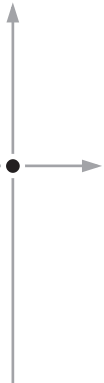


CameraMan

1CCD CAMERA CONTROL KEYPAD

Operation Manual



L1202101 Rev D1
1998

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Grass Valley Web Site

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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Congratulations On Your Purchase

The Camera Control Keypad provides you with portable control of up to three CameraMan 1-CCD cameras. You can use it in either wireless, or hard-wired mode, providing you with 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 1-CCD General Pan/Tilt camera, please refer to the installation and operations manual included with the camera.

You will see three icons throughout 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 **1-CCD General Pan/Tilt Camera Installation and Operations Manual** that came with your camera.

Your 1-CCD Camera Control Keypad should include these components:

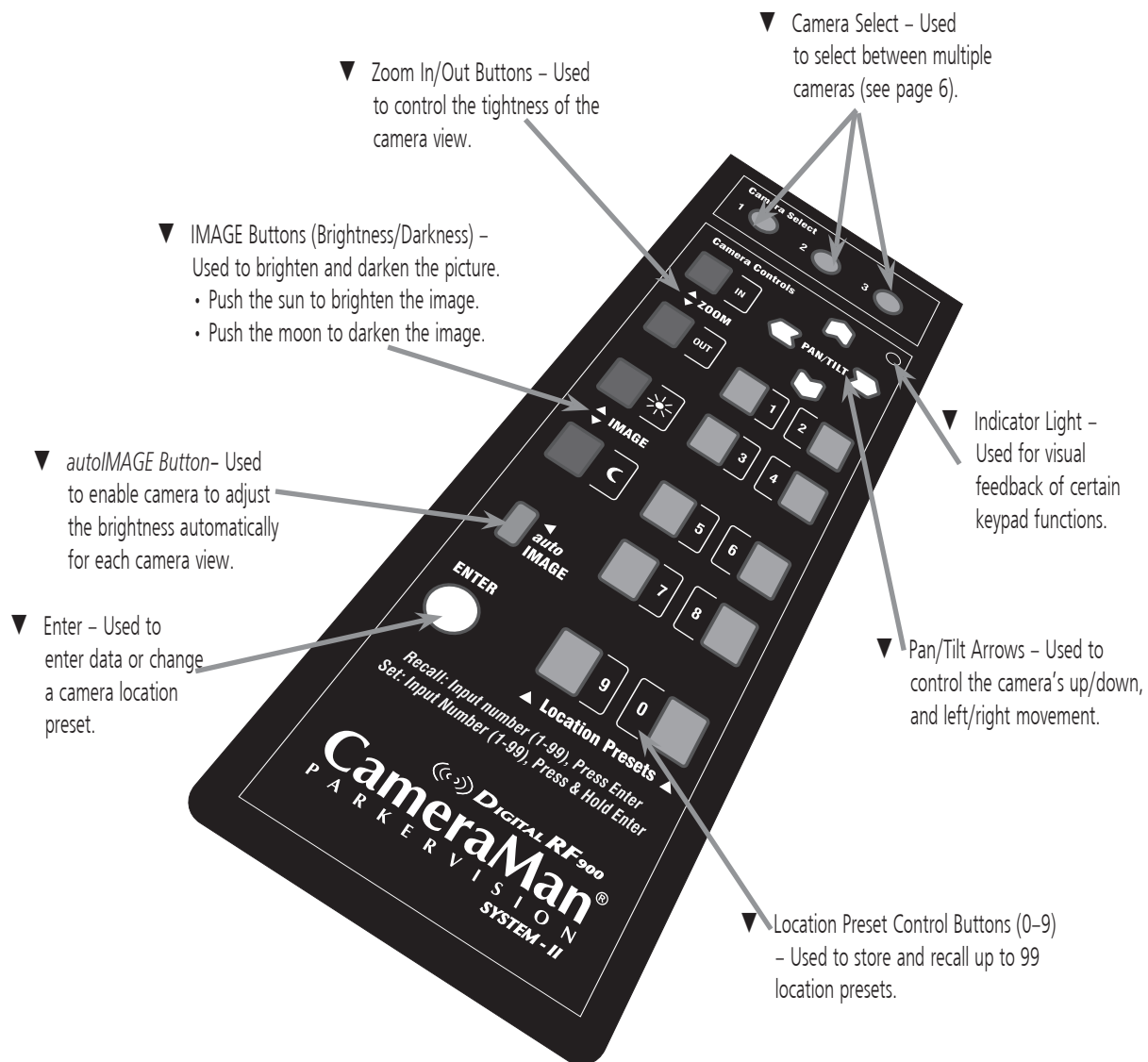
- One 1-CCD Camera Control Keypad
- One 1-CCD Camera Control Keypad Operations Manual
- One Keypad Quick Reference Card

