

Set the Camera

notes

Bigger is Better

The size of the image captured by the camera is one of the most important settings when shooting your work—and bigger is better!

What is Image Size?

What exactly do I mean by image size? Is it the size of the file when stored on the computer? For example, the number of kilobytes shown on a list of files? Is it the size of the image on paper when printed? For example, the 8" x 10" shown in Photoshop? Or is it something else?

Images Contain Pixels

Before I answer that question, let's look at how a digital image is put together. An image, such as this one, is actually composed of millions of small squares of color.

If I magnify the center of the image, you can see the individual squares. Each is a picture element, or "pixel" for short.

When the pixels are arranged together in a grid, they create the image. And because the pixels are very small—remember there are millions of them—what we see is continuous lines and areas of color.

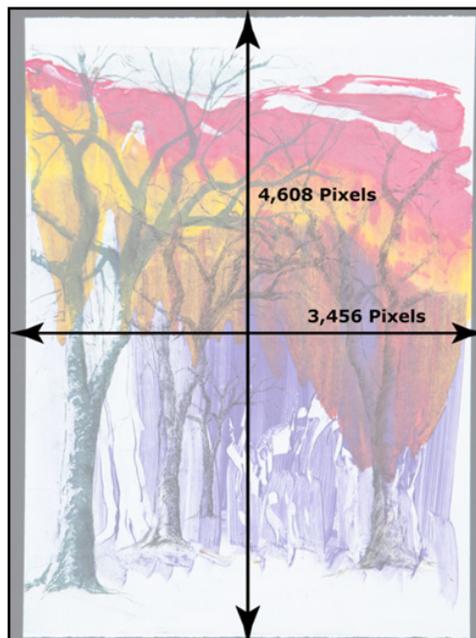


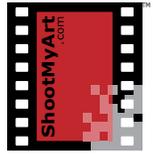
How Many Pixels?

Exactly how many pixels are there in an image? That depends on the camera's sensor.

In this image—which is straight from the camera—there are 3,456 pixels horizontally and 4,608 pixels vertically. Those are the dimensions of the sensor inside this camera, and it's the maximum image size this camera can capture. Different camera models have sensors with other dimensions, so these numbers will vary for your camera.

If I multiply the pixel width times the height, I get the overall size of





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the image. In this case, it's about 16 million pixels or 16 megapixels—which is common for many new cameras.

Now back to my earlier question. What am I referring to with image size? It's the number of pixels that make up the image.

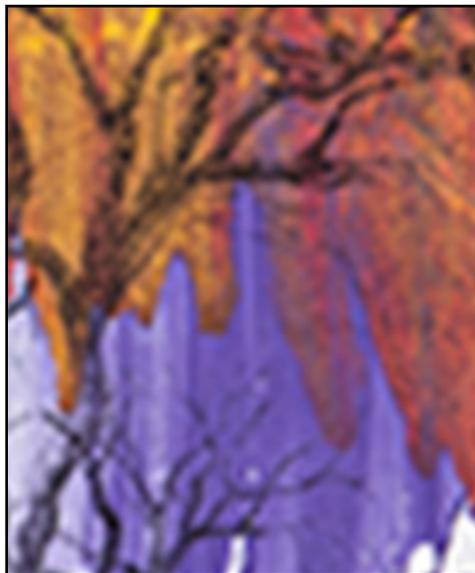
Why Image Size Matters

Why does image size matter? The number of pixels in an image determines its resolution—the extent to which small details can be seen or “resolved” by the eye. Resolution affects how images look, particularly when they are made larger.

A low-resolution image, such as this one, looks OK but the details are a bit fuzzy. When the image is enlarged by a factor of three, the detail in the artwork disappears. This happens because there just aren't enough pixels to show the detail.



Low-Resolution Image

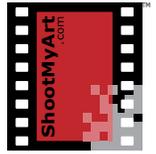


Low-Resolution Enlarged 3x

A high-resolution image, such as this one, looks sharp and stays relatively sharp when enlarged. With more pixels, there are enough to show the detail in the image when it's magnified for closer viewing or reproduced in a larger print.

