► Read this manual BEFORE operating the machine.
► Keep this manual for your reference.
► Go to www.LAIGames.com click on Support to register your games and receive of future updates.

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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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LAI Games

sales@laigames.com  www.laigames.com
Dear Customer,

Keep up to date with new software updates or Service Bulletins for this game.

Check our Website at [www.laigames.com](http://www.laigames.com) and click on Support, here you will find links to all the Bulletins and Software Updates to keep your game in top working order.

Thanks,
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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 more !.

BE SURE TO READ THE FOLLOWING

* WARNING! *

Always turn OFF Mains AC power and unplugged the game, before opening or replacing any parts.

Always when unplugging the game from an electrical outlet, grasp the plug, not the line cord.

Always connect the Game Cabinet to grounded electrical outlet with a securely connected ground line.

Do Not installs 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 °C.
MACHINE INSTALLATION and INSPECTION

When installing and inspecting “Princess Castle”, 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 “Princess Castle”, it is another great product from LAI GAMES. another exciting ball throwing game from LAI Games. “Princess Castle” features a remarkable game cabinet design with colorful graphics and seven stunning targets on the playfield. This game offers a simple but exciting game play with the chance to collect double points each time you play. Undoubtedly, “Princess Castle” will make an exciting ticket redemption game to any location, on or off site.

We hope you take the time to read this manual and learn about the many other features and user-friendly adjustments that can be made to “fine-tune” the game for maximum earning potential.

DESCRIPTION

- The “Princess Castle” is a one player, ticket redemption game, where players attempt to throw as many balls as they can into the target to collect points. The more points they collect, the more tickets they won.

PACKAGING

- At delivery, the machine should arrive in good condition. To move the packaged machine for transport or placement, use a forklift and take care not to hit the package or stack heavy objects on top, as this may cause damage to the machine.

CONTENTS

- The “Princess Castle” cabinet
- Keys: 2 x coin door keys
- 2 x back door keys
- 2 x ticket door key
- 300x Balls
- Operator’s manual
- IEC Power Cord (In cash box)
- Parts & Accessories (In cash box)
SPECIFICATIONS

DIMENSIONS
- Weight: 220 kg (485 lb)
- Height: 2350 mm (93”)
- Width: 864 mm (34”)
- Length: 1855 mm (73”)
- Power: 200 Maximum W – (220V @ 1 A)(120V @ 2 A)

ELECTRIC SUPPLY
The game has the option to operate on an 110V, 120V, 220V or 240V AC 50/60Hz single phase mains electric supply. The supply must be a three wire grounded supply.

* CAUTION! *
Before switching the machine on be sure to check that it has been set on the correct voltage for your area!

Please Refer to the mains voltage adjustment section of this manual. Machines are normally shipped on 220V AC unless otherwise specified.

LOCATION REQUIREMENTS
- Ambient temperature: between 5°C and 40°C.
- Ambient humidity: Low
- Ambient U.V. radiation: Very low
- Vibrations level: Low
HOW TO PLAY

THE Player’s aim is to COLLECT POINTS BY THROWING THE BALLS INTO THE CASTLE

■ Pay to Play.

■ Press the Start button to start the game. The ball gate will open and balls will be released to the player.

■ Throw as many balls as you can into the Archway, Garden, Windows or Walls in the amount of time given to collect points. Try to get the balls into the flashing target to get double points. For each ball that went into a target, players will get 5 points. For each ball that went into a flashing target, players will get 10 points.

* NOTE! *
The maximum number of points a player can collect per play is 999. When that value is reached in a play, the score will stop incrementing.

■ When the time is up, the ball gate will close and tickets will be paid according to the points collected. The exact number of points per ticket is dependent on program settings.
OPERATION

The “Princess Castle” has 6 operational modes: Attract mode, Play mode, Test Mode, Programmable Adjustments mode, Audits mode and Game History mode.

OPERATIONAL DIAGRAM

ATTRACT MODE
- The Attract mode provides a light and sound display, while the game is not being played. This feature is to attract potential customers to play the game. The attract mode sound can be turned on and off.

PLAY MODE
- The Princess Castle has two play modes. The Standard Coin Play mode, where a coin, or coins are inserted. Or Free Play where no coins are necessary.

COIN PLAY
- The 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
- The free play mode is entered from attract mode by holding the Service button for longer than five second, F R E will be displayed on the 3-digit LED display.
- For a single free game, just press the Service button once. When issuing single free games in this manner, tickets will be dispensed as normal.
TEST MODE

The **Princess Castle** Test mode has three test configurations allowing you to test the function of the Sound, LED & Credit Displays, the Game Switches, all game lamps, and the ball gate. (Refer to the Test Mode Diagram on next page).

The Test mode is also used for Clearing Game Errors. If there is an active error, its code will be displayed. To try to clear the error code, press the red Test button once. The error can be bypass by quickly pressing the red Test button twice.

