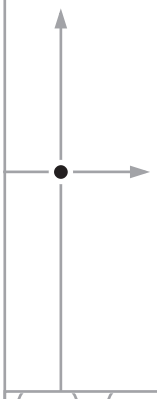
grass valley

CameraMan

CAMERA CONTROL KEYPAD

Operation Manual



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The www.thomsongrassvalley.com web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Software updates, drivers, and patches can be downloaded.

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Refer all Warranty and Servicing to the ParkerVision Consumer Center listed in the back of the installation and operations manual that came with your CameraMan camera.

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Congratulations on Your Purchase

ParkerVision's Camera Control Keypad gives you portable control of up to three CameraMan 3-CCD cameras. You can use it in either wireless or hard-wired mode to give you even more flexibility.

This manual covers the connection, configuration and use of your new Camera Control Keypad. *If you have questions regarding the installation, or operation of your CameraMan 3-CCD General Pan/Tilt camera, refer to the installation and operations manual included with the camera.*

You willl see three icons in this manual:

This icon alerts you to ***important instructions*** in the operation and maintenance of your Camera Control Keypad.

This icon alerts you to ***tips or noteworthy suggestions*** in the operation, use or maintenance of your Camera Control Keypad.

This icon refers you to the ***3-CCD General Pan/Tilt Camera Installations and Operations Manual*** that came with your camera.

Product Description

The Camera Control Keypad allows you to control the pan, tilt, zoom, FOCUS, and IMAGE functionality of your CameraMan camera. In addition, you can store up to 125 presets per camera for up to three separate cameras. The keypad can be used in either an RF wireless mode (up to 60'/18.28m from camera) or a hard-wired mode (up to 250'/76.2m from camera).

Your 3-CCD Camera Control Keypad should include these components:

- One 3-CCD Camera Control Keypad
- One 3-CCD Camera Control Keypad Operations Manual
- One Keypad Quick Reference Card

Buttons and Controls

Take a look at the front of your Camera Control Keypad. Here, you will find all the buttons required to control the pan, tilt, zoom FOCUS, and IMAGE, as well as store up to 125 presets and adjust camera settings.

▼ **Camera Select –** Used to select between, and control multiple cameras (see page 6).

▼ **Zoom Buttons (In/Out) –** Used to control the tightness of the camera view.

Camera Setup Mode:

- ***Menu*** *(Zoom IN) – Used to toggle the on-screen menu display on and off.*
- ***Bars*** *(Zoom OUT) – Used to toggle the on-screen color bars on and off.*

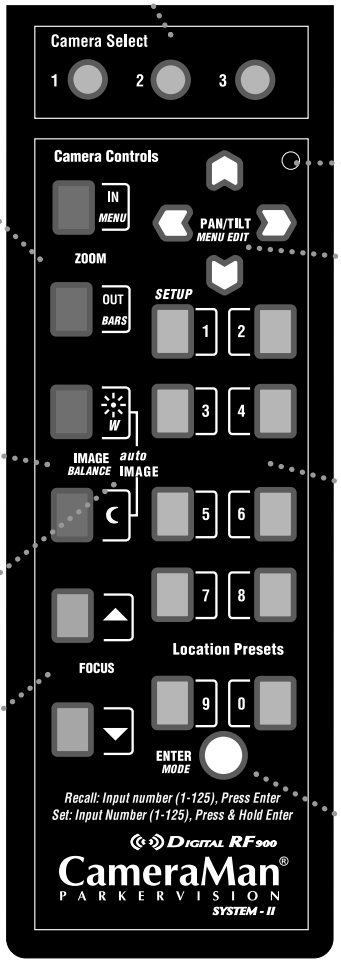
▼ **IMAGE Buttons (Brightness/Darkness) –** Used to brighten and darken the picture.

Camera Setup Mode:

- ***W. Balance Button*** *(Brightness) – Used to automatically white balance the camera.*

▼ ***autoIMAGE Buttons –*** Used to enable the camera to adjust the brightness and darkness for each camera view automatically.

▼ **Focus Buttons –** Used to change the focal point of the camera lens.



▼ **ON Light –** indicates that the Keypad is operational.

▼ **Pan/Tilt Arrows –** Controls the camera's up/down, and left/right movement.

