OPERATORS MANUAL
Version 2
SPEED OF LIGHT

PLEASE
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.
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

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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.

MACHINE INSTALLATION and INSPECTION
When installing and inspecting Speed of Light, pay attention to the following points to ensure that players can enjoy the game safely.

- Always turn Off mains power before removing safety covers to work on the machine, and refit all safety covers when work is completed.
- When unplugging the game from an electrical outlet, grasp the plug, not the line cord.
- Always connect 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.
- 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 use any fuse that does not meet the specified rating.
- Before switching the machine on be sure to check that it has been set on the correct voltage for your area.
- Check that the 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.
- Only qualified personnel should inspect or test the integrated circuit (IC) logic PC Boards.
INTRODUCTION
Congratulations on your purchase of Speed of Light, the competitive, speed and reflex game by LAI Games. 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 player has to press randomly illuminated lights on the button matrix. Six lights are illuminated at once. Each time one is pressed, it goes out and another is illuminated. Gameplay is fast and frantic, with the aim to get as high a score as possible within a designated time.

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 Speed of Light cabinet
- Keys
- 2 x coin door keys
- 2 x back door keys
- 2 x ticket door key
- Operator’s manual
- IEC Power Cord (In cash box)
- Platform feet   (In cash box)
- 5 x Spare buttons (In Cash box)
- Bonus and Gameplay signage

SPECIFICATIONS
DIMENSIONS
- Weight: 250 kg   (551 lb)
- Width: 187cm   (74”)
- Depth: 164cm   (65”)
- Height: 237cm   (93”)
- Power: Maximum 1.2 - 1.3 A (220AC) 2.4 - 2.6 A (110AC)

ELECTRIC SUPPLY
The game has the option to operate on a 100V, 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.
To unpack *Speed of Light*, first remove the exterior carton.

The header and platform are both located securely inside the Rear Bar mounting.

Remove the 9 bolts from the Rear Bars (4 at each bar top, one at the base), then remove the Rear Bars.

Carefully take out the platform and the header. Now re-bolt the Rear Bars to the main cabinet.

Additional bolts are required at the base of the Rear Bars, but this is done later in the assembly.
Open and remove the back panel on the middle section of the header so you have access to the header cables. These cables are to be connected to the cable coming up through the center two tubes in the button matrix. Position the header on top brackets and secure with the 10 bolts supplied. Leave the bolts loose until all are fitted, then tighten them. Connect the left and right speakers, score display, and LED connectors from inside of the header, then replace the back panel on the Header and tighten all the bolts.
THE PLATFORM

The cabinet will arrive with the platform separate from the cabinet. The platform feet are located inside the coin box. Attach them, then position the platform as per drawing 1.

Adjust the feet on the platform to allow the bars to slide into the front of the cabinet as pictured. Slide the platform close to the cabinet and plug together the wiring connectors (Platform Wiring) then slide the platform fully into place. Once the platform and the cabinet are together, secure the platform from the back of cabinet first. Use the two bolts at the very back to pull the platform into the correct position before installing the remaining bolts that secure the platform and cabinet. Then add the side brace plates, and tighten everything up to finish the assembly.
To attach the wing signs, first bolt each wing to the external side, and top corner brackets as illustrated. Next, bolt the top of the wing to the back of the bonus header bracket, using the spacer provided.
GAMEPLAY

OBJECTIVE
Players hit as many illuminated buttons as they can within the designated time limit. Bonus points are awarded for hitting the lit buttons continuously at a high speed. At the end of normal game time, there is a three-second bonus round in which all the buttons are illuminated at once, and the player hits as many as they can.

HOW TO PLAY
- Pay to play.
- Select your game mode (1 player, 2 player, link mode)
- Hit the lit buttons as fast as you can within the time limit
- Hit as many buttons as you can in the three-second bonus round
- Win tickets based on:
  - Score (points per ticket)
  - Beating the high score
  - Reaching the top score of 999
- Or win bonus credits based on:
  - Beating the high score
  - Reaching the top score of 999

TWO PLAYER
- Players stand shoulder to shoulder and play on half of the playfield each
- The winner is the player with the highest score at the end of the game
- The machine pays out the sum of both players ticket winnings at once
- Winner takes all, or they can divide the tickets as they see fit
- If card swipe system is installed, there is an option that allows the sum of both players tickets go to the winners card (Note: two card swipers are needed)
- High score/999 bonuses can also be won in two player

CHEATING
The software is programmed to identify when two or more people are playing a one player game. Once identified, the following occurs:
- The speed bonus per button press (usually 1-5 points) is disabled, and the players receive 1 point per button press.
- Their score, if high, is not displayed as the day’s high score
- They do not receive any bonuses for beating the high score or reaching a score of 999
OPERATION

The “Speed of Light” game has five operational modes: Attract mode, Play mode, Test mode, Programmable Adjustments Mode and Audits Mode.

OPERATIONAL DIAGRAM

ATTRACTION MODE

PRESS TEST

PLAY MODE

PRESS TEST

VIEW ERRORS - Press again to clear

PRESS TEST

Software Version Number

PRESS TEST

SOUND, LAMPS & DISPLAY TEST

The display counts, all lamps are flashing and sound is played

PRESS TEST

SWITCH INPUT Test

No INPUT is active

PRESS TEST

TICKET notch

PRESS TEST

SERVICE switch

PRESS TEST

RUN Test

PRESS SERVICE

PRESS SERVICE

Dispensing Ticket

• Press Service button to activate and dispense a ticket

• Ticket dispenser test function

PRESS TEST

PROGRAMMABLE ADJUSTMENTS MODE

PRESS TEST

AUDITS MODE

PRESS TEST

GAME HISTORY MODE
**ATTRACTION 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**
*Speed of Light* 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**
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**
Free play can be set in one of three ways:

- From attract mode by holding the green service button for longer than five seconds (this is reset to normal play when the machine is turned off and back on)
- Or by setting the P-01 setting to *FrEE* (this is fixed, and stays set to free until this setting is changed)
- 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.

