



## **Legislative Control System Commissioning Guide**

**Version 3.0**

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Our mission is to:

1. Provide a Superior Customer Experience
  - offer the best product quality and support
2. Make Cool Practical Technology
  - develop great products that customers love

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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

- Ross Part Number: **4500DR-002-3.0**
- Release Date: June 1, 2015.
- Software Issue: **3.0**

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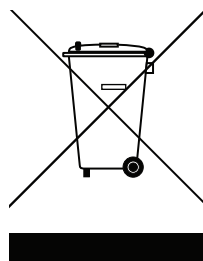
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# Introduction

This chapter contains the following sections:

- “**Overview**” on page 1–1
- “**Documentation Conventions**” on page 1–1
- “**Contacting Technical Support**” on page 1–2

## 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 HDMI converter (Ross Video SHC-9642).
- A supported delegate microphone system.
- 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:

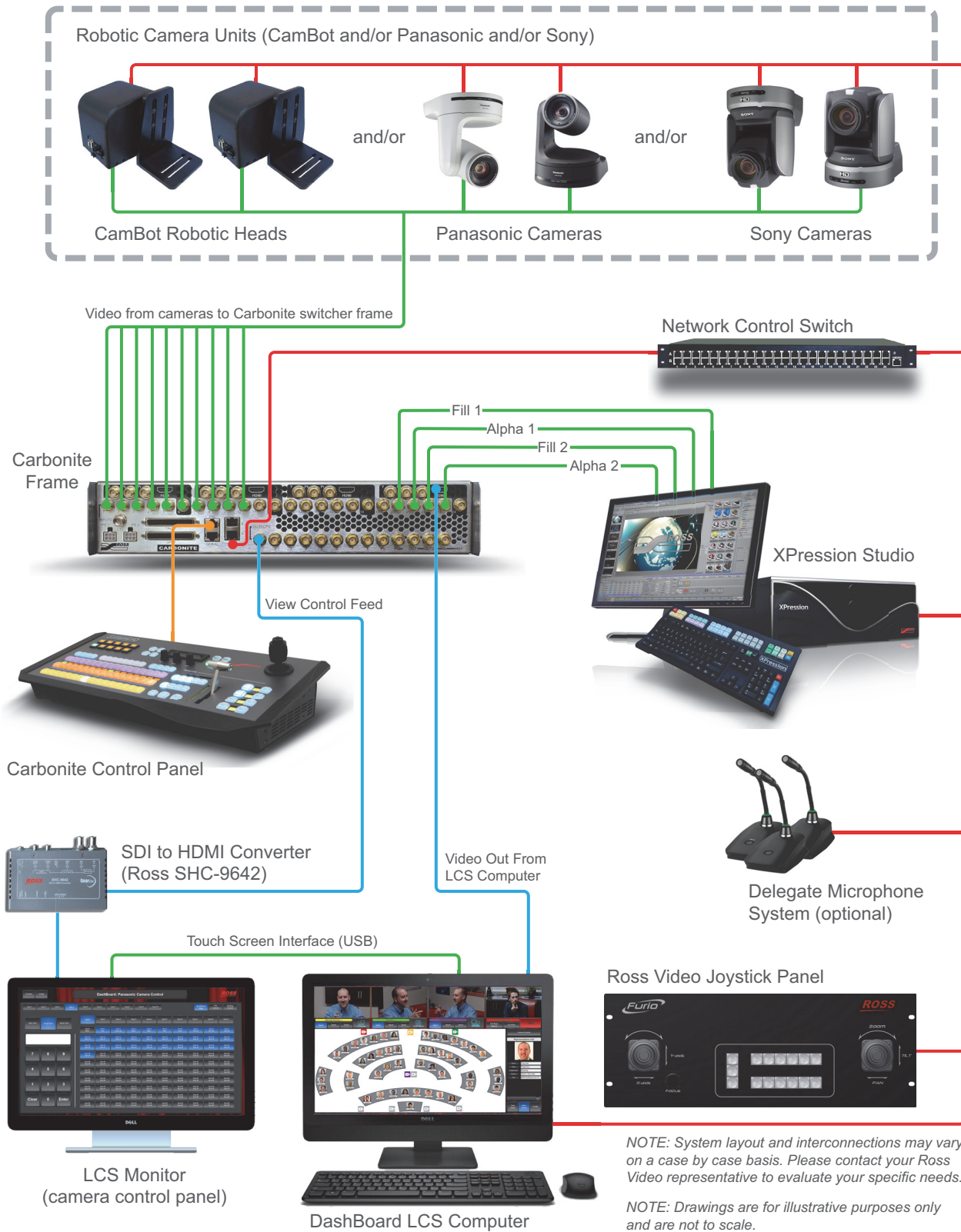


Figure 2.1 LCS System Architecture

# 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**” on page 3–1
- “**Preparing XPression Graphics for the LCS**” on page 3–3
- “**Installing DashBoard and the LCS Panel for Pre-Configuration**” on page 3–4
- “**Adding Images to the LCS**” on page 3–4
- “**Specifying General Settings**” on page 3–5
- “**Adding Cameras**” on page 3–6
- “**Enabling Microphone System Communication**” on page 3–12
- “**Configuring Representative Information**” on page 3–7
- “**Creating Representatives**” on page 3–8
- “**Creating Marks**” on page 3–9
- “**Repositioning Mark Icons and Camera Icons (Mark Layout View)**” on page 3–11
- “**Copying LCS Panel Data for Transfer to the Customer Site**” on page 3–13

## 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.

We recommend that you create or obtain a diagram of the legislative chamber, with all marks and camera locations clearly indicated. Marks are locations you may want to shoot and show on air, including representative seats, podiums, the speaker’s chair, chamber insignia, etc.

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

- Name and location of the legislative body (state and country).
- 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 project for bringing representative info on and off air in a lower-third graphic. The standard graphics project can be modified, or a custom graphics project can be created. Depending on customer requirements and project complexity, an additional DashBoard panel may be required to interact with the graphics project.

The LCS supports up to 20 customizable **Rep Info** data fields containing data about representatives. You can import the data into custom XPression graphics.

If custom graphics are being created, they must adhere to certain requirements. For more information, see “**Preparing 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.

If you want the entire background image to be visible at all times, the image should be the same size and have the same aspect ratio (width to height) as the area in which it is displayed. If you are using a 1080P format monitor, the display areas are as follows:

- › For the **Mark Layout** background image — 1611 pixels wide by 707 pixels high.
- › For the **Seat Layout** background image — 1433 pixels wide by 1067 pixels high.

If the background image is larger or smaller than the area in which it is displayed, it is automatically resized to fit. If the aspect ratio does not match, this results in distortion of the image. You can remedy this by positioning marks outside the default display area, thus expanding it.

- Information about each camera:
  - › Camera position
  - › Type of camera (brand/model). Confirm with Ross Video that your cameras and lenses are supported.
  - › Type of lens (to determine effective range, for shot planning purposes)
  - › Effective range of motion (to determine coverage, for shot planning purposes)
- Data about each representative:
  - › First Name
  - › Last Name
  - › Data for custom data fields, including data to be used for on-air graphics.
 

You can configure up to 20 custom data fields, and populate those fields with data about each representative. For example, you might create a field named **Party** to contain data about the political party affiliations of the representatives.

You need to know the names of the custom data fields you want to use, and have access to representative data to populate those fields.
- One head shot photo for each representative.

This image appears in the **Representative Info** area of the layout to help identify the selected representative.

It may also be used in icons in the Seat Layout and Mark Layout views. For each representative, the icon can be based on either the head shot image, or on a set of custom graphics.

The head shot image is not used in on-air graphics.

The image files must be either .png or .jpg format.

For best performance and a consistent visual appearance, make all the images the same size and keep them small. For best results, the image size should match the size used in the **Representative Info** area of the layout window:

- › For the **Mark Layout** view on a 1080p display — 155 pixels wide by 153 pixels high.
- › For the **Seat Layout** view on a 1080p display — 100 pixels wide by 98 pixels high.

**IMPORTANT:** Do not use large image files. If your images are large, use graphics software to reduce their file size before using them in the LCS.

- A set of three graphics to use as mark icons, if you are not planning to use representative head shots. Each graphic is associated with a state, and is only shown when the mark is in that state:
  - **Not Selected** — The mark is not selected for preview, and is not on-air.
  - **On Preview** — The mark has been selected and is in preview.
  - **On Air** — The mark is on-air.

Mark graphics are stored on the DashBoard LCS computer, in the **Images/Panel** folder. Place all mark graphic files in this folder.

The graphics files must be either .png or .jpg format. If necessary, DashBoard automatically shrinks the graphics to fit within the mark icon.

For best performance and a consistent visual appearance, make all the images the same size and keep them small. For best results, the image size should match the size used in the **Representative Info** area of the layout window:

- › For the **Mark Layout** view on a 1080p display — 155 pixels wide by 153 pixels high.
- › For the **Seat Layout** view on a 1080p display — 100 pixels wide by 98 pixels high.

**IMPORTANT:** Do not use large image files. If your images are large, use graphics software to reduce their file size before using them in the LCS.

## Preparing XPression Graphics for the LCS

This section describes how custom XPression graphics must be created to work properly with the LCS. If you plan to use the standard graphics project provided with LCS, you can skip this section.

### About the Standard XPression Graphics Project

This section describes some aspects of the default XPression project, and how XPression graphics must be configured 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 **Program** scene is taken to air. Both scenes include representative name 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.

### XPression Project Requirements

To work with the LCS panel, the XPression project must be configured as follows:

- The **Program** scene can use any **TakeID** except **03**.  
By default, the standard graphics project uses **TakeID 02**.  
Note the **TakeID**. You will need it for LCS panel configuration later.
- The **Preview** scene must use **TakeID 03**.
- The **Program** scene 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.

### Using Rep Info Data in an XPression Graphics Project

You can import custom Rep Info data into your graphics project. Rep Info data fields are created in the LCS panel, and are typically used to store representative data you might want to show on air, such as political parties, titles, districts, etc.

**Tip:** **First Name** and **Last Name** data is available by default. You do not need to create RepInfo data fields for this data.

When you create your XPression graphics, you can include data fields that will later be populated with RepInfo data through Ross Video's Datalinq feature.

During on-site commissioning, you establish a connection between the data fields in your XPression graphics and the RepInfo data fields in the LCS panel. For more information, see “**Setting Up Communication Between XPression and the LCS**” on page 4–7.

## 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>

**IMPORTANT:** At the time of publication, the minimum supported version of DashBoard to be used with LCS v3.0 is **DashBoard v7.0**.

2. Consult the *DashBoard User Guide (8351DR-004-xx)* to confirm that your computer meets the system requirements for installing DashBoard.
3. Follow the installation instructions in the *DashBoard User Guide (8351DR-004-xx)* 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 the C:\ directory, 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.

## Adding Images to the LCS

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

Each LCS panel uses the following types of images:

- **Background image** — a photo or diagram of the legislative chamber, showing the view from above. The image must be either .png or .jpg format.

If the background image is larger or smaller than the area in which it is displayed, it is automatically resized to fit. If the aspect ratio does not match, this results in distortion of the image.

- **Head Shot photos** — one small photo per representative.

This image appears in the **Representative Info** area of the layout to help identify the selected representative.

It may also be used in icons in the Seat Layout and Mark Layout views. For each representative, the icon can be based on either the head shot image, or on a set of custom graphics.

The head shot image is not used in on-air graphics.

The image files must be either .png or .jpg format.

For best performance and a consistent visual appearance, make all the images the same size and keep them small. For best results, the image size should match the size used in the **Representative Info** area of the layout window:

- › For the **Mark Layout** view on a 1080p display — 155 pixels wide by 153 pixels high.
- › For the **Seat Layout** view on a 1080p display — 100 pixels wide by 98 pixels high.

**IMPORTANT:** Do not use large image files. If your images are large, use graphics software to reduce their file size before using them in the LCS.

### To store the images:

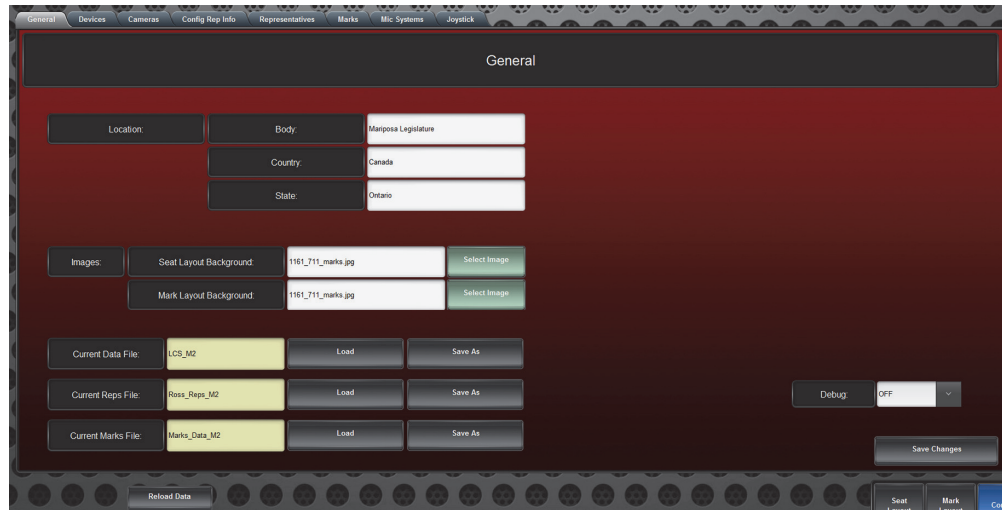
- On the DashBoard LCS Computer, save background and head shot images in the **C:\LCS\Images\Photos** folder.

## 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.



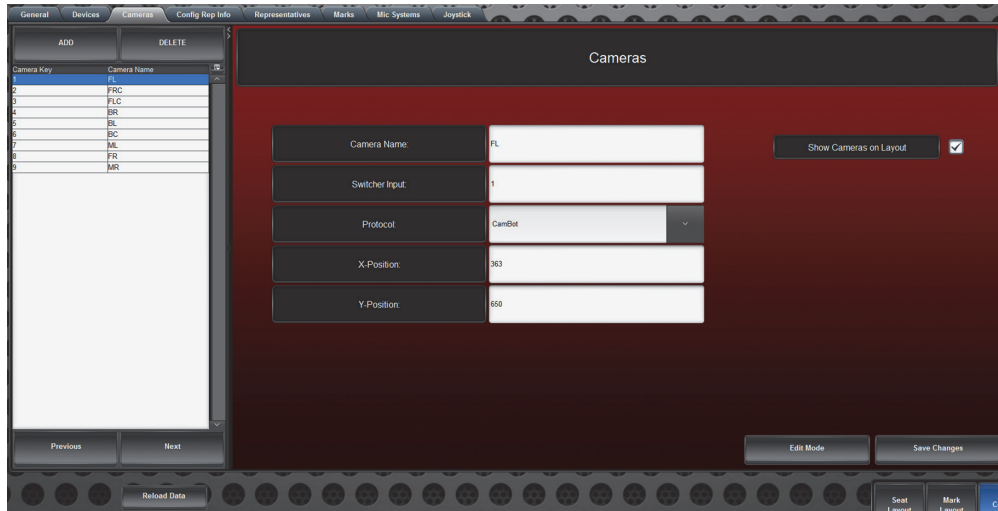
4. In the **Location** area, specify data about your legislature:
  - **Body** — Type the name of your legislative body
  - **Country** — Type the name of your nation.
  - **State** — Type the name of the state, province, region, or territory where the legislature is located.
5. In the **Images** area, 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. Tap the **Save Changes** button.

## Adding Cameras

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. If you want camera icons to appear on the layout, select the **Show Cameras on Layout** check box. This setting applies to all camera icons. They are either all shown or all not shown.
3. Tap the **ADD** button. A new camera entry appears in the list.
4. In the **Camera Name** box, type a name for the camera.
5. 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.
6. In the **Protocol** list, select the camera type.
7. If you want an icon for this camera to appear on the layout, do the following:
  - a. Select the **Show/Hide Cameras on Layout** check box.
  - b. Do one of the following to set the position of the camera icon on the layout:
    - If your LCS uses the **Mark Layout** view:
      - › Tap the **Save Changes** button.
      - › Note the **Camera Name** and then tap the **Edit Mode** button.
      - › Tap the camera icon and then tap where you want to place it.
      - › Use the green directional arrows in the **Edit Mode** area to position the icon precisely.
      - › Tap **Exit**.
    - If your LCS uses the **Seat Layout** view:
      - › In the **X-Position** box, specify the horizontal position, in pixels. A value of **0** positions the camera icon at the far left side.
      - › In the **Y-Position** box, specify the vertical position, in pixels. A value of **0** positions the camera icon at the top.
      - › Tap **Save Changes**.

- › Tap the **Seat Layout** button and then check whether the camera icon is in the correct position.
  - › Tap the **Config** button.
  - › Keep changing and checking the **X-Position** and **Y-Position** values until the camera icon is in the correct position on the Seat Layout.
8. Tap the **Save Changes** button.
  9. Repeat **Steps 3 and 8** to add more cameras.

## Configuring Representative Information

You can define up to 20 custom data fields about representatives. These data fields can be populated with data for each representative. For example, you might add “Political Party” and “Portfolio” data fields. Representative data can be used in on-air graphics.

### To configure representative information data fields:

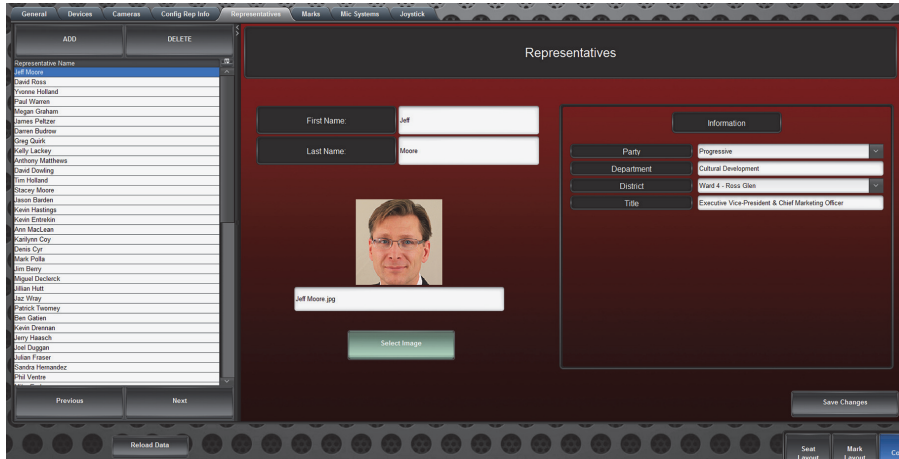
1. In the LCS panel, tap the **Config** button.
2. On the **Config Rep Info** tab, highlight the **Field Name** of the data field you want to configure.
3. In the **Field Name** box, type the name of the field.
4. In the **Field Type**: box, select one of the following data types:
  - **Text** — The data can be any text string.
  - **List** — The data is selected from a list of valid data items.
5. If you specified **List** as the **Field Type**, define the list of valid data items:
  - a. Click **ADD**.  
A new list item appears.
  - b. Tap the new item, and then type the valid data string.
  - c. Continue adding data items as required.
  - d. When you have finished adding data items, tap the **Save Changes** button before doing anything else.
6. Select the **Use Field** check box.
7. Tap **Save Changes**.
8. Configure additional data fields as required.

# Creating Representatives

## 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.
4. Do one of the following to specify a head shot image:
  - Tap the **Select Image** button, tap the image you want to use, and then tap **Accept**.
  - In the box above the **Select Image** button, type the filename for the image. Include the file extension. For example, **DavidRoss.jpg**.  
**Tip:** Image files are stored in the **C:\LCS\Images\Photos** folder.
5. In each row of the **Information** table, define data about the representative, as applicable:
  - If the data box has a down arrow, tap it to expand the list of data options, and then tap the correct value.
  - If the data box does not have a down arrow, tap the data box and then type the data value.
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 can represent the positions of representative seats, podiums, the speaker's chair, areas of the public gallery, etc.

This section describes how to configure default mark settings and how to create marks.

### Configure Default Mark Settings

Default mark settings are settings that affect the default visual appearance of marks on the layout. Some of these settings can be overridden on a mark-by-mark basis.

You can specify a set of three default graphics to use as mark icons. Each graphic is associated with a state, and is only shown when the mark is in that state:

- **Not Selected** — The mark is not selected for preview, and is not on-air.
- **On Preview** — The mark has been selected and is in preview.
- **On Air** — The mark is on-air.

For a given mark, default graphics are used only if ALL of the following are true:

- The **Rep Image if Available** box for the mark is clear, or there is no representative head shot image available.
- No custom icon graphic has been specified for the mark, for the required state. For example, if the **On Air** box for the mark contains a graphic, then it is shown instead of the default **On Air** graphic.

#### To configure default mark settings:

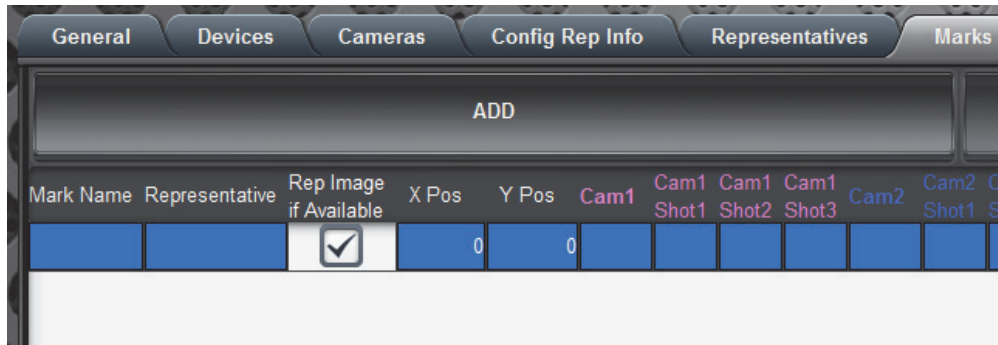
1. In the LCS panel, tap the **Config** button, and then tap the **Marks** tab.  
The **Default Marks Settings** area is on the right side of the LCS panel.
2. In the **Representative Size** area, set the default size of icons for marks that use a representative head shot:
  - a. Set the **Height** of the mark icons, in pixels
  - b. Set the **Width** of the mark icons, in pixels
3. In the **Camera Size** area, set the default size of camera icons:
  - a. Set the **Height** of the camera icons, in pixels
  - b. Set the **Width** of the camera icons, in pixels
4. In the **Mark Settings** area, set the default size of icons for marks that use graphics:
  - a. Set the **Height** of the mark icons, in pixels
  - b. Set the **Width** of the mark icons, in pixels
5. If you want to specify a custom set of graphics for the default appearance of icons, in the **Mark Settings** area, tap **Default Mark Images**.  
A graphics selection interface appears, showing available images at the top, and three graphic selection areas at the bottom.
  - a. In each of the three graphic selection areas, (**Not Selected**, **On Preview**, and **On Air**), select the option button below the graphic, and then tap the required graphic.
  - b. Tap the **Accept** button to save your changes, or tap the **Cancel** button to discard them.
6. Tap **Save Changes**.

## Create Marks

### To create marks:

1. In the LCS panel, tap the **Config** button.
2. On the **Marks** tab, tap the **Engineering** button.
3. Tap the **ADD** button.

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



4. In the **Mark Name** box, type the name of the mark.
5. In the **Representative** box, select the representative who sits at the mark location.  
**Tip:** If the mark is not associated with a representative, select the blank entry at the top of the list.
6. If you want to use the representative's head shot photo in the icon for this mark, select the **Rep Image if Available** check box.
7. Do one of the following to set the position of the mark:
  - If your LCS panel uses the **Seat Layout** view:
    - › In the **X Pos** box, specify the horizontal position, in pixels.  
A value of **0** positions the mark icon at the far left side.
    - › In the **Y Pos** box, specify the vertical position, in pixels.  
A value of **0** positions the mark icon at the top.
    - › Tap the **Seat Layout** button and then check whether the mark icon is in the correct position.
    - › Tap the **Config** button to return to the **Marks** tab.
    - › Keep changing and checking the **X Pos** and **Y Pos** values of the mark until the icon is in the correct position on the Seat Layout.
  - If your LCS panel uses the **Mark Layout** view:
    - › Tap the **Save Changes** button.
    - › Note the **Representative Name** (or **Mark Name** if there is no **Representative Name**), and then tap the **Edit Mode** button.
    - › Tap the mark icon and then tap where you want to place it.
    - › Use the green directional arrows in the **Edit Mode** area to position the icon precisely.
    - › Tap **Exit**.
8. In the **Mic ID** box, type the string that the delegate microphone system sends to indicate that the microphone at the mark location is activated.

**Note:** This applies only to systems that include a delegate microphone system used for selecting previews and/or triggering video transitions.

9. If you want to specify a custom set of icon graphics for this mark, double-click the **Not Selected** box for the mark.

A graphics selection interface appears, showing available images at the top, and three graphic selection areas at the bottom.

- a. In each of the three graphic selection areas, (**Not Selected**, **On Preview**, and **On Air**), select the option button below the graphic, and then tap the required graphic.
- b. Tap the **Accept** button to save your changes, or tap the **Cancel** button to discard them.

10. Tap the **Save Changes** button.

11. Repeat **Steps 3 to 8** for each mark in the chamber.

## Repositioning Mark Icons and Camera Icons (Mark Layout View)

This section applies only to LCS panels that use the **Mark Layout** view.

When you create marks, it is usually most efficient to skip the step of specifying their positions individually, and position them all at once later. You can use a graphic interface to reposition mark icons and camera icons at any time.

### To reposition mark icons and camera icons:

1. In the LCS panel, tap the **Config** button.
2. On the **Marks** tab, at the bottom of the **Default Mark Settings** area, tap the **Edit Mode** button.
3. Tap an icon you want to move, and then tap where you want to place it.
4. Use the green directional arrows in the **Edit Mode** area to position the icon precisely.
5. Continue moving icons until they are all in the correct positions.
6. When you are finished repositioning icons, tap the **Exit** button.

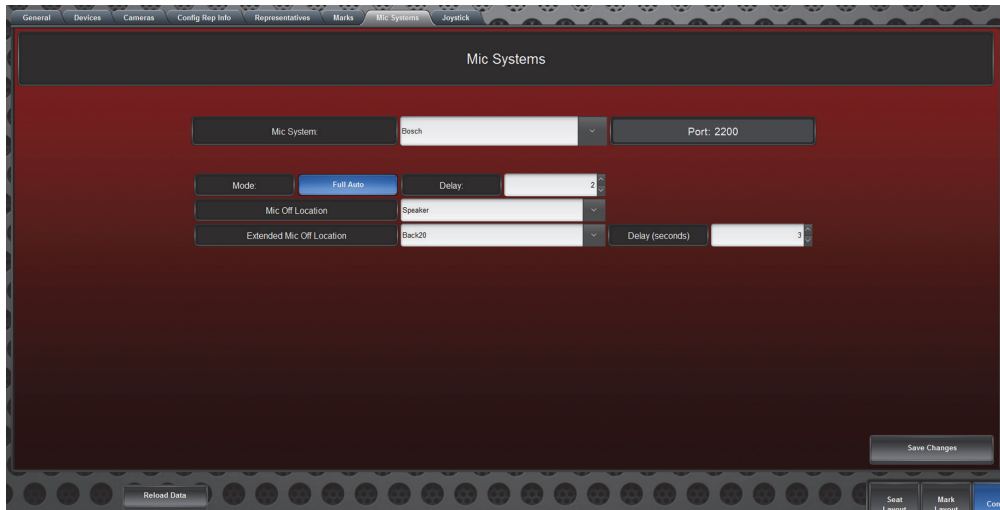
## Enabling Microphone System Communication

Enable the LCS panel to communicate with your delegate microphone system (if applicable).

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

### To enable microphone system communication:

1. In the LCS panel, tap the **Config** button, and then tap the **Mic Systems** tab.



1. From the **Mic System** list, select the type of delegate microphone system you are using.
  - **NONE** — Select this option if you want to select previews manually.
  - **IRC** — Select this option if you have an International Roll Call (IRC) microphone system.
  - **Bosch** — Select this option if you have a Bosch microphone system.
3. If you have a Bosch microphone system, configure the LCS to work with it, as follows:
  - a. Tap the **Mode** button to select an operating mode:
    - **Semi-Auto** — The Bosch system selects preview shots, but an operator must take them to air.
    - **Full Auto** — The Bosch system selects a preview shot and takes it to air. No operator is required.
  - b. If you have a Bosch microphone system using **Full Auto** mode, in the **Delay** box specify a delay period in seconds.

When a microphone goes live, the system pauses for the number of seconds specified in the **Delay** box before taking the preview shot to air.

**IMPORTANT:** Set the delay to be longer than the longest shot recall. If a shot recall takes longer than the delay, the camera may still be moving when the shot goes to air.
  - c. Specify how the LCS should react when microphones turn off:
    - If you want a certain mark to go on-air when microphones turn off, select the mark from the **Mic Off Location** list.

For example, you may want the LCS to switch to a view of the Speaker's Chair. The mark's primary camera and primary shot are used, unless that camera is already in use.
    - If you do not want the system to immediately react to microphones turning off, select the **Do Not Move Camera** option from the **Mic Off Location** list.

- d. Specify how the LCS should behave when microphones remain off for a specified period of time:
- If you want a certain mark to go on-air when microphones remain off for a certain period of time, select the mark from the **Extended Mic Off Location** list, and then specify the delay period in the **Delay (seconds)** box.  
For example, when proceedings appear to be over, you may want to switch to a wide view of the legislature. The mark's primary camera and primary shot are used, unless that camera is already in use.  
**Note:** If you set both a **Mic Off Location** and an **Extended Mic Off Location**, the delay for the **Extended Mic Off Location** starts after the transition for the **Mic Off Location** is complete.
  - If you do not want the system to react to microphones remaining off, select the **Do Not Move Camera** option from the **Extended Mic Off Location** list.

## Copying LCS Panel Data for Transfer to the Customer Site

When you are finished pre-commissioning tasks in the LCS panel, you can save the data and then transfer it to the customer site.

**Note:** This section does not apply if you performed the pre-commissioning tasks on the DashBoard LCS computer being commissioned.

### To save LCS panel data:

1. In the LCS panel, tap the **Config** button.
2. Tap the **General** tab.

At the bottom of the tab, there are three rows: **Current Data File**, **Current Reps File**, and **Current Marks File**.

3. In the **Current Data File** row, tap the **Save As** button.

The **Save LCS Data File As** dialog box appears.

4. In the **Filename** box, type a new name for the LCS data file, and then tap the **Save As** button.

Note the name of the LCS data file. You will need it for on-site commissioning.

5. In the **Current Reps File** row, tap the **Save As** button.

The **Save Representatives File As** dialog box appears.

6. In the **Filename** box, type a new name for the representatives data file, and then tap the **Save As** button.

Note the name of the representatives data file. You will need it for on-site commissioning.

7. In the **Current Marks File** row, tap the **Save As** button.

The **Save Marks File As** dialog box appears.

8. In the **Filename** box, type a new name for the marks data file, and then tap the **Save As** button.

Note the name of the marks data file. You will need it for on-site commissioning.

### To transfer LCS panel data:

1. On the DashBoard LCS computer, navigate to the LCS installation location.

**Tip:** The default installation location is **C:\LCS**.

2. In the **LCS** folder, create a new folder.

3. Copy the following folders (including their contents) from the LCS folder to the new folder:
  - The **Data** folder
  - The **Marks** folder
  - The **Representatives** folder
  - The **Images** folder.
4. Rename the new folder as **LCS**, and save it to a mobile storage device, such as a 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:**

- “**Setting up Equipment**” on page 4–1
- “**Installing and Configuring MasterPanel Software**” on page 4–2
- “**Preparing the LCS Panel and Camera Control Panel(s)**” on page 4–4
- “**Connecting Carbonite to Cameras, XPression, and the LCS**” on page 4–6
- “**Setting Up Communication Between Carbonite and the LCS**” on page 4–6
- “**Setting Up Communication Between XPression and the LCS**” on page 4–7
- “**Establishing a Device Connection to the Joystick Server**” on page 4–8
- “**Planning Shots and Assigning them to Marks**” on page 4–8
- “**Configuring Cameras and Creating Shots in Camera Control Panels**” on page 4–10
- “**Backing Up LCS Data**” on page 4–10

## Setting up Equipment

**Set up the following equipment:**

- Carbonite switcher (control panel and frame)
- XPression Studio graphics system  
If you plan to use a custom XPression graphics project, copy the project onto the XPression computer.
- 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

This section applies if your LCS includes CamBot robotics heads and/or a Ross Video joystick panel.

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

You must configure MasterPanel to work with the LCS, and ensure one or more CamBot shot list files exist.

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**, **camera name**, and **shot capacity** for each camera in your system.

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

1	192.168.0.90	1	1	CAM1	400
↑	↑	↑	↑	↑	↑
Camera Number	IP Address	Camera Name	Shot Capacity		

**IMPORTANT:** Set the shot capacity to **400**. This is the maximum number of shots for CamBot units.

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

**Note:** The maximum number of cameras supported by the LCS is ten.

**IMPORTANT:** 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.

**IMPORTANT:** 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 **400**.

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 **save changes and exit** button.

11. In the **Configuration** window, tap the **remote** button until it reads "**remote: Ross Video**".

12. Tap the **save config settings** button.

13. Tap the **exit** button.

14. Close the **CamBot Control Panel** window.

**To ensure that one or more CamBot shot list files exist:**

1. Navigate to the C:\Cambotics folder.
2. If the **Cambotics** folder contains any files with a **.dat** extension, such as **file1.dat**, then CamBot shot list files exist.  
Skip the remaining steps.
3. Launch MasterPanel (C:\Cambotics\masterpanell.exe).
4. In the **CamBot Control Panel** window, if the **System** button is visible, tap it.
5. Tap the **File Save** button.  
The **File Save** window appears.
6. In the **File Save** window, tap a **file** button.  
The button turns red.
7. Tap the **Save File** button.  
A message notifies you that the file has been saved.
8. In the message box, tap **OK**.
9. Tap the **Return** button.
10. Minimize the **CamBot Control Panel** window, but do not close it.  
MasterPanel must be running whenever you use the LCS.

## Preparing the LCS Panel and Camera Control Panel(s)

By default, Dashboard and the LCS panel files, including camera control panel files, are pre-installed on the Dashboard LCS Computer. If newer versions of versions Dashboard, the LCS panel files, or the camera control panel files are required, Ross Video may ask you to install them.

**Note:** Each camera control panel is designed to control one type of camera (CamBot, Sony, or Panasonic). If your system includes multiple camera types, you need multiple camera control panels.

### Install Dashboard

**To install Dashboard:**

1. Download the required version of Dashboard software and the Dashboard User Guide from the Ross Video website: <http://www.rossvideo.com/control-systems/Dashboard/index.html>  
**IMPORTANT:** At the time of publication, the minimum supported version of Dashboard to be used with LCS v3.0 is **Dashboard v7.0**.
2. Follow the installation instructions in the *Dashboard User Guide (8351DR-004-xx)* to remove any previous versions of Dashboard, and then to install the new one.

### Install the LCS Panel

**To install the LCS Panel:**

1. On the Dashboard LCS computer, navigate to the C:\ directory.
2. If the C:\ directory contains an **LCS** folder, do one of the following:
  - If you want to keep the old LCS panel and data for future reference, rename the folder.
  - If you do not want to keep the old LCS panel and data, delete the **LCS** folder.
3. Extract the **LCS** folder from the zip file, and place it in the C:\ directory.

## Install Camera Control Panel(s)

### To install a camera control panel:

1. On the DashBoard LCS computer, navigate to the **C:\** directory.
2. In the **C:\** directory, find the folder for the type of camera panel you are installing:
  - **CamBotCamera** folder — contains files to control CamBot robotic heads and cameras mounted to them.
  - **Panasonic HE-120** folder — contains files to control Panasonic cameras.
  - **Sony BRC-900** folder — contains files to control Sony cameras.
3. Do one of the following:
  - If you want to keep the old camera control panel files and data for future reference, rename the folder.
  - If you do not want to keep the old camera control panel files and data, delete the folder.
4. Extract the new camera control folder from the zip file, and place it in the **C:\** directory.
5. Start DashBoard.
6. From the **Views** menu, tap **File Navigator**.
7. On the **File Navigator** tab, tap the green + symbol.

The **Browse for Folder** dialog appears.
8. Navigate to the camera control folder located in the **C:\** directory, and then tap **OK**.
9. In the **File Navigator** tree, expand the folder to show the **.grid** file (**CamBot.grid** or **PanasonicCamera.grid**, or **SonyCamera.grid**).
10. To open the camera control panel anytime, double-tap the **.grid** file.

The camera control panel will always be available from the DashBoard File Navigator.
11. If your system requires multiple camera control panels, repeat these steps for each type of camera control panel.

## Transfer LCS Data

If you pre-configured the LCS panel on a different computer and saved the LCS panel files on a mobile storage device such as a USB stick, you must transfer them to the DashBoard 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 DashBoard LCS Computer:

1. On the DashBoard LCS computer, navigate to the **C:\** directory.
2. Copy the **LCS** folder and save it using a new name, to make it a backup of the LCS panel as originally installed.

For example, you might rename the folder “**LCS\_backup**”.
3. In the **C:\LCS** folder, delete the following folders and their contents:
  - **Data**
  - **Images**
  - **Marks**
  - **Representatives**
4. Insert the USB stick that contains the saved LCS panel files, and navigate to its **LCS** folder.
5. Copy the contents of the USB stick’s **LCS** folder, and paste them into the **C:\LCS** directory on the DashBoard LCS computer.

6. When the transfer is complete, remove the USB stick.

**To add the LCS panel to the DashBoard File Navigator:**

1. On the DashBoard 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 the **C:\** directory, 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:**

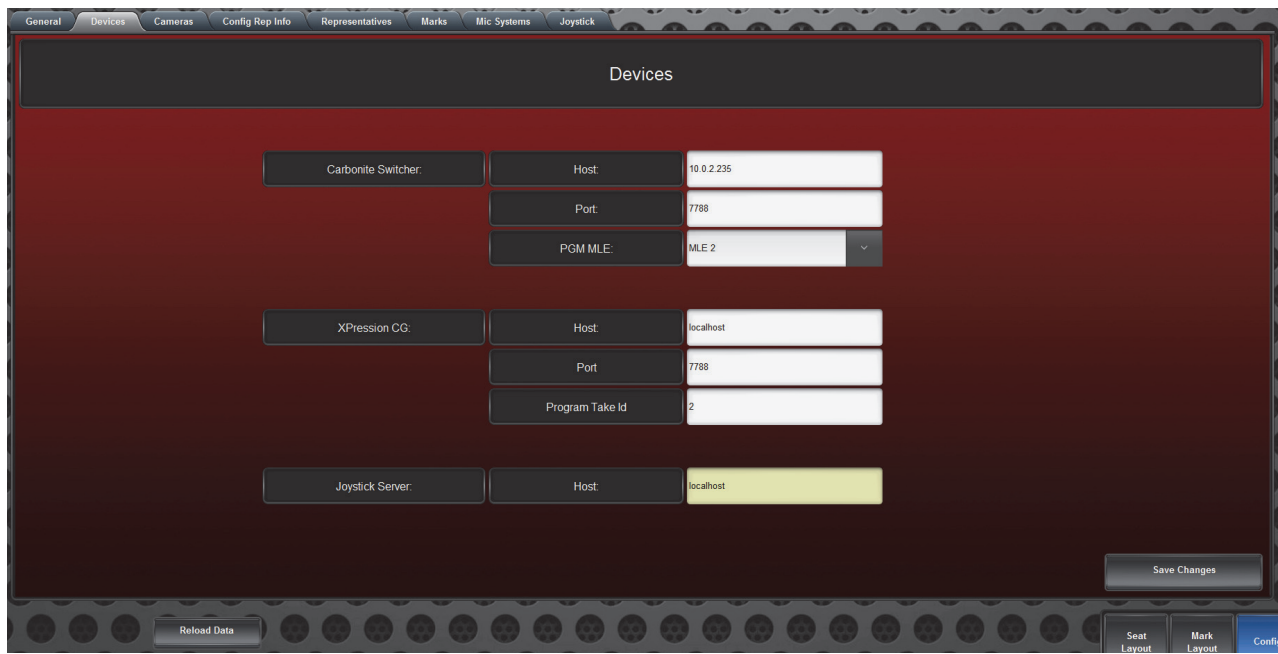
1. Connect the cameras to inputs on the Carbonite frame, starting at **INPUT 1** and continuing with **INPUT 2**, **INPUT 3**, and so on.  
**Tip:** If you already created cameras in the LCS panel and specified crosspoints for them, connect the actual cameras to the corresponding switcher inputs.
2. 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 DashBoard 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 and the LCS

**To set up communication between Carbonite and the LCS:**

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. Tap the **Save Changes** button.

Leave the LCS panel open for the next procedure.

## Setting Up Communication Between XPression and the LCS

### To set up communication between XPression and the LCS:

1. On the **Devices** tab, specify the **Host IP** address and **Port** number for the **XPression CG**.
2. In the **Program Take ID** box, specify the **Take ID** number used by the **Program** scene in your XPression graphics project.
 

**Tip:** The standard graphics project included with the LCS uses **Take ID 2**.
3. Tap the **Save Changes** button.
 

Leave the LCS panel open for the next procedure.
4. On the XPression computer, open the DataLinq server interface.
 

The interface shows a list of **DataLinq Sources**.
5. Click **Add New**.
 

The **Select DataLinq Source** dialog box appears.
6. Select **DashBoard DataLinq Source**, and then click **OK**.
 

The **Connection Options** dialog box appears.
7. In the **Host** box, type the IP address of the DashBoard LCS computer, and then click **OK**.
 

The DataLinq to the LCS is established.
8. If you are using a custom XPression graphics project that imports **RepInfo** data fields from the LCS panel, use DataLinq to associate the data fields to the graphical objects that require them:
  - a. In your XPression project, select the object that requires RepInfo data.
  - b. In the **Object Inspector** pane, on the **Data Sources** tab, select **DataLinq** and then click **Set**.
  - c. In the dialog box that appears, from the **DataLinq** list, select the LCS DataLinq source.

- d. Click **Browse**.
- e. In the dialog box that appears, select the desired data field, and then click **OK**.

The data field is linked to the graphic.

Repeat **Steps a to e** for each graphic object that requires RepInfo data.

## Establishing a Device Connection to the Joystick Server

This procedure applies only to systems that include a Ross Video joystick panel.

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 **Robots**. The name doesn't matter.

5. Tap **Finish**.

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

Leave the LCS panel open for the next procedure.

## 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.

**Note:** The terms “**preset**” and “**shot**” are used interchangeably.

### 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 determining which cameras to use for each mark. If you create a worksheet listing mark names, 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:** 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 on-air when the operator selects a mark 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, tap the **Engineering** button.

Mark Name	Representative	Rep Image if Available	X Pos	Y Pos	Cam1	Cam1 Shot1	Cam1 Shot2	Cam1 Shot3	Cam2	Cam2 Shot1	Cam2 Shot2	Cam2 Shot3	Cam3	Cam3 Shot1	Cam3 Shot2
Speaker	David Ross	<input checked="" type="checkbox"/>	767	617	2	1	2	3	3	1	2	3	1	1	2
Exec01	James Peltzer	<input checked="" type="checkbox"/>	407	563	1	4	5	6	2	4	5	6	3	4	5
Exec02	Yvonne Holland	<input checked="" type="checkbox"/>	516	529	1	7	8	9	2	7	8	9	3	7	8
Exec03	Paul Warren	<input checked="" type="checkbox"/>	625	510	2	10	11	12	1	10	11	12	3	10	11
Exec04	Megan Graham	<input checked="" type="checkbox"/>	724	503	2	13	14	15	1	13	14	15	3	13	14
Exec05	Jeff Moore	<input checked="" type="checkbox"/>	823	504	2	16	17	18	3	16	17	18	1	16	17
Exec06	Darren Budrow	<input checked="" type="checkbox"/>	922	513	2	19	20	21	3	19	20	21	1	19	20
Exec07	Greg Quirk	<input checked="" type="checkbox"/>	1017	530	3	22	23	24	2	22	23	24	1	22	23

4. On the **Marks** tab, specify the camera and shots to use for each mark:
  - a. In the camera columns (**Cam1**, **Cam2**, **Cam3**, **Cam4**), specify the camera numbers to be used for the mark.  
**Note:** Camera priority is from Cam1 to Cam4. Cam1 is the default camera. If Cam1 is unavailable, the LCS tries to use Cam2, and so on.
  - b. In the shot columns (**Cam1 Shot1**, **Cam1 Shot2**, **Cam1 Shot3**, **Cam2 Shot1**, and so on to **Cam4 Shot3**), specify the shot numbers to be used for the mark.  
**Note:** For each camera, shot 1 (for example, **Cam3 Shot1**) is the default shot. The other two shots are available as alternatives.  
**IMPORTANT:** Ensure that shot 1 is specified for each camera to be used for shooting the mark. For example, if using two cameras for the mark, specify shots for **Cam1 Shot1** and **Cam2 Shot1**. These “shot 1s” are the default shots for the cameras, and must be present for the system to work properly.  
**IMPORTANT:** Always tap the **Save Changes** button before entering **Edit Mode**. If you tap the **Edit Mode** button before saving changes, your changes are lost.
5. When you are finished assigning shots to marks, tap the **Save Changes** button.

## 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

**IMPORTANT:** After you configure cameras and create shots, you must return to this section to complete the commissioning procedures and to back up your LCS files.

## Backing Up LCS Data

When the LCS is completely configured and ready for use, create a backup of all LCS files.

### To back up LCS Data:

1. On the DashBoard LCS computer, ensure the LCS panel and camera control panel(s) are configured as required.
2. Close DashBoard.
3. Navigate to the C:\ directory.
4. Create a new folder, and give it a name that indicates it is an archive of your LCS setup.  
**Tip:** Include the name of your organization and the date in the file name.
5. Copy the following folders and paste them into the new archive folder:
  - **LCS**
  - **CamBotCamera** — This folder is present only if the LCS uses CamBot robotic heads.
  - **Sony BRC-900** — This folder is present only if the LCS uses Sony cameras.
  - **Panasonic HE-120** — This folder is present only if the LCS uses Panasonic cameras
6. Store a copy of the archive folder in a safe place, such as on a different computer, in a backed-up network location, or on a mobile storage device such as a USB stick.
7. Send a copy of the archive folder to Ross Video. Sharing your LCS files with Ross Video may improve the response time for future support requests.

# 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:

- “**Installing the Camera Control Panel Files**” on page 5–1
- “**Launching the Camera Control Panel**” on page 5–1
- “**Configuring Cameras**” on page 5–2
- “**Creating and Storing Shots**” on page 5–4
- “**Backing up LCS Data**” on page 5–5

The section, “**User Interface Reference**” on page 5–5 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](http://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.

## Configuring Cameras

This section describes how to perform the following configuration tasks:

- “**Configuring Connectivity**” on page 5–2
- “**Configuring Shot Store Mode**” on page 5–2
- “**Renaming Presets (Shots)**” on page 5–2
- “**Saving and Loading Camera Data**” on page 5–3

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

### Configuring Connectivity

You can configure settings that enable the camera control panel to communicate with cameras and the Ross Video joystick panel (if equipped).

#### To configure connectivity:

1. In the camera control panel, tap the **Config** button.
2. On the **General** tab, 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**.
3. 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.
4. On the **Joystick** tab, check that joystick data is shown.  
The **Joystick** tab displays raw data from the Ross Video joystick panel (if equipped), for diagnostic purposes. The data is not configurable. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

### Configuring Shot Store Mode

The camera control panel has two buttons related to storing and recalling shots: **Store Shot**, and **Recall Shot**. By default, after you use the **Store Shot**, the **Recall Shot** button becomes the active button. If you then tap a shot button, the shot is recalled because the **Recall Shot** button is active. This helps protect you from overwriting shots if you accidentally tap a shot button without first tapping the **Recall Shot** button.

You can change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.

#### To configure shot store mode:

1. In the camera control panel, tap the **Config** button.
2. In the **Store Mode** list, select one of the following options:
  - **1-Time** — After you store or delete a shot, the **Recall Shot** button becomes the active button.
  - **Hold** — Whichever button you tap (**Store Shot**, or **Recall Shot**) remains active until you tap a different one.

### Renaming Presets (Shots)

Every preset, or shot, has a number. They also have names.

Shot numbers cannot be changed, but you can change the shot names to make them more meaningful.

Shot names and numbers appear in the LCS panel.

### To rename shots:

1. In the CamBot camera control panel, create all your shots.  
For more information, see “**Creating and Storing Shots**” on page 5–4.
2. Save your shots in a **Camera File**.  
Note the name of the file. This is also the name of the CamBot shot list file.  
For more information, see “**Saving and Loading Camera Data**” on page 5–3.
3. In the **Master Panel** application, load the CamBot shot list file, rename the shots, and then save the shot list file.  
For more information, see the *CamBot Control System User Guide (5100DR-503-xx)*.
4. In the CamBot camera control panel, load the **Camera File**.

## Saving and Loading Camera Data

You can save all camera data in a file, and later load that file back into your camera control panel. Camera data includes camera configuration data and preset (shot) data.

**Note:** When you load a camera data file, any unsaved changes you made are lost. If you want to save your current camera data, do so before you load a camera data file.

### To save a camera data file:

1. In the camera control panel, tap the **Config** button.
2. In the **Camera File** box, tap the camera for which you want to save data, or tap **All Cameras** to save data for all cameras.  
This feature enables you to save CamBot shot list data for each camera individually.
3. Beside the **Camera File** box, tap the **Save File** button.  
The **Save Camera File** dialog box appears.
4. In the **Filename** box, type a new name for the camera data file.  
**Tip:** this filename is also the name of the CamBot shot list file.
5. Tap **Save As**.  
The camera data file is saved.

### To load a camera data file:

1. In the camera control panel, tap the **Config** button.
2. In the **Camera File** box, tap the camera for which you want to load data, or tap **All Cameras** to load data for all cameras.  
This feature enables you to load CamBot shot list data for each camera individually.
3. Beside the **Camera File** box, tap the **Load File** button.  
The **Load Camera File** dialog box appears.
4. Tap the name of the file you want to load, and then tap the **Load File** button.  
The camera data file loads.

## Creating and Storing 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 4–9.

This section describes how to manually control cameras, and how to store and recall shots.

### Controlling a Camera

This section describes how to use the camera control panel to control cameras. After you move a camera, you can save its position as a shot to be recalled later.

#### To position a camera:

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. Move the camera using either 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.

### Storing and Recalling Shots

You can save a camera’s position as a shot and recall it later.

After you create and store shots, you can save them in a camera data file. For more information, see “**Saving and Loading Camera Data**” on page 5–3.

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

#### To store a shot:

1. Move the camera to the position you want to store as a shot.

For more information, see “**Controlling a Camera**” on page 5–4.

2. Tap the **Store/Recall Shots** button.

3. Tap the **Store Shot** button.

4. Do one of the following to store the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.
- Store the shot graphically:
  - › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to store the shot.

**5.** Rename the shot, if necessary.

For more information, see “**Renaming Presets (Shots)**” on page 5–2.

**To recall a shot:**

**1.** Tap the **Store/Recall Shots** button.

**2.** Tap the **Recall Shot** button.

**3.** Do one of the following to recall the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.
- Recall the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to recall the shot.

**Tip:** Only blue buttons contain shots.

## Backing up LCS Data

When the LCS is completely configured and ready for use, you must back up all LCS files.

Follow the instructions in the section, “**Backing Up LCS Data**” on page 4–10.

## 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 5–5.
- **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 5–8.

### 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:

- “**General Tab**” on page 5–6
- “**Cameras Tab**” on page 5–7
- “**Preset Names Tab**” on page 5–8
- “**Joystick Tab**” on page 5–8

## General Tab

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

Setting or Button	Description
<b>Debug</b>	Debug mode collects information about camera control panel performance. Turn Debug mode on only if asked to do so by Ross Video Technical Support.
<b>Master Panel IP</b>	Shows the IP address of the CamBot MasterPanel software. For LCS applications, MasterPanel is installed on the same computer as the LCS software (localhost). This is not configurable.
<b>Store Mode</b>	<p>By default, after you use the <b>Store Shot</b> button or the <b>Delete Shot</b> button, the <b>Recall Shot</b> button becomes the active button. If you then tap a shot button, the shot is recalled because the <b>Recall Shot</b> button is active. This helps protect you from overwriting or deleting shots if you accidentally tap a shot button without first tapping the <b>Recall Shot</b> button.</p> <p>The Store Mode feature enables you to change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.</p> <p>The options are as follows:</p> <ul style="list-style-type: none"><li>• <b>1-Time</b> — After you store or delete a shot, the <b>Recall Shot</b> button becomes the active button.</li><li>• <b>Hold</b> — Whichever button you tap (<b>Store Shot</b>, <b>Recall Shot</b>, or <b>Delete Shot</b>) remains active until you tap a different one.</li></ul>
<b>Camera File</b>	Select an option for loading or saving camera data, including shots: Tap the camera for which you want to load/save data, or tap All Cameras to load/save data for all cameras.
<b>Load File</b>	Enables you to load a camera data file.
<b>Save File</b>	Enables you to save a camera data file.
<b>Send Camera Preset Names</b>	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. <b>Tip:</b> Preset names are defined in Master Panel. For more information, see “ <b>Renaming Presets (Shots)</b> ” on page 5–2.
<b>Refresh Master Panel Connection</b>	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 Master Panel <b>devices.cam</b> file.

## Cameras Tab

Figure 5.1 shows the **Cameras** tab.

Camera Number	Camera Name	Camera IP Address	Invert Horizontal Axis	Invert Vertical Axis
1	1-LeftGallery	192.168.0.90	<input type="checkbox"/>	<input type="checkbox"/>
2	2-RightGallery	192.168.0.91	<input type="checkbox"/>	<input type="checkbox"/>
3	3-CenterGallery	192.168.0.92	<input type="checkbox"/>	<input type="checkbox"/>
4	4-LeftChamber	192.168.0.93	<input type="checkbox"/>	<input type="checkbox"/>
5	5-RightChamber	192.168.0.94	<input type="checkbox"/>	<input type="checkbox"/>
6	6-PodiumFront	192.168.0.95	<input type="checkbox"/>	<input type="checkbox"/>
7	7-PodiumRight	192.168.0.96	<input type="checkbox"/>	<input type="checkbox"/>

**Figure 5.1** Cameras Tab

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

Setting or Button	Description
<b>Camera Number</b>	Displays the numbers of the cameras. This is not editable. Each row in the table represents one camera.
<b>Camera Name</b>	Specify a meaningful name for the camera.
<b>Camera IP Address</b>	Displays the IP addresses of the cameras. This is not editable. Each row in the table represents one camera. For information about configuring camera IP addresses, see “ <b>Installing and Configuring MasterPanel Software</b> ” on page 4–2.
<b>Invert Horizontal Axis</b>	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.
<b>Invert Vertical Axis</b>	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.

## 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
<b>Camera tabs</b>	Each <b>Camera</b> 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.
<b>Preset Number</b>	Displays the numbers of the camera presets (shots). This is not editable. Each row in the table represents one preset.
<b>Preset Names</b>	Displays the names of the camera presets (shots). This is not editable. Each row in the table represents one preset. For information about renaming presets, see “ <b>Renaming Presets (Shots)</b> ” on page 5–2.

## Joystick Tab

The Joystick tab displays raw data from the Ross Video joystick panel. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

## 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 5–9
- “**PTZ Controls Window**” on page 5–10

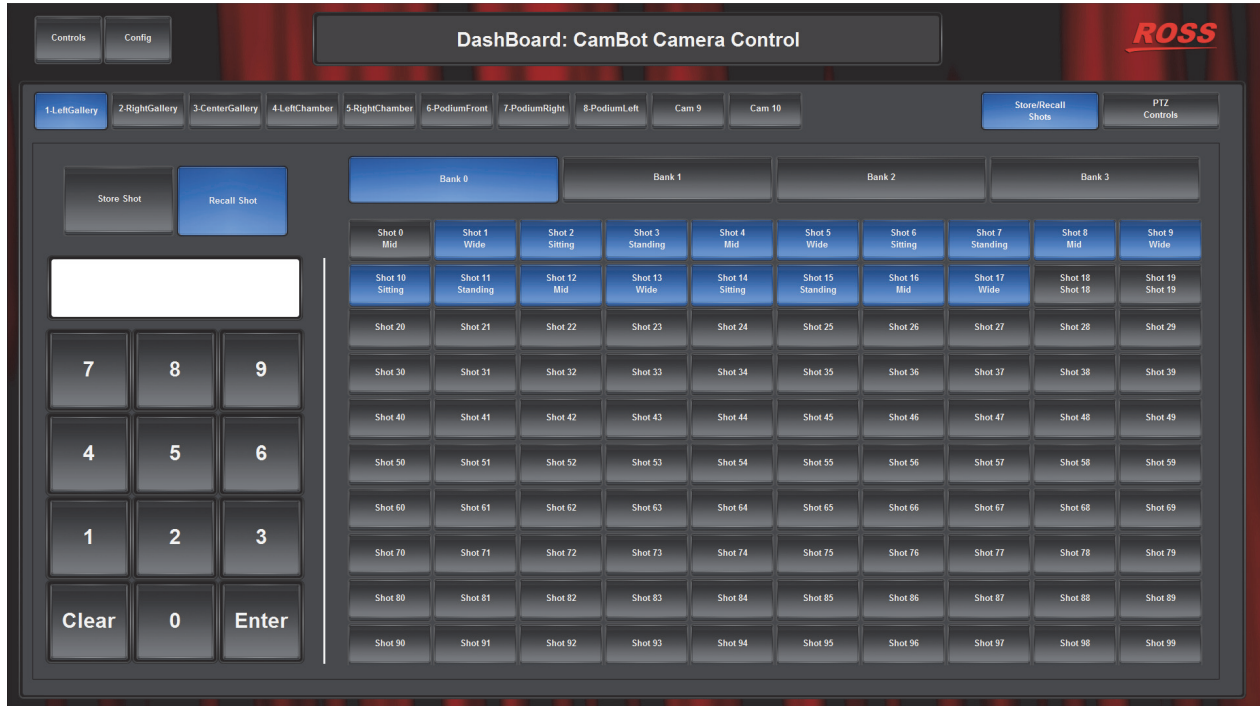
## Store/Recall Shots Window

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
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>Store/Recall Shots</b> 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.
<b>Store Shot button</b>	Tap the button to switch to <b>Store Shot</b> mode. In <b>Store Shot</b> mode, you can save the current camera position as a shot for future recall.
<b>Recall Shot button</b>	Tap the button to switch to <b>Recall Shot</b> mode. In <b>Recall Shot</b> mode, you can recall saved shots for the current camera. <b>Recall Shot</b> mode is used for camera operation.
<b>Shot Selection keypad</b>	Type a shot number and then press the <b>Enter</b> 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 <b>Enter</b> button on the keypad.

Setting or Button	Description
<b>Bank buttons</b>	Tap a bank button to quickly access a group of shots. The camera control panel can only display 100 shot buttons at a time. Shot banks enable you to change which group of 100 shots is shown.
<b>Shot buttons</b>	Tap a <b>Shot</b> button to store or recall a shot, depending on the current mode. <b>Shot</b> buttons are used for camera operation. <b>Tip:</b> Be aware of the current mode ( <b>Store Shot</b> , or <b>Recall Shot</b> ) before you tap a <b>Shot</b> button.

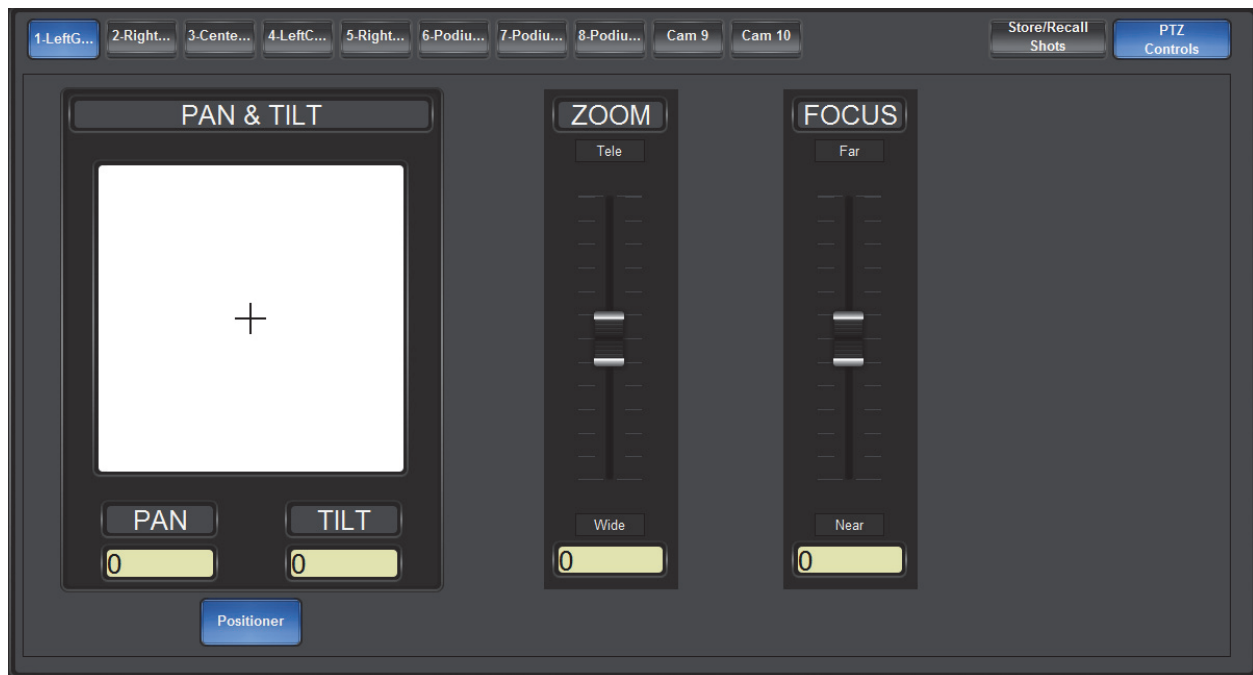
### PTZ Controls Window

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
<b>Camera buttons</b>	<p>The row of ten buttons across the top of the <b>PTZ Controls</b> window includes one button per camera.</p> <p>Tap a button to select which camera you want to move.</p>
<b>Positioner button</b>	<p>Switches between interfaces for adjusting pan and tilt positions:</p> <ul style="list-style-type: none"> <li>• <b>PAN and TILT sliders</b> — enable you to adjust pan and tilt individually.</li> <li>• <b>PAN &amp; TILT Positioner</b> — enables you to adjust pan and tilt simultaneously.</li> </ul> <div data-bbox="589 485 1336 1031" style="text-align: center;"> </div> <p style="text-align: center;"><i>Figure 5.5 Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)</i></p>
<b>PAN and TILT sliders</b>	<p>Tap and drag the <b>PAN</b> or <b>TILT</b> slider handles to pan or tilt the camera.</p> <p>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.</p> <p>Higher pan values pan right. Higher tilt values tilt upwards.</p> <p>Pan and tilt slider values are relative, not absolute. When you release the slider, the value shown returns to zero.</p>
<b>PAN &amp; TILT Positioner</b>	<p>Tap and drag the cross-hairs within the white box until the camera is in the desired pan/tilt position.</p> <p>Positioner values are relative, not absolute. When you release the cross-hairs, they return to the center and the values return to <b>0</b>.</p>
<b>ZOOM slider</b>	<p>Tap and drag the <b>ZOOM</b> slider handle up or down to zoom the lens.</p> <p>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.</p> <p>Higher values are towards telephoto, and lower values are towards wide.</p> <p>Zoom slider values are relative, not absolute. When you release the slider, the value shown returns to <b>0</b>.</p>
<b>FOCUS slider</b>	<p>Tap and drag the <b>FOCUS</b> slider handle up or down to focus the lens manually.</p> <p>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.</p> <p>Higher values are towards far focus, and lower values are towards near focus.</p> <p>Focus slider values are relative, not absolute. When you release the slider, the value shown returns to <b>0</b>.</p>



# 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:

- “**Installing the Camera Control Panel Files**” on page 6–1
- “**Launching the Camera Control Panel**” on page 6–1
- “**Configuration**” on page 6–2
- “**Creating and Storing Shots**” on page 6–5
- “**Backing up LCS Data**” on page 6–7

The section, “**User Interface Reference**” on page 6–7 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](http://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.

## Configuration

This section describes how to perform the following configuration tasks:

- “**Configuring Connectivity**” on page 6–2
- “**Adjusting Camera Shading Controls**” on page 6–2
- “**Turning Cameras On and Off**” on page 6–3
- “**Configuring Shot Store Mode**” on page 6–3
- “**Renaming Presets (Shots)**” on page 6–4
- “**Saving and Loading Camera Data**” on page 6–4

For more detailed information about specific configuration settings, see “**Camera Configuration Window**” on page 6–7.

### Configuring Connectivity

You can configure settings that enable the camera control panel to communicate with cameras and the Ross Video joystick panel (if equipped).

#### To configure connectivity:

1. In the camera control panel, tap the **Config** button.
2. On the **Cameras** tab, tap the camera number to highlight the settings for that 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 Numbers** in the LCS panel configuration (**Config** interface, **Cameras** tab).

3. In the **Camera IP Address** box, type the IP address of the camera.
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. Repeat **Steps 2 to 4** for each Sony camera in your system.
6. If your system includes a Ross Video joystick panel, on the **Joystick** tab, check that joystick data is shown.

The **Joystick** tab displays raw data from the Ross Video joystick panel (if equipped), for diagnostic purposes. The data is not configurable. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

### Adjusting Camera Shading Controls

You can adjust camera shading controls (also known as paint controls). Shading controls are used to ensure consistent video quality from each camera.

**Note:** When you store a shot, settings for white balance mode, red gain, and blue gain are saved as part of the shot.

#### To set camera shading controls:

1. In the camera control panel, tap the **Controls** button.
2. Tap the camera button for the camera you want to adjust.

3. Tap the **Shading Controls** button, and then adjust the following as required:
  - **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**.
  - **White Balance** — Select a white balance mode:
    - › **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**.
4. Repeat **Steps 2 to 3** for each Sony camera in your system.

## Turning Cameras On and Off

You can turn individual cameras on or off.

### To turn a camera on or off:

1. In the camera control panel, tap the **Controls** button.
2. Tap the camera button for the camera you want to turn on or off.
3. Tap the **Shading Controls** button, and then tap the **Power** button until it shows the desired state (**Power ON** or **Power OFF**).

## Configuring Shot Store Mode

The camera control panel has three buttons related to storing and recalling shots: **Store Shot**, **Recall Shot**, and **Delete Shot**. By default, after you use the **Store Shot** button or the **Delete Shot** button, the **Recall Shot** button becomes the active button. If you then tap a shot button, the shot is recalled because the **Recall Shot** button is active. This helps protect you from overwriting or deleting shots if you accidentally tap a shot button without first tapping the **Recall Shot** button.

You can change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.

### To configure shot store mode:

1. In the camera control panel, tap the **Config** button.
2. In the **Store Mode** list, select one of the following options:
  - **1-Time** — After you store or delete a shot, the **Recall Shot** button becomes the active button.
  - **Hold** — Whichever button you tap (**Store Shot**, **Recall Shot**, or **Delete Shot**) remains active until you tap a different one.
3. Tap the **Save** button.

## Renaming Presets (Shots)

Every preset, or shot, has a number. They also have names. You can change the shot names to make them more meaningful.

Shot names and numbers appear in the LCS panel.

### To rename a preset:

1. In the camera control panel, tap the **Config** button.
2. On the **Preset Names** tab, tap the camera button corresponding to the camera for which you want to rename presets.
3. In the list of presets, find the preset you want to rename.
4. In the **Preset Names** box for the preset you want to rename, delete the old name, and then type a new one.
5. Rename other presets, as required.
6. When you are finished naming your presets, on the **General** tab, tap the **Send Camera Preset Names** button. This makes the names available to the LCS.

## Saving and Loading Camera Data

You can save all camera data in a file, and later load that file back into your camera control panel. Camera data includes camera configuration data and preset (shot) data.

**Note:** When you load a camera data file, any unsaved changes you made are lost. If you want to save your current camera data, do so before you load a camera data file.

### To save a camera data file:

1. In the camera control panel, tap the **Config** button.
2. Beside the **Camera Data** box, tap the **Save As** button.

The **Save Camera Data** dialog box appears.
3. In the **Filename** box, type a new name for the camera data file.
4. Tap **Save As**.

The camera data file is saved.

### To load a camera data file:

1. In the camera control panel, tap the **Config** button.
2. Beside the **Camera Data** box, tap the **Load** button.

The **Load Camera Data** dialog box appears.
3. Tap the name of the file you want to load, and then tap the **Load Data** button.

The camera data file loads.

## Creating and Storing 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 4–9.

This section describes how to control a camera to move it into position, and how to store shots. It also describes how to recall and delete shots.

### Controlling a Camera

This section describes how to use the camera control panel to control cameras. After you move a camera, you can save its position as a shot to be recalled later.

#### To position a camera:

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. Move the camera using either 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 camera control 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 camera control panel. Before you adjust the iris, tap the **Auto Iris** button at least once until the button says **Auto Iris OFF**.

4. If you want to adjust the camera’s white balance mode, red gain, or blue gain and save these settings as part of the shot, follow **Steps 2 to 3** in the section, “**Adjusting Camera Shading Controls**” on page 6–2.

White balance mode, red gain, and blue gain are saved as part of the shot.

### Storing, Recalling, and Deleting Shots

You can save a camera’s position as a shot and recall it later. You can also delete shots.

After you create and store shots, you can save them in a camera data file. For more information, see “**Saving and Loading Camera Data**” on page 6–4.

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

**To store a shot:**

1. Move the camera to the position you want to store as a shot.

For more information, see “**Controlling a Camera**” on page 6–5.

2. Tap the **Store/Recall Shots** button.

3. Tap the **Store Shot** button.

4. Do one of the following to store the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.
- Store the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to store the shot.

The shot button turns blue to indicate that it contains a shot.

5. Rename the shot, if necessary.

For more information, see “**Renaming Presets (Shots)**” on page 6–4.

**To recall a shot:**

1. Tap the **Store/Recall Shots** button.

2. Tap the **Recall Shot** button.

3. Do one of the following to recall the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.
- Recall the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to recall the shot.

**Tip:** Only blue buttons contain shots.

**To delete a shot:**

1. Tap the **Store/Recall Shots** button.

2. Tap the **Delete Shot** button.

3. Do one of the following to delete the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.
- Delete the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to delete the shot.

**Tip:** Only blue buttons contain shots.

## Backing up LCS Data

When the LCS is completely configured and ready for use, you must back up all LCS files.

Follow the instructions in the section, “**Backing Up LCS Data**” on page 4–10.

## 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 6–7.
- **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 6–10.

### 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:

- “**General Tab**” on page 6–7
- “**Cameras Tab**” on page 6–8
- “**Preset Names Tab**” on page 6–9
- “**Joystick Tab**” on page 6–10

#### General Tab

The General tab contains settings related to connectivity and panel behavior.

**IMPORTANT:** After you make changes on the **General** tab, tap the **Save** button.

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

Setting or Button	Description
<b>Debug</b>	Debug mode collects information about camera control panel performance. Turn Debug mode on only if asked to do so by Ross Video Technical Support.
<b>Camera Port</b>	Shows the computer port over which the cameras communicate. The camera port is not configurable.
<b>Joystick Server</b>	Shows the IP address of the Ross Video joystick server (if equipped). This is not configurable.

Setting or Button	Description
<b>Store Mode</b>	<p>By default, after you use the <b>Store Shot</b> button or the <b>Delete Shot</b> button, the <b>Recall Shot</b> button becomes the active button. If you then tap a shot button, the shot is recalled because the <b>Recall Shot</b> button is active. This helps protect you from overwriting or deleting shots if you accidentally tap a shot button without first tapping the <b>Recall Shot</b> button.</p> <p>The Store Mode feature enables you to change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.</p> <p>The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>1-Time</b> — After you store or delete a shot, the <b>Recall Shot</b> button becomes the active button.</li> <li>• <b>Hold</b> — Whichever button you tap (<b>Store Shot</b>, <b>Recall Shot</b>, or <b>Delete Shot</b>) remains active until you tap a different one.</li> </ul>
<b>Camera Data</b>	<p>Shows the name of the current camera data file.</p> <p>Camera data includes camera configuration data and preset (shot) data.</p>
<b>Load button</b>	Enables you to load a camera data file.
<b>Save As button</b>	Enables you to save a camera data file.
<b>Send Camera Preset Names</b>	<p>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.</p> <p><b>Tip:</b> Preset names are defined on the Preset Names tab.</p>
<b>Reset Camera Sequence Numbers</b>	<p>This button resets addressing numbers on the Sony cameras to ensure that an inter-connected DashBoard panel, such as a Legislative Control System (LCS) panel, can control the cameras. The numbers can become mismatched between the camera and the LCS panel if another system takes control of one or more cameras.</p>
<b>Save</b>	Saves changes made on the <b>General</b> tab. If you do not save your changes, they may be lost.

## Cameras Tab

Figure 6.1 shows the **Cameras** tab.

Camera Number	Camera Name	Camera IP Address	Invert Horizontal Axis	Invert Vertical Axis
1	1-FarRightChamber	10.0.1.170	<input type="checkbox"/>	<input type="checkbox"/>
2	2-FrontLeftChamber	10.0.1.171	<input type="checkbox"/>	<input type="checkbox"/>
3	3-FrontCenterCha...	10.0.1.172	<input type="checkbox"/>	<input type="checkbox"/>
4	4-BackRightCham...	10.0.1.173	<input type="checkbox"/>	<input type="checkbox"/>
5	5-BackLeftChamber	10.0.1.174	<input type="checkbox"/>	<input type="checkbox"/>
6	6-FrontRightCham...	10.0.1.175	<input type="checkbox"/>	<input type="checkbox"/>
7	7-FarLeftChamber	10.0.1.176	<input type="checkbox"/>	<input type="checkbox"/>
8	8-PodiumrRght	10.0.1.177	<input type="checkbox"/>	<input type="checkbox"/>
9	9-PodiumLeft	10.0.1.178	<input type="checkbox"/>	<input type="checkbox"/>
10	10-PodiumCenter	10.0.1.179	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

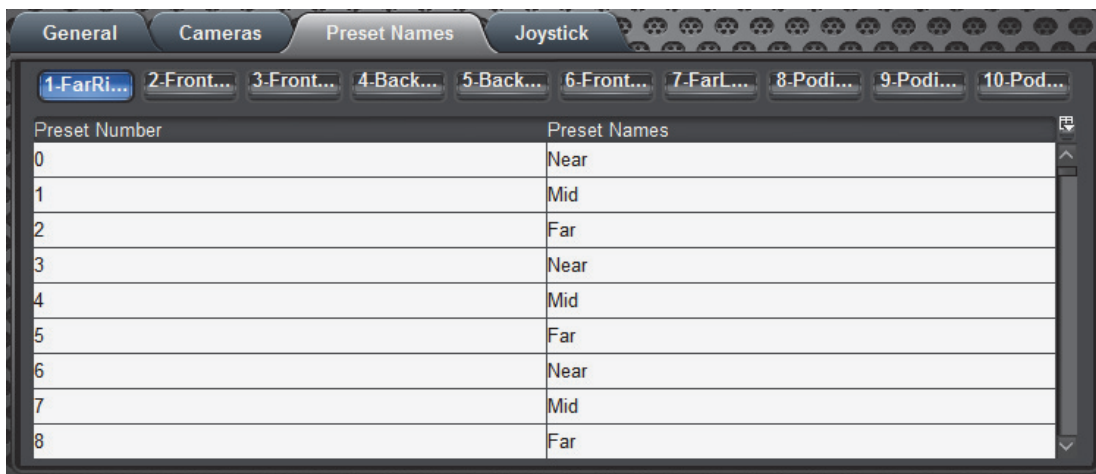
Figure 6.1 Cameras Tab

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

Setting or Button	Description
<b>Camera Number</b>	The number of the camera being controlled. This is not editable. Each row in the table represents one camera. <b>IMPORTANT:</b> 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 <b>Camera Key</b> numbers in the LCS panel configuration ( <b>Config</b> interface, <b>Cameras</b> tab).
<b>Camera Name</b>	Specify a meaningful name for the camera. This name appears in the LCS panel.
<b>Camera IP Address</b>	Specify the IP address of the camera. Every camera must have a unique IP address. <b>IMPORTANT:</b> 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.
<b>Invert Horizontal Axis</b>	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.
<b>Invert Vertical Axis</b>	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.

### 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
<b>Camera buttons</b>	Each camera button 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.

Setting or Button	Description
<b>Preset Number</b>	Each preset on a given camera has a unique preset number, or shot number, to identify the preset. This is not configurable. Shot numbers appear in the LCS panel.
<b>Preset Names</b>	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”. Preset names, or shot names, appear in the LCS panel. After you define preset names, you must send them to the LCS panel by tapping the <b>Send Camera Preset Names</b> button on the <b>General</b> tab.

### Joystick Tab

The **Joystick** tab displays raw data from the Ross Video joystick panel (if equipped), for diagnostic purposes. The data is not configurable. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

### 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 6–10
- “**PTZ Controls Window**” on page 6–12
- “**Shading Controls Window**” on page 6–14

#### 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.

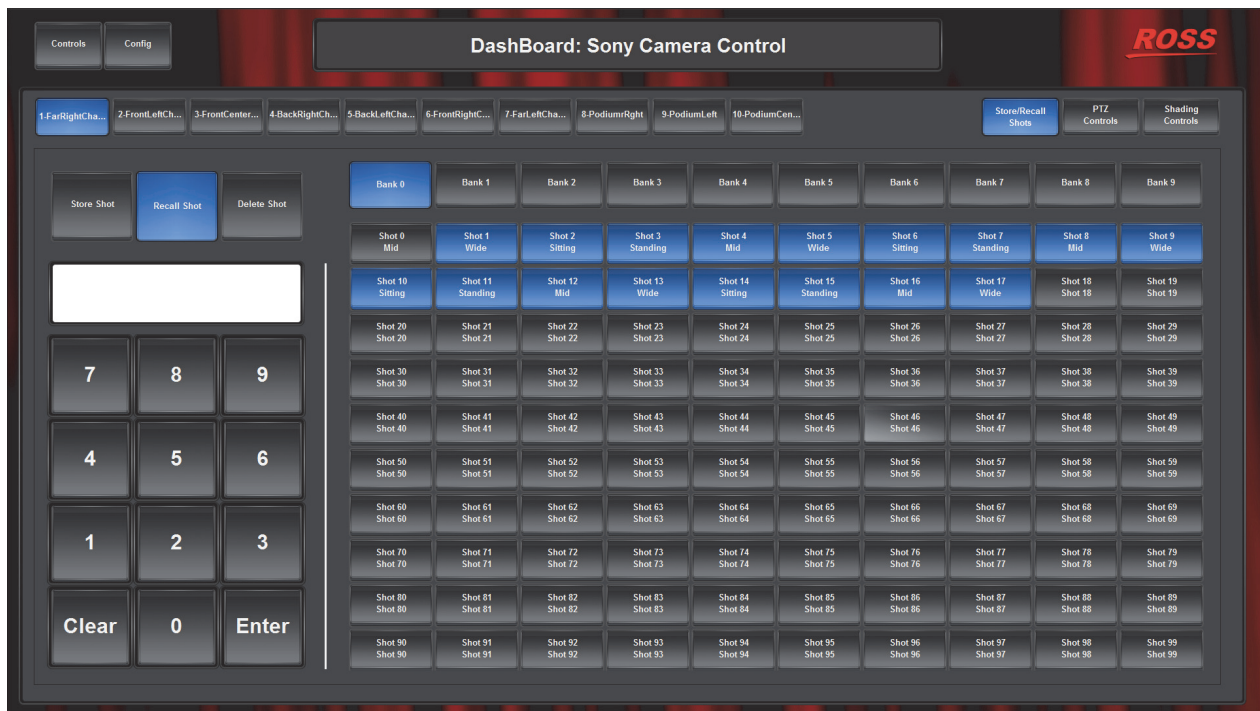


Figure 6.3 Store/Recall Shots Window

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

Setting or Button	Description
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>Store/Recall Shots</b> 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.
<b>Store Shot button</b>	Tap the button to switch to <b>Store Shot</b> mode. In <b>Store Shot</b> mode, you can save the current camera position as a shot for future recall.
<b>Recall Shot button</b>	Tap the button to switch to <b>Recall Shot</b> mode. In <b>Recall Shot</b> mode, you can recall saved shots for the current camera. <b>Recall Shot</b> mode is used for camera operation.
<b>Delete Shot button</b>	Tap the button to switch to <b>Delete Shot</b> mode. In <b>Delete Shot</b> mode, you can delete existing shots. <b>Tip:</b> Shot buttons that contain shots are blue.
<b>Shot Selection keypad</b>	Type a shot number and then press the <b>Enter</b> button on the keypad to store, recall, or delete a shot, depending on the current mode. Alternatively, you can type a number in the box above the keypad and then press the <b>Enter</b> button on the keypad.
<b>Bank buttons</b>	Tap a bank button to quickly access a group of shots. The camera control panel can only display 100 shot buttons at a time. Shot banks enable you to change which group of 100 shots is shown.
<b>Shot buttons</b>	Tap a <b>Shot</b> button to store, recall, or delete a shot, depending on the current mode. <b>Shot</b> buttons are used for camera operation. <b>Tip:</b> Be aware of the current mode ( <b>Store Shot</b> , <b>Recall Shot</b> , or <b>Delete Shot</b> ) before you tap a <b>Shot</b> button.

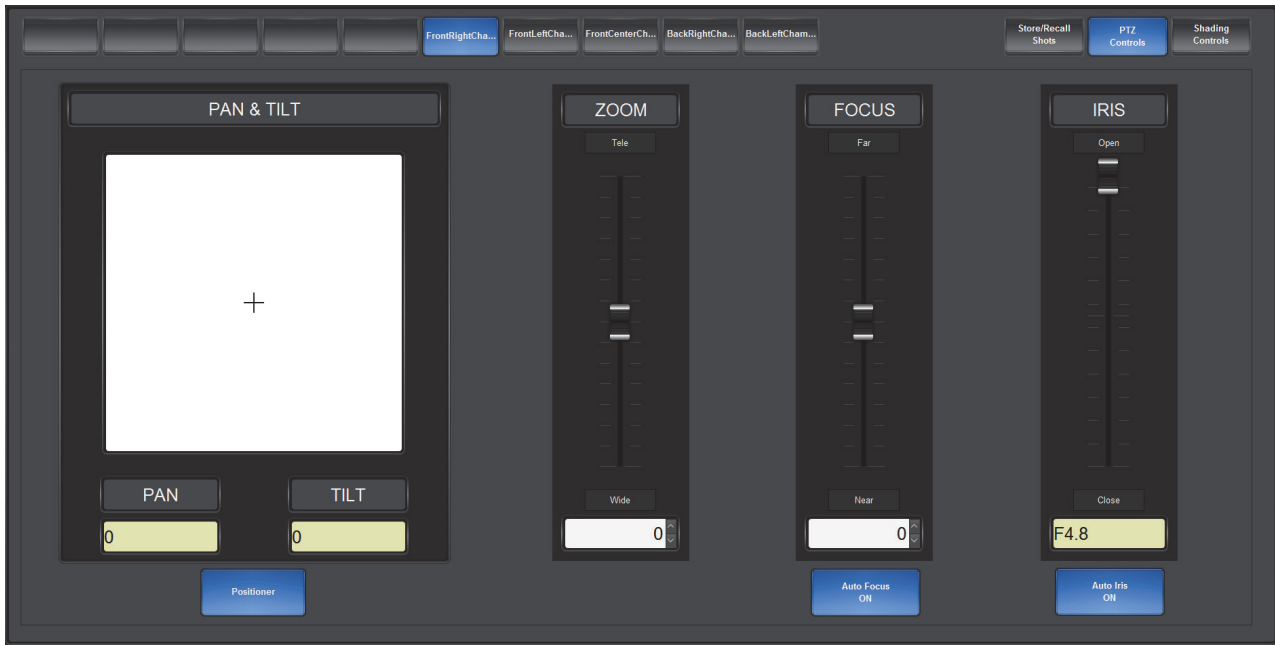
## PTZ Controls Window

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
<b>Camera buttons</b>	<p>The row of ten buttons across the top of the <b>PTZ Controls</b> window includes one button per camera.</p> <p>Tap a button to select which camera you want to move.</p>
<b>Positioner button</b>	<p>Switches between interfaces for adjusting pan and tilt positions:</p> <ul style="list-style-type: none"> <li>• <b>PAN and TILT sliders</b> — enable you to adjust pan and tilt separately.</li> <li>• <b>Pan &amp; Tilt Positioner</b> — enables you to adjust pan and tilt simultaneously.</li> </ul> <div data-bbox="495 485 1430 1041" style="text-align: center;"> </div> <p style="text-align: center;"><i>Figure 6.5 Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)</i></p>
<b>PAN and TILT sliders</b>	<p>Tap and drag the <b>PAN</b> or <b>TILT</b> slider handles to pan or tilt the camera.</p> <p>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.</p> <p>The value range is <b>-24 to 24</b>. Higher pan values pan right. Higher tilt values tilt upwards.</p> <p>Pan and tilt slider values are relative, not absolute. When you release the slider, the value shown returns to zero.</p>
<b>Pan &amp; Tilt Positioner</b>	<p>Tap and drag the cross-hairs within the white box until the camera is in the desired pan/tilt position.</p>
<b>ZOOM slider</b>	<p>Tap and drag the <b>ZOOM</b> slider handle up or down to zoom the lens.</p> <p>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.</p> <p>The value range is <b>-7 to 7</b>. Higher values are towards telephoto, and lower values are towards wide.</p> <p>Zoom slider values are relative, not absolute. When you release the slider, the value shown returns to zero.</p>
<b>Auto Focus button</b>	<p>Tap to switch between automatic focus and manual focus control.</p> <p>When <b>Auto Focus</b> is <b>OFF</b>, you can adjust focus using the <b>FOCUS</b> slider.</p> <p><b>Note:</b> The Auto Focus status may be shown incorrectly because Sony cameras cannot communicate their focus status to the camera control panel. Whenever you want to adjust the focus or know the Auto Focus state of a camera, tap the <b>Auto Focus</b> button at least once, until the desired state is shown.</p>

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

### Shading Controls Window

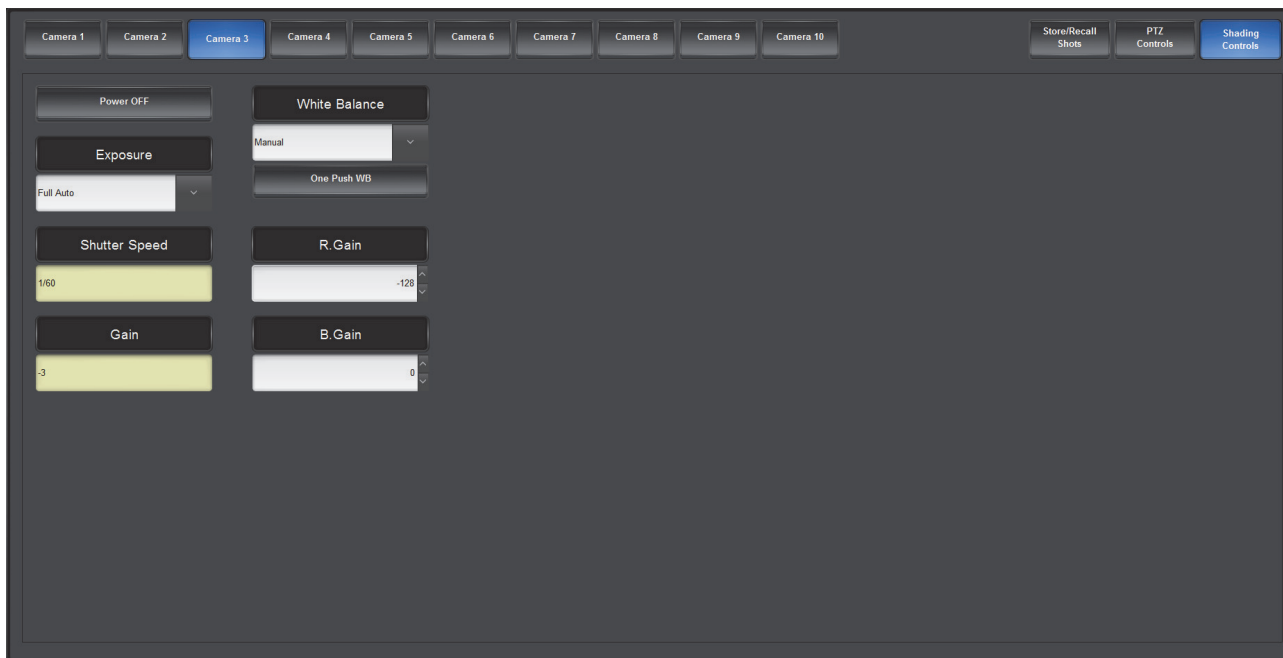
The **Shading Controls** window enables you to adjust selected camera controls, including shading and shutter speed. Shading settings remain until changed again.

**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
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>Shading Controls</b> window includes one button per camera. Tap a button to select which camera you want to adjust.
<b>Power button</b>	Turns the camera <b>ON</b> or <b>OFF</b> . The <b>Power</b> button shows the current state.
<b>Exposure</b>	Select an exposure mode: <ul style="list-style-type: none"> <li>• <b>Full Auto</b> enables automatic exposure.</li> <li>• <b>Manual</b> enables you to manually set the <b>Shutter Speed</b> and <b>Gain</b>.</li> <li>• <b>Shutter Priority</b> enables you to manually set the <b>Shutter Speed</b>, but not the <b>Gain</b>.</li> <li>• <b>Iris Priority</b> enables the iris to determine exposure.</li> </ul>
<b>Shutter Speed</b>	Select a shutter speed. <b>Tip:</b> Shutter Speed is available only if <b>Exposure</b> is set to <b>Manual</b> or <b>Shutter Priority</b> .
<b>Gain</b>	Specify a gain value (-3, or 0 to 30). <b>Tip:</b> Gain is available only if <b>Exposure</b> is set to <b>Manual</b> .
<b>White Balance</b>	<b>White Balance</b> — Select a white balance mode: <ul style="list-style-type: none"> <li>• <b>Auto</b> enables automatic white balance.</li> <li>• <b>Indoor</b> sets white balance levels for typical indoor shooting conditions.</li> <li>• <b>Outdoor</b> sets white balance levels for typical outdoor shooting conditions.</li> <li>• <b>One Push</b> enables you to perform a white balance operation on demand, using the <b>One Push</b> button.</li> <li>• <b>Manual</b> enables manual white balance. It also enables you to set red gain and blue gain values.</li> </ul> <b>Tip:</b> When you save a shot, white balance mode is saved as part of the shot.
<b>One Push WB</b>	Performs a white balance operation if <b>White Balance</b> is set to <b>Auto</b> or to <b>One Push</b> .

Setting or Button	Description
<b>R.Gain</b>	Specify a red gain value (-128 to 127). <b>Tip:</b> Red gain is available only if <b>White Balance</b> is set to <b>Manual</b> . <b>Tip:</b> When you save a shot, red gain is saved as part of the shot.
<b>B.Gain</b>	Specify a blue gain value (-128 to 127). <b>Tip:</b> Blue gain is available only if <b>White Balance</b> is set to <b>Manual</b> . <b>Tip:</b> When you save a shot, blue gain is saved as part of the shot.

# 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:

- “**Installing the Camera Control Panel Files**” on page 7–1
- “**Launching the Camera Control Panel**” on page 7–1
- “**Configuration**” on page 7–2
- “**Creating and Storing Shots**” on page 7–5
- “**Backing up LCS Data**” on page 7–7

The section, “**User Interface Reference**” on page 7–7 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](http://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.

## Configuration

This section describes how to perform the following configuration tasks:

- “**Configuring Connectivity**” on page 7–2
- “**Adjusting Camera Shading Controls**” on page 7–3
- “**Configuring Shot Store Mode**” on page 7–3
- “**Setting Camera Recall Speed**” on page 7–4
- “**Renaming Presets (Shots)**” on page 7–4
- “**Saving and Loading Camera Data**” on page 7–4

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

### Configuring Connectivity

You can configure settings that enable the camera control panel to communicate with cameras and the Ross Video joystick panel (if equipped).

#### To configure connectivity:

1. In the camera control panel, tap the **Config** button.
2. If you are using a **Panasonic AW-RP120** control console (joystick console), do the following:
  - a. On the **General** tab, turn the **Panasonic Controller** option **ON**.
  - b. In the **Controller IP** box, type the IP address of the **Panasonic AW-RP120** control console.

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

**Tip:** When enabled, the Panasonic joystick control follows the selected camera. For example, if you select a camera in the camera control panel or LCS panel, the Panasonic joystick can immediately control it.

3. On the **Cameras** tab, tap the camera number to highlight the settings for that 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 Numbers** in the LCS panel configuration (**Config** interface, **Cameras** tab).

4. In the **Camera IP Address** box, type the IP address of the camera.
5. 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.

6. Repeat **Steps 3 to 5** for each Panasonic camera in your system.
7. If your system includes a Ross Video joystick panel, on the **Joystick** tab, check that joystick data is shown.

The **Joystick** tab displays raw data from the Ross Video joystick panel (if equipped), for diagnostic purposes. The data is not configurable. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

## Adjusting Camera Shading Controls

You can adjust camera shading controls (also known as paint controls). Shading controls are used to ensure consistent video quality from each camera.

### To set camera shading controls:

1. In the camera control panel, tap the **Controls** button.
2. Tap the camera button for the camera you want to adjust.
3. 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.

4. Repeat **Steps 2 to 3** for each Panasonic camera in your system.

## Configuring Shot Store Mode

The camera control panel has three buttons related to storing and recalling shots: **Store Shot**, **Recall Shot**, and **Delete Shot**. By default, after you use the **Store Shot** button or the **Delete Shot** button, the **Recall Shot** button becomes the active button. If you then tap a shot button, the shot is recalled because the **Recall Shot** button is active. This helps protect you from overwriting or deleting shots if you accidentally tap a shot button without first tapping the **Recall Shot** button.

You can change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.

### To configure shot store mode:

1. In the camera control panel, tap the **Config** button.
2. In the **Store Mode** list, select one of the following options:
  - **1-Time** — After you store or delete a shot, the **Recall Shot** button becomes the active button.
  - **Hold** — Whichever button you tap (**Store Shot**, **Recall Shot**, or **Delete Shot**) remains active until you tap a different one.
3. Tap the **Save** button.

## Setting Camera Recall Speed

You can change how quickly the cameras move when they recall presets.

### To set the camera preset speed

1. In the camera control panel, tap the **Config** button.
2. On the **Recall Speed** tab, 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.

## Renaming Presets (Shots)

Every preset, or shot, has a number. They also have names. You can change the shot names to make them more meaningful.

Shot names and numbers appear in the LCS panel.

### To rename a preset:

1. In the camera control panel, tap the **Config** button.
2. On the **Preset Names** tab, tap the camera button corresponding to the camera for which you want to rename presets.
3. In the list of presets, find the preset you want to rename.
4. In the **Preset Names** box for the preset you want to rename, delete the old name, and then type a new one.
5. Rename other presets, as required.
6. When you are finished naming your presets, on the **General** tab, tap the **Send Camera Preset Names** button. This makes the names available to the LCS.

## Saving and Loading Camera Data

You can save all camera data in a file, and later load that file back into your camera control panel. Camera data includes camera configuration data and preset (shot) data.

**Note:** When you load a camera data file, any unsaved changes you made are lost. If you want to save your current camera data, do so before you load a camera data file.

### To save a camera data file:

1. In the camera control panel, tap the **Config** button.
2. Beside the **Camera Data** box, tap the **Save As** button.

The **Save Camera Data** dialog box appears.
3. In the **Filename** box, type a new name for the camera data file.
4. Tap **Save As**.

The camera data file is saved.

### To load a camera data file:

1. In the camera control panel, tap the **Config** button.
2. Beside the **Camera Data** box, tap the **Load** button.

The **Load Camera Data** dialog box appears.

3. Tap the name of the file you want to load, and then tap the **Load Data** button.

The camera data file loads.

## Creating and Storing 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 4–9.

This section describes how to control a camera to move it into position, and how to store shots. It also describes how to recall and delete shots.

## Controlling a Camera

This section describes how to use the camera control panel to control cameras. After you move a camera, you can save its position as a shot to be recalled later.

### To position a camera:

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. Move the camera using either 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.

## Storing, Recalling, and Deleting Shots

You can save a camera’s position as a shot and recall it later. You can also delete shots.

After you create and store shots, you can save them in a camera data file. For more information, see “**Saving and Loading Camera Data**” on page 7–4.

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

**To store a shot:**

1. Move the camera to the position you want to store as a shot.

For more information, see “**Controlling a Camera**” on page 7–5.

2. Tap the **Store/Recall Shots** button.

3. Tap the **Store Shot** button.

4. Do one of the following to store the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.

- Store the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to store the shot.

The shot button turns blue to indicate that it contains a shot.

5. Rename the shot, if necessary.

For more information, see “**Renaming Presets (Shots)**” on page 7–4.

**To recall a shot:**

1. Tap the **Store/Recall Shots** button.

2. Tap the **Recall Shot** button.

3. Do one of the following to recall the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.

- Recall the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to recall the shot.

**Tip:** Only blue buttons contain shots.

**To delete a shot:**

1. Tap the **Store/Recall Shots** button.

2. Tap the **Delete Shot** button.

3. Do one of the following to delete the shot:

- On the numeric keypad, type the shot number and then tap **Enter**.

- Delete the shot graphically:

- › Tap a **Bank** button to select a shot bank.

**Tip:** Each shot bank contains 100 shots. Bank 0 contains shots 0 to 99, bank 1 contains shots 100 to 199, and so on.

- › Tap a shot button to delete the shot.

**Tip:** Only blue buttons contain shots.

## Backing up LCS Data

When the LCS is completely configured and ready for use, you must back up all LCS files.

Follow the instructions in the section, “**Backing Up LCS Data**” on page 4–10.

## 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 7–7.
- **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 7–11.

### 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:

- “**General Tab**” on page 7–7
- “**Cameras Tab**” on page 7–8
- “**Recall Speed Tab**” on page 7–9
- “**Preset Names Tab**” on page 7–10
- “**Joystick Tab**” on page 7–10

#### General Tab

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

Setting or Button	Description
<b>Debug</b>	Debug mode collects information about camera control panel performance. Turn Debug mode on only if asked to do so by Ross Video Technical Support.
<b>Panasonic Controller</b>	If you are using a <b>Panasonic AW-RP120</b> control console (joystick console), turn the <b>Panasonic Controller</b> option <b>ON</b> . <b>Note:</b> A Panasonic joystick console is not required to use the Panasonic camera control panel.
<b>Controller IP</b>	Specify the IP address of the <b>Panasonic AW-RP120</b> control console (joystick console), if present. <b>Note:</b> A Panasonic joystick console is not required to use the Panasonic camera control panel. <b>Tip:</b> When enabled, the Panasonic joystick control follows the selected camera. For example, if you select a camera in the camera control panel or LCS panel, the Panasonic joystick can immediately control it.
<b>Joystick Server</b>	Shows the IP address of the Ross Video joystick server (if equipped). This is not configurable.

Setting or Button	Description
<b>Store Mode</b>	<p>By default, after you use the <b>Store Shot</b> button or the <b>Delete Shot</b> button, the <b>Recall Shot</b> button becomes the active button. If you then tap a shot button, the shot is recalled because the <b>Recall Shot</b> button is active. This helps protect you from overwriting or deleting shots if you accidentally tap a shot button without first tapping the <b>Recall Shot</b> button.</p> <p>The Store Mode feature enables you to change the behavior of these buttons so that whichever button you tap remains active until you tap a different one.</p> <p>The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>1-Time</b> — After you store or delete a shot, the <b>Recall Shot</b> button becomes the active button.</li> <li>• <b>Hold</b> — Whichever button you tap (<b>Store Shot</b>, <b>Recall Shot</b>, or <b>Delete Shot</b>) remains active until you tap a different one.</li> </ul>
<b>Camera Data</b>	<p>Shows the name of the current camera data file.</p> <p>Camera data includes camera configuration data and preset (shot) data.</p>
<b>Load button</b>	Enables you to load a camera data file.
<b>Save As button</b>	Enables you to save a camera data file.
<b>Send Camera Preset Names</b>	<p>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.</p> <p><b>Tip:</b> Preset names are defined on the Preset Names tab.</p>
<b>Save</b>	Saves changes made on the <b>General</b> tab. If you do not save your changes, they may be lost.

### Cameras Tab

Figure 7.1 shows the Cameras tab.

Camera Number	Camera Name	Camera IP Address	Invert Horizontal Axis	Invert Vertical Axis
1	1-LeftGallery	10.0.1.128	<input type="checkbox"/>	<input type="checkbox"/>
2	2-CenterGallery	10.0.1.129	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	3-rightGallery	10.0.1.130	<input type="checkbox"/>	<input type="checkbox"/>
4	4-LeftChamber	10.0.1.131	<input type="checkbox"/>	<input type="checkbox"/>
5	5-CenterChamber	10.0.1.132	<input type="checkbox"/>	<input type="checkbox"/>
6	6-RightChamber	10.0.1.133	<input type="checkbox"/>	<input type="checkbox"/>
7	7-PodiumRight	10.0.1.134	<input type="checkbox"/>	<input type="checkbox"/>
8	8-PodiumCenter	10.0.1.135	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	9-PodiumLeft	10.0.1.136	<input type="checkbox"/>	<input type="checkbox"/>

Figure 7.1 Cameras Tab

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

Setting or Button	Description
<b>Camera Number</b>	The number of the camera being controlled. This is not editable. Each row in the table represents one camera. <b>IMPORTANT:</b> 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 <b>Camera Key</b> numbers in the LCS panel configuration ( <b>Config</b> interface, <b>Cameras</b> tab).
<b>Camera Name</b>	Specify a meaningful name for the camera.
<b>Camera IP Address</b>	Specify the IP address of the camera. Every camera must have a unique IP address. <b>IMPORTANT:</b> 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.
<b>Invert Horizontal Axis</b>	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.
<b>Invert Vertical Axis</b>	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.

### Recall Speed Tab

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

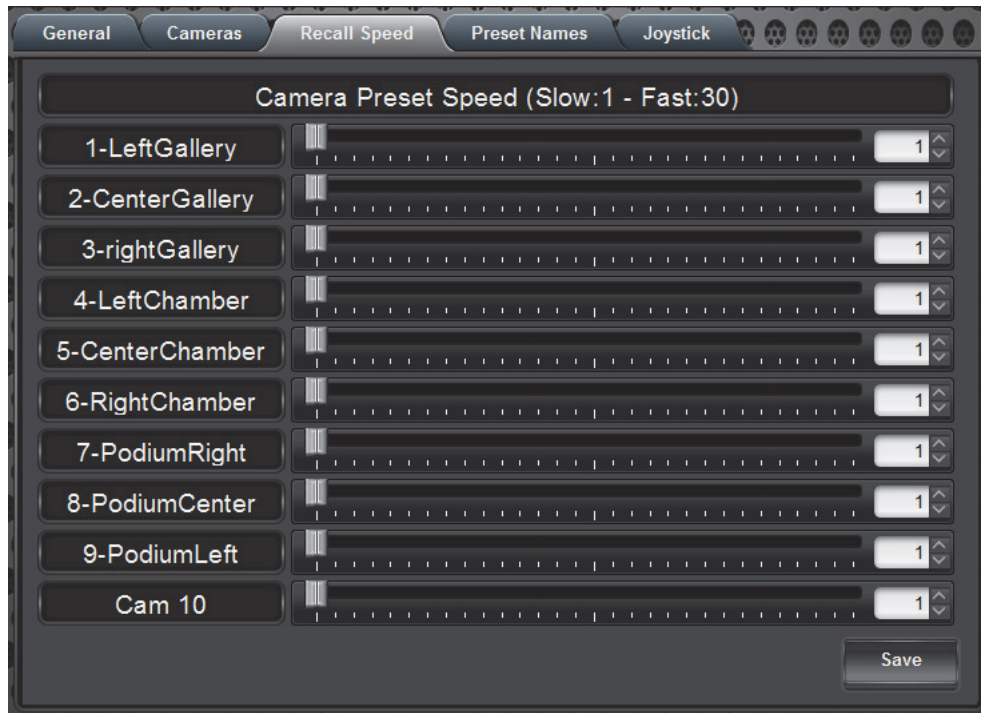


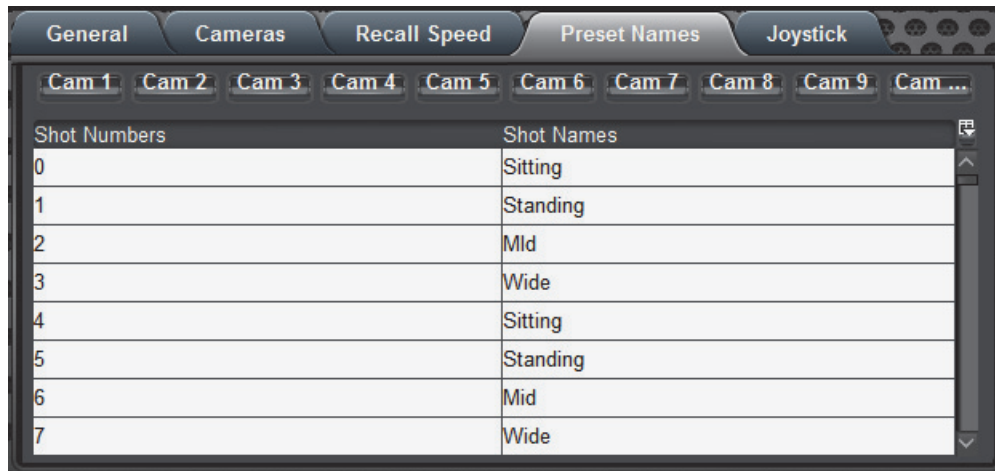
Figure 7.2 Recall Speed Tab

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

Setting or Button	Description
<b>Camera preset speeds</b>	Do one of the following to set the speed of each camera: <ul style="list-style-type: none"> <li>• Tap and drag the speed slider. The speed is shown in a box to the right of the slider.</li> <li>• Type a number in the speed box to the right of the slider.</li> <li>• Tap the up and down arrows beside the speed box.</li> </ul> <b>Tip:</b> Higher numbers represent faster speeds
<b>Save</b>	Saves changes made on the <b>Save</b> tab. If you do not save your changes, they may be lost.

