SPORTAPPS®

USER GUIDE

P2123

AJT
SYSTEMS
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1   Introduction

Congratulations on purchasing a state-of-the-art sports graphics system that provides broadcast quality and reliability.

With the SportApps® software suite and a LiveBook GFX® or LiveServer GFX® system:

- Select and customize professional style on-screen scoreboards (score bugs)
- Easily integrate with Daktronics, OES, or Sportzcast displays to automatically populate controller data to the on-screen scoreboard
- Drive the scoreboard system from the laptop
- Drive a variety of graphics (lower thirds, watermarks, full screens, etc.) from the intuitive Insert Graphics Tab

System Support

Support for the SportApps® software suite is provided under the terms of the AJT Systems License Agreement and includes software patches, standard telephone and online support during regular business hours, and 24-hour emergency support for system failures.

AJT Contact Information

AJT Systems, Inc.
2501 E. Commercial Blvd., Suite 214
Ft. Lauderdale, FL, 33308

Tel: 954-776-4591

https://ajtsystems.com/support-all/

AJT Technical Support

support@ajtsystems.com

Business hours: 954-776-4591
Nights and weekends: 954-647-0510

Daktronics Contact Information

Daktronics
201 Daktronics Drive
Brookings, SD, 57006

Tel: 1-800-325-8766

https://www.daktronics.com/MySupport

Daktronics Technical Support

Domestic (U.S. and Canada): 1-800-325-8766
International: +1-605-697-4000

2   Hardware Setup

After unpacking all the components, it is just a few simple steps to prepare to use the SportApp™ software and the new LiveBook GFX® or LiveServer GFX® system.

LiveBook GFX

The LiveBook GFX® is a portable graphics system designed to produce broadcast-quality sports graphics at remote venues.

LiveBook GFX Hardware Connections

Video input and output connections are made through the BNC ports on the back of the I/O box. Refer to **Figure 1**.

Figure 1: LiveBook GFX Input/Output Box

In a control room or fully equipped production truck environment, the scoreboard is typically keyed over video at the switcher. It is possible to have the output of the switcher fed back to the LiveBook GFX® system in order to monitor the scoreboard over the video.

In a more streamlined remote situation, content from a camera feed goes directly to the I/O box and the scoreboard is internally keyed over the video. Video with the scoreboard is then output for uplink.

In addition to input and output, a reference signal (black burst or tri-level) should be connected to ensure smooth synchronization of video.

There are three different options for setting up the LiveBook GFX® hardware depending on the system workflow:

- **Internal key/upstream** - allows you to key a scoreboard over video and output the resulting video within the system

- **Single-channel Key and Fill out/downstream** - allows you to output graphics as key/fill video and feed this into a downstream device to key the output graphics over video; this is used with OCR/DVE clocks

- **Dual-channel Key and Fill out/downstream** - allows you to output two channels of graphics as key/fill video and feed this into a downstream device to key the output graphics over video

Refer to the **LiveBook GFX Quick Setup Guide SDI/NDI®/LE (DD4598910)** in **Appendix B: Supplementary Documents (p.79)** for information on initial hardware setup for the three scenarios.

> **Note:** Once the physical connections are made, configure the system in the SportApp™ software. Refer to **Hardware Configuration (p.4)**.

Scoreboard Feed Connections

The LiveBook GFX® system can receive data from a stadium scoreboard display in two ways:

- Via serial interface

- Via TCP/IP

To connect the stadium display feed via serial interface use the serial-to-USB cable to connect to the available USB port on the LiveBook GFX® system.

To connect the stadium display feed via TCP/IP connect the LiveBook GFX® to a network that has access to the TCP/IP scoreboard feed.

> **Note:** Once the cable connection or network access is made, configure the display feed settings in the SportApp™ software. Refer to **Enable Scoreboard Connectivity (p.14)**.

LiveServer GFX

The LiveServer GFX® is a rack-mounted graphics solution that can be custom designed to produce broadcast-quality sports graphics in live operator and broadcast automation environments.

LiveServer GFX Hardware Connections

Video input and output connections are made through the BNC ports on the back of the LiveServer GFX®. Refer to **Figure 2**.
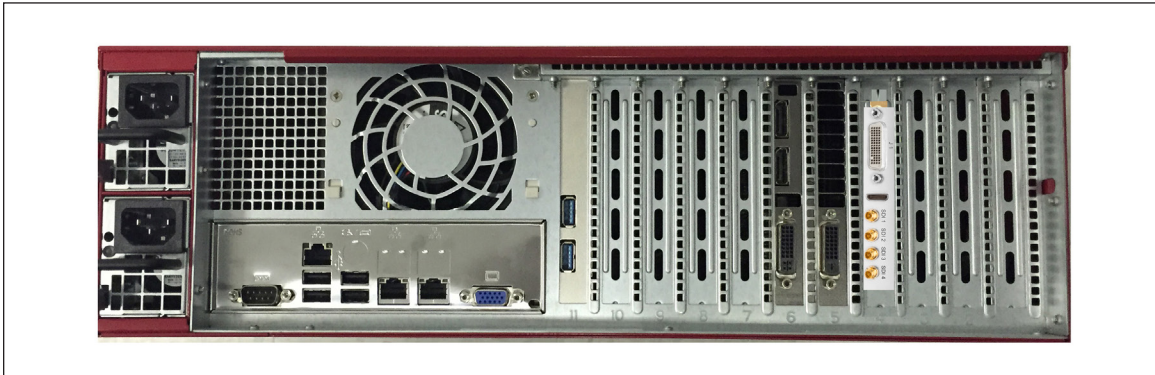
Figure 2: LiveServer GFX Hardware

In a control room or fully equipped production truck environment, the scoreboard is typically keyed over video at the switcher. It is possible to have the output of the switcher fed back to the LiveServer GFX® system in order to monitor the scoreboard over the video.

In a more streamlined remote situation, content from a camera feed goes directly to the LiveServer GFX® and the scoreboard is internally keyed over the video. Video with the scoreboard is then output for uplink.

In addition to input and output, a reference signal (black burst or tri-level) should be connected to ensure smooth synchronization of video.

There are three different options for setting up the LiveServer GFX® hardware depending on the system workflow:

- **Internal key/upstream** - allows you to monitor the scoreboard that is internally keyed over the input video from within the user interface

- **Single-channel Key and Fill out/downstream** - allows you to output graphics as key/fill video and feed this into a downstream device to key the output graphics over video; this is used with OCR/DVE clocks

- **Dual-channel Key and Fill out/downstream** - allows you to output two channels of graphics as key/fill video and feed this into a downstream device to key the output graphics over video

Refer to the **LiveServer GFX Quick Setup Guide SDI/NDI® (DD4744289)** in **Appendix B: Supplementary Documents (p.79)** for information on initial hardware setup for the three scenarios.

> **Note:** Once the physical connections are made, configure the system in the SportApp™ software. Refer to **Hardware Configuration (p.4)**.

Scoreboard Feed Connections

The LiveServer GFX® system can receive data from a stadium scoreboard in two ways:

- Via serial interface

- Via TCP/IP

To connect the stadium clock feed via serial interface use the serial-to-USB cable to connect to the available USB port on the LiveServer GFX® system.

To connect the stadium clock feed via TCP/IP connect the LiveServer GFX® to a network that has access to the TCP/IP scoreboard feed.

> **Note:** Once the cable connection or network access is made, configure the scoreboard feed settings in the SportApp™ software. Refer to **Enable Scoreboard Connectivity (p.14)**.

Hardware Configuration

After all the physical connections are made, it is necessary to configure the system to ensure that devices communicate and function correctly. All these settings are found in the SportApp™ software that comes with the system.

Access the Settings Panel

All hardware and scoreboard configuration settings are available in the **Settings** panel of the SportApp™ interface.

Start the sport-specific SportApp™ program by double-clicking the appropriate desktop shortcut to open the application. Refer to **Figure 3**.

Figure 3: SportApp Icons

> **Note:** Only the purchased SportApp™ programs are available.

The main functions for all SportApp™ programs are found along the bottom of the screen. Refer to **Figure 4**. Other specific functions and features differ by sport.

Figure 4: SportApp User Interface

The settings and tools functions are located along the bottom-right side of the user interface. Refer to **Figure 5**.
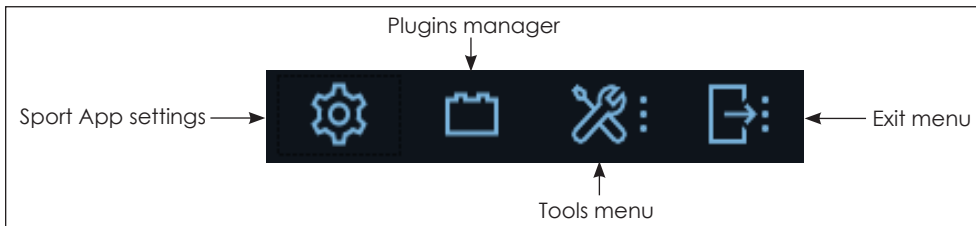

Figure 5: Settings/Tools

Click the Sport App settings icon ⚙ to open the **Sport App Settings** panel. Refer to **Figure 6**.
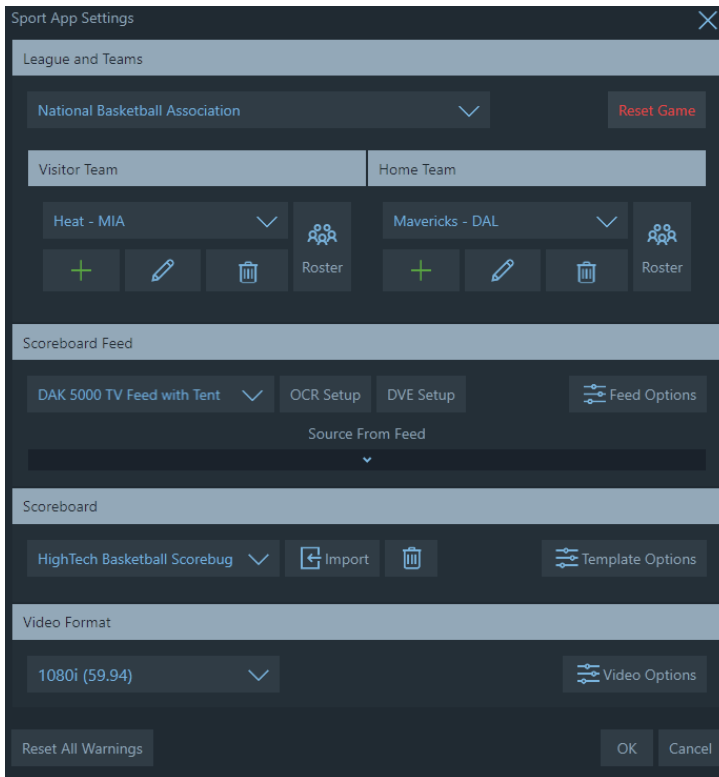
Figure 6: Sport App Settings

Configure Settings

For the system to correctly process video input and output signals, specify the following settings:

- Video format

- Internal or downstream keying

- Reference signal

- Video timing

The correct settings for the keying and reference signal depend on how the hardware was connected and are based on the production workflow.

Video Format

To configure the video format, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select the correct **Video Format** from the drop-down list. Refer to **Figure 7**.

Figure 7: Video Format

3. Complete the system configuration as determined by the system workflow. Refer to **Internal Key/Upstream (p.7)**, **Single-Channel Key and Fill Out/Downstream (p.8)**, or **Dual-Channel Key and Fill Out/Downstream (p.10)**.

Internal Key/Upstream

To configure keying and reference with this set up, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Click **Video Options** button under the **Video Format** section. Refer to **Figure 7**. The **Video Options** panel opens. Refer to **Figure 8**.
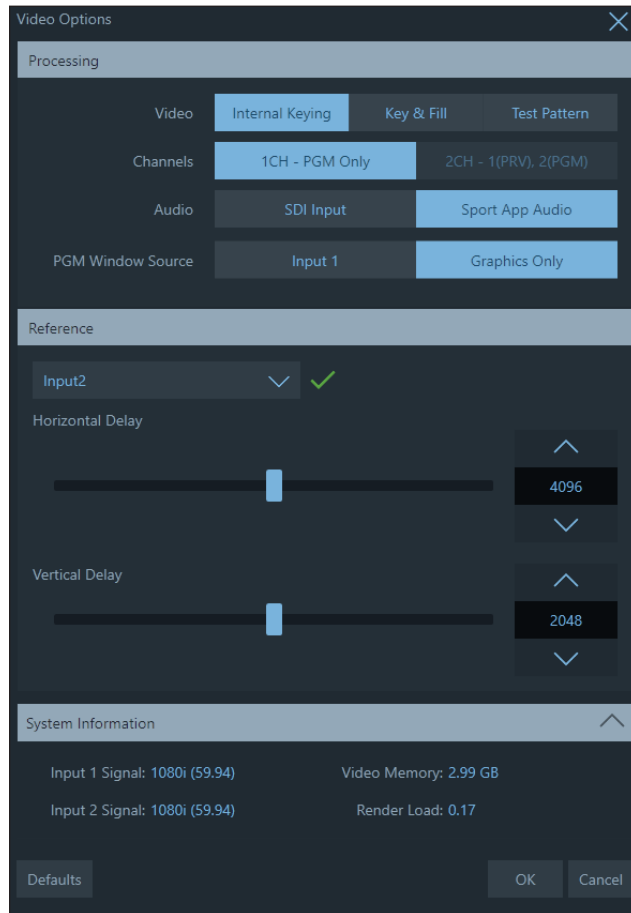
Figure 8: *Video Options*

3. Select **Internal Keying** in the **Video** section under **Processing**. Refer to **Figure 9**.
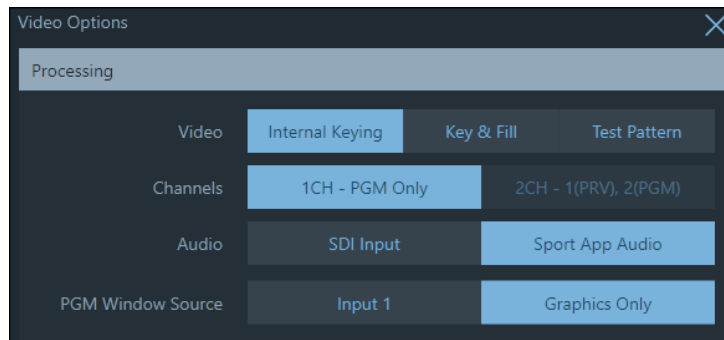
Figure 9: *Internal Keying - Video Options*

4. Select the number of output **Channels**:

    *   **1CH - PGM Only** - shows the output in the Program window only

5. Select an **Audio** option:

- **SDI Input** - if the incoming video source includes audio, it will be heard on the output monitor

- **Sport App Audio** - if an insert graphic has audio embedded in the template, it will be heard on the output monitor

6. Select a **PGM Window Source** option:

- **Input 1** - shows the feed coming from the reference in the Program window

- **Graphics Only** - shows only the scoreboard in the Program window

7. Go to the **Reference** section and select **Input2** from the drop-down list. Refer to **Figure 10**.
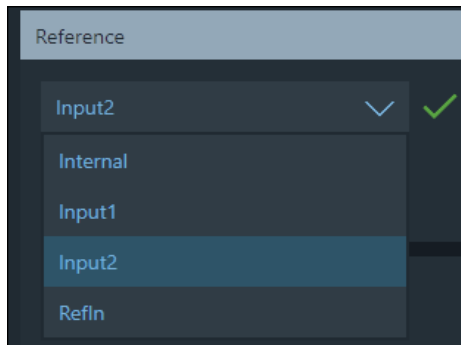
Figure 10: Reference Options

8. Verify that there is a green check next to the **Reference** drop-down list. A green check mark confirms that the system detects a valid signal. A red X indicates that no signal is detected from the selected source. If a red X is shown, check the hardware connections.

9. Click **OK** to save the settings and close the panel.

10. Confirm video input and set vertical and horizontal delay. Refer to **Confirm Video Input and Set Horizontal and Vertical Delay (p.12)**.

Single-Channel Key and Fill Out/Downstream
To configure keying and reference with this set up, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Click **Video Options** under the **Video Format** section. Refer to **Figure 11**. The **Video Options** panel opens. Refer to **Figure 12**.
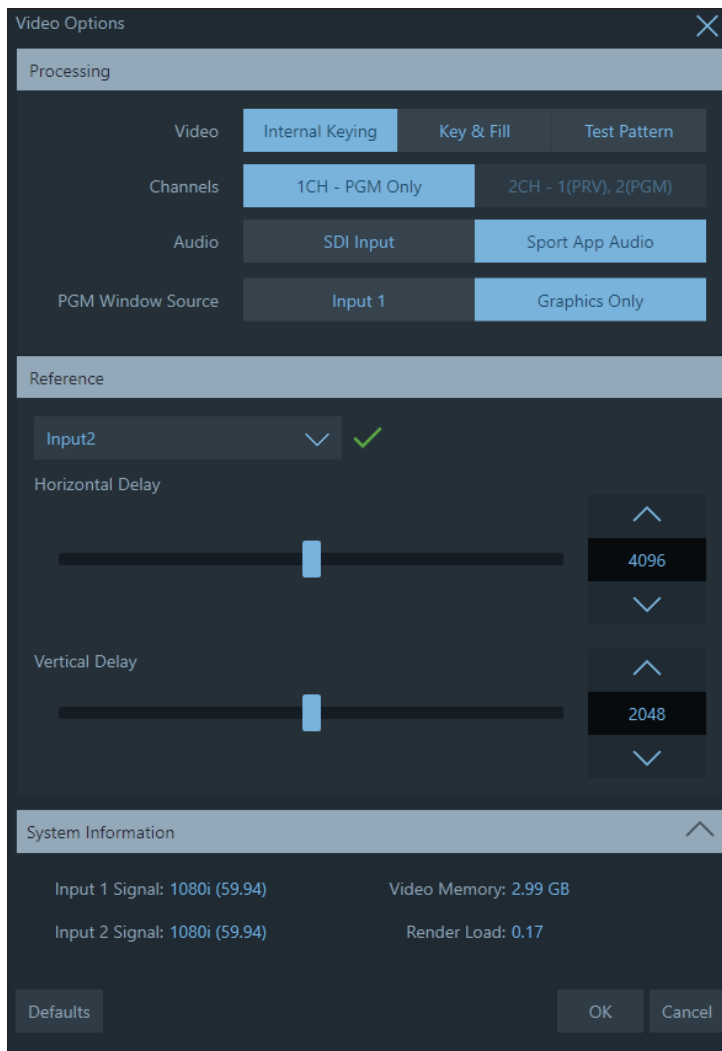

Figure 11: Video Format

Figure 12: Video Options

3. Select **Key & Fill** in the **Video** section under **Processing**. This routes the scoreboard and the video out for downstream keying at the switcher. Refer to **Figure 13**.
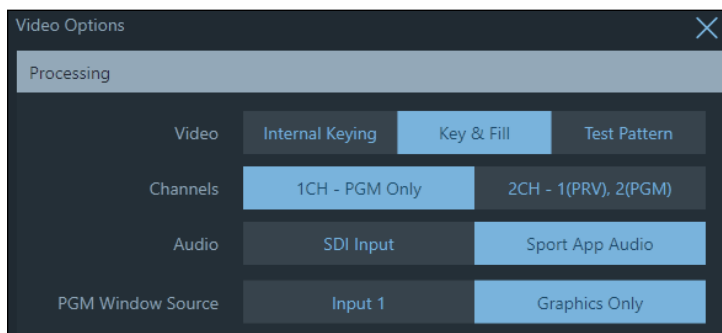

Figure 13: Single Channel Key & Fill - Video Options

4. Select **1CH - PGM Only** in the **Channels** section.

5. Select an **Audio** option:

   • **SDI Input** - if the incoming video source includes audio, it will be heard on the output monitor

   • **Sport App Audio** - if an insert graphic has audio embedded in the template, it will be heard on the output monitor

6. Select a **PGM Window Source** option:

    • **Input 1** - shows the feed coming from the reference in the Program window

    • **Graphics Only** - shows only the scoreboard in the Program window

7. Go to the **Reference** section and choose the correct option from the drop-down list. Refer to **Figure 14**.

    • If no reference signal is connected to the LiveBook GFX® I/O box or the LiveServer GFX®, choose **Internal**.

    • If a reference signal is connected, select **RefIn**.

8. Verify that there is a green check next to the **Reference** drop-down list. A green check mark confirms that the system detects a valid signal. A red X indicates that no signal is detected from the selected source. If a red X is shown, check the hardware connections.

Figure 14: *Reference Options*

9. Click **OK** to save the settings and close the panel.

10. Confirm video input and set vertical and horizontal delay. Refer to **Confirm Video Input and Set Horizontal and Vertical Delay (p.12)**.
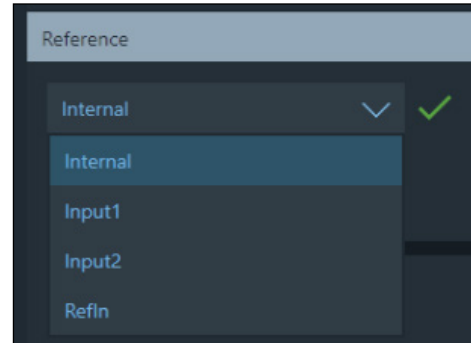
Dual-Channel Key and Fill Out/Downstream

To configure keying and reference with this set up, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Click **Video Options** under the **Video Format** section. Refer to **Figure 15**. The **Video Options** panel opens. Refer to **Figure 16**.
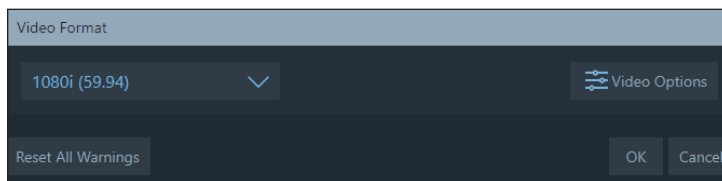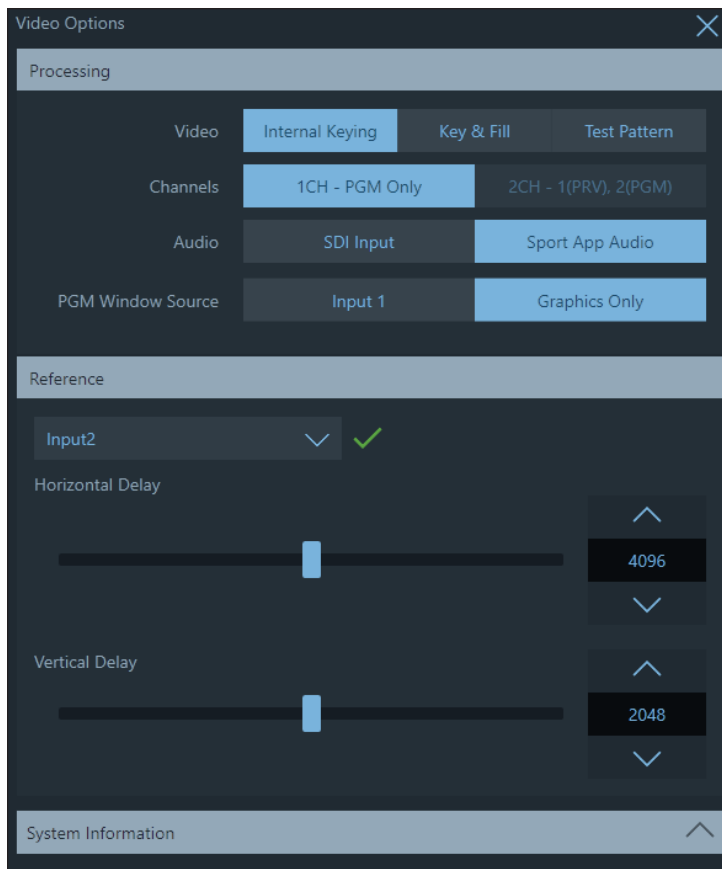

Figure 15: *Video Format*

Figure 16: *Video Options*

3. Select **Key & Fill** in the **Video** section under **Processing**. This routes only the scoreboard out for downstream keying at the switcher. Refer to **Figure 17**.
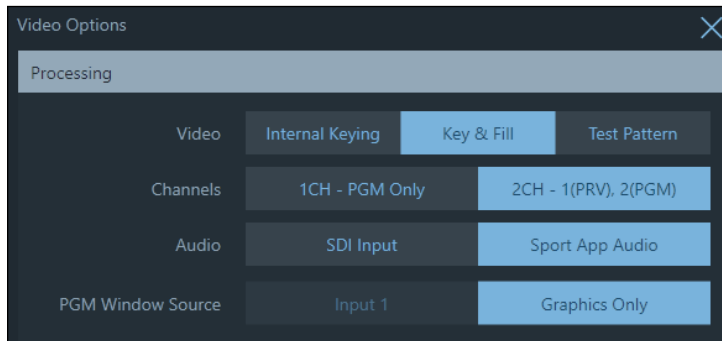
Figure 17: *Keying with Program Access - Video Options*

4. Select **2CH - 1(PRV), 2(PGM)** in the **Channels** section.

5. Select an **Audio** option:

    •   **SDI Input** - if the incoming video source includes audio, it will be heard on the output monitor

    •   **Sport App Audio** - if an insert graphic has audio embedded in the template, it will play if the insert graphic is sent to the Preview or Program windows

6. Confirm that **Graphics Only** is enabled in the **PGM Window Source** section; the **Input 1** option is disabled when **2CH - 1(PRV), 2(PGM)** is selected in the **Channels** section.

7. Go to the **Reference** section and choose the correct option from the drop-down list. Refer to **Figure 18**.

- If no reference signal is connected to the LiveBook GFX® I/O box or the LiveServer GFX®, choose **Internal**.

- If a reference signal is connected, choose **RefIn**.

8. Verify that there is a green check next to the **Reference** drop-down list. A green check mark confirms that the system detects a valid signal. A red X indicates that no signal is detected from the selected source. If a red X is shown, check the hardware connections.

Figure 18: Reference Options

9. Click **OK** to save the settings and close the panel.

10. Confirm video input and set vertical and horizontal delay. Refer to **Confirm Video Input and Set Horizontal and Vertical Delay (p.12)**.
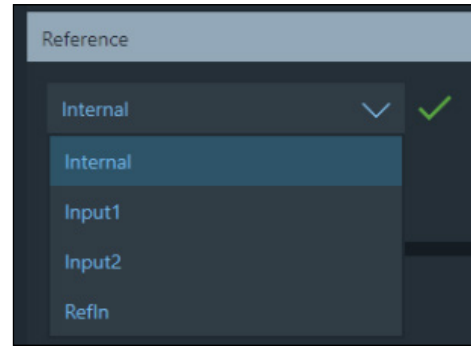
Confirm Video Input and Set Horizontal and Vertical Delay

To avoid problems with video input, it is important to confirm that the video format is correct. If necessary, adjust the horizontal delay (pixels) and vertical delay (lines).

To confirm video format and adjust horizontal and vertical delay, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Click **Video Options** under the **Video Format** section. Refer to **Figure 19**. The **Video Options** panel opens. Refer to **Figure 20**.
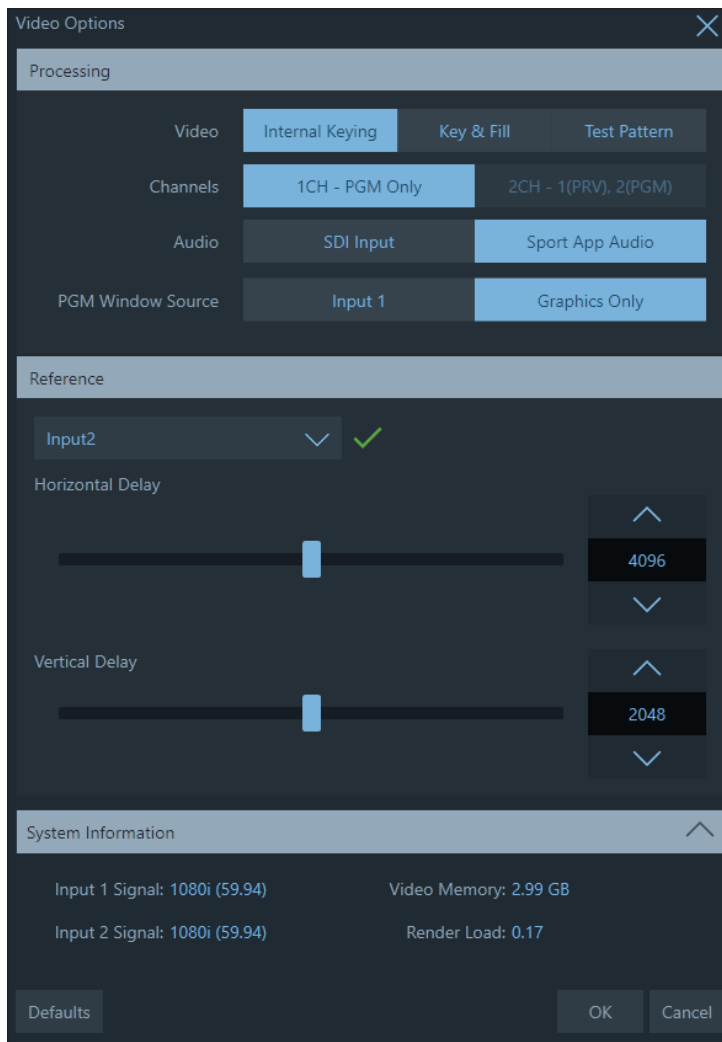

Figure 19: Video Format

Figure 20: *Video Settings*

3. Confirm the video format for the input connections under the **System Information** area. The video format selected in the **Sport App Settings** panel should match the format shown here.

> **Note:** To confirm that the system hardware is properly connected to the LiveBook GFX® or the LiveServer GFX® and to the reference signal for the intended workflow, refer to **LiveBook GFX Hardware Connections (p.2)** or **LiveServer GFX Hardware Connections (p.3)**.

4. Adjust the horizontal and vertical timing of the video input signal as needed using any of the sliders and edit controls. Refer to **Figure 20**.

   - Drag the slider to change the delay.

   - Click the up or down arrows next to the delay values on the right.

   - Double-click the value to type a new value.

5. Click **OK** to save the settings and close the **Video Options** panel.

6. Click **OK** to save the settings and close the **Settings** panel.

Enable Scoreboard Connectivity

If the LiveBook GFX® or LiveServer GFX® is connected to a scoreboard display feed, select the correct settings to enable this connection.

> **Note:** To enable Fanfare (available in Baseball, Basketball, Football, Hockey, and Soccer) for the scoring animations in manual or automatic mode, click the ellipsis button to the right of the scoring panel and enable the **Fanfare** option.

