Exploring the CLS

CHAPTER 1

The components of the Nikon Creative Lighting System are any Nikon dSLR and the SB-800, SB-600, and SBR-200 Speedlights. Additional components include the SU-800 commander unit, and the R1 and R1C1 macro lighting kits. And, as with any new camera equipment, it is important to know how everything works and where all the controls are.

In this chapter you take a look and the main features and functions of the major components in the Nikon CLS, including the SB-800 and the SB-600. Additionally, this chapter also touches on some features and functions of the SU-800 wireless commander and the SBR-200 macro Speedlight kit. By the end of the chapter, you ought to have an in-depth knowledge of what all the buttons do and how to use the features of the CLS for the best results with your photography.

In This Chapter

Features of the Nikon Creative Lighting System

In this section you take a look at all of the available features of the Nikon Creative Lighting System. It's important to keep in mind that although at some level all of these features are available, not all of them are available with certain Speedlight and camera combinations.

Note

While all Nikon dSLR's can be used with the Nikon Creative Lighting System, not all features are available with every camera.

For specific information on what features are available, see the tables in the following pages to determine which features can be utilized with your Speedlight and camera combination.

- **iTTL.** Nikon's most advanced metering system, it uses pre-flashes fired from the Speedlight to determine the proper flash exposure. The pre-flashes are read by a 1005-pixel metering sensor. The information is then combined with the information from matrix metering, which is a reading of how much available light is falling on the subject. The Speedlight uses this information to decide how much flash exposure is needed to create a fill flash.
- **Flash Value lock.** The FV lock allows you to meter the subject, getting a reading for the proper flash exposure. Pressing and holding the FV lock button allows you to meter the subject, and then recompose the shot while maintaining the proper flash exposure for the subject.
- **Advanced Wireless Lighting.** This allows you to use your Speedlights wirelessly. The commander unit fires pre-flashes, which transmits information back and forth between the camera and the flash.
- **High-Speed Sync.** This allows you to use your flash at higher shutter speed than your camera body is rated for. You may want to use this feature when shooting outdoor portraits requiring a wide aperture and high shutter speed.
- **Wide-Area AF-assist Illuminator.** The SB-800 and SB-600 have a built-in LED that emits a light pattern to give the cameras AF something to lock onto. The LED pattern is wide enough to cover all eleven focus areas on the D200, D2X/s and the D2H/s.
- **Flash Color Information Communication.** As the flash duration gets longer the color temperature changes a bit. The SB-800 and SB-600 transmit this change to the camera body, ensuring a more accurate white balance.

SB-800

The SB-800 has many great features and offers a great deal of versatility when shooting with flash. As you no doubt already have the flash and have read the manual (or at least skimmed through it), you should know the basics about your Speedlight already. But, before you go much further, you should familiarize yourself with the Speedlight.

SB-800 specs and features

This section provides a brief look at different features that are available on the SB-800 Speedlight. It is important to note, however, that some features may not be available to use depending on the camera body you are using. For example, when using the D50 or D70/D70s the FP High Speed Sync feature is unavailable.

The features the SB-800 is capable of include

- **Guide Number.** 125 at ISO 100 on the 35mm setting. See your owner's manual for more specifics on GNs for specific zoom ranges.
- **Automatic zooming flash-head.** Provides lens coverage from 24mm up to 105mm, 14mm with the included wide-angle adaptor.

- **i-TTL.** Supports i-TTL, D-TTL, TTL, and full Manual operation.
- **Advanced Wireless Lighting.** This allows you to control up to three different groups of Speedlights in TTL, AA, A, or M mode.
- **Slow Sync.** Enables you to match the ambient background lighting with the flash so the background doesn't end up black.
- **Red-eye reduction.** Fires off a pre-flash to contract the pupils to avoid "devil-eyes."
- **AF-Assist light.** Emits an array of light from an LED to assist in focusing in low-light situations.
- **FP High-Speed Sync.** Allows you to shoot with a shutter speed higher than the rated sync speed of the camera. This is useful when shooting portraits in bright light using a wide aperture to blur the background.
- **Flash Value lock.** Using the FV lock you can get a reading from your subject then recompose the shot while retaining the original exposure.
- **Distance-priority Manual flash mode.** With this mode you put in the distance information and the aperture, the SB-800 adjusts the power level accordingly.
- **Modeling flash.** Releases a short burst of flashes allowing you to see what the light falling on your subject looks like.
- **Repeating Flash mode.** Fires off a specified amount of flashes like a strobe light.
- **Tilting/rotating flash-head for bouncing flash.** Allows you to point the flash-head up for bouncing light from the ceiling or to the side to bounce off of the wall. The SB-800 also allows you to tilt the head downward 7° for close-up subjects.

Understanding the Guide Number

Although the actual power of the flash is fixed, the Guide Number (GN) of the flash changes with the ISO setting of the camera and also varies with the zoom setting of the flash. This is due to the increased sensitivity of the sensor and the actual dispersion of the light when set to a specific zoom range. When the ISO is at a higher setting, the sensor is more sensitive to light, in effect making the flash more powerful, hence a higher GN.

Also, when the zoom is set to a wide-angle, the flash tube is set further back in the flash head, diffusing the light and giving it wider coverage. This makes the flash somewhat less bright, thereby warranting a lower GN.

Remember that the Guide Number is exactly that—a guide. In reality, it is nothing more than a number assigned by the manufacturer to assist you in obtaining the correct exposure. Refer to your owner's manual for a table with the GN of the Speedlight at the specific zoom ranges.

Main parts

The main parts of the SB-800 Speedlight are identified and discussed in the following sections. Figures and explanations of each part and feature are included so you have a clear understanding of how each is used.

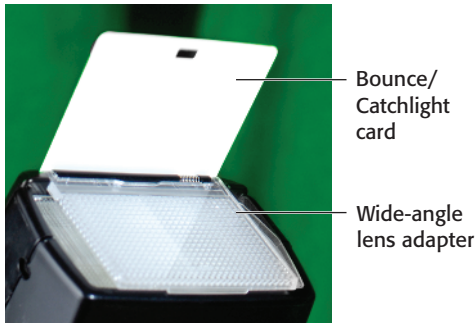
- **Flash head.** This is where the flashbulb is located. Inside is a mechanism that zooms the flashbulb back and forth to provide flash coverage for lenses of different focal lengths. The flash head is adjustable; it can be tilted upward to 90° and downward to 7°. It can also be adjusted horizontally 180° to the left or 90° to the right.

1.1 The front of the SB-800 Speedlight

- **Flash head lock release button.** This button releases the flash head lock allowing you to adjust the angle for bounce flash.
- **Battery compartment lid.** Slide this downward to open the battery compartment to change out the batteries.

1.2 The back of the SB-800 Speedlight

- **Light sensor for TTL wireless flash.** This sensor reads signals from Commander units enabling wireless flash.
- **Light sensor for automatic non-TTL flash.** This sensor reads the light reflected off of the subject telling the flash when to shut off when operating in AA (aperture automatic mode), or A (non-TTL automatic mode).
- **AF-assist illuminator.** Emits an LED light array to achieve focus in low-light situations.
- **External power source terminal.** Nikon's optional external power sources can be plugged in to this terminal, these power sources include the SC-7 DC unit, the SD-8A high performance battery pack, and the SK-6/SK-6A power bracket unit.
- **Flash head tilting angle scale.** Allows you to set the flash head at 45°, 60°, 75°, or 90° tilt.
- **Modeling flash illuminator button.** Fires the flash repeatedly to allow a preview to what the shadows and lighting looks like on the subject.
- **LCD panel.** This is where all of the Speedlight settings and controls are viewed.
- **Control buttons.** These are used to set and change setting on the Speedlight.
- **Ready light.** Lights up indicating the Speedlight is ready to fire. After the Speedlight is fired this light blinks until the Speedlight is fully recycled and ready to fire again.
- **Mounting foot locking lever.** Locks the Speedlight into the hot shoe or the AS-19 Speedlight stand.
- **Wide-angle lens adaptor.** This built-in diffuser provides you with the ability to use the Speedlight with a lens as wide as 14mm without having light fall-off at the edges of the image.



1.3 Wide-angle lens adaptor and built-in catchlight card

- **Bounce or Catchlight card.** This white card reflects light down into the eyes providing a catchlight when the flash is used in the bounced position.
- **TTL multiple flash terminal.** This is used for linking more than one flash together using TTL metering; requires a Nikon TTL flash cord such as the SC-27, SC-26, SC-19, or SC-18.

1.4 TTL multi-flash terminal (top) and PC sync terminal (bottom)

- **PC sync terminal.** This is used for linking more than one flash unit in non-TTL mode, usually in manual mode.
- **External AF-assist contacts.** These contacts are for use with the optional SC-29 TTL remote cord. This allows you to use the AF-assist beam when using your flash off camera.

1.5 External AF-assist contacts and the hot shoe mounting foot

- **Hot shoe mounting foot.** This slides into the hot shoe on your camera body and locks down with a lever.
- **Flash head rotating angle scale.** This enables you to rotate the flash head horizontally left 30°, 60°, 90°, 120°, 150°, and 180°. To the right it can be adjusted 30°, 60°, and 90°.

1.6 Flash head rotating angle scale

Control buttons

There are several control buttons on the SB-800 and you should know what each of them does in order to get the best results from your Speedlight. Some of them are obvious, like the On/Off button, but others control the menus you select. You need to know how to navigate your Speedlight.

1.7 SB-800 control panel

- **Multi-selector button.** This main button can be pressed up and down, left and right, or in the center.
  - **Up and down.** Labeled as + for up and – for down, these buttons allow you to move up and down in the menu, which displays on the LCD when the Speedlight is turned on. Use them to select from the various menu items.
  - **Left and right.** The left button is labeled with three small trees, symbolizing wide angle. The right button has one large tree, which indicates telephoto. The buttons are used to change the zoom of the flash head for different lens coverage from 24mm wide angle to 105mm telephoto.
  - **Select.** The center button is the Select button. This button is used to select an item to be highlighted for change after using the up and down buttons to navigate to the item. Press the Select button for two seconds to get to the Custom Settings Mode (CSM). CSM is used to set up specific functions of the SB-800, such as the wireless flash modes, ISO settings, the power zoom function, and many other things.

The Custom Settings Menu and the specific functions you can control are covered in detail in Chapter 2.

- **The On/Off button.** This button does just what it says it does. Press it for about a half a second to turn the Speedlight on or off.
- **The Flash button.** Press this button to test fire the SB-800 to ensure it is functioning properly or to take a test reading using a hand held flash meter
- **The Mode button.** The mode button is used to cycle through the LCD menu among the different flash modes of the SB-800 Speedlight. The different modes are:
  - **TTL BL – i-TTL balanced fill flash.** The exposure is determined by the camera and matched with the ambient light.
  - **TTL – i-TTL flash.** The exposure is determined by the camera to sufficiently illuminate the subject that is focused on.
  - **AA – Auto Aperture.** An aperture-based automatic mode. You enter the aperture value and the Speedlight determines the flash power.
  - **GN – distance based automatic mode.** You enter the distance to the subject and the Speedlight determines the flash power.
  - **M – full manual mode.** You determine the flash power by using the guide number of the flash and dividing this number by the distance of the Speedlight from the subject, with the quotient being the aperture to which you need to set your camera. You can also use a flash meter to determine the flash and camera settings.

Depending on which camera and lens you are using, all of the SB-800 flash modes may or may not be available.

In addition to the standard buttons on the back of the Speedlight, there are some functions that can only be accessed by pressing two buttons at the same time:

- **Mode and Select.** When these two buttons are pressed in conjunction, the SB-800 shows what the underexposure level was when using the i-TTL flash mode. This is shown as a numeric value on the LCD, such as 1.7 ev.
- **Mode and On/Off.** Pressing these two buttons simultaneously for two seconds resets all settings to the default factory settings. Refer to your owners manual if you aren't sure what the default settings are.
- **On/Off and Select.** Pressing these two buttons together locks all of the buttons of the flash to prevent the accidental change of settings. The Flash button and the Modeling Light button are not affected by locking the buttons.

SB-800 accessories

Along with the SS-800 soft case for storing and carrying your SB-800, other important accessories include

- **SD-800 quick recycle battery pack.** This allows faster recycle time by adding an additional battery.
- **AS-19 Speedlight stand.** Enables you mount your SB-800 to a stand or tripod, but it also makes it easier to stand the Speedlight on a flat surface.
- **SJ-800 colored filter set.** The set includes tungsten and fluorescent filters for matching the flash to ambient light, and it also includes red and blue for special effects.
- **SW-10H diffusion dome.** The dome softens the flash output resulting in more natural looking shadows.

SB-600

The SB-600, while not as feature-rich as the SB-800, still has many features that you will find useful in when shooting with flash. As with the SB-800, you've likely got the flash in hand and have at least skimmed through the manual. At this point, you are probably familiar with the basic features of your Speedlight. The material in the next few sections gives you a better idea of not only what the features are, but also why they are important.

SB-600 feature overview

The SB-600 has less features and a lower Guide Number than the SB-800, but it's still a great flash. Most of the missing features are shooting modes that you may find aren't necessary to have. And, although the GN is lower, the SB-600 is still a powerful flash. Firing the SB-600 at full power using an aperture of f/2.8 it's possible to get a fairly well lit shot at almost two hundred and fifty feet.

This section provides a brief look at different features that are available on the SB-600 Speedlight. It is important to note, however, that some features may not be available to use depending on the camera body you are using. For example, when using the D50 or

D70/s the FP High Speed Sync feature is unavailable.

- **Guide Number.** 125 at ISO 100 on the 35mm setting. See your owner's manual for more specifics on GNs for specific zoom ranges.
- **Automatic zooming flash-head.** Provides lens coverage from 24mm up to 105mm. 14mm with the included wide-angle adaptor.
- **i-TTL.** Supports i-TTL, D-TTL, TTL, and full Manual operation.
- **Slow Sync.** Enables you to match the ambient background lighting with the flash so the background doesn't end up black.
- **Red-eye reduction.** Fires off a pre-flash to contract the pupils to avoid "devil-eyes."
- **AF-Assist light.** Emits an array of light from an LED to assist in focusing in low-light situations.
- **FP High-Speed Sync.** Allows you to shoot with a shutter speed higher than the rated sync speed of the camera. This is useful when shooting portraits in bright light using a wide aperture to blur the background. Works with D200, D2X, and D2H camera bodies.
- **Modeling flash.** Releases a short burst of flashes allowing you to see what the light falling on your subject looks like. Works with D200, D2X, and D2H camera bodies.
- **Tilting/rotating flash head for bouncing flash.** Allows you to point the flash head up for bouncing light from the ceiling or to the side to bounce off of the wall.

Main parts

Even though the SB-600 Speedlight is similar to the SB-800, it is still important to go over each of the important parts of the equipment. I've included figures and explanations of the parts and features to give you a better understanding of how each is used.

- **Flash head.** This is where the flashbulb is located. Inside is a mechanism that zooms the flashbulb back and forth to provide flash coverage for lenses of different focal lengths. The flash head is adjustable; it can be tilted upward to 90°. It can also be adjusted horizontally 180° to the left or 90° to the right.
- **Flash head lock release button.** This button releases the flash head lock allowing you to adjust the angle for bounce flash.
- **Battery compartment lid.** Slide this downward to open the battery compartment to change out the batteries.
- **Light sensor for TTL wireless flash.** This sensor reads signals from Commander units enabling wireless flash.

- **Wireless remote ready light.** Works as a ready light when the SB-600 is being used as a remote flash.
- **AF-assist illuminator.** Emits an LED light array to achieve focus in low-light situations.
- **Flash head tilting angle scale.** Allows you to set the flash head at 45°, 60°, 75°, or 90° tilt.
- **LCD panel.** This is where all of the Speedlight settings and controls are viewed.