Camera Setup Mode:

- ***Menu Edit Buttons –*** *Used to navigate through, and adjust, the camera settings found in the on-screen menus.*

▼ **Location Preset Controls –** Used to select from 1-125 Location Presets.

Camera Setup Mode:

- ***Setup Button*** *(1) – Used, when pressed simultaneously with Mode (Enter) Button to turn the keypad's*

▼ **Enter –** Used to enter, or change a camera location preset.

Camera Setup Mode:

- ***Mode Button*** *(Enter) – Used, when pressed simultaneously with Setup (Location Preset Button 1) Button to turn the keypad's Camera Setup Mode on and off.*

Connecting Your Keypad

Your Camera Control Keypad can be used in either a wireless or hard-wired mode. The wireless mode enables you to move freely around the room, while the hard-wired option enables you to control the camera from greater distances. For either mode, follow the steps below to connect your keypad to your camera system.

1. Adjust the KEYPAD ADDRESS rotary switch (located in the battery compartment of the keypad) so the selected setting corresponds to the setting of the BASE UNIT ADDRESS switch on the back of the Camera.

   For multiple-camera applications, refer to page 6.

   For information on how to set the Base Unit Address on your CameraMan camera, refer to the ***3-CCD CameraMan's Installation and Operations Manual***.

2. Configure the keypad for your application:

   For Wireless RF Mode (up to 60'/18.28m):
   - Install the supplied AA batteries in the Camera Control Keypad by removing the battery door and inserting the batteries into the battery compartment.
   - Replace the battery door.
   - Press one of the **PAN/TILT** arrows on the keypad and verify that the LED on the front of the keypad illuminates. This indicates that the batteries are installed properly.

   If the light does not illuminate, then the batteries may be installed backwards. Reverse the batteries and try again. If you install a low battery, the keypad emits a long beep.

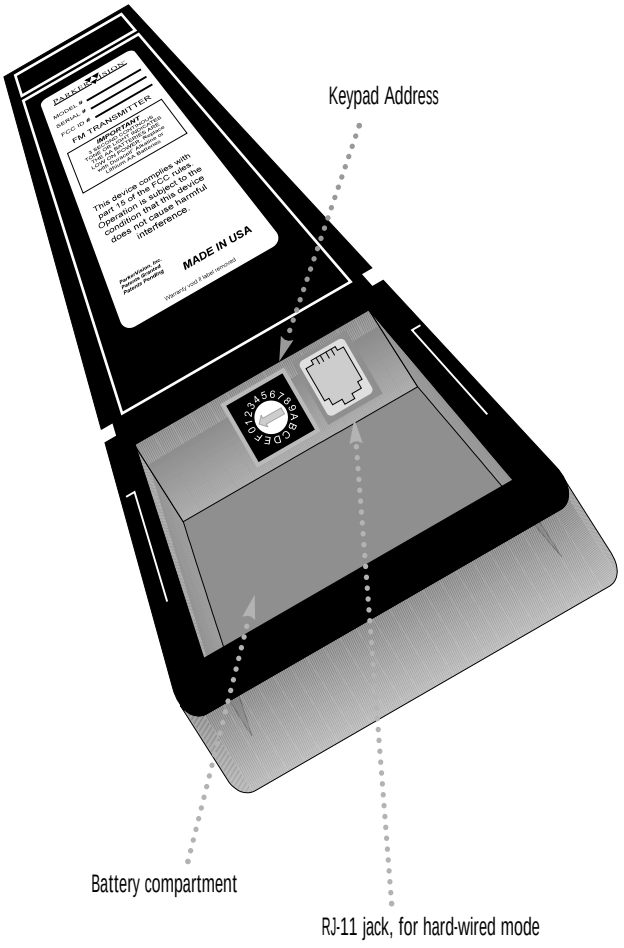
   If the batteries are inserted improperly, it will not damage the keypad. The keypad will simply not work.

   For Hard-wired Mode (up to 250'/76.2m):
   - Connect the CameraMan Keypad Cable to the RJ-11 type jack located in the battery compartment of the Keypad.
   - Connect the other end of the cable to the PVI Com port on the CameraMan camera.

   When the system is powered on, the light on the keypad should illuminate momentarily, indicating the keypad is ready for operation. The light located above the PVI COM port on the camera indicates communication activity.