**ERRORS**
Button, ticket and machine errors can be alerted in multiple ways. A voiceover during the attract mode, a silent red light flashing on the front of the machine, or both. The silent red button is the default setting. To identify the error in this mode, press the red test button once. To clear the error, press the red test button once more. The game will check if the error is fixed. If the reason for the error is gone, the game will continue as normal. If the error has not been fixed, error will remain on the display.

<table>
<thead>
<tr>
<th>CODE</th>
<th>ERROR DESCRIPTION</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Err1</td>
<td>TICKET ERROR - Jammed tickets, no tickets, or no ticket notch pulse for longer than 3 seconds</td>
<td>Clear ticket dispenser jam or replenish tickets.</td>
</tr>
<tr>
<td>Err2</td>
<td>GAME MODE BUTTON JAM - active for longer than 30 seconds</td>
<td>Check button function using switch test</td>
</tr>
<tr>
<td>Err3</td>
<td>EEPROM ERROR - Problem with on-board EEPROM</td>
<td>The main MCU is getting errors reading the EEPROM (24C16 IC on MCU).</td>
</tr>
<tr>
<td>Err4</td>
<td>PLAYFIELD BUTTON ERROR - active for longer than 30 seconds</td>
<td>Check button function using switch test and clear the jam button or faulty switch</td>
</tr>
</tbody>
</table>

**Err1 - TICKET ERROR**
This error usually occurs if the game has run out of tickets or there is a ticket jam. If the game was out of tickets, replace them, and the error will automatically clear as well as feed any outstanding payout. Less common reason is if the game PCB tries to dispense tickets but does not get a notch pulse for approximately three seconds. Use the switch test function to
detect a notch pulse by passing a ticket in and out of the notch sensor. An active notch will be display as C1.

**Err2 - START/STOP BUTTON JAMMED**
This error is usually displayed if the Start/Stop button is active for longer than 30 seconds. Use the switch test function to clarify. An active button will be display as C3.

**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 23C16 IC on the main MCU PCB). This could cause problems with the game audits and program settings.

If this occurs, firstly try switching the machine OFF and ON for at least 2 cycles. If the message still appears, replace the EEPROM IC Atmel 24C16 on the CPU PCB with a new EEPROM. If the error message remains, send your main MCU PCB to the nearest authorized LAI Games dealer for repair.

**Err4 – PLAYFIELD BUTTON ERROR**
This error is usually displayed if one or more buttons are jammed, or a button switch is faulty. Test the button function by using both the Run Test and Switch Test. Switch Test should display numbers between C11 – C40.
TEST MODE

The *Speed of Light* test mode allows you to run sound/lamp/display, switch, and run tests. Cycle through these test modes with the red test button.

*NOTE!*

- Entering Test Mode will clear any credits remaining in the game.

GAME SWITCHES

All game switches have a code from C1 to C40 as tabled below. By activating any of the switches, their code will be displayed on the 4-digit display.

If there are no switches active, C - 00 be displayed.

If several switches are activated simultaneously, the display will consecutively show their codes, indicating which switches are active.

<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-00</td>
<td>No Switch Active</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>C-01</td>
<td>Ticket Notch 1 Active</td>
<td>Ticket Door (if fitted)</td>
</tr>
<tr>
<td>C2</td>
<td>C-02</td>
<td>Service Switch Active</td>
<td>Service Panel</td>
</tr>
<tr>
<td>C3</td>
<td>C-03</td>
<td>Player 1 Start Button Active</td>
<td>Control Panel</td>
</tr>
<tr>
<td>C4</td>
<td>C-04</td>
<td>Coin 1 Switch Active</td>
<td>Coin Door</td>
</tr>
<tr>
<td>C5</td>
<td>C-05</td>
<td>Coin 2 Switch Active</td>
<td>Coin Door</td>
</tr>
<tr>
<td>C6</td>
<td>C-06</td>
<td>Ticket Notch 2 Active</td>
<td>Only Used For Card System Mode</td>
</tr>
<tr>
<td>C7</td>
<td>C-07</td>
<td>Not Used</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>C-08</td>
<td>Not Used</td>
<td></td>
</tr>
<tr>
<td>C9</td>
<td>C-09</td>
<td>Not Used</td>
<td></td>
</tr>
<tr>
<td>C10</td>
<td>C-10</td>
<td>2 Player Start /ink Button Active</td>
<td>Control Panel</td>
</tr>
<tr>
<td>C11 – C40</td>
<td>Playfield Button (See Diagram)</td>
<td>Playfield</td>
<td></td>
</tr>
</tbody>
</table>

PLAYFIELD DIAGRAM (C--)

![Playfield Diagram](image-url)
**PROGRAMMABLE ADJUSTMENTS (P-Settings) REFERENCE**