*NOTE!*  
- Entering Test Mode will CLEAR any CREDITS remaining in the game.
- If during test mode no ADJUSTMENTS or actions are made to the game for approximately four minutes, it will automatically RETURN to Attract Mode.
TEST MODE DIAGRAM

ATTRACTION MODE  Press Test  PLAY MODE

SOUND, LAMPS & DISPLAY TEST

The Display counts, all lamps flash, and Sound is played.

0 0 0
1 1 1
9 9 9

GAME SWITCHES TEST  Press Test

SWITCH INPUT TEST

No INPUT is active

<table>
<thead>
<tr>
<th>TICKET notch is active</th>
<th>SERVICE switch is active</th>
<th>Target 4 sensor is active</th>
<th>Target 5 sensor is active</th>
</tr>
</thead>
<tbody>
<tr>
<td>C - 1</td>
<td>C - 2</td>
<td>C - 9</td>
<td>C 1 0</td>
</tr>
</tbody>
</table>

Run TEST MODE  Press Test

BALL GATE TEST
- R01 = Opening the gate
- R02 = Closing the gate

PRESS SERVICE

PRESS SERVICE REPEATEDLY
To step from R01 to R02

Loops back to R01

Press Test

PROGRAMMABLE ADJUSTMENTS MODE
SOUND, LAMPS & DISPLAY TEST

- **ENTER** The Sound, Lamp & Display test is entered from Attract mode by pressing the Test button once.

<table>
<thead>
<tr>
<th>* NOTE! *</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ If there is an active error displayed, press the red Test button once to try and clear the error.</td>
</tr>
<tr>
<td>■ If the error code will not clear, it can be bypass by quickly pressing the red Test button twice.</td>
</tr>
</tbody>
</table>

**DURING THE TEST:**
- Game music will be played.
- The Time Indicator lamps will light on and off in sequence.
- The Credit display will count from 000 to 999 and then repeat.
- The target lamps will light on and off in sequence.
- The Start button lamps will flash on and off.

- **EXIT** The Sound, Lamp & Display test is exited by pressing the Test button. The next test will be switch test.

SWITCH TEST

- **ENTER** The Switch Test can be entered by pressing the Test button once while in the Sound, Light & display test or by pressing the Test button twice while in Attract mode, C-X will be displayed on the 3-digit display where ‘XX’ is a number representing the switch that is active.

**TESTING THE GAME SWITCHES**

All game switches have a code from C1 to C11 as tabled below. By activating any of the switches, their code will be displayed on the 3-digit display. If there are no switches are active then C-0 will be displayed.

<table>
<thead>
<tr>
<th>CODE</th>
<th>DISPLAY</th>
<th>SWITCH FUNCTION</th>
<th>SWITCH LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>C0</td>
<td>C-0</td>
<td>No Switch Active</td>
<td>-</td>
</tr>
<tr>
<td>C1</td>
<td>C-1</td>
<td>Ticket Notch is Active</td>
<td>Ticket Door</td>
</tr>
<tr>
<td>C2</td>
<td>C-2</td>
<td>Service Switch is Active</td>
<td>Service Bracket</td>
</tr>
<tr>
<td>C3</td>
<td>C-3</td>
<td>Start button is Active</td>
<td>Player Control panel</td>
</tr>
<tr>
<td>C4</td>
<td>C-4</td>
<td>Coin 1 Switch is Active</td>
<td>Coin Door</td>
</tr>
<tr>
<td>C5</td>
<td>C-5</td>
<td>Ball Gate Switch is Active</td>
<td>Ball Gate</td>
</tr>
<tr>
<td>C6</td>
<td>C-6</td>
<td>Target 1 sensor is Active</td>
<td>Garden 1</td>
</tr>
<tr>
<td>C7</td>
<td>C-7</td>
<td>Target 2 sensor is Active</td>
<td>Garden 2</td>
</tr>
<tr>
<td>C8</td>
<td>C-8</td>
<td>Target 3 sensor is Active</td>
<td>Wall</td>
</tr>
<tr>
<td>C9</td>
<td>C-9</td>
<td>Target 4 sensor is Active</td>
<td>Archway</td>
</tr>
<tr>
<td>C10</td>
<td>C-10</td>
<td>Target 5 sensor is Active</td>
<td>Window 1</td>
</tr>
<tr>
<td>C11</td>
<td>C-11</td>
<td>Target 6 Sensor is Active</td>
<td>Window 2</td>
</tr>
</tbody>
</table>

Normal condition for the game no switches are active.
**TICKET DISPENSER NOTCH**
The Ticket Notch Switch (C1) can be activated or deactivated from the Ticket Feed Button on the Ticket Dispenser PCB or by manually pushing the tickets from the ticket holder through the dispenser after pulling the ticket release rod upwards.

*NOTE!*
- For more information on the servicing and testing the ticket please look at the Dispenser Reference guide.

**EXIT**
The Switch Test is exited into Run Test Mode by pressing the Test Button once.

*NOTE!*
- Several switches can be simultaneously activated in Switch test. The display will then consecutively show their codes, indicating which switches are active. However, it is much easier to test the game switches individually.
RUN TEST

- **ENTER** The Run Test can be entered by pressing the Test button once while in the Switch Test or by pressing the Test button three times while in Attract mode, 333 will be displayed on the 3-digit display.

