



Using the Nikon D90



The difficulty in writing a book on a powerful camera like the Nikon D90 is balancing it for multiple types of users—and their varying levels of knowledge. Too much technical detail and the book will read like a user’s manual. Too little technical detail and advanced users will get no benefit from the book.

Many new users of the Nikon D90 digital single lens reflex (DSLR) camera have come over from the world of fully automated point-and-shoot cameras. On the other hand, many photographers are upgrading to the D90 from cameras like the Nikon D40, D60, D70, and D80. Then there are professionals who buy the D90 to have a backup for their pro-level cameras like the Nikon D300, D700, D3, and D3x. Others are coming over from

the film world, drawn by the siren call of immediate image use and very high quality.

In *Mastering the Nikon D90* I’ve tried my best to balance the needs of new and experienced users. I remember my first DSLR (the Nikon D100 in 2002) and my confusion about how to configure the camera compared to my old film SLR. “What’s all this ‘white balance’ and ‘color space’ stuff?”

The bottom line is that the Nikon D90 is a rather complex camera, and it requires careful study of resources like this book, and the User’s Manual, to really get a grasp on the large range of features and functions. According to Nikon, it’s an “advanced” camera, with features not found in lesser “consumer” models.





It's designed for people who really love photography and have a passion for image making that far exceeds just taking some nice pictures at a family event. The D90 has most of the features found in cameras like the D300 and D700, which are considered "professional" cameras by most.

Following the publication of my book *Mastering the Nikon D300*, I have compared the D300 and D90 side by side. I'm here to tell you today that the Nikon D90 has all the critical functions found in the D300. It even includes extra features like D-Movie, a more robust Nikon Picture Control System, and better in-camera image manipulation.

The D90 has a full range of functions that allow you to shoot images and "post-process" them in the camera instead of on your computer. If you don't like computers but want to take digital photographs and videos, the Nikon D90 is the camera for you!

I could go on for hours raving about all the cool features in the D90, like the fact that it is Nikon's first DSLR that can take both still images and 24 frames-per-second (fps) video. In fact, I do go on raving about this camera for the next 11 chapters. I hope you can sense my enthusiasm for this cool imaging device as you read this book. There are few cameras in the world with this level of capability, and you own one!

First Use of the Nikon D90

In this section, I'll help you set your camera up for first-time use. There are important functions scattered through the various menus of the camera that you

need to consider and set. Even if you've been using your D90 for a while, please consider using this section as a brief refresher since you might have overlooked some things that will benefit your use of the camera.

Some of the features discussed in this chapter are already configured the way I ask you to set them. Nikon uses many of these settings as factory defaults. However, I want to cover these areas for two reasons:

- You may have purchased a pre-owned D90, and some of these items may not be configured well for your style of shooting.
- I want you to become familiar with where these settings are because they are important and you may be changing them as you shoot different types of images.

Charging the Battery

If you're like me, you'll open the box, put the lens on your camera, insert a battery, and take your first picture. Wouldn't it be a better idea to wait an hour to charge the battery, and only then take the first picture? Sure it would, but I've never done that, and I bet you haven't either. Nikon knows this and it doesn't send out new cameras with dead batteries.

Most of the time the battery is not fully charged, but it has enough charge for you to set the time and date and then take and review a few pictures. Think about it. How do you test a brand-new battery? You charge it and see if it will hold a charge. Do you think Nikon is in the habit of sending out batteries that are



Nikon D90 front view

untested? No! So most of the time, you can play with your camera for at least a few minutes before charging the battery. I've purchased nearly every DSLR Nikon has made since 2002, and not one of them has come in with a dead battery.

When my D90 arrived, the battery was about 75 percent charged. I played with the camera for an hour or two before I charged the battery. However, let me mention one important thing. If you plug in the battery and it is very low, such as below 25 percent, it would be a good idea to go ahead and charge it before shooting and reviewing too many pictures. Maybe you can get the time and date set and test the camera a time or two, but go no further with a seriously low battery.

The D90 uses a lithium-ion (li-ion) battery pack. While this type of battery

doesn't develop the memory effects of the old nickel-cadmium (ni-cad) batteries from years past, they can be a problem if you allow them to get too low. *A li-ion battery should never be used to complete exhaustion.* The battery can develop metal shunts internally if you run it completely down, and that will cause it to short out and stop working. *When your camera's li-ion battery gets down to the 25 percent level, please recharge it.* I don't let mine go below 50 percent for any extended use.