**TABLE V1.5.0**

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Range</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>Coin 1: number of coins</td>
<td>FrEE..20</td>
<td>1</td>
</tr>
<tr>
<td>P02</td>
<td>Coin 1: number of credits</td>
<td>1..20</td>
<td>1</td>
</tr>
<tr>
<td>P03</td>
<td>Coin 1: Activate multiple bonus pricing</td>
<td>On/Off</td>
<td>Off</td>
</tr>
<tr>
<td>P3-1</td>
<td>Coin 1: Number of coins bonus pricing level 1</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P3-2</td>
<td>Coin 1: Number of bonus credits at pricing level 1</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P3-3</td>
<td>Coin 1: Number of Coins for Bonus Pricing Level 2</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P3-4</td>
<td>Coin 1: Number of Bonus Credits at Bonus Pricing Level 2</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P3-5</td>
<td>Coin 1: Number of Coins for Bonus Pricing Level 3</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P3-6</td>
<td>Coin 1: Number of Bonus Credits at Bonus Pricing Level 3</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P04</td>
<td>Coin 2: number of coins</td>
<td>1..20</td>
<td>1</td>
</tr>
<tr>
<td>P05</td>
<td>Coin 2: number of credits</td>
<td>1..20</td>
<td>1</td>
</tr>
<tr>
<td>P06</td>
<td>Coin 2: Activate Multiple bonus pricing,</td>
<td>On/Off</td>
<td>Off</td>
</tr>
<tr>
<td>P6-1</td>
<td>Coin 2: Number of Coins for Bonus Pricing Level 1</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P6-2</td>
<td>Coin 2: Number of Bonus Credits at Bonus Pricing Level 1</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P6-3</td>
<td>Coin 2: Number of Coins for Bonus Pricing Level 2</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P6-4</td>
<td>Coin 2: Number of Bonus Credits at Bonus Pricing Level 2</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P6-5</td>
<td>Coin 2: Number of Coins for Bonus Pricing Level 3</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P6-6</td>
<td>Coin 2: Number of Bonus Credits at Bonus Pricing Level 3</td>
<td>Off,1...99</td>
<td>Off</td>
</tr>
<tr>
<td>P07</td>
<td>Attract Mode sound</td>
<td>On/Off</td>
<td>On(1)</td>
</tr>
<tr>
<td>P08</td>
<td>Beat the High Score: bonus type</td>
<td>0 – None</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – Credit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 – Tickets</td>
<td></td>
</tr>
<tr>
<td>P09</td>
<td>Beat the High Score: Number of bonus credits or tickets</td>
<td>Credits 1, 2, 3...10</td>
<td>20 tickets or 1 credit</td>
</tr>
<tr>
<td></td>
<td>1 – 10 credits (P08 setting on Credits)</td>
<td>Tickets 1, 2, 3...100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – 100 tickets (P08 setting on Tickets)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P10</td>
<td>Reach a 999 Score: Bonus type</td>
<td>0 – None</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – Credit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 – Tickets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Credits</td>
<td>Tickets</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| P11| Reaching a 999 score: Number of bonus credits or tickets for reaching a score of 999  
1 – 10 credits (P10 setting on Credits)  
1 – 100 tickets (P10 setting on Tickets) | 1, 2, 3...10 | 1, 2, 3...100 | Default P-Setting give 15-20 ticket payout average (50c play, 1c ticket) |
| P12| Ticket Payout: Number of points per ticket                                   | 1 ... 100 | 20      |                                                |
| P13| Ticket Payout: Minimum ticket payout                                          | 0..30   | 8       |                                                |
| P14| Ticket Payout: Maximum ticket payout                                          | No, (P13) ... 100 | No (No Max) |                                                |
| P15| Ticket Payout: Pay tickets on free mode                                      | On/Off | Off     |                                                |
| P16| Default high score                                                           | 50-700  | 500     |                                                |
| P17| Current high Score                                                           | (P16)...990 | 500     |                                                |
| P18| Retain the High Score when game is turned off/on                             | On/Off | On(1)   |                                                |
| P19| Ticket payout                                                                | On/Off | On      |                                                |
| P20| Game linking type (optional)                                                  | 0- None 1- Master 2- Slave | 0 |                                                |
| P21| Error message option                                                         | 1..4    | 4       |                                                |
| P22| Combine coin1 and coin2                                                       | On, Off | On      |                                                |
| P23| 2 Player Game - one credit                                                   | On, Off | Off     |                                                |
| P24| Card system Mode (2 Swipers and 2 Ticket outputs)                            | On, Off | Off     |                                                |
| P25| Competition mode                                                             | Off, 1...4 | Off   |                                                |

**Note:** Default P-Setting give 15-20 ticket payout average (50c play, 1c ticket)
PROGRAMMABLE ADJUSTMENTS DETAILED

- **P01 – Coin 1 – Number of coins per credit** *(Default 01, adjustable FrEE – 20)*
  This sets the number of coins that need to be inserted into coin mechanism one, for each credit. It can be set between 1 to 20 coins for one credit. The default setting is 1. Setting P01 to “FrEE” enables free play mode. This stays active when the machine is switched on and off.

- **P02 – Coin 1 – Number of game plays per credit** *(Default 01, adjustable 1 – 20)*
  This sets the number of games for each credit inserted into coin mechanism 1. This can be set from 1 to 20 plays for each credit. The default setting is 1.

- **P03 – Coin 1 - Activate multiple bonus pricing** *(Default OFF adjustable ON – OFF)*
  This turns on the multiple bonus credit system and activates the settings for up to 3 bonus levels on coin mechanism 1. It can be set to ON or OFF. The default setting is “OFF”. This means that multiple bonuses is disabled. If set to “ON”, the multiple bonus setting will be active, and open the sub-menu P03-1 to P03-6.

Note: Settings P03 and P03-1 to P03-6 are only used for the setting of bonus credit levels. For example if a setting like this is required:

- $0.50 = 1 play
- $1.00 = 3 plays
- $2.00 = 7 plays
- $5.00 = 20 plays

- **P03-1 – Coin 1- Number of coins needed to reach bonus credit level 1** *(Default OFF, adjustable OFF-99)*
  This sets the number of coins (or bills) that need to be inserted into coin mechanism 1 to reach the bonus credit level 1. It can be set to either OFF for no bonus, or 1 to 99 coins.

- **P03-2 – Coin 1- Number of bonus credits given at bonus level 1** *(Default OFF adjustable OFF-99)*
  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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”. This means that P03-3 will not open.

- **P03-3 – Coin 1- Number of coins needed to reach bonus credit level 2** *(Default OFF, adjustable OFF-99)*
  This sets the number of coins (or bills) that need to be inserted into coin mechanism 1 to reach the bonus credit level 2. It can be set to either OFF for no bonus, or 1 to 99 coins.

- **P03-4 – Coin 1- Number of bonus credits given at bonus level 2** *(Default OFF adjustable OFF-99)*
  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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”. This means

- **P03-5 – Coin 1- Number of coins needed to reach bonus credit level 3** *(Default OFF, adjustable OFF-99)*
  This sets the number of coins (or bills) that need to be inserted into coin mechanism 1 to reach the bonus credit level 3. It can be set to either OFF for no bonus, or 1 to 99 coins.
• **P03-6 – Coin 1- Number of bonus credits given at bonus level 3** *(Default OFF adjustable OFF-99)*

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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”.

