

Digital Eye 5: Type Styles and Lighting Tips

Unit Five
Lesson Thirty



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Digital Eye 5: Type Styles and Lighting Tips

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Introduction.

This lesson is slightly different from the previous “Digital Eye” lessons in this series. Rather than focus on a single topic, we’re going to cover two very interesting subjects, both of which you’re likely to put into practice in your digital photography.

We’re going to start with a basic introduction to the use of words and letters in conjunction with your photographs. We’re not talking about photo captions or illustrated articles, but the use of type combined with images – something that you will need to do if you want to create a cover for a magazine, newsletter, or brochure, for example. If you use your digital skills to create invitations, posters or calendars, you’ll also need to work with type and pictures in close proximity.

We’ve entitled the first part of this lesson “Type Styles” because we want to give you some basic information about type and how to use it. After you learn a little bit about the subject, you’ll see that there are two goals – first, to avoid using type in a way that takes away from your image, and second, to use type in a way that enhances the final product.

It used to be that working with type was a task that was limited to graphic artists, typesetters, and typographers. That all

changed when desktop publishing and Adobe Photoshop came along in the mid 1980s. Now it’s easy for everyone to work with a wide selection of type fonts in a variety of sizes and colors. However, just because you can do something is no guarantee that you can do it well. In fact, we often see examples of bad combinations of type and images. Type fonts can be very expressive, but the wrong font – compounded by selection of the wrong size and color of type for the image with which it is being combined – can look simply awful.

When you finish the type section of this lesson, you’ll have a clear idea what not to do. You’ll also have the knowledge and tools at your disposal to start using type in a way that will add to your images and to the final product that you’re creating.

The second part of this lesson will build on the previous “Digital Eye” lesson – Lighting Basics. You’ve already learned the basic qualities of light – intensity, direction, and color. We’ve covered natural light, available light, and the tools photographers use to create artificial light. While we don’t expect you to go out and spend thousands of dollars on expensive studio lighting, we’re going to show you some lighting tips you can use with little or no cost to add drama and emphasis to your photographs.

There’s a lot of ground to cover in this lesson, so let’s get started.

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Type Styles.

A Very Brief History.

Until the computer got involved, printing techniques had been altered relatively little for over five hundred years. From the age when Gutenberg invented movable type and the basic printing press in the early 1450s until the 1960s, changes in printing technology were mostly mechanical. For many centuries, ink was applied to metal type – elevated letters assembled to create books, magazines, newspapers and other printed items. The inked type was then pressed onto a surface, usually paper, to transfer the ink.

Over time, lithographic plates were developed for a slightly different printing process, one that, incidentally, could give better reproduction to photographs, which began to proliferate in newspapers and magazines at the beginning of the Twentieth Century. However the process was essentially the same – ink transferred from a plate onto paper.

But the type that we can create using computers gives us much more flexibility. The average computer owner can select from a wide variety of typestyles offered with most word processing software. Hundreds of other type varieties,



Today's Lithographic Press.

© Hemera



© Hemera

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or fonts as they are called, can be purchased or downloaded for free online. In addition, unlike metal type that had to be cast in blocks using large machines that melted lead ingots and turned them into lines of type, it's easy to change the size, spacing, and weight of type on a computer with just a few key strokes or mouse clicks.

The computer's influence over how most of us communicate with the world is virtually unparalleled.

You may ask yourself: Why is type important to a photographer? There are many reasons.

First, we all know that by nature, photographers are constantly striving to improve their work. Photographers who know how to combine type with their digitized images instantly open up a whole new world of possibilities. At first that may sound like an exaggeration because when many of us think of type, we think of word processing. Instead think of magazines with colorful pictures, Web sites of all sorts, invitations, brochures, business cards, picture posters, and Web sites, to name a few. In short, think graphics. Using Adobe Photoshop, photographers can create artful, professional, personal and more communicative images and messages.



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Though at first the whole process may feel intimidating, by learning a few of the basic elements of type, your confidence will grow and you'll be ready to take your imaging to yet a new level. Whether you use type only for captions and credit lines for your photographs, or whether you start to experiment with the combination of photographic images and words, your computer is a powerful creative tool. In fact, your ability to work with type styles and sizes far surpasses that of most print shops up to the era of the Second World War.