Product Description

The Camera Control Keypad enables you to control the pan, tilt, zoom, and IMAGE functionality for up to three (3) CameraMan cameras. You also can store up to 99 presets per camera for up to three separate cameras. The keypad can be used either in RF wireless mode (up to 60 feet/18.28 meters from the camera) or in hard-wired mode (up to 250 feet/76.2 meters from the camera).

Buttons And Controls

Look at the front of the Camera Control Keypad. Here, you will find all the buttons required to control the pan, tilt, zoom, and IMAGE, and also the buttons required to store up to 99 location presets.



Connecting Your Keypad

Your Camera Control Keypad is designed to be used either in wireless or hard-wired mode. The wireless mode enables you to freely move around the room. The hard-wired mode enables you to control the camera from greater distances. For either mode, use the following steps to connect your keypad to your camera system:

Step 1: Adjust the KEYPAD ADDRESS rotary switch (located in the battery compartment of the keypad). The selected setting must be the same as 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 1-CCD CameraMan Installation and Operations Manual

Step 2: Configure the keypad for the desired mode:

For Wireless RF Mode (up to 60 feet/18.28 meters):


- Install the supplied AA batteries in the Camera Control Keypad by removing the battery compartment door and inserting the batteries. You will hear a beep.
- Replace the battery compartment 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, the batteries may be installed backwards. Reverse the way the batteries are inserted, and try again. If a battery with a low charge is installed, the keypad will emit a long beep.


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

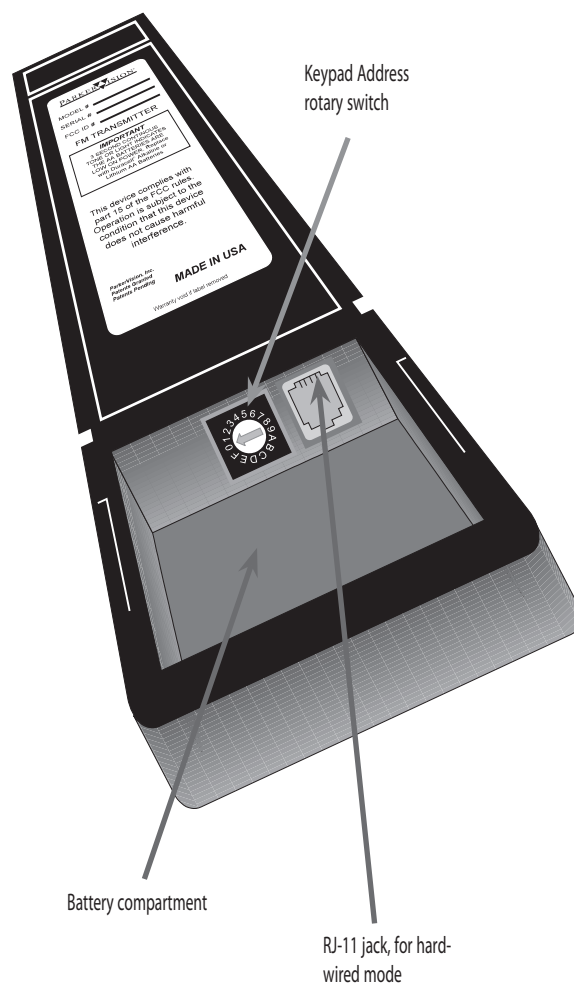
For Hard-wired Mode (up to 250 feet/76.2 meters):

- Remove the batteries.
- Connect the CameraMan Keypad Cable supplied 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 to install batteries in the Camera Control Keypad when using it in hard-wired mode.