**BONUS CREDIT EXAMPLES**

<table>
<thead>
<tr>
<th>Examples</th>
<th>(Base price $0.25c)</th>
<th>(Base Price $0.50c)</th>
<th>(Base Price $0.50c)</th>
<th>(Base Price $1.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Setting Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 play</td>
<td>$0.25c</td>
<td>1 play</td>
<td>$0.50c</td>
<td>1 play</td>
</tr>
<tr>
<td>3 plays</td>
<td>$0.50c</td>
<td>3 plays</td>
<td>$1.00</td>
<td>3 plays</td>
</tr>
<tr>
<td>7 plays</td>
<td>$1.00</td>
<td>7 plays</td>
<td>$2.00</td>
<td>8 plays</td>
</tr>
<tr>
<td>($0.25c coins or DBA set on $0.25c pulses)</td>
<td>($0.25c coins or DBA set on $0.25c pulses)</td>
<td>($0.25c coins or DBA set on $0.25c pulses)</td>
<td>22 plays</td>
<td>$5.00</td>
</tr>
<tr>
<td>P01 / P04</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>P02 / P05</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>P03 / P06</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>P3-1 / P6-1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>P3-2 / P6-2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>P3-3 / P6-3</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>P3-4 / P6-4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>P3-5 / P6-5</td>
<td>OFF</td>
<td>OFF</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>P3-6 / P6-6</td>
<td>OFF</td>
<td>OFF</td>
<td>12</td>
<td>8</td>
</tr>
</tbody>
</table>

• **P04 – Coin 2 – Number of coins per credit** *(Default 01, adjustable 1 – 20)*

This sets the number of coins that need to be inserted into coin mechanism 2, for each credit. It can be set between 1 to 20 coins for one credit. The default setting is 1.

• **P05 – Coin 2 – Number of game plays per credit** *(Default 01, adjustable 1 – 20)*

This sets the number of games for each credit inserted into coin mechanism 2. This can be set from 1 to 20 plays for each credit. The default setting is 1.
• P06 – Coin 2 – **Activate coin 2 multiple bonus pricing** *(Default OFF adjustable ON – OFF)*

This turns on the multiple bonus credit system and activates the settings for up to 3 bonus levels on coin mechanism 2. It can be set to ON or OFF. The default setting is “OFF”. This means that multiple bonuses is disabled. If set to “ON”, the multiple bonus setting will be active, and open the sub-menu P06-1 to P06-6.

Note: Settings P06-1 to P06-6 set the bonus credit levels. For example:
- $0.50 = 1 play
- $1.00 = 3 plays
- $2.00 = 7 plays
- $5.00 = 20 plays

• P06-1 – Coin 2 – **Number of coins needed to reach bonus credit level 1** *(Default OFF, adjustable OFF-99)*

This sets the number of coins (or bills) that need to be inserted into coin mechanism 2 to reach the bonus credit level 1. It can be set to either OFF for no bonus, or 1 to 99 coins.

• P06-2 – Coin 2 – **Number of bonus credits given at bonus level 1** *(Default OFF adjustable OFF-99)*

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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”. This means that P06-3 will not open.

• P06-3 – Coin 2 – **Number of coins needed to reach bonus credit level 2** *(Default OFF, adjustable OFF-99)*

This sets the number of coins (or bills) that need to be inserted into coin mechanism 2 to reach the bonus credit level 2. It can be set to either OFF for no bonus, or 1 to 99 coins.

• P06-4 – Coin 2 – **Number of bonus credits given at bonus level 2** *(Default OFF adjustable OFF-99)*

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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”. This means

• P06-5 – Coin 2 – **Number of coins needed to reach bonus credit level 3** *(Default OFF, adjustable OFF-99)*

This sets the number of coins (or bills) that need to be inserted into coin mechanism 2 to reach the bonus credit level 3. It can be set to either OFF for no bonus, or 1 to 99 coins.

• P06-6 – Coin 2 – **Number of bonus credits given at bonus level 3** *(Default OFF adjustable OFF-99)*

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. It can be set either to OFF, or from 1 to 99 bonus credits. The default setting is “OFF”. This means

• P07 – Attract Mode Sound *(Default ON)*

This adjustment turns the **attract mode sound ON** or OFF. This is the sound and music that the game generates to attract customers when not being played. The music will loop approximately every 3 minutes.
• P08 – Beat high score bonus type (Default tickets)
This is the type of bonus awarded to the player for beating the high score. It can be set to none, credits, or tickets.

• P09- Number of bonus credits or tickets for beating the high score (Default, 20 tickets)
This is the number of tickets or credits awarded to the player for beating the high score and is adjustable 1-100 is P08 is set for Tickets or 1-10 if P08 is set for Credits

• P10- Reach score of 999, bonus type (Default, tickets)
This is the type of bonus awarded to the player for reaching 999. It can be set to none, credits, or tickets.

• P11- Number of bonus credits or tickets for reaching a score of 999 (Default, 20 tickets)
This is the number of tickets or credits awarded to the player for reaching a score of 999 and is adjustable 1-100 is P10 is set for Tickets or 1-10 if P10 is set for Credits.

• P12- Number of points per ticket (Default, 20)
This is the number of points the player must score to accumulate each ticket and it is adjustable 1-100.

• P13- Minimum ticket payout (Default, 8)
This is the minimum number of tickets that will be paid out, no matter the score the player reaches. It is adjustable from 0 to 30.

• P14- Maximum ticket payout (Default, no max)
This is the maximum number of tickets that will be paid out to the player. It is adjustable from no (No Maximum) to 100 tickets.

• P15- Pay out tickets on free mode (Default Off)
This is whether tickets are paid out when the machine is set to free mode and can be set to on or off.

• P16- Default high score (Default, 500)
This is the high score the machine starts with, and resets to if P18 is set to off, it is adjustable from 50 to 700.