All that said, the optimum situation would be to restrain yourself from turning on the camera until after the battery is charged. That'll give you some time to read the section of this book on initial configuration and check out the User's Manual.



Figure 1 – The four critical camera configuration menus

Initial Camera Setup

Let's look at the most important functions for initial configuration. In this chapter I'll just point you to the critical and most-used functions. Use the other chapters in the book to read about the advanced configuration of these items.

I'll start with the absolutely necessary items and then advance through the various menus touching on features that, in my opinion, you should learn for the best initial imaging experience with the D90.

There are seven menu systems in the D90 that you'll have to deal with over time. *Figure 1* shows a view of the four menus that affect initial camera setup: the *Playback Menu*, the *Shooting Menu*, the *Custom Setting Menu*, and the *Setup Menu*.

Setup Menu – World Time

When you open the box on a new D90, insert the battery, and turn it on, it will ask you to set the *World time*. Let's look at this in detail since you really do need to set this up before you do anything else.

There are several functions to set under the *World time* section of the *Setup Menu*:

- Time zone
- Date and time
- Date format
- Daylight saving time



Figure 2 – Time zone screens

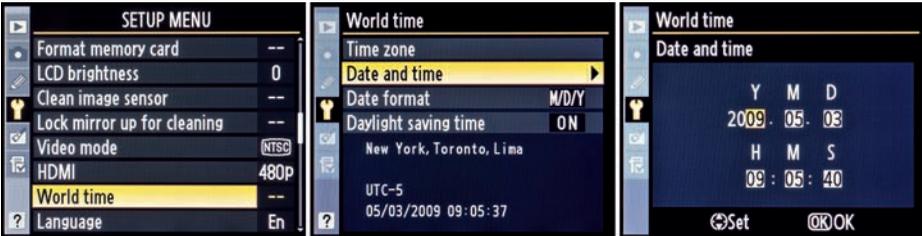


Figure 2A – Date and time screens

Time zone – Figure 2 shows the *Time zone* configuration screens. The screen used to set the zone uses a familiar world map interface to select the area of the world in which you are using the camera. To set the Time zone, follow these steps:

- Press the *MENU* button and scroll to the *Setup Menu*.
- Select *World time*, and then scroll to the right.
- Select *Time zone*, and then scroll to the right.
- Use the multi selector button to scroll left or right until your time zone is under the yellow vertical bar in the center of the world map screen.
- Once you have selected your time zone, press the *OK* button to save the setting.

Date and time – Figure 2A shows the three *Date and time* configuration screens. The final screen in the series allows you to select the year, month, and day (Y, M, D), and the hour, minute, and second (H, M, S):

- Press the *MENU* button and scroll to the *Setup Menu*.
- Select *World time*, and then scroll to the right.
- Select *Date and time*, and then scroll to the right.
- Using the multi selector button, scroll left or right until you have selected the value you want to change. Then scroll up or down to actually change the value.
- When you have set the correct date and time, press the *OK* button to save the settings. Please note that the time setting uses the 24-hour military-style clock. To set 3 p.m., you would set the H and M settings to 15:00.

24 Hour Time Equivalents

For your convenience, here is a listing of the 24-hour time equivalents:

A.M. Settings:

12:00 a.m. = 00:00 (midnight)
 01:00 a.m. = 01:00
 02:00 a.m. = 02:00
 03:00 a.m. = 03:00
 04:00 a.m. = 04:00
 05:00 a.m. = 05:00
 06:00 a.m. = 06:00
 07:00 a.m. = 07:00
 08:00 a.m. = 08:00
 09:00 a.m. = 09:00
 10:00 a.m. = 10:00
 11:00 a.m. = 11:00

P.M. Settings:

12:00 p.m. = 12:00 (noon)
 01:00 p.m. = 13:00
 02:00 p.m. = 14:00
 03:00 p.m. = 15:00
 04:00 p.m. = 16:00
 05:00 p.m. = 17:00
 06:00 p.m. = 18:00
 07:00 p.m. = 19:00
 08:00 p.m. = 20:00
 09:00 p.m. = 21:00
 10:00 p.m. = 22:00
 11:00 p.m. = 23:00

Interestingly, there is no 24:00 time (midnight). After 23:59 comes 00:00.

Date format – The D90 gives you three different ways to format the date (see *figure 2B*):

1. Y/M/D = Year/Month/Day
(2010/12/31)
2. M/D/Y = Month/Day/Year
(12/31/2010)
3. D/M/Y = Day/Month/Year
(31/12/2010)

United States D90 owners will probably use setting # 2, which matches the MM/DD/YYYY format so familiar to Americans. Other areas of the world can select their favorite date format.

To select the date format of your choice, do the following:

- Press the *MENU* button and scroll to the *Setup Menu*.
- Select *World time*, and then scroll to the right.
- Select *Date format*, and then scroll to the right.
- Choose the format you like best from the three available formats.
- Press the *OK* button.



Figure 2B – Date format screens



Figure 2C – Daylight saving time screens

Daylight saving time – Many areas of the United States use daylight savings time. In the spring, many American residents set their time forward by one hour on a specified day each year. Then in the fall, they set it back, leading to the clever saying “spring forward or fall back.”

To enable automatic *Daylight saving time*, take the following steps (see figure 2C):

- Press the *MENU* button and scroll to the *Setup Menu*.
- Select *World time*, and then scroll to the right.
- Select *Daylight saving time*, and then scroll to the right.
- Select *On* or *Off* from the menu.
- Press the *OK* button.

If you set it to *On*, your D90 will now automatically “spring forward and fall back,” adjusting your time forward by one hour in the spring and back one hour in the fall.

Since you are already in the *Setup Menu*, let’s see what else you might want to initially configure while here. (See chapter 8, “Setup Menu,” for full details.)

Setup Menu – Format Memory Card

While you are in the *Setup Menu*, notice the location of the SD memory card formatter. When you insert a card into a new camera for the first time, it’s a good idea to format the card with that camera. This will match the card to the camera and give you greater reliability in the long run.



Nikon D90 back view

Here are the four steps to formatting a memory card using the menus:

- Press the *MENU* button and scroll to the *Setup Menu*.
- Select *Format memory card*, and then scroll to the right.
- Select *Yes* from the screen with the big red exclamation mark and the words *All images on memory card will be deleted. OK?*
- Press the *OK* button.

Once you press the *OK* button, you'll see the two screens in quick succession. One says *Formatting memory card*, and the next says *Formatting complete*. Then the camera switches back to the *Setup Menu's* first screen. The card is now formatted, and you can take lots of pictures.

You can use this *Format memory card* menu selection to format the card or you can use external camera controls. Since

this is an initial configuration section, let's also look briefly at how to format a card using the external camera controls. I use this method to format memory cards because it's faster and easier than the menu method.

Referring to *figure 3A*, do the following steps to format a card with camera buttons:

- Hold down the *Delete* and *Metering* buttons at the same time until you see the word *For* and the image count number flashing in the top control panel LCD.
- Briefly release and reapply the *Delete* and *Metering* buttons again, and the memory card formatting operation will take place.

Notice how the *Delete* and *Metering* buttons have a dual purpose. They



Figure 3 – Format memory card



Figure 3A – External camera controls to format a memory card



Figure 4 – Selecting the Standard (SD) Picture Control

normally control image deletion and metering functions, but if you hold both down at the same time, for several seconds, the format function is activated.

Now, let's move to the *Shooting Menu* for several important configuration changes.

Shooting Menu – Set Picture Control

Later, in chapter 6, “Shooting Menu,” I’ll cover picture controls in detail, including how to use the Nikon picture controls to create new custom picture controls that you can use and share with others. For now, until you get a sufficient

understanding of picture controls, let’s select one for initial use.

Using the menu screens in *figure 4*, select the SD-Standard picture control:

- Press the *MENU* button and scroll to the *Shooting Menu*.
- Select *Set picture control*, and then scroll to the right.
- Select *SD-Standard* from the menu, and then press the *OK* button.