 Using a cable other than the one supplied for the PVI COM port may cause damage.



Orienting The Pan Arrows

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

Understanding The Panning Motion

Examples 1 and 2 depict instances 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 while 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 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 do not need to face the camera (example 2). In these situations, the default setting would 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:

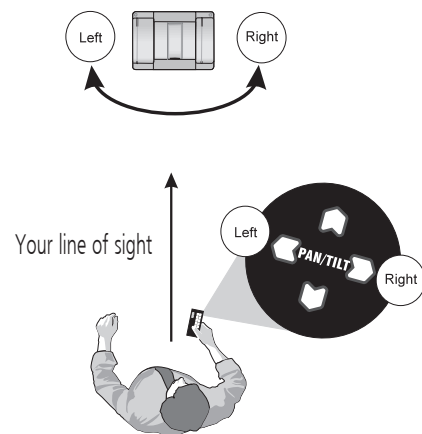
- Presentations where you are not the presenter, but are controlling the camera's movement.
- Videoconferences where you are a moderator, but not an on-screen participant.
- Applications where you are controlling the camera from a control room.
- Any other application where you, the camera controller,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

Re-Orienting The Pan Arrows

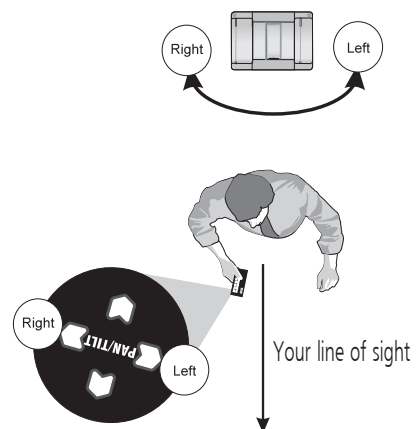
To re-orient (reverse) the setting of the pan arrows on your Camera Control Keypad:

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

Example 1 (Default setting): Facing toward the front of the camera



Example 2: Facing away from the front of the camera



Maximum Pan/Tilt Configuration

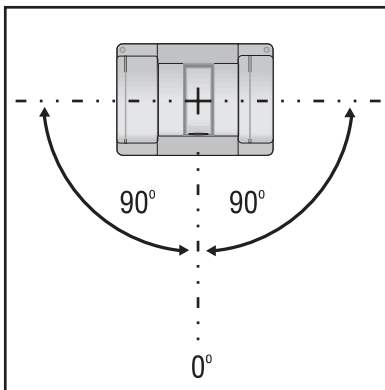
Now that you've learned how to program the pan arrows to meet your application's needs, you can continue to customize how your Camera Control Keypad works with your CameraMan system.

Maximum Pan/Tilt Travel

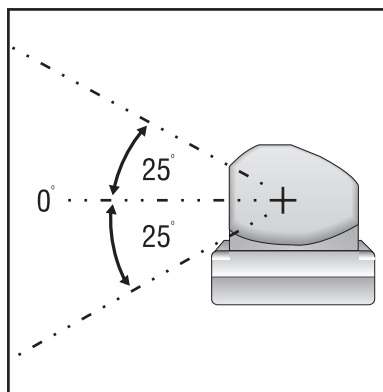
Once the CameraMan Camera is installed, you can configure the PAN/TILT settings to suit your application. The CameraMan camera has a maximum pan range of 359° , but comes programmed with factory default settings for maximum pan/tilt settings of $\pm 90^\circ$ of PAN and $\pm 25^\circ$ of TILT. Use the following procedure to change the maximum position settings:

1. Select the camera you want to adjust (see page 6, Multiple Camera Keypad Usage).
2. Press and hold the ENTER button.
3. While holding the ENTER button, use the PAN/TILT arrows to move the camera to the maximum desired position in one direction.
4. Release the ENTER button to set the maximum desired position for that direction.
5. Listen for two beeps, indicating that the maximum position for that direction has been set.
6. If desired, repeat steps 2-5 until all maximum positions (left, right, up and down) are set.
7. If desired, repeat steps 1-6 for additional cameras.

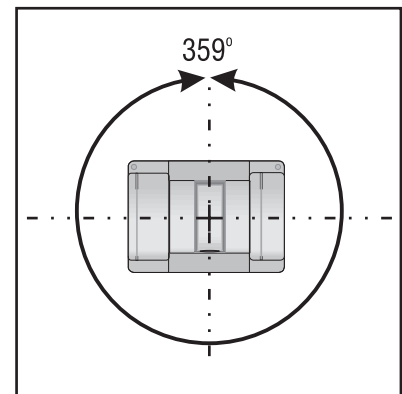
180° Default Maximum **Pan** Settings



50° Default Maximum **Tilt** Settings



359° Maximum **Pan** Range



Multiple Camera Applications

The Camera Control Keypad can control the pan, tilt, zoom, and IMAGE for up to three separate cameras. It is possible to control multiple CameraMan cameras in one of three modes- wireless, hard-wired, or a combination of the two. Use the following procedures to enable the keypad to work properly with multiple cameras:

Multiple Camera Control (wireless mode)

In this mode, the keypad communicates with each camera using RF (wireless) communications, therefore the keypad is NOT hardwired.

1. Make sure your cameras are all within 60 feet/18.28 meters of the keypad.
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 successively follow the address that you used for the first camera.

Example:

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

4. Set the RF Command configuration switch on all three cameras to ENABLE (up).



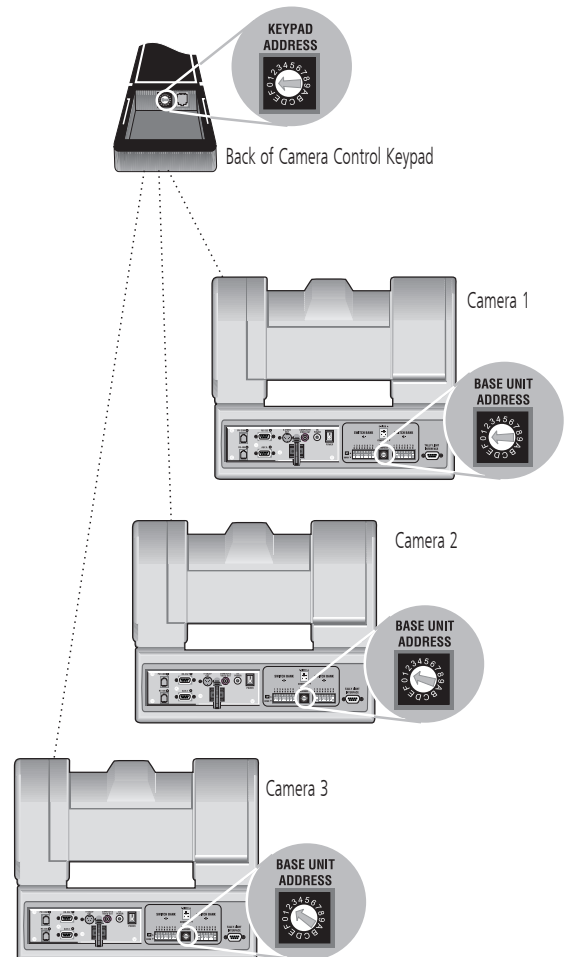
See your **1-CCD CameraMan Operations and Installation Manual** for more information on setting the configuration switches on your CameraMan camera(s).