• P17- Current high Score (Default, 500)
This setting is used to manipulate the current high score and the score can be change up or down and is adjustable down to the P16 setting and up to 990.

• P18- Memorise the High Score (Default, on)
This sets whether or not the machine remembers the last high score when switched off.

• P19- Ticket payout (Default, on)
This sets ticket payouts on or off.

• P20- Game linking type (Default, 0 none) (optional)
This sets the machine to either master or slave when linked with another Speed of Light machine. It can be either 0 (no linking), 1 (Master) or 2 (Slave).
• **P21- Error message option** *(Default, 4)*
  This sets the manner in which errors are alerted. The default silently flashes the red light on the front of the machine. It is adjustable from 1-4 as per the table below.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Voice Over</th>
<th>4 Digit Display</th>
<th>Red Lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Played</td>
<td>Displayed</td>
<td>Flash</td>
</tr>
<tr>
<td>2</td>
<td>Played</td>
<td>Will display when test button pressed.</td>
<td>Flash</td>
</tr>
<tr>
<td>3</td>
<td>Not Played</td>
<td>Displayed</td>
<td>Flash</td>
</tr>
<tr>
<td>4</td>
<td>Not Played</td>
<td>Will display when test button pressed.</td>
<td>Flash</td>
</tr>
</tbody>
</table>

• **P22- Common coin** *(Default, 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. Example: This is often used with a DBA set on 25c pulses and 25c coin mech.

• **P23- Double player - one credit** *(Default, off)*
  This allows the two-player mode to be played with just one credit instead of the default 2 credits.

• **P24- Card system** *(Default, off)*
  This allows splitting of the coin inputs for 2 player games, allowing the winner of a 2-player game to be credited their winnings. This mode requires two card swipers installed on the game and the Card system wired to the 2nd Ticket Dispense connector.

• **P25- Competition mode** *(Default, off. Adjustable 1-5 )*
  This setting allows for adjustment of the bonus ramp for in store competitions. Exceptional players may be able to reach 999 on a regular basis. By adjusting this setting, it can be assured players never reach 999, and thus the winner of a tournament can be established. The settings (1-5) represent the max points per button press. The recommended setting for a competition is 3.
**AUDITS MODE**

The *Audits Mode* provides statistics on all areas of gameplay. This enables the operator to make calculated adjustments and fine tune the machine to maximize earning potential. The *Audits Mode* stores records of the games played since the audits were last reset. While in this mode, the game audits can be reset to zero by holding down the 1 Player Start button for longer than 5 seconds.

*Speed of Light* has a total of 40 audits that can be viewed. They are A01 to A40 and their codes and values are displayed alternatively on the 4-digit credit display. For example, code A01 would be displayed as A01, and a value of 421 as 421.

Large values such as 21589 are displayed as 2158 and 9.

---

**ENTER AUDITS MODE**

The *Audits Mode* is entered from the *Attract Mode* by pressing the red test button five times. A4A4A will be displayed on the 4-digit display.

**CYCLE THROUGH AUDITS**

Starting from the A4A4A display, the green service button is pressed for cycling through the audits.

**RESET AUDITS**

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 display will be cleared, and will return to that audit when the start button is released. The value of all audits will be reset to 00,000.

**EXIT AUDITS**

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

---

**NOTE**

Audits will stop incrementing when the value reaches 60,000

Audits must be reset to 00000 by holding the start button for longer than 5 seconds while in audits mode.
<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>Total number of games played (resettable)</td>
</tr>
<tr>
<td>A02</td>
<td>Total 1 player games played (resettable)</td>
</tr>
<tr>
<td>A03</td>
<td>Total 2 player games played (resettable)</td>
</tr>
<tr>
<td>A04</td>
<td>Total multi-player games played (resettable)</td>
</tr>
<tr>
<td>A05</td>
<td>Total Coin Mech. 1</td>
</tr>
<tr>
<td>A06</td>
<td>Total Coin Mech. 2</td>
</tr>
<tr>
<td>A07</td>
<td>Total Service Credits</td>
</tr>
<tr>
<td>A08</td>
<td>Total Link Games</td>
</tr>
<tr>
<td>A09</td>
<td>Total 1 player high score bonus wins</td>
</tr>
<tr>
<td>A10</td>
<td>Total 2 player high score bonus wins</td>
</tr>
<tr>
<td>A11</td>
<td>Total multi-player high scores</td>
</tr>
<tr>
<td>A12</td>
<td>Average tickets per game</td>
</tr>
<tr>
<td>A13</td>
<td>Highest 1 player game score</td>
</tr>
<tr>
<td>A14</td>
<td>Highest 2 player game score</td>
</tr>
<tr>
<td>A15</td>
<td>Highest multi-player game score</td>
</tr>
<tr>
<td>A16</td>
<td>Total 1 player 999 game scores</td>
</tr>
<tr>
<td>A17</td>
<td>Total 2 player 999 game scores</td>
</tr>
<tr>
<td>A18</td>
<td>Total multi-player 999 game scores</td>
</tr>
<tr>
<td>A19</td>
<td>Total games played (not resettable)</td>
</tr>
<tr>
<td>A20</td>
<td>Total 1 player games played (not resettable)</td>
</tr>
<tr>
<td>A21</td>
<td>Total 2 player games played (not resettable)</td>
</tr>
<tr>
<td>A22</td>
<td>Total multi-player games played (not resettable)</td>
</tr>
<tr>
<td>A23</td>
<td>Manufacturer Audits (Total Link Games)</td>
</tr>
<tr>
<td>A24</td>
<td>Manufacturer Audits (Highest game score 1PL not resettable)</td>
</tr>
<tr>
<td>A25</td>
<td>Manufacturer Audits (Highest game score 2PL not resettable)</td>
</tr>
<tr>
<td>A26</td>
<td>Manufacturer Audits (Highest game score MPL)</td>
</tr>
<tr>
<td>A27</td>
<td>Manufacturer Audits (High Score Bonus Win 1PL not resettable)</td>
</tr>
<tr>
<td>A28</td>
<td>Manufacturer Audits (High Score Bonus Win 2PL not resettable)</td>
</tr>
<tr>
<td>A29</td>
<td>Manufacturer Audits (High Score Bonus Win MPL not resettable)</td>
</tr>
<tr>
<td>A30</td>
<td>Manufacturer Audits (Total Highest score = 999 1PL not resettable)</td>
</tr>
<tr>
<td>A31</td>
<td>Manufacturer Audits (Total Highest score = 999 2PL not resettable)</td>
</tr>
<tr>
<td>A32</td>
<td>Manufacturer Audits (Total Highest score = 999 MPL not resettable)</td>
</tr>
<tr>
<td>A33</td>
<td>Manufacturer Audits (Total Game Plays not resettable)</td>
</tr>
<tr>
<td>A34</td>
<td>Manufacturer Audits (checksum for game audits not resettable)</td>
</tr>
<tr>
<td>A35</td>
<td>Manufacturer Audits (coin 1 counter not resettable)</td>
</tr>
<tr>
<td>A36</td>
<td>Manufacturer Audits (coin 2 counter not resettable)</td>
</tr>
<tr>
<td>A37</td>
<td>Manufacturer Audits (checksum for coin counter not resettable)</td>
</tr>
<tr>
<td>A38</td>
<td>Manufacturer Audits (Total Tickets not resettable)</td>
</tr>
<tr>
<td>A39</td>
<td>Manufacturer Audits (Total Game Plays not resettable)</td>
</tr>
<tr>
<td>A40</td>
<td>Manufacturer Audits (checksum for Average not resettable)</td>
</tr>
</tbody>
</table>

