Legislative Control System Commissioning Guide

Version 2.1

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David Ross
CEO, Ross Video
dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

Legislative Control System Commissioning Guide

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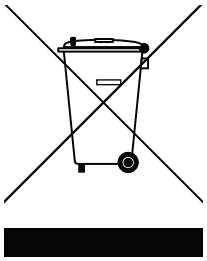
Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

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Contents

Introduction

This chapter contains the following sections:

Overview

This commissioning guide is intended to help experienced systems integrators plan and deploy DashBoard Legislative Control Systems (LCS).

This guide describes the entire process, and includes detailed procedures for commissioning the LCS.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and submenus that must be followed to reach a particular command.

Interface Elements

Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example:

In the **Media Manager Client**, tap **Channel 1** in the **Channels** section.

Touch-Screen Support

This guide assumes you are using a touch-screen. The guide includes instructions to tap user interface elements. If you are using a mouse instead of a touch screen, click the mouse instead of tapping.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the **File Name** box, enter `Channel01.property`.

Referenced Guides

Italic text is used to identify the titles of referenced guides, manuals, or documents. For example:

DashBoard Server and User Rights Management User's Guide

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads "**Server** > **Save As**," you would tap the **Server** menu and then tap **Save As**.

Important Instructions

Star icons are used to identify important instructions or features. For example:

✶ Contact your I.T. Department if you experience communication issues with DashBoard and are running anti-virus software.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Technical Support:** (+1) 613-652-4886
- **After Hours Emergency:** (+1) 613-349-0006
- **E-mail:** techsupport@rossvideo.com
- **Website:** http://www.rossvideo.com

System Overview

The Legislative Control System (LCS) integrates several technologies to deliver a system that enables you to produce high-quality video of legislative proceedings. It controls robotic video cameras and provides an easy-to-use interface for switching video, including graphics.

The LCS is configured and operated from the LCS panel, which is a DashBoard software application that is customized for your legislature. An additional camera panel enables you to create shots and control cameras directly.

Legislative Control System Architecture

Every Legislative Control System includes some or all of the following:

- One DashBoard LCS all-in-one computer (including monitor, keyboard and mouse), with the following Ross Video software installed:
  - DashBoard Control System
  - An LCS panel (DashBoard panel application)
  - MasterPanel robotic control application
  - A camera control panel (DashBoard panel application)
- One additional touch-screen monitor, for displaying the camera control panel.
- One Carbonite Switcher, consisting of a control panel and frame
- One XPression Studio system, for graphics creation, real-time rendering, and playout.
- One Ross Video joystick panel.
- Two to ten robotic camera units (CamBot and/or Panasonic and/or Sony).
- One SDI to DVI-D converter (AJA HDP2).
- A supported delegate microphone system (optional).
- A network control switch

Note: The preceding list includes some equipment not provided by Ross Video.

Figure 2.1 shows the architecture of an LCS system:

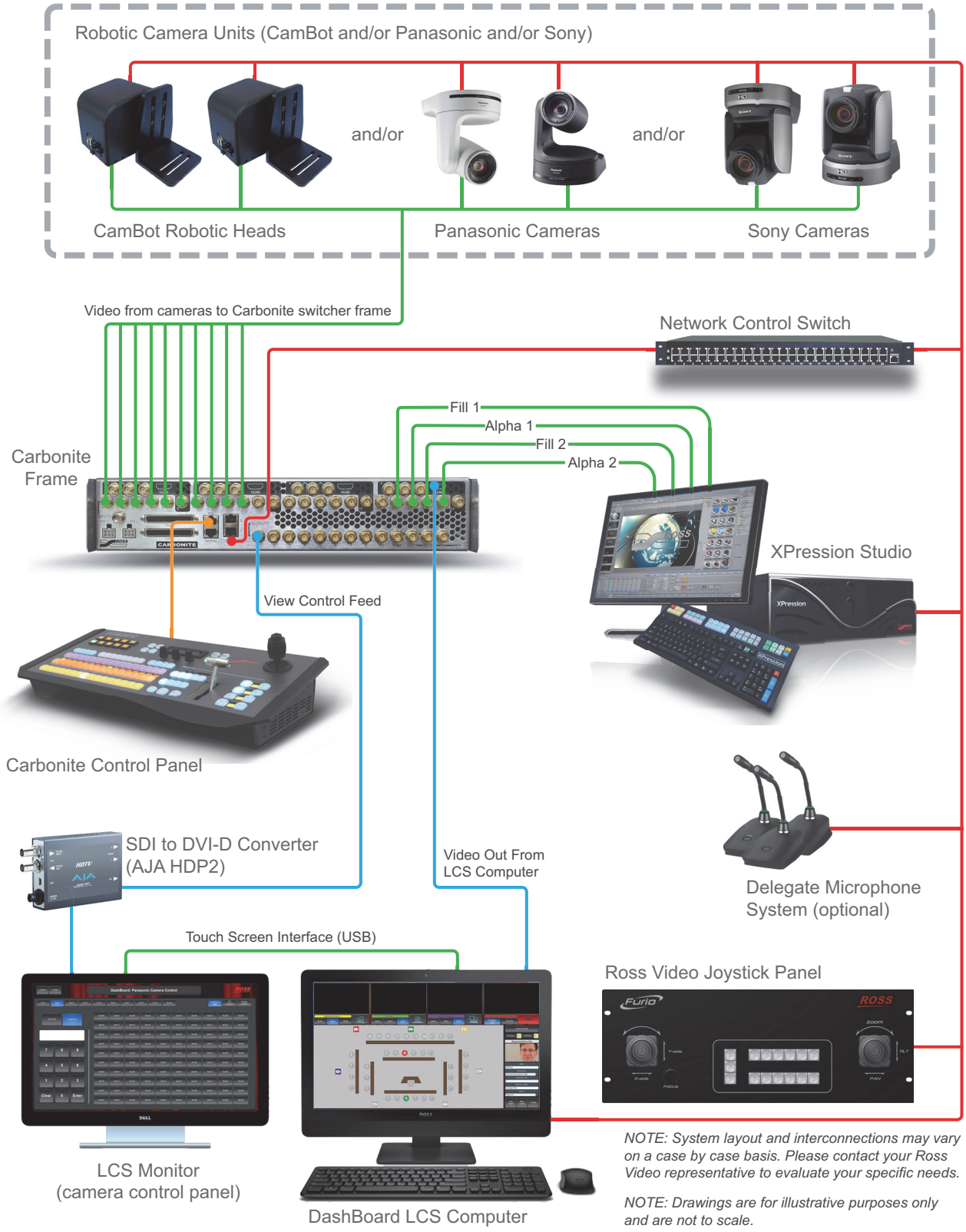


***Figure 2.1** LCS System Architecture*

Pre-Commissioning

This chapter describes commissioning tasks that can be done off-site in advance of on-site commissioning. Pre-commissioning tasks include information gathering and off-site pre-configuration of the LCS panel.

IMPORTANT: Some procedures in this chapter depend on others. Perform them in the order indicated.

Pre-commissioning tasks described in this chapter include:

Gathering Customer Information

The key to a successful LCS implementation is proper planning. During the pre-sales cycle, information is gathered to determine customer requirements so LCS features and graphics can be adjusted or developed if needed. Then, before commissioning begins, additional information is gathered to support customization of the LCS to suit the customer's legislative chamber.

Before system commissioning begins, the following information must be gathered:

- Name of the legislative body.
- Nation in which the legislative body is located.
- State, province, region, or territory in which the legislative body is located (if applicable).
- Names of all political parties represented.
- Which layout view the LCS panel will use (Seat Layout view or Mark Layout view).
- Information about what graphics are required and about who will produce them. The LCS includes a standard XPression graphics package for bringing representative info on and off air in a lower-third graphic. The graphics can be modified. Additional graphics can be created. Depending on customer requirements and project complexity, an additional DashBoard panel may be required to interact with the graphics package.

  Note: XPression graphics for use with the LCS must be created in a particular way to work properly. For more information, see "**Creating XPression Graphics for the LCS**" on page 3–3.
- A background photo or diagram of the legislative chamber, showing the view from above. The image must be either .png or .jpg format. DashBoard automatically resizes images to fit, but to avoid distortion it's important to maintain the correct ratio of height to width:
  - The **Mark Layout Background** image area is **1611 pixels wide by 707 pixels high**.
  - The **Seat Layout Background** image area is **1433 pixels wide by 1067 pixels high**.
- A diagram of the legislative chamber showing the position of all marks. Create a list that maps representatives to marks. Number the marks starting at 1. Print copies of the diagram and representatives list for reference during pre-commissioning and commissioning.

- Information about each camera:
  - Position in the legislative chamber
  - Type of camera (brand/model)
  - Type of lens (to determine effective range)
  - Effective range of motion (to determine coverage)
- Data about each representative:
  - First Name and Last Name
  - District ID (if applicable)
  - District Name (if applicable)
  - Party (if applicable)
  - Portfolio(s) (if applicable)
- Up to two photos for each representative. The photos are shown within the LCS panel but not on-air.

  The representative **Image** photo appears in the **Representative Info** area. Image photos are required for all LCS panels.

  The **Head Shot** photo appears as an icon to indicate the representative's position in the legislative chamber. Head Shot photos are required for all LCS panels that use the **Seat Layout** view, and are optional for LCS panels that use the **Mark Layout** view.

  The photos must be either .png or .jpg format. DashBoard automatically resizes photos to fit, but to avoid distortion it's important to maintain the correct ratio of height to width:
  - For LCS panels that use the **Mark Layout** view, the **Image** photo area is **155 pixels wide by 284 pixels high**.
  - For LCS panels that use the **Seat Layout** view, the **Image** photo area is **100 pixels wide by 452 pixels high**.
  - For all LCS panels, the **Head Shot** photo area is **70 pixels wide by 85 pixels high**.

Installing DashBoard and the LCS Panel for Pre-Configuration

You can pre-configure many properties of the LCS panel on your own computer in advance, and then simply transfer the panel data to the customer's DashBoard LCS computer during on-site commissioning. Before pre-configuring the LCS panel, you must install DashBoard and the LCS panel on a computer that meets the DashBoard system requirements.

To install DashBoard:

1. Download DashBoard software and the DashBoard User Guide from the Ross Video website: http://www.rossvideo.com/control-systems/dashboard/index.html
2. Consult the DashBoard User Guide to confirm that your computer meets the system requirements for installing DashBoard.
3. Follow the installation instructions in the DashBoard User Guide to install DashBoard.

To install the LCS Panel:

1. Extract the **LCS** folder from the zip file, and place it in the **C:** directory.
2. Start DashBoard.
3. From the **Views** menu, tap **File Navigator**.
4. On the **File Navigator** tab, tap the green + symbol.

   The **Browse for Folder** dialog appears.
5. Navigate to the **LCS** folder located in **Computer > OS (C)**, and then tap **OK**.
6. In the **File Navigator** tree, expand the **LCS** folder to show the **LCS.grid** file.
7. To open the LCS panel anytime, double-tap the **LCS.grid** file.

The LCS panel will always be available from the DashBoard File Navigator.

Creating XPression Graphics for the LCS

The LCS includes a basic XPression graphics project for displaying representative data in a lower third. You can alter the graphics project to suit your needs.

This section describes some aspects of the XPression project, and how XPression graphics must be organized to work with the LCS panel.

The XPression project includes two scenes: **Preview** and **Program**. The **Preview** scene appears in the LCS panel to show the operator how the preview shot looks with the graphic. The **Progra**m scene is taken to air. Both scenes include representative data streamed from the LCS panel to XPression through Datalinq.

If the graphics mode of the LCS panel is set to **Auto**, the graphic appears every time a shot is taken to air. The transition occurs as follows:

1. The operator taps the **TAKE** button to start the transition.
2. The graphic transitions out.
3. The new shot is taken to air.
4. The updated graphic transitions in.

You can modify the graphics in XPression, or create your own. To work with the LCS panel, the XPression project must be organized as follows:

- The **Program** scene must use **TakeID 02**.
- The **Preview** scene must use **TakeID 03**.
- The **Program** scene (**TakeID 02**) must be directed to **output channel 1**.
- The **Preview** scene (**TakeID 03**) must be directed to **output channel 2**.
- There must be a pause between the in and out animations.

  By default, this pause is 30 frames. If you set a shorter pause in XPression, the pause will still be 30 frames because that is how long the LCS panel pauses between animations.

Note: If you want to create complex animations or multiple animations, you can create a separate DashBoard panel to control them. For more information, contact your Ross Video consultant.

Adding Images to the LCS

IMPORTANT: Do not use high resolutions images! Convert them to lower resolutions, as described in this section.

Each LCS panel uses the following types of images:

- **Background image** — a drawing or photo of the legislative chamber. The view should be from above.

  The background image must be either .png or .jpg format. DashBoard automatically resizes images to fit, but to avoid distortion it's important to maintain the correct ratio of height to width.

  You need only one background image. Each LCS panel uses either **Seat Layout** view or **Mark Layout** view, and the images areas are as follows:

  › The **Mark Layout Background** image area is **1611 pixels wide by 707 pixels high**.

  › The **Seat Layout Background** image area is **1433 pixels wide by 1067 pixels high**.

- **Representative Image** photos — one photo per representative.

  The representative **Image** photo must be either .png or .jpg format. DashBoard automatically resizes photos to fit, but to avoid distortion it's important to maintain the correct ratio of height to width:

  › For LCS panels that use the **Mark Layout** view, the **Image** photo area is **155 pixels wide by 284 pixels high**.

› For LCS panels that use the **Seat Layout** view, the **Image** photo area is **100 pixels wide by 452 pixels high**.

- **Head Shot photos** — one small photo per representative (only for LCS panels that use **Seat Layout** view)

  The **Head Shot** photo appears as an icon to indicate the representative's position in the legislative chamber.

  The photos must be either .png or .jpg format. DashBoard automatically resizes photos to fit, but to avoid distortion it's important to maintain the correct ratio of height to width.

  The **Head Shot** photo area is **70 pixels wide by 85 pixels high**.

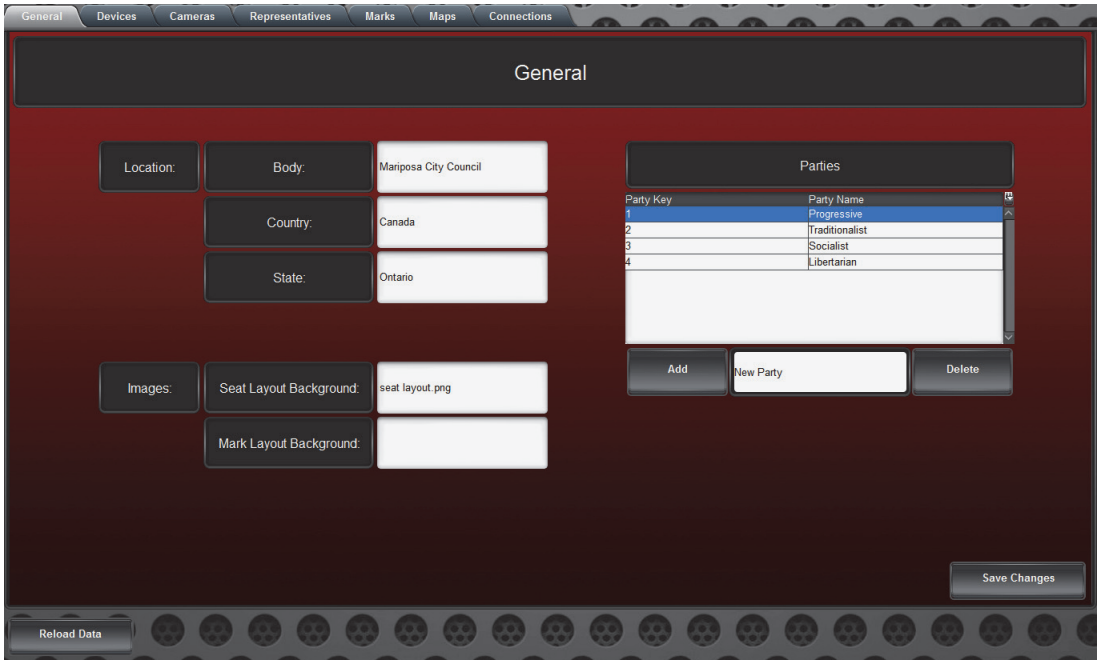
To store images:

- On the DashBoard LCS computer, save the images in the **C:\LCS\Images\Photos** folder.

Specifying General Settings

1. Start dashboard and open the LCS panel.
2. In the LCS panel, tap the **Config** button.

   The **Legislative Control System Configuration** window appears.
3. Tap the **General** tab.



4. In the **Location** area, specify data about your legislature:
   - **Body** — Type the name of your legislative body
   - **Country** — Type the name of your nation.
   - **State** — Type the name of the state, province, region, or territory where the legislature is located.
5. In the **Images** area, specify the filename of the background image for the LCS panel. Use the box that corresponds to the type of layout your LCS panel uses.
6. In the **Parties** area, define political parties or groups (if any):
   a. In the blank box at the bottom of the **Parties** area, type the name of the party you want to add.
   b. Tap **Add**.

      The new party appears on the list of parties.
   c. If you want to delete a party, tap it in the list and then tap **Delete**.

7. Tap the **Save Changes** button.

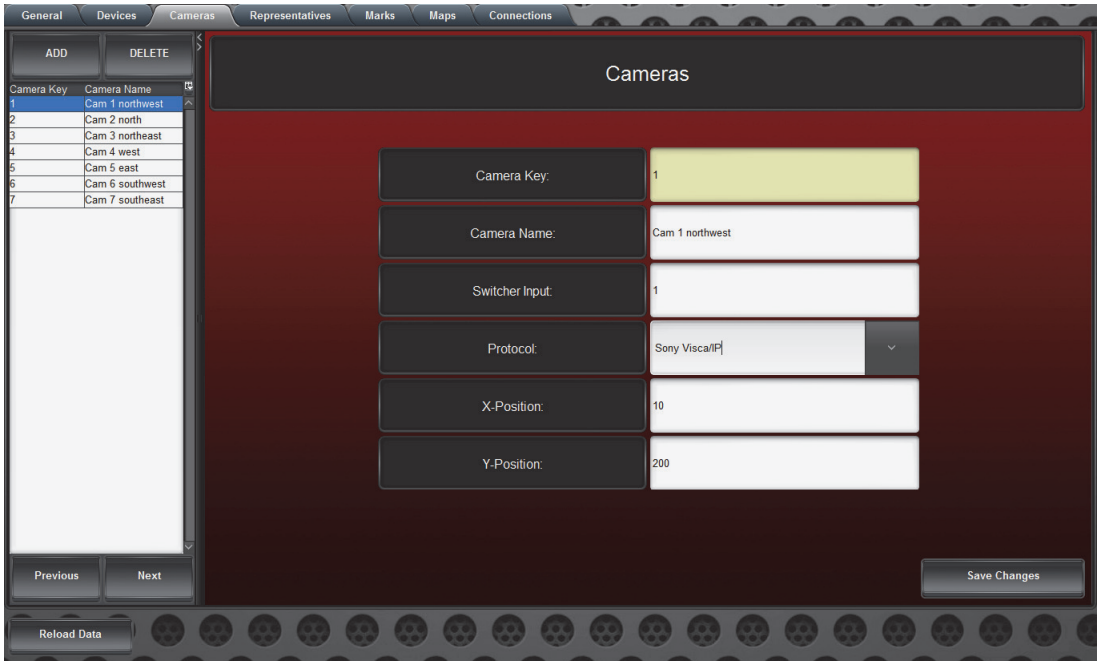
Adding Cameras

Before you begin, number each camera on your diagram of the legislative chamber, starting at 1. Camera numbers are used during configuration and operation of the system.

In this procedure, you add cameras to the LCS panel. Later, on-site, you will configure the cameras and create shots on a separate camera control panel.

To add cameras to the LCS panel:

1. In the LCS panel, tap the **Cameras** tab.



2. Add a camera to the list, and specify the camera's properties:
   a. Tap the **ADD** button.

      A new camera entry appears in the list.

   b. In the **Camera Name** box, type a name for the camera.

   c. In the **Switcher Input** box, specify the switcher crosspoint associated with the camera.

      Tip: For easy reference, use the camera numbers as switcher crosspoint numbers; the switcher inputs also start at 1.

   d. In the **Protocol** list, select the camera type.

   e. If your LCS panel uses the **Mark Layout** view, in the **X-Position** and **Y-Position** boxes, specify the X (horizontal) and Y (vertical) position of the camera, in pixels.

      Tip: An X value of 0 places the camera on the far left side. A Y value of 0 places the camera at the top.

3. Tap the **Save Changes** button.

4. If your LCS panel uses the Mark Layout view, tap the **Mark Layout** button and find the new camera on the layout. If the camera position is not correct, tap the **Config** button, go to the **Cameras** tab, adjust the **X-Position** and **Y-Position** values, tap **Save Changes**, and then check again.

5. Repeat **Steps 2 to 4** to add all cameras.

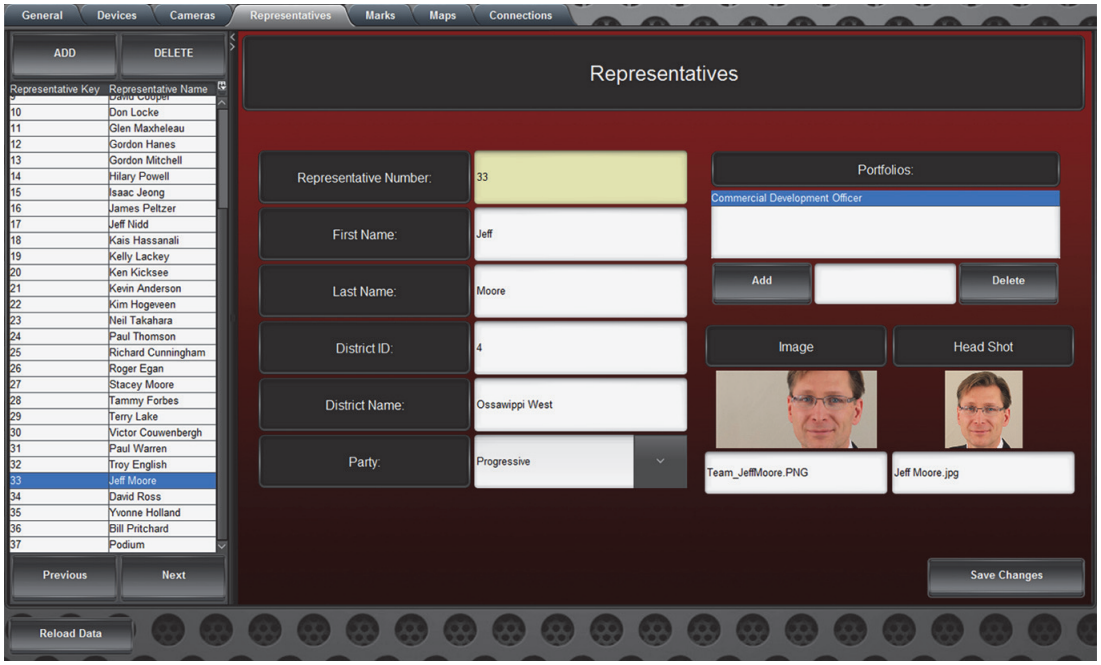
Creating Representatives

When you create representatives, consult the list you created that maps representatives to marks. Create the representatives in the same order, starting from number 1.

To create representatives:

1. In the LCS panel, tap the **Config** button.
2. On the **Representatives** tab, tap the **ADD** button.

   A new representative entry is added to the bottom of the list.



3. Specify the following data as required:
   - **First Name** — Specify the first name of the representative.

     This name appears in the Seat Layout and Mark Layout views, and in on-air graphics.
   - **Last Name** — Specify the last name of the representative.

     This name appears in the Seat Layout and Mark Layout views, and in on-air graphics.
   - **District ID** — Specify the district identifier (if any) for the representative.

     This ID appears in the Seat Layout and Mark Layout views, and in on-air graphics.
   - **District Name** — Specify the district name for the representative.

     This name appears in the Seat Layout and Mark Layout views, and in on-air graphics.
   - **Party** — Select a party for the representative.

     Tip: If the representative's party is not listed, you must add it. For more information, see "**Specifying General Settings**" on page 3–4.
4. In the **Portfolios** area, edit the representative's portfolio(s) as required:
   - **To add a portfolio**, type the name of the portfolio in the box at the bottom of the **Portfolios** area, and then tap the **Add** button.
   - **To rename a portfolio**, double-tap the portfolio name in the list, and then type the new portfolio name.
   - **To delete a portfolio**, tap the portfolio in the list, and then tap the **Delete** button.
5. In the **Image** box, type the file name of the representative image photo.

6. If there is a head shot photo for the representative, in the **Head Shot** box, type the file name of the head shot photo.

   Head shot photos are required for LCS panels that use the **Seat Layout** view, and optional for LCS panels that use the **Mark Layout** view.

7. Tap the **Save Changes** button.

8. Repeat Steps 2 to 7 for each representative.

Mapping Marks to Representatives

Marks represent shot target positions in the legislative chamber. Each mark definition includes a list of camera shots designed to shoot the mark position. Mapping marks to representatives ensures that the correct representative data is taken to air when a shot is recalled.

Tip: An easy way to help keep track of mappings, marks, and representatives is to create mappings in the same order as you created representatives, so the map key numbers, mark numbers, and representative numbers all correspond.

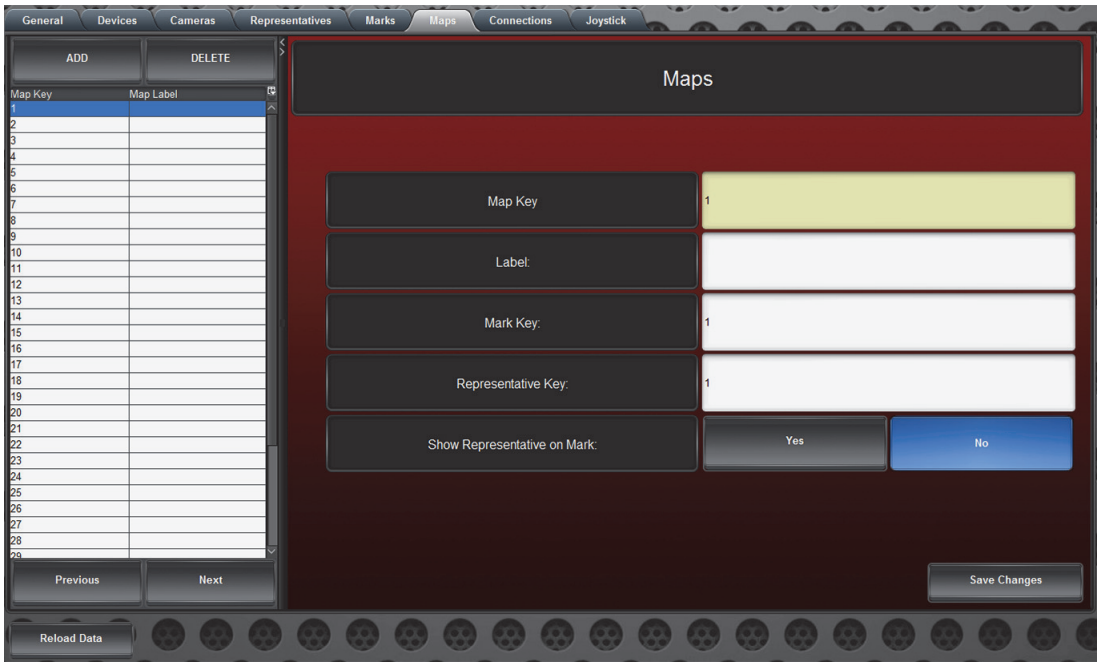
Note: Every mark must be associated with a representative, even if the mark position is not a representative's seat. If your LCS panel includes marks that are not associated with real people, create "non-human" representatives for them. Note that data you include about non-human representatives may appear on-air as part of the graphics package.

To create mappings between marks and representatives:

1. In the LCS panel, tap the **Config** button.

2. On the **Maps** tab, tap the **ADD** button.

   A new mapping entry is added to the bottom of the list.



3. In the **Mark Key** box, type the number of the mark you want to map to a representative.

   Tip: We strongly recommend that you use the same numbering order for marks, representatives, and mappings. For example, for **Map Key 1**, you would specify **Mark Key 1** and **Representative Key 1**.

4. In the **Representative Key** box, type the number of the representative you want to match to the mark you specified in Step 3.

5. Beside **Show Representative on Mark**, tap either **Yes** to show the mark as the representative's photo icon, or **No** to show the mark as a star icon.

   Note: If your LCS panel uses the **Seat Layout** view, the representative's photo icon is always shown.

6. Tap the **Save Changes** button.

7. Repeat Steps 2 to 6 for each representative.

Creating Marks

Marks represent shot target positions in the legislative chamber. Marks may represent the positions of representative seats, podiums, the speaker's chair, areas of the public gallery, etc.

In the LCS panel, options for showing marks are as follows:

- In **Mark Layout** view, marks can be shown as numbered stars, or as photo icons of the representatives associated with them.
- In **Seat Layout** view, marks are shown as photo icons of the representatives associated with them.

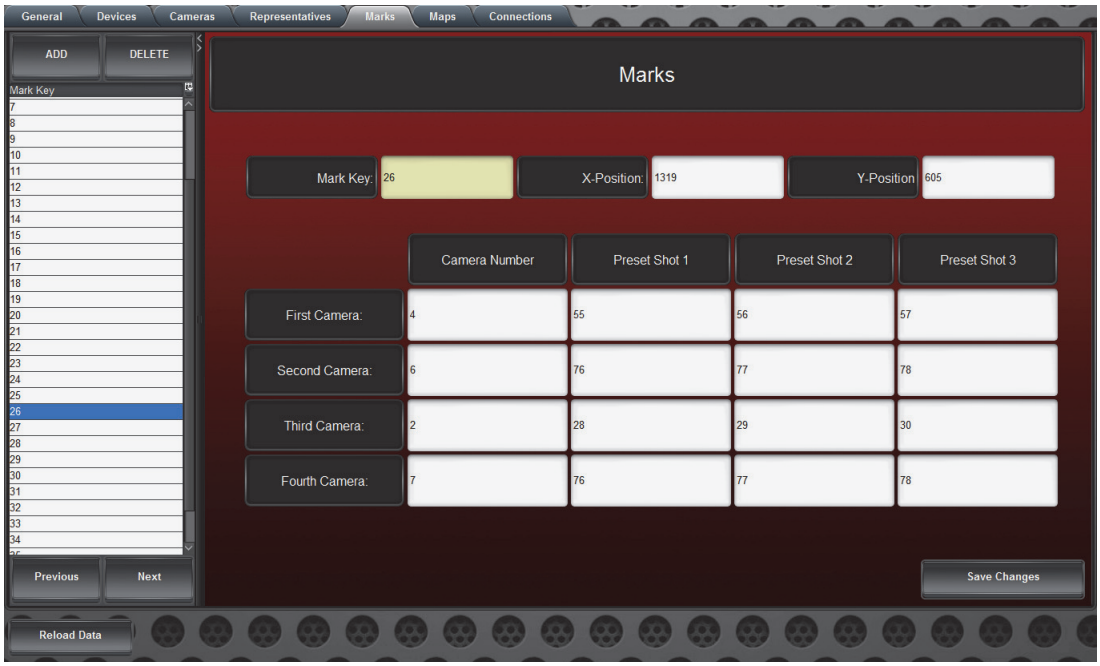
Tip: An easy way to help keep track of mappings, marks, and representatives is to create marks in the same order as you created representatives and mappings, so the mark numbers and representative numbers correspond.

To create a mark:

1. In the LCS panel, tap the **Config** button.

2. On the **Marks** tab, tap the **ADD** button.

   A new mark entry is added to the bottom of the list.



3. In the **X-Position** box, specify the horizontal position of mark, in pixels.

   Tip: An **X** value of **0** places the mark on the far left side.

4. In the **Y-Position** box, specify the vertical position of the mark, in pixels.

   Tip: A **Y** value of **0** places the mark at the top.

5. Tap the **Save Changes** button.

6. Check that the mark icon or representative icon appears in the correct position in the layout view:
   - If your LCS panel uses the **Mark Layout** view, tap the **Mark Layout** button and find the new mark on the layout. If the mark position is not correct, tap the **Config** button, go to the **Marks** tab, adjust the **X-Position** and **Y-Position** values, tap **Save Changes**, and then check again.
   - If your LCS panel uses the **Seat Layout** view, tap the **Seat Layout** button and find the new mark on the layout. If the mark position is not correct, tap the **Config** button, go to the **Marks** tab, adjust the **X-Position** and **Y-Position** values, tap **Save Changes**, and then check again.
7. Repeat Steps 2 to 6 for each representative.

Copying LCS Panel Files for Transfer to the Customer LCS Panel

When you are finished pre-configuring the LCS panel, copy the LCS panel files so you can transfer them to the customer's LCS computer on-site.

Note: This procedure is not required if you are performing the pre-commissioning tasks on the LCS computer being commissioned.

To copy LCS panel data:

1. Close DashBoard.
2. Navigate to **Computer > OS (C)**.
3. Copy the **LCS** folder to a USB stick.
4. When the transfer is complete, remove the USB stick.

On-Site Commissioning

This chapter describes the tasks you must do on-site to set up a Legislative Control System (LCS).

IMPORTANT: Before you start performing on-site commissioning tasks, you must complete the pre-commissioning tasks as described in "**Pre-Commissioning**" on page 3–1.

IMPORTANT: Some procedures in this chapter depend on others. Perform them in the order indicated.

On-Site commissioning tasks described in this chapter include:

This chapter also describes how to upgrade LCS software while preserving data specific to your LCS panel(s). For more information, see "**Upgrading LCS Panel Software**" on page 4–9.

Setting up Equipment

Set up the following equipment:

- Carbonite switcher (control panel and frame)
- XPression Studio graphics system
- DashBoard LCS all-in-one computer, including keyboard and mouse.
- Touch-screen monitor (for camera control panel)
- Ross Video joystick panel
- Robotic camera units (CamBot and/or Panasonic and/or Sony)
- Network switch
- SDI to DVI-D converter AJA HA5
- Delegate microphone system (if applicable)

Installing and Configuring MasterPanel Software

MasterPanel is an application that controls CamBot robotic heads and interprets data from the Ross Video joystick panel. It is required even if your system does not include CamBots. Although LCS users do not interact with the MasterPanel user interface, MasterPanel must be running whenever the LCS is in use.

Typically, MasterPanel is pre-installed on the DashBoard LCS computer. In some cases, Ross Video may instruct you to upgrade to a newer version.

To install or upgrade MasterPanel:

1. On the DashBoard LCS computer, navigate to the **C:** directory.
2. If the **C:** directory contains a **Cambotics** folder, rename the folder so it can act as a backup.

   For example, you might rename the folder **Cambotics_backup**.
3. In the **C:** directory, create a new folder named **Cambotics**.
4. Extract the contents of the **masterpanel** zip file into the **C:\Cambotics** folder.
5. If you are adding the LCS to an existing CamBot system and you want to retain data such as camera IP addresses, camera names, etc, do the following:
   a. Navigate to the **Cambotics backup** folder you created in **Step 2**.
   b. Select all files that end in a **.cam** extension, and copy them.
   c. Paste the copied files into the **C:\Cambotics** folder.

      When prompted about existing files with the same names, tap the **Copy and Replace** option.

To configure MasterPanel:

1. On the DashBoard LCS computer, navigate to the **C:\Cambotics** folder.
2. If your system includes CamBot robotic heads, edit the **devices.cam** file, as follows:
   a. Open the **devices.cam** file in a text editor, such as Notepad.
   b. In the list of cameras at the end of the file, specify the **camera number**, **IP address**, **name**, and **shot capacity** for each camera in your system.

      Tip: If you are adding the LCS to an existing CamBot system, the IP addresses and camera names may already be defined.

      Tip: Each line contains several pieces of data, separated by spaces. The line format is described at the start of the file.

      Note: The maximum number of cameras supported by the LCS is ten. The maximum shot capacity for CamBot heads is **400**.

      Note: If your system includes CamBots plus Sony and/or Panasonic robotic cameras, you must ensure that each camera has a unique camera number. For example, you might number Sony cameras as 1, 2, 4, and 7, and number CamBot cameras as 3, 5, 6, and 8. For CamBots, camera numbers are defined in the **devices.cam** file. For Sony and Panasonic cameras, they are defined in the camera control panels. Steps for configuring Sony and Panasonic cameras appear later in this guide.

      Note: If you add cameras or update camera IP addresses in the **devices.cam** file, you must also restart the CamBot Camera Control panel, or tap the **Refresh Master Panel Connection** button from within the CamBot Camera Control panel.

      Refreshes the connection to the MasterPanel application. Enables you to establish a connection to cameras that have been added or that have had their IP addresses changed in the MasterPanel devices.cam file.
   c. Save and close the **devices.cam** file.

3. Edit the **masterpanel1.exe.config** file, as follows:
   a. Open the **masterpanel1.exe** file in a text editor, such as Notepad.
   b. Find the section of the file that resembles the following:

      <CambotControlPanel

      MaxDevices="8"

      DeviceButtonsPerRow="8"

      MaxShots="96"

      MaxVias="16"

      EnableShotReflow="true"

      EnableCameraWindowButtonBar="true"

      EnableNonModalJoysticksWindow="true"

      EnableMainWindowNotAlwaysOnTop="false"

      MouseWheelTimeIncrement="15"

   c. Set the **MaxDevices** value to **10**.
   d. Set the **DeviceButtonsPer Row** value to **10**.
   e. Set the **MaxShots** value to the **shot capacity** you defined in the **devices.cam** file (maximum400).
   f. If you do not want the **CamBot Control Panel** window to always be on top of all other windows, set the **EnableMainWindowNotAlwaysOnTop** property to **true**.

      Tip: We recommend setting this property to **true** to maximize visibility of the LCS panel and camera control panel(s).
   g. Save and close the **masterpanel1.exe.config** file.
4. Launch MasterPanel (**C:\Cambotics\masterpanel1.exe**).

   Tip: To make the MasterPanel application more readily available, create a shortcut to the application, and place the shortcut on your desktop.
5. In the **CamBot Control Panel** window, tap the **Configure** button.
6. In the **Configuration** window, tap the **Engineering Screen** button.
7. In the **password** box, type the password, **foo**.
8. Tap **OK**
9. In the **Engineering Configuration** window, tap the **automation cam-switch following** button to turn it **off**.
10. Tap the s**ave changes and exit** button.
11. In the **Configuration** window, tap the **remote** button until it reads "**remote: Ross Video**".
12. Tap the s**ave config settings** button.
13. Tap the **exit** button.
14. Minimize the **CamBot Control Panel** window, but do not close it.

Preparing the LCS Panel

By default, the LCS panel files are pre-installed on your LCS computer.

If you pre-configured the LCS panel on a different computer and saved the LCS panel files on a USB stick, you must transfer them to the LCS computer.

This section contains instructions for transferring saved LCS panel files, and instructions for adding the LCS panel to the DashBoard File Navigator for easy access.

To transfer saved LCS panel files to the LCS computer:

1. On the LCS computer, insert the USB stick that contains the saved LCS panel files.
2. Navigate to **Computer > OS (C)**, and then tap **OK**.
3. Rename the existing **LCS** folder to make it a backup of the LCS panel as originally installed.

   For example, you might rename the folder "**LCS_backup**".
4. On the USB stick, navigate to the folder that contains the **LCS** folder.
5. Copy the **LCS** folder from the USB stick to the **C:** folder.
6. When the transfer is complete, remove the USB stick.

To add the LCS panel to the DashBoard File Navigator:

1. On the LCS computer, start DashBoard.
2. From the **Views** menu, tap **File Navigator**.
3. On the **File Navigator** tab, tap the green + symbol.

   The **Browse for Folder** dialog appears.
4. Navigate to the **LCS** folder located in **Computer > OS (C)**, and then tap **OK**.
5. In the **File Navigator** tree, expand the **LCS** folder to show the **LCS.grid** file.
6. To open the LCS panel anytime, double-tap the **LCS.grid** file.

   The LCS panel will always be available from the DashBoard File Navigator.

Connecting Carbonite to Cameras, XPression, and the LCS

To set up Carbonite for the LCS:

1. Connect the cameras to inputs on the Carbonite frame, starting at **INPUT 1** and continuing with **INPUT 2**, **INPUT 3**, and so on.

   Tip: If you already created cameras in the LCS panel and specified crosspoints for them, connect the actual cameras to the corresponding switcher inputs.
2. Connect XPression to **INPUTS 20** to **23** on the Carbonite frame:
   - Fill 1 — **INPUT 20**
   - Alpha 1 — **INPUT 21**
   - Fill 2 — **INPUT 22**
   - Alpha2 — **INPUT 23**
3. Connect the LCS computer **HDMI out** to **INPUT 24** on the Carbonite frame.
4. Connect the SDI **OUTPUT 01** on the Carbonite frame to the **SDI to DVI-D converter**, and then connect the converter to the secondary monitor.
5. Load the provided LCS switcher set file onto the Carbonite switcher panel.

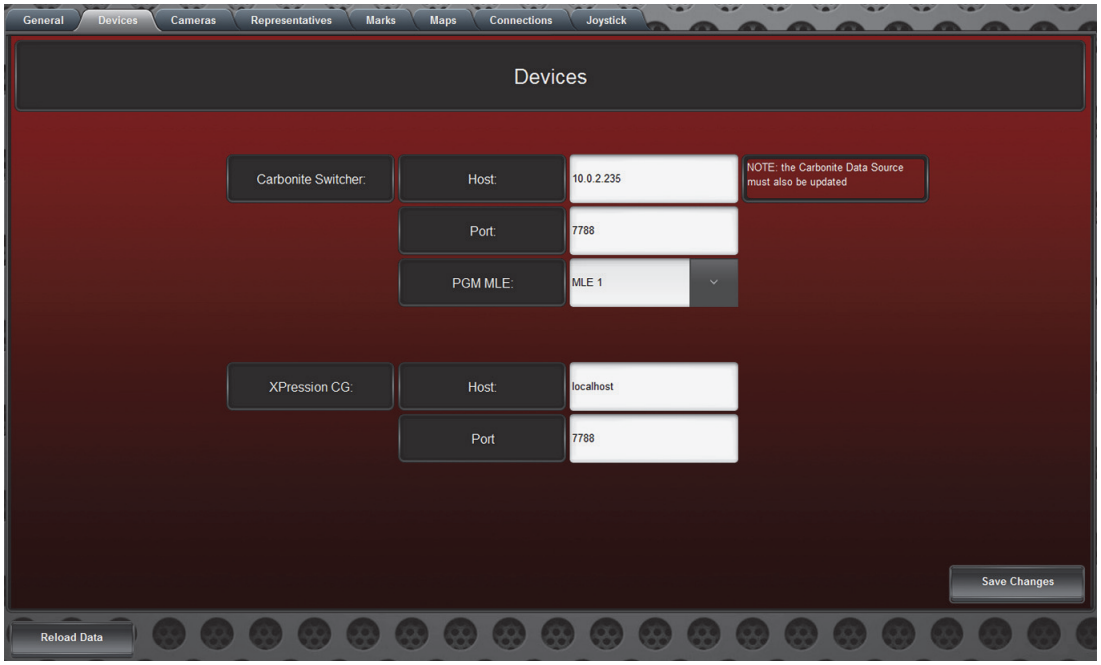
   For information about loading switcher sets, see the ***Carbonite Operation Manual (4802DR-110)***.

Setting Up Communication Between Carbonite, XPression, and the LCS

To set up device communication:

1. Start DashBoard and open the LCS panel.
2. In the LCS panel, tap the **Config** button.

   The **Legislative Control System Configuration** window appears.
3. On the **Devices** tab, specify the **Host IP** address, **Port**, and program ME (**PGM MLE**) for the **Carbonite Switcher**.



4. Specify **Host IP** address and **Port** for the **XPression CG**.
5. Tap the **Save Changes** button.

   Leave the LCS panel open for the next procedure.

Adding Carbonite as an LCS Data Source

To add Carbonite as an LCS data source:

1. In **DashBoard**, look at the **Tree View** to ensure that the Carbonite switcher appears in the tree.
2. With the LCS panel open, from DashBoard's **Edit** menu, tap **PanelBuilder Edit Mode** to enter **Edit Mode**.

   Tip: When a panel is in **Edit Mode**, grid lines are visible over the entire panel.
3. In the **Edit Mode** toolbar, tap the **Data Sources** button.

   The **Data Sources** dialog box appears.
4. In the **Data Sources** dialog box, tap the **Edit** button for a Carbonite switcher.

   The **Select Device for Context** dialog box appears.
5. Select the Carbonite switcher from the **Select a device** list.

   Tip: The switcher entry is within a frame entry, and appears as **Slot 0: Carbonite**.
6. Click **OK**.

   A **Device Type Mismatch** message appears.

7. Click **Yes**.
8. Tap the **PanelBuilder Edit Mode** button to exit **Edit Mode**.

   Leave the LCS panel open for the next procedure.

Establishing a Device Connection to the Joystick Server

The MasterPanel software includes a joystick server component. You must establish a device connection in DashBoard to enable the LCS panel to use the Ross Video joystick panel.

To Establish a Device Connection to the Joystick Server:

1. Ensure that **MasterPanel** is running (**C:\Cambotics\masterpanel1.exe**).
2. In **DashBoard**, from the **File** menu, tap **New**, and then tap **TCP/IP openGear Frame**.

   The **New TCP openGear Frame Connection** dialog box appears.
3. In the **IP Address** box, type **localhost**.
4. In the **Display Name** box, type a name for the node. For example, you might name it **JoystickServer**.
5. Tap **Finish**.

   The new node appears in the tree. Because MasterPanel is running, the node icon includes a green dot.

   Note the name of the joystick server node. You will need it for later configuration steps.

   Leave the LCS panel open for the next procedure.

Adding the Joystick Server as an LCS Panel Data Source

The joystick server appears as a node you created in the DashBoard device tree. You must add it as a data source in the LCS panel so the joystick can communicate with the LCS panel.

1. With the LCS panel open, from DashBoard's **Edit** menu, tap **PanelBuilder Edit Mode** to enter **Edit Mode**.

   Tip: When a panel is in **Edit Mode**, grid lines are visible over the entire panel.
2. In the **Edit Mode** toolbar, tap the **Data Sources** button.

   The **Data Sources** dialog box appears.
3. In the **Data Sources** dialog box, find the following **Tag** entry and click the associated **Edit** button:

   abs [id-Joystick, name=Joystick]

   The **Select Device for Context** dialog box appears.
4. In the **Select a device** list, expand the joystick server node.

   Tip: You created and named the joystick server node in a previous procedure. For more information, see "**Establishing a Device Connection to the Joystick Server**" on page 4–6.

   Note: if the node is not green, the MasterPanel application is not running. Start MasterPanel (**C:\Cambotics\masterpanel1.exe**).
5. Within the joystick server node, select **Local Joystick**, and then tap **OK**.
6. If a **Device Type Mismatch** dialog box appears, tap **Yes**.
7. In the **Data Sources** dialog box, tap **Ok**.
8. Tap the **PanelBuilder Edit Mode** button to exit **Edit Mode**.

   Leave the LCS panel open for the next procedure.

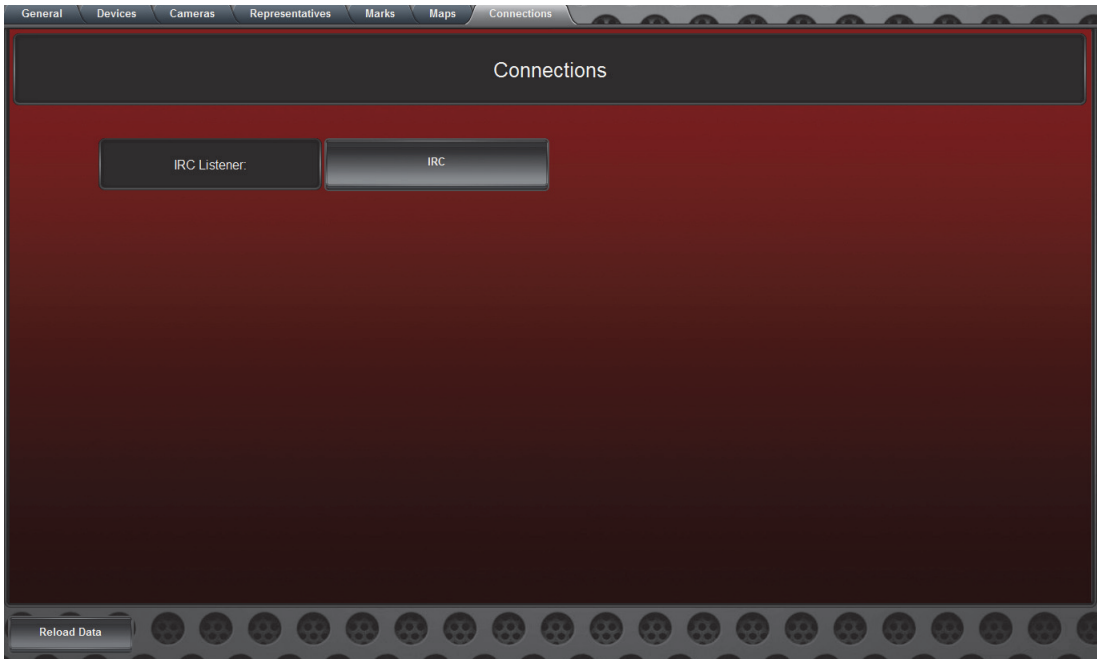
Enabling Microphone System Communication

Enable a listener to communicate with your Microphone system (if applicable).

This procedure applies only if you want your microphone system to trigger camera shot recalls.

To enable the listener:

1. In the LCS panel, tap the **Config** button.
2. The **Legislative Control System Configuration** window appears.
3. Tap the **Connections** tab.



4. If your system includes a supported microphone system, tap the button corresponding to the microphone system to enable the listener.

   Tip: Listeners are enabled when their buttons are green.

5. Close DashBoard.

Planning Shots and Assigning them to Marks

This section describes how to plan shots and how to assign shot numbers to marks in LCS configuration.

Planning Shots

An LCS implementation includes a large number of camera shots; usually several hundred. We recommend that you develop a strategy for keeping track of shots so you can easily assign them to marks in the LCS panel.

You can plan your shot numbers in advance by looking at your diagram of the legislative chamber to determine which cameras to use for each mark. If you create a worksheet listing marks, representatives, cameras, shot numbers and shot names, it becomes easy to enter the data into LCS and to use the worksheet as a shot list when creating the actual shots. Examples of typical shot names include, “sitting”, “standing”, “close”, “far”, “tight”, and “wide”.

Each camera has its own collection of shots. To assign a shot to a mark, you need to know both the camera number and shot number.

Seat Layout view enables you to preview three shots from one camera, while a shot from a second camera is on-air. Shot lists for Seat Layout have up to six shots per mark.

Mark Layout view enables you to preview three shots from each of three cameras, while a shot from a fourth camera is on-air. Shot lists for Mark Layout have up to 12 shots per mark.

Tip: Some camera systems number shots starting at 0, and others starting at 1, as follows:

- Sony shot numbers start at 1.
- Panasonic shot numbers start at 0.
- CamBot shot numbers start at 0.

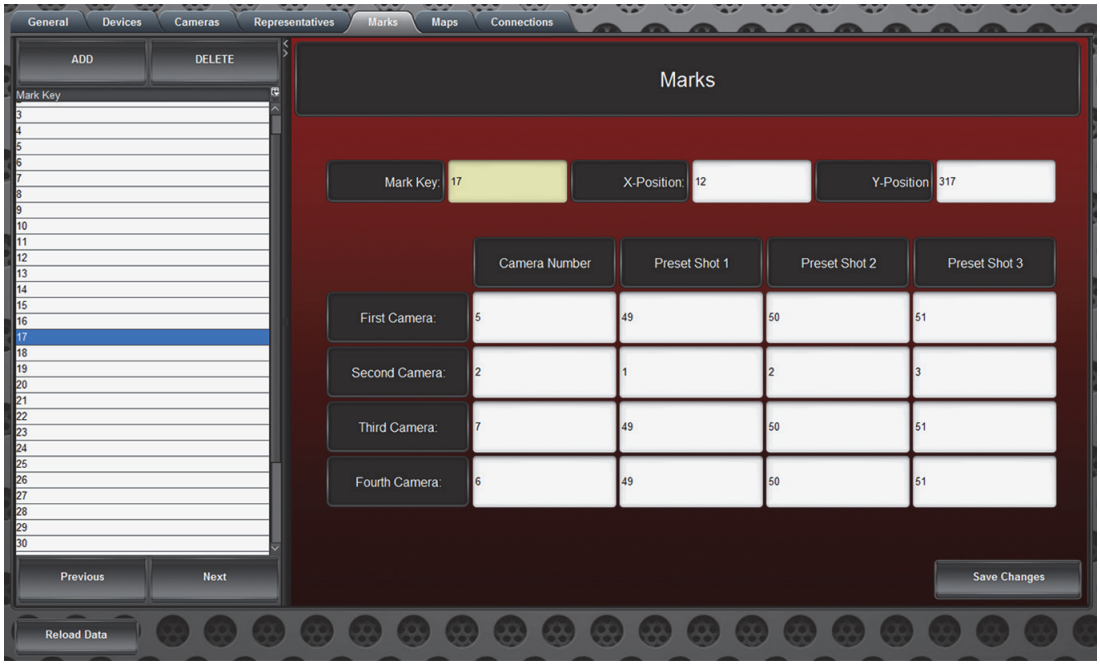
Assigning Shots to Marks

When you assign shots to marks in LCS, you are specifying which shots will be available for taking to on-air when the operator selects a mark or representative in the layout view.

To assign shots to marks:

1. Start DashBoard and open the LCS panel.
2. In the LCS panel, tap the **Config** button.

   The **Legislative Control System Configuration** window appears.
3. On the **Marks** tab, in the **Mark Key** list, tap the mark number to which you want to assign shots.



4. Specify camera numbers and shot numbers in the shot list, considering the following:
   - Each row of the shot list includes three shots from one camera.
   - The shot list is hierarchical, so the top row is the default, followed by the other rows. Within a row, shots are prioritized from **Preset Shot 1** to **Preset Shot 3**.
   - If your panel uses the **Seat Layout** view, use only the top two rows of the shot list. Only six shots per mark are available.
5. Tap **Save Changes**.

Configuring Cameras and Creating Shots in Camera Control Panels

To configure cameras and create shots, you use a camera control panel that is separate from the LCS panel. There is one camera control panel for each type of camera in your system. For example, if your system uses only Sony cameras, you use the Sony camera control panel.

For information about how to configure cameras and create shots, see the chapter corresponding to your type(s) of cameras system(s):

- "**The CamBot Control Panel**" on page 5–1
- "**The Sony Control Panel**" on page 6–1
- "**The Panasonic Control Panel**" on page 7–1

The remaining tasks in the commissioning process are described in the camera control panel chapters.

Upgrading LCS Panel Software

This section describes how to upgrade LCS panel software while preserving data specific to your LCS panel(s).

The new LCS panel software is delivered as a compressed zip archive file.

Note: If the LCS is used for multiple types of events, there are multiple sets of LCS panel files, each of which must be upgraded.

To upgrade the LCS panel:

1. On the LCS computer, create a backup copy of your current LCS installation folder (typically, **C:\LCS**).
2. Open the new **LCS zip file** to display the contents of the archive.
3. Copy the **LCS.grid** file and the **LCS.xml** file to **c:\LCS**. Agree to replace the destination files when prompted.
4. Copy the folder **\LCS\Images\Photos** to **c:\LCS\Images\Panel**. Agree to replace the destination files when prompted.

The CamBot Control Panel

The CamBot Control Panel is a DashBoard panel used to configure CamBot units and create shots. Camera control panels interact with camera systems and the LCS panel to control cameras.

This chapter contains information about the camera control interface, and how to use it to commission cameras and create shots for a Legislative Control System (LCS).

The remaining LCS commissioning tasks are as follows:

The section, "**User Interface Reference**" on page 5–3 describes the controls available in the camera control panel.

Note: Each LCS implementation includes one or more camera control panels. There is one camera control panel for each type of camera in your system (Sony, Panasonic, CamBot). You must configure all cameras in your system, using the appropriate camera control panel for each type.

IMPORTANT: The LCS does not save CamBot shots in a file. CamBot Shots are stored on the CamBot robotics heads. You can save the shots from one CamBot head or all CamBot heads in a shot list file. For more information, see the ***CamBot Control System User Guide (5100DR-503)***.

Installing the Camera Control Panel Files

The camera control panel is a DashBoard panel. DashBoard must be installed to run the camera control panel. DashBoard is available as a free download from www.rossvideo.com.

To install the camera control panel:

1. Ensure that DashBoard is installed.
2. Open the camera control panel zip file and then extract the **CamBotCamera** folder into the **C:** directory.

Launching the Camera Control Panel

Add the camera control panel to the DashBoard File Navigator, to make it readily available from DashBoard.

To add the camera control panel to DashBoard File Navigator:

1. Start DashBoard.
2. From the **Views** menu, tap **File Navigator**.
3. On the **File Navigator** tab, tap the green + symbol.

   The **Browse for Folder** dialog appears.
4. Navigate to the **CamBotCamera** folder located in **Computer > OS (C)**, and then tap **OK**.
5. In the **File Navigator** tree, expand the **CamBotCamera** folder to show the **CamBot.grid** file.
6. To open the camera control panel anytime, double-tap the **CamBot.grid** file.

   The camera control panel will always be available from the DashBoard File Navigator.

Adding the Joystick Server as a Data Source

The joystick server appears as a node you created in the DashBoard device tree. You must add it as a data source in the camera control panel so the joystick can communicate with the LCS panel.

1. With the camera control panel open, from DashBoard's **Edit** menu, tap **PanelBuilder Edit Mode** to enter **Edit Mode**.

   Tip: When a panel is in **Edit Mode**, grid lines are visible over the entire panel.

2. In the **Edit Mode** toolbar, tap the **Data Sources** button.

   The **Data Sources** dialog box appears.

3. In the **Data Sources** dialog box, find the following **Tag** entry and click the associated **Edit** button:

   abs [id-Joystick, name=Joystick]

   The **Select Device for Context** dialog box appears.

4. In the **Select a device** list, tap the joystick server node.

   Tip: You created and named the joystick server node in a previous procedure. For more information, see "**Establishing a Device Connection to the Joystick Server**" on page 4–6.

   Note: if the node is not green, the MasterPanel application is not running. Start MasterPanel (**C:\Cambotics\masterpanel1.exe**).

5. Within the joystick server node, select **Local Joystick**, and then tap **OK**.

6. If a **Device Type Mismatch** dialog box appears, tap **Yes**.

7. In the **Data Sources** dialog box, tap **Ok**.

8. Tap the **PanelBuilder Edit Mode** button to exit **Edit Mode**.

   Leave the LCS panel open for the next procedure.

Configuring Cameras

This section describes how to configure cameras.

For more detailed information about specific configuration settings, see "**Camera Configuration Window**" on page 5–4.

To configure a camera:

1. In the camera control panel, tap the **Config** button.

2. In the **Master Panel IP** box, type the IP address of the computer running the MasterPanel application.

   This box records the IP address of the computer running the MasterPanel application. For LCS applications, the software runs on the same computer as the DashBoard LCS software (IP = **localhost**).

3. Tap the **Refresh Master Panel Connection** button to ensure the connection is active.

   Tip: The MasterPanel application must be running whenever you use the LCS. MasterPanel is on the DashBoard LCS computer at **C:\Cambotics\masterpanel1.exe**.

4. If any of the cameras are mounted in an inverted position, on the **Cameras** tab, select the **Invert Horizontal Axis** and **Invert Vertical Axis** check boxes as required.

   Tip: Invert camera axes as required to make all cameras behave consistently when manipulated by any controls, including joysticks, camera controls, and LCS panels.

5. On the **Preset Names** tab, name the presets (shots) for each camera. These names will appear in the LCS panel.

   Tip: Within the **Preset Names** tab there is a tab for each camera.

6. When you are finished naming your shots, tap the **Send Camera Preset Names** button. This makes the names available to the LCS.

Creating, Storing, and Recalling Shots

An LCS implementation typically includes several hundred camera shots. Creating and storing these shots can be tedious, but the task is easy if the shots are planned in advance. This section assumes that you have a list of shots to be created for each camera, and that the shot numbers have already been assigned to marks in the LCS panel configuration interface. For more information, see "**Assigning Shots to Marks**" on page 4–8.

This section summarizes how to create, store, and recall shots.

For more detailed information about specific controls, see "**Camera Control Window**" on page 5–6.

To create and store a shot:

1. In the camera control panel, tap the **Controls** button.
2. Tap a camera button to control that camera.

   Tip: The ten camera buttons are in a row along the top of the window.
3. If you want to move the camera, you can use the Ross Video joystick panel, or the **PTZ Controls** window:
   - To use the Ross Video joystick panel:
     - **Pan** — Push the right joystick right and left.
     - **Tilt** — Push the right joystick forward and backward.
     - **Zoom** — Rotate the right joystick.
     - **Focus** — Turn the **FOCUS** knob.
   - To use the **PTZ Controls** window, tap the **PTZ Controls** button, and then adjust the following as required:
     - **Pan and Tilt** — Tap the **Positioner** button to choose between **PAN** / **TILT** sliders or the pan/tilt positioner, and then move the camera.
     - **Zoom** — Tap and drag the **ZOOM** slider handle to adjust the zoom.
     - **Focus** — Tap and drag the **FOCUS** slider handle to adjust the focus.
     - **Iris** — The LCS does not control iris on CamBot heads.
4. Tap the **Store/Recall Shots** button.
5. Tap the **Shot** button for the shot number you want to store.

   Tip: If you want to store a shot higher than 99, use the Shot Selection keypad to specify the shot number, instead of tapping a **Shot** button.

   IMPORTANT: The LCS does not save CamBot shots in a file. CamBot Shots are stored on the CamBot robotics heads. You can save the shots from one CamBot head or all CamBot heads in a shot list file. For more information, see the ***CamBot Control System User Guide (5100DR-503)***.
6. Continue creating and storing shots until all required shots exist for all cameras in your system.

   Note: If your LCS setup includes multiple types of cameras (i.e. Sony and CamBot), you must use the corresponding camera control panel to configure each type of camera, and to create shots for them. For more information, see the chapter corresponding to the camera type(s).

User Interface Reference

This section describes the controls available in the CamBot camera control panel.

The camera control panel consists of two interfaces:

- **Camera Configuration (Config) Window** — Enables you to configure camera settings such as camera names, IP addresses, and preset (shot) names. For more information, see "**Camera Configuration Window**" on page 5–4.
- **Camera Control (Controls) Window** — Enables you to operate cameras. You can move cameras, and store and recall shots. For more information, see "**Camera Control Window**" on page 5–6.

Camera Configuration Window

The camera configuration window enables you to configure camera settings such as camera names, IP addresses, and preset (shot) names.

To access the camera configuration window:

- Tap the **Config** button.

The **Config** window includes the following tabs:

- "**Cameras Tab**" on page 5–4
- "**Preset Names Tab**" on page 5–5

Cameras Tab

Figure 5.1 shows the **Cameras** tab.

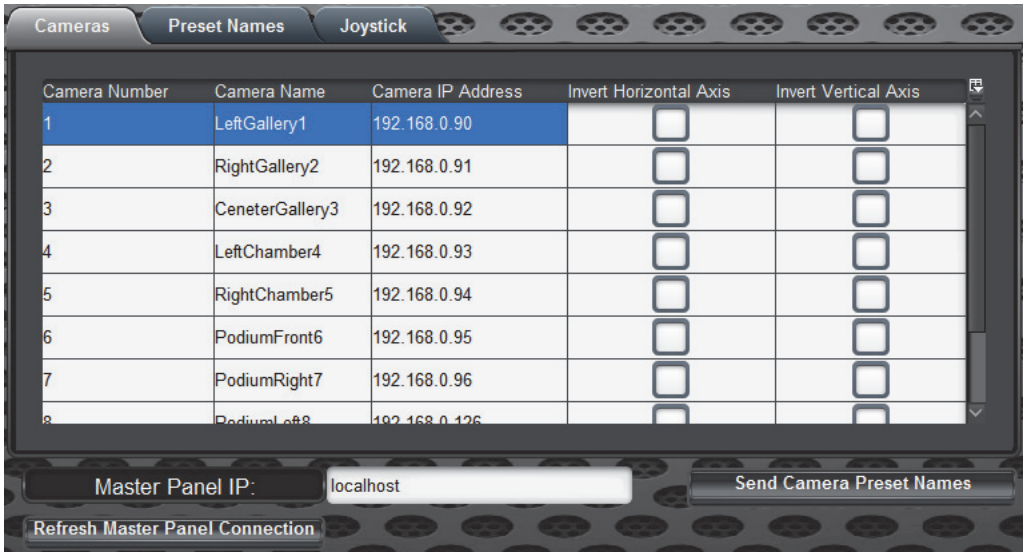


Figure 5.1 *Cameras Tab*

The **Cameras** tab includes the following settings and buttons:

Setting or Button	Description
Camera Number	The number of the camera being controlled. This is not editable. Each row in the table represents one camera. **IMPORTANT:** If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (CamBot, Sony, etc), you must ensure that each camera in the system has a unique camera number. For example, if your system includes five CamBot cameras and five Sony cameras, you could set up the CamBot cameras as numbers 1 to 5, and the Sony cameras as numbers 6 to 10. Each type of camera is configured on a separate camera control panel. For example, if you have Sony and CamBot cameras, there is one camera control panel for Sony, and one for CamBot. Additionally, the camera numbers in the camera control panels must correspond with the **Camera Key** numbers in the LCS configuration (**Config** interface, **Cameras** tab).
Camera Name	Specify a meaningful name for the camera.
Camera IP Address	Displays the IP addresses of the cameras.
Invert Horizontal Axis	Reverses the direction the camera pans when manipulated by the joystick or the Camera Control window. Use this option if the camera is mounted in an inverted position.
Invert Vertical Axis	Reverses the direction the camera tilts when manipulated by the joystick or the Camera Control window. Use this option if the camera is mounted in an inverted position.
Master Panel IP	Specify the IP address of the computer running the MasterPanel application. For LCS applications, MasterPanel typically runs on the same computer as DashBoard (IP = localhost).
Send Camera Preset Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them. **Tip:** Preset names are defined on the Preset Names tab.
Refresh Master Panel Connection	Refreshes the connection to the MasterPanel application. Enables you to establish a connection to cameras that have been added or that have had their IP addresses changed in the MasterPanel devices.cam file.

Preset Names Tab

Figure 5.2 shows the **Preset Names** tab.

***Figure 5.2** Preset Names Tab*

The **Preset Names** tab includes the following settings and buttons:

Setting or Button	Description
Camera tabs	Each **Camera** tab corresponds to a camera in the system. Each camera has a separate list of presets. Tap a tab to set preset names for shots on a different camera.
Preset Names	Specify a meaningful name for the preset (also known as a shot). Examples of typical shot names include, “sitting”, “standing”, “close”, “far”, “tight”, and “wide”.
Master Panel IP	Specify the IP address of the computer running the MasterPanel application. For LCS applications, MasterPanel typically runs on the same computer as DashBoard (IP = localhost).
Send Camera Preset Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them.
Refresh Master Panel Connection	Refreshes the connection to the MasterPanel application. Enables you to establish a connection to cameras that have been added or that have had their IP addresses changed in the MasterPanel devices.cam file.

Camera Control Window

The camera control window enables you to operate cameras. You can move cameras, and store and recall shots.

To access the camera control interface:

- Tap the **Controls** button.

The **Controls** interface includes the following windows:

- “**Store/Recall Shots Window**” on page 5–7
- “**PTZ Controls Window**” on page 5–9

Store/Recall Shots Window

The **Store/Recall Shots** window enables you to store camera positions as shots for future recall. It also enables you to recall those shots. The **Store/Recall Shots** window is used as an operator interface for controlling cameras during a presentation.

To access the Store/Recall Shots window:

- From the camera control interface, tap the **Store/Recall Shots** button.

Figure 5.3 shows the **Store/Recall Shots** window.

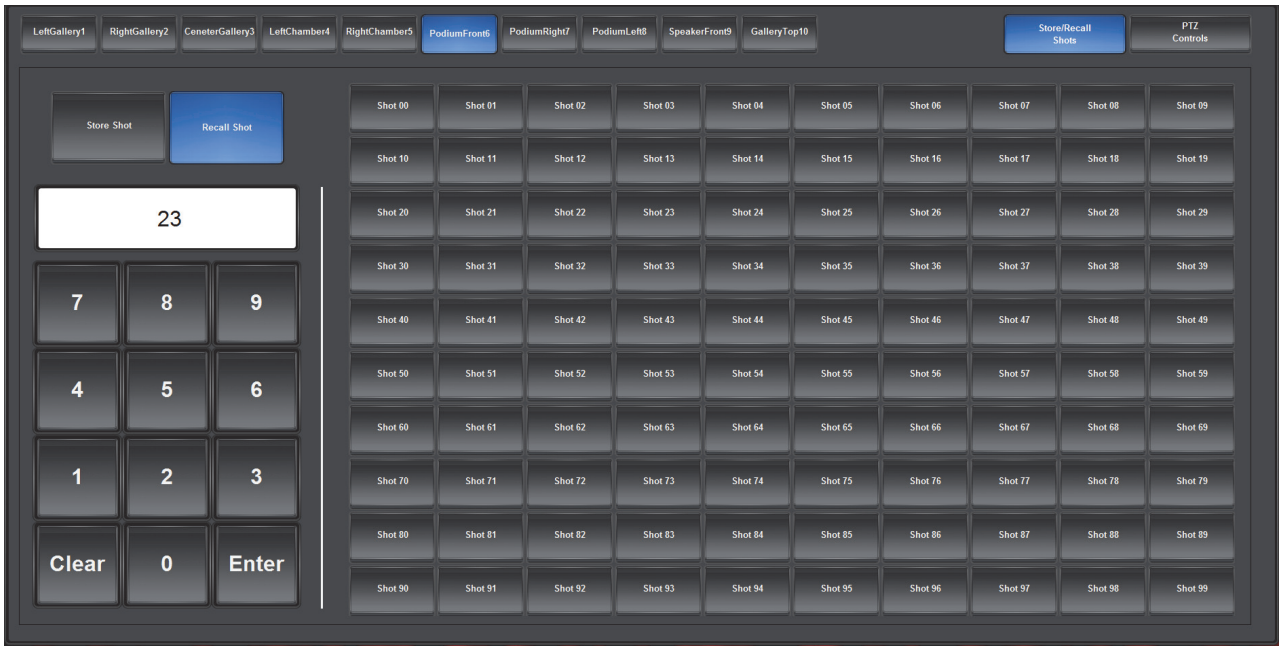


Figure 5.3 *Store/Recall Shots Window*

The **Store/Recall Shots** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **Store/Recall Shots** window includes one button per camera. Tap a button to select the camera to which you want to store shots, or from which you want to recall them.
Store Shot button	Tap the button to switch to **Store Shot** mode. In **Store Shot** mode, you can save the current camera position as a shot for future recall. **IMPORTANT:** The LCS does not save CamBot shots in a file. CamBot Shots are stored on the CamBot robotics heads. You can save the shots from one CamBot head or all CamBot heads in a shot list file. For more information, see the ***CamBot Control System User Guide (5100DR-503)***.
Recall Shot button	Tap the button to switch to **Recall Shot** mode. In **Recall Shot** mode, you can recall saved shots for the current camera. **Recall Shot** mode is used for camera operation.