Let's look at some of the basic terms and concepts.

Type Basics.

Character. The basic element of type. In graphics, this term is used for letters, numbers, punctuation marks, or various symbols and decorative shapes. [SEE FIGURE 1]

Typeface or Face. A set of characters in one style is called a typeface. One example of a typeface is the italic style of Arial. [SEE FIGURE 2]

Font Family. A complete set of faces designed to be used together, including roman, bold, italic, etc. renditions, is called a font family or a font in industry shorthand.



Figure 1 A few basic characters.

Arial – Regular

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

Arial – Italic

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

Arial – Bold

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

Arial – Bold Italic

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

Figure 2 The Arial Family with Arial - Italic highlighted.

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There are tens of thousands of different fonts. In fact, new fonts are being created everyday They are all classified according to their historical attributes including serif, sans serif, and script, to name a few which we will explain in more detail.

Standard Fonts. There are a handful of core fonts, which can be found on most computers. These fonts have been chosen for their universality and quality and are good candidates for new explorations in type usage or cross-platform compatibility. You'll also begin to notice that many fonts in use today are derived from this core set. Often standard system font sets include Times Roman, Helvetica, Arial, Courier, and Garamond, to name a few.

[\[SEE FIGURE 3\]](#)

Times – Roman

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

Helvetica – Medium

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

Courier – Medium

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#%\$^&*()

Figure 3 Some typical system fonts which may vary from platform to platform.

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Figure 4 The red circles highlight the serifs on these characters from the Times - Roman typeface.



Figure 5 The red circles highlight the absence of serifs on these characters from the Helvetica font family.

Type Classifications.

Serif. A serif is a small decorative line added as embellishment to the beginnings and endings of the basic forms of a character. Characters with these small embellishments are commonly used for large sections of copy because they lead the eye along the baseline of the text, making long lines of text easier to read. Times Roman is a serif type. [\[SEE FIGURE 4\]](#)

How to Take Great Photographs of Sunsets with a Film or Digital Camera

"Ah, Krakatoa, now those were sunsets! If only we had color film back then!"
—Quote from the old, old, old photographer.

We know a photographer who visited Hawaii exactly once, and then only for two hours while changing airplanes for a flight to Japan. He had time to take a few pictures right around the airport, including a photograph of that evening's dramatic sunset with a palm tree in the foreground. He sold that image over and over again through his stock photo agency and made a total of \$17,000.

Not bad for a two-hour layover in Hawaii. Sunsets sell! We get a lot of questions at the Institute about how to take great photographs of sunsets. The truth is, it's easy. The hard part is finding a great sunset and being ready at the right time. We promise that if you follow the tips in this article, you'll be ready when you find the perfect sunset.

The sun sets every day, but to get a perfect sunset picture you have to be at the right place at the right time.

Figure 6 Sample newspaper clipping. Note how Sans Serif type is used on the titles and Serif type is used for the story.

Sans Serif. Remembering that “sans” means “without” will help you learn the definition of this term. It is a font characterized by the absence of serifs. [\[SEE FIGURE 5\]](#)

Sans serifed fonts are commonly used in titles. Take a look at the front page of your local newspaper for some good examples. Helvetica is a sans serif type. [\[SEE FIGURE 6\]](#)

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Script. Script fonts are derived from handwritten letterforms. Letters are often overlapping, sloped, or imitating traditional calligraphic and cursive styles, and therefore are often used for certificates or special occasion invitations. [SEE FIGURE 7] Brush Script and Edwardian Script are both examples of script forms. [SEE FIGURE 8]



Figure 7 Wedding invitation and placard using a script font.

Brush Script

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

Edwardian Script

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

AaBbCcDdEeFfGgHhIiJjKkLlMmNn

OoPpQqRrSsTtUuVvWwXxYyZz

1234567890!@#%&'()*

Figure 8 This example shows Brush and Edwardian in three different point sizes. Notice how the characters are more styled in general and are harder to read at smaller point sizes.

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Type Styles.

Regular, Book or Roman. This style is the upright and most commonly used face in a font family.

Italic. A type that has been italicized has characters slanted to the right and often have a script-like quality.

Oblique. Oblique is similar to the italic style, but usually lacks the script-like quality of a traditional italic letterform.

Bold or Boldface. A typeface that has thicker, or heavier, strokes than the regular or roman style is a boldface.

Demi Bold. A face that lies in between bold and normal weight is a demi boldface.

Black. Black faces often have the heaviest letterforms in a font family.

Condensed. When the space between each letter and/or the actual width of the character forms are reduced so that the letters appear pushed together, a face is referred to as a condensed style. Condensed type allows you to get more words on a line of a given length.

These are just a few terms that typographers use to describe the various styles that they create for a complete font family. Fonts can have any number of style variations represented in its family. In general, more traditional letterforms, such as serif and sans serif varieties, will tend to have basic variations like roman, bold and italic. More stylized fonts, like script varieties, might not have any other faces in their families because they do not follow these more traditional rules and uses of typography. Have a look at the ITC Franklin Gothic family on the next page which has examples of many of the type styles listed above. [\[SEE FIGURE 9\]](#)

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ITC Franklin Gothic – Book
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Book Italic
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Book Oblique
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Medium
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Medium Italic
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Medium Condensed
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Medium Condensed Italic
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Demi
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Demi Italic
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Demi Oblique
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Heavy
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Heavy Italic
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

ITC Franklin Gothic – Heavy Oblique
AaBbCcDdEeFfGgHhIiJjKkLlMmNn
OoPpQqRrSsTtUuVvWwXxYyZz
1234567890!@#\$\$%^&*()

Figure 9 The ITC Franklin Gothic font family showing examples of many kinds of type styles.

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Type Usage Terminology.

Body text. A longer section of text in a graphic layout is referred to as body text. Body text is best displayed with a font that is easy to read in a smaller size. This paragraph is part of the body text on this page's text layout.

Headlines. Typically, headline text introduces a section of body text. Headlines are usually written in bigger and bolder type styles that complement but vary significantly from the body text type treatment. On this page, the text "Type Usage Terminology" represents the headline for this section of text.

Point size. Type is measured in points which indicates the height of the highest letter to the bottom of the lowest letterform. There are 72 points in an inch. Standard body text type is usually 10 points or 12 points. The body text on this page has been set at 11 points.



Figure 10 The red arrows indicate where the leading for these two lines of text would be measured.

Leading. Pronounced led-ing, this term refers to the space between the lines of the text. Measured in points, leading is the distance between the baseline of one line of text and the baseline of the next. Increasing and decreasing leading can be used to augment readability. The leading for the body text on this page has been set at 13 points to allow the ascending characters, such as "f", "d", and "B," and descending characters, such as "g" and "y", to not intersect if they should happen to occur on top of each other. [SEE FIGURE 10]

Li European lingues es membres del sam familie. Lor separat existentie es un myth. Por scientie, musica, sport etc., li tot Europa usa li sam vocabularium. Li lingues differe solmen in li grammatica, li pronunciation e li plu commun vocabules. Omnico directe al desirabilita de un nov lingua franca: on refusa continuar payar custosi traductores. It solmen va esser necessari far uniform grammatica, pronunciation e plu summun paroles.

Ma quande lingues
coalesce, li grammatica
del resultant lingue es plu
simplic e regulari quam ti
del coalescent lingues.

Figure 11 The smaller text has been kerned so that the letters are further apart and therefore easier to read. In the larger text, the letters have been kerned closer together to improve readability.

Kerning. Adjusting the space between two letters is called kerning the letters. Kerning text can be used to augment a section of text's readability by making the letterforms fit together naturally and evenly. If text is exceptionally small, sometimes increasing the kerning will make it more readable. Likewise with larger text size, decreasing the kerning, or carefully adjusting the distance between letterforms to be more equal, will often make that text more readable.

[SEE FIGURE 11]

A drop cap is often used in books for the first letter of the first word of a chapter in order to invite the reader into the new section of text.

Figure 12 A typical drop cap.

Drop Cap. Frequently seen in desktop publishing, drop cap refers to a letter that is enlarged and so “drops” down below its line. This is often used in books for the first letter of the first word of a chapter in order to invite the reader into the new section of text. [SEE FIGURE 12]

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Drop Shadow. A text effect in Photoshop that creates the illusion that the text is floating above a surface and casting a shadow. [SEE FIGURE 13]

Drop Out Type. Also called “knockout” or “reverse,” drop-out text refers to any text which is lighter than the page it is on. A common reverse type combination is white text on a black background. [SEE FIGURE 14]

Drop Shadow.

Figure 13 This drop shadow was created by using the Drop Shadow Layer Effect in Photoshop.

Drop Out Type.

Figure 14 This is an example of Drop Out Type.

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Adobe Photoshop.

Now that you're equipped with a handful of technical terms, return to your best tool for incorporating text with your photographs—Photoshop. You can manipulate your photographs using text layout and those effects that you have already learned to create more powerful and effective images.

Composition.

Just as good composition in traditional photography is highly valued, well thought-out placement in the digital darkroom is essential to creating an attractive piece. Your eye and gut response, will be one of the most important factors in discerning where images and text should be placed. It's important to find a balance between the type and the images within the space.

Mixing different sized fonts and doing it well comes naturally to some and to others it may require some practice. Start to pay attention to how magazines, newspapers, and other publications that you love to read mix up large, small, and medium-sized fonts. After you spend about a week doing this, you'll begin to notice things that you had not before. And you'll begin to get a sense of how different fonts can

work together in an aesthetically pleasing way.

In general, we recommend that you begin your explorations with type with the standard fonts available on your computer system. Much as you are becoming more familiar with various effects and filters in Photoshop, gradually, you will also become more acquainted with this core set of fonts and be able to use them more effectively and skillfully. As you become more confident with these fonts and their styles and combinations, you can begin to incorporate less common or more experimental fonts into your work.

Remember: This core set of fonts have become part of the standard system fonts set because of their quality and universality. Take advantage of this natural selection for success in your first compositions.

That's just the beginning. There is also the art of combining totally different styled fonts, such as Geneva and Gatica, together. This is when things can start to get more exciting. But remember, two fonts that look too similar to one another can create visual clutter.

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Color, Color, Everywhere!

In addition to playing with combining different fonts and discerning where to space all of your type, with the aid of your computer you can also use color to change the look and feel of your composition. Adding color to an invitation, brochure, or announcement helps to create a theme and a mood for it. Imagine a baby shower invitation colored in pink and blue with photos of the happy parents on it and a fun crayon-style font. On the other hand, for an event such as a business luncheon, invitations in a neutral color, such as beige or cream, with a black Monaco font can create a sophisticated style.

Successful Type Usage.

Here a few pointers to help you get started with incorporating text with your images.

1. A type font can be too big or too small. Make sure your text size is appropriate to how it functions in the overall composition.
2. Don't mix too many type styles. In general, we recommend that you limit the number fonts you use in one composition to three or less. Otherwise, the image will start to look too cluttered.
3. Avoid using type in a way that makes it hard to read. Pay attention to leading, kerning, and text color to augment readability. Black type may look great over most of the colors and forms in a photograph, but if a key word (or a portion of one) runs over a very dark area, your viewer may not be able to easily read it.
4. Script and overly stylized fonts are fine for headlines but are hard to read in body text.

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In Conclusion.

We've covered a lot of ground in this section on type styles, and if you've never given much thought to the subject before, you head may be swimming with all the different factors that you should consider.

However, this is one area where you shouldn't let all the variables overwhelm you. You'll find that once you get started working with type, you'll soon begin to develop your own sense of what works and what doesn't.

A famous advertising graphic designer once suggested that the best way to evaluate a printed advertisement was to tape it to a wall upside down and view it from ten feet away. That may sound a bit odd, but in fact, you may find that viewing a printout of your photo-and-type combination from a distance will give you a better sense of how the type and pictures are working together than you can get from staring at a monitor.

A great way to get ideas for possible design combinations is to look at the wide variety of graphic styles that you can find on magazine covers, story layouts and advertisements. There are infinite possibilities – type styles and design are

everywhere. We encourage you to experiment, and seek feedback from your family and friends about your ideas and designs. Good combinations of type and pictures can be very powerful. You may well find that you have talent in this area that you never considered before.