*NOTE!*  
“Multi-player” refers to multiple people playing a one-player game.
AUDITS DETAILED

- **A01 - TOTAL NUMBER OF GAMES PLAYED**
  Displays the total number of games played since the audits were last cleared

- **A02 - TOTAL 1 PLAYER GAMES**
  Displays the total number of 1 player games played since the audits were last cleared

- **A03 - TOTAL 2 PLAYER GAMES**
  Displays the total number of 2 player games played since the audits were last cleared

- **A04 - TOTAL MULTI-PLAYER GAMES**
  Displays the total number of multi-player games played since the audits were last cleared

- **A05 - TOTAL COIN MECH 1**
  Displays the total number of coin mech 1 pulses since the audits were last cleared

- **A06 - TOTAL COIN MECH 2**
  Displays the total number of coin mech 2 pulses since the audits were last cleared

- **A07 - TOTAL SERVICE CREDITS**
  Displays the total number of service credits issued since the audits were last cleared

- **A08 - TOTAL LINK GAME**
  Displays the total number of link mode games played since the audits were last cleared

- **A09 - TOTAL 1 PLAYER HIGH SCORE BONUS WIN**
  Displays the total number of 1 player games that won the “beat the high score bonus” since the audits were last cleared

- **A10 - TOTAL 2 PLAYER HIGH SCORE BONUS WIN**
  Displays the total number of 2 player games that won the “beat the high score bonus” since the audits were last cleared

- **A11 - TOTAL MULTI-PLAYER HIGH SCORE**
  Displays the total number of multi-player games that “beat the high score” since the audits were last cleared

- **A12 - AVERAGE TICKETS PER GAME**
  Displays the average number of tickets won per game, since the audits were last cleared

- **A13 - HIGHEST 1 PLAYER GAME SCORE**
  Displays the highest 1 player game score since the audits were last cleared

- **A14 - HIGHEST 2 PLAYER GAME SCORE**
  Displays the highest 2 player game score since the audits were last cleared
• **A15 - HIGHEST MULTI-PLAYER GAME SCORE**  
  Displays the highest multi-player game score since the audits were last cleared

• **A16 - TOTAL 1 PLAYER 999 GAME SCORES**  
  Displays the total number of 1 player games that reached a score of “999” since the audits were last cleared

• **A17 - TOTAL 2 PLAYER 999 GAME SCORES**  
  Displays the total number of 2 player games that reached a score of “999” since the audits were last cleared

• **A18 - TOTAL MULTI-PLAYER 999 GAME SCORES**  
  Displays the total number of multi-player games that reached a score of “999” since the audits were last cleared

• **A19 - TOTAL GAMES PLAYED (Non-resetable)**  
  Displays the total number of games played, and is non-resettable

• **A20 - TOTAL 1 PLAYER GAMES PLAYED (Non-resetable)**  
  Displays the total number of 1 player games played, and is non-resettable

• **A21 - TOTAL 2 PLAYER GAMES PLAYED (Non-resetable)**  
  Displays the total number of 2 player games played, and is non-resettable

• **A22 - TOTAL MULTI-PLAYER GAMES PLAYED (Non-resetable)**  
  Displays the total number of multi-player games played, and is non-resettable

• **A23 to A40 - MANUFACTURE AUDITS ONLY (Non-resetable)**  
  These are non-resettable audits, and are for manufacture use

### GAME HISTORY MODE

By using the Game History Mode the operator can view the score of the last 10 games and the type of game played. The credit display shows the game number, and the corresponding score is viewed on the header display

• **ENTER GAME HISTORY MODE**  
  The Game History mode is entered from Audits mode by pressing the red test button once, or from the attract mode by pressing the red test button six times. **H H H H** will be displayed on the 4-digit display.

• **CYCLING THROUGH GAME HISTORY**  
  The green Service button is pressed for advancing each step through the set of game histories. Starting from the **H H H H** display, H01 is the first step, continuing through to H10. This will loop until the mode is exited.

• **EXIT**  
  You exit the Game History mode by pressing the red test button once
SECTION A: SERVICE INSTRUCTIONS

*NOTE*

Be sure to read the following carefully before servicing the machine

LOCATING AND ACCESSING PARTS

- 3" Speaker
- BAFB45 4" Display
- 1 Player Start Button
- 4-digit credit display
- Error light
- Ticket Dispenser
- 2 player Start/Link
- Coin Cradle
- DBA (optional)
- Cash Box (inside coin door)
PARTS DESCRIPTION

COIN MECHANISMS
The coin mechanisms are located inside the coin door, at the front-right of the machine cabinet.

CASH BOX
The cash box is located inside the coin door on the front of the machine cabinet.

SPEAKERS
Two speakers are located in the games header and the subwoofer is mounted in a speaker enclosure in the bottom right hand cabinet box. Access for all speakers is through their rear service panels.

SERVICE CONTROLS
Are located on the service panel, mounted behind the coin door.

GREEN SERVICE BUTTON
Use to input credits to the game without activating the coin counter, and to perform test procedures in combination with the red test button.

RED TEST BUTTON
Used to enter and access the test modes.

VOLUME KNOB
Use to adjust the speaker’s sound level.

POWER CORD
This is a standard IEC power cord, and is plugged in to the power inlet socket at the rear of the machine.

POWER INLET
It is a standard IEC inlet socket, located at the rear of the machine, on the right-hand side as viewed from the rear. Note: there is a main power fuse internal in this IEC socket.

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

FUSES- MAIN AC SUPPLY FUSE (1 x 6 AMP FAST BLOW, M205 TYPE)
This fuse is for the main AC supply and is situated in the IEC mains input socket.

* WARNING! *

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

PCB’s
For location of all game PCB’s, refer to the parts location diagram.
POWER SUPPLY
The power supply is located at the back of the cabinet, and is accessed via the rear service door of the machine. It is a 12VDC 12.5A 150-Watt switching power supply.

LAMPS

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 the coin door or back door.

PLATFORM LAMPS
There are multiple white LED Strip Lights 12V/DC inside the platform and Blue LED strip Lights underneath the platform.

HEADER LIGHTING
There is White LED Strip lights 12V/DC above the BAFB45 4” Display, and behind the header logo and also Blue LED Strip lights in each speaker housing. Each have rear access.

LEFT AND RIGHT CABINET BASE LIGHTING
There are blue LED strip lights in the left and right base cabinet units. Each has access from the front.

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

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.
Any scratches or marks in the acrylic can be buffed out using car polish or cut and polish. Do not use solvents on the panels as it may affect the finish or 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 unplug game before cleaning the machine interior

BUTTONS
The game buttons get a lot of hard use, so regularly check that all displays, button lamps and button switches are operating correctly through the Sound, Lamps and Display, and Switch Test. Replace any globes, micro switches or buttons that are not work correctly.
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.

MAINS 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)

TRANSFORMER CONNECTORS
Locate the machine transformer(s) in the base of the cabinet. If unsure of the location of the transformer(s), refer to Parts location diagram of this manual. Change the position of the ‘ACTIVE’ or ‘HOT WIRE’ input, (marked brown on the diagram), to the position for the desired mains voltage. (See Diagram Below)

6 WAY CONNECTOR PINOUT

<table>
<thead>
<tr>
<th>PIN</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>240VAC</td>
</tr>
<tr>
<td>2</td>
<td>220VAC</td>
</tr>
<tr>
<td>3</td>
<td>120VAC</td>
</tr>
<tr>
<td>4</td>
<td>110VAC</td>
</tr>
<tr>
<td>5</td>
<td>0VAV (NEUTRAL)</td>
</tr>
<tr>
<td>6</td>
<td>EARTH</td>
</tr>
</tbody>
</table>
COIN OPTIONS REFERENCE GUIDE

LAI Games have installed on the coin door a 9 way Molex connector. This connector can be used to make adaptors for most electronic coin systems and comparators.

Please see below picture to understand the connection setup.

And the coin harness supplied with the game.

A coin harness that will fit NRI G13 and 2x Electronic Coin Comparator (LAI GAMES standard) is supplied with the game. Other types of coin electronic harnessing can be supplied as requested. Please contact your nearest LAI GAMES Distributor.

TICKET DISPENSER REFERENCE GUIDE

Your *Speed of Light* is fitted with an “Industry Standard” Deltronics DL-1275 ticket dispenser. For more information on this ticket dispenser go to [www.delroniclabs.com](http://www.delroniclabs.com)
## MAIN PCB FB66 CONNECTOR WIRING

<table>
<thead>
<tr>
<th>COMPONENTS SIDE</th>
<th>SOLDER SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GND</td>
<td>A GND</td>
</tr>
<tr>
<td>GND</td>
<td>B GND</td>
</tr>
<tr>
<td>+12VDC</td>
<td>C +12V</td>
</tr>
<tr>
<td>+12VDC</td>
<td>D +12V</td>
</tr>
<tr>
<td></td>
<td>E Test button</td>
</tr>
<tr>
<td></td>
<td>F Service button</td>
</tr>
<tr>
<td></td>
<td>H Player 1 Start Button</td>
</tr>
<tr>
<td></td>
<td>J Ticket 2 Notch</td>
</tr>
<tr>
<td>2 Player Start/Link mode button</td>
<td>K Ticket 1 notch</td>
</tr>
<tr>
<td></td>
<td>L Coin1</td>
</tr>
<tr>
<td></td>
<td>M Coin2</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>(watch dog)</td>
<td>P (watch dog)</td>
</tr>
<tr>
<td></td>
<td>R Credit Display 7seg clock</td>
</tr>
<tr>
<td></td>
<td>S Credit Display 7seg data</td>
</tr>
<tr>
<td></td>
<td>T</td>
</tr>
<tr>
<td>Player 2 Score Display Data</td>
<td>U RSL Board 1 Data (FB152)</td>
</tr>
<tr>
<td>Player 2 Score Display Clock</td>
<td>V RSL Board 2 Data (FB152)</td>
</tr>
<tr>
<td>Player 1 Score Display Data</td>
<td>W RSL Board 3 Data (FB152)</td>
</tr>
<tr>
<td>Player 1 Score Display Clock</td>
<td>X RSL Board Clock (FB152)</td>
</tr>
<tr>
<td>GND</td>
<td>Y GND</td>
</tr>
<tr>
<td>GND</td>
<td>Z GND</td>
</tr>
</tbody>
</table>

