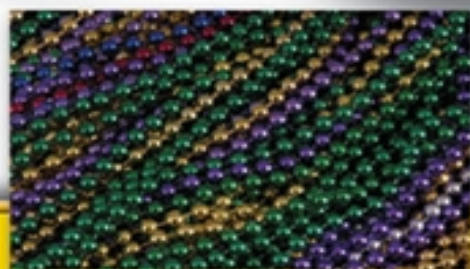


David D. Busch

Nikon[®] D40/D40x

Digital Field Guide

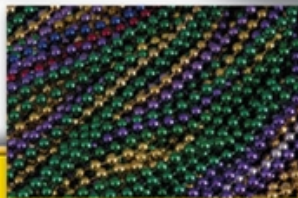


Full Color Throughout!

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Nikon[®] D40/D40x Digital Field Guide

by David D. Busch



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About the Author

David D. Busch was a roving photojournalist for more than 20 years, illustrating his books, magazine articles, and newspaper reports with award-winning images before he turned full time to writing and illustrating books. He has operated his own commercial studio, suffocated in formal dress while shooting weddings-for-hire, and shot sports for a daily newspaper and Upstate New York college. His photos have been published in magazines as diverse as **Scientific American** and **Petersen's PhotoGraphic**, and his articles have appeared in **Popular Photography & Imaging**, **The Rangefinder**, **The Professional Photographer**, and hundreds of other publications. He has reviewed dozens of digital cameras for CNet Networks and **Computer Shopper**.

When About.com named its top five books on Beginning Digital Photography, occupying the first two slots were Busch's **Digital Photography All-in-One Desk Reference For Dummies**, and **Mastering Digital Photography**. He has published more than 90 other books since 1983, including best-sellers **Digital SLR Cameras & Photography For Dummies**, and **Digital Photography For Dummies Quick Reference**.

Busch earned top category honors in the Computer Press Awards the first two years they were given (for **Sorry About The Explosion** and **Secrets of MacWrite, MacPaint and MacDraw**) and later served as Master of Ceremonies for the awards.

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Introduction

This is my fifth Digital Field Guide devoted to a Nikon digital SLR (dSLR), and my seventh Digital Field Guide overall, and it's been one of the most enjoyable to work on. The company that we old-timers still think of as Nippon Kogaku (Japan Optical), but now goes by the moniker Nikon, has really outdone itself with its new Nikon D40 and D40X cameras. This descendant of the pioneering and wildly popular Nikon D70/D70s had a high bar to leap, but the Nikon D40 and D40X have set new standards as an ultra-compact, ultra-friendly entry-level camera for those looking for a lot of photographic prowess in a small package.

Indeed, the D40 and D40X include many of the same features found in Nikon's more upscale models, like the Nikon D80, for a lower price. If you want a flexible camera with good performance and excellent image quality, this camera is tough to beat. It's an incredible camera in its own right and can serve as a worthy companion for anyone using one of Nikon's pricier cameras.

What Nikon has done is take many of the features that were less than perfect in the D70/D70s, and upgrade them, while adopting some useful features from the D80. For example, the D40/D40X's eyelevel viewfinder is big and bright, much improved over that of Nikon's original digital SLR series, and the back panel color LCD is a huge and brilliant 2.5-inches (diagonally).

Instead of a top panel LCD with status information, Nikon has placed all the menus and shooting data on the back LCD, where it's readily accessible while shooting. The new camera is quite D80-like in its D40x version (using a similar 10.2 megapixel sensor), and includes a useful Function button that I use to switch between several different shooting modes on the fly. The D40X has a more useful ISO 100 minimum sensitivity setting, and

it uses more petite memory cards. What's not to like about this pair of powerful, bargain-priced cameras?

Well, the manual that's furnished with the camera is not the best. It's thorough and complete, but doesn't explain things as clearly as it could, and you frequently must flip back and forth among two or three cross-references to find everything you need to know. That's one of the reasons I wrote this book: To provide an easy-to-understand introduction to the Nikon D40 and D40X and their features, accompanied by chapters on basic photographic concepts and techniques, and a series of recipes you can use to take great pictures in many of the most common shooting situations.

The Nikon D40/D40X's Advantages

There is a lot that's new about the D40 and D40X, but there's a great deal to like about what these cameras share with their predecessors and the other models in the Nikon line. Here are some of them:

- ♦ **Nikon lenses.** Nikon has a vast selection of lenses, including the 18-55mm and 18-135mm *kit* lenses, which offer lots of versatility and performance at economical prices. You can find dozens of other compatible AF-S lenses available from Nikon that provide excellent value. Of the other digital camera vendors, very few can match Nikon's broad selection of lenses that any photographer can afford.
- ♦ **Full feature set.** You don't give up anything in terms of essential features when it comes to the Nikon D40/D40X. It has significant advantages over the D70/D70s it replaced, and rivals its more expensive sibling, the D80, in many ways. The D40/D40X has a large memory buffer, improved color LCD, a nifty black-and-white photography mode, and the ability to shoot both unprocessed RAW files and three quality levels of JPEG format files.
- ♦ **Fast operation.** The Nikon D40 and D40X operate more quickly than many other digital SLRs. It includes a memory buffer that's more than twice as large as the one found in some dSLRs, so you can shoot continuously for a longer period of time. It also writes images to the

memory card rapidly. Many D40/D40X users report being able to fire off shots as almost as quickly as they can press the shutter release, for as long as their index finger (or memory card) holds out.

One popular low-end dSLR takes as long as three seconds after power-up before it can take a shot. If you don't take a picture for a while, it goes to sleep and you have to wait another three seconds to activate it each time. The D40/D40X switches on instantly and fires with virtually no shutter lag. (Actually, it uses so little juice when idle that you can leave it on for days at a time without depleting the battery much.) Performance-wise, the D40/D40X compares favorably with digital cameras costing much more. Unless you need a burst mode capable of more than two-and-a-half or three frames per second, this camera is likely to be faster than you are.

♦ **Great expandability.** There are tons of add-ons you can buy that work great with the D40/D40X. These include bellows and extension rings for close-up photography, and at least three different electronic flash units from Nikon and third parties that cooperate with the camera's through-the-lens metering system. Because Nikon dSLRs have been around for awhile, there are lots of accessories available, new or used, and Nikon cameras are always among the first to be served by new gadgets as they're developed.

Where to Go from Here

If you're brand new to digital photography and digital SLRs, you should spend a lot of time with the Quick Tour, which includes all the basic information you need to learn just enough to go out and begin taking pictures. There's no need to memorize all the controls and learn what every function is. You can learn more making a few basic settings and then going out and enjoying yourself by taking a few hundred great photographs.

Within a short period of time, you'll be eager to learn more, and you can begin reading Chapter 1 to discover the location and function of all the dials, buttons, and other controls that are on the D40/D40X. You can learn about different exposure options in Chapter 2, how to use automatic

exposure, work with the retouch menu to fix red-eye defects, or do minor fix-ups of your photos.

When you're ready to customize the more advanced settings of your camera, you can find everything you need to know in Chapter 3. But I think you probably want to take a detour first into the photography basics chapters of this book. Learn about exposure in Chapter 4, discover how lenses work and how to select the lenses you need in Chapter 5, and read everything you need to know about working with electronic flash and natural light in Chapter 6.

And should you want some tips for taking pictures under a variety of photo situations, you can find discussions of photo subjects like animal and action photography, fireworks, landscapes, sunsets, and close-up photography in Chapter 7. This chapter also discusses recommended lenses, settings, accessories, and shooting techniques to get the kind of pictures you expect from your D40 or D40X.

Because this is a field guide, rather than a software manual, you won't find instructions in this book about how to use Photoshop or similar programs. In Chapter 8, you can find an introduction to Nikon Capture NX and other tools. If you're having trouble with your D40/D40X, you might find the troubleshooting tips in the Appendix helpful.

That's a lot of material to cover in a guidebook that I hope you carry along with you as you go out in the field with your D40/D40X; I hope I've given you the help you need to take the kind of pictures you expect.

Shooting Your First D40/D40x Picture

In This Quick Tour

- Selecting a shooting mode
- Reviewing your pictures
- Correcting exposure
- Transferring images to your computer

Even if you know nothing about photography, you can be taking great pictures five minutes after you slip your Nikon D40 or D40x out of that shiny gold box. The camera is smart enough to choose the correct exposure settings for you, focus a sharp, clear image, pop up the flash if there isn't enough light, and snap a winning shot at the press of a button. All you need to do is charge the battery, insert a digital memory card, and remember to take off the lens cap.

Go ahead. If you haven't already, see for yourself just how easy the D40 or D40x is to use. Rotate the lever in the upper right corner of the camera to the On position. Spin the large Mode dial on the upper right top surface of the camera to the green AUTO camera icon. Bring the camera to your eye, and when you see something you want to capture, press the shutter release button (it's located exactly where you'd expect it to be, on top of the hand grip.) You hear a comforting **click**, and the photo you just took displays on the big color LCD panel on the back of the D40/D40x. That's all there is to it.

After you've snapped a couple good photos flying solo, you can still be taking better pictures if you take the time to read through this Quick Tour. Although the D40/D40x is a digital single lens reflex (dSLR) that works very

well even if you have little or no experience with photography, the camera operates better the more you know about it.

Beginners can find everything they need to know to get started on their photo journey in this chapter. But this chapter can help even more experienced photographers, too. The basics are all here, providing a perfect prep for the more detailed chapters on your Nikon's controls and features and digital photography tips you can find later in this book. There's plenty of time to learn all that. This Quick Tour is an introduction that can help you get up to speed quickly. You can learn just the basics now, so that the good-looking images you produce during your first shooting session whet your appetite to learn more.

Selecting a Shooting Mode

If you've been able to resist activating your D40 or D40x until now, turn it on by rotating the lever that's concentric with the shutter release clockwise to the On position. Then, choose a shooting mode for the kind of pictures you want to take by using the Mode dial on the right side of the top panel of the camera (see figure QT.1). If you're willing to let the camera make all the decisions for you, rotate the Mode dial to the P (programmed exposure) or Auto (full auto exposure) settings. Either of these exposure settings work well for most picture-taking situations.

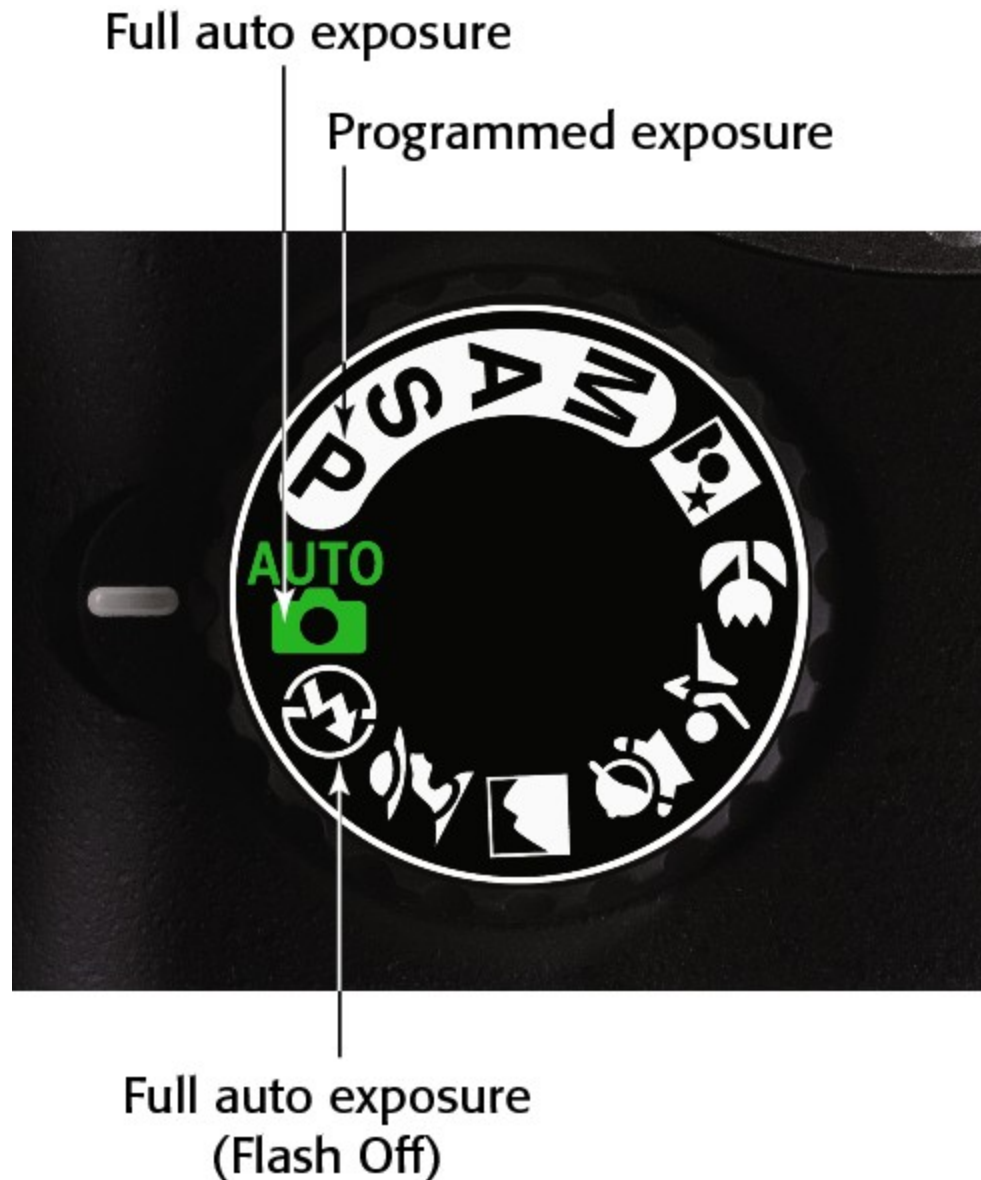
The main difference between the two is that in Auto (a sort of "fail-safe" mode) the built-in electronic flash pops up automatically when needed, and the D40/D40x locks in the settings so you can't change them. In P (programmed exposure) mode, you need to elevate the flash yourself when the "Subject is too dark" message appears on the LCD panel on the back of the camera. You can override the camera's settings to make your pictures darker or lighter if you choose.

In addition to regular Auto, an Auto "no flash" mode exists which disables the built-in flash unit (it looks like a lightning bolt inside a circle with a slash through it, the universal symbol for NO).

Or, you can select one of the semiautomatic or manual modes (A, S, or M) or any of the six modes that Nikon calls Digital Vari-Program (DVP) modes for specific kinds of shooting situations.



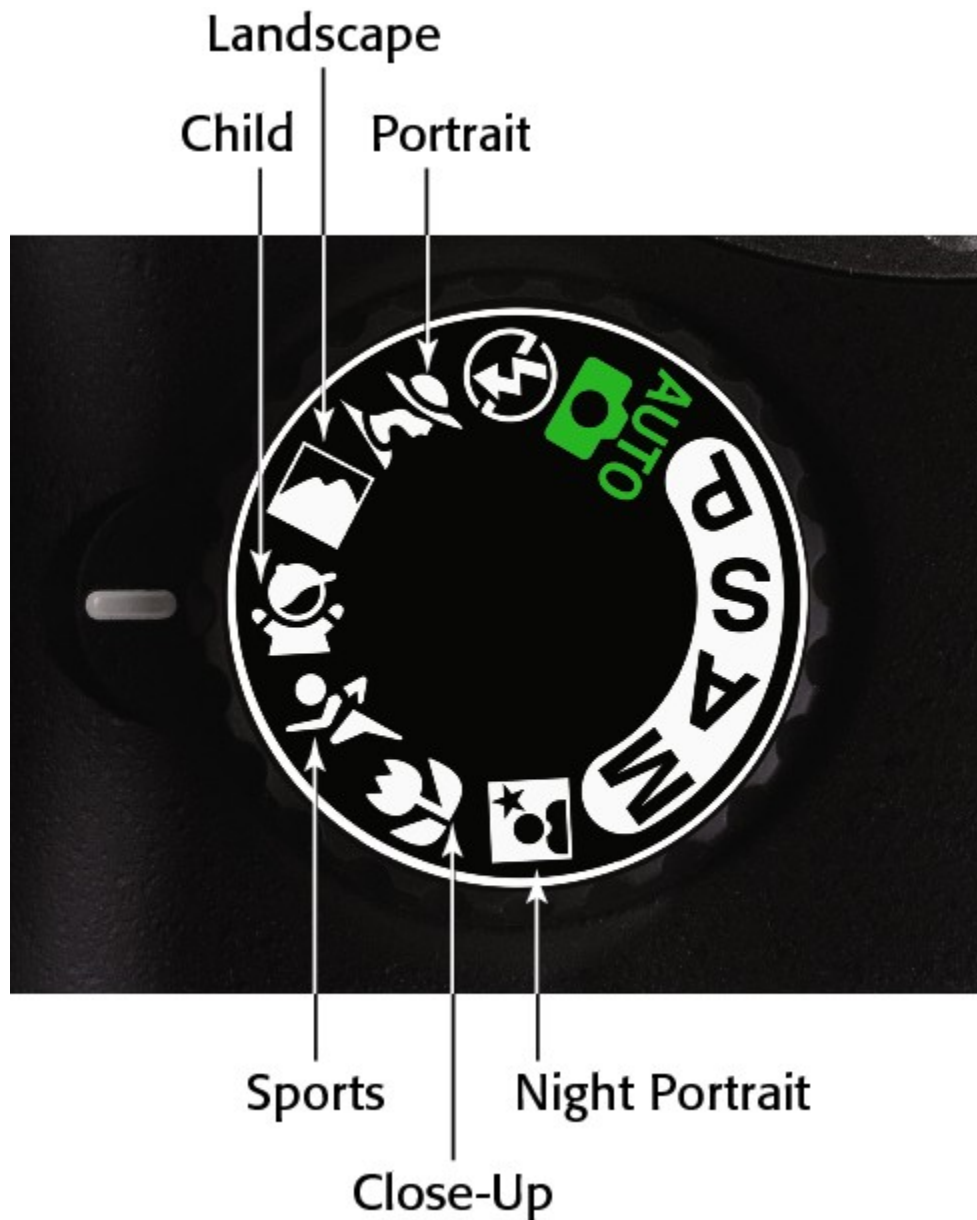
I explain the use of DVP, P, A, S, and M modes in more detail in Chapter 1.



QT.1 Set the Mode dial to P (Programmed exposure), Full auto exposure, or Full auto exposure (Flash Off) if you want the D40 or D40x to make all the shooting decisions for you.

These shooting situations include portraits, landscapes, children, action pictures, close-ups, and night portraits. These modes make all the

adjustments on your behalf and, at the same time, limit how much fine-tuning you can do. DVP modes give you a high percentage of good shots, but once you become more familiar with the camera, you can probably do a better job of tweaking the settings yourself. That's especially true when you want to make adjustments for creative purposes, say, to make a picture lighter or darker to produce a specific mood or look. The modes are as follows:



QT.2 Automatic and Digital Vari-Program modes program all the basic settings for you.

♦ **Full Auto. When to Use:** When you're taking quickie shots, or when friends who aren't familiar with your D40 or D40x use it.

Don't Use: If you want absolutely consistent exposure from picture to picture. The Full Auto setting treats each shot as a new picture, and may change the exposure if you shoot from a different angle, or compose your image slightly differently. The Full Auto (Flash Off) mode is the same, but the built-in flash is disabled.

♦ **Portrait. When to Use:** When you're shooting a portrait of a subject close to the camera.

Don't Use: If your portrait subject is not the closest object to the camera, as the Portrait mode optimizes exposure and tones for the subjects nearest to the lens.

♦ **Landscape. When to Use:** When you want extra-sharp images and vivid colors of distant landscapes.

Don't Use: If you want to use flash to brighten shadows cast on human subjects who are also in the photo, as Landscape mode disables the D40 or D40x's built-in electronic flash.

♦ **Child. When to Use:** When you want vivid colors for clothing and background, and soft, lifelike skin tones.

Don't Use: When a more subtle look is desired, especially for photographs of older children, teens, or adults.

♦ **Sports. When to Use:** When you're taking any kind of action photography of moving subjects.

Don't Use: When you don't want a frozen look. Because Sports mode uses fast shutter speeds to freeze the action, avoid this DVP setting if you want to shoot subjects, such as motor sports, that often look best when a little blur remains to add a feeling of motion.

♦ **Close-Up. When to Use:** When you're shooting small animals, blossoms, stamps and collectibles, and other objects closer than one foot to the camera, and centered in the viewfinder.

Don't Use: If you want to place your subject somewhere other than in the center of the frame, or if you'd like to focus on one special part of

the subject in order to highlight it.



These modes are discussed in much more detail in Chapter 1.

♦ **Night Portrait. *When to Use:*** If you're shooting at night and want to illuminate the subjects in the foreground with flash while also allowing the background to be properly exposed.

Don't Use: If you are unable to hold the camera steady, or can't use a tripod or other steadying device during the long exposures this mode often produces.

If you already have some knowledge about using shutter speeds and f-stops, you might want to use one of these more advanced modes:

♦ **Program. *When to Use:*** When you want your camera to make the basic settings, with the option of switching to a different f-stop or shutter speed, or dialing in a little more or less exposure to tweak your photograph.

Don't Use: If you don't understand how these settings affect your picture.

♦ **Shutter Priority. *When to Use:*** When you'd like to use a certain shutter speed to freeze action, reduce the effects of camera shake, or allow moving objects to blur in creative ways. The D40 or D40x selects an f-stop appropriate for the shutter speed you've chosen.

Don't Use: If there is too much or too little light to produce a good exposure at the shutter speed you select.

Don't Use: If you are unable to set exposure properly.

Selecting a focus mode

Your Nikon D40 or D40x can focus for you automatically if you are using an autofocus lens with the letters AF-S in its name, which signifies that the lens has an autofocus motor built into the lens itself. To activate the autofocus function, you must set the camera focus mode to one of the AF positions (AF-C, AF-S, or AF-A), rather than the Manual focus (M) setting. Some lenses, including the 18-55mm, 18-70mm, and 18-135mm, often sold as **kit** lenses with Nikon cameras, include an M/A or M/A-M switch on the barrel of the lens. You should set the focus to A or M/A on the lens. When you set the D40/D40x's lens to M/A, focus is automatic, but you can override the camera's focus setting by rotating the focus ring on the lens to manually focus.



The focus ring on your lens may be the innermost or outermost ring; it depends on the lens.

When you set the lens autofocus/manual switch or the camera's focus mode to M, you must focus manually at all times.

When you set both the D40 or D40x and lens for automatic focus, you can initiate focusing by pressing the shutter release halfway. The area, or zone, used to calculate focus is represented in the viewfinder screen by one or more of the three brackets that are briefly illuminated in red (see figure QT.5). If you've selected a DVP mode other than Close-Up, the D40 or D40x chooses the focus zone that coincides with the subject closest to the camera. If you select the Close-Up DVP mode, the focus zone defaults to the center zone.

Lens autofocus/manual switch



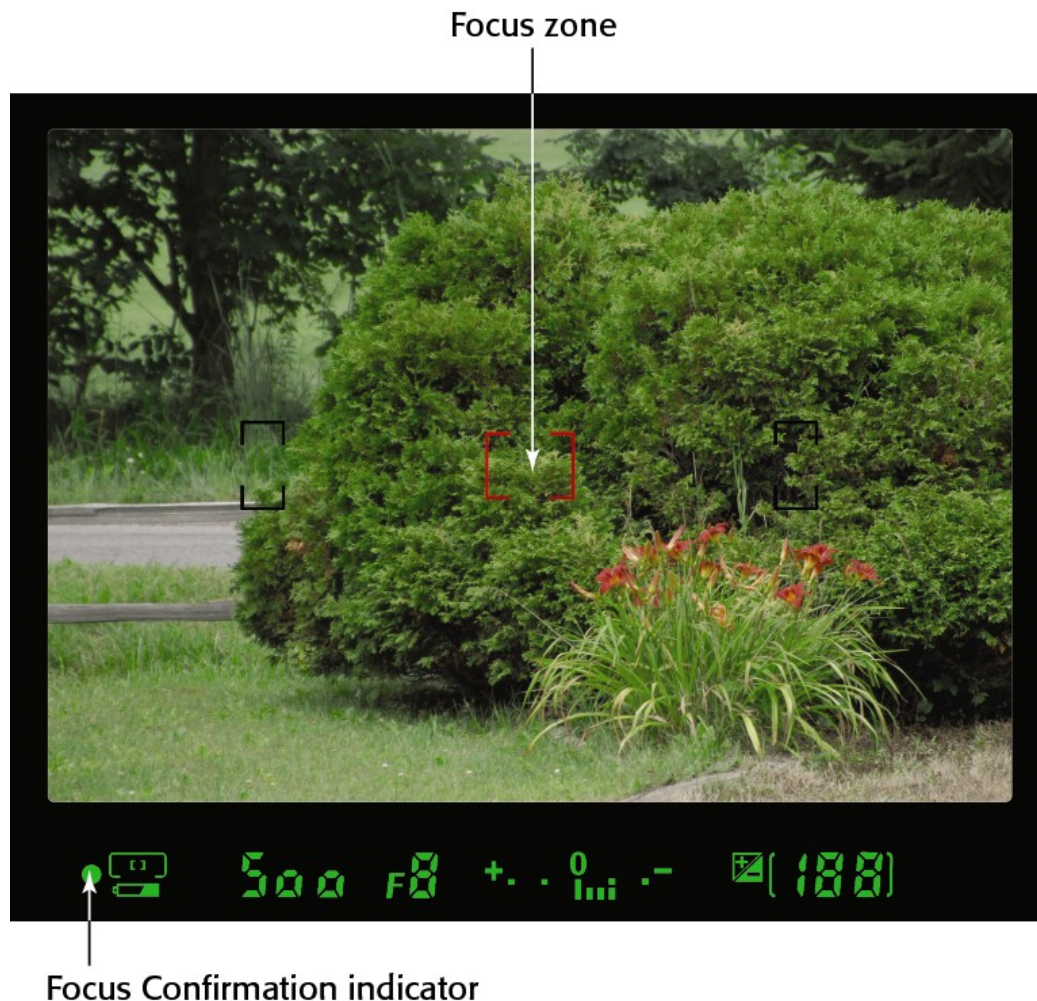
QT.4 The lens focus mode selector switch chooses autofocus or manual focus modes.



In Sports or Close-Up DVP mode and the other non-scene shooting modes, you can set the camera so you may choose which focus zone is used, as noted in

Chapter 1.

When the autofocus mechanism locks in the correct focus point, or when you focus manually and achieve correct focus, a green light in the viewfinder glows (see figure QT.5). If you want the focus and exposure to lock at the current settings, so you can adjust the composition or take several similar photographs in succession, press and hold down the AE-L/AF-L button located to the right of the viewfinder.



QT.5 The Focus Confirmation indicator in the lower-left corner of the viewfinder glows when correct focus is achieved.

Using the self-timer and remote controls

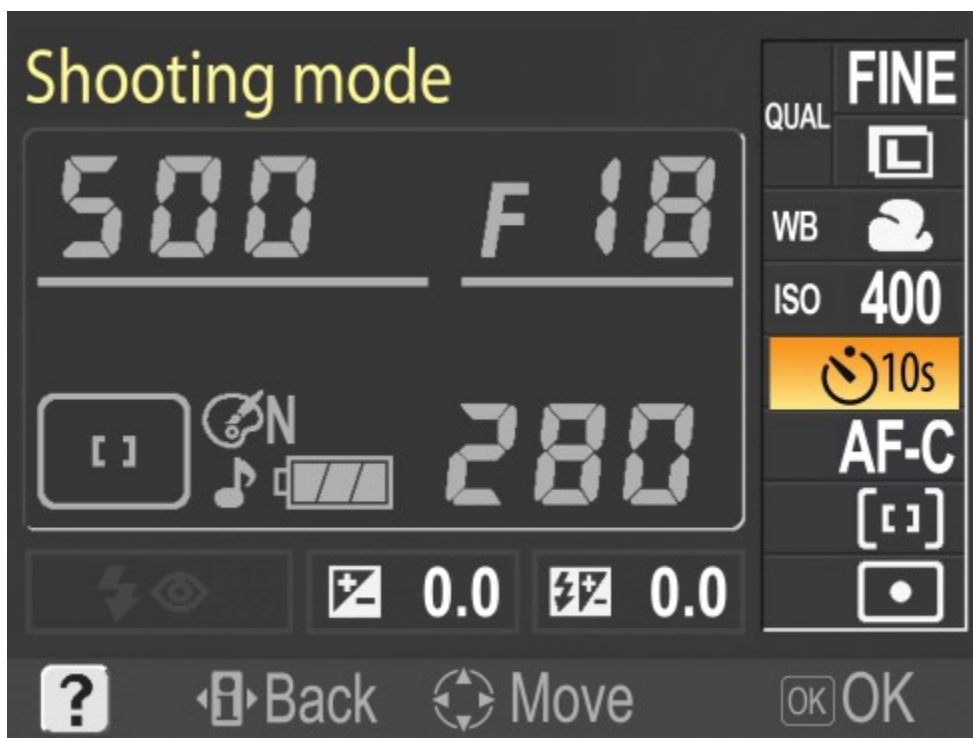
Perhaps you want to get into the photo yourself, or activate the D40 or D40x from a few feet away. Maybe the light is dim and you expect a long exposure and want to avoid shaking the camera when you press the shutter release. Mount the camera on a tripod and use either the D40/D40x's built-in self-timer or the optional Nikon ML-L3 infrared remote control (see figure QT.6.) Both of these features allow you to shoot shake-free pictures without the need to press the shutter release manually.

You can activate the 10-second self-timer by pressing the Fn/Self-timer button on the left side of the lens mount (unless you've redefined this button to perform another function instead, as described in Chapter 3). You can also switch to the self-timer or activate the infrared remote control by following these steps:



QT.6 The Nikon ML-L3 infrared remote control allows you to trigger the camera from several feet away.

1. Press the Settings button in the lower left corner of the back panel of the camera.
2. Use the multi selector to navigate to the Shooting mode area (your selection is highlighted in orange), and press the center OK button.
3. Press the down portion of the multi selector to highlight the Self-timer icon, Quick Response, or Delayed Response Remote icons. Press OK to make your selection.
4. To use the self-timer to take a photo, frame your picture and press the shutter release button down all the way when you're ready to take a photo. The self-timer starts, a white light on the front of the camera blinks, and a beep sounds. Two seconds before the camera takes the picture, the white light stops blinking and the beeping speeds up.



QT.7 Switch to the self-timer in Shooting Mode.

You can also take a picture by using the ML-L3 infrared remote. This inexpensive device activates the camera only from the front, because the infrared sensor is on the front of the hand grip. The range is about 16 feet.