Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if no installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the manufacturer may void the user’s authority to operate the equipment.
Billboard Controller Connectors and Operation

<table>
<thead>
<tr>
<th>Power Socket 1</th>
<th>Power Button</th>
<th>Reset Button</th>
<th>Hard Disk LED</th>
<th>USB</th>
<th>Serial Port Status LED</th>
<th>RS232 Serial Port</th>
</tr>
</thead>
</table>

**Power Sockets**

Power sockets 1 and 2 provide two different ways to get power into the Billboard. Power must be 19V or 19.5V DC at 3A (60W) minimum. *Only one socket must be connected at any time.* Socket 1 is a lockable socket and is for use with the supplied PSU. Socket 1 can also be used with many standard laptop power supplies with a 2.5mm barrel connector, e.g. Toshiba. The centre pin is positive. Socket 2 is a Dell-type socket which can be used with any Dell laptop power supply.

**Power & Reset Buttons**

The power button is a momentary switch. Press briefly to power on the Billboard, and press briefly to start the shutdown sequence (this switches off the Billboard software and then shuts down the machine). The button glows red when power is available but the Billboard is not switched on. The button glows blue when the Billboard is on. If the Billboard becomes unresponsive, it can be switched off by holding the power button for 4 seconds or restarted by pressing the reset button (not recommended). *Always switch off the Billboard using the main power button when possible. Using the reset button or holding the power button for 4 seconds can cause the Billboard to lose configuration changes and may corrupt the software.*

**Serial Port & LED**

The RS232 socket is standard PC pin out and can be connected to Cammegh Mercury or Cammegh Slingshot wheels with a null modem cable. The Serial Port Status LED indicates whether any data is received by the serial port and works independently of whether the software is operating. It glows green if it receives an understood protocol, red if it receives a protocol which it cannot understand, and is off if it receives nothing.

**Introduction**

1. At its most basic, the Billboard Display System comprises a Billboard controller connected to one or more LCD displays. The mounting assembly varies from order to order, but typically consists of a display stand and either a single- or double-sided display for each Billboard.

2. The Billboard controller can receive game data in the following ways:
   
   i. By serial connection to the wheel’s controller (for Cammegh wheels with In-Rim sensors)*
   
   ii. By USB connection to the Cammegh EyeBall camera (for any wheel), if licensed to do so*
   
   iii. By serial or Ethernet connection to another source of Cammegh or approved 3rd party protocol
iv. By serial connection to a compatible 3rd party card shoe, such as Angel Eye or Bee-Tek**

v. By USB connection to the Cammegh EyeCard camera (for casino-standard cards and tables)**

vi. By manual entry, using a Cammegh TD2 Keypad, numeric keypad or standard USB keyboard

vii. By remote Telnet connection to another Billboard

* Roulette only   ** Card games only

3. The Billboard controller can send data to a 3rd party system (e.g. betting terminals) through the Ethernet Serial port, if licensed to do so.

4. The Billboard controller can record and store an indefinite number of game results, either locally or to a network location for use in management software such as Cammegh PitBoss.

Installation Location
The Billboard can be fixed to the back of a monitor with 100mm-spaced VESA mounting points or any surface which is amenable to wood screws, such as the underside of a desk or wall of a cabinet, using the supplied mounting plate. It can be mounted in any orientation, providing the ventilation holes are not obscured. When selecting a site, ensure that that it is as dust-free (away from carpet and baize surfaces) and as well ventilated as possible. Do not install it in an enclosed area or near any heat source. Do not operate in air temperatures exceeding 40˚C (including any temperature rise due to the Billboard’s operation). The Billboard contains environmental logging hardware and operation in hostile conditions may affect warranty.

Fixing to a Wooden Surface
Screw the mounting plate to the mounting surface using 4 number 8 wood screws. Note: the raised plate and thumb screw will end up on the side opposite to the connectors. Slide the Billboard (with the connector side away from the thumbscrew plate) on to the mounting bolts so that all 4 keyhole slots in the underside of the Billboard engage, and push the Billboard against the raised plate. Screw the thumbscrew on the raised plate into the threaded hole in the face opposite to the connector face. Check that the Billboard is attached securely.

Fixing to a Monitor
This method of fixing is not currently needed in any Cammegh products, but has been designed in as an option and is useful for configuring and demonstrating Billboards. If you have a monitor which has 100mm VESA mounting points on the rear (M4 tapped holes on a 100mm grid), such as a Cammegh standard monitor, then you can unscrew the double-headed VESA mounting bolts from the supplied mounting plate, and screw them into four holes on the back of the monitor. The Billboard can then be hung on the back of the monitor using the keyhole slots, normally with the connector face downwards.

IMPORTANT NOTE:

Please DO NOT TAMPER with the internal workings of the Billboard computer unless you have been given the all clear by Cammegh Ltd. The Billboard licensing is sensitive to hardware changes, meaning a license may be invalidated if unauthorised modifications (e.g. graphics card replacements) are performed. If a problem arises, contact Cammegh Ltd before performing any maintenance yourself.

Tampering with the Billboard hardware without appropriate approval WILL VOID THE WARRANTY of the Billboard computer and we cannot be held responsible for any subsequent damage caused.

Billboard Computer Operation

Start-up and Shutdown

1. Switch on the LCD display(s) first. For new displays (with rounded corners), switch on the display PSU then use the remote control to turn off standby mode. For older displays (sharp cornered) the display power switch is located on the underside of the unit.
2. Switch on the Billboard controller next, by pushing the larger of the two rounded buttons on the front of the case. This button will also initiate a safe shutdown while the Billboard is running.

3. The Billboard computer is provided with Microsoft Windows installed. The following user accounts have been set up:
   - Username: “Billboard”, password: “billboard”
   - Username: “Administrator”, password: “cammegh_letmein”

   The “Billboard” user will be automatically logged on when the Billboard computer starts up. You should only log in to the “Administrator” user area if instructed by Cammegh Ltd.

4. The Billboard software will start automatically when the “Billboard” user logs in.

5. To safely switch off the Billboard computer, push the larger of the two rounded buttons on the front of the case again. This will close the Billboard software, shut down Windows and switch off the computer.

**Billboard Software Introduction**

1. The Billboard software receives its game data from the inputs listed in the introduction. This data usually includes the game state and winning results, both of which are used to display graphics and animations on the LCD displays.

2. Various features of the Billboard software can be accessed and configured using the on-screen menu. To open this menu, press ‘Enter’ on the number keypad, then use the arrow keys to navigate and ‘Enter’ to select an item.

3. The Billboard software displays information on the LCD displays in a number of zones. Pre-configured layouts with different zone arrangements can be accessed through the menu.

4. Roulette table information, such as Table Name, currency and Minimum/Maximum Bet, can be configured through the menu.

5. Dealer names can be changed by entering a PIN (Personal Identification Number) using the number keypad. This provides a simple and fast method of changing the Dealer Name displayed on the Billboard.

6. All statistical data as and Billboard settings will be retained when the Billboard computer is switched off.
Billboard Software Menu

To open the software menu, press ‘Enter’ on the number keypad. Navigate up and down through the menu options by pressing the ‘up’ and ‘down’ arrows and select options using ‘Enter’. Menu options are listed and described below.

1. **Exit Menu**  
Closes the menu

2. **Select Layout**  
Displays a list of available Screen Layouts  
   i. [List of Screen Layouts]  
      Selecting a screen layout will activate it, changing the graphics that appear on-screen

3. **Pay Table**  
Displays a list of available Pay Tables  
   i. [List of Pay Tables]  
      ▪ **Edit** (Available if the Pay Table is unlocked for editing)  
         Shows Pay Table columns that can be quick-edited via the menu  
         ▪ [List of editable columns]  
            ○ [Editable value]  
      ▪ **Select**  
         Activates the current pay table  
      ▪ **Main Menu**  
         Returns to the root of the menu

4. **Call Attendant**  
   i. Toggles the ‘Call Attendant’ function, which causes a region of the screen to flash

5. **Table Set-Up**  
Displays additional configuration options  
   i. **Table Name**  
      Allows the table name to be edited  
      ▪ [Editable value]  
   ii. **Min/Max Bet**  
      Displays a list of simple table limits for editing (can be overridden by the current Pay Table)  
      ▪ **Minimum Bet**  
         Allows the table Minimum Bet to be edited  
         ▪ [Editable value]  
      ▪ **Maximum Bet**  
         Allows the table Maximum Bet to be edited  
         ▪ [Editable value]  
      ▪ **Eg Max Bet**  
         Allows the table Maximum Egalité Bet to be edited  
         ▪ [Editable value]  
      ▪ **Back**  
         Returns to the Table Set-Up menu  
   iii. **LED Strip Colour**
Provides options for configuring the LED Strips on 2016-style displays

- **Off**
  Switches off the LED Strips

- **Start Cycling/Stop Cycling**
  Toggles the LED Strips’ Colour Cycle mode

- **[List of colours]**
  Selecting a colour will change the LED Strips accordingly

iv. **Statistics Length**
   Allows the user to change the number of previous game results from which several statistics are calculated
   - **[Editable value]**

v. **Currency**
   Allows the currency symbol to be changed (can be overridden by the current Pay Table)

vi. **Reset Statistics**
   Deletes all game results and refreshes all applicable statistics

vii. **Reset Tree Statistics**
   Deletes all Live Game results and refreshes all applicable statistics

viii. **Chiptree**
   Displays options relating to Chip Tree values and sorting
   - **Chronological Order**
     Orders chips from most to least recently changed
   - **Value Ordered Hi Lo**
     Orders chips from highest value to lowest
   - **Value Ordered Lo Hi**
     Orders chips from lowest value to highest
   - **Static Ordering**
     Prevents chip order from changing
   - **Chiptree Values**
     Allows chip values to be changed
     - **[List of available chips]**
       Selecting a chip displays options to change its value
       - **[List of available pre-set values]**
         Selecting a value will assign it to the current chip
       - **Custom Value**
         Allows a custom value to be entered for the current chip
         - **[Editable value]**
       - **Inactive**
         Hides the current chip’s value
   - **Back**
     Returns to the Table Set-Up menu

ix. **Screen Text**
   Allows custom Screen Text values to be changed
   - **[List of Screen Text items]**
     Select a Screen Text to edit its value
     - **[Editable value]**

x. **More**
Provides access to the options below

**xi. EyeBall Selection**
Displays a list of available EyeBall configurations

- [List of EyeBall configurations]
  Selecting an EyeBall configuration will initialise it

**xii. Baccarat**
Displays configuration options that are specific to Baccarat

- **Run length**
  Allows the user to change the minimum number of consecutive Player/Banker results that constitute a ‘run’
  - [Editable value]

- **Reset Shoe Counter**
  Resets the ‘Shoe Count’ value to 0

- **Back**
  Returns to the Table Set-Up menu

**xiii. Void Game**
Voids the current Roulette game

**xiv. Main Menu**
Returns to the root of the menu

6. **Close Table Options / Open Table**
Displays options for activating and configuring ‘Table Closed’ mode, or disables ‘Table Closed’ mode if it is active

i. **Close Table**
Puts the Billboard into ‘Table Closed’ mode

ii. **Set Countdown Minutes**
Allows the user to change the duration of the ‘Close Countdown’
  - [Editable value]

iii. **Start Close Countdown/Stop Close Countdown**
Starts/ Stops the ‘Close Countdown’, after which the Billboard will automatically enter ‘Table Closed’ mode

iv. **Set Auto-Close Time**
Allows the user to change the ‘Auto Close’ time of day
  - [Editable value]

v. **Enable Auto-Close/Disable Auto-Close**
Toggles the ‘Auto-Close’ feature, which automatically puts the Billboard into ‘Table Closed’ mode at the specified time of day

vi. **Main Menu**
Returns to the root of the menu

7. **Test Mode / Normal Mode**
Toggles the ‘Test Mode’ feature. Any results entered while Test Mode is active will be removed when the Billboard is returned to ‘Normal Mode’

8. **Countdown**
Displays a list of available Countdowns

i. [List of available countdowns]
  Selecting a countdown will display options for its configuration

- **Start/Stop**
  Activates or deactivates the selected countdown
Selecting a configuration option will allow its value to be edited
- [Editable value]

9. **MediaPro**
   Displays options relating to MediaPro
   i. **Start Override/Stop Override**
      Toggles the ‘Override’ feature, which replaces the default MediaPro channel with the selected one
   ii. **Channel Select**
      Allows the Override channel to be specified by index
      - [Editable Value]
   iii. **Live Select**
      Allows the Override channel to be selected from a list of available channels
      - [List of available channels]
   iv. **Enter Override Time**
      Allows the duration of the Override in minutes to be defined
      - [Editable value]
   v. **Main Menu**
      Returns to the root of the menu