Setting or Button	Description
Shot Selection keypad	Type a shot number and then press the **Enter** button on the keypad to store or recall a shot, depending on the current mode. Alternatively, you can type a number in the box above the keypad and then press the **Enter** button on the keypad. **Tip:** The **Shot** buttons can also be used to select a shot for storage or recall. There are 100 **Shot** buttons, numbered **00** to **99**. If you want to store or recall a shot higher than **99**, use the **Shot Selection** keypad.
Shot buttons	Tap a **Shot** button to store or recall a shot, depending on the current mode. **Shot** buttons are used for camera operation. **Tip:** Be aware of the current mode (**Store Shot** or **Recall Shot**) before you tap a **Shot** button. If you are in **Recall Shot** mode and tap a **Shot** button, the current camera position is stored as that shot. **Tip:** CamBot robotic heads can store up to 400 shots each. The camera control panel has 100 Shot buttons, numbered 00 to 99. If you want to store or recall a shot higher than 99, use the **Shot Selection** keypad. **IMPORTANT:** The LCS does not save CamBot shots in a file. CamBot Shots are stored on the CamBot robotics heads. You can save the shots from one CamBot head or all CamBot heads in a shot list file. For more information, see the ***CamBot Control System User Guide (5100DR-503)***.

PTZ Controls Window

The **PTZ Controls** window enables you to manually adjust the position of the currently-selected camera. You can move cameras during a presentation, or move them into position to store a shot.

To access the PTZ Controls window:

- From the camera control interface, tap the **PTZ Controls** button.

Figure 5.4 shows the **PTZ Controls** window.

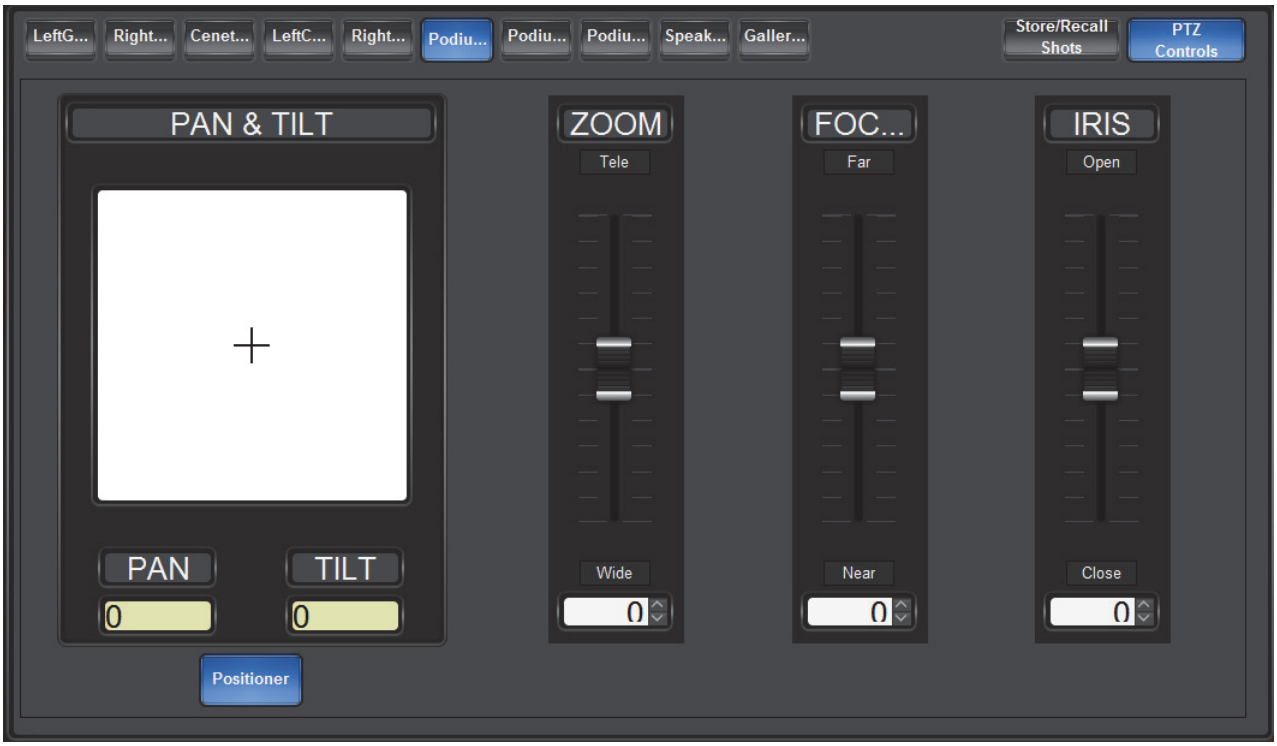


Figure 5.4 *PTZ Controls Window (showing Pan/Tilt positioner)*

The **PTZ Controls** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **PTZ Controls** window includes one button per camera. Tap a button to select which camera you want to move.
Positioner button	Switches between interfaces for adjusting pan and tilt positions: • **PAN and TILT sliders** — enable you to adjust pan and tilt individually. • **PAN & TILT Positioner** — enables you to adjust pan and tilt simultaneously.  ***Figure 5.5*** *Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)*
PAN and TILT sliders	Tap and drag the **PAN** or **TILT** slider handles to pan or tilt the camera. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. Higher pan values pan right. Higher tilt values tilt upwards. Pan and tilt slider values are relative, not absolute. When you release the slider, the value shown returns to zero.
PAN & TILT Positioner	Tap and drag the cross-hairs within the white box until the camera is in the desired pan/tilt position. Positioner values are relative, not absolute. When you release the cross-hairs, they return to the center and the values return to **0**.
ZOOM slider	Tap and drag the **ZOOM** slider handle up or down to zoom the lens. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. Higher values are towards telephoto, and lower values are towards wide. Zoom slider values are relative, not absolute. When you release the slider, the value shown returns to **0**.
FOCUS slider	Tap and drag the **FOCUS** slider handle up or down to focus the lens manually. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. Higher values are towards far focus, and lower values are towards near focus. Focus slider values are relative, not absolute. When you release the slider, the value shown returns to **0**.

The Sony Control Panel

The Sony camera control panel is a DashBoard panel that enables you to configure and control up to ten Sony robotic cameras. You can control cameras manually, store and recall shots, and adjust shading controls.

This chapter contains information about the Sony camera control interface, and how to use it to commission cameras and create shots for a Legislative Control System (LCS).

The remaining LCS commissioning tasks are as follows:

The section, "**User Interface Reference**" on page 6–4 describes the controls available in the camera control panel.

Note: Each LCS implementation includes one or more camera control panels. There is one camera control panel for each type of camera in your system (Sony, Panasonic, CamBot). You must configure all cameras in your system, using the appropriate camera control panel for each type.

Installing the Camera Control Panel Files

The camera control panel is a DashBoard panel. DashBoard must be installed to run the camera control panel. DashBoard is available as a free download from www.rossvideo.com.

To install the camera control panel:

1. Ensure that DashBoard is installed.
2. Open the camera control panel zip file and then extract the **Sony** folder into the **C:** directory.

Launching the Camera Control Panel

Add the camera control panel to the DashBoard File Navigator, to make it readily available from DashBoard.

To add the camera control panel to DashBoard File Navigator:

1. Start DashBoard.
2. From the **Views** menu, tap **File Navigator**.
3. On the **File Navigator** tab, tap the green + symbol.

   The **Browse for Folder** dialog appears.
4. Navigate to the **Sony BRC-900** folder located in **Computer > OS (C)**, and then tap **OK**.
5. In the **File Navigator** tree, expand the **Sony BRC-900** folder to show the **SonyCamera.grid** file.
6. To open the camera control panel anytime, double-tap the **SonyCamera.grid** file.

   The camera control panel will always be available from the DashBoard File Navigator.

Adding the Joystick Server as a Data Source

The joystick server appears as a node you created in the DashBoard device tree. You must add it as a data source in the camera control panel so the joystick can communicate with the LCS panel.

1. With the camera control panel open, from DashBoard's **Edit** menu, tap **PanelBuilder Edit Mode** to enter **Edit Mode**.

   Tip: When a panel is in **Edit Mode**, grid lines are visible over the entire panel.

2. In the **Edit Mode** toolbar, tap the **Data Sources** button.

   The **Data Sources** dialog box appears.

3. In the **Data Sources** dialog box, find the following **Tag** entry and click the associated **Edit** button:

   abs [id-Joystick, name=Joystick]

   The **Select Device for Context** dialog box appears.

4. In the **Select a device** list, tap the joystick server node.

   Tip: You created and named the joystick server node in a previous procedure. For more information, see "**Establishing a Device Connection to the Joystick Server**" on page 4–6.

   Note: if the node is not green, the MasterPanel application is not running. Start MasterPanel (**C:\Cambotics\masterpanel1.exe**).

5. Within the joystick server node, select **Local Joystick**, and then tap **OK**.

6. If a **Device Type Mismatch** dialog box appears, tap **Yes**.

7. In the **Data Sources** dialog box, tap **Ok**.

8. Tap the **PanelBuilder Edit Mode** button to exit **Edit Mode**.

   Leave the LCS panel open for the next procedure.

Configuring Cameras

This section describes how to configure cameras.

For more detailed information about specific configuration settings, see "**Camera Configuration Window**" on page 6–4.

To configure a camera:

1. In the camera control panel, tap the **Config** button.

2. On the **Cameras** tab, specify names and IP addresses for the Sony cameras.

   IMPORTANT: If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that each camera in the system has a unique camera number. For example, if your system includes five Sony cameras and five CamBot cameras, you might number the Sony cameras as 1, 2, 3, 7, and 9, and number the CamBot cameras as 4, 5, 6, 8, and 10. The camera numbers you assign here must correspond with the **Camera Key** numbers in the LCS panel configuration (**Config** interface, **Cameras** tab).

3. If any of the cameras are mounted in an inverted position, select the **Invert Horizontal Axis** and **Invert Vertical Axis** check boxes as required.

   Tip: Invert camera axes as required to make all cameras behave consistently when manipulated by any controls, including the Ross Video joystick panel, camera control panels, and LCS panels.

4. On the **Preset Names** tab, name the presets (shots) for each camera. These names will appear in the LCS panel.

   Tip: Within the **Preset Names** tab there is a tab for each camera.

5. When you are finished naming your shots, tap the **Send Shot Names** button. This makes the names available to the LCS.

6. If you want to adjust camera shading and other selected controls, tap the **Controls button**, then tap the **Shading Controls** button, and then adjust the following as required:

   - **Exposure** — Choose an exposure mode:
     - › **Full Auto** enables automatic exposure.
     - › **Manual** enables you to manually set the Shutter Speed and Gain.
     - › **Shutter Priority** enables you to manually set the Shutter Speed, but not the Gain.
     - › **Iris Priority** enables the iris to determine exposure.
   - **Shutter Speed** — Select a shutter speed.

     Tip: Shutter Speed is available only if Exposure is set to Manual or Shutter Priority.
   - **Gain** — Specify a gain value (-3, or 0 to 24).

     Tip: Gain is available only if **Exposure** is set to **Manual**.
   - **White Balance** — Select a white balance option:
     - › **Auto** enables automatic white balance.
     - › **Indoor** sets white balance levels for typical indoor shooting conditions.
     - › **Outdoor** sets white balance levels for typical outdoor shooting conditions.
     - › **One Push** enables you to perform a white balance operation on demand, using the **One Push** button.
     - › **Manual** enables manual white balance. It also enables you to set red gain and blue gain values.

       Note: White balance settings are retained in presets, and are recalled when presets are recalled.
   - **One Push WB** — Performs a white balance operation if **White Balance** is set to **Auto** or to **One Push**.
   - **R.Gain** — Specify a red gain value (-128 to 127).

     Tip: Red gain is available only if **White Balance** is set to **Manual**.
   - **B.Gain** — Specify a blue gain value (-128 to 127).

     Tip: Blue gain is available only if **White Balance** is set to **Manual**.

   Note: When you store a shot, shading controls are saved as part of the shot.

7. If you want to turn the camera **ON** or **OFF**, tap the **Power** button until it shows the desired state (**Power ON** or **Power OFF**).

Creating, Storing, and Recalling Shots

An LCS implementation typically includes several hundred camera shots. Creating and storing these shots can be tedious, but the task is easy if the shots are planned in advance. This section assumes that you have a list of shots to be created for each camera, and that the shot numbers have already been assigned to marks in the LCS panel configuration interface. For more information, see “**Assigning Shots to Marks**” on page 4–8.

This section summarizes how to create, store, and recall shots.

For more detailed information about specific controls, see “**Camera Control Window**” on page 6–7.

To create and store a shot:

1. In the camera control panel, tap the **Controls** button.

2. Tap a camera button to control that camera.

   Tip: The ten camera buttons are in a row along the top of the window.

3. If you want to move the camera, you can use the Ross Video joystick panel, or the Camera Control window:
   - To use the Ross Video joystick panel:
     - **Pan** — Push the right joystick right and left.
     - **Tilt** — Push the right joystick forward and backward.
     - **Zoom** — Rotate the right joystick.
     - **Focus** — Turn the **FOCUS** knob.
   - To use the Camera Control window, tap the **PTZ Controls** button, and then adjust the following as required:
     - **Pan and Tilt** — Tap the **Positioner** button to choose between **PAN** and **TILT** sliders or the **PAN & TILT** positioner, and then move the camera.
     - **Zoom** — Tap and drag the **ZOOM** slider handle to adjust the zoom.
     - **Focus** — Tap and drag the **FOCUS** slider handle to adjust the focus.

       Note: You cannot adjust the focus if **Auto Focus** is **ON**. Unfortunately, the Auto Focus status may be shown incorrectly because Sony cameras cannot communicate their focus status to the LCS panel. Before you adjust the focus, tap the **Auto Focus** button at least once until the button says **Auto Focus OFF**.
     - **Iris** — Tap and drag the **IRIS** slider handle to adjust the iris.

       Note: You cannot adjust the iris if **Auto Iris** is **ON**. Unfortunately, the Auto Iris status and iris value may be shown incorrectly because Sony cameras cannot communicate their iris status to the LCS panel. Before you adjust the iris, tap the **Auto Iris** button at least once until the button says **Auto Iris OFF**.
4. Tap the **Store/Recall Shots** button.
5. Tap the **Shot** button for the shot number you want to store.

   Tip: If you want to store a shot higher than 100, use the Shot Selection keypad to specify the shot number, instead of tapping a **Shot** button.
6. Continue creating and storing shots until all required shots exist for all cameras in your system.

   Note: If your LCS setup includes multiple types of cameras (i.e. Sony and Panasonic), you must use the corresponding camera control panel to configure each type of camera, and to create shots for them. For more information, see the chapter corresponding to the camera type(s).

User Interface Reference

This section describes the controls available in the Sony camera control panel.

The camera control panel consists of two interfaces:

- **Camera Configuration (Config) Window** — Enables you to configure camera settings such as camera names, IP addresses, and preset (shot) names. For more information, see "**Camera Configuration Window**" on page 6–4.
- **Camera Control (Controls) Window** — Enables you to operate cameras. You can move cameras, store and recall shots, and adjust shading controls. For more information, see "**Camera Control Window**" on page 6–7.

Camera Configuration Window

The camera configuration window enables you to configure camera settings such as camera names, IP addresses, and preset (shot) names.

To access the camera configuration window:

- Tap the **Config** button.

The **Config** window includes the following tabs:

- "**Cameras Tab**" on page 6–5
- "**Preset Names Tab**" on page 6–6

Cameras Tab

Figure 6.1 shows the **Cameras** tab.

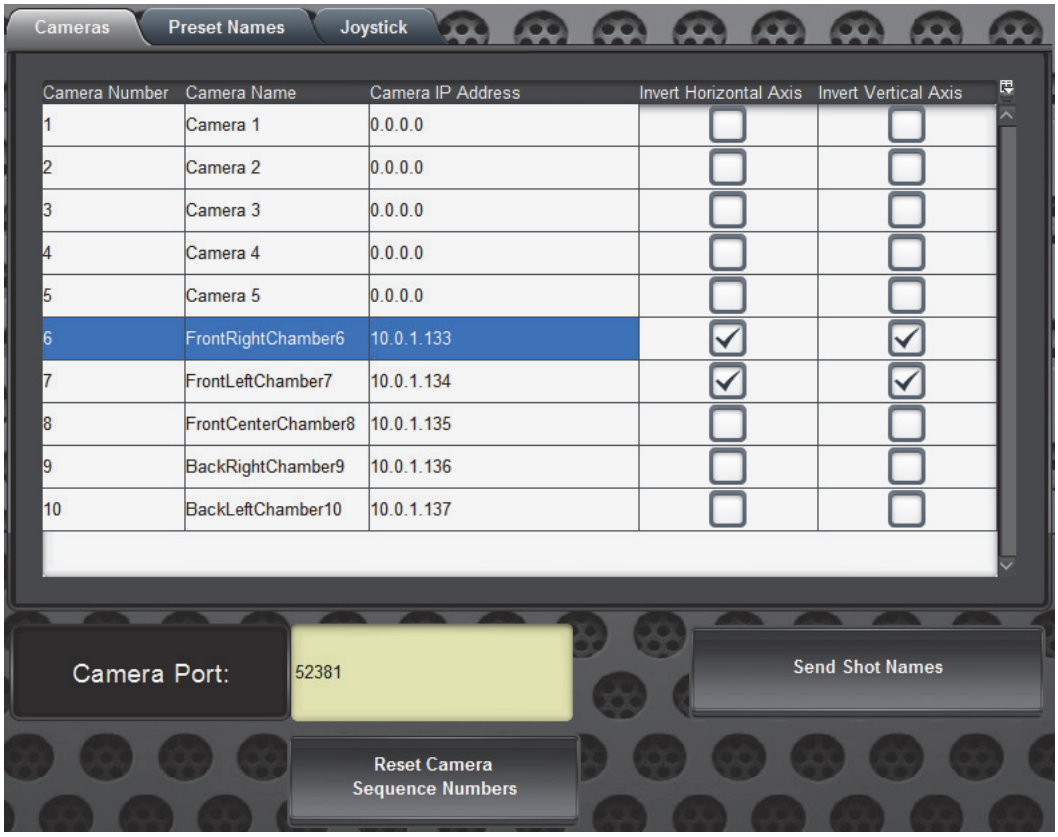


Figure 6.1 *Cameras Tab*

The **Cameras** tab includes the following settings and buttons:

Setting or Button	Description
Camera Number	The number of the camera being controlled. This is not editable. Each row in the table represents one camera. **IMPORTANT:** If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that each camera in the system has a unique camera number. For example, if your system includes five Sony cameras and five CamBot cameras, you might number the Sony cameras as 1, 2, 3, 7, and 9, and number the CamBot cameras as 4, 5, 6, 8, and 10. The camera numbers you assign here must correspond with the **Camera Key** numbers in the LCS panel configuration (**Config** interface, **Cameras** tab).
Camera Name	Specify a meaningful name for the camera.
Camera IP Address	Specify the IP address of the camera. Every camera must have a unique IP address. **IMPORTANT:** If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that all camera IP addresses in the system are unique.
Invert Horizontal Axis	Reverses the direction the camera pans when manipulated by a joystick or by the Camera Control window. Use this option if the camera is mounted in an inverted position.

Setting or Button	Description
Invert Vertical Axis	Reverses the direction the camera tilts when manipulated by a joystick or by the Camera Control window. Use this option if the camera is mounted in an inverted position.
Camera Port	Shows the computer port over which the cameras communicate. The camera port is not configurable.
Send Shot Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them. **Tip:** Preset names are defined on the Preset Names tab.
Reset Camera Sequence Numbers	This button resets addressing numbers on the Sony cameras, to ensure that the LCS panel has control of the cameras. The numbers can become mismatched between the camera and the LCS panel if another system takes control of one or more cameras.

Preset Names Tab

Figure 6.2 shows the **Preset Names** tab.

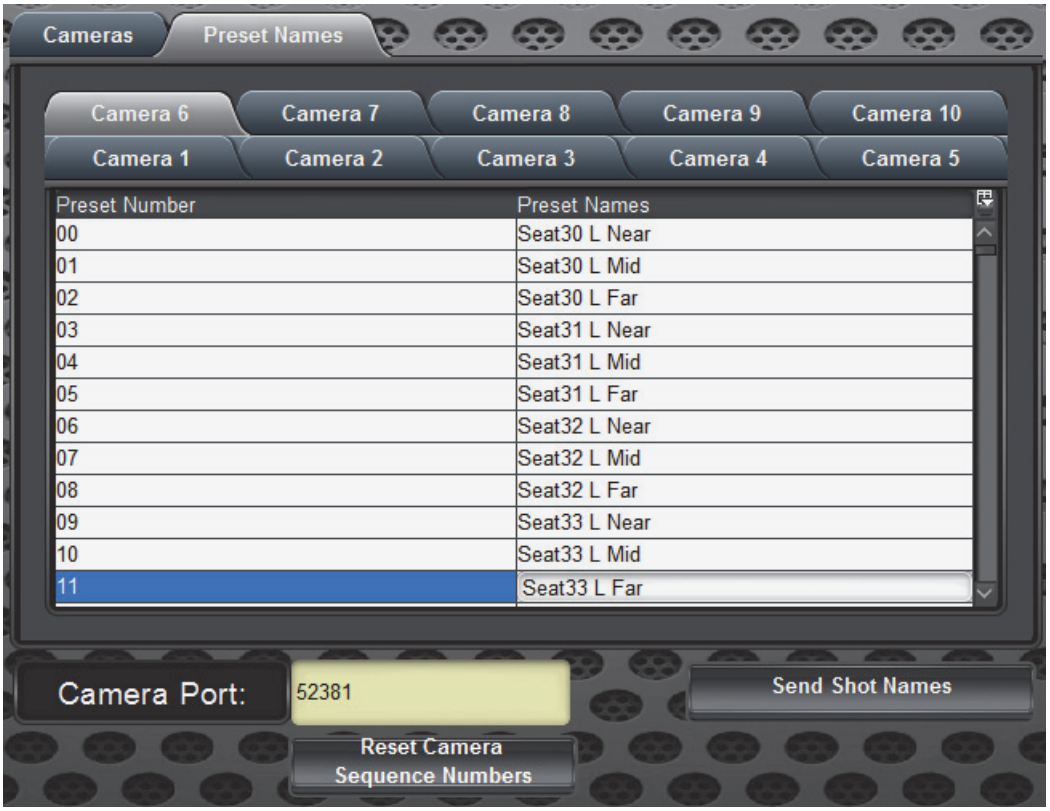


Figure 6.2 *Preset Names Tab*

The **Preset Names** tab includes the following settings and buttons:

Setting or Button	Description
Camera tabs	Each **Camera** tab corresponds to a camera in the system. Each camera has a separate list of presets. Tap a tab to set preset names for shots on a different camera.
Preset Names	Specify a meaningful name for the preset (also known as a shot). Examples of typical shot names include, “sitting”, “standing”, “close”, “far”, “tight”, and “wide”.

Setting or Button	Description
Camera Port	Shows the computer port over which the cameras communicate. The camera port is not configurable.
Send Shot Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them.
Reset Camera Sequence Numbers	This button resets addressing numbers on the Sony cameras, to ensure that the LCS panel has control of the cameras. The numbers can become mismatched between the camera and the LCS panel if another system takes control of one or more cameras.

Camera Control Window

The camera control window enables you to operate cameras. You can move cameras, store and recall shots, and adjust shading controls.

To access the camera control interface:

- Tap the **Controls** button.

The **Controls** interface includes the following windows:

- "**Store/Recall Shots Window**" on page 6–8
- "**PTZ Controls Window**" on page 6–9
- "**Shading Controls Window**" on page 6–12

Store/Recall Shots Window

The **Store/Recall Shots** window enables you to store camera positions as shots for future recall. It also enables you to recall those shots. The **Store/Recall Shots** window is used as an operator interface for controlling cameras during a presentation.

To access the Store/Recall Shots window:

- From the camera control interface, tap the **Store/Recall Shots** button.

Figure 6.3 shows the **Store/Recall Shots** window.

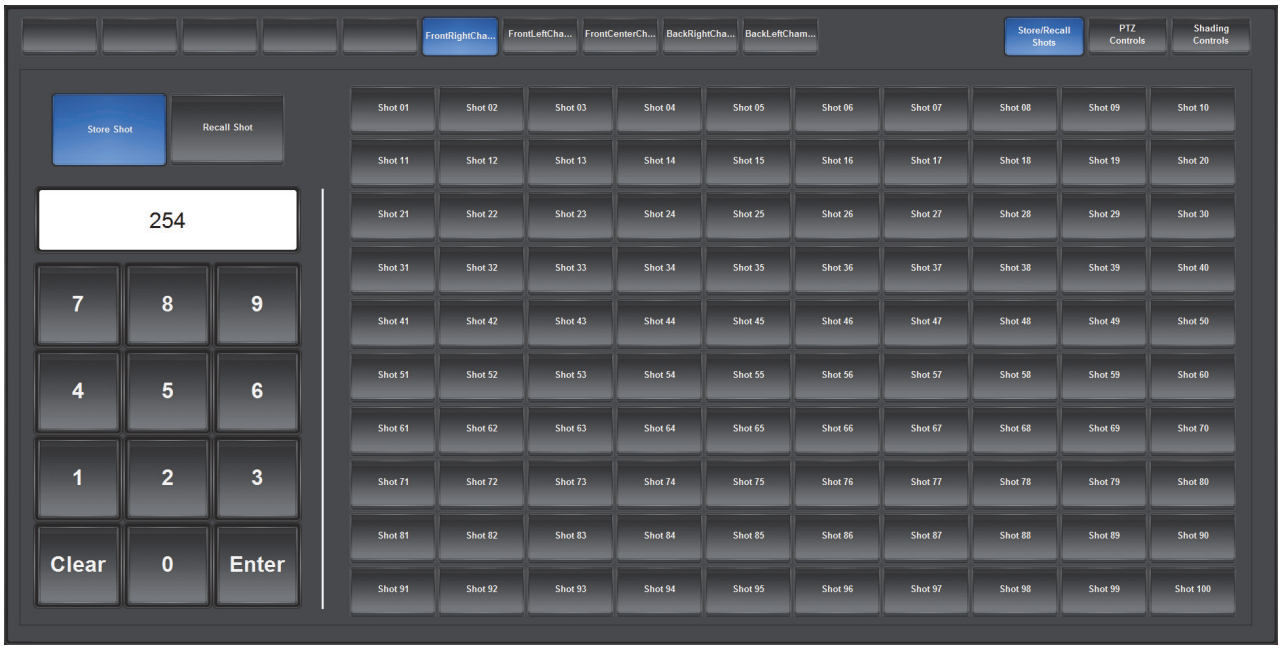


***Figure 6.3** Store/Recall Shots Window*

The **Store/Recall Shots** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **Store/Recall Shots** window includes one button per camera. Tap a button to select the camera to which you want to store shots, or from which you want to recall them.
Store Shot button	Tap the button to switch to **Store Shot** mode. In **Store Shot** mode, you can save the current camera position as a shot for future recall.
Recall Shot button	Tap the button to switch to **Recall Shot** mode. In **Recall Shot** mode, you can recall saved shots for the current camera. **Recall Shot** mode is used for camera operation.
Shot Selection keypad	Type a shot number and then press the **Enter** button on the keypad to store or recall a shot, depending on the current mode. Alternatively, you can type a number in the box above the keypad and then press the **Enter** button on the keypad. **Tip:** The **Shot** buttons can also be used to select a shot for storage or recall. There are 100 **Shot** buttons, numbered **01** to **100**. If you want to store or recall a shot higher than **100**, use the **Shot Selection** keypad.

Setting or Button	Description
Shot buttons	Tap a **Shot** button to store or recall a shot, depending on the current mode. **Shot** buttons are used for camera operation. **Tip:** Be aware of the current mode (**Store Shot** or **Recall Shot**) before you tap a **Shot** button. If you are in **Recall Shot** mode and tap a **Shot** button, the current camera position is stored as that shot. **Tip:** Sony cameras can store up to 16 shots. The camera control panel also uses virtual shots, enabling you to store up to 1000 shots in total. The camera control panel has 100 Shot buttons, numbered 01 to 100. If you want to store or recall a shot higher than 100, use the **Shot Selection** keypad. **Tip:** Shots 01 to 16 are stored on the Sony cameras. The camera control panel stores only shots 17 to 999. If you want all your shots to be saved in data files, use only shots above 16.

PTZ Controls Window

The **PTZ Controls** window enables you to manually adjust the position of the currently-selected camera. You can move cameras during a presentation, or move them into position to store a shot.

To access the PTZ Controls window:

- From the camera control interface, tap the **PTZ Controls** button.

Figure 6.4 shows the **PTZ Controls** window.

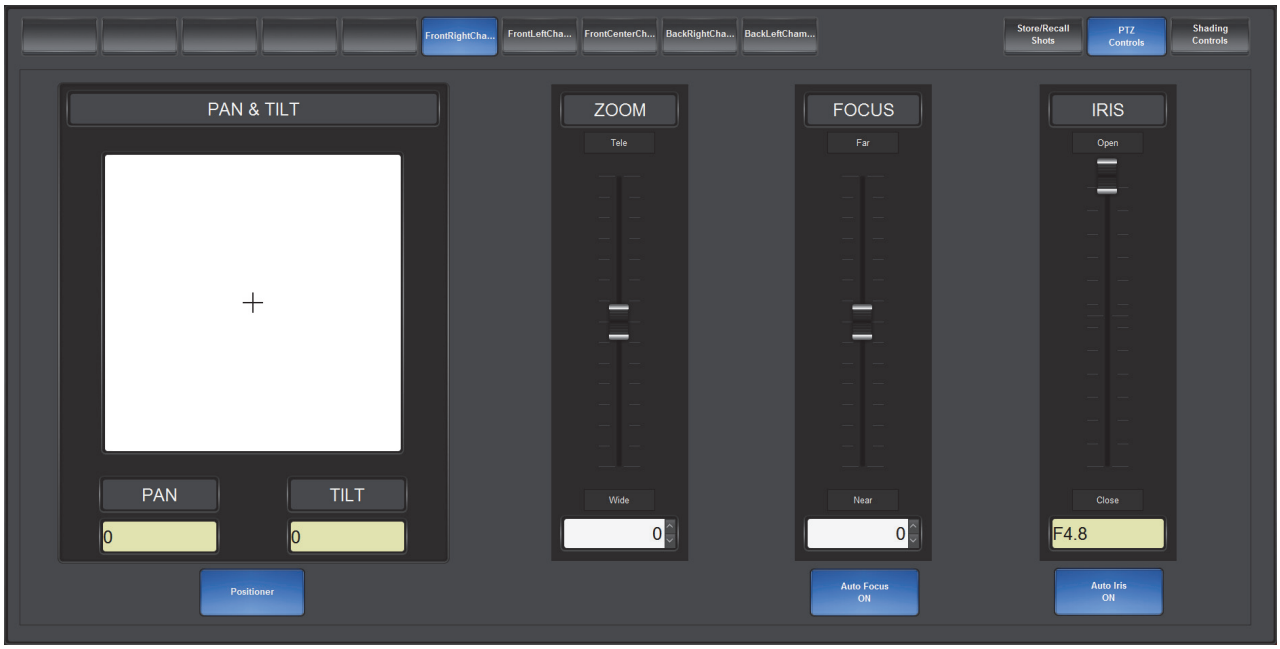


Figure 6.4 *PTZ Controls Window (showing Pan/Tilt positioner)*

The **PTZ Controls** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **PTZ Controls** window includes one button per camera. Tap a button to select which camera you want to move.
Positioner button	Switches between interfaces for adjusting pan and tilt positions: • **PAN and TILT sliders** — enable you to adjust pan and tilt separately. • **Pan & Tilt Positioner** — enables you to adjust pan and tilt simultaneously.  ***Figure 6.5*** *Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)*
PAN and TILT sliders	Tap and drag the **PAN** or **TILT** slider handles to pan or tilt the camera. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **-24** to **24**. Higher pan values pan right. Higher tilt values tilt upwards. Pan and tilt slider values are relative, not absolute. When you release the slider, the value shown returns to zero.
Pan & Tilt Positioner	Tap and drag the cross-hairs within the white box until the camera is in the desired pan/tilt position.
ZOOM slider	Tap and drag the **ZOOM** slider handle up or down to zoom the lens. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **-7** to **7**. Higher values are towards telephoto, and lower values are towards wide. Zoom slider values are relative, not absolute. When you release the slider, the value shown returns to zero.
Auto Focus button	Tap to switch between automatic focus and manual focus control. When **Auto Focus** is **OFF**, you can adjust focus using the **FOCUS** slider. **Note:** The Auto Focus status may be shown incorrectly because Sony cameras cannot communicate their focus status to the LCS panel. Whenever you want to adjust the focus or know the Auto Focus state of a camera, tap the **Auto Focus** button at least once, until the desired state is shown.

Setting or Button	Description
FOCUS slider	Tap and drag the **FOCUS** slider handle up or down to focus the lens manually. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **-7** to **7**. Higher values are towards far focus, and lower values are towards near focus. Focus slider values are relative, not absolute. When you release the slider, the value shown returns to zero. **Note:** You cannot adjust the focus if **Auto Focus** is **ON**. Unfortunately, the Auto Focus status may be shown incorrectly because Sony cameras cannot communicate their focus status to the LCS panel. Before you adjust the focus, tap the **Auto Focus** button at least once until the button says **Auto Focus OFF**.
Auto Iris button	Tap to switch between automatic and manual iris control. When **Auto Iris** is **OFF**, you can adjust the iris using the **IRIS** slider. **Note:** The Auto Iris status may be shown incorrectly because Sony cameras cannot communicate their iris status to the LCS panel. Whenever you want to adjust the iris or know the Auto Iris state of a camera, tap the **Auto Iris** button at least once, until the desired state is shown.
Iris slider	If you want to adjust the iris, tap and drag the **IRIS** slider handle up or down. Iris slider values are absolute. When you release the slider, the value you set remains. **Note:** You cannot adjust the iris if **Auto Iris** is **ON**. Unfortunately, the Auto Iris status and iris value may be shown incorrectly because Sony cameras cannot communicate their iris status to the LCS panel. Before you adjust the iris, tap the **Auto Iris** button at least once until the button says **Auto Iris OFF**.

Shading Controls Window

The **Shading Controls** window enables you to adjust selected camera controls, including shading and shutter speed. Shading settings remain until changed again. They are saved as part of the shots.

Note: For more information about the effect of these camera controls, refer to the documentation that came with your camera system.

To access the Shading Controls window:

- From the camera control interface, tap the **Shading Controls** button.

Figure 6.6 shows the **Shading Controls** window.