- **SELECT** The Service button is pressed once to start the run test mode. The credit display will show 01, opening ball gate. The Service button is then pressed again to close the gate, showing 02 on the 3-digit display.

- **EXIT** The Run Test is exited into Programmable Adjustments Mode by pressing the Test button once.
PROGRAMMABLE ADJUSTMENTS MODE

The Princess Castle has nine programmable adjustments that can be changed in this mode. They are P01 to P09 and their codes and values are displayed alternatively during the adjustment procedure.

Example: Code P01 (Number of Coins Mech 1) is displayed as P 0 1 and its value of 1 as 1 on the 3-digit display.

PROGRAMMABLE ADJUSTMENTS MODE DIAGRAM

PROGRAMMABLE ADJUSTMENTS PROCEDURE

■ ENTER The Programmable Adjustments Mode can be entered by pressing the Test button once while in the Run Test or by pressing the Test button four times while in Attract mode, P P P will be displayed on the 3-digit credit display.

■ SELECT The green Service button is pressed to step through each of the adjustment configurations, starting from the P P P display, P01 being the first step, continuing through to P09, and then looping again from P01 to P09 until the mode is exited.

■ CHANGE The Start button is pressed to change the displayed value. The value can only be stepped up by using the Start button, but the value will loop back to its minimum value the next step after its max value.

* NOTE! *

■ Certain program adjustments have a fast adjustment feature. By holding the Start button down, the values step through quicker.

■ EXIT The Programmable Adjustments mode is exited into Audits mode, by pressing the Test button once.
### PROGRAMMABLE ADJUSTMENTS QUICK REFERENCE TABLE (V 1.0)

<table>
<thead>
<tr>
<th>CODE</th>
<th>PROGRAMMABLE ADJUSTMENTS</th>
<th>OPTIONAL VALUES</th>
<th>DEFAULT SETTINGS</th>
<th>FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>1 – 10</td>
<td>1, 2, 3…10</td>
<td>1</td>
<td>Coin Slot 1 – Coins / Credit</td>
</tr>
<tr>
<td>P02</td>
<td>1 – 10</td>
<td>1, 2, 3…10</td>
<td>1</td>
<td>Coin Slot 1 – Games / Credit</td>
</tr>
<tr>
<td>P03</td>
<td>ON or OFF</td>
<td>ON or OFF</td>
<td>ON</td>
<td>Attract Mode Sound</td>
</tr>
<tr>
<td>P04</td>
<td>20s – 90s</td>
<td>20, 21, 22, …90</td>
<td>45</td>
<td>Game Duration</td>
</tr>
<tr>
<td>P05</td>
<td>5 – 100</td>
<td>5, 6,7 …100</td>
<td>5</td>
<td>Number of Points / Ticket</td>
</tr>
<tr>
<td>P06</td>
<td>0 – 10</td>
<td>0, 1, 2 …10</td>
<td>4</td>
<td>Minimum Tickets payout</td>
</tr>
<tr>
<td>P07</td>
<td>OFF, P06 – 100</td>
<td>OFF, P06, …100</td>
<td>10</td>
<td>Maximum Tickets payout</td>
</tr>
<tr>
<td>P08</td>
<td>OFF – ON</td>
<td>OFF, ON</td>
<td>ON</td>
<td>Ticket Option</td>
</tr>
<tr>
<td>P09</td>
<td>0 – 20s</td>
<td>0,1,2,3…20 s</td>
<td>0</td>
<td>Ball gate time out</td>
</tr>
</tbody>
</table>

### PROGRAMMABLE ADJUSTMENTS DETAILED

- **P01 = COIN MECH 1: NUMBER OF COINS PER CREDIT**
  (Default 01) (Adjustable 1 – 10)

  This sets the number of coins that need to be inserted into coin mechanism 1, for each credit. It can be set to either of 1, 2, 3… to 10 coins for one credit.

- **P02 = COIN MECH 1: NUMBER of PLAYS PER CREDIT**
  (Default 01) (Adjustable 1 – 10)

  This sets the number of games for each credit inserted into coin mechanism 1. It can be set to either of 1, 2, 3… to 10 plays for each credit.

- **P03 = ATTRACT MODE SOUND**
  (Default ON) (Adjustable ON or OFF)

  This adjustment turns the attract mode sound **ON** or **OFF**. This is the sound and music that the game generates to attract customers when it is not being played.

- **P04 = GAME DURATION**
  (Default 45s) (Adjustable 20s – 90s)

  This variable sets the number of seconds the game can be played per play. It is adjustable from 20s to 90s per play.

- **P05 = NUMBER OF POINTS PER TICKET**
  (Default 5) (Adjustable 5 – 100)

  This setting sets the number of points a player must collect to win ONE ticket. The adjustment values are from 5 to 100.
- **P06 = MINIMUM TICKETS PAYOUT**  
  (Default 5) (Adjustable 0 – 10)  
  This variable sets the minimum number of tickets the machine dispenses per play, regardless to how many points a player has collected. It is adjustable from 0 to 10.