   You do not need batteries installed in the Camera Control Keypad when using it in hard-wired mode.

   Using cable other than ParkerVision-supplied cable for the PVI COM port may cause damage.



Orienting the Pan Arrows

You can configure the Camera Control Keypad to pan left and right according to your specific application needs. The following explains how to understand, configure, and control the camera's panning motion.

Understanding The Panning Motion

The examples on the right explain when you might want to re-configure the pan arrows on your Camera Control Keypad.

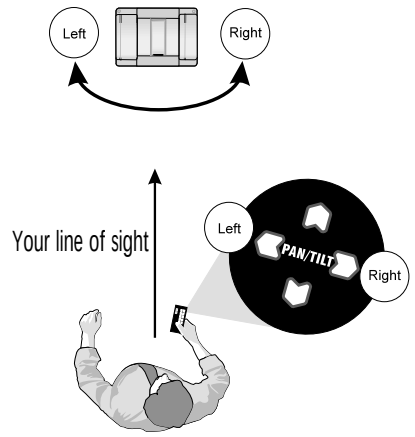
The default setting, shown in Example 1, is designed to operate as if you are facing the CameraMan camera. Some examples of applications that would benefit from the default settings are:

- Distance Learning where you are the instructor.
- Presentations where you are the presenter and the audience members are watching you on a monitor.
- Videoconferences where the you are an on-screen participant.
- Any other application where you, the camera controller, need to be on camera.

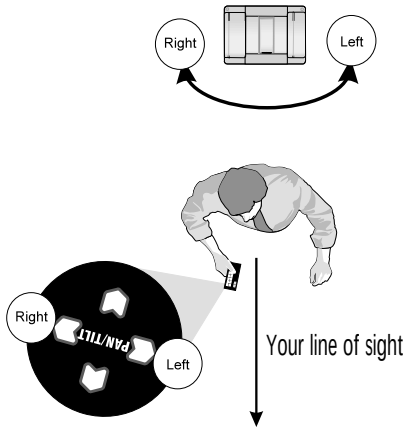
There are applications, however, in which you are not facing the camera (example 2), so the default setting will not work. These applications require that you re-orient the PAN arrows (see below). Some examples of applications that might benefit from this re-orientation are:

- Presentations where you are not the presenter, but are controlling the camera's movement.
- Videoconferences where you are a moderator, but not an on-screen participant.
- Applications where you are controlling the camera from a control room.
- Any other application where you, the camera controller, do not need to be on camera.

Example 1 (Default setting): Facing toward the camera.



Example 2: Facing away from the camera**.**



Re-Orienting The Pan Arrows

To re-orient (reverse) the setting of the pan arrows on your Camera Control Keypad, use the following procedure:

1. Select the camera you wish to re-orient (see page 6).
2. Press and hold **ENTER** and **autoIMAGE** simultaneously.
3. Listen for a beep, indicating that the reversal is complete.
4. Release the buttons.
5. Verify that the orientation has changed.

Maximum Pan and Tilt Configuration

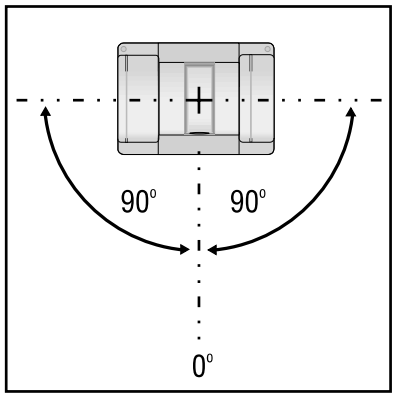
Now that you've learned how to program the pan arrows to meet your application's needs, you can customize further how your Camera Control Keypad works with your CameraMan system.

Maximum Pan/Tilt Travel

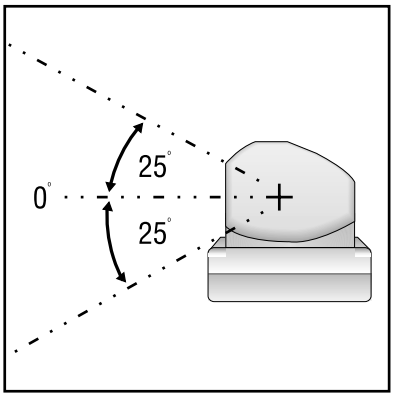
Once the CameraMan Camera is installed, you can configure the **PAN/TILT** settings to suit your application. The CameraMan camera has a maximum **PAN** range of **359°**, but comes programmed with factory default settings for maximum **PAN/TILT** settings of **±90°** of **PAN** and **±25°** of **TILT**. You can do the following to change the maximum position settings:

1. Select the camera you wish to adjust (see page 6).
2. Press and hold **ENTER**.
3. While holding **ENTER**, use the **PAN/TILT** arrows to move the camera to the maximum desired position in a given direction.
4. Release **ENTER** to set the maximum desired position for that direction.
5. Listen for two beeps to indicate that the maximum position for that direction has been set.
6. If desired, repeat steps **2-5** to set all maximum positions (left, right, up, and down).
7. If desired, repeat steps **1-6** for additional cameras.

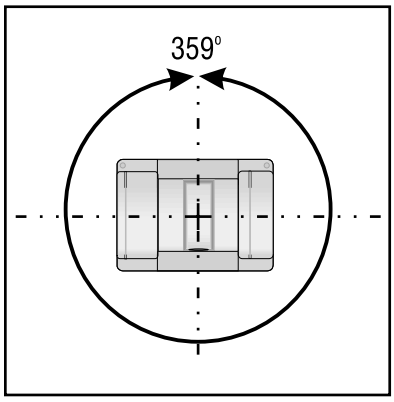
180° Default **PAN** Settings



50° Default **TILT** Settings



359° Maximum **Pan** Settings



Multiple Camera Applications

Your Camera Control Keypad can control the pan/tilt, zoom, FOCUS, and IMAGE for up to three separate cameras. Multiple CameraMan cameras can be controlled in one of three ways: wireless, hard-wired, or a combination of the two. Follow the steps below to enable the keypad to work properly with multiple cameras.

Multi-Camera Control (wireless)

In this mode, the keypad communicates with each camera using RF (wireless) communications.

1. Make sure your cameras are all within 60 feet/18.28 meters of the keypad.

   See your 3-CCD CameraMan Installation and Operations Manual for more information on daisy-chaining your cameras.

2. Set the **KEYPAD ADDRESS** on your Camera Control Keypad to match the **BASE UNIT ADDRESS** on the first camera.

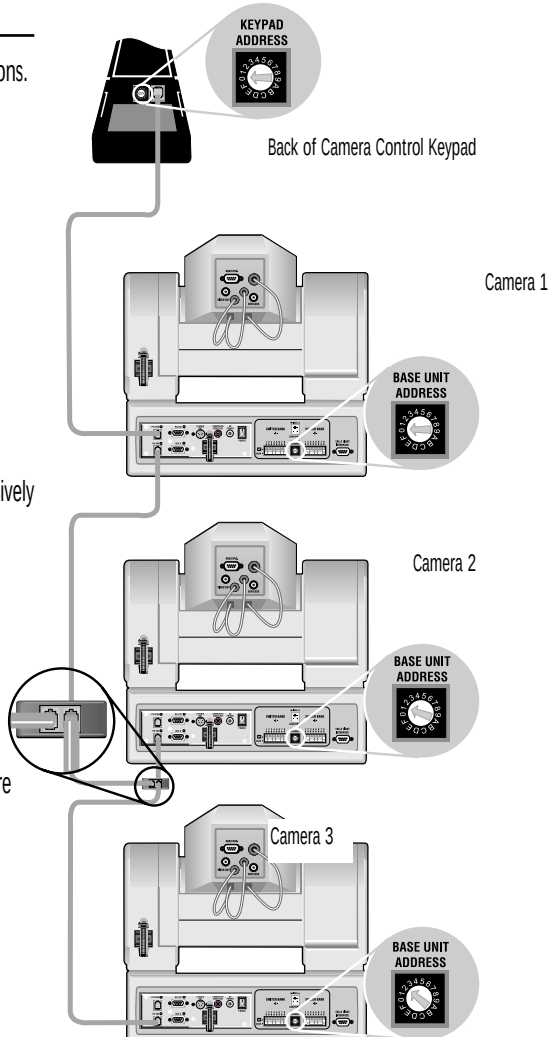
   See page 3 for more information on setting the **KEYPAD ADDRESS**.