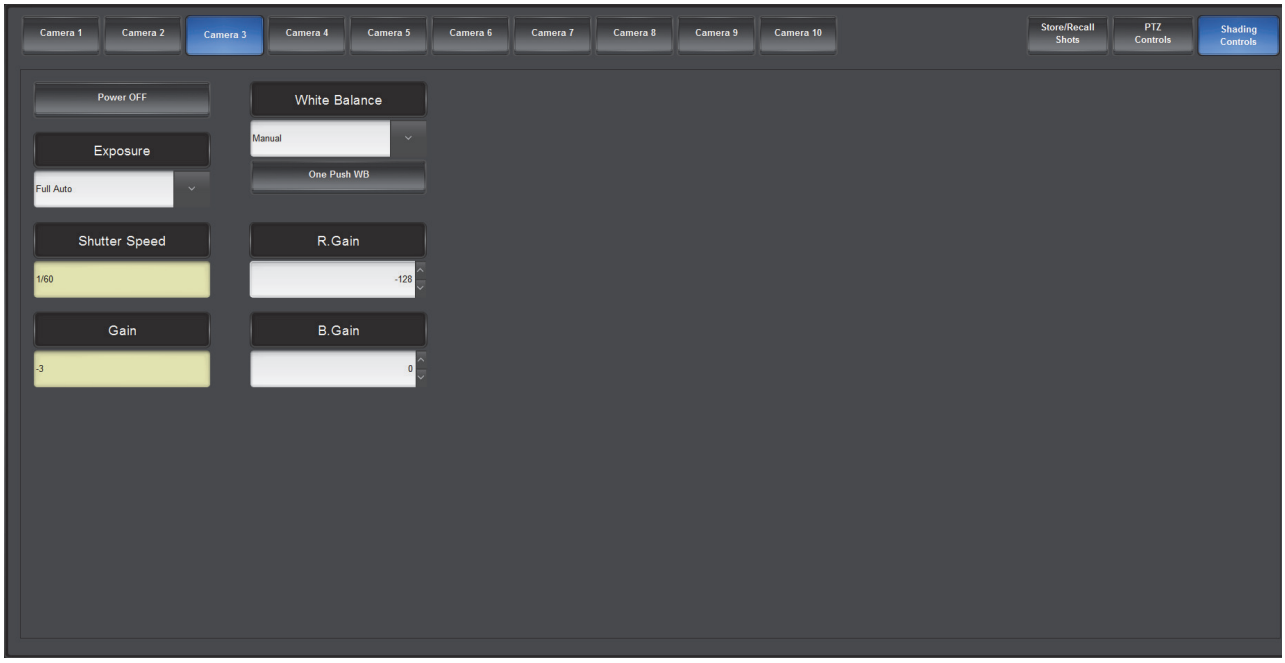


Figure 6.6 *Shading Controls Window*

The **Shading Controls** tab includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **Shading Controls** window includes one button per camera. Tap a button to select which camera you want to adjust.
Power button	Turns the camera **ON** or **OFF**. The **Power** button shows the current state.
Exposure	Select an exposure mode: • **Full Auto** enables automatic exposure. • **Manual** enables you to manually set the **Shutter Speed** and **Gain**. • **Shutter Priority** enables you to manually set the **Shutter Speed**, but not the **Gain**. • **Iris Priority** enables the iris to determine exposure.
Shutter Speed	Select a shutter speed. **Tip:** Shutter Speed is available only if **Exposure** is set to **Manual** or **Shutter Priority**.
Gain	Specify a gain value (-3, or 0 to 30). **Tip:** Gain is available only if **Exposure** is set to **Manual**.

Setting or Button	Description
White Balance	**White Balance** — Select a white balance option: • **Auto** enables automatic white balance. • **Indoor** sets white balance levels for typical indoor shooting conditions. • **Outdoor** sets white balance levels for typical outdoor shooting conditions. • **One Push** enables you to perform a white balance operation on demand, using the **One Push** button. • **Manual** enables manual white balance. It also enables you to set red gain and blue gain values.
One Push WB	Performs a white balance operation if **White Balance** is set to **Auto** or to **One Push**.
R.Gain	Specify a red gain value (-128 to 127). **Tip:** Red gain is available only if **White Balance** is set to **Manual**.
B.Gain	Specify a blue gain value (-128 to 127). **Tip:** Blue gain is available only if **White Balance** is set to **Manual**.

The Panasonic Control Panel

The Panasonic camera control panel is a DashBoard panel that enables you to configure and control up to ten Panasonic robotic cameras. You can control cameras manually, store and recall shots, and adjust shading controls and shot recall speeds.

This chapter contains information about the Panasonic camera control interface, and how to use it to commission cameras and create shots for a Legislative Control System (LCS).

The remaining LCS commissioning tasks are as follows:

The section, "**User Interface Reference**" on page 7–4 describes the controls available in the camera control panel.

Note: Each LCS implementation includes one or more camera control panels. There is one camera control panel for each type of camera in your system (Sony, Panasonic, CamBot). You must configure all cameras in your system, using the appropriate camera control panel for each type.

Installing the Camera Control Panel Files

The camera control panel is a DashBoard panel. DashBoard must be installed to run the camera control panel. DashBoard is available as a free download from www.rossvideo.com.

To install the camera control panel:

1. Ensure that DashBoard is installed.
2. Open the camera control panel zip file and then extract the **Panasonic HE-120** folder into the **C:** directory.

Launching the Camera Control Panel

Add the camera control panel to the DashBoard File Navigator, to make it readily available from DashBoard.

To add the camera control panel to DashBoard File Navigator:

1. Start DashBoard.
2. From the **Views** menu, tap **File Navigator**.
3. On the **File Navigator** tab, tap the green + symbol.

   The **Browse for Folder** dialog appears.
4. Navigate to the **Panasonic HE-120** folder located in **Computer > OS (C)**, and then tap **OK**.
5. In the **File Navigator** tree, expand the **Panasonic HE-120** folder to show the **PanasonicCamera.grid** file.
6. To open the camera control panel anytime, double-tap the **PanasonicCamera.grid** file.

   The camera control panel will always be available from the DashBoard File Navigator.

Adding the Joystick Server as a Data Source

The joystick server appears as a node you created in the DashBoard device tree. You must add it as a data source in the camera control panel so the joystick can communicate with the LCS panel.

1. With the camera control panel open, from DashBoard's **Edit** menu, tap **PanelBuilder Edit Mode** to enter **Edit Mode**.

   Tip: When a panel is in **Edit Mode**, grid lines are visible over the entire panel.

2. In the **Edit Mode** toolbar, tap the **Data Sources** button.

   The **Data Sources** dialog box appears.

3. In the **Data Sources** dialog box, find the following **Tag** entry and click the associated **Edit** button:

   abs [id-Joystick, name=Joystick]

   The **Select Device for Context** dialog box appears.

4. In the **Select a device** list, tap the joystick server node.

   Tip: You created and named the joystick server node in a previous procedure. For more information, see "**Establishing a Device Connection to the Joystick Server**" on page 4–6.

   Note: if the node is not green, the MasterPanel application is not running. Start MasterPanel (**C:\Cambotics\masterpanel1.exe**).

5. Within the joystick server node, select **Local Joystick**, and then tap **OK**.

6. If a **Device Type Mismatch** dialog box appears, tap **Yes**.

7. In the **Data Sources** dialog box, tap **Ok**.

8. Tap the **PanelBuilder Edit Mode** button to exit **Edit Mode**.

   Leave the LCS panel open for the next procedure.

Configuring Cameras

This section describes how to configure cameras.

For more detailed information about specific configuration settings, see "**Camera Configuration Window**" on page 7–4.

To configure a camera:

1. In the camera control panel, tap the **Config** button.

2. In the **Remote Control IP** box, type the IP address of the **Panasonic AW-RP120** control console (joystick console), if present.

   N**ote:** A Panasonic joystick console is not required to use the Panasonic camera control panel.

3. On the **Cameras** tab, specify names and IP addresses for the Panasonic cameras.

   IMPORTANT: If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that each camera in the system has a unique camera number. For example, if your system includes five Panasonic cameras and five CamBot cameras, you might number the Panasonic cameras as 1, 2, 3, 7, and 9, and number the CamBot cameras as 4, 5, 6, 8, and 10. The camera numbers you assign here must correspond with the **Camera Key** numbers in the LCS panel configuration (**Config** interface, **Cameras** tab).

4. If any of the cameras are mounted in an inverted position, select the **Invert Horizontal Axis** and **Invert Vertical Axis** check boxes as required.

   Tip: Invert camera axes as required to make all cameras behave consistently when manipulated by any controls, including the Ross Video joystick panel, camera control panels, and LCS panels.

5. On the **Recall Speed** tab, set the shot recall speed for each camera.
6. On the **Preset Names** tab, name the presets (shots) for each camera. These names will appear in the LCS panel.

   Tip: Within the **Preset Names** tab there is a tab for each camera.
7. When you are finished naming your shots, tap the **Send Camera Preset Names** button. This makes the names available to the LCS.
8. If you want to adjust camera shading and other selected controls, tap the **Controls button**, then tap the **Shading Controls** button, and then adjust the following as required:
   - **Camera Output** — Choose between normal camera output and test bars.
   - **Shutter Speed** — Select a shutter speed.
   - **Gain** — Specify a gain value (0 to 30).
   - **Chroma** — Specify a chroma value (-3 to 3).
   - **Detail** — Select a level of detail (High, Low, Off)
   - **White Balance** — Select a white balance option from the list, to perform a camera white balance:
     - **ATW** — Auto-Tracing White Balance. White balance adjusts continuously as you shoot.
     - **AWB A** — Auto White Balance A. Applies a saved white balance preset.
     - **AWB B** — Auto White Balance B. Applies a saved white balance preset.
     - **Preset 3200K** — Applies white balance for typical indoor (incandescent) conditions.
     - **Preset 5600K** — Applies white balance for typical outdoor (daylight) conditions.

     Alternatively, to perform a manual white balance, tap the **Execute AWB** button. If **AWB A** or **AWB B** are selected, the **Execute AWB** button also stores the white balance level in the preset shown (**AWB A** or **AWB B**).
   - **Execute ABB** — Tap this button to perform a black balance.
   - **Pedestal** — Specify a black pedestal level (-150 to 150).
   - **Digital Noise Reduction** — Select a level of digital noise reduction (High, Low, Off).
   - **Flesh Tone Noise Suppress** — Select a level of flesh tone noise suppression (High, Low, Off).

   Note: When you store a shot, shading controls are not saved as part of the shot.

Creating, Storing, and Recalling Shots

An LCS implementation typically includes several hundred camera shots. Creating and storing these shots can be tedious, but the task is easy if the shots are planned in advance. This section assumes that you have a list of shots to be created for each camera, and that the shot numbers have already been assigned to marks in the LCS panel configuration interface. For more information, see "**Assigning Shots to Marks**" on page 4–8.

This section summarizes how to create, store, and recall shots.

For more detailed information about specific controls, see "**Camera Control Window**" on page 7–8.

To create and store a shot:

1. In the camera control panel, tap the **Controls** button.
2. Tap a camera button to control that camera.

   Tip: The ten camera buttons are in a row along the top of the window.

3. If you want to move the camera, you can use the Ross Video joystick panel, or the Camera Control window:
   - To use the Ross Video joystick panel:
     - **Pan** — Push the right joystick right and left.
     - **Tilt** — Push the right joystick forward and backward.
     - **Zoom** — Rotate the right joystick.
     - **Focus** — Turn the **FOCUS** knob.
   - To use the Camera Control window, tap the **PTZ Controls** button, and then adjust the following as required:
     - **Pan and Tilt** — Tap the **Positioner** button to choose between **PAN** / **TILT** sliders or the pan/tilt positioner, and then move the camera.
     - **Zoom** — Tap and drag the **ZOOM** slider handle to adjust the zoom.
     - **Focus** — Tap and drag the **FOCUS** slider handle to adjust the focus.

       Tip: If the **FOCUS** slider is visible but not available, tap the **Auto Focus** button to turn off auto focus.
     - **Iris** — Tap and drag the **IRIS** slider handle to adjust the iris.

       Tip: If the **IRIS** slider is visible but not available, tap the **Auto Iris** button to turn off automatic iris.
4. Tap the **Store/Recall Shots** button.
5. Tap the **Shot** button for the shot number you want to store.

   Tip: If you want to store a shot higher than 99, use the Shot Selection keypad to specify the shot number, instead of tapping a **Shot** button.
6. Continue creating and storing shots until all required shots exist for all cameras in your system.

   Note: If your LCS setup includes multiple types of cameras (i.e. Sony and Panasonic), you must use the corresponding camera control panel to configure each type of camera, and to create shots for them. For more information, see the chapter corresponding to the camera type(s).

User Interface Reference

This section describes the controls available in the Panasonic camera control panel.

The camera control panel consists of two interfaces:

- **Camera Configuration (Config) Window** — Enables you to configure camera settings such as camera names, IP addresses, recall speeds, and preset (shot) names. For more information, see "**Camera Configuration Window**" on page 7–4.
- **Camera Control (Controls) Window** — Enables you to operate cameras. You can move cameras, store and recall shots, and adjust shading controls. For more information, see "**Camera Control Window**" on page 7–8.

Camera Configuration Window

The camera configuration window enables you to configure camera settings such as camera names, IP addresses, recall speeds, and preset (shot) names.

To access the camera configuration window:

- Tap the **Config** button.

The **Config** window includes the following tabs:

- "**Cameras Tab**" on page 7–5
- "**Recall Speed Tab**" on page 7–6
- "**Preset Names Tab**" on page 7–7

Cameras Tab

Figure 7.1 shows the **Cameras** tab.

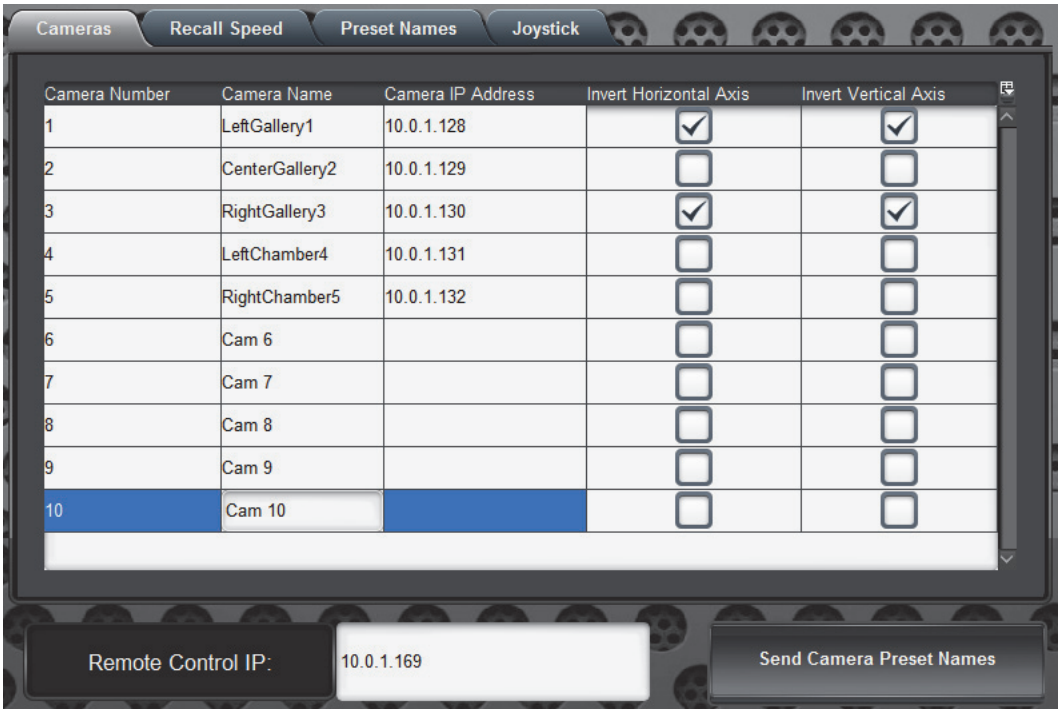


Figure 7.1 *Cameras Tab*

The **Cameras** tab includes the following settings and buttons:

Setting or Button	Description
Camera Number	The number of the camera being controlled. This is not editable. Each row in the table represents one camera. **IMPORTANT:** If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that each camera in the system has a unique camera number. For example, if your system includes five Panasonic cameras and five CamBot cameras, you might number the Panasonic cameras as 1, 2, 3, 7, and 9, and number the CamBot cameras as 4, 5, 6, 8, and 10. The camera numbers you assign here must correspond with the **Camera Key** numbers in the LCS panel configuration (**Config** interface, **Cameras** tab).
Camera Name	Specify a meaningful name for the camera.
Camera IP Address	Specify the IP address of the camera. Every camera must have a unique IP address. **IMPORTANT:** If you are configuring cameras for use in a Ross Video Legislative Control System (LCS) that includes more than one type of camera (Panasonic, Sony, CamBot), you must ensure that all camera IP addresses in the system are unique.
Invert Horizontal Axis	Reverses the direction the camera pans when manipulated by a joystick or the Camera Control window. Use this option if the camera is mounted in an inverted position.
Invert Vertical Axis	Reverses the direction the camera tilts when manipulated by a joystick or the Camera Control window. Use this option if the camera is mounted in an inverted position.

Setting or Button	Description
Remote Control IP	Specify the IP address of the Panasonic AW-RP120 control console (joystick console), if present. A joystick console is not required to use Panasonic camera control panel.
Send Camera Preset Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them. **Tip:** Preset names are defined on the Preset Names tab.

Recall Speed Tab

Figure 7.3 shows the **Recall Speed** tab.

