

Panorama Shooting Guide for Photographers

Contents

	Page
1. Equipment (our recommendation in parentheses)	2
2. Virtual Tour Panoramic Head and Tripod Set-up	3, 4
3. Scene Set-up	4
4. Camera Set-up	5, 6
5. Setting a Correct AE Lock for your Panorama	7
6. Tips for determining the Mid-Value with any digital camera	8
7. Shooting the Panorama	9
8. Troubleshooting	10

1. Equipment (3cim recommendation in parentheses)

- A. Digital Camera * (Nikon 800, or 900 series digital cameras)
- B. 2 fully charged sets of 4 AA batteries for the camera
- C. Tripod with head (Bogen 3000 series legs and 3000 series head)
- D. Panoramic Head (Kaidan Kiwi dedicated Panoramic Head)
- E. Memory card(s)



Before Assembly



After Assembly

* Any digital camera with a minimum resolution of 480 x 640 pixels (VGA), auto-focus and auto exposure lock may be used for this procedure.

2. Virtual Tour Panoramic Head and Tripod Set-up

- A. Extend the tripod's legs to an equal length such that the tripod head is at chest level when all three legs are resting firmly on the ground.



Fig. B



Fig. C

- B. Attach the standard tripod insert to the Kiwi Pano Head socket (Fig. B).
 C. Clip the insert with the Kiwi Pano Head to the tripod (Fig. C).



Fig. D

- D. Attach the camera to the Kiwi Pano Head by screwing the **Tripod Socket Screw** into the tripod socket located on the bottom of the camera (Fig. D).



Figs. F & G

F. Bubble Level:

Level the tripod by adjusting the tripod's **Level Adjustment Knobs** until the **Bubble Level** is centered (Fig. F).

G. Nodal Point: Is the central pivot point of a panorama. To ensure that your panorama stitch evenly, check to see that the center of the camera lens is aligned with the center of the tripod's axis. Tighten the **Tripod Socket Screw** and the **Level Adjustments Knobs** once the camera is perfectly leveled and centered.

3. Scene Set-up

Place the tripod in the area from which to shoot the panorama, usually the center or corner of a room, or a location where all objects that are to appear in the panorama are clearly visible.

4. Camera Set-up

For the Nikon Coolpix 950 Camera:

Set the camera resolution quality to VGA (640 x 480 pixels) and Auto Exposure Lock (AE-Lock).*



- A. Press the **quality button (7)** and simultaneously turn the **command dial (6)** until one of the VGA modes appears in the bottom right-hand corner of the LCD display. There are 3 VGA option modes with the 950 – VGA Basic, VGA Normal, VGA Fine– any of which will work, but may vary in the file size of the individual images. (VGA Fine is recommended)



- B. Turn the **command lever (2)** on the Nikon camera to **M** for Manual.
- C. Zoom the lens to the widest angle of view by pushing the **W (1)** button until the lens stops.
- D. Scroll through the menu by pushing the **T** or **W (1)** button and highlight “AE Lock.” Push the **shutter release (4)** button to select AE Lock “ON” and show the AE Lock window.
- D. With AE Lock “ON” and the AE Lock window displayed, press the shutter release button to activate AE Lock. The AE Lock must be now reset for the new exposure.
- E. Press the Menu button and scroll down using “W” to highlight “AE Lock.” Push the shutter release button to show the AE Lock window and scroll with the “W” button to select “Reset.” Press the shutter release button to reset the AE Lock.

For the Nikon Coolpix 885 Camera:

Set the camera resolution quality to VGA (640 x 480 pixels) and Auto Exposure Lock (AE-Lock).*



- A. Turn the **Power Switch (1)** to the on position and turn the **Mode Dial (2)** to the CSM, Custom Mode position.
- B. Press the **Menu Button (3)** to launch the menu window in the LCD.
- C. Scroll through the menu window by pressing the down arrow on the **Multi Selector (4)** button until the **Qual** tab is highlighted, select it by pushing the right arrow on the Multi Selector button.
- D. Select the **Image Quality** field and press the right arrow. Select **Normal** quality by pressing the right arrow.
- E. After the quality has been selected and the window menu is displayed with the **Image Quality** tab highlighted, press the right arrow.
- F. Select the **Image Size** field by pressing the down arrow and press the right arrow once it is highlighted.
- G. Select **VGA** and press the right arrow.
- H. Set the AE Lock by pressing the **Menu Button (3)** to launch the menu window.
- I. Scroll through the menu using the down arrow until the **EXP** (Exposure Option) tab is highlighted. Press the right arrow to select it.
- J. Press the down arrow to select the **AE Lock** Field. Press the right arrow to select the **ON**.
- K. After the AE Lock has been turned on and the window menu is displayed with the **EXP** tab highlighted, press the right arrow.
- L. Press the down arrow to select **AE Lock**. Press the right arrow to select **Reset**.
- M. Once the AE Lock has been reset the camera is ready to be programmed for a new exposure setting. Press the shutter release to program the AE Lock.