Multiple Camera Keypad Usage

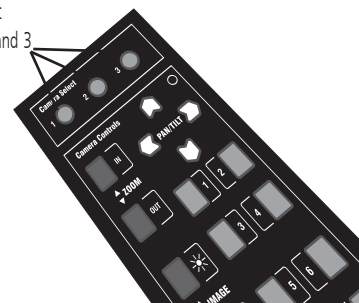
To control any of the three cameras in your multi-camera network, press one of the CAMERA SELECT buttons marked 1, 2 and 3 at the top of your keypad. Button **1** corresponds to Camera One, button **2** corresponds to Camera Two, and button **3** corresponds to Camera Three.



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



Camera Select buttons 1, 2 and 3



Multiple Camera Applications

Multiple Camera Control (hard-wired mode)

In this mode, the keypad communicates with camera one (1) 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 **1-CCD CameraMan Installation and Operations Manual** for more information on daisy-chaining your cameras together.

2. Connect the Keypad to the PVI COM port on camera one (1) using the CameraMan Keypad Cable (hard-wired mode only).
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 successively follow the address that you used for the first camera.

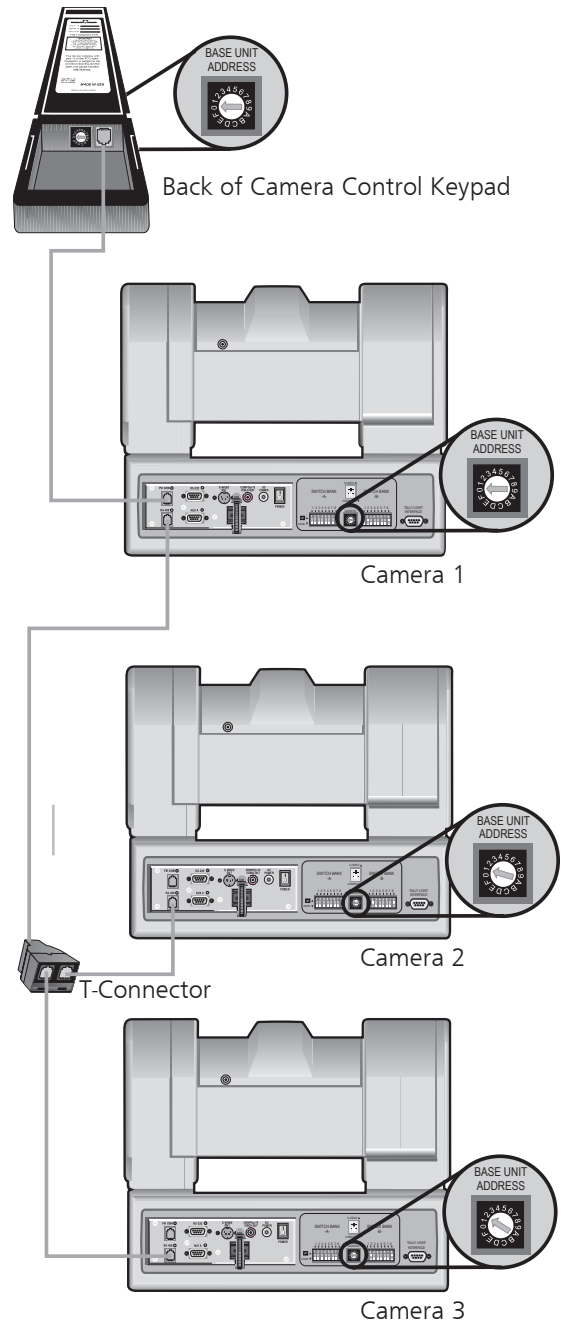
Example:

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

5. Disable or enable the RF Command configuration switch on all cameras. This setting will not affect functionality.



See your **1-CCD CameraMan Installation and Operations Manual** for more information on setting the configuration switches on your CameraMan camera(s).



Multiple Camera Applications

Multiple Camera Control (wireless and hard-wired combined mode)

In this mode, the keypad communicates with camera one (1) 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. The keypad is NOT hardwired.

1. Make sure camera one is within 60 feet/18.28 meters of the keypad.
2. Make sure cameras two and three are daisy-chained to camera one.



See your **1-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.

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

Example:

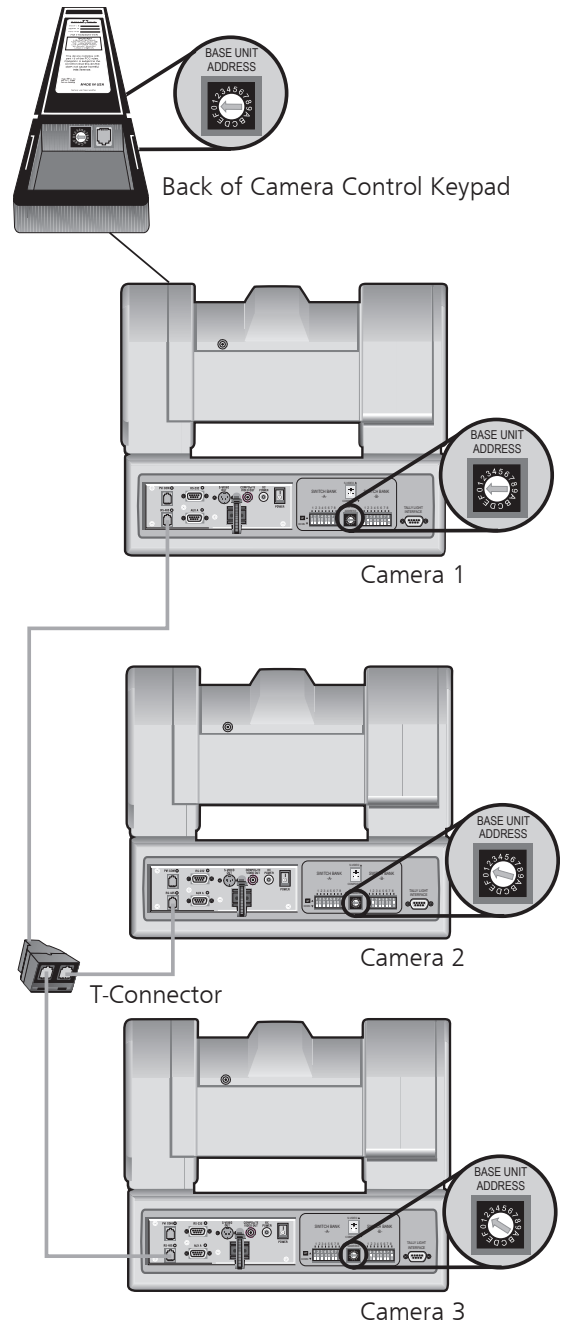
Camera	Base Unit Address	Keypad Address
1	0	0
2	1	
3	2	

5. Set the RF Command configuration switch on camera 1 to ENABLE (up). Set the RF Command configuration switch on cameras 2 and 3 to DISABLE (down).



See your **1-CCD CameraMan Installation and Operations Manual** for more information on setting the configuration switches on your CameraMan camera(s).

6. Set the Interlink configuration switch on Camera 1 to ON (up).



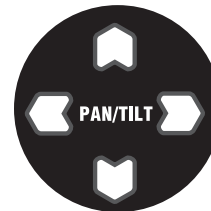
Operating Your Camera Control Keypad

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

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

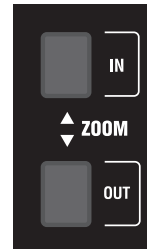


IMAGE Setting Buttons

By pressing either IMAGE button, the camera's image control automatically becomes a **manual** adjustment, overriding **autoIMAGE**.

Manual

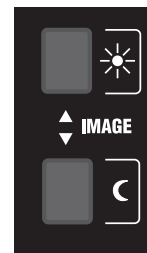
- Press and release the top **IMAGE** button (**sun**) to open the iris.
- Press and release the bottom **IMAGE** button (**moon**) to close the iris.



The IMAGE setting can be adjusted manually and can be 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 it should be. Otherwise, the IMAGE setting automatically adjusts itself to the lighting conditions in all areas of the room.



autoIMAGE

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



An autoIMAGE setting can be stored in a Location Preset.



Operating Your Camera Control Keypad

To move quickly from view to view using the Camera Control Keypad, use the location preset function on the keypad. With location presets, you can store and recall up to 99 pre-determined views by following these steps.

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 stores the following camera control settings:

- PAN/TILT position
- ZOOM perspective
- IMAGE setting

To Set or Change a Location Preset

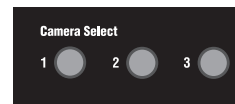
1. Select the camera you want to program using the **CAMERA SELECT** buttons (if you are using only one camera, press **CAMERA SELECT 1**).
 2. Use **PAN/TILT** arrows to move the camera to the desired location.
 3. If desired, use **ZOOM In/Out** to set the needed Zoom perspective.
 4. If desired, use the manual **IMAGE** buttons to set the needed brightness.
 5. Enter a **Location Preset** number (1-99).
 6. Press and hold **ENTER** until you hear two beeps.
- The two beeps indicate that the **Location Preset** has been stored.

To Recall a Location Preset

1. Select the camera (if only using one camera, press **CAMERA SELECT 1**).
2. Enter the **Location Preset** number (1-99).
3. Press and release **ENTER**.

The CameraMan camera will move to the memorized location and recall the information stored for that Location Preset.

 Each CameraMan camera can store and recall up to **99 Location Presets**.



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6

Operating Your Camera Control Keypad

You can use combinations of buttons to adjust the Shutter and Gain settings for each camera.

Adjusting Shutter Settings


1. Press **Enter** and **ZOOM IN** to adjust the **Shutter UP**.
2. Press **Enter** and **ZOOM OUT** to adjust the **Shutter DOWN**.

Adjusting Gain Settings

1. Press **Enter** and **IMAGE lighten** (*sun*) to increase the **Gain**.
2. Press **Enter** and **IMAGE darken** (*moon*) to decrease the **Gain**.

Setting Up Gen Lock with Your Control Keypad


You can adjust the Gen Lock settings to synchronize all video sources based on the sync pulses from one source, such as a remote camera. When you switch between cameras, you may detect a flicker on your monitor. Adjusting the Gen Lock settings enable you to remove the flicker for smooth transitions between cameras.

 Place the **Gen Lock Mode Setup** card over the Keypad when adjusting Gen Lock. It provides the instructions below and highlights the buttons you will use.

Gen Lock Setup (with the overlay card)

The following procedure will enable you to adjust Gen Lock settings with the **Gen Lock Setup** overlay card.

1. Press and hold down the buttons labeled **Gen Lock** and **Mode**. After 2-3 seconds, you will hear a beep.
2. Release the **Gen Lock** and **Mode** buttons. The **Gen Lock Setup** menu appears.

 To reset the menu items to the default values, press the button labeled **Reset**.

