



# **IAM** FULL OF POSSIBILITIES



I AM THE NIKON TOTAL DIGITAL IMAGING SYSTEM iamnikon.com

# The Nikon Total Digital Imaging System: Let your imagination be your guide

Nikon is proud to bring you its latest incarnation of the Nikon Total Digital Imaging System, full of photographic excitement, answers and inspiration. Within these pages you will find everything you need to realize your present ideas and inspire new ones. Whether you are a seasoned professional or a passionate weekend shooter, we are confident that the contents of this brochure can help you craft better images. Every item is designed specifically to work with Nikon cameras, which means a seamless performance that truly brings out the best in you and your Nikon D-SLR. Got an idea? Make it happen. Here's where you start.



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This image was achieved via the Creative Lighting System and the photographer's imagination. Two Speedlight units that support Advanced Wireless Lighting (one in the kayak and one from above) were wirelessly triggered with a properly positioned SU-800 to send command signals to both remote units.

© Joe McNally



# Why more light?

# Nikon Creative Lighting System: Easily accomplish studio quality photographs virtually anywhere

It's easy to understand the need for a flash in low-light shooting scenarios, but Nikon Speedlights are also extremely helpful in daytime situations with bright sunlight and deep shadow. The additional light helps cameras capture what our eyes see so well. It's easy to forget that the human eye is a remarkable optical instrument, registering levels of contrast between highlight and shadow impossible for cameras to detect. With additional light at your command, you can fill in the shadows and reduce the contrast you see to within the range that your camera's image sensor can record. The camera's built-in flash is often suitable, but the direct, frontal light can be too harsh for fine detail, leaving some images with flat,



A model in shadow against a bright background photographed without Speedlight. Matrix metering. No exposure compensation. Exposure is well balanced, but the picture lacks impact.



with one off-camera Speedlight. Notice the richer, more saturated color. The Speedlight fired from camera left in an angled position (45°) to create depth

Opposite page: A third Speedlight is employed here from behind the model Attached to the supplied Speedlight stand on the ground, The Speedlight's flash head is tilted 45° upward. This third light creates the shimmering light around her hair and shoulders and helps separate her from the background. © Joe McNallv



overexposed areas. A simple wireless, off-camera flash from the side, however, provides added depth as well as smooth, rounded tones from highlight to shadow (as shown in the center picture below). Perhaps the most powerful argument for additional light is aesthetic: one or more strategically placed Speedlights can transform the mood of your photograph in ways available light is unable to. Speedlights can guickly and easily turn taking snapshots into creating images that reflect the original meaning of the word "photography" - drawing with light. Turn wherever you are into your own personal studio. Working seamlessly and wirelessly with your Nikon D-SLR, the Nikon Creative Lighting System makes it easy.





Adding a second Speedlight from above and bouncing it off of a reflector from below. Strong shadow from the model's neck is removed.



© Kathy Wolfe

# See what just one Speedlight can do

# Beautiful soft light *bounced off* a wall

"Kids have their own agenda, even while I'm shooting," says child photographer Kathy Wolfe, "one of the key principles of photographing children is speed." Wolfe has to find quality light fast or quickly create her own when needed, such as when in a low-lit room while her child models remain

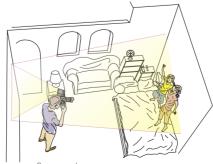


Wireless remote flash from the right side of the camera erases unwanted shadows cast on the wall by the window light from the left. © Kathy Wolfe

cooperative. The light and remarkably portable Nikon Speedlights are always in her camera bag. How she works with the Nikon Creative Lighting System (CLS) is simple but what she gets is significant. She tilts the flash head of a hotshoed Speedlight toward a white wall for a bounce-flash effect. This simple act can transform harsh light into a soft, smooth glow. Any large, white surface can act as an impromptu light-softening device — a simple technique that results in richer colors like those you see here. Wolfe almost always uses the i-TTL flash mode. That way the innovative Creative Lighting System calculates ideal flash exposures for her automatically, frame after frame, allowing her to concentrate on capturing the moment.



The Speedlight's flash bounces off the large white wall behind the photographer, wrapping this low-lit room with soft light.



On-camera bounce

# One strong light *from outside* a window

World-renowned photojournalist Joe McNally has some advice when taking pictures. "The most important thing is to first see the picture in your mind's eye," he says, "Everything comes naturally from there, such as where to place the camera and how to light your subject." While shooting high-school athletes in a



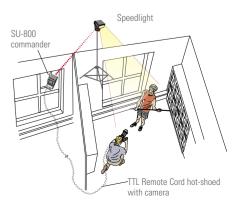
Even with a single Speedlight, countless combinations of subtlety and nuance can be explored. © Joe McNally

locker room, Joe envisioned a picture of his subject in golden, late afternoon light. To create the right environment, he positioned a camera low using a wide-angle lens. Then, he placed one Speedlight outside the window, distanced far enough to create deep shadows across the lockers. Using a Color Filter in order to warm the light appropriately and zooming the flash head to 200mm to concentrate the light on the athlete, McNally recreated the shooting situation that he'd first constructed in his imagination. The picture above looks like it was taken in the natural light of a late afternoon, but in actuality was shot using a Nikon Speedlight, helping to maintain "Golden Hour" lighting for as long as desired. With just one Speedlight, the level of nuance to explore is astounding.

© Joe McNally



Use your surroundings as a light-shaping tool: a Speedlight placed outside the window recreates warm, late afternoon light.





© Cliff Mautne

# Magnify your potential with multiple Speedlights

### Secondary flash *from behind* for a beautiful halo of light

"In order to capture important events as they happen without distractions, a wedding photographer must be flexible and unobtrusive." Helpful words from Cliff Mautner, one of the profession's most respected practitioners. How he uses the Nikon Creative Lighting System is

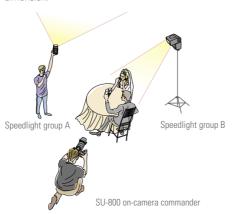


Main light from the camera's left illuminates the bride's face. A second light from behind the subject reveals details in the veil © Cliff Mautner

both simple and strategically effective. All he needed to create texture, dimension and mood in the image above was an off-camera flash fired from the left side of the frame. Wireless control and i-TTL make it easy. To get soft light in situations where reflectors or a white ceiling are not an option, Cliff tilts the flash head 90 degrees upward — or even backward - to "feather" the light, softening a harsh flash to fit the scene beautifully. This way he adds just the right amount of light to show the clear ridge of the bride's profile in the picture above. To open up the shadows in the bride's veil, he introduces a second light from behind. This is set in a different group than the main flash, which means that he can turn it on and off from his camera seamlessly, and without disturbing his subject.



One remote unit is handheld by a photographer's assistant at an angled position, creating texture and dimensior



### Small, precise lighting around the subject to reveal detail

"I am addicted to light. It never stops surprising me," says still life photographer Yves Paternoster, "It truly is a game of inches, changing the look and mood of my pictures depending on where I place it." As a studio shooter, Paternoster likes to take the kind of light you find outdoors and use it inside a studio environment, replicating natural light by creative use of flashes. The Close-up Speedlight Commander Kit R1C1 does this and more. "It makes me creatively brave," he says, adding "Well, I feel that it



can make anyone creatively brave." The SB-R200 flash units that work with

Taken with one Speedlight

© Yves Paternoste

around with light freely by handholding the unit in different positions to get exactly the effect they want. Although he was satisfied with a particular flower picture taken with a single flash unit, he decided to explore different possibilities by introducing a second light source. What he did was simple, but what he achieved was a powerful new alternative shot, as you can see above. While intuitive control is a big advantage of the system, the ability to control light precisely — as required in normal studio lighting — is of great importance. As you can see from the picture on the right, the R1C1 plus three additional SB-R200 units let you illuminate exactly where you want on very small objects. The system is like a portable pocketsized studio, but the level of precision

© Yves Paternoste

can still amaze even seasoned studio photographers.



laving with light; here, in addition to the small SB-R200 above, another SB-R200 is handheld to illuminate the flowers from below



the SU-800 are small and wireless, so photographers like Paternoster can play

# Many features, unl imited possibilities



i-TTL balanced fill flash © Joe McNallv

#### The same scene taken without flash

i-TTL balanced fill-flash

#### Just the right amount of light for well-balanced foreground and background exposure

Incredibly useful in varied or unpredictable lighting, the innovative i-TTL system delivers consistently accurate flash exposures automatically. Whenever your Nikon digital SLR is set to either 3D color matrix metering II/III or center-weighted

> metering, your Speedlight automatically readies i-TTL to deliver balanced fill-flash. In this mode, a monitor pre-flash fires microseconds before the actual flash, accurately informing the Speedlight on the latest scene information. Even for difficult scenes such as backlit subjects, the flash comes through with well-balanced exposures across the frame and avoids overexposing the subject.

to shoot at much faster shutter speeds — as high as your camera is capable of — enabling the use of larger apertures such as f/2.8 for a beautifully shallow focal plane, which looks great in portraits. High-speed sync also works when stopping action



Auto FP high-speed sync for shallow depth-of-field © Kathy Wolfe

Normal sync for deep depth-of-field

### Flash Value (FV) lock

at high noon.

#### Maintain flash exposure in constantly changing lighting conditions

The FV lock helps you maintain the same flash value for correct exposures during a sequence of photographs. This allows you to zoom in on your subject, change the composition or adjust the aperture, all without altering your intended exposure. The



pictures here were taken using FV lock. Notice how the flash output value remains the same, even when a highly reflective surface (of the train) enters the frame. This way you can concentrate on capturing your subject without worrying about adjusting your subject's lighting.



Rear-curtain sync to fire flash at the end of the exposure © Joe McNally



Slow sync © loe McNall

Normal sync

#### **Speedlight and high ISO combination** Add a touch of quality light to your quantity of light

While many shooters praise the incredible power of Nikon's high ISO performance, it is worth noting the important difference between guality of light and guantity of light. While a high ISO can increase your shooting power in situations with a low quantity of light, high ISO alone cannot improve the quality of light. This is a job

for Nikon Speedlights. A simple flash can open up the shadows across a model's skin and draw our attention to her face as the photographer intended. A Speedlight working together with high ISO also allows you to illuminate faraway subjects with straight or bounce flash.



Flash output remains the same with EV lock activated

10 © Joe McNallv



#### **Rear-curtain sync**

#### Create a sense of motion with intended blur

When using rear-curtain sync mode, a flash fires at the very end of an exposure instead of at the beginning. When you are shooting at 1/30 second or slower, the image sensor soaks up the available light. Then right before the shutter closes, the flash fires to illuminate the main subject. As the name Speedlight implies, the flash fires very quickly, freezing the action of your main subject. Apply this to a moving subject, and the effect is eye-catching, giving the viewer a sense of movement through the combination of sharp features and intended blur.

#### Slow sync

#### Capture the ambient light with a slow shutter speed

When shooting a dimly lit scene with available light, a fast normal sync speed such as 1/250 second will expose your main subject but cannot properly expose the surroundings. If you use a shutter speed of 1/30 second or slower in any of the camera's exposure modes, the ambient illumination will be more naturally

balanced.



Flash fill-in and high ISO (1600) used together © Joe McNally

High ISO without using flash

# The Nikon Creative Lighting System

## **The Speedlight Lineup**



### **SB-910** Nikon's top-of-the-line Speedlight enables photographers to be

## more imaginative with their creative lighting

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100, D3000, COOLPIX P7100/P7000

- Fully compatible with Nikon Creative Lighting System
- Three illumination patterns (standard/even/center-weighted), with increased light distribution accuracy, are available to match every shooting environment
- Automatically detects Nikon FX and Nikon DX formats and selects suitable light distribution angles
- Power zoom function covers wide 17-200mm (in FX format) zoom range
- AF-assist illumination, compatible with multi-point AF system, covers wide 17-135mm focal length range
- New MENU button enables quick access to custom settings, while improved LCD panel GUI (graphical user interface) enhances operability
- Durable and heat-resistant, easy-to-use, hard-type color filters (fluorescent or incandescent) included
- Automatically detects color filter types and transmits filter information to camera for optimum white balance setting
- Guide number of 34 at 35mm or 53 at 200mm (FX format, standard illumination pattern, ISO 100, m, 20°C)
- Minimum recycling time: approx. 2.3 seconds with Ni-MH batteries
- Automatically detects increases in flash head temperature and controls recycling time accordingly, thus preventing overheating
- Compatible with SD-9 High-Performance Battery Pack



## SB-700

#### High-performance versatile Speedlight brings simplicity to oncamera, remote and multiple flash photography

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100, D3000, COOLPIX P7100/P7000

- Functions as a master or remote flash unit in Advanced Wireless Lighting
- Controls an unlimited number of Speedlights for up to two groups
- Offers four independent channels of wireless control up to 10 m for competitive shooting environments
- Quick wireless control mode allows control of flash output for two remote flash unit groups
- LCD and layout of controls designed for easy and intuitive operation
- Power zoom covers wide 24-120mm zoom range (Manual also available)
- Three illumination patterns (standard/even/center-weighted) are available
- Automatically detects Nikon FX and DX formats for suitable light distribution
- AF-assist illumination, compatible with multi-point AF system, covers wide
- 24-135mm focal length range
  Automatically detects type of hard-type color filters (fluorescent/incandescent) and adjusts camera's white balance
- User-applied firmware update function via Nikon D-SLR cameras
- Short recycling time
- Automatically detects increases in flash head temperature and controls recycling time accordingly, thus preventing overheating



#### **SB-400** Pocket-sized flash with bounce capabilities

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100, D3000, COOLPIX P7100/P7000

- Four available angles for bounce flash opportunities
- Flash exposure control set on the camera, such as slow sync, red-eye reduction
- Runs on two R6/AA-size batteries



Zoom head set to 200mm in order to strike the bride's face clearly. @ Cliff Mautner

## R1C1/R1 Close-up Speedlight Kit

# The ultimate Speedlight system for creative, wireless close-up photography

R1C1: Close-up Speedlight Commander Kit (SU-800, two SB-R200s and all the accessories)

R1: Close-up Speedlight Remote Kit (Two SB-R200s and all the accessories)

#### R1C1

- Up to three remote groups and four channels using SU-800 as a commander and SB-R200s as remote units can be arranged to enable creative lighting from the left, right, above or below your subject
- Settings are easily made and confirmed on the SU-800's LCD panel from the camera's position
- SB-R200 units can be tilted up to 60 degrees to accommodate lenses with short working distances
- \* There are limitations to usable lenses



#### **Flash Accessories**

external AF-assist illuminator





# SC-28/SC-29 TTL Remote Cord (1.5 m) AS The SC-28/SC-29 makes off-camera TTL The flash control easy and assured. With the as Nikon D-SLRs, the SC-29 also works as an D3

AS-15 Sync Terminal Adapter The AS-15 is compatible with cameras such as the D7000, D90, D5100, D5000, D3200, D3100 and D3000, which feature standard ISO-type accessory shoe but lack a sync terminal for large studio strobes.

-



### SB-R200 Wireless Remote Speedlight

Also available as a separate unit

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100, D3000

Two SB-R200 units are included with both the R1C1 and the R1. Each unit features a guide number of 10 (ISO 100, m) or 14 (ISO 200, m). When attached to a lens via the SX-1, the flash head can be tilted up to 60 degrees toward the optical axis of the lens or up to 45 degrees away.



## SU-800

#### Wireless Speedlight Commander

Also available as a separate unit

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100, D3000

Placed atop your Nikon D-SLR's hot shoe, the SU-800 acts as a commander for as many Speedlights as you desire.

#### R1C1/R1 Accessories



**AS-20 Speedlight Stand** 



SZ-1 Color Filter Holder



**Adapter Rings** 



SJ-R200 Color Filter Set



SG-3IR IR Panel for Built-in Flash





**SD-9 High-Performance Battery Pack** The SD-9 is an external power source for the SB-910/SB-900 Speedlight. It can hold up to two sets of four R6/AA-size batteries, ensuring a stable power supply for the SB-910/SB-900, greatly increasing the number of flashes, and reducing recycling time.

## **The Concept**

#### Innovative i-TTL flash control

Working photographers around the world are discovering how the Creative Lighting System (CLS) brings simplicity and realworld usability to both multiple-flash and single-flash photography. At the core of the innovation are Nikon's i-TTL flash control technology and the precision monitor pre-flash, which work together for accurate flash exposures. Here is how multiple wireless lighting works: with i-TTL mode activated, the master Speedlight that is hot-shoed to the camera will send signals to remote units, ordering them to pre-flash the scene. Through the lens, the camera analyzes what it sees in the scene, constantly adjusting the pre-flash output of independent remote units. Once it measures the correct exposure for the entire scene, it determines the flash output value — all from the centralized point-of-view of the camera. In nearly any lighting situation, i-TTL flash control will perform all the complex lighting calculations for you. The precise feedback information from Nikon's exclusive monitor pre-flash registers everything from available light and shadows to color temperature and reflective surfaces within the scene. The camera also integrates information from its built-in database of over 30,000 actual scenes to determine the ideal exposure. All of this happens within milliseconds before each shutter release. Whether on top of a camera or used as a wireless remote unit, CLS offers the most dependable and consis-

tent flash exposure in the business.

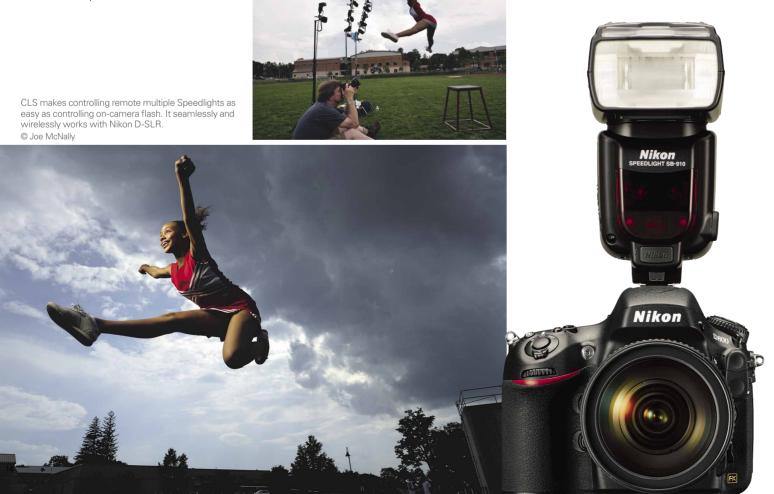
#### Advanced Wireless Lighting — intuitive, fluid operation of multiple remote Speedlights

One of the greatest benefits of CLS is that controlling multiple Speedlights is just as easy as controlling a single, on-camera Speedlight. What's more, the system is wireless, so setting up your Speedlights can be done guickly and smoothly no matter where you're shooting. From the master Speedlight connected to the hotshoe of your camera, you can control the flash output of up to three groups of wireless remote flash units, adding any number up to three Speedlight of Speedlights to each group. Simply set everything to Nikon's exclusive i-TTL for



Control all from the LCD panel of vour master Speedlight, Set the flash mode, turn Speedlight groups on or off and control the flash exposure compensation for aroups

accurate exposures in diverse lighting situations. You can also explore alternate exposures by using the master flash unit to adjust the flash exposure compensation of individual Speedlight groups. Turn off any of the Speedlight groups, or for more direct control you can fluidly switch from i-TTL to manual. All operations can be achieved easily via the LCD panel on the master Speedlight, and all of these are possible without ever leaving your camera. Multiple Speedlight control has never been this intuitive or fluid. No other lighting system comes close.

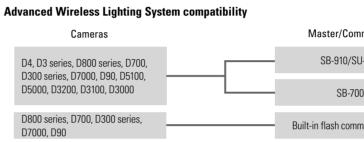


## **Speedlight Compatibility**

#### Speedlight/Features compatibility

	SB-910	SB-700	SB-400	SB-R200
i-TTL balanced fill-flash	•	•	•	•*2
Advanced Wireless Lighting	•	•		*2
Auto FP high-speed sync*1	•	•		•*2
FV lock*1	•	•	•	•* <sup>2</sup>
AF-assist illumination for multi-point AF	•	•		
Flash Color Information Communication	•	•	•	•* <sup>2</sup>
Switching illumination patterns	•	•		
FX/DX selection	•	•		
Firmware update capability	•	•		

\*1 Not available with D5100, D5000, D3200, D3100 and D3000. \*2 Activated by the commander function of SB-910, SB-700, SU-800, D800 series, D700, D300 series, D7000 and D90.



#### **Specifications**

	SB-910	SB-700	SB-400
Guide number (ISO 100/200, m, 20°C)	34/48 (at 35mm zoom head position, in FX format, standard illumination pattern)	28/39 (at 35mm zoom head position, in FX format, standard illumination pattern)	21/30
Light distribution angle (in FX format)	Power zoom 17-200mm; 12mm with built-in wide-flash adapter	Power zoom 24-120mm; 12mm with built-in wide-flash adapter	27mm
Illumination pattern	3 illumination patterns (standard/even/center-weighted)	3 illumination patterns (standard/even/center-weighted)	—
Flash mode	i-TTL, Auto aperture, Non-TTL auto, Distance-priority manual, Manual, Repeating flash	i-TTL, Distance-priority manual, Manual, Repeating flash*	i-TTL, Manual (not available with D3 series)
Minimum recycling time (manual at full)	Approx. 2.3 seconds (with Ni-MH batteries)	Approx. 2.5 seconds (with Ni-MH batteries)	Approx. 2.5 seconds (with Ni-MH batteries)
Number of flashes (manual at full)	Approx. 110 (with alkaline batteries)	Approx. 160 (with alkaline batteries)	Approx. 140 (with alkaline batteries)
Power source	Four R6/AA-size batteries; SD-9	Four R6/AA-size batteries	Two R6/AA-size batteries
Dimensions (W x H x D)	Approx. 78.5 x 145.0 x 113.0 mm	Approx. 71.0 x 126.0 x 104.5 mm	Approx. 66.0 x 56.5 x 80.0 mm
Weight (without batteries)	Approx. 420 g	Approx. 360 g	Approx. 127 g

• Transmission mode: Infrared-pulse emitting communication using a flash discharge tube
<ul> <li>Transmission range: Approx. 20 m for the SB-900/SB-700 and approx. 4 m for the SB-R200 at normal setting</li> </ul>
Number of channels: 4
Number of groups: 3
Number of transmissions: Approx. 1,200
•Transmission interval: Approx. 1 second
•Flash light wavelengths: Approx. 800 to 1,000 nm (infrared ray)
• Flash coverage: Approx. 60° (vertical), approx. 78° (horizontal)
• Display: LCD, ready-light
<ul> <li>AF-assist illumination for multi-point AF: Approx.10 m at center area using a 50mm f/1.8 lens</li> </ul>
Power source: One 3V CR123A lithium battery
• Dimensions (W x H x D): Approx. 68 x 96 x 58 mm
•Weight (without battery): Approx. 160 g

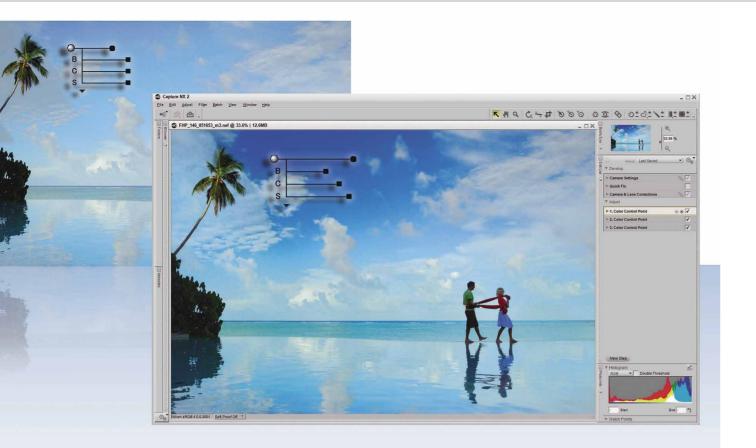
nmander	Remote
U-800	A group SB-910, SB-700, SB-R200
00	B group SB-910, SB-700, SB-R200
mander mode	C group SB-910, SB-700, SB-R200

\*When used as a remote unit

#### 3-R200 Wireless Remote Speedlight specifications

Electronic construction: Automatic Insulated Gate Bipolar Transistor (IGBT) and series circuitry for wireless remote flash unit only)

- Guide number: 10 (ISO 100, m), 14 (ISO 200, m)
- Angle of coverage: 24mm
- lash mode: i-TTL; D-TTL; M (Manual): full to 1/64 output (close-up), full to 1/128 output (commander)
- Ain. recycling time: Approx. 6.0 seconds (Manual at full)
- lumber of flashes: Approx. 290 (Manual at full)
- lash head tilt angle: Down to 60°, or up to 45°
- Aounting foot: Dedicated shoe for Attachment Ring SX-1 or Speedlight Stand AS-20
- arget light: White LED
- )isplay: Ready-light
- ower source: One 3V CR123A lithium battery
- Dimensions (W x H x D): Approx. 80 x 75 x 55 mm
- Veight (without battery): Approx. 120 g



# NEF + Capture NX 2 — Get the highest quality from your images

#### The power of NEF

As a pioneer in RAW image file development, Nikon has incorporated its exclusive and highly versatile NEF (Nikon Electronic Format) system into every D-SLR since the first D1 and Nikon 1 series cameras. Consider NEF files to be the link between your Nikon camera and Nikon's Capture NX 2 software. Each NEF image you shoot contains a thumbnail image and your camera, lens and Speedlight settings, which the software recognizes and applies just as you did when you created the image. The exclusive Capture NX 2 concept also ensures that the image data in each file remains intact: use NEF and you can always return to the original image's maximum possible quality. If you've made changes to the image using the software, those settings are also stored in the NEF, which is capable of holding countless versions of the same image. Creativity doesn't end after the shutter clicks. With NEF and Capture NX 2, it is only beginning.