10. **Switch Off**
    Exits the Billboard software and returns to Windows

**Scrolling Text Footer**
1. Some Billboard layouts draw a scrolling text message across the screen. This message is sourced directly from two text files on the Windows Desktop, both of which can be edited and saved to change the message content.
2. To change the message for a regular layout, exit the Billboard software using ‘Switch Off’ in the menu and open the file ‘Messages.txt’ on the Windows Desktop. To change the message for a ‘Table Closed’ layout, open ‘Table Closed.txt’
3. With a keyboard plugged into the Billboard computer, these text file can be edited and saved. When you next start the Billboard software, the amended messages will be displayed.

**Dealer Names**
1. The dealer names (usually appearing in the software header, if requested) are sourced directly from a text file on the Windows Desktop, which can be edited to change the names which appear. Dealers can be changed within the Billboard software using the number keypad by typing ‘*’ followed by the dealer PIN.
2. To amend the list of dealer names, exit the Billboard software using ‘Switch Off’ in the menu and open the file ‘Dealers.txt’ on the Windows Desktop. Dealers must be entered in the following format:
   
   001 Isaac

   Each name must be preceded by a unique 3-digit PIN and a space. With a keyboard plugged into the Billboard computer, this text file can be edited and saved.
3. Within the Billboard software, switch between dealer names by typing ‘*’ on the number keypad, followed by the PIN of the desired dealer.
Manual Result Entry

Results can be entered manually using the keypad provided with each Billboard. Each game has a different method for entering results depending on the mode that is being used by the current screen layout.

Manual Result Entry - Roulette

1. Standard Entry Mode (Default)

   To Manually ADD a result:-
   ‘+’ followed by two digits.
   All single digits are preceded by ‘0’
   Single Zero = ‘0’‘0’
   Double Zero = ‘3’‘8’

   To Manually REMOVE a result:-
   ‘-’

   To clear the statistics:-
   Menu > Table Setup > Reset Statistics > Yes

2. Preview Mode (Billboard 2 only)

   To Manually ADD a result:-
   Enter digit (s), pocket will be shown on screen, press enter to confirm
   Single Zero = ‘0’
   Double Zero = ‘0’‘0’

   To Manually REMOVE a result:-
   ‘-’

   To clear the statistics:-
   Menu > Table Setup > Reset Statistics > Yes
Manual Result Entry – Punto Banco

1. Standard Entry Mode (Default)

To Manually **ADD** a result:
- Player = ‘+’ ‘0’ ‘0’
- Banker = ‘+’ ‘0’ ‘1’
- Tie/Egalite = ‘+’ ‘0’ ‘2’

To Manually **REMOVE** a result:
- ‘-’

To clear the statistics:
- Menu > Table Setup > Reset Statistics > Yes
  or
- ‘+’ ‘0’ ‘3’

Manual Result Entry – Baccarat

1. Standard Entry Mode

To Manually **ADD** a result:
- Player = ‘+’ ‘0’ ‘0’
- Banker = ‘+’ ‘0’ ‘1’
- Tie/Egalite = ‘+’ ‘0’ ‘2’

To Manually **REMOVE** a result:
- ‘-’

To clear the statistics:
- Menu > Table Setup > Reset Statistics > Yes
  or
- ‘+’ ‘0’ ‘3’

2. Preview Mode (default)

To Manually **ADD** a result:
Requested results will be shown on screen, press enter to confirm
- Player = ‘7’
- Banker = ‘4’
- Tie/Egalite = ‘1’
- Natural = ‘2’
- Player Pair = ‘8’
- Banker Pair = ‘9’

Example:-  
To add a Player result with Natural and Player Pair  
‘7’ ‘2’ ‘8’ ‘enter’

To Manually **REMOVE** a result:
- ‘-’

To clear the statistics:
- Menu > Table Setup > Reset Statistics > Yes
Help & Support

Please contact Cammegh Ltd for any support enquiries.

Email: support@cammegh.com
Website: www.cammegh.com
Telephone: +44 (0) 1233 820 771
Fax: +44 (0) 1233 820 077