### 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
<b>Camera buttons</b>	Each camera button 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.
<b>Shot Numbers</b>	Each preset on a given camera has a unique preset number, or shot number, to identify the preset. This is not configurable. Shot numbers appear in the LCS panel.
<b>Shot Names</b>	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”. Preset names, or shot names, appear in the LCS panel. After you define preset names, you must send them to the LCS panel by tapping the <b>Send Camera Preset Names</b> button on the <b>General</b> tab.

### Joystick Tab

The **Joystick** tab displays raw data from the Ross Video joystick panel (if equipped), for diagnostic purposes. The data is not configurable. If the tab does not show data, or says **No Connection**, then no connection to the joystick is detected.

## 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 7–11
- “**PTZ Controls Window**” on page 7–12
- “**Shading Controls Window**” on page 7–14

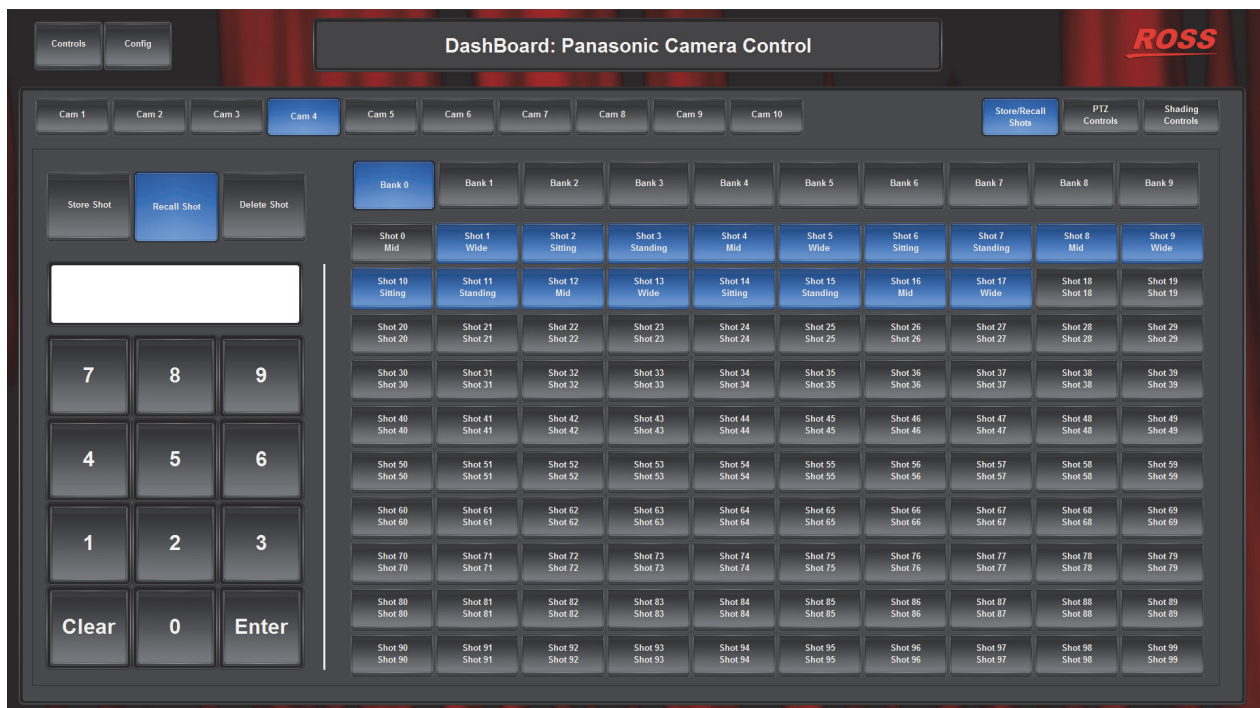
### Store/Recall Shots Window

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
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>Store/Recall Shots</b> 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.
<b>Store Shot button</b>	Tap the button to switch to <b>Store Shot</b> mode. In <b>Store Shot</b> mode, you can save the current camera position as a shot for future recall.
<b>Recall Shot button</b>	Tap the button to switch to <b>Recall Shot</b> mode. In <b>Recall Shot</b> mode, you can recall saved shots for the current camera. <b>Recall Shot</b> mode is used for camera operation.
<b>Delete Shot button</b>	Tap the button to switch to <b>Delete Shot</b> mode. In <b>Delete Shot</b> mode, you can delete existing shots. <b>Tip:</b> Shot buttons that contain shots are blue.
<b>Shot Selection keypad</b>	Type a shot number and then press the <b>Enter</b> 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 <b>Enter</b> button on the keypad.
<b>Bank buttons</b>	Tap a bank button to quickly access a group of shots. The camera control panel can only display 100 shot buttons at a time. Shot banks enable you to change which group of 100 shots is shown.
<b>Shot buttons</b>	Tap a <b>Shot</b> button to store, recall, or delete a shot, depending on the current mode. <b>Shot</b> buttons are used for camera operation. <b>Tip:</b> Be aware of the current mode ( <b>Store Shot</b> , <b>Recall Shot</b> , or <b>Delete Shot</b> ) before you tap a <b>Shot</b> button.

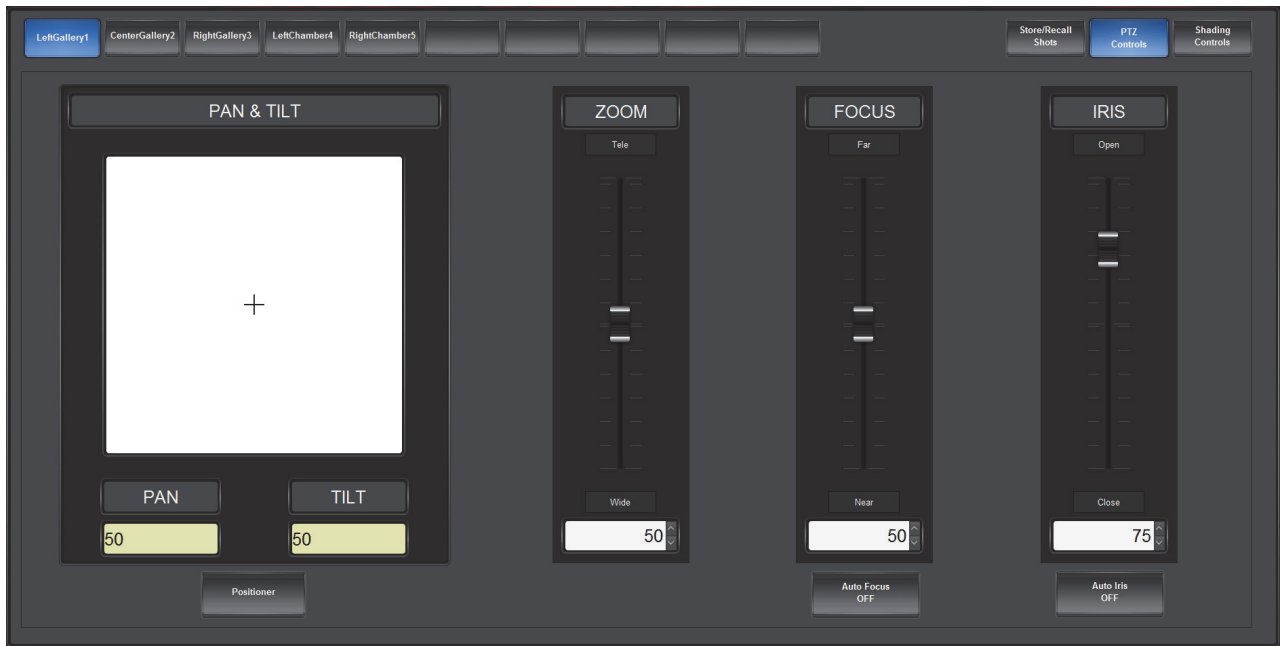
### PTZ Controls Window

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.

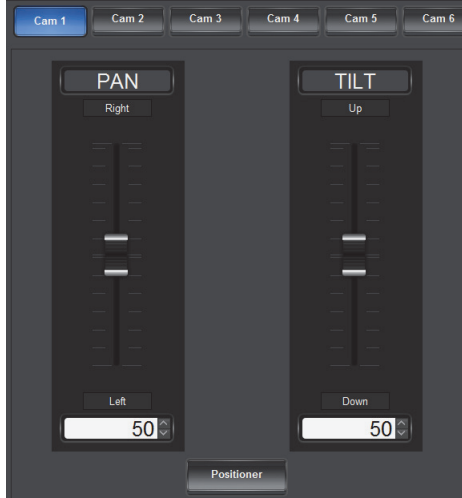
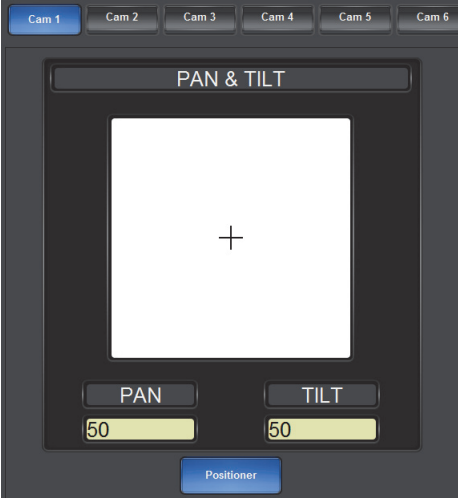
**Figure 7.5** shows the **PTZ Controls** window.



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

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

Setting or Button	Description
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>PTZ Controls</b> window includes one button per camera. Tap a button to select which camera you want to move.
<b>Positioner button</b>	Switches between interfaces for adjusting pan and tilt positions: <ul style="list-style-type: none"> <li>• <b>PAN and TILT sliders</b> — enable you to adjust pan and tilt separately.</li> <li>• <b>PAN &amp; TILT Positioner</b> — enables you to adjust pan and tilt simultaneously.</li> </ul>

**Figure 7.6** Pan/Tilt Sliders (left) and Pan/Tilt Positioner (Right)

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

### Shading Controls Window

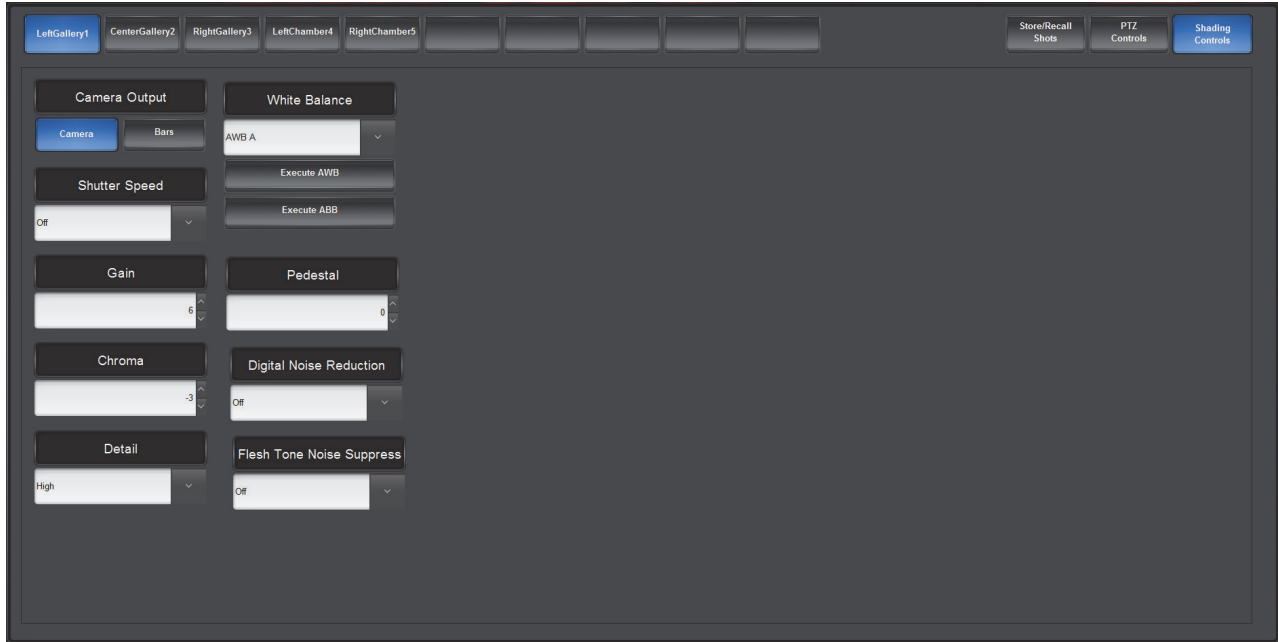
The **Shading Controls** window enables you to adjust selected camera controls, including shading and shutter speed. Shading settings remain until changed again. They are not saved as part of the shots.

**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
<b>Camera buttons</b>	The row of ten buttons across the top of the <b>Shading Controls</b> window includes one button per camera. Tap a button to select which camera you want to adjust.
<b>Camera Output</b>	Switches between normal camera output and test bars.
<b>Shutter Speed</b>	Select a shutter speed from the list, or select <b>Off</b> . <b>Tip:</b> When this setting is <b>Off</b> , the shutter will not operate, even if the <b>Shutter</b> button on the camera is pressed.
<b>Gain</b>	Specify a gain value. The range is 0 to 30.
<b>Chroma</b>	Specify a chroma value. The range is -3 to 3.
<b>Detail</b>	Select a level of image detail (sharpness) from the list. The options are <b>High</b> , <b>Low</b> , or <b>Off</b> . <b>Tip:</b> If <b>Detail</b> is set to <b>High</b> , detail is enhanced.
<b>White Balance</b>	Select a white balance option from the list, to perform a camera white balance: <ul style="list-style-type: none"> <li>• <b>ATW</b> — Auto-Tracing White Balance. White balance adjusts continuously as you shoot.</li> <li>• <b>AWB A</b> — Auto White Balance A. Applies a saved white balance preset.</li> <li>• <b>AWB B</b> — Auto White Balance B. Applies a saved white balance preset.</li> <li>• <b>Preset 3200K</b> — Applies white balance for typical indoor (incandescent) conditions.</li> <li>• <b>Preset 5600K</b> — Applies white balance for typical outdoor (daylight) conditions.</li> </ul> <b>Note:</b> When you store a shot, white balance and other shading controls are not saved as part of the shot.
<b>Execute AWB button</b>	Tap this button to perform a white balance. If <b>AWB A</b> or <b>AWB B</b> are selected, tapping <b>Execute AWB</b> also stores the white balance level in the preset shown ( <b>AWB A</b> or <b>AWB B</b> ).

Setting or Button	Description
<b>Execute ABB button</b>	Tap this button to perform an Automatic Black Balance ( <b>ABB</b> ).
<b>Pedestal</b>	Specify a black pedestal level. The range is <b>-150</b> to <b>150</b> .
<b>Digital Noise Reduction</b>	Select a level of digital noise reduction. The options are <b>Off</b> , <b>Low</b> , and <b>High</b> .
<b>Flesh Tone Noise Suppress</b>	Select a level of flesh tone noise suppression. The options are <b>Off</b> , <b>Low</b> , and <b>High</b> .