- **P07 = MAXIMUM TICKETS PAYOUT**  
  (Default 10) (Adjustable OFF, P06 – 100)  
  This adjusts the maximum number of tickets paid out per play, regardless to how many points a player has collected. The minimum value of this setting is the value of program setting P06. When sets to OFF, the machine will have no maximum value for dispensing tickets and will dispense tickets according to the points a player has collected and program setting P05.

  *NOTE!*
  - The maximum number of points a player can collect per play is 999. When that value is reached in a play, the score will stop incrementing.
  - If P 6 is set to 0, then the minimum value of P 7 is 1.

- **P08 = TICKET OPTION**  
  (Default ON) (Adjustable OFF – ON)  
  This adjusts how the ticket is dispense the default set to ON this mean machine will able to dispense ticket, when set to OFF machine will not be able to dispense any ticket at all.

- **P09 = BALL GATE TIME OUT**  
  (Default 0) (Adjustable 0 – 20 s)  
  This adjust how the ball gate time out closest before the end of a game the default set to 0 this mean machine will close the gate at the end of a game, the value of 1s is the shortest gate closest and the longest is 20 s before the game ends.
AUDITS MODE

The Audits Mode allows the operator to view statistics in all areas of the Game Play. This enables the operator to make calculated adjustments and “Fine Tune” the machine to maximize earning potential. The Audits mode stores bookkeeping of the games processed since the last game audits reset. While in this mode, the game audits can also be reset to zero.

The Princess Castle has Seventeen Audits that can be viewed in this mode. They are A01 to A17 and their codes and values are displayed alternatively during the Audit Mode.

Example: Code A01 will be displayed as A1 and a value of 421 as 421 on the 3-digit display.
Or it will display large values like 21589 as 21 and 589 on the 3-digit display.

AUDITS MODE DIAGRAM

<table>
<thead>
<tr>
<th>PROGRAMMABLE ADJUSTMENTS MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESS TEST</td>
</tr>
<tr>
<td>AUDITS MODE</td>
</tr>
<tr>
<td>PRESS SERVICE</td>
</tr>
<tr>
<td>421</td>
</tr>
<tr>
<td>Displays CODE then VALUE</td>
</tr>
<tr>
<td>or if value &gt; 999</td>
</tr>
<tr>
<td>Displays CODE, upper VALUE</td>
</tr>
<tr>
<td>Then lower VALUE</td>
</tr>
<tr>
<td>PRESS SERVICE</td>
</tr>
<tr>
<td>21</td>
</tr>
<tr>
<td>Loops back to A01</td>
</tr>
<tr>
<td>A17</td>
</tr>
<tr>
<td>Press and hold START button</td>
</tr>
<tr>
<td>for 5 seconds to reset All Audits</td>
</tr>
<tr>
<td>PRESS TEST</td>
</tr>
<tr>
<td>GAME HISTORY MODE</td>
</tr>
</tbody>
</table>

* NOTE! *
- For Audit values that are greater than 4 digits the audits’ values will be displayed in two steps.
- The first number, which is displayed as 21, has leading dash symbols
- The second value is displayed as 589, which has no dash symbols.
- In this example the final value is 21,589.
AUDIT PROCEDURE

**ENTER**  The Audits mode is entered from Programmable Adjustments mode by pressing the Test button once or from Attract mode by pressing the Test button five times. ☐☐☐ Will be displayed on the 3-digit display.

**SELECT**  The green Service button is pressed for advancing each step through the set of audits configurations, starting from the ☐☐☐ display, A01 being the first step, continuing through to A17, and then looping again from A01 to A17 until the mode is exited.

**RESET**  The entire set of user audits can be reset during any of the audit configurations, by holding the Start button for longer than 5 seconds. The displays will be cleared while still holding the button pressed and will return to the same audit step after releasing the button. The value of all audits will be reset to “00 000”.

**EXIT**  The Audits mode is exited into Game History mode, by pressing the Test button once.

* NOTE! *

- **ALL**  Audits will **STOP INCREMENTING** when the “Total Number of Games Played”, audit A01, reaches 60,000.

- To restart the audits they must be reset to 00 000 by holding The Start button for longer than 5 seconds while in audits mode.
AUDITS QUICK REFERENCE TABLE