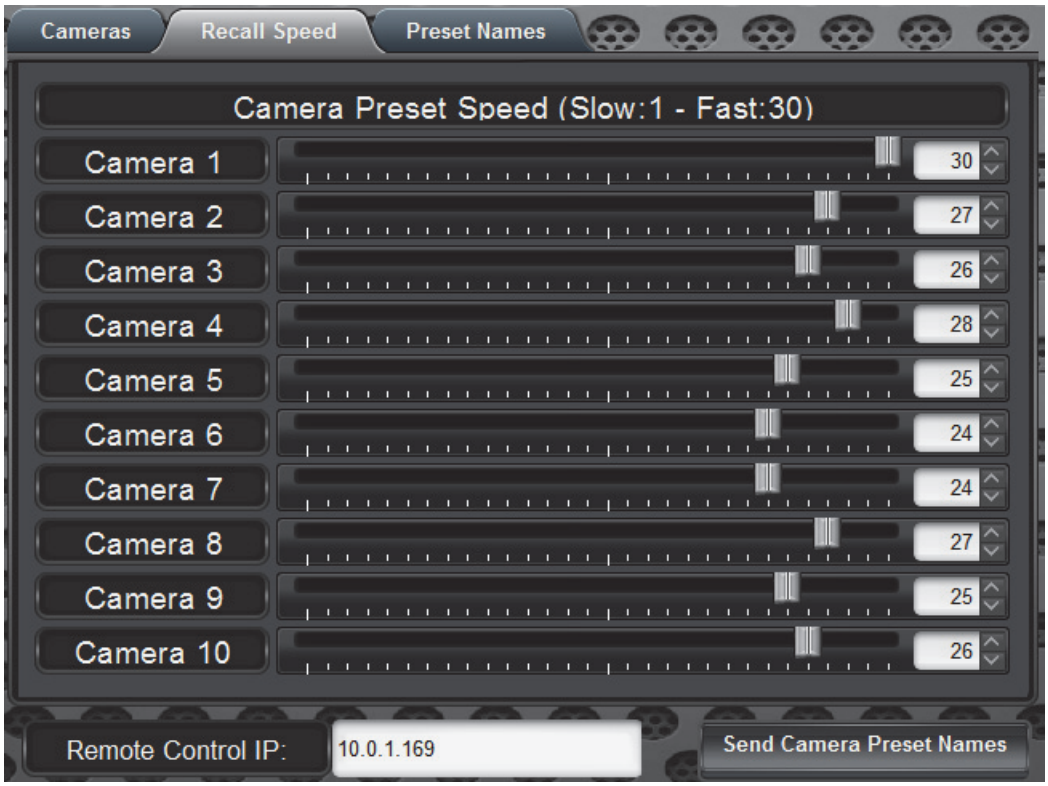


***Figure 7.2** Recall Speed Tab*

The **Recall Speed** tab includes the following settings and buttons:

Setting or Button	Description
Camera preset speeds	Do one of the following to set the speed of each camera: • Tap and drag the speed slider. The speed is shown in a box to the right of the slider. • Type a number in the speed box to the right of the slider. • Tap the up and down arrows beside the speed box. **Tip:** Higher numbers represent faster speeds

Setting or Button	Description
Remote Control IP	Specify the IP address of the Panasonic AW-RP120 hard IP control panel, if present. Hard control panel is not required to use Panasonic camera control panel.
Send Camera Preset Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them. **Tip:** Preset names are defined on the Preset Names tab.

Preset Names Tab

Figure 7.3 shows the **Preset Names** tab.

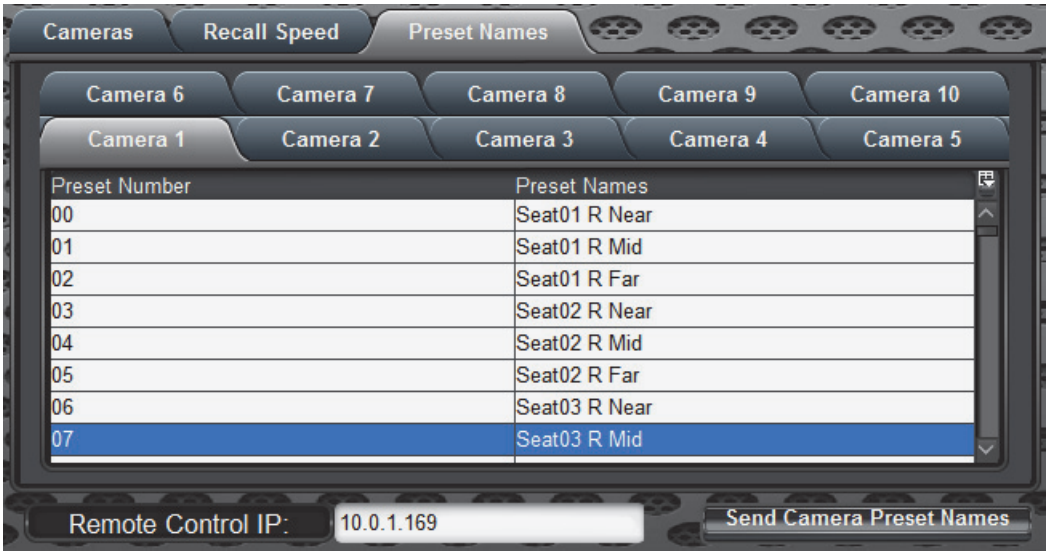


Figure 7.3 *Preset Names Tab*

The **Preset Names** tab includes the following settings and buttons:

Setting or Button	Description
Camera tabs	Each **Camera** tab corresponds to a camera in the system. Each camera has a separate list of presets. Tap a tab to set preset names for shots on a different camera.
Preset Names	Specify a meaningful name for the preset (also known as a shot). Examples of typical shot names include, “sitting”, “standing”, “close”, “far”, “tight”, and “wide”.
Remote Control IP	Specify the IP address of the Panasonic AW-RP120 hard IP control panel, if present. Hard control panel is not required to use Panasonic camera control panel.
Send Camera Preset Names	Tap this button to send the names of presets (shots) to other inter-connected DashBoard panels, such as a Legislative Control System (LCS) panel. Sending the preset names enables the other panel(s) to display them.

Camera Control Window

The camera control window enables you to operate cameras. You can move cameras, store and recall shots, and adjust shading controls.

To access the camera control interface:

- Tap the **Controls** button.

The **Controls** interface includes the following windows:

- "**Store/Recall Shots Window**" on page 7–8
- "**PTZ Controls Window**" on page 7–9
- "**Shading Controls Window**" on page 7–11

Store/Recall Shots Window

The **Store/Recall Shots** window enables you to store camera positions as shots for future recall. It also enables you to recall those shots. The **Store/Recall Shots** window is used as an operator interface for controlling cameras during a presentation.

To access the Store/Recall Shots window:

- From the camera control interface, tap the **Store/Recall Shots** button.

Figure 7.4 shows the **Store/Recall Shots** window.

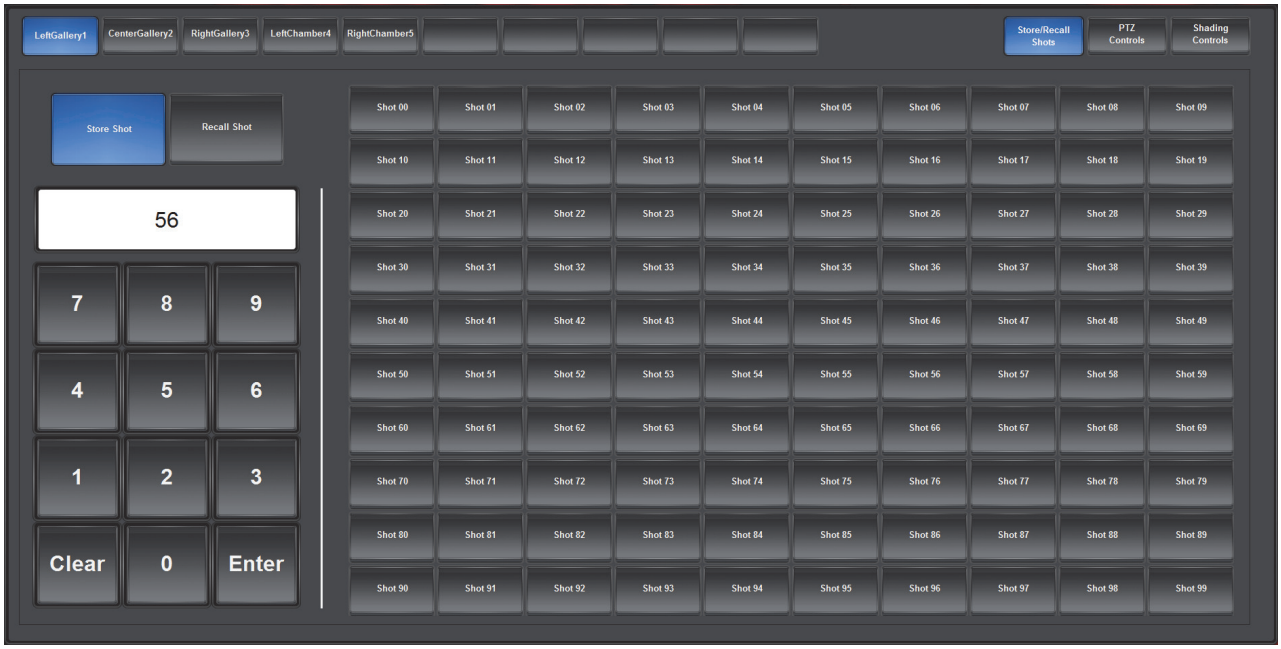


Figure 7.4 *Store/Recall Shots Window*

The **Store/Recall Shots** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **Store/Recall Shots** window includes one button per camera. Tap a button to select the camera to which you want to store shots, or from which you want to recall them.
Store Shot button	Tap the button to switch to **Store Shot** mode. In **Store Shot** mode, you can save the current camera position as a shot for future recall.

Setting or Button	Description
Recall Shot button	Tap the button to switch to **Recall Shot** mode. In **Recall Shot** mode, you can recall saved shots for the current camera. **Recall Shot** mode is used for camera operation.
Shot Selection keypad	Type a shot number and then press the **Enter** button on the keypad to store or recall a shot, depending on the current mode. Alternatively, you can type a number in the box above the keypad and then press the **Enter** button on the keypad. **Tip:** The **Shot** buttons can also be used to select a shot for storage or recall. There are 100 **Shot** buttons, numbered **00** to **99**. If you want to store or recall a shot higher than **99**, use the **Shot Selection** keypad.
Shot buttons	Tap a **Shot** button to store or recall a shot, depending on the current mode. **Shot** buttons are used for camera operation. **Tip:** Be aware of the current mode (**Store Shot** or **Recall Shot**) before you tap a **Shot** button. If you are in **Recall Shot** mode and tap a **Shot** button, the current camera position is stored as that shot. **Tip:** Panasonic cameras can store up to 100 shots. The camera control panel also uses virtual shots, enabling you to store up to 1000 shots in total. The camera control panel has 100 Shot buttons, numbered 00 to 99. If you want to store or recall a shot higher than 99, use the **Shot Selection** keypad. **Tip:** Shots 00 to 99 are stored on the Panasonic cameras. The camera control panel stores only shots 100 to 999. If you want all your shots to be saved in data files, use only shots above 99.

PTZ Controls Window

The **PTZ Controls** window enables you to manually adjust the position of the currently-selected camera. You can move cameras during a presentation, or move them into position to store a shot.

To access the PTZ Controls window:

- From the camera control interface, tap the **PTZ Controls** button.

Figure 7.5 shows the **PTZ Controls** window.

Figure 7.5 *PTZ Controls Window (showing Pan/Tilt positioner)*

The **PTZ Controls** window includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **PTZ Controls** window includes one button per camera. Tap a button to select which camera you want to move.
Positioner button	Switches between interfaces for adjusting pan and tilt positions: • **PAN and TILT sliders** — enable you to adjust pan and tilt separately. • **PAN & TILT Positioner** — enables you to adjust pan and tilt simultaneously.  ***Figure 7.6*** *Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)*

Setting or Button	Description
PAN and TILT sliders	Tap and drag the **PAN** or **TILT** slider handles to pan or tilt the camera. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **1** to **99**. Higher pan values pan right. Higher tilt values tilt upwards. Pan and tilt slider values are relative, not absolute. When you release the slider, the value shown returns to zero.
PAN & TILT Positioner	Tap and drag the cross-hairs within the white box until the camera is in the desired pan/tilt position. Positioner values are relative, not absolute. When you release the cross-hairs, they return to the center and the values return to **50**.
ZOOM slider	Tap and drag the **ZOOM** slider handle up or down to zoom the lens. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **1** to **99**. Higher values are towards telephoto, and lower values are towards wide. Zoom slider values are relative, not absolute. When you release the slider, the value shown returns to zero.
Auto Focus button	Tap to switch between automatic focus and manual focus control. When **Auto Focus** is **OFF**, you can adjust focus using the **FOCUS** slider.
FOCUS slider	Tap and drag the **FOCUS** slider handle up or down to focus the lens manually. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **1** to **99**. Higher values are towards far focus, and lower values are towards near focus. Focus slider values are relative, not absolute. When you release the slider, the value shown returns to zero. **Note:** If the **FOCUS** controls are shown but not available, tap the **Auto Focus** button below the slider to turn auto focus **OFF**. You cannot adjust focus if auto focus is **ON**.
Auto Iris button	Tap to switch between automatic and manual iris control. When **Auto Iris** is **OFF**, you can adjust the iris using the **IRIS** slider.
Iris slider	If you want to adjust the iris, tap and drag the **IRIS** slider handle up or down. Alternatively, you can type a value in the box below the slider, or use the up/down arrows beside the box to select a value. The value range is **1** to **99**. Higher values open the iris, and lower values close it. Iris slider values are absolute. When you release the slider, the value you set remains. **Note:** If the **IRIS** controls are shown but not available, tap the **Auto Iris** button below the slider to turn automatic iris **OFF**. You cannot adjust the iris if automatic iris is **ON**.

Shading Controls Window

The **Shading Controls** window enables you to adjust selected camera controls, including shading and shutter speed. Shading settings remain until changed again. They are not saved as part of the shots.

Note: For more information about the effect of these camera controls, refer to the documentation that came with your camera system.

To access the Shading Controls window:

- From the camera control interface, tap the **Shading Controls** button.

Figure 7.7 shows the **Shading Controls** window.

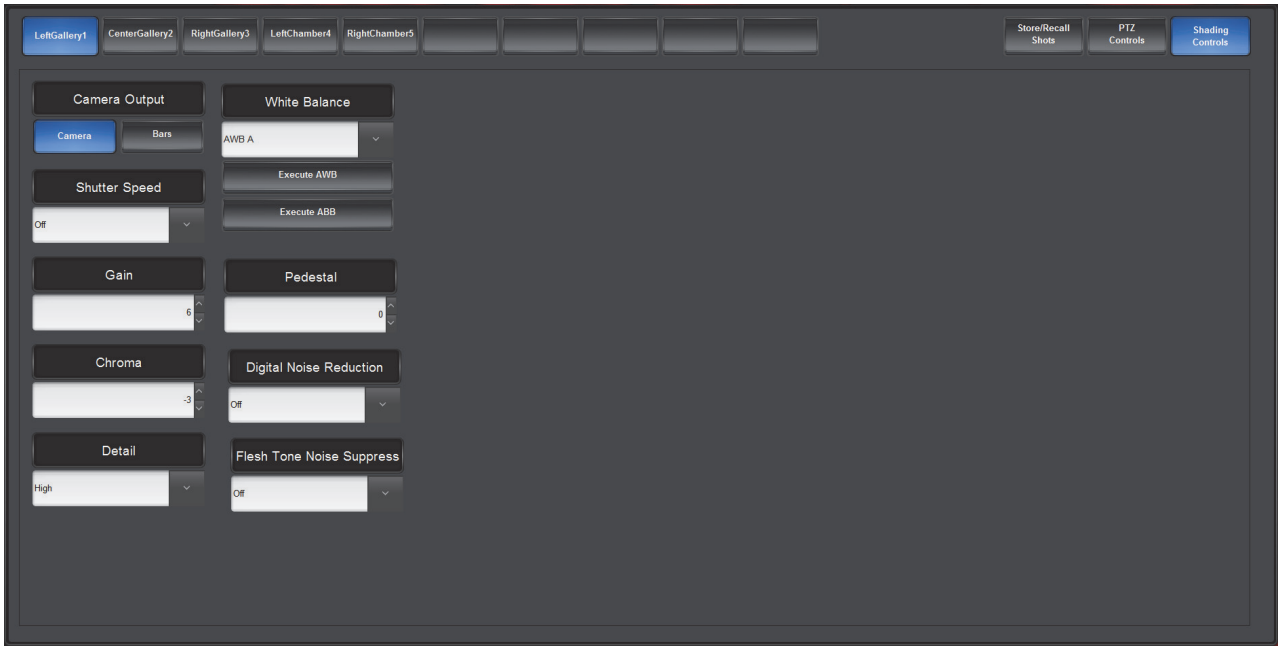


***Figure 7.7** Shading Controls Window*

The **Shading Controls** tab includes the following settings and buttons:

Setting or Button	Description
Camera buttons	The row of ten buttons across the top of the **Shading Controls** window includes one button per camera. Tap a button to select which camera you want to adjust.
Camera Output	Switches between normal camera output and test bars.
Shutter Speed	Select a shutter speed from the list, or select **Off**. **Tip:** When this setting is **Off**, the shutter will not operate, even if the **Shutter** button on the camera is pressed.
Gain	Specify a gain value. The range is 0 to 30.
Chroma	Specify a chroma value. The range is -3 to 3.
Detail	Select a level of image detail (sharpness) from the list. The options are **High**, **Low**, or **Off**. **Tip:** If **Detail** is set to **High**, detail is enhanced.
White Balance	Select a white balance option from the list, to perform a camera white balance: • **ATW** — Auto-Tracing White Balance. White balance adjusts continuously as you shoot. • **AWB A** — Auto White Balance A. Applies a saved white balance preset. • **AWB B** — Auto White Balance B. Applies a saved white balance preset. • **Preset 3200K** — Applies white balance for typical indoor (incandescent) conditions. • **Preset 5600K** — Applies white balance for typical outdoor (daylight) conditions.
Execute AWB button	Tap this button to perform a white balance. If **AWB A** or **AWB B** are selected, tapping **Execute AWB** also stores the white balance level in the preset shown (**AWB A** or **AWB B**).
Execute ABB button	Tap this button to perform an Automatic Black Balance (**ABB**).

Setting or Button	Description
Pedestal	Specify a black pedestal level. The range is **-150** to **150**.
Digital Noise Reduction	Select a level of digital noise reduction. The options are **Off**, **Low**, and **High**.
Flesh Tone Noise Suppress	Select a level of flesh tone noise suppression. The options are **Off**, **Low**, and **High**.