OPERATORS MANUAL

COLOR MATCH

V1.6 AND ABOVE

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ISO 9001 CERTIFIED ORGANIZATION
ISO 9001: 2008 Cert No. 17460

LAI Games

Correspondence regarding this machine should be addressed to your closest LAI Games office, or LAI Games Distributor.
For contact details, refer to the back page of this manual.

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SAFETY PRECAUTIONS

The following safety precautions and advisories are used throughout this manual and are defined as follows.

> *** WARNING! ***
> Disregarding this text could result in **serious injury**.

> *** CAUTION! ***
> Disregarding this text could result in damage to the machine.

> *** NOTE! ***
> Is an advisory text to hint or help understand.

⚠ BE SURE TO READ THE FOLLOWING

> *** WARNING! ***
> **Always** turn **OFF** Mains AC power and unplug the game before opening or replacing any parts.
> **Always** grasp the plug, not the line cord, when unplugging the game from an electrical outlet.
> **Always** connect the Game Cabinet to a grounded electrical outlet with a securely connected ground line.
> **Do Not** install the Game Cabinet outdoors or in areas of high humidity, direct water contact, dust, high heat or extreme cold.
> **Do Not** installs the Game Cabinet in areas that would present an obstacle in case of an emergency, i.e. near fire equipment or emergency exits.

> *** CAUTION! ***
> **Always** use a Digital Multimeter, logic tester or oscilloscope for testing integrated circuit (IC) logic PC boards. The use of a continuity tester is not permitted.
> **Do Not** connect or disconnect any of the integrated circuit (IC) logic PC boards while the power is **ON**.
> **Do Not** uses any fuse that does not meet the specified rating.
> **Do Not** Subject the game cabinet to extreme temperature variations. Reliability of electrical components deteriorates rapidly over 60 $^{\circ}$C.

MACHINE INSTALLATION AND INSPECTION

When installing and inspecting *Color Match*, be very careful of the following points and pay attention to ensure that the players can enjoy the game safely.

- Be sure to turn the power **OFF** before working on the machine.

> * WARNING! *
> **Always** Turn **OFF** mains power before removing safety covers and refit all safety covers when work is completed.

- Make sure the power cord is not exposed on the surface (floor, ground, etc.) where people walk.

- Check that the rubber glide feet levelers are set correctly on the floor so that the game cabinet is level and stable.

- Always make complete connections for the integrated circuit (IC) logic PC Boards and other connectors. Insufficient insertion can damage the electrical components.

> * CAUTION! *
> **Before** Switching the machine on be sure to check that it has been set on the correct voltage for your area!
>
> **Refer** To the mains voltage adjustment section of this manual. Machines are normally shipped on 220V AC unless otherwise specified.

- Only qualified personnel should inspect or test the integrated circuit (IC) logic PC Boards.

- If any integrated circuit (IC) logic PC Boards should need servicing, please contact the nearest LAI Games Distributor. (Refer to the back page of this manual)

INTRODUCTION

Congratulations on your purchase of **Color Match** by LAI Games. We hope you take the time to read this manual and learn about the many features and user-friendly adjustments that can be made to fine-tune the game for maximum earning potential.

DESCRIPTION

Color Match is a prize redemption game with multiple payout options.
Players select a color at the beginning of the game and then attempt to match that color around the disc to the major prize level. There are a range of minor and major prize options, as well as the option to add a special prize.

PACKAGING

CONTENTS

- The Color Match cabinet
- Operator manual
- 1 x USB (preloaded with game system image)
- 2 x coin door keys
- 2 x pad lock
- 6 x back door handle
- 7 x front door handle
- 1 x left header section
- 1 x right header section
- 1 x middle header section
- 1 x header text ("Color")
- Kick plate
- Control panel
- IEC Power Cord   (In cash box)
- Parts & Accessories   (In cash box)

SPECIFICATIONS

DIMENSIONS

- Weight: 320 kg (820 lb)
- Height with header: 2269.7mm (89.3")
- Height without header: 1960.7mm (77.2")
- Width: 643.4mm (25.3")
- Length: 1170.1mm (46.1")
- Power: Maximum 350W
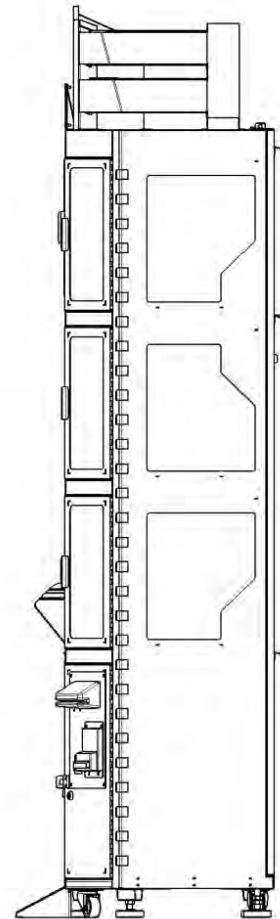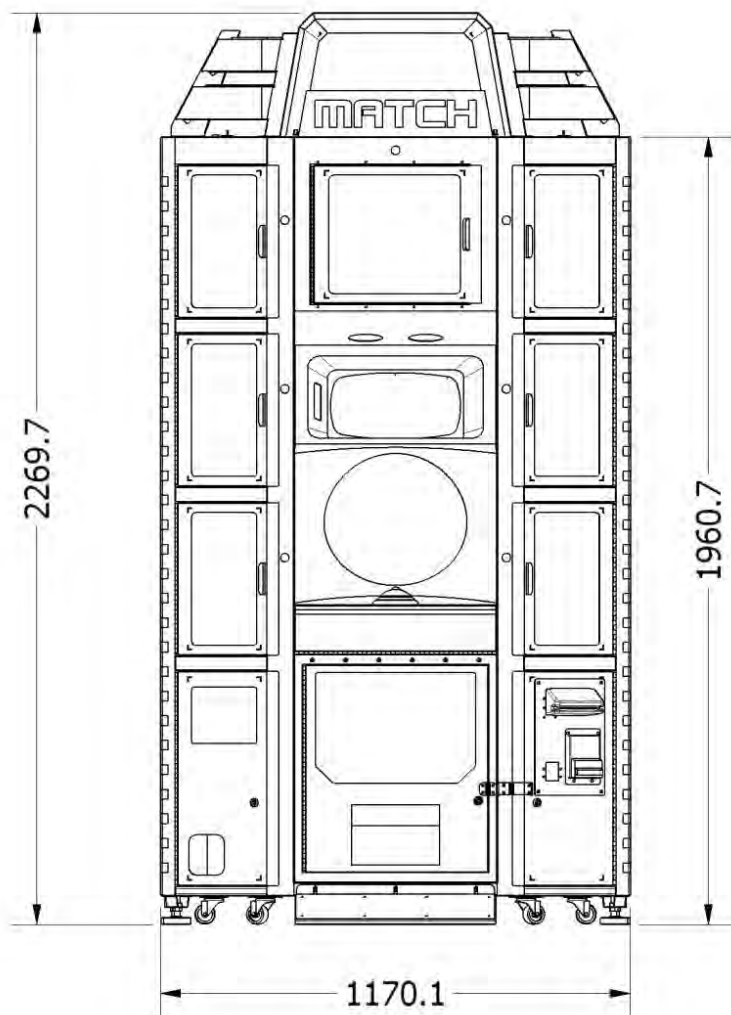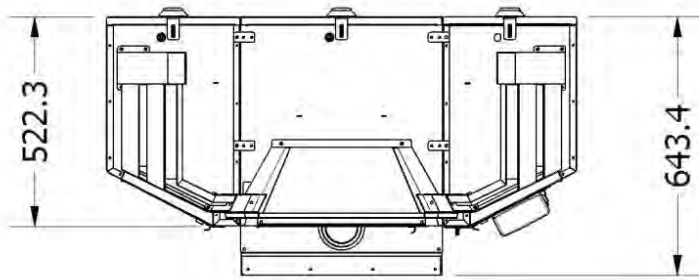
ELECTRIC SUPPLY

The game can operate on a universal mains input voltage between 88-264VAC 50/60Hz single phase.
The supply must be a three wire grounded supply.
An adjustment screw is available for fine-tuning the output voltage.

LOCATION REQUIREMENTS

- Ambient temperature: 5C - 40C
- Ambient humidity: Low
- Ambient U.V. radiation: Very low
- Vibrations level: Low

ASSEMBLY

1. HEADER TEXT INSTALLATION
Install M5x15 bolt (A1-A4)
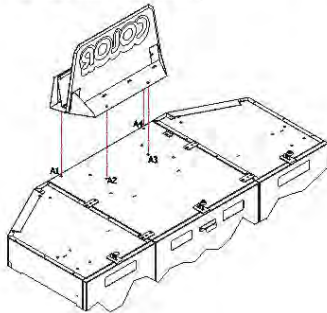
2. MIDDLE HEADER INSTALLATION
Install M5x15 bolt (B1-B2)
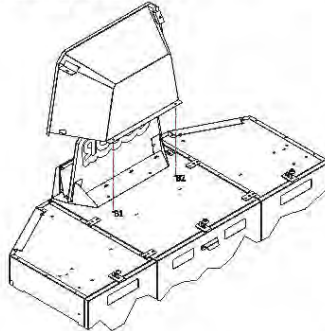
3. LR HEADER INSTALLATION
Install M5x15 bolt (C1-14)
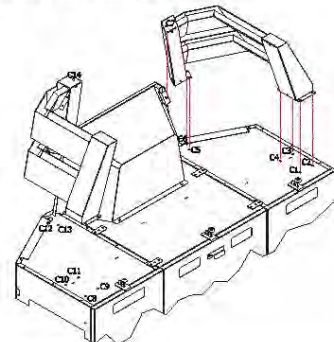
4. KICK PLATE INSTALLATION
Install M6x15 bolt (D1-D3)
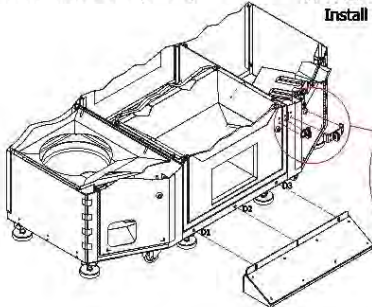
5. PAD LOCK INSTALLATION
Install CB bolt M5x15 (E1-E8)
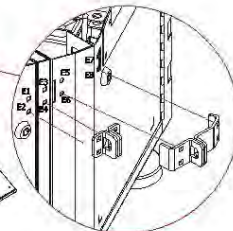
6. CONTROL PANEL INSTALLATION
Install M6x15 bolt (F1-F7
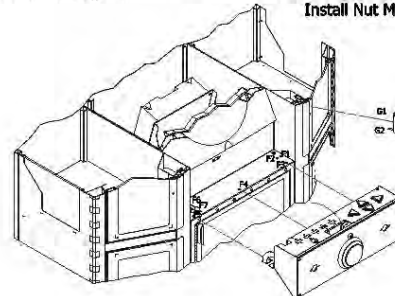
7. HANDLE INSTALLATION
Install Nut M4 (G1-G2) 7x

GAMEPLAY AND MODES

OBJECTIVE

Players select a segment color, then try to match all the segments on the disc to the same color, one segment at a time. As the player reaches each new segment, it begins changing colors. Players must use their reflexes to stop the color on the same color they are trying to match. Colors will change faster the further the player progresses.

HOW TO PLAY

- Pay to play
- Select your segment color by pressing the start button.
- Match your selected color on the next segment.
- Keep matching the selected color on every segment of the disc
- Reach minor prize, multiple payout options (operator defined)
- Reach major prize, multiple payout options (operator defined)

ATTRACT MODE

Attract mode provides a visual and audio display while the game is not being played. The attract mode displays colorful animations on the color disc itself, and demonstrates the gameplay. The attract mode sound can be turned on and off, or set to play at timed intervals.

PLAY MODE

Color Match has two play modes. The standard *Coin Play* mode, where a coin or coins are inserted, or *Free Play* mode, where no coins are necessary.

COIN PLAY

Coin Play mode is entered from *Attract mode*, by inserting coins in any of the two coin slots on the front of the machine cabinet, then following the instructions in the "How to Play" section of this manual.

FREE PLAY

Free play can be set in one of three ways:
- Entering the operator menu by pressing the red TEST button, then entering the game settings. From here, enter free play settings and turn free play mode on.
- For a single free game, just press the green SERVICE button once. When issuing single free games in this manner, prizes can be won as normal.
- Push and hold the green SERVICE button for 5 seconds. This is a temporary free mode, and the game will return to normal when reset.

CHEATING

Color Match takes a screenshot at the end of every game. These screenshots, along with other information about gameplays and wins, can be accessed through the operator menu by going into History and then selecting the relevant history section (major wins, minor wins, game history).

