






0-360 Panoramic Optic Setup for Canon A650

- 1) Thread Optic (with lens thread adapter) to camera. (Press button on camera face to remove ring)
- 2) Mount Camera to tripod, securely, with lens pointing vertically.
- 3) Adjust tripod until Optic is vertical (refer to bubble level on top of unit).
- 4) Set Mode Dial (top) to 'Av' and turn Power on.
- 5) Press 4-way controller 'Right' to set Aperture to F8.0
- 6) Press ISO button and set to ISO 100
- 7) Press "FUNC" button and set:
 - ▶ Drive Mode ▶  (10 second timer)
 - ▶ Metering ▶ 'Evaluative'
 - ▶ Quality ▶ 'S' (Superfine)
 - ▶ Image size ▶ 'L' (Large - maximum image dimensions)
- 7b) Press FUNC again to exit
- 8) Press 4-way controller up to turn Flash 'Off' 
- 9) Adjust Zoom so that 'donut' is as large as possible, without running off frame, as shown:
- 10) Press 4-way controller down ( MF) to set to Manual Focus (MF)
- 11) Press 4-way controller left/right to align the focus bar  with the center of the digit "0" in "20cm", as shown: 
- (HINT: To adjust Aperture, Exposure Compensation, or MF distance in the future, press the [+/-] button to toggle through the settings, then the left/right arrows on the 4-way controller to adjust.)
- 12) Press "Menu" button ▶ Save Settings ▶ OK
- (Now, you have stored all the settings in 'C'. While it is always a good idea to check the image preview on the LCD screen before you shoot, you should never have to adjust the settings again! To shoot virtual tours, set the Mode Dial to 'C', and take the shot. Very convenient!)
- 13) Press the shutter release to shoot. You have 10 seconds to hide!

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 attachment. 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.

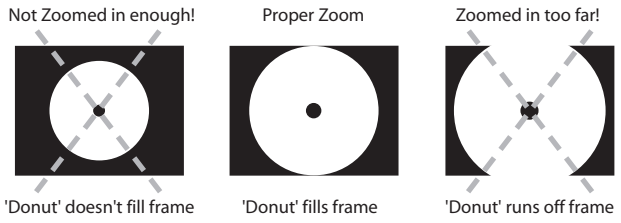
A smaller Aperture opening (higher F-Stop number) allows less light to enter the camera, but yields a higher Depth of Field. With a high F-Stop, the shutter speed needs to be slowed down to allow more light (else a dark photo), but will have more Depth of Field in focus.

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.

With the Canon A650, you should be able to get a vFOV of over 110 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!
 0-360.com
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Please read the Care Instructions on back page.

IMPORTANT!

Instructions for use with Canon Powershot A650



ENJOY!

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.

WARRANTY

- 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!

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: