

Stay Focused Guide

Nikon D3000

Simple
Techniques
For Taking
Great Photos



Stay Focused: Nikon D3000 Editors

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Introduction

You're the proud owner of a new Nikon D3000 digital SLR camera. It's loaded with features that are capable of capturing great photos. You've used it a few times but you're not getting the results that you know are possible. Now you'd like to find out how to turn your snapshots into gallery quality photos.

Unlike other guides that treat the camera as a technical gadget requiring confusing explanation, this **Stay Focused Guide** is for those picture takers who want to solve common shooting problems and capture the best photos that their cameras promise.

We answer the questions standing between you and the perfect photo that's within your grasp. We explain the way out of the many annoying problems that come up as you learn to use the many features that set your advanced digital SLR apart from the point-and-shoot variety cameras. We won't confuse the explanations with any high tech jargon; we use easy-to-understand English. Furthermore, we illustrate the answers and show you before/after photos so that you can instantly see the solution.


How We've Organized The Book

We've organized this book into ten distinctive sections, therefore you won't need to read from page 1 to the end to find the solution to your photo challenge.

Each section has several common challenges that you have likely faced while snapping your photos. We'll use a "before" photo that describes the problem as well as an "after" photo that shows a solution. Then you'll find out how to adjust your camera to get the "after" photo.



The easy-to-follow steps will

Also, we're using the term **Quick Access display** to describe the display you'll see on the LCD screen when you press the  button two times.

Aperture

Shutter

ISO

Depth of Field

Boosting Your Photography IQ

You don't have to be a camera whiz to learn to use your digital SLR.

But understanding a few things about how it works will help you jump-start your photography IQ.

Read this section to learn a few photography basics or move to the next section if you'd rather skip the fundamentals.

In days gone by when film was king, if you wanted to take pictures with an SLR camera, you'd first have to learn a few *fundamentals of photography* to get started. You'd need enough know-how to make the appropriate camera settings to take a good photograph.

Fortunately, today's digital SLRs have marvelous brains which make picture taking so much simpler. For many scenes, you can just turn it on and start snapping away. The myriad of advanced features of your Nikon D3000 minimizes the need for you to understand how the camera decides how to best take your photograph.

With such smarts built right into the camera, why do we include this beginner's section?

We know that many of you will want to skip this section and rely on the technical prowess of your camera to make the decisions for you. But others may want to understand how the camera makes many of its automatic decisions and what they can do to effect these to their benefit and produce even better quality photos.

If you'd like to stay with us, keep reading. Otherwise skip ahead.

Film is no longer king. Rather, your digital camera's sensor is king. The sensor in the Nikon D3000 is a large set of electronic eyes that are sensitive to light much the same as the film's surface is sensitive to light. To put it simply, the key to a good photograph is to ensure that the camera's sensor captures the proper *exposure* — the correct amount of light for the camera to record an ideal image.

Your Nikon D3000 has many different features and a good many of them are there to determine the proper exposure for a given scene. The three main controls that affect exposure are:

- ❖ Aperture
- ❖ Shutter speed
- ❖ ISO setting

There's one more topic that we'll mention — a topic that isn't directly concerned with exposure. However, understanding *depth of field* will definitely boost your photo IQ. OK, here we go.

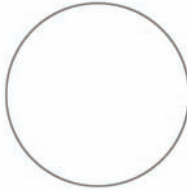
Aperture

When taking a photograph, the light reflecting from your scene passes through the lens on its way to the sensor in your D3000. The lens has two jobs to do: *focus* the rays of light that pass through and *control* the amount of light that passes through. The glass in the lens is responsible for focusing the light. The aperture, a mechanical device within the lens, controls the amount of light passing through it by opening wider or closing narrower.

The aperture controls the amount of light passing through it by opening wider or closing narrower. In other words, the aperture is the lens opening. The larger the opening, the more light that can pass through.

f-2

Aperture f-2 lets most light pass through



f-8

Aperture f-8 lets less light pass through



f-4

Aperture f-4 lets a lot of light pass through



f-16

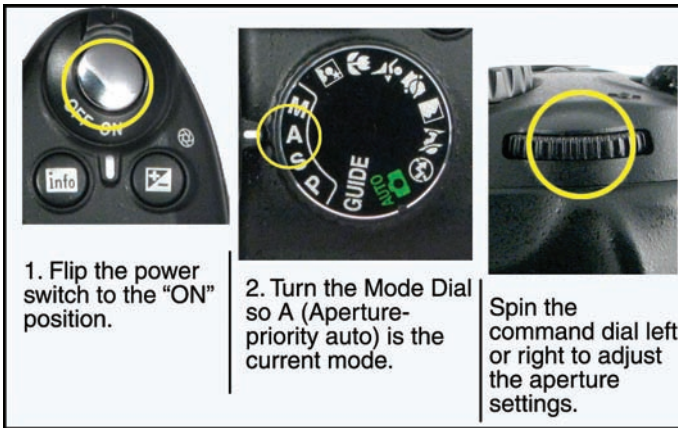
Aperture f-16 lets very little light pass through



To say it a different way, the aperture is the lens opening. The larger the opening, the more light that can pass through.

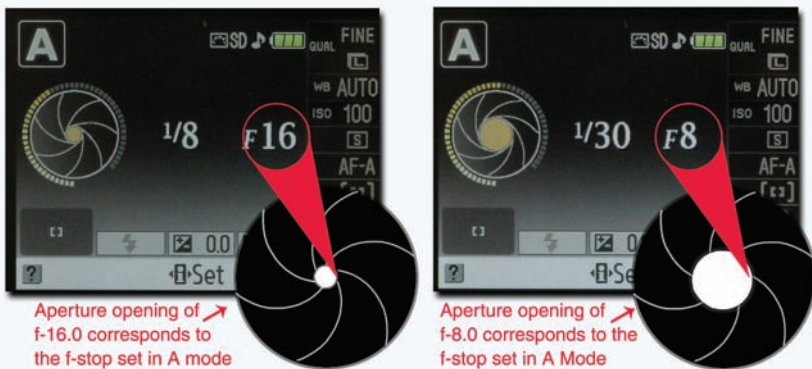
To get a little more technical, the measurement of the lens aperture is referred to as an f-stop (and is shown on the D3000 as f2, f4, f8, etc.). Let's see how the D3000 refers to the aperture.

Power on your camera and turn the Mode dial to A (Aperture-priority auto) mode. Now spin the Command dial and you'll see that the large value in the top right of the LCD changes to display f-5.6, f-8.0 or f-11.0, for example. A smaller value (f-5.6) allows more light to pass through the lens than a larger value (f-8.0). These values may be confusing since a smaller value represents a larger aperture (opening) and a larger value represents a smaller aperture (opening).



When you're in A mode and press the shutter-release to capture a scene, the camera automatically sets the proper shutter speed to achieve a proper exposure. Here's an illustration that shows two different f-stop shutter speed combinations.

When you press the shutter-release to capture a scene, the lens opening is set automatically to the proper f-stop. In this illustration, the openings representing the two different f-stops are f-16.0 (left) and f-8.0 (right).



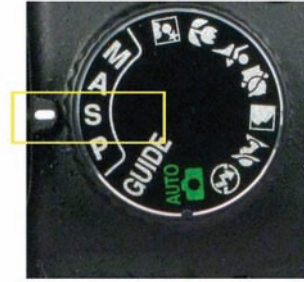
So when talking about f-stops, the rule is to use a smaller f-stop to allow more light to reach the sensor and use a larger f-stop to allow less light to reach the sensor.

Shutter Speed

The shutter is a mechanical device inside the camera positioned directly in front of the sensor. It's electronically controlled to open and then close for a varying length of time. This time period is known as the camera's *shutter speed*.

A shutter that opens for only a short time allows less light to reach the sensor than a shutter that opens for a longer time. Let's say this a different way: *a slow shutter speed implies a longer exposure time while a fast shutter speed implies a shorter exposure time.*

Let's see how the D3000 refers to the shutter speed. Power on your camera and turn the Mode Dial to the S (Shutter-priority auto) mode.



Turn the command dial so that S (Shutter Priority) is the current mode.

Spin the Command dial and you'll see that the value in the center of the LCD changes to, for example, 1/60 or 1/125. A smaller value (1/60) indicates a shutter speed of one-sixtieth of a second while a larger value (1/125) indicates a faster shutter speed of one-hundred twenty-fifth of a second. As you can see, these values usually indicate a fraction of a second.

Notice that as you spin the command dial the value in the LCD changes to numbers such as 1/200 or 1/160, for example. A smaller value (1/160) indicates a shutter speed of one-one hundred sixtieth of a second while a larger value (1/200) indicates a faster shutter speed of one-two hundredth of a second.



As you can see, the values you set for the shutter speed in S Mode usually indicate a fraction of a second.

A camera's shutter speed also changes the way action or movement in a scene is captured in a photograph. You'll want to use a fast shutter speed to freeze fast-moving subjects such as runners or racing cars. Conversely, you'll want to use a slow shutter speed to blur moving subjects to create special effects such as flowing water.

When you set the D3000 to S mode and select a specific shutter speed, the D3000 will automatically set the aperture to produce the proper exposure.

The Aperture and Shutter Speed Dance

When you set the Mode Dial to P (Programmed auto) mode, the D3000 automatically determines the exposure for a scene. While pointing the camera at a scene, press the shutter-release button halfway and observe the LCD. You'll see both the aperture and shutter speed that the camera has selected for this scene. Spin the Command dial and you'll see that both the aperture and shutter speed change on the LCD. Continue to spin the Command dial and you'll see all of the aperture and shutter speed combinations that will produce a proper exposure. These are all equivalent exposure combinations.

When you set your D3000 to P (Programmed Auto mode), it automatically determines the exposure for the scene.

Shutter speed Lens opening



Shutter speed Lens opening



Shutter speed Lens opening



The point is that as you change the shutter speed, you'll also must change the aperture to produce a proper exposure. Conversely, as you change the aperture, you'll also must change the shutter speed. In P mode (Programmed auto), the camera does this for you simply by spinning the command dial.

ISO

The third way to control exposure with the D3000 is by adjusting its ISO speed. We've already learned that the light reflected from a scene enters the lens, passes through the shutter and strikes the camera's sensor.

When the scene has sufficient brightness, the sensor records all of the elements of the scene in vivid detail. However, as the brightness of the scene diminishes, such as under heavy overcast skies or as night begins to fall, the sensor may have trouble capturing all the detail.

Using its sophisticated electronics, the D3000 is able to increase the sensitivity of its sensor thus allowing it to record more detail when the lighting is diminished. The camera's ISO speed is a measurement of the sensor's sensitivity and ranges from 100 to 1600 — with 100 being the least sensitive and 1600 being the most sensitive.

When the Mode Dial is set to any of the Digital Vari-Program modes (see below), the D3000 automatically sets the ISO speed for the scene. When the Mode Dial is set to any of the Exposure modes, you can explicitly set the ISO speed. We'll show you how to do this in the sections that follow.

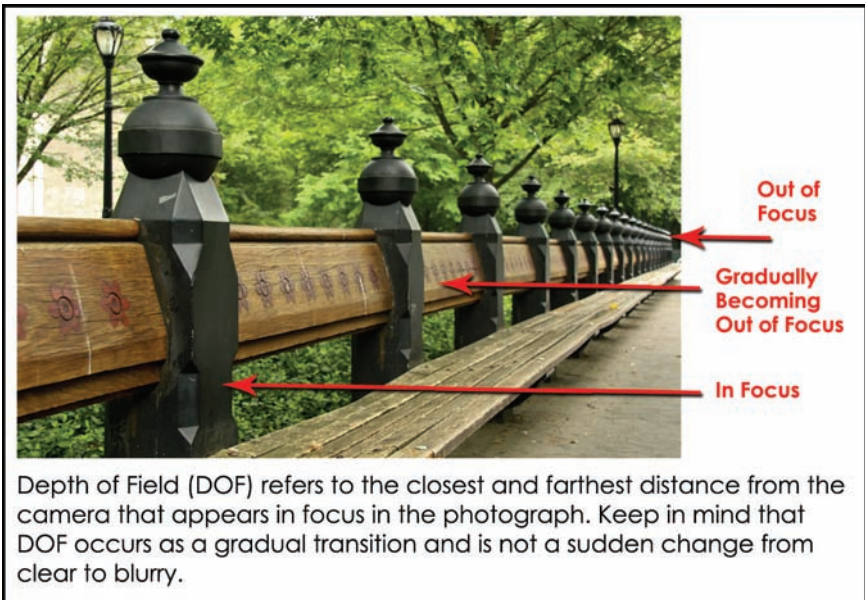
	<p>When you set the Mode Dial to any of the Digital Vari-Program modes, the D3000 automatically sets the ISO speed for the scene.</p> <p>When you set the Mode Dial to any of the Exposure modes, you can explicitly set the ISO speed.</p>
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As you might expect, changing the camera's ISO speed requires a change in both the aperture and shutter speed to achieve a proper exposure. But again, the D3000 automatically synchronizes the settings as you change one of these three controls (except when the Mode Dial is set to M).

In general, using a lower ISO speed produces a higher quality photograph than when using a higher ISO speed. Using higher ISO speeds, for example 800 and higher, may add speckles (granular spots) to your photographs. So if you're striving for the highest quality photos, use the lowest ISO speed that the scene allows.

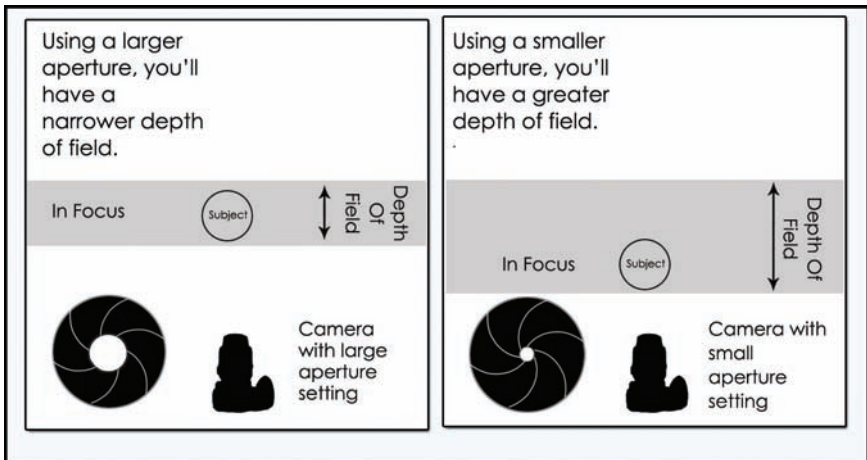
Depth of Field

There's one last topic that we'll discuss here. *Depth of Field* (DOF for short) refers to the closest and farthest distance from the camera that appears in focus in the photograph. Keep in mind that DOF occurs as a gradual transition and is not a sudden change from clear to blurry.

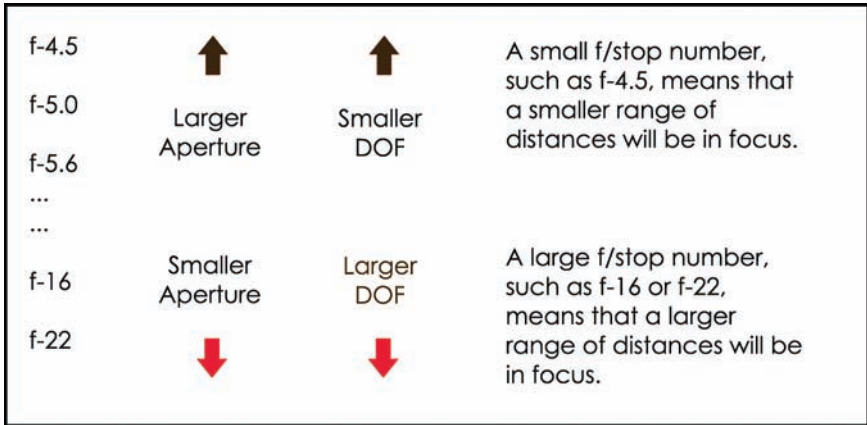


DOF is affected by both the *focal length* of the lens and its aperture setting.

First a quick note about focal length. The standard lens for the Nikon D3000 is the 18mm-55mm zoom lens. This lens has a focal length that can be varied from 18mm at its widest setting to 55mm at its longest lens setting. When at its widest setting, the DOF is greater compared to its longest setting. This means that more of the scene is in focus at its widest lens setting than at its longest setting.



Likewise, the aperture setting of the lens affects the photograph's DOF. If you snap two photos, one captured at a large f-stop and the other captured at a small f-stop, the second will show more DOF.



Using this know-how, you'll be able to better control the amount of a scene that you'd like to keep in sharp focus.

Mode Dial and Modes

The large Mode Dial on the top right of your camera is the first control that you'll want to set before you begin snapping away. As you rotate the dial, you're changing the shooting modes. These are divided into two types: the Digital Vari-Program modes and the Exposure modes.

Those of you who are starting out will most likely choose to shoot using one of the Digital Vari-Program modes where the D3000 automatically sets most of the controls when you press the shutter-release button.

As you progress and learn how the controls are able to add subtle enhancements to your photos, you'll be using one of the Exposure modes more often. In fact, most of the techniques that we'll show you in the next pages will have you using one of the Exposure Mode shooting modes.

Finally, for reference, we'll show you a detailed illustration of the controls and indicators that you'll be using to get those great photos from your D3000.

Nikon D3000 Controls, Dials And Buttons

You'll need to be familiar with the controls and features that we talk about in the book. Sometimes, however, we might talk about a specific control and you may not know where it is on the camera.

You should already be familiar with the power switch for the camera but you should also know the location of the other controls on the top of the camera, specifically the Mode dial and the Main dial.



- 1 Built-in flash
- 2 Flash hot shoe
- 3 Shutter button
- 4 Power switch
- 5 Exposure compensation
- 6 Info button
- 7 Mode dial
- 8 Flash button

The large LCD monitor should be easy to locate. You'll find the MENU and DISP (display) buttons above the LCD monitor and to the left of the viewfinder. To the right of the LCD monitor are the controls that you'll use in your everyday shooting.



- 1 LCD Monitor
- 2 Information display / Quick Access settings button
- 3 Thumbnail / Playback / Zoom out button
- 4 MENU button
- 5 Playback button
- 6 Viewfinder eyepiece
- 7 Dioptic adjustment control
- 8 Command dial
- 9 Multi selector (up-down-left-right)
- 10 OK button
- 11 Delete button



Fixing Blurry Photos

A blurry or out of focus photo is the most common problem photographers encounter. Fortunately, this is a problem that you can solve easily.

There are also times, however, when you want your photo to be blurry, for example when you want to add a feeling of depth.

We'll talk about these situations in this section.

Adjusting The Viewfinder

While I'm looking through the viewfinder everything is out of focus. Even when the lens is set to autofocus, the scene appears blurry. What is the problem?



If you look through the viewfinder and the scene appears out of focus but the lens seems to be working, you may need to use the viewfinder dioptic adjustment control.

The diopter adjustment control is to the right of the viewfinder. Slide it up or down to make the view sharp.



Look at the AF points (autofocus points) on the viewfinder. (1)

Move the diopter adjustment control (2) up or down.

When the AF points are sharpest, your viewfinder is set for your eyesight. (3)

Note: The image is intentionally lightened to better highlight the AF points.



Tip Talk

If you look through the viewfinder and the scene appears out of focus but the lens seems to be working fine, you may need to adjust the viewfinder dioptic setting. The *dioptic adjustment control* is to the right of the viewfinder (see diagram on the preceding page).

You can adjust the viewfinder for different eyesight corrections by moving the control up or down. In other words, the dioptic setting is used to adjust the viewfinder to your particular eyesight whether you use eyeglasses, contact lenses, etc.

Keep in mind that the dioptic adjustment is now set for your eyesight. Therefore, if anyone else uses your camera, they may need to readjust the dioptic setting for their eyesight.

Zooming In On An Diopter Adjustment Lens

If you cannot bring the focus areas into sharp focus, then the built-in diopter adjustment control may not be sufficient for your particular eye strength.

In this case, you can purchase a diopter adjustment lens. Nikon has diopter adjustment lenses for -5, -4, -3, -2, 0, +.5, +1, +2 and +3m.



My Main Subject Is Out Of Focus

The main subject in my photo is far away and I can see that it's blurry. For example, I took the following photo of the attractive building. However, when I look at the photo closely, I can see the building is out of focus. What do I need to do to keep it in focus?



Mode: Auto Shutter: 1/250
Aperture: f-8 ISO: 100

Notice that the building is out of focus.



Mode: Auto Shutter: 1/200
Aperture: f-7.1 ISO: 100

The building is now in sharp focus after changing the AF point.



By default the camera is set to focus on the closest subject, which in this case is the lamppost. We can fix this easily.

Turn the Mode Dial to AUTO. (1)



The AF-area is set by default to the closest subject. To change this, press the **[i]** button until the Quick Access settings display appears. (2)



Press **[Multi selector]** to select **[■]** (AF-area mode) (3) and press OK to open the AF-area mode display.



Press **[Multi selector]** to select **[□]** (Single area) (4) and press OK to close the AF-area mode display.



Position the focus point (5) over the building.



If necessary, press **[Multi selector]** up or down to choose any of the eleven focus point.

Press and hold the shutter-release (6) button halfway.



Recompose the shot to position the building as desired in the viewfinder.

Press the shutter-release button fully to capture the picture. (6)

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My Main Subject Is Out Of Focus

Tip Talk

The AF-area is set by default to the closest subject when you set the Mode dial to any mode other than Sports and Closeup.

The camera uses the focus point for the subject that is closest to the camera. The light pole in the first photo is closer to the camera than the rest of the scene. Therefore the light pole is in perfect focus but the building isn't in focus.

By switching the AF-area to Single area, you can select a particular focus area using the Multi selector. You then position the focus point over the main subject in the viewfinder to choose which of the of the multiple objects in the viewfinder is the most important; in our case, it's the large building.

Zooming In On The AF-area

The Mode Dial for your Nikon D3000 is located at the top of the camera. You'll turn it to select which shooting mode you want to use.

The Nikon D3000 has three focus areas. If one of the focus areas covers an object in the viewfinder, it will flash red when you press the shutter-release button half way.



When set to any mode other than Sports and Closeup, the D3000 automatically sets the AF-Area to the closest subject.

You can select any of three AF-areas:

- ❖ Closest subject (1)
The D3000 selects the subject closest to the camera.
- ❖ Dynamic (2)
You can select one of the eleven focus points using the Multi selector but the D3000 will automatically use another focus point and try to "follow" the subject.
- ❖ Single area (3)
You can use the Multi selector to choose any of the eleven focus areas.




My Closeups Are Blurry

The photos of the flowers from my garden are coming out blurry. What can I do to fix this?



Mode: Auto Shutter: 1/50
Aperture: f-5.0 ISO: 400



Mode:  Close-up Shutter: 1/50
Aperture: f-5.0 ISO: 400
Focus: Manual Focus

Although the photo is good overall, the flower is blurry.

Use Close up mode and manual focus to sharpen the focus.



Turn the Mode dial to  (Close up mode). (1)



Move the lever on your lens from **A** to **M** to set the lens to manual focus. (2)
Some lenses may be marked **M/A** and **M** see the following page for more information.



Compose the scene.

Slowly and carefully focus the lens manually by turning the focusing ring back and forth (3) until the portion of the flower that is important to you appears sharpest in the viewfinder. (4)



Press the shutter-release button (5) halfway to set the exposure and then fully to capture the picture.



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My Closeups Are Blurry

Tip Talk

When shooting subjects that are close to the camera, you may want to switch your autofocus lens to manual for precise focus.

When you're trying to take an extreme closeup, your camera may not be able to achieve perfect focus automatically. By setting the lens to M (manual focus) you can arbitrarily choose the portion of the flower that you want to be in exact focus.

Regardless of whether you use A (autofocus) or M (manual focus), each lens has a minimum focus distance. As you can imagine, attempting to capture a subject closer than the minimum focus distance will result in a blurry photo.

When you're finished taking closeups, don't forget to reset the lens back to A (autofocus).

Zooming In On Autofocus & Manual Focus Locations

Nikon lenses have two types of switches for setting autofocus and manual focus.

The location for one type of lens is on the left (as shown in the diagram on the previous page). You may also see it shown differently on another lens (right):



When you set it to A, the lens will autofocus but you're unable to focus manually. When you set it to M, autofocus is disabled.

When you set it to M/A, the lens will autofocus but you're still able to focus manually. When you set it to M, autofocus is disabled.



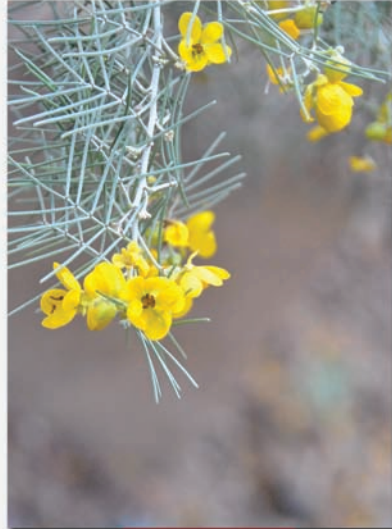
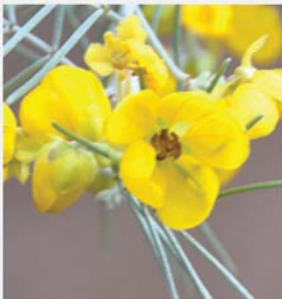
My Closeups Are Still Blurry

As I'm shooting closeups, I've noticed that even a gentle breeze moves the flowers. What can I do to keep the flower in focus?



Mode: Auto Shutter: 1/25
Aperture: f-5.0 ISO: 400

Just when you think you captured a great shot, even a gentle breeze can make the photo blurry.



Mode: Close-up Shutter: 1/200
Aperture: f-5.6 ISO: 800
Focus: Manual

By using a higher shutter speed, you can "arrest" the movement of the subject.



Turn the Mode dial to S (Shutter-priority auto). (1)

Press the **i** button until the Quick Access settings display appears. (2)

Press **Q** (Multi selector) to select **ISO** (3) and press OK to open the ISO sensitivity display.

Press **Q** (Multi selector) to select **800** (4) and press OK. Press the **i** button to close the ISO sensitivity display

Turn the Command dial to set a shutter speed of 1/100 (or faster). (5)

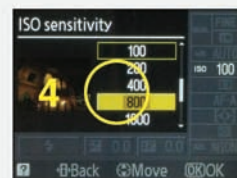
Move the lever on the lens from **A** (autofocus) to **M** (manual focus). (6)

Compose the scene.

Slowly and carefully focus the lens by turning the focusing ring back and forth (7) until the portion of the flower that is important appears sharpest. For extreme closeups, only a small portion of the flower may be in focus.

Press the shutter-release button halfway to set the exposure.

If you recompose or if the breeze moves the flower, you'll need to let go of the shutter-release button and then press it again to reset the exposure.



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My Closeups Are Still Blurry

Tip Talk

Most flowers are so delicate that even slight breezes on warm days can cause them to move. While you may not think that the wind is a factor, a gentle whiff can cause a small flower to move appreciably.

When wind is a factor, use a higher shutter speed to arrest the motion.

A faster shutter speed will reduce the possibility of a blurry photo if the breeze or wind causes the flower to move.

To insure less movement from breezes, you can construct a small *wind blind* around the flower. The blind can be as simple as a large cardboard carton that shields the flower from the direct effects of the wind.



This cardboard carton serves as a wind blind to shield the flower from the effects of even slight breezes when you're taking closeups.

Adjusting Focus for Closeups

Although I used the manual focus as suggested in a previous technique, only a small portion of the flower is in focus. What else can I do to sharpen the picture?



Mode: Auto Shutter: 1/200
Aperture: f-5.0 ISO: 400



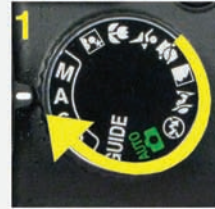
Mode: A (Aperture priority)
Shutter: 1/10 Aperture: f-9.0 ISO: 400
Focus: Manual

Many times your closeups just don't appear to be sharp enough, in other words, only a small part of the photo is in focus.

By using a smaller aperture, you're increasing the depth of field and therefore bringing more of the subject into focus.



Turn the Mode dial to A (Aperture-priority auto). (1)



Press the  button (2) until the Shooting Information Display appears.



Turn the command dial until you see **F9** or smaller (higher F-number) displayed on the monitor. (3)



Move the lever on the lens from A to M. (4) to set the lens to manual focus.



Compose the scene.

Slowly and carefully focus the lens manually by turning the focusing ring (5) back and forth until the portion of the flower that is important to appear sharpest. For extreme closeups, only a small portion of the flower may be in focus.

Press the shutter-release button (6) halfway to set the exposure and then fully to capture the picture.



Tip Talk

By choosing a smaller aperture, you're increasing the *depth of field* of the lens. This is a term that describes how much of the subject is in focus at varying distances from the camera. By using a smaller aperture (larger f-number), more of the subject is in focus. By using a larger aperture (smaller f-number), less of the subject is in focus.

Depending on the brightness of the scene, an aperture of f-11 or f-16 would produce a photo with a larger portion of the flower in focus.

Keep in mind that as you change to a smaller aperture, the D3000 will also use a correspondingly slower shutter speed that may introduce camera shake or subject movement. If so, use a higher ISO such as 800 or 1600.

Zooming In On Aperture Priority Mode

The best way to understand aperture priority is to shoot several photos in A mode when you don't need to worry about taking great pictures. If you can convince some friends or family members to pose for you, position them a few feet in front of each other and take a series of photos, each one at a different f-number.



You'll probably get both subjects clearly in focus in some photos but only one in focus in other photos.

Also, the farther away that you focus, the deeper the depth of field will be. So focusing on the subject in back will yield more depth of field than if you focus on the closest subject, even at the same aperture setting.

Understanding the relationship between aperture size and distance is important for photography in general but it's critical when you're shooting closeups. The closer you bring your camera to the subject, the narrower your depth of field becomes. If you're shooting something that's only a few inches away, then the depth of field can be less than an inch. This is the perfect time to switch to aperture priority and dial in the deepest depth of field possible.

Only A Part Of The Photo Is In Focus

I wanted to take a photo of a large autumn-themed flower bed. The flowers in the front of the photo are in focus but the flowers and pumpkins in the back aren't in focus. How can I get all the flowers and pumpkins to be in focus?



Mode: A (Aperture Priority)
Shutter: 1/125 Aperture: f-4.0 ISO: 100



Mode: A (Aperture Priority) Shutter: 1/15
Aperture: f-11 ISO: 100

The area of the fence in the foreground is in focus but the area in the back is not.

Setting and using a smaller aperture puts most of the scene in focus.



This technique can be used in bright light when you're able to use a smaller aperture with a significantly fast shutter speed

Turn the Mode Dial to A (Aperture priority mode). (1)

Rotate the command dial to choose an aperture of F11 or smaller; in other words, a larger f-number. (2)

Press the **i** button to display the Quick Access settings. (3)

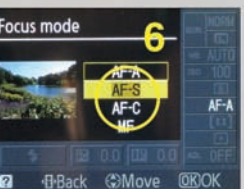
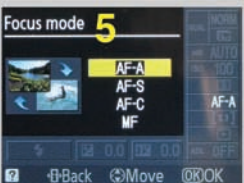
Press the **OK** (Multi-selector) to select **AF-A** (Automatic Focus Mode) (4) and press OK to open the Focus mode. (5)

Press the **OK** (Multi-selector) to select **AF-S** (Single Focus Mode). (6)

Press OK and press **i** to exit the Quick Access settings.

Compose the picture by placing the focus point over an area 1/3 the distance from the farthest part of the scene.

Press the shutter-release button fully to capture the picture.



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Only Part Of The Photo Is In Focus

Tip Talk


The best setting on your camera to control depth of field is Aperture-priority auto because you can set the aperture required for the depth of field you want and the D3000 will automatically set the shutter speed depending on the available light.

Getting a good “depth of field” photo with your D3000 not only depends on the aperture you select but also on how close you’re focusing. This may take some experimenting. A good place to starting point is to focus on a spot that is 1/3 the distance from the farthest part of the scene. For example, if your scene is ten feet deep, you can try to focus on a spot about 3 or 4 feet in.

A general rule to follow is that making the aperture smaller (so that you’re using a larger f-number) increases the depth of field while making the aperture larger (using a smaller f- number) reduces the depth of field.

The D3000 unfortunately doesn’t have a simple “DOF” button for you to press to take the perfect depth of field photo. It may take some experimenting on different Aperture-priority settings.

Farthest




Getting a good “depth of field” photo not only depends on the aperture you select but also on how close you’re focusing.

This may take some experimenting. A good place to starting point is to focus on a spot that is about 1/3 the distance from the farthest part of the scene.

For example, if your scene is ten feet deep, you can try to focus on a spot about three or four feet in.

Closest



Camera

Focus on a spot about 1/3 from the closest part of the scene

Preventing Blurry Photos

Blur is most often caused by improper focus. So focusing the camera better will take you a long way to eliminating most of the situations in which your photos turn out blurry. Here are a few tips to help you capture that picture perfectly the first time.

AF Points

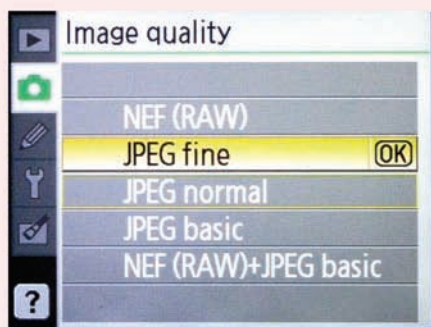
The key to getting your lens to produce tack-sharp photos is to pay attention to the AF points. When an AF point flashes red over a subject, the lens is focused on that subject. If more than one AF point flashes red, the lens is focused on the closest subject.



If the desired subject is not the closest, it may appear blurry in the photo. Therefore you may want to selectively choose a focus point to ensure perfect focus.

When you set your D3000 to one of the Basic modes, all the AF points are active. Set the camera to one of the Creative modes to select a single focus point. Make doubly sure that the AF point covers your subject and press the shutter button halfway to lock focus. While still depressing the shutter button, recompose the scene in the viewfinder if necessary and then press fully to capture the scene.

Quality Setting



We haven't talked yet about the image recording Quality setting. While the D3000 has several settings, we recommend that you use JPEG Fine quality setting. Recording your photos in this setting produces the highest resolution image possible. This in turn produces sharper photos than images with less resolution.

Manual Focus

While autofocus lenses perform quite well for most photos, sometimes you may want to focus manually. This is especially true for close-ups. If you hear the lens struggling by moving as it tries to focus, move the lever to M (manual focus).



By focusing the lens manually, you'll often get sharp photos that are difficult to capture with autofocus. Keep in mind that each lens has a minimum focus distance. If you try to take a photo of a subject that is closer than this minimum focus distance, your results will be blurry.



Difficult Scenes

When shooting scenes with low light or low contrast, your camera may hesitate while focusing. You'll hear the lens move back and forth several times and then just set there if it is unable to achieve proper focus.

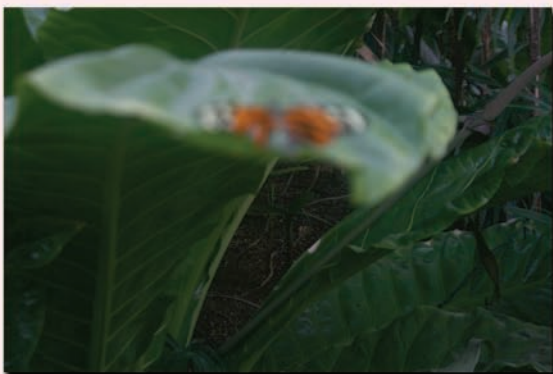
When this happens one solution is to focus on a secondary subject that is the same distance from you as the desired subject. Lock the focus by keeping the shutter depressed halfway, recompose the scene in the viewfinder and then press fully to capture the scene.

Focus on a secondary subject the same distance from you as the desired subject when your D3000 hesitates while focusing.

More Tips On Fixing Blurry Photos

It's helpful to know whether a blurry photo is the result of poor focus or camera shake.

Poor focus usually produces a blurry photo with some elements that are sharp and others that are out of focus. The elements tend to have soft yet smooth edges.



Example of poor focus causing the photo to be blurred.



Example of camera shake causing the photo to be blurred.

On the other hand, camera shake usually produces a photo that is blurry throughout. The elements have a jagged or harsh look.

If you conclude your photo suffers from poor focus, follow these tips:

- ❖ Set the lens for autofocus (look for the 'A' on the lens).
- ❖ Consider using manual focus for closeups (look for the 'M' on the lens).
- ❖ Consider using manual focus for scenes with low contrast (look for the 'M' on the lens).
- ❖ Pay attention to the focus area selection. The focus area is set by default to the closest subject (except if you're shooting in Sports or Close-up modes). You can, however, change to either Dynamic area or Single area for greater control.

If you conclude your blurry photo suffers from camera shake, follow these tips:

- ❖ Set the lens to use its Vibration Reduction, if available (look for the 'VR' on the lens).
- ❖ Plant your feet firmly on the ground – don't stand on your toes.
- ❖ Hold your D40 so that your elbows are braced against your chest.
- ❖ Carefully and gently press the shutter release button but don't hammer the shutter.
- ❖ Use a tripod if shutter speed is longer than 1/30th of a second.



Action & Sports Photos

Recording action and sporting events are among the most exciting types of photos. Here are a few ways to make your photos come alive.

My Indoor Sporting Events Photos Are Blurry

My son loves playing hockey. When I'm taking photos using Sports mode in the indoor field, the photos are out of focus. Shouldn't Sports Mode stop the action?



Mode: Sports Shutter: 1/100
Aperture: f-5.3 ISO: 800

Although Sports mode works great in many situations, sometimes the action is too fast and results in the action becoming blurred.




Mode: Program Shutter: 1/250
Aperture: f-5.3 ISO: 1600


By boosting the ISO to 1600, you can use a faster shutter speed to stop the action.



Turn the Mode Dial to  (Sports). (1)

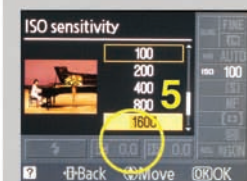
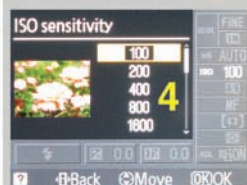
Press the  button until the Quick Access settings display appears. (2)

Press  (Multi selector) to select **ISO** (3) and press OK to open the ISO sensitivity display. (4)

Press  (Multi selector) to select **1600** (4) for the ISO setting.

Press OK and press  to exit the Quick Access settings.

Press the shutter-release button fully to capture the photo.

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My Indoor Sporting Events Photos Are Blurry

Tip Talk

When you set the D3000 to Sports mode, the default setting for ISO is Auto. This, in turn, limits the shutter speed for proper exposure that can introduce subject movement into the photos. In low light situations, this ISO may be automatically set to 800. By manually setting the ISO to 1600, you can use a faster shutter speed that can help to stop the motion of your subject.

Use the Quick settings to change the ISO to use faster shutter speed to help stop the action.

Zooming In On ISO

The ISO number indicates how sensitive the image sensor in your D3000 is to the amount of available light. A higher ISO number means the image sensor is more sensitive to light. This means that you can take photos in low-light situations.



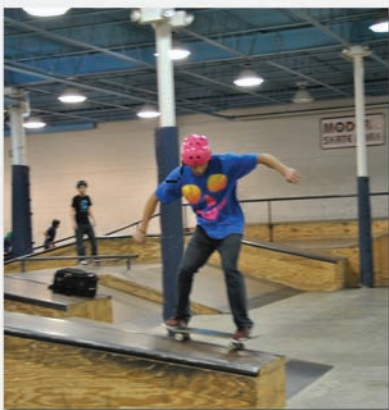
One common example is when you're in conditions where there isn't enough light to correctly expose a scene. Although you might be able to use the built-in flash, you can manually set a higher ISO to 800 or even 1600, for example. Also, if you've set a shutter speed so slow (1/60 sec. and slower) that it's difficult to hold the D3000 steady, then try the next higher ISO which will then allow you to select a faster shutter speed.


You should keep these general rules in mind about the ISO setting:

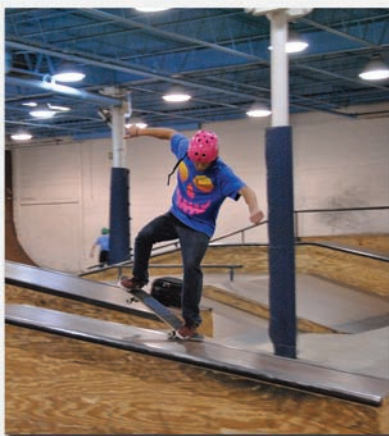
- ❖ When you're shooting in conditions where there is enough light for a correct exposure, such as on a sunny day, set a low ISO such as 100.
- ❖ If you want to take photos indoors in low-light conditions, you'd need to improve the conditions by using the flash or setting a higher ISO.
- ❖ You can prevent camera shake and blurry photos by using a higher ISO.
- ❖ The problem of noise with high ISO settings, which was a major concern for photographers before, isn't as much of a problem now. Therefore, don't be afraid to set a higher ISO number in situations that require it.

My Indoor Sporting Events Photos Are Blurry #2

My youngest is a skateboarder. To capture him in action, I've increased the ISO but the photos are still blurry and out of focus. Is there anything I can do to make the photos sharper?

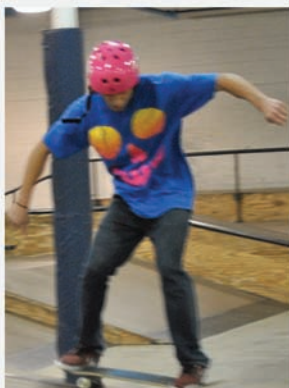


Mode:  (Sports) Shutter: 1/80
Aperture: f-4.2 ISO: 800



Mode: Program Shutter: 1/125
Aperture: f-4.5 ISO: 1600

In some situations boosting the ISO may not stop the action leaving a blurry photo.





When available lighting is low, you can "pan" the camera to follow the action.




Turn the Mode Dial to P (Programmed auto). (1)

Press the  button to display the Quick Access settings. (2)

Press  (Multi selector) to select ISO and press OK to display the ISO sensitivity settings. (3)

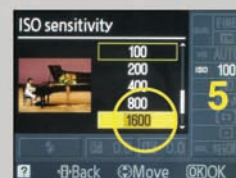
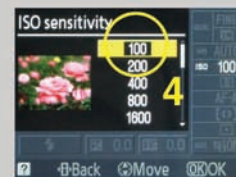
Press  (Multi selector) to select 1600 and press OK. (4)

Press the  to exit the Quick Access settings.

Position yourself so you can observe the movement of the subject from either a left to right direction or from right to left direction. (5) Follow the movement from this position by keeping the subject centered in the viewfinder. This is called *panning*.

Press and hold the shutter-release button (6) halfway as you slowly and steadily pan the camera.

Press the shutter-release button (6) completely to capture the action.

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My Indoor Sporting Events Are Blurry #2

Tip Talk

By increasing the ISO setting and using the widest aperture, you're using a fast shutter speed to help stop the action.

In situations when the lighting is low, such as this indoor skateboard park, the shutter speed may not be fast enough to stop the action. You can, however, reduce the amount of subject movement (in relation to the camera) and capture a sharper image of your subject by *panning*.

Zooming In On Panning

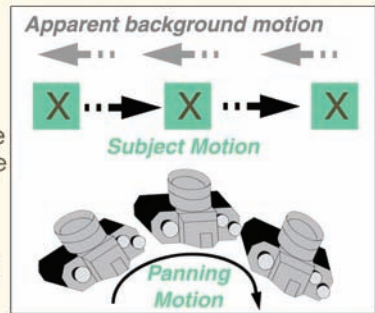
The technique of panning to convey a sense of motion is one that takes practice. You'll need slow shutter speeds and steady hands.

One reason that panning requires practice is that unlike most of your other photos, panning means you're moving the D3000 instead of holding it still.

Note the subject in this diagram is moving from left to right but could be moving in the other direction or up or down. What is important is that you can follow the movement evenly throughout the time it takes to capture the photo. How fast and how close the moving subject is will determine the shutter speed to use.

Use a slower shutter speed if you want to emphasize the sense of movement but keep in mind that this will make it more difficult to keep your camera steady.

Plant your feet, draw your arms into your body, hold your camera securely and rotate the top half of your body as you track your subject. Pan as fast as the subject moves so you keep it in the same position in your viewfinder. Press the shutter down as you continue your motion and follow through even after the shutter has closed. Use continuous shooting mode if you have time for more exposures.



Take several different shots varying the speed at which you follow the subject in the viewfinder. Keep your panning movement smooth and steady. The panning technique takes practice so don't get discouraged if your first few attempts aren't perfect.

One way to get a more stop-action looking photo is to capture it at the height of the action. In other words, snap the photo when the basketball player is at the highest part of the jump or when the skateboarder is at the top of the half-pipe.




Try to capture your action photos as the subject approaches the maximum height, top of climb, etc.

Capturing Peak Action

My son is a soccer player and I'm using my D3000 to take photos of his games. My photos, however, lack the excitement that should show off his talent. What can I do to capture the peak action?



Mode:  (Sports) Shutter: 1/800
Aperture: f-5.6 ISO: 200

Here's a simple stop action of a soccer game.






Mode:  (Sports) Shutter: 1/1000
Aperture: f-5.6 ISO: 200

When you set the Release mode to Continuous, you can record a series of action




Turn the Mode Dial to  (Sports mode).
(1)

Press the  button until the Quick Access settings display appears. (2)

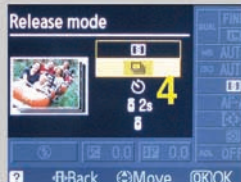
Press  (Multi selector) to select  (Release mode) (3) and press OK to open the Shooting mode display.

Press  (Multi selector) to select  (Continuous) (4) and press OK.

Press the  button to exit the Quick Access settings mode.

Compose your scene (5) and press and hold the shutter-release button (6) to capture a series of action shots.

You'll probably want to pan as you follow the action.

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Capturing The Peak Action

Tip Talk

When you set the Release mode to Continuous on your D3000, it can take about three photographs per second. This lets you choose from a group of action photos to select a “peak” capture.

After taking a series of continuous photos, you may notice that the D3000 remains busy as it processes and records the images to your SD card. This is normal. When the processing is complete, the final image is shown on the LCD.

Zooming In On Locating Buttons & Keys

Refer to pages 12-13 for information on locating buttons, keys, etc., that we mention in the diagrams and elsewhere in the book.

Also see the “Boosting Your Photography IQ” chapter if you need more information on photography.





Continuous shooting mode lets you take several action photos when you hold down the shutter button. This lets you choose the "peak" action photo.



Mode:  (Sports)
Shutter: 1/1000 sec
Aperture: f-5.6
ISO: 200
Drive Mode: Continuous

Tips On Shooting At Sporting Events

Set Your Camera For Continuous Mode

Because it's impossible to time every shot perfectly, use continuous mode so you can take several photos in quick succession.

Capture The Action By Panning

Panning is one technique you should practice for photographing sporting events. By becoming experienced in panning, you'll produce a photo with a nice effect of seeing your athlete in focus yet have the background slightly blurred.

Anticipate The Action

One way to snap your best photo is by anticipating the action. Always be ready for opportunities such as the action near a goal in a hockey or soccer game or your son waiting for the pitch in baseball game. Don't overlook the scoreboard. It's a great way to record game information you may later need to help tell a story with your photos

Expect The Unexpected

The most interesting sports photo opportunities are not always found on the field so look around for photo opportunities in unexpected places, such as the bleachers, pressbox, refreshment stands, etc.

Problem With Lights Inside Gyms

The mercury or sodium vapor lights used in many high school gyms occasionally flicker or change in intensity and color. Although you may not notice the changes, your camera may. The best way to avoid this problem is to use the built-in flash on your camera. Check to make certain that flash photography is allowed at the event.

Practice

Snap as many photos as you can at your children's sporting events to increase the chance of getting great photos that you can proudly show to family and friends. It also gives you more experience in getting the proper camera settings for future sporting events.



Fixing Color In Your Photos

You can take what you think (hope) is a great photo only to realize that it's too blue or too yellow. These are examples of problems with color that you may have noticed before but tried to fix on your computer using software.


However, it's better to avoid these problems in the camera instead of using software.

You also may be trying to take that sunset or sunrise photo but never quite got the shades of color just right.

Fixing Orange-tinted Photos

When I'm taking pictures indoors, the faces of my subjects look reddish or orangish. How can I fix this?



Mode:  Auto (Flash off)
Shutter: 1/15 **Aperture:** f-4.2 **ISO:** 800

This photo was taken indoors where an incandescent bulb was lighting the room. The photo has a reddish tint.




Mode: P (Programmed Auto)
Shutter: 1/30 **Aperture:** f-4.2
ISO: 800 **White Balance:** Tungsten

Notice that the color is more pleasing after the white balance is adjusted.



Turn the Mode Dial to P (Programmed Auto). (1)

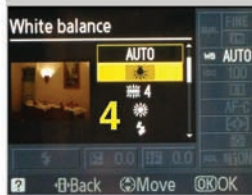
Press the  button until the Quick Access settings display appears. (2)

Press  (Multi selector) to select **WB** (3) and press OK top open the White balance display.

Press  (Multi selector) to select  (Tungsten) (4).

Press OK and press  to exit the Quick Access settings.

Compose your scene with the main subject in the center of the viewfinder. Press the shutter release button fully to capture the picture.



Tip Talk

Indoor lighting is typically from widely used tungsten light bulbs. Tungsten lighting causes the orangish tint that you often see in the faces of the subjects.

The D3000 tries to set the white balance automatically but this isn't always foolproof.

To remove the color cast, you can select an appropriate white balance.

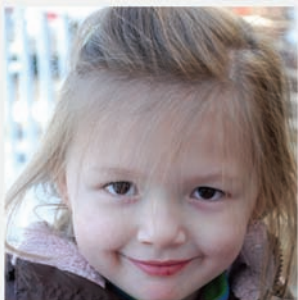
Fixing Blue-tinted Photos

When I'm taking photos outdoors, the faces of my subjects have a blue tint. How can I fix this?



Mode: Auto Shutter: 1/50
Aperture: f-5.6 ISO: 200
White Balance: Auto

Notice the bluish tint in this photo that was captured in the open shade.





Mode: P (Programmed auto) Shutter: 1/50
Aperture: f-5.6 ISO: 200
White Balance: Open Shade


The color here is more pleasing after the white balance is adjusted.



Turn the Mode Dial to P (Programmed Auto). (1)

Press the  button until the Quick Access settings display appears. (2)

Press  (Multi selector) to select WB (3) and press OK.

Press  (Multi selector) to select  (Shade). (4)

Press OK and press  to exit the Quick Access setting.

Compose your scene with the main subject in the center of the viewfinder. (5)

Press the shutter release button fully to capture the picture. (6)



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Fixing Blue-tinted Photos

Tip Talk

Photos that you take in the open shade, such as in our example here, often have a blue tint. Adjust the *white balance* of the camera to remove this blue cast.

Focusing In On Clearing Custom Settings

Don't forget to clear or change any settings to your D3000 that you have made before your next photo opportunity arises.

You can do this easily by following these steps:

- ❖ Press the MENU button.
- ❖ Navigate to the Shooting Menu.
- ❖ Select Reset shooting options.
- ❖ Press the OK button.
- ❖ Navigate to Yes and press the OK button.
- ❖ This will return the D3000 to the following original (default) settings:

Image quality.....JPEG normal	Metering.....Matrix
Image size.....Large	White balance.....Auto
Exposure compensation.....0.0	Flash compensation.....0.0
Release mode.....Single frame	Active D-Lighting.....Off
Focus mode.....AF-A	
ISO sensitivity.....Auto or 100 (depending on shooting mode)	
Flash mode.....Auto / Auto Slow Sync / Fill Flash (depending on shooting mode)	



More About White Balance

As its name suggests, white balance adjusts the overall color of an image so objects that appear white in your scene also appear white in your photos. To do this, your camera depends on the "color temperature" of the light source and refers to the relative warmth or coolness of white light.

Keep in mind that most light sources are not 100% white but have a specific "color temperature." A low color temperature shifts light towards red while a high color temperature shifts light towards blue.

Different light sources emit light at different color temperatures producing the color cast. The unit of measurement for light temperature is Kelvin, named for its inventor, Lord Kelvin. The following table shows approximate temperatures of light sources that might affect your photography:

Type of Light	Color Temperature in degrees K
Candle Flame	1000-2000
Incandescent (Tungsten)	2500-3500
Sunrise / Sunset (clear skies)	3000-4000
Fluorescent Lamps	4000-5500
Electronic Flash	5000-5500
Bright overhead sun, clear sky	5000-6500
Cloudy Sky / Shade	6500-8000
Blue Sky	9,000
Overcast / Heavy cloud cover	9000-10,000

Why is it so important to understand white balance? An incorrect white balance (WB) setting can create blue, orange or even green color casts that can turn an otherwise good photo into a disappointing photo.



When you press the shutter button, your camera considers the overall color of the scene and calculates what it determines to be the automatic white balance (AWB). However, your camera can be tricked, especially if one color, say green, dominates the scene or if there is no natural white present in the scene.



In other words, your camera needs to find a reference point that represents white. It will then calculate all the other colors based on this white point. For example, if you photograph a halogen light shining on a white wall, the wall in the photo will have a yellow cast even though the wall to you appears white. If, however, the camera knows the wall is supposed to be white, it will then compensate all the other colors in the scene accordingly.



The trick is to tell your camera how to do this. Fortunately, this is why you may need to use one of the preset white balances on your camera.

Also, as you become more familiar with white balance, you can create your own white balance setting.



When you understand white balance, you'll avoid or overcome color casts that your camera may create. You'll also become a better photographer because you'll be improving your skills under a greater range of lighting conditions.

An incorrect white balance setting can create different color casts that can turn a photo into a disappointing photo.

Liven Up Dull Photos

The photos that I take outdoors on cloudy days turn out dull. What can I do to liven up the colors?



Mode: Auto Exposure: 1/500
Aperture: f-5.6 ISO: 360



Mode: P (Programmed Auto) Exposure: 1/160
Aperture: f-15.6 ISO: 100

Cloudy, overcast weather can change the color of light enough to add a bluish cast to your photos.


By changing the white balance setting and using Optimize Image in your D3000, you can liven the overall color.




Turn the Mode Dial to P (Programmed Auto). (1)

Press the MENU button and press the Multi selector to select **SHOOTING MENU** to open the Shooting Menu display. (2)

Press  (Multi selector) to select **Set Picture Control** setting (3) and press OK.


Press  (Multi selector) to select **Vivid** setting (4) and press OK.

Press the  button to exit the Quick Access settings.

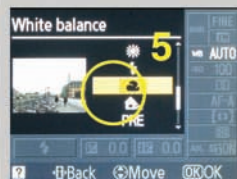
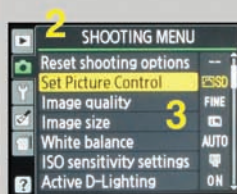
Press the  button.

Press  (Multi selector) to select **WB** and press OK.

Press  (Multi selector) to select **Cloudy**. (5)

Press the  button to exit the Quick Access settings.

Press the shutter release-button fully to capture the photo. (6)

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Liven Up Dull Photos

Tip Talk

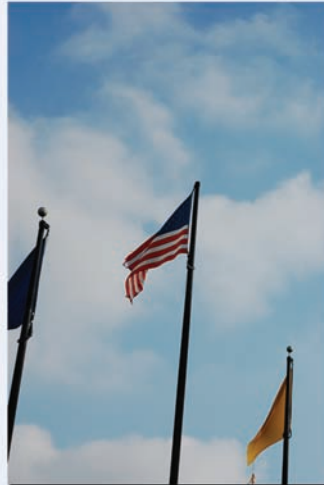
The Optimize Image setting lets you adjust color, contrast and sharpening, as well as other image settings, according to the type of scene or output you need.

Using Vivid



Mode: Programmed Auto
Exposure: 1/400
Aperture: f-10
ISO: 200

Here are two examples of the same scene. The first photo, left, is set normally but the second photo, below, is set Vivid.



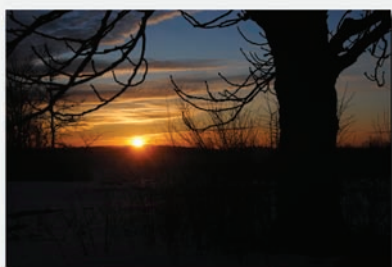
Capturing Colorful Sunsets

I'm starting to take sunset photos but too often they're not as "rich" as I would like. Can you suggest how I can take better sunset photos?



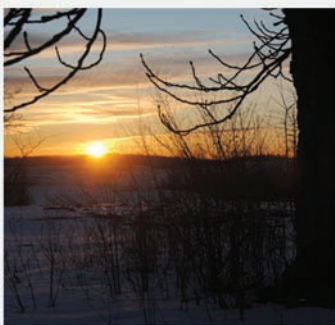
Mode: Auto Exposure: 1/320
Aperture: f-9.0 ISO: 100

Although this photo is picturesque, some people may prefer a photo that is "richer."






Mode: P (Programmed Auto) Exposure: 1/400
Aperture: f-10 ISO: 100
Exposure Compensation: -1

This photo was taken a few seconds later and exhibits much richer colors simply by adjusting the exposure compensation.



Turn the Mode Dial to P (Programmed Auto). (1)

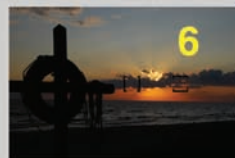
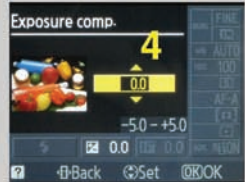
Press the  button until the Quick settings display appears. (2)

Press  (Multi selector) to select  (Exposure comp.) (3) and press OK to open the Exposure comp display. (4)

Press  (Multi selector) to select -1 and press OK. (5)

Compose your scene with the main subject in the center of the viewfinder (6) and press the shutter-release button halfway.

Press the shutter-release button fully to capture the sunset.



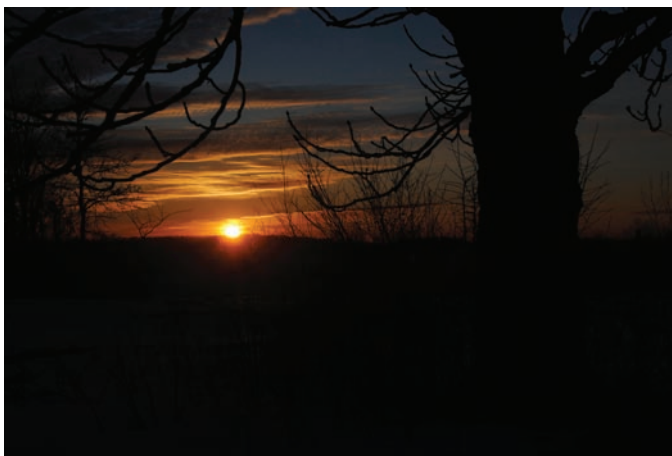
Nikon
D3000

Capturing Colorful Sunsets

Tip Talk

One way to add richer, saturated colors to your sunset photos is to adjust the *exposure compensation*.

There is no right way or wrong way to capture sunsets because judging the results is very subjective. Our advice is to take several photos at different levels of exposure compensation, for example, one stop underexposed, two stops underexposed and maybe even more. Then compare the results on your LCD monitor and see which you like the best.



This photo had an exposure compensation setting of -3 in P (Programmed auto) mode.

Good sunset photos are often the result of careful planning. Look for places that might be good for sunsets before your photo shoot. Instead of a sunset over open water, consider adding foreground elements and silhouettes such as we did with the lifesaver.

Also consider the weather. Instead of waiting for a perfectly clear day for a sunset photo, you may find the most dramatic photos are on days when clouds appear above the horizon.

Taking Black & White Photos

How can I easily capture photos in black and white?



Mode: Auto **Shutter:** 1/80
Aperture: f-4.5 **ISO:** 200
Picture Style: Standard

Here's a **color** photo of the sculpture.




Mode: P (Program) **Shutter:** 1/60
Aperture: f-4.5 **ISO:** 200
Picture Style: Monochrome


By changing to record monochrome, you can make the photo more dramatic.



Press the MENU button. (1)

Press the MENU button and press the Multi selector to select **SHOOTING MENU** to open the Shooting Menu display.

Press  (Multi selector) to select **Set Picture Control** (2) and press OK.

Press  (Multi selector) to select **Monochrome** (3) and press OK.

Press the  button to close the Shooting menu display.

Compose your photo (4) and press the shutter release button. (5)

NOTE: You can change other settings as needed just as you would with a color photograph. In other words, if the resulting photo is too dark, please read the section on fixing dark photos.

IMPORTANT NOTE:

Make certain to cancel the Monochrome setting when you're finished by opening the Optimize image display and selecting Normal. Using the "two button reset" won't reset the Black-and-white setting.



Tip Talk

The D3000 has, in fact, two ways for you to create black and white images. We already mentioned the using the Monochrome Optimize Image setting.

The second method is capturing the photo in color as you would normally and then use the Retouch tool to convert the color images to monochrome.



Although the first approach is definitely the easier of the two, you are left with an image that has no color information saved with it. In other words, there is no way to convert it into a color image later.

Any photo that you've taken with the Nikon D3000 that is still stored on the memory card can be edited in the camera (no computer required) using Nikon's "Retouch" features.

The disadvantage of using this method is that it's sometimes hard to see the results of your editing efforts on the small LCD screen compared to a 17-inch, 19-inch or larger monitor.


Follow the steps on the next page to convert an existing image to black-and-white.

Press the MENU button. (1)

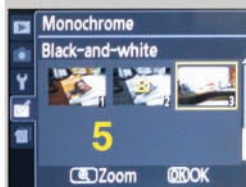
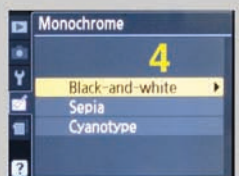
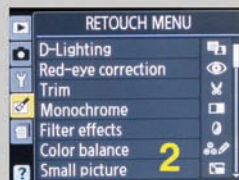
Press  (Multi selector) to select  (Retouch) (2) and press OK to open the RETOUCH MENU display.

Press  (Multi selector) to select the **Monochrome** setting (3) and press OK.

Press  (Multi selector) to select **Black-and-white** (4) and press OK.

Press  (Multi selector) to select the image you want to convert to black and white. (5) Press OK.

The converted image is displayed in black and white. Press OK to save the new image. Your original color image is retained.



6

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Taking Black & White Photos #2

Tips On Shooting In Black And White

Why shoot black and white photography when every one is so used to seeing a bright colorful photo. It's easy for most photographers to consider black-and-white photography as "old" in this digital age. It is, however, because of your digital camera that you can easily rediscover the beauty of black-and-white photography.

Subject

Choose your subject carefully because some subjects that look interesting in color look dull in black-and-white (but the opposite is also true). Photographs of people look especially good in black-and-white but buildings, landscapes and other scenes are also valuable subjects in black-and-white photography.

Perspective

Perspective in any photograph can help tell a story and bring new interest to an otherwise over-photographed subject. Try shooting from an unusual angle, for example, if you're photographing a building, stand at the bottom and aim your camera up to snap the photo.



Background / Foreground Elements

Make certain any background or foreground elements don't interfere with your subject. If so, take the photo from a different angle or move your subject a few feet to the right or left.

The photograph on the right is an example. The small branches from the left side of the photo can be slightly distracting from the bridge in the background.



Light and shadow

Using available light and shadows properly can turn a good black and white photograph into a more dramatic photo. You may need to visit the same scene at different times during the day to snap photos as the light and shadows change.

Colors

Although you might not think so, you must consider color carefully in black and white photography. Some colors and color combinations that are eye-catching in a color photo can get washed out in a black-and-white photograph. Although red and green look very different in a color photograph, they're almost impossible to tell apart in a black-and-white photograph.



Shapes

Black-and-white photography depends greatly on shapes and lines to provide interest to anyone looking at your photos. A black-and-white photograph that shows slanting lines, crooked lines or curves usually looks more interesting in black-and-white than photographs of straight lines.

Texture

Textures, as with shapes, are very important in black-and-white photography. The surface of a straw hat, for example, has more visual impact than the surface of a baseball cap. People in black and white photographs usually look better if they're dressed simply and in solid colors.



Fixing Photos That Are Too Dark

Sometimes either your photo or part of your photo can be too dark either from shade, lighting problems or flash problems. In this section we'll talk about how you can solve the problems of dark photos.

Face Is Dark Due To Backlighting

My photo is nicely posed but the face of my subject is too dark. How can I lighten the face?



Mode: Auto **Shutter:** 1/500
Aperture: f-5.6 **ISO:** 100
Metering: Matrix (Default)




Mode: P (Programmed Auto)
Shutter: 1/200
Aperture: f-4.8 **ISO:** 100
Metering: Spot


Because the subject is lit from behind, her face is in the shadows.


By switching the metering mode to Spot metering, we've lightened our subject's face.





Turn the Mode Dial to P (Programmed Auto). (1)

Press the  button until the Quick Access settings display appears. (2)


Press  (Multi selector) to select [1] (AF-Area mode) and press OK to open the AF-Area mode display.

Press  (Multi selector) to select [1] (Single point) and press OK. (3)

Press  (Multi selector) to select [1] (Metering) (4) and press OK to open the Metering display.

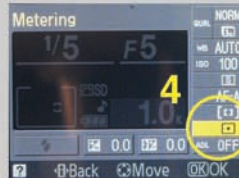
Press  (Multi selector) to select [1] (Spot metering) (4) and press OK.

Press  to exit Quick settings.

Compose the picture by placing a focus point over the subject's face. (5) Use the  (Multi selector) to move the focus point in the viewfinder if necessary.

Press the shutter-release button (6) halfway to check exposure settings.

Press the shutter-release button (6) fully to capture the picture.



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Face Is Dark Due To Backlighting

Tip Talk

To lighten the subject's face, you can change the metering mode to take the light falling on the subject's face into greater consideration. In this scene, the sun is lighting the background evenly but the faces are in the "shade" and, therefore, appear too dark. *Backlighting* occurs when the main light source (in this case, the sun) is shining from behind the main subject.

Your D3000 normally assumes the scene is evenly lit and determines the standard exposure using *matrix metering*. In this backlit scene, the lighting is uneven; the sun is bright but the faces are heavily shadowed. When you select *Spot metering*, the D3000 determines the standard exposure by using the small central part of the viewfinder. Because you're positioning the faces behind this central part, the amount of light falling on the face determines the exposure and not the bright background.

If the face isn't in the center, you can change the AF-area mode display to change the focus point.

Zooming In On The D3000 Metering Modes

Metering is the brains behind how your camera determines the shutter speed and aperture, based on lighting conditions and ISO speed. Your D3000 uses three metering options:

- ❖ **Matrix metering** divides the scene into segments, or matrixes. The D3000 calculates the exposure value by the overall brightness, the contrast between the matrix segments, the active focus area and the focused distance.
- ❖ **Spot metering** assigns the metering sensitivity to a circular area and can be centered on any of the three autofocus sensing areas.
- ❖ **Center-Weighted metering** assigns sensitivity to a small circular area located in the center of the viewfinder.

Matrix metering and Spot metering give you more control over the exposure than Center weighted average. They're useful when there is a small object within your scene that you either need to be perfectly exposed or know that it will provide the closest match to middle gray.

A common application of matrix metering is when the subject is backlit. By metering off of the subject, you can avoid the subject looking as an under-exposed silhouette against a bright background.

Spot metering works similarly to Partial metering but is used less often because its metering area is very small and therefore quite specific.



Faces Are Dark Due To Backlighting #2

The bright sun is causing shadows when coming from behind the subjects. What is another way to lighten their faces?



Mode: Auto Shutter: 1/250
Aperture: f-8.0 ISO: 100

Backlighting in the bright sun, results in strong shadows in your photos.




Mode: P (Programmed Auto) Shutter: 1/200
Aperture: f-9.0 ISO: 100 Flash: Fired

Fill flash is a great solution in situations where you need additional light to fill areas of the subject that are in the shade.



Turn the Mode dial to P (Programmed Auto). (1)



Press the  (flash button) (2) to pop the flash. (3)



Press the shutter-release button halfway (4) to focus the lens and to verify that the flash icon is ready.



Press the shutter-release button (4) fully to capture the picture.



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Faces Are Dark Due To Backlighting #2

Tip Talk

To fix these types of problems, you'll lighten the subject's face by using the built-in flash. Using the built-in flash is an easy, effective way to add light to dark areas of your scene (i.e., photo).

When you use this technique outdoors, it's referred to as *fill flash* where the additional light fills the areas of the subject that are in shadows.

Zooming In On Fill Flash

Although you'll most likely use fill flash to brighten dark areas when you're taking photos outdoors on sunny days, don't forget that you can use the technique whenever the background is much brighter than the subject.

Also keep in mind that, depending on your distance from the subject, you might not need the full power of the flash. If you're too close to your subject, the flash may overexpose your subject. To avoid this problem, set the Flash Exposure Compensation level and choose from different flash levels, such as .3, .7 or 1.0. Try adjusting the flash exposure compensation to have the natural light balance the light from the flash.



Photo Is Dark Due To Backlighting

Why is the subject in some of photos dark but the background is well-lit. For example, in the following photo, how can I fix the backlighting from darkening the subject's face?



Mode: Auto Shutter: 1/500
Aperture: f-5.6 ISO: 200

Backlighting is causing the face of this young subject to fall in the shadow.






Mode: P (Programmed Auto) Shutter: 1/200
Aperture: f-5.6 ISO: 200
Exposure Compensation: +1

Here we can lighten her face using exposure compensation.




Turn the Mode Dial to P (Programmed auto). (1)

Press the  button until the Quick settings display appears. (2)

Press  (Multi selector) to select  (Exposure comp.) (3) and press OK to open the Exposure comp display. (4)

Press  (Multi selector) to select +1.0 (5) and press OK.

Compose the picture by placing the central part of the viewfinder over the subject's face and press the shutter-release button halfway. (5)

If the subject's face is not directly in the central part of the viewfinder, (6) press and hold the  button (AE Lock) to lock the exposure and then recompose.

Press the shutter-release button fully to capture the picture.

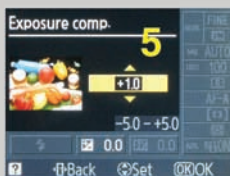
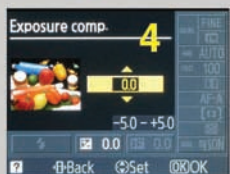
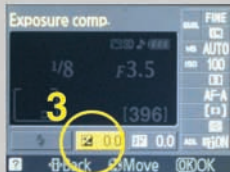
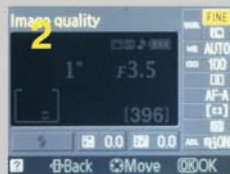
Nikon
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Photo Is Dark Due To Backlighting

Tip Talk

To fix this backlit photo, we used a different technique called *exposure compensation* to lighten the subject's face.

As in the first example, this scene has backlighting where the main light source is shining from a position behind the main subject.

When you set your D3000 to one of the Digital Vari-Program modes, the backlighting "fools" the exposure metering of your camera into producing the dark face. To adjust the exposure, set the camera to either the M, A, P or S modes.

When you're pressing the Multi selector to add more exposure in the Exposure comp display, you're lightening the dark face. This is called *exposure compensation*.

If neither solution corrects the dark face individually, combine the two solutions by changing to Spot metering and using exposure compensation.

Photo Is Dark Due To Backlighting #2

I have framed and focused everything properly but the subject in my photos is still dark. Do you have any suggestions as to how I can fix this?



Mode: Auto Shutter: 1/250
Aperture: f-8.0 ISO: 100

Although the subject is framed and focused properly, backlighting is making her too dark in this photo.



Mode: Auto Shutter: 1/320
Aperture: f-9.0 ISO: 100
Rearrange so sun is from the back of the camera.

By rearranging the subject, you can change the lighting conditions and overcome the problem of backlighting.



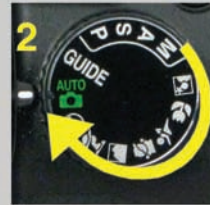
This technique isn't a camera setting technique, but instead explains how to arrange the subject to take advantage of the source of main light.

Ask the subject to move to a position so that the light is falling on his/her face.

As the picture-taker, move so that the light is coming from behind – often called “over the shoulder.” (1)

Turn the Mode dial to AUTO. (2)

Press the shutter-release button fully to capture the picture. (3)



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Photo Is Too Dark Due To Backlighting #2

Tip Talk

The problem with this photo is that it has very strong backlighting. This makes the young girl's face dark. To lighten the face, we changed the way in which we arrange the subject in the scene.

You may be wondering how you can move the subject and still include the original background?

Don't worry because you won't need to be a magician. You might think that this technique isn't very useful in this situation, but by moving to a slightly different angle, you can do wonders for lighting faces and including the scenic background. A few steps in one direction or another and some swiveling can yield dramatically improved photos.

Subject Is Too Dark

The black dog in this scene appears too dark even when using the flash.



Mode: Auto Shutter: 1/60
Aperture: f-5.0 ISO: 200



Mode: P (Programmed auto) Shutter: 1/60
Aperture: f-5.0 ISO: 200
Flash compensation: +1.0

The black dog in this scene appears too dark, even when using the flash.

By using the Flash compensation setting on the D60 camera, the dog is illuminated much better






Turn the Mode Dial to P (Programmed auto). (1)




Press the  (flash button) (2) to pop the flash (3).



Press the  button until the Quick Access settings display appears. (4)

Press  (Multi selector) to select  (Flash compensation) (5) and press OK to open the Flash compensation display (6).



Press  (Multi selector) to select the desired amount (-3 to +1); +1 for example means one f/stop additional exposure. (7)



Press OK.



Press the shutter-release button halfway to focus the lens and to verify that the flash icon is ready.



Press the shutter-release button fully to capture the picture.

Tip Talk

To fix the photo, you'll want to lighten the face of the dog by using the built-in flash.

However with such a dark subject, the flash may not be set to provide sufficient light. In this situation, you can use flash exposure compensation to add more illumination.

Zooming In On Locating Buttons & Keys

Refer to pages 12-13 for information on locating buttons, keys, etc., that we mention in the diagrams and elsewhere in the book.

Also see the "Boosting Your Photography IQ" chapter if you need more information on photography.



Using A Reflector To Fix Dark Photos

The subjects in my photos are only slightly darker than I would like. Is there a way to fix this problem?



Mode: Auto Shutter: 1/160
Aperture: f-6.3 ISO: 100



Mode: Auto Shutter: 1/160
Aperture: f-6.3 ISO: 100
Reflector: Used

The faces of the subjects in this photo are slightly dark although the rest of the scene is fine.

We used a reflector here to redirect the sunlight to the areas of the face that the shadows hide or make darker.



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Using A Reflector To Fix Dark Photos

This technique is not a camera setting technique, but instead explains how you can selectively add light to the subject's face without affecting the remainder of the scene.

Ask an assistant to hold a portable reflector (available from most photo and camera shops). If you don't have a reflector available, use a white sheet or pillowcase opposite the subject's face. You'll want the white surface to reflect the sunlight so as to lighten the shadows on the face. (1)



Turn the Mode dial to AUTO. (2)



Press the shutter-release button fully to capture the photo. (3)



Tip Talk

In this type of situation when you want to lighten the faces and soften the shadows as well, we added light using a *portable reflector*.

A portable reflector is one of the best items to use in these situations. You can find a portable reflector at most photo and camera shops but you can improvise a reflector from a white sheet or pillowcase.

In this example, we used a portable reflector available from most photo and camera shops. You want to position the reflector so it redirects the sunlight to the areas of the face that are hidden or darkened by the shadows.

This reflector has a flexible wire frame that opens to a diameter of about three feet and includes several colors of reflective material, for example, white, silver and gold that add a tint to the reflective light. The unit collapses to a small size — about ten inches — for easy storage.

You can also improvise a reflector from a white sheet or pillowcase.

Part Of The Photo Is Too Dark

I'm using the tree in the foreground in this picture to help frame my photo. The main subject is perfectly exposed but the tree is a bit dark. How can I fix this?



Mode: Auto **Shutter:** 1/200
Aperture: f-7.1 **ISO:** 100
Flash: Not Fired

The tree is used to help frame the scene. However, it's dark compared to the main subject.




Mode: Program **Shutter:** 1/200
Aperture: f-8 **ISO:** 100
Flash: Fired

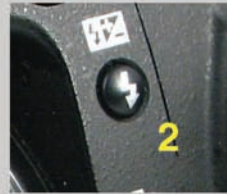
By using the built-in flash on your camera, you can add more light to the tree trunk and leaves making for an evenly exposed scene.



Turn the Mode Dial to P (Programmed Auto). (1)



Press the  (flash button) (2) to pop the flash (3). You'll find the flash button on the left side of the camera near the lens opening.



Compose the picture by placing the central part of the viewfinder over the main subject (building in this example). (4)



Press the shutter button (5) halfway to verify that the flash icon is ready.



Recompose if necessary.

Press the shutter-release button fully to capture the picture. (5)

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Part Of The Photo Is Too Dark

Tip Talk

To lighten the tree in this photo, you can use the built-in flash on your camera.

Fill flash is used most of the time to add more light to faces in a scene. But you'll find many other uses for the flash when you want to even out the lighting of a scene.

Zooming In On Fill Flash

Although you'll most likely use fill flash to brighten dark areas when you're taking photos outdoors on sunny days, don't forget that you can use the technique whenever the background is much brighter than the subject.

Also keep in mind that, depending on your distance from the subject, you might not need the full power of the flash. If you're too close to your subject, the flash may overexpose your subject. To avoid this problem, set the Flash Exposure Compensation level and choose from different flash levels, such as .3, .7 or 1.0. Try adjusting the flash exposure compensation to have the natural light balance the light from the flash.



Indoor Flashless Photo Is Too Dark

Sometimes I'm at places that prohibit using my flash indoors. How can I take an indoor photo without using the flash?



Mode: Auto **Flash off** **Shutter:** 1/30
Aperture: f-3.5 **ISO:** 1400



Mode: P (Programmed Auto) **Shutter:** 1/15
Aperture: f-3.5 **ISO:** 1600
Exposure compensation +1

When flash photography is prohibited, your photo may be too dark.

Adjust the ISO and exposure compensation to capture a brighter photo.



Turn the Mode Dial to P (Programmed auto). (1)

Press the **i** button until the Quick settings display appears. (2)

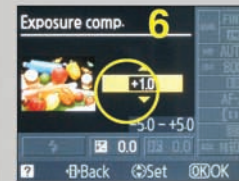
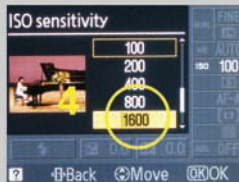
Press **Multi selector** to select **ISO** and press OK to open the ISO sensitivity display. (3)

Press **Multi selector** to select **800** (4) for the ISO setting.

Press **Multi selector** to select **+** (Exposure comp.) and press OK to open the Exposure comp display (5).

Press **Multi selector** to select **+1.0** (6) and press OK.

Verify that the scene is to your liking and press the shutter-release button fully to capture the photo.



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Indoor Flashless Photo Is Too Dark

Tip Talk

You may find occasions where you're allowed to snap photos, but you cannot use the flash. You can still capture good photos even without the flash by adjusting the ISO and the exposure compensation. You may also need to change the white balance setting (see the "Fixing Color In Your Photos" section for more information on adjusting the white balance).



Fixing Photos That Are Too Light

Sometimes either your photo or part of your photo can be too light either from too much sunlight or other lighting problems or other exposure problems.

We'll talk in this section about how you can solve the challenge of light photos.

The Sky Is Too Light

How can I prevent the sky from appearing so light (washed out)?



Mode: Auto **Shutter:** 1/400
Aperture: f-10 **ISO:** 200

Sometimes everything about a photo is good except the sky is too light.





Mode: P (Programmed Auto)
Shutter: 1/500 **Aperture:** f-11.0
ISO: 200 **Exposure Compensation:** -1

By using exposure compensation, you can make the sky more vivid.



Turn the Mode Dial to P (Programmed Auto). (1)

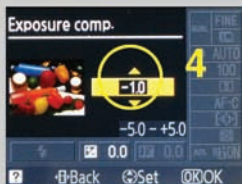
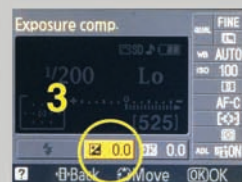
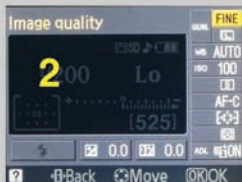
Press the  button until the Quick Access settings display appears. (2)

Press the  (Multi selector) to select  (Exposure comp.) and press OK to open the Exposure comp display. (3)

Press the  (Multi selector) to select the desired amount (-1.0 for example) and press OK (4). In this example, we're reducing exposure by -1.0.

Press the shutter-release button halfway (6) to frame the scene as desired.

When you have the photo framed, (5) press the shutter-release (6) fully to capture the photo.



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The Sky Is Too Light

Tip Talk

The D3000 usually does a good job of setting an average exposure for the main part of the scene. However, the sky and clouds are often “overexposed” using the average exposure setting, making it appear very light.

Using compensation exposure to reduce the amount of exposure of the sky and clouds can make the light areas of the scene more vivid. Keep in mind that too much exposure compensation may unduly darken the rest of the scene so you may want to experiment with the amount of compensation.

Using Exposure Compensation And A Polarizing Filter

Here is another example of the same scene after we set the exposure compensation to -2.



Mode: Program
Shutter: 1/500
Aperture: f-11
ISO: 100
Exposure Compensation: -2
Filter: Polarizing filter

A filter helps give you more control over how a photograph will appear. A polarizing filter darkens the sky, as well as the landscape below it, but clouds are generally less affected (as in the above photograph). This gives a photograph a darker and more dramatic sky, and emphasizing the clouds.

Snowy Scene Is Washed Out

My snowy landscapes photos are too light. How can I prevent these from looking so washed out?



**Mode: Auto Shutter: 1/500 Aperture: f-5.6
ISO: 100 Exposure compensation: 0**




**Mode: P (Programmed Auto)
Shutter: 1/800 Aperture: f-7.1 ISO: 100
Exposure compensation: -1**


Tricky landscapes are occasionally quite difficult to photograph because the bright sun can cause the scene to appear “washed out.”

By setting Exposure compensation to -1 or lower, you can avoid landscape scenes from being “washed out” on bright days.



Turn the Mode Dial to P (Programmed Auto). (1)

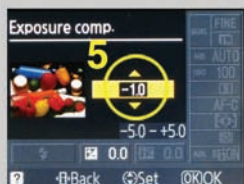
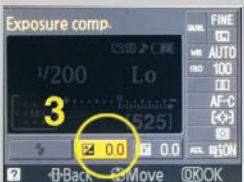
Press the  button until the Quick Access settings display appears. (2)

Press the Multi selector to select  (Exposure comp.) (3) and press OK to open the Exposure comp display. (4)

Press the Multi selector to select the desired amount (-5.0 to +5.0) (5) and press OK. We're using -1.0 in this example.

Press the shutter-release button halfway to frame the scene as desired. (6)

When you have the photo framed, press the shutter-release fully to capture the photo.



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Snowy Scene Is Washed Out

Tip Talk

Similar to adjusting the exposure for “The Sky Is Too Light,” you can use the same technique for preventing landscape scenes from appearing too light.

Also, you can follow this solution when you’re shooting winter scenes when the snow is very bright.

Zooming In On The LCD Monitor In Bright Sunlight

It’s sometimes difficult to view the LCD monitor of your D3000 camera on bright, sunny days. You might be able to make it a bit easier to read the LCD monitor by adjusting its brightness.

Keep in mind, however, that it’s a good idea to keep the LCD brightness level in the center of the adjustment scale. Therefore, if you do adjust it, make certain to adjust it back to its original setting.



- ❖ Press the MENU button.
- ❖ Press the left Multi function button to select the column of icons on the left. .
- ❖ Press the down Multi function button to select the Tools tab (SETUP MENU should appear at the top of the LCD monitor).
- ❖ Press the right Multi function button and then the down Multi function button to select LCD brightness.
- ❖ Press the OK button.
- ❖ Press the right or left Multi function button to set the desired brightness.

Eliminating Sunspots

Why am I getting annoying sunspots on my photos?



Mode: Auto **Shutter:** 1/200
Aperture: f-8.0 **ISO:** 100
Lens hood: Not used

Here you can see sunspots or streaks through the photo. Although sunspots may add a nice effect to some photos, they're usually distracting and annoying.



Mode: Auto **Shutter:** 1/200
Aperture: f-7.1 **ISO:** 100
Lens hood: Used

Here's another photo of the family building the snowman but the sunspots don't appear on the photo.



Tip Talk

Although most photographers consider sunspots as a problem to avoid, other photographers believe the sunspots can add a dramatic effect to their photos.

You may want to consider experimenting with sunspots to see if you can use them to add dramatic effects to your photos as well.

Examples Of Using Sunspots Creatively

Some photographers believe sunspots can add a dramatic effect to their photos, such as in these two examples. The photo on the left is of a bright stainless steel sculpture that easily reflects the sunlight. So, instead of trying to shoot around the reflections, we decided to incorporate the sunspots into the photo.



Mode: Programmed Auto Exposure: 1/250 Aperture: f-8
ISO: 100 Exposure Compensation: -0.7



Mode: Programmed Auto Exposure: 1/320 Aperture: f-9
ISO: 100 Exposure Compensation: 0

It's a similar situation with the photo on the right. The round sunspots add to the shape and form of the sculpture.

This is, of course, subjective so you should experiment to see what is to your liking.

Zooming In On How To Eliminate Sunspots

This technique is not a camera setting technique, but instead explains how to arrange your camera to minimize the chances of sunspots. The sunspots are the result of direct or reflected rays of sunlight reaching the front surface of your lens.



Use A Lens Hood

A lens hood fits over the front of your lens and blocks rays of sunlight from striking the surface of your lens. If you don't already have a lens hood, you can purchase one for your camera at a nominal cost.

Shield The Lens

Shield the front of the lens with your hand or a hat. When shooting towards the sun, you can often use your hand or an object such as a hat to block the direct rays of the sun from striking the front lens surface.

Polarizing Filter

A polarizing filter screws into the front threads of your lens and allows the rays of light to pass through to the lens in an orderly manner. In doing so, it darkens the sky to produce a more dramatic effect to any captured photos.





Fixing Flash Photos

Using the flash isn't difficult but it is something that sometimes requires a little bit of extra thought and planning. You'll probably use the flash most often when not enough light is available, such as a group portrait at gatherings.

There are, however, many other situations where you can use the flash too, such as fill-flash situations when the background is brighter than the subject, using the flash to light up a room and creating better coloring, or using the flash to freeze a moving object in a dark situation.

Flash Photo Is Too Dark

When I take photos using the flash, the subject turns out too dark. How do I prevent my subject from appearing so dark?



Mode: P (Programmed Auto) **Shutter:** 1/60
Aperture: f-4.8 **ISO:** 200
Flash: Fired

Sometimes your subject can appear too dark in your photo.




Mode: P (Programmed Auto) **Shutter:** 1/60
Aperture: f-4.8 **ISO:** 200
Flash Exposure Compensation: +1
Flash: Fired



Using flash exposure compensation can fix this common problem.




Turn the Mode Dial to P (Programmed auto). (1)

Press the  (flash button) (2) to pop the flash (3).

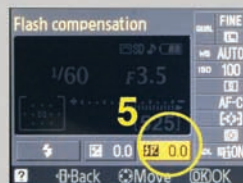
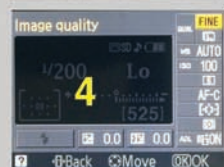
Press the  button until the Quick Access settings display appears. (4)

Press  (Multi selector) to select  (Flash compensation) (5) and press OK to open the Flash compensation display (6).

Press  (Multi selector) to select the desired amount (-3 to +1); +1 for example means one f/stop additional exposure. (7)

Press OK.

Press the shutter-release button halfway to frame the scene as desired.



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Flash Photo Is Too Dark

Tip Talk

Your D3000 usually does a good overall job when taking flash photos. However, if you find that your photos are turning out too dark, use the camera's flash exposure compensation to add light to the scene.

Zooming In On Flash Exposure Compensation

You can vary the flash exposure compensation with values from -3.0 to +1.0.

If you set the value to -3.0 the flash outputs 1/8th the amount of light than at a 0 setting.

The following show the same photo but at different exposures to give you an idea of how exposure compensation can affect a photo:



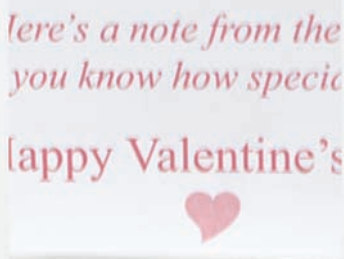
Flash Picture Is Too Light

When I take a flash photo of a card for a scrapbook, the photo turns out too light. How can I prevent this?



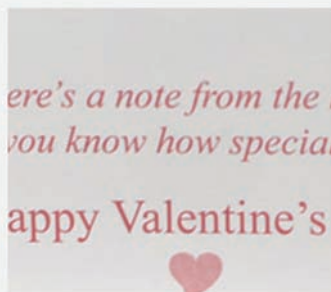
Mode: Auto Shutter: 1/25
Aperture: f-4.0 ISO: 100

Sometimes flash photo appears "washed out."




Mode: P (Programmed Auto) Shutter: 1/25
Aperture: f-4.0 ISO: 100
Flash Exposure Compensation: -1



You can fix this problem by using Flash Exposure Compensation.




Turn the Mode Dial to P (Programmed auto). (1)

Press the  (flash button) (2) to pop the flash (3).

Press the  button until the Quick Access settings display appears. (4)

Press  (Multi selector) to select  (Flash compensation) (5) and press OK to open the Flash compensation display (6).

Press  (Multi selector) to select the desired amount (-3 to +1); -1 for example means one f/stop additional exposure. (7)

Press OK.

Press the shutter-release button halfway to frame the scene as desired.



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Flash Photo Is Too Light

Tip Talk

When taking closeups or portraits with the flash, the subject may turn out too light, especially if you're close to the subject. When this happens, use the flash exposure compensation on your D3000 to provide less light than used for a "normal" exposure. This feature determines the amount of light that is emitted by the flash, thus allowing you to provide a range of lightness (and darkness) that illuminates the subject.

Note that flash compensation is available only when you're using either the P, S, A or M modes; it's unavailable when the D3000 is set to any of the Digital Vari-program modes.

Exposure Compensation or Flash Exposure Compensation?

Don't confuse the Exposure Compensation of your D3000 with its Flash Exposure Compensation.

The Exposure Compensation lets you intentionally lighten or darken the ambient lighting in the background and is completely separate from Flash Exposure Compensation; it has no effect on how much flash output strikes your subject. On the other hand, Flash Exposure Compensation affects only the flash output. The ambient light in your background will remain unchanged as you adjust Flash Exposure Compensation.

Don't be surprised if you find that you need to use Flash Exposure Compensation occasionally in fill-in flash photos. Also, if you think the flash output in your fill-in shots isn't quite right, you can adjust it by increasing or decreasing the amount of exposure.



Background Is Black Or Too Dark

When I take flash photos in Portrait mode, the main subject turns out fine but the background is almost completely black so we cannot tell where the photo was taken. How do I lighten up the background?



Mode: Auto Shutter: 1/60
Aperture: f-4.0 ISO: 200
Flash: Flash fired

The main subject in this photo turned out fine but the background is almost too dark making it difficult to determine where the photo was taken.



Mode:  (Night portrait) Shutter: 1/60
Aperture: f-4.0 ISO: 200
Flash: Flash fired

By simply switching to Night portrait, the background now appears brighter.



Turn the Mode Dial to  (Night portrait) mode. (1)



Press the shutter-release button halfway (2) to “pop” open the flash unit. (3)



Compose your picture in the viewfinder (4) and press the shutter-release (5) button to capture the photo.



Hold the camera steady since the shutter may remain open for a longer period of time thereby causing you to move the camera even slightly.

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Background Is Black Or Too Dark

Tip Talk

When you're using the flash in the Portrait mode, your D3000 determines a normal exposure based on the distance from the subject. Since the subject is usually separated from the background, the background receives little or no light from the flash. The result is that the background appears darker or blacker in the photo.

Any existing light that is illuminating the background is known as *ambient light*. When you switch the mode to Night portrait mode, the camera uses a slow flash synchronization speed. Using a slower speed, the camera can capture both the subject with the flash and the background with the ambient light.

Since the shutter speed may be low, you'll want to hold the camera steady when using Night portrait mode so as not to introduce camera shake.

Harsh Lighting

My flash photo has enough light but it's harsh, which makes the photo very "contrasty." What can I do to make the light less harsh?



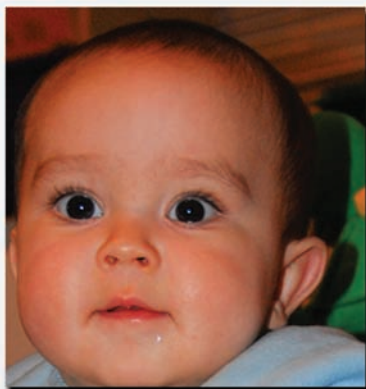
Mode: Auto Shutter: 1/60
Aperture: f-4.2 ISO: 400
Flash: Fired (flash uncovered)

Harsh lighting conditions can add objectionable contrast to your photos.



Mode: Auto Shutter: 1/60
Aperture: f-4.2 ISO: 400

A simple way to overcome harsh lighting conditions is to diffuse the flash.



Find a clean, white handkerchief, Kleenex®, a baby sock or a white plastic bag to use as a diffuser. (1)

Place the diffuser carefully over the flash. (2)

We've used a rubberband here to attach a small square (4" x 4") over the flash. (2) and (3)

Compose your picture in the viewfinder and press the shutter button to capture the photo. (4)

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Harsh Lighting

Tip Talk

In harsh lighting situations you should consider using a *diffuser*. Although you can buy a diffuser at your favorite camera store, you can also make a simple one.

The concentrated light that comes from the flash produces bright highlights and strong shadows. By placing a diffuser over the flash, the light from the flash bounces from the ceiling, walls and other surfaces thereby softening the light. The resulting flash is spread more evenly over the subject and reduces harshness.

Zooming In On Locating Buttons & Keys

Refer to pages 12-13 for information on locating buttons, keys, etc., that we mention in the diagrams and elsewhere in the book.

Also see the "Boosting Your Photography IQ" chapter if you need more information on photography.





Capturing The Nighttime Experience

Don't be shy about taking photos at night. You have an almost endless amount of photo opportunities to select...traffic lights, people walking, bridges, etc.

Grab your D3000 and venture out into the night.

Shooting Buildings At Night

I'm interested in nighttime photography. I know the shimmering and colorful lights can transform dark backgrounds into beautiful images.

Although the lights do shimmer in my photo, the overall photo is blurry. How can I fix this?



Mode: Auto (Flash off) **Shutter:** 1/5 sec
Aperture: f-3.8 **ISO:** 1600
Camera: Hand-held

Notice how the lights shimmer in this nighttime photo but that it's too blurry overall. The reason for the blurry photo is camera shake.



Mode: Auto (Flash off)
Shutter: 1/4 sec **Aperture:** f-3.8
ISO: 1600
D3000 Placed on a flat, sturdy surface

Simply setting the camera on a sturdy surface can help reduce taking a blurry nighttime photo.



Turn the Mode Dial to  Flash off. (1)

Stabilize your camera on a flat surface (2) with the lens pointing at the subject. (Make certain it's a safe and strong surface.)

Press the shutter-release button (3) down halfway and verify that the scene is composed to your liking. (4)

Press the shutter-release button (5) fully to capture the photo.

Make certain to press the shutter-release button carefully to capture the photo. Use a “delicate” touch to minimize any shaking or jerking of the camera.

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Shooting Buildings At Night

Tip Talk

The blur of the building and building lights comes from *camera shake*. In this photo, the camera automatically set such a long shutter speed that no photographer could hold it steady for that length of time. The typical way to “fix” the blur is to use a tripod.

The problem is that you can’t always carry a tripod with you even though you still need to keep your camera steady when you’re taking night shots. The answer is setting your D3000 on a sturdy, flat surface instead of using a tripod. This will help eliminate, or at least greatly reduce, the chances of camera shake and a blurry nighttime photo.

Night Photography Without The Flash

We already know that minimizing camera shake can mean the difference between a good and a great nighttime photo.

Here's a nighttime photo of a colorful downtown scene that is located in a dimly lit area.



Mode: Flash off Shutter: .6 sec
Aperture: f-4.5 ISO: 1600
Camera: Hand-held



Mode: Flash off Shutter: 1/4 sec
Aperture: f-4.2 ISO: 1600
Self-timer: Set

Due to a long exposure of two seconds, this photo shows the result of camera shake.

Here's the same shot using the self-timer on the D3000.



Turn the Mode Dial to Auto (Flash off). (1)

Press the **i** button (2) until the Quick Access display appears.

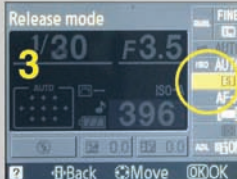
Press **Q** (Multi selector) to select **S** (Single mode) and press OK to open the Release mode display. (3)

Press **Q** (Multi selector) to select (Self-timer 10 seconds) (4) and press OK.

Place the camera on a flat surface (5) to prevent camera shake. Make certain the lens is pointing at the scene.

Press the shutter-release (6) down halfway to verify that the scene is composed to your liking.

Press the shutter-release button (6) down fully. You'll hear the faint beep of the self-timer. When the time counts down to zero, the shutter is released to capture the photo.



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Night Photography Without The Flash

Tip Talk

When you press the shutter-release button, you're likely to produce camera shake. This is especially true with nighttime photography. By using the self-timer feature, the camera has a few seconds to stabilize itself. This is usually enough time to remove the excess camera shake so you can capture a sharper image.

As a reminder, change the Release mode back to S when you're done using the self-timer

Focusing In On Clearing Custom Settings

Don't forget to clear or change any settings to your D3000 that you have made before your next photo opportunity arises.

You can do this easily by following these steps:



- ❖ Press the MENU button.
- ❖ Navigate to the Shooting Menu.
- ❖ Select Reset shooting options.
- ❖ Press the OK button.
- ❖ Navigate to Yes and press the OK button.
- ❖ This will return the D3000 to the following original (default) settings:

Image quality.....JPEG normal	Metering.....Matrix
Image size.....Large	White balance.....Auto
Exposure compensation.....0.0	Flash compensation.....0.0
Release mode.....Single frame	Active D-Lighting.....Off
Focus mode.....AF-A	
ISO sensitivity.....Auto or 100 (depending on shooting mode)	
Flash mode.....Auto / Auto Slow Sync / Fill Flash (depending on shooting mode)	

Bright Lights

Some of my night shots are actually too bright. What can I do to prevent this?



Mode: Flash off **Shutter:** 1/15
Aperture: F-5.6 **ISO:** 1600
Flash: Not fired



Mode: P (Programmed Auto) **Shutter:** 1/30
Aperture: F-5.6 **ISO:** 800
Exposure Compensation: -2

This photo shows the lights are too bright.

The night lights don't "burn" as bright in this photo.



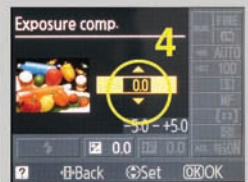
Turn the Mode Dial to P (Programmed Auto). (1)

Press the **i** button (2) until the Quick Access settings display appears.

Press the Multi selector to select **[+]** (Exposure comp.) (3) and press OK to open the Exposure comp display. (4)

Press **[Multi selector]** (Multi selector) to select **-2.0** and press OK (5).

Compose your picture in the viewfinder and press the shutter-release button to capture the photo.



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Bright Lights

Tip Talk

Although it may be dark when you're shooting lights at night, you may be surprised that the lights are often quite bright. Therefore, taking photos of these lights may not require long exposure times. If you're shooting with a normal length lens (for example, up to 55-mm) and have a steady hand, you should be able to hand-hold your camera to capture the lights.

The photos above show us the bright outdoor lights. However, you may feel that the lights here are overly bright and should be turned down slightly. The resulting image will appear sharper since the glare of the lights is reduced.

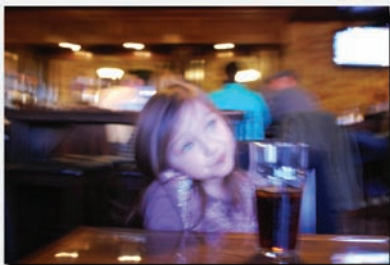
Your camera automatically sets longer shutter speeds in low-light situations. To prevent camera shake, you can set the camera on a flat surface.


Keep in mind that photography is subjective so the choice of which photo is better is up to you; some may prefer the first photo with the brighter light.

This is also another advantage of using a digital camera because you can use both techniques and print both photos.

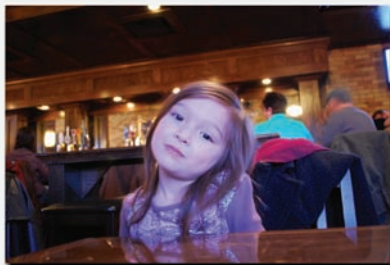
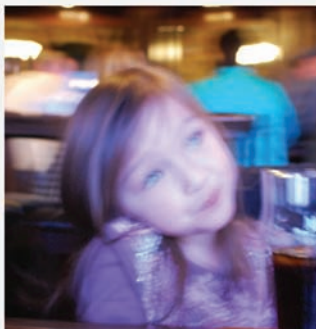
Nighttime Action


I like taking pictures in our exciting, bustling nighttime environment. But many places won't let you use flash, even though the lighting is dim. Do you have any suggestions for taking better shots?



Mode:  (Auto Flash off)
Shutter: 1/2 sec Aperture: f-4.2
ISO: 1600

In the dark restaurant, the exposure was a 1/2 second which caused the blur.



Mode:  (Auto Flash off)
Shutter: .8 sec Aperture: f-5.0
ISO: 1600


By bracing the camera, you can minimize the blur.



Turn the Mode Dial to  (Auto Flash Off). (1)

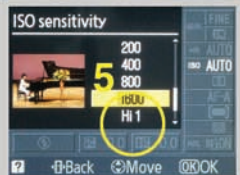
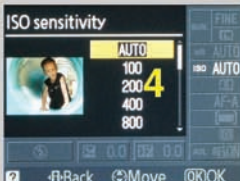
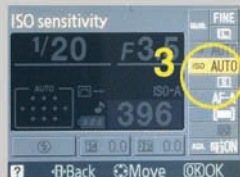
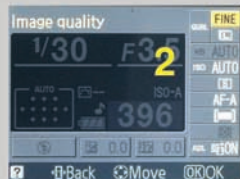
Press the  button (2) until the Quick Access settings display appears.