Photo by NYI Student Veleda Church

Lightning is one form of illumination that makes a great subject. Obviously you need to make photographs of lightning from a safe location. The technique is quite simple and involves an element of luck. Place the camera on a tripod, use a medium size aperture (say f/5.6 or f/8), and open the shutter for a time exposure. Then, if you're lucky, a giant burst of lighting flashes across the sky in the region at which your camera is pointed.

Lighting Tips.

As we noted in the introduction to this lesson, we don't expect you to invest thousands of dollars in studio lighting equipment. However, there's a lot you can do working with your existing equipment, particularly as you increase your understanding of how lighting affects photographs. In fact, with your new insights into lighting you're well ahead of most photographers who simply rely on their cameras and only use automatic flash.

Here are *Seven Tips for Better Lighting*, most of which are inexpensive and easy to perform.

Tip One: Learn to Control Your Camera's Built-in Flash.

It's time to take control of your camera's flash. As wonderful as modern camera technology is, your camera is programmed to make certain assumptions. Controlling your on-camera flash was touched upon in Part Two of the Weekend Photo Workshop that you received back in Unit Two, but here we're going to cover the subject in detail.

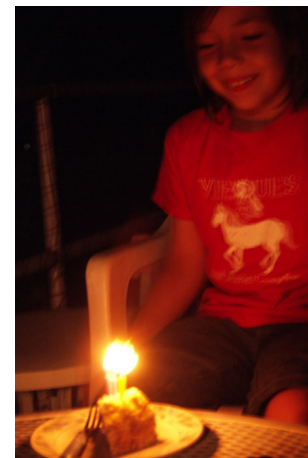
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Here are three basic assumptions that are programmed into your camera:

1. If the exposure sensors determine that there's low illumination in the scene at which the camera is pointed, the flash will fire. Your camera has been programmed with the assumption that light from your camera's flash will improve your subject.
2. If the exposure sensors determine that the scene has bright illumination, the flash won't fire. Camera programming assumes that the flash isn't necessary.
3. In low light, the flash will fire regardless of the distance from the camera to the subject. After all, it's dark out there.

These performance characteristics make sense, and the programmers that design camera systems have made them work very effectively. The problem is that there are many common photographic situations when you want just the opposite results. Let's look at some specific examples.



© Chuck DeLaney.

Low Light.

There are times when you want to take a photograph in low illumination without the flash because of the nature of your subject matter.

When the subject includes candles on a birthday cake, as in the example we showed you in *Digital Eye 4*, or perhaps lights on a Christmas tree, the result of turning off your flash is a photo that will be taken with a slower shutter speed and no

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flash. With the flash off, you have to make sure to hold the camera steady to keep your subject sharp. You'll probably get the best results if you use a tripod to steady the camera. If tungsten light bulbs, or candles provide the illumination in the scene, the color of the image will probably be a warm orange/red tone.

Why go to the effort of using a tripod and getting warm colors? Because those characteristics may be more in keeping with the subject you're photographing and the way you want the image to look. Remember that the direct hard light that comes from the camera's flash gives a very cold, clinical look to the subject. That may be fine in certain circumstances, but not in others. You should make the choice, not your camera.

Bright Light.

When you're working in bright sunlight, the camera's flash won't fire. That saves power for your batteries, but what if it takes away from your picture? That's not what you want. This is very common when your subject is a person and the sun is overhead in the sky. If the subject is wearing a hat, then you're likely to discover that your subject's entire face will be in dark shadow. Even without a hat, it's common to see heavy shadows under the chin and perhaps even



The use of fill flash in the second image captures more detail in this man's face.

obscuring your subject's eyes. The solution is to fill in those pesky shadows using a technique called fill flash.

Once again, the choice whether or not to use flash should be yours, not the camera's decision.

Scenic Photos in Low Light.


In the Weekend Photo Workshop we showed you the absurd condition that results when tourists visiting New York City take pictures from the top of the Empire State Building at twilight and into the evening as the visitors point their cameras toward the dramatic skyline


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scenes that are visible in all directions, the flash fires, doing nothing to illuminate the subject in front of the camera, unless there are some insects flying in the region. The solution to each of the situations we've described is to take control of your camera.