* Review the camera manufacturer's users' manual to determine how to set the VGA and AE-Lock for cameras other than the Coolpix 950 and 885.

5. Setting a Correct AE Lock for your Panorama

- A. Pan the camera around the area to be photographed and find the **Mid-Value** in the panorama that has both the darkest and lightest light values of the scene (see “6. Tips . . . “ below to determine the appropriate Mid-Value).
- B. Set the AE Lock by pressing the shutter release button once the Mid-Value has been determined and the desired area framed in the camera’s viewfinder.
- C. After the capturing the image, evaluate the Mid-Value by viewing it in the camera’s LCD display.
- D. EV compensation:

For Nikon Coolpix 950 camera only

If the Mid-Value appears too dark or too light, reset the AE-Lock with the **EV Compensation** by simultaneously pressing the **+/- button (5)** and turning the **command dial (6)** until a **+0.00** appears in the bottom right-hand corner of the camera’s LCD display. The exposure compensation value will either darken or lighten the image with values ranging from **–2.00** to **+2.00**; e.g., –2.00 for darkest and +2.00 for lightest.

For Nikon Coolpix 885 camera only

If the Mid-Value appears too dark or too light, reset the AE-Lock with the **EV Compensation** by simultaneously pressing the **+/- button (5)** and **Multi Selector (4)** button up or down until a **+0.00** appears in the bottom right-hand corner of the camera’s LCD display. The exposure compensation value will either darken or lighten the image with values ranging from **–2.00** to **+2.00**; e.g., –2.00 for darkest and +2.00 for lightest.

- E. Once the Mid-Value has been set into the AE-Lock, begin shooting the panorama.

6. Tips for determining the AE Lock Mid-Value with any digital camera.



Optimal – Mid-Value set using both the lightest and darkest areas of the entire panorama.



Too Dark – Mid-Value set to the lightest area of the panorama; entire panorama too dark.



Too Light – Mid-Value set to the darkest area of the panorama; entire panorama too light.

7. Shooting the Panorama

- A. The panorama will be constructed from images taken in “portrait,” as opposed to “landscape” orientation, with each image being of size 480 pixels (width) by 640 pixels (height). The camera should be rotated 90° clockwise or counter-clockwise (i.e., stood on end) to change from landscape to portrait orientation. If the procedures in number 1) above, for camera and tripod setup were followed, the camera will be in portrait orientation.



- B. The pictures should be taken from left to right (clockwise).
- C. Shoot the first picture, then turn the camera clockwise, leaving from 10% - 90% of the previous image in the left-hand side of the frame for the next image.
- D. Repeat step C, for successive images until the camera has come full circle.
- E. The last image of the panorama must have elements of the first image (in the right-hand side of the frame) in order to complete the full 360° panorama.
- F. Shoot a blank frame to separate sets of images to make it easier to identify entire scenes when later downloading the images to a computer.

8. Troubleshooting

A. Problem:

Panorama doesn't align properly around blank walls or open areas that have solid fields of color.

Solution:

Each individual frame or picture in a panorama must have an identifiable pattern in order for the individual frame to stitch together properly with surrounding frames. It is recommended that a **place marker** be used to give each blank frame an identifiable reference pattern. Bright-colored post-its can be used as place markers, preferably of a color that contrasts with the color of the background being photographed. Place the markers along the bottom outermost corners of each frame (or picture). Pan the camera clockwise to the next frame leaving part of the marker in the left-hand side of the new frame. Repeat this procedure for all frames having a solid field of color.

B. Problem:

Areas where there are windows are well (or over-) exposed while the rest of the panoramic scene is very dark.

Solution:

The AE-Lock Mid-Value was set based upon the light coming from the window. Reset the Mid-Value by panning the camera around to an area that is 90% wall and 10% window, set the AE-Lock and reshoot the panorama.

C. Problem:

The panorama has areas that are of different colors and shades of light. The stitching is clearly visible.

Solution:

The AE-Lock was not set or enabled. Follow step 4 (above) and re-shoot the entire panorama.

Copyright ©2000-2006

3cim, Inc.
3333 Bowers Ave. #143
Santa Clara, CA 95054
Tel: 408-988-7001
Email: support@3cim.com