Press  (Multi selector) to select ISO and press OK to open the ISO sensitivity display. (3)

Press  (Multi selector) to select 1600 (4) and press OK.

Hold the camera as steady as you can. One way to do this is to brace your elbows firmly on the table surface. (4)

Carefully press the shutter-release button (5).

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Nighttime Action

Tip Talk

You have to deal with at least two challenges here...exposure time and low light. However, by boosting the ISO, you can use a shorter exposure.

Also remember to hold the camera as steady as possible to help keep the image sharp. For this shot, a human tripod was formed with the two elbows and the camera firmly braced against the shooter's head.

Traffic Streaks & Lights

How can I capture the moving headlights of auto traffic?



Mode: Auto (flash off) **Shutter:** 1/30 sec
Aperture: f-4.5 **ISO:** 1600



Mode: S (Shutter-priority Auto) **Shutter:** 1/2 sec
Aperture: f-16 **ISO:** 1600

You may capture the action of the traffic by using the the Flash Off mode.



By setting the shutter speed for a long exposure, you can capture exciting streaks of light.





For this shot, you'll need to use a tripod or a way to brace the camera.

Turn the Mode Dial to S (Shutter-priority Auto). (1)

Press the  button (2) until the Quick Access settings display appears.

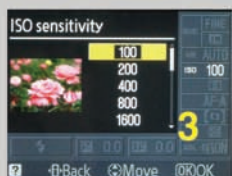
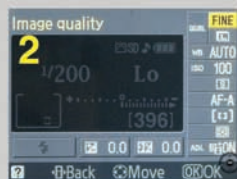
Press  (Multi selector) to select ISO and press OK to open the ISO sensitivity display. (3)

Press  (Multi selector) to select 200 (4) and press OK. Press the  button to close the ISO sensitivity display.

Turn the Command dial to select a shutter speed of 1.5 seconds or 2 seconds. (5)

Wait patiently until the auto traffic is flowing with multiple sets of headlights in the viewfinder.

Press the shutter button carefully to (6) minimize camera shake and capture the photo. (Make certain not to hold down the shutter button but to press it.)



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Traffic Streaks & Lights

Tip Talk

By using a relatively long shutter speed (one to two seconds), you can record the auto lights as a streak of light rather than a single headlight.

Experiment using different shutter speeds. You'll capture varying "lengths" of light streaks to produce interesting and colorful effects.

More Ideas On Taking Nighttime Photos

Here are a few more tips and suggestions for shooting nighttime photos.

Tripod

If you plan to take lots of photos at night, a tripod is essential. Mounting your camera on the tripod prevents camera shake, the most common cause of blur.

Keep in mind that the most important feature of a tripod is to provide a stable platform for your camera so make sure that its legs are sturdy. You'll find that the range and cost of tripods varies widely depending on the other features: weight, ease of setup and quality of the head (platform) to name a few.

But for nighttime shots, you'll find that taking pictures with a low-cost tripod is better than taking them without a tripod.

Keep your tripod handy and you'll find your nighttime photos greatly improved.



More Ideas On Taking Nighttime Photos (continued)

Camera Mode

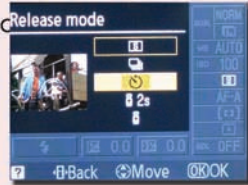
When set to Night Portrait mode the camera tries to blend the background lighting of a scene with the foreground. Depending on the lighting, the flash may pop up to light your subject in the foreground.

If you don't want to introduce flash into your photo, use Flash off mode instead. Without flash, keep your subject from becoming too dark by positioning the subject so that the available light is falling on his or her face.

If your pictures are too dark with Flash off mode, use Programmed auto mode and boost the ISO to the maximum setting of 1600.

Self-Timer

The self-timer is your phantom remote control. You can set the D3000 to have either a 5 second delay or a 10 second delay. Normally, pressing the shutter introduces shake to your nighttime photos, but with the slight delay, the camera has time to stabilize before the scene is captured.



Select Release mode and press OK to open the D3000 Self-timer.



Small Flashlight

A small flashlight comes in very handy when its dark and you need to adjust the camera settings. We suggest using a miniature model that focuses its beam on a small area and won't spoil your nighttime vision. This small model costs less than \$3.00 and fits easily into a camera bag.

More Ideas On Taking Nighttime Photos (continued)

Remote Control

You can use a wireless remote control, such as the ML-LS Infrared Wireless Remote Control, for either immediate release or after a two-second delay.

It has a range of about fifteen feet and costs about \$18.





Showing Motion In Your Photos

Your Nikon D3000 is known as a still camera but that doesn't mean that you cannot use it to capture the feeling of motion in your subjects.

Suggesting Motion

I've seen photos where some of the scene is sharp but the subjects seem to be moving. How can I recreate this effect to show that the subject is a live, animated person and not a statue?



Mode: Sports mode **Shutter:** 1/500
Aperture: f-5.0 **ISO:** 200



Mode: S (Shutter-priority) **Shutter:** 1/20
Aperture: f-20.0 **ISO:** 100


Sports mode usually produces stop-action photos.

By switching to Shutter-priority mode, you can introduce motion to make your photos "come alive."




Turn the Mode Dial to S (Shutter-priority auto). (1)

Turn the main dial to select a shutter speed of 1/15 (or slower). (2)

Press the  button until the Quick Access settings display appears. (3)

Press  (Multi selector) to select ISO and press OK to open the ISO configuration display.

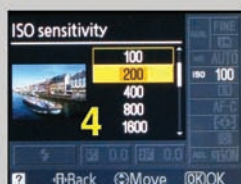
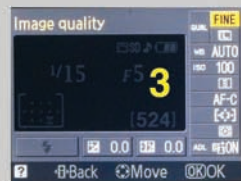
Press  (Multi selector) to select 200 (3) and press OK.

Compose your scene with the main subject in the center of the viewfinder.

Press the shutter-release button halfway. (5)

Wait patiently for the moment when your main subject's face is relatively still, but his/her hands or legs are moving. (5)

Press the shutter-release button fully to capture the picture.



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Suggesting Motion In Photos

Tip Talk

By setting your camera to use a relatively slow shutter speed, for example 1/30, you can introduce motion into your photos. When you capture the picture as the subject moves his/her hands, they will appear blurred thereby creating the effect of motion.

If you can hold the camera steady, you may be able to use a shutter speed as long as 1/8th or 1/4th of a second, especially if your lens has the Nikon VR (image stabilization) feature.

Conveying Motion By Panning

When using Sports mode to winter action, the resulting photo looks great with everything sharply in focus. However, I've seen shots where the action is in focus with the background out of focus. How can I get this effect?



Mode: Auto **Shutter:** 1/1000
Aperture: f-5.6 **ISO:** 180



Mode: S (Shutter Priority) **Shutter:** 1/125
Aperture: f-22 **ISO:** 100
(Using the panning technique to show motion by blurring the background)


The D3000 often freezes the action when you're shooting in Sports mode.


By panning you can introduce motion to your photo and help it "move."




Turn the Mode Dial to S (Shutter-priority auto). (1)

Turn the command dial to select a shutter speed of 1/160 or slower. (2)

Press the  button until the Quick Access settings display appears. (3)

Press  (Multi selector) to select AF-A (Focus mode) (4) and press OK.

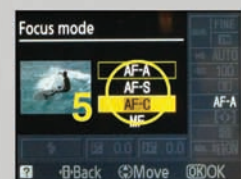
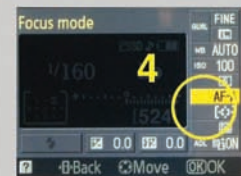
Press  (Multi selector) to select AF-C mode (continuous auto focus). (5)

Press OK and press  to exit the Quick Access settings display.

Compose your scene by panning -- slowly following the motion of your subject in the viewfinder.

Try to keep the subject centered in the viewfinder as you pan.

Press the shutter-release button (5) fully to capture the picture.



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Conveying A Sense Of Motion By Panning

Tip Talk

The technique of following the subject in the viewfinder is called *panning*. If done properly, the motion of the camera will make the background blurred while at the same time keeping the main subject sharp and in focus. This adds to the feeling of action.

You'll want to practice this technique to become proficient. To achieve the best results, when following the subject in the viewfinder remember to move the camera slowly and steadily until you gently squeeze the shutter button.

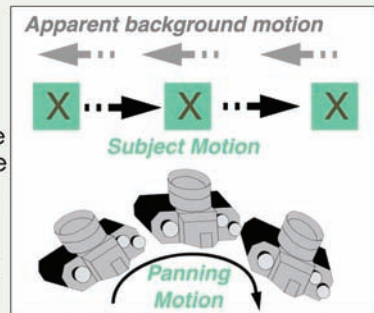
Zooming In On Panning

The technique of panning to convey a sense of motion is one that takes practice. You'll need slow shutter speeds and steady hands.

One reason that panning requires practice is that unlike most of your other photos, panning means you're moving the D3000 instead of holding it still.



Note the subject in this diagram is moving from left to right but could be moving in the other direction or up or down. What is important is that you can follow the movement evenly throughout the time it takes to capture the photo. How fast and how close the moving subject is will determine the shutter speed to use.



Use a slower shutter speed if you want to emphasize the sense of movement but keep in mind that this will make it more difficult to keep your camera steady.

Plant your feet, draw your arms into your body, hold your camera securely and rotate the top half of your body as you track your subject. Pan as fast as the subject moves so you keep it in the same position in your viewfinder. Press the shutter down as you continue your motion and follow through even after the shutter has closed. Use continuous shooting mode if you have time for more exposures.

Making Water Flow

After shooting a scenic waterfall, the water seems to “hang” in midair. How can I make the water appear as if it were flowing?



Mode: Auto **Shutter:** 1/200
Aperture: F-4.8 **ISO:** 200

Using Auto usually stop the action resulting in no sense of the water flowing.



Mode: S (Shutter-priority auto) **Shutter:** 1/25
Aperture: F-14.0 **ISO:** 200

By using a slower shutter speed, the water appears to flow naturally.



Turn the Mode Dial to S (Shutter-priority auto). (1)

Rotate the command dial to select a shutter speed of $1/30$ (2) or slower.

Compose your scene in the viewfinder. (3) Press the shutter-release button (4) halfway.

Press the shutter-release (4) fully to capture the picture.

Because you're using a relatively slow shutter speed, make certain to press the shutter-release button *gently* so as not to cause camera shake.

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Making Water Flow

Tip Talk

Water drops over a waterfall at a rapid rate. By using a slow shutter speed to capture the scene, the water appears to “flow” adding to the feeling of motion. By using an even slower shutter speed than 1/30 of a second, you may be able to create the “mist effect.”

Focusing In On Clearing Custom Settings

Don't forget to clear or change any settings to your D3000 that you have made before your next photo opportunity arises.

You can do this easily by following these steps:



- ❖ Press the MENU button.
- ❖ Navigate to the Shooting Menu.
- ❖ Select Reset shooting options.
- ❖ Press the OK button.
- ❖ Navigate to Yes and press the OK button.
- ❖ This will return the D3000 to the following original (default) settings:

Image quality.....JPEG normal	Metering.....Matrix
Image size.....Large	White balance.....Auto
Exposure compensation.....0.0	Flash compensation.....0.0
Release mode.....Single frame	Active D-Lighting.....Off
Focus mode.....AF-A	
ISO sensitivity.....Auto or 100 (depending on shooting mode)	
Flash mode.....Auto / Auto Slow Sync / Fill Flash (depending on shooting mode)	

Taking Better Nature Photos

I enjoy nature photography and want to capture the birds visiting my neighborhood park. How can I capture the action of my winged friends?



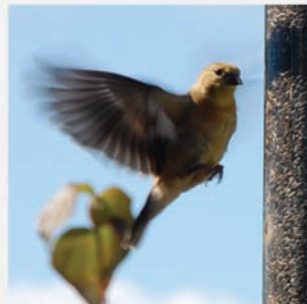
Mode: Auto **Shutter:** 1/500
Aperture: f-8 **ISO:** 200

Although this shot is nicely composed, it doesn't convey much action.



Mode: S (Shutter-priority auto)
Shutter: 1/160
Aperture: f-13 **ISO:** 200


By being patient and waiting for the right moment, you can capture a more interesting photo.





Turn the Mode Dial to S (Shutter-priority auto). (1)


Rotate the command dial to select a shutter speed of 1/100. (2)

Press the  button to open the Quick settings display.

Press  (Multi selector) to select AF-A (Focus mode) and press OK to open the Focus mode display. (3)

Press  (Multi selector) to select AF-C mode and press OK. (4)

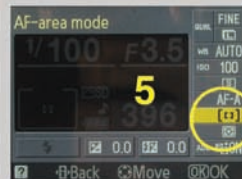
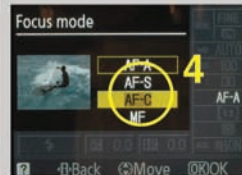
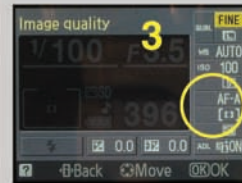
Press  (Multi selector) to select AF-area mode and press OK.

Press  (Multi selector) to select [t:1] (Dynamic area) and press OK. (5)

Press  to exit Quick settings.

Compose your scene. Keep one of the focus areas over the bird (subject).

Patience is important. When you see action, gently press the shutter-release button (6) fully to capture the picture. To make multiple shots, keep the shutter button depressed and move the camera slowly in the direction of the motion.

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Taking Better Nature Photos

Tip Talk

Taking photos of wildlife is often a labor of patience. You may have to wait several minutes or even hours for that perfect moment to capture your favorite bird or wild animal.

Notice that we used a relatively slow shutter speed to emphasize the motion of our winged friend.

To maximize your chances of capturing the best photos, have your camera set to take multiple shots (Continuous Shooting Mode) so that you can choose from a group of photos.



Taking Care Of Your Nikon D3000

After spending hundreds of dollars to buy your Nikon D3000 camera, it's now important to protect your photography investment by caring for it in the best way possible.

Accessories

As a proud owner of a Nikon D3000, you'll probably soon own more than just the camera. Since DSLRs are *system* cameras, you can easily extend the capabilities of your D3000 by adding accessories, such as lenses, filters, batteries, chargers, picture cards and more.

Camera strap

You'll usually rely on the camera strap when carrying your camera. As you lengthen your shooting sessions, you may discover that your camera seems to feel heavier. The innovative R-Strap is can be worn diagonally across the torso from shoulder to hip and is adjustable to fit most photographers.

The lightweight is an innovative solution for both comfort and easy of access for any camera. The R-Strap has a sizing adjustment located on the front for quick adjustments. It also features a quick access, secure pocket for storing two extra memory cards in their protective cases.

The locking FastenR connects the R-Strap to the tripod socket located on either the camera body or the lens. Once connected, the camera hangs upside down, resting securely at your side or in the small of your back, with the lens pointing behind you.



The lightweight R-Strap (www.blackrapid.com) is an innovative alternative to the camera strap.

With the camera at your hip or behind your back, you can maneuver quickly and easily through a crowd, carry a tripod or other gear, or simply have both hands free.

When you're ready to take the shot, the camera quickly glides up the strap into shooting position.

Camera Bag

You certainly don't want to just toss your camera into your car or backpack and head out for a photo shoot. Instead, you're likely to want it to keep working for more than a few months. Therefore, you might consider the safety of a protective camera bag.

How do you choose the right camera bag? Consider the type of photos you'll be taking and what you'll need to take those photos, such as lenses, filters, extra batteries, etc. You should also think about future accessories you may be purchasing. Look for a camera bag of the appropriate size to hold it all.

The camera bag should feature durable, well padded exterior walls. Look for adjustable compartments on the inside of the bag so you can safely separate your accessories.

The camera bag should include several pockets either inside or outside the bag where you can keep smaller items like filters and batteries. Although the bag should have secure, strong latches, make certain you can open them easily with one hand because you may be holding your camera in the other hand. Finally, you want a durable exterior that can hold up to being bounced around.

See the checklist on page 171 for information on what you might want to have in your camera bag.



Jill-e Designs features a line of camera bags designed specifically for the female photographer (see www.jill-e.com for details).

Another camera bag idea is the Shootsac. It lets you transport lenses and other camera accessories not only safely but also fashionably. It holds three to six lenses and other accessories safely and conveniently at your fingertips. Unlike most camera bags, you can fold it completely flat for easy transportation and storage.

Its slim ergonomic shape hugs your body so you feel sleek and mobile instead of clumsy and bulky.



The Shootsac (www.shootsac.com) lets you transport your camera and accessories safely and fashionably.



The slim design of the Shootsac actually makes it less obvious that you are carrying camera equipment.

Tripods, Monopods & Pods

Although you won't always need a tripod, they're nevertheless an accessory you may want to consider.

However, you won't always need to carry around the typical large, heavy tripod. Several types of tripods are now available that you can even carry in a pocket or camera bag.

We've already talked about a few different examples (see page 143). Other similar ideas include the Pod (www.thepod.com). It's a flexible beanbag with a mounting bolt to connect to your D3000. You can set it up quickly on tables, rocks, cars, benches, etc.

Protecting The LCD Monitor

One overlooked area of camera protection is the LCD monitor. Although a fingerprint or slight scratch won't hurt the camera, a deep scratch could be a problem. Therefore, you should cover the LCD monitor with a clear adhesive film that is made for cameras.

You can find the LCD screen protectors at camera stores or the internet for a few dollars.