Today's automatic cameras – both digital and film models – usually offer five basic camera flash settings.

 **Automatic.** Flash will fire when the exposure sensor and camera programming tell it to.

 **Automatic with Red Eye.** Flash will fire when the exposure sensor tells it to, and the flash will employ some type of red eye reduction pre-lighting.

If you pay no attention to your flash, when you turn on your camera it will automatically select one of these two settings, usually Automatic with red eye reduction. We suggest that you avoid using these settings. Instead, choose from the following flash options, depending on your subject and how you want to show your subject.

 **Flash must fire.** This is the setting you can use to make sure your flash fires to fill in shadowed areas

on sunny days. When you select this setting the flash will fire every time you press the shutter.



Flash disabled, so it won't fire. This setting is the one to use when you want to record your subject as illuminated by the available light in a low light setting. *Remember that if you're taking pictures in low light, you may well need to steady your camera on a tripod.*



Slow shutter with flash. This is the least understood flash setting. The flash will fire (often with red eye reduction) but the shutter will stay open for a longer interval than necessary. This allows you to capture the subject that is illuminated by the flash, but also allows more time for other lighting in the scene to record itself on film. This setting is intended principally for pictures of people in front of brightly lit cityscapes. The flash provides light to illuminate the people — let's say tourists in Times Square or in front of a gaudy Las Vegas casino — and the additional interval that the shutter stays open allows time for the lights to get recorded by the film or chip.

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Photo by NYI Student Melissa Burns

This photo is a perfect example of a picture that automatic flash wouldn't capture. Since we're looking up at the subject, there's lots of bright sky in the frame. If the photographer doesn't command the flash to fire, the girl's face would be lost in deep shadow.

Setting Your Camera's Flash.

You have to find out exactly how to switch between these five settings yourself. Consult your camera's instruction book. The location of the lighting controls will vary considerably on film cameras, and with the wide variety of digital designs on the market, there are many different menu pathways used by different manufacturers. However, if your camera is an automatic model with a built-in flash, you'll find these five different settings somewhere in your camera's controls. Now you know which ones we recommend you use, and why you should avoid automatic settings in most instances.

Tip Two: Consider a More Powerful Flash Unit.

Depending on the make and model of your camera, you may be able to attach an additional flash unit. Most SLR cameras feature what is known as a *hot shoe*, which is an attachment that holds a flash unit and also provides an electrical contact from the camera body to fire the flash.

A separate flash unit offers several advantages for the photographer.

First and foremost, as we noted in the title of this tip, this type of flash is more powerful than your camera's built-in flash. That means you can put more light on the subject and illuminate subjects at greater distance.

In addition, a separate flash unit will run on its own power supply – most often a set of 4 AA batteries. These batteries are relatively inexpensive, and you can buy rechargeable ones if you like. Your built-in camera flash draws its power from the batteries that drive your camera, some of which can be very expensive. The more you use your built-in flash, the more often you have to replace your camera's batteries.



Hot shoe on an SLR camera where you can attach an additional flash unit.

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Photograph by NYI Student Lisa J. H. Gardner

This photo was made late in the day, and the setting sun provides nice illumination of the lake and background. The subjects are in open shade and without the use of flash we wouldn't see them clearly. In this picture the photographer has balanced the flash with the background so that we see both clearly. If the photographer makes the flash brighter and uses a smaller aperture, the background would become darker.

Another advantage is that most flash units allow you to tip and tilt the flash to get different lighting effects. You can point the flash straight up so that it bounces off the ceiling, or you can tilt the flash to an upward angle so that it lights your subject with less directionality.

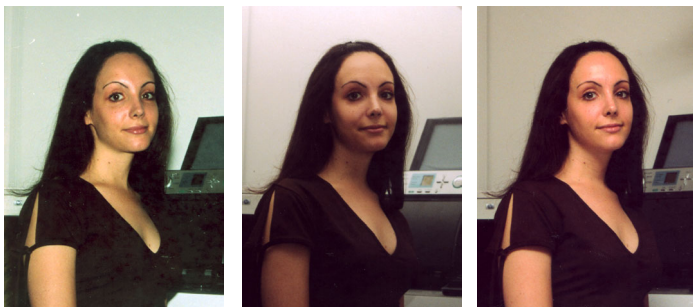
Flash units for cameras that can accommodate them range in price from about \$100 to \$400. The most expensive models are the so-called “dedicated” flashes that are carefully programmed to work with a given type of camera. Information is passed between the flash unit and the camera to provide precise automatic exposure and also to provide a host of different exposure ranges and special effects.



