




# 0-360 Panoramic Optic Setup for Canon PowerShot Pro1

- 1) Mount camera on tripod, securely, with lens pointing vertically.
- 2) Press Ring Release button (front of camera) and unscrew lens ring. Replace with LA-DC58C thread adapter and +3 close-up ring. Thread 0-360 Optic to ring. (Do not overtighten.)
- 3) Adjust tripod until Optic is vertical (refer to bubble level on top of Optic).
- 4) Turn Power on.
- 5) Turn Mode Dial to "Av" (Aperture Priority)
- 6) First time setup:  
 ---Press "MENU". Set "MF-Point Zoom" to "On". Press "MENU" again.  
 ---Press "FUNC". Then use Omni Selector and Main Dial to set ISO to "100", Quality to "Superfine", and Image Size to "L" (3264x2448) . Press "FUNC" again.
- 7) Rotate Main Dial to set Aperture (F-number on bottom of screen) to F8.0.
- 8) Press & hold MF(Manual Focus) button, and rotate Zoom ring until focus is set to ~50cm. Watching both the outer edge and center area of the reflector, adjust until both are focused.
- 9) Adjust Zoom until image of mirror just fills frame from top to bottom: 
- (NOTE: Depending on your camera's threads, the image may be slightly off-center. This is normal. A trick is to use a thin piece of paper or tape as a shim in the adapter gap to align to center.)
- 10) Adjust Focus again, until both center and outside of mirror are sharply in focus.
- 11) Press Flash Button to turn flash off. (A  will appear on screen)
- 12) Press Timer Button on top of camera to turn timer on. (A  will appear on the screen)
- 13) Press the shutter release. You have 10 seconds to hide!
- 14) Review the image. Zoom in to see that both the center and outside of the mirror are in focus. If not, adjust the Manual Focus and/or Aperture to obtain uniform focus. (The depth of field of the Pro1 does not allow for the entire reflector to be sharply focused. You should be able to adjust the focus for a "happy medium", with most of the image sharp, and the edges getting soft.)
- 15) Once you get the proper settings, press "MENU", and select "Save Settings". This stores all of the settings in either 'C1' or 'C2'. Then, whenever shooting virtual tours, simply set the Mode Dial to 'C1' or 'C2', and the camera will be ready to shoot! A nice feature!
- 16) Advanced Users: Turn 'Bracketing' on to take multiple images at different exposures at the same time. You can composite these images later, or use a 3rd party HDR software package to increase the image's dynamic range.

## A note about Aperture, Depth of Field, and Field of View

**Aperture-** a mechanism behind the camera lens similar to the iris of your eye, opening and closing to adjust the amount of light entering the camera. The aperture opening also determines the Depth of Field of the image.  
**Depth of Field-** describes the objects in the image which are in focus, in terms of their distance from the camera. For example, a camera focused at 30m, with a Depth of Field of 8m, will have objects from 26-34m from the camera in focus. Objects closer than 26m or further than 34m will start to become blurry.  
**Field of View-** the vertical Field of View (vFOV) of the 0-360 Panoramic Optic. The 0-360 has a vFOV of 115 degrees, meaning it will "see" from 52.5°+ above the horizon to 62.5°+ below the horizon.

A smaller Aperture opening (higher F-Stop number) allows less light to enter the camera, but yields a higher Depth of Field. With a high F-Stop, the shutter speed needs to be slowed down to allow more light (else a dark photo), but will have more Depth of Field in focus.

A larger Aperture opening (lower F-Stop number) allows more light to enter the camera, but a lower Depth of Field. This means the shutter speed can be faster, but fewer objects will be in focus. (With slower shutter speeds, moving objects may blur.)

The 0-360 is designed to operate with a camera F-Stop of F8.0 or higher. This provides a high enough Depth of Field to allow the entire mirror to be in focus. With lower F-stops, the shutter speed can be increased, but the upper or lower portions (or both) of the mirror may not be entirely in focus. This means the image far above or far below the horizon may not be sharply focused. This may not be a problem, as many times the sky or the ground may not need to be sharply focused.

The depth of field of the Canon Powershot Pro1 does not allow for the entire mirror to be sharply focused. With the Pro1, you should be able to get a vFOV of approx. 95-100 degrees, with good focus across the entire image.

For best results, shoot a well-lit scene! With high F-Stops, you need good lighting, or longer exposure times.

## Quick Start Guide

360 Panoramic Photos, Just One Click!  
  
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Please read the Care Instructions on back page.

## IMPORTANT!

## Instructions for use with Canon PowerShot Pro1



## ENJOY!

**WARRANTY**  
 The 0-360 Panoramic Optic is warranted against defects in material and workmanship for a period of one year from date of purchase. This warranty does not cover damage caused by accident, abuse, misuse, exposure to the elements, or scratches to the mirror surface. If a defect in workmanship or material is discovered, 0-360.com will, at its option, repair or replace the Optic free of charge. Purchaser must first obtain a Return Authorization from 0-360.com, and return the unit properly packaged and freight prepaid. 0-360.com's liability is limited to repair or replacement of the Optic only. This warranty supersedes all other warranties, express or implied.

**Care Instructions**  
 Thank you for purchasing the 0-360 Panoramic Optic! With proper care and handling, the Optic should give you years of service. Here are a few important handling instructions:  
 1) Do not touch, handle, or polish the mirror! While the mirror does have a protective coating, touching or rubbing on its surface can cause scratches. Use the dust blower provided to remove dust before shooting. Use lens cleaning paper or lens cloth only if absolutely necessary, and rub gently. NEVER use a paper towel or other material to clean. 2) Avoid dropping or mishandling the unit, as it is a sensitive glass optical device. 3) Store the unit in its carrying case when not in use, in an upright position and in a cool, dry environment.  
 4) Use care in threading the Optic into your camera, avoiding cross-threading.

## Care Instructions

## IMPORTANT!