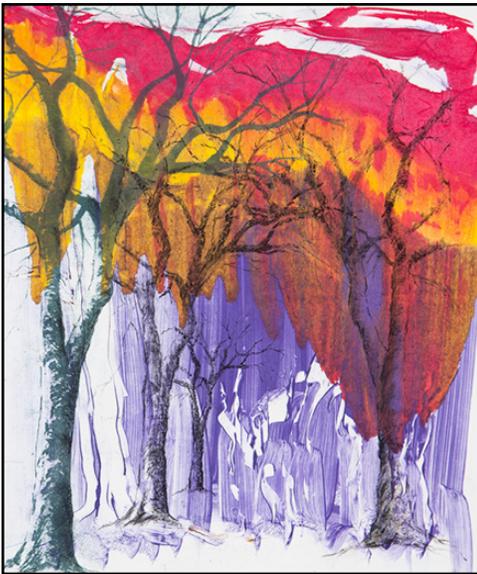
Importantly, the resolution of an image is fixed once it's captured. You can't add resolution later. Photo editing software can increase the size of an image by adding pixels, but only by guessing at the color of each new pixel.

For the sharpest images, therefore, it's best to set the camera to capture images at the largest size it can—that is to say, with the most pixels for



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High-Resolution Image



High-Resolution Enlarged 3x

the highest resolution. This will give you the most flexibility later when it comes time to use the images.

Setting Image Size

Now, let's look at how to set the image size on your camera to be sure you're getting the largest images with the highest resolution.

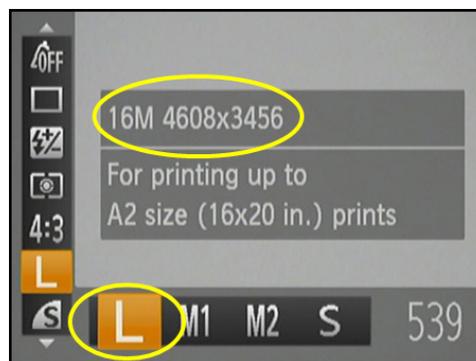
This is the back of a typical Canon point-and-shoot camera. Most camera models have settings similar to what I'll demonstrate, although the menus and location of the settings may be different. You'll need to refer to the user manual for the specific steps with your camera.

To set the image size, I first press the Function button—which opens the function or settings menu.

I then use the dial to find the image size settings and select the setting for the largest size. Here it's "L" for "Large", but on your camera it may be labeled "High".

Many cameras will help you find the setting you want by showing the size of the image at each setting.

Here, the overall size is 16 megapixels, with a width of 4,608 pixels and a height of 3,456—the same dimensions I showed earlier. The size of the largest print that can reasonably be made from the image also happens to be shown.





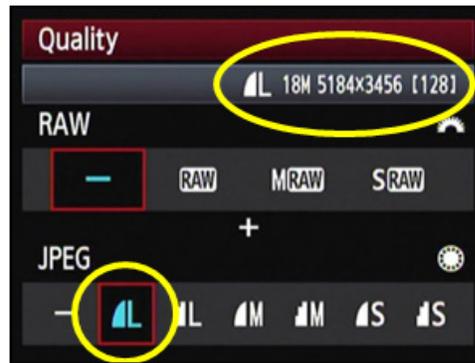
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Once I've made a choice, I press the Function button again to set the image size.

On this Canon DSLR, the image size setting is accessed from the menu.

I first press the Menu button, and from the menu access the image quality settings. I then use the dial to select the largest size. The image dimensions are shown on the display. Pressing the Set button again will complete the selection.



If you're using a phone or tablet to photograph your work, the image size is usually already set at maximum and cannot be changed.

That's it—once you've set the camera to capture images at the largest size, you'll have photos of your work that are sharp and clear, with details that are easily seen when the image is enlarged or when reproduced in larger prints.

Setting the Image Size on Your Camera

1. Locate the instruction manual or user guide for your camera. Look in the Index for "Resolution" or "Image Size" or in the Table of Contents for a section on image settings. Write the page number where the instructions are found here: _____.
2. Turn on your camera and follow the steps listed in the instructions to set the camera to the maximum resolution or image size. Write the name of the setting here: _____.
3. More information about the resolution or size settings usually can be found in the Specifications section at the back of the manual. Find the listing for the maximum resolution and write the size in megapixels (M) here : _____ and the pixel dimensions at the setting here: _____ x _____.
4. Make any other notes about setting the image size here: