marquee and the (2) upper marquee mounting brackets, as well as the following hardware:
 - a. (6) Black steel washers for ¼" screw
 - b. (6) Black tamper proof Torx machine screws, ¼"-20 thread size, ⅝" long
3. Attach the brackets to the back of the upper marquee using the hardware and a T-27 Torx security bit (see exploded view below)
4. Locate the (4) flanged hex head screws on the top of the cabinet and unscrew them so they are offset from the top surface by about an ⅛"
5. Lift the upper marquee sub-assembly, rest it on the back of the top of the cabinet, and slide it forward such that the flanged hex head screws pass through the upper marquee sub-assembly and make contact with the end of the slots in the bottom of the brackets
6. Tighten the (4) flanged hex head screws using a ⅜" socket to secure the marquee into place



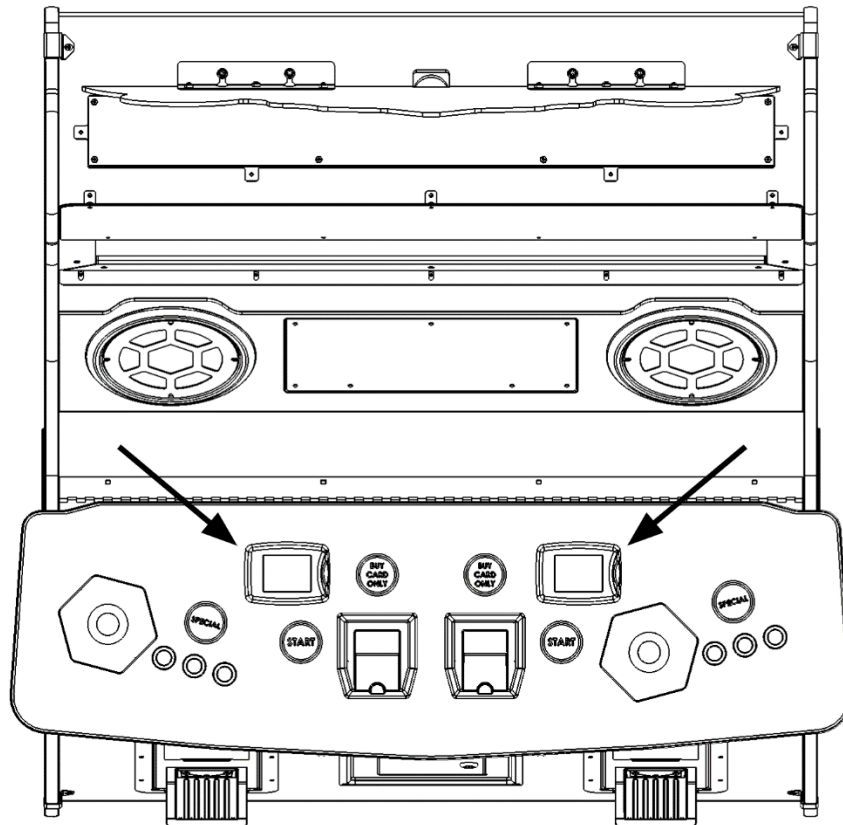
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Card Reader Installation and Setup

Due to the rising popularity of aftermarket debit card systems for cashless or coinless operation of amusement machines (i.e. Embed, Intercard, Semnox), this Marvel: Contest of Champions cabinet is equipped with UCL compatible harnessing to ensure that the installation process is easier and less prone to miswiring.

You can choose to use 1 or 2 card readers in the price settings section of the test menu. It is recommended to use 2 card readers for best results and player access.

There are (2) supplied connections, each located under the control panel near the player positions. There is enough slack to accommodate mounting (2) card readers on the control panel, as shown below, or on the front panels, as each operator desires.



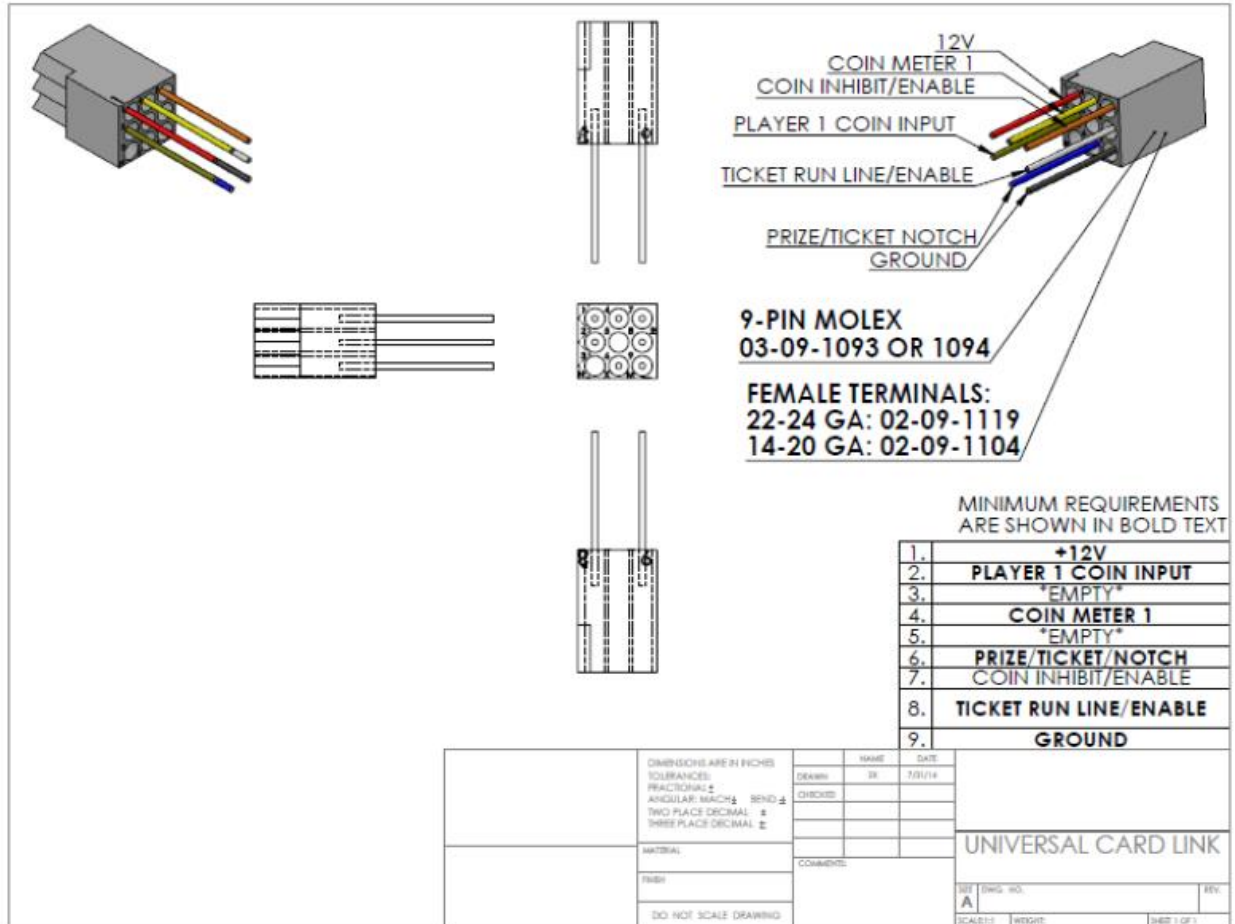
If only (1) card reader will be used, it is recommended that the card reader be mounted to the coin door using either the Player 1 or Player 2 UCL connection or standard coin door harness to complete installation.

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Card Reader Installation and Setup (cont.)

UCL, or Universal Card Link, is a debit card standard established by the American Amusement Machine Association. Visit <https://coin-op.org/standardization/> for the latest UCL standard and manual information.

The UCL connections on the game use pins 1, 2, 6, 8, and 9. The other pins are unused. Each UCL connector can supply up to 1A at 12VDC.



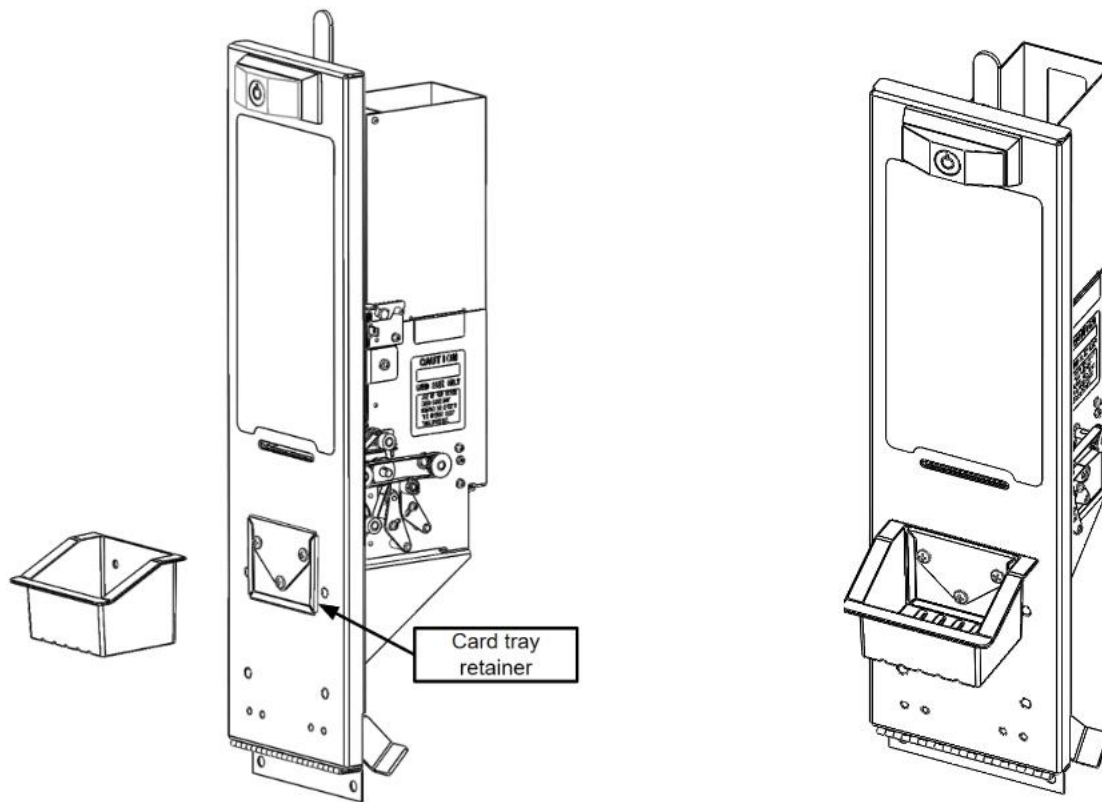
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Card dispenser card tray installation

Included with the cabinet are (2) card trays ((1) red and (1) blue) that need to be installed on the front of the card dispensers before operation. To install:

1. Remove the (3) screws holding the card tray retainer in place
2. Hold the card tray against the front of the card dispenser and place the card tray retainer against the back of the inside of the card tray, lining up the holes of the card tray retainer, card tray, and the card dispenser
3. Reinstall the (3) screws

Repeat for the other card dispenser, making sure that the red card tray is installed on the *Player 1* card dispenser and the blue card tray is installed on the *Player 2* card dispenser



Check Electrical Settings

1. Verify the voltage of the AC outlet you will be plugging the game into.
2. Verify the AC outlet ground connection is present and working.

Startup Game

1. Plug the line cord into an AC outlet.
2. Turn the main cabinet power switch on.
3. Verify the game and all components are operating normally. See *Basic Functional Test on Initial Power Up* in the *Diagnostics and Adjustments* section for the recommended procedure.
4. Authorize a set of cards. See *Authorizing More Cards* under the *Cards and Card Dispensers* section.

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Basic Functional Test on Initial Power Up

1. Enter the Input Test and verify all switch inputs are working.
2. Enter the Monitor Test and verify the monitor is working properly.
3. Enter the Sound Test and verify the audio works and is not distorted.
4. Enter the Light Test and verify that all the lights are working properly.
5. Enter the Coin Meter Test and verify the coin meter is working properly.
6. Enter the Scanner Test and verify both Player 1 and Player 2 card scanners are working properly.
*****CHECK SCANNER ASSIGNMENT will not clear until you complete this step*****
7. Enter the Card Dispenser Test and verify the dispensers are working properly.
8. Enter the Watchdog Test and verify the game reboots.
9. Upon a successful reboot, you are ready to adjust pricing, volume and other functions.

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[Test Menu](#)

Main Menu

Choose from all available operator settings and menus here.

MCOC VERSION N/A	MARCH 6, 2024 11:50:06 AM	SERIAL #: 34567 CABINET TYPE: N/A
MAIN MENU		
DIAGNOSTICS CARD AUTHORIZATION PRICING ADJUSTMENTS GAME SETTINGS SYSTEM SETTINGS AUDITS RESETS VOLUME UTILITIES ADVERTISING SYSTEM INFORMATION EXIT	Verify or diagnose the operation of all game functions.	CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/M/H Attack, Start Go Back: Service, Special, Buy Card		

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Diagnostics

This menu contains a number of tools to verify or diagnose the status of all game functions.

MCOC VERSION N/A	MARCH 5, 2024 05:12:53 PM	SERIAL #: XXXX CABINET TYPE: N/A
DIAGNOSTICS		
INPUT TEST HARD DRIVE CHECK VIDEO TEST AUDIO TEST CABINET LIGHTS TEST METER TEST CARD DISPENSER TEST SCANNER TEST SMART CARD TEST WATCHDOG TEST EXIT	Test input hardware such as switches.	CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/M/H Attack, Start Go Back: Service, Special, Buy Card		

- **Input Test:** Verify function of cabinet switches.
- **Hard Drive Check:** Test hard drive file integrity.
- **Video Test:** Check screen colors and pixel function.
- **Audio Test:** Test speakers.
- **Cabinet Lights Test:** Toggle lamps.
- **Meter Test:** Test functionality of the physical coin meter.
- **Card Dispenser Test:** Check dispenser status and clear dispenser errors.
- **Scanner Test:** Test scanner cameras.
- **Smart Card Test:** Check RFID Smart Card reader and read RFID cards.
- **Watchdog Test:** Test functionality of watchdog (Game will reboot if working properly).

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Card Authorization

Use this tool to authorize additional cards to dispense.

CARD AUTHORIZATION

INSTRUCTIONS: PLACE CARD ON SCANNER

STATUS: NO CARD

UID: 00 00 00 00 00 00 00

CARD SERIAL: 0

UNUSED COUNT: 0

CREATE TIME: N/A

CONSUME TIME: N/A

CABINET SERIAL: 0

USED COUNT: 0

CARDS AUTHORIZED ON THIS SYSTEM: 83

PRESS ANY BUTTON TO EXIT

Instructions:

1. Locate the RFID card under the lid of the box of Marvel: Contest of Champions cards.
2. Remove the RFID card and place it on the RFID scanner near the Test Bracker.
3. Wait for the card status to update on screen.
4. Press Start to consume the card and increase the authorized card count.
5. Remove the consumed card and set aside.

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Pricing Adjustments

This menu allows for the customization of pricing settings.

MCOC	MARCH 5, 2024	SERIAL #: XXXX
VERSION N/A	05:50:36 PM	CABINET TYPE: N/A
PRICING ADJUSTMENTS		
FREE PLAY	OFF	Turn freeplay mode on or off.
CURRENCY INPUT	CARD SWIPES	
CURRENCY TYPE	US DOLLARS	
SWIPE VALUE	\$1.00	
SWIPES TO PLAY	1	
MAX CREDITS	30	
SHARED CASHBOX	OFF	
EXIT		
		CURRENT SETTINGS
		CURRENCY INPUT: CARD SWIPES
		COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H RHack, Start Go Back: Service, Special, Buy Card		

- **Freeplay:** No coins or swipes needed to play.
- **Currency Input:** Choose among Cash, Tokens, or Swipes.
- **Currency Type:** Select among different currencies.
- **Swipe Value:** Currency value per swipe.
- **Swipes To Play:** Number of swipes to play, continue, upgrade, or buy a card.
- **Max Credits:** Maximum number of stacked credits.
- **Shared Cashbox:** Single or split credit pools.