#### 16-bit processing throughout for high-quality NEF

Photographers today utilize a variety of file formats, but Nikon's NEF offers capabilities far beyond the reach of the others. NEF files give you an unprecedented level of versatile and creative options. For example, thanks to 16-bit processing, the incredible versatility of the NEF format and the power of the Capture NX 2 software, you can reveal shadow detail and enhance sharpness in ways unattainable with other formats. These files can also be easily converted into JPEGs and TIFFs for printing and publishing. Capture NX 2 also lets you convert your TIFFs and JPEGs into NEF files for added creative choices without deteriorating image quality. Saving these or even scanned prints as NEFs allows you to keep a copy of your originals without needing to hold onto numerous versions, which frees up valuable storage space.

#### **Color Control Points for intuitive image enhancement**

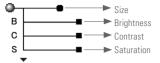
One of the features that makes Capture NX 2 crucial software for photographers is Nikon's Color Control Points, which simplify image enhancement while enabling photographers with unmatched image processing freedom. Instead of complicated layering and memorization, with Capture NX 2 you simply place a Color Control Point wherever you want to reprocess. Using the Color Control Point's slider controls, you can adjust hue, saturation, brightness, contrast, red tone, green tone, blue tone and image warmth. The selection can then be applied within a designated area for the color you need. Simply click, slide and adjust: a wonderfully visual experience. This intuitive system makes both subtle and radical changes possible in seconds. You can also craft customized color wheels and preset color settings to save extra time and effort. Compose a selection and change it at will, or make multiple settings with Color Control Points and watch how the software responds to help you achieve exactly what you want to see!

#### Selection Control Points for quick and easy image editing

This function enables you to apply enhancements such as Unsharp Mask or D-Lighting to a specific area with just a click of the mouse. There is no need for precision selection or masks — the Selection Control Point recognizes the areas you want to modify. Any enhancement effect you create can easily be adjusted, and can be applied to either the designated area or to everywhere outside that area, just like with intuitive masking. The Selection Control Point can be used with virtually any image enhancement tool, including D-Lighting, Brightness, Color, Focus, Correction, and Noise Reduction. For example, you can apply Unsharp Mask to only the area you want to edit if you like.

#### **Auto Retouch Brush**

Distracting blemishes and other imperfections in your pictures can be effectively removed without compromising the color or integrity of your image. Simply click and drag over a spot caused by dust on the camera's sensor, for example, and it disappears. You can also make creative changes, such as removing unwanted facial details or other distracting elements in a picture. It's important to remember that just like color enhancements, each retouching effect you enact here is also non-destructive, giving you great freedom to pick and choose retouching actions and determine exactly what is best for your picture without worrying about spoiling the original. Color Control Points



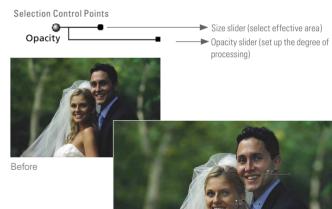
In addition to the sliders indicated at left, there are sliders for Hue, Red, Green, Blue, and Warmth. You can choose to display BCS (Default), HSB, RGB, or All mode, and adjust images to suit your purposes.

Sefore



After

© Joe McNally



After

© Cliff Mautne





Before

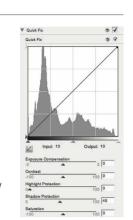
Afte

© Cliff Mautne

#### **Quick Fix selections**

Click on the Quick Fix Header and a selection of tools appear for fast first adjustments. With NEF files you can: alter contrast; adjust Exposure Compensation with a  $\pm 2$  stop range; apply protection to highlights and shadow areas and modify color saturation. All fast. All without damaging the original file.

\*Exposure compensation can be applied to RAW (NRF/ NRW) images only.



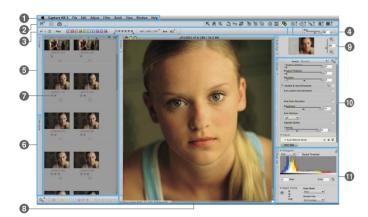


V Camera Settings

## For more efficient workflow

#### Edit List — easy-to-operate multiple image processing adjustments

Capture NX 2's interface offers a convenient edit list that displays various image processing adjustments at the same time, allowing you to make intuitive decisions about what you want to apply. Because you can visually confirm the effects as you work, the editing process becomes so much smoother



1 Menu bar 2 Toolbar 3 Labeling and rating toolbar 4 Tool option bar 5 Folders 6 Metadata 7 Browser ③Image window ④Bird's eye ①Edit List ①Photo info

#### **Camera Settings**

When you take an original NEF from your Nikon D-SLR or Nikon 1 series camera and open it in Capture NX 2, an additional header for "Camera Settings" will appear. This tool enables non-destructive changes to the original NEF, such as adjustments to White Balance, Picture Control and Noise Reduction. This and many other NEF and Capture NX 2 abilities realize control never before possible with image processing software. That goes for compatibility as well: NEF files

from the first Nikon D-SLR models are still compatible with today's Nikon Capture NX 2. That means the newest tools can be applied to your oldest NEF files. How could your early digital images benefit from the latest image processing technology? Find out, courtesy of Capture NX 2.

#### Workspaces

Switch fluidly between the four workspaces provided: Browser, Metadata, Multi-Purpose and Edit — Workspaces can be saved in a palette layout for reopening later. Various customizable shortcuts are also available.

~	Browser Metadata Multi-Purpose Edit	
	Save Workspace	
	My Workspaces	
	Manage Workspaces	

White Balance	0.0
Set Color Temperature	
Camera WB:	
Auto, 0, 0	
New WB:	
Recorded Value	*
	-
Fine Adjustment	
Cabeler V	larmer 0
Fint	
12 🔺	12 0
Picture Control	0.0
Picture Control	
Picture Control	
[NL] NEUTRAL	
	-
Unchanged	
Quick Adjust:	2 0
-2 A	2 [9
Reset	l,

801

Other
Batch Processing Preset editing information can be applied to all image data in a selected folder.
<b>Vignette Control (Nikon D-SLR or Nikon 1 series camera only)</b> Easily and visually minimize the appearance of vignetting in your pictures by brightening the corners of the image. The tool can both brighten and darken, allowing you to apply a vignette effect where it didn't exist, for creative purposes.
Auto Color Aberration Reduces lateral chromatic aberration throughout an entire image, for superior overall quality.
<b>Distortion Control</b> Reduces pincushion and barrel distortions that are sometimes visible in images.
Software

Capture NX 2 system requirements	
Windows and Macintosh versions are available.	ł
32-bit and 64-bit versions of Windows and Macintosh are supported.*	
<ul> <li>Free trial download is available.</li> <li>The latest specifications and system requirements in detail are shown on Nikon's website.</li> </ul>	
	5
* Only 32-bit versions are supported with Windows XP.	١
Notes	C
<ul> <li>Package version: CD-ROM drive required for installation.</li> <li>Download version: Free trial version is available. Internet connection is required for download</li> </ul>	a
and installation.	\ \
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	2

# Other features

#### Noise Reduction

Color noise, edge noise, and color moiré reduction functions reduce noise in details without degrading image quality. <Noise Reduction in the Camera Settings section of the Edit List can be applied only to RAW (NEF) images.>

#### Picture Control <RAW (NEF) images captured by a D-SLR or Nikon 1 series camera only>

If you're using a Nikon D-SLR or Nikon 1 series model that incorporates Picture Control settings, then Capture NX 2 can process your images incorporating all of your Picture Control adjustments. Picture Control is an exclusive Nikon development that enables refined control image characteristics such as tonal values, hue and contrast, as well as color space. Up to six different Picture Control choices are available in-camera and comparable adjustments to those settings are possible from within Capture NX 2. Create imaging styles and modify them however you see fit. Each unique creative touch you make is non-destructive — turn them on or off with a mouse click giving you room to experiment with the peace of mind that your images are being kept safe in their original state.

#### Camera Control Pro 2 (Full and Upgraded Edition)

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000

This remote shooting application software for studio and field shooting boasts advanced viewer features and supports the Live View function incorporated in the cameras. You can remotely control virtually all functions (exposure mode, shutter speed, aperture, etc.) of other Nikon D-SLR cameras from a computer via USB connection. With an optional wireless transmitter and a compatible camera, a wireless LAN (Wi-Fi) or wired Ethernet connection is possible.

Shooting data can be directly transferred to a computer to enable remote shooting, transfer and storage of image data and image viewing in combination with ViewNX 2. Let a client sit and view your images on a computer wirelessly while you are shooting, or shoot a wedding while sending images to your computer where an assistant guickly edits and displays the results for the guests. Applications like these will make a lasting impression on viewers.

# Multi-Power Battery Pack + Added Reliability

### More power and speed when you need it





Runs on one EN-EL15, one EN-EL18 (BL-5 Battery

EH-5b and EP-5B ensures longer-period shooting.

Features shutter-release button, AF-ON button, multi selector, and two command dials for vertical shooting. The same integral magnesium alloy construction and weather sealing as the D800

Chamber Cover required) or eight R6/AA-size

alkaline/Ni-MH/lithium batteries. Using with

MB-D12 Multi-Power Battery Pack

for D800 series

body itself are utilized.



#### **MB-D11 Multi-Power Battery Pack** for D7000

Runs on either one EN-EL15 battery or six R6/ AA-size alkaline/Ni-MH/lithium batteries to provide added stability with extended shooting potential. Magnesium alloy employed for exterior cover durability.



#### MB-D10 Multi-Power Battery Pack

for D700, D300 series

Runs on one EN-EL3e, one EN-EL4a (BL-3 Battery Chamber Cover equired) or eight R6/AA-size alkaline/lithium/Ni-MH/nickel-manganese batteries. Features two command dials, shutter-release button and AF-ON button for vertical shooting. Enhanced sealing system helps diminish penetration by dust and moisture



EN-EL18 Rechargeable EN-EL4a Rechargeable Li-ion Batterv Li-ion Battery

for D3 series

MH-22

Quick Charger

for D3 series

Li-ion Battery for D700, D300 series, D90

MH-26

for D4

**Battery Charger** 

Enables charging of

same time

EN-EL18 Rechargeable

Li-ion Battery, two at the Li-ion Battery.

Li-ion Battery for D5100, D3200, D3100, for D800 series, D7000, COOLPIX P7100/P7000

EN-EL3e Rechargeable EN-EL14 Rechargeable EN-EL15 Rechargeable MH-18a Li-ion Battery Quick Charge for D700, D300 series,

> D90 Enables charging of EN-EL3e Rechargeable Li-ion Battery.

These rechargeable batteries provide extended life and consistent power, even in colder conditions. Used together with your Nikon D-SLR or Nikon 1 series camera, the camera's "fuel gauge" accurately displays the remaining charge and number of shots since the last charging. The EN-EL4a and EN-EL18 even give notice when calibration is necessary. The EN-EL18 in particular provides superior performance at low temperatures



for D4

MH-21

EN-EL4a.

20

Quick Charge

for D3 series





MH-24

Battery Charger

for D5100. D3200. D3100.

COOLPIX P7100/P7000

Enables charging of

EN-EL14 Rechargeable



MH 25

Nikon 1 V1

**Battery Charger** 

for D800 series, D7000,

Enables charging of

Li-ion Battery

EN-EL15 Rechargeable

Nikon 1 V1



EH-5b EH-6b AC Adapter AC Adapter for D800 series, D700, D300 for D4, D3 series series, D7000, D90, D5100, D5000, D3200, D3100, D3000, COOLPIX P7100/ P7000, Nikon 1 V1

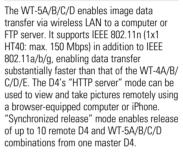
Provide AC power to the camera for uninterrupted operation. EP-5B Power Connector (for D800 series. D7000, Nikon 1 V1), EP-5A (for D5100, D3200, D3100, COOLPIX P7100/P7000) or EP-5 (for D5000, D3000) is required when connecting the EH-5b to the camera. EP-6 Power Connector is required when connecting the EH-6b to the D4.

# Wireless Transmission Accessories + Enhanced Efficiency Higher workflow speed and new photographic enjoyment



#### WT-5A/B/C/D\* Wireless Transmitter

for D4



\*1 Product name varies according to region, depending on local frequency channels available

# GP-1 + Your Location

Record your images' latitude, longitude, altitude and time information





Enables charging of Rechargeable Li-ion Battery







#### WT-4A/B/C/D/E\* Wireless Transmitter

for D4, D3 series, D800 series, D700, D300 series, D7000

The WT-4A/B/C/D/E supports wireless LAN conforming to IEEE 802.11b/g, IEEE 802.11a, and wired LAN conforming to IEEE 802.3u (100BASE-TX) and IEEE 802.3 (10BASE-T). Transmission range when wireless LAN is used is approx. 180 m (IEEE 802.11b/g) or 260 m (IEEE 802.11a). Thumbnail Select mode permits thumbnail display of images taken with up to five wirelessly connected cameras on a computer display. Images selected by confirming the thumbnail can be downloaded and saved on the computer



#### WU-1a Wireless Mobile Adapter for D3200

Images taken with the camera can be transmitted wirelessly to a Wi-Fi equipped smart device\* such as smartphone or tablet You can easily share images via social networking services (SNS), or attach them to emails. Also, its remote shooting function enables release of the D3200's shutter using a smart device as a live view display, allowing a flexible shooting angle. Compatible OSs: Android 2.3 series (smartphone); Android 3.x series (tablet)

- \* Wireless Mobile Adapter Utility that can be downloaded m the Google Play Store is required
- · Google, Android and Google Play are registered trade marks or trademarks of Google Inc.



#### MC-35 GPS Adapter Cord

for D4, D3 series, D800 series, D700, D300 series

To be connected to NMEA-0183 protocolcompatible GPS (Global Positioning System) units such as GARMIN™ and MAGELLAN™ for recording GPS positioning information and time signals synchronous to UTC (Universal Coordinated Time) within image data files during shooting.



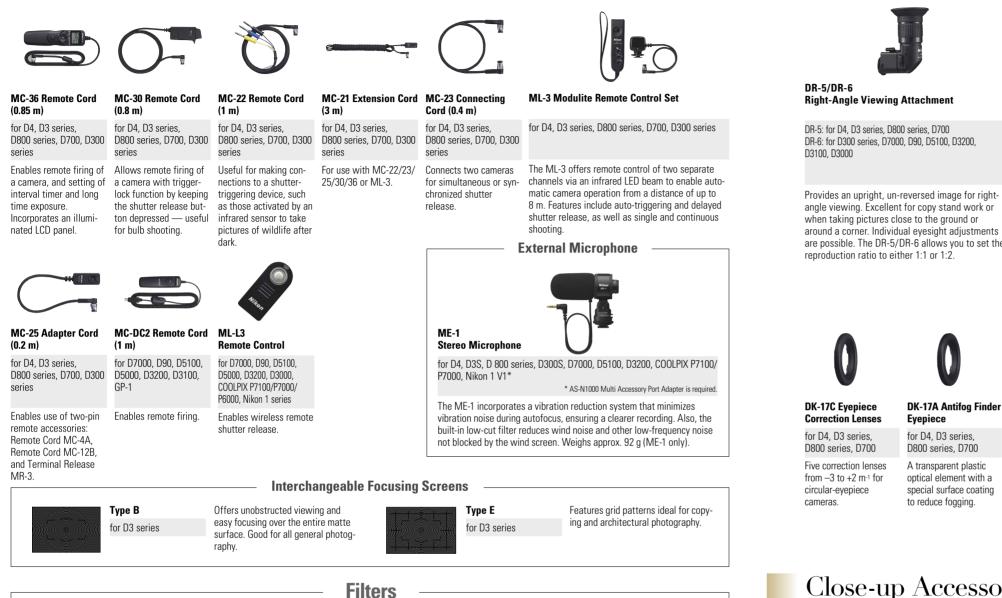
#### **GP-1 GPS Unit**

for D4, D3 series, D800 series, D700, D300 series, D7000, D90, D5100, D5000, D3200, D3100

With the GP-1 connected to a camera that supports GPS, you can record location information such as latitude, longitude, altitude and UTC (Universal Coordinated Time) onto each image's EXIF data. The unit can be mounted on the camera's accessory shoe or the camera strap

# Remote Cord + Long Exposure

Getting the most out of steady tripod shooting



#### Neutral Color NC Filters

These filters serve as lens protectors and do not affect color balance. Multilaver coating diminishes internal reflections and improves color rendition. Available in sizes 52/58/62/67/72/77 mm.



These filters enable shooting through glass windows and minimize glare from reflective surfaces such as water and glass. They also enhance the appearance of blue skies. Compatible with both color and monochrome photography. Available in sizes 52/58/62/67/72/77 mm.

#### Soft Focus Filters

Give your images a moderately soft and beautiful blur effect. Good for various shooting situations, such as portrait. Available in sizes 52/62/67/72/77 mm.

#### **Slip-in Circular Polarizing Filters**

Designed for use with telephoto lenses that provide a slip-in filter holder, these filters reduce glare from non-metallic surfaces such as glass and water. Simply turn the rotating ring on the holder to find the most effective position. These filters do not affect autofocus or auto exposure operation. Both the C-PL1L and C-PL3L feature a diameter of 52 mm.

#### Gelatin Filter Holders AF-3, AF-4

These holders accommodate gelatin or glass filters to a thickness of approx. 2 mm. The AF-3 is used with 3-inch square gelatin filters and NIKKOR lenses having an attachment size of 52/62/67/72/77 mm. The AF-4 is used with 4-inch square gelatin filters and NIKKOR lenses having an attachment size of 52/62/67/72/77/82/95 mm. Nikon also offers two dedicated hood options --- the HN-36 for the AF-3 and the HN-37 for the AF-4. Several hoods of the same diameter can be stacked, depending on the focal length of the lens in use.

Slip-in Circular Polarizing Filters	— compatible	e lenses
	C-PL1L	C-PL3L
AF-S 200mm f/2G ED VR II	_	
AF-S VR 200mm f/2G IF-ED	_	
AF-S 300mm f/2.8G ED VR II	$\checkmark$	_
AF-S VR 300mm f/2.8G IF-ED	$\checkmark$	_
AF-S 400mm f/2.8G ED VR	$\checkmark$	_
AF-S 400mm f/2.8D IF-ED II	$\checkmark$	_
AF-S 500mm f/4G ED VR	$\checkmark$	_
AF-S 500mm f/4D IF-ED II	$\checkmark$	_
AF-S 600mm f/4G ED VR		_
AF-S 600mm f/4D IF-ED II	$\checkmark$	_
AF-S 200-400mm f/4G ED VR II	$\checkmark$	_
AF-S VR 200-400mm f/4G IF-ED		_
√: Compatible  —: Incompatible		

Clin in Circular Polarizing Filtore compatible longer

for D4, D3 series, D800 series, D700 Five correction lenses from -3 to +2 m<sup>-1</sup> for circular-eyepiece cameras

D800 series D700

for D5100, D3200, D3100 D3000

## **Close-up Accessories Close in on every subject**



Slide Copying Adapter Macro Copy Stand

Used with the PB-6 and a Attaches to the end of

duplicate slides. Cropping a smaller stand ideal for

use in scientific and

medical specimen

photography.