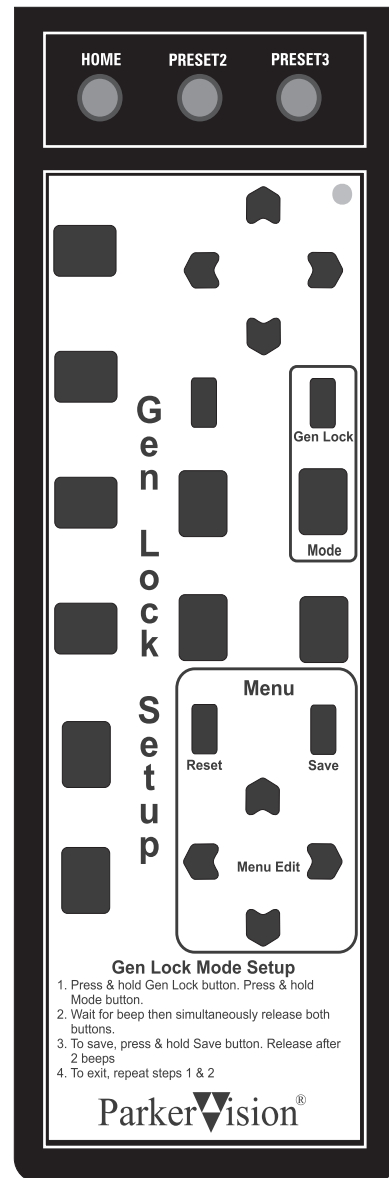
3. Press the **up** and **down Menu Edit** arrows to move the arrow on-screen and to select the item you want to change.
4. Press the **left** and **right Menu Edit** arrows to change the value for the following items:

Menu Item	Values
MODE	AUTO or INT (internal)
H-PHASE	-99° to +99°
SCFINE	-99° to +99°

5. To save your changes, press the button labeled **Save**.

 The SC-PHASE is set using Dip Switch number 2: **DOWN = 150°** and **UP = 180°**.

6. Press and hold **Gen Lock** and **MODE** to exit.



Setting Up Gen Lock with Your Control Keypad

Gen Lock Setup (without the overlay card)

The following procedure will enable you to adjust Gen Lock settings without the **Gen Lock Setup** overlay card.

1. Press and hold down button numbers **0** and **8**. After 2-3 seconds, you will hear a beep.
2. Release the **0** and **8** buttons. The **Gen Lock Setup** menu appears.



To reset the menu items to the default values, press button number **1**.

3. Press the **up** and **down PAN/TILT** arrows to move the arrow on-screen and to select the item you want to change.
4. Press the **left** and **right PAN/TILT** arrows to change the value for the following items:

<u>Menu Item</u>	<u>Values</u>
MODE	AUTO or INT (internal)
H-PHASE	-99° to +99°
SCFINE	-99° to +99°

5. To save your changes, press button number **2**.



The SC-PHASE is set using Dip Switch number 2: **DOWN = 150°** and **UP = 180°**.

6. Press and hold **8** and **0** to exit.

Appendix A : Troubleshooting and Specifications

If you have any problems with your Camera Control Keypad, please refer to the following Troubleshooting section. If you have questions or problems after troubleshooting, please contact your authorized reseller, or contact Product Support directly at 904-596-3500.

Troubleshooting

- Problem:** *The Camera Control Keypad will not control the CameraMan camera when used in the wireless RF mode.*
- Solution:**
1. Verify that the batteries are 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 **1-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 batteries are first plugged in.
 5. Be sure that you have pressed the **CAMERA SELECT** button on the Camera Control Keypad that corresponds to the camera you want to control. (see page 6) If only using one camera be sure to 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 have the same setting (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 the cable with the supplied cable only.
 4. Be sure that you have pressed the **CAMERA SELECT** button on the Camera Control Keypad that corresponds to the camera you want to control (see page 6). If only using one camera be sure to press **CAMERA SELECT 1**.

Specifications

Wireless Mode:

RF Range: 60 ft./18.28 m from camera (typical)

Power: (2) AA DURACELL® battery

Hard-Wired Mode:

Range: 250 Ft./76.2mf from camera (typical)

Power: supplied through cable

Keypad Dimensions: US: 7.0"L x 2.20"W x 0.85"H

INTL: 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 pan/tilt orientation to their factory settings, and clears **Location Presets 1, 2, and 3** (presets **4-99** will not be reset). **Please use with caution.**

Returning to the Factory Defaults:

1. Press and hold the **IMAGE (sun)** button and button number **3** for approximately one second.
2. Release the buttons.
3. If off-center, the camera will return to the default home position.



