

Fast & Furious Arcade 43” Operator’s Manual



FAST & FURIOUS **ARCADE**



Table of Contents

OPERATION	5
TRANSPORTING	5
HANDLING COMPONENTS	5
DISCONNECT POWER	5
GROUNDING	5
ELECTRICAL SHOCKS	5
MONITOR	5
VOLTAGE.....	5
POWER CORD	5
SURGE SUPPRESSOR.....	6
WATER AND OTHER LIQUID SOURCES	6
CONNECTORS.....	6
COMPUTER.....	6
VENTILATION	6
HAZARD TO EPILEPTICS	6
MANUAL.....	6
Product Specifications	7
ELECTRICAL POWER	7
TEMPERATURE	7
HUMIDITY	7
DIMENSIONS.....	7
Fuse Replacement Guide	7
12V POWER DISTRIBUTION.....	7
Setup	8
SAFETY NOTICE	8
UNPACK MATERIALS	8
REQUIRED TOOLS	8
CABINET ASSEMBLY	9
Single Game Setup	9
Twin Game Setup.....	10
CARD READER INSTALLATION AND SETUP.....	11

Fast & Furious Arcade

CHECK ELECTRICAL SETTINGS	12
STARTUP GAME	12
SAMSUNG MONITOR SETTINGS.....	13
Diagnostic and Adjustments	14
BASIC FUNCTIONAL TEST ON INITIAL POWER UP	15
TEST MENUS	16
Main Menu.....	16
Diagnostics	17
Pricing Adjustments (Cash)	18
Pricing Adjustments (Tokens)	19
Pricing Adjustments (Swipes).....	20
Game Settings	21
System Settings.....	22
Audits	23
Resets Menu	24
Volume	25
Calibration.....	26
Utilities	27
System Information.....	28
CHOOSING THE RIGHT PRICING ADJUSTMENTS FOR YOUR LOCATION	29
PC HARDWARE	30
PC HARD DRIVE RECOVERY	31
Troubleshooting	32
Technical Support	36
Electrical and Mechanical Illustrations	37

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.

Voltage

Each game is manufactured for a specific AC voltage. Before applying power, verify that the AC voltage matches the game’s specified voltage rating.

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.

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.

Ventilation

It is critical that the game is installed in a manner that allows for proper ventilation and air flow. Game must be installed such that there is a minimum amount of clearance between the wall or another game to allow good air circulation through the game cooling fans and vents.

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 physician 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. 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.

Product Specifications

Electrical Power

United States, Canada (ETL)
Voltage: 120VAC / 60 Hz
Operating AC Current: 5 Amps

International (CE)
Voltage: 230VAC / 50/60Hz
Operating AC Current: 3 Amps

Temperature

50° F to 104° F
(10° C to 40° C)

Humidity

Must not exceed 95% relative humidity

Dimensions

94”H x 40”W x 85”D (238.76cm H x 101.6cm W x 215.9cm D)
Approximate weight 500lbs. (227kg)

Fuse Replacement Guide

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

12V Power Distribution

Please see unit for specified fuse labeling.

Abbreviations:

5A 250V	5A, 250VAC Fast Acting 3AG Fuse	Littlefuse 0312005.MXP (or equivalent)
---------	---------------------------------	--

Setup

Safety Notice

A 6-foot step ladder (minimum height) is required as part of the installation process (for marquee installation). Make sure that you are familiar with the manual contents, game setup, and operations before you begin the installation process. Do not push or pull on the decorative items such as the spoiler to move the game. Doing so can damage the decorative items. Be aware of your surroundings and individuals around you during the installation process for your safety and the safety of others. Work only in an area with sufficient lighting and a clean level surface.

Unpack Materials

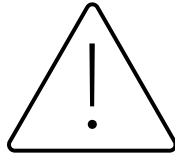
1. Place the shipping crate(s) on a flat, stable surface.
2. Cut the banding straps and remove the cardboard lids.
3. Lift off the large cardboard containers surrounding the cabinet assembly and remove any shipping cleats.
4. Remove the keys from the front dash.
5. Check for shipping damage to the following:
 - Monitor(s)
 - Monitor bracket
 - Cabinet decals
6. Check the AC line cords for visible signs of damage.

Pay particular attention to the plug and line cord insulation.

Required Tools

- Drill Driver
- T-27 Tamper Resist Torx Bit
- 6ft Step Ladders (Minimum Height)

Cabinet Assembly



CAUTION

UNDER NO CIRCUMSTANCES SHOULD THIS GAME BE OPERATED UNLESS ALL INSTALLATION PROCEDURES HAVE BEEN COMPLETED AND ALL SAFETY FEATURES HAVE BEEN POSITIVELY TESTED AND ARE FULLY FUNCTIONAL!

*******It is recommended that the main cabinet be moved to or very near its desired operational location before beginning any of the setup tasks*******

Single Game Setup

1. Remove the lower rear door.
2. Remove the upper rear door.
3. Unpack the single game marquee and use the supplied hardware to install. Pierce the top stripe decal to access hidden holes.
4. Run the power cable through the hole in the top of the cabinet and connect it inside the cabinet to the mating connector.
5. Move the cabinet to the desired location and set the leg levelers to the down position.
6. Return the rear doors to their operating position.
7. Plug in the AC cord at the rear of the cabinet and power on.

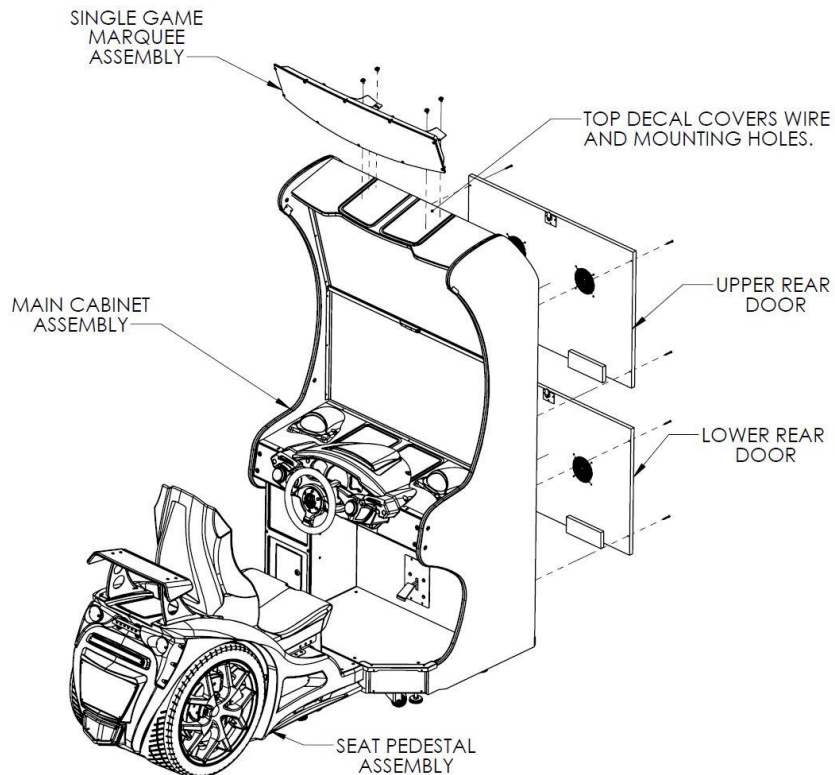


fig. a

Fast & Furious Arcade

Twin Game Setup

1. Remove the lower rear door.
2. Remove the upper rear door.
3. Unpack the twin marquee and use the supplied hardware to install. Pierce the top stripe decal to access hidden holes.
4. Run the power cables through the respective holes in each cabinet top and connect them separately inside the right and left cabinets to the mating connectors.
5. Install the decorative side arches to the left and right outer cabinet walls using the five screws, lock and flat washers that are provided.
6. Align the cabinets next to each other in the desired location and set the leg levelers to the down position.
7. Return the rear doors to their operation position.
8. Plug in the AC cords at the rear of each cabinet and power on.

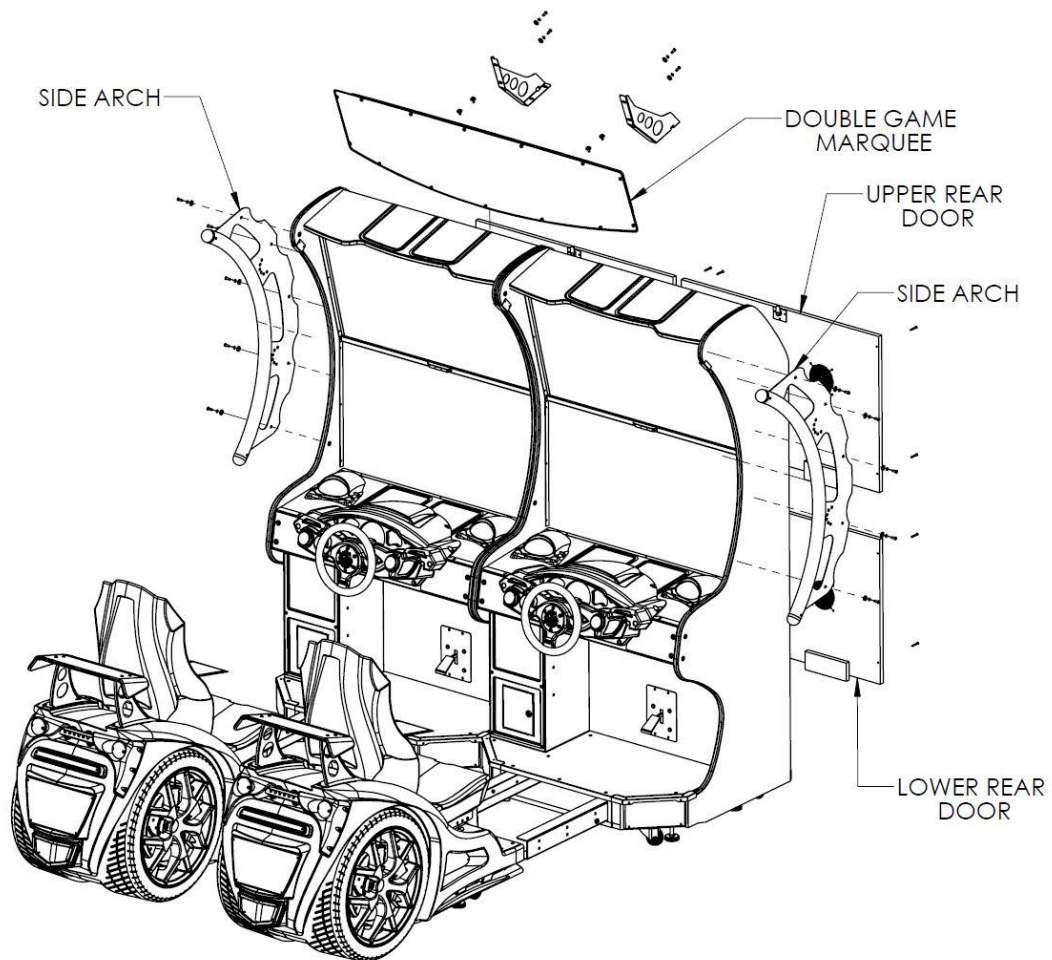


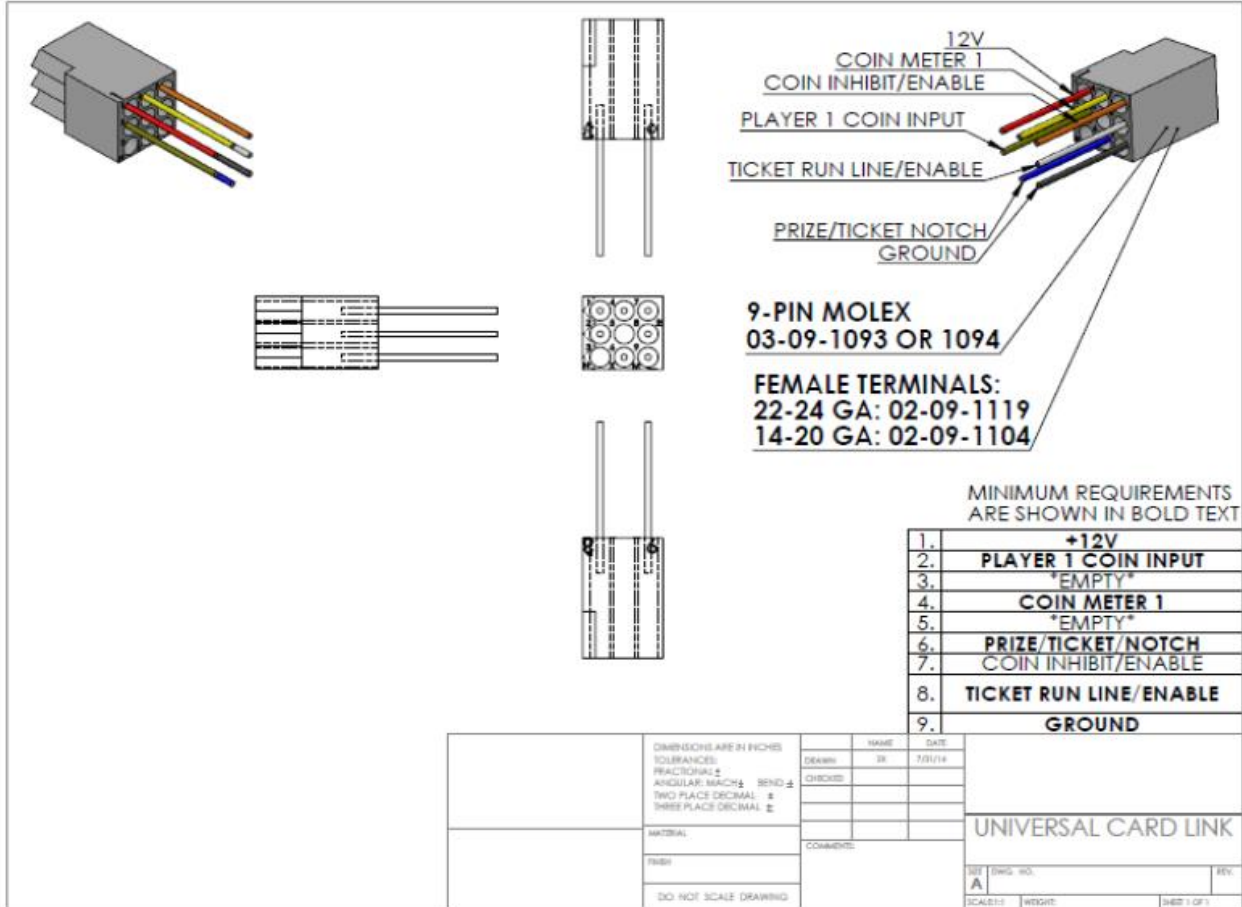
fig. b

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 Fast & Furious Arcade cabinet is equipped with UCL compatible harnessing to ensure that the installation process is easier and less prone to miswiring.

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.



You can choose to use 1 card reader in the pricing adjustments section of the test menu. It is recommended to use 1 card reader for best results and player access.

There is (1) supplied connection, located on the driver cabinet assembly behind the dash plate to the right of the steering wheel. It is recommended that the card reader be mounted to the bottom right corner of the dash, using the provided UCL connector and provided mounting holes.

Check Electrical Settings

1. Verify the voltage in the nearest AC outlet.
2. Verify the AC outlet ground connection is present and working.

Startup Game

1. Plug the two line cords into an AC outlet (**Recommended: plug the line cords into a dedicated breaker to prevent capacity overload (5A@120VAC, 5A@230VAC)**).
2. Turn the main cabinet power switches on (there are two switches, GAME and COMPRESSOR).
3. Calibrate the steering (follow onscreen prompts).
4. Calibrate the gas and brake pedals (follow onscreen prompts)
5. Calibrate the camera (follow onscreen prompts).
*****MACHINE IS NOT OPERATIONAL WITHOUT FIRST CALIBRATING THE HARDWARE*****
6. 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.
7. Complete the monitor setup for both monitors (next page).

*****IMPORTANT*****

PLEASE FOLLOW INSTRUCTIONS TO SET UP MONITORS

SAMSUNG MONITOR SETTINGS

Model #BE43T

STEP 1: Verify game is connected to monitor in HDMI IN 1 at rear of monitor.

STEP 2: Power on GAME cabinet and MONITOR, wait about 30 seconds.

STEP 3: Press the power button on the remote. This only needs to be done once during initial setup.

1. Language => [x] English
2. Connection Guide => NEXT
3. Installation Type => [x] Basic Setup
4. Wireless Connection => SKIP <right arrow>
5. Select Your TV Source => I don't receive a broadcast signal

STEP 4: Press the "SOURCE" button on the remote. Navigate to "HDMI 1."

STEP 5: Press "MENU" on the remote to enter the settings menu.

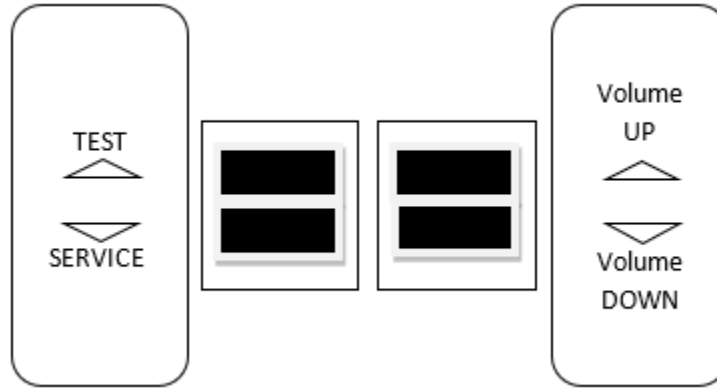
STEP 6: Verify the settings below, navigating with the remote:

- GENERAL
 - EXTERNAL DEVICE MANAGER
 - GAME MODE: ON
 - HDMI BLACK LEVEL: NORMAL
 - ECO SOLUTION
 - POWER SAVING MODE: OFF (default)
 - AUTO POWER OFF: OFF (default)

Diagnostic and Adjustments

The Service Button Panel has four buttons, three of which can navigate the menu system.

The control panel buttons can also advance through test menu screens.



Navigating the Test Menu	
Button	Action
TEST (Not in Test Menu)	Enters Test Menu
TEST (In Test Menu)	Selects Highlighted Option
SERVICE (On Main Menu)	Exits Test Menu
SERVICE (Not on Main Menu)	Cancel Selection
VOLUME UP/Tunes Button	Move Up
VOLUME DOWN/View Button	Move Down
Start Buttons	Selects Highlighted Option
Stop Motion Button	Return to Previous Screen

When in the Pricing Menu, an on-screen message acknowledges changes or when you exit a selection without making a change.

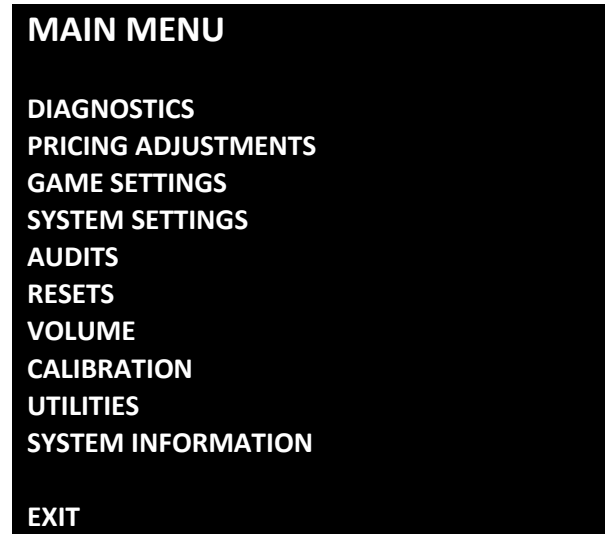
Basic Functional Test on Initial Power Up

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 Watchdog Test and verify the game reboots.
7. Upon a successful reboot, you are ready to adjust pricing, volume and other functions.

Test Menu

Main Menu

Choose from all available operator settings and menus here. You can use the test menu bracket and volume buttons to navigate. The View/Tunes buttons also are available to use for easier navigation through these menus.



Diagnostics

Verify or diagnose the operations of all game functions.

DIAGNOSTICS

INPUT TEST

VIDEO TEST

AUDIO TEST

NETWORK TEST

CABINET LIGHTS TEST

WHEEL FORCE FEEDBACK TEST

METER TEST

TICKET TEST

CAMERA TEST

QR HIGH SCORE TEST

QR ACCOUNT TEST

WATCHDOG TEST

EXIT

- **Input Test**: Test input hardware such as switches.
- **Video Test**: Checks color pattern of monitors.
- **Audio Test**: Test audio using 100Hz and 1000Hz.
- **Network Test**: Test the connectivity between linked games.
- **Cabinet Lights Test**: Tests all LED cabinet lighting together and individually.
- **Wheel Force Feedback Test**: Test steering wheel force feedback.
- **Meter Test**: Test the functionality of the mechanical coin meter inside the cabinet.
- **Ticket Test**: Test the functionality of the ticket mech.
- **Camera Test**: Test the functionality of the camera.
- **QR High Score Test**: Test the functionality of the QR high score code.
- **QR Account Test**: Test the functionality of the QR system.
- **Watchdog Test**: Test the functionality of the Watchdog (if successful the cabinet will power off and reboot).

Pricing Adjustments (Cash)

Set pricing and payout adjustments for game operation.

PRICING ADJUSTMENTS (CASH)

FREEPLAY
CURRENCY INPUT
CURRENCY TYPE
COIN VALUE
COINS TO PLAY
COINS TO CONTINUE
COINS TO UPGRADE
MAX CREDITS

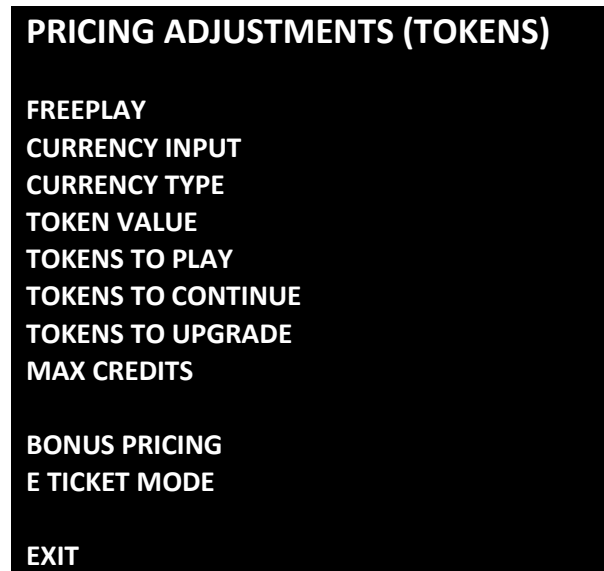
BONUS PRICING
E TICKET MODE

EXIT

- **Freeplay**: Turn free play mode on or off.
- **Currency Input**: Change the currency input.
- **Currency Type**: Change the currency type.
- **Coin Value**: Change the money value of the coin.
- **Coins to Play**: Adjust the amount of coins to start a game.
- **Coins to Continue**: Adjust the amount of coins to continue a game.
- **Coins to Upgrade**: Adjust the amount of coins to upgrade the player's car before the start of the race.
- **Max Credits**: Adjust the maximum number of credits.
- **Bonus Pricing**: Turn on (default off) to allow players to pay for multiple races at a discount.
- **E Ticket Mode**: N/A for cash settings.

Pricing Adjustments (Tokens)

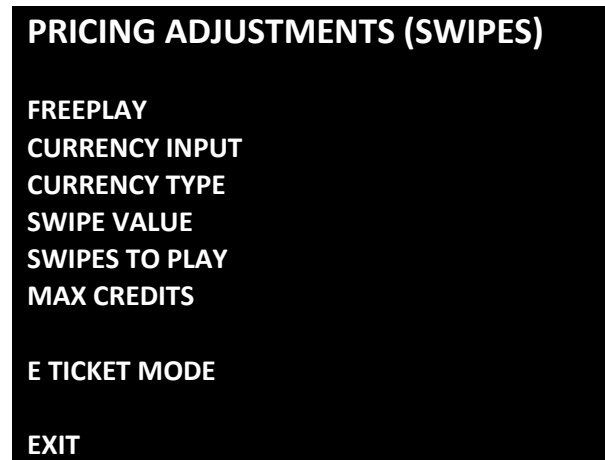
Set pricing and payout adjustments for game operation.



- **Freeplay**: Turn free play mode on or off.
- **Currency Input**: Change the currency input.
- **Currency Type**: Change the currency type.
- **Token Value**: Change the money value of the token.
- **Tokens to Play**: Adjust the amount of tokens to start a game.
- **Tokens to Continue**: Adjust the amount of tokens to continue a game.
- **Tokens to Upgrade**: Adjust the amount of tokens to upgrade the players car before the start of the race.
- **Max Credits**: Adjust the maximum number of credits.
- **Bonus Pricing**: Turn on (default off) to allow players to pay for multiple races at a discount.
- **E Ticket Mode**: N/A for token settings.

Pricing Adjustments (Swipes)

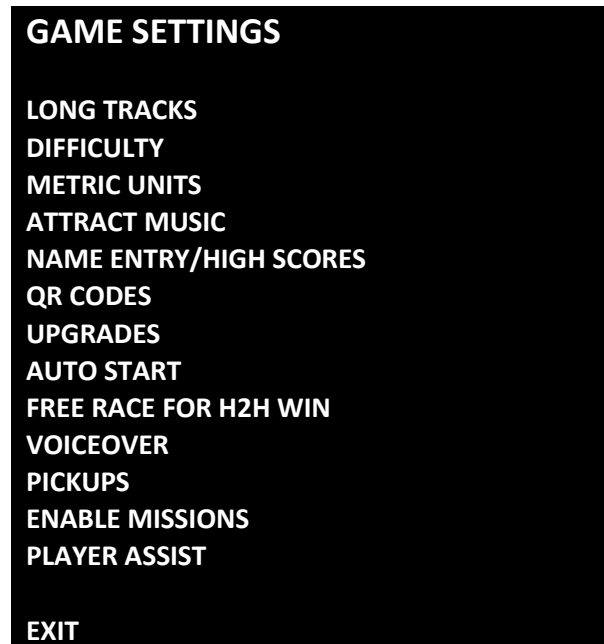
Set pricing and payout adjustments for game operation.



- **Freeplay**: Turn free play mode on or off.
- **Currency Input**: Change the currency input.
- **Currency Type**: Change the currency type.
- **Swipe Value**: Money value of the swipe.
- **Swipes to Play**: Adjust the amount of swipes to start a game.
- **Max Credits**: Adjust the maximum number of credits.
- **E Ticket Mode**: Turn E Tickets on or off (default off).

Game Settings

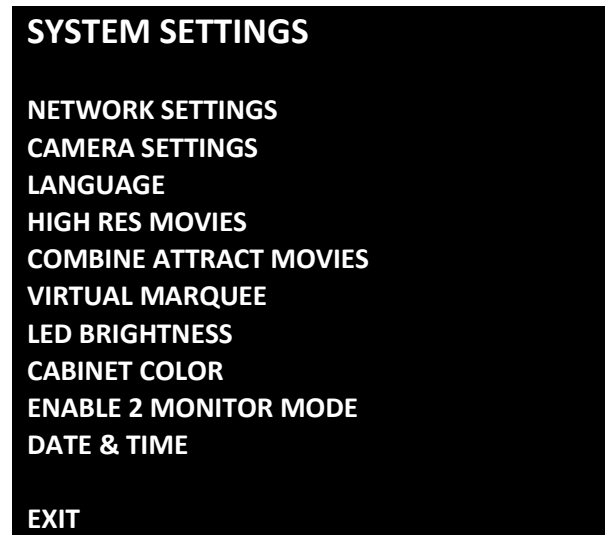
Adjust game settings for operation.



- **Long Tracks**: When enabled, track length will be about 2:30 instead of 1:30.
- **Difficulty**: Adjust the game difficulty.
- **Metric Units**: Use metric units like KPH and meters.
- **Attract Music**: How often should music play in attract mode.
- **Name Entry/High Scores**: Turn on or off (default on). When on, players may enter their name and show high scores after finishing a race.
- **QR Codes**: Turn on or off (default off). When on, the venue and location must be set. This allows players to scan a QR code after race to share their high scores on social media sites. Additionally, this enables QR player login during car select or track select, so the player can view their achievements online, along with saving their QR login info.
- **Upgrades**: Turn on or off (default on). When on, this allows the players to purchase upgrades before the start of a race.
- **Auto Start**: Start the game when player inserts credits.
- **Free Race for H2H Win**: Turn on or off (default off). When on, the winner of a head to head race against another player will receive a free race.
- **Voiceover**: Enable/disable voiceovers during a race and in the menus.
- **Pickups**: Enable/disable pickups. This includes nitro and electric pickups.
- **Enable Missions**: Enable missions gameplay or make game just a race only.
- **Player Assist**: Assist player with auto gas if they don't use the gas pedal.

System Settings

This menu allows for customization of various system settings.



- **Network Settings**: Turn on for linked games (leave off if operating a single game). **The cabinets must be numbered in order from left to right. This ensures gameplay elements display correctly.**
- **Camera Settings**: Change settings for photo camera (on or off).
- **Language**: Set in-game language.
- **High Res Movies**: Play highest resolution movies possible. Turn off if you experience stuttering.
- **Combine Attract Movies**: Combine attract movie screens across networked games.
- **Virtual Marquee**: Show a game title marquee at the top of the screen during attract and gameplay.
- **LED Brightness**: Adjust the brightness of the cabinet LED lights.
- **Cabinet Color**: Specify the color of the cabinet plastics.
- **Enable 2 Monitor Mode**: Enable 2 monitor mode (required for Virtual Marquee).
- **Date & Time**: Use to set the date and time.

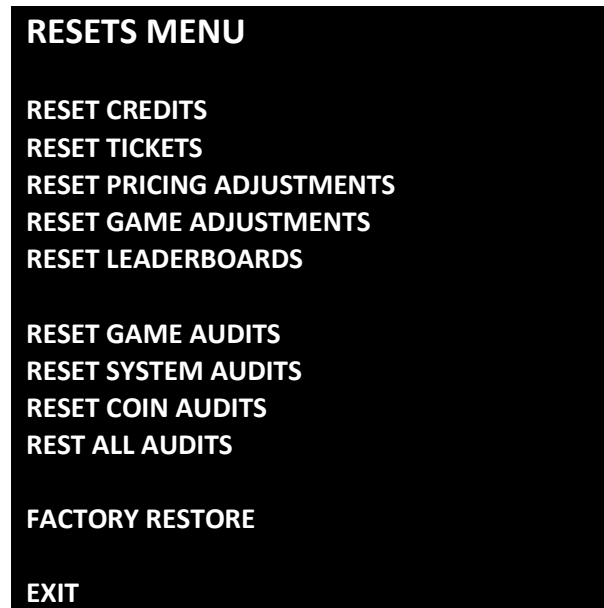
Audits

Audit screen helps assess game performance, find intermittent problems, decide whether to adjust game difficulty and help maximize game earnings.

There are no special menu options for this test menu entry.

Resets Menu

Resets menu allows for the resetting of various machine settings and audits.



- **Reset Credits:** Reset credits to zero (0).
- **Reset Tickets:** Clears out all tickets owed on the game.
- **Reset Pricing Adjustments:** Reset all pricing settings to default.
- **Reset Game Adjustments:** Reset all game settings to default.
- **Reset Leaderboards:** Reset all high score tables.
- **Reset Game Audits:** Reset all game related audits.
- **Reset System Audits:** Reset all system audits.
- **Reset Coin Audits:** Reset all coin audits.
- **Reset All Audits:** Reset all audits.
- **Factory Restore:** Restore game to default factory settings.

Volume

Volume adjustments.



- **Game Volume**: Adjust the volume during gameplay (from 0 to 20).
- **Attract Volume**: Adjust the volume during the attract mode sequences (from 0 to 20).
- **Credit Volume**: Adjust the volume of the credit chime (from 0 to 20).

Calibration

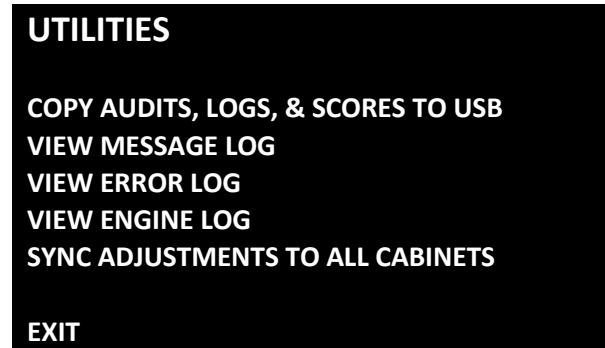
Calibration of hardware.



- **Input Calibration**: Calibrate the input POTS such as steering.
- **Camera Calibration**: Calibrate camera orientation.

Utilities

Miscellaneous operator tools.



- **Copy audits, logs, & scores to USB**: Copy all audits and diagnostics to USB drive.
- **View Message Log**: Examine logged messages from the game.
- **View Error Log**: Examine error messages from the game.
- **View Engine Log**: Examine game engine messages.
- **Sync Adjustments to All Cabinets**: Sync all game, pricing, and volume settings with all networked games.

System Information

This screen allows you to see various information about the software and hardware.

- Serial Number
- Software Revision
- Build Date
- RIO PCB
- RIO Firmware
- Dongle Version
- Cabinet Type
- Game Template

There are no special menu options for this test menu entry.

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, or the payout will be incorrect. **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/Token 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 Fast and Furious Arcade.
 - b. After setting the coins per play, set “Coin Value” to the currency equivalent of your coin, or the payout will be incorrect. **THIS SETTING IS EXTREMELY IMPORTANT!** (Example: If your coin is worth \$0.25, set “Coin Value” to \$0.25 as well).

PC Hardware

Your *Fast & Furious Arcade* game uses a **Lenovo M70t Desktop PC**.



(above: *Lenovo M70t Desktop PC*)

NOTICE

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.

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 reinstall the software (the game ships with (1) USB drive which is used in the steps below):

(USB Thumb Drive is used on the *Lenovo M70t*)

*****ATTENTION: An approved “Business Account” on rawthrills.com is required to complete software installation. Please complete account activation before installing software!*****

*****See website for details: <https://rawthrills.com/raw-web/login>*****

1. With game and PC on, verify that the RIO2 board has power. If not, see Troubleshooting.
2. Open the upper back door of the cabinet.
3. Insert the recovery USB thumb drive (included in your game) into an open USB port on the PC.
4. Turn cabinet power switch to OFF. Wait 30 seconds.
5. Turn cabinet power switch to ON. Wait for install menu to load.
6. Once the install menu has loaded, press the Test button on the service bracket to select the installation program and then press the Test button to confirm that you want to continue with the installation.
7. Follow on screen instructions to begin recovery.
8. If recovery does not begin, check to ensure USB Drive is inserted correctly and is not damaged.
9. Initial software loading may take several minutes. Check progress periodically.
Do not interrupt power or reset the game during recovery.
10. When software has been loaded, a message indicates that restore is complete. When instructed to remove USB Drive, wait 15 seconds then remove the drive from the PC.
11. Turn cabinet power switch off. Wait 30 seconds. Turn the cabinet on again.



12. Scan the QR code to the left or [click here \(if viewing on electronic device\)](#) for instructions on completing setup.

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.
	PC BIOS set incorrectly.	Contact your distributor.
	Flash Drive Installer is left connected to PC.	Disconnect Flash Drive Installer and power cycle the game.
Buttons do not work.	Faulty micro switch.	Replace the micro switch on the 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 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.
Neither buttons nor audio work.	PCB connected to faulty USB port (boot message may indicate not detected)	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.

Fast & Furious Arcade

Problem	Possible Cause	Solution
No sound or bad sound.	Bad connection.	Check connection to speakers.
	Volume set too low.	Use VOL UP button on Test panel to raise volume
	Faulty wiring.	Verify all wires are firmly connected to the speakers and the audio PCB. Verify that audio PCB is connected to the computer via USB cable.
	Blown speakers.	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.
	Reversed wires.	A weak or low muffled sound is a sign of reversed speaker wires. Check for reversed wires on each speaker.
Constant low audio hum.	Faulty PCB.	To verify audio is working at the computer, disconnect the USB cable coming from the audio PCB and connect stereo headphones to the green computer audio port.
	Faulty power supply.	Check external DC supply and the PC supply.
RIO2 disconnected	Open ground.	Check all ground wires in cabinet. Ensure AC wall outlet is properly grounded.
	USB cable disconnected.	Check USB connection from PC to RIO2 board.
Message on screen: Game dongle not found. Please RECONNECT the game dongle.	No power to RIO2 board.	Check for proper voltage (+5V, +12V) at RIO2 P1 connector.
	Dongle missing or disconnected.	Find the dongle cable and reseal in USB port.
	Faulty USB port.	Insert dongle cable in different USB port.

Fast & Furious Arcade

Problem	Possible Cause	Solution
Message on screen: Insufficient RAM, 16GB required.	Loose or disconnected RAM stick.	Contact your distributor for service.
	Faulty RAM stick.	Contact your distributor for service.
Message on screen: GFX card missing. Please RECONNECT the GFX card.	Loose or disconnected graphics card.	Contact your distributor for service.
	Faulty graphics card.	Contact your distributor for service.
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.)		
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 HDMI connector(s) to Monitor(s). Check and secure DVI or HDMI connector(s) to PC.
	Cabinet was powered on too quickly after a manual shutdown/power loss	Shut off cabinet via both switches at rear of cabinet. Leave off for 30 seconds, then power back on.

Fast & Furious Arcade

Problem	Possible Cause	Solution
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.
Exits Test Mode every 3 seconds.	Test button stuck in ON position.	Slide or toggle button off after Test Menu appears
Improper number of credits given when bills are inserted.	Incorrect setting in Pricing Adjustments.	Adjust pricing settings.
	Faulty wiring.	Disconnect cabinet from AC power. Verify wires are firmly connected to bill validator and ground wires are properly connected. Verify no wires are frayed or shorting to ground.
Onscreen message: "Version Mismatch" appears after reinstalling/updating software	One or more cabinets is running a different version of software.	Enter test menu on each cabinet. Check the version number in the top left corner. Using the USB drive that came with your game (or a USB drive from your distributor) install latest version to any mismatched cabinets (<i>see pg. 31 for installation procedure</i>). Once installation is complete, power cycle all cabinets. The message should disappear.
	Software install/update did not complete correctly.	
Top and bottom monitor images are reversed	Connections at PC are connected to the incorrect ports.	Verify that top monitor HDMI cable is connected to the HDMI port on the video card at rear of PC. Verify that bottom monitor HDMI-DVI cable is connected to the DVI port on video card at rear of PC. If not, swap the cables around and reboot the cabinet.
Linked game monitor displays are not displaying linked attract properly	Cabinets are number incorrectly.	Test menu – System Settings – Network Settings: Verify that the cabinets are numbered from left to right in numerical order.

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



All Raw Thrills assembly and service videos:

rawthrills.com/assembly-and-service-videos/

Electrical and Mechanical Illustrations

- Pg. 38 – Single Game Operational Dimensions**
- Pg. 39 – Single and Twin Game Setup Instructions**
- Pg. 40 – Main Cabinet Assembly Diagram**
- Pg. 41 – Control Panel and Dash Assembly Diagrams**
- Pg. 42 – Pedestal Assembly Diagram**
- Pg. 43 – Seat Assembly Diagram**
- Pg. 44 – Rear Spoiler Assembly Diagram**
- Pg. 45 – Single Game and Twin Game Marquee Assembly Diagrams**
- Pg. 46 – Main Upper Harness and PCB System Diagram**
- Pg. 47 – Main Lower Harness and DC Distribution System Diagram**
- Pg. 48 – Seat Cabinet System Diagram**
- Pg. 49 – Dash System Diagram**
- Pg. 50 – Vault System Diagram**
- Pg. 51 – PC, Monitors, and AC Distribution System Diagram**

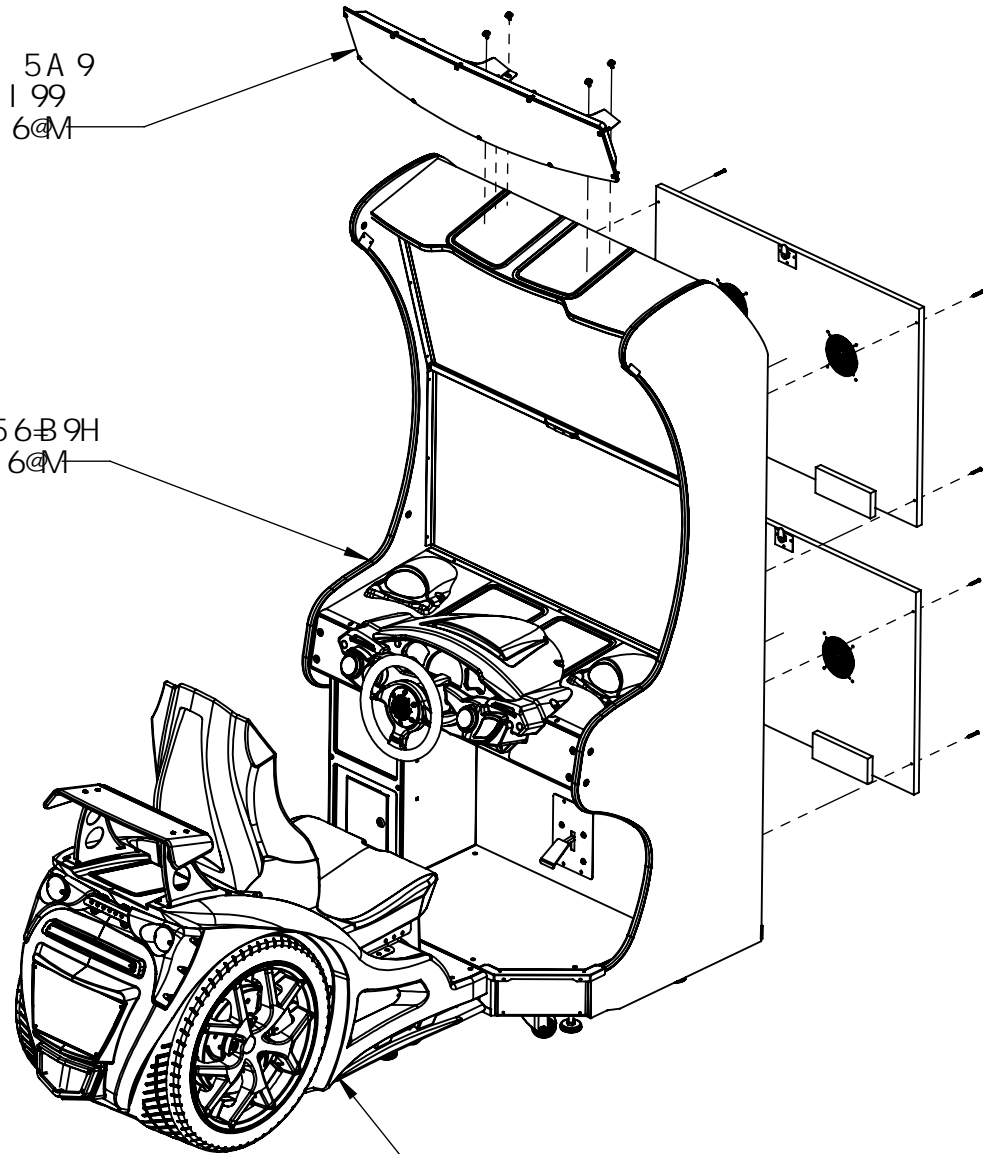


For the latest manual and information regarding this game scan the QR code or [click here \(if viewing on an electronic device\)](#)

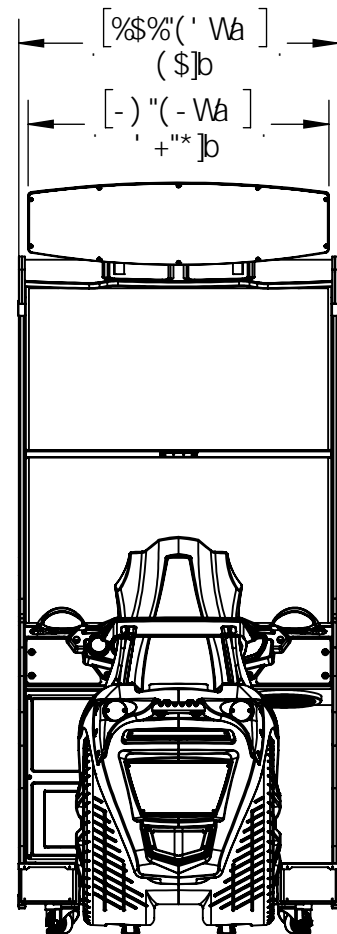
: 5GH5B8 : I F € I G (' " 8 I 5 @ G 7 F 9 9 B
 8 A 9 B G € B G ,) " @ L (\$ " K L ' - (" <
 K 9 > < H) \$ \$ @ G ! Y g j a U H X '

GB : @ : 5 A 9
 A 5 F E I 9 9
 5 G G 9 A 6 @ M

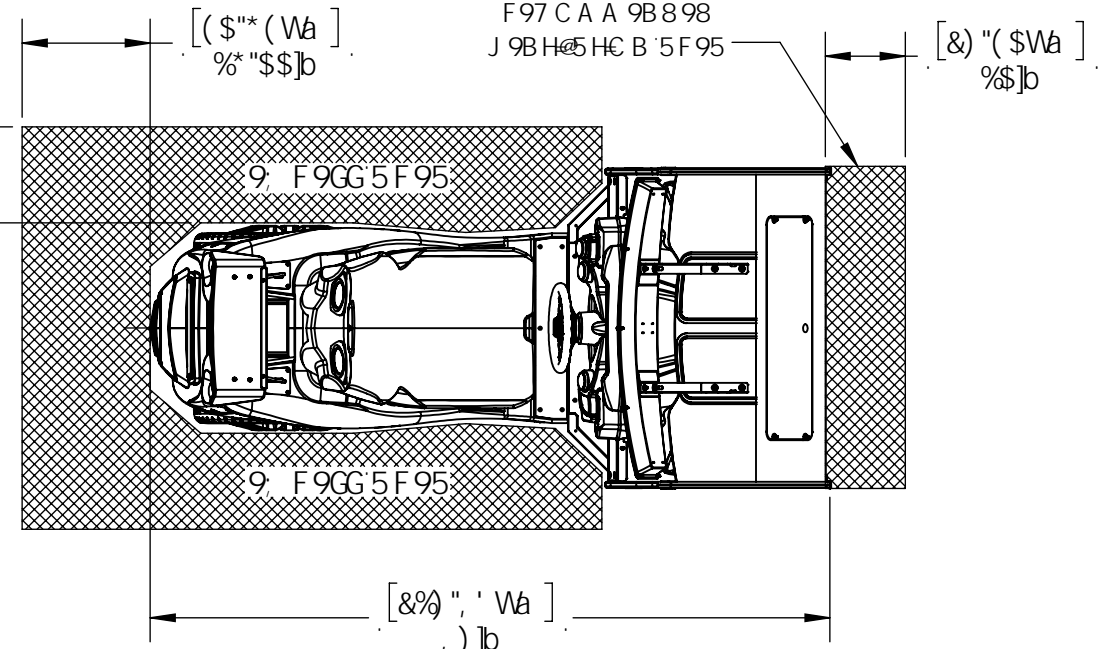
A 5 B 7 5 6 B 9 H
 5 G G 9 A 6 @ M



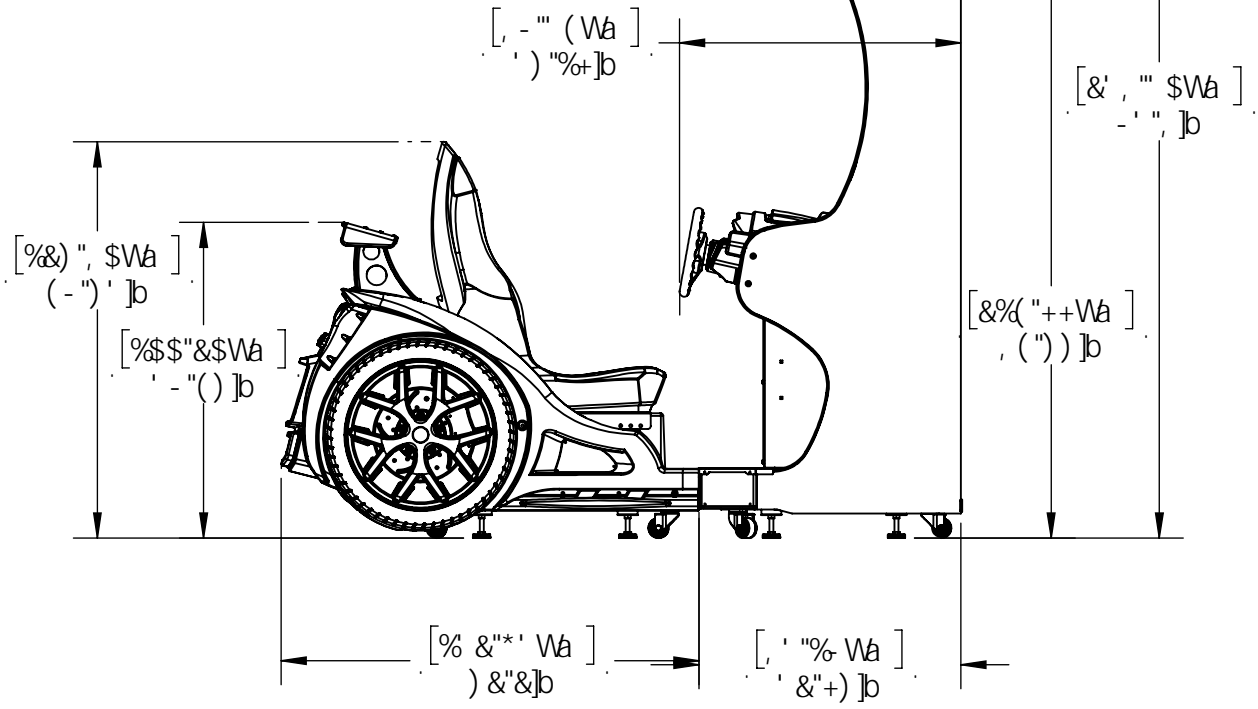
G 9 5 H D 9 8 9 G H 5 @
 5 G G 9 A 6 @ M



[' \$ " (, V a]
 % & " \$ \$] b



F 9 7 C A A 9 B 8 9 8
 J 9 B H 5 H C B 5 F 9 5



[% & " , \$ V a]
 (-) '] b
 [% \$ \$ & \$ V a]
 ' - ()] b

[, - " (V a]
 ') " % +] b

[& ' , " \$ V a]
 - ' "] b

[& % (" + + V a]
 , (")] b

[% & " ' V a]
) & "] b

[, ' " % V a]
 ' & " +)] b

:5GH5B8:I F€I G(' ""GB; @; 5A 9'G9H D

%F9A CJ 9@K 9F'F95F'8CCF"

&F9A CJ 9I DD9F'F95F'8CCF"

'L' BD57?'GB; @; 5A 9'A 5FE I 99'5B8'I G9'G DD@98 '<5F8K 5F9

D-9F7 9'H 9'HC D'GF-9'897 5@HC '57 7 9GG'<889B'<C @G"

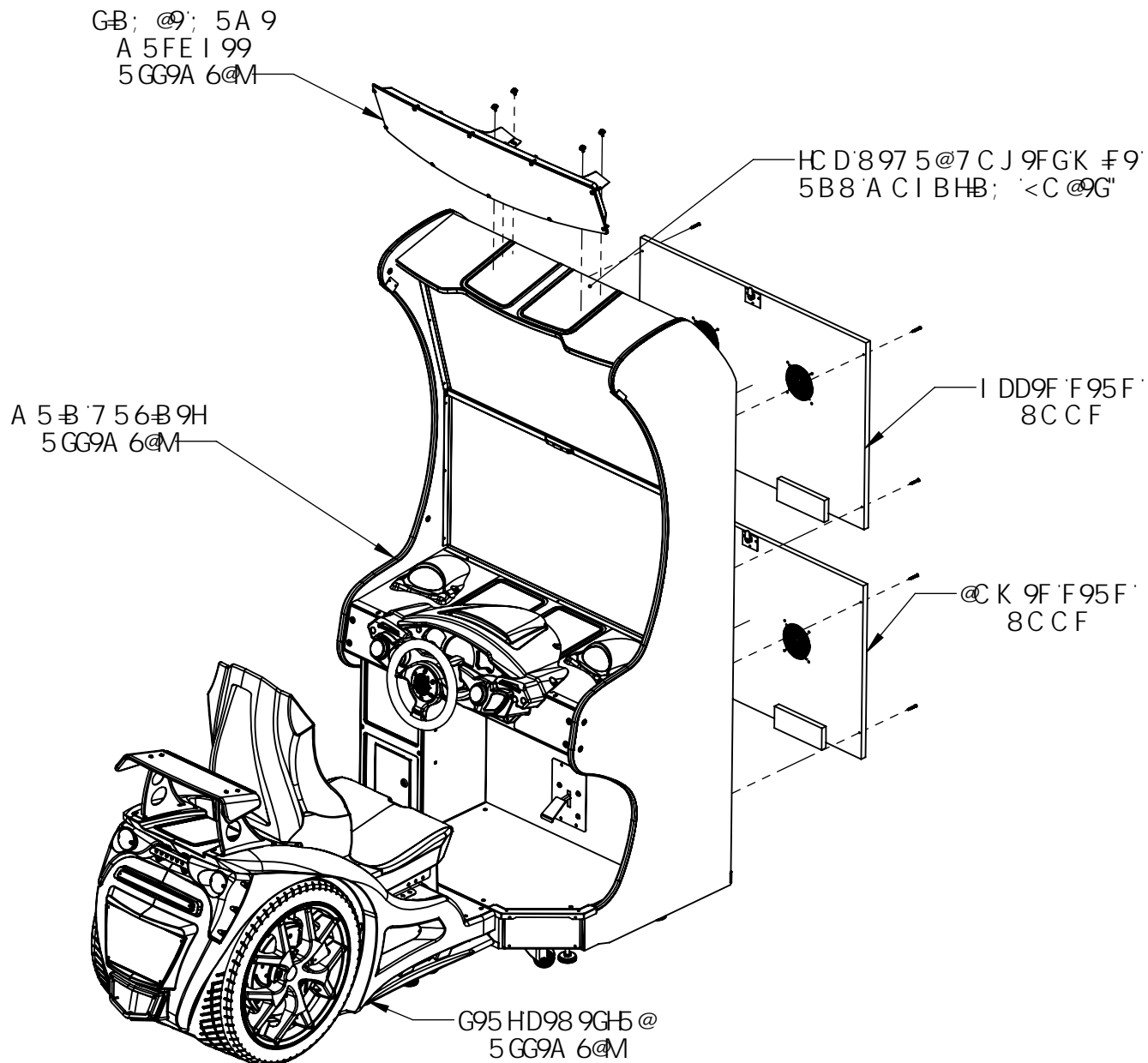
(L'F I B'DCK 9F'756@H'FCI; <'<C @-B'HCDC: '756-B9H5B8'7CBB97H

BG89'756-B9HHC 'A 5HB; '7CBB97HCF"

)L'G9H@; '9J 9@FG-B'K'9'8CK B'DC G#HB"

*L'F9H FB'K'9'F95F'8CCFGHC 'K'9'F'CD9F5HB; 'DC G#HB"

+L'D@; 'B'57'7CF8:FCA '657?'C:; 5A 9'5B8'DCK 9F'CB"



:5GH5B8:I F€I G(' ""8CI 6@; 5A 9'G9H D

%F9A CJ 9@K 9F'F95F'8CCFG"

&F9A CJ 9I DD9F'F95F'8CCFG"

'L' BD57?'8CI 6@; 5A 9'A 5FE I 99'5B8'I G9'G DD@98 '<5F8K 5F9

""D-9F7 9'H 9'HC D'GF-9'897 5@HC '57 7 9GG'<889B'<C @G"

(L'F I B'DCK 9F'756@H'FCI; <'F9GD97HJ 9'<C @G-B'957'<'756-B9H

""HC D'5B8'7CBB97HG9D9F5H@M-BG89'K'9'F# <H5B8 '@: H756-B9H

""HC 'K'9'A 5HB; '7CBB97HCFG"