This SD picture control sets your camera up for medium contrast and color saturation for a look resembling Fuji Provia 100F slide film or Kodak Gold



Figure 5 – Selecting JPEG fine image quality with menus



Figure 5A – Selecting JPEG fine image quality with external controls

100. This setting is a good starting point for how your camera captures contrast and color, with enough contrast for solid blacks and sufficient color saturation for a realistic look in skin tones and foliage. Later you can experiment with the other controls and make more informed choices. This is a good “starter” *picture control* to use until you understand the others more fully.

Shooting Menu – Image Quality

If you’re new to digital photography and are not experienced with post-processing images later in the computer, or if you have no interest in working on images after the fact, you’ll need to select the *Image quality - JPEG fine* setting. This setting allows your camera to create excellent,

immediate-use images that are compatible with virtually all types of printing or display of images. The JPEG format is the standard basic final format for almost everything done in photography today.

In chapter 6, we’ll consider all the formats available in the D90, and even which are best to use for various types of photography. The JPEG fine format is the factory default for the D90, but I wanted you to know where it is located if you decide to change it. Here’s how (see the menu screens in *figure 5*):

- Press the *MENU* button and scroll to the *Shooting Menu*.
- Select *Image quality*, and then scroll to the right.
- Select *JPEG fine* from the menu, and then press the *OK* button.

You can set the image quality using external camera controls also. In fact, this is my preference. In *figure 5A*'s rightmost image you'll see a little box in the lower-left corner of the control panel LCD. When you hold the *QUAL* button and turn the rear main-command dial, you'll see the values scroll there.

Referring to *figure 5A*, why not give it a try on your D90. This is the fastest way to change formats.

Here are the steps to select *JPEG fine*:

- Press the *QUAL* button and hold it.
- Rotate the rear main-command dial until you see *FINE* appear on the left of the upper control panel LCD.
- Release the *QUAL* button.

Shooting Menu – Image Size

The Nikon D90 can shoot in three image sizes. I have never taken mine off of the *L-Large* setting since I have no need for smaller pictures. Here are the three options under *Image size*:

- Large – 4288 x 2848 – 12.2 megapixels
- Medium – 3216 x 2136 – 6.9 megapixels
- Small – 2144 x 1424 – 3.1 megapixels

Here are the steps to select the large size (see *figure 5B*):

1. Press the *MENU* button and select *Shooting Menu*.
2. Choose *Image size*, and then scroll right.
3. Choose the size of the image.
4. Press the *OK* button.

Shooting Menu – White Balance

White balance is a subject that few digital photographers fully understand. In chapter 6, I'll discuss the basic configuration of the white balance settings. Also, there is an entire chapter of this book, chapter 3, devoted to complete coverage of this very important subject.

For now, let's just validate that the default setting for white balance is *Auto*. This will allow your camera to make decisions about the ambient color of the light in which it finds itself. This will produce reasonably colored images initially, without harmful tints. Please take the time later to fully understand how white balance works. It will make you a better digital photographer.



Figure 5B – Selecting the large image size



Figure 6 – Selecting *White balance – Auto* with menusFigure 6A – Selecting *White balance – Auto* with external camera controls

Using the menus in *figure 6*, follow these steps:

1. Press the *MENU* button and scroll to the *Shooting Menu*.
2. Select *White balance*, and then scroll to the right.
3. Select *Auto* from the menu, and then scroll to the right.
4. Press the *OK* button.

When you get to the third screen with the color *Adjust* box, which lets you fine-tune the white balance, just press *OK*. (Leave the little black square directly in the center of the *Adjust* box.) This is a fine-tuning screen, and at this time, you may not have sufficient need or experience to adjust this. If you accidentally moved the little black square in the color *Adjust* box, just put it back in the center and press *OK*.

Also, you can use external camera controls to adjust which White balance mode you use. For now, stay with *WB A*, since the *A* icon represents *Auto*. In *Figure 6A* are the controls and steps used.

Follow these steps to set *WB* with the external controls (see *figure 6A*):

1. Hold down the *WB* button on back of the *D90*.
2. Turn the rear *Main* command dial, until the *WB A* shows on the upper control panel LCD.
3. Release the *WB* button.

The factory default is *A*, or *Auto*, but I want you to know where this important control is located for later use. Understanding and using the white balance settings are critical for consistently excellent images. (See chapter 3, “White Balance.”)