OPERATION

OPERATOR MENU GUIDE

- **MAIN MENU**
  - **Game Settings**
    - Bonus Credits
    - Coin Settings
    - Minor Prize
    - Major Prize
    - Special Prize
    - Mercy Prize
    - Free Play
    - Sound Settings
  - **Audits**
  - **Input and Output Tests**
    - Switch Tests
    - Lamp Tests
    - Prize Door Tests
    - Minor Prize Tests
  - **Errors**
    - Current Errors
    - Error History
    - Error Settings
  - **History**
    - Major Win History
    - Minor Win History
    - Special Win History
    - Game History
    - Door History
  - **System Settings**
    - Dispenser Type
    - Show Gameplay Instructions
    - Time and Date Settings
    - Change Cabinet Type
  - **System Diagnostics**
    - Copy Logs
    - Clear Pending Prizes
    - Color Calibration
    - Screen Alignment
  - **Language**

PRIZE LOADING

USER INTERFACE
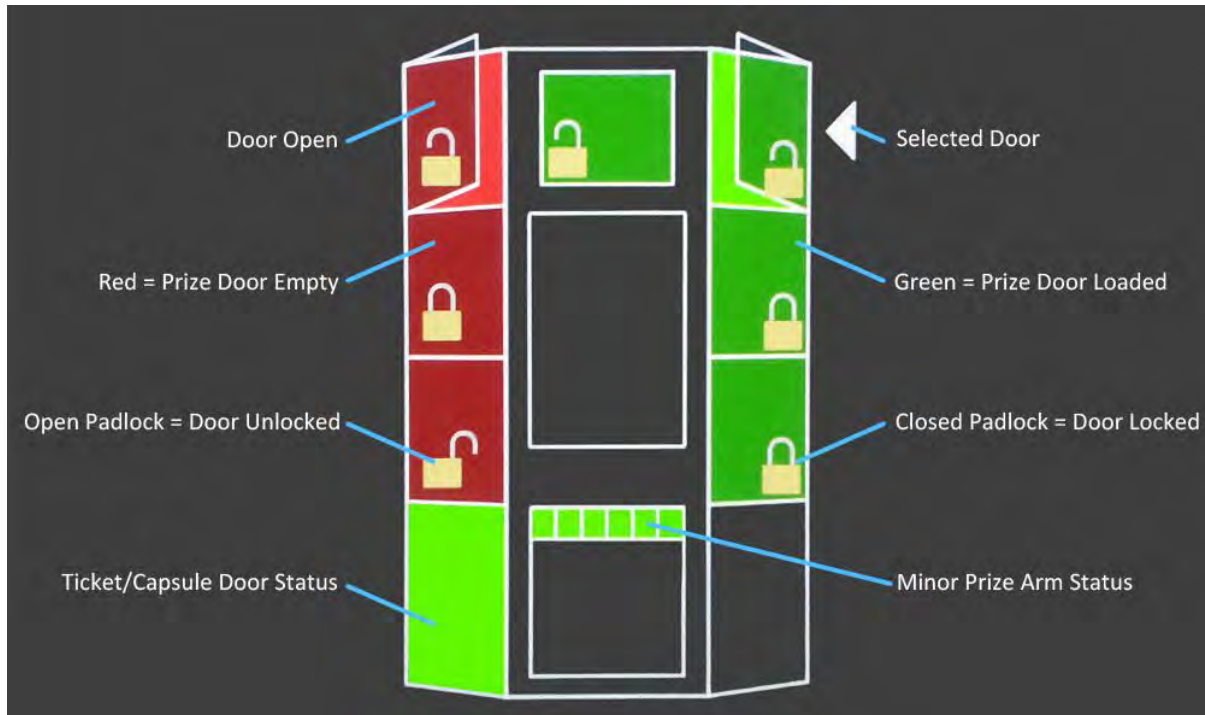
PRIZE DOORS

To load the prize doors on the **Color Match** cabinet, follow the instructions below.

1. From attract mode, press the red TEST button to enter the operator menu.
2. Using the blue up and down buttons, scroll to the load prizes option.
3. Enter load prizes by pressing the red TEST button.
4. Note the image on the bottom screen displays all relevant information.
    a. A red door means there is no prize loaded, green means there is a prize loaded.
    b. A locked padlock means the door is currently locked. The padlock will change to unlocked when the door is unlocked.
    c. The door image will change to show when a door is open.
    d. A door with a star symbol is a special prize door (see Special Prize settings for more information on special prizes)
5. Use the blue UP and DOWN arrows to select a door.
    a. Hold the START button for more than five seconds to set the selected door as empty (Setting a door as empty is essentially the same as disabling the door. If you are having issues with a prize door, setting it to empty will ensure that players are unable to select it.)
6. Press the red TEST button to unlock a door.
7. The padlock image should now change to unlocked, meaning the door can now be opened.
8. Once you have loaded the prize and closed the door, press the red TSET button to lock the door.
9. Notice the door should now be green, to indicate that a prize has been loaded.
10. Repeat steps 5 to 9 to load the other prize doors.
11. When you are finished loading prizes, press the green SERVICE button to return to the operator menu.
12. All prize doors will be automatically locked upon exiting the menu.
13. Press the green SERVICE button again to exit the operator menu and return to the game.

SPECIAL PRIZE DOORS

To set up and load one or more special prize doors, follow the instructions below.

1. From attract mode, press the red TEST button to enter the operator menu.
2. Using the blue UP and DOWN buttons, scroll to the game settings option.
3. Enter game settings by pressing the red TEST button.
4. Using the blue UP and DOWN buttons, scroll to the special prize settings option.
5. Enter special prize settings by pressing the red TEST button.
6. Set the special prize to on and the prize type to door. Use the special prize difficulty calculator to set the difficulty to the recommended level.
7. Scroll down to the door settings option and enter it by pressing the red TEST button.
8. Use the blue UP and DOWN buttons to scroll through the prize doors. Press the red TEST button to set the selected door as a special prize door. A star will appear on the door, to indicate that it has been set as a special prize door. A minimum of one door must be set as a special prize door.
9. Special prize doors may now be loaded the same way as major prize doors, through the load prizes section of the operator menu. Follow the instructions above, beginning from step 4.

PRIZE ARMS

To load the minor prize arms, follow the instructions below.

1. From attract mode, press the red TEST button to enter the operator menu.
2. Using the blue UP and DOWN buttons, scroll to the load prizes option.
3. Enter load prizes by pressing the red TEST button.
4. Note the image on the bottom screen displays all relevant information.
    a. A red box over a minor prize arm represents an empty prize arm. A green box represents a prize arm that has prizes loaded.
5. Unscrew the prize locking pin by turning it in a clockwise direction and remove the pin by pulling it all the way out.
6. Attach the prizes to the hanging ties, ensuring there is a loose three finger gap in the hanging tie. This ensures that the tie does not interfere with the operation of the prize arm.
7. Load the prizes onto the prize arm by sliding the hanging tie over the entire arm. Ensure that prizes are spaced so they are well presented, and not more than half the length of the prize arm apart, as this could cause a prize dispensing error.
8. Reinsert the prize locking pin into the center of the spiral, ensuring that the pin is **always above** the hanging ties. Tighten the pin by turning it anti-clockwise.
9. Once a prize arm has been loaded, use the blue UP and DOWN buttons to select the prize arm that has been loaded on load prizes image.
10. With the prize arm selected, press the red TEST button to mark a red/empty prize arm as green/loaded.
11. When you are finished loading prizes, press the green SERVICE button twice to return to attract mode.

MINOR PRIZE SIZE GUIDELINES

When running on minor prize arms, LAI recommends that the below guidelines for prize dimensions are followed, to ensure that prizes are vended correctly. Minor prize arm coils have a tight pitch to ensure that they can hold enough prizes to get through a busy week with a standard minor prize collection percentage, and can be filled to capacity.

- **Weight:** No less than 10g
- **Height:** 15cm max (from the top of the tie to the bottom of the prize)
- **Width:** 8cm max
- **Value:** Minor prize value should be approximately 30% of the price per play.

GAME SETTINGS

Game settings can be accessed from the main menu of the operator menu.

COIN SETTINGS

- **Coins Per Credit Mech 1** (Default: 1, Adjustable: 1-20)
  The number of coins that need to be inserted into coin mechanism one, for each credit.

- **Games Per Credit Mech 1** (Default: 1, Adjustable: 1-20)
  The number of games for each credit inserted into coin mechanism one.

- **Common Coin** (Default: On, Adjustable: On/Off)
  This controls the dual coin system. When set to off, both coin systems are separate (double coin system), when set to on, both coin inputs will be combined and into a single accumulated pool. NOTE: The value of both inputs needs to be the same. This is often used with a DBA set on 25c pulses and 25c coin mech.

- **Coins Per Credit Mech 2** (Default: 1, Adjustable: 1-20)
  The number of coins that need to be inserted into coin mechanism two, for each credit.

- **Games Per Credit Mech 2** (Default: 1, Adjustable: 1-20)
  The number of games for each credit inserted into coin mechanism two.

- **Payment Method Prompt** (Default: Swipe Card, Adjustable: Swipe Card/Insert Coin/Insert Credit)
  Set the type of payment prompt that will appear on screen in attract mode.

BONUS CREDITS

- **Level One** (Default: Off, Adjustable: On/Off)
  Defines if the first level of bonus credits is active or not.
  - **No. of Coins:** This sets the number of coins that need to be inserted into coin mechanism 1 to reach the bonus credit level 1.
  - **Bonus Credits:** This sets the number of bonus credits that are given when credit level 1 is reached. This is the number of bonus credits given, on top of what has been paid for.
  - **Total Credits:** This sets the total number of credits given when level 1 is reached.
- **Level Two** (Default: Off, Adjustable: On/Off)
  Defines if the second level of bonus credits is active or not.
  - **No. of Coins:** This sets the number of coins that need to be inserted into coin mechanism 1 to reach the bonus credit level 2.
  - **Bonus Credits:** This sets the number of bonus credits that are given when credit level 2 is reached. This is the number of bonus credits given, on top of what has been paid for.
  - **Total Credits:** This sets the total number of credits given when level 2 is reached.
- **Level Three** (Default: Off, Adjustable: On/Off)
  Defines if the third level of bonus credits is active or not.
  - **No. of Coins:** This sets the number of coins that need to be inserted into coin mechanism 1 to reach the bonus credit level 3.
  - **Bonus Credits:** This sets the number of bonus credits that are given when credit level 3 is reached. This is the number of bonus credits given, on top of what has been paid for.
  - **Total Credits:** This sets the total number of credits given when level 3 is reached.

MINOR PRIZE SETTINGS

- **Minor Prize On** (Default: On, Adjustable: On/Off)
  Whether or not the minor prize is active.

- **Prize Type** (Default: Ticket, Adjustable: Ticket/Capsule/Prize Arm/Coupon/Point)
  The type of prize vended for a minor prize win. NOTE: Setting the prize type to coupons or points will still pay out tickets, but the terminology used in game will change.

- **Number of prizes** (Default: 1, Adjustable: 1-200)
  The amount of prizes that are vended for a minor win. This setting is inactive when prize type is set to minor prize arm.

- **Payout when** (Default: Take Win, Adjustable: Before Game/Take Win/ Reach Minor)
  Defines when the minor prize is vended.

- **Retries** (Default: 3, Adjustable: 0-3)
  The number of times the player is allowed to select a new prize arm if the prize arm they originally chose failed to dispense a prize. This setting is only active if prize type is set to prize arm.

MAJOR PRIZE SETTINGS

- **Major Prize Type** (Default: Door, Adjustable: Prize Door/Ticket/Coupon/Point/Call Attendant)
  The type of prize won from a major prize win. NOTE: Setting the prize type to coupons or points will still pay out tickets, but the terminology used in game will change.

- **Number of Prizes** (Default: 1, Adjustable: 1-9999)
  The number of prizes won from a major prize win. This setting is inactive when prize type is set to prize door or call attendant.

- **Points Per Ticket** (Default: 4, Adjustable: 1 – 100)
  Set the number of points that each ticket is worth. NOTE: This setting is disabled unless prize type is set to points.

- **Coupons Per Ticket** (Default: 2, Adjustable: 1 – 100)
  Set the number of coupons that each ticket is worth. NOTE: This setting is disabled unless prize type is set to coupons.

- **Difficulty Calculator** (Default: On, Adjustable: On/Off)
  Enable to determine the recommended difficulty to maximize game revenue by entering the Price Per Play and Prize Value settings.

- **Price Per Play** (Default: 1, Adjustable: 0.10 – 10)
  Set your price per play.

- **Prize Value** (Default: 275, Adjustable: 1 – 1000)
  Set your major prize value.

- **Major Prize Difficulty** (Default: 825, Adjustable: 1-1500)
  Sets the difficulty in winning the major prize, with 1 being the easiest, and 1500 being the hardest. This value will be automatically set by the *Major Difficulty Calculator*, but can be adjusted independently. NOTE: The recommended difficulty will always be shown to the right of this setting.

- **Game Speed** (Default: Fast, Adjustable: Normal, Fast, Very Fast)
  The rate at which the segments in the game change color. Normal speed is suited for a location with a very transient crowd. Fast speed is suited for a location with a somewhat transient crowd that has some skilled players. Very fast is suited for locations with skilled, repeat players, such as bars.

SPECIAL PRIZE SETTINGS

- **Special Prize On** (Default: On, Adjustable: On/Off)
  Whether or not the special prize is active. NOTE: It is recommended that special prize not be used in locations with a very transient crowd. Locations with a large number of repeat players are encouraged to use special prize.

- **Prize Type** (Default: Door, Adjustable: Prize Door/Ticket/Coupon/Point/Prize Arm/Call Attendant)
  The type of prize won from a special prize win.

- **Number of Prizes** (Default: 1, Adjustable: 1-9999)
  The number of prizes vended on a special prize win.

- **Difficulty Calculator** (Default: On, Adjustable: On/Off)
  Enable to determine the recommended difficulty to maximize game revenue by entering the Price Per Play and Prize Value settings.

- **Price Per Play** (Default: 1.0, Adjustable: 0.10 – 10)
  Set you price per play.

- **Prize Value** (Default: 300, Adjustable: 1 – 1000)
  Set your special prize value.