1.8 The front of the SB-600 Speedlight

1.9 The back of the SB-600 Speedlight

- **Ready light.** Lights up indicating that the Speedlight is ready to fire. After the Speedlight is fired this light blinks until the Speedlight is fully recycled and ready to fire.
- **Control buttons.** Used to set and change setting on the Speedlight.
- **Mounting foot locking lever.** Locks the Speedlight into the hot shoe or the AS-19 Speedlight stand.
- **Wide-angle lens adaptor.** This built-in diffuser provides you with the ability to use the Speedlight with a lens as wide as 14mm without having light fall-off at the edges of the image.

1.10 Wide-angle lens adaptor

- **External AF-assist contacts.** These contacts are for use with the optional SC-29 TTL remote cord. This allows you have the AF-assist beam when using your flash off camera.

1.11 External AF-assist contacts and the hot shoe mounting foot

- **Hot shoe mounting foot.** This slides into the hot shoe on your camera body and locks down with a lever.
- **Flash head rotating angle scale.** Enables you to rotate the flash head horizontally left 30°, 60°, 90°, 120°, 150°, and 180°. To the right it can be adjusted 30°, 60°, and 90°.

1.12 Flash head rotating angle scale

Control buttons

You should know what each of the various control buttons on the SB-800 Speedlight can do to get the best results. The following sections describe them.

1.13 SB-600 control panel

- **The On/Off button.** Press the on/off button for about a half-second to turn the SB-600 on or off.
- **The Flash button.** Press this button to test fire the SB-600 to check for output.
- **The Zoom button.** Pressing this button changes the zoom of the flash head to adjust for different focal length lenses. It allows coverage for 24mm to 85mm lenses. 14mm coverage is achieved with the built-in wide angle diffuser.
- **The +/- buttons.** The +/- buttons are used to change the values and settings on the SB-600 LCD screen. Depending on the flash mode the values and settings will be different.
  - **TTL/TTL BL.** The +/- buttons allow you to set the flash compensation of the Speedlight to underexpose or overexpose from the camera's TTL reading. The flash compensation can be set +/- 3 stops in ⅓ stop increments.
  - **M.** The +/- buttons are used to set the flash exposure manually from 1/1 to 1/64. These settings are also adjustable in ⅓ stop increments.
  - **CSM.** When in the custom settings mode, the +/- buttons are used to cycle through the different custom settings.

The Custom Settings Menu is covered in detail in Chapter 2 Setting up the SB-800 and SB-600.

- **The Mode button.** The mode button allows you to switch between the available flash modes. The modes available with the SB-600 are:
  - **TTL BL – i-TTL balanced fill flash.** The exposure is determined by the camera and matched with the ambient light.
  - **TTL – i-TTL flash.** The exposure is determined by the camera to sufficiently illuminate the subject that is focused on.
  - **M – full manual mode.** You determine the flash power.

Depending on which camera and lens you are using, all of the SB-600 flash modes may or may not be available.

In addition to the standard buttons on the back of the SB-600 Speedlight, there are some functions that can only be accessed by pressing two buttons at the same time:

- **Zoom and Mode.** When the Zoom and Mode buttons are pressed simultaneously, the underexposure value from the TTL reading is displayed.
- **Mode and On/Off.** Pressing Mode and the On/Off button together resets the SB-600 settings to factory default. You may need to do this if you've changed the settings and have forgotten what changes you've made.

- **Mode and minus.** When the mode button and the - button are pressed in conjunction the control buttons are locked to prevent any accidental changes to the settings.

The lock does not affect the flash button and the On/Off button.

- **Zoom and minus.** Pressing the Zoom button and the – button together switches to the Speedlight to the Custom Settings Mode (CSM).

The Custom Settings Menu is covered in detail in Chapter 2.

SB-600 accessories

While the SB-600 doesn't have as many accessories as the SB-800, it does still come with the SS-600 soft case for storage and carrying as well as an AS-19 Speedlight stand, which not only allows you mount your SB-800 to a stand or tripod, you can also use it stand the Speedlight on a flat surface.