<table>
<thead>
<tr>
<th>CODE</th>
<th>DISPLAY</th>
<th>AUDIT FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>A-1</td>
<td>Total Number of Games Played</td>
</tr>
<tr>
<td>A02</td>
<td>A-2</td>
<td>Total Coins in Coin Mechanism 1</td>
</tr>
<tr>
<td>A03</td>
<td>A-3</td>
<td>Total Number of Service Credits</td>
</tr>
<tr>
<td>A04</td>
<td>A-4</td>
<td>Total Number of Balls Exit Through Target 1 (Flashing)</td>
</tr>
<tr>
<td>A05</td>
<td>A-5</td>
<td>Total Number of Balls Exit Through Target 1 (Not Flashing)</td>
</tr>
<tr>
<td>A06</td>
<td>A-6</td>
<td>Total Number of Balls Exit Through Target 2 (Flashing)</td>
</tr>
<tr>
<td>A07</td>
<td>A-7</td>
<td>Total Number of Balls Exit Through Target 2 (Not Flashing)</td>
</tr>
<tr>
<td>A08</td>
<td>A-8</td>
<td>Total Number of Balls Exit Through Target 3 (Flashing)</td>
</tr>
<tr>
<td>A09</td>
<td>A-9</td>
<td>Total Number of Balls Exit Through Target 3 (Not Flashing)</td>
</tr>
<tr>
<td>A10</td>
<td>A10</td>
<td>Total Number of Balls Exit Through Target 4 (Flashing)</td>
</tr>
<tr>
<td>A11</td>
<td>A11</td>
<td>Total Number of Balls Exit Through Target 4 (Not Flashing)</td>
</tr>
<tr>
<td>A12</td>
<td>A12</td>
<td>Total Number of Balls Exit Through Target 5 (Flashing)</td>
</tr>
<tr>
<td>A13</td>
<td>A13</td>
<td>Total Number of Balls Exit Through Target 5 (Not Flashing)</td>
</tr>
<tr>
<td>A14</td>
<td>A14</td>
<td>Total Number of Balls Exit Through Target 6 (Flashing)</td>
</tr>
<tr>
<td>A15</td>
<td>A15</td>
<td>Total Number of Balls Exit Through Target 6 (Not Flashing)</td>
</tr>
<tr>
<td>A16</td>
<td>A16</td>
<td>Ball Gate Error</td>
</tr>
<tr>
<td>A17</td>
<td>A17</td>
<td>Target Jam</td>
</tr>
</tbody>
</table>
AUDITS DETAILED

■ **A01 = TOTAL NUMBER OF GAMES PLAYED**

This Audit displays the total number of Games Played since the audits were last cleared.

*NOTE!* All Audits will **STOP INCREMENTING** when the “Total Number of Games Played”, audit A01, reaches 60,000.

To restart the audits they must be reset to 00 000 by holding the Start button for longer than 5 seconds while in audits mode.

■ **A02 = TOTAL COINS IN COIN MECHANISM 1**

This Audit displays the total number of coins inserted into coin mechanism 1 since the audits were last cleared.

■ **A03 = TOTAL NUMBER OF SERVICE CREDITS**

This Audit displays the total number of Service Credits since the audits were last cleared. This records the number of credits given by pressing the Service Button on the service panel.

■ **A04 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 1 (FLASHING)**

This Audit displays the total number of exiting balls passed through target 1 as the target flashed.

■ **A05 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 1 (NOT FLASHING)**

This Audit displays the total number of exiting balls passed through target 1 when the target is not flashing.

■ **A06 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 2 (FLASHING)**

This Audit displays the total number of exiting balls passed through target 2 as the target flashed.

■ **A07 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 2 (NOT FLASHING)**

This Audit displays the total number of exiting balls passed through target 2 when the target is not flashing.
- **A08 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 3 (FLASHING)**
  This Audit displays the total number of exiting balls passed through target 3 as the target flashed.

- **A09 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 3 (NOT FLASHING)**
  This Audit displays the total number of exiting balls passed through target 3 when the target is not flashing.

- **A10 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 4 (FLASHING)**
  This Audit displays the total number of exiting balls passed through target 4 as the target flashed.

- **A11 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 4 (NOT FLASHING)**
  This Audit displays the total number of exiting balls passed through target 4 when the target is not flashing.

- **A12 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 5 (FLASHING)**
  This Audit displays the total number of exiting balls passed through target 5 as the target flashed.

- **A13 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 5 (NOT FLASHING)**
  This Audit displays the total number of exiting balls passed through target 5 when the target is not flashing.

- **A14 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 6 (FLASHING)**
  This Audit displays the total number of exiting balls passed through target 6 when the target is flashing.

- **A15 = TOTAL NUMBER OF BALLS EXIT THROUGH TARGET 6 (NOT FLASHING)**
  This Audit displays the total number of exiting balls passed through target 6 when the target is not flashing.
**A16 = TOTAL NUMBER OF BALL GATE ERROR**
This Audit displays the total number of ball gate error.

**A17 = TOTAL NUMBER OF TARGET JAM**
This Audit displays the total number of Target Jam,

* NOTE! *
- LAI Games Customer Support may request from the operator the values of these Manufacturers audits, to help with any service issues.
GAME HISTORY MODE

By using the Game History Mode the operator can view the results of the last five games played. This enables the operator to verify player’s win results.

**Example:** The diagram below shows the game history for the very last game and 5\textsuperscript{th} last game played. **H1P** displays the points collected by player for the very last game played. **H5t** shows the number of tickets paid out for the 5\textsuperscript{th} last game played.