- **Special Prize Difficulty** (Default: 1000, Adjustable: 1-1500)
  Sets the difficulty in winning the special prize, with 1 being the easiest, and 1500 being the hardest. This value will be automatically set by the *Special Difficulty Calculator*, but can be adjusted independently. NOTE: The recommended difficulty will always be shown to the right of this setting.

- **Game Speed** (Default: Fast, Adjustable: Normal, Fast, Very Fast)
  The rate at which the segments in the game change color if the player selects the special prize segment. Normal speed is suited for a location with a very transient crowd. Fast speed is suited for a location with a somewhat transient crowd that has some skilled players. Very fast is suited for locations with skilled, repeat players, such as bars.

- **Door Settings** (Default: One door active, Adjustable: Up to six doors active)
  Sets the doors a player can choose from if they win the special prize. If special prize is on, at least one door must be active.

- **Image Settings**
  Set the special prize logo, as well as the background color of the special prize wedge and the color that will be removed from the playfield and replaced by special prize.
  - o **Replaced Color** (Default: Light Blue, Adjustable: Light Blue, Yellow, Purple, Orange, Red, Green, Dark Blue)
    Select the color that will be removed from game play and replaced by the special prize.
  - o **Background Color** (Default: White, Adjustable: Replaced Color, Black White)
    Select the background color of the special prize wedge.
  - o **Select Logo** (Default: colormatch 0.png)
    Select the image file to use as the special prize logo.
  - o **Preview**
    View a full screen preview of the game wheel with the current special prize settings.
  - o **Find Logos**
    Scan any connected USB devices for accepted image files to use as special prize logos. The image file must be a PNG file, located in the root directory of the USB, called colormatch and have a size of 128x128.
  - o **Manage Logos**
    View or delete any currently stored special prize logos. The two default logos that come installed with *Color Match* cannot be deleted.

MERCY SETTINGS

- **Mercy Prize** (Default: Off, Adjustable: On/Off)
  Defines if the mercy prize is active.

- **Prize Type** (Default: Tickets, Adjustable: Ticket/Coupon /Point/ Prize Arms)
  The type of prize vended on a mercy prize win.

- **Number of Prizes Vended** (Default: 5, Adjustable: 1-100)
  The number of prizes vended for a mercy prize. This setting is inactive when prize type is set to minor prize arm.

FREE PLAY SETTINGS

- **Free Play Mode** (Default: Off, Adjustable: On/Off)
  Defines if the game is running in free play mode.

- **Give Prizes in Free Mode** (Default: Off, Adjustable: On/Off)
  Defines if the game vends prizes when in free play mode.

SOUND SETTINGS

- **Game Volume** (Default: 10, Adjustable: 1-10)
  The volume of the audio during gameplay.

- **Attract Mode Sound** (Default: On, Adjustable: On/Off)
  Defines whether the attract mode audio is played continuously, at set intervals, or is turned off completely.

- **Attract Volume** (Default: 10, Adjustable: 1-10)
  The volume of the audio during attract mode.

- **Attract Mode Audio Delay** (Default: Off, Adjustable: 2/5/10/15/20/30/60/Off)
  Defines the intervals in minutes between the attract mode audio loop being played.

AUDITS

The audits section provides statistics on all areas of gameplay. This enables the operator to make calculated adjustments and fine tune the machine to maximize earning potential.

ENTER AUDITS

The audits section can be entered from the main menu of the operator menu.

CYCLE THROUGH AUDITS

The blue UP and DOWN arrow buttons can be used to cycle through the audits.

RESET AUDITS

Holding down the START button for longer than five seconds will reset all of the user audits.

EXIT AUDITS

Audits Mode can be exited by pressing the green service button.

AUDITS DETAILED

1. **Total Coins Mech 1**
   The total number of coin mech 1 pulses since the audits were last cleared
2. **Total Coins Mech 2**
   The total number of coin mech 2 pulses since the audits were last cleared
3. **Total Service Credits**
   The total number of service credits issued since the audits were last cleared
4. **Bonus Credits Issued**
   The total number of bonus credits issued
5. **Games Played**
   The total number of games played since the audits were last cleared
6. **Special Prize Chosen**
   The number of times a player has selected the special prize logo instead of a color when starting the game.
7. **Major AGW**
   The average number of games played for every major prize won since the audits were last cleared
8. **Minor AGW**
   The average number of games played for every minor prize won since the audits were last cleared
9. **Special AGW**
   The average number of games played for every special prize won since the audits were last cleared
10. **Major Prize Wins**
    The total number of major prize wins since the audits were last cleared
11. **Minor Prize Wins**
    The total number of minor prize wins since the audits were last cleared
12. **Special Prize Wins**
    The total number of special prize wins since the audits were last cleared
13. **Minor Prize Continues**
    The total number of times players have opted to continue playing after winning the minor prize since the audits were last cleared
14. **Percentage of Minor Prizes Taken**
    The percentage of players that have taken the minor prize once reaching the minor prize level

15. **Percentage of Players to Reach Minor**
The percentage of players that have reached at least the minor prize level

16. **Major Skill Wins**
The number of major prizes won by players who have beat the system since the audits were last cleared

17. **Pending Major Skill Wins**
The number of major skill wins waiting to balance out the AGW since the audits were last cleared

18. **Balanced Major Skill Wins**
The number of major skill wins that have balanced out the AGW since the audits were last cleared

19. **Special Skill Wins**
The number of special prizes won by players who have beat the system since the audits were last cleared

20. **Pending Special Skill Wins**
The number of special skill wins waiting to balance out the AGW since the audits were last cleared

21. **Balanced Special Skill Wins**
The number of special skill wins that have balanced out the AGW since the audits were last cleared

22. **Plays Since Major Difficulty Changed**
The number of games played since the major AGW has been changed

23. **Wins Since Major Difficulty Changed**
The number of games won since the major AGW has been changed

24. **Plays Since Special AGW Changed**
The number of games played since the special AGW has been changed

25. **Wins Since Special AGW Changed**
The number of games won since the special AGW has been changed

26. **Main Counter 1**
Manufacturer's audits

27. **Main Counter 2**
Manufacturer's audits

28. **Main Counter 3**
Manufacturer's audits

29. **Additional Counter 1**
Manufacturer's audits

30. **Additional Counter 2**
Manufacturer's audits

31. **Additional Counter 3**
Manufacturer's audits

INPUT AND OUTPUT TESTS

Input and Output Tests can be accessed from the main menu of the operator menu. Use the blue UP and DOWN buttons to scroll to the input and output tests button and press the red TEST button to enter input and output tests.

SWITCH TESTS

This section can be used to view the current state of all the switches on the cabinet.

- Every switch on the cabinet is listed by name, followed by a check box. If there is a cross in the check box, the switch corresponding to that box is active.
- Pressing the blue UP or DOWN button should result in a cross in the box corresponding to those button switches.

LAMP TESTS

This section can be used to test all the lamps on the cabinet.

- Use the blue UP and DOWN buttons to scroll between lamps, and press the red TEST button to set the lamp to active. Press the red TEST button again to deactivate the lamp. A cross will appear in the box corresponding to the currently active lamp.

DOORS AND MOTORS

This section can be used to test all the doors on the cabinet.

- Use the blue UP and DOWN buttons to scroll between doors, and press the red TEST button to change the state of the door. Press the red TEST button again to continue to toggle between the doors states (locked, unlocked and running). The checkboxes to the right will indicate which door switches are currently active.

MINOR PRIZE TESTS

This section can be used to test all prize arms and dispensers.

- The button to the right of the prize arm name represents the current state of the prize arm. This can be toggled between *stopped* and *dispensing* by pressing the red TEST button.
- The two check boxes to the right of this show if the motor is current running and if the prize sensor has been activated. Note that the same prize sensor is used for all prize arms, so if the sensor is activated, all the checkboxes should show a cross.
- Press the red TEST button with the ticket or capsule dispenser selected to dispense one ticket or capsule.
- The two check boxes to the right of this show if the motor is current running and if the prize sensor has been activated. The prize sensor checkbox should always be active and will flash off when a prize passes through the sensor.

ERRORS

The top screen of the operator menu will alert you immediately if there are any active errors. The bar along the top of the screen will be red if there are errors present or green if there are no errors. Errors can be accessed from the main menu of the operator menu. Use the blue UP and DOWN buttons to scroll to the errors button and press the red TEST button to enter the errors menu. Below is a list of the error types, their cause and solution.

Error Name	Cause	Solution
Coin Jammed	The coin sensor has been pressed for a long period of time.	Release the coin sensor to clear the error. See Switch Tests in the Input and Output Tests section of the operator menu to check the status of the coin mech sensor.
Ticket / Capsule Sensor Jam	The ticket or capsule dispenser sensor has been pressed for a long period of time.	Release the ticket or capsule sensor to clear the error. See Minor Prize Tests in the Input and Output Tests section of the operator menu to test the functionality of the dispenser.
Ticket / Capsule Timeout	The ticket or capsule dispenser timed out while dispensing a prize.	This could be caused by running out of tickets/capsules or a faulty sensor. Set the dispenser to loaded after refilling the dispenser (located in the load prizes menu).
Input Jam	There is an input that has been receiving a signal for a long period of time. This includes all buttons.	See Switch Tests in the Input and Output Tests section of the operator menu to see which button is being detected as pressed. Ensure that this button isn't stuck.
Minor Prize Vend	There has been an error vending a minor prize.	See Dispenser Tests in the Input and Output Tests section of the operator menu to test the functionality of the prize dispensers. Minor Win History will confirm what kind of prize failed to vend and when.
Major Prize Vend	There has been an error vending a major prize.	See the Input and Output Tests section of the operator menu to test the functionality of the prize dispensers. Major Win History will confirm what kind of prize failed to vend and when.

Mercy Prize Vend	There has been an error vending a mercy prize.	See the Input and Output Tests section of the operator menu to test the functionality of the prize dispensers. Game History will confirm what kind of prize failed to vend and when.
Special Prize Vend	There has been an error vending a special prize.	See the Input and Output Tests section of the operator menu to test the functionality of the prize dispensers. Special Win History will confirm what kind of prize failed to vend and when.
Door Empty	All available prize doors are empty.	See the Prize Loading section of the operator menu and load prizes into any red/empty doors.
Doors Not Closed	A door has not closed correctly.	Use the Door Tests menu to troubleshoot doors.
Door Not Locked	A door has not locked correctly.	Use the Door Tests menu to troubleshoot doors.
Door Not Unlocked	A door has not unlocked correctly.	Use the Door Tests menu to troubleshoot doors.
Door Locked and Open	A door is both locked and open.	A door should always be closed if it is locked. Use the Door Tests menu to troubleshoot doors.
Prize Arms Empty	All the minor prize arms are empty.	Set the minor prize arms to loaded after refilling them with prizes (located in the load prizes menu).

Corrupted Config File	The game was switched off during a critical point in saving data.*	The game automatically recovers from this error, but please check all the game settings, as they may have reverted back to their default settings.
Corrupt Audit Files	The game was switched off during a critical point in saving data.*	The game automatically recovers from this error, but please note that the audits will have been reset.
Corrupt AGW Audit Files	The game was switched off during a critical point in saving data.*	The game automatically recovers from this error, but please note that some audits will have been reset.

*Please note that in most cases, there will be no issues caused by switching a game off at any point during operation or from sudden power failures. Corrupted data errors will only occur if all data backups are corrupted simultaneously, which is highly unlikely.

CURRENT ERRORS

This menu lists information on all current/active errors. Further information on the error is provided in the information box on the left of the top screen. Use the UP and DOWN buttons to select an error, then press the red TEST button to attempt to clear it or be taken to the relevant menu for troubleshooting.

ERROR HISTORY

This section lists all errors, both current and already cleared. The type of error, date it occurred on and the date it was cleared on (if applicable) are listed.

ERROR SETTINGS

There are a number of ways the *Color Match* cabinet can notify you that there is an error with the machine. These can be switched on or off in the operator menu by entering Errors and then Error Settings. The silent red lighting alert is the default setting. The error history can also be cleared by pressing the red TEST button with the clear error history option selected.

Alert Type	Options	Default Setting
Red Light Warning	On/Off	Off
On Screen Warning	On/Off	On
Voice Over Warning	On/Off	Off

HISTORY

History can be accessed from the main menu of the operator menu. Use the blue UP and DOWN buttons to scroll to the history button and press the red TEST button to enter the history menu.

- Use the blue UP and DOWN buttons to scroll through the history records types, then press the red TEST button to enter a history record.
- Press the green SERVICE button to exit a history record type and return to the History menu. Press the green SERVICE button a second time to return to the main menu.

MAJOR WIN HISTORY

Displays information on previous major prize wins.

- It shows the time and date the game was won, if a prize was vended successfully or if it failed, and which door the player claimed their prize from, if applicable
- Select a specific game using the blue UP and DOWN buttons, then press the red TEST button to show the end of game screenshot.

MINOR WIN HISTORY

Displays information on previous minor prize wins.

- It shows the time and date the game was won and which prize type was vended. It also shows if a prize was vended successfully or if it failed.
- Select a specific game using the blue UP and DOWN buttons, then press the red TEST button to show the end of game screenshot.

SPECIAL WIN HISTORY

Displays information on previous special prize wins.

- It shows the time and date the game was won, if a prize was vended successfully or if it failed, and which door the player claimed their prize from, if applicable
- Select a specific game using the blue UP and DOWN buttons, then press the red TEST button to show the end of game screenshot.

GAME HISTORY

- Displays the last 100 games played, regardless of whether they are wins or losses.
- It will display the time and date the games ended, whether the result was a win or a loss, what type of prize was vended and if the prize vended successfully or not.
- Select a specific game using the blue UP and DOWN buttons, then press the red TEST button to show the end of game screenshot.

DOOR HISTORY

Displays the time and date that each prize door was last opened, and how it was opened (Prize Loading menu, during game play etc…).

SYSTEM SETTINGS

The system settings menu can be accessed from the main menu of the operator menu. The complete software version number can be seen in this menu.

DISPENSER TYPE

Set whether you have a ticket dispenser installed or a capsule dispenser.

SHOW GAMEPLAY INSTRUCTIONS

Display gameplay instructions on the first and second segment in game. This setting is recommended for locations with a very transient crowd.

TIME AND DATE SETTINGS

Use the blue UP and DOWN buttons to select the value to change, then press the red TEST button. Use the blue UP and DOWN buttons to change the value. The time and date format can also be changed in this menu.

CHANGE CABINET TYPE

This setting should only be used if you are installing software on a different *Color Match* cabinet type. For *Color Match*, this setting should always read Color Match. For this setting change to take effect, the apply button must be used. Pressing apply will restart the game.

SYSTEM DIAGNOSTICS

The system diagnostics menu can be accessed from the main menu of the operator menu. The complete software version number can be seen in this menu.

COPY LOGS

Automatically copies a zip file onto a USB that contains all relevant game data. LAI Games support may request this file to assist in troubleshooting.

CLEAR PENDING PRIZES

The number of pending prizes is shown on the top screen in the information section. The game will try to vend any pending prizes on start up. Use this button to clear any pending prizes that are waiting to be vended.

COLOR CALIBRATION

Press the red TEST button with the Color Calibration button selected to display the color calibration image. Press the red TEST or green SERVICE button once to stop displaying the image.

SCREEN ALIGNMENT

Press the red TEST button with the Screen Alignment button selected to display the screen alignment image. Use this image to ensure that the screen overlay on the *Color Match* cabinet is correctly aligned. The white circle should be just visible around the entire inside edge of the overlay. Press the red TEST or green SERVICE button once to stop displaying the image.

LANGUAGE

Use the blue UP and DOWN buttons to scroll through the available languages, then press the red TEST button to select and activate a language. Press the green SERVICE button to exit the language settings menu back into the main menu.
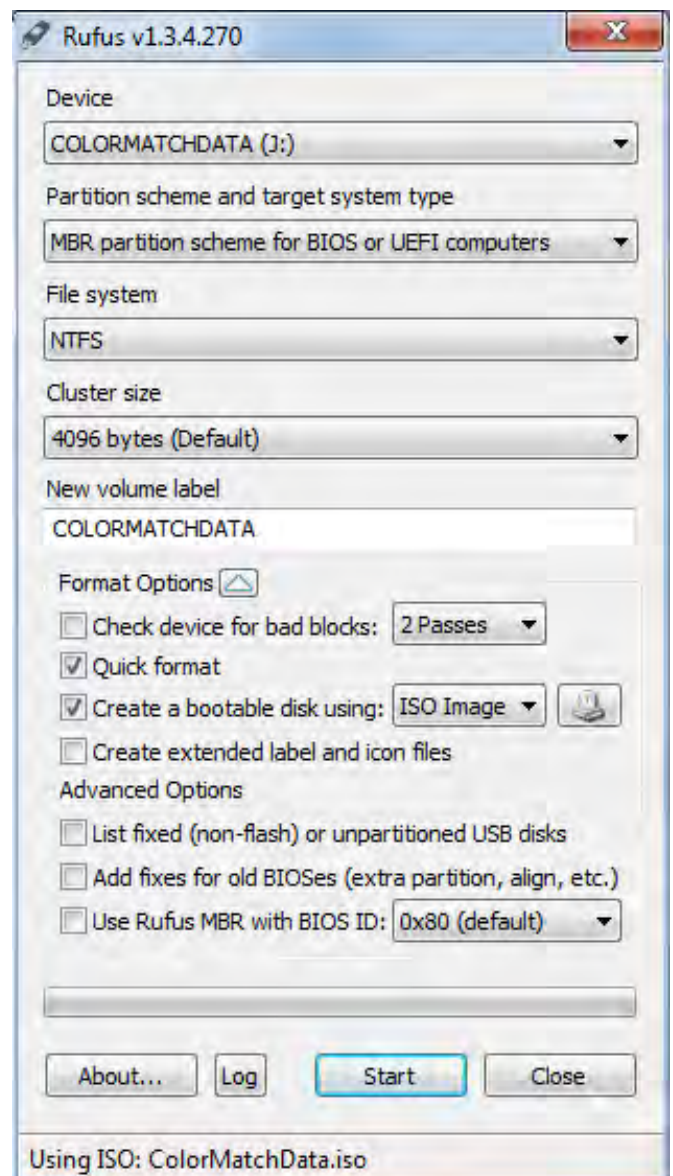
CREATING A BOOTABLE USB

THINGS YOU WILL NEED

- A completely empty USB that has a capacity of at least 4GB.
- **NOTE:** *Everything on this USB will be COMPLETELY ERASED. Ensure that there are no important files on it.*
- The downloaded game software file (this is an ISO file, for example, ColorMatch0.9.iso).
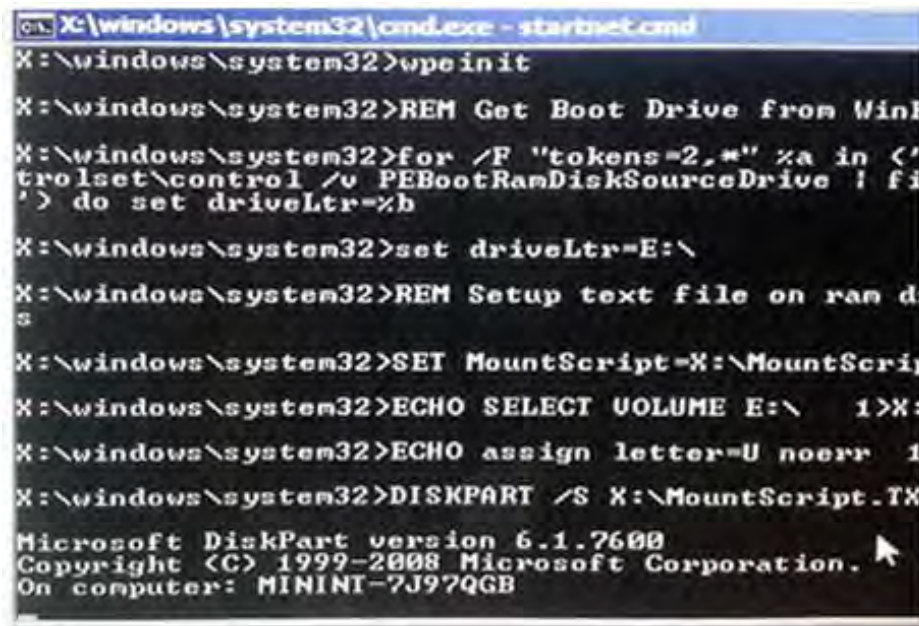- The program Rufus, free download from http://rufus.akeo.ie/

INSTRUCTIONS

1. Plug your empty USB into your personal computer.
   NOTE: *Ensure you only have one USB device plugged into the computer, to guarantee that the wrong device is not accidentally wiped.*
2. Run the program Rufus (the file should be called rufus_v1.3.4, though the numbers may vary).
3. Under the first option, **Device**, select your USB device from the drop down menu.
   NOTE: *If your device is not listed in the drop down menu, click the white arrow button next to the heading* **Format Options**. *Under the new* **Advanced Options** *section, check the first check box. This enables "List fixed (non-flash) or unpartitioned USB disks."*
4. To the right of the option called *Create a bootable disk using:* there is a button with an image of a CD on it. Click this button.
5. Select your ISO file and click Open.
6. Ensure that all the check boxes and settings match the image to the right.
7. Click Start, and in the window that pops up, click OK. This process can take up to 5 minutes, depending on the size of the ISO file.
8. When the process is finished, DONE should show at the bottom of the Rufus window.
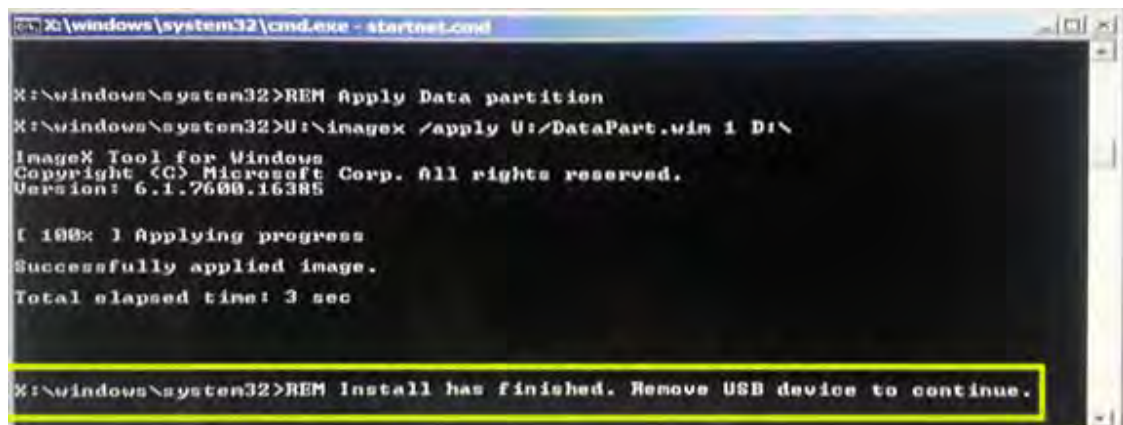9. The bootable USB is now finished.

UPDATING A CABINET USING A BOOTABLE USB

1. Ensure that the cabinet is turned off.
2. Plug in the USB. Ensure that no other USB's are plugged in.
3. Switch on the cabinet.
4. The operating system should boot straight into the USB, bringing up a black box that will display progress. This process will take around 20 minutes. The percentage at the bottom of the box will continue to update until it reaches 100%.

5. Once the process is finished, the last line of text in the black box will instruct you to remove the USB.

6. Remove the USB.
7. The cabinet will now automatically reboot.
8. Your game has successfully been updated.

SECTION A: SERVICE INSTRUCTIONS

> *NOTE*
> Be sure to read the following carefully before servicing the machine.

LOCATING AND ACCESSING PARTS

The following pictures identify the location of the main serviceable items.

CABINET FRONT

HEADER

PRIZE DOOR
LOCK ASSEMBLY
x7 (INSIDE)

SPEAKERS (x2)

OPERATOR/
PLAYER PANEL

TICKET
DOOR

COIN DOOR
CASH BOX
INSIDE

MINOR
PRIZE DOOR

KICK PLATE

CABINET REAR

MONITOR

QUIXANT PC

PRIZE ARMS (x6)

FB190 RGB CONTROLLER

FB182 QXT IO PCB

POWER SUPPLY PS-320-12

PLAYER PANEL

SELECT BUTTON

START BUTTON

TAKE WIN BUTTON

OPERATOR PANEL

COUNTERS

SERVICE/BACK BUTTON

UP BUTTON

TEST/ENTER BUTTON

VOLUME KNOB

DOWN BUTTON

PRIZE DOOR LOCK ASSEMBLY

UPPER DOOR CLOSE SWITCH

FB156 LED PCB

DOOR LOCK SWITCH

DOOR LOCK MOTOR

DOOR UNLOCK SWITCH

LOWER DOOR CLOSE SWITCH

MONITOR CONTROLS

| AUTO BUTTON |
| MENU BUTTON |
| SELECT BUTTON |
| DOWN BUTTON |
| UP BUTTON |
| POWER BUTTON |
| POWER LED |

PARTS DESCRIPTION

COIN MECHANISMS/DBA

The coin mechanisms are located inside the coin door, at the lower front-right of the machine cabinet. Two inputs can allow for the coin mechanisms and DBA to be connected.
When installing a mains powered DBA, ensure the mains harness is connected at the rear of the cabinet.

CASH BOX

The cash box is located inside the coin door at the lower front-right of the machine cabinet.

SPEAKERS

Two speakers are located above the monitor. Access to all speakers is through the rear service panel. The speakers are driven by a class-D BTL (bridge tied load) type amplifier, with a differential signal to the + and – terminals. It is important that the speaker – terminal IS NOT tied to ground. Both speakers must remain only connected to the + and – outputs of the Quixant PC.

OPERATOR PANEL – SERVICE CONTROLS

This is located under the player panel, accessed by unlocking and tilting the panel forward.

COUNTERS

Counters will increment for each coin input and ticket or prize dispensed. All counters are under software control. COIN1/COIN2 counters are triggered by the coin mechanism inputs. TICKET counter is triggered by the ticket mech or capsule dispenser. MINOR meter is triggered by the minor prize arm micro switches. PRIZE meter is triggered when a major prize is won (not when a door is opened).

BUTTONS

Press the green SERVICE/BACK button to issue a service credit from attract mode.
Press the red TEST/ENTER button to enter the operator menu from attract mode.
When in the operator menu, use all four buttons to navigate through the menu.

VOLUME KNOB

Use to adjust the speaker's sound level.

POWER INLET/MAINS SWITCH

The power inlet is a standard IEC inlet socket with mains power switch, located at the rear of the machine. There is a main power fuse internal in this IEC socket. The fuse should be a M205, 250VAC, 3A.

> * WARNING! *
> **ALWAYS** turn **OFF** mains power and unplug the game before replacing any fuses, and **ALWAYS** use the correct rated fuse.