Cleaning Accessories

Keeping your camera clean inside and outside is important but be careful when doing so. Make certain to use a blower instead of canned air. Canned air has moisture and can freeze parts as the compressed air is released. Furthermore, your camera isn't airtight and canned air may blow dust into the inside of the lens.



Occasionally wipe your camera with dry or slightly damp lint-free cloth (eyeglass cloths or microfiber cloths are good for this purpose). Be very careful not to get the controls and the electronics wet.

An item to have handy is the Spudz Microfiber Lens Cloth. The cloth stays hooked inside a protective pouch but is small enough for you to carry easily in your camera bag. See www.alpineproducts.com for more information.



Fun Accessories

Make certain to have some fun with your photography, too. One way is by sharing your photos in different ways. You're probably familiar with Flickr and other photo sharing sites on the Internet. However, you can share photos in other ways as well, such as in digital photo key chains, digital pens, digital slideshows, digital photo frames and more.

Quick Care Suggestions

Here are some quick things you should do take care of your camera:

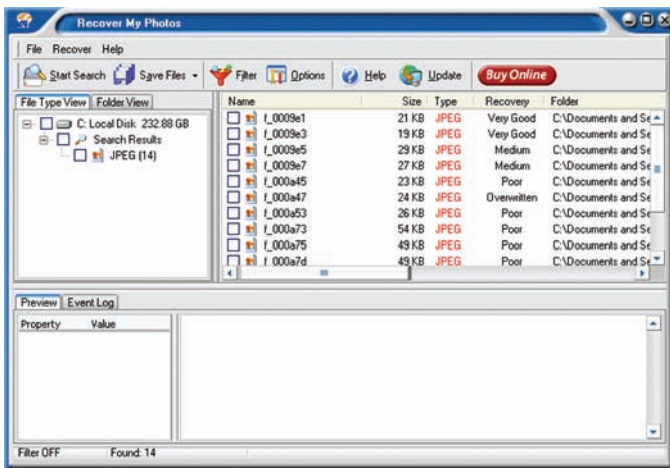
Recovering Deleted Photos

Although accidentally deleting photos or formatting the memory card before moving the photos to your computer doesn't sound like a common problem, it can happen to anyone at anytime. Fortunately you may be able to recover some or all of the missing photos even after you format the SD card by using special recovery software.

You can find several reasonably priced recovery software packages on the Internet. Use a search engine such as Google and type "SD card recovery software" for the search.

These programs typically need your camera to be connected to your computer (so the SD card appears as a drive letter on your computer). You can also use a digital camera card reader instead of connecting the camera to the computer.

The recovery programs work similarly and have similar features. You install the software, connect your D3000 to your PC (or insert the SD card into a card reader connected to your PC) and run the recovery software. It will scan your memory card or your PC hard drive and then display the photos/files it can recover.



Recover My Photos is a program you can use to recover accidentally deleted photos from your SD card.

The following are some examples of recovery programs you might consider. All have free trial versions that you can download and determine if the program can recover your missing images.

- ❖ Card Recovery (www.cardrecovery.com/)
- ❖ Photorescue Wizard (www.datarescue.com/)
- ❖ Recover My Photos (www.recovermyphotos.com)
- ❖ MediaRECOVER 4.0 (www.mediarecover.com)
- ❖ Image Recall Don't Panic - Photo Edition (www.imagerecall.com)

Removing Dust Spots

Some spots on your photos may be the result of setting the ISO too high but these spots are typically in the shadows and darker areas of the photo. So, if you're seeing dark points or spots in brighter areas of your photos, it's possible that you have dust inside your camera.

It's probably best to prevent dust from getting inside your camera in the first place. Although the sensor cleaning does remove a lot of the dust inside your camera, it cannot remove all of it.

One common way for dust to sneak into your camera is when you change lenses. Therefore, before you change the lens, make certain to turn off the camera power. Then always change lenses with the body pointed toward the floor or ground (regardless of how clean you think your house is, dust can still find its way inside your camera).

You can also have the camera do a manual sensor cleaning that is similar to the sensor cleaning the camera does when you shut it off.

- ❖ Press the MENU button
- ❖ Press the Multi selector to select the Tools tab.
- ❖ Press the Multi selector to select **Clean image sensor** and press the OK button.
- ❖ Press the Multi selector to select either **Clean now** to clean the sensor right away or **Clean at** to clean the sensor at a specified time later such as when you start or turnoff the camera or both or to turn off the clean sensor option completely.

Storing Your Camera

You don't want to have your camera just lying around on a table or desk where it could be damaged. Instead, keep the following suggestions in mind:

- ❖ Store your camera correctly, such as in a secure camera bag, if you won't be using it for a long time.
- ❖ Store it properly away from humid, dusty or dirty places.
- ❖ Keep your camera dry and free from condensation.
- ❖ Don't subject it to extreme hot or cold temperatures.
- ❖ Keep it out of direct sunlight for prolonged times or inside a car when it is hot.

Handling

- ❖ Use a clear protective filter over the lens to protect the front element from scratches. A filter also makes cleaning the camera easier and safer..
- ❖ Be careful when handling your camera. This is especially true when passing your camera to friends so they can see your photos in the LCD monitor. According to a survey by *PC Photo* magazine, this is when a camera is most likely to be dropped.
- ❖ Turn off the camera before removing or disconnecting the power source or a cable, or removing the battery or memory card.
- ❖ Do not subject your camera to knocks, vibration, magnetic fields, smoke, water, steam, sand or chemicals.
- ❖ Don't subject it to extreme hot or cold temperatures.
- ❖ Keep it out of direct sunlight for prolonged times or inside a car when it is hot.
- ❖ Be careful around water — if you drop it in water, the camera may be damaged beyond repair.

Photographer's Checklist

Is The Battery Charged?

Your D3000 depends on its battery for power so if your camera runs out of power, or is even low on power, you may find yourself missing some great photo opportunities. Therefore, you should get into the habit of checking the battery power after each time you use your camera. The camera then will be ready the next time a great photo opportunity arises. It's also not a bad idea to keep an extra battery in your camera bag (make sure it's charged, too) in case you lose or cannot charge the first battery.

You can check the level of power in the battery anytime by turning on your camera and looking at the LCD monitor. Look for an icon shaped like a battery on the LCD monitor.

Format Your Memory Card

Unless you're using a CF card or memory card with a very large capacity, it's a good idea to format your card before going out to snap your photos. Make certain though that you've safely transferred any photos you want to keep BEFORE formatting the card because you'll lose everything on the card.

Check The Camera Settings

You may have changed some of the camera settings the last time you used the camera, for example, ISO, white balance, exposure compensation, etc.

Therefore, make certain to have the right settings appropriate to the conditions you're shooting. For example, you may have used Tungsten light for the white balance setting the last time you used the camera. That setting, however, probably won't work so well outdoors on a bright sunny day. Therefore, it's best to check the various settings before you start shooting.

Focusing In On Clearing Custom Settings

Don't forget to clear or change any settings to your D3000 that you have made before your next photo opportunity arises.

You can do this easily by following these steps:



- ❖ Press the MENU button.
- ❖ Navigate to the Shooting Menu.
- ❖ Select Reset shooting options.
- ❖ Press the OK button.
- ❖ Navigate to Yes and press the OK button.
- ❖ This will return the D3000 to the following original (default) settings:

Image quality.....JPEG normal

Image size.....Large

Exposure compensation.....0.0

Release mode.....Single frame

Focus mode.....AF-A

ISO sensitivity.....Auto or 100 (depending on shooting mode)

Flash mode.....Auto / Auto Slow Sync / Fill Flash (depending on shooting mode)

Metering.....Matrix

White balance.....Auto

Flash compensation.....0.0

Active D-Lighting.....Off

What To Have Handy In Your Camera Bag

Some of the items you should have handy in your camera bag may be obvious but sometimes the obvious is what we overlook the most. Therefore, we're including the following checklist of items for you to have in your camera bag.

Battery charger



This is a necessary item for you to have in your camera bag. A good habit to begin developing is to charge your battery after each day of shooting. You cannot do that without having the battery charger in your camera bag. Also, don't forget a battery charger for an external flash, too.

**Bug Repellent**

Whether you should keep a can of bug repellent in your camera bag may depend on where you live and when you're shooting. If you like to shoot landscapes near a river or in the woods during the summer months, you should consider carrying some bug repellent.

**Cable release**

You may discover a cable release to be important when you're shooting nighttime shots or other shots that require long exposures.

**Camera**

There isn't much point going on a photoshoot if you don't keep your camera safely secured in a camera bag.

**External flash**

If you have an external flash, there isn't a reason not to have it in your camera bag, depending on what you're planning to photograph. Also don't forget to take a long a spare set of batteries for the external flash.

**Extra lenses**

The best place to store extra lenses is securely in the camera bag. This will help protect the lenses but you'll also know where they are located.

**Extra filters**

As with extra lenses, the best place to store extra filters is securely in the camera bag. This will not only protect the filters but you'll also know where they are located.

**Facial tissue**

You may discover facial tissues to be quite useful on a photoshoot from cleaning the camera to using as a diffuser to keeping your hands clean.

**USB cables**

Although inexpensive, USB cables (for transferring your photos to your computer) are easy to lose. Therefore, a great place to store these cables is in your camera bag.

- 

Garbage bags
You can use a large garbage bag to sit on or kneel on when you're shooting low to the ground.
- 

Cleaning materials
This will include a lens cleaning cloth (a micro fiber cloth requiring no liquid is best), lens cleaning fluid and lens tissue.
- 

Lightweight tripod or monopod
Although perhaps too large to fit inside a camera bag (useful for shots using a timer)
- 

Notebook, paper and pen/pencil
A small notebook with a pen is good to have for taking notes on shooting locations, settings, time, etc.
- 

Plastic bags
These are very useful to protect your camera and lenses in the event of bad weather.
- 

Small roll of duct tape
Duct tape is a handy thing to include especially if your photoshoot is out in the middle of nowhere. You should also include a small pair of scissors to cut the duct tape if needed.
- 

Spare car key
A spare car key is an often overlooked item to include in a camera bag. However, you may lock your keys in the car or, worse, lose your car keys on a landscape photoshoot.
- 

Spare lens cap
A lens cap is so easy to misplace or lose on a photoshoot. It's always a good idea to have at least one spare lens cap in your camera bag.
- 

Sunscreen
This suggestion is similar to the bug repellent; it may depend on where you live and when you're shooting. If you're planning a long photoshoot outdoors on a bright sunny day, definitely consider carrying a container of sunscreen in your camera bag.

**Extra memory cards**

You might not think you could ever fill the memory card since you can delete or transfer all the photos. However, did you consider that you might lose a memory card or somehow damage it? This is why it's important to keep a second memory card in the camera bag.

**Wrist strap or neck strap for the camera**

Double-check the neck strap on your camera often to make certain it's secured correctly to the camera.

GLOSSARY

Aberration

The inability of a lens to produce a perfect, sharp image, especially at the edge of the photo.

Ambient Light

The existing light in an indoor or outdoor setting that you do not provide.

Aperture

The opening in a camera lens through which light passes. The aperture size is usually calibrated in f-numbers; the larger the f-number, the smaller the lens opening (and the slower the shutter must be).

Artificial light

Any light such as a flash that isn't coming from a natural source.

Backlighting

This is a light source that appears from behind the subject, and towards the camera lens, so that the subject stands out against the background.

Cable release

This is a flexible cable for firing a camera shutter. You should consider a cable release when shooting long exposures or in other situations where touching the shutter button might cause camera-shake and result in a blurry photo.

Center Weighted

Refers to a camera metering system that concentrates the light reading mostly to the central portion of the viewfinder and feathering out to the edges.

Chromatic Aberration

This occurs when the lens cannot focus different colors on the same focal plane. Chromatic aberrations appear as a color fringe around objects, especially at the edges of the photo.

Color cast

This is an overall bias towards one color in a color photo.

Depth of field

This is the distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph. Depth of field depends on the lens aperture, the focal length of the lens, and the distance from the subject.

Depth of focus

This is the very narrow zone on the image side of the lens within which slight variations in the position of the film will make no appreciable difference to the focusing of the image.

Diffuse Lighting

Any lighting that is low or moderate in contrast; an overcast day is a good example.

Existing Light

This refers to all light that is available including natural lighting and any artificial lighting such as lamps, candles, daylight through windows, etc.

Exposure

This is the amount of light allowed to enter your camera. The aperture controls the amount of light and the shutter speed controls the time.

Exposure compensation

You may need to change the exposure from the value suggested by the camera to get a better photo. To do this, you need to press the exposure compensation button [+/-] on your camera. Set a positive compensation when the main subject is darker than the background or a negative compensation when the subject lighter than the background.

f-stop

The number that indicates the size of the lens opening is called the f/stop. Examples of f-numbers on cameras are typically f1.4, f2, f2.8, f4, f5.6, f8, f11, f16 and f22. The larger the f-number means a smaller lens opening, so an f/22 will have the smallest lens opening in this example. The f/stops work with shutter speeds to indicate exposure settings.

Fill-in light

Light from any additional lamp, flash, or reflector is fill-in light or fill-in flash when flash is used. Photographers use fill-in light to soften or "fill in" the shadows caused by the brighter main light source, such as the sun.

Focal length

Focal length is the distance between the film plane and the focal point (optical center of the lens) when the lens is focused at infinity. The

focal length of the lens is marked in millimetres on the lens mount. The principal focal point is the position of best focus for infinity. There are two principal focal points, if a lens is turned around a second focus is obtained. 'Reversed' lenses are often used in close-up Macrophotography because using a lens reversed allows a closer focusing distance.

Hood

A tube, usually made of metal or rubber, that prevents unwanted light from falling on the lens surface.

Infinity

Although it at first may seem like an astronomical term, infinity in photography refers to the focusing point at which the lens gives a sharp image of very distant objects, such as the far horizon.

ISO (International Standards Organization)

ISO is the speed rating for photographic materials and is based on a mathematical progression so ISO 200 is twice as fast as ISO 100 but only half as fast as ISO 400.

Macro lens

This lens provides continuous focusing from infinity to extreme close-ups. You can also use macro lenses at ordinary subject distances

Neutral density filter

This is a neutral gray camera filter that you can use to reduce the amount of light entering the camera when a slow shutter speed or wide aperture is needed.

Over exposed

This occurs when too much light reaches the camera. The resulting photo is either overall too light or is too light in different areas.

Panning

This is a technique for photographing a moving subject. While the shutter is open, the camera moves to follow the moving subject. Although panning creates a blurred background, it does produce a sharp subject. Panning generally works better with slower shutter speeds.

RAW

As its name suggests, this is an unprocessed digital file direct from your camera. Raw is not a standard file format such as JPEG but typically created by the manufacturer specifically for their cameras.

Shutter speed

The time in which the shutter stays open to light is called the shutter speed. It's measured in fractions of seconds so that speed setting of 1/4000 means 1/4000th a second, which is very fast, and a setting of 30" means 30 seconds, which is very slow.

Stop down

This refers to when you change the lens aperture to a smaller opening, such as from f/4 to f/5.6. When you stop-down you're also increasing the depth of field.

Under exposed

This occurs when not enough light reaches the camera. The resulting photo is either overall too dark (muddy looking) or is too dark in different areas.

White Balance

An otherwise good photo, depending on the lighting conditions, may appear slightly yellow or blue. To prevent this problem, you may need to adjust the white balance control settings on your camera.

- * Avoiding Out Of Focus Photos
- * Fixing Dark Photos
- * Taking Action Photos
- * Better Flash Photos
- * Fixing Washed Out Photos
- * Amazing Nighttime Photos
-and much more!

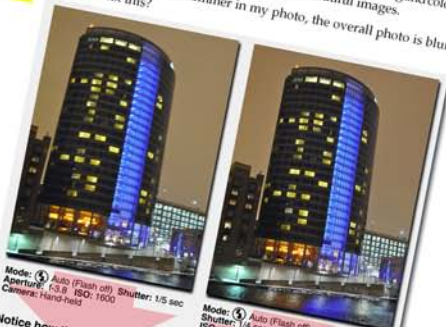
Solve common shooting problems and capture the best photos with your Nikon D3000.

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Capturing The Nighttime Experience

Shooting Buildings At Night

I'm interested in nighttime photography. I know the shimmering and colorful lights can transform dark backgrounds into beautiful images. Although the lights do shimmer in my photo, the overall photo is blurry. How can I fix this?



Mode: (1) Auto (Flash off) Shutter: 1/5 sec Aperture: f3.8 ISO: 1000 Camera: Hand-held

Mode: (5) Auto (Flash off) Shutter: 1/4 sec Aperture: f3.8 ISO: 1600 Flash: Not fired Camera: Placed on a flat, sturdy surface

Notice how the lights shimmer in this nighttime photo but that it's too blurry overall. The reason for the blurry photo is camera shake.

Simply setting the camera on a sturdy surface can help reduce taking a blurry nighttime photo.



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Capturing The Nighttime Experience

Turn the Mode Dial to (1) Flash off. (1)



Stabilize your camera on a flat surface (2) with the lens pointing at the subject. (Make certain it's a safe and strong surface.)



Press the shutter-release button (3) down halfway and verify that the scene is composed to your liking. (4)



Press the shutter-release button (5) fully to capture the photo.

Make certain to press the shutter-release button carefully to capture the photo. Use a "delicate" touch to minimize any shaking or jerking of the camera.

D3000 Shooting Buildings At Night



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