HOW TO BUY
the Right Camera

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"The truth is, you can take great photos with lousy cameras and lousy photos with great cameras. Your decision rides mostly, then, on what you plan to do with the camera and where you plan to sell the pictures it produces."

— Professional Photographer Rich Wagner

Photography is truly a field that has something for everyone. Whether you love gadgets and want the latest high-tech tools or you are always on-the-go and need something lightweight and easy, you can be sure there are cameras and gear out there to match your needs.

But with so many choices on the shelf today, how do you decide which is best for you? How do you buy the right camera?

This report lays out everything you need to know about different types of cameras and the pros and cons that go along with each. It also answers frequent questions we get from our readers like...

"What does SLR stand for?"

"How many megapixels do I need?"

"Nikon, Canon... or what about this camera that's on sale?"

We'll start by talking about the difference between a point-and-shoot camera and an SLR and what kind of camera belongs in your ideal kit...

The Difference between a Point-and-shoot Camera and an SLR

Cameras are generally divided into two main categories: Point-and-shoot and SLR.

Point-and-shoot Cameras — For the most part, point-and-shoots are compact, lightweight, and easy to travel with. They almost always have zoom capabilities (both optical and digital). True to the name you can turn the camera on, point and shoot without a whole lot more to worry about. And, if you're just starting out, the camera you most likely already own, or the camera you'll probably buy first, will fall into this category. All our phone cameras are essentially point and shoots.

SLRs — In addition to having lenses that are removable and interchangeable, SLRs (or DSLRs, where the "D" is for "digital") are larger, bulkier, and sturdier, with many more options for controlling the camera, including the ability to change your aperture and shutter speed settings as well as shoot in "full manual."

The biggest (and probably most important) difference that distinguishes a digital point-and-shoot from a digital SLR lies in the quality of the pictures each is capable of making.

While point-and-shoot cameras have their own advantages (they're compact, easy to travel with, usually cheaper, and they auto-adjust almost everything to help you get the best picture possible), they cannot compete with SLRs in terms of image quality.

That is because digital SLRs have much larger image sensors. This larger sensor size produces a much higher quality image and, therefore, the pictures you produce with an SLR will be saleable in many more markets than those taken with a point-and-shoot.

How to Choose the Camera That's Best for You: The Ideal Kit

There's actually no such thing as the "Ideal Kit," no more than there is an ideal mate, or an ideal car. It's all subjective, and it all depends on what your photography goals are.

While it's always best to have at least one camera on you at all times, and most of us do with our smart phones these days, it's likely you'll want a different setup for each of the different kinds of shooting you'll do.

Here's a quick glimpse of some of the equipment most photographers carry...

A Digital Point-and-Shoot

Most professional photographers own a compact point-and-shoot camera they can easily slip into their bag or carry in their pocket.

Some will tell you they never leave home without it. All agree that a lower quality picture taken with a point-and-shoot is better than no picture at all. And sometimes, it's just not prudent to carry your bigger equipment around.

This is the first level of equipment you should have in your kit. At times, it'll be the only equipment you carry.

There are currently many brands making excellent point-and-shoot cameras: Nikon, Canon, Fuji, Panasonic, Olympus, Sony and Pentax all have excellent offerings. When you're buying a compact point-and-shoot, try to get one that has at least 12 megapixels.

Megapixels aren't all you should be thinking about though, because **not all megapixels are created equal**. Twelve megapixels on a point-and-shoot camera isn't the same as twelve megapixels on a SLR. Each of those pixels on the SLR will be several times larger in size than those on the point-and-shoot. That difference translates into higher image quality.

In total, you'll want to consider the following when you're buying a digital point-and-shoot...

1. **Megapixels.** These days, you shouldn't consider anything less than 12 megapixels.

2. **Optical zoom.** If your camera comes with "digital" zoom, turn it off. When you set your camera to use digital zoom, it's only enlarging a very small part of an already small sensor. While it may look OK on the computer, it will not print well. Most cameras allow you to turn off the digital zoom setting. You should do that and ignore anything the salesman tells you about digital zoom. A good camera should have at least 3 x "optical" zoom. Many models offer up to and beyond 6x.