Notes:

- Adjusting the number of units per credit will clear any currently stored partial credits.
- Adjusting Credit Pools will clear all credits.
- Separate Credit Pools feature is not compatible with DBV

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Game Settings

This menu allows you to adjust various settings related to game play.

MCOC	MARCH 5, 2024	CABINET TYPE: N/A
VERSION N/A	05:57:21 PM	
GAME SETTINGS		
DIFFICULTY	MEDIUM	Adjust the game difficulty.
COUNTDOWN TIME	45	
LONGER MATCHES	OFF	
LOW CARD INDICATOR	OFF	
EXIT		
		CURRENT SETTINGS
		CURRENCY INPUT: CARD SWIPES
		COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Difficulty:** Select among Easy, Medium, and Hard.
- **Countdown Time:** Sets the maximum number of seconds per match.
- **Longer Matches:** Reduces damage for longer matches, changes will affect Countdown Time.
- **Low Card Indicator:** Display a message when card hopper runs low.

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System Settings

This menu allows you to adjust system settings.

MCOC VERSION N/A	MARCH 5, 2024 05:59:20 PM	SERIAL #: XXXX CABINET TYPE: N/A
SYSTEM SETTINGS		
DATE & TIME REGION/LANGUAGE EXIT	3/5/2024 5:59:20 PM USA	Set the date and time.
		CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Date & Time**: Set the date and time.
- **Region/Language**: Region changes will modify language, pricing, and game settings.

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Audits

This menu allows you to view a wide variety of statistics and information about the game.

MCOC	MARCH 5, 2024	CABINET TYPE: N/A
VERSION N/A	06:01:25 PM	
AUDITS		
SYSTEM AUDITS COIN AUDITS GAME AUDITS EXIT		View system audits.
		CURRENT SETTINGS
		CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Rttack, Start Go Back: Service, Special, Buy Card		

- **System Audits:** View system audits.
- **Coin Audits:** View coin audits.
- **Game Audits:** View game audits.

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Resets Menu

This menu contains all available operator resets for the game.

MCOC VERSION N/A	MARCH 5, 2024 06:03:11 PM	SERIAL #: XXXX CABINET TYPE: N/A
RESETS MENU		
RESET CREDITS RESET CARDS RESET DISPENSERS RESET PRICING ADJUSTMENTS RESET GAME ADJUSTMENTS RESET GAME AUDITS RESET SYSTEM AUDITS RESET COIN AUDITS RESET ALL AUDITS FACTORY RESTORE EXIT	Reset all credits to zero.	CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Reset Credits:** Reset all credits to zero.
- **Reset Cards:** Clear number of cards owed.
- **Reset Dispensers:** Clear dispenser errors and cards owed.
- **Reset Pricing Adjustments:** Reset all pricing settings to default.
- **Reset Game Adjustments:** Reset all game settings to default.
- **Reset Game Audits:** Reset all game related audits.
- **Reset System Audits:** Reset all system audits.
- **Rest Coin Audits:** Reset all coin audits.
- **Reset All Audits:** Reset all audits.
- **Factory Restore:** Restores game to original factory state.

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Volume

This menu allows you to adjust the volume levels for the game.

MCOC	MARCH 5, 2024	SERIAL #: XXXX
VERSION N/A	06:04:49 PM	CABINET TYPE: N/A
VOLUME		
GAME VOLUME	15/30	Adjust the volume during gameplay.
ATTRACT VOLUME	15/30	
CREDIT VOLUME	15/30	
ADVERTISEMENT VOLUME	15/30	
MINIMUM VOLUME	0/30	
EXIT		
		CURRENT SETTINGS
		CURRENCY INPUT: CARD SWIPES
		COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Game Volume:** Sets the in-game volume level.
- **Attract Volume:** Sets the attract mode volume level.
- **Coin Volume:** Sets the volume level of the coin in sound.
- **Advertisement Volume:** Sets the volume of attract mode advertisements.
- **Minimum Volume:** Sets the minimum volume for all game modes.

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Utilities

This menu includes several log-focused tools.

MCOC VERSION N/A	MARCH 5, 2024 06:06:23 PM	SERIAL #: XXXX CABINET TYPE: N/A
UTILITIES		
COPY AUDITS, LOGS, & SCORES TO USB VIEW GAME LOG VIEW UNITY LOG EXIT	Copy all audits and diagnostics to USB drive.	CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Copy Audits, Logs, & Scores to USB:** Copies audits, logs, and other data to a USB drive.
- **View Game Log:** View game messages.
- **View Unity Log:** View engine messages.

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Advertising

Add your own ads to play during attract mode.

MCOC	MARCH 5, 2024	CABINET TYPE: N/A
VERSION N/A	06:07:58 PM	
ADVERTISING		
AD SLOT 1	NOT SET	View or modify the advertisement being shown during attract mode.
AD SLOT 2	NOT SET	
AD SLOT 3	NOT SET	
AD SLOT 4	NOT SET	
IMAGE AD LENGTH	15 SECONDS	
EXIT		
		CURRENT SETTINGS
		CURRENCY INPUT: CARD SWIPES
		COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

- **Ad Slot 1, 2, 3, 4:** Access settings for each individual ad slot.
- **Image Ad Length:** How long to display image advertisements.

*****NOTE : Image formats – JPG, JPEG, PNG. Video Format – OGV (REQUIRED).**

Desired resolution – 1920 x 1080 or less***

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Advertising (continued)

Each ad slot allows you to view or modify the advertisements shown in attract mode.

MCOC		MARCH 5, 2024	CABINET TYPE: N/A
VERSION N/A		06:09:27 PM	
AD SLOT 1			
LOAD AD		NOT SET	Load an image or video file into this slot. Videos must be in .OGV format.
DISPLAY MODE		MAINTAIN ASPECT RATIO	
AD ROTATION		NONE	
PREVIEW AD			
DELETE AD			
EXIT			
			CURRENT SETTINGS
			CURRENCY INPUT: CARD SWIPES
			COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card			

- **Load Ad:** Select an image or video file from an attached USB flash drive (**videos must be in OGV format**).
- **Display Mode:** Select among fixed aspect ratio, stretch to fit, or keep original ratio.
- **Ad Rotation:** Rotate ads in 90-degree increments.
- **Preview Ad:** Test ad with current settings.
- **Delete Ad:** Remove ad and clear slot.

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System Information

View hardware and software information.

MCOC	MARCH 6, 2024	SERIAL #: 13337
VERSION 1.53	04:38:27 PM	CABINET TYPE: N/A
SYSTEM INFORMATION		
SERIAL NUMBER 13337 SOFTWARE REV 1.53 BUILD DATE RIO PCB RIO FIRMWARE PC BIOS DONGLE VERSION CABINET TYPE NOT SET GAME TEMPLATE NOT SET		
		CURRENT SETTINGS CURRENCY INPUT: CARD SWIPES COST PER GAME: \$1.00
Navigation: Vol +/-, Joystick Up/Down Select Item: Test, L/Π/H Attack, Start Go Back: Service, Special, Buy Card		

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Choosing the Right Pricing Adjustments for Your Location

Card Swipe Locations

- Make Sure Your Game is Set to **Swipes Mode**:
 1. Hold the Test Button for 2 seconds to enter the Test Menu.
 2. Select “Pricing Adjustments” from the menu.
 3. Select “Currency Input” from the menu.
 4. Select “Card Swipes” from the menu.
 5. Exit out of “Currency Input” menu.
 6. While back in “Pricing Adjustments” menu, set “Swipe Value” to the currency equivalent of your swipe. **THIS SETTING IS EXTREMELY IMPORTANT!** (Example: If the card swipe is worth \$1.50 in your card system, set the swipe value to \$1.50 as well).

Coin Locations

- Make Sure Your **Pricing & Coin Value** are Correct:
 1. Hold the Test Button for 2 seconds to enter the Test Menu.
 2. Select “Pricing Adjustments” from the menu.
 3. Select “Currency Input” from the menu.
 4. Select “Cash” or “Tokens” from the menu.
 5. Exit out of “Currency Input” menu.
 6. While back in “Pricing Adjustments” menu
 - a. Select “Coins to Play” and set the desired amount of coins per game of Marvel: Contest of Champions.
 - b. After setting the coins per play, set “Coin Value” to the currency equivalent of your coin. **THIS SETTING IS EXTREMELY IMPORTANT!** (Example: If your coin is worth \$0.25, set “Coin Value” to \$0.25 as well).

TM

Cards and Card Dispensers



frequency. Per manufacturer’s recommendations, dispenser maintenance s



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Authorizing More Cards

1. Remove the serialized RFID card included with your new box of cards. (See Image 1 Below)
2. Open the top coin door.
3. Enter the Test Mode by pressing the Test Button for two seconds.
4. Select "CARD AUTHORIZATION" from menu
5. Place the RFID card on the Smart Card Reader, which can be found near the Service Panel. (See Image 2 Below)
6. Following the directions on the screen, press the Start Button to begin the authorization process.
7. Wait for the authorization process to complete. Once the authorization process is complete, an on-screen message will appear verifying the new cards have been authorized.
8. Remove the used RFID card.
9. Close the coin door.



Image 1

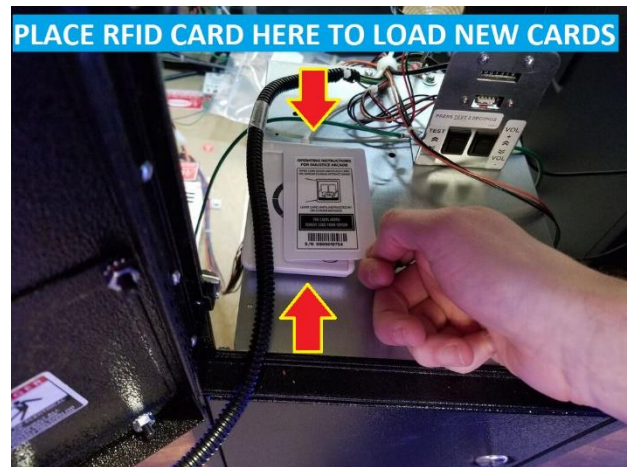


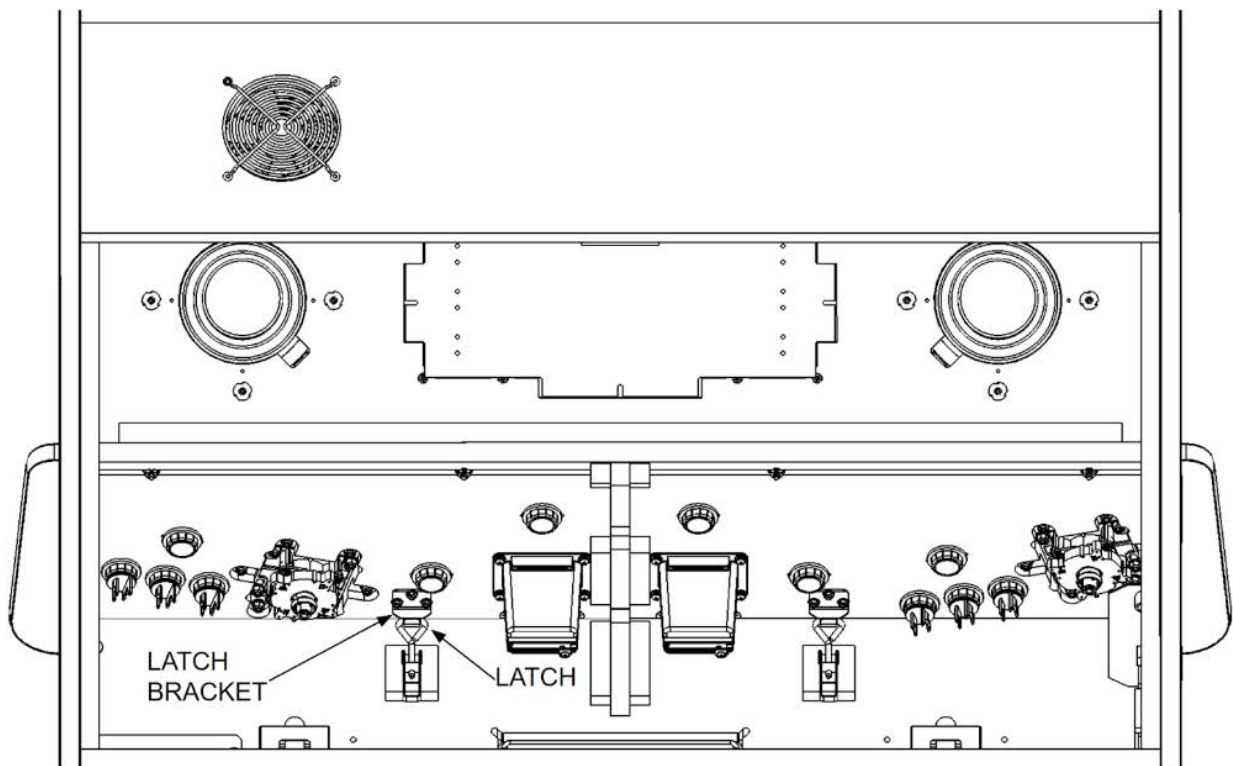
Image 2

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Cabinet control panel

The control panel is held in place by (2) adjustable latches.

1. Open both card dispenser doors and reach up and in. You can also reach the latches by opening the top door of the coin door, if it's installed.
2. Grab the latch handle and lift up to release the latch from the latch bracket.
3. Grab the latch arm and rotate it away from the bracket (attempt to not turn the latch arm while doing so).
4. Slowly open the hinged control panel.
5. To adjust the latch arm's length, turn the arm. If you find that it's difficult to relatch the control panel, lengthen the arm. If the control panel does not feel secure once relatched, shorten the arm.

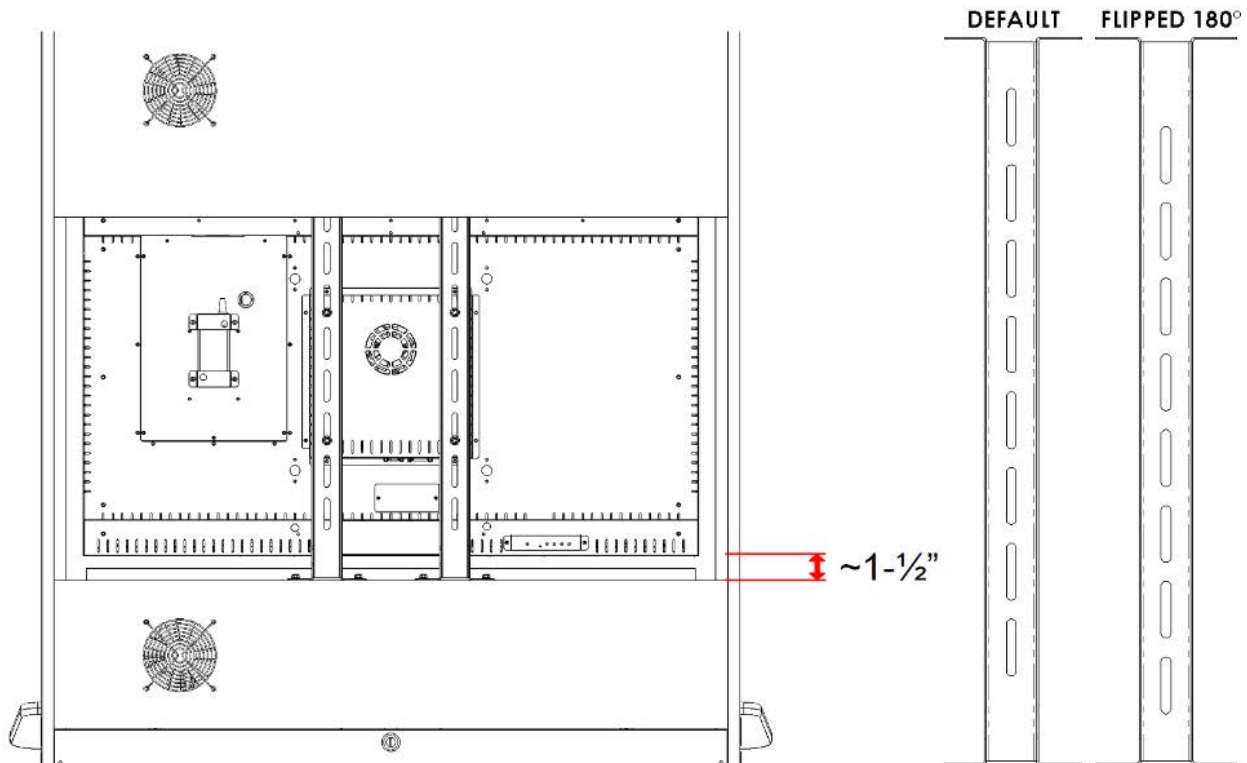


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Monitor mounting and replacement

The 43" monitor is mounted to (2) VESA mounting brackets that are then mounted to one of three sets of ¼"-20 T-nuts in the cabinet. To replace the monitor:

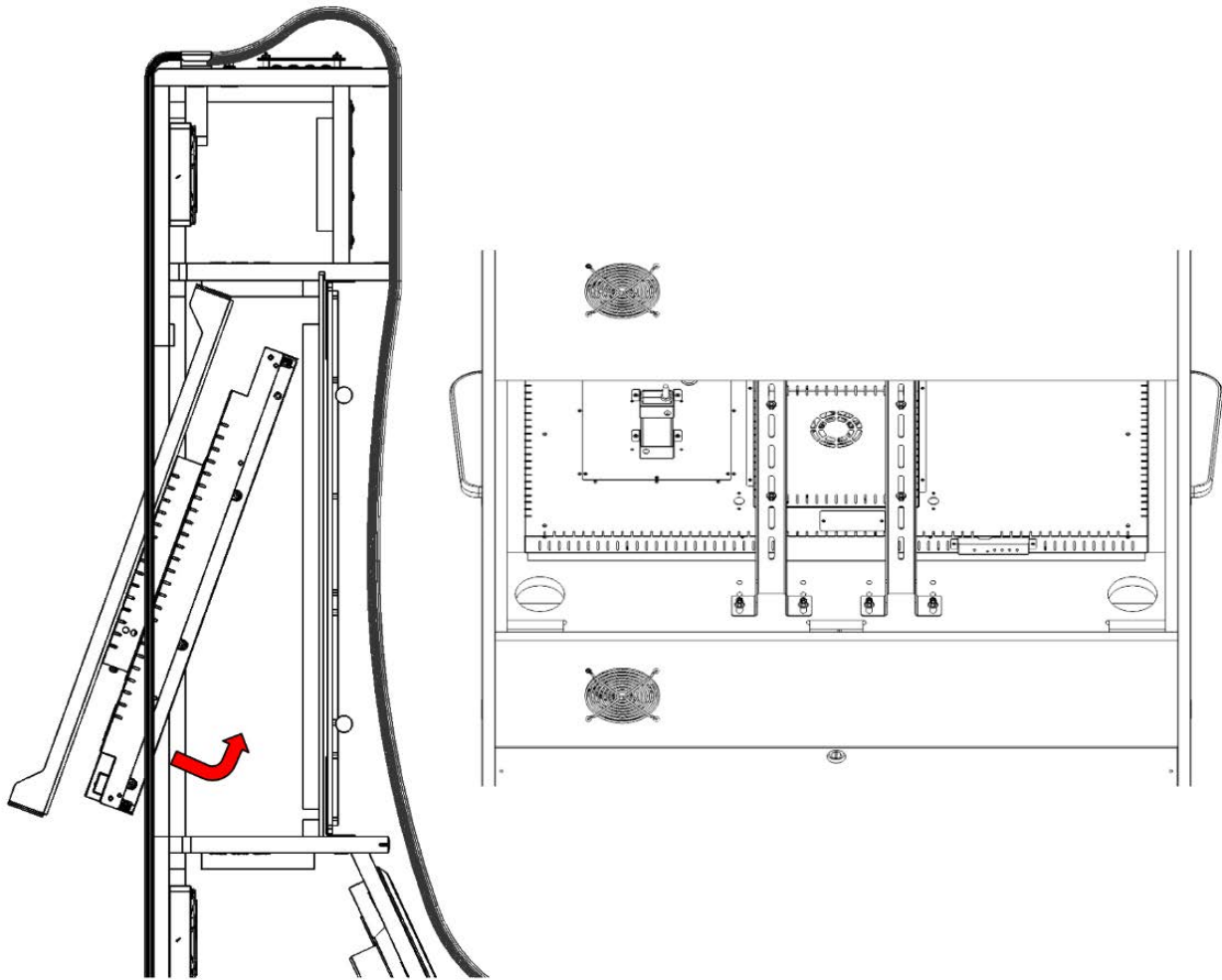
1. Remove the hardware securing the VESA mounting brackets to the cabinet using a 7/16" socket
2. Remove the monitor assembly from the back of the cabinet by rotating the bottom of the assembly out while pulling the assembly down and away from the cabinet.
3. Remove the hardware securing the monitor to the brackets. This hardware differs depending on the monitor model.
4. Gently place the replacement monitor face down on a surface that won't damage the monitor screen and place the brackets on the back of the monitor such that the slots line up with the monitor's VESA mounting holes and the bottom of the monitor is about 1-½" above the bottom of the brackets (this distance will vary based on the monitor model).
 - a. If the monitor's VESA mounting holes don't line up with the slots of the brackets, the brackets can be flipped 180°.



Marvel: Contest of Champions™

Monitor mounting and replacement (cont.)

5. Attach the VESA mount brackets to the back of the monitor, making sure that the bottom of the brackets are lined up with one another.
 - a. If the replacement monitor is a different model than the model included in the game, different hardware may be required.
6. Place the monitor assembly back in the cabinet and push the monitor forward until the front of it is touching the glass. The slots of the brackets will line up with one of the three sets of T-nuts. While pushing the monitor assembly forward, secure the monitor assembly to the wood panels above and below the monitor by reinstalling the hardware that was previously removed.
7. Look at the monitor from the front of the game and determine if any adjustments need to be made.



Marvel: Contest of Champions™

PC Hardware

Your Marvel: Contest of Champions™ uses a [Lenovo M70t](#) computer with a [GeForce GTX 1650](#) graphics card.

NOTE 1

WARNING: DO NOT ENTER THE BIOS SETTINGS MENU! Modifying the BIOS settings will cause your game to stop functioning. In order to boot, new security features verify the BIOS settings against factory settings, including timestamp.

NOTE 2

In the event your video card needs to be replaced, any brand of GeForce GTX 1650 will work.



Lenovo M70t

Marvel: Contest of Champions™

PC Hard Drive Recovery

Symptoms requiring a PC hard drive recovery include:

- File test reports bad or missing files.
- Game fails to finish loading during setup.
- After resetting the AC power, an error is reported.
- Erratic Game or Attract Mode behavior.

The only way to repair corrupt files is to reinstall the software as described below:

Computer

The computer contains sensitive components. Do not handle roughly. Contact your distributor before servicing its internal components. Ask about warranty information as it relates to the PC.

Do **not** use the PC on/off switch. Turn AC power on or off with the cabinet power switch.

Steps to Re-Install the software (the game ships with a USB drive which is used in the steps below):

(NO DVD Restoration. USB Thumb Drive is used on the *Lenovo M70t*)

1. With game and PC's on, verify that the RIO2 board has power. If not, see Troubleshooting.
2. Open the lower back door of the cabinet.
3. Insert the recovery USB thumb drive (included in your game) into an open USB port.
4. Plug in a USB keyboard to the PC.
5. Turn cabinet power switch to OFF. Wait 30 seconds.
6. Turn cabinet power switch to ON, and **HOLD** F12 on the keyboard until the Boot Menu screen appears.
7. Use the Up and Down arrow keys to highlight "USB HDD 1" (or similar) and press enter.
8. Follow on screen instructions to begin recovery.
9. If recovery does not begin, check to ensure USB Drive is inserted correctly and is not damaged.
10. Initial software loading may take several minutes. Check progress periodically.
Do not interrupt power or reset the game during recovery.
11. When software has been loaded, a message indicates that restore is complete. When instructed to remove USB Drive, wait 15 seconds to remove the drive from the PC.
12. Turn cabinet power switch off.
13. Turn the cabinet on again.
14. Your game will now be restored.

Marvel: Contest of Champions™

Troubleshooting

Warning: Review the Safety section before making any adjustments to the game.

Problem	Possible Cause	Solution
Game will not power up.	Game not plugged in.	Plug game into AC outlet.
	Game not turned on.	Turn on main power switch.
	Game fuse is blown.	Check and replace fuse. See Specification section for fuse values.
	No power to receptacle.	Test AC outlet and plug game into powered outlet.
	Flash Drive Installer is left connected to PC.	Disconnect Flash Drive Installer and power cycle the game.
Joysticks/Buttons do not work.	Faulty micro switch.	Replace the micro switch on the joystick/button and re-test. Verify that the wires are connected to the correct spades on the micro switch.
	Faulty wiring.	Disconnect the cabinet from AC power. Verify that all wires are firmly connected to each joystick/button and the PCB. Verify that no wires are frayed or improperly shorting to ground. Verify that wires are connected to the correct spades on the micro switches.
	Faulty PCB.	Ensure all connections to PCB are secure. Replace PCB if faulty.

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Problem	Possible Cause	Solution
<p>Neither buttons nor audio work.</p>	<p>PCB connected to faulty USB port (boot message may indicate not detected)</p>	<p>To test a USB port, turn off the game, disconnect the device from the port, and then connect the game dongle to the port. Reboot the game. A No Dongle message indicates the port is bad. If the game starts, the port is working. After the test, reconnect all devices to the correct USB ports and reboot.</p>
<p>No sound or bad sound.</p>	<p>Bad connection.</p>	<p>Check connection to speakers.</p>
	<p>Volume set too low.</p>	<p>Use VOL UP button on Test panel to raise volume</p>
	<p>Faulty wiring.</p>	<p>Verify all wires are firmly connected to the speakers, PCB, and green computer audio port. Verify that each wire is connected to the correct port and no wires are frayed or improperly shorting to ground.</p>
	<p>Blown speakers.</p>	<p>Remove the grill and inspect each speaker for visible damage. Run the Sound Test from System Tests in the Operator Menu to verify each speaker is working.</p>
	<p>Reversed wires.</p>	<p>A weak or low muffled sound is a sign of reversed speaker wires. Check for reversed wires on each speaker.</p>
<p>Faulty PCB.</p>	<p>To verify audio is working at the computer, connect stereo headphones to the green computer audio port.</p>	

Marvel: Contest of Champions™

Problem	Possible Cause	Solution
Constant low audio hum.	Faulty power supply.	Check external DC supply and the PC supply.
	Open ground.	Check all ground wires in cabinet. Ensure AC wall outlet is properly grounded
Game does not load.	PC hard drive failure.	Recover hard drive. See Flash Installer Document or contact your distributor for the latest software revision.
PC Drive test reports “bad” or “missing” files.		
Game fails to finish loading.		
After resetting, game still reports an error.		
Erratic game mode or attract mode.		
WARNING! Data files Corrupted. (Game Operation May Become Unstable.) Use “Test” Switch to Enter Test Mode and Run “File Test.”		
Game Resets	Bad file.	Run Flash Installer.
No Video	PC not turned on.	Turn PC power switch on. Ensure IEC cable tightly plugged in. Trace cable back to source to ensure continuity.
	Video cable not secure.	Check and secure DVI or HDMI connector to Monitor. Check and secure DVI or HDMI connector to PC.
Coin meter does not click during test.	No pulse to meter.	Check wiring from meter to PCB board.
	Faulty meter.	Replace coin meter.
	Blown fuse(s) on PCB	Replace 12vdc 5A fuse(s) on PCB.

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Problem	Possible Cause	Solution
Dongle Not Present	Dongle missing or disconnected.	Find dongle cable and reseat in USB port.
	Faulty USB port.	Insert dongle cable in different USB port.
Improper number of credits given when coins or bills are inserted.	Incorrect setting in Pricing Adjustments.	Adjust pricing settings.
	Faulty wiring.	Disconnect cabinet from AC power. Verify wires are firmly connected to coin mech and bill validator and ground wires are properly connected. Verify no wires are frayed or shorting to ground.
	Faulty coin mech.	Verify coin mech is not jammed. Ensure coin mech is properly aligned and latched to coin door.
Exits Test Mode every 3 seconds.	Test button stuck in ON position.	Slide or toggle button off after Test Menu appears
Connect RIO Board or RIO Board Missing.	USB cable disconnected.	Check USB connection from PC to RIO board.
	No Power to RIO board.	Check for proper voltage (+5V, +12V) at RIO P1 connector.
Card Dispenser Not Dispensing (Motor Not Moving)	Card Jammed	See <i>Clearing Card Dispenser Jam</i> in the <i>Cards and Dispensers</i> section.
	Harness Connector Unplugged	Make sure the connector from the wire harness is fully plugged in.
Card Dispenser Not Dispensing (Motor Moving)	Card Jammed	See <i>Clearing Card Dispenser Jam</i> in the <i>Cards and Dispensers</i> section.
	Weight Missing	Ensure weight is in the card hopper on top of the card stack.
	Card Dispenser Too Full	Remove some of the cards from the card hopper.

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Problem	Possible Cause	Solution
RFID Card Not Being Recognized	USB Cable Unplugged	Ensure the Smart Card Reader's USB cable is securely plugged in.
	Card Too Far Away	Make sure you're physically touching the RFID card to the Smart Card Reader.
Cards Not Scanning Properly	Card Scanner(s) Unplugged	Ensure the Card Scanner's USB cable is securely plugged in.
	Scanning Window Dirty	Ensure the Scanning Window is clean and that there are no major scratches or marks.
	Scanner LED not Working	Make sure the connector for the LED is fully plugged in.

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Technical Support

For an authorized distributor near you, check the Raw Thrills website at www.rawthrills.com

Betson's Raw Thrills Technical Support Hotline

Phone: 1-800-753-2513

FAX: 1-201-438-5019

Email: rtsupport@betson.com



Marvel: Contest of Champions™

Electrical and Mechanical Illustrations

Pg. 43-44 – Cabinet Assembly

Pg. 45 – Control Panel Assembly

Pg. 46 – Card Reader/Joystick Assembly

Pg. 47 – Speaker Assembly

Pg. 48 – Card Dispenser Assembly

Pg. 49 – Upper and Lower Marquee LED Assembly

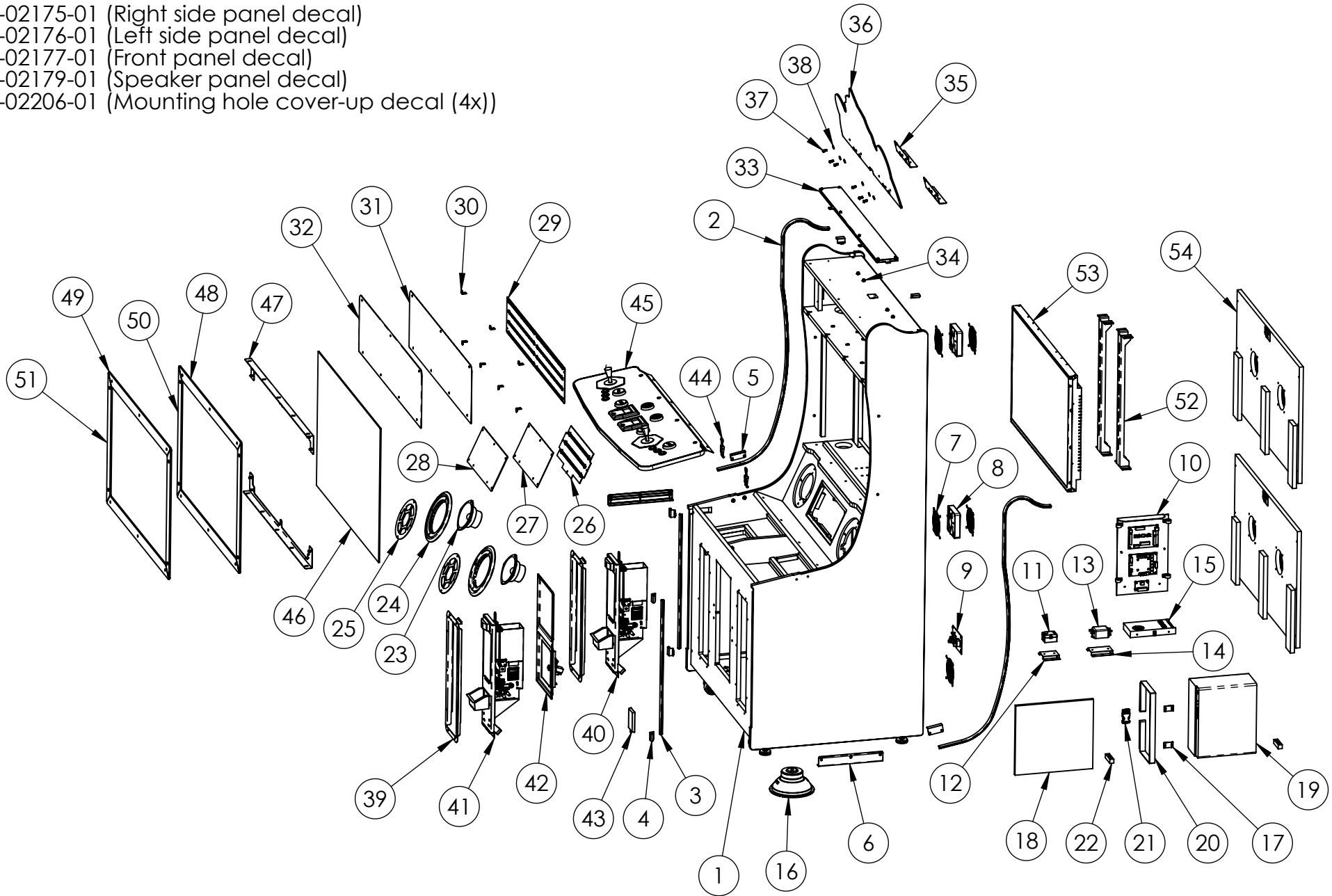
Pg. 50 – Back Door Assembly

Pg. 51 – PCB & AC Power Plate Assembly

Pg. 52-57 – System Diagrams

Cabinet decals:

- 606-02175-01 (Right side panel decal)
- 606-02176-01 (Left side panel decal)
- 606-02177-01 (Front panel decal)
- 606-02179-01 (Speaker panel decal)
- 606-02206-01 (Mounting hole cover-up decal (4x))



Not shown:

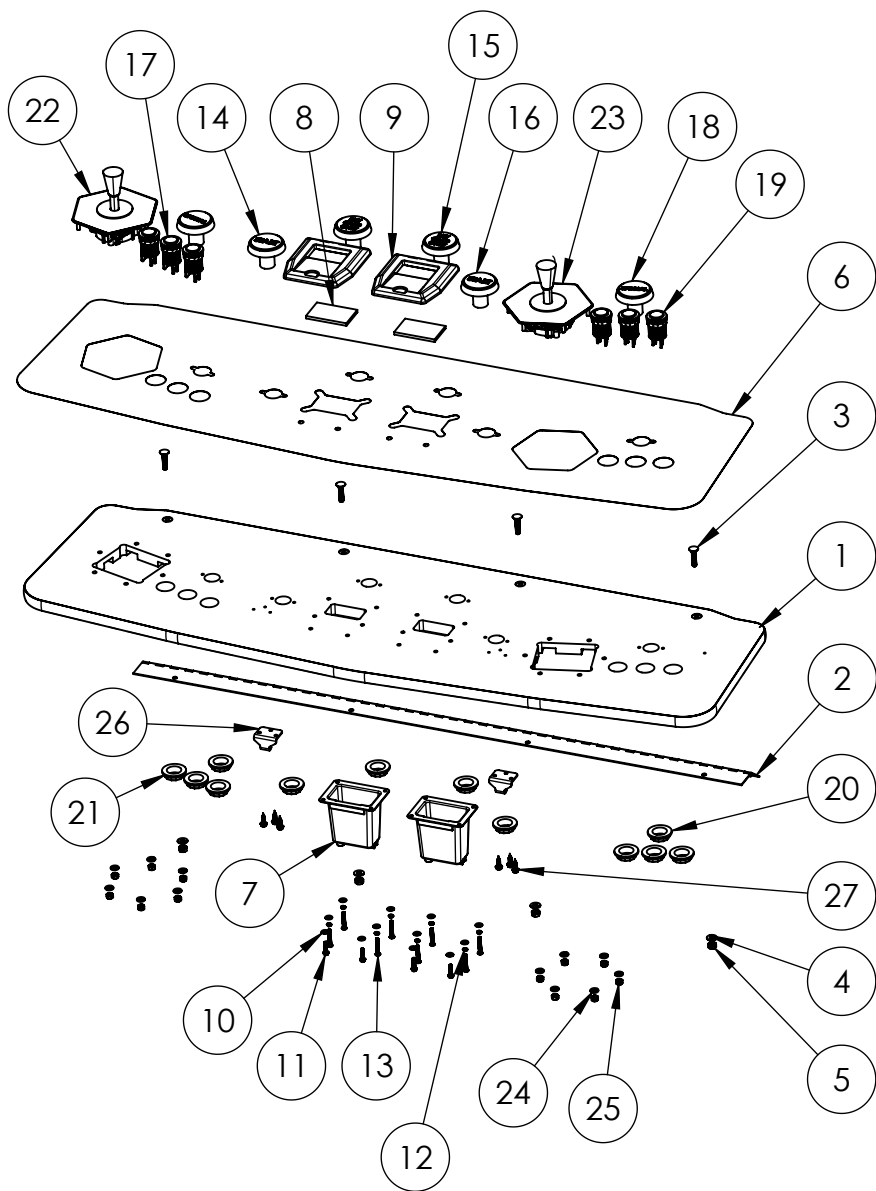
- Selective hardware
- 500-00131-01 - RGB LED strip reel
 - 2x 150 cm/90 LEDs (installed in item #2)
 - 2x 65 cm/39 LEDs (installed in item #3)

Marvel Contest of Champions (43'') Cabinet Assembly (BoM on next page)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	601-01020-01	Cabinet	1
2	603-00718-01 (61.25")	LED T-Molding Extrusion - 61.25"	2
3	603-00718-01 (25.625")	LED T-Molding Extrusion - 25.625"	2
4	600-01134-01	LED T-Molding Clip	6
5	600-02743-01	LED T-Molding Clip, Large	2
6	603-01002-01	12" Clear T-Molding Clip	2
7	800-00001-00	120mm Wire Fan Guard	5
8	820-00001-00	12VDC, 120CFM Cooling Fan (120mm x 120mm x 25mm)	2
9	AC Plate Assembly	AC Power Plate Assembly	1
10	PCB Plate Assembly	PCB Plate Assembly	1
11	800-00079-01	Crouzet: 25A Solid State Relay (84137910N)	1
12	600-03119-01	Solid State Relay Bracket	1
13	442-00001-01	Power Line Filter (Corcom 6MV1)	1
14	600-03206-01	AC Line Filter Bracket	1
15	500-00193-01	Mean Well: 320W, 12V PFC Dual Voltage Power Supply (RSP-320-12)	1
16	2-1-18-00-00-000	Goldwood: 8" Woofer, 4 Ohm, Poly-Mica Cone	1
17	600-00891-01	Securing Nylon Strap Plate	2
18	Partec - 7-197	PC Foam Pad	1
19	850-00036-01	Lenovo M70t	1
20	McM-C - 87425K76	PC Mounting Nylon Strip (0.075" x 1" x 56.25")	1
21	McM-C - 29705T86	Plastic Buckle, Squeeze Release, NO-Sew for 1" Webbing	1
22	601-00580-01	PC Wood Cleat	2
23	2-1-10-00-00-000	5.25" Full Range Speaker, 8 Ohm	2
24	Speaker Bezel Assembly	Speaker Bezel Assembly	2
25	600-02362-01	Speaker Grill	2
26	Speaker Panel Backlight Assembly	Speaker Panel LED Assembly	1
27	606-02182-01	Speaker Panel Translite	1
28	600-03237-01	Speaker Panel PETG	1

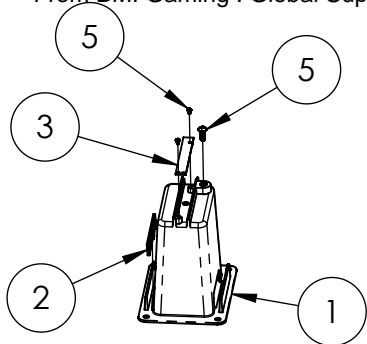
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
29	Lower Marquee Backlight Assembly	Lower Marquee LED Assembly	1
30	600-01434-01	Lower Marquee Bracket	7
31	606-02181-01	Lower Marquee Translite	1
32	600-01951-01	Marquee PETG	1
33	Upper Marquee Uplighting Assembly	Upper Marquee LED Assembly	1
34	McM-C - 92316A540	Black-Phosphate Grade 8 Steel Screw, Flanged Hex Head, 1/4"-20 Thread Size, 3/4" Long	4
35	600-03238-01	Upper Marquee Bracket	2
36	606-02183-01	Upper Marquee	1
37	McM-C - 90484A539	Tamper-Resistant Button Head Hex Drive Screw, 1/4"-20 Thread Size, 5/8" Long	6
38	McM-C - 97416A119	Black-Oxide Steel SAE Washer for 1/4" Screw Size, 0.281" ID, 0.625" OD	6
39	600-02060-01	Extended Card Dispenser Door Frame Plate	2
40	Extended Card Dispenser Door Assembly (P1)	Extended Card Dispenser Door Assembly	1
41	Extended Card Dispenser Door Assembly (P2)	Extended Card Dispenser Door Assembly	1
42	Cashless Mid-width Door Assembly	Cashless Mid-width Door Assembly	1
43	380-00005-01	USB NFC Card Reader/Writer	1
44	600-03240-01	Control Panel Latch	2
45	MCOC43 Control Panel Assembly	Control Panel Assembly	1
46	600-03242-01	Glass (0.1875" x 41.375" x 25.625")	1
47	600-03243-01	Monitor Border Bracket	2
48	606-02165-01	Horizontal Monitor Border, Black	2
49	606-02185-01	Horizontal Monitor Border	2
50	606-02164-01	Vertical Monitor Border, Black	2
51	606-02184-01	Vertical Monitor Border	2
52	600-03244-01	Monitor VESA Bracket	2
53	809-00004-01	43" Monitor	1
54	Back Door Assembly	Back Door Assembly	2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	601-01019-01	Control Panel	1
2	600-03239-01	Control Panel Hinge	1
3	Partec - 31-CB250-03-005	Flat Head Carriage Bolt, 1/4"-20 Thread Size, 1-1/4" Length	4
4	McM-C - 90126A029	Zinc-Plated Steel SAE Washer for 1/4" Screw Size, 0.281" ID, 0.625" OD	4
5	McM-C - 90675A029	Zinc-Plated Steel Locknut with External-Tooth Lock Washer, 1/4"-20 Thread Size	4
6	606-02178-01	Control Panel Decal	1
7	Card Reader Assembly	Card Reader Assembly	2
8	600-02072-01	Card Reader Glass	2
9	603-00854-01	Card Reader Bezel	2
10	McM-C - 90126A512	Zinc-Plated Steel SAE Washer for Number 8 Screw Size, 0.188" ID, 0.438" OD	12
11	McM-C - 90316A197	Flanged Hex Head Screws with Slotted Drive, 8-32 Thread Size, 3/4" Long	4
12	McM-C - 91102A735	Zinc-Plated Steel Split Lock Washer for Number 8 Screw Size, 0.174" ID, 0.293" OD	8
13	McM-C - 91772A211	Stainless Steel Pan Head Phillips Screw, 8-32 Thread Size, 1-1/8" Long	8
14	702-00085-01	Large Round RED IPB (.187 Gold SW, 6V White LED) w/ "START" legend (P1)	1
15	702-00084-01	Large Round GREEN IPB (.187 Gold SW, 6V White LED) w/ "VEND ONLY" legend	2
16	702-00086-01	Large Round BLUE IPB (.187 Gold SW, 6V White LED) w/ "START" legend (P2)	1
17	702-00083-01	LED Controlled Pushbutton - Red (75-0033-W187)	3
18	702-00103-01	Large Round YELLOW IPB (.187 Gold SW, 6V White LED) w/ "SPECIAL" legend	2
19	702-00080-01	LED Controlled Pushbutton - Blue (75-0036-W187)	3
20	Ring Nut for Large IPB	Included with IPBs	6
21	Ring Nut for Small IPB	Included with IPBs	6
22	MCOC43 P1 Joystick Assembly	P1 (Red) Joystick Assembly	1
23	MCOC43 P2 Joystick Assembly	P2 (Blue) Joystick Assembly	1
24	McM-C - 97416A115	Black-Oxide Steel SAE Washer for Number 10 Screw Size, 0.219" ID, 0.5" OD	12
25	McM-C - 90631A411	Low-Strength Steel Nylon-Insert Locknut, 10-32 Thread Size	12
26	600-03241-01	Latch Bracket	2
27	McM-C - 90197A645	Zinc-Plated Steel Flanged Piercing Screw, Number 10 Size, 3/4" Long	6



Marvel Contest of Champions (43")
Control Panel Assembly



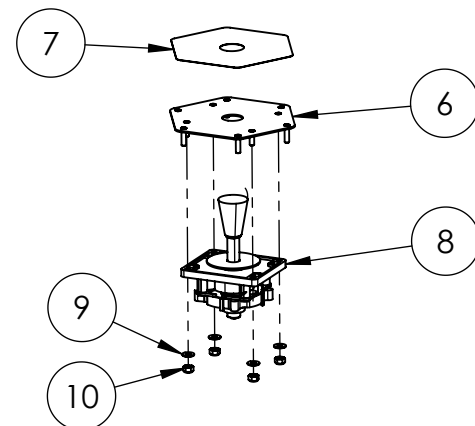
NOT SHOWN:
USB Cable for Webcam (810-00162-01) +
cable tie

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	603-00855-01	Card Reader Camera Holder	1
2	500-00162-01 (5 CM)	Flexible White LED Strip, w/ Foam	1
3	500-00213-01	Card Reader Webcam, 10 cm Focus	1
4	McM-C - 99461A605	Phillips Rounded Head Thread-Forming Screws, Number 1 Size, 1/8" Long	2
5	McM-C - 90272A146	Zinc-Plated Steel Pan Head Phillips Screw, 6-32 Thread Size, 3/8" Long	1

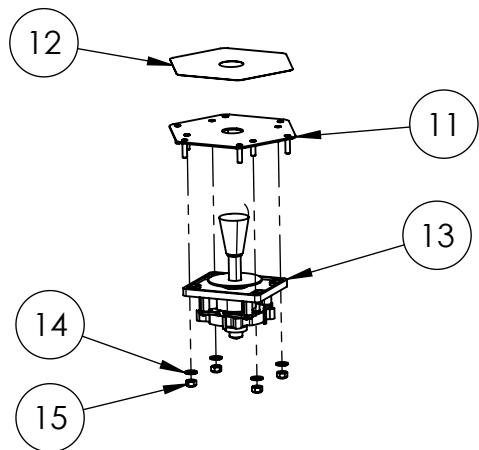
Marvel Contest of Champions (43") Card Reader Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
6	600-02409-01	Joystick Plate	1
7	606-01653-01	P1 Joystick Plate Decal	1
8	800-00072-01	8-Way Ultimate Joystick - Red (50-7608-100)	1
9	McM-C - 90126A514	Zinc-Plated Steel SAE Washer for Number 10 Screw Size, 0.219" ID, 0.5" OD	4
10	McM-C - 90631A411	Low-Strength Steel Nylon-Insert Locknut, 10-32 Thread Size	4



Marvel Contest of Champions (43") P1 (Red) Joystick Assembly

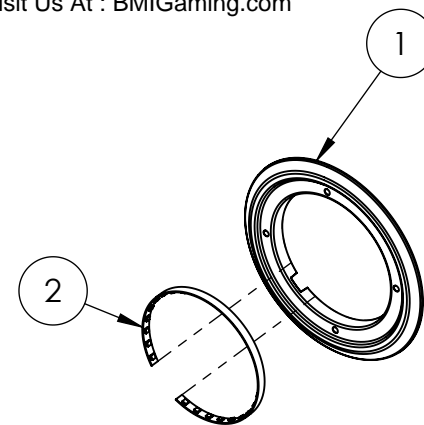


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
11	600-02409-01	Joystick Plate	1
12	606-01654-01	P2 Joystick Plate Decal	1
13	800-00073-01	8-Way Ultimate Joystick - Blue (50-7608-120)	1
14	McM-C - 90126A514	Zinc-Plated Steel SAE Washer for Number 10 Screw Size, 0.219" ID, 0.5" OD	4
15	McM-C - 90631A411	Low-Strength Steel Nylon-Insert Locknut, 10-32 Thread Size	4

Marvel Contest of Champions (43") P2 (Blue) Joystick Assembly

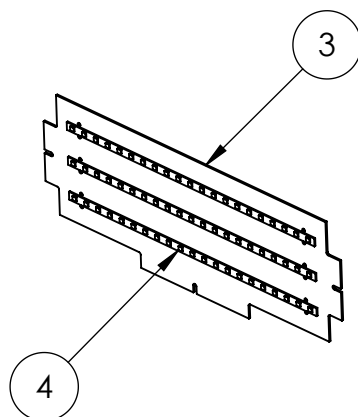


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	603-00853-01	Speaker Bezel	1
2	500-00184-01 (45 CM)	Flexible RGB LED Strip w/ Foam	1



Marvel Contest of Champions (43") Speaker Bezel Assembly

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	600-02095-01	Mini Marquee LED Panel	1
4	500-00162-01 (35 CM)	Flexible White LED Strip w/ Foam	3



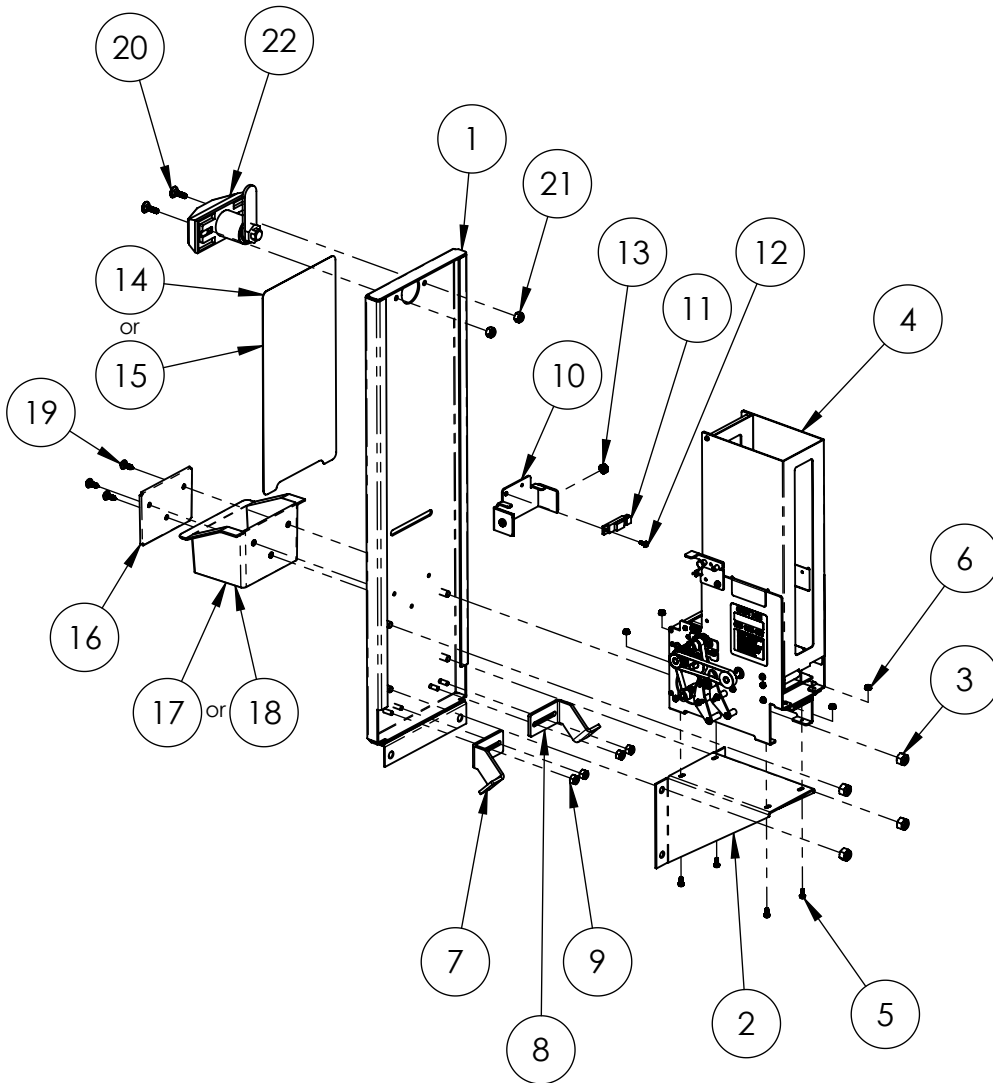
Marvel Contest of Champions (43") Speaker Panel LED Assembly



Notes:

- For P1 assembly, exclude items #15 and #18
- For P2 assembly, exclude items #14 and #17

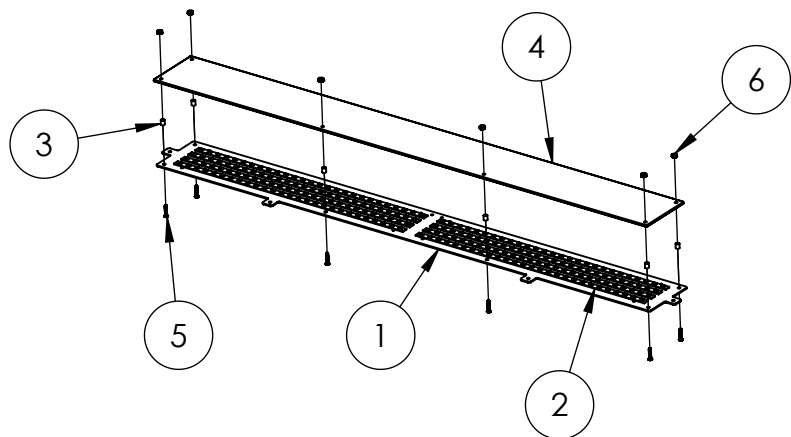
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	608-00242-01	Extended Card Dispenser Door Weldment	1
2	600-02073-01	Card Dispenser Mounting Plate	1
3	McM-C - 90640A129	Low-Strength Steel Nylon-Insert Locknut, Zinc-Plated, 1/4"-20 Thread Size	4
4	800-00067-00	CD-1300 Card Dispenser w/ 340 Cassette	1
5	McM-C - 90317A526	Stainless Steel Rounded Head Screws with External-Tooth Washer, M3 x 0.5 mm Thread, 8 mm Long	4
6	McM-C - 93825A110	Zinc-Plated Steel Locknut with External-Tooth Lock Washer, M3 x 0.5 mm Thread	4
7	600-02061-01	Card Dispenser Right Stop Bracket	1
8	600-02062-01	Card Dispenser Left Stop Bracket	1
9	McM-C - 90631A009	Low-Strength Steel Nylon-Insert Locknut, 8-32 Thread Size	4
10	600-02387-01	Sensor Bracket for CD-1300-340	1
11	500-00246-01	Reflective Optical Sensor Unit (Sharp GP2A200LCS0F)	1
12	McM-C - 90402A107	Steel Pan Head Screw with External-Tooth Lock Washer, 4-40 Thread Size, 5/16" Long	1
13	McM-C - 90675A009	Steel Locknut with External-Tooth Lock Washer, 8-32 Thread Size	1
14	606-02180-01	MCOC43 P1 Card Dispenser Decal	1
15	606-02205-01	MCOC43 P2 Card Dispenser Decal	1
16	600-02909-01	Card Tray Retainer	1
17	603-01113-01	P1 Molded Card Tray (Red)	1
18	603-01114-01	P2 Molded Card Tray (Blue)	1
19	McM-C - 90935A243	Phillips Rounded Head Screws for Sheet Metal, Number 10 Size, 1/2" Long	3
20	McM-C - 92356A243	Stainless Steel Square-Neck Carriage Bolt, 10-24 Thread Size, 5/8" Long	2
21	McM-C - 90631A011	Steel Nylon-Insert Locknut, 10-24 Thread Size	2
22	604-00036-01	T-Handle Lock Assembly	1

Marvel Contest of Champions (43") Extended Card Dispenser Door Assembly



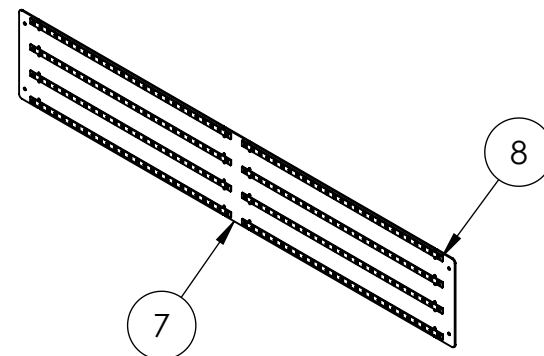


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	600-01947-01	Upper Marquee LED Panel	1
2	500-00162-01 (45 CM)	Flexible White LED Strip w/ Foam	8
3	McM-C - 94639A289	Nylon Unthreaded Spacer for Number 8 Screw Size, 1/4" OD, 5/16" Length	6
4	600-01948-01	Upper Marquee LED Panel PETG	1
5	McM-C - 90272A151	Zinc-Plated Steel Pan Head Phillips Screw, 6-32 Thread Size, 3/4" Long	6
6	McM-C - 90675A007	Zinc-Plated Steel Locknut with External-Tooth Lock Washer, 6-32 Thread Size	6

Marvel Contest of Champions (43") Upper Marquee LED Assembly

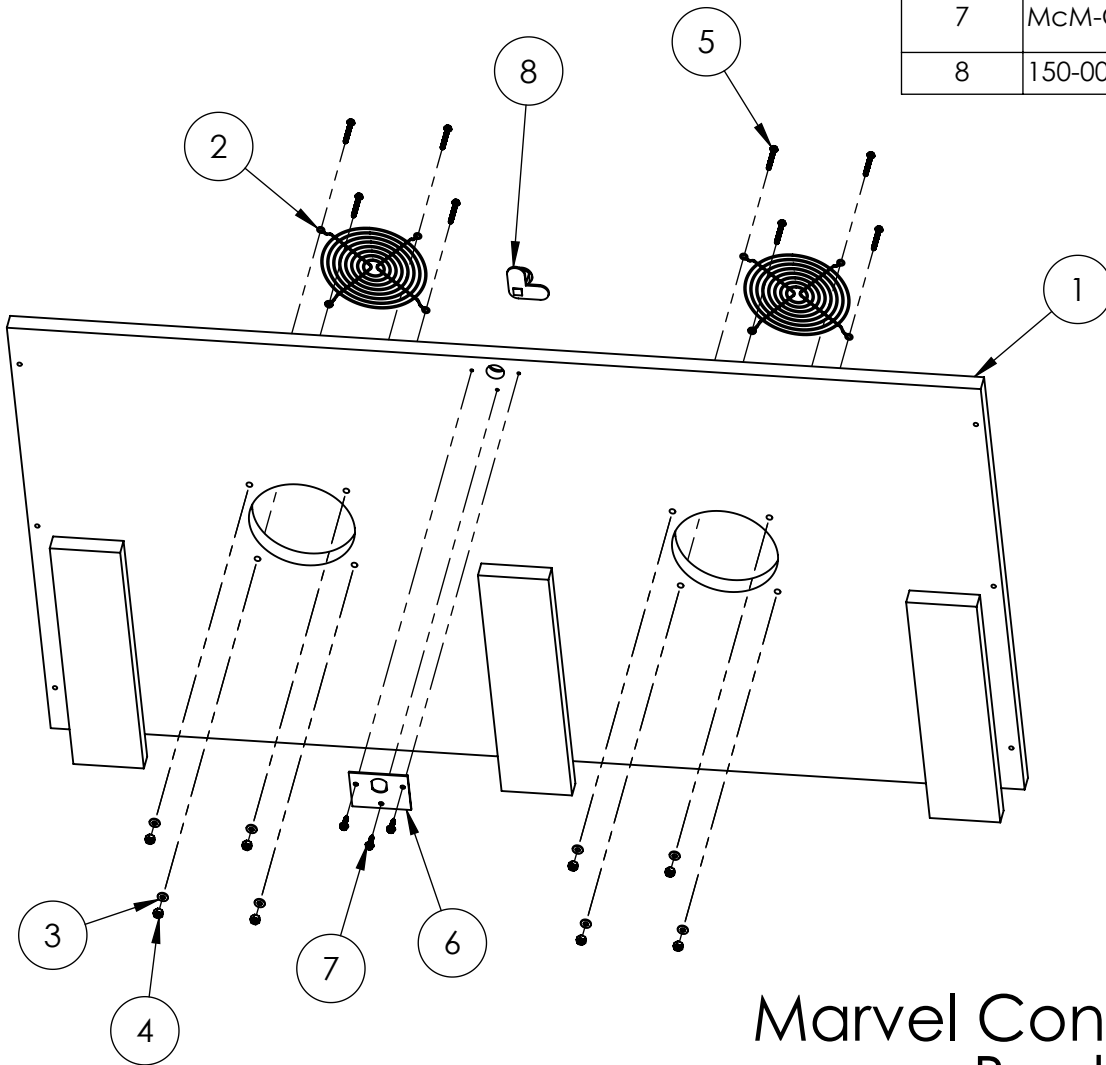


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
7	600-02096-01	Lower Marquee LED Panel	1
8	500-00162-01 (45 CM)	Flexible White LED Strip w/ Foam	8