### JST 7
1. Base Light 1
2. Base Light 2
3. Leader Light
4. Base Light 3
5. Base Light 4
6. Base Light 5
7. Error Light
8. Base Light 6

### JST 5
1. (PNP) Ticket 1 motor drive
2. (PNP) Ticket 2 motor drive
3. Coin1 counter
4. Coin2 counter
5. Ticket 1 counter
6. Ticket 2 counter
7. Start Button Light
8. Start Button Light
BAFB152 LAMP DRIVER PCB CONNECTOR WIRING

J1 (JST 8 Way)
1. +12V
2. -
3. GND
4. -
5. Data 1
6. Data 2
7. Data 3
8. Clock

JP1 (4 Way JST)
1. +12V
2. +12V
3. GND
4. GND

J2. (16 Way Mini Fit Connector)

<table>
<thead>
<tr>
<th>PIN</th>
<th>Description</th>
<th>PIN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Button 1 Lamp</td>
<td>9</td>
<td>Button 8 Lamp</td>
</tr>
<tr>
<td>2</td>
<td>Button 2 Lamp</td>
<td>10</td>
<td>Button 9 Lamp</td>
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<tr>
<td>3</td>
<td>Button 3 Lamp</td>
<td>11</td>
<td>Button 10 Lamp</td>
</tr>
<tr>
<td>4</td>
<td>Button 4 Lamp</td>
<td>12</td>
<td>Button 11 Lamp</td>
</tr>
<tr>
<td>5</td>
<td>Button 5 Lamp</td>
<td>13</td>
<td>Button 12 Lamp</td>
</tr>
<tr>
<td>6</td>
<td>Button 6 Lamp</td>
<td>14</td>
<td>Button 13 Lamp</td>
</tr>
<tr>
<td>7</td>
<td>Button 7 Lamp</td>
<td>15</td>
<td>Button 14 Lamp</td>
</tr>
<tr>
<td>8</td>
<td>+12V Out</td>
<td>16</td>
<td>+12V Out</td>
</tr>
</tbody>
</table>

J3. (16 Way Mini Fit Connector)

<table>
<thead>
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<th>PIN</th>
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<th>PIN</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Button 15 Lamp</td>
<td>9</td>
<td>Button 22 Lamp</td>
</tr>
<tr>
<td>2</td>
<td>Button 16 Lamp</td>
<td>10</td>
<td>Button 23 Lamp</td>
</tr>
<tr>
<td>3</td>
<td>Button 17 Lamp</td>
<td>11</td>
<td>Button 24 Lamp</td>
</tr>
<tr>
<td>4</td>
<td>Button 18 Lamp</td>
<td>12</td>
<td>Button 25 Lamp</td>
</tr>
<tr>
<td>5</td>
<td>Button 19 Lamp</td>
<td>13</td>
<td>Button 26 Lamp</td>
</tr>
<tr>
<td>6</td>
<td>Button 20 Lamp</td>
<td>14</td>
<td>Button 27 Lamp</td>
</tr>
<tr>
<td>7</td>
<td>Button 21 Lamp</td>
<td>15</td>
<td>Button 28 Lamp</td>
</tr>
<tr>
<td>8</td>
<td>+12V Out</td>
<td>16</td>
<td>+12V Out</td>
</tr>
</tbody>
</table>

J5. (16 Way Mini Fit Connector)

<table>
<thead>
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<th>PIN</th>
<th>Description</th>
<th>PIN</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Button 29 Lamp</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Button 30 Lamp</td>
<td>10</td>
<td>-</td>
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<tr>
<td>3</td>
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<td>-</td>
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<tr>
<td>4</td>
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<td>14</td>
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<tr>
<td>7</td>
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<td>15</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>+12V Out</td>
<td>16</td>
<td>+12V Out</td>
</tr>
</tbody>
</table>
BAFB162 INPUT LIST

J1. PWR
1. +12V
2. +12V
3. -
4. -
5. GND
6. GND
7. -
8. -

J2. INPUT (24 Way Mini Fit Connector)

<table>
<thead>
<tr>
<th>PIN</th>
<th>Description</th>
<th>PIN</th>
<th>Description</th>
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<tbody>
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<td>Button 29</td>
<td>13</td>
<td>Button 11</td>
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<tr>
<td>2</td>
<td>Button 30</td>
<td>14</td>
<td>Button 12</td>
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<tr>
<td>3</td>
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<td>Button 33</td>
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<td>Button 15</td>
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<td>Button 34</td>
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<td>Button 36</td>
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<td>Button 18</td>
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<td>9</td>
<td>Button 37</td>
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<td>Button 19</td>
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<tr>
<td>10</td>
<td>Button 38</td>
<td>22</td>
<td>Button 20</td>
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<tr>
<td>11</td>
<td>Button 39</td>
<td>23</td>
<td>Button 21</td>
</tr>
<tr>
<td>12</td>
<td>Button 40</td>
<td>24</td>
<td>Button 22</td>
</tr>
</tbody>
</table>

J5. INPUT (20 Way Mini Fit Connector)

<table>
<thead>
<tr>
<th>PIN</th>
<th>Description</th>
<th>PIN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>11</td>
<td>Button 23</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>12</td>
<td>Button 24</td>
</tr>
<tr>
<td>3</td>
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<td>13</td>
<td>Button 25</td>
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<tr>
<td>4</td>
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<td>14</td>
<td>Button 26</td>
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<tr>
<td>5</td>
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<td>15</td>
<td>Button 27</td>
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<tr>
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<td>16</td>
<td>Button 28</td>
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<tr>
<td>9</td>
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<td>19</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>20</td>
<td>-</td>
</tr>
</tbody>
</table>
SPEED OF LIGHT MAIN WIRING DIAGRAM
SPEED of LIGHT MAIN WIRING 2
SPEED of LIGHT MAIN WIRING 3
SPEED of LIGHT CONTROL WIRING 3
SPEED of LIGHT OPTIONAL WIRING
SPEED of LIGHT POWER WIRING
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Tech. Support: productsupport@laigames.com

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