3. **The ability to shoot RAW files.** In the past only the more expensive Digital SLRs were capable of shooting files in RAW format (this type of file stores the maximum amount of data) allowing for greater flexibility and quality in the final output using a computer program like Adobe Lightroom to "develop" it. Not all point and shoots have this capability. Consider it a plus.

4. **Image stabilization.** This is a feature that greatly reduces camera shake giving you the ability to take shots at slower shutter speeds and lower light levels.

5. **Good viewscreen for shooting and image review.** While most cameras in this size range rely on the LCD screen to compose the photograph, some also have an optical viewfinder. Because of the small size of the camera, these optical viewfinders are often too small to be of real use.

6. **Video capability.** Most high end point and shoots will do a great job of recording video, including sound.

Digital point-and-shoots are capable of producing images that can be printed up to 8 inches by 10 inches — perfect for uploading to websites like Facebook, or for sending to friends over the Internet.

Many digital point-and-shoot cameras are also capable of producing images that are high enough quality for use on websites, in newspapers, and in magazines, making them ideal for travel writers who would also like to shoot photos to go along with an article. There are some stock photographers in fact who have gotten so adept with their phone cameras that they are building stock portfolios almost exclusively with phone shots.

The proliferation of the Smartphone camera has also resulted in camera manufacturers trying to compete by creating new compacts with much more to offer. These high-end pocket cameras offer things like the ability to shoot in RAW, faster lenses and larger sensors, all of which increase the image quality.

What's important is that you find something with at least 12 megapixels, and something new. Used point-and-shoot cameras can be fine, but technology changes so quickly these days that you don't want to buy anything that's more than a year old.

If you want a professional image to print in a large format — such as a fine art print that you can sell, or you'd like to submit images to a stock agency, you'll want to consider a digital SLR camera.

A Digital SLR (DSLR)

Point-and-shoot cameras come equipped with zoom lenses that allow you to shoot wide-angle and telephoto pictures, but you're limited to the zoom range that is fixed to the camera. With a DSLR, there are literally hundreds of different fixed and zoom lenses to choose from, giving you greater creative control.

DSLRs have an image sensor that's significantly larger than those of point-and-shoot cameras and can produce a much higher-quality image. So when it comes to image quality, bigger is better.

Camera makers have led us to believe that a camera with more megapixels is always a better camera. But as we mentioned earlier, the size of the sensor is a very important part of the quality equation. Understand that a 12 megapixel SLR will always outperform a 12 megapixel point-and-shoot in image quality.

As prices rise in the DSLR world, you increase durability, including great water resistance on the highest models, and get much faster focus response time. The best DSLR cameras also give you noise-free images at higher ISOs for better low-light shooting.

Image stabilization is a common feature here. Some manufacturers build it into individual lenses (Nikon, Canon, Panasonic) while others build it into the body and any lens benefits from the image stabilization (Olympus, for example).

Video is now expected on most DSLRs. The ability to plug in a wireless microphone can make a significant difference in your sound quality. If you're interested in video, this is a worthwhile feature.

Entry level DSLRs do a fine job in most conditions, but if you're going to be shooting sports or action wildlife, you'll want to move up in price to take advantage of the faster autofocus and multiple frames per second these models provide.

How to Choose the Right Camera Brand

Most professional photographers will tell you that their preferences in camera brands are largely dependent on how the camera feels and handles, not just on how many pixels or "scene" choices it has.

All professional grade cameras are ruggedly built and many have a fair amount of water resistance. With those in the water resistant group, you can shoot in the rain, sleet, and snow and never have a problem.

This does come without a downside, though. Better-protected cameras are generally heavier. What's more, they scream "I'm going to take your picture!!!" and can make candid shooting nearly impossible.

It's very important to physically handle multiple cameras before you buy. It isn't enough to Google all the reviews and make your decision based on Internet statistics.

A camera is like a pair of jeans. You've got to try it on before you buy and make sure it fits. Is it too heavy? Are the most common functions — changing your aperture, shutter speed, ISO, and exposure compensation — easily manipulated on the body of the camera without having to search through the menus on the LCD screen?

The major players in digital SLR photography today are Canon, Nikon, Pentax and Sony, with Canon and Nikon in the lead.

Another option in the DSLR market comes from Sony, Fuji, Olympus and Panasonic. Their Mirrorless and Micro Four Thirds sensor is slightly smaller than the Canon/Nikon DSLRs, but still produces wonderful quality.

Because of the smaller sensor and the use of electronic instead of mirror viewfinders, the lenses and the bodies are about half to two thirds the size of the others. They are smaller, lighter, cost less and still provide excellent quality. In addition, the lenses from both manufacturers are interchangeable. These definitely deserve a look before making your decision.

Sony is a relative newcomer to high end DSLRs, but is starting to have a very strong presence. A disadvantage is that Sony has used a proprietary hot shoe (the metal contact on top of your camera where you can place a flash unit and other accessories) making the use of third party flash units and wireless triggers impossible or inefficient.

The major advantage to sticking with these brands is that they've been at this for a long time. They're not likely to go out of business (leaving you with a bunch of equipment you can't sell off, upgrade, or repair). They also have higher resale value. And if you stick with Canon or Nikon, you'll have a large selection of accessories to choose from — both name brand, and aftermarket.

The rest comes down to price. Typically, more expensive cameras buy you more durability, faster and better auto focus, and higher frames-per-second shooting rates. More expensive cameras also tend to take better pictures at night with less "noise" in your shadows and faster ISO speeds.

Manufacturers tend to improve their cameras every 18 months or so. New or updated lenses are introduced without any regular schedule.

The same is true for camera bags, memory cards, tripods, and other accessories. So, be aware that there is always new or upgraded equipment coming on the horizon. You can never truly be ahead of the game with technology.

Of course, you have to start somewhere. Many new photographers start with an entry level DSLR and use it for a couple of years. This works fine, and then later down the line, the entry-level camera becomes the "backup" when you're ready to upgrade. You can also place your used equipment on eBay or sell it to a mail-order outlet such as Adorama, B&H Photo Video or KEH Camera.

SLRs for Beginners

The Canon Rebel series is made up of several different camera bodies starting at a low and ending at a moderate price point. Their 60D has been a great workhorse in the mid-price range.

Nikon has starter bodies in the 3100/3200/3300 & 5100/5200/5300 series. Mid-price includes the D700.

DSLRs for More Advanced Shooters

Canon's more advanced, and more expensive cameras include the 5D, 6D, and 7D series bodies.

Nikon moved up their offerings with the D7000, D7100, D750 and D610 bodies. Very high end is the new D800 — used by many pros.

Micro 4/3 include the Fuji X-E2, Olympus OM-D E-M10 and the Panasonic GM series.

You can spend even more, if your budget allows. At the present time the Nikon D4 and Canon 1Dx are representative of the top of the line with the body alone (no lens) costing over $6,000. However, the mid-priced and entry level models will provide image quality that lets you enter any market.

Lenses

In general, your lenses will last significantly longer than your camera body. Good lenses from the major manufacturers can be used on the new bodies whenever they are introduced. Nikon prides itself in the fact that every lens it has made will still fit on the newest bodies. The really old ones may not auto focus or auto aperture, but the lens is still usable. Canon comes close, and Olympus and Panasonic lenses can be used on any Micro 4/3 body. Good lenses are a good investment.

When you're buying a camera in the store, your salesman will more or less tell you what you're getting. But when you buy online, make sure you double-check to see whether or not your camera comes with a lens. Usually, the description will tell you. Or it'll say "camera kit" which implies you'll get both the camera body and a lens.

Most starter cameras come with an 18-55mm lens. This will serve you well on the street and at family picnics.

Most photographers, however, want something with a little more range for photographing things farther away and/or a faster lens for photographing things in low light.

Most likely, you'll expand your kit to include:

1. "Normal" zoom lens from around 28-70mm
2. Wide angle lens from 15-35mm
3. Telephoto lens covering 100-200mm

Sports photographers need telephotos in the 200-400mm range. Landscape photographers use telephotos and wide angles, sometimes as short as 17mm or so. And food photographers likely want a "fast" lens (more on that in a minute).

How to Buy a Lens

Quality lenses make a noticeable improvement in your pictures, so it's far better to buy a quality used lens than a cheap knock-off of a no-name brand.

A high-quality lens can last your entire photographic career, even when you upgrade camera bodies — as long as you stay with the same brand.

B&H Photo (www.bhphotovideo.com) and Adorama (www.adorama.com) are reputable sites for buying and selling used camera equipment.

If you don't know what you want, start with the lens that comes with your camera and work your way through the ones listed above.

Lenses are generally classified by their focal length and their maximum aperture.

A 28-135mm f3.5-5.6 zoom lens has a lens focal length between 28 and 135mm and a maximum aperture of f.3.5 – f5.6, depending on how far you extend the telephoto (zoom).

Aperture is like the pupil of your eye. The more you open up your aperture, the more light you let into your camera. And, conversely, the more you close it, the less light you let in.

And aperture is measured in f-stops. F-1.0 is a very wide (often referred to as "fast") aperture setting — the most light your lens can let in. And f-22 is very small — the least amount of light you can let in.

So, with a 28-135mm f3.5- f5.6 lens, the widest you can open the aperture is f3.5. And that is at the 18mm wide angle setting. When you zoom to 135mm, the widest aperture becomes f5.6.

Why is that important?

Well, think of it this way...

If your camera needs more light to hit the digital sensor in order to make a correctly exposed image, and it can't open up your lens to get the light it needs, it has no choice but to adjust your shutter speed.

If it does that — adjusts your shutter speed — you run the risk of getting a blurry image if you're in a low-light situation. (Remember, the longer your shutter stays open, the more chance you have of getting camera shake.)

So, that's why many photographers often want a "fast" lens. That is, a lens that'll let you open the aperture in the range of f2.8 or less so that your shutter speed can stay fast in a dimly lit environment, like a night club or restaurant.

A wider aperture also gives you a much shallower depth of focus. That's how you see those lovely blurred backgrounds on many photos.

Do you need a fast lens?

Not everyone does. Travel photographers might not care about speed as much as they do zoom length. But it's something to consider when you're adding lenses to your toolkit.

Most likely, the first lens you buy will be a 28-70mm f2.8 lens. It's still considered fast, and it also has a nice telephoto.

And, if you can't decide which lens is best for you, start with the lens that comes in your camera kit. You can always trade up later.

Which is Right for You: Point-and-Shoot or DSLR?

Truth is, point-and-shoots are great cameras to start learning on because they don't typically have all the bells and whistles of a DSLR. That means you can master basic photography techniques without getting bogged down in the technical specifics of your camera. (They're also great on trips where a bulkier camera might be more of a hindrance than a help.)

Besides that, almost all of the techniques in our e-letter archives and our Turn Your Pictures into Cash Program can be practiced on a point-and-shoot and your Smartphone. Selective focus will be an exception. Other than that, their main drawback is when it comes to selling your work. While there are some exceptions, they still generally don't produce images of a high enough quality for stock agencies, fine art, and some publications.

DSLRs may seem more complicated, but they all have the same kind of completely automatic functions that point-and-shoots are famous for. You can take great photos shooting on full auto, and still have the flexibility available to progress as your knowledge increases. The higher image quality of photographs from an SLR means you can sell to practically any market you may be interested in.

Which brings us to where you can sell your photos.