Flash unit tilted in various directions.

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Here are three pictures of the same subject taken with the flash head at three different positions. The first image was taken with the flash head pointed directly at the subject. The lighting is harsh. You can see that the flash casts heavy shadows on the wall, and puts bright highlights on the subject's face. The second photo was taken with the flash bounced off the white ceiling in the room. While this provides a softer light, you can see that the subject's eyes, cheeks and neck are in shadow. The third picture was taken with the flash head at a 45-degree angle and the small white reflector card extended. This creates the best balance of soft lighting without excessive shadows. In many situations, this is the best flash position to use with portrait subjects.

Tip Three: Learn to Use a Reflector.

When you're working with any type of light, whether natural or artificial, you can use a reflector to lighten the shadow areas in a scene and give added illumination to your subject. There are all types of reflectors available for your use. The most inexpensive ones are simply white poster boards that you can buy at the local stationery store. There are also many different kinds of reflectors available for various photographic purposes.

This is one time when it makes sense to start with the least expensive alternative. You can either purchase a piece of



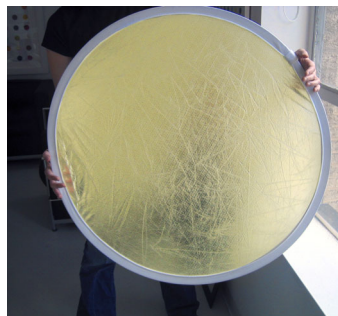
Image taken without the use of a reflector to fill the left side of the face.



Image taken with a reflector.

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Various examples of reflectors.



© Photoflex

often give a crisper, more dimensional appearance to the subject. A gold reflector actually provides a warm tone to the reflected light.

You can use a reflector outdoors and indoors, and with any type of lighting. As you start to experiment with reflectors, you'll see how much they can add to all kinds of photographs.

When you're using a reflector you're often working with it quite close to the model. Make sure that you don't get the reflector into the photograph!

Tip Four: Pick a Scene to Photograph in Different Lighting Situations.

The variety and subtlety of the way that light plays across a scene is something that most people don't appreciate. The light varies with the time of day, the time of year, and the climactic conditions. To start to understand how different lighting conditions affect a subject, we suggest you undertake the following experiment.

Pick a scene that's near where you live or work that you can photograph on a regular basis. You can either carry your camera with you, or keep it handy in your home or work-

poster board, or take a piece of cardboard and cover it with aluminum foil. Assuming that you're using a camera with auto exposure, chances are you won't need to compensate for the added light splashed back onto the scene from the reflector. Many professionals make extensive use of reflectors. To use one, the photographer usually needs an assistant to manipulate the reflector until the desired illumination is achieved and then to hold the reflector in place while the picture is being taken. In some studio situations the reflector can be put into position and then clamped with a light stand. On location an assistant is usually used.

Professional reflectors have white surfaces, or silver and gold metallic ones. The metallic surfaces reflect more light and

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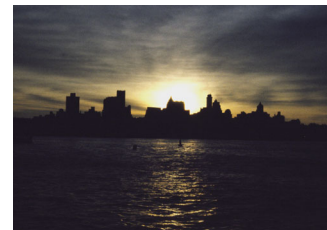
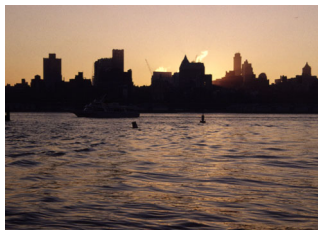
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place so you're ready to photograph the same scene, from the same location, in all sorts of different types of light. See how many different versions of the scene you can create just by observing the way the light is striking the scene.

Tip Five: Try Painting With Light.

What if you could completely control light, so that it only appeared where you wished in the scene before you? Think of the way that you could control what would be seen in your photograph.