NIKKOR lens to make

of the original slide is

possible.



**Macro Adapter Ring** 

BR-2A also increases

having a 52 mm-sized

front attachment

for normal or wide-

angle lenses.

copying documents or for the working distance

A handy adapter that

## Viewing Attachment + Your Perspective View with clarity and comfort



DG-2 Eyepiece Magnifier

> for D4. D3 series. D800 for D4, D3 series, D700, D300 series, D7000, D90, D5100, D3200, D3100, D3000

The DG-2 provides 2x magnification of the central area of the finder image. Eyesight adjustare possible. The DR-5/DR-6 allows you to set the ment provided. Useful for with a circular eyepiece. range is widened at both critical focusing in close The DK-22 is for cameras the (+) and (-) sides up photography. Requires with a rectangular eve-

an evepiece adapter. niece

DK-17A Antifog Finder DK-19 Rubber Eyecup DK-20 Rubber Eyecup

**DK-17C Eyepiece** Correction Lenses Eyepiece for D4, D3 series, D800 series, D700

for D4, D3 series,

A transparent plastic ontical element with a special surface coating to reduce fogging

**RR-3\*** Adapter Ring Enables reverse-

the PB-6 to convert it into mounting of lenses. The converts the bayonet mount of reverse mounted lenses to the 52 mm thread used for filters and hoods. Compatible with lenses





for D300 series, D800 series, D7000, series, D700 D90, D5100 D3200, D3100, D3000

Enables attachment of



**DK-17M** Magnifying Eyepiece

for D4. D3 series. D800 series D700

Attached to a camera, Evepiece Magnifier DG-2 the DK-17M magnifies to the camera's eyepiece. the finder image approx. The DK-18 is for cameras 1.2x. Diopter adjustment



#### **DK-21M** Magnifying Eyepiece

for D300 series, D7000, D90

The DK-21M magnifies the finder image by approx. 1.17x.



#### **DK-20C Evepiece** Correction Lenses (-5 to +3 m<sup>-1</sup>)

for D300 series, D7000 D90, D5100, D5000, D3200, D3100, D3000

An easy-to-use viewing and focusing aid which allows near and farsighted photographers to view the finder image accurately without wearing eyeglasses.







DK-21 Rubber Eyecup

for D7000, D90

DK-23 Rubber Eyecup for D300 series

Improves viewing comfort and prevents stray light from entering the viewfinder and diminishing contrast.









#### PK-11A\*/PK-12\*/PK-13\* **Auto Extension Rings**

Use one or multiple extension rings for further creative capabilities. An AI NIKKOR will retain automatic diaphragm and meter coupling functions, letting you compose, focus and meter at a wide-open apertures. The rings can also be used for manual exposure control (Exposure meter does not work with D90, D5100, D5000, D3200, D3100 and D3000). \* G-type lenses cannot be used.

# System Compatibility

			D4	D3 series	D800 series	D700	D300 series	D7000	D5100	D3200	D3100	Nikon 1 series
Flash												
	Speedlights	SB-910/SB-700/SB-400/SU-800/ SB-R200	•	•	•	•	•	•	•	•	•	
-	Flash	SB-R200 SC-28/SC-29	•	•	•	•	•	•	•	•	•	
	Accessories	AS-15	Ū	Ū	Ū	Ū		Ŏ	•	•	•	
Remote Accessories									1			1
		ML-3 MC-DC2	•	•	•	•	•	•	•	•	•	
		MC-21/MC-22/MC-23/	•	•	•	•	•					
		MC-25/MC-30/MC-36		•	•		•					
Mierenhane		ML-L3						•	•	•		•
Microphone	Stereo Microphone	ME-1	•	(D3S)			(D300S)	•	•	•	1	(V1) *1
Power Sources			•	-				•		Ū	1	-
		EN-EL4a										
		EN-EL3e										
	Batteries	EN-EL14			•			•	•	•	•	0/1)
		EN-EL15 EN-EL18	•		•							(V1)
		MH-18a				•	•					
		MH-21/MH-22										
	Battery Chargers	MH-24										
		MH-25 MH-26	•		•			•				(V1)
-		MB-D10				•	•					
	Multi-Power Battery Packs	MB-D11					-					
_	Dallery Facks	MB-D12			•							
	AC Adapters	EH-5b*2 EH-6b*3	•	•	•		•	•	•	•	•	(V1)
GPS		EH-OD -			1 1		1 1		1	1	1	
		GP-1	•	•		•		•	•	•	•	
		MC-35										
Wireless Transmitter/W	Wireless Mobile Ada	pter WT-5A/B/C/D		1			1		1	1	1	1
		WT-5A/B/C/D/E	•	•	•	•	•	•				
		WU-1a								•		
Viewing Attachments												
		DR-5		•	•	•						
-		DR-6 DG-2	•*4	•*4	•*4	•*4	• •*5	• •*5	• •*5	• •*5	• •*5	
		DK-17A/DK-17C/DK-17M/DK-18/DK-19	•	•	•	•						
		DK-22										
	Eyepieces	DK-21M					•					
	Eyecups	DK-20C DK-20					•	•	•	•	•	
		DK-20 DK-21						•	-	•	•	
		DK-23					•					
Software												
		Capture NX 2 Camera Control Pro 2	•	•	•	•	•	•	•			•
Focusing Screens		Camera Control Pro Z		•	•				•	1	1	1
. southing ouround		Туре В/Туре Е										
Body Cap												
		BF-1B	٠			٠		٠		•	•	
LCD Monitor Covers		BM-8										
		BIVI-8 BM-9				•	•					
		BM-12			•	-						
		BM-11						٠				
		DIVI-11										
Camera Cases				1	1	•	1 1		1	1	1	1
Camera Cases		CF-D700				٠						
Camera Cases					•	٠	•					
Camera Cases		CF-D700 CF-D200 CF-DC4 CF-DC3			•	•	•	•				
Camera Cases		CF-D700 CF-D200 CF-DC4			•	•	•	•	•	•	•	

\*1 AS-N1000 Multi Accessory Port Adapter is required. \*2 EP-5B Power Connector (for D800 series, D7000, Nikon 1 V1), EP-5A Power Connector (for D5100, D3200, D3100, COOLPIX P7100/P7000) required when connecting the EH-5b to the camera. \*3 EP-6 Power Connector is required when connecting the EH-6b to the D4.

\*4 DK-18 Evepiece Adapter is required.
\*5 DK-22 Evepiece Adapter is required.
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