POWER SUPPLY

The power supply is located at the back of the cabinet, and is accessed via the rear service panel of the machine. It is a SP-320-12 12V 25A Universal AC input switching power supply. It can handle AC input from 88-264VAC at 50/60Hz. An adjustment screw is available for fine-tuning the output voltage.

PRIZE DOOR LOCK ASSEMBLY

The assembly is accessible by removing the cover behind the major prize door. Two door closed switches are connected in parallel at the top and bottom of the door.
When activated, the lock motor will continuously move the locking bar up and down cycling between the locked and unlocked positions. When in the uppermost position, the door is locked and the lock switch will be activated. When the locking bar is in its lowermost position, the door is unlocked and the unlock switch will be activated.

MINOR PRIZE ARMS

Six minor prize arms are driven by DC motors, rotating a coil which carries a prize off the end of the arm. A micro switch at the end of each arm detects when the prize has fallen and will trigger the motor to turn off. Note that all 6 arms have their micro switches connected in parallel.
Micro switches are 50g models capable of being activated by light prizes.
Refer to the "Loading Prizes" section for the procedure for refilling minor prizes, and prize size, weight and tie restrictions.

MONITOR

The 26" monitor is powered by the system 12DC supply, and connects to the Quixant PC with a DVI-D cable. It is held in place with brackets on all four edges, and can be accessed through the rear service panel.
Control buttons and an indicator are on the monitor and should not be needed during normal operation.

QUIXANT PC

The Quixant QXi-200 PC is an industrial PC powered by the main 12VDC system power supply. It runs the application and controls the main machine I/O. The embedded windows operating system is preconfigured for automatic startup and does not need the OS "shut down" command before powering the machine off.
Hardware I/O signals are buffered through the FB182 and FB190 before being routed around the machine.

FB182 QXT IO PCB

The FB182 buffers the parallel I/O signals between the machine and Quixant PC. It contains additional hardware drivers and level translators. Peripheral power is routed through this PCB, so it also has built-in protection fuses.

FB190 RGB CONTROLLER PCB

The FB190 provides PWM control to the cabinet's red-green-blue strip lighting to allow the cabinet lighting to match the game color shown on the monitor. It connects to the Quixant PC via serial port COM4.

TICKET MECH/CAPSULE DISPENSER

A DL-1275 ticket mech or capsule dispenser may be installed behind the ticket door.

LAMPS

> *** WARNING ***
> **Always** turn **OFF** mains power and unplug the game, before replacing any lamps.
> **Always** replace the lamps with the same or equivalent size, wattage and voltage**.**

COIN DOOR LAMPS (LED)

The coin door lamps all are 12V/DC T10 LED or equivalent and can be accessed via the coin door.

BUTTON LAMPS (LED)

The button lamps all are super bright 12V/DC T10 LED or equivalent and can be accessed via opening the player panel and unscrewing the operator plate to access the lamps.

DOOR LOCK/UNLOCK LAMPS (LED)

Red/Green LED lamps are available as FB156 LED PCB. These are accessible by uncovering the prize door lock assembly.

MINOR PRIZE SELECT LAMPS (LED)

Minor prize lamps are green 5mm super bright LEDs housed in a panel-mount bezel. They can be accessed by opening the minor prize door.

MONITOR SURROUND BEZEL

The monitor surround contains LED strip lighting. It can be removed by unscrewing retainer nuts accessible by removing the rear service panel. Ensure that the RGB strip light connector is disconnected before removing the surround.

CABINET EDGE/HEADER/MONITOR SURROUND LIGHTING

All multicolored lighting is RGB strip lighting. Cabinet Edge lighting can be accessed through the major prize doors or by removing the major prize rear panels. Header lighting can be accessed by removing the relevant header brackets. Monitor Surround Lighting can be accessed by removing the monitor surround.

MAJOR PRIZE LIGHTING

Three white LED modules are used to illuminate each major prize. These are accessible by removing the rear prize panels and unscrewing the roof of the major prize plate.

MAINTENANCE

EXTERIOR

- Regularly dust and clean the external cabinet areas as required, using a soft water-damp cloth and mild soap.
- Check for blown bulbs and replace as required. Check all LED strips are functioning and repair as required.
- Check the monitor image is clear.
- Clean prize door glass with a soft cloth and normal glass cleaner.
- Wipe the monitor clean with a soft damp cloth.
- Any scratches or marks in the monitor surround can be buffed out using car polish or cut and polish. Do not use solvents on the panels as they may affect the finish.

INTERIOR

- Regularly dust and vacuum the interior of the cabinet including prize areas, taking care to remove any objects that may have fallen.
- Check and tighten all fixing hardware and fasteners as required.

> * WARNING! *
> **Always** turn **OFF** mains power and unplug the game before cleaning the interior of the machine.

BUTTONS

The game buttons get a lot of hard use so regularly check that all the button lamps and switches are operating correctly through the Input and Output Tests in the operator menu. Replace any globes, micro switches or buttons that are not working correctly.

MINOR PRIZE ARMS

Check the minor prizes are all hanging freely and are not stuck. Test the prize arm switches are operating correctly through the Input and Output Tests in the operator menu.

SECTION B: TECHNICAL DETAILS

⚠️ It is advised that anybody using SECTION B for repairing or modifying any of the components of the game should be a qualified technician, having at least a basic knowledge of digital components, integrated circuits and electricity.

POWER SUPPLY

The single universal AC input power supply generates 12VDC for the entire machine. The green LED indicates powered operation.
The power supply output voltage should be 12VDC. It can be adjusted when necessary by turning the blue adjustment trimpot with a small Philips screwdriver.

VOLTAGE ADJUSTMENT POT

POWER LED
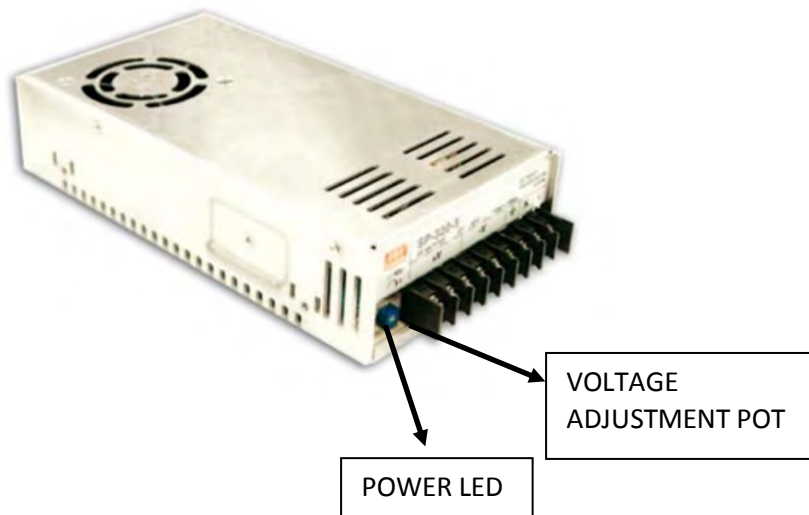
COIN OPTIONS REFERENCE GUIDE

By default, the coin door contains a micro switch connected to the COIN2 input for crediting the machine.
A 9 way Molex connector has been installed on the coin door which can be optionally used to make adaptors for most electronic coin systems and comparators.

The following picture illustrates the connector pinout.

Shell part number: Molex 03-09-1092

Pins: Molex 02-09-1119 (loose)
          Molex 02-09-1117 (chain)

PIN1 = GND
PIN2 = COIN1 input
PIN3 = 12VDC
PIN7 = GND
PIN8 = COIN2 input
PIN9 = 12VDC

Contact your nearest LAI Games distributor for harnessing to suit different coin comparators and bill acceptors.

TICKET DISPENSER/CAPSULE DISPENSER REFERENCE GUIDE

A ticket mech or capsule dispenser can be fitted inside the ticket door. Connection is available through a standard 4 way Molex receptacle. Contact your nearest LAI Games distributor for harnessing for ticket mech or capsule dispenser.
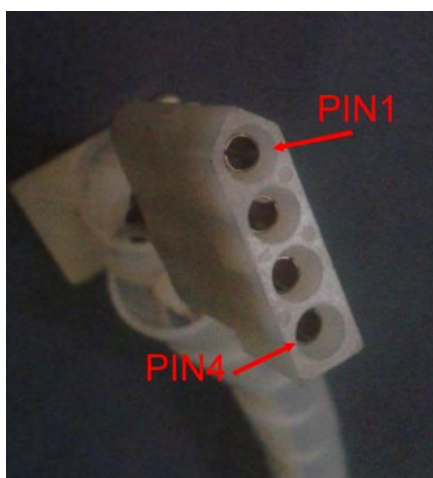
Shell part number: Molex 03-09-1042
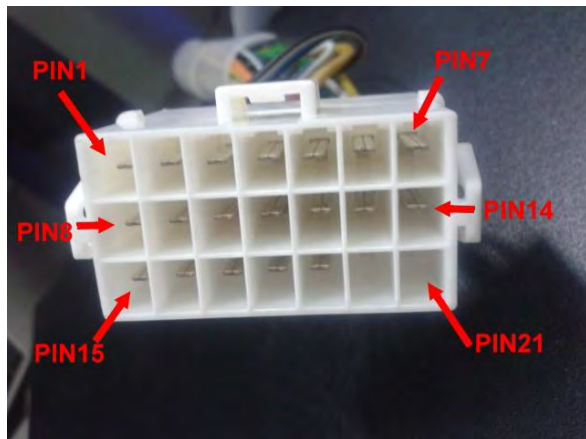
Pins: Molex 02-09-1119 (loose)
          Molex 02-09-1117 (chain)

PIN1 = NOTCH
PIN2 = GND
PIN3 = DRIVE
PIN7 = 12VDC

CARD SYSTEM REFERENCE GUIDE

A 21 pin connector exists inside the coin door for connection to a card system.

Mating shell part number: JST YLP-21V

Pins part number: SYF-01T-P0.5A (for AWG26-20)

PIN1 = COIN1 Input
PIN2 = COIN2 Input
PIN3 = COIN1 METER Output
PIN4 = COIN2 METER Output
PIN5 = TICKET 1 DRIVE (from GAME)
PIN6 = TICKET 1 DRIVE (to MECH)
PIN7 = TICKET 2 DRIVE (from GAME).
PIN8 = TICKET 2 DRIVE (to MECH)
PIN9 = TICKET 1 NOTCH (to GAME)
PIN10 = TICKET 1 NOTCH (from MECH)
PIN11 = TICKET 2 NOTCH (to GAME)
PIN12 = TICKET 2 NOTCH (from MECH)
PIN13 = 12VDC POWER Output
PIN14 = 12VDC POWER Output
PIN15 = GND
PIN16 = GND
PIN17 = PRIZE METER Output
PIN18 = MINOR METER Output
PIN19 = TICKET METER Output

Ticket mech connections allow a card system to intercept the ticket mech signals. If no card system is connected then ensure the loopback connector is installed (connects PIN5 to PIN6 and PIN9 to PIN10).
Ensure no more than 1A total is drawn from pins 13 and 14.

SECURITY DONGLE

A security dongle is required to be plugged in before the game application will start. If the dongle is missing, the game will not run, and the screen will remain black.
The dongle plugs into any USB port and must remain plugged in at all times.

QUIXANT QXi-200

The front and rear panel as well as required connections are shown below.
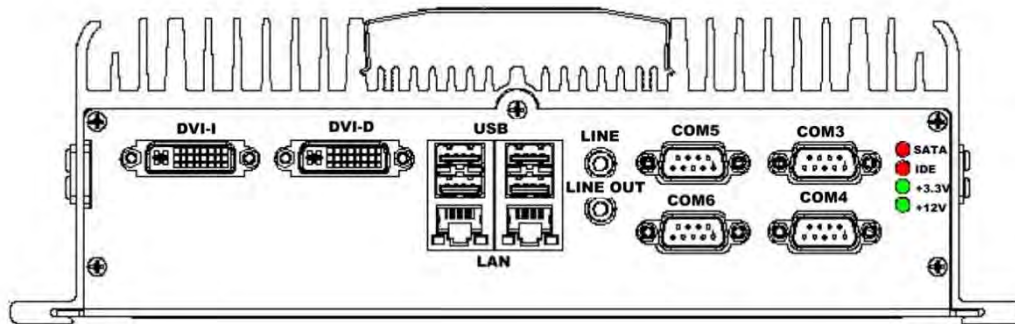
DVI-D – connects to monitor.
USB – connects to the security dongle. The port is not specific, when operating the green LED will be on solid.
COM4 – connect to RGB Controller PCB.
SATA LED – flashes to indicate disk activity.
+3.3V – lights when internal power regulator is operating.
+12V – lights when the QXi-200 has power. Power supply must be between 8~14VDC to operate.
The rear panel contains connections for the FB182 IO PCB, power supply and speaker. All connections are required to be plugged in for proper operation.
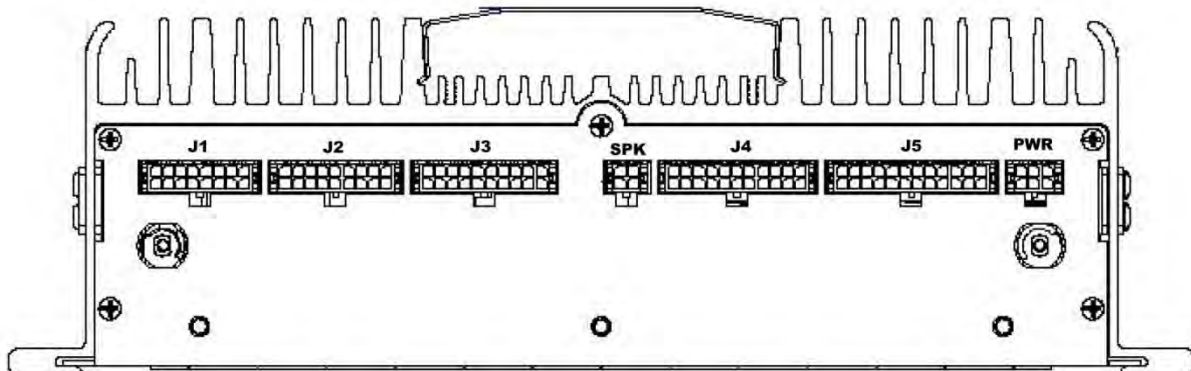
J1, j2, J3, J4, J5 – connect to FB182.
SPK – connect to volume knob and speakers. **Caution**: the audio amplifier is of the Bridge Tied Load (BTL) type, which drives the speakers with a differential signal to the speaker + and – terminals. It is important that the – terminal IS NOT connected to ground.
PWR – Connects to the 12VDC power supply.

FB182 CONNECTOR WIRING
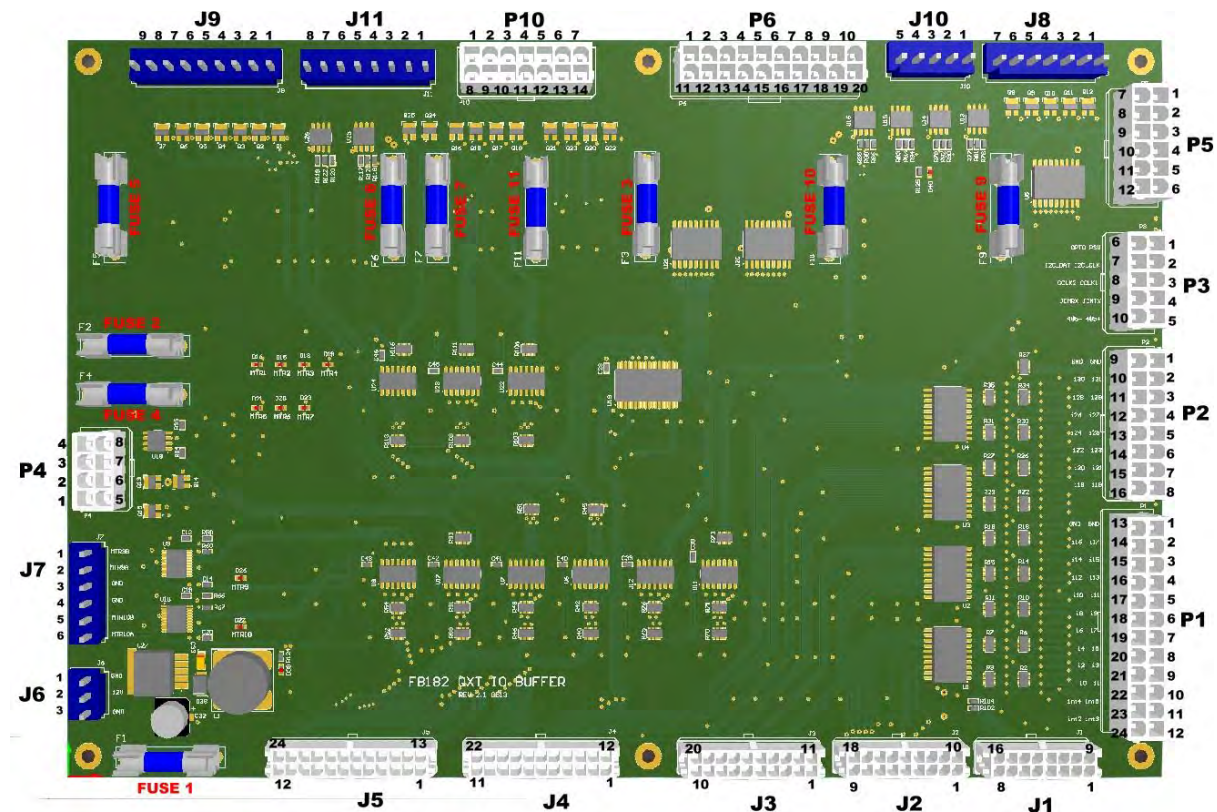
FUSES

FUSE 1	1A Fast	Main regulator and board logic
FUSE 2	3A Fast	P4 pin 8 - 12V switched output (unused connector)
FUSE 3	3A Fast	P6 pins 1,2,11,12 - 12V switched output to prize door un/lock lamps, start button lamp
FUSE 4	3A Fast	P4 pins 1,2,3 - 12V output (unused connector)
FUSE 5	4A Fast	J9 pins 8,9 – 12V switched output to door lock motors
FUSE 6	3A Fast	J11 pins 5, 6 – 12V switched output (unused connector)
FUSE 7	3A Fast	J11 pins 3, 4 – 12V output (unused connector)
FUSE 9	3A Fast	J8 pins 6, 7 – 12V output to coin/ticket/prize meters
FUSE 10	3A Fast	J10 pins 1, 2, 3, 4 - 12V switched outputs to Ticket Drive, Minor Prize Lamp 6
FUSE 11	3A Fast	P10 pins 3, 4, 5, 10, 11 12 – 12V output to Minor Prize Motors

CONNECTORS

J1 – Quixant I/O

*** RS485-*	9	1	RS485+ **
GND	10	2	GND
*** JCM RX*	11	3	JCM TX **
GND	12	4	CCTALK1 **
GND	13	5	CCTALK2 **
SPI SS#	14	6	SPI CLK
SPI MOSI	15	7	SPI MOSI
GND	16	8	METER PWR **

** Italics means the signal is not used

Harness connector shell: Molex Microfit 43025-1600
Harness connector pins: Molex Microfit 43030-0001

J2 – Quixant I/O

*** I2C DAT*	10	1	I2C CLOCK **
GND	11	2	PSU AC FAIL# **
*** OPTO DRV#*	12	3	INTR2**
GND	13	4	INTR3**
GND	14	5	INTR4 **
GND	15	6	INTR5 **
DIN 1 – Service/Back Button	16	7	DIN 0 – Test/Right Button
DIN 3 – Down/Select Button	17	8	DIN 2 – Up/Take Win Button
DIN 5 – Coin 2	18	9	DIN 4 – Coin1

** Italics means the signal is not used

Harness connector shell: Molex Microfit 43025-1800
Harness connector pins: Molex Microfit 43030-0001

J3 – Quixant I/O

GND	11	1	GND
DIN 7 – Ticket Notch	12	2	DIN 6 – Start Button
DIN 9 – Minor Prize Arm Switch	13	3	*DIN 8 **
DIN 11 – Prize door 2 Open	14	4	DIN 10 – Prize door 1 Open
DIN 13 – Prize door 4 Open	15	5	DIN 12 – Prize door 3 Open
DIN 15 – Prize door 6 Open	16	6	DIN 14 – Prize door 5 Open
DIN 17 – Prize door 1 Lock Switch	17	7	DIN 16 – Prize door 7 Open
DIN 19 – Prize door 3 Lock Switch	18	8	DIN 18 – Prize door 2 Lock Switch
DIN 21 – Prize door 5 Lock Switch	19	9	DIN 20 – Prize door 4 Lock Switch
GND	20	10	GND

** Italics means the signal is not used

Harness connector shell: Molex Microfit 43025-2000
Harness connector pins: Molex Microfit 43030-0001

J4 – Quixant I/O

GND	12	1	GND
DIN 23 – Prize door 7 Lock Switch	13	2	DIN 22 – Prize door 6 Lock Switch
DIN 25 – Prize door 2 Unlock Switch	14	3	DIN 24 – Prize door 1 Unlock Switch
DIN 27 – Prize door 4 Unlock Switch	15	4	DIN 26 – Prize door 3 Unlock Switch
DIN 29 – Prize door 6 Unlock Switch	16	5	DIN 28 – Prize door 5 Unlock Switch
*DIN 31 ** *	*17*	6	DIN 30 – Prize door 7 Unlock Switch
GND	18	7	GND
DOUT 1 – Minor Prize Lamp 2	19	8	DOUT 0 – Minor Prize Lamp 1
DOUT 3 – Minor Prize Lamp 4	20	9	DOUT 2 – Minor Prize Lamp 3
DOUT 5 – Take Win Button Lamp	21	10	DOUT 4 – Minor Prize Lamp 5
DOUT 7 – Select Button Lamp	22	11	DOUT 6 – Start Button Lamp

** Italics means the signal is not used

Harness connector shell: Molex Microfit 43025-2200
Harness connector pins: Molex Microfit 43030-0001

J5 – Quixant I/O

*DOUT 9 – J7 MTR 9 Direction ** *	*13*	*1*	*DOUT 8 – J7 MTR9 Enable ** *
*DOUT 11 – J7 MTR10 Direction ** *	*14*	*2*	*DOUT 10 – J7 MTR 10 Enable** *
*DOUT 13 – P4 pin 6 Output ** *	*15*	*3*	*DOUT 12 – P4 pin 7 Output ** *
*DOUT 15 – P4 pin 8 Output ** *	*16*	*4*	*DOUT 14 – P4 pin 5 Output ** *
DOUT 17 – Door 2 Lock Motor	17	5	DOUT 16 – Door 1 Lock Motor
DOUT 19 – Door 4 Lock Motor	18	6	DOUT 18 – Door 3 Lock Motor
DOUT 21 – Door 6 Lock Motor	19	7	DOUT 20 – Door 5 Lock Motor
DOUT 23 – Minor Meter	20	8	DOUT 22 – Door 7 Lock Motor
DOUT 25 – Coin 2 Meter	21	9	DOUT 24 – Coin 1 Meter
DOUT 27 – Prize Meter	22	10	DOUT 26 – Ticket Meter
*DOUT 29 – J10 Pin 29 Output ** *	*23*	11	DOUT 28 – Ticket Drive
DOUT 31 – SPI SS# Manual	24	12	DOUT 30 – Minor Prize Lamp 6

** Italics means the signal is not used

Harness connector shell: Molex Microfit 43025-2400
Harness connector pins: Molex Microfit 43030-0001

J6 – Power Input

1	GND
2	12VDC
3	GND

Harness connector shell: JST VHR-3N
Harness connector pins: SVH-21T-P1.1

J7 – Bidirectional Motor

1	*MOTOR 9 B ****
2	*MOTOR 9 A ****
3	*GND ****
4	*GND ****
5	*MOTOR 10 B ****
6	*MOTOR 10 A ****

** Italics means the signal is not used

Harness connector shell: JST VHR-6N
Harness connector pins: SVH-21T-P1.1
Each motor connection is driven by bidirectional H-bridge drivers. The drivers have built-in current limiting set at 0.6A.

J8 – Counter/Meter Connection

1	Major Prize Meter
2	Ticket/Capsule Meter
3	Coin 2 Meter
4	Coin 1 Meter
5	Minor Prize Meter
6	12VDC (fused)
7	12VDC (fused)

Harness connector shell: JST VHR-7N
Harness connector pins: SVH-21T-P1.1
Meters can be connected and powered by the fused pins 6 and 7. The PCB has on-board back-EMF diodes for use with inductive meters so no additional diodes are needed in the harness nor meters. Current per meter pin should be limited to 1.5A maximum.

J9 – Prize Door Lock Motors

1	Prize door 1 motor
2	Prize door 2 motor
3	Prize door 3 motor
4	Prize door 4 motor
5	Prize door 5 motor
6	Prize door 6 motor
7	Prize door 7 motor
8	12V (fused)
9	12V (fused)

Harness connector shell: JST VHR-9N
Harness connector pins: SVH-21T-P1.1
Door lock motors can be connected and powered by the fused pins 8 and 9. The PCB has on-board back-EMF diodes for use with inductive loads so no additional diodes are needed in the harness or motors.
Motor current draw per pin should not exceed 1A maximum with total combined current draw not exceeding 4A.

J10 – Ticket mech, High-Side Drivers

1	Ticket Drive 1
2	*Ticket Drive 2 **
3	Minor Prize 6 Lamp
4	*Spare **
5	GND

** Italics means the signal is not used

Harness connector shell: JST VHR-5N
Harness connector pins: SVH-21T-P1.1
High side drivers are capable of sourcing 1.5A each pin, with total current feeding back into the ground pin not exceeding 3A.
Ticket Drive is capable of driving the ticket mech or capsule dispenser motor directly. Contact your nearest LAI Games distributor for information for converting between tickets and capsules.
Ensure that no wire is connected to pin 4.

J11 – Spare High/Low Drivers

1	*Lowside SPI24 **
2	*Lowside SPI25 **
3	*12V (fused) **
4	*12V (fused) **
5	*Highside SPI26 **
6	*Highside SPI27 **
7	*GND **
8	*GND **

** Italics means the signal is not used

Harness connector shell: JST VHR-8N
Harness connector pins: SVH-21T-P1.1
Pins 1 and 2 can sink 1.5A each, with the load being powered by the fused pins 3 and 4.
Pins 5 and 6 can source 1.5A each, with the load return ground available on pins 7 and 8. High side drivers are internally current limited with thermal shutdown.

P1 – Game Inputs

GND	13	1	GND
Prize door 7 Open Switch	14	2	Prize door 1 Lock Switch
Prize door 5 Open Switch	15	3	Prize door 6 Open Switch
Prize door 3 Open Switch	16	4	Prize door 4 Open Switch
Prize door 1 Open Switch	17	5	Prize door 2 Open Switch
Ticket Notch 2 **	18	6	Minor Prize Arm Switch (parallel)
Start Button	19	7	Ticket Notch 1
Coin 1	20	8	Coin 2
Up/Take Win Button	21	9	Down/Select Button
Right/Test Button	22	10	Left/Service button
INT4 **	23	11	INT5 **
INT2 **	24	12	INT3 **

** Italics means the signal is not used

Harness connector shell: Molex Minifit 003901-2240
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

P2 – Game Inputs

GND	9	1	GND
Prize door 7 Open Switch	10	2	Prize door 1 Lock Switch
Prize door 5 Open Switch	11	3	Prize door 6 Open Switch
Prize door 3 Open Switch	12	4	Prize door 4 Open Switch
Prize door 1 Open Switch	13	5	Prize door 2 Open Switch
Ticket Notch 2 **	*14*	6	Minor Prize Arm Switch (parallel)
Start Button	15	7	Ticket Notch 1
Coin 1	16	8	Coin 2

** Italics means the signal is not used

Harness connector shell: Molex Minifit 003901-2160
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

P3 – Aux Signals

OPTO Drive**	*6*	*1*	*Power Fail ***
I2C DAT**	*7*	*2*	*I2C CLK ***
CCTALK2**	*8*	*3*	*CCTALK1 ***
JCM RX**	*9*	*4*	*JCM TX ***
RS485- **	*10*	*5*	*RS485+ ***

** Italics means the signal is not used

Harness connector shell: Molex Minifit 003901-2100
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

P4 – Light Drivers

LIGHT OUT 3 **	*5*	*1*	*12V (fused) ***
LIGHT OUT 2 **	*6*	*2*	*12V (fused) ***
LIGHT OUT 1 **	*7*	*3*	*12V (fused) ***
12V (switched)	8	4	GND

** Italics means the signal is not used

Harness connector shell: Molex Minifit 003901-2080
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

P5 – Light Outputs

12V output	7	1	12V output
12V output	8	2	12V output
START Button Lamp	9	3	SELECT Button Lamp
Minor Prize Lamp 5	10	4	TAKEWIN Button Lamp
Minor Prize Lamp 3	11	5	Minor Prize Lamp 4
Minor Prize Lamp 1	12	6	Minor Prize Lamp 2

Harness connector shell: Molex Minifit 003901-2120
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

P6 – Door Lock Lighting

| 12V (fused)	11	1	12V (fused)
12V (fused)	12	2	12V (fused)
SPI14 Start Button Surround	13	*3*	*SPI 15 Output ***
SPI12 Door 7 Lock Lamp	14	4	SPI13 Door 7 Unlock Lamp
SPI10 Door 6 Lock Lamp	15	5	SPI11 Door 6 Unlock Lamp
SPI8 Door 5 Lock Lamp	16	6	SPI9 Door 5 Unlock Lamp
SPI6 Door 4 Lock Lamp	17	7	SPI7 Door 4 Unlock Lamp
SPI4 Door 3 Lock Lamp	18	8	SPI5 Door 3 Unlock Lamp
SPI2 Door 2 Lock Lamp	19	9	SPI3 Door 2 Unlock Lamp
SPI0 Door 1 Lock Lamp	20	10	SPI1 Door 1 Unlock Lamp

** Italics means the signal is not used

Harness connector shell: Molex Minifit 003901-2200
Harness connector pins: Molex Minifit 39-00-0038 (Reel)
Harness connector pins: Molex Minifit 39-00-0039 (Loose)

Door lock and unlock lamps are powered from the fused 12V power outputs. Maximum current per lamp is 500mA with total current on all lamps not to exceed 2A.

P10 – Minor Motor Drivers

Minor Prize Motor 2	8	1	Minor Prize Motor 1
Minor Prize Motor 4	9	2	Minor Prize Motor 3
12V (fused)	10	3	12V (fused)
12V (fused)	11	4	12V (fused)
12V (fused)	12	5	12V (fused)
Minor Prize Motor 6	13	6	Minor Prize Motor 5
*SPI23 ***	*14*	*7*	*SPI22 ***

** Italics means the signal is not used

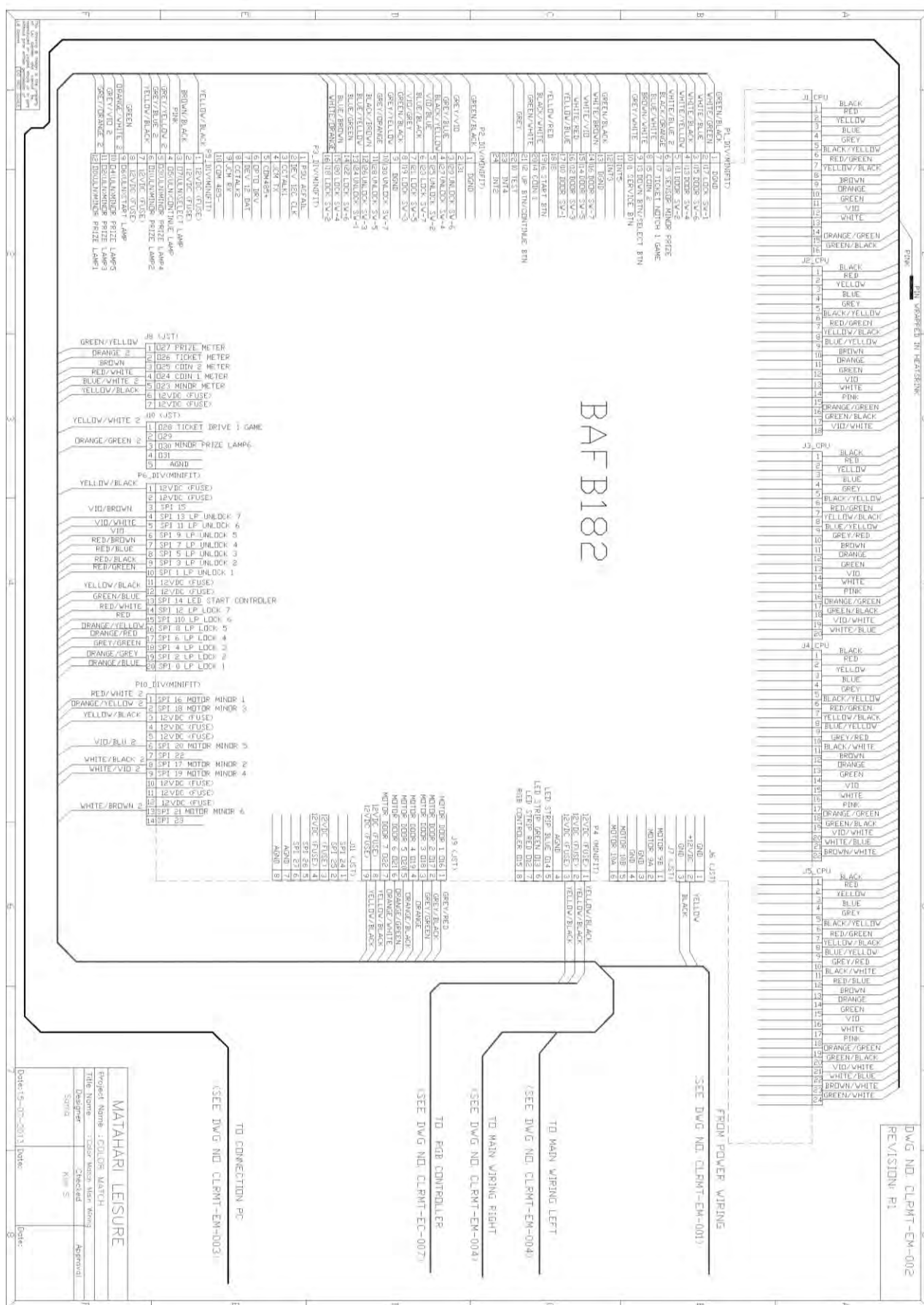Harness connector shell: Molex Minifit 003901-2140
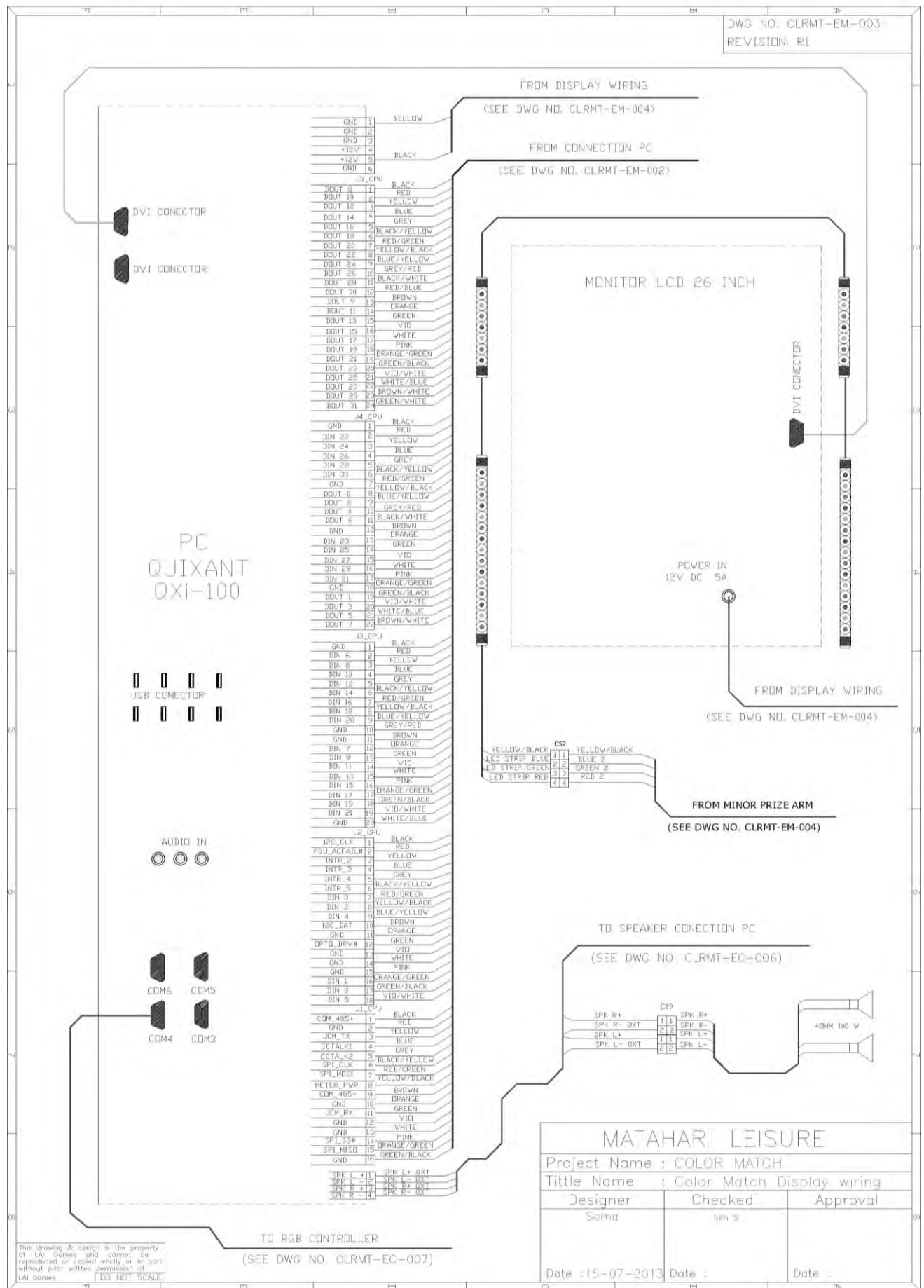Harness connector pins: Molex Minifit 39-00-0038 (Reel)
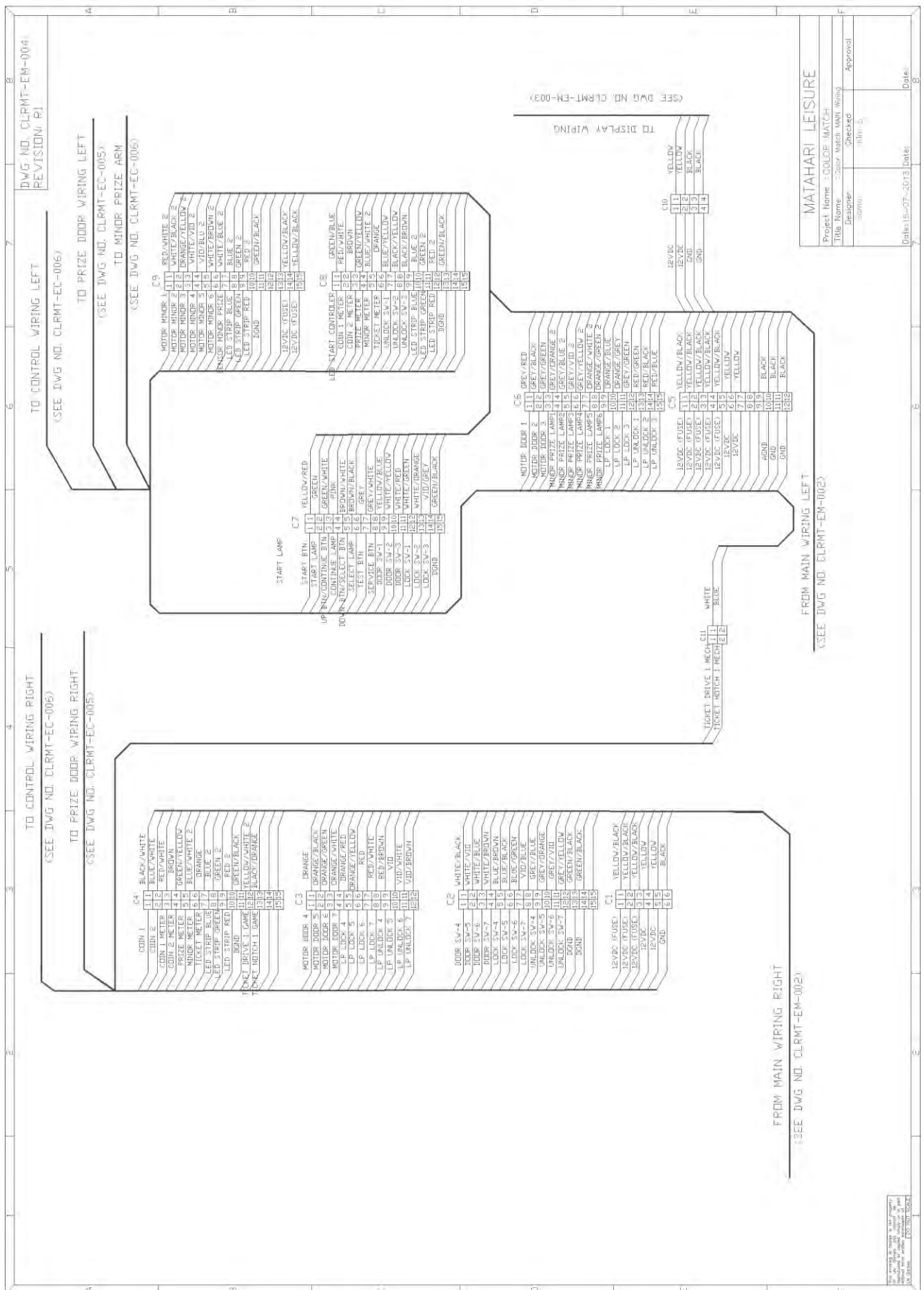Harness connector pins: Molex Minifit 39-00-0039 (Loose)