To a limited extent, you can do this. The technique is called “painting with light” and it is highly experimental. There are expensive professional tools you could purchase for this purpose, but you can have a lot of fun with this technique simply by using a flashlight. The only other requirement is a dark room so you can make a time exposure. How to make your camera give you either an unlimited exposure or a very long one – perhaps 30 seconds – will depend on the type of camera you're using. Refer to your camera's instruction book to see what possibilities for a long shutter speed are available to you.



© Chuck DeLaney,

NYI Dean Chuck DeLaney lives in lower Manhattan. This scene looks eastward from Manhattan across the East River to a section of Brooklyn called Brooklyn Heights. As you can see, these images were made at varying times of day including sunrise and sunset.

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Tip Six: Use Window Light for Portraits.

Painters have used window light for centuries. It is important to understand that we mean the soft light that comes through a window, not sunlight pouring through the window into a room. In the northern hemisphere, artists' studios often feature large windows facing north, since the sun will shine directly into the studio from windows in the east, south, and west walls depending on the time of day.

The use of a reflector in combination with window light will greatly assist in softening shadows. The light from a window diminishes rapidly, which means that you have to watch out for hot spots and make sure that your exposure records some detail in the areas of your subject that are highlighted by the location of the window.



Photograph by NYI Student Mike Byalik

This photograph is a very sophisticated portrait but we come very close to losing the important detail of the woman's right shoulder because her skin almost gets lost against the background. NYI Student Mike Byalik made this picture using a digital SLR. CCD chips can easily lose all detail in a highlight area, a condition we call "blown out." CCD chips have come a long way in the time they have been used in video and still cameras, but you may find you need to take manual control of your camera and cut the exposure by a stop or so to make certain you record highlight detail.

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Photo by NYI Student Victore Nieves

Tip Seven: Twilight for Night Time.

We know that shadows in pictures appear darker than the same shadows appear to our eyes when we view a scene before we take a picture. We've discussed how to lighten shadows on people's faces, for example, by using fill flash.

When you want to make a picture of a night time scene, whether it's a cityscape ablaze with bright lights, or a landscape scene, bear in mind that a photograph taken in twilight will appear to the viewer to be the equivalent of a night time scene while still providing detail in the sky rather than a black void.

This charming picture of a young girl was made with a traditional film SLR and ISO 400 negative film. A reflector was used, but you can see how radically the light drops off. Look at the illumination of the chair in the background. When using window light, the background must be surveyed to see what will be prominent in the scene. Here either the model should be repositioned, or else the tree and chair in the background should be rearranged.

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Photo by NYI Student David Schmiedeberg

As with all suggestions – or so-called rules – there are times when you want to take a different tack. There are times when a stark black sky is the best dramatic choice. This photograph of the Mormon Temple in La Jolla, California was made in black-and-white film and the stark black sky is a very dramatic frame for this light color.

Lighting Equipment Pays for Itself.

In closing this series of tips on lighting, we've come full circle. At the beginning we promised that we wouldn't push expensive lighting equipment on you – and we won't. – “How expensive?” – you may wonder. Professionals equipping a studio with enough lights to conduct a fashion shoot or make commercial photos of large items like automobiles can spend tens of thousands of dollars.

However, if you invest somewhere between \$250 to \$1000, you can purchase lighting equipment that could make a big



Relatively inexpensive stand alone flash unit, manufactured by White Lighting. The close-up of the control panel shows that you can vary the power output .

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difference in the kind of images you can produce. To be able to get your flash off the camera allows you to play with the direction of artificial light in your photographs. If you purchase a strobe head or two, light stands to hold them, a reflector and perhaps some seamless background paper, you'll find that you can produce all kinds of photographs that people will gladly pay for.

Most professionals will tell you that an initial investment in lighting equipment will pay itself back far more quickly than the purchase of a new lens, second camera body or other types of photographic equipment.

However, the most important investment you can make with regard to lighting in your photographs is to invest your own time – a very important and limited commodity. You don't need to spend a penny, but simply take the time to observe the way light plays around different scenes and profoundly affects the world that we photograph.



Photo by NYI Student Paula Kline

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