To enable the system to receive data from the arena scoreboard, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select the appropriate scoreboard feed from the drop-down list under the **Scoreboard Feed** section. Refer to **Figure 21**.
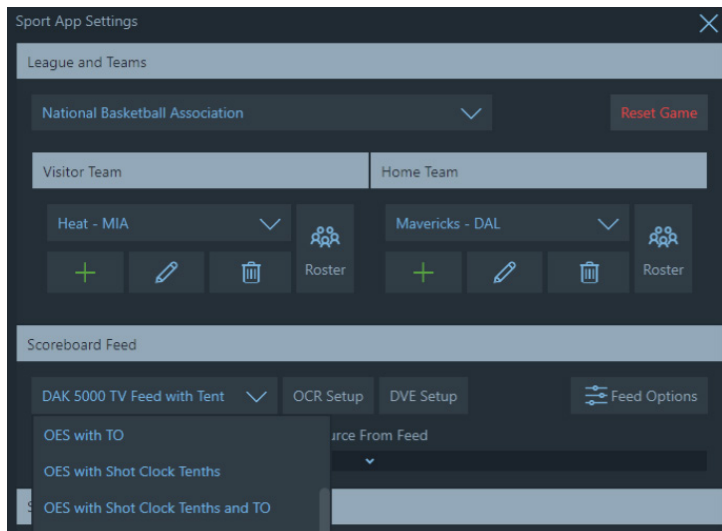

Figure 21: *Scoreboard Feed*

3. Click **Feed Options** to open the **Feed Options** panel. This panel will differ depending on the selected scoreboard feed. Refer to **Figure 22**.
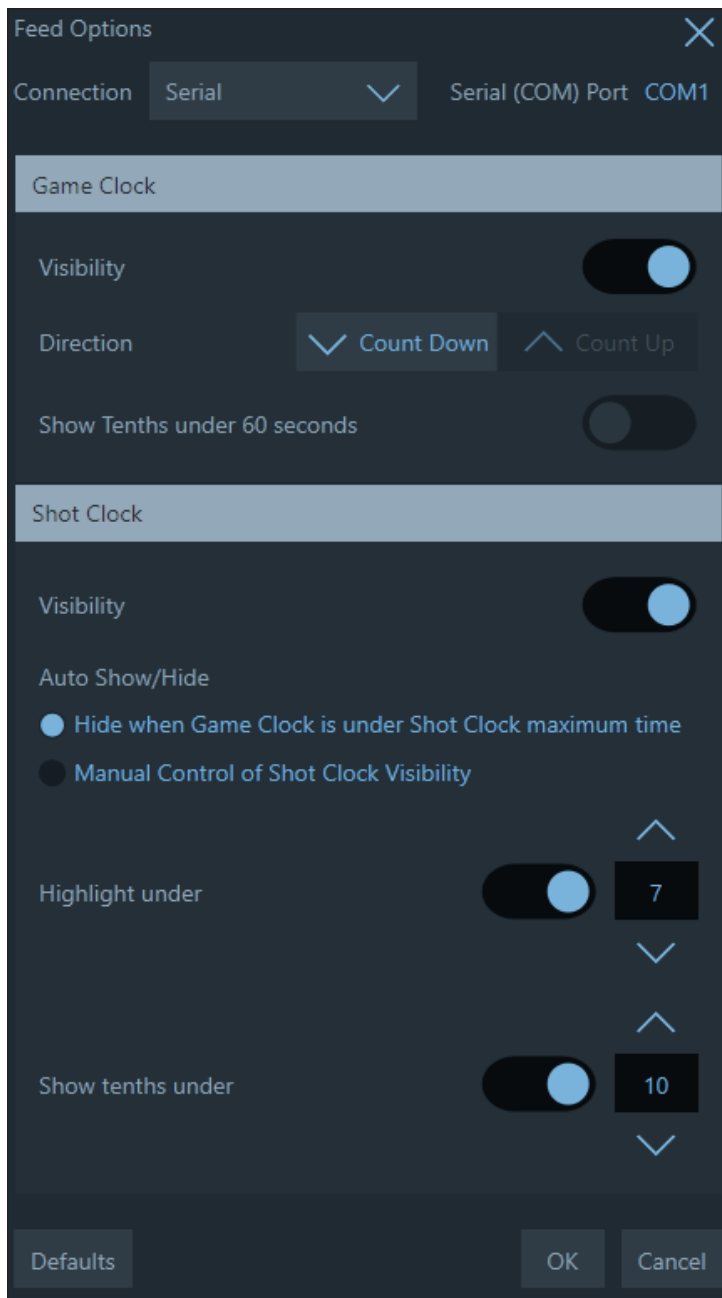
Figure 22: *Clock Settings*

4. Click the **Connection** drop-down list and select either **Network** or **Serial** connection. The connection port information is shown on the right side. Refer to **Figure 23**.
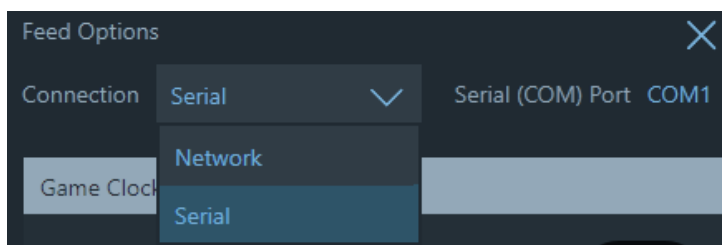

Figure 23: *Clock Settings - Connection*

5. Click **OK** to save the settings and close the **Clock Settings** panel or continue to configure the game clock, shot clock, or play clock. Refer to **Set Up DVE Clock (p.18)** or **Set Up OCR Clock (p.20)**.

Enable ERTD

If the LiveBook GFX® or LiveServer GFX® is connected to an enhanced real-time data (ERTD) feed, select the correct settings to enable this connection.

To enable the system to receive ERTD, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select the appropriate ERTD feed from the drop-down list under the **Scoreboard Feed** section. Refer to **Figure 24**.
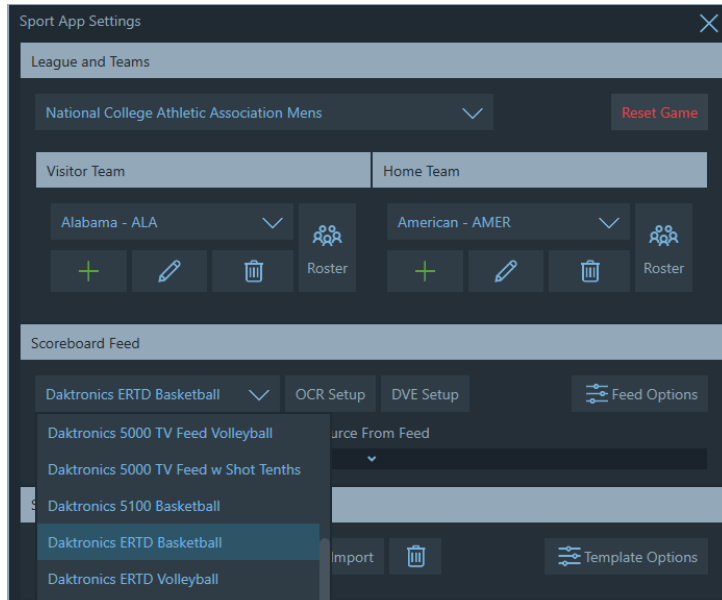

Figure 24: *Scoreboard Feed - ERTD*

3. Click **Feed Options** on the right to open the **Feed Options** panel. Refer to **Figure 25**.
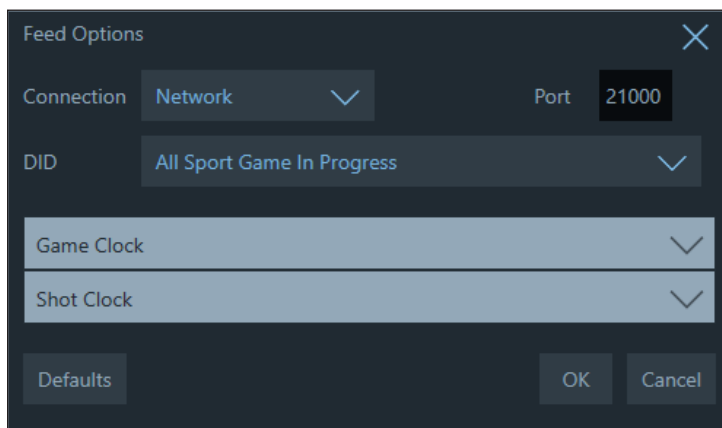

Figure 25: *Feed Options - ERTD*

4. Confirm the **Connection** is a **Network** connection.

5. Confirm the **Port** number. The ERTD data source is related to the Port number. For example, if the ERTD data source is 4, the Port number is 21040. The default port number is **21000**.

Enable Sportzcast

If the LiveBook GFX® or LiveServer GFX® is connected to a Sportzcast feed, select the correct settings to enable this connection.

To enable the system to receive Sportzcast data, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select the appropriate Sportzcast feed from the drop-down list under the **Scoreboard Feed** section. Refer to **Figure 26**.
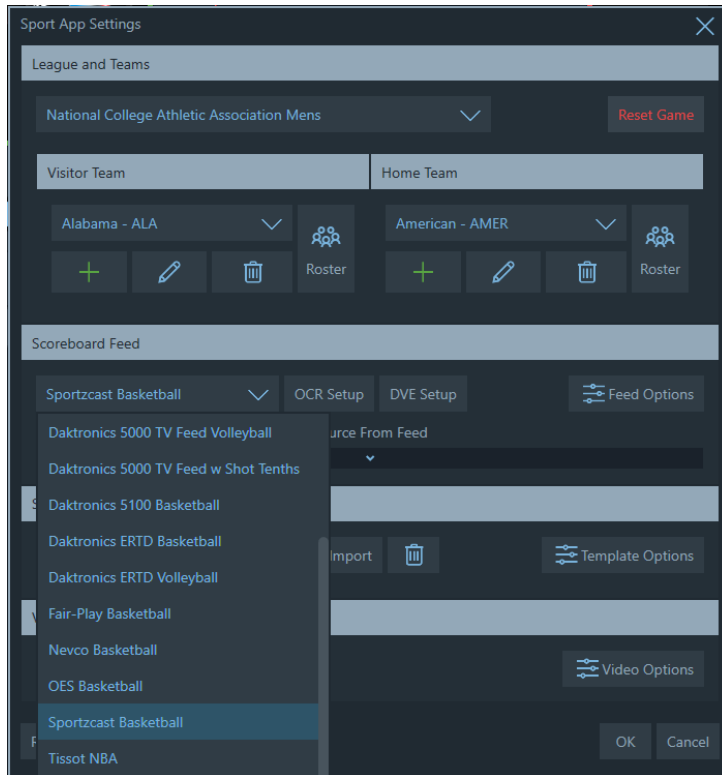

Figure 26: *Scoreboard Feed - Sportzcast*

3. Click **Feed Options** to open the **Feed Options** panel. Refer to **Figure 27**.
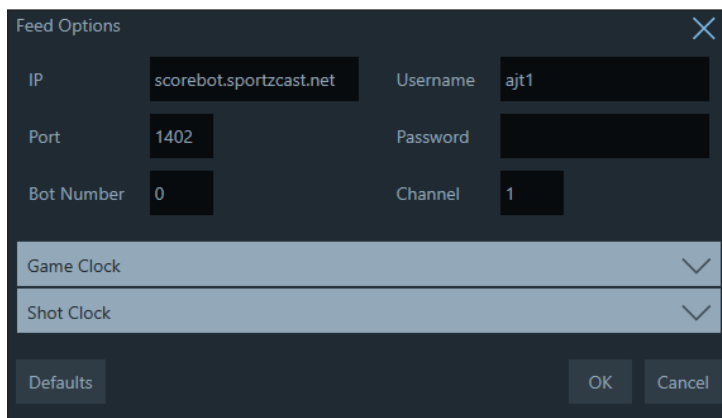

Figure 27: *Feed Options - Sportzcast*

4. Confirm the information in this panel including the **IP** address, **Port** number, **Bot Number**, and Channel. Click **OK**.

Set Up DVE Clock

If no display controller is available, it is possible to aim a camera at the scoreboard to get data to the scoreboard by using the DVE clock. In this case, the camera must be connected to **Input 1** when using the DVE clock.

> **Note:** The DVE clock feed video format should match the selected video format within the SportApp™ program.

To set up the DVE clock, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select **DVE Game Clock** from the drop-down list under the **Scoreboard Feed** section. Refer to **Figure 28**.
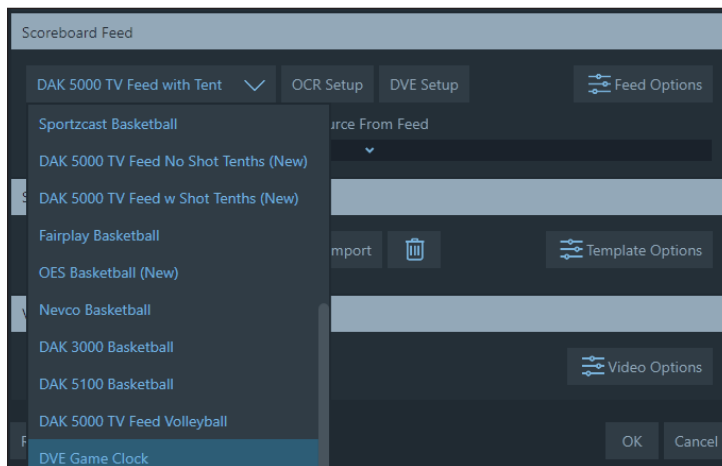

Figure 28: *Scoreboard Feed*

3. Check the image going to the scoreboard in the Preview window. If the camera is connected, this image will appear larger than expected. Refer to **Figure 29**. If the camera is not connected to the LiveBook GFX® or LiveServer GFX®, the game clock and shot clock will appear black.

Figure 29: *Large DVE Clock Image from Camera - Preview*

4. Click **DVE Setup** to open the **DVE Setup** panel.

5. Position the game clock, shot clock, or play clock position trackers around the numbers using the position and scale slider controls. Refer to **Figure 30**.

Figure 30: DVE Clock Trackers

6. Check the image going to the scoreboard in the Preview window. The clock data should be the correct size. Refer to **Figure 31**.
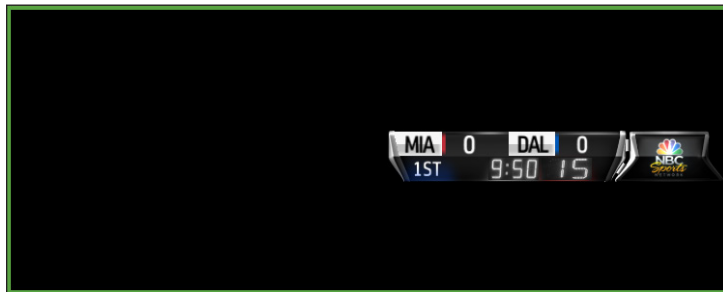

Figure 31: Correct DVE Clock Image from Camera - Preview

7. Click **OK** to save the changes.

8. Click the **PGM** button to send the scoreboard with the clock data to the Program window. Refer to **Figure 32**.
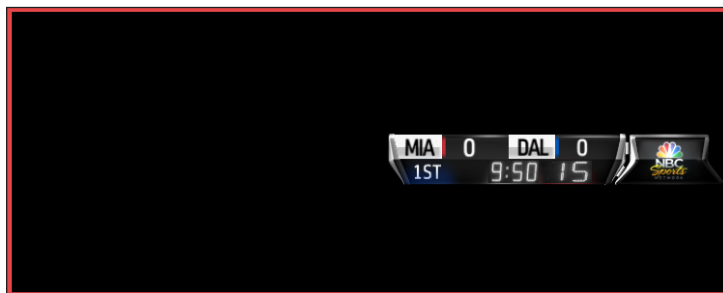

Figure 32: Correct DVE Clock Image from Camera - Program

Set Up OCR Clock

If no scoreboard controller is available, it is possible to aim a camera at the scoreboard to get data to the scoreboard by using the OCR clock. In this case, the camera must be connected to **Input 1** when using the OCR clock.

To set up the OCR clock, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Select **AJT OCR** from the drop-down list under the **Scoreboard Feed** section. Refer to **Figure 33**.
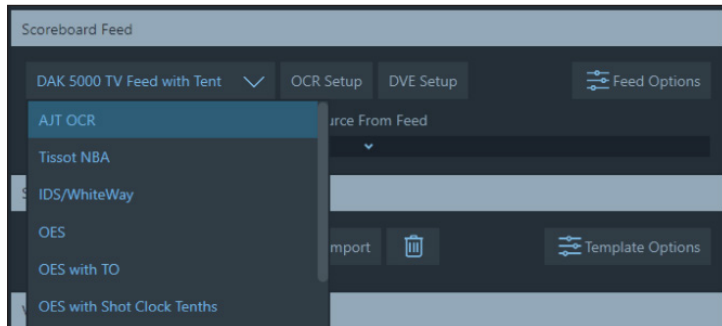

Figure 33: *Scoreboard Feed*

3. Check the image going to the scoreboard in the Preview window. When the feed is set to **AJT OCR**, the game clock will not change. Refer to **Figure 34**.
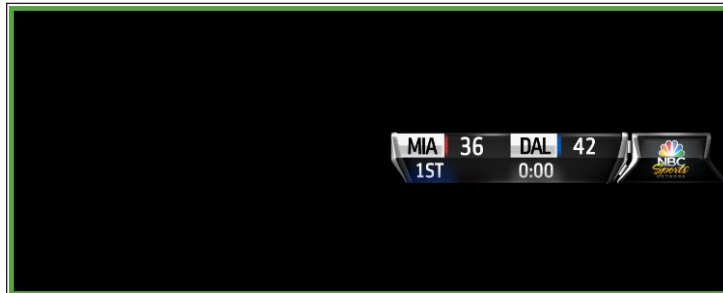

Figure 34: *OCR Clock Not Visible - Preview*

4. Click **OCR Setup** to open the **OCR Setup** panel. Refer to **Figure 35**.

Figure 35: OCR Setup

5. Adjust the video properties using the **Position**, **Scale**, and **Shear** slider controls to fit the video in the settings panel.

6. Adjust the **Threshold**, **Brightness**, and **Contrast** settings for the incoming video. This determines how the clock data appears on the scoreboard and output monitor. Refer to **Figure 36**.

Figure 36: OCR Settings

Keyboard shortcuts are also available to manipulate position, scale, brightness, contrast, and shear. Refer to **Figure 37**.
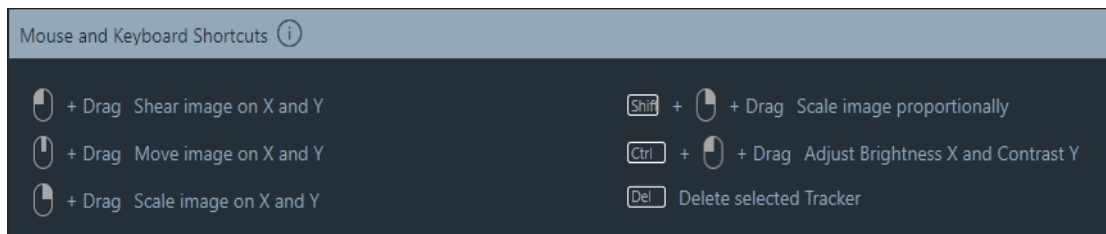
Hardware Setup

Figure 37: Mouse and Keyboard Shortcuts

7. Add trackers for each digit in the game, shot, or play clocks. Refer to **Figure 38**.

Figure 38: OCR Clock Trackers

8. Check the image going to the scoreboard in the Preview window. The scoreboard should be updated with the correct clock data from the OCR clock. Refer to **Figure 39**.
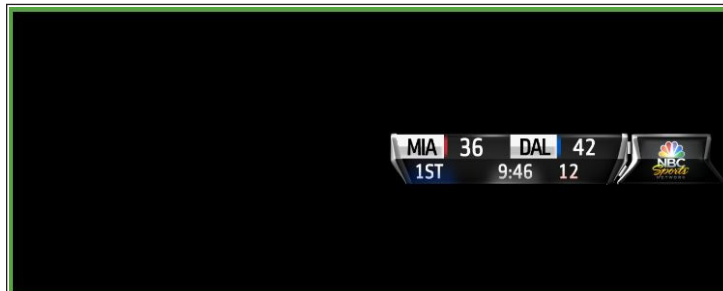

Figure 39: OCR Clock Visible - Preview

9. Click **Save OCR** to save the settings as an XML file. Refer to **Figure 40**.
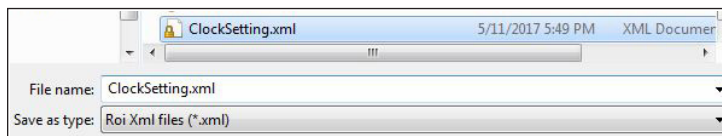

Figure 40: Save OCR Clock Settings

> **Note:** Save the OCR settings to quickly and easily set up the OCR clock at that venue in the future.

10. Check that the settings are saved properly.

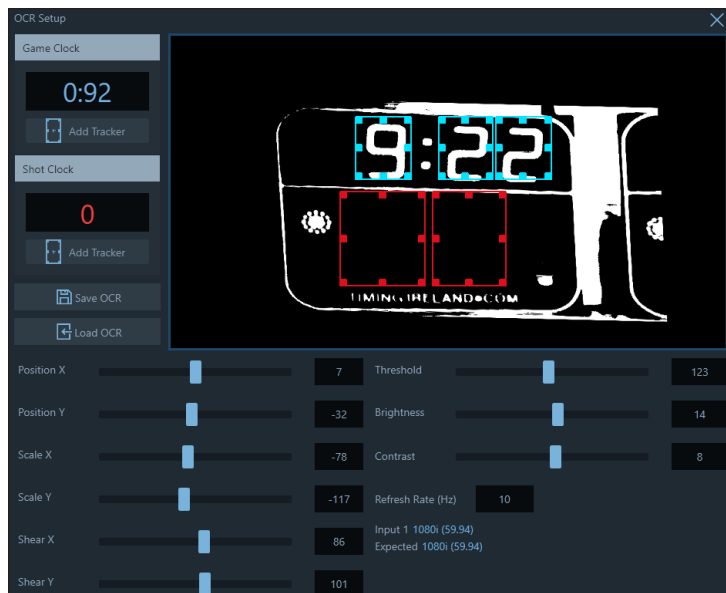   a. Change the sliders in the settings panel randomly. Refer to **Figure 41**.

Figure 41: *OCR Clock Settings - Changed*

    b.   Click **Load OCR** to load the saved XML settings file. Confirm that the settings have returned to the saved configuration and the clocks are shown correctly on the scoreboard. Refer to **Figure 42**.

Figure 42: *OCR Clock Settings - Restored*

11. Click **OK** to close the OCR settings panel.

12. Click the **PGM** button to send the scoreboard with the clock data to the Program window. Refer to **Figure 43**.
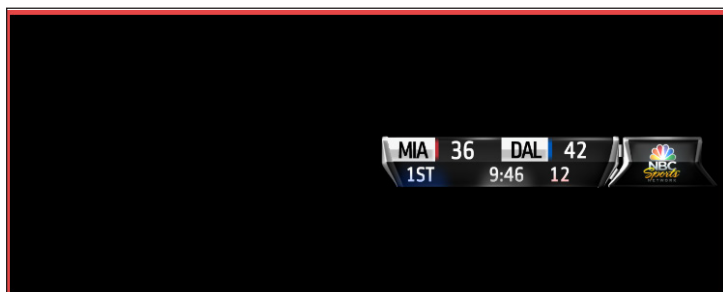

Figure 43: *OCR Clock Visible - Program*

Enable Manual Score and Game Data Updates

If the LiveBook GFX® or LiveServer GFX® system is not connected to a scoreboard system, configure the SportApp™ software for manual updates to the score, period, and game data. Even if the system is connected to a scoreboard system, it is possible to enter some or all of the game data manually.

To enable manual updates to the scoreboard, follow these steps:

1. Open the settings dialog as described in **Access the Settings Panel (p.4)** if not already open.

2. Click the **Source From Feed** drop-down arrow under the **Scoreboard Feed** section and toggle the buttons to **Manual** for each type of data to be entered manually. Refer to **Figure 44**.
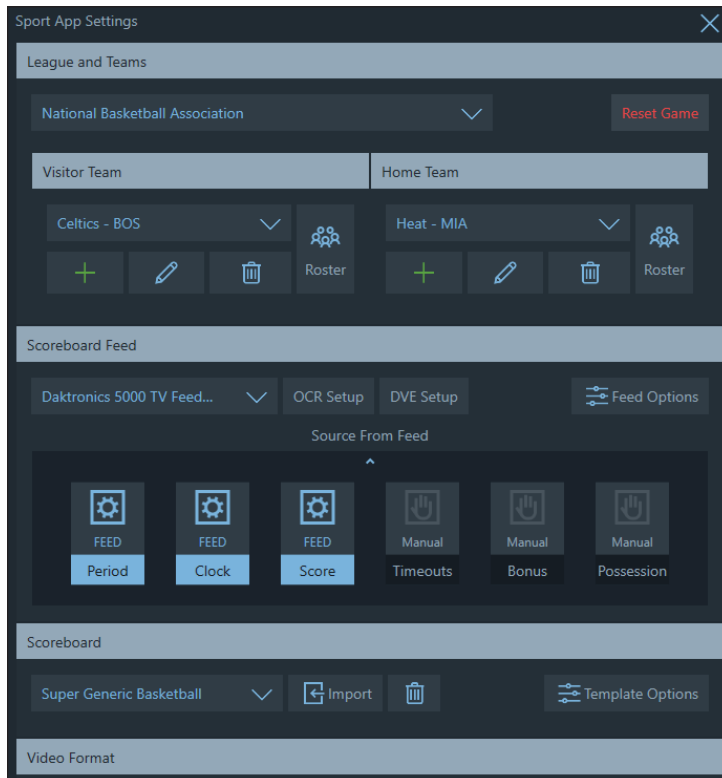

Figure 44: *Manual Data Entry*

3. Close the **Sport App Settings** panel and return to the main interface.

4. Manually enter the data for any of these fields:

- Ball on
- Bonus
- Clock
- Distance
- Down

- Penalty clocks
- Period
- Possession
- Score
- Time out

> **Note:** Available fields depend on the specific sport.

3 Game Setup and Operation

Before the game, make sure the league and teams are selected. While the game is in progress, operate the scoreboard through the intuitive user interface. While each program includes sport-specific features, this chapter includes instructions for the common features that are applicable to any sport:

- Take the scoreboard on-air or off-air

- Choose the network or sponsor logos to display with the scoreboard

- Add text messages such as promos or statistics to display on air

Configure Leagues and Teams

Specify the league, teams, and how the scoreboard displays team logos and colors for each game or event.

Each SportApp™ program is pre-configured with some leagues and teams. It is possible to edit the pre-configured team information including team logos and colors as needed. Teams can also be added or deleted from leagues.

Choose Leagues and Teams

To choose the leagues and teams for an event, follow these steps:

1. Open the **Sport App Settings** panel. Refer to **Access the Settings Panel (p.4)**.

2. Click the **Reset Game** button to return all scores to zero and remove any other data remaining from previous games.

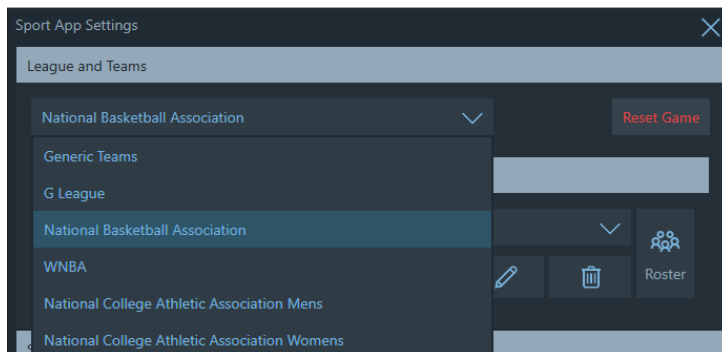3. Select the league from the drop-down list. Refer to **Figure 45**.

Figure 45: *League Selection*

4. Select the teams from the **Visitor Team** and **Home Team** drop-down lists. Refer to **Figure 46**.
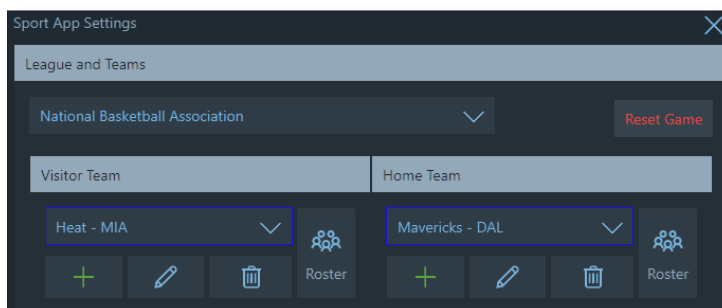

Figure 46: *Team Selection*

5. Confirm that the scoreboard now displays the correct abbreviation, logo, and color(s) associated with the selected teams.

6. Click **OK** to save the settings and close the **Sport App Settings** panel or continue to make changes.

Add Teams

To add a team to a league, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Click the green plus button ➕ below either the **Visitor Team** or **Home Team** sections. Refer to **Figure 47**. The **Edit Team** panel opens.
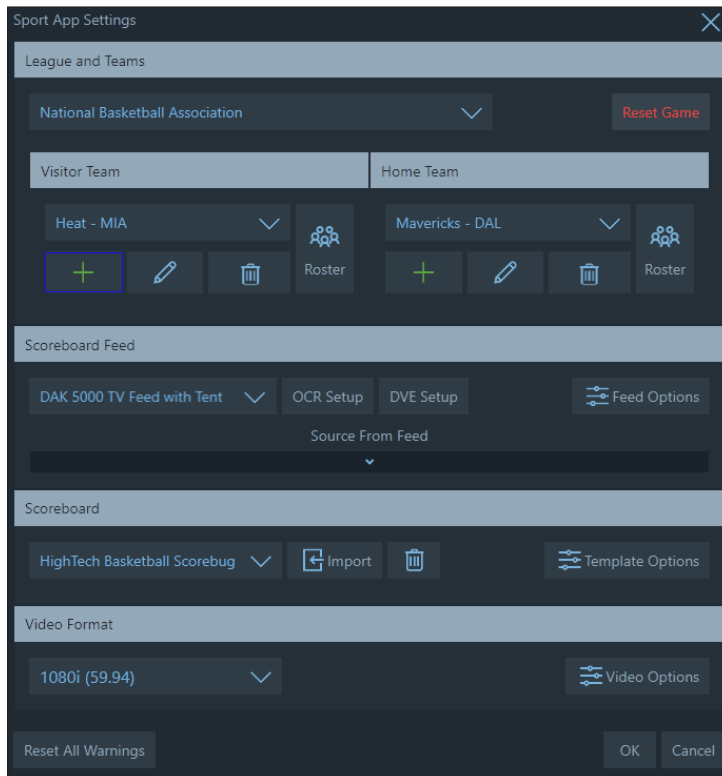
Figure 47: Add a Team

3. Enter the team information in the appropriate fields. If the template supports any of these fields, this information will be visible on the scoreboard, go-to-break graphic, or insert graphic. Refer to **Figure 48**.
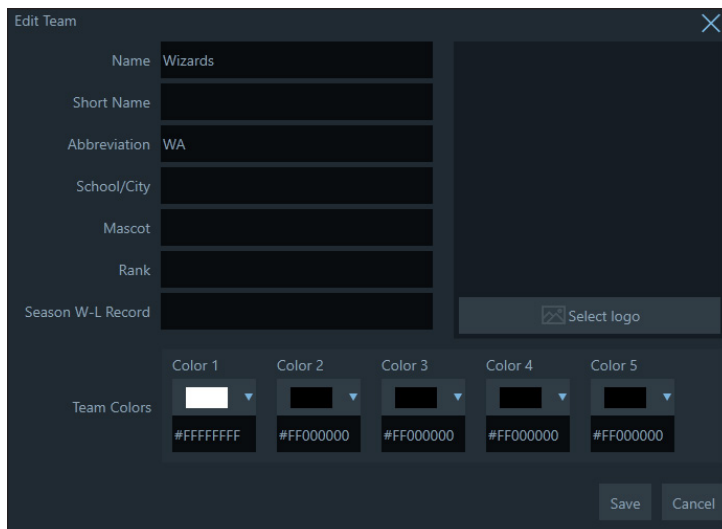
Figure 48: *Enter Team Information*

> **Note:** The team **Abbreviation** has a limit of 4 characters.

4. Enter up to five team colors. These will appear on the scoreboard or insert graphic if it supports more than one team color. Refer to **Figure 49**. Set the colors with one of these actions:

   • Double-click the hexadecimal color code field and enter the desired color code.

   • Click the arrow next to the color field to open the color picker. Enter the RGBA values, use the sliders to adjust the color, click anywhere within the color field, or use the hue slider to the right. Click anywhere outside the color picker to exit.
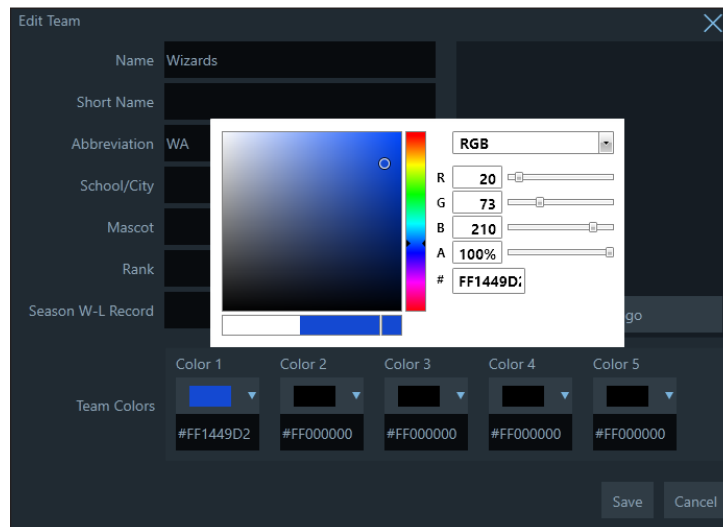

Figure 49: *Set Team Colors*

5. Click **Select logo** to navigate to the desired logo and then click **Open**. Refer to **Figure 50**. For more information about logo standards, refer to **Appendix A: Art Department Guidelines (p.77)**.
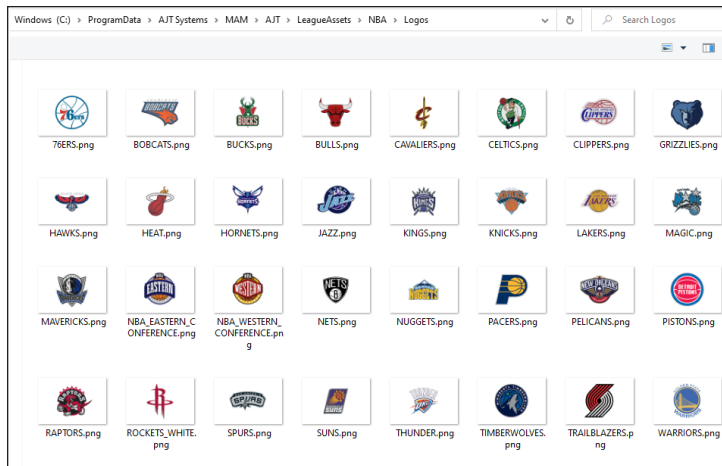
Figure 50: *Select Logo*

6.   Click **Save** to save the team information and exit.

Edit Teams

To edit team information, follow these steps:

1.   Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2.   Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.

3.   Click the pencil button [✏] below the team name. The **Edit Team** panel opens. Refer to **Figure 51**.
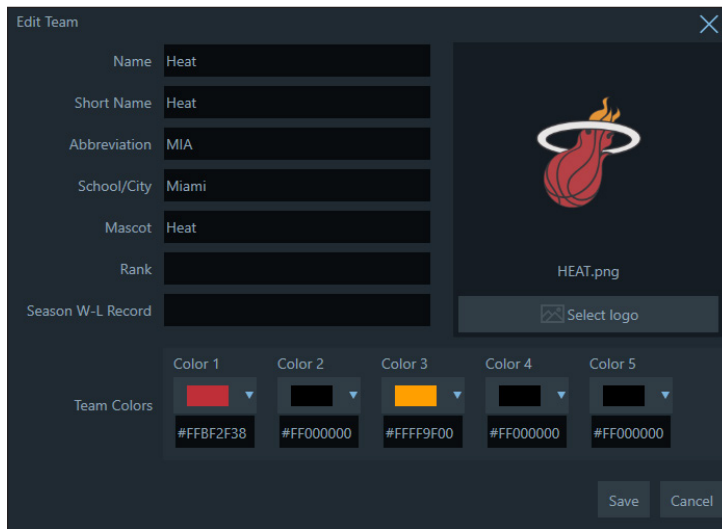

Figure 51: *Edit Team Information*

4.   Make the desired changes.

   •   Edit the team **Name**, **Abbreviation** or other fields. Each team name and abbreviation must be unique within a league.

   •   Edit the team colors or logo. For more information about logos, refer to **Section A: Art Department Guidelines (p.77)**.

5.   Click **Save** to save the changes and exit.

Delete Teams

To delete a team, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.

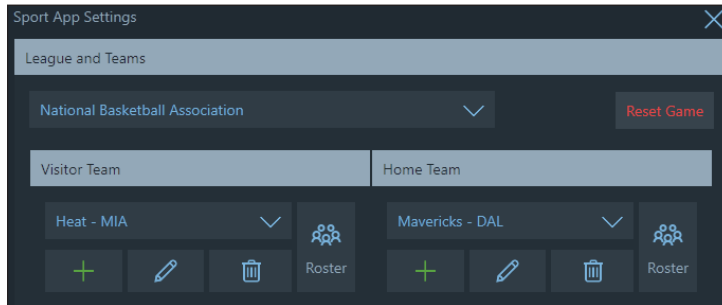3. Click the delete button 🗑 below the team name. Refer to **Figure 52**.

Figure 52: Delete a Team

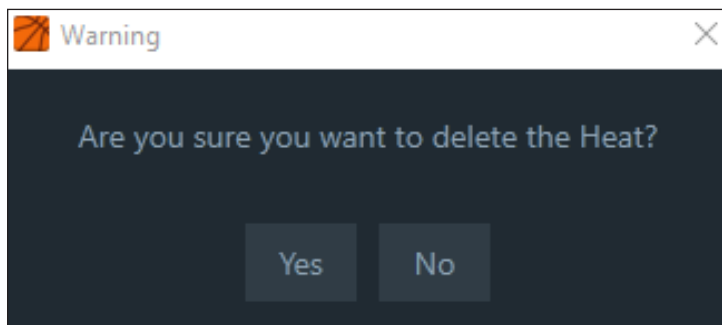4. Click **Yes** to confirm that the team should be deleted. Refer to **Figure 53**.

Figure 53: Team Selection

> **Note:** The team name is no longer available in the **Visitor Team** or **Home Team** drop-down lists; however, the team logo remains in the system in case the team is added back later.

5. Click **OK** to save the changes and exit.

Add Team Rosters

Player rosters can be added to a team from a roster file or a data feed plug-in (Stat Crew or NBA GSS).

Add Team Roster from File

To add team rosters from a file, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections. Refer to **Figure 54**.
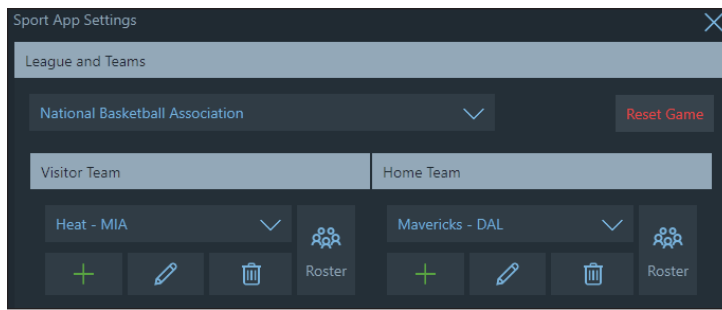
***Figure 54:** Team Roster*

3. Click **Roster** next to the team name. An empty **Player Information** panel opens. Refer to **Figure 55**.

***Figure 55:** Empty Team Roster*

4. Click **Import Players**. Two options appear: **From File** and **From Plugin**. Refer to **Figure 56**.
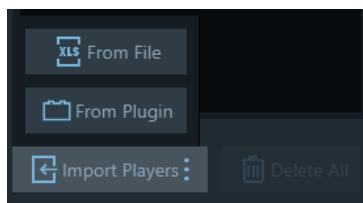
***Figure 56:** Add Team Roster*

5. Click **From File** to navigate to the roster file location and click **Open** to import the file. The roster file can be an XLS, XLSX, or CSV file. Refer to **Figure 57**.
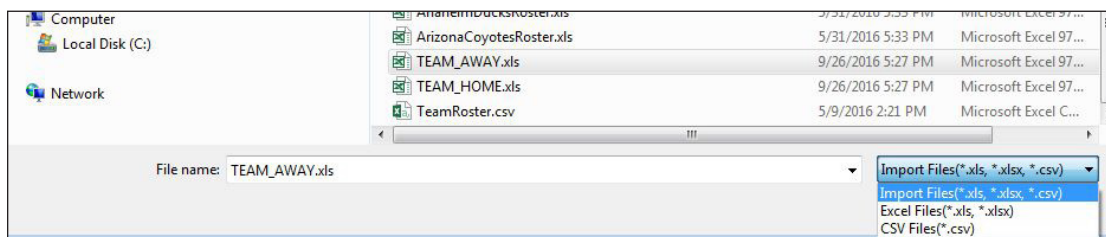
***Figure 57:** Import Roster File*

> **Note:** Refer to the **ExampleRoster** files in the C:\ProgramData\AJT Systems\MAM\ AJT\LeagueAssets folder for an example of the roster file format.

6. Confirm that the **Player Information** required fields are filled out and enter any missing information. Refer to **Figure 58**.
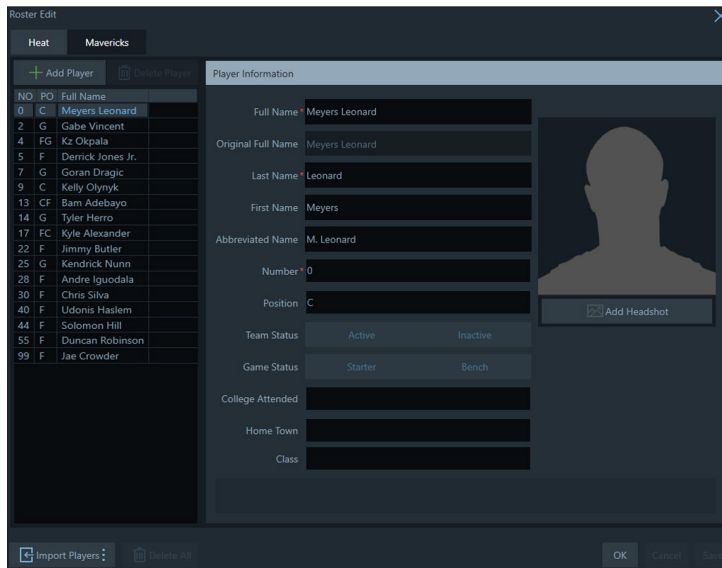
***Figure 58:** Populated Player Information*

7. Click **OK**.

Add Team Roster from Plug-In

To add team rosters via a data feed plug-in, follow these steps:

1. Enable the plug-in. Refer to **Enable Data Feed Plug-In (p.67)**.

2. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4).**

3. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.

4. Click **Roster** next to the team name. An empty **Player Information** panel opens. Refer to **Figure 59**.
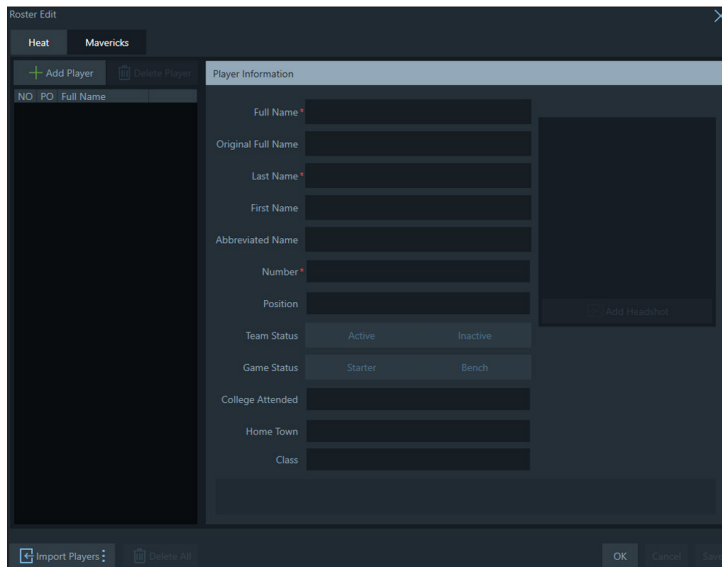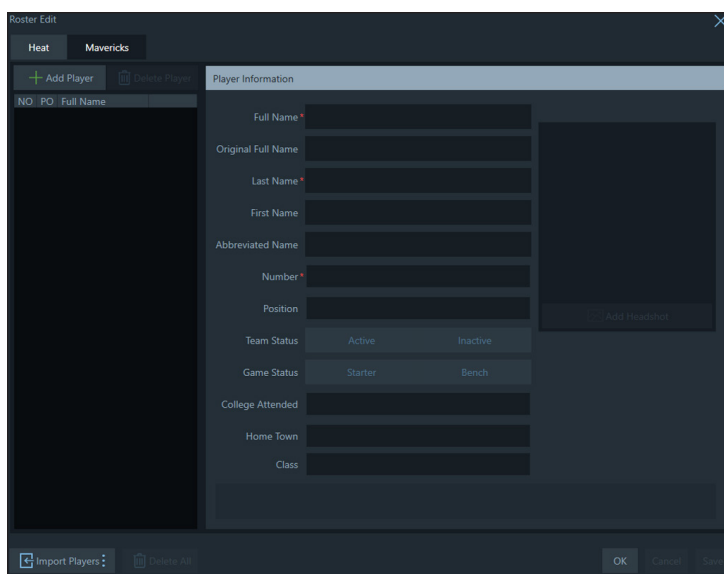
Figure 59: Empty Team Roster

5. Click **Import Players**. Two options appear: **From File** and **From Plugin**. Refer to **Figure 60**.
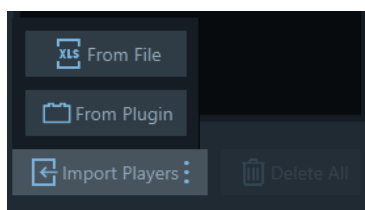
Figure 60: Add Team Roster

6. Click **From Plugin**.

7. Confirm that the roster is populated with player information from the Stat Crew or NBA GSS plug-in.

8. Click **OK**.

Add Players to the Team Roster

To add a player to a team roster, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.

3. Click **Roster** next to the team name. The team's full roster is shown.

4. Click **+ Add Player**. A blank new **Player Information** panel opens.

5. Fill out the player information and click **Save**. Refer to **Figure 61** and **Add a Player Headshot (p.33)**.

Figure 61: *Add Player to Roster*

> **Note:** The player information is used to generate a player call up number (**CU#**) that is used to easily add a player page to a show. Refer to **Call Up a Page (p.62)**.

Delete Players from Team Rosters

To delete a player from a team roster, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.
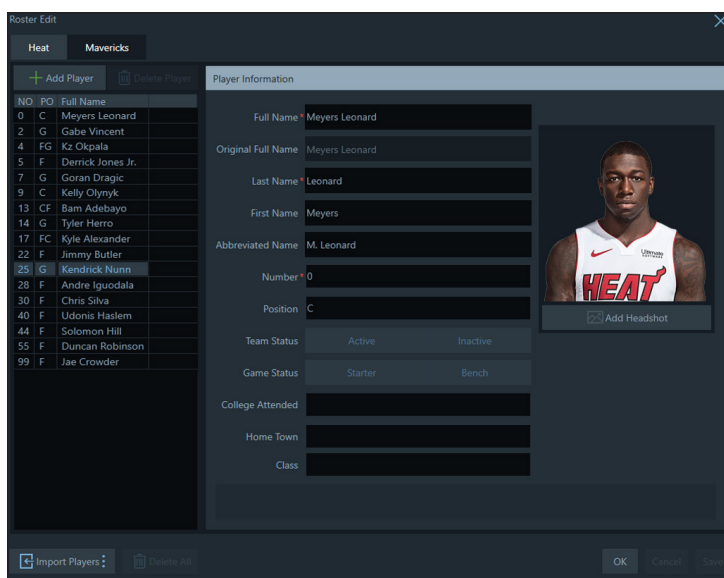
3. Click **Roster** next to the team name. The team's full roster is shown.

4. Select the player and click **Delete Player**. The player is removed from the list.

5. Click **Save**.

Add a Player Headshot

When creating a headshot, the base canvas size must be 512 x 512 pixels. Refer to **Appendix A: Art Department Guidelines (p.77)** for more information and the headshot reference file located in the Media Asset Management (MAM) folder: **C:\ProgramData\AJT Systems\MAM\AJT\LeagueAssets\NCAA\Headshots**.

To add or edit a player headshot, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the team name from the drop-down list in either the **Visitor Team** or **Home Team** sections.

3. Click **Roster** next to the team name. The team's full roster is shown.

4. Select the player and click **Add Headshot**. The league-specific folder will be shown.

5. Select the headshot from the folder and click **Open**.

6. Confirm that the headshot is now visible in the **Player Information** panel and click **Save**. Refer to **Figure 61**.

Configure the Scoreboard

This section describes how to choose the scoreboard design template, adjust the scoreboard's position or scale, and select the data feed going into the scoreboard.

Select a Scoreboard Template

To select a specific scoreboard template, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the scoreboard style from the drop-down list in the **Scoreboard** section. Refer to **Figure 62**. The scoreboard style changes instantly.
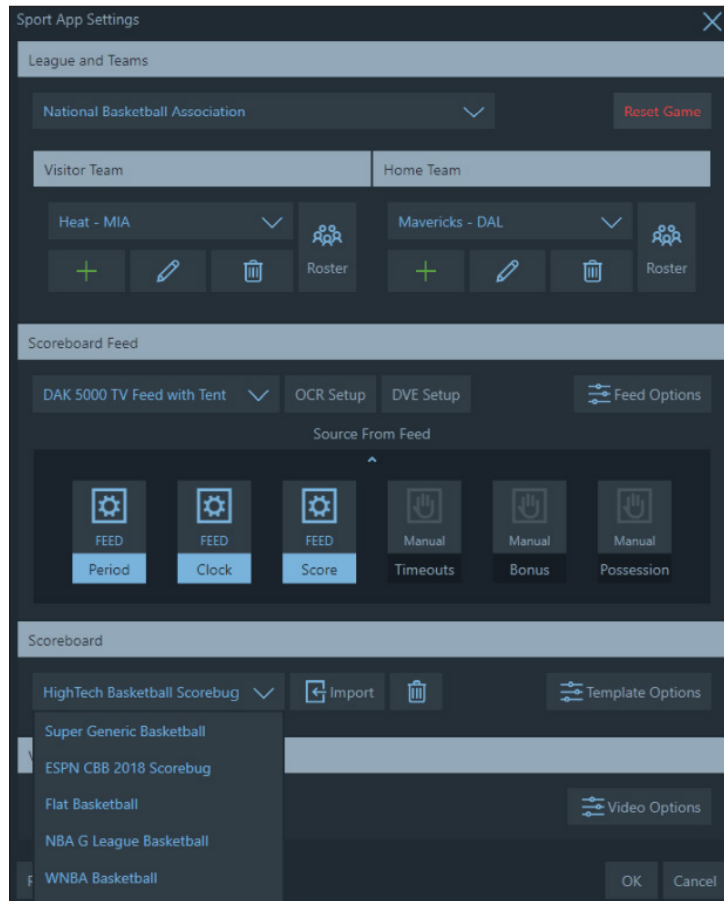

Figure 62: *Select Scoreboard Template*

3. Confirm that the selected style is the preferred design in the Preview window. **Figure 63** shows two different template styles with the same data.
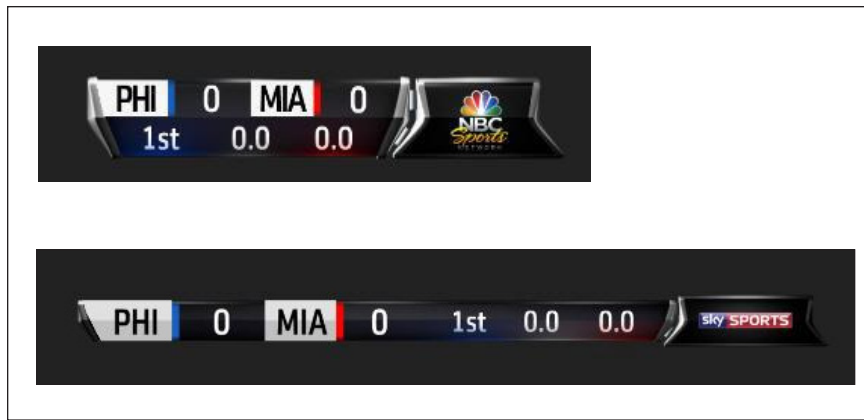
Figure 63: Score Bug Styles

Import a New Scoreboard Template

To import a new score bug template for a scoreboard, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Click **Import** in the **Scoreboard** section. The **Scoreboard Import** panel opens. Refer to **Figure 64**.
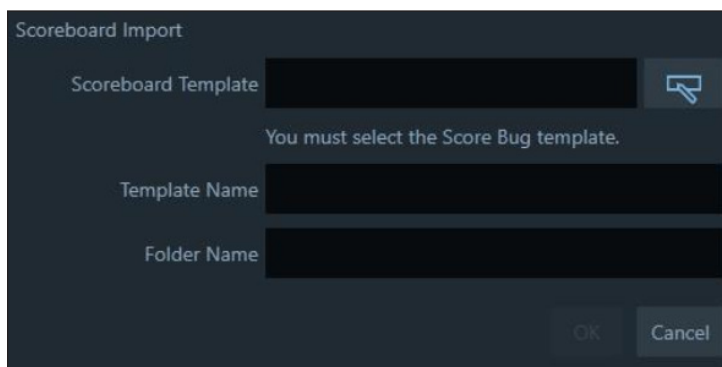
Figure 64: Import Scoreboard Template

3. Click the edit button [icon] beside the **Scoreboard Template** field to navigate to the location of the new scoreboard template.

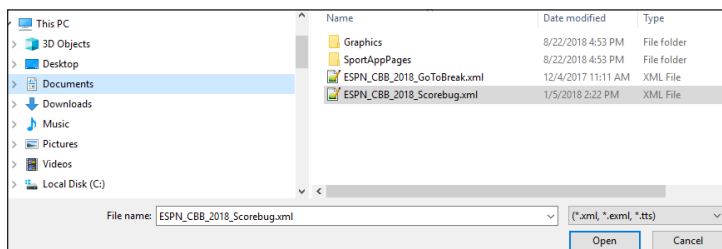4. Select the template to import and click **Open**. Refer to **Figure 65**.

Figure 65: Select Scoreboard Template

5. Confirm that the imported scoreboard template is shown with the correct location in the **Scoreboard Import** panel. Refer to **Figure 66**.
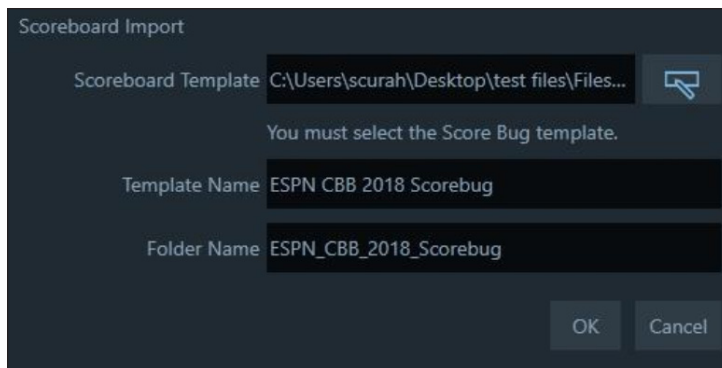
Figure 66: Import Selected Scoreboard Template

> **Note:** When a new template is imported, its associated fonts are automatically installed.

6. Click **OK** to continue.

7. Open the scoreboard drop-down list to select the newly imported scoreboard template. Refer to **Figure 67**.
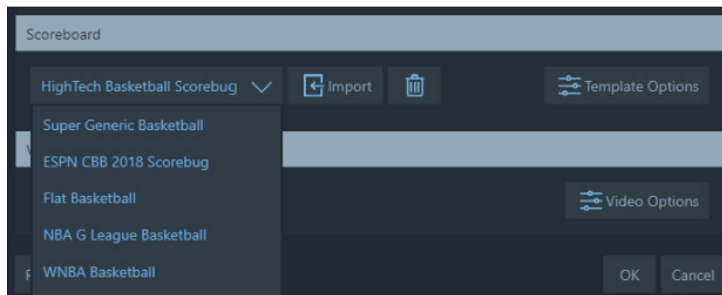
Figure 67: New Score Bug Template

Adjust the Scoreboard Template

To adjust the scoreboard template's position and size, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Select the desired scoreboard template from the drop-down list in the **Scoreboard** section. Refer to **Figure 67**.

3. Click **Template Options**. The **Template Options** panel opens. Refer to **Figure 68**.
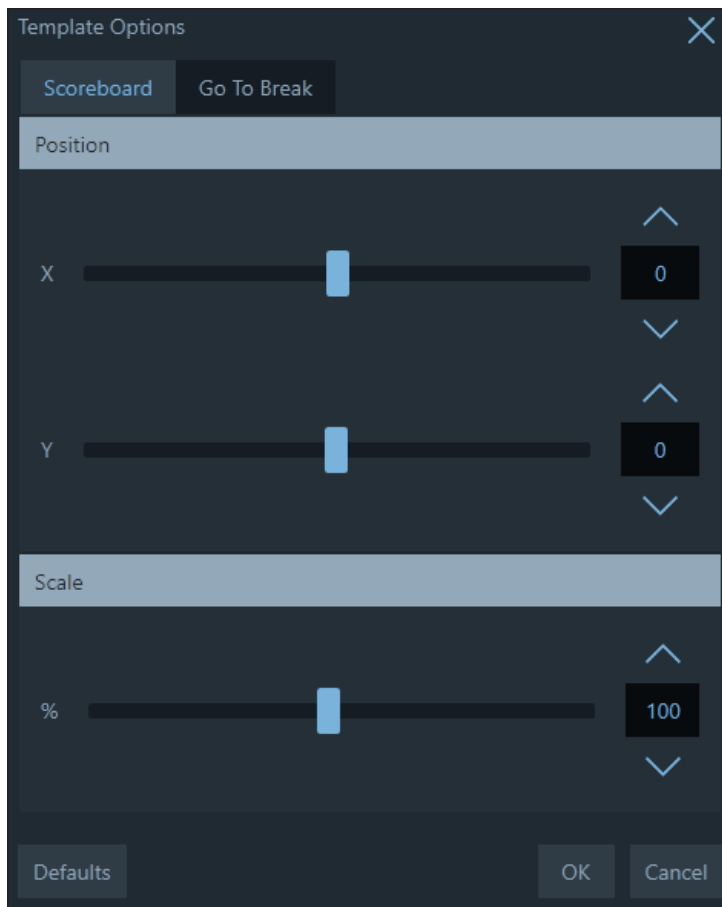
Figure 68: *Scoreboard Template Options*

4. Adjust the scoreboard template **Position** as needed in one of these ways:

   - Move the **X** and **Y** sliders.

   - Click the up or down arrows next to the **X** and **Y** value fields.

   - Type a number into the **X** and **Y** value fields.

5. Adjust the scoreboard template **Scale** as needed in one of these ways:

   - Move the **%** scale slider.

   - Click the up or down arrows next to the scale value field.

   - Type a number into the **%** value field.

   > **Note:** The scoreboard template can be scaled to as small as 10% or as large as 200% of its default size.

6. Confirm that the scoreboard template's position and size are correct.

   > **Note:** Click the **Defaults** button to return the scoreboard template to its default size and position.