Minor prize arm motors are powered from the fused 12V outputs. Maximum current per motor is 1.5A with a total current for all motors not to exceed 3A.
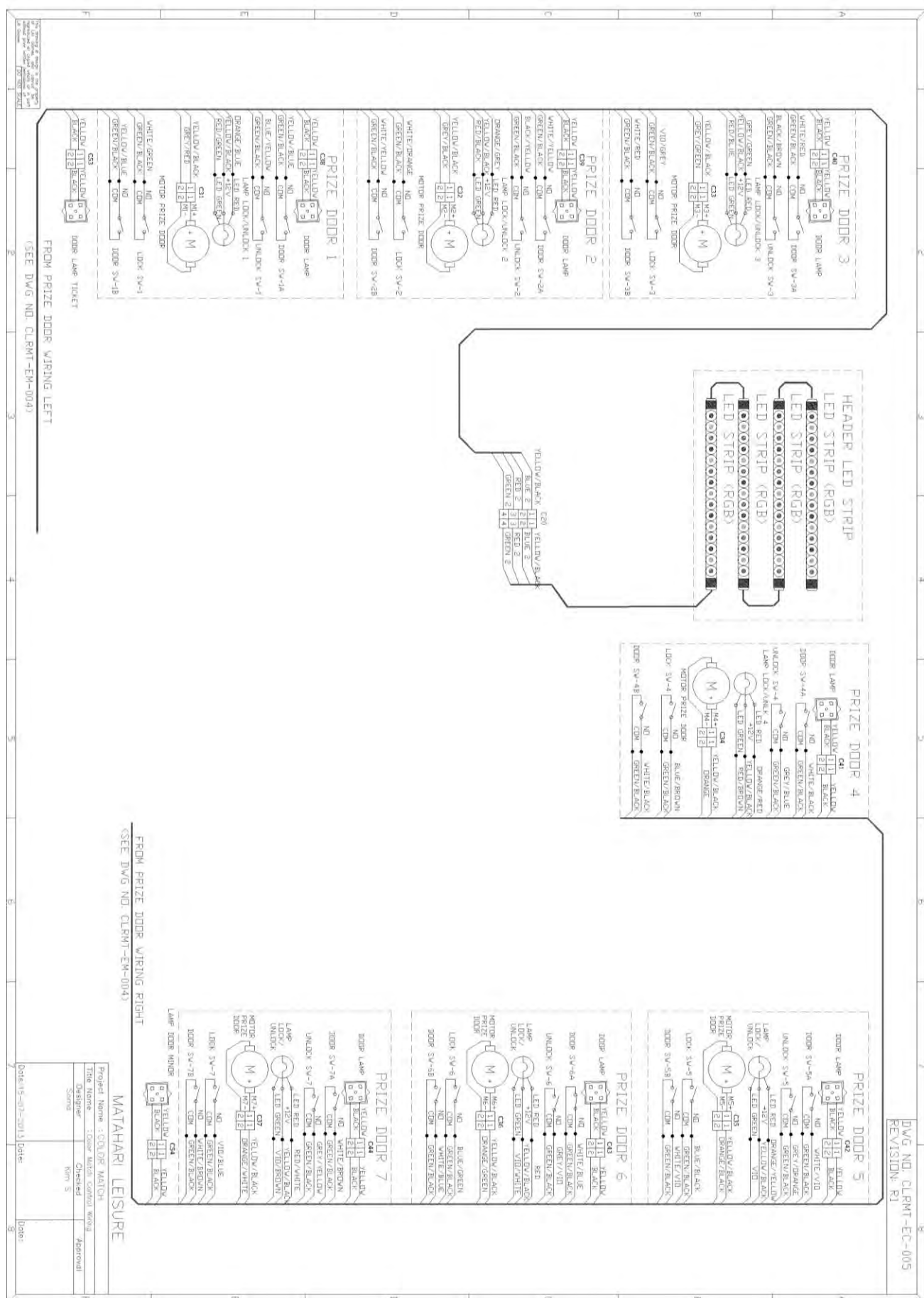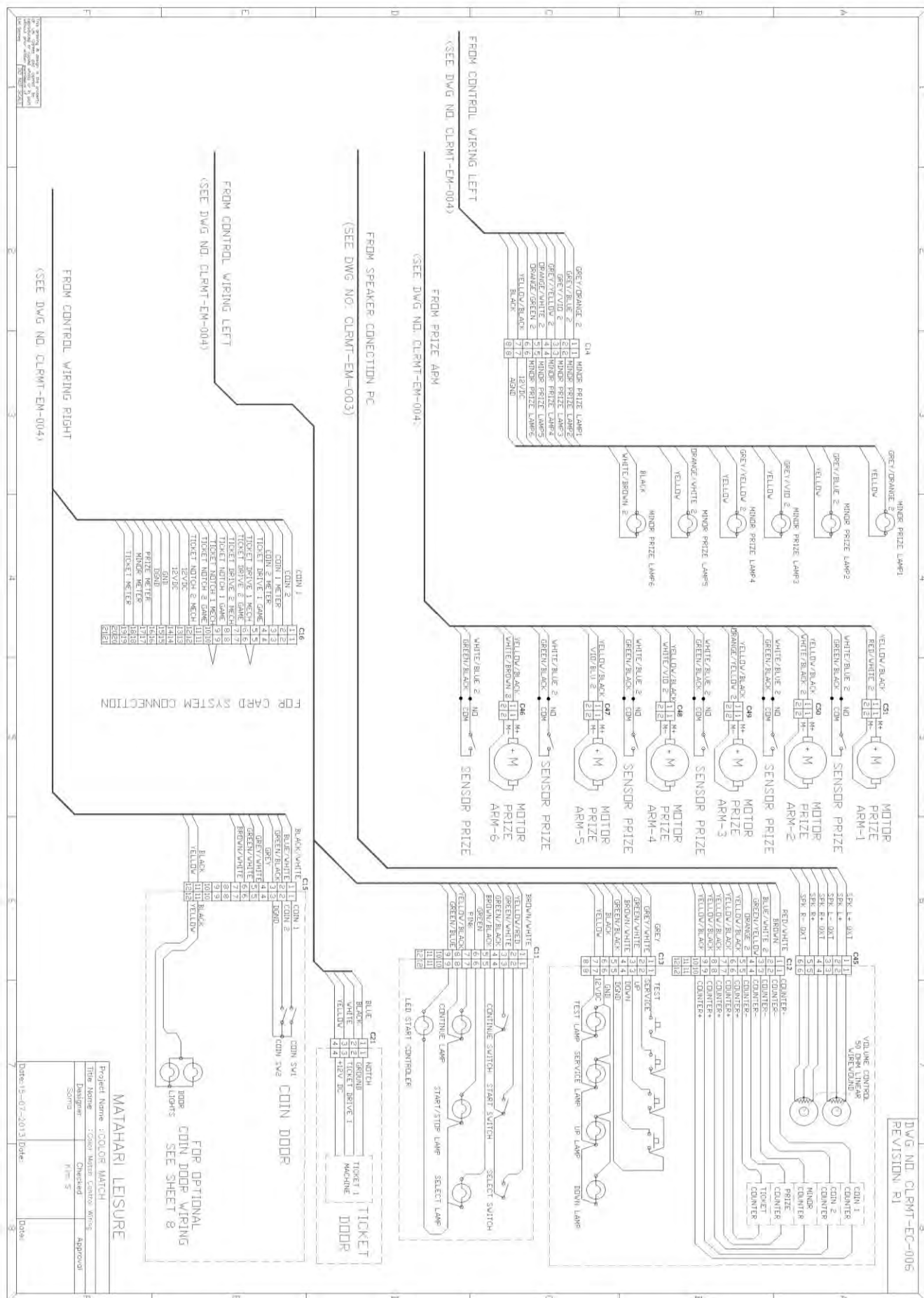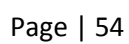
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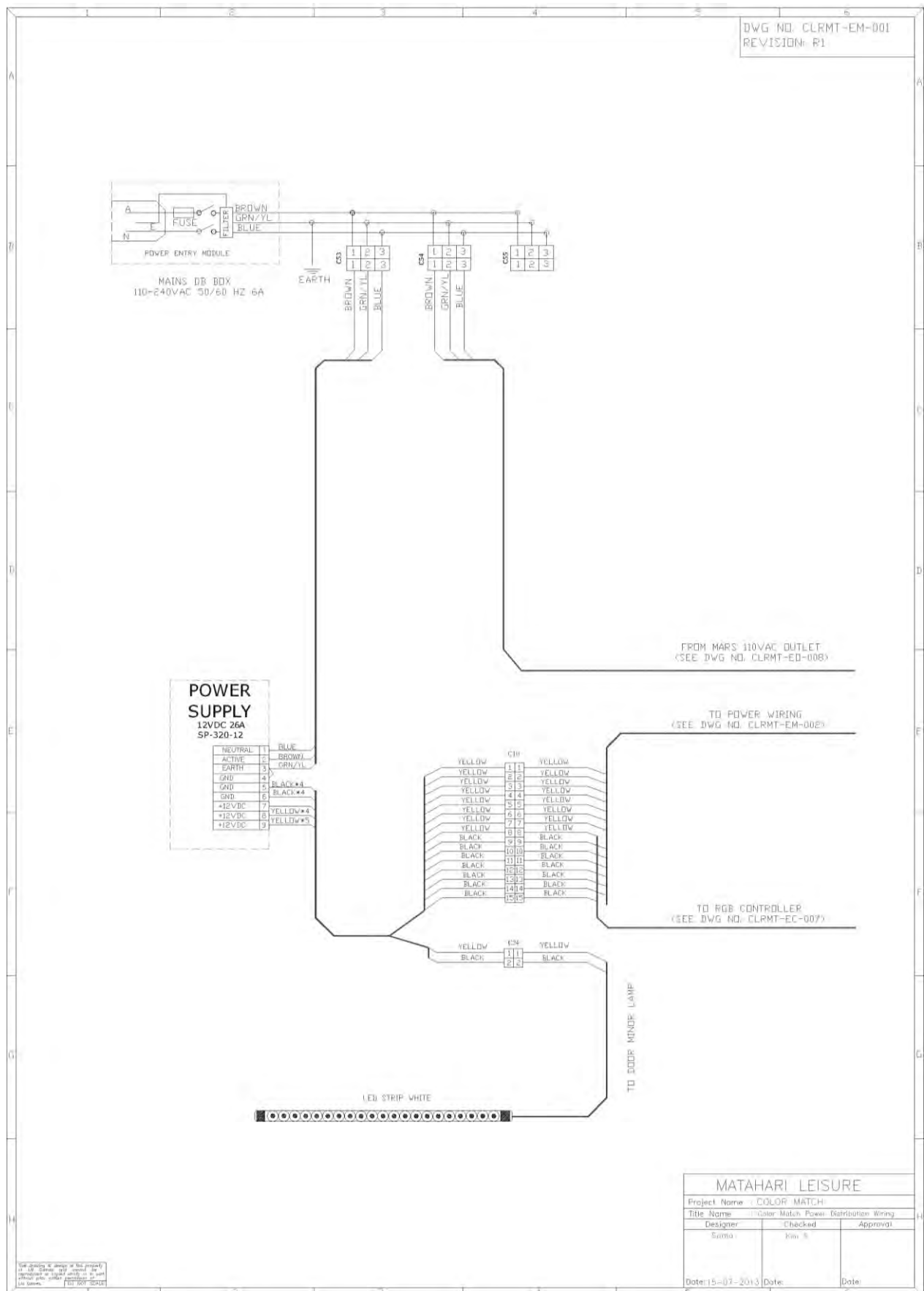
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