**GAME HISTORY MODE DIAGRAM**

![Game History Mode Diagram]

*NOTE!* Score Histories will be erased if the game is switched off then on. Empty score histories show as - - - on the 3-digit display.
GAME HISTORY PROCEDURE

- **ENTER** The Game History mode is entered from Audits mode by pressing the Test button once or from Attract mode by pressing the Test button six times. HHH will be displayed on the 3-digit display.

- **SELECT** The green Service button is pressed for advancing each step through the set of Game Histories, starting from the HHH display, H1P being the first step, continuing through to H5t, and then looping again from H1P to H5t until the mode is exited.

- **EXIT** The Game History mode is exited into Game Attract mode, by pressing the Test button once.

GAME HISTORY QUICK REFERENCE TABLE

<table>
<thead>
<tr>
<th>CODE</th>
<th>DISPLAY</th>
<th>HISTORY RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1t</td>
<td>H1 t</td>
<td>Number of Tickets for Very Last Game Played</td>
</tr>
<tr>
<td>H1P</td>
<td>H1 P</td>
<td>Number of Points for Very Last Game Played</td>
</tr>
<tr>
<td>H2t</td>
<td>H2 t</td>
<td>Number of Tickets for 2nd Last Game Played</td>
</tr>
<tr>
<td>H2P</td>
<td>H2 P</td>
<td>Number of Points for 2nd Last Game Played</td>
</tr>
<tr>
<td>H3t</td>
<td>H3 t</td>
<td>Number of Tickets for 3rd Last Game Played</td>
</tr>
<tr>
<td>H3P</td>
<td>H3 P</td>
<td>Number of Points for 3rd Last Game Played</td>
</tr>
<tr>
<td>H4t</td>
<td>H4 t</td>
<td>Number of Tickets for 4th Last Game Played</td>
</tr>
<tr>
<td>H4P</td>
<td>H4 P</td>
<td>Number of Points for 4th Last Game Played</td>
</tr>
<tr>
<td>H5t</td>
<td>H5 t</td>
<td>Number of Tickets for 5th Last Game Played</td>
</tr>
<tr>
<td>H5P</td>
<td>H5 P</td>
<td>Number of Points for 5th Last Game Played</td>
</tr>
</tbody>
</table>
**ERRORS AND TROUBLESHOOTING**

If the Game microprocessor detects any problems with the operation of the game, an Error will be displayed on the 3-digit display and the machine will play a voice message. “Please Call the Attendant”. Some error Messages will only be displayed when test mode is entered. Errors are displayed on the displays as **ErrX**, where ‘X’ is the error number, listed as follows:

**ERROR CODE QUICK REFERENCE TABLE**

<table>
<thead>
<tr>
<th>CODE</th>
<th>ERROR DESCRIPTION</th>
<th>SOLUTION</th>
</tr>
</thead>
</table>
| Err1 | TICKET DISPENSE ERROR  
Jammed tickets, no tickets or no ticket notch pulse for longer than 3 seconds. | Clear ticket dispenser jam or replenish tickets. After this, push Test button once to clear error. |
| Err2 | COIN INPUT ERROR  
Coin switches are active for more than 5 seconds | Check coin switches for coin jam and clear the jam. Use the Switch Test mode to check coin switches. Adjust, and/or replace if necessary. |
| Err3 | EEPROM ERROR  
Problem with on-board EEPROM | The main MCU is getting errors reading the EEPROM (24C16 IC on MCU). |
| Err4 | BALL GATE ERROR  
Ball gate switch is not properly closed | Check ball gate switch for jam and clear the jam. Use Switch Test to check gate switch. Press Test button to clear the error and close the gate. |
| Err5 | TARGET SENSOR BLOCKED  
Target sensor are blocked for longer than 3 seconds | Clear Blockage from between target sensors or test sensor using Switch Test. |
TROUBLESHOOTING GAME ERRORS

■ CLEARING GAME ERRORS
Game errors can be cleared, by pushing the test button ONCE. The game will try and check if the error is fixed. If the reason for the error is fixed, the game will continue as normal. If the error is not fixed, the error will remain on the display.

■ Err1 – TICKET ERROR
This error usually occurs if the game has run out of tickets or there is a ticket jam. A less common reason is if the game PCB tries to dispense tickets but doesn’t get a notch pulse for approximately three seconds. Use the Switch Test and test the notch pulse by passing a ticket in and out of the notch sensor an active notch will be display as C1. If the game was out of tickets, replace the tickets, clear the ticket jam and then push the test button once to clear the error. The game will then payout any owed tickets.

■ Err2 – COIN INPUT ERROR
This error occurs if one of the coin switches is closed for more than 5 seconds. The problem can be a coin stuck in the coin switch path or the coin switch is out of adjustment or faulty. Enter Switch Test mode to check the coin mechanisms.

■ Err3 – EEPROM ERROR
This Error is only displayed in test mode and means that the CPU cannot read the EEPROM, or is receiving errors during communication with the EEPROM (The 24C16 IC on the main MCU PCB). This could cause problems with the game audits and program settings. The first thing to do is trying to switch ON and OFF the machine in at least 2 cycles, if message still appear than replace the EEPROM IC Atmel 24C16 on the CPU PCB with the new EEPROM. If still Error massage, this could be a problems with the game audits and program. If this error occurs, send your main MCU PCB to the nearest authorized LAI games dealer for repair.

■ Err4 – BALL GATE ERROR
This error occurs if the ball gate switch is not properly closed after a game is played. Enter Switch Test mode to check the ball gate switch. If C5 is displayed, then the switch is not closed. The problem can be something obstructing the gate/gate switch from closing. Check for ball gate jam and clear the jam.

■ Err5 – TARGET SENSOR BLOCKED
This error usually occurs if the target sensor is blocked or a ball is jammed in the ball exit, blocking the infrared beam of the target sensor for longer than 3 seconds. The sensor can be tested using the switch test. If the sensor is blocked C6, C7, C8, C9, C10 or C11 will be displayed in this test (depends on the target). Clear whatever is blocking the sensor and the error will clear itself. If you cannot find anything blocking the sensor, there could be faulty infrared sensors. The sensor PCB’s should be returned to your nearest LAI Games distributor for repair.
SECTION A: SERVICE INSTRUCTIONS

BE SURE TO READ THE FOLLOWING Carefully before servicing this machine

A
MCU Power Fuse 1.5A QB M205

MCU Control Fuses 5A QB M205

Main AC Supply Fuse 6A QB M205 (Access is from behind the front cabinet)

Main CPU PCB BAFB66A

Switch Mode Power Supply

Sound PCB BAFB106
PARTS DESCRIPTION

- **COIN MECHANISM**
  The coin mechanism is located inside the coin door located to the right on the front of the machine.

- **CASH BOX**
  The cash box is located inside the coin door. Access is from the front of the machine.

- **TICKET MECHANISM**
  The ticket mechanism is located inside the ticket door located to the left on the front of the machine.

- **SPEAKERS**
  Two speakers are located to the front of the cabinet inside the ball receiving through. Access is through the ticket and coin doors.

- **GAME CONTROLS**
  Located in front cabinet, when facing the machine. The control panel can be accessed through the coin door.

- **START BUTTON:**
  The Start button is the large red round illuminated button located at the right-hand side of the control panel. This button is used to start a game and for test and program adjustments.

- **SERVICE CONTROLS**
  Located on the service panel mounted on top of the cash box and accessed through the coin door.

  1. **SERVICE BUTTON:** Used to input credits to the game without activating the coin counter, and to perform test procedures in combination with the test button.
  2. **TEST BUTTON:** Used to perform the test mode, in combination with the Service button.
  3. **VOLUME KNOB:** Used to adjust the speaker’s sound
- **POWER CORD**
  The power cord is a standard IEC power cord (as used on computers) that is plugged in to the power inlet socket at the rear of the machine. The power cord can be removed for transport.

- **POWER INLET**
  The power inlet is located at the rear of the control panel cabinet on the left-hand side as viewed from the rear. It is a standard IEC inlet socket.

- **MAINS SWITCH**
  The mains switch is located on the power inlet assembly along with the mains fuse, and IEC inlet socket.

- **FUSES**
  For locations of all fuses refer to Fuses and Fuse location of this manual.

  * WARNING! *
  *Always* turn OFF Mains power and unplugged the game, before replacing any fuses
  *Always* use the correct rated fuse. Refer to for fuse information.

- **7-SEG DISPLAY**
  There is a 3-digit display located on the playfield. Access is through the back of the cabinet.

- **PCB’s**
  For location of all game PCB’s, refer to the Parts Location diagram page of this manual.

- **POWER SUPPLY**
  The power supply is located at the front of the cabinet and is accessed from the front door. It is a 12V 13A switching power supply.

- **TARGET SENSORS**
  All seven target sensors are located on the playfield. Three target sensors are located on the underside of the upper playfield. The other four are located under the lower playfield.

  BAFB84A and BAFB84B
  Sensor PCB
LAMPS

* WARNING! *
Always turn OFF Mains power and unplugged the game, before replacing any lamps.

Always allow time for cooling as Lamps that have been active for a time may still be too hot to touch.

COIN DOOR LAMPS (LED)
The coin door lamps all are 12V/DC or equivalent and can be accessed through the coin door.

BUTTON LAMPS (LED)
The button lamps all are 12V/DC or equivalent and can be accessed through the coin door or back door.

* CAUTION! *
Always replace the lamps with the same or equivalent size, wattage and voltage.
CLEANING AND CHECK UP

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.

Any scratches or marks in the fiberglass or acrylic can be buffed out using car polish or cut and polish.

* CAUTION! *
Do not use solvents on the panels as it may affect the artwork.

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

* WARNING! *
Always turn OFF Mains power and unplugged the game, before cleaning the interior of the machine.

Always after cleaning the cabinet interior, check all harness connectors and restore all loose or interrupted connections.

Regularly check that all the Display and Button Lamps are operating through the Sounds, Lamps and Display Test. Replace any globes that are not operational.
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.
MAIN VOLTAGE ADJUSTMENT

POWER SUPPLY
The Switch Mode Power Supply has a switch to set the mains voltage range. It is located at the rear of the game cabinet, and is accessed via the back door. Use a thin blade screwdriver to move the selector switch to the desired mains voltage (See Diagram Below)
LAI GAMES have installed the 9 way Molex connection on the coin door on every product, this coin options connector should be useable for most of electronic coin system and electronic coin comparators.

Please see below picture to understand the connection setup,

The Coin harness supplied with the game,

End connection to coin will fit to NRI G13 and 2x Electronic Coin Comparator LAI GAMES standard). Other types of coin electronic harnessing can be supplied as requested, please contact your nearest LAI GAMES distributor.
"Quick Release" Ticket Dispenser Manual

The "Quick Release" Ticket Dispenser
- Quick release face plate
- Bottom metal ticket guide
- Foolproof braking system
- Optical sensor dust cover

The Industry Standard
Model DL-1275

Another quality product from Deltronic Labs . . . the industry leader in ticket dispensers.
“Quick Release” Ticket Dispenser

Features

All Models

1. Removable top metal ticket guide
2. Bottom metal ticket guide
3. Ticket advance switch
4. Braking system
5. Brake bracket
6. Optical sensor w/dust cover
7. Ticket stop adjustment
8. Roller tension spring
9. Locating spring
10. "Quick Release" Face Plate

Validation rollers emboss tickets

Deltronic Labs, Inc.
120 Liberty Lane, Chalfont, PA 18914 • 215-997-8616 • FAX 215-997-8606 • www.deltroniclabs.com
Control Board  Rev. 8
DL-1275 with 12V meter output

The dispenser is controlled by the game software. The game turns on the dispenser with a logic high signal and monitors a return notch signal from the ticket dispenser to turn it off. It will dispense as many tickets as game options allow.

NOTES
1. Resistors R4 and diode D6 and the jumper going to pin 1 of the IC are changed for this revision. Note that the current going through the switch and then to pins 1 and 8 of the IC.

2. Resistors R6, R7, and R8 were moved from this schematic. The Rev. 7 schematic shows these resistors, but they were never actually mounted on the board.

3. The unit is shipped from the factory as per this schematic. All triggers the counter whenever tickets are dispensed normally, but not when doing so by pressing the switch. If desired, the unit can be changed so that tickets dispensed by pressing the switch are also counted. Do this by deleting diode D6.

4. The unit can be made to conform to CE specifications by the addition of the components not shown here. If these are desired, please order the CE version and the unit will be shipped with the necessary components.

5. This unit can be configured in a number of ways. Please check our "Full Option" schematic to verify the different configurations. If this schematic is not included with your manuals, contact us for a copy.

6. If the currents are highly unbalanced, the 1.3k shutdown resistor RS can be lowered in value (e.g., 2k7). If more sensitive adjustment, the jumper RS can be replaced with a 2k7 position. And the 1.3k resistor RS can be changed to 1k.
Control Board
Models DL-4-S-S  DL-4-P-S

Note: With logic input components and dotted lines are omitted and Z1 is jumped to Z2.

Model #DL-4-S-S, SW Input
Model #DL-4-P-S, Logic Input.

Note: Enable pulse may be positive or negative by having jumper on TM-4 in proper place.

Note: On PCB TM-4, Rev. 1 & 2, Q1 and Q2 transistors are D40Kt or equivalent.

Deltronic Labs, Inc. 120 Liberty Lane, Chalfont, PA 18914 • 215-997-8616 • FAX# 215-997-9505 • www.deltroniclabs.com
DISCLAIMER

OPERATOR WILL TAKE NOTE.

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(b) Assembling or causing the assembly of the hardware in a manner not authorized by or disclosed in this manual;

(c) Any tampering with, changes to, or modifications of the licensed software that occur after the software leaves LAI GAMES factory that is not made by authorized LAI GAMES personnel and that is directly or indirectly caused by Operator; and

(d) Any tampering with the computer chip/electronic programmable read only memory (EPROM) by or on behalf of Operator that directly or indirectly causes the tamper-indicating holographic seal on the computer chip/EPROM to be broken or damaged in any way.

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WARRANTY

LAi Games warrants its manufactured products for a period of 3 months inclusive of parts and labor from the date of sale.

LAi Games exclusive obligation is to repair any item with any defects as a result of faulty workmanship or materials, providing the defective item or items of equipment are returned to the LAi GAMES distributor from which the machine was purchased.

LAi Games shall have no obligation to make repairs necessitated by negligence or interference to any component by any unauthorized personal. This will automatically void any existing warranty.

IF MAKING A WARRANTY CLAIM:

(a) A Copy of the sales invoice must accompany the claim.
(b) To and from Transport and freight costs are not covered by the warranty.
(c) Warranty is not transferable with the sale of a machine from one owner to another.

LAi Games

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Tech. Support: support@mleisure.co.id
Website: www.laigames.com

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