

Panosaurus Rex

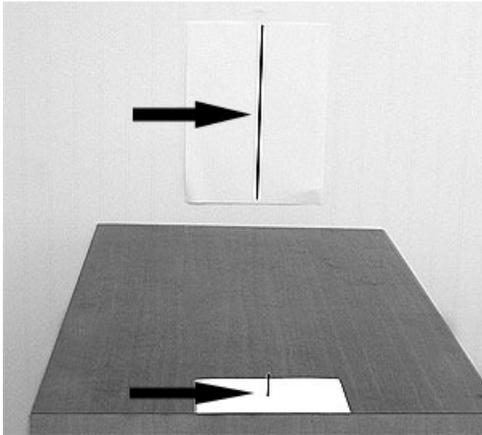
May 2009

Please Visit <http://gregwired.com/pano/Support.htm>
To view the setup video for the Panosaurus Rex.

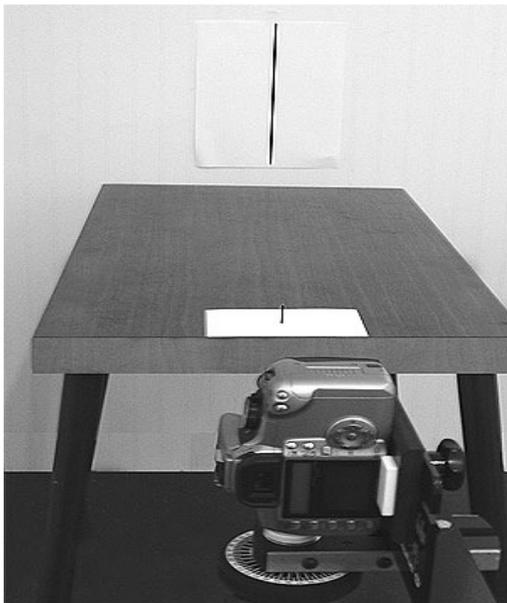
Note:

There currently is no printed setup information available.
This booklet explains how to find optical centers once
your Rex has been assembled and properly setup.

Finding the optical centers (entrance pupil) of your lenses

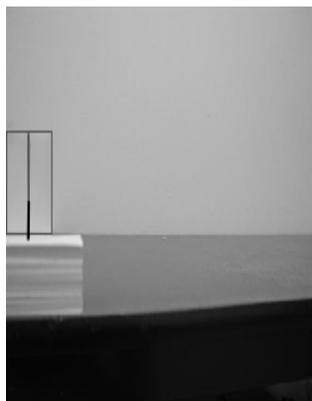


There are several methods you can use to find the optical center of lenses. The picture to the left shows one setup to find the optical center of lenses with focal lengths of **less than 70mm**. Stick a small nail through a business card and then place the nail and card on a table. Then tape a piece of paper onto the wall about 30-36 inches behind the nail. Draw a dark straight line on the paper.



Next set the Panosaurus Rex with your camera mounted to a tripod as close to the nail as possible .

The front of the camera lens should be about 4-12 inches from the nail – or as close as you can get and still be able to focus the camera fairly well on both the line and nail at the same time.



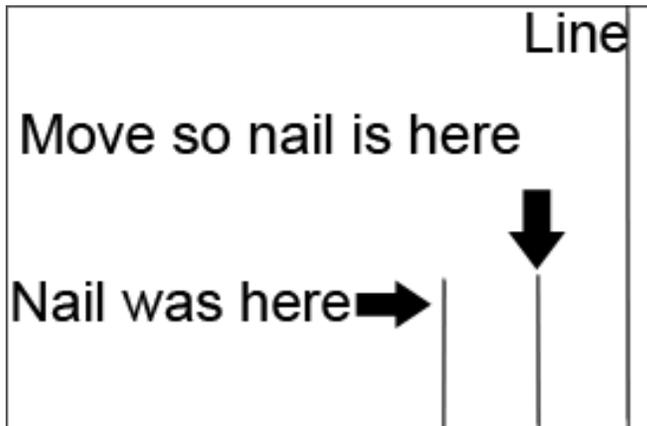
STEP A: Position the tripod so that when you look at the LCD screen or viewfinder this is what you see. The nail needs to be aligned with the line on the paper and in the **EXTREME** left hand area of the frame. **VERY IMPORTANT: This is ALWAYS the starting point of the procedure.** You will probably have to move not only the rotator of the Panosaurus but also the **tripod** in order to get into this starting position.



Now rotate the rotator of the Panosaurus (**DO NOT MOVE THE TRIPOD**) until you see the nail and line in the extreme right hand of the frame. The nail and line will **probably** now be out of alignment - either to the right or left of the line. If the nail is to the right of the line this probably means the camera needs to be moved further forward on the metal arm.

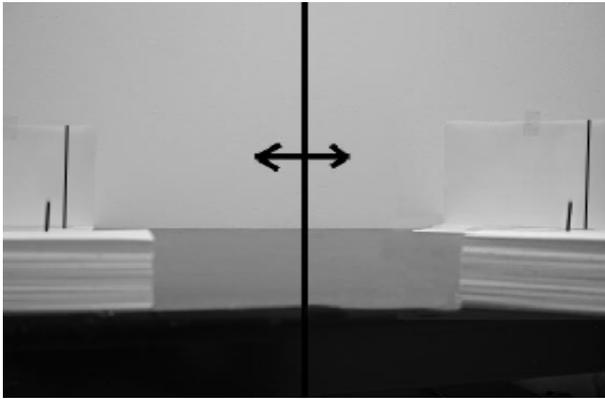


The nail in this picture has moved to the left of the line when it was rotated from the left side of the frame to the right side of the frame. This means that you will probably need to move the camera back toward you on the metal arm.

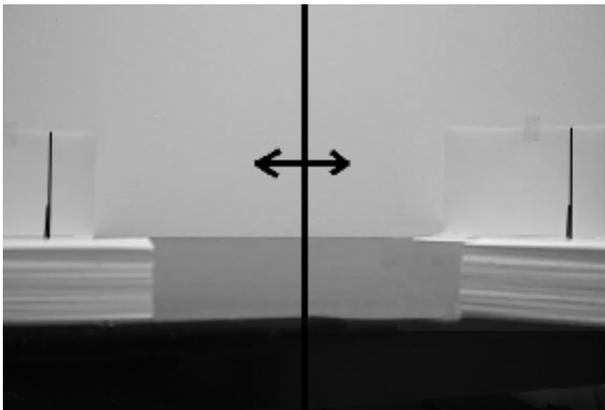


Now slightly loosen the bolts and clamping knob holding your camera and **slowly** move the camera forward or backward on the metal arm until you see that the nail is about **HALFWAY** from the distance it currently is from the line - as in the picture on the left - then tighten your clamping knob.

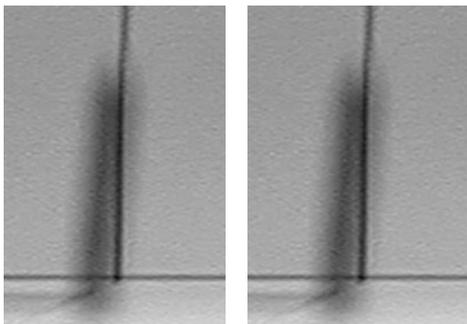
Note: If the nail had been on the right of the line to begin with then move halfway in other direction closer to the line.



Now rotate the rotator of the Panosaurus back so the nail and line are in the left side of the frame. **IF** you have moved the camera to the correct location on the metal arm the nail and line should now be out of alignment on the left side of the frame by the same amount that it is out of alignment on the right side of the frame and you may have found the optical center point. To make sure – go to step B.



STEP B: Ultimately you are striving to achieve the results seen in the picture on the left. The nail is aligned in the left of the frame and as you pan the camera with the rotator to the right of the frame the nail remains aligned with the line. In order to ensure that you have achieved this goal you now return to **STEP A** and precede to this point again and again until the goal is achieved.



To ensure that you are perfectly aligned you may want to take a picture of the left frame area and then pan to the right frame area and take another picture. Load the two pictures into your image editing software and greatly enlarge them. (If your camera allows you to enlarge in your LCD playback screen this is a good method also) If the two pictures are very similar (as are the two pictures on the left) then you have reached the optical center. Otherwise you will need to keep fine adjusting the position of the camera on the metal arm. Once you are satisfied that you have reached the optical center be sure to note where on the metal Arm the Camera Mounting Block rests. This will be the position you always place the camera on the metal arm when you shoot at that particular focal length.

Finding the optical center for longer focal length lenses.



To find the optical center of a lens with a focal length of over 70mm you will probably need to set up your camera outdoors.

The picture on the left shows how I have set my camera to align with a pole and the edge of a window in the left of my frame. The pole is about 5 feet from my camera and the window is about 30 feet from the camera. The focal length of my lens is 100mm.



The picture on the left shows what my alignment looks like when I then pan the camera to put the pole in the right side of the frame.

I will follow the same procedure as with the nail and the line on paper to perfectly align the pole and the edge of the window in both sides of the frame.

Once you have found all the optical centers of all your lenses at the various focal lengths you wish to use you are ready to setup the camera to shoot panoramas.

Shooting and Maintenance.



The turntable is laid out in 5 degree increments. There are numbers on the turntable every 10 degrees. You use the extreme front edge of the metal strips screwed to side of the rotator arm (not shown in pictures) to point to the numbers or lines on the turntable. So for example - to shoot a full 360 degree panorama using 9 shots you would shoot your first picture at "0" and then shoot a picture at the numbers 4, 8, 12, 16, 20, 24, 28, and 32 (This example assumes that you have at least 20 percent overlap in your images with your particular lens).

Important Note: The bubble level that comes with the Panosaurus is **VERY** sensitive. In fact if you set up your tripod head so that the bubble level reads level - then rotate the head 180 degrees - you may find that the reading is no longer perfectly level. This is because the level is so sensitive that the mere variations in the thickness of the plastic of the rotator arm from one side of the head to the other can effect the readout. So...realistically if you can set the rotator at level at any point in the rotation prior to shooting you can rest assured that you are rotating at "a realistic level" throughout the shooting sequence -and the stitching of your pictures will not suffer for being out of level.

Note: The level is held in place by the magnet glued to the bottom of the level. Be sure not to lose the level when you pack the Panosaurus for travel. The amount of tension that exists between the Rotator Arm and the Turntable is determined by the bolt that is under the bubble level. If you need to adjust the amount of tension you will need a Phillips screwdriver. The tension is very sensitive - a very slight turn of the bolt will change the tension dramatically. Clockwise to increase tension. Counterclockwise to decrease tension. Happy shooting.