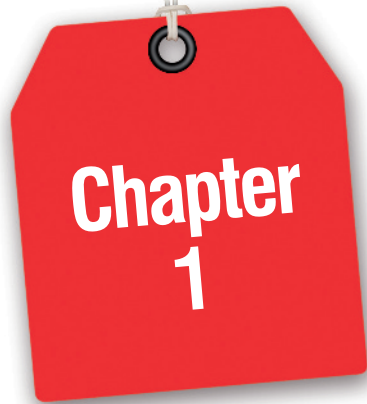




Taking Better Snaps with a Cheaper Camera

- Chapter 1: Getting the Best from a Low-Cost Camera
- Chapter 2: Why Most Snaps Fail to Impress
- Chapter 3: First Steps in Portraiture with FREE and Low-Cost Lighting



Getting the Best from a Low-Cost Camera

If you read what great photographers have to say about cameras, you will find two apparently conflicting opinions. Some place emphasis on buying the most expensive equipment. Edward Weston, one of whose vintage prints sold for over a million dollars, said: “I was extravagant in the matter of cameras—anything photographic—I had to have the best.” Others play down the need for it. “No photographer is as good as the simplest camera,” said Edward Steichen, whose photograph “The Pond-Moonlight” (1904) sold for \$2.9 million in 2006.

In fact, they were both right. If you want to get serious about photography, invest in a good camera. That’s why I’ve written this book for the reader who decides to “buy a better camera” but doesn’t have a budget left over for expensive lenses, software, and accessories. However, you don’t need an expensive camera to get some great shots. As photographer Brooks Jensen points out, “All the great photographs in history were made with more primitive camera equipment than you currently own.” Even a cheap digital camera is a miracle of high technology, capable of producing a masterpiece of fine art if you use it properly.

How Cheap Is “Cheap”?

The least expensive digital cameras cost about twice the retail price of this book. Some disposable film cameras cost even less. There has even been a craze for “toy cameras” such as the Chinese Holga brand, the Diana-F, and the four-lens Lomo Action Sampler. These are all much loved by enthusiasts who strive for a certain “look” that actually emphasizes the poor quality of the image for artistic effect—similar to wearing tatty, secondhand clothing to show a sense of style.

At the time of writing this book, I have settled on “\$100” as being a very low-cost price point for a compact camera. You can take this to mean “just over” \$100 in the United States and £60–£80 in the United Kingdom—throughout the book, I don’t show the £ equivalent on every mention of the \$ price, and prices are always taken to be approximate. Although some cameras are even cheaper, at this price level you can currently get 10 megapixels and reasonable quality optics in cameras such as the Fujifilm A100 or Canon PowerShot A480 (see Figure 1.1).



Figure 1.1: Simple, but effective. The Canon PowerShot A480.
Image courtesy of Canon

How Much Camera Can You Get?

The two key components of a low-cost digital camera are the lens and the sensor. Today you can find both of them integrated into mobile phones, but it is still better to buy a dedicated camera because the lens will almost certainly be superior, even if the sensor is identical to the one on your phone.

For around \$100, you can obtain a camera that has a resolution of 10 megapixels, a decent lens with a three-times optical zoom, built-in flash, automatic focus, motorized zoom, continuous shooting mode of about one frame per second, and shutter speeds up to 1/2000th of a second. This is all you need for great snapshots. If you pay more, make sure the money is going into a better quality lens and not into the styling of the camera.

Bigger Cameras Deliver More for Less

Despite being smaller—in fact, because they are smaller—ultra compacts cost more than ordinary compacts. Avoid them. Why pay more for less? You may as well use the camera on your mobile phone. It is far better to get a compact that has a bigger lens, a larger battery, and a better LCD screen. If size and portability are not issues, you may opt for a larger point-and-shoot at the low end of the superzoom range. This type of chunky, all-black camera with a large, permanently attached zoom lens weighs twice as much and will cost you twice or even three times as much, but it's a very good option from a photographic point of view. One example is the Panasonic Lumix FZ38, superbly specified with an 18x optical zoom, 12.1 megapixels, and a powerful movie mode (see Figure 1.2).

Lowest-Cost Models

All the major manufacturers have extensive ranges of compact cameras, with prices to match. You can buy the cheapest—which are perfectly adequate for great snaps—or pay two, three, or four times as much for a model with more features. Check out Chapter 4,



Figure 1.2: Bulky, but brilliant. The Panasonic Lumix DMC-FZ38.
Image courtesy of Panasonic

“Choosing a Better Camera,” for advice on how to buy at a rock-bottom price. Here are some of the ranges:

- Panasonic Lumix
- Kodak EasyShare
- Fujifilm FinePix
- Canon PowerShot
- Nikon Coolpix

See What Other People Achieve with Each Camera

Before you buy a very low-cost camera, check out the kind of pictures that other people have been able to achieve with it (see Figures 1.3 and 1.4). How do you do this? Easy. Visit one of the FREE online photo galleries that categorizes images by the make and model of camera. One of the best in this respect is PBase.com—go to the Camera Search page (www.pbase.com/cameras) to find the right set of images.

The first point to notice is the number of photos in the database that have been taken with your model (or intended model) of camera. This is not a completely reliable guide, but it does at least give you some idea of how many people have chosen this camera. You can also look at the “Most Viewed” table, which gives you an indication of the level of interest being generated by a particular model. Don’t take too much notice of it. Everyone wants to look at images from the latest camera—not necessarily the low-cost model you have in mind.

Some of the PBase camera index pages have hundreds of entries, so you may have to use Ctrl+F to bring up the finder and make a search. Insert the model number—and there (most likely) you are. If your model is missing, which is improbable but not impossible, it may be because it’s new and no one has gotten around to uploading any pictures from it. Popular



Figure 1.3: With a \$100 camera (Fuji, 10MP, at max aperture f/3.1), picture quality is great but it's hard to isolate any part of the subject.



Figure 1.4: With a DSLR (Fuji S5 Pro, 6MP, 50mm lens at f/1.6), you can throw the background out of focus and make the subject stand out.

models may have tens of thousands of sample images, a random selection of which is displayed each time you click "More."

When you view the images, remember that some may have been taken by incompetent photographers, so examine the better ones for sharpness, clarity, contrast, and depth of color. To do this, choose one that has been shot in natural light on a bright day with light

cloud cover (ideal conditions). Download the largest size, and look at the corners as well as the center. Is it still sharp at the edge? Is there any color aberration such as purple fringing, typically found around foliage taken against the sky? Can you detect lens distortion at the edges of the image, such as “barrel distortion” (straight lines bowed outwards) or “pincushion distortion” (straight lines pinched towards the center)? Is the image “noisy,” especially in the shadows where the speckled effect of image noise, caused by insufficient data reaching the sensor, is most likely to show up? By looking at several examples, you will soon get a feel for the camera’s capabilities. You can trust well-composed shots more than those that lack artistic qualities. They have probably been taken by people who have some technical ability.

Getting to Know Your Camera

Once you’re in possession of a camera—any camera—you need to familiarize yourself with it before taking it on the road. The first step is to read the manual. It’s surprising how many people refuse this obvious task, but every camera has unique features—and even if you’ve handled something similar you need to know what they are.

Finding Your Camera’s Limits

When you’ve discovered what all the buttons do, the next step is to find out the camera’s limitations. You’ll need to bear these in mind when you’re taking pictures. If you go beyond them you may—or may not—be able to rescue the photo at a later stage. For example, if you blow a few highlights because you’ve gone beyond the camera’s dynamic range, you may be able to darken them satisfactorily using software. But if you get too close to the subject and step inside the minimum focusing distance, nothing can remove the blur from the photo.

So, what limitations should you look for? First, consider the lens that’s permanently attached to your low-cost camera. What is its angle of view when fully zoomed out or in? Only optical zooming provides any real magnification. Digital zooms simply fill the live viewfinder with a cropped portion of the image, significantly lowering the resolution.

Second, consider how powerful your flash is. If you exceed the range of your flash in dull conditions you’ll get dark images—one of the most common faults of snapshot photographers. With an inexpensive camera and low-powered flash, you are very likely to fall into this trap when the subject is more than four or five steps away. Cameras can automatically reduce the amount of flash, but they can’t increase it above the maximum rating of the flash unit.

Third, think about the focusing distance. Luckily, focus is one of the least of your problems with modern digital cameras. They are all good at identifying your likely subject and then adjusting the focus automatically for you. Make a note of the minimum focusing distance and don’t go any closer. With a typical wide-angle lens on a compact camera you will not have to worry too much about *depth-of-field* (the depth of the scene in sharp focus). In fact, you may often have too much depth-of-field, which is a major limitation of compact cameras, preventing you from throwing the background out of focus by opening up the aperture of the lens. The relatively small lenses on compacts are not large enough for this kind of effect.

There are other limitations to bear in mind, for example: the resolving power or sharpness of the lens; the ISO setting (such as ISO 400 or ISO 800) at which the images become noisy;

and the start-up speed from when the camera is switched off. Once you know where the boundaries lie, you can operate safely within them—and take many great pictures.

Playing to Your Camera's Strengths

I have examined thousands of images on PBase and I'm constantly struck by how the same low-cost camera—whether it's a Nikon Coolpix or a Sony Cybershot—can produce mediocre images on one occasion and brilliant photos on another. Most experts explain this by saying “it's the person behind the camera . . .,” which is partly true but it's not the whole story.

Every modern compact camera can take great snaps in natural light under ideal conditions. As long as you don't want enlargements, say, beyond 5 x 7 inches, you can get results that rival those from any camera, especially if you tweak the image in FREE editing software. But if your subject is a long way off, or if the light is failing, or if there is a lot of movement within the frame, you will soon start to wish you had more expensive equipment. Most users get good results occasionally, when the camera is suited to the situation (by which I mean the subject and lighting conditions). Yet only by playing to your camera's strengths and not going beyond its limitations can you get terrific results consistently.

Ten Universal Questions for Every Shot

Whenever you take a photo—any photo—there are some questions you can ask yourself about the shot. It's hard to think about them all at once, but experienced photographers can come up with the answers almost automatically. The more you practice, the sooner you'll be able to do the same.

1. What Is in Front of the Camera?

This might seem obvious, but a camera can only take what's in front of it. Yet time and again a photo can surprise you, even though you saw the identical scene when you pressed the shutter release. Why is this? It's partly because there's often too much happening in front of the camera for you to take it all in until you've frozen the moment; and partly because the camera interprets the scene in its own way instead of reproducing your experience of it. What may seem ugly or ordinary in real life may look striking and even beautiful in a photo.

2. How Is the Subject Framed?

Even after all the experiments of modern art, the rectangular frame remains predominant in photography. The digital era has partially liberated photographers from “standard sizes” because you can now reframe the image in software. When you take a snap you need to consider whether holding the camera horizontally (landscape) or vertically (portrait) is more appropriate. Use whichever is likely to be least wasteful when you crop the image later.

3. What Is the Camera's Lens Angle?

You can fill the frame with your subject by standing close and using a wide angle, or by moving back and zooming into the subject. When you move your position backward or forward you change the perspective (that is, the size of objects in the frame change in

relationship to each other). However, if you remain where you are and simply zoom, the perspective stays exactly the same.

4. What Depth-of-Field Will You Capture?

Don't worry too much about DoF for snapshots, but just bear in mind that people or objects on either side of your subject will be in focus, whereas those in front or behind may not. There are plenty of FREE ways to work out the depth-of-field (see Chapter 14, "FREE Photo Calculators"), but they are normally beyond the scope of snapshot photography.

5. What Is the Dynamic Range of the Scene or Subject?

This is a key question you need to consider in order to shoot decent pictures. If there is a huge difference in the values between the darkest shadow and the brightest highlight, no digital camera—least of all an inexpensive one—can capture detail in all parts of the scene. You can reduce dynamic range by lighting the shadows ("fill light") or by filtering the sun's rays with a translucent material.

6. What Is the Quality of the Light?

Is it harsh or soft, warm or cool, unidirectional or multidirectional? "Light makes photography," said George Eastman. "Embrace light. Admire it. Love it. But above all, know light. Know it for all you are worth, and you will know the key to photography."

In landscape photography you have to rely chiefly on light from the sun, but the actual quality of light changes dramatically according to the sun's position in the sky, the amount of haze or cloud cover, and reflected light from clouds, water, and large objects. The best light for landscapes and "natural light" portraits is often when the sun is low in the sky, while clouds form a giant "light tent" overhead.

7. Will Color Play a Major or Minor Role in the Image?

On an abstract level, a photo consists of form and color. It is mostly light and shade that delineate form (shape, pattern, rhythm) while color plays a secondary role. But color can also define form quite independently of light and shade. Once in a while, you should forget content and think about these abstract elements when you take snaps.

8. Is the Exact Moment of Capture Significant?

Sometimes the exact moment of capture is the whole point of the shot: especially in sport. Yet whatever the genre, if your snapshot says "this is a unique moment," it is bound to be successful on one level. Viewers will even forgive technical imperfection if you have a "great capture."

9. Is the Exposure "Right"?

Although you can often create several successful versions of (for example) a landscape using different exposures, many snaps would be improved had the exposure been longer

or shorter. If the most important feature is washed out or too dark, the exposure is surely wrong. Understand which parts of the image your automatic exposure system samples. This is especially important when the subject is off-center.

10. Is the Camera Stable?

The typical snapping technique of arms extended—camera waving in the air—is the worst for taking sharp photos. Flash will freeze most camera movement, but try turning it off and keeping the camera steady. Where possible, rest the camera on something solid. If you don't have a tripod or monopod, try new positions. Squatting on the floor and resting your elbows on your knees is a good position.

When you no longer have to ask yourself these questions, but instead start to provide the answers instinctively whenever you take a snap, that means you're well on the way to becoming a photographer.

Summary

You can take stunning photographs with even the cheapest digital camera, but not in all circumstances. If you have an inexpensive camera, you must understand its limitations. When you buy any camera, always examine photographs other people have taken with that model. Full-size images from most camera models are easy to locate on the Internet.

Even before you start to get really serious about photography, you can improve your snapshots by asking yourself simple questions each time you press the button. Bear these points in mind and you will soon be taking better quality shots. Even so, sometimes you'll be in the right place at the right time, but fluff the shot because of a technical error. Chapter 2 identifies mistakes that occur all too frequently, but are easy to correct if you know what they are.