)L'BG#5@897CF5HJ 9'G89'5F7'<9'HC 'K'9'@: H5B8'F# <HC I H9F'756-B9H

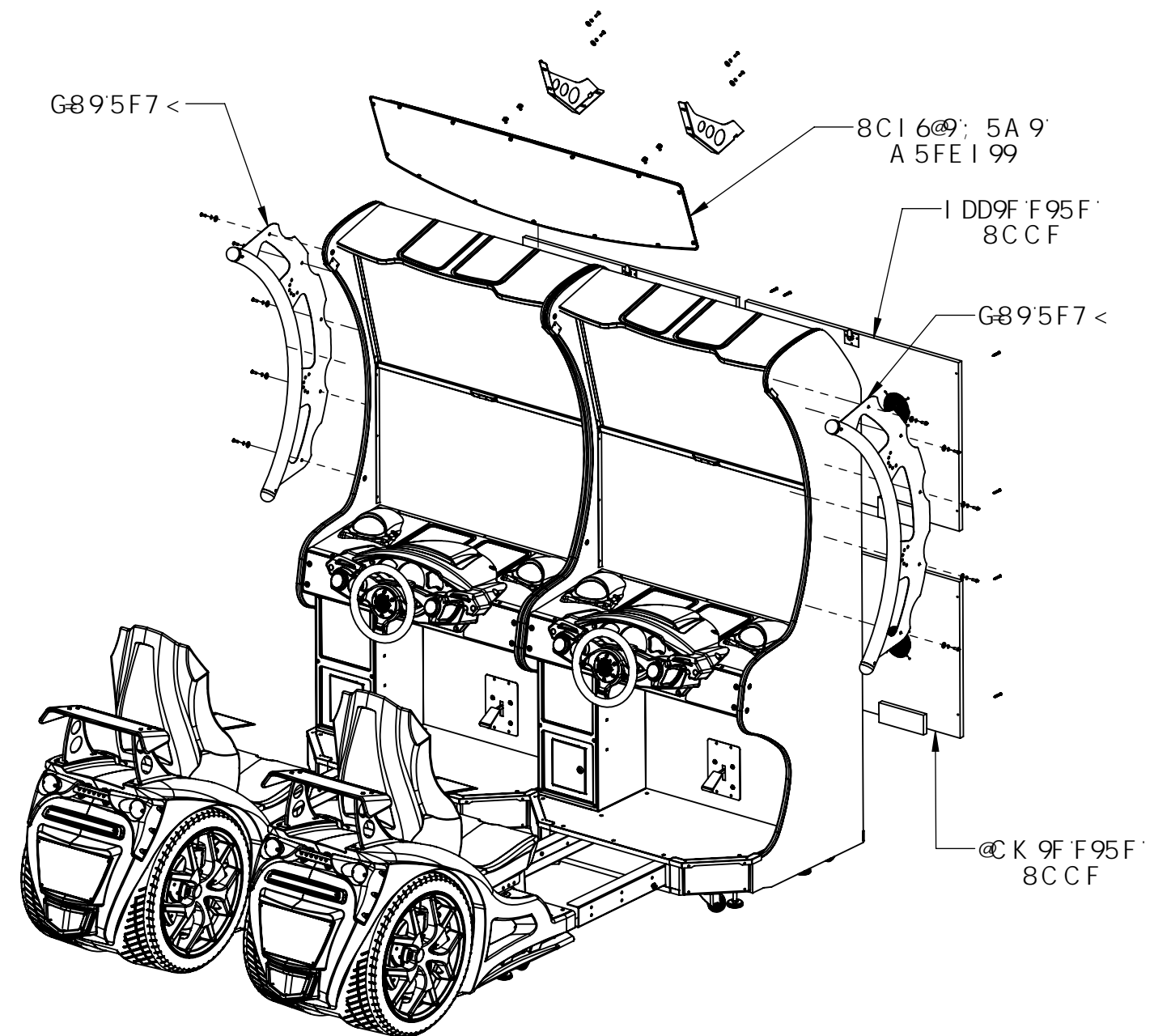
""K 5@G I G-B; ':# 9'G7F9K G#@7?'5B8: @HK 5G'9FGDFCJ #98"

)L'5@ B; 5A 9GB9LHHC '957'<C'K'9'F'B'89GF98 '@75HC B'5B8'

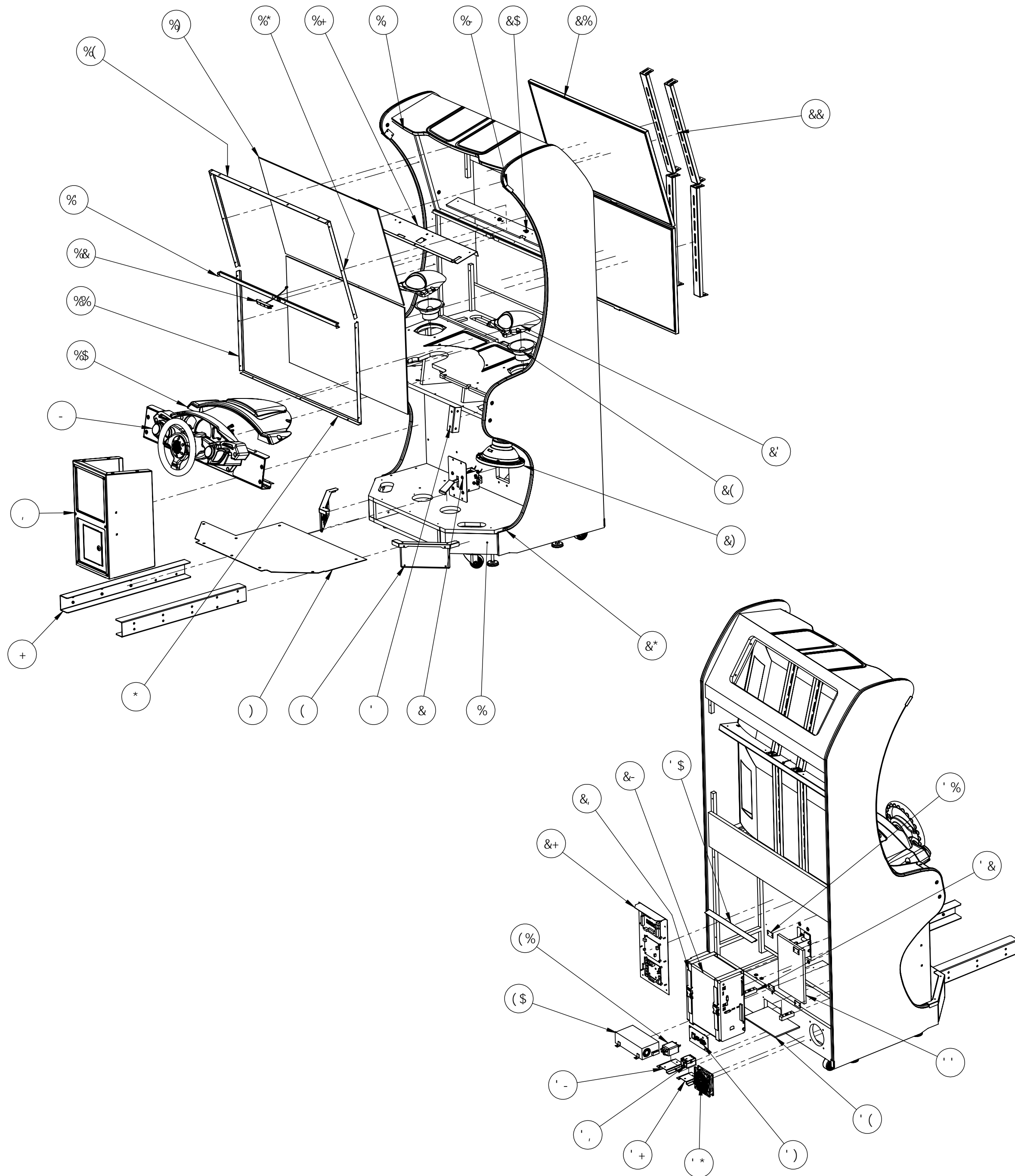
""G9H@; '9J 9@FG-B'K'9'8CK B'DC G#HB"

*L'F9H FB'K'9'F95F'8CCFGHC 'K'9'F'CD9F5HB; 'DC G#HB"

+L'D@; 'B'57'7CF8G:FCA '657?'C: '957'<; 5A 9'5B8'DCK 9F'CB"

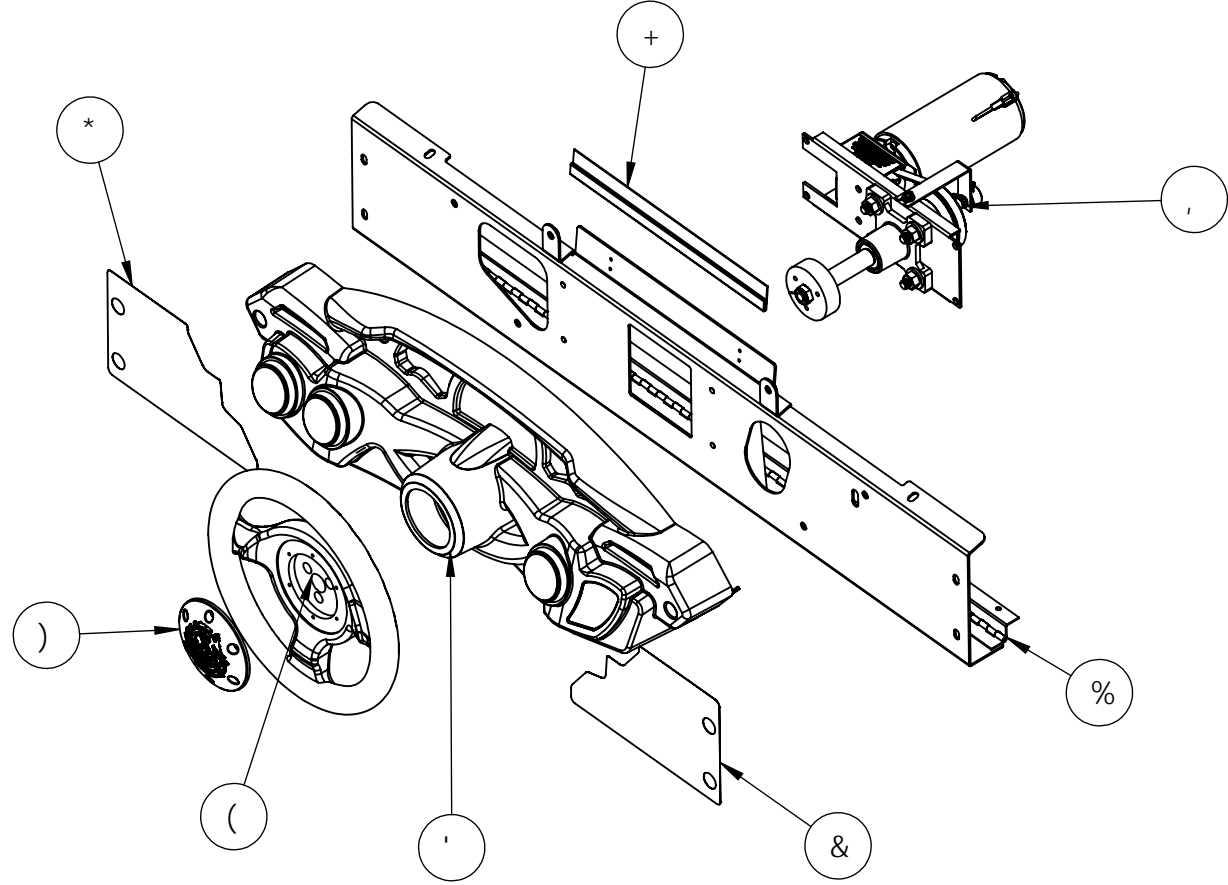


:5GH5B8:1F-€1G('"
A5-B756-B9H5GG9A6@M

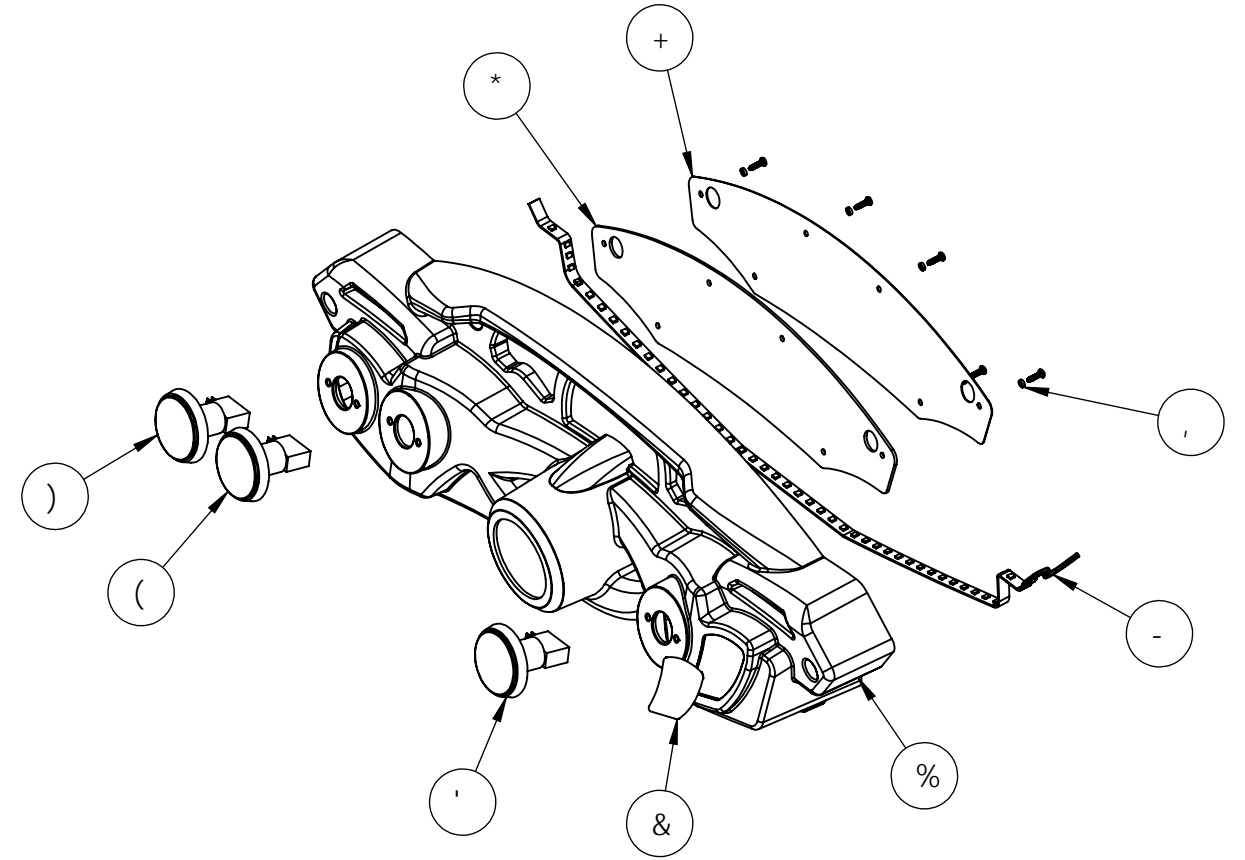


#9A 'BC "	D5FHBI A 69F	8YgWfdhcb	A 5H@ DFC D	H E
%	*\$%\$%\$&!\$%	:/:('!A U]b'7 UV]bYh	B!E	%
&	*\$(!\$\$) &!\$%	; UgDYXU'5ggm	B!G	%
'	*\$\$!\$%+, !\$%	7 fi]gb'8 Ug' A ci bh]b['6fUW_Yhf&L	B!G	&
(	?]M_ 'DUH' 5ggm	G\YYha YHU'6fUW_YH#5Wfm]WDUbY'	B!G# DI7	&
)	*\$\$!\$' &!\$%	:/:('!A U]b'7 UV'HYUX'd'UH	B!I	%
*	*\$\$!\$' &*%\$%	:/:('!A U]b'7 UV'A cb]rcf'7 fcgg' ; 'Ugg6fUW_@ck Yf	B!G	%
+	*\$\$!\$%++!\$%	7 fi]gb' DYXYgU' Gfi hf&L'fYe fX	B!H	&
,	:b:('J Ui 'h5ggm	:b:('J Ui 'h5ggm	B!G	%
-	:/:('!8 Ug'!5ggm	:/:('!8 Ug'!5ggm'fGYY'9' d'cXYX&	!	%
%\$	*\$' !\$\$++!\$%	7 fi]gb'!<ccX!& A c'XYX	DI>	%
%&	*\$\$!\$' &-!\$%	:/:('!A U]b'WUV'; 'Ugg6fUW_Yh! @ck Yf	B!G	&
%&	7 Ua YfU!<ci gb] !5ggm	A chc!; D'7 Ua YfU'5ggYa V'mfGYY' YI'd'cXYX&	DI>	%
%	*\$\$!\$' &*!\$%	:/:('!A U]b'7 UV'A cb]rcf'7 fcgg' ; 'UggA 'X	B!G	%
%&	*\$\$!\$' &*!\$%	:/:('!A U]b'7 UV'A cb]rcf'7 fcgg' ; 'UggI ddYf	B!G	%
%&	*\$\$!\$' &*!\$%	:/:('!H'a dYfYX'A cb]rcf'; 'Ugg f&L	B!L	&
%&	*\$\$!\$' &*!\$%	:/:('!A U]b'WUV'; 'Ugg6fUW_Yh! I ddYf	B!G	&
%+	*\$\$!\$' &-!\$%	:/:('!I b] YfgU' A cb]rcf' A ci bh 7 fcgg'6fUW_Yh	B!G	%
%	H'd'7 \fca Y'Ha c'X]b[		DI:	%
%	*\$\$!\$' \$-'!\$%	:/: '@98' K]XY'6fUW_YhA U]b'7 UV' f&L	B!G	&
&\$	%\$(!&\$!)!:'Uh5ggm		!	%\$
&%	, \$-'!\$\$&!)\$%	G\Ua g b['69('H<'69H<'Dfc'H' G'fYg!'('	!	&
&&	*\$\$!\$' &*(!\$%	:/:('!A cb]rcf' A ci bh]b['Gfi h	B!H	(
&'	*\$' !\$\$%&&\$%\$5GGM		DI>	&
&(	&!%&\$!\$!\$!\$!\$	)'&':i "'FUb[Y'GdYU_Yfz, 'c\&	!	&
&)	G6' !,]bK ccZYf!5ggm	G' D9F6?9G' !,]bK ccZYf!5ggm	DI># B!G	%
&*	*\$' !\$\$+% !-\$	@98' HA C @B; '-\$'	DI:	&
&+	:/:(' SF€& <5F8K 5F9!5GGM	:/:(' SF€& <5F8K 5F9!5GGM	B!H	%
&	D7!GfUd'5ggm	D7!GfUd'5ggm'G@85GA	DI5<	&
&-	@'bcj cA +\$h		!	%
' \$	@98!9LHF! G€ B!5GGM%]b	@98!9LHF! G€ B!5GGMf% "'@b[L	DI!G	%
' %	*\$\$!\$\$, -%\$%	G'W'f]b['Bmcb'GfUd' DUH'	B!H	(
' &	*\$%\$)\$), \$!\$%	D7' K ccX'7 YUh	B!C	&
' '	:cUa 'DUX		DI5@	%
' ('	:cUa 'DUX!GA @		DI5@	%
')	A chc!; DS5!7 'DUH' 5ggm	A chc!; DS5!7 'DUH' 5ggYa V'm	B!H	%
' *	:Ub5ggm	87 'ZUb'UbX'k]fY[i UfX'UggYa V'm	B!M	%
' +	*\$\$!\$' %&!\$%	Gc'X'GfUH' FY'Um6fUW_Yh	B!H	%
' ,	, \$\$!\$\$\$+!\$%	*&%\$5LL'G'G'87' '#* &%\$8GL!' Gc'X'GfUH' FY'Um	!	%
' -	*\$\$!\$' &\$*!\$%	Dck Yf@bY:]Hf'6fUW_YhfGa U`L	B!H	%
(\$	' '\$!\$\$\$!\$%	<FD!*\$\$!& *\$K z%&'8i U' J c'fU[Y'Dck YfG dd'm	!	%
(%	((&\$\$\$\$%\$%	Dck Yf@bY:]Hf'f7 c'fWc'a '*A J %&	!	%
(&	F%\$%)%	:/:('!6fUW_YH'HA c'X]b['f&L	&	
('	*\$*!\$&&!\$%	:/:('!FccZJ]bmi'8YWU'		%
((	*\$*!\$&&!\$%	:/:('!<ccX'J]bmi'8YWU'		%

:5GH5B8:I F€I G(' ""
7CBHFC@D5B9@5GG9A 6@M



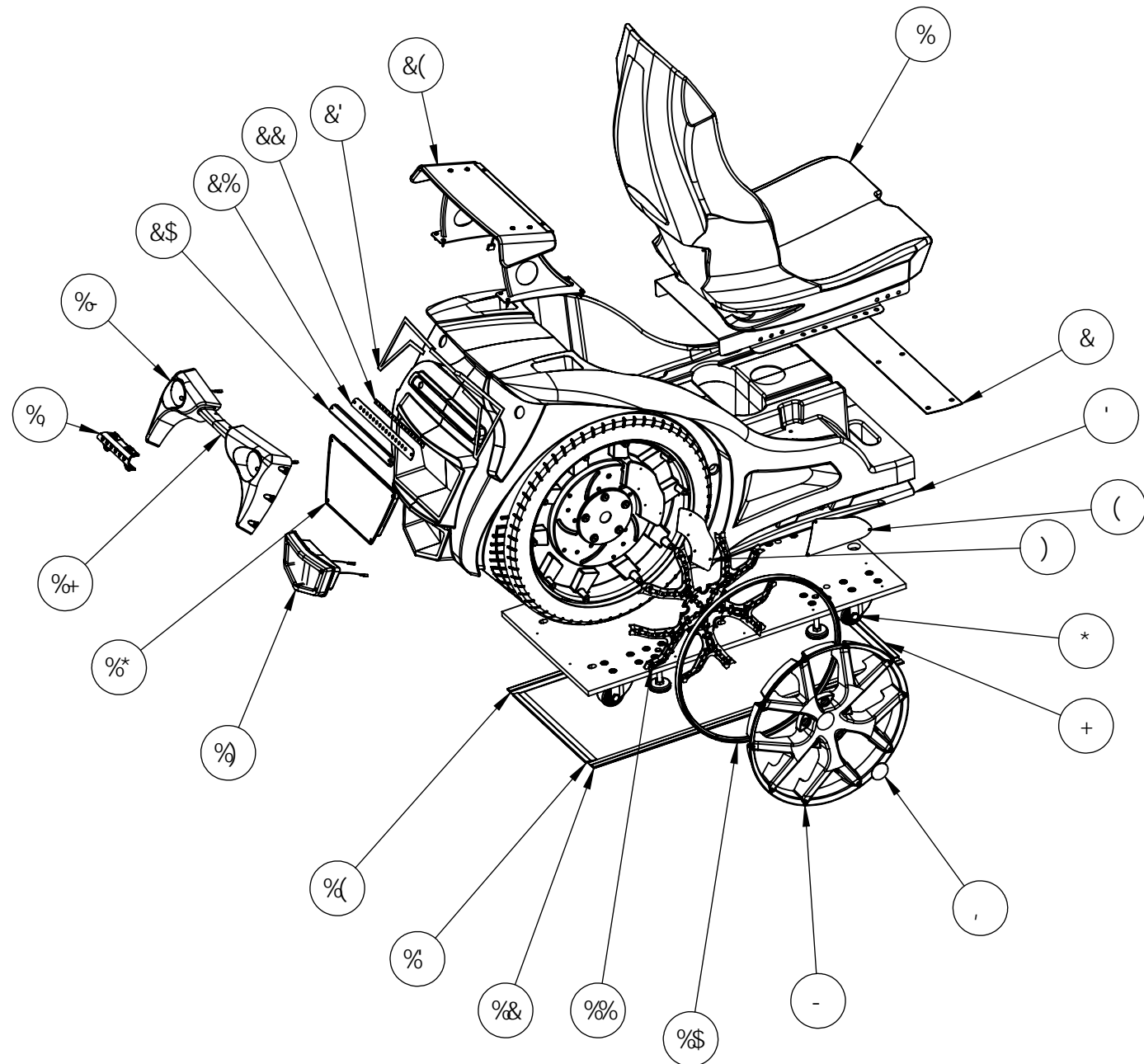
:5GH5B8:I F€I G(' ""
85G< '5GG9A 6@M



#9A 'BC "	D5FHBI A 69F	8YgWfdhcb	A 5H@ DFC D	EM
%	*\$!\$ \$ &)!\$%	: / : (' '7CBHFC@D5B9@	B!G	%
&	*\$!\$&%+&!\$%	: / : (' !8Ug\ J]bm'8YWU!F	!	%
'	8Ug\!G\Y`!5ggYa V`m	8Ug\!G\Y`!5ggYa V`mfYY` Y!d`cXYXŁ	!	%
(	&!%\$!\$!\$!\$!\$%	<Udd`G`Y`f]b[`K \YY`	D!>	%
)	*\$!\$ \$ +, -!\$%	7 fi]gfb`G`Y`f]b[`K \YY`7 Ud	D!>	%
*	*\$!\$&%+!\$%	: / : (' !8Ug\ J]bm'8YWU!@	!	%
+	@98!9LHF! G€ B!5GGM%&]b	@98!9LHF! G€ B!5GGM%&]b	D!G	%
,	*\$(!\$\$\$&!\$ \$	<5DD!:: : 6!G`99F`B; !5GGM	!	%

#9A 'BC "	D5FHBI A 69F	8YgWfdhcb	A 5H@ DFC D	EM
%	*\$!\$ \$ ++\$!\$%	7 fi]gfb!8Ug\!`A c`XYX	D!?	%
&	*\$!\$% -, !\$%	: / : !8Ug\ F][\h'8YWU!J`BM@	!	%
'	+\$&!\$ \$ \$ *!\$%	FCI B8!G`5FH6I`HC B!; F99B	D!>	%
(	+\$&!\$ \$ \$ +!\$%	FCI B8!J`9K`6I`HC B!6@ 9	D!>	%
)	+\$&!\$ \$ \$ *, !\$%	FCI B8!H`B9G`6I`HC B!C F;	D!>	%
*	*\$!\$% (' !\$%	7 fi]gfb!8Ug\`bghDUbY!7`YUf`cj`YfUm	D!F	%
+	*\$!\$&\$)`!\$%	: / : `bghfi`a`YbhDUbY!K` \]r`GmfYbY` '\$`a`]	D!9	%
,	*!` &G7 F9K	*!` &D`Ugh]MGWYk / BYcdfYbYK Ug\Yf	!	*
-	8Ug\`@98`Gf]d!)7 A`f7 5!(-((Ł	8Ug\`@98`Gf]d!+)7 A`k` \hk`ZcUa`hUdY	!	%

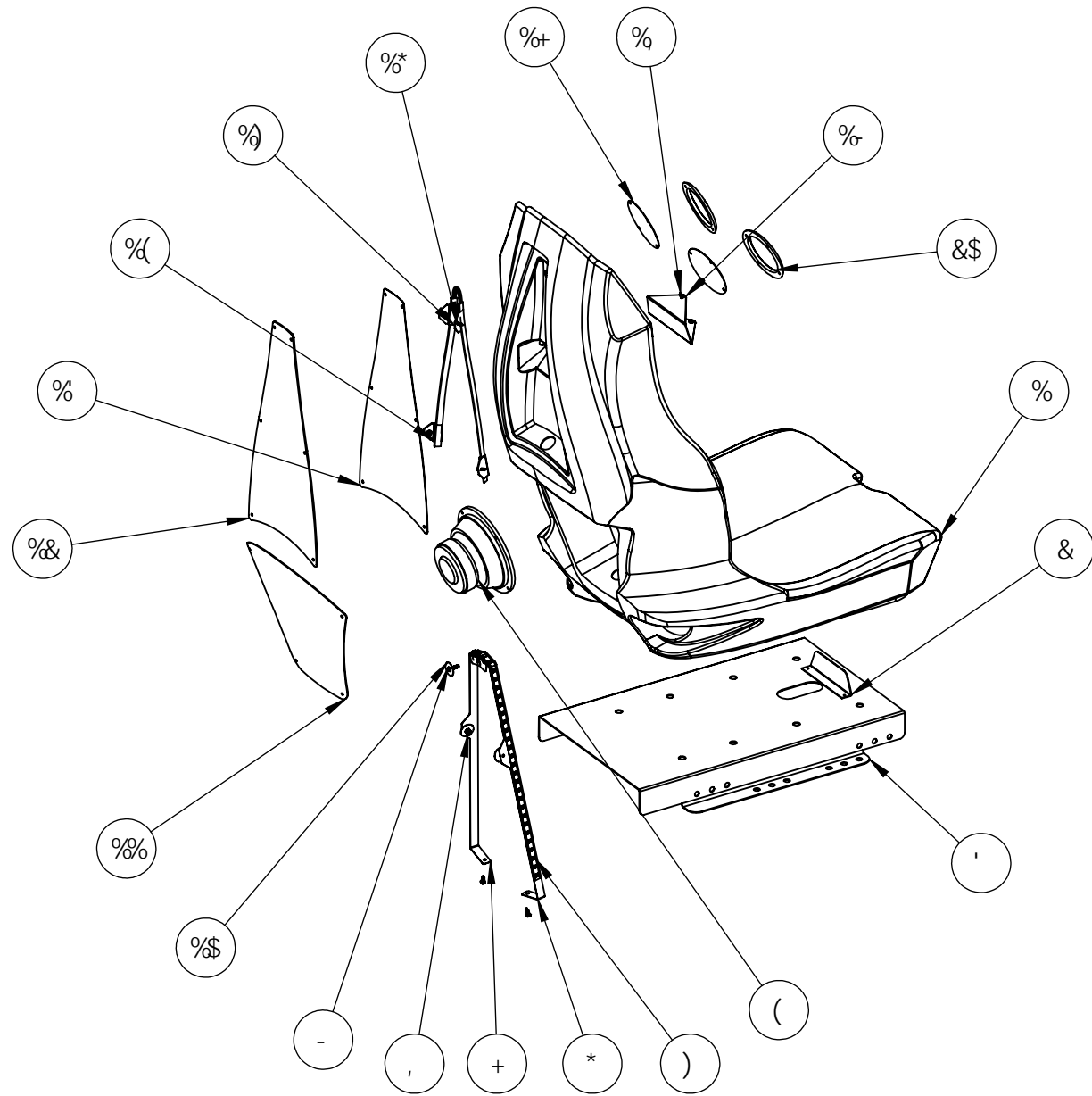
:5GH5B8:I F€I G('
D989GH5@5GG9A 6@M



#9A 'BC "	D5FHBI A 69F	8YgWfdhjb	A 5H@ DFC D	Σ E
%	: / : '6UgY 'GYUf5 ggm	: / : '6UgY 'GYUf5 ggm fGY Y '8YHU] g	!	%
&	* \$\$!\$% +*!\$%	7 fi]gfb!DYXY gU 'HYUX 'DUHY	B!I	%
'	* \$! \$\$++(!\$%	7 FI -GfB 'G95 HD98 9GH5@	D!A	%
(	* \$\$!\$% , )!\$%	7 fi]gfb!DYXY gU 'GXY ; f] 'f&L fYe fX	B!H	&
)	* \$*!\$%&\$*!\$%	7 fi]gfb!6FU_Y '7U'dYf f&L fYe fX	D!F	&
*	: / : (' !DYXY gU '7 UghY fDUbY '5 ggm	: / : (' !DYXY gU '7 UghY fDUbY '5 ggm	B!C	%
+	* \$! \$\$+* &!% -B	@98 '9l ffi gjcb '%]bWYg	D!G	%
,	* \$*!\$%&%(!\$%	7 fi]gfb! 'FbX 'K \YY '9a VYa 'f&L	!	&
-	* \$! \$\$+* -!\$%	7 fi]gfb! 'K \YY '#7 \fca Y 'f&L fYe fX	D!?	&
%\$	K <99@ @98 'HA C @B; !5 GGM	K <99@ FC 6! @98 'HA C @B; !5 GGM	D!:	&
%%	K \YY ' @98 '5 ggm	: / : 'K \YY ' @98 '5 ggya V'm	D!?	&
%&	@98!9LFI G€ B!5 GGM+ \$Wa S& ,]b!A	I bXYf7 UV 'F; 6 '@[\h]b[	D!G	%
%	@98!9LFI G€ B!5 GGM(\$Wa	@98!9LFI G€ B!5 GGM(\$Wa 'f%']bL' @b[	D!G	%
%(	@98!9LFI G€ B!5 GGM+ \$Wa S& ,]b	I bXYf7 UV 'F; 6 '@[\h]b[	D!G	%
%@	7 fi]gfb 'HU]'D]dY!5 ggm	7 fi]gfb 'HU]'D]dY!5 ggm fGYY' Yl'd'cXYXe	D!?	%
%*	: / : '@W'bgY!'DUHY!5 ggm	: / : '@W'bgY!'DUHY!5 ggm fGYY' Yl'd'cXYXe	D!?	%
%+	FYUfHU]@[\h5 ggm!F	FYUfHU]@[\h5 ggm!F	D!?	%
%	* \$! \$\$, \$'!\$%	7 fi]gfb! '7YbhYfHU]''[\h7 c j Yf'fA L	D!?	%
%-	FYUfHU]@[\h5 ggm!@	FYUfHU]@[\h5 ggm!@	D!?	%
&\$	* \$\$!\$% , &!\$%	7 fi]gfb!DYX '<c f]nc bHU]''@[\hC j YfUm	D!7	%
&%	* \$\$!\$% , %!\$%	7 fi]gfb!DYX '<c f]nc bHU]''@[\hA Ug	D!<	%
&&	) \$\$!\$\$% %!\$%	7 fi]gfb! '6FU_Y] [\hF; 6 '@98 '%\$"	!	%
&'	) \$\$!\$\$% &!\$%&&7 A	%&&7 A 'HU]@[\hK \]HY ' @98 'G@DFH	!	%
&(	: / : 'Gdc]Yf5 ggm!F 9J €98	: / : 'Gdc]Yf5 ggm!F 9J €98	!	%

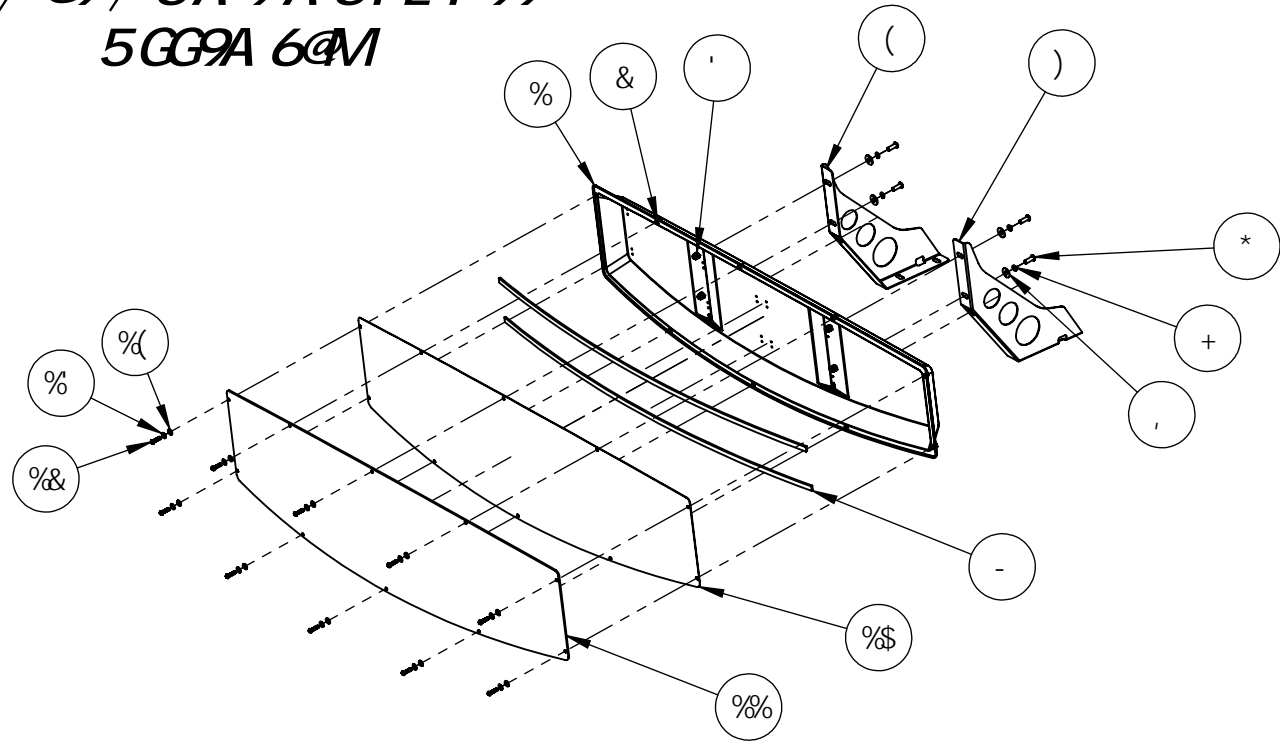
: 5GH5B8: I F-€ I G('

G95H5GG9A 6@M

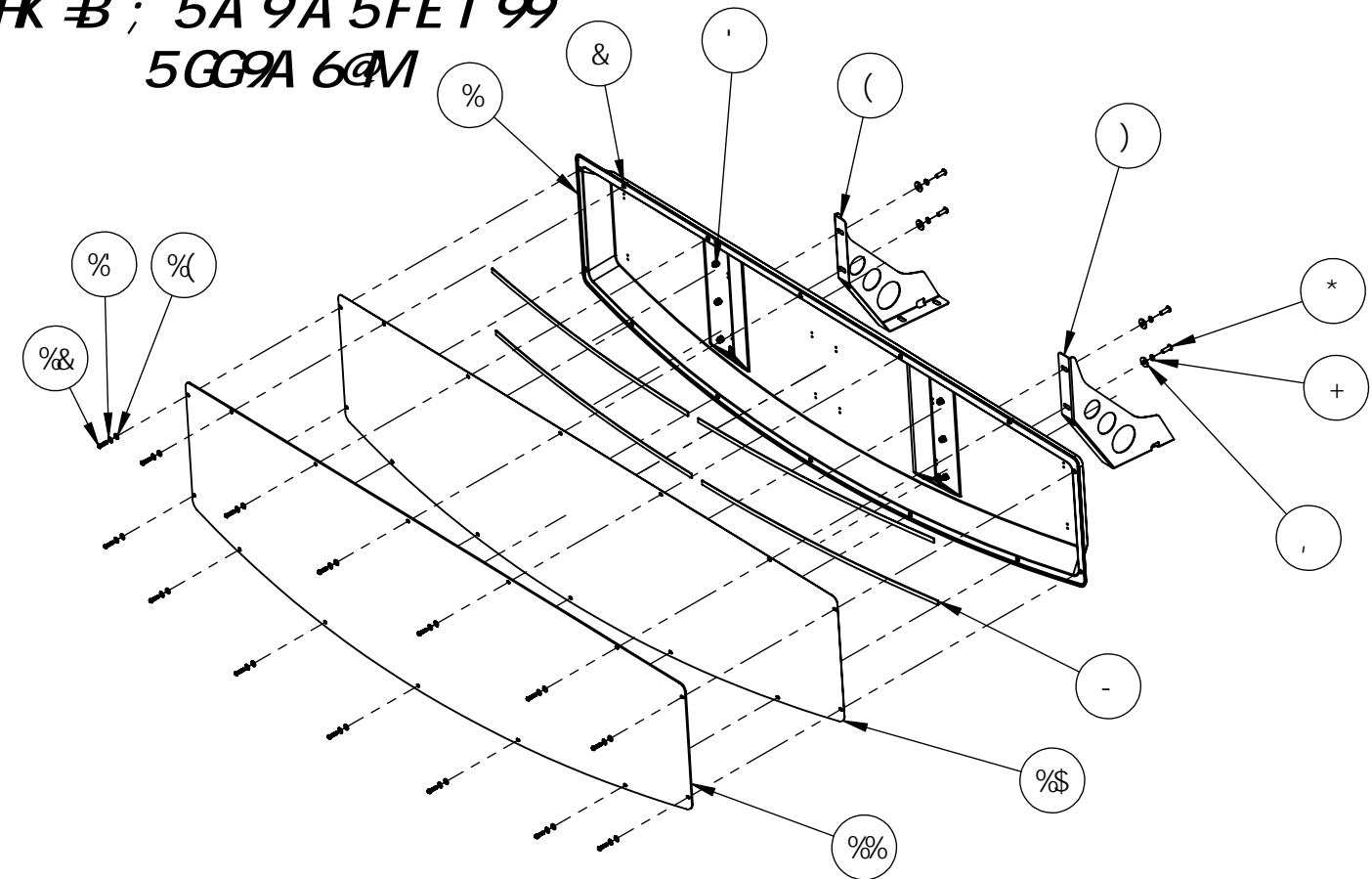


#DA BC "	D5FHBI A 69F	8YgWfdhjb	A 5H@ DFCD	E HM
%	*\$!\$%, !\$%	: / : 'FC HC 'A C @898 'G95HfFYXž C fb[ž; fbžM Ł	D!A	%
&	*\$\$!\$%+,)!\$%6	577 9GG6@ 7?CI H6F57?9H	B!G	%
'	*\$\$!\$%+,)!\$%	7 fi]gfb 'GYUhA ci bhjb['6fUW_Yh	B!G	%
(	&!%\$!\$!\$!\$!\$!\$	GD95?9F!K C C : 9F!*") ""('C <a	!	%
)	)\$\$!\$%*&!)\$	&-") ""+)7 A '@8 'Gfd 'K \]h'fk 'žUa 'hUdY Ł	!	&
*	*\$\$!\$' \$), !\$%	: / : 'GYUh@98 'A ci bhjb['6fUW_YhF	B!H	%
+	*\$\$!\$' \$) +!\$%	: / : 'GYUh@98 'A ci bhjb['6fUW_Yh@	B!H	%
,	-\$*' %5 \$\$-	-\$*' %5 \$\$- S@C K !GF 9B; Hk 'GH99@BMc B!B G9FH@ 7?BI H	!	&
-	-\$+) 5%(	-\$+) 5%('S'HC FL '6i HC B' GC 7?9H7 5D'G7 F9K	!	%
\$\$	, , : @HK 5G<9F @;	, \$\$: @HK 5G<9F	!	'
%%	*\$\$!\$%\$*!\$%	K C C : 9F!; F @@	B!G	%
%&	*\$\$!\$% (\$!\$%	7 fi]gfb 'GYUH/UW_7 YUf 'C j YfUm	D!5 =	%
%	*\$*!\$% --!\$%	: / : !'GYUH/UW_ 'HUbgi[\h	D!9	%
%('	)\$\$!\$%*&!\$%+\$7 A	K <#P '@8 'GH D!G95 H '@ A B5HC B	!	%
%)	*\$'!\$%+*&!\$%&	@98 '9i hfi g]c b 'fGUbXUfX 'I gy Ł	D!G	(
%'	-\$\$(5%(,	-\$\$(5%(, S<9L 'K 5G<9F ' <958 'G7 F9K : C F 'G<99H A 9H5@	!	*
%+	*\$\$!\$%\$!\$%	G95 H<95 8 F9GHGD95?9F!; F @@	B!G	&
%	-\$- &) 5%*	-\$- &) 5%* SD5B '<958 'HC FL '8F J 9'G7 F9K : C F 'G<99H A 9H5@	!	&
%-	*\$\$!\$' \$, (\$!\$%	: / : 'GYUh6cW_ci hD'UHY	B!G	%
&\$	, \$+!\$%\$(!\$%	' '#&"GdYU_Yf; fj`Y	B!G# D!>	&

:5GH5B8:1F€IG('
 GB; @; 5A 9A 5FEI 99
 5GG9A 6@M



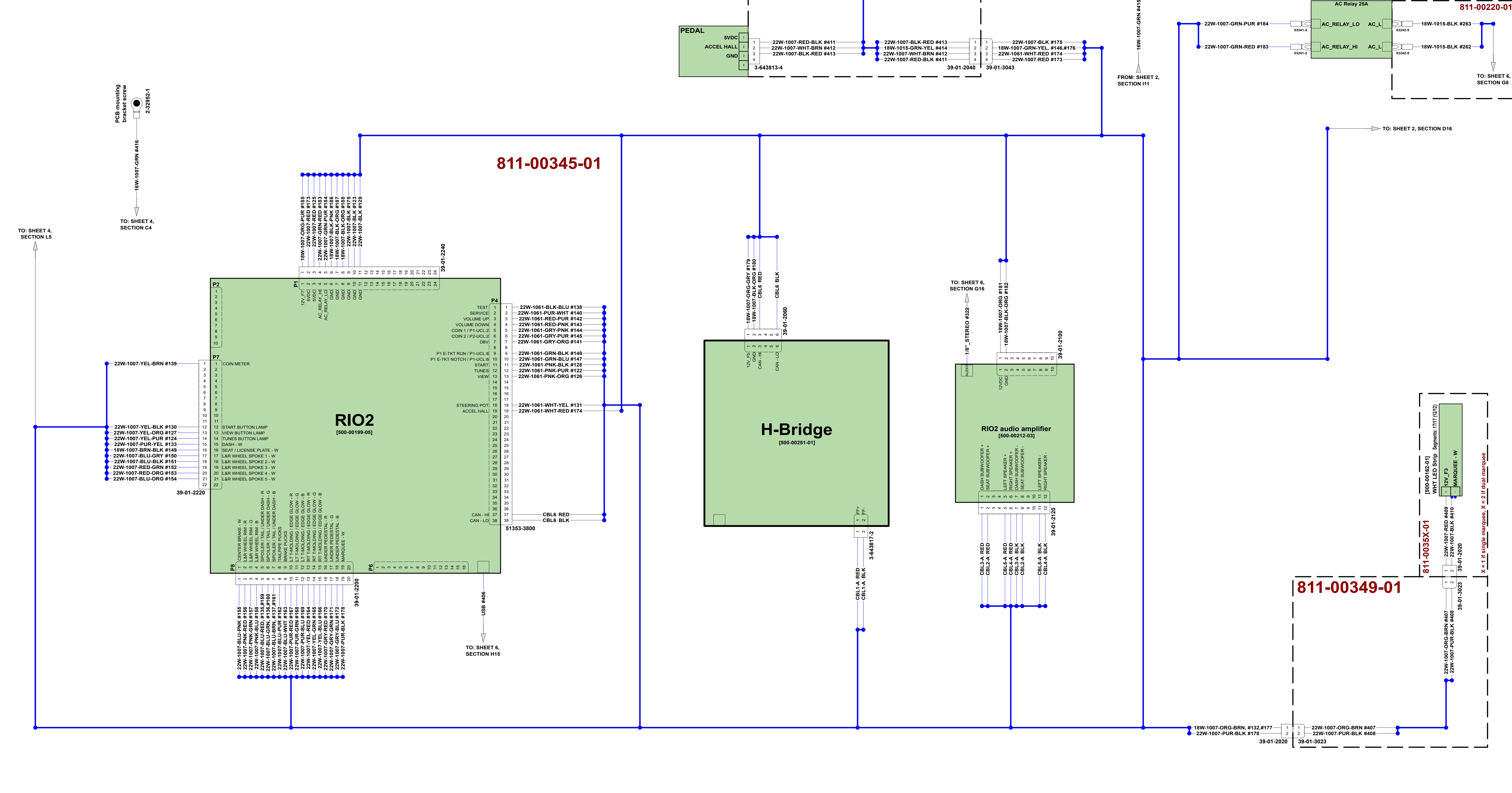
:5GH5B8:1F€IG('
 HK B; 5A 9A 5FEI 99
 5GG9A 6@M



#PA BC "	D5FHBI A 69F	8YgMfdhjb	A 5H@ DFC D	E HM
%	*\$!\$%&@\$%	:/:('!A Ufei YY 'DUb'G]b['YI b]h]UW : cfa YXŁ	D!58	%
&	-&%\$) 5 \$\$&	N]bW5`cmHUdd]b['bgYftgZc fGc Zrk ccX	!	%\$
'	-&%\$) 5 %\$\$	-&%\$) 5 %\$\$SH5 DD-B; 'B G9F HG	!	(
(	*\$\$!\$' &*, !\$%	:/:('!A Ufei YY '6fUW_Yh@	B!G	%
)	*\$\$!\$' &*-\$!\$%	:/:('!A Ufei YY '6fUW_YhF	B!G	%
*	HC FL%(!&\$! ' S(']b		!	(
+	%\$('@ 7? 'K 5G<9F		!	(
,	%\$(: @HSK 5G<9F	%#("B'L') #, "'C 8 : @HSK 5G<9F	!	(
-	) \$\$!\$\$%* &-\$	-\$7 A @98 'Gf]d 'K \]hY 'fk 'ZcUa 'HUdYŁ	!	&
%\$	*\$*!\$&%+(!\$%	:/:('!G]b['YI b]h]A]b]A Ufei YY" '\$a]' HfUbg][\h	D!9	%
%%	*\$\$!\$' &+@\$%	:/:('!A Ufei YY 'A -B=G]b['YI b]h]7 YUf' Cj YfUm%#, "'@9BG	D!5	%
%&	-*\$+) 5%(')	-\$*\$+) 5%(' S'HC FL '6I HC B 'GC 7?9H7 5D' G7 F9K	!	%\$
%	, , : @HK 5G<9F	, %\$: @HK 5G<9F	!	%\$
%&	--\$, &5%(\$	5VfUg]c b!FYg]h]UbhGYU']b['K Ug\Yf	!	%\$

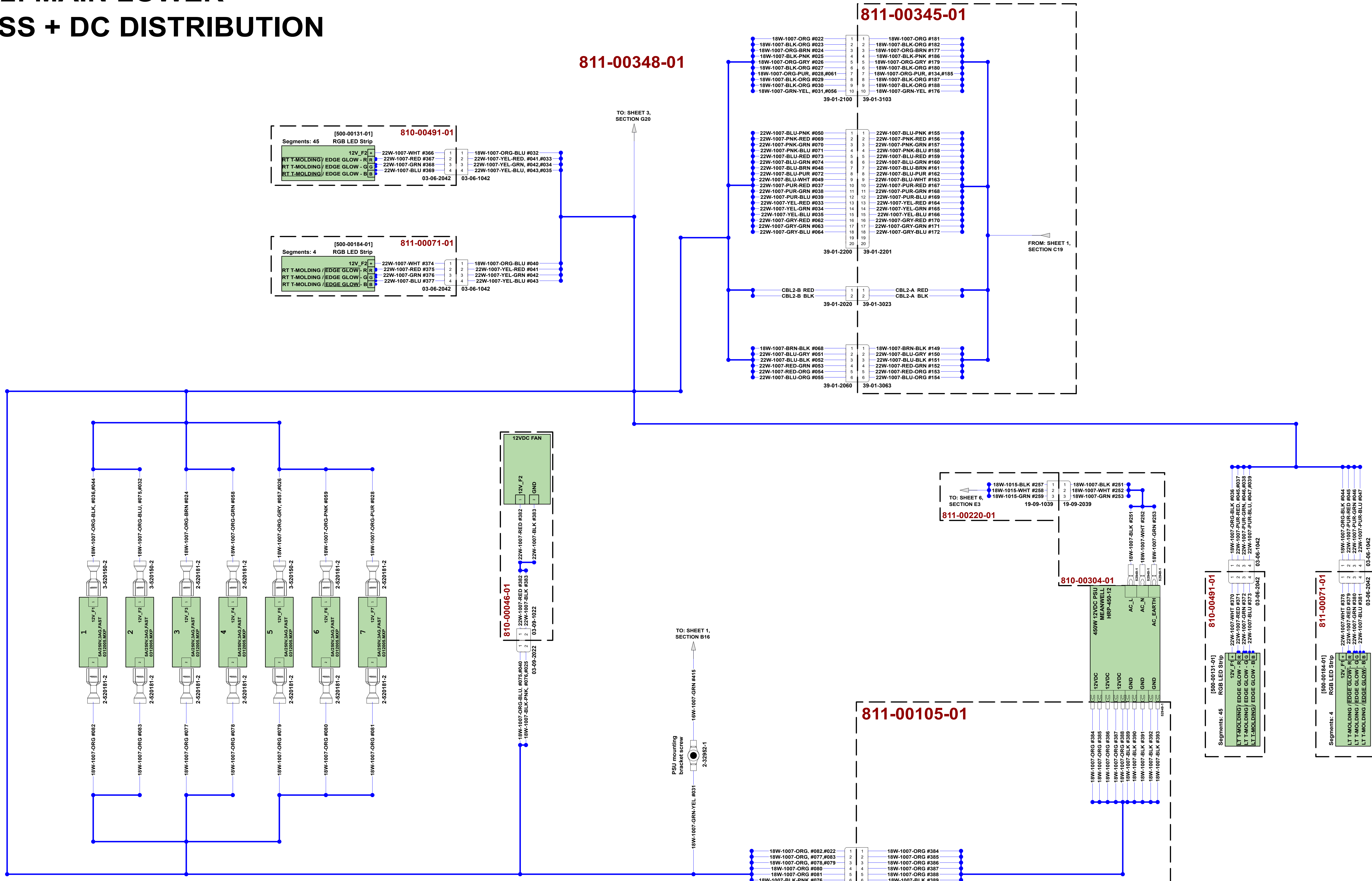
#PA BC "	D5FHBI A 69F	8YgMfdhjb	A 5H@ DFC D	E HM
%	*\$!\$%&@\$%	:/:('!A Ufei YY 'DUb'f]UW: cfa YXŁ	D!58	%
&	-&%\$) 5 \$\$&	N]bW5`cmHUdd]b['bgYftgZc fGc Zrk ccX	!	%&
'	-&%\$) 5 %\$\$	-&%\$) 5 %\$\$SH5 DD-B; 'B G9F HG	!	*
(	*\$\$!\$' &*, !\$%	:/:('!A Ufei YY '6fUW_Yh@	B!G	%
)	*\$\$!\$' &*-\$!\$%	:/:('!A Ufei YY '6fUW_YhF	B!G	%
*	HC FL%(!&\$! ' S(']b		!	(
+	%\$('@ 7? 'K 5G<9F		!	(
,	%\$(: @HSK 5G<9F	%#("B'L') #, "'C 8 : @HSK 5G<9F	!	(
-	) \$\$!\$\$%* &*\$7	: 'YI]Y @98 'Gf]d) A 'fc "'K \]hY 'k : cUa ' HUdY	!	(
%\$	*\$*!\$&%+-\$!\$%	:/:('!8V`K]XY '>fA Ufei YY" '\$a]' HfUbg][\h	D!9	%
%%	*\$\$!\$' &+@\$%	:/:('!8V`K]XY '>fA Ufei YY'7 YUf%#,' D9H '@9BG	D!5	%
%&	-*\$+) 5%(')	-\$*\$+) 5%(' S'HC FL '6I HC B 'GC 7?9H7 5D' G7 F9K	!	%&
%	, , : @HK 5G<9F	, %\$: @HK 5G<9F	!	%&
%&	--\$, &5%(\$	5VfUg]c b!FYg]h]UbhGYU']b['K Ug\Yf	!	%&

SHEET 1: MAIN UPPER HARNESS + PCBS



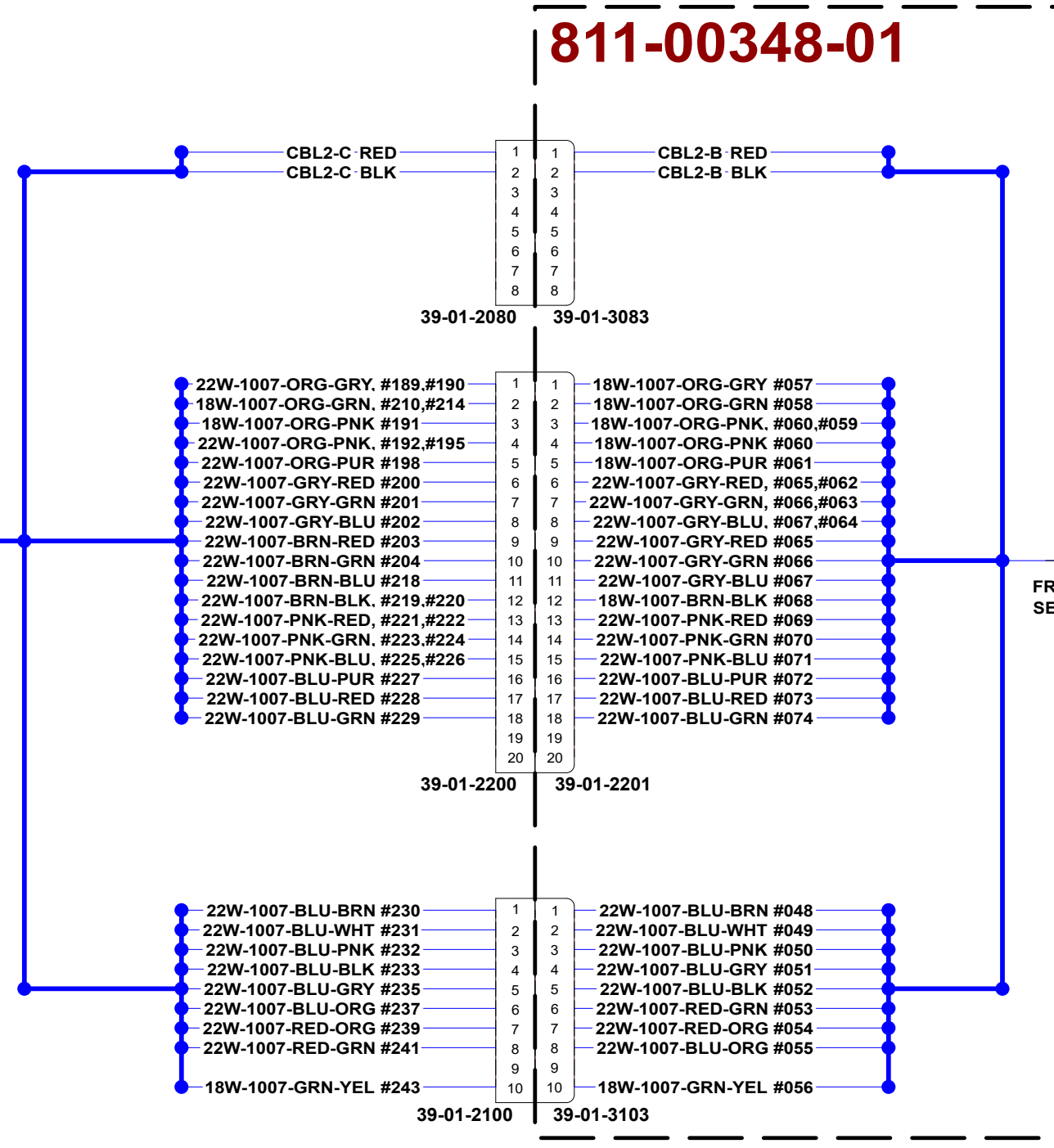
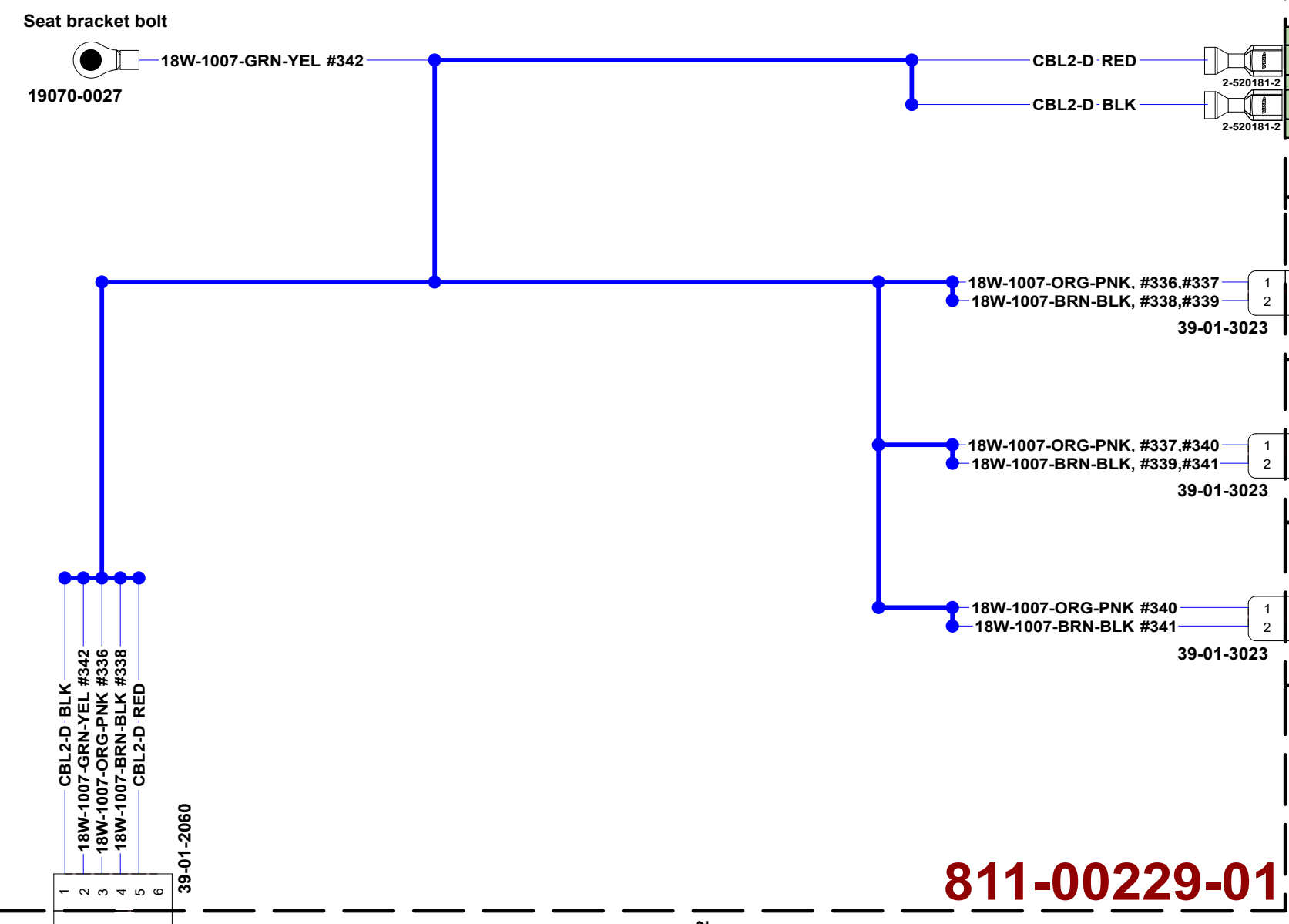
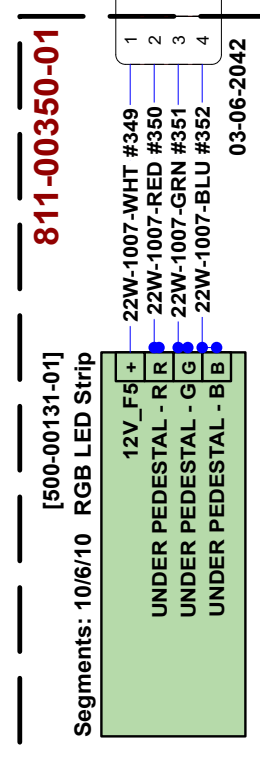
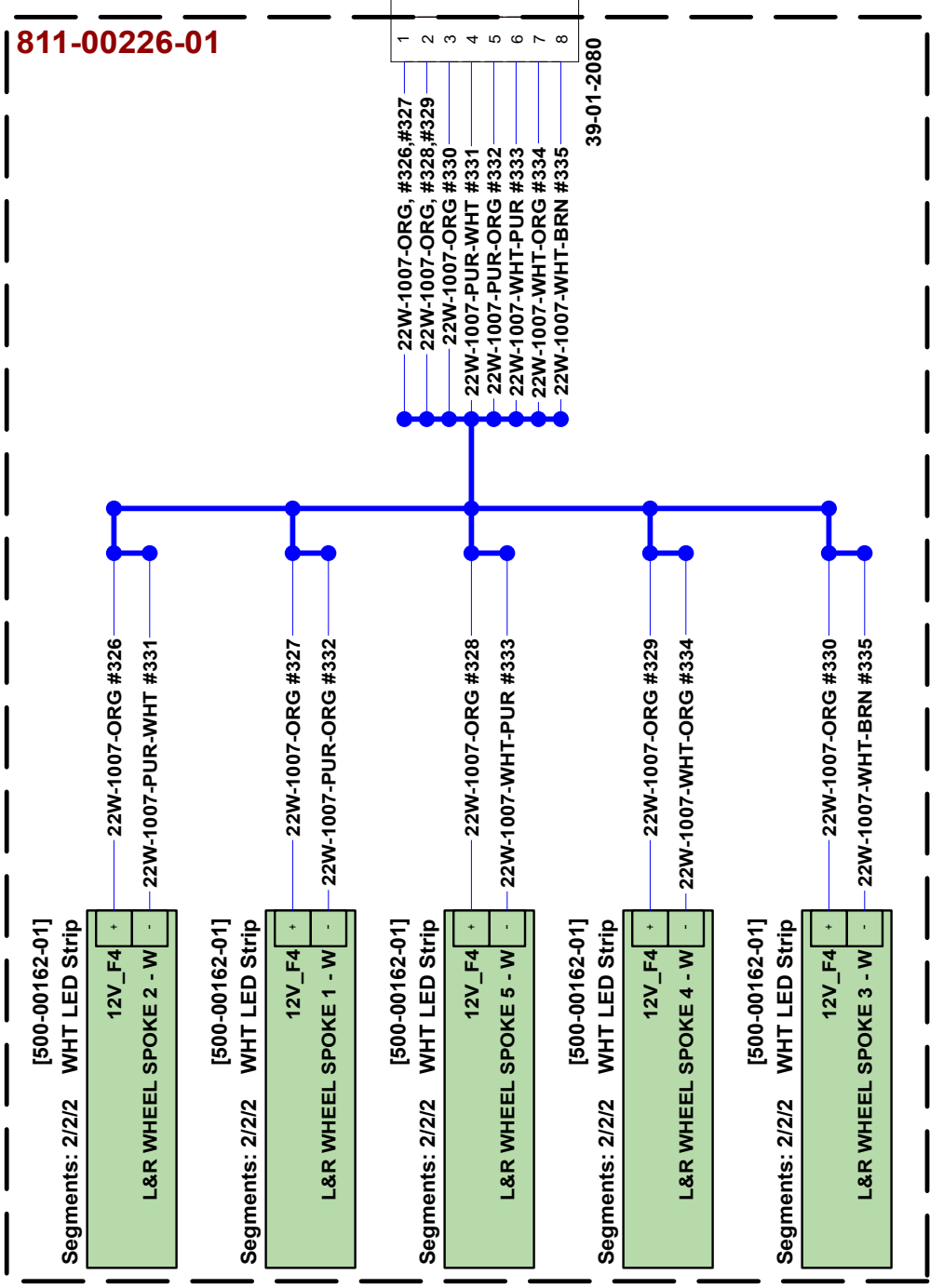
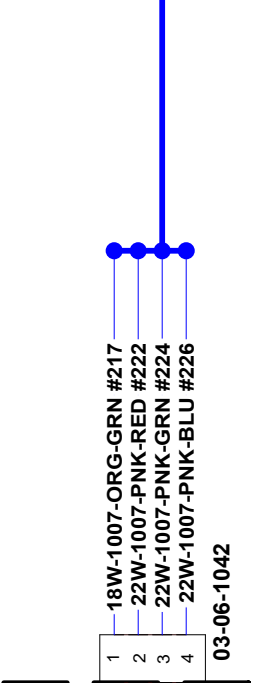
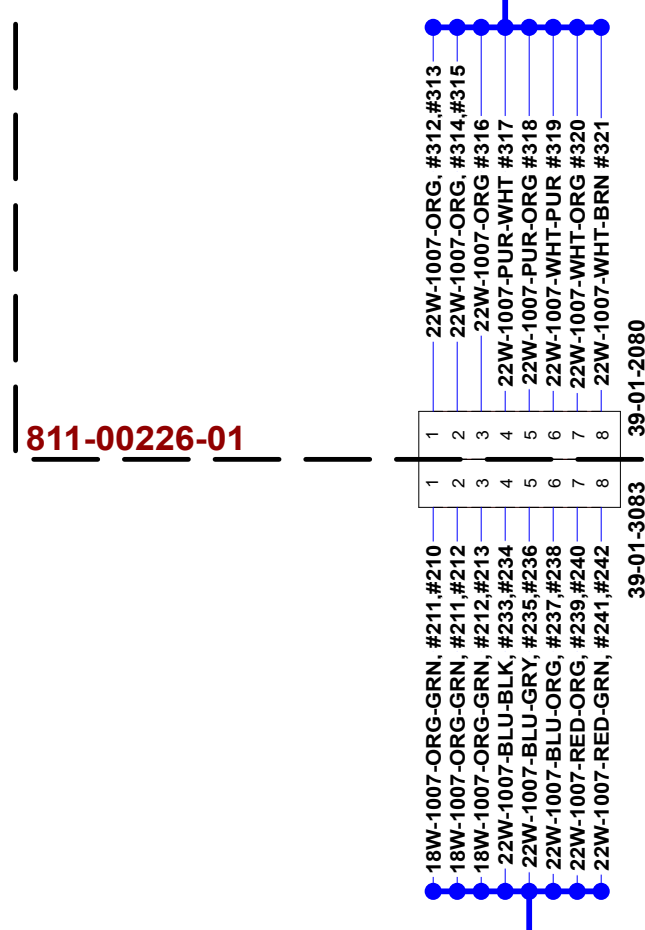
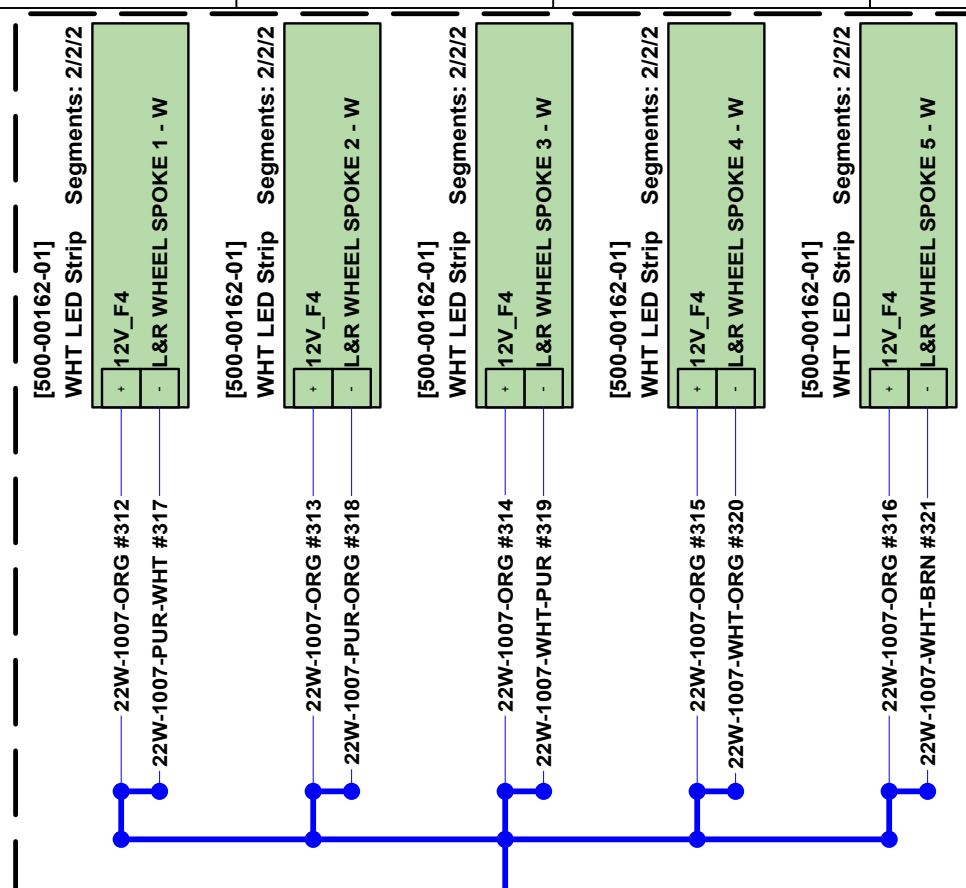
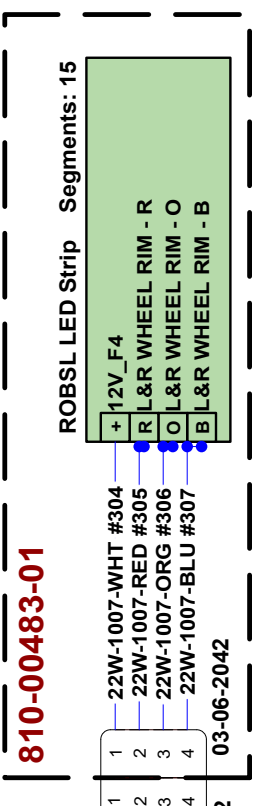
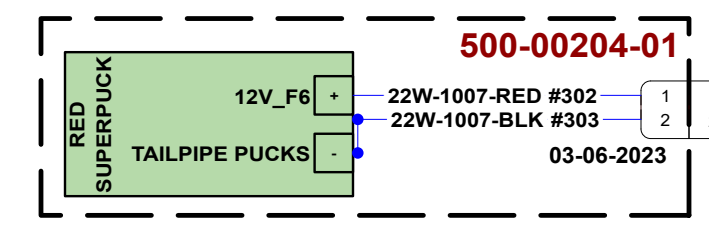
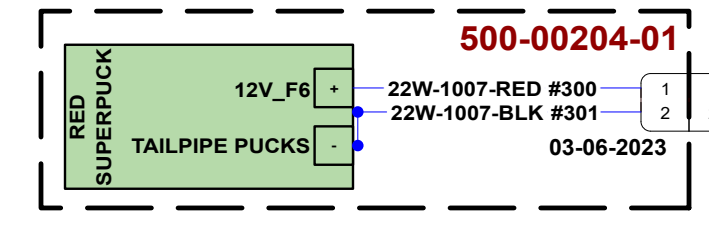
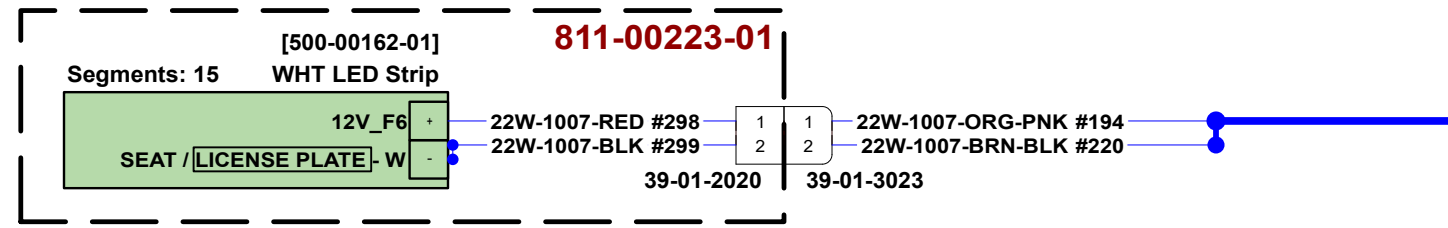
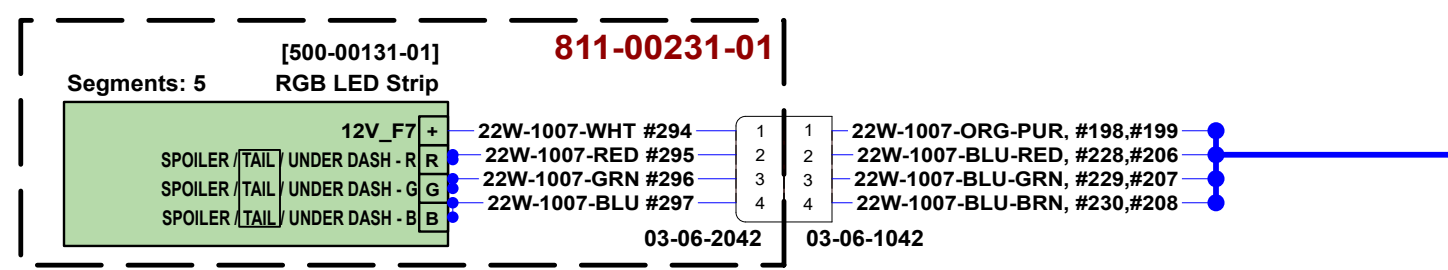
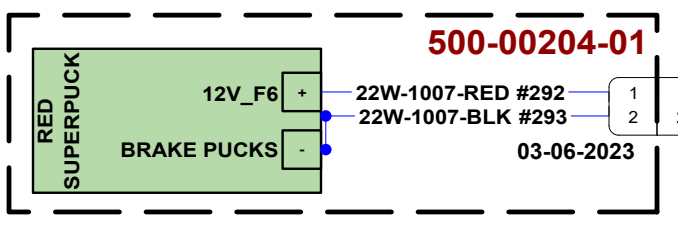
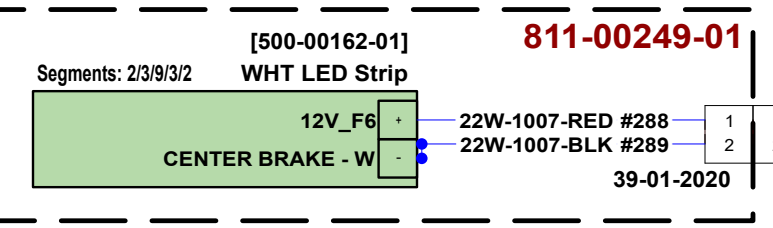
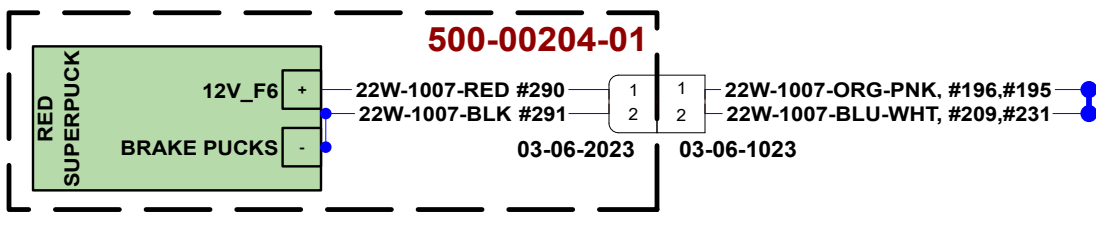
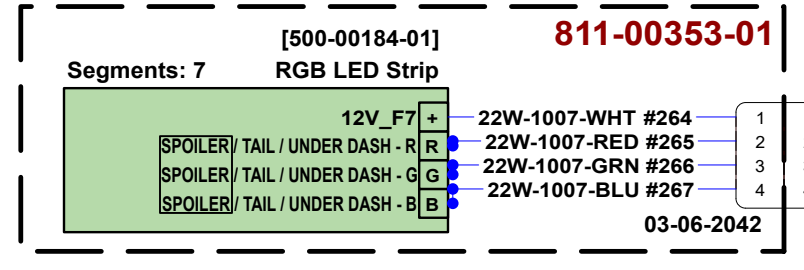
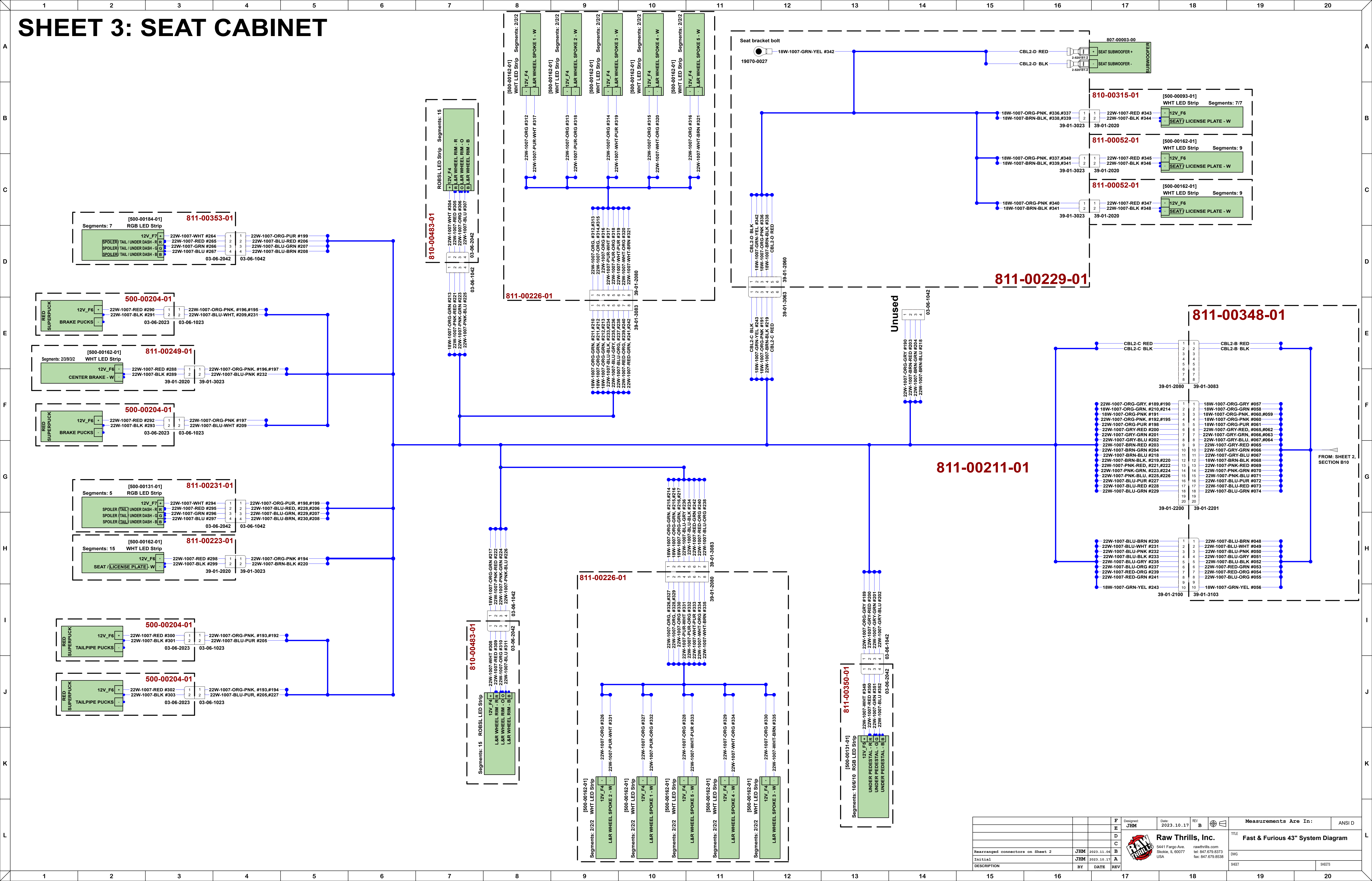
Rearranged connectors on Sheet 2		JHM	2023.10.17	A	Initial	JHM	2023.10.17	A	DESCRIPTION	BY	DATE	REV	F	Designed:	JHM	Date:	2023.10.17	REV	B	Measurements Are In:	ANSI D
Raw Thrills, Inc.												Raw Thrills, Inc. 5411 Fargo Ave. Skokie, IL 60077 USA rawthrills.com tel: 847.679.8373 fax: 847.679.8538		Fast & Furious 43" System Diagram TITLE DWG SHEET		SHEETS					

SHEET 2: MAIN LOWER HARNESS + DC DISTRIBUTION



Designed: JHM	Date: 2023.10.17	REV: B	Measurements Are In: ANSI D
Raw Thrills, Inc. 5411 Fargo Ave. Skokie, IL 60077 USA rawthrills.com tel: 847.678.8373 fax: 847.679.8538			
Rearranged connectors on Sheet 2 Initial: JHM DESCRIPTION:			TITLE: Fast & Furious 43" System Diagram DWG: SHEET:

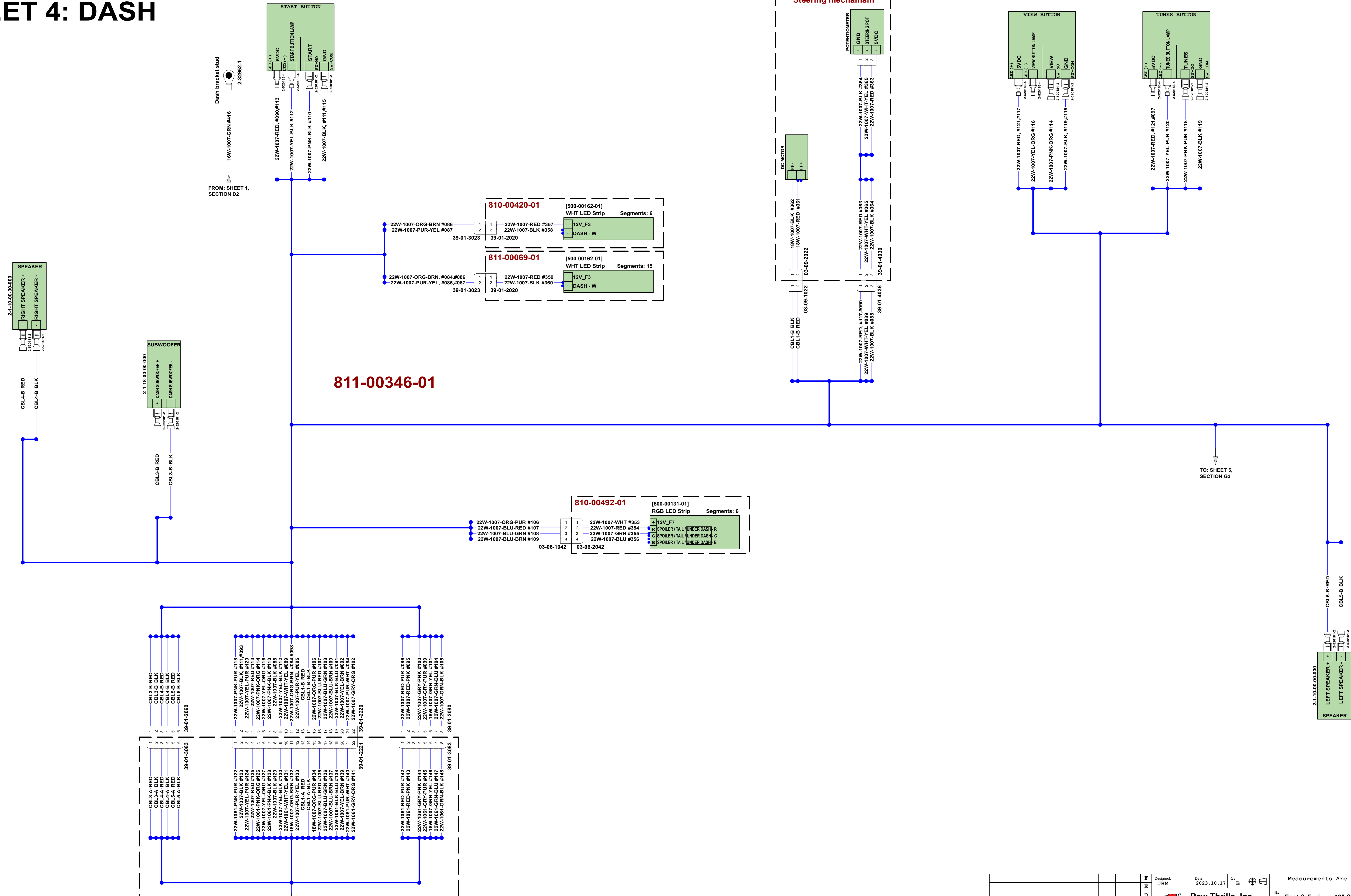
SHEET 3: SEAT CABINET



DESIGNER	JHM	DATE	2023.10.17	REV	B	MEASUREMENTS ARE IN:	ANSI D
BY	JHM	DATE	2023.10.17	REV	A	TITLE	Fast & Furious 43" System Diagram
DESCRIPTION						DWG	
						SHEET	

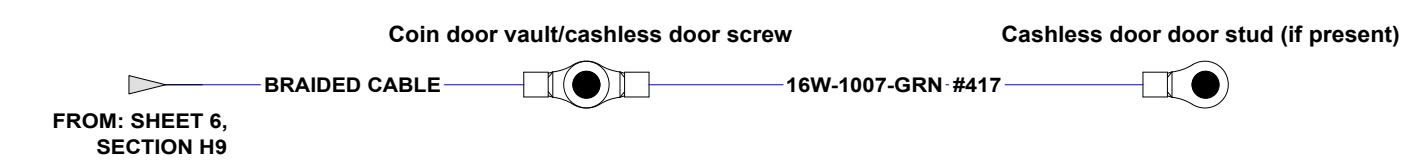
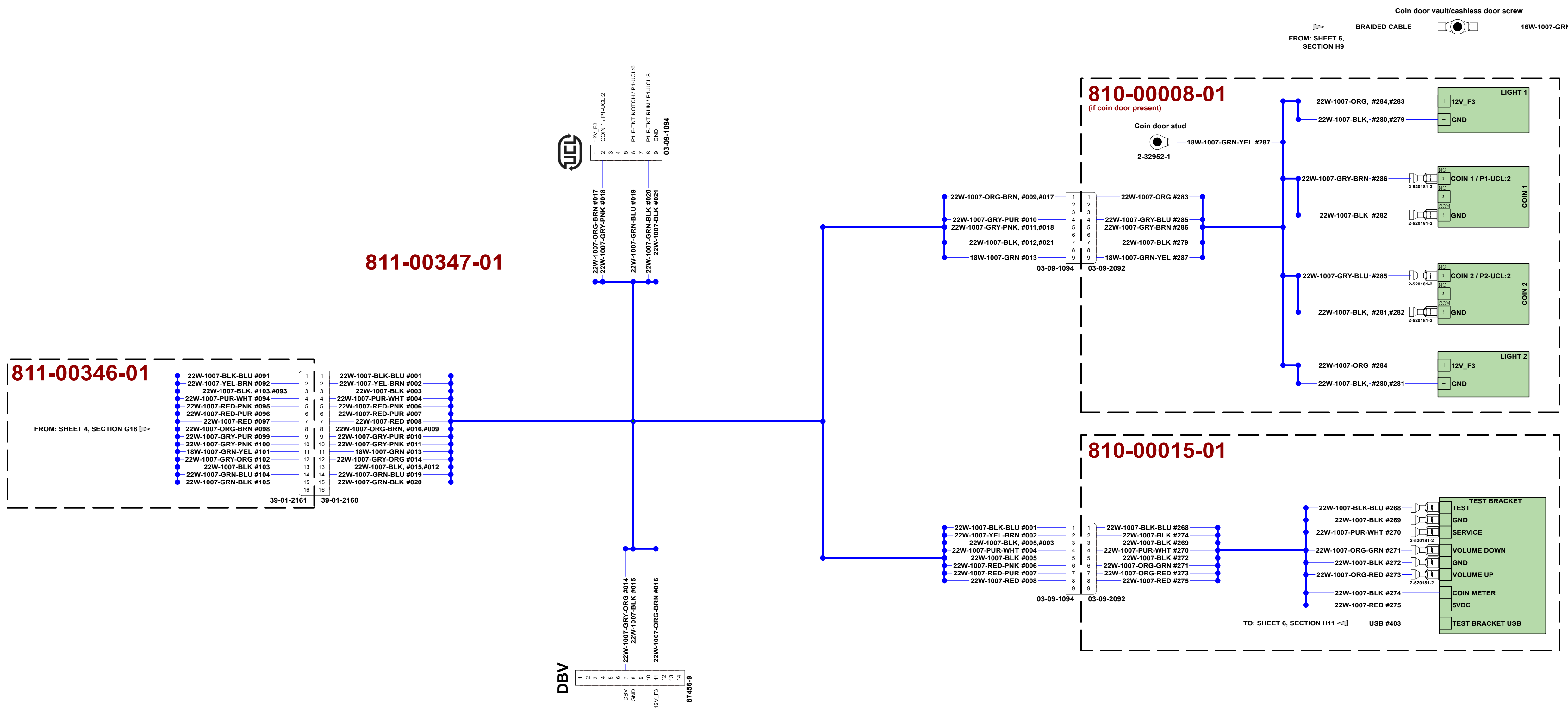


SHEET 4: DASH



DESIGNED	JHM	DATE	2023.10.17	REV	B	MEASUREMENTS ARE IN:	ANSI D
REARRANGED CONNECTORS ON SHEET 2	JHM	DATE	2023.11.06	REV	B	Raw Thrills, Inc. 5441 Fargo Ave. Skokie, IL 60077 USA rawthrills.com tel: 847.679.8373 fax: 847.679.8538	
INITIAL	JHM	DATE	2023.10.17	REV	A	TITLE: Fast & Furious 43" System Diagram DWG SHEET	
DESCRIPTION		BY		DATE		SHEETS	

SHEET 5: VAULT

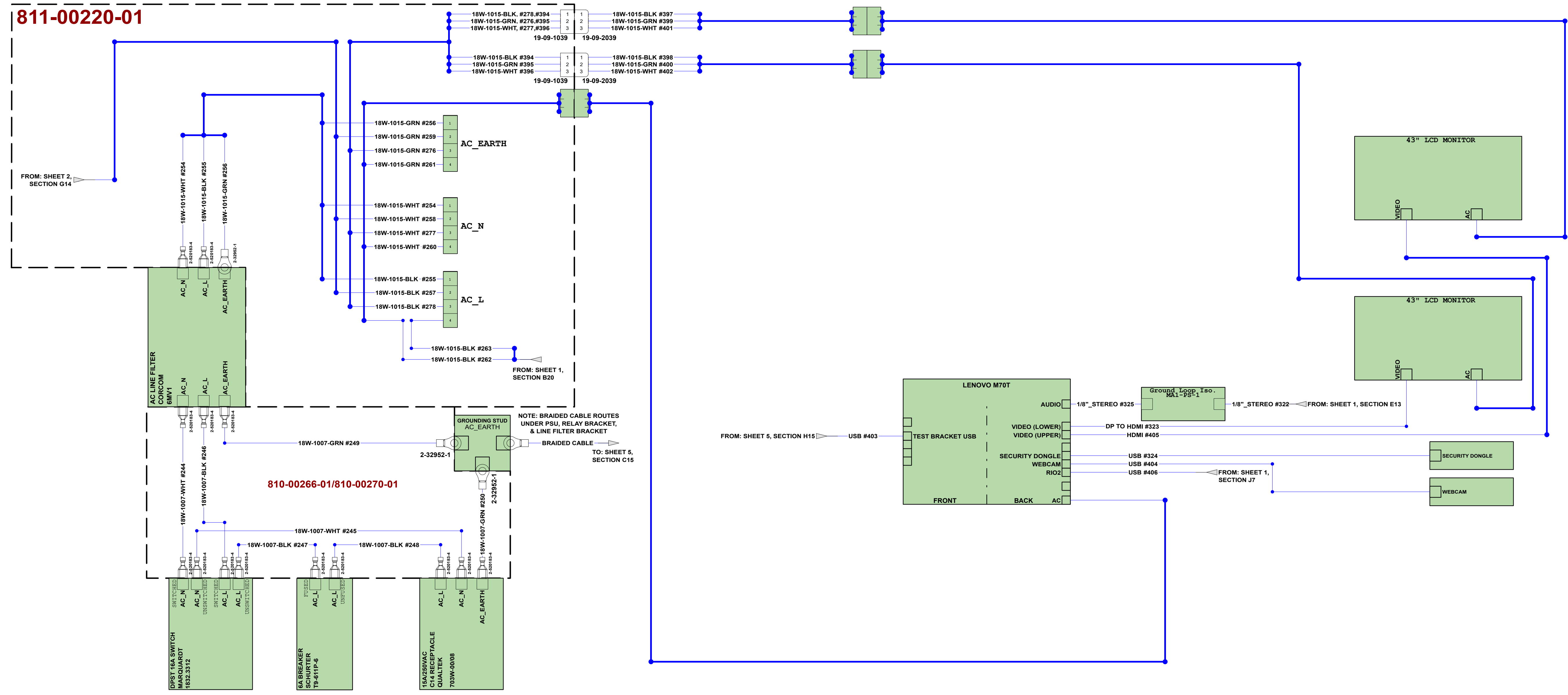


DESIGNER	JHM	DATE	2023.10.17	REV	B	MEASUREMENTS ARE IN:	ANSI D
REARRANGED CONNECTORS ON SHEET 2	JHM	2023.11.06					
INITIAL	JHM	2023.10.17					
DESCRIPTION	BY	DATE	REV				



TITLE: Fast & Furious 43" System Diagram
 SHEET: 5

SHEET 6: PC + MONITORS + AC DISTRIBUTION



Designed:	JHM	Date:	2023.10.17	REV:	B	Measurements Are In:	ANSI D	
D						Raw Thrills, Inc. 3441 Fargo Ave. Skokie, IL 60077 USA rawthrills.com tel: 847.679.9373 fax: 847.679.8538	TITLE	Fast & Furious 43" System Diagram
C					DWG			
Rearranged connectors on Sheet 2	JHM	2023.11.06	B					
Initial	JHM	2023.10.17	A					
DESCRIPTION	BY	DATE	REV			SHEET		