7. Click **OK** to save the settings or click **Cancel** to discard the changes and exit.

Configure the Scoreboard Feed

To specify how game information (game clock data or shot clock data) displays in the on-air scoreboard, follow these steps:

1. Open the **Sport App Settings** panel if not already open. Refer to **Access the Settings Panel (p.4)**.

2. Click the **Source From Feed** drop-down list in the **Scoreboard Feed** section. Refer to **Figure 69**. The available sources are shown. Refer to **Figure 70**.
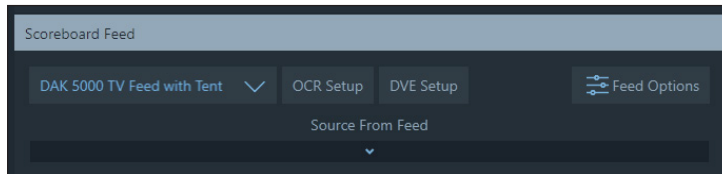

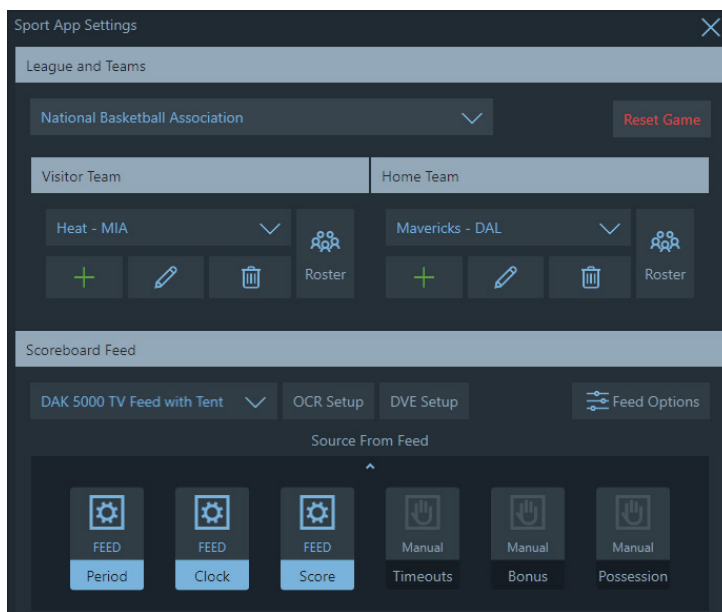***Figure 69:*** *Source From Feed - Drop-Down*

Figure 70: *Source From Feed - Sources*

3. Click **Feed Options** in the **Scoreboard Feed** section. The **Feed Options** panel opens. Refer to **Figure 71**.
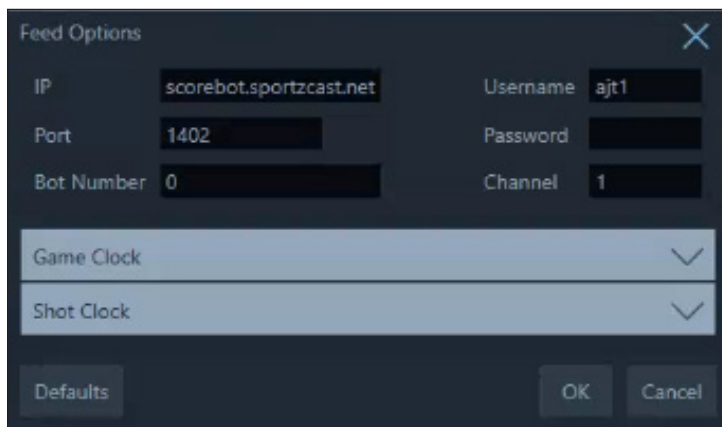
Figure 71: *Feed Options*

4. Click the **Game Clock** drop-down arrow. The clock settings panel opens. Refer to **Figure 72**.

Figure 72: *Clock Feed Settings*

5. Configure the **Game Clock** settings. Click the toggle switch to turn on or off any of these settings:

- **Visibility** - enables the scoreboard to display time remaining in the current period

- **Direction** - selects the direction the clock numbers count, **Up** or **Down**

- **Show Tenths under 60 seconds** - enables the scoreboard to display tenths of a second when there is less than a minute remaining in the game or period

When the toggle is blue, the item is enabled.
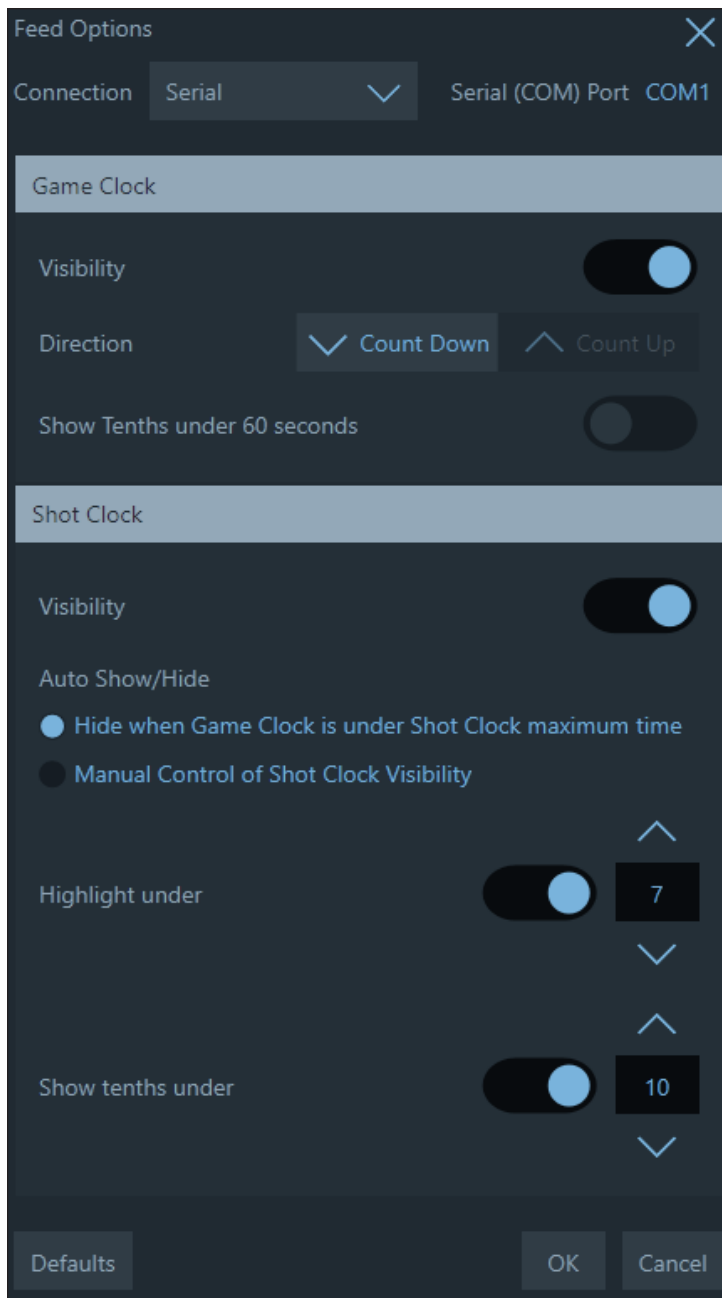
6. Click the **Shot Clock** drop-down arrow. The clock settings panel opens. Configure the **Shot Clock** settings. Click the toggle switch to turn on or off any of these settings:

- **Visibility** - enables the scoreboard to display the seconds remaining on the shot clock

- **Auto Show/Hide** - shows or hides the shot clock automatically when using the scoreboard controller

- **Highlight under** - highlights the shot clock when it reach the set number of seconds

- **Show tenths under** - shows the tenths of a second when the shot clock reaches the set number of seconds

7. Click **OK** to save the settings and close the **Feed Options** panel.

Scoreboard Operation

Scoreboard operation depends on how the LiveBook GFX® system is set up. If the system is connected to a scoreboard data feed, the scores and other data shown in the scoreboard are updated automatically. If the system is configured for manual operation, use the intuitive controls in the SportApp™ interface to change scores and other data. Each interface differs depending on the sport.

Take Scoreboard On-Air or Off-Air

The scoreboard is designed with built-in animations that play automatically when it is taken on-air or off-air. To take the scoreboard on-air and off-air, follow these steps:

1. Check the appearance of the scoreboard before taking it on-air; look at the scoreboard template in the Preview window. Refer to **Figure 73**.
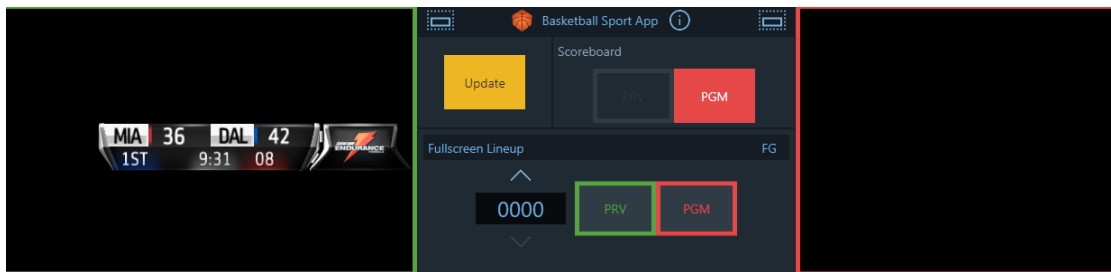

Figure 73: Scoreboard in the Preview Window

2. Click **Update**. The scoreboard will appear in the Program window, the **PGM** button fills in with red, and the **Update** button is disabled. Refer to **Figure 74**. The scoreboard is now on-air.
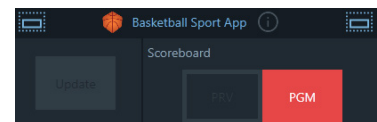
Figure 74: Scoreboard On-Air

> **Note:** The Program window is used for real-time monitoring. If the system is configured for internal keying or for downstream keying with program access, the scoreboard is shown over the video.

3. Make a change (for example, add Header Message) and click the **PRV** button to see the change in the Preview window (preview button fills in green and the Update button is enabled).

4. Click the **Update** button again to apply changes to the scoreboard while it is on-air.

5. Click the red **PGM** button to take the scoreboard off-air. The scoreboard disappears from the Program window and is no longer shown on the video output. The **PGM** button shows a red outline and the **Update** button is enabled. Refer to **Figure 75.**.
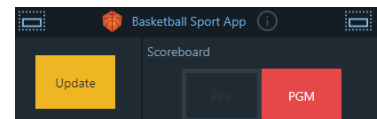

Figure 75: Scoreboard Off-Air

Display Network Logos

Select a network logo to display on the scoreboard. This can be changed while the scoreboard is on-air or off-air. Network logos are stored in a separate file under a graphics package. Refer to the **MAM Folder Structure for Sport App Quick Guide (DD4311489)** in **Appendix B: Supplementary Documents (p.79)**. To show a network logo on the scoreboard, follow these steps:

1. Open the main SportApp™ interface and navigate to the **Network Logo** area.

2. Select a logo from the drop-down list. Refer to **Figure 76**. The logo appears as a **Network Logo** thumbnail.
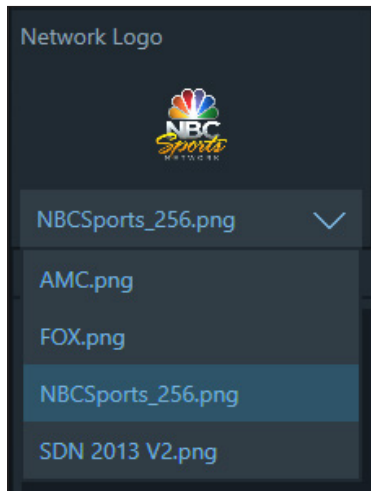

Figure 76: Select Network Logo

3. Confirm that the network logo appears on the scoreboard in the Preview window. Refer to **Figure 77**.
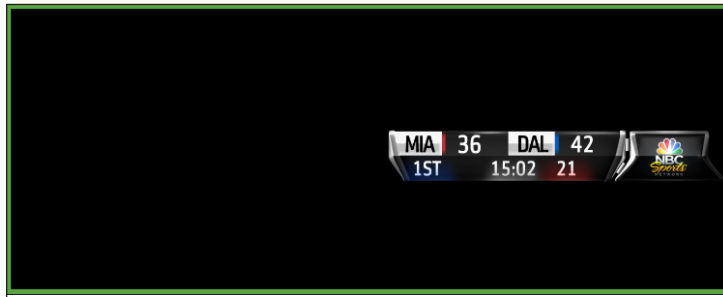
Figure 77: Network Logo on Scoreboard - Preview

4. Click the main scoreboard **PGM** button to send the scoreboard with network logo to air. The **PGM** button has a red outline and fills in with red when the scoreboard is on-air.

Display Sponsor Logos

Select a sponsor logo to display on the scoreboard. This can be changed while the scoreboard is on-air or off-air. Sponsor logos are stored in a separate file under a graphics package. Refer to the **MAM Folder Structure for Sport App Quick Guide (DD4311489)** in **Appendix B: Supplementary Documents (p.79)**. To show a sponsor logo on the scoreboard, follow these steps:

1. Open the main SportApp™ interface and navigate to the **Sponsor Logo** area.

2. Select a logo from the drop-down list. Refer to **Figure 78**. The logo appears as a **Sponsor Logo** thumbnail.

Figure 78: *Select Sponsor Logo*

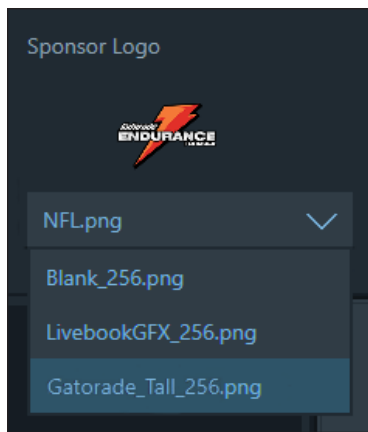3. Confirm that the sponsor logo appears on the scoreboard in the Preview window. Refer to **Figure 79**.
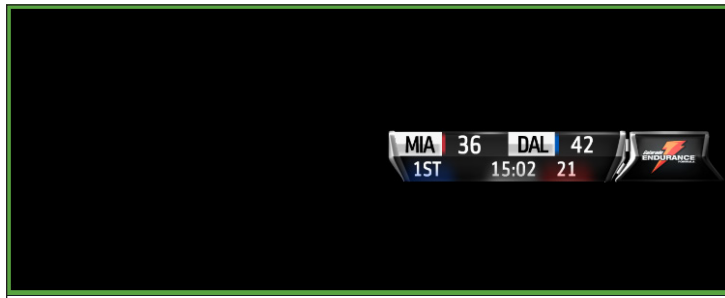

Figure 79: *Sponsor Logo on Scoreboard - Preview*

4. Toggle the **Auto Hide** option, choose the length of time in seconds the sponsor stays on-air using the up and down arrows, and click the **PGM** button. Refer to **Figure 80**.
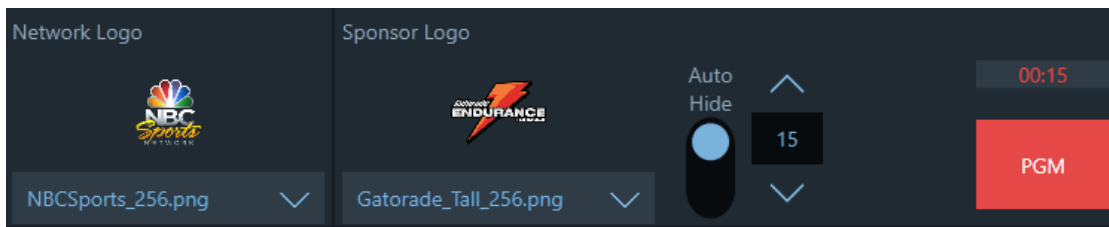
Figure 80: *Sponsor Logo - Timed*

Note: With **Auto Hide** enabled, the sponsor logo plays for the specified time and then switches back to the network logo or is removed depending on how the template is designed.

Header Messages

Each scoreboard style includes an element to display header messages such as promotions, statistics, social media information, contact information, or any other text. Use the SportApp™ interface for the following actions:

*   Create and save messages
*   Edit or delete saved messages
*   Select and preview a message
*   Show or hide the message element of the scoreboard
*   Dynamically change the message while it is on-air

To access the header message controls, go to the **Header Message** area below the Preview window. There are controls to access, preview, and display messages. Refer to **Figure 81**.
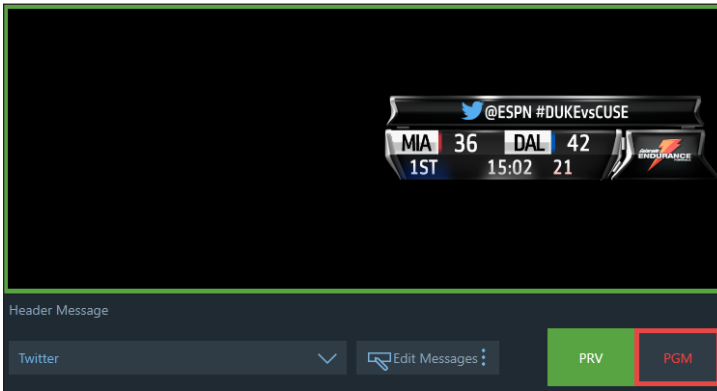
Figure 81: Header Message

> **Note:** For more information on how to edit object-level properties of the message text such as size, font, color, etc., refer to the **User Guide for Embedded Formatting** from AJT Systems. Contact support@ajtsystems.com to receive this manual.

Add a New Header Message

To add a new header message, follow these steps:

1. Click **+ New Message** in the **Header Message Editor**. The message name and text fields are now active. Refer to **Figure 82**.
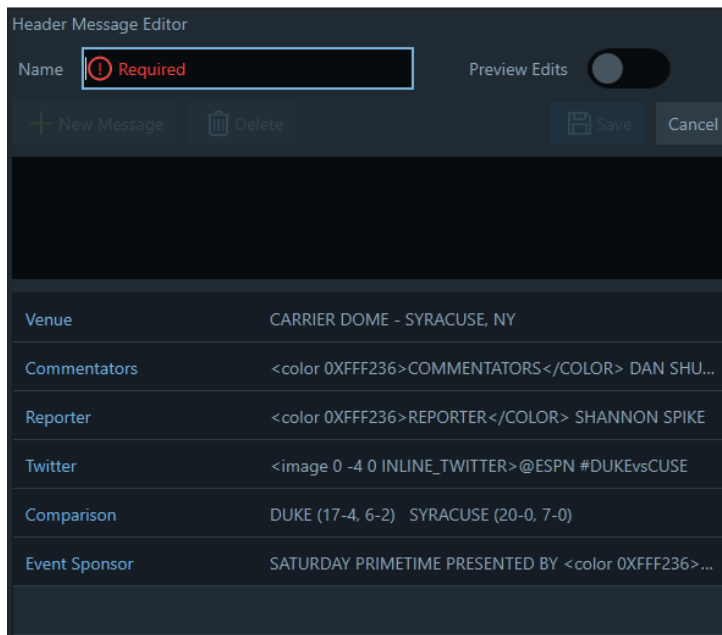
Figure 82: New Header Message

2. Enter a descriptive name for the header message in the **Name** field (required). Refer to **Figure 83**.
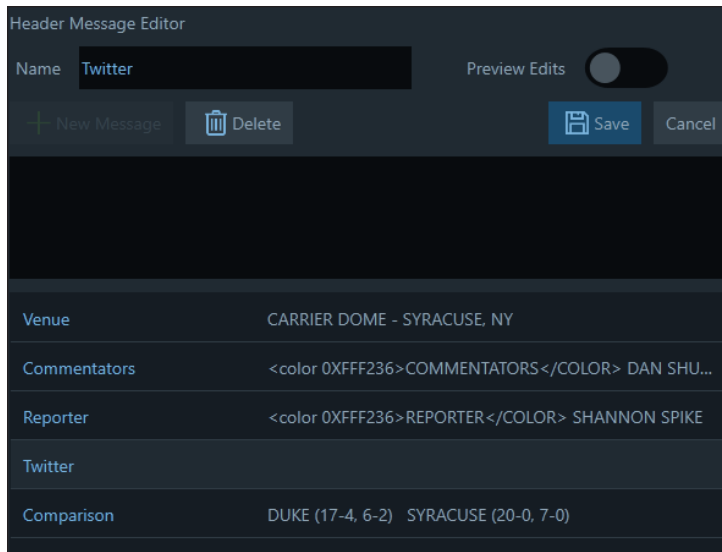
Figure 83: New Header Message Name

3. Enter the message in the message text field. This is how the message will appear in the scoreboard on-air. Refer to **Figure 84**.
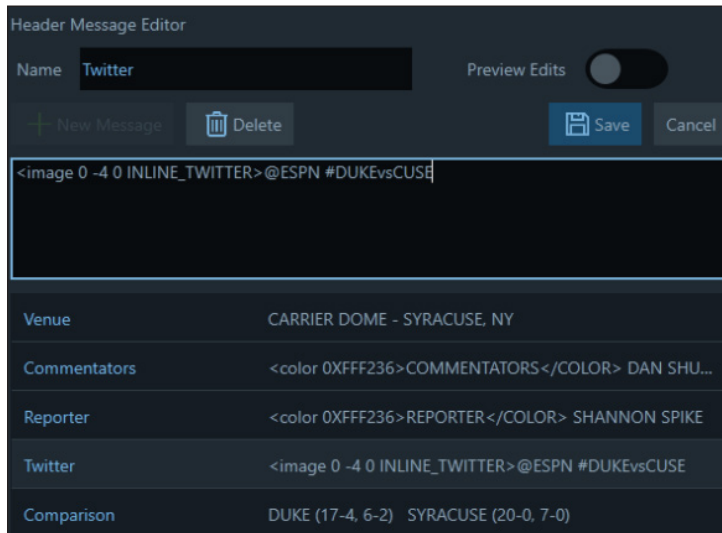
Figure 84: New Header Message Body
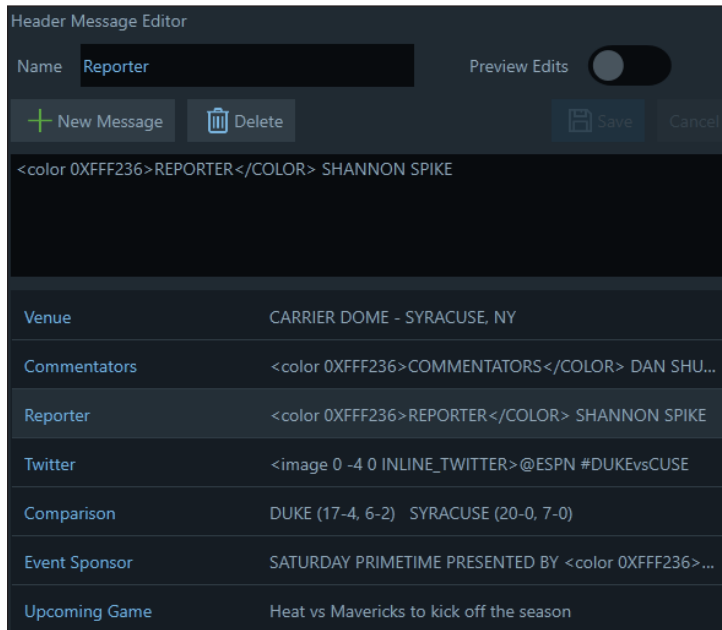
> **Note:** To enter the message using a header message stat tag, refer to the **Sport App Header Message Stat Tags Quick Guide (DD4953803)** in **Section B: Supplementary Documents (p.79)**.

4. Click the **Save** button. The new message will appear in the message list and can be selected to display on the scoreboard or go-to-break.

Edit a Header Message

To edit an existing header message, follow these steps:
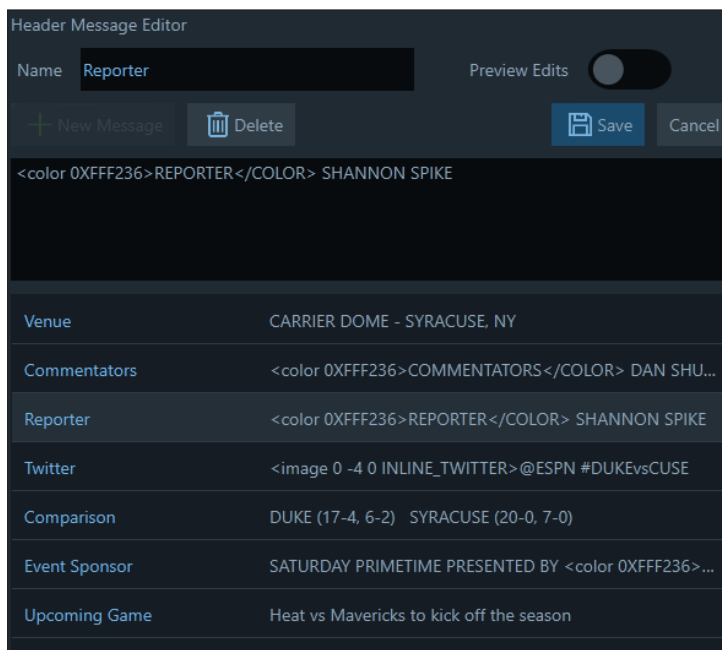
1. Select the message from the message list. Refer to **Figure 85**. The edit panel opens for the selected message. As soon as any changes are typed into the **Name** or message field, the **Save** and **Cancel** functions are enabled. Refer to **Figure 86**.
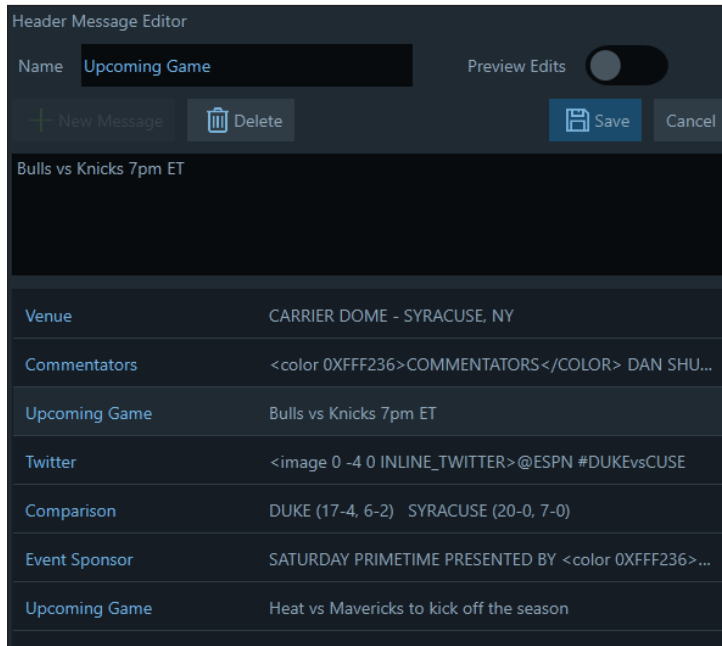
Figure 85: Header Message List

Figure 86: Header Message Fields

2. Enter any changes to the message fields (message **Name** or body of the message). Enter the message as it will appear on-air in the message text field. Refer to **Figure 87**.

Figure 87: Edit Header Message

3. Click the **Save** button. The new message will appear in the message list and can be selected to display on the scoreboard or go-to-break. Refer to **Figure 88**.

Figure 88: Saved Header Message

Delete a Header Message

To delete an existing header message, follow these steps:

1. Select the message from the message list. Refer to **Figure 89**. The message loads.
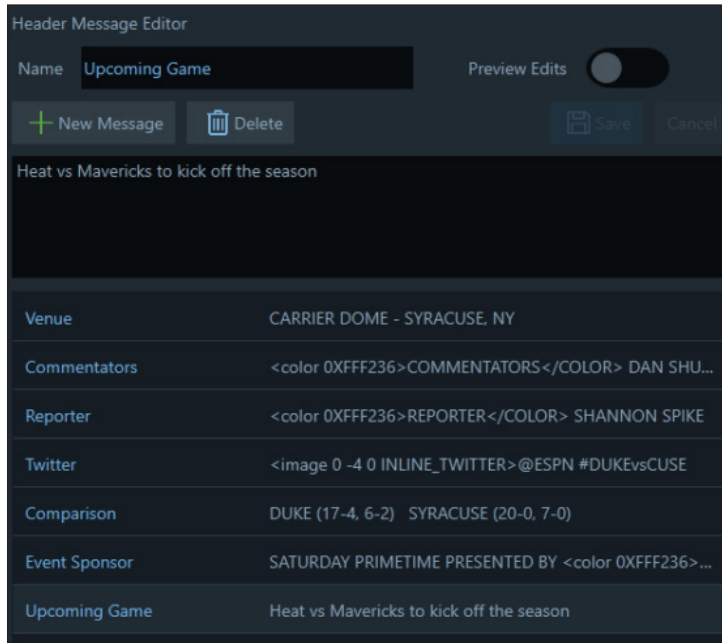
Figure 89: *Selected Header Message*

2. Click **Delete**. Refer to **Figure 90**.
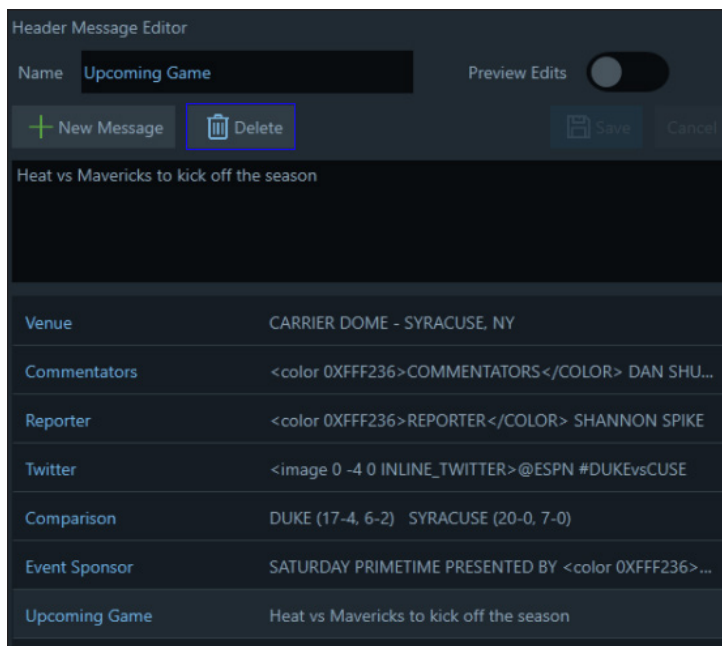
Figure 90: *Delete Header Message*

3. Confirm that the message is removed from the message drop-down list. Refer to **Figure 91**.
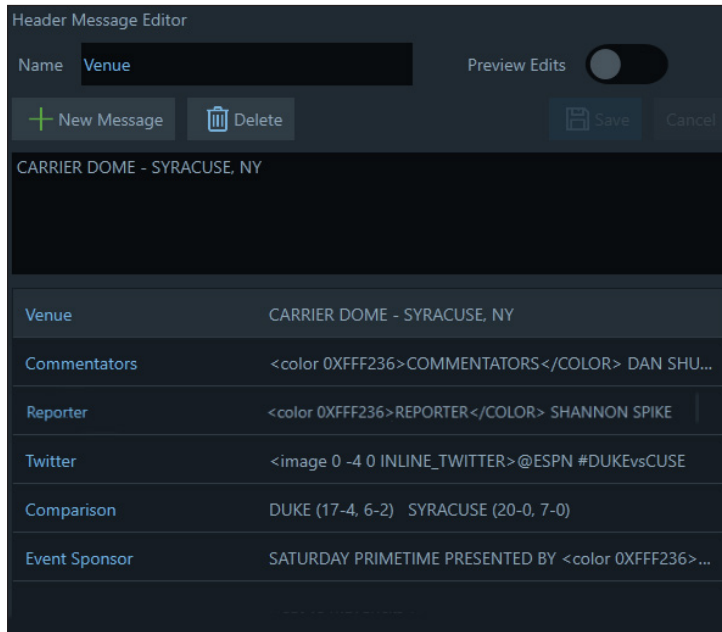
Figure 91: *Header Message Removed from List*

Display Header Messages

To display a header message on the scoreboard, follow these steps:

1. Click the message drop-down list in the **Header Message** area.

2. Select the desired message from the list. Refer to **Figure 92**.
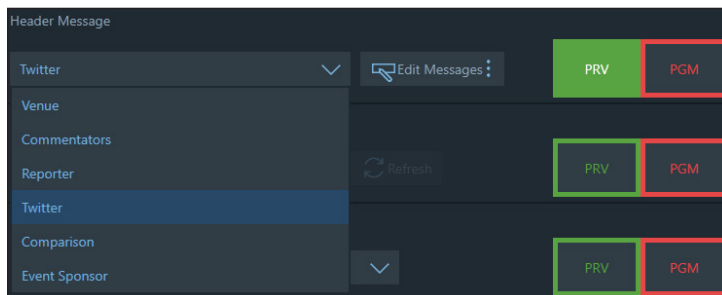
Figure 92: *Select Message to Display*

3. Preview the header message in the Preview window.

- If selected, the message should be visible on the scoreboard in the Preview window.

- If the message is not visible in the Preview window, click the **PRV** button next to the **Edit Messages** button. Refer to **Figure 93**.
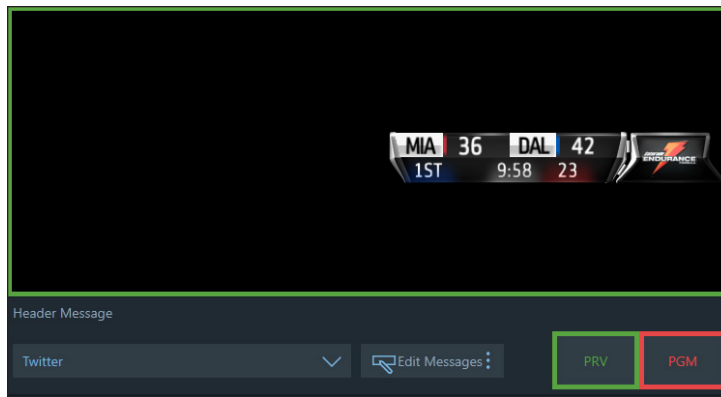
Figure 93: *Header Message not Displayed*

4. Confirm that the message is shown on the scoreboard in the Preview window. Refer to **Figure 94**.
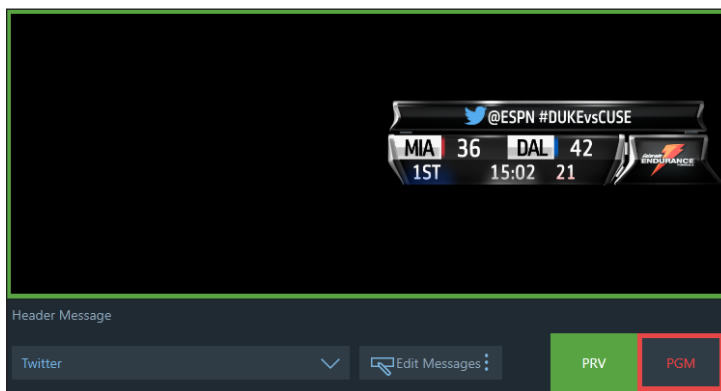
Figure 94: *Header Message Displayed*

5. Click the **PGM** Program button to play the message on-air.

Display or Hide Header Messages On-Air

To display or hide a header message on the scoreboard while the scoreboard is on-air, follow these steps:

1. Click the **PGM** button to show/hide the selected message on the scoreboard. The message element should appear or disappear in the both the Preview and Program windows. Refer to **Figure 95**.
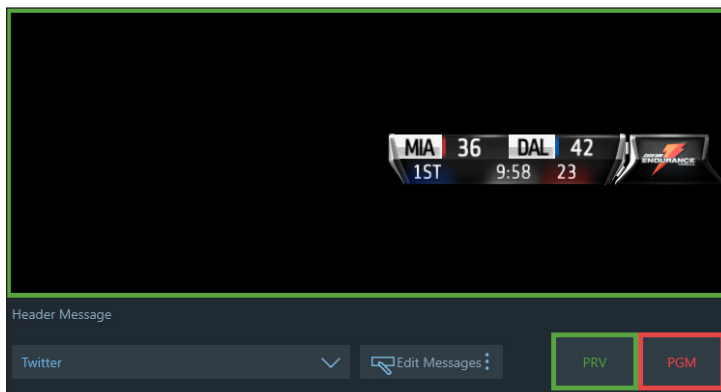
Figure 95: *Header Message not Displayed*

2. If the header message is shown in the Preview window but not the Program window, click the yellow Update button between the two windows. Refer to **Figure 96**.
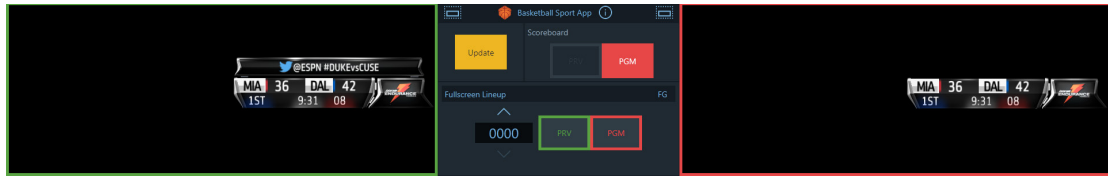
Figure 96: *Message in Preview but not in Program*

3. Confirm that the message is now shown on the scoreboard on the Program output. Refer to **Figure 97**.
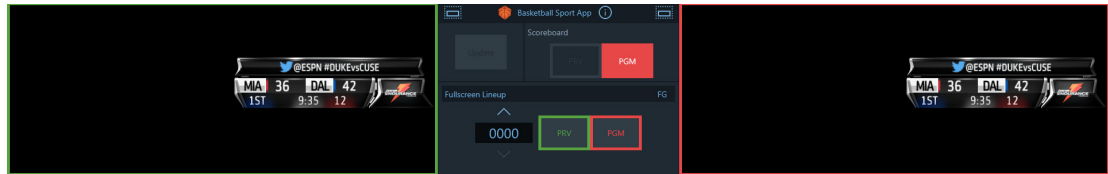
Figure 97: *Message in Preview and in Program*

Update Header Messages On-Air

To dynamically update the message while the scoreboard is on-air, follow these steps:

1. Select the message from the message drop-down list.

2. Click the **Update** button.

Insert Graphics

Create a Show

To create a show, follow these steps:

1. Open the **Insert Editor** tab along the bottom of the screen and click the ellipsis button ⋮ to the right of the **Show** drop-down list. Refer to **Figure 98**.
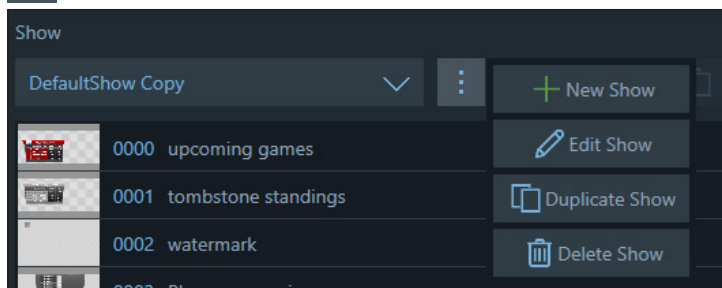
Figure 98: *Create a New Show*

2. Click **+ New Show**.

3. Enter a **Name** for the show and browse to a folder or default folder containing the insert graphic templates. Refer to **Figure 99** and **Figure 100**.
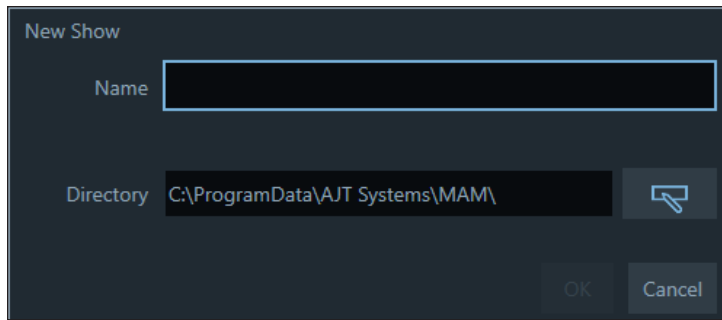
Figure 99: *New Show Settings*
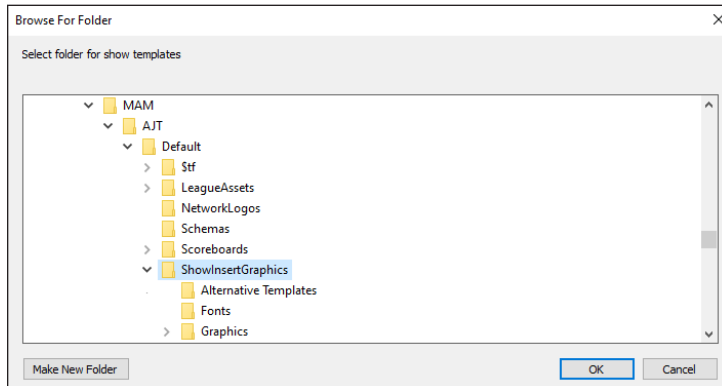
Figure 100: *Graphic Templates Folder*

> **Note:** The insert graphics templates and any other relevant graphics are found in the Media Asset Management (MAM) folder. Refer to **MAM Folder Structure for Sport App Quick Guide (DD4311489)** in **Appendix B: Supplementary Documents (p.79)**.

Edit a Show

To edit a show, follow these steps:

1. Select the show from the **Show** drop-down list, click the ellipsis button ⫶ to the right, and then select **Edit Show**. The **Edit Show** panel opens. Refer to **Figure 101**.
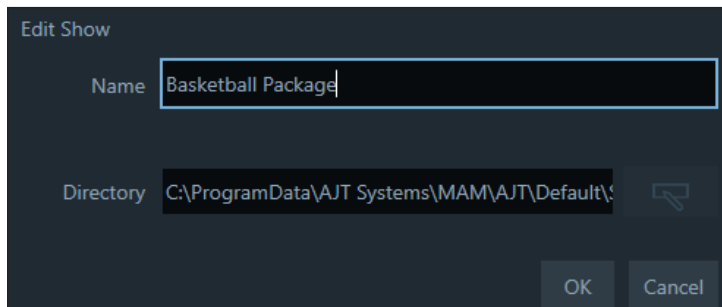
Figure 101: *Edit Show*

2. Change the **Name** of the show and click **OK**.

> **Note:** Only the name of the show can be changed; the location cannot be changed.

3. Confirm that the name change is visible in the **Show** drop-down menu. Refer to **Figure 102**.
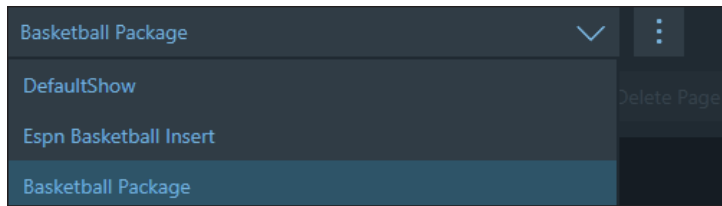
Figure 102: Show Renamed

Copy a Show

To copy a show, follow these steps:

1. Select the show from the **Show** drop-down list, click the ellipsis button ⋮ to the right, and then select **Duplicate Show**. The **Duplicate Show** panel opens. Refer to **Figure 103**.
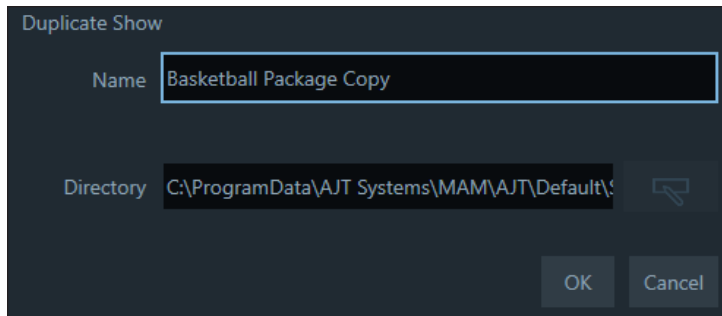
Figure 103: Duplicate Show

2. Enter a new **Name** and click **OK**.

3. Confirm that the copied show is visible in the **Show** drop-down list. Refer to **Figure 104**.

Figure 104: Copied Show in Drop-down List

Delete a Show

To delete a show, follow these steps:

1. Select the show from the **Show** drop-down list, click the ellipsis button ⋮ to the right, and then select **Delete Show**. A confirmation window opens. Refer to **Figure 105**.
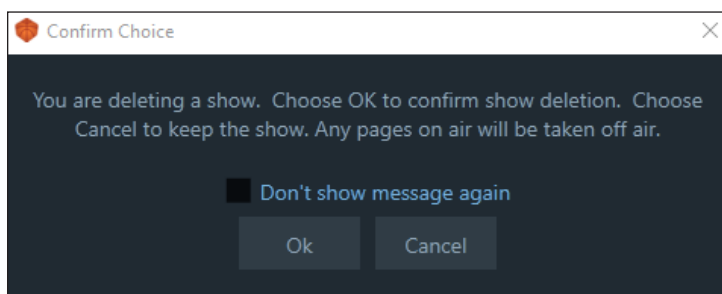
Figure 105: Delete Show Confirmation

2. Click **Ok**.

> **Note:** When a show is removed, the remaining shows are still available in the drop-down list. The default show cannot be removed.

Game Setup and Operation

Add a Player-Specific Page

To add a player page to a show, follow these steps:

1. Select the show from the **Show** drop-down list and click the green plus sign ➕ on the right to add a page. Refer to **Figure 106**. The **New Page** window opens. Refer to **Figure 107**.

Figure 106: Page Functions

Figure 107: New Page

2. Select a player-specific template from the **Template** drop-down list. Refer to **Figure 108**.
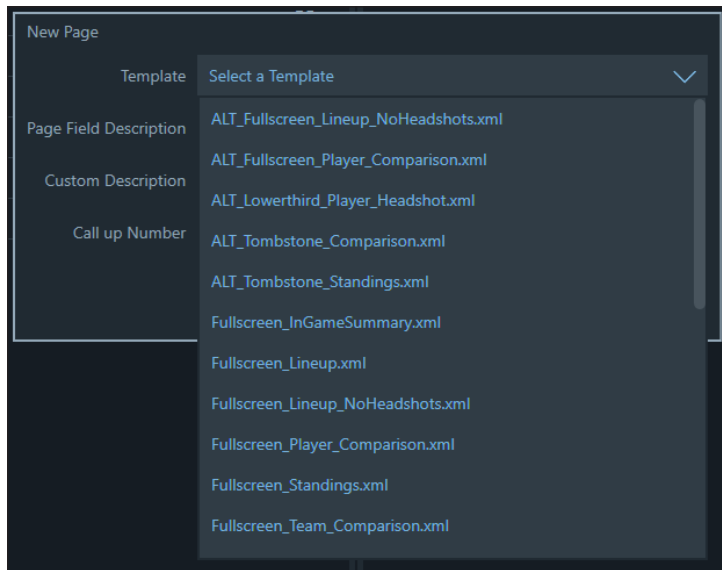
Figure 108: Select a Template

3. Toggle the **Page Field Description** on or off.

   - **On** – shows the player details separated by a vertical line | in the page description for that template under the **Show** panel. This information is taken from the team roster and from the **Page Field Editor** panel. Refer to call up number **0024** in **Figure 110**.

- **Off** – does not show the player details in the page description for that template under the **Show** panel. The description is taken from the **Custom Description** field as shown in **Figure 107**. Refer to call up number **0021** in **Figure 110**.

> **Note:** By default, the **Page Field Description** is enabled.

4. Enter the **Call up Number** for a player template. The second digit of the number determines if the player is on the visitor or home team; **0 = Visitor** and **1 = Home**. The last two digits represent the player jersey number. Refer to **Figure 109**.

   - Call up number **0024** is a visitor player with jersey number 24.

   - Call up number **0144** is a home player with jersey number 44.

Figure 109: Enter Player Call up Number

5. Visually confirm that the correct template was selected. The pages within the selected show are listed with a thumbnail, Call up Number, and Page Field Description or Custom Description. Refer to **Figure 110**.

Figure 110: Pages within Selected Show

6. Enter any additional player page data using the **Page Field Editor** panel and click **Save**. The initial player data shown here is populated from the team roster. Refer to **Figure 111**.

Figure 111: Page Field Editor

7. Confirm that the page playout section lists the call up number. The banner above contains the player information including team color, name, page name, and layer where the page is located. Hover the mouse over the description to see the full description. Refer to **Figure 112**.

Figure 112: Page Playout – Player Page

8. Click the **PRV** button to preview the page in the Preview window. Refer to **Figure 113**.

Figure 113: Page in Preview Window

9. Confirm that the scoreboard plays off and the page plays on if they are located on the same layer (FG, BG, FG1, BG1, etc.). If they are on different layers, both templates will be on-air. The **Pages On Air** panel under the main **Playout** window shows the call up number in green when the page is loaded in the Preview window. Refer to **Figure 114**.

Figure 114: Pages On Air – Page in Preview Window

10. Click either the **PRG** button or **Update** button to send the page to the Program window. Refer to **Figure 115**.

Figure 115: Page in Program Window

11. Confirm that the **Pages On Air** panel shows the call up number in red when the page is loaded in the Program window. Refer to **Figure 116**.
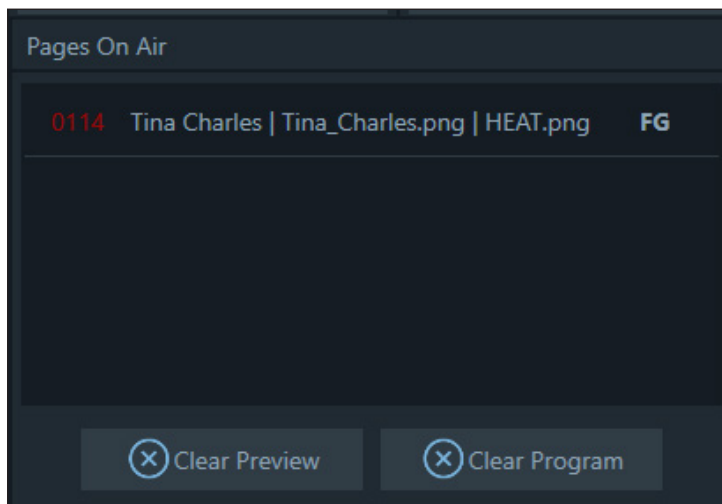
Figure 116: Pages On Air – Page in Program Window

12. Confirm that the page playout is visible in both the Preview and Program windows. Refer to **Figure 117**.
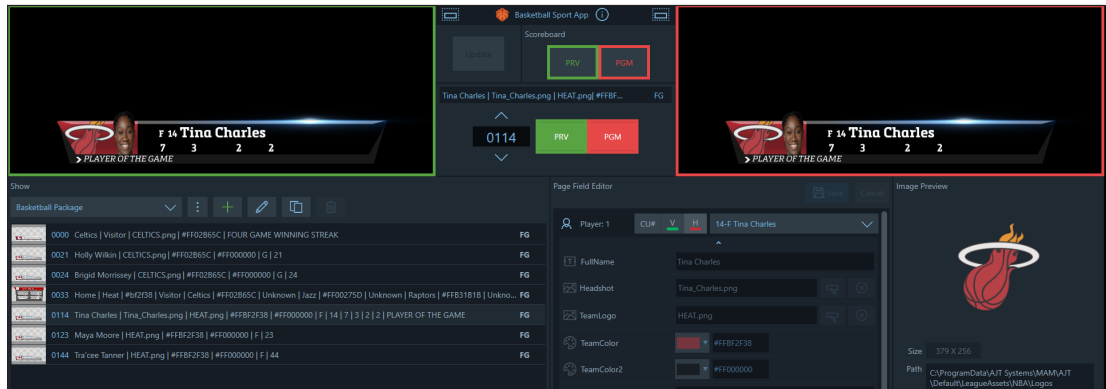
Figure 117: *Page in Preview and Program Windows*

13. Click the **Clear Program** button to clear the page(s) from the Program window. The call up number in the page playout changes from red to green.

14. Click the **Clear Preview** button to clear the page(s) from the Preview window. The scoreboard plays on when a FG page plays off.

Add a Team-Specific Page

To add a team page to a show, follow these steps:

1. Select the show from the **Show** drop-down list and click the green plus sign ☐ on the right to add a page. Refer to **Figure 118**. The **New Page** window opens. Refer to **Figure 119**.
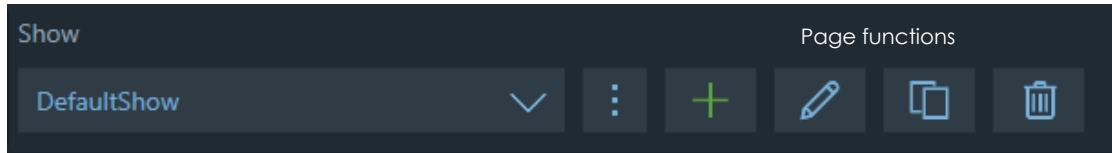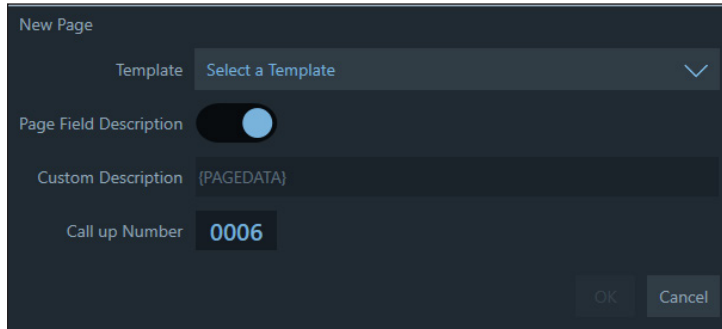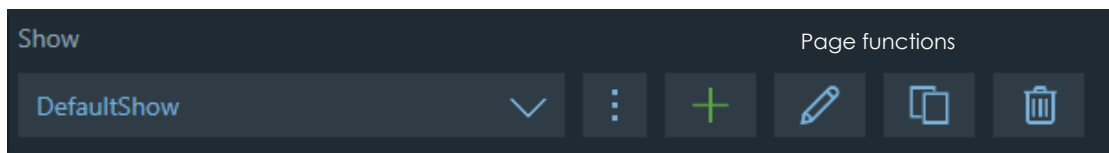

Figure 118: *Page Functions*
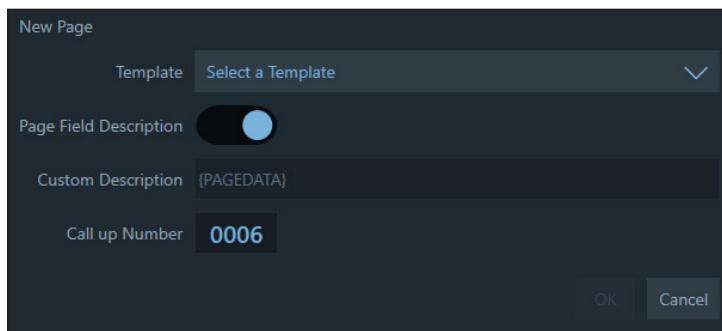
Figure 119: *New Page*

**2.** Select a team-specific template from the **Template** drop-down list. Refer to **Figure 120**.
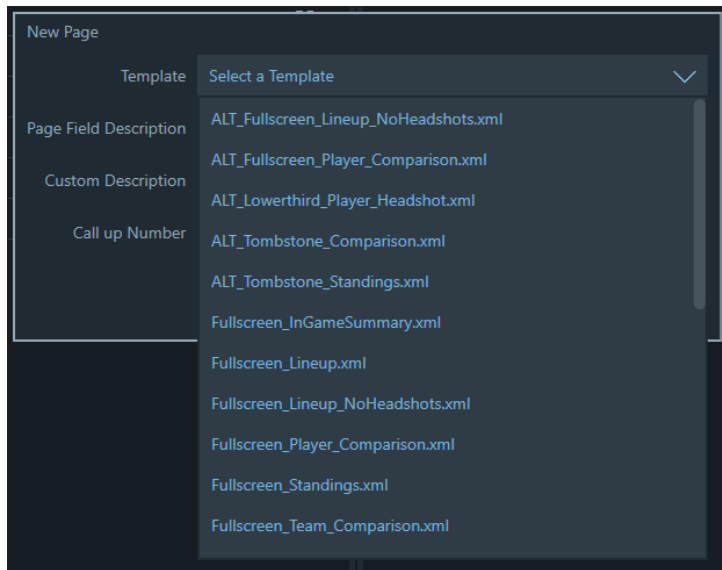
Figure 120: Select a Template

3. Toggle the **Page Field Description** on or off.

- **On** - shows the team details separated by a | in the page description for that template under the **Show** panel. Refer to call up number **0000** in **Figure 125**. This information is not populated initially; the team description is shown as **Unknown** until the team is selected. Refer to **Figure 122**.

- **Off** - does not show the team details in the page description for that template under the **Show** panel. The description is taken from the **Custom Description** field. Refer to call up number **0100** in **Figure 125**.

> **Note:** By default, the **Page Field Description** is enabled.

4. Enter the **Call up Number** for a team template. This number does not automatically choose a visitor or home team. Refer to **Figure 121**.
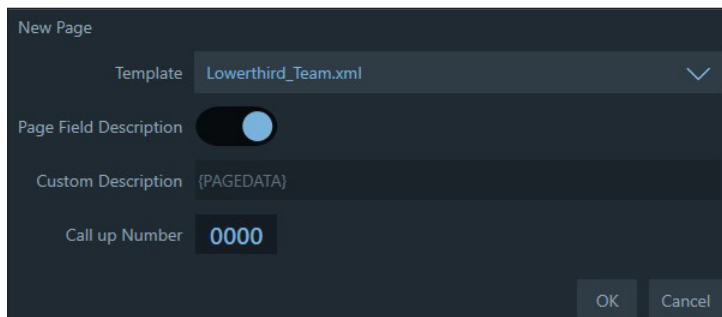
Figure 121: Enter Team Call up Number

5. Visually confirm that the correct template was selected and **Unknown** is listed in the page description. Refer to **Figure 122**.
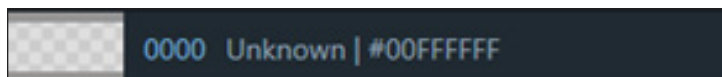
Figure 122: Team Listed as Unknown

6. Select the desired team in the **Page Field Editor** panel from the **Select A Team** drop-down list. Refer to **Figure 123** and **Figure 124**.
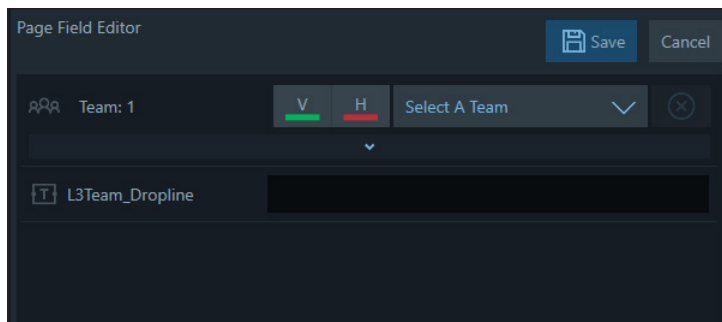
Figure 123: Select a Team
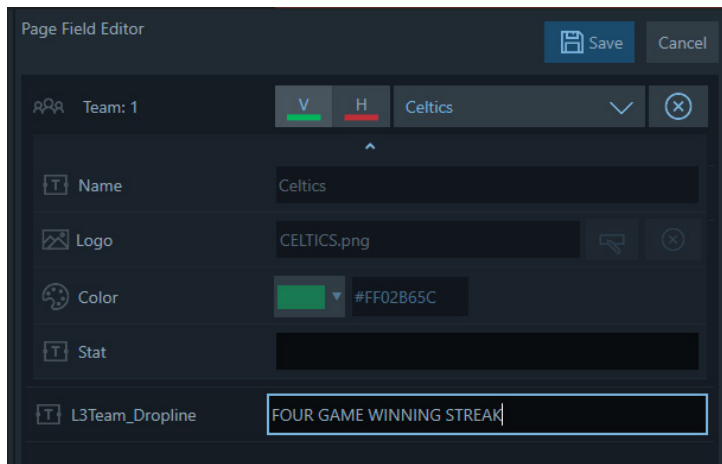
Figure 124: Team Data

7. Visually confirm that the pages within the selected show are listed with a thumbnail, Call up Number, and Page Field Description or Custom Description. Refer to **Figure 125**.
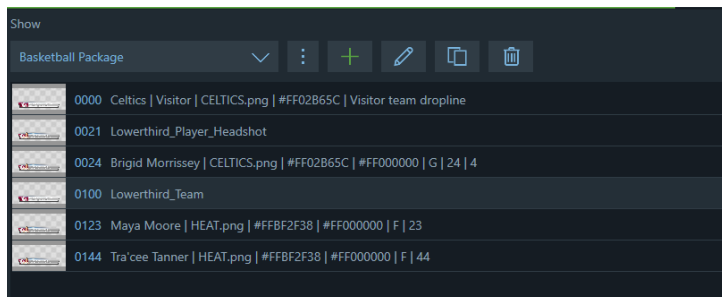
Figure 125: Pages Within Selected Show

8. Enter any additional team page data using the **Page Field Editor** panel and click **Save**. The team data shown here automatically populates from the entered team information.
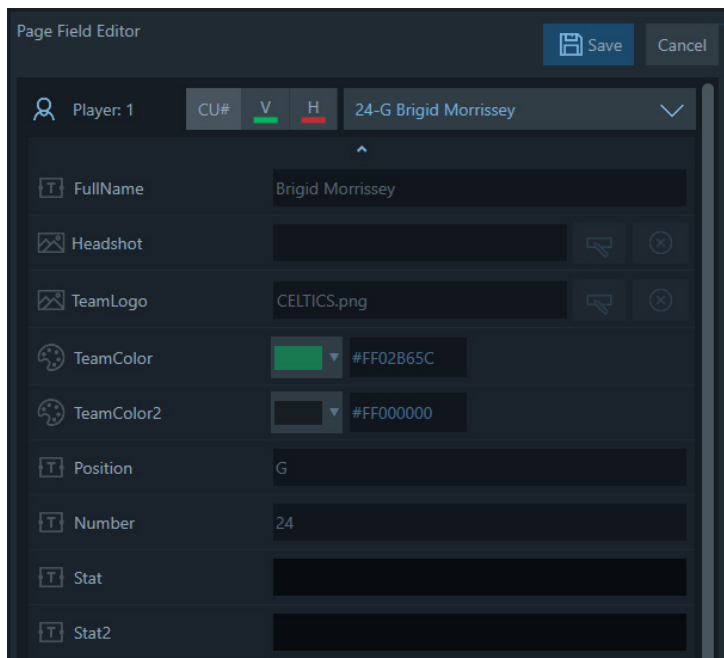
9. Confirm that the page playout section lists the call up number. The banner above contains the player information including team color, name, page name, and layer where the page is located. Hover the mouse over the description to see the full description. Refer to **Figure 126**.
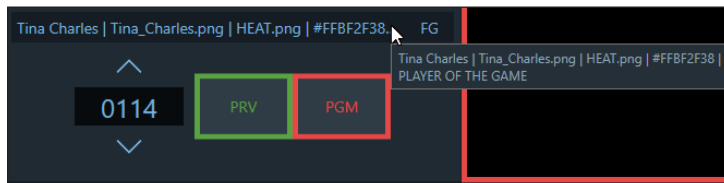
Figure 126: Page Playout – Team Page

10. Click the **PRV** button to preview the page in the Preview window. Refer to **Figure 127**.
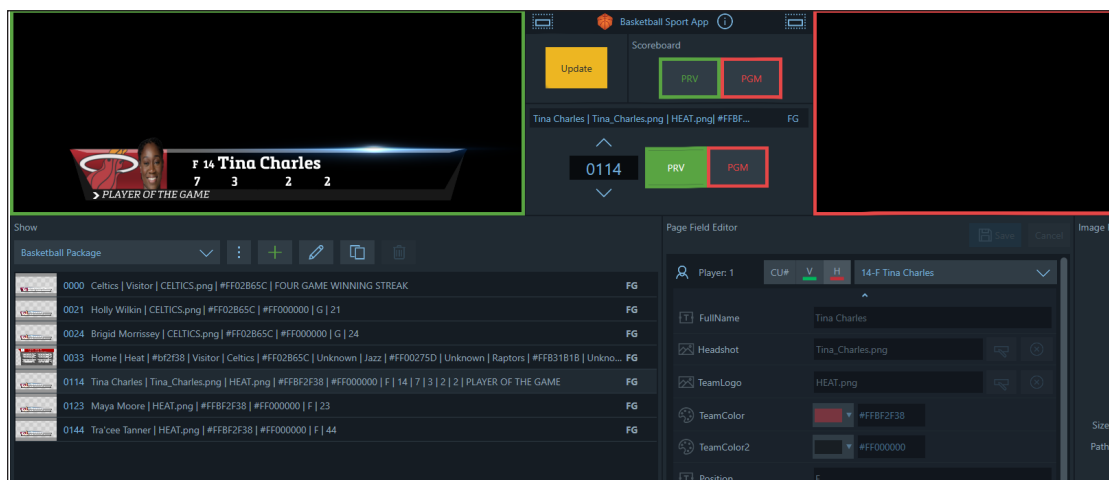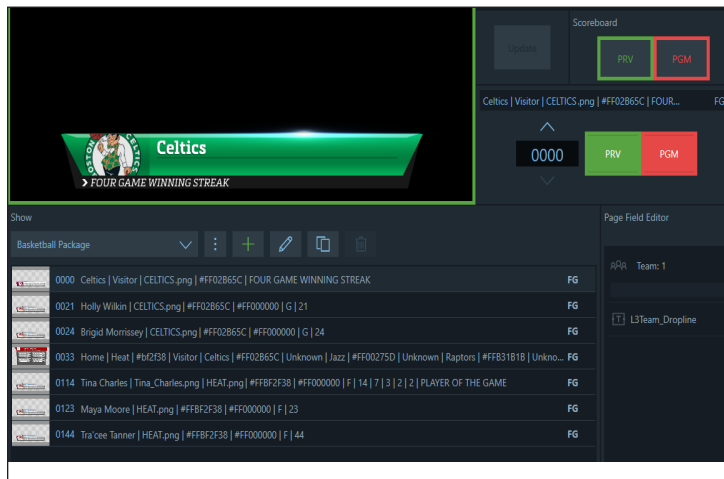

Figure 127: Page in Preview Window

11. Confirm that the scoreboard plays off and the page plays on if they are located on the same layer (FG, BG, FG1, BG1, etc.). If they are on different layers, both templates will be on-air. The **Pages On Air** panel shows the Call up Number in green when the page is loaded in the Preview window. Refer to **Figure 128**.
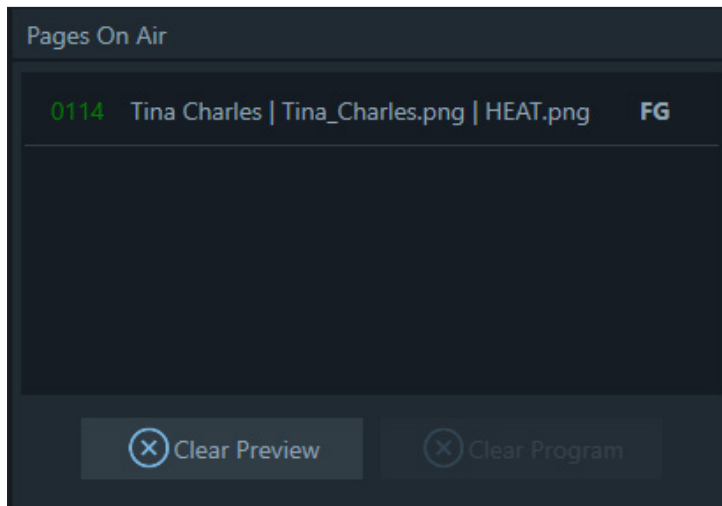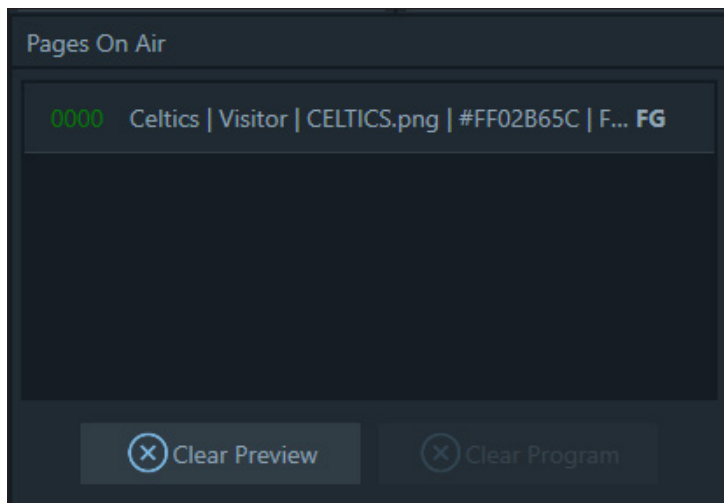

Figure 128: Pages On Air – Page in Preview Window

12. Click either the **PRG** button or **Update** button to send the page to the Program window. Refer to **Figure 129**.
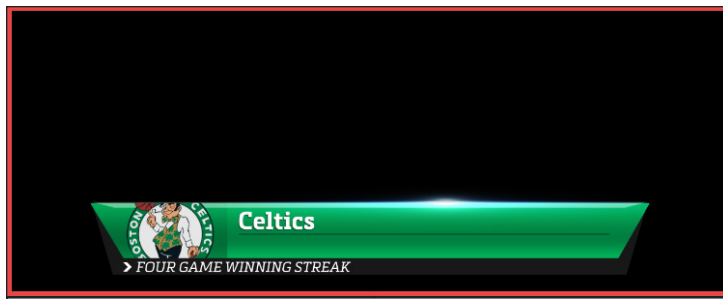
Figure 129: *Page in Program Window*

13. Confirm that the **Pages On Air** panel shows the call up number in red when the page is loaded in the Program window. Refer to **Figure 130**.
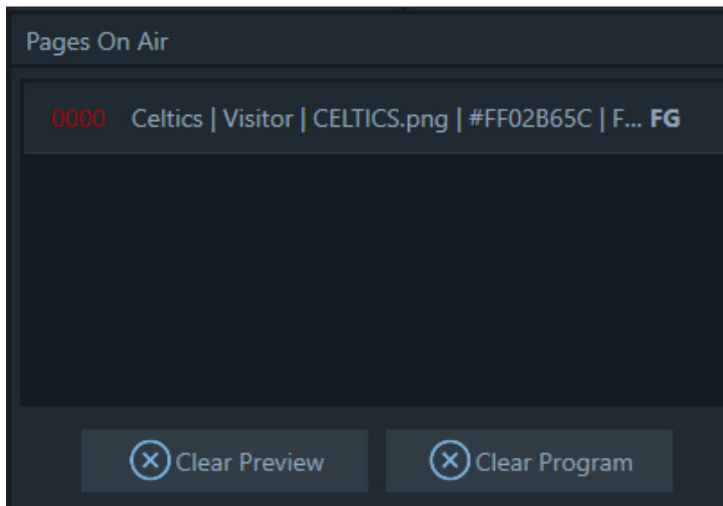
Figure 130: *Pages On Air – Page in Program Window*

14. Confirm that the page playout is visible in both the Preview and Program window. Refer to **Figure 131**.
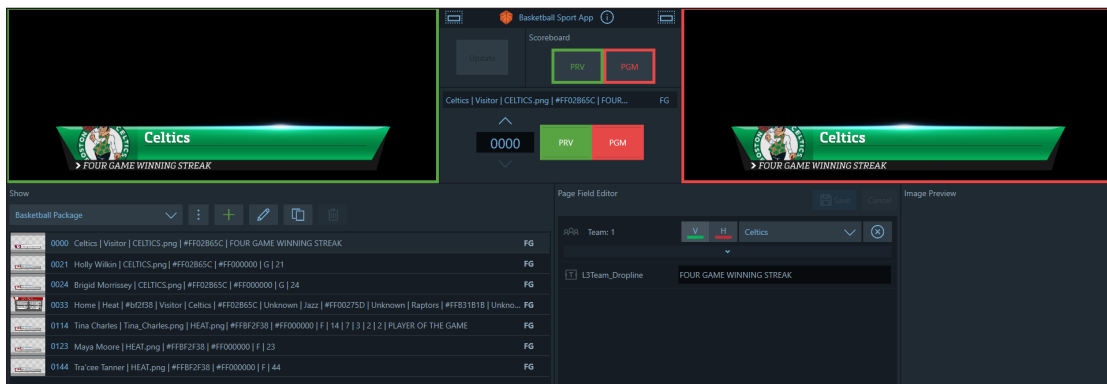
Figure 131: *Page in Preview and Program Windows*

15. Click the **Clear Program** button to clear the page(s) from the Program window. The call up number in the page playout changes from red to green.

16. Click the **Clear Preview** button to clear the page(s) from the Preview window. The scoreboard plays on when a FG page plays off.

Call Up a Page

Enter a page call up number or select a page from the list of pages in a selected show.

If the number matches a call up number in the page list, it will show in the page playout. Refer to **Figure 132**.
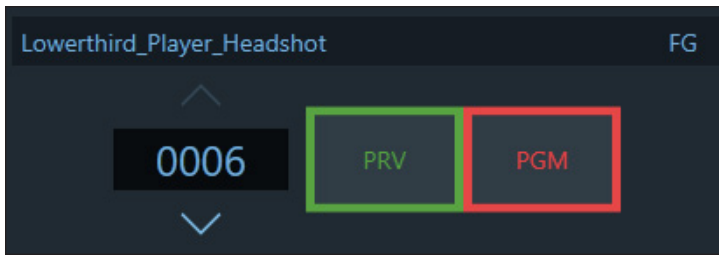
Figure 132: *Page Found in Page List*

If the number does not match a call up number in the page list, the message **No Page Available** is shown. Refer to **Figure 133**.
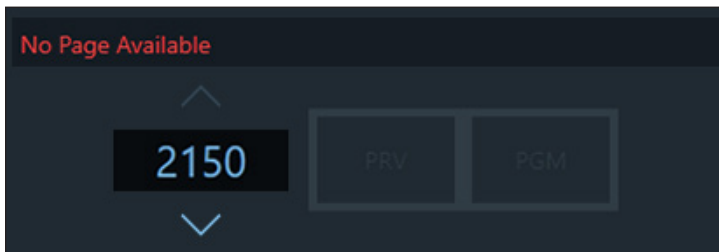
Figure 133: *Page Not Found in Page List*

Edit a Page

To edit the name of a page, follow these steps:

1. Select a page from the list and click the pencil icon. Refer to **Figure 134**. The **Edit Page** panel opens. Refer to **Figure 135**.
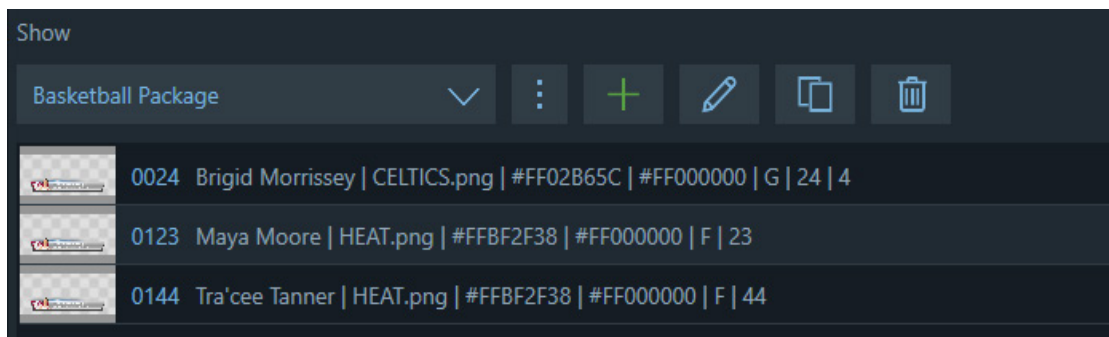
Figure 134: *Select Page to Edit*
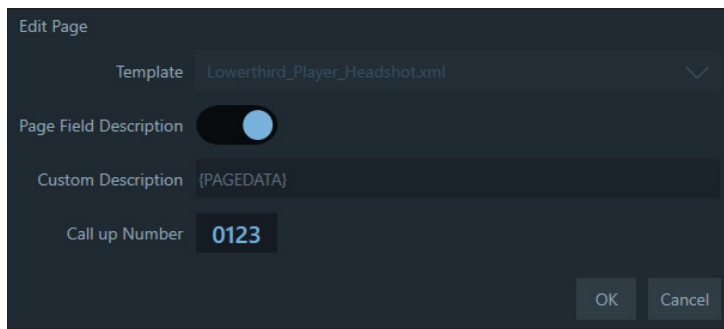
Figure 135: Edit Page Name

2. Change the **Custom Description** if the **Page Field Description** is disabled and/or change the **Call Up Number**.

3. Confirm that the change has been made in the page list.

4. Edit any information within the page by selecting the page from the list and entering the data in the **Page Field Editor** panel. Refer to **Figure 136**.
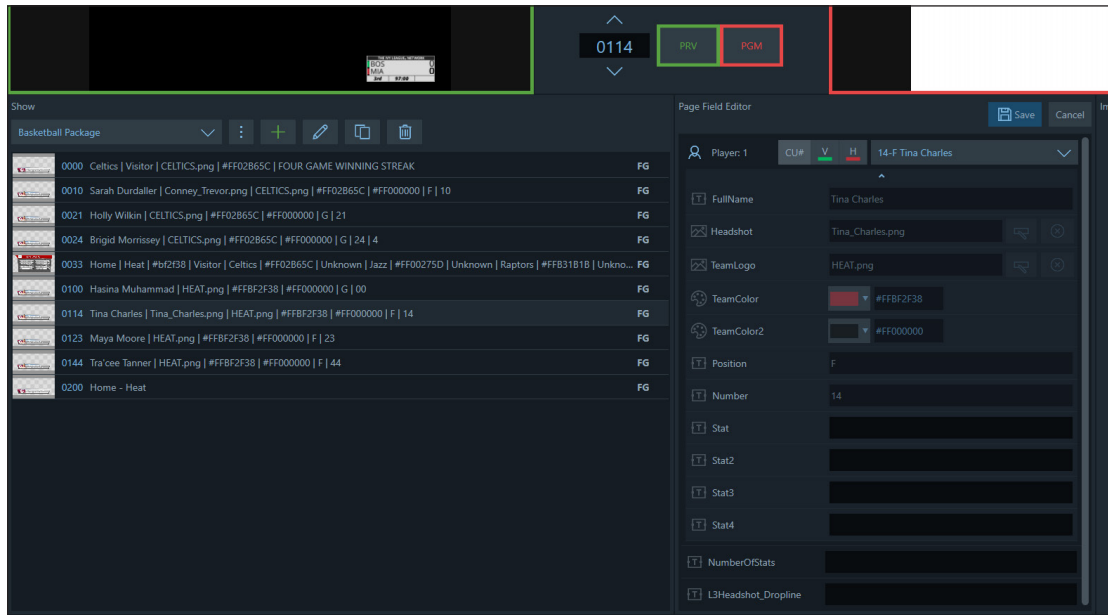
Figure 136: Page Changes

Copy a Page

To copy a page, follow these steps:

1. Select a page from the list and click the pages icon. Refer to **Figure 137**. The **Duplicate Page** panel opens. Refer to **Figure 138**.
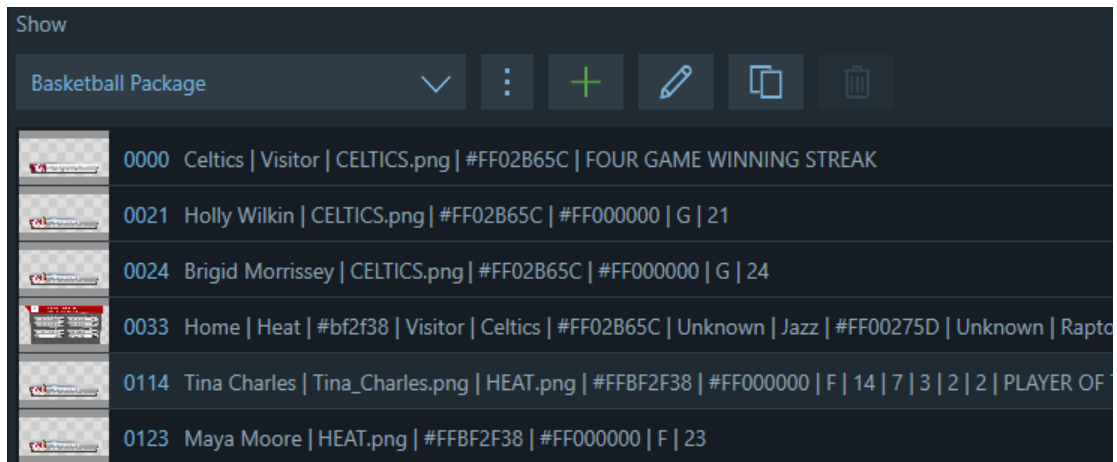
Figure 137: Select Page to Copy
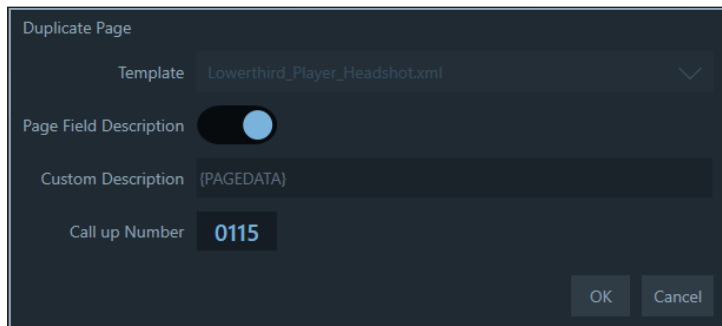
Figure 138: Duplicate Page

2. Change the **Custom Description** if the **Page Field Description** is disabled and/or change the **Call up Number**.

> **Note:** By default, the **Call up Number** is increased by 1.

3. Add data to the new page (e.g. player or game information) and click **OK**.

4. Confirm that the new page is added to the page list. Refer to **Figure 139**.
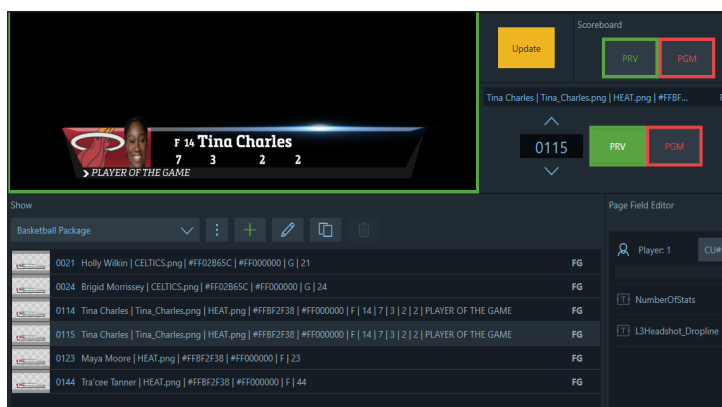
Figure 139: Duplicated Page in List

Delete a Page
To delete a page, follow these steps:

1. Select a page from the list and click the trash can icon. Refer to **Figure 140**. The page is immediately deleted.
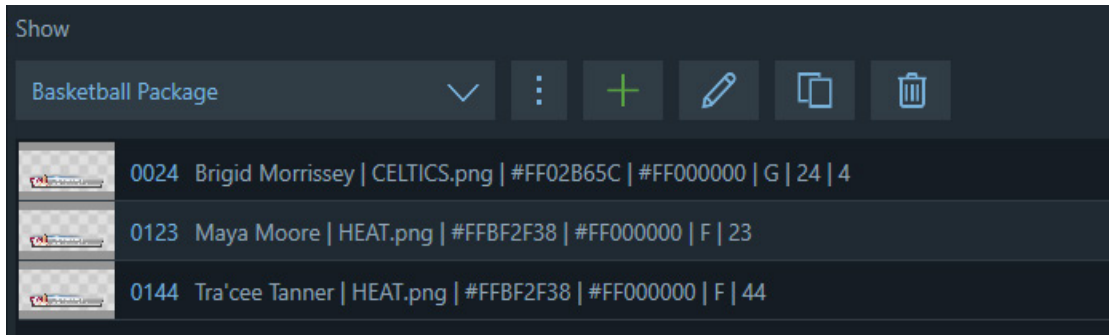
Figure 140: *Select Page to Delete*

2. Confirm that the page is removed from the page list and the page playout.

Add Quick Action Buttons
A quick action button contains a list of pre-loaded pages that can be used during a game. Simply click the **Add Page** button and then choose the desired page from the list. To add a page to the quick action button, follow these steps:

1. Click a quick action button on the playout tab. Refer to **Figure 141**.
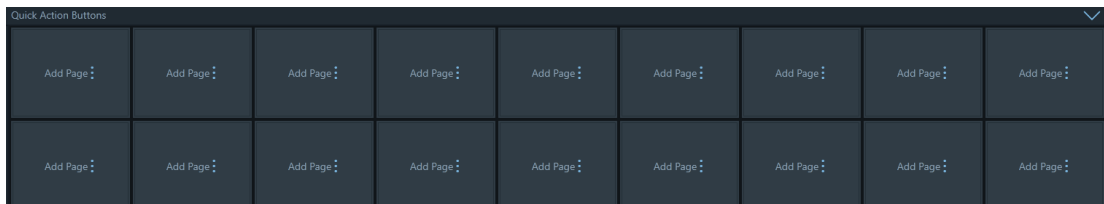
Figure 141: *Quick Action Buttons*

2. Select a page from the **Available Pages** list. This page is now assigned to the quick action button. Refer to **Figure 142**.
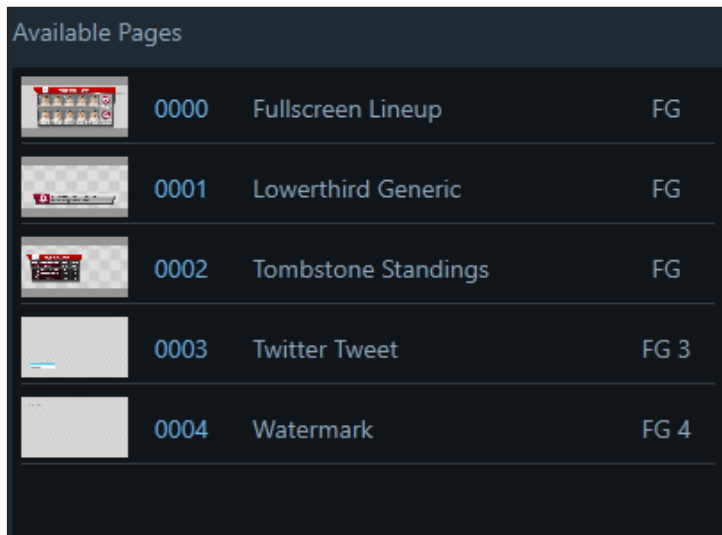
Figure 142: *Selected Page*

3. Click the left section (green section) of the quick action button to send the page to the Preview window. Refer to **Figure 143**.
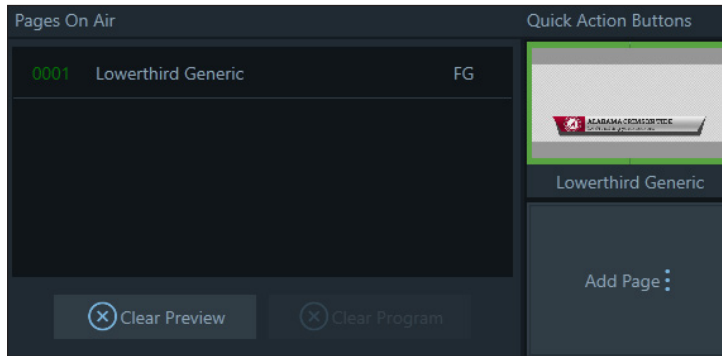
Figure 143: Page Sent to Preview Window

> **Note:** Remove the page from the Preview window by clicking the left section of the quick action button again.

4. Click the right section (red section) of the quick action button to send the page to the Program window. Refer to **Figure 144**.
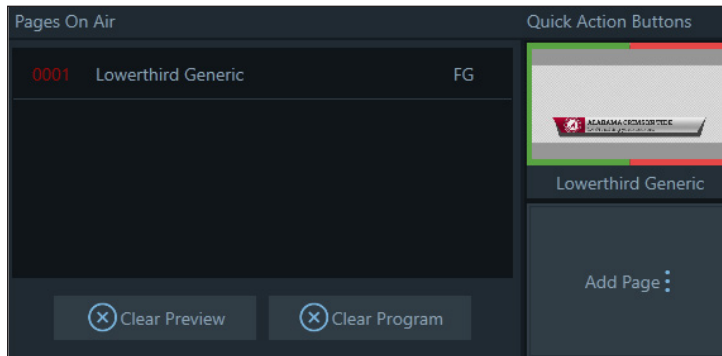
Figure 144: Page Sent to Program Window

> **Note:** Remove the page from the Program window by clicking the right section of the quick action button again.

5. Remove a page from a quick action button at any time by selecting the name of the page and clicking **Delete**. This does not delete the page from the Insert Editor. Refer to **Figure 145**.
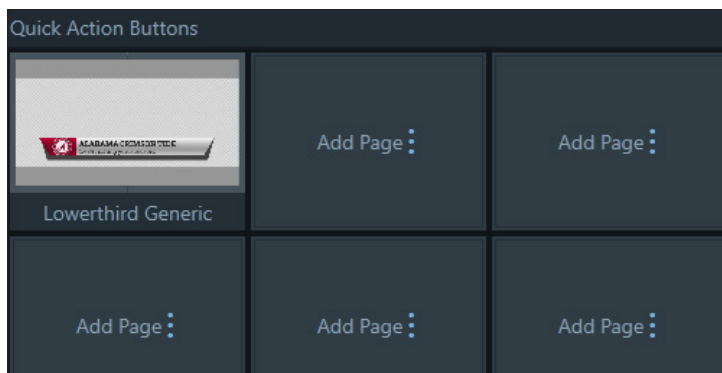
Figure 145: Delete Page from Quick Action Button

Game Stats

Game stats come into the system from a sports data feed such as NBA GSS or Stat Crew.

Enable Data Feed Plug-In

To set up the data feed, follow these steps:

Figure 146: Plugins Manager Icon

1. Click the **Plugins Manager** icon. Refer to **Figure 146**. The **Plugins Manager** panel opens. Refer to **Figure 147**.
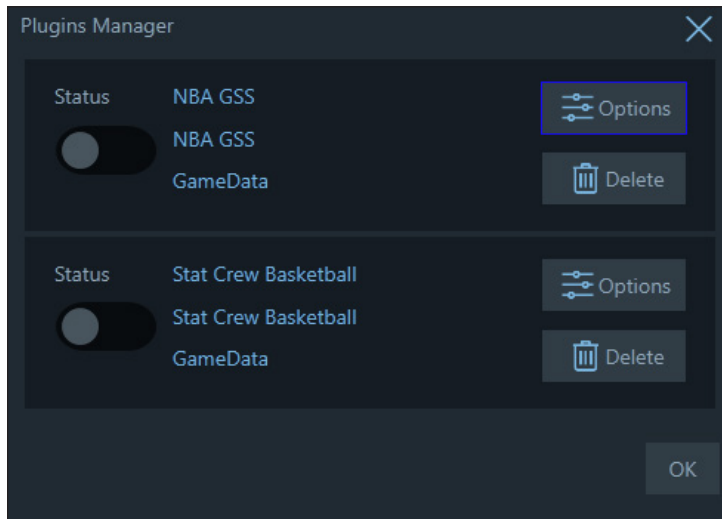
Figure 147: Plug-Ins Manager Options

2. Click the **Options** button for the desired plug-in. The **Plug-In Settings** panel opens. Refer to **Figure 148**.
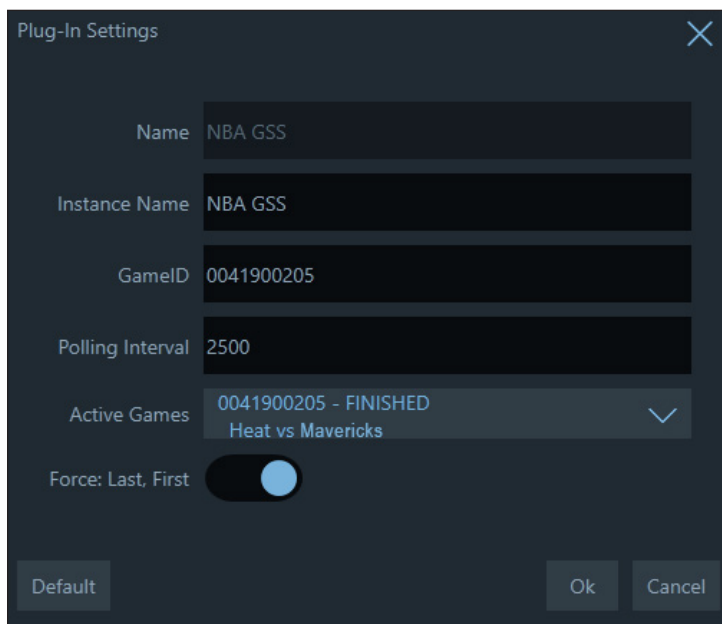
Figure 148: Plug-In Settings

3. Enter the necessary settings information. Refer to **Figure 148**.

> **Note:** The **Plug-In Settings** options will vary depending on the sports data feed.

4. Click **OK** to save the changes.

5. Confirm that the plug-in is now enabled in the **Plug-Ins Manager** panel. The **Status** switch is toggled to show that it is turned on. The example in **Figure 149** shows the NBA GSS plug-in is enabled.
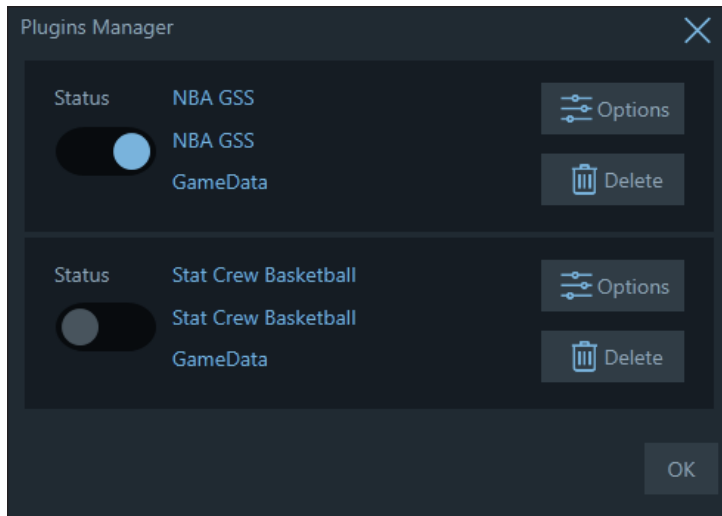
Figure 149: *Plug-in Enabled*

6. Confirm that the connection to the server is working properly by checking the stats feed **Status** bar. The status will show **Data OK** in green or **Error** in red. Refer to **Figure 150** and **Figure 151**.
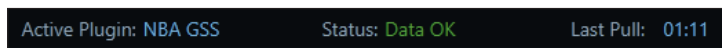
Figure 150: *Status of the Stats Feed - OK*
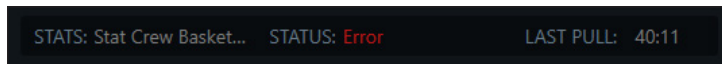
Figure 151: *Status of the Stats Feed - Error*

Stat Editor

Click the **Stat Editor** tab along the bottom of the user interface to open the stats features. Refer to **Figure 152**. Refer also to the sport-specific Stat Tags documents in **Appendix B: Supplementary Documents (p.79)**.
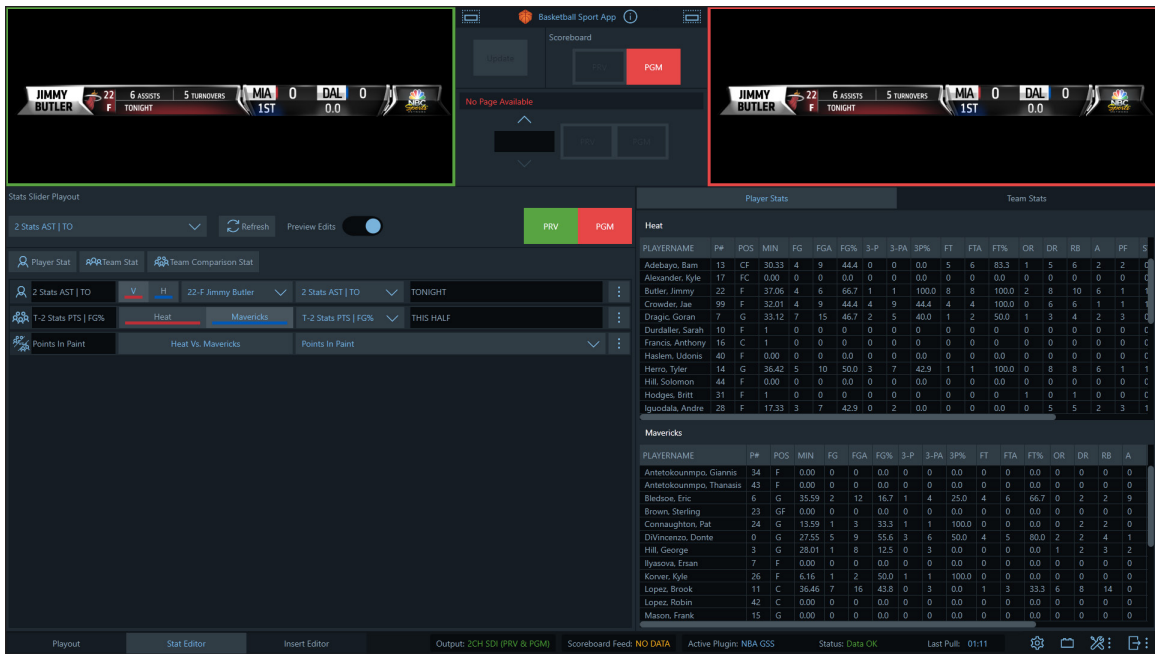
Figure 152: *Stat Editor*

Stats Grid

The right side shows the full box score and statistics information. There are two tabs at the top for **Player Stats** and **Team Stats**.

The **Player Stats** contains the player names, jersey numbers, player positions, etc. Refer to **Figure 153**.

Figure 153: *Player Stats*

The **Team Stats** shows statistics related to the team. Refer to **Figure 154**.

	MIN	FG	FGA	FG%	3-P	3-PA	3P%	FT	FTA	FT%	OR	DR	RB	A	PF	ST	TO	BS	PTS	PTSINPT	
Heat	240.00	35	73	47.9	11	31	35.5	22	24	91.7	5	43	48	21	21	6	21	7	103	32	
Mavericks	240.00	33	91	36.3	9	33	27.3	19	26	73.1	13	28	41	20	23	7	11	5	94	34	

Figure 154: *Team Stats*

Stats Slider Playout

The left side contains the stats builder function to create a custom stat for a player, team or to compare two teams. To build a stat, follow these steps:

1. Choose the tab to build a **Player Stat**, **Team Stat**, or **Team Comparison Stat**. Refer to **Figure 155**.
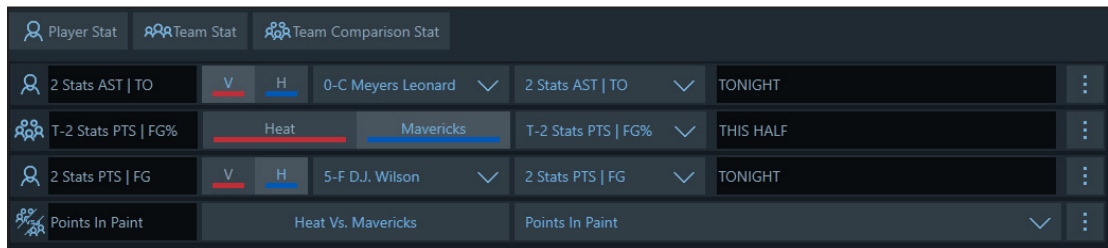
Figure 155: *Build a Stat*

2. Build a stat by choosing the desired information from the drop-down lists. The new stat is saved in the **Stats Slider Playout** list.

3. Preview how the stat looks on the scoreboard.

   a. Select the stat from the **Stat Slider Playout** drop-down list. Refer to **Figure 156**.
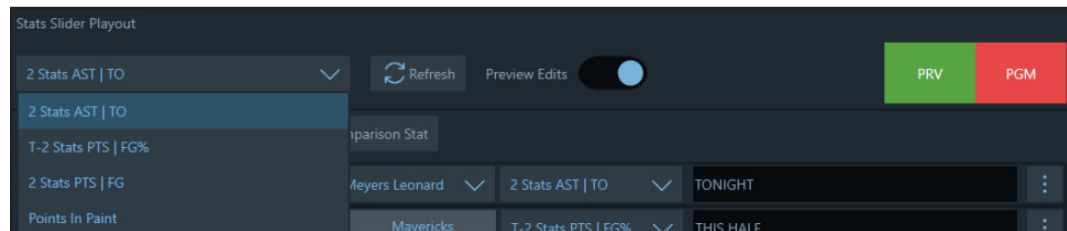
   Figure 156: *Select a Stat*

   b. Click the **PRV** button to view the stat in the Preview window or click the **PGM** button to view the stat in the Program window. Refer to **Figure 157**.
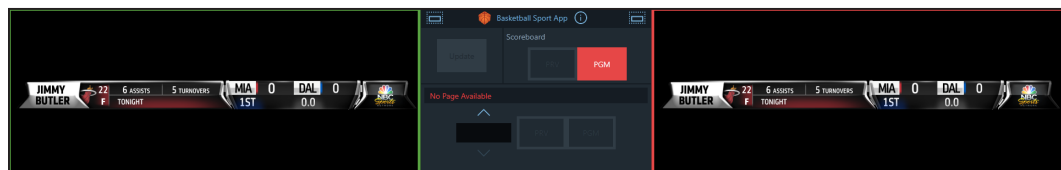
   Figure 157: *View Stat in Score Bug*

4   Troubleshooting

The LiveBook GFX® system is designed with ease-of-use in mind; however, there are resources available to help with any issues:

- Consult this user guide. For any process, make sure that all the steps have been followed as described.

- Access the **Online Help** information directly from the application.

- Visit the AJT Systems website: https://ajtsystems.com/support-all/

Access Online Help

To access the **Online Help** information, follow these steps:

1. Click the information icon ⓘ in the upper middle section of the user interface. Refer to **Figure 158**. A system information panel opens.
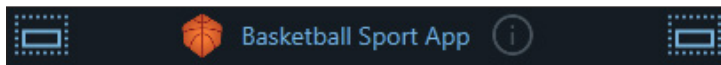
Figure 158: Information Icon

2. Click the **Online Help** link in the information panel. Refer to **Figure 159**.
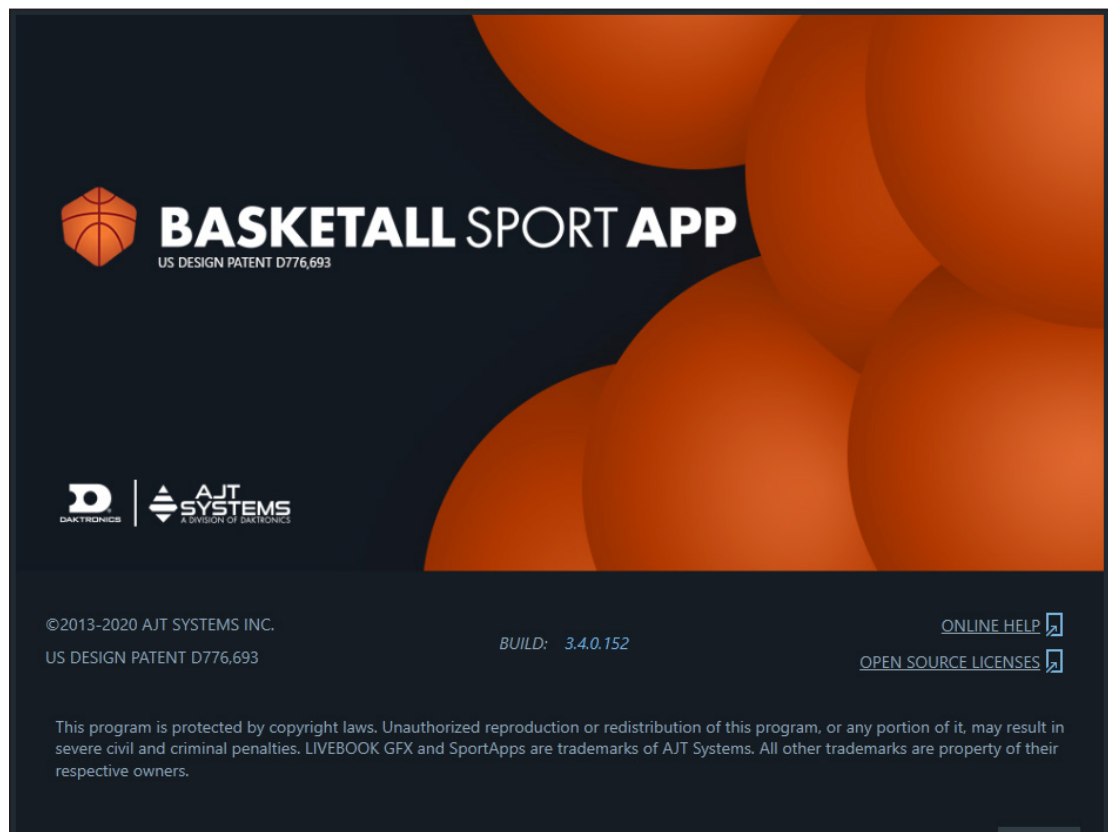
Figure 159: System Information

> **Note:** The current software version is listed as the **Build** number.

Contact Customer Service

Before contacting customer service, please have the following information:

- all steps that led to the problem

- any error messages that appear on the screen

- any relevant screenshots

- information that identifies the system software version; refer to **Access Online Help (p.71)**

- any crash dump files; refer to **Crash Dump File (p.73)**

Contact Information

AJT Systems support staff is available to assist 7 days a week, 8 AM - 8 PM ET.

For emergency help call: +1 954-776-4591

For non-emergency help, email: support@ajtsystems.com

> **Note:** An AJT Systems Support Contract must be valid to receive customer services.

Diagnostic Tools

The LiveBook GFX® system includes several diagnostic tools for working with computer and video related devices.

Color Bars

Color bars are a useful tool to aid in the calibration of video monitors. To display color bars, follow these steps:

1. Open the **Sport App Settings** panel. Refer to **Access the Settings Panel (p.4)**.

2. Click **Video Options** under the **Video Format** section.

3. Note the current **Video** mode setting (**Internal Keying** or **Key & Fill**).

4. Select **Test Pattern**. The color bars will be shown. Refer to **Figure 160**.
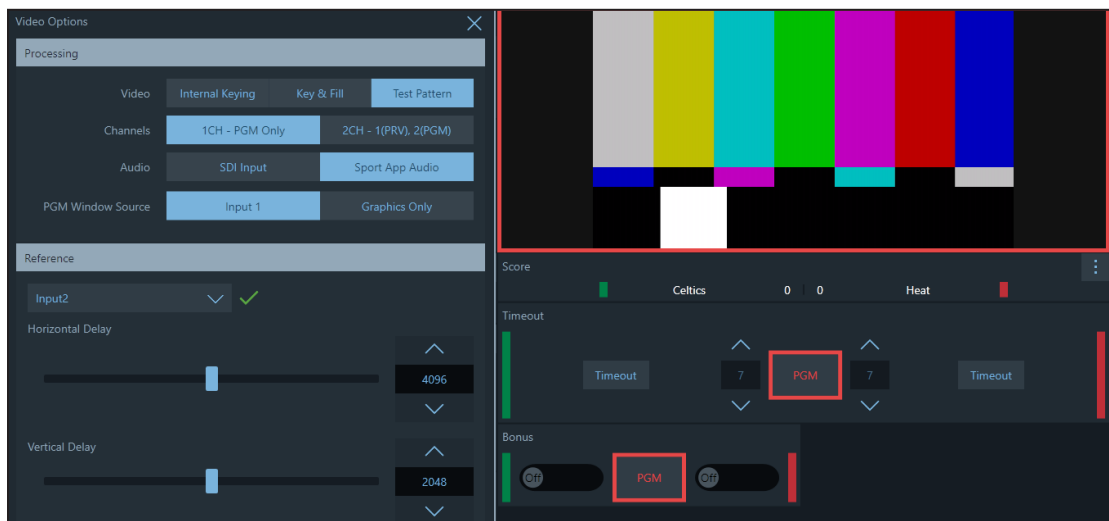
Figure 160: *Video - Test Pattern*

5. Restore the original **Video** mode setting by clicking **Internal Keying** or **Key & Fill**.

System Information

Problems can result from incompatible video formats as well as video memory or render usage getting close to system capacity. To confirm video formats and monitor memory and render load usage, follow these steps:

1. Open the Sport App and open the **Settings** panel. Refer to **Access the Settings Panel (p.4)**.

2. Click **Video Options** under the **Video Format** section.

3. Click the **System Information** drop down arrow and review the information. Refer to **Figure 161**.
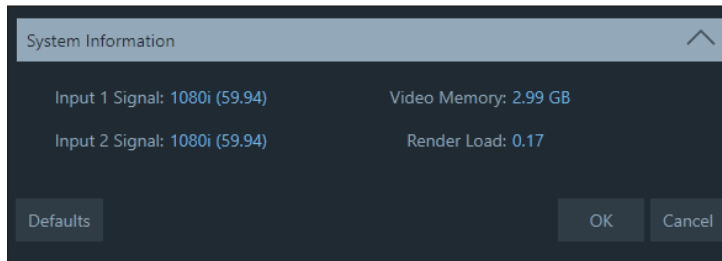
Figure 161: System Information

Crash Dump File

The LiveBook GFX® system automatically creates a crash dump file if the system crashes. This file contains useful information about events leading up to the crash and may be requested by the customer service support team.

Typically, crash dump files are located here: **C:\CrashDumps**

Warranty Information

IMPORTANT- PLEASE READ THIS LIMITED WARRANTY CAREFULLY TO UNDERSTAND YOUR RIGHTS AND OBLIGATIONS!

"Hardware Device" means the AJT Systems supplied laptop and IO box.

"You" or "Your" means either an individual or a single legal entity.

"Software" means the software supplied by AJT Systems for use with the applicable Hardware Device.

Warranty

Subject to the terms and conditions of this Limited Warranty and in lieu of any other (if any) express warranties, AJT Systems warrants that under normal use and service, on the date of acquisition as shown on Your receipt or similar proof of payment and for the next one year:

1. Hardware will operate free from defects in workmanship and materials.

2. Software operation will substantially conform with the accompanying AJT Systems packaging and documentation, with free support and software upgrades.

As to any defects discovered after the Warranty Period, there is no warranty or condition of any kind.

This Limited Warranty does not cover, and no warranty of any kind is provided with respect to any subjective or aesthetic aspects of the Hardware Device or Software. The express warranty stated above is the only express warranty made to You and is provided in lieu of all other express or implied warranties and conditions (except for any non-disclaimable implied warranties that exist), including any created by any other documentation or packaging. No information or suggestions (oral or in a record) given by AJT Systems, its agents, affiliates, suppliers or employees, shall create a warranty or condition or expand the scope of this Limited Warranty.

Exclusive Remedy

AJT Systems will, at its option and as Your exclusive remedy for breach of this Limited Warranty and any implied warranties:

* Repair or replace all or part of the defective Software or the defective Hardware Device.

* Make payment to You for the allowable damages that You incurred in reasonable reliance, but only up to the amount You paid (if any) for the Software and/or the Hardware less reasonable depreciation based on actual use.

The above remedy is subject to the following:

Any repaired or replaced Software or Hardware Device will be new or refurbished or serviceably used, comparable in function and performance to the original Hardware Device (or Software), and may include third party items.

Any Software or Hardware Device repaired or replaced under this Limited Warranty will be warranted for the remainder of the original Warranty Period.

Exclusion of Other Damages

To the full extent allowed by law, AJT Systems and its suppliers, affiliates, and agents are not liable for any:

* Consequential or incidental damages.

* Damages or loss of any nature whatsoever relating to lost profits, business interruption, loss of data or privacy or confidentiality, any inability to use all or part of the hardware device or software, personal injury, or any failure to meet any duty (including but not limited to any duty of negligence, good faith or workmanlike effort).

* Indirect, special, or punitive damages arising out of or relating in any way to the software or hardware device. The foregoing applies even if AJT Systems or any supplier, affiliate or agent has been advised of the possibility of such losses or damages, and even in the event of fault, tort (including negligence), strict or product liability, misrepresentation or other reason.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusions may not apply to You.

Exclusions from Coverage

This Limited Warranty shall not apply and AJT Systems has no liability under this Limited Warranty if the Software or Hardware Device:

- is rented or leased to a third party or used for purposes beyond the scope of the Software license.

- is modified or tampered with.

- is damaged by Acts of God, power surge, misuse, abuse, negligence, accident, wear and tear, mishandling, misapplication, or other causes unrelated to defects in the Hardware Device or the Software.

- is damaged by programs, data, or viruses, or during shipments or transmissions.

- is not used in accordance with the accompanying documentation and use instructions

- is repaired, modified or altered by an entity other than AJT Systems.

This Limited Warranty does not include any warranty regarding legal rights or abilities, such as any warranty regarding title, quiet enjoyment, or lack of infringement.

Registration

You need not register Your acquisition of the Software and Hardware Device for the Limited Warranty to be effective.

Beneficiary

To the extent allowed by applicable law, the Limited Warranty is only made to You, the licensed user of the Software or purchaser of the Hardware Device, and there are no third party beneficiaries of the Limited Warranty. Except as required by law, this Limited Warranty is not intended for and does not apply to anyone else, including anyone to whom You make any transfer as authorized in the Agreement.

Further Information

AJT Systems is the warrantor under this Limited Warranty. To receive instructions for obtaining performance of this Limited Warranty, you must contact AJT Systems.

You must also:

- Submit proof of payment in the form of a bona-fide, dated receipt, or invoice (or a copy) evidencing that You are the beneficiary of this Limited Warranty and that Your request for a remedy is made within the Warranty Period;

- Follow AJT Systems' shipping and other instructions if it determines that all or part of Your Hardware Device or Software requires return.

- Take or deliver the item in either its original packaging or packaging that provides an equal degree of protection to the location specified by AJT Systems. Except as otherwise required by legislation in Your jurisdiction, costs associated with transport (including packaging) for warranty service shall be at Your expense.

- Delete or remove any private or confidential data prior to sending the item to AJT Systems.

Failure to follow the above instructions may result in delays, cause You to incur additional charges, or may void Your warranty.

This Limited Warranty gives You specific legal rights and You may also have other rights which vary from jurisdiction to jurisdiction. Where any term of this Limited Warranty is prohibited by such laws, it shall be null and void, but the remainder of the Limited Warranty shall remain in full force and effect if its allocation of risks is not materially disturbed.

Governing Law; Exclusive Forum

If You acquired the Hardware Device and/or Software in the United States of America, all parts of this Agreement (including the Limited Warranty) shall be construed under and controlled by the laws of the State of Florida, U.S.A., and You irrevocably consent to exclusive jurisdiction and venue in the federal courts sitting in Fort Lauderdale, FL, unless no federal subject matter jurisdiction exists, in which case You irrevocably consent to exclusive jurisdiction and venue in the Superior Court of Fort Lauderdale, FL.

If You acquired this Hardware Device outside of the United States of America, then local laws may apply.

Additional Maintenance and Warranty

AJT Systems offers for purchase additional maintenance and support contracts for the period after one year.

AJT Systems offers for purchase an optional 3-year laptop warranty with accidental damage protection.

A   Art Department Guidelines

The scoreboard generated with the SportApp™ software can display team logos, network logos, and sponsor logos. The system comes with some network and team logos pre-installed, but others can be added easily.

These logo images may be created in third-party art applications such as Adobe® Photoshop®. It is important to create the logos correctly and consistently, and then to store them in the correct location on the LiveBook GFX® system.

To ensure that the logos display properly, follow these guidelines:

- All logo graphics should be PNG files.

- All logo graphics should be 379 x 256 pixels or 1024 x 1024 pixels.

- Images should be centered in their respective graphics.

- The images within each graphic should be sized consistently.

Figure 162 shows the correct format for logos, while **Figure 163** shows the incorrect format for logos.

Figure 162: Correct Logo Formats

Figure 163: Incorrect Logo Formats

To ensure that art is available for use in a scoreboard, the best practice is to store files in the correct folder on the LiveBook GFX® local drive.

Store league logos, team logos, network logs, and sponsor logos here:
C:\ProgramData\AJT Systems\MAM\AJT\<appropriate sub-folder>

Sub-folders include:

- **<LeagueAssets>** for team logos and player headshots

- **<NetworkLogos>** for network logos

- **<SponsorLogos>** for sponsor logos

- **<ShowInsertGraphics>** for show templates and graphics relevant to those templates for page creation

This folder structure is already set up in the system. It is important to place logos in the correct sub-folder. For example, if a sponsor logo is not placed in the designated folder, then the logo is not available for selection from the **Sponsor Logo** drop-down list in the user interface.

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B   Supplementary Documents

This section includes the following:

- **Basketball SportApp Stat Tags (DD4312633)**
- **Football SportApp Stat Tags (DD4312736)**
- **Hockey SportApp Stat Tags (DD4312740)**
- **LiveBook GFX Quick Setup Guide SDI/NDI®/LE (DD4598910)**
- **LiveServer GFX Quick Setup Guide SDI/NDI® (DD4744289)**
- **MAM Folder Structure for SportApps 3.4 Quick Guide (DD4311489)**
- **SportApps Header Message Stat Tags Quick Guide (DD4953803)**

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Basketball SportApp™ Stat Tags

STAT TAG	STAT DESCRIPTION
MIN	Minutes in Game
FG	2 Point Field Goals
FGA	2 Point Field Goals Attempts
FG%	Percentage of Field Goals Made
3-P	3 Points
3-PA	3 Points Attempts
3P%	Percentage of 3 Points Made
FT	Free Throws
FTA	Free Throws Attempts
FT%	Percentage of Free Throws Made
OR	Offensive Rebounds
DR	Defensive Rebounds
RB	Total Rebounds OR+DR
A	Assits
PF	Personal Fouls
ST	Steals
TO	Turnovers
BS	Block Shots
DQ	Fouled Out (Disqualified)
PTS	Points
PTSINPT	Points in Paint
PTSOFFTO	Offensive Turnovers
CHAN2PTS	After shot hits rim and same team player gains possesion of the ball
FBRPTS	Fast Break Points. When a team scores before opponent sets up defense
BNCHPTS	Points scored by a non-starter

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Football SportApp™
Stat Tags

CATEGORY	STAT TAG	STAT DESCRIPTION
Passing	COMP	Pass Completions
	ATT	Pass Attempts
	PAC%	Pass Completion Percentage
	INTD	Number of interceptions thrown by passer
	PAYD	Passing Yards
	PATD	Passing TDs
	LGPA	Number of long passes
	SCKD	Number of sacks on the passer
	SCKYD	Yards by sack on the passer
Rushing	RUSH	Rushing Attempts
	RUYD	Rushing Yards
	RUGN	Positive Rushing Yards
	RULS	Negative Rushing Yards
	RUTD	Rushing TDs
	RUYA	Average yards gained per rushin attempt
	LGRU	Number of long rushes
Receiving	REC	Number of Receptions
	REYD	Yards Receiving
	RETD	Receiving TDs
	LGRE	Number of long receptions
Kick Return	KR	Number of Kick Returns
	KRYD	NUmber of Kick Return Yards
	KRTD	Number of Kick Return TDs
	LKRET	Number of Long Kick Returns
Punt Return	PR	Number of Punt Returns
	PRYD	Punt Return Yards
	PRTD	Number Punt Return TDs
	LPRET	Number of Long Punt Returns
KICK OFFS	KO	Number of Kick Offs
	KOYD	Kick Off Yards
	KOB	KOs Out of Bounds
	KTB	Kick Off Touch Backs

Football SportApp™ Stat Tags

CATEGORY	STAT TAG	STAT DESCRIPTION
PUNTS	P	Number of Punts
	PYD	Punt Yards
	LONGP	Number of Long Punts
	BLP	Number of Blocked Punts
	PTB	Punt Touchbacks
	PFC	Punt Fair Catch
	PP50	Punts Over 50 Yards
	PI20	Punts Inside 20
	PAVG	Punt Average
SCORING	XPA	Extra Point Attempts
	XPM	Extra Points Made
	TTD	Touchdowns
FUMBLES	F	Number of Fumbles
	FF	Forced Fumbles
	FR	Fumble Recovery
	FL	Fumble Lost
DEFENSIVE	TK	Number of Unassisted Tackles
	ATK	Number of Assisted Tackles
	TTK	Total Tackles
	SCKYDD	Sack Yards for Defender
INTERCEPTION	INT	Number of Interceptions
	INTRYD	Number of Yards from Interceptions
	INTERTD	Number of TDs from Interceptions
Field Goals	FGM	Field Goal Made
	FGA	Field Goal Attempted
	LGFG	Long Field Goals
	FGB	Field Goal Blocked
	FG%	Field Goal Percentage

Football SportApp™ Stat Tags

CATEGORY	STAT TAG	STAT DESCRIPTION
TEAMS	YPG	Total Yards
	FDPG	Number of First Downs
	RUYD	Rush Yards
	PAYD	Passing Yards
	GIVE	Turnovers
	TOP	Time of Possession
	FDPA	Number of First Downs (Passing)
	FDRU	Number of First Downs (Rushing)
	FDPN	Number of First Downs (From Penalties)
	3DCA	Number of Third Down Conversion Attempts
	3DCM	Number of Third Down Conversions Made
	3DC%	Third Down Conv/Atts
	4DCA	Number of Fourth Down Conversion Attempts
	4DCM	Number of Fourth Down Conversions Made
	4DC%	Fourth Down Conv/Atts
	PLYS	Total Offensive Plays
	ATGN	Average Gain Per Play
	RUSH	Total Rush Attempts
	RUYA	Average Gain per Rush
	ATT	Total Pass Attempts
	COMP	Total Pass Completions
	PAYA	Net Yards per Pass Play
	SCKD	Number of Times Sacked
	SCKYD	Yards Lost by Sack
	P	Number of Punts
	PYD	Total Punt Yardage
	PAVG	Average Yards per Punt
	RETYD	Total Return Yards
	PR	Number of Punt Returns

Football SportApp™ Stat Tags

CATEGORY	STAT TAG	STAT DESCRIPTION
TEAMS	PRYD	Total Yards for Punt Returns
	KR	Number of Kick Returns
	KRYD	Total Yards for Kick Returns
	INT	Number of Interceptions
	INTRTD	Number of TDs from Interceptions
	INTRYD	Total Yards from Interceptions
	PEN	Number of Penalties
	PENYD	Yards from Penalties
	F	Number of Fumbles
	FL	Number of Fumbles Lost
	SCK	Number of Sacks
	SCKYDD	Yards Lost by Opponent from Sacks
	SDRVPLAYS	Score Drive Plays
	SDRVYDS	Score Drive Yards
	SDRVDUR	Score Drive Duration
	SDRVSCORE	Score Drive Score
	CDRVPLAYS	Current Drive Plays
	CDRVYDS	Current Drive Yards
	CDRVSTART	Current Drive Start
	CDRVDUR	Current Drive Duration

Hockey SportApp™ Player Stat Tags

STAT TAG	STAT DESCRIPTION
G	Goal Scored
A	Assist on Goal (last 2 who touched puck)
SOG	Scoring Attempts
SHG	Goals Scored when team has less players on ice than opponent
PIM	Total Time Player Receives in Penalties
BKS	Player other than goalie blocks a shot
FO%	Percentage of Faceoffs Won
FO	Total Faceoffs
FOW	Faceoffs Won
FOL	Faceoffs Lost
PLS	Hockey Plus Stat
MNS	Hockey Minus Stat
PLSMNS	Hockey Plus Minus Stat
PPG	Power Play Goals
SHOG	Goals Scored in Shootout
S	Saves
GA	Goals Allowed (not empty net)
TGA	Total Goals Allowed
MIN	Minutes Goalie Played

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Hockey SportApp™
Team Stat Tags

STAT TAG	STAT DESCRIPTION
G	Total Team Goals
A	Total Team Assists
SOG	Total Team Shots
SHG	Total Team Short Handed Goals
PPG	Total Team Power Play Goals
PPOP	Total Power Play Opportunities
FOW	Total Face Offs Won
FOL	Total Face Offs Lost
BKS	Total Block Shots
PIM	Total Penalty Minutes
PCNT	Total Penalty Count
PMIN	Total Count Minor Penalties
PMAJ	Total Count Major Penalties
PMIS10	10 Minute Misconduct

LIVE **BOOK** GFX

Quick Setup Guide
SDI/NDI®/LE

DAKTRONICS | AJT SYSTEMS
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What is Included
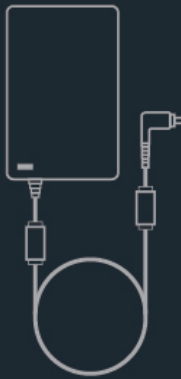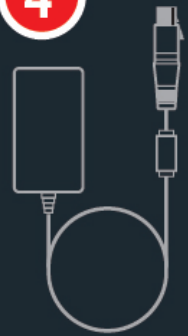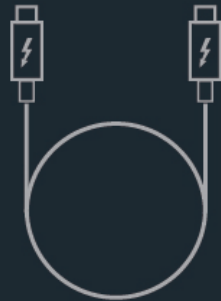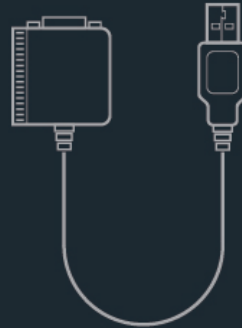
1. LIVE BOOK GFX® Laptop
2. I/O Box
3. Laptop Power Supply
4. I/O Box Power Supply
5. Thunderbolt Cable
6. Serial To USB Adapter
7. Wired Mouse
8. USB License Dongle

● SDI systems only

STEP 1. Connect all of the components of your system

Once you unpack all of the components, you are just a few simple steps from being ready to use your new LIVE BOOK GFX® system.

A Connect the laptop power supply, USB license dongle and the USB wired mouse to the laptop.

> *Skip B and C for NDI and LE systems*

B Connect the I/O box power supply to the 12-volt power connector on the left of the I/O box.
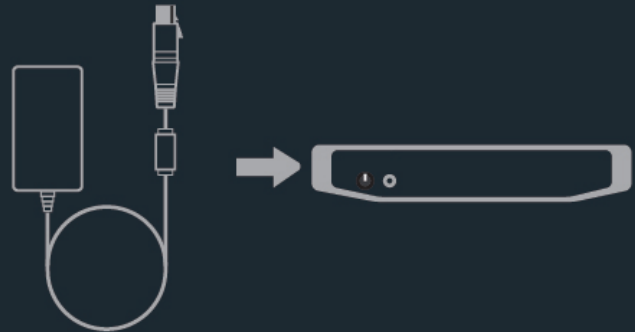
C Connect the Thunderbolt cable from the Thunderbolt connector on the I/O box to the Thunderbolt connector on the LIVE BOOK GFX®.

D Connect the game data feed to the LIVE BOOK GFX® via network or serial interface.

For serial interface use the Serial to USB adapter.
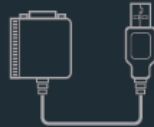
E Power on the LIVE BOOK GFX® laptop and the I/O box.

STEP 2. Connect to video switcher or streaming device

Refer to one of the following three diagrams to make the appropriate connections based on your broadcast workflow.
Note: Ref-In port may be in a different position depending on I/O model.

Internal Key / Upstream

(Optional) Black Burst	Streaming Device	LIVE BOOK GFX Loop	OCR Camera
Trilevel	Program	Program	Feed

Ref In

Key and Fill Out / Downstream
With OCR/DVE Clocks

Black Burst
Trilevel

Camera
Feed

To Switcher
Fill   Key

Ref
In

Dual Channel
Key and Fill Out / Downstream

Black Burst
Trilevel

Channel 1
Fill   Key

Channel 2
Fill   Key

Ref
In

STEP 3. System settings

Once you make all the necessary physical connections, you need to configure your system to ensure that the devices communicate and function correctly. All of the settings for hardware and score bug configurations are made in the Settings window of the Sport App® that comes with your system.

From the bottom menu bar, choose Settings.

A Select League and Teams for the game.

B Select incoming scoreboard protocol.

C Select the style of your score bug.

D Select graphics video format.

Sport App Settings

League and Teams

National Basketball Association   ⌄   Reset Game

Visitor Team	Home Team
Celtics - BOS ⌄	Heat - MIA ⌄
+ ✎ 🗑 Roster	+ ✎ 🗑 Roster

Scoreboard Feed

DAK 5000 TV Feed ⌄   OCR Setup   DVE Setup   Feed Options

Source From Feed
⌄

Scoreboard

Super Generic Basketball ⌄   ← Import   🗑   Template Options

Video Format

1080i (59.94) ⌄   Video Options

Reset All Warnings   OK   Cancel

E Complete STEP 4 (if necessary). Click **OK** to save your system settings.

STEP 4. Select Appropriate Video Options

Click the Video Options button in the Video section to access additional Video configuratons.

A

Select desired video processing method, number of output channels, Audio Source and Program Window Source.

Use Test Pattern for testing or calibration.

B

Select Reference input.

*Use **Input2** if in Internal Keying mode.*

Video Options   ✕

Processing

Video	Internal Keying	Key & Fill	Test Pattern
Channels	1CH - PGM Only		2CH - 1(PRV), 2(PGM)
Audio	SDI Input		Sport App Audio
PGM Window Source	Input 1		Graphics Only

Reference

⌄ ✕

Horizontal Delay

⌃
4096
⌄

C Click **OK** to save your Video settings.

Your LIVE BOOK GFX® is now ready to broadcast a game.

Need More Help?

Please refer to the Sport App User Guide for more information.

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LIVE **SERVER** GFX

Quick Setup Guide
SDI/NDI®

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What is Included
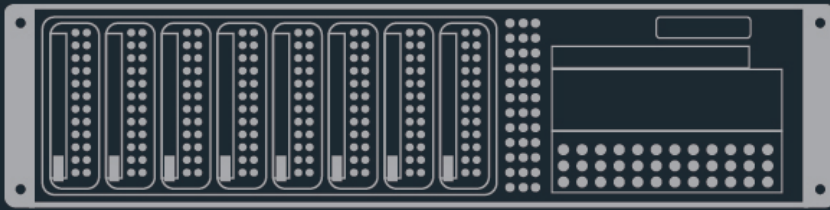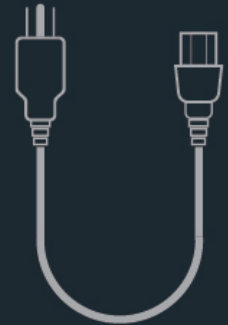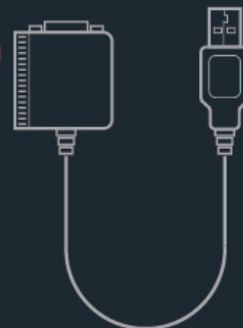
1. LIVE SERVER GFX®
2. Power Cable
3. Wired Keyboard
4. Wired Mouse
5. Serial To USB Adapter
6. USB License Dongle

STEP 1. Connect all of the components of your system

Once you unpack all of the components, you are just a few simple steps from being ready to use your new LIVE SERVER GFX® system.

A Connect the power cable, the USB license dongle, the USB wired keyboard and USB wired mouse to the LIVE SERVER GFX®.
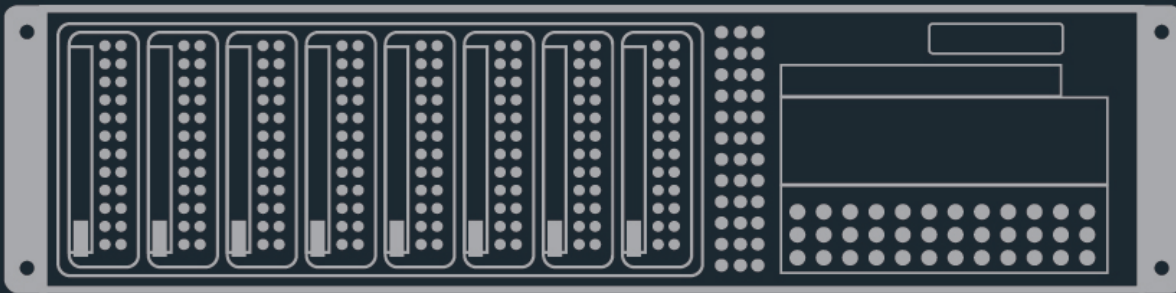
B Connect the game data feed to the LIVE SERVER GFX® via network or serial interface.
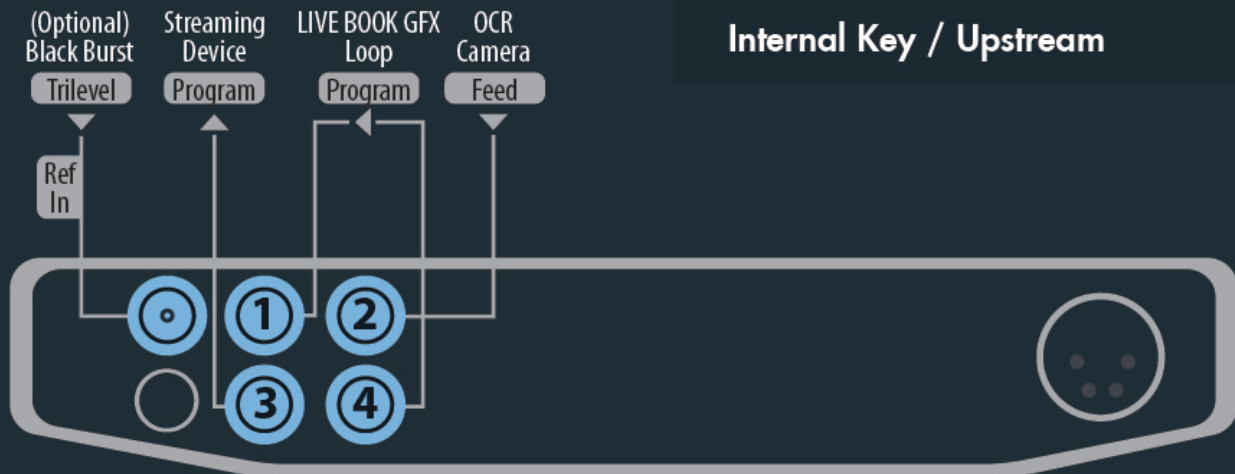
For serial interface use the Serial to USB adapter.
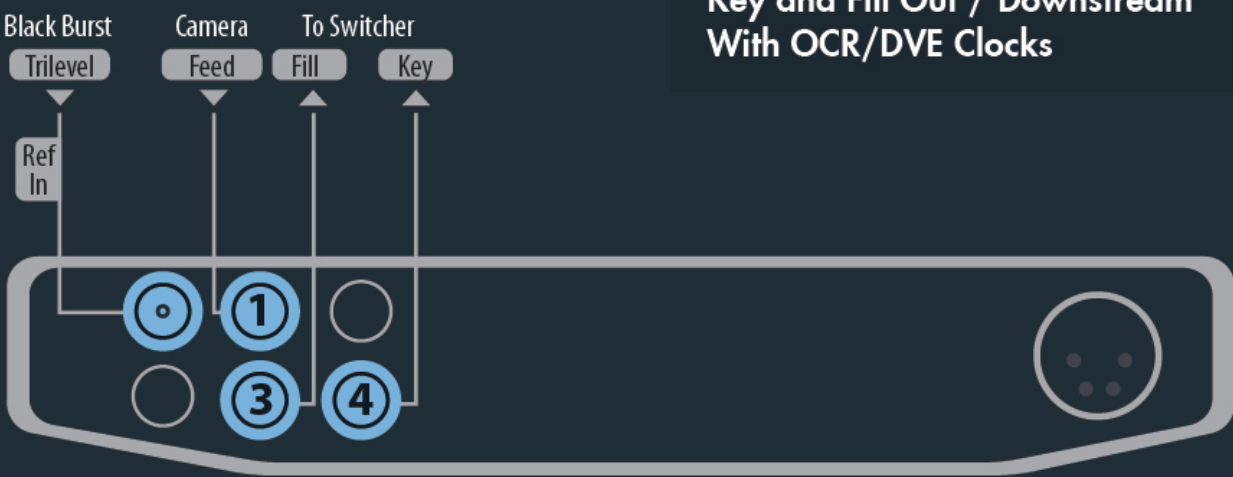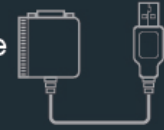
C Power on the LIVE SERVER GFX®.

STEP 2. Connect to video switcher or streaming device

Refer to one of the following three diagrams to make the appropriate connections based on your broadcast workflow.
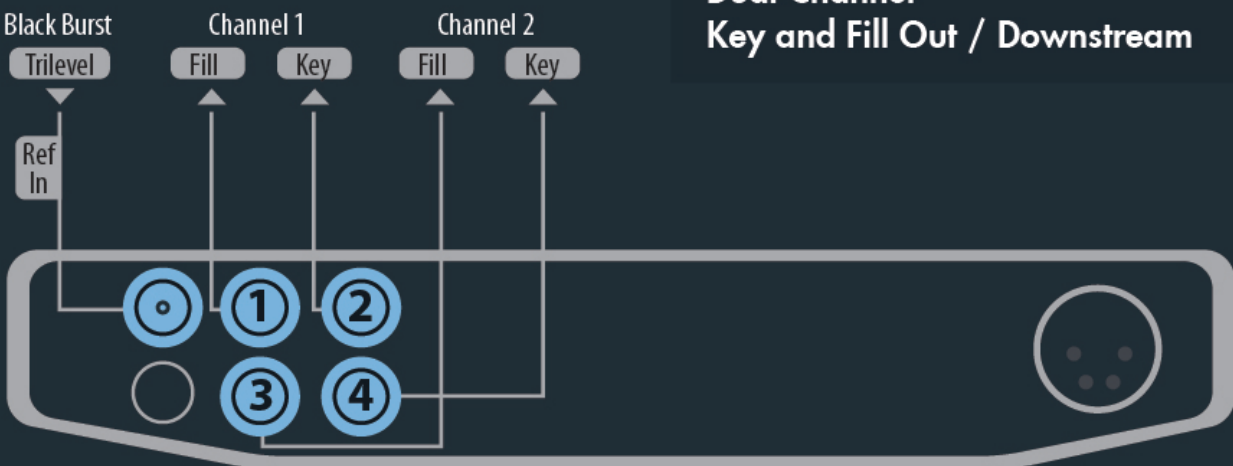
Internal Key / Upstream

REF In — Trilevel Black Burst (Optional)

SDI 2 — Feed OCR Camera

SDI 1

SDI 3 — Program Streaming Device

SDI 4 — Program LIVE SERVER GFX Loop

Key and Fill Out / Downstream
With OCR/DVE Clocks

REF In — Trilevel Black Burst
SDI 2 — Feed OCR Camera
SDI 1
SDI 3 — Program Streaming Device
SDI 4 — Program LIVE SERVER GFX Loop

Dual Channel
Key and Fill Out / Downstream

REF In — Trilevel Black Burst
SDI 1 — Fill
SDI 2 — Key Channel 1
SDI 3 — Fill
SDI 4 — Key Channel 2

STEP 3. System settings

Once you make all the necessary physical connections, you need to configure your system to ensure that the devices communicate and function correctly. All of the settings for hardware and score bug configurations are made in the Settings window of the Sport App® that comes with your system.

From the bottom menu bar, choose Settings.

A Select League and Teams for the game.

B Select incoming scoreboard protocol.

C Select the style of your score bug.

D Select graphics video format.

Sport App Settings	✕

League and Teams

National Basketball Association	⌄	Reset Game

Visitor Team	Home Team

Celtics - BOS ⌄	👥 Roster	Heat - MIA ⌄	👥 Roster
+ ✏ 🗑		+ ✏ 🗑	

Scoreboard Feed

DAK 5000 TV Feed ⌄	OCR Setup	DVE Setup	⇌ Feed Options

Source From Feed
⌄

Scoreboard

Super Generic Basketball ⌄	⬅ Import	🗑	⇌ Template Options

Video Format

1080i (59.94) ⌄	⇌ Video Options

Reset All Warnings	OK Cancel

E Complete STEP 4 (if necessary). Click **OK** to save your system settings.

STEP 4. Select Appropriate Video Options

Click the Video Options button in the Video section to access additional Video configuratons.

A Select desired video processing method, number of output channels, Audio Source and Program Window Source.

Use Test Pattern for testing or calibration.

B Select Reference input.

*Use **Input2** if in Internal Keying mode.*

Video Options

Processing

Video	Internal Keying	Key & Fill	Test Pattern
Channels	1CH - PGM Only	2CH - 1(PRV), 2(PGM)	
Audio	SDI Input	Sport App Audio	
PGM Window Source	Input 1	Graphics Only	

Reference

Horizontal Delay

4096

C Click **OK** to save your Video settings.

Your LIVE SERVER GFX® is now ready to broadcast a game.

Need More Help?

Please refer to the Sport App User Guide for more information.

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The SportApps® 3.4 software suite includes an updated MAM (Media Asset Management) file structure that takes a package-first approach instead of the sport-first approach as seen in previous versions.

Folder Structure

As shown in **Figure 1**, the highest level folders are the Partner-level folders that host all the needed resources to create state of-the-art sports graphics. A Partner folder can contain multiple Graphics Package folders.

LeagueAssets Folder

LeagueAssets folders contain team logos and headshots grouped as leagues. These are located under the Graphics Packages within Partner folders as well as directly within Partner-level folders.

For example, **Figure 1** shows a LeagueAssets folder under the ESPN 2020 Graphics Package and a LeagueAssets folder under the ESPN Partner folder. This means that any template within ESPN 2020 will use the team logos found in ESPN\ESPN 2020\LeagueAssets. In contrast, any template within ESPN 2015 (or any other Graphics Package) will use the team logos found in ESPN\LeagueAssests.

AJT Folder

A new Partner-level folder named **AJT** contains a LeagueAssets folder for team logos and headshots. All new SportApps® programs will use this unless a Graphics Package or Partner folder contains its own LeagueAssets folder. The AJT folder is also the location of all AJT-created templates that will be added in the future and contains the default SuperGeneric template.

User Folder

A Partner-level folder named **User** must be created to contain any custom template packages. To automatically import these custom templates at launch, refer to **Content Installers (p.2)**. This is also where all manually-imported packages are located: User\Imported\Scoreboard. Any insert graphics related to a manually-imported package must be copied to User\Imported\ShowInsertGraphics. Create this ShowInsertGraphics folder under User\Imported if it does not exist.

MAM structure for SPORT APPS 3.4 and above C:\ProgramData\AJT Systems\MAM	Levels Description
ESPN	Partner (replaced Sport)
ESPN 2020	Graphics Package (New)
ESPN CFB 2020 Clips	Miscellaneous Assets
LeagueAssets	League Assets(under package level)
NCAA	Leagues
Logos	Primary Team Logos
TeamBlue.png	Team Logo
Secondary	Alternate Team Logos
Primary_Knockout	Alternate Team Logos
Scoreboards	Scorebug and GTB Templates
ESPN_CFB_2020_Scorebug.xml	Scorebug Template
Graphics	Scorebug Template Assets
ShowInsertGraphics	Show/Insert Graphics Templates
Lowerthirds	Show Sub-folder
9000-PlayerStat.xml	Insert Templates
NetworkLogos	Network Logos(under package level)
SponsorLogos	Sponsor Logos(under package level)
ESPN 2015	Graphics Package
LeagueAssets	League Assets(under partner level)
AJT	Partner - All AJT created packages
User	Partner - All custom (user-created) packages

Figure 1: MAM Folder Structure

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Content Installers

Content installers are available to automatically import packages to help adopt the new folder structure and simplify the installation of graphics packages. These installers are in the form of EXE files and will place selected content, fonts, and LeagueAssets in the correct location with one click.

All newly downloaded packages contain a new JSON file next to the scoreboard (score bug) template. This JSON file is used by the SportApps® programs to identify and automatically import the package at launch.

To create a JSON file that will import custom templates at launch, follow these steps:

1. Open Notepad on the LiveBook GFX®.

2. Copy and place the following text:

   {

   "Schema": "1",

   "Template": "scoreboard_name.xml",

   "TemplateFriendlyName": "Scoreboard Name",

   "ApplicableApplications": [

   "Football"

   ]}

3. Replace **"scoreboard_name.xml"** with the file name of the custom scoreboard (score bug) template including the file extension.

4. Replace **"Scoreboard Name"** with the name of the custom scoreboard (score bug) template.

5. Add all desired applications that apply, e.g. "Baseball", "Basketball", "Football", "Hockey", or "Soccer".

6. Save the file at the scoreboard (score bug) and Go To Break location with the same name as the scoreboard (score bug) template but with **.json** as the file extension.

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Content installers are currently being created for all current templates on the AJT Dashboard and will include the JSON file for automatic import.

To move any packages into the new structure before an installer is available, refer to **Figure 2**. This structure must be followed or content installers will fail when trying to place content into the correct location.
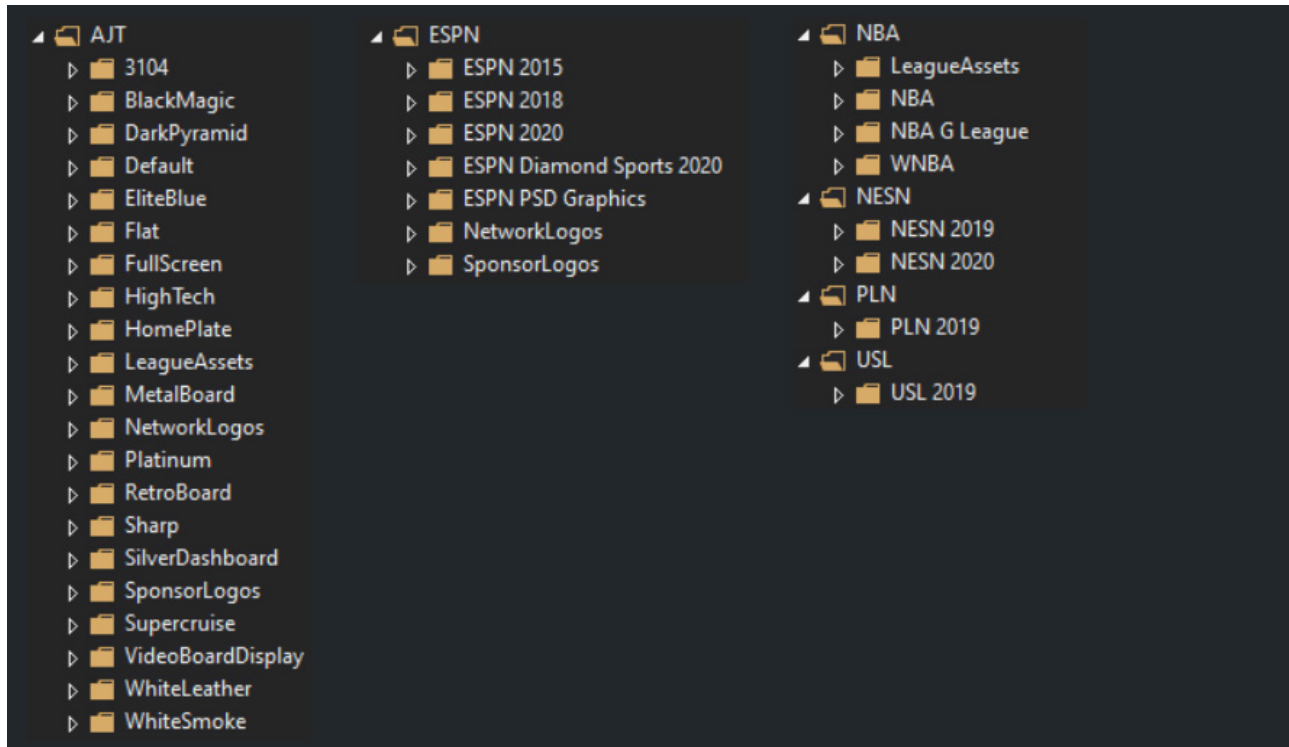
Figure 2: *Package Organization*

Team Logos

Starting with the SportApps® version 3.4, all templates will use the team logos located here: C:\ProgramData\ AJT Systems\MAM\AJT\LeagueAssets unless the package has its own set of logos. For example, the ESPN 2020 templates have their own set of logos located at C:\ProgramData\AJT Systems\MAM\ESPN\ESPN 2020\ LeagueAssets as shown in **Figure 1**.

Team logos are found in two locations because there are two different logo sizes. AJT Systems/Daktronics has provided logos at 379x256 pixels; however ESPN now provides logos at 1024x1024 pixels. Therefore, the new 1024x1024 logos will become the standard size starting with the new ESPN CFB 2020 graphics package. As new templates are created, only 1024x1024 pixel logos will be used with the 379x256 pixel logos eventually retiring.

To use the 1024x1024 pixel version of the NCAA logos in a custom package, just copy the LeagueAssets folder from C:\ProgramData\AJT Systems\MAM\ESPN\ESPN 2020 to C:\ProgramData\AJT Systems\MAM\User.

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Technical Support

Please visit our website for updates: https://ajtsystems.com/support-all/

E-mail: support@ajtsystems.com

If further assistance is required, Daktronics Customer Service is available 24/7 via phone or online.

- Domestic (U.S. and Canada): 1-800-325-8766

- International: +1-605-697-4000

- www.daktronics.com

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Each scoreboard style in the SportApps® software suite includes an element to display header messages such as team or player information, statistics, social media information, contact information, or any other text. Create and save messages or dynamically change the message while it is on-air.

Create Header Message

Create a new header message using header message stat tags:

1. Click the **Edit Messages** button under **Header Message**. Refer to **Figure 1**.

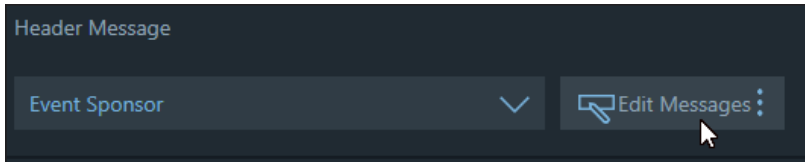*Figure 1: Create Header Message*

2. Click **+ New Message**. The message **Name** and blank text box are now active.

3. Enter a descriptive name for the header message in the **Name** field (required). Refer to **Figure 2**.
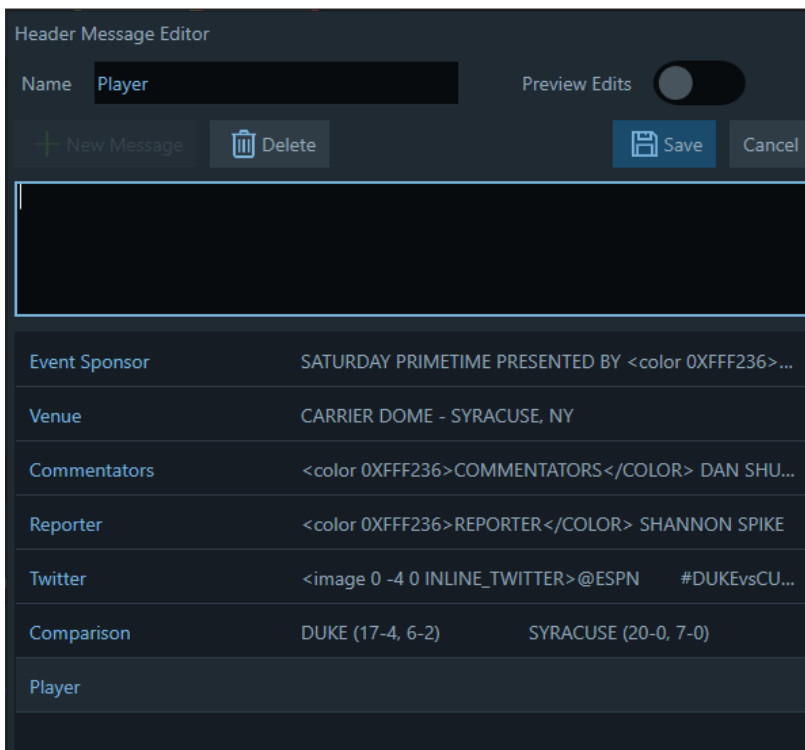
Figure 2: Enter Header Message Name

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4. Enter the message in the message text box using the header stat tags shown the tables on pages 3-4. Enter vertical bars | to separate text if desired. This is how the message will appear in the scoreboard header on-air. Refer to **Figure 3**.
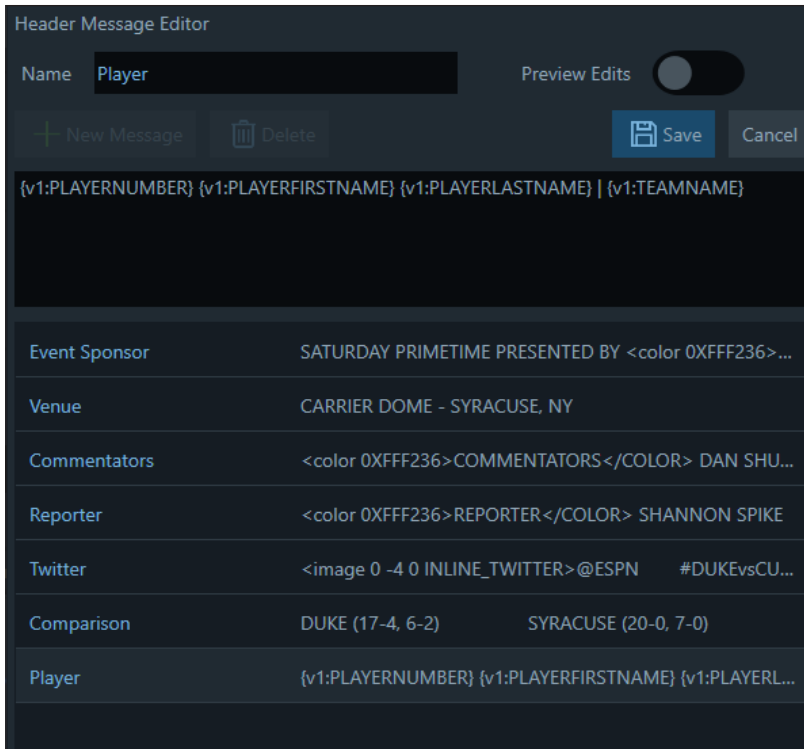
Figure 3: Enter Header Message Stat Tags

5. Click **Save**. The new header message will appear in the **Header Message** drop-down list as shown in **Figure 1**.

6. Select the header message to display on the scoreboard or go-to-break. Refer to **Figure 4**.

Figure 4: Header Message Added to Scoreboard

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Header Message Stat Tags

Stat Tag	Description
Visitor Team Stat Tags	
{v:TEAMNAME}	Visitor team name
{v:TEAMSHORTNAME}	Shortened visitor team name
{v:TEAMABBREVIATION}	Abbreviated visitor team name
{v:TEAMSCHOOL}	Visitor team school
{v:TEAMMASCOT}	Visitor team mascot
{v:TEAMRANK}	Visitor team ranking
{v:TEAMRECORD}	Visitor team record
{v:TEAMCOLOR}	Primary visitor team color
{v:TEAMCOLOR2}	Second visitor team color
{v:TEAMCOLOR3}	Third visitor team color
{v:TEAMCOLOR4}	Fourth visitor team color
{v:TEAMCOLOR5}	Fifth visitor team color
{v:TEAMLOGO}	Visitor team logo
Home Team Stat Tags	
{h:TEAMNAME}	Home team name
{h:TEAMSHORTNAME}	Shortened home team name
{h:TEAMABBREVIATION}	Abbreviated home team name
{h:TEAMSCHOOL}	Home team school
{h:TEAMMASCOT}	Home team mascot
{h:TEAMRANK}	Home team ranking
{h:TEAMRECORD}	Home team record
{h:TEAMCOLOR}	Primary home team color
{h:TEAMCOLOR2}	Second home team color
{h:TEAMCOLOR3}	Third home team color
{h:TEAMCOLOR4}	Fourth home team color
{h:TEAMCOLOR5}	Fifth home team color
{h:TEAMLOGO}	Home team logo

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Player Stat Tags

Note: The examples are for the home team player #7; use **v#** for a visitor team player.

{h7:POS}	Player position
{h7:P#}	Player number
{h7:PLAYERNUMBER}	Player number
{h7:PLAYERCODE}	Player number or other code if no number is available
{h7:FULLNAME}	Player full name from the user-modified Full Name field
{h7:PLAYERNAME}	Player full name
{h7:PLAYERFIRSTNAME}	Player first name
{h7:PLAYERLASTNAME}	Player last name
{h7:TEAMNAME}	Player's team name
{h7:TEAMSHORTNAME}	Player's shortened team name
{h7:TEAMABBREVIATION}	Player's abbreviated team name
{h7:TEAMSCHOOL}	Player's team school
{h7:TEAMMASCOT}	Player's team mascot
{h7:TEAMRANK}	Player's team rank
{h7:TEAMRECORD}	Player's team record
{h7:TEAMCOLOR}	Player's primary team color
{h7:TEAMCOLOR2}	Player's second team color
{h7:TEAMCOLOR3}	Player's third team color
{h7:TEAMCOLOR4}	Player's fourth team color
{h7:TEAMCOLOR5}	Player's fifth team color
{h7:TEAMLOGO}	Player's team logo