3. Set the **BASE UNIT ADDRESS** on the second and third cameras to follow successively the address you used for the first camera.

Camera	Base Unit Address	Keypad Address
1	0	0
2	1	
3	2	

4. Set the **RF** Command configuration switch on cameras **2** and **3** to **ENABLE** (UP).

   See your ***3-CCD CameraMan Installation and Operations Manual*** for more information on setting the configuration switches.

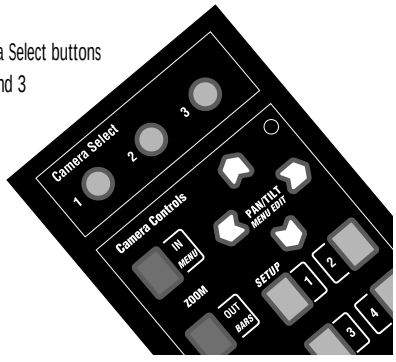


Multi-Camera Keypad Usage

To control any of the three cameras in your multi-camera network, push one of the **CAMERA SELECT** buttons marked **1**, **2**, and **3** at the top of your keypad. The button marked **1** corresponds to **Camera One**, the button marked **2** corresponds to **Camera Two**, and the button marked **3** corresponds to **Camera Three**.

All camera control and Location Preset commands are issued to the last camera selected.

Camera Select buttons 1, 2, and 3



Multi-Camera Control (hard-wired)

In this mode, the keypad communicates with camera one using the hard-wired connection. Any commands sent to cameras two or three will be received by camera one and sent to the proper camera using RS-485 communications.

1. Make sure your cameras are daisy-chained together.

   See your ***3-CCD CameraMan Installation and Operations Manual*** for more information on daisy-chaining your cameras.

2. Set the **KEYPAD ADDRESS** on your Camera Control Keypad to match the **BASE UNIT ADDRESS** on the first camera.

   See page 3 for more information on setting the **KEYPAD ADDRESS**.

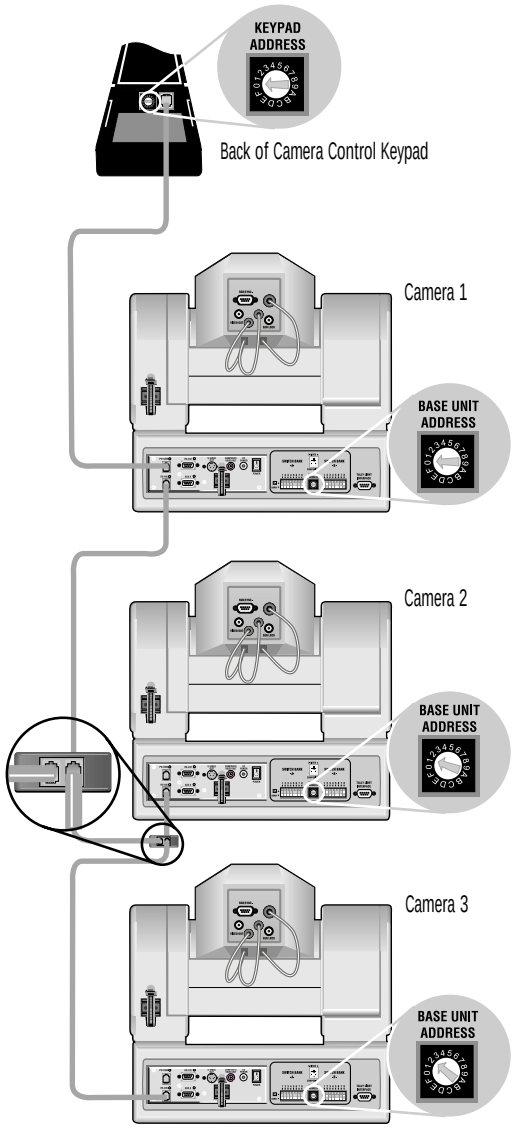
3. Set the **BASE UNIT ADDRESS** on the second and third cameras to follow successively the address you used for the first camera.

Camera	Base Unit Address	Keypad Address
1	0	0
2	1	
3	2	

4. Set the **RF** Command configuration switch on cameras **1**, **2**, and **3** to **DISABLE** (UP).

   See your ***3-CCD CameraMan Installation and Operations Manual*** for more information on setting the configuration switches.

