



At the heart of the image



PICTURE
CONTROL

Nikon Picture Control System

Create Images Exactly as You Imagine Them



A simple, effective image creation system that enables you to flexibly control a wide range of shooting situations and achieve your particular preferences.

Naturally, you seek to create images that achieve your own desired characteristics — images that project your own particular style.

It's a feeling shared by everyone who loves photographs and loves taking them, professional and amateur alike. With digital cameras, you're able to control image characteristics such as tone, hue, and contrast — and do so relatively easily. In turn, this leads to an ever-growing penchant to create exactly the sort of images you want, whether you're a professional or amateur. Picture Control System, Nikon's all-new original system of image creation settings, allows you to do precisely that. Now, photographers at all levels, from novices to professionals, can easily select and adjust Picture Control by simply using the screen settings on their digital SLR cameras.

By utilizing the same Picture Control settings, users of Picture Control System-compatible cameras* are able to shoot images with virtually the same sharpening, contrast, brightness, saturation, and hue, even with different camera models.

* D3X, D3S, D3, D700, D300S, D300, D7000, D90, D5000, D3100 and D3000, as

of December 1, 2010.



PICTURE CONTROL



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To ensure optimum clarity, all pictures appearing in this brochure were taken with the Nikon D3X, D3S, D700, D300S or D90, at [Standard] Picture Control setting, and the resulting images were processed on a computer using Picture Control. Using one of these cameras and the same settings, you should be able to obtain similar results.

Main Features of the Picture Control System

Six Kinds of Picture Controls

Nikon Picture Control System-compatible cameras feature six types of Picture Control: Standard, Neutral, Vivid, Monochrome, Portrait*¹ and Landscape*¹. Using them allows you to flexibly adjust for Sharpening, Contrast, Brightness and much more.*²

*¹ Available as Optional Picture Controls for the D3X, D3S, D3, D700, D300S and D300
*² Standard/Neutral/Vivid/Portrait/Landscape: Sharpening, Contrast, Brightness, Saturation and Hue (coloration)
Monochrome: Sharpening, Contrast, Brightness, Filter Effects and Toning

Custom Picture Controls

Allow you to designate Nikon Picture Controls to which you've made adjustments and register them as custom Picture Controls. What's more, you can input and register custom Picture Controls created on another camera or computer by reading them from a memory card.

Optional Picture Controls

Optional Picture Controls Portrait (for natural-looking images with a real sense of depth and for smooth reproduction of skin tone) and Landscape (for lively natural scenes and vibrant city streets), both pre-installed in the D7000, D90, D5000, D3100 and D3000, can be downloaded from Nikon's website for installation in the D3X, D3S, D3, D700, D300S and D300.

The ViewNX 2*¹ software included with the camera and the optional software Capture NX 2*² feature D2X/D2XS Optional Picture Control, which enables you to apply color reproduction approximating that of the D2X and D2XS. You can download the D2X/D2XS Optional Picture Control from Nikon's website and install it in the D3X, D3, D700, and D300. The pre-installed Picture Controls and the Optional Picture Controls are known collectively as Nikon Picture Controls.

*¹ The latest version of ViewNX 2 can be downloaded from Nikon's website.

*² Users of Capture NX 2 can download the latest version from Nikon's website.

Quick Adjust

With the Standard and Vivid controls, Quick Adjust makes it easy to achieve well-balanced adjustments. You can make five levels of modification, with Sharpening, Contrast, and Saturation all adjusted automatically. Plus, after using Quick Adjust, you can carry out finer, more detailed modifications to each item to suit your particular preferences and get the exact results you require.

Picture Control Grid

Picture Controls can be displayed as coordinates on a grid, based on the common Picture Controls standard, with Contrast as the vertical axis and Saturation as the horizontal axis*. This enables you to visually determine the relationships between your selected Picture Control and other Picture Controls.

*In Monochrome, only Contrast is shown.

Brightness Adjustment

Enables you to not only adjust the brightness of an image, but also the gradations and richness of highlighted and shadowy areas within that image. This exceptional depiction of gradations is unique to Nikon digital SLR cameras.