Other Components of the Creative Lighting System

You have your SB-800 and SB-600 Speedlights, but what else might you need to round out your CLS? These two elements are a great start, but that isn't all there is to the Nikon Creative Lighting System. However, the components of the Nikon Creative Lighting System are hard to define as a whole. For example, the camera body is an integral part of CLS and, you can use CLS-compatible Speedlights with non-compatible camera bodies, so the line gets a little blurred.

Your D50, D70/D70s, D80, D200, D2H/D2Hs, D2X/D2Xs, or F6 camera body works great with the Speedlights. However, even if your camera is CLS compatible, that doesn't mean it supports every available feature of the Speedlight, as explained in the earlier sections of this chapter. Be that as it may, if you use any of the camera bodies I've mentioned with any of the Speedlights in the following list, you have some, if not all, of the features of Nikon's CLS.

- SB-800 Speedlight
- SB-600 Speedlight
- SU-800 Wireless Speedlight commander
- SBR-200 Wireless Remote Speedlight
- R1C1 Close-up Speedlight commander kit
- R1 Close-up Speedlight remote kit

Camera compatibility

Some camera bodies only allow certain features to be used with CLS. Table 1.1 shows which functions are supported by each different camera.

Table 1.1
Nikon CLS Camera Compatibility

Camera Model or Series	*CLS Feature*	*Details*
D50	i-TTL flash	Available with the built-in Speedlight, SB-800, and SB-600
	i-TTL balanced fill flash	Available with the built-in Speedlight, SB-800, and SB-600
	Auto aperture	Available only with the SB-800 and an autofocus lens
	Non-TTL Auto	Available with the SB-800
	Distance priority manual	Available with the SB-800
	Wide Area AF-assist illuminator	Available with the SB-800, SU-800 and SB-600
D70/D70s	i-TTL flash	Available with the built-in Speedlight, SB-800, and SB-600
	i-TTL balanced fill flash	Available with the built-in Speedlight, SB-800, and SB-600
	Auto aperture	Available only with the SB-800 and an autofocus lens
	Non-TTL Auto	Available with the SB-800
	Distance-priority manual	Available with the SB-800
	Built-in Speedlight acts as a wireless remote commander	
	Flash Value (FV) lock	
	Wide Area AF-assist illuminator	Available with the SB-800, SU-800 and SB-600
D200	i-TTL flash	Available with the built-in Speedlight, SB-800 and SB-600
	Auto aperture	Available only with the SB-800 and a CPU lens
	i-TTL balanced fill flash	Available with the built-in Speedlight, SB-800 and SB-600
	Non-TTL Auto	Available with the SB-800
	Distance priority manual	Available with the SB-800
	Built-in Speedlight acts as a wireless remote commander	

Camera Model or Series	*CLS Feature*	*Details*
	Flash Value (FV) lock	
	Auto FP high-speed sync	Available with the SB-800 and SB-600
	Wide Area AF-assist illuminator	Available with the SB-800, SU-800 and SB-600
D2X/D2Xs and D2H/D2Hs	i-TTL flash	Available with the SB-800 and SB-600
	Auto aperture	Available with the SB-800
	i-TTL balanced fill flash	Available with the SB-800 and SB-600
	Non-TTL Auto	Available with the SB-800
	Distance priority manual	Available with the SB-800
	Flash Value (FV) lock	Available with the SB-800 and SB-600
	Auto FP high-speed sync	Available with the SB-800 and SB-600
	Wide Area AF-assist illuminator	Available with the SB-800, SU-800 and SB-600

Even though each camera doesn't offer full functionality of the CLS features that each Speedlight offers, there are some caveats, as the next sections explain.

D50

With the D50, just because you can't use the built-in Speedlight as a remote commander doesn't mean you can't use advanced wireless lighting. The SB-800 or the SU-800 can be used as the commander for wireless remote Speedlights.

D70/D70s

Although the D70/D70s does allow you to use the built-in Speedlight as a commander, it is somewhat limited. When used as a commander, the built-in Speedlight does not produce enough light to add to the exposure (this can be good or bad). It allows you to use as many remote Speedlights as you need, but all of the remote units can be used as only one group. Therefore, any exposure compensations you want to make has an effect on all of the Speedlights in the group.

Considering the price of the D70/D70s, this is still an amazing and useful feature. Being able to command even one off-camera Speedlight without the purchase of any additional accessories (other than camera and flash) is a great deal.

There are ways to lessen the exposure of one Speedlight in a group, such as moving it further away from the subject. The other drawback to using the D70/D70s built-in Speedlight as a commander is that it only allows you the option of using one channel. When using the Advanced Wireless Flash different channels can be used to transmit the information to the remote Speedlights. Therefore, in a competitive shooting environment, if someone near you is using the D70 to fire an off-camera flash, their flash will set off yours and vice-versa. As with the D50, when used in conjunction with an SB-800 or SU-800 the full range of advanced wireless lighting options are available including access to multiple channels.

While the D70/D70s do support FV lock, to gain this control you need to access the camera's Custom Settings Menu. In the CSM you can select the AF/AE lock button to act as the FV lock when a Speedlight is attached.

D200

Like the D70, the D200's built-in Speedlight can be used as a wireless remote commander. The D200's built-in Speedlight is a lot more flexible than that of the D70. It allows you to use any number of Speedlights in two groups on four channels. The D200 also allows you the option of using the built-in Speedlight to add to the exposure when acting as a commander.

To achieve the FV lock feature, the D200's function button must be set in the camera's Custom Settings Menu.

The D200 offers the full range of CLS features when used with the SB-800 and a CPU lens, with the added benefit of a built-in wireless commander—something that the D2-series, which is much more expensive, does not provide. With any camera in the D2 series you have to use either an SU-800 or an SB-800 to use the advanced wireless lighting.

D2X/D2Xs and D2H/D2Hs

You are in luck with the D2 series of cameras when using the SB-600 or SB-800 Speedlights. Not only are they the top of the Nikon camera line, they support all available functions of the SB-600 and SB-800.

SU-800 Commander

A Commander unit is what tells the remote Speedlights when to fire. It also reads the data provided by the remote Speedlights pre-flashes and relays the information to the camera body for use in setting the exposure levels.

The SU-800 is an infrared wireless commander for the Nikon Creative Lighting System. It functions in much the same way as the SB-800 does in Commander mode except that it doesn't emit any visible light. The SU-800 Commander has four independent channels, so if you are working near other photographers you can work on different channels so someone else's SU-800 Commander won't set off your flashes.

It slides into the hot shoe of your camera like any other Speedlight and is used to wirelessly control the SB-800, SB-600, or SBR-200 flashes. Each channel can be used to control up to three groups of flashes. From the SU-800 or SB-800 you can control the output of each group individually. You can set each group to TTL, A, or M in order to fine-tune the lighting to suit your needs.

SBR-200 Speedlight

The SBR-200 is a dedicated macro Speedlight. With macro flash photography it's best to get your flash on axis, or on the same level as the subject. In macro photography, your lens is usually very close to your subject, which ends up blocking the light from an on-camera shoe-mounted flash. This is where lens-mounted flashes come in.

The SBR-200 Speedlight is attachable to your lens via the SX-1 attachment ring. The SX-1 is sold separately from the SBR-200, or you can buy a kit that includes it. Nikon offers two versions of the kit:

- **R1C1 kit.** This kit includes two SBR-200 Speedlights, an SU-800 Commander, and the SX-1 attachment ring.
- **R1 kit.** This kit includes two SBR-200 Speedlights and the SX-1 attachment ring.

The SBR-200 can't be mounted to a hot shoe and fired from the camera. It can only be controlled with the SU-800, the SB-800, or by the on-camera Speedlights of the D200 and the D70/D70s.

Cross-Reference *More macro lighting techniques are covered in Chapter 6.*

1.14 Nikon D200 with SU-800 commander with two SBR-200 macro Speedlights