5. Connect the Keypad to the **PVI COM** port on **Camera One** using the CameraMan Keypad Cable (hard-wired mode only).



Multi-Camera Control (wireless and wired combined)

In this mode, the keypad will communicate with camera one using RF (wireless). Any commands sent to cameras two or three will be received by camera one and sent to the proper camera using RS-485 communications.

1. Make sure camera one is within 60'/18.28m of the keypad.
2. Make sure cameras two and three are daisy-chained together.

See your ***3-CCD CameraMan Installation and Operations Manual*** for more information on daisy-chaining your cameras.

3. Set the **KEYPAD ADDRESS** on your Camera Control Keypad to match the **BASE UNIT ADDRESS** on the first camera.

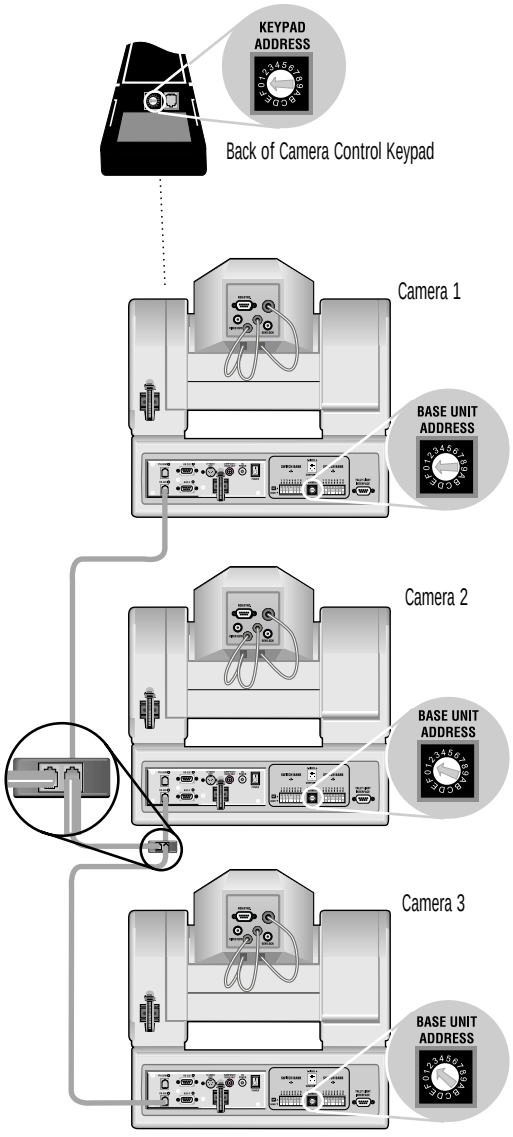
See page 3 for more information on setting the **KEYPAD ADDRESS**.

4. Set the **BASE UNIT ADDRESS** on the second and third cameras to follow successively the address you used for the first camera.

Camera	Base Unit Address	Keypad Address
1	0	0
2	1	
3	2	

5. Set the **RF** Command configuration switch on cameras **2** and **3** to **DISABLE** (UP).

See your ***3-CCD CameraMan Installation and Operations Manual*** for more information on setting the configuration switches.



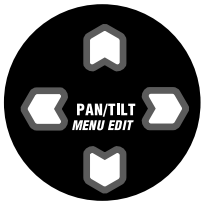
Operating Your Camera Control Keypad

Now that you've learned what the buttons are for and configured them to work properly, it's time to put them to use. Here is the basic functionality of each button.

Controlling The Camera and Image

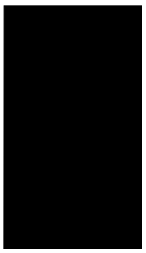
Manual Pan/Tilt Arrows

Press the up, down, left, and right **PAN/TILT** arrows to pan or tilt the camera according to your setup (see page 4).



Zoom Perspective Buttons

- Press the **Zoom IN** button for the camera to zoom in for a tighter view.
- Press the **Zoom OUT** button for the camera to zoom out for a wider view.

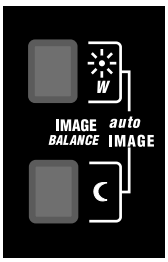


The **Zoom** can be adjusted manually and stored in a Location Preset.