STANDARD

Picture Control Settings

Choose [Set Picture Control] from the shooting menu and a list appears.

Select your desired Picture Control type and press "OK".



D3 monitor.

You can also select settings from the grid display that show the relation between your selected Picture Control and other Picture Controls. Simply press "OK".



D3 monitor.

Gives you standard, balanced images with no inconsistencies in the strength of the subject's sharpening, contrast, brightness, saturation and coloration. Before you know it, you'll be taking shots with vibrant colors that linger in the viewer's memory. Moreover, you'll be able to print out images that display an attractive finish, with no need for special processing.

Suitable for portraits, snapshots, landscape pictures and just about anything else.



• Camera: D3S • Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/2000 second, f/4
• White balance: Auto • Sensitivity: ISO 3200



• Camera: D3S • Lens: AF-S VR Zoom-Nikkor 70-300mm f/4.5-5.6G IF-ED • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/1250 second, f/4.5 • White balance: Auto • Sensitivity: ISO 640

NEUTRAL

Delivers images that are closest to the actual original scene. To reproduce the subject's unique colors and gradations with maximum authenticity, avoid extreme enhancements. Compared to Standard, Neutral gives a more soothing overall impression. It's also ideal for materials that you plan to adjust after shooting to express a specific idea.

Neutral



Standard



VIVID

For distinct, colorful, fresh-looking images with just the right emphasis on your subject's contrast and sharpening. Compared with Standard, Vivid bestows a more glamorous overall impression.

It's ideal for situations where you wish to emphasize primary colors, such as colorful fashions, city streets, fresh fruits and floral arrangements.

Vivid



Standard



MONOCHROME

Gives you monochromatic shadings, such as black-and-white or sepia. You can also select Filter Effects, to create the kind of results you get when shooting with a color filter for black-and-white photographs; and Toning, to adjust the overall tone of images in a way that formerly required working in a darkroom with photographic paper when shooting with film. Use monochrome shooting to endow your subjects with greater allure.



• Camera: D3S • Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit, lossless-compressed RAW (NEF) • Exposure: [A] mode, 1/640 second, f/4 • White balance: Cloudy • Sensitivity: ISO 320

Toning [Red Purple]



• Camera: D3S • Lens: AF-S NIKKOR 14-24mm f/2.8G ED • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/80 second, f/22 • White balance: Incandescent • Sensitivity: ISO 200

Toning [Blue Green]



• Camera: D3S • Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/2000 second, f/4 • White balance: Cloudy • Sensitivity: ISO 250

PORTRAIT

Using Neutral as its base, Portrait imparts more natural appearing skin. Skin tones are more lifelike, projecting a real sense of depth — as if shot with professional-quality film — for a clear, authentic finish. For subjects other than human skin, it delivers vivid colors for bold impressions.

Portrait



Standard



LANDSCAPE

Produces a more profound intensity than Standard. Compared with Vivid, Landscape creates more soothing, relaxed colors, effective for nature scenes. Rich gradations with an eye-catching appeal enhance the vibrancy and liveliness of landscapes, nature and even city street scenes.

Landscape



Standard



These enable you to adjust the sharpening, contrast, and brightness to suit your specific needs. With Standard, Neutral, and Vivid, you can adjust Sharpening, Contrast, Brightness, Saturation, and Hue (coloration); with Monochrome you can adjust Sharpening, Contrast, Brightness, and set Toning, Toning Saturation, and Filter Effects.

QUICK ADJUST

Quick Adjust enables easy, balanced adjustments of Standard and Vivid. Adjustments can be made at five levels, from [-2] to [+2], with Sharpening, Contrast, and Saturation adjusted automatically. Moving toward the minus side results in images with more subdued Standard

and Vivid characteristics; moving toward the plus side results in images that emphasize those characteristics.

With Quick Adjust, you can make fine adjustments to all five items, including Brightness and Hue (coloration), to suit your particular needs.

Standard

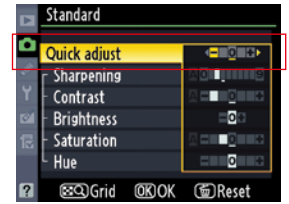


• Camera: D300S • Lens: AF-S NIKKOR 50mm f/1.4G • Image quality: 14-bit, lossless-compressed RAW (NEF) • Exposure: [M] mode, 1/100 second, f/5 • White balance: Cloudy • Sensitivity: ISO 400

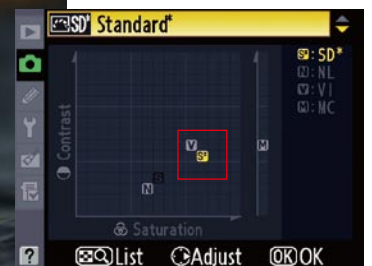
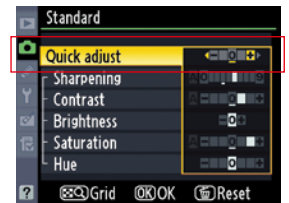
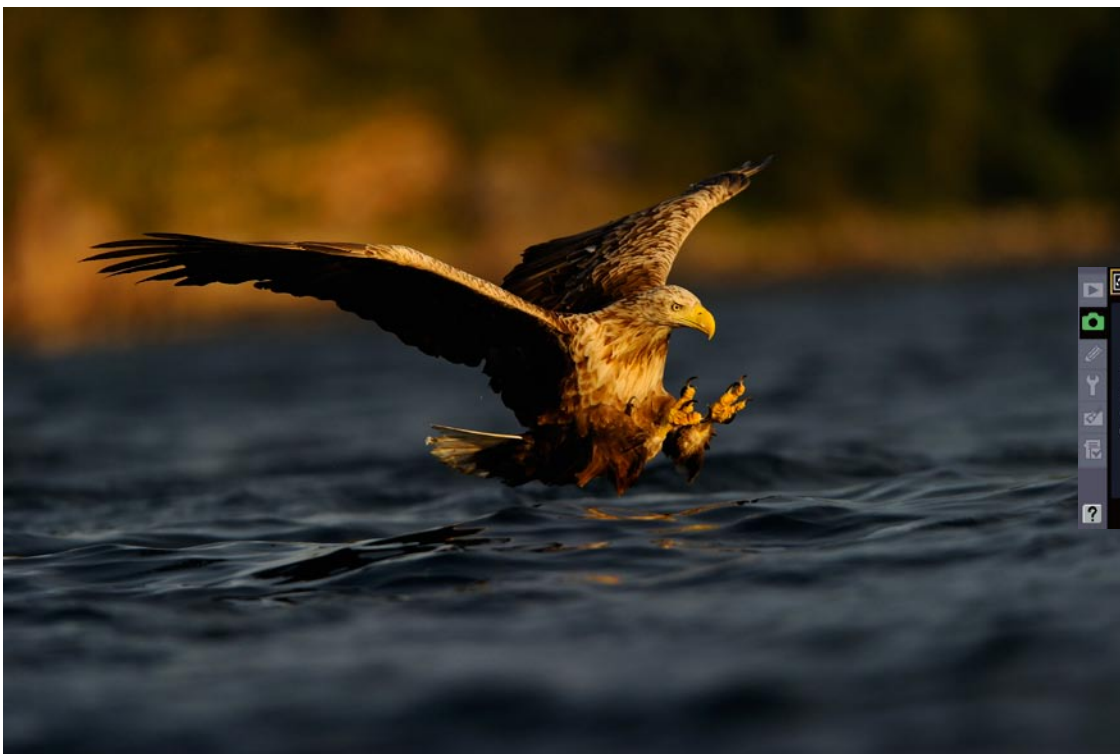
Vivid



• Camera: D3S • Lens: AF-S NIKKOR 24-70mm f/2.8G ED • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/10 second, f/2.8 • White balance: Auto • Sensitivity: ISO 800



Quick Adjust [-2]



Quick Adjust [+2]

• Camera: D3S • Lens: AF-S NIKKOR 400mm f/2.8G ED VR • Image quality: 14-bit, lossless compressed RAW (NEF) • Exposure: [P] mode, 1/8000 second, f/3.2
 