Marvel Contest of Champions (43") Lower Marquee LED Assembly

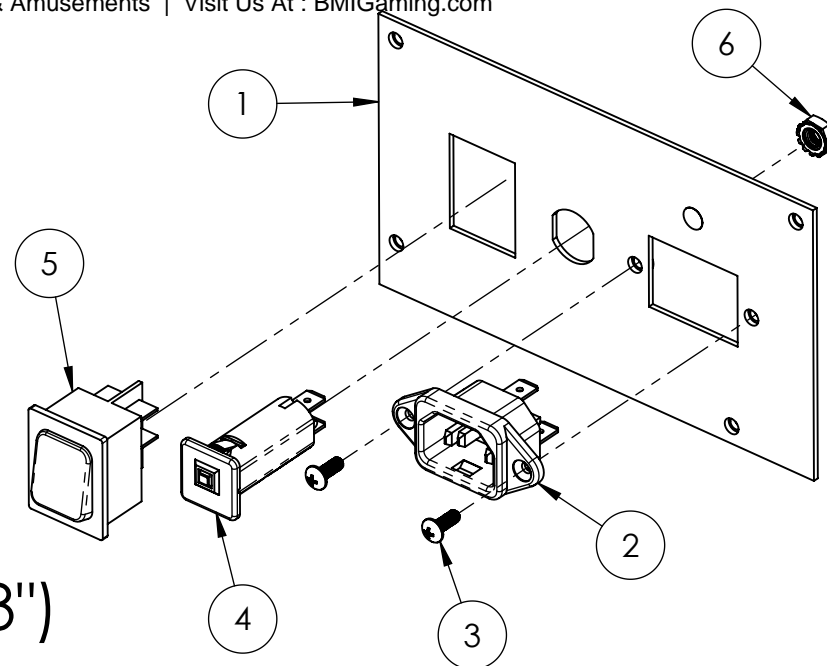
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	601-00798-01	Back Door	1
2	800-00001-00	120mm Wire Fan Guard	2
3	McM-C - 90126A512	Zinc-Plated Steel SAE Washer for Number 8 Screw Size, 0.188" ID, 0.438" OD	8
4	McM-C - 90631A009	Low-Strength Steel Nylon-Insert Locknut, 8-32 Thread Size	8
5	McM-C - 90272A201	Zinc-Plated Steel Pan Head Phillips Screw, 8-32 Thread Size, 1-1/4" Long	8
6	600-00043-01	Lock Retainer Plate	1
7	McM-C - 90054A196	Zinc-Plated Steel Flanged Hex Head Screw for Sheet Metal, Number 8 Size, 5/8" Long	3
8	150-00001-00	Standard Door Lock Assembly (for 3/4" Panels)	1



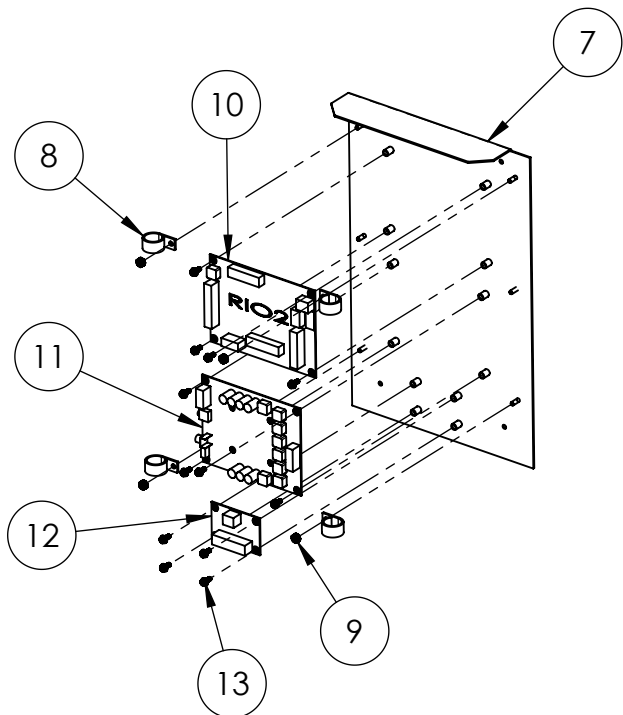
Marvel Contest of Champions (43") Back Door Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	600-01681-01	AC Electronics Plate	1
2	Qualtek - 703W-00/08	AC Power Inlet, IEC 320-C14, 250VAC, 10A	1
3	McM-C - 90272A146	Zinc-Plated Steel Pan Head Phillips Screw, 6-32 Thread Size, 3/8" Long	2
4	Schurter - 4404.0002	Circuit Breaker, 240VAC, 48VDC, 6A	1
5	Marquardt - 1832.3312	On/Off AC Rocker Switch (DPST), 125VAC/15A, 250VAC/5A	1
6	McM-C - 90675A195	Steel Locknut with External-Tooth Lock Washer. 10-32 Thread Size	1



Marvel Contest of Champions (43") AC Power Plate Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
7	600-02049-01	PCB Mounting Plate	1
8	AEH - 04-12-750	Wire Harness Clip (for 3/4" Bundle Diameter)	4
9	McM-C - 90675A009	Steel Locknut with External-Tooth Lock Washer, 8-32 Thread Size	4
10	500-00199-05	RIO2 PCB	1
11	500-00212-03	RIO2 Audio Amplifier PCB	1
12	500-00218-02	8 x 5 Diode Matrix PCB	1
13	McM-C - 90316A192	Flanged Hex Head Screws with Slotted Drive, 8-32 Thread Size, 3/8" Long	12

Marvel Contest of Champions (43") PCB Plate Assembly



SHEET 1: MAIN UPPER HARNESS + PCBS

TO: SHEET 3, SECTION K20

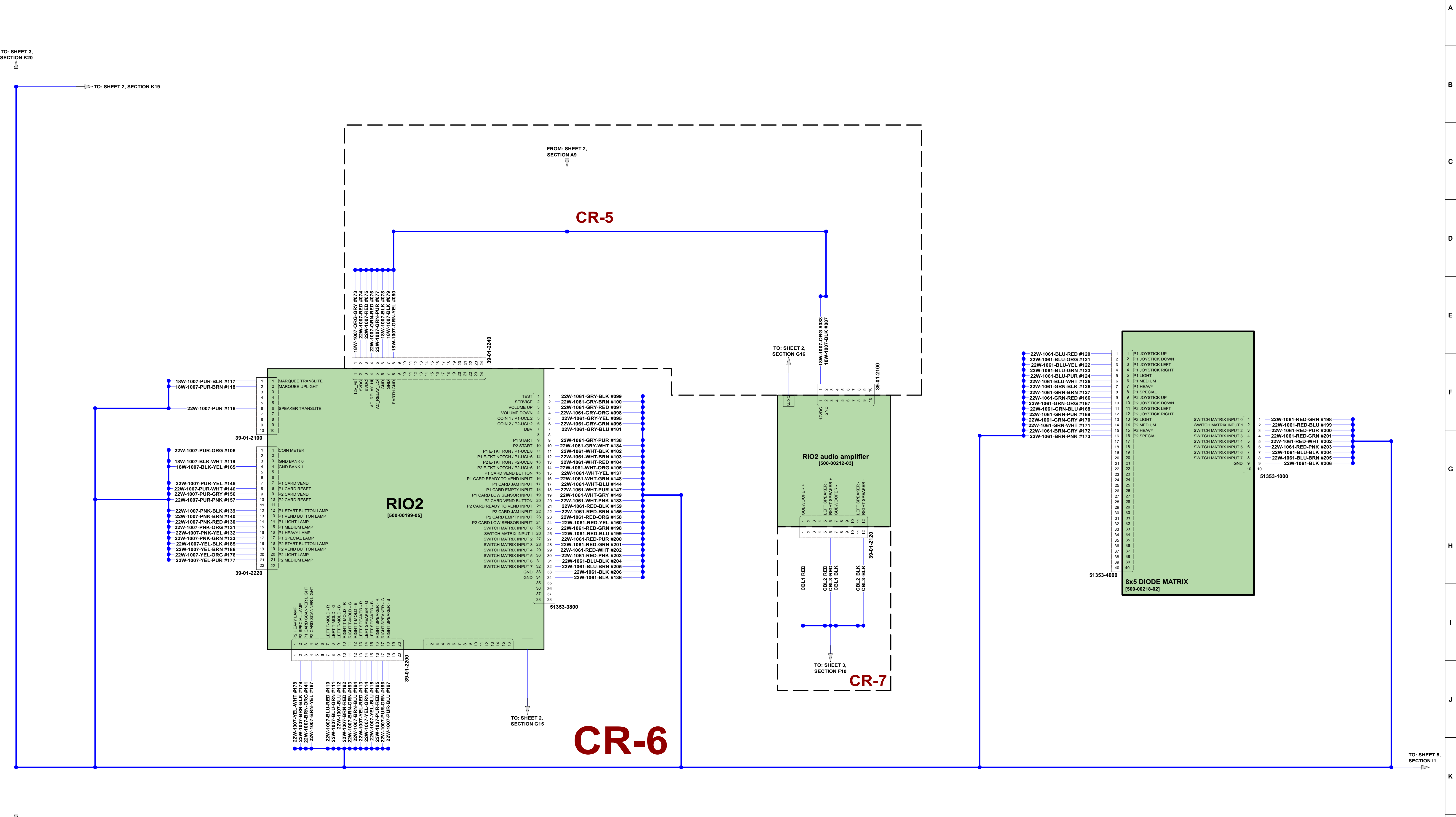
TO: SHEET 2, SECTION K19

FROM: SHEET 2, SECTION A9

TO: SHEET 2, SECTION G16

TO: SHEET 3, SECTION F10

TO: SHEET 5, SECTION H

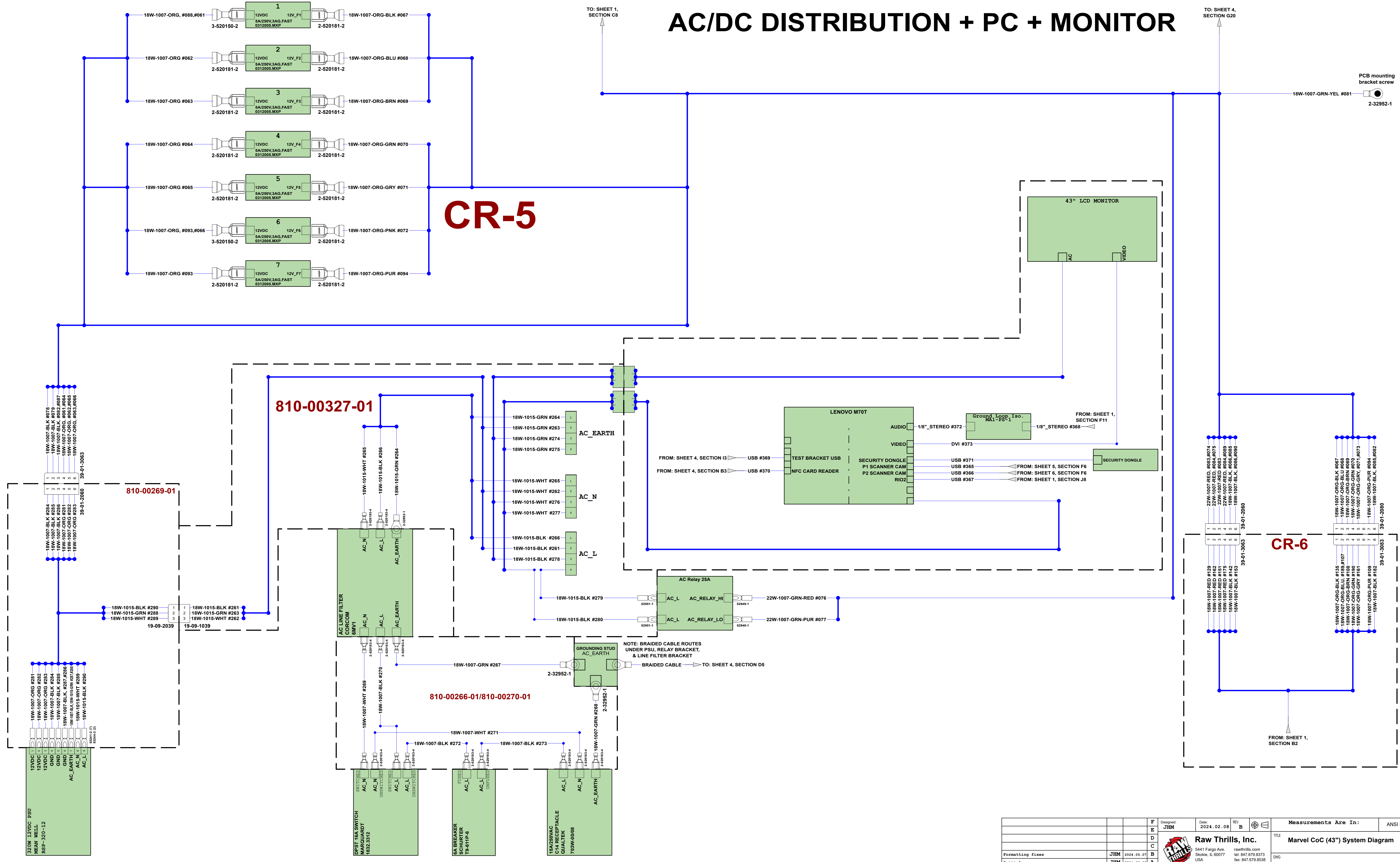


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DESIGN	JHM	DATE	2024.02.08	REV	B	MEASUREMENTS ARE IN:	ANSI D
FORMATTING FIXES	JHM	DATE	2024.05.07	REV	B	TITLE	Marvel CoC (43") System Diagram
INITIAL	JHM	DATE	2024.02.08	REV	A	DWG	
DESCRIPTION		BY		DATE		SHEET	

Raw Thrills, Inc.
 3441 Fargo Ave. Skokie, IL 60077 USA
 rawthrills.com tel: 847.679.8373 fax: 847.679.8538

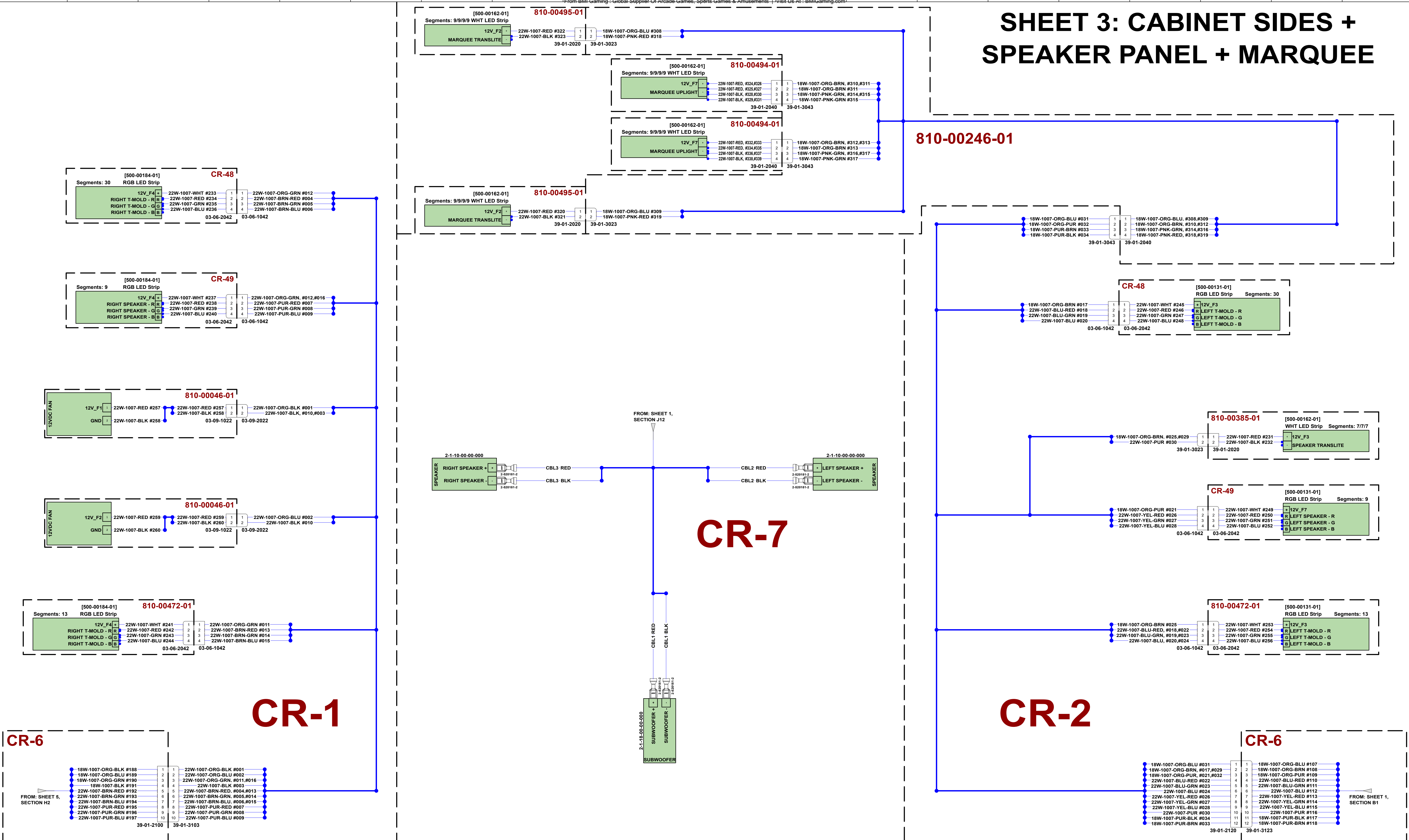
SHEET 2: MAIN LOWER HARNESS + AC/DC DISTRIBUTION + PC + MONITOR



DESIGNED	JHM	DATE	2024.02.08	REV	B	MEASUREMENTS ARE IN:	ANSI D
FORMATTING FIXES	JHM	DATE	2024.05.07	REV	A	TITLE	Marvel CoC (43") System Diagram
INITIAL	JHM	DATE	2024.02.08	REV	A	DWG	
DESCRIPTION		BY		DATE		SHEET	

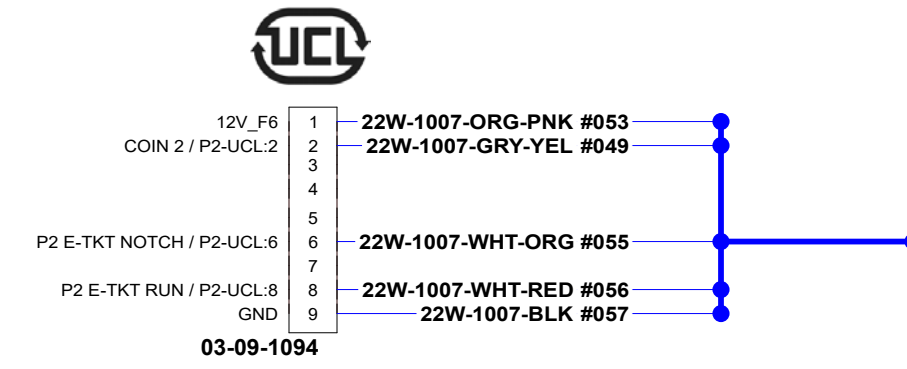
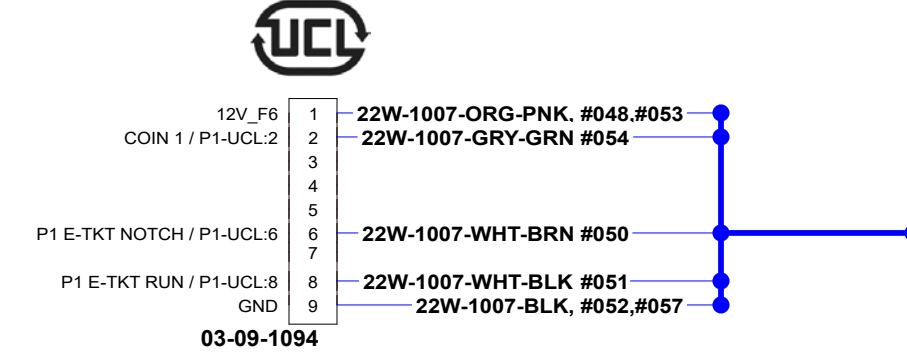
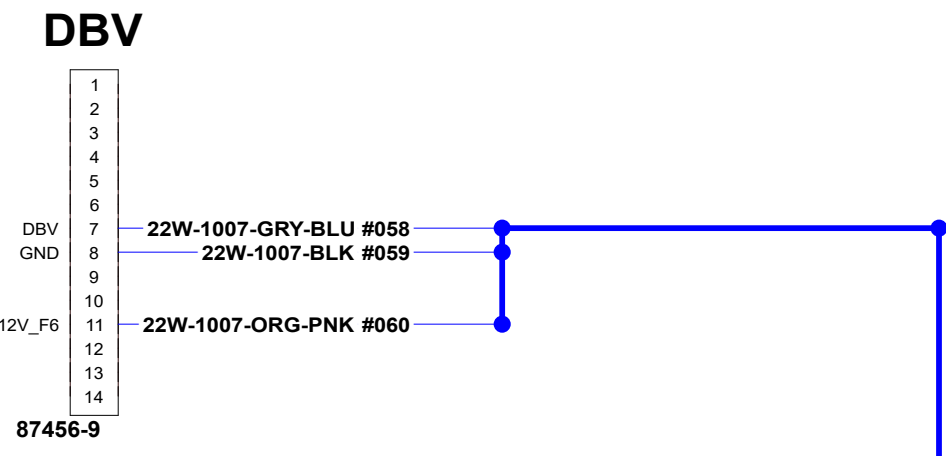
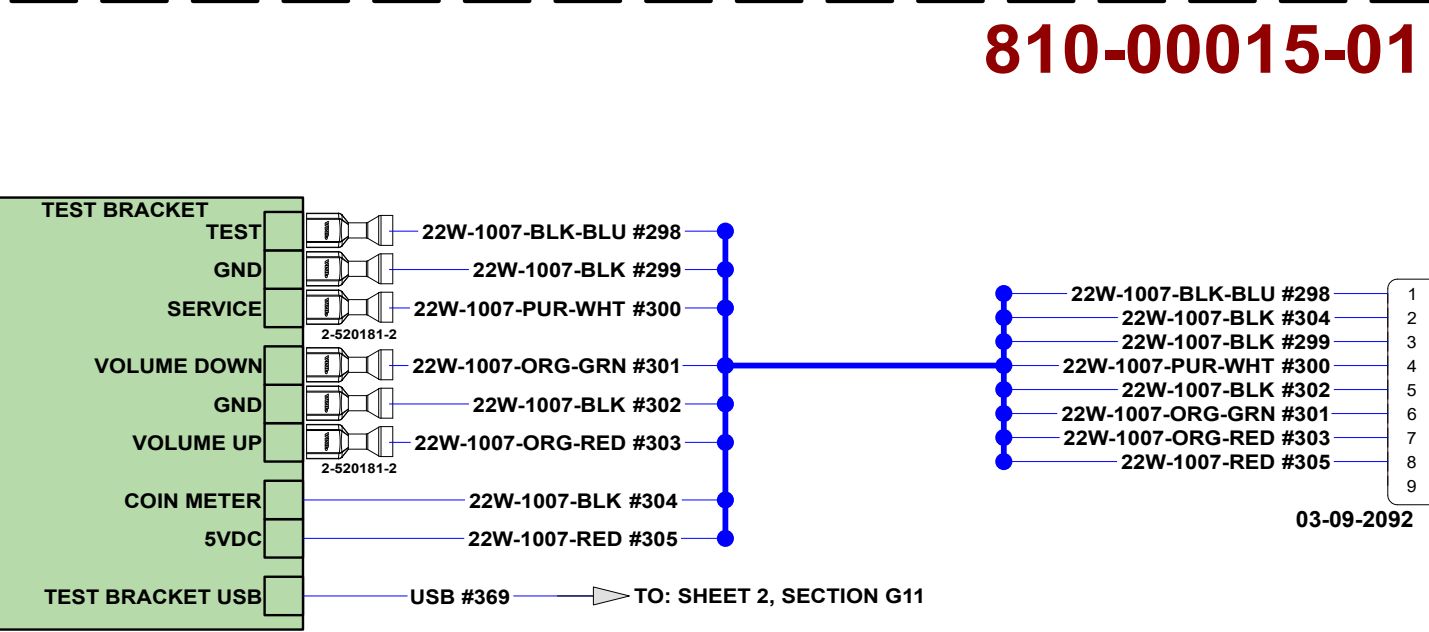
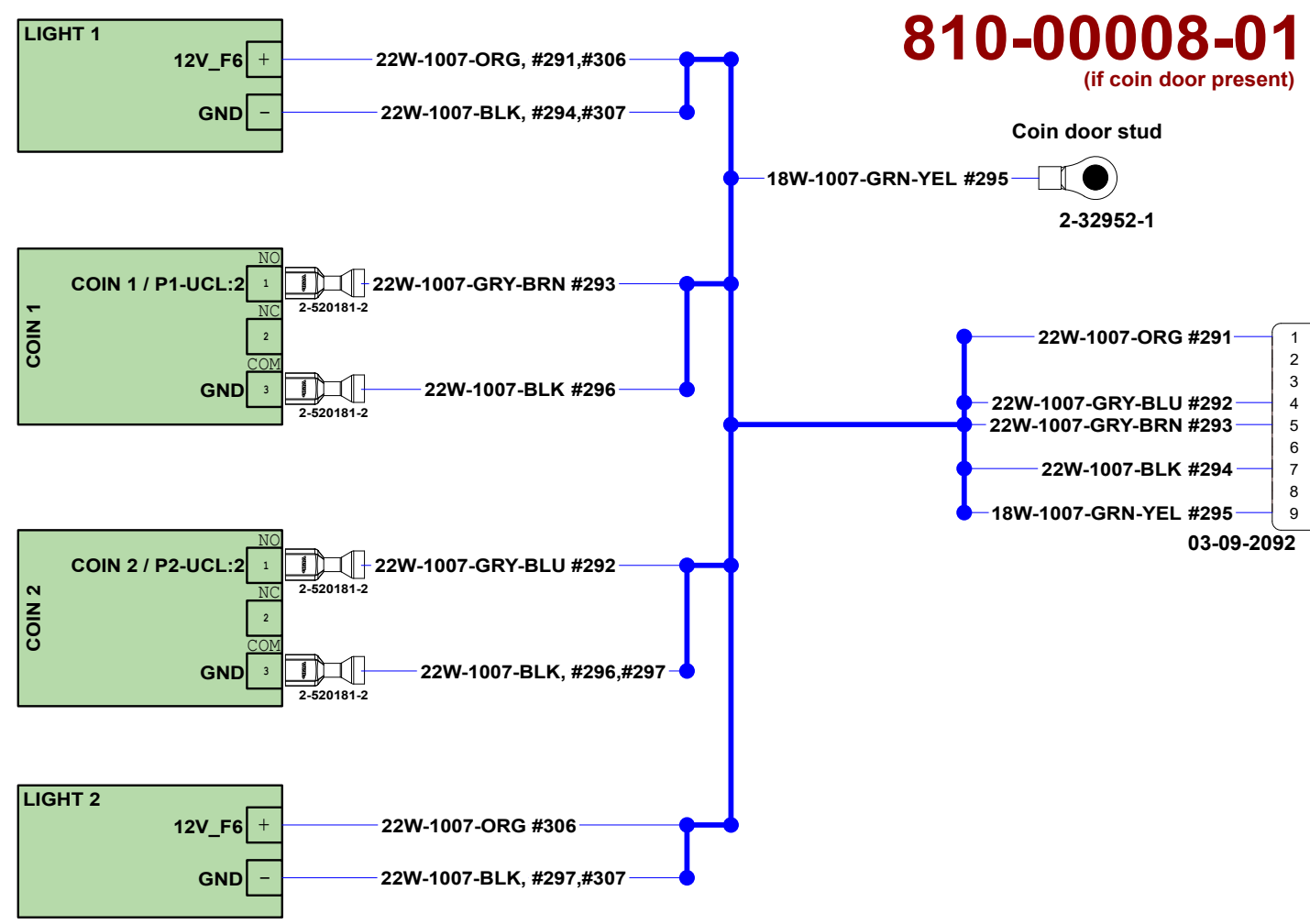
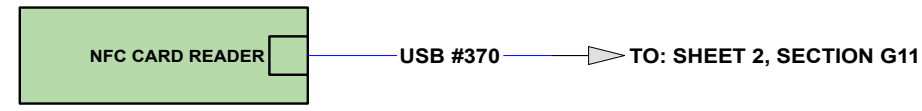


SHEET 3: CABINET SIDES + SPEAKER PANEL + MARQUEE

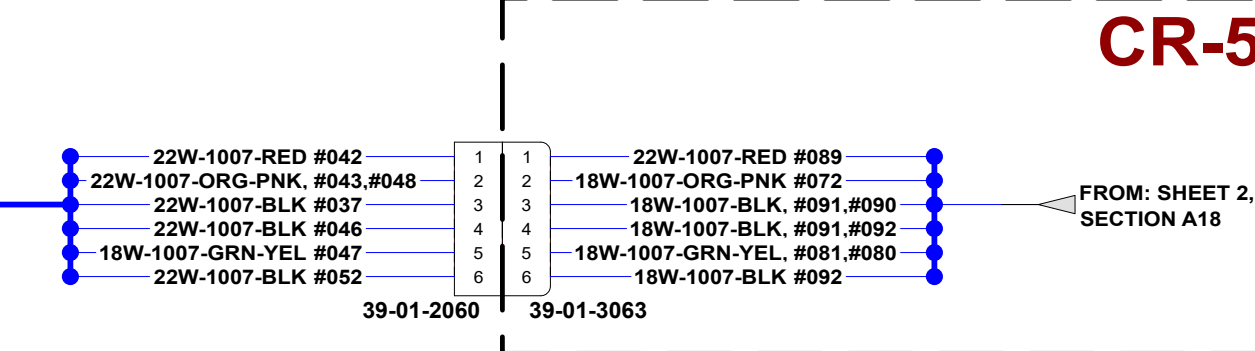
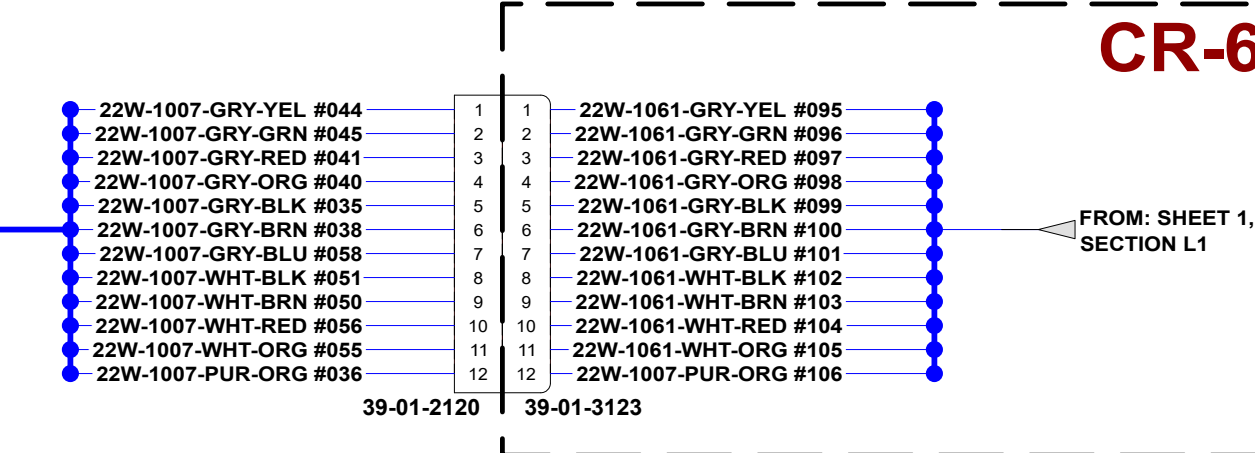


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TITLE: Marvel CoC (43") System Diagram DWG: _____ SHEET: _____																																																							

SHEET 4: VAULT

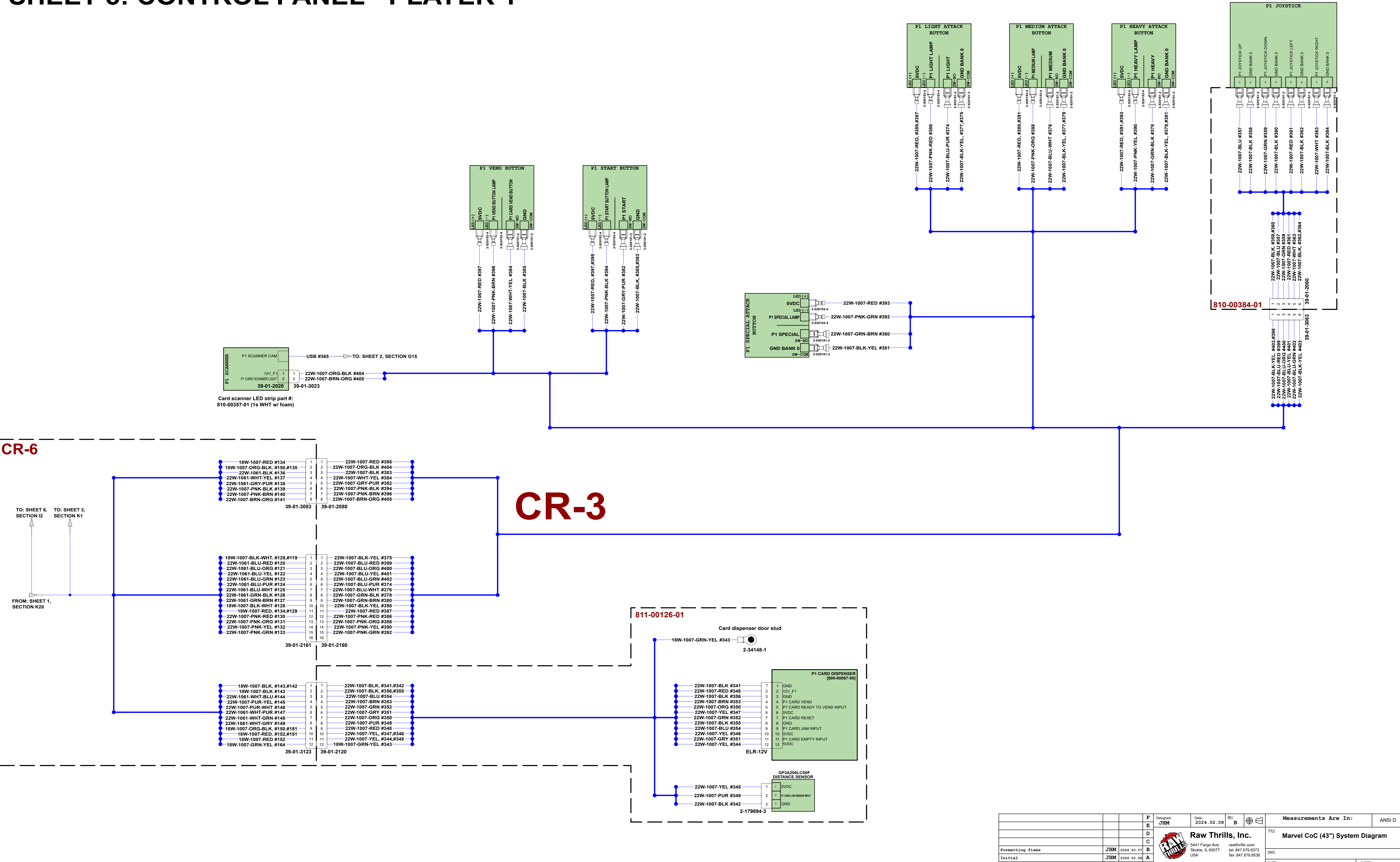


CR-4



Designed: JHM	Date: 2024.02.08	REV: B	Measurements Are In: ANSI D
Raw Thrills, Inc. 5411 Fargo Ave. Skokie, IL 60077 USA rawthrills.com tel: 847.679.8373 fax: 847.679.8538			TITLE: Marvel CoC (43") System Diagram DWG SHEET
Formatting fixes Initial DESCRIPTION	JHM JHM BY	2024.05.07 2024.02.08 DATE	REV: A REV

SHEET 5: CONTROL PANEL - PLAYER 1



CR-6

CR-3

811-00126-01

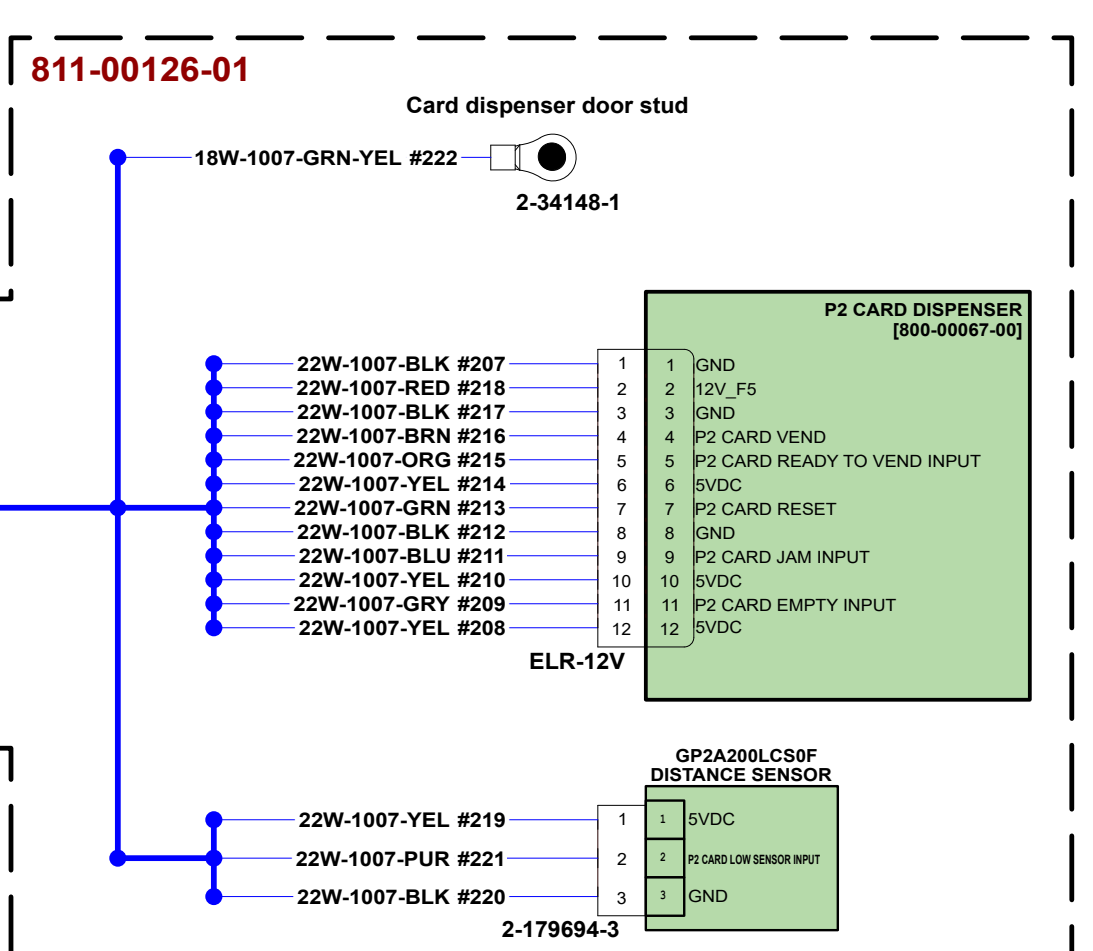
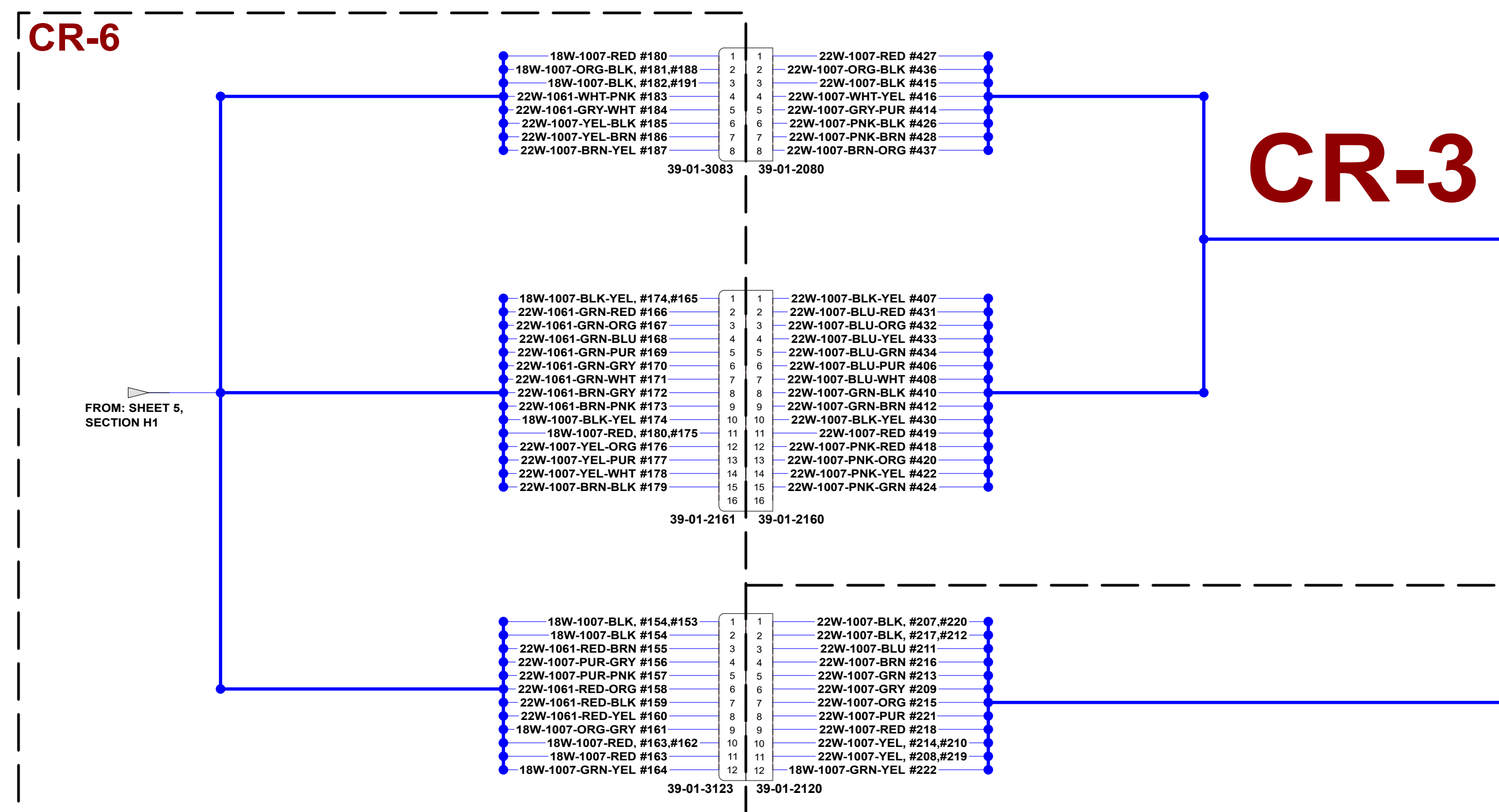
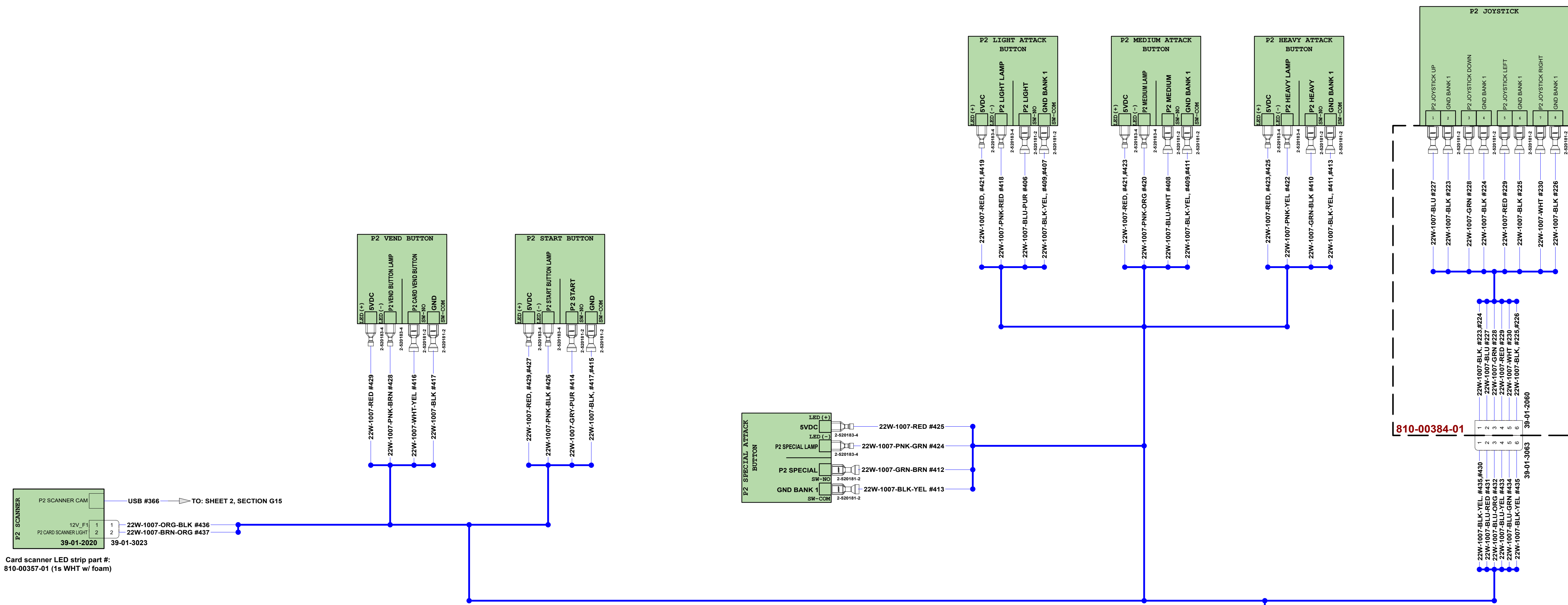
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TO: SHEET 6, SECTION I2
TO: SHEET 3, SECTION K1
FROM: SHEET 1, SECTION K20

DESIGNER	JHM	DATE	2024.02.08	REV	B	MEASUREMENTS ARE IN:	ANSI D
INITIAL	JHM	DATE	2024.02.08	REV	A	TITLE	Marvel CoC (43") System Diagram
DESCRIPTION		BY		DATE		DWG	
		BY		DATE		SHEET	



SHEET 6: CONTROL PANEL - PLAYER 2



DESIGNER	JHM	DATE	2024.02.08	REV	B	MEASUREMENTS ARE IN:	ANSI D
FORMATTING FIXES	JHM	DATE	2024.05.07	REV	B	TITLE	Marvel CoC (43") System Diagram
INITIAL	JHM	DATE	2024.02.08	REV	A	DWG	
DESCRIPTION		BY		DATE		SHEET	

Raw Thrills, Inc.
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