IMAGE Setting Buttons

Manual

- Press and release the top **IMAGE** button to brighten the picture.
- Press and release the bottom **IMAGE** button to darken the picture.



The **IMAGE** setting can be adjusted manually and stored in a Location Preset.

You may want to use the **Manual IMAGE** setting when you are not fully satisfied that the video image is as dark or light as you want. Otherwise, the **IMAGE** setting adjusts itself automatically to the lighting conditions in all areas of the room.

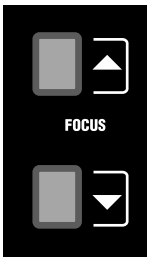
autoIMAGE

In this mode, CameraMan adjusts the **IMAGE** (light & dark) automatically for each camera view. Press and release both the top and bottom **IMAGE** buttons to enable automatic operation of the CameraMan's **IMAGE** function.

An **autoIMAGE** setting can be stored in a Location Preset.

FOCUS Setting Buttons

- Press the **UP** arrow button to focus far (send the focal point farther from the camera).
- Press the **DOWN** arrow button to focus near (bring the focal point closer to the camera).



Operating Your Camera Control Keypad

The Camera Setup Mode buttons (with green text) on your keypad enable you to adjust the camera's settings through four on-screen menus. These adjustments should be made by qualified technical personnel only.

If you are using a CameraMan SHOT Director with your camera(s), you should perform all setup through the SHOT Director. Do not use these keypad features.

Adjusting the Camera Setup Mode Settings

SETUP button

MODE button

Setup and Mode Buttons

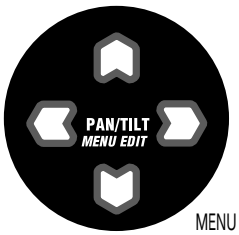
To enter the camera setup mode:

- Press and hold **SETUP** and **MODE** simultaneously for 2.5 seconds. The keypad should beep once.
- Release both buttons.
- The video flashes and an on-screen menu appears when it enters the camera setup mode.

MENU EDIT Arrows

To select a setting, or the value of a setting, use the **PAN/TILT MENU EDIT** buttons (left/right and up/down) on your keypad:

- **TILT UP:** moves the on-screen cursor up.
- **TILT DOWN:** moves the on-screen cursor down.
- **PAN RIGHT:** increases, or changes the setting.
- **PAN LEFT:** decreases, or changes the setting.



MENU EDIT arrows

To change between the various on-screen settings menus:

- Place the cursor on the first line of the menu using the menu edit **UP** and **DOWN** arrows.
- Select the menu page (1-4) using the menu edit **LEFT** and **RIGHT** arrows.

For more information on the on-screen camera settings and their functionality, refer to the ***3-CCD CameraMan Installation and Operations Manual***.

When accessing the on-screen camera settings, do not change the **BAUD RATE**. This may impact the camera's communication links.

MENU Button

Press the **Menu** button to toggle between the on-screen settings menu and the video image.

MENU button

BARS Button

Press the **Bars** button to toggle between the on-screen color bars and the video image.

BARS button

White Balance Button

Press the button next to the **W** to set the white balance automatically when the on-screen menu is turned **off**.

WHITE BALANCE button

Once all adjustments have been made, the camera must be returned to system mode for normal operation. Just follow the same directions as above to enter camera setup mode. The menu disappears and the camera returns to normal operation.

Location Presets

To move quickly from shot to shot using the Camera Control Keypad, use the Location Preset function on the keypad. With Location Presets, you can store and recall up to 125 predetermined locations.

Working With Location Presets

What are Location Presets?

Location Presets are stored locations that can be recalled using the Camera Control Keypad. Each Location Preset memorizes and stores the following camera control functions:

- **PAN/TILT** position
- **ZOOM** perspective
- **IMAGE** setting
- **FOCUS** setting

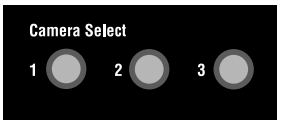
To Set or Change a Location Preset

1. Select the camera you want to program using the **CAMERA SELECT** buttons. (If only using one camera, press **CAMERA SELECT 1**).
2. Use the **PAN/TILT** arrows to move the camera to the desired location.
3. If desired, use the manual **ZOOM** buttons to set the needed Zoom perspective.
4. If desired, use the manual **IMAGE** buttons to set the needed light/dark contrast.
5. If desired, use the **FOCUS** buttons to change the camera's focal point.
6. Input the **Location Preset** number (**1–125**).
7. Press and hold **ENTER** until you hear two beeps. The two beeps indicate the **Location Preset** has been stored.

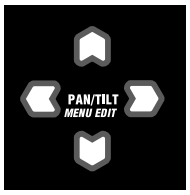
To Recall a Location Preset

1. Select the camera of choice (if only using one camera, press **CAMERA SELECT 1**).
2. Input the **Location Preset** number (**1–125**).
3. Press and release **ENTER**.

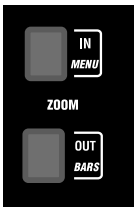
The CameraMan camera moves to the memorized location and recalls the information stored for that **Location Preset**.



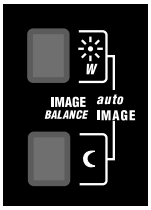
Step 1



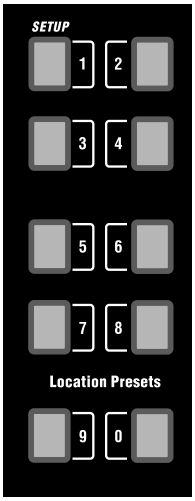
Step 2



Step 3



Step 4



Step 6

Step 5

Step 7

Appendix A : Troubleshooting and Specifications

If you have any problems with your Camera Control Keypad, please refer to the following Troubleshooting section. If you still have questions or problems, please contact your authorized ParkerVision reseller or contact ParkerVision Product Support at 904-737-1367.

Troubleshooting

Problem: **The Camera Control Keypad will not control the CameraMan Camera when used in the wireless RF mode.**

Solution:

1. Verify that the battery is installed in the keypad properly (see page 3).
2. Verify that the **BASE UNIT ADDRESS** switch on the back of the CameraMan Camera, and the **BASE UNIT ADDRESS** switch in the battery compartment of the keypad are set to the same setting (see page 3).
3. Verify that the **RF** command switch on the back of the CameraMan camera is set to **ENABLE** (see your ***3-CCD CameraMan Installation and Operations Manual***).
4. Verify that the light on the front of the Camera Control Keypad illuminates for a few seconds when the battery is first plugged in.
5. Be sure that you have pressed the appropriate **CAMERA SELECT** button on the Camera Control Keypad corresponding to the camera you wish to control (see page 6). If only using one camera, press **CAMERA SELECT 1**.

Problem: **The Camera Control Keypad will not communicate with the CameraMan Camera in the "hard-wired" mode.**

Solution:

1. Verify that the CameraMan Keypad Cable is connected from the **PVI COM** port on the back of the camera to the **RJ-11** jack in the battery compartment of the Camera Control Keypad (see page 3).
2. Verify that the **BASE UNIT ADDRESS** switch on the back of the CameraMan camera and the **BASE UNIT ADDRESS** switch in the battery compartment of the keypad match (see page 3).
3. Does the light on the front of the keypad come on for a few seconds when the keypad is first plugged in? If not, replace cable only with a ParkerVision-supplied cable.
4. Be sure that you have pressed the appropriate **CAMERA SELECT** button on the Camera Control Keypad corresponding to the camera you wish to control (see page 6). If only using one camera, press **CAMERA SELECT 1**.

Specifications

Wireless Mode:

RF Range: . . . . . .60'/18.28m from Camera (typical)

Power: . . . . . .(2) AA DURACELL® Battery

Hard-Wired Mode:

Range: . . . . . .250'/76.2m from Camera (typical)

Power: . . . . . .Supplied through Cable

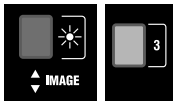
Keypad Dimensions: . . . . .US: 7.0"L x 2.20"W x 0.85"H
INT: 17.78cm L x 5.59cm W x 2.16cm H

Return To Default

The **Return to Default** command resets the cameras maximum pan/tilt position and orientation to the factory settings and clears location presets **1**, **2**, and **3** (presets 4-125 will not change). **Please use with caution.**

Returning to the Factory Defaults:

1. Simultaneously press the **IMAGE light** and number **3** button for approximately one second.



2. Release the buttons.
3. If it was off-center, the camera returns to the home position.

Notes