Let's take a look at the various markets

In general, point-and-shoot markets include:

1. Web-only photos (travel blogs, or articles published online)
2. Supporting photos to go with a travel article...
3. Most newspapers...
4. The family scrapbook...
5. Fine art for pieces 8 x 10 and smaller.

SLR markets include all of the above. In addition, you can sell to:

1. Stock agencies (both print and online)...
2. Travel magazines...
3. Newspapers...
4. Text books...
5. Fine art...
6. Galleries...
7. Web markets...
8. Portraits...
9. Etc.

If you want to publish your pictures both on the web and in print, what you need to know, is that while everything looks great on your computer, that doesn't mean it will look great when printed in a magazine or as fine art.

The computer screen displays everything at 72 ppi (pixels per inch), while prints on paper generally require 300 dpi (dots per inch) to make a quality reproduction.

That means an image measuring 1050 x 1500 pixels will display on your computer screen as 15 inches x 21 inches (1050/72 = 15 by 1500/72 = 21). But that same image printed on paper at 300 dpi will only print to 3.5 inches x 5 inches (1050/300 = 3.5 by 1500/300 = 5). If you try to print it at 15 x 21, like it appears on your computer screen, you'll stretch the image and it'll appear blurry and pixilated.

What else do I need?

You'll need several other things to round out your camera kit...

Just when you're ready to make that shot of a lifetime, there is nothing more frustrating than running out of space on a memory card or having your battery die. So, always carry extra memory cards and an extra battery. If you tend to shoot a lot of photos, start the day with a large memory card in your camera and carry at least one more in a card wallet that fits in your pocket along with an extra battery.

If you want to shoot in low-light situations or make high-quality landscape images, you'll need a tripod and a shutter release. A shutter release sets off your camera without you having to touch it... thus preventing the camera shake that comes from pressing the shutter button when you're making longer exposures.

Today, most shutter releases are a camera accessory made by the camera's manufacturer, so you have to buy them at a camera store or by mail order.

There are all kinds of tripods on the market — some of which don't provide much stability for your camera.

Here's what you need to look for in a tripod:

1. **Weight** — The tripod should be heavy enough to support your camera and lens. Check to see if the tripod has a rating for how much weight it will be able to carry. You don't want to put a DSLR on a tripod that is rated for a point-and-shoot, and you most likely won't need a tripod that is rated for 25 pounds.

2. **Legs** — Next, look at how the legs are extended and secured. Can you easily loosen and tighten the legs and ensure that they will not slip or collapse? Most tripods have a center column. Don't use it, because the camera is most stable when the center column is not extended.

3. **Height** — Finally, the tripod, when extended, should place the camera viewfinder at your eye level when you are standing. You should not have to bend over to look through the viewfinder. You will really like this feature when you are waiting for the perfect sunset and constantly checking things through the viewfinder.

Bottom line: Take your time and you'll find the equipment that best suits your needs.

Your Most Important Asset

While there is a plethora of different camera equipment available on the market, hopefully this report has broken things down in a way that makes it easy for you to discern the main advantages and disadvantages of each option, so you can buy the right camera for you.

Ultimately, what you plan to do with your pictures and where you plan to sell them will be the deciding factor for which particular brand and model of camera you buy.

Remember, too, that your most important tool as a photographer isn't your camera. It's your eyes. As you become more advanced in your photography, you'll learn to see things differently from the average person: the details/angles/lighting/etc.

The key isn't just purchasing the right equipment; it's being able to develop a photographer's eye. Practice with your new equipment and you'll improve your overall sense of the craft, how well you see things, and the quality of your photos.

Join us on one of our photography expeditions and learn to see the world through your lens.

We have several exciting events planned for the coming year, including photo expeditions in Abu Dhabi, Peru, Thailand, and beyond.

Seats always fill up fast, so be sure to put yourself on our Workshop Alert list to be among the first notified about these events, here: Great Escape Publishing Photo Workshops.

For a full list of cameras and their accessories, printers, scanners, and more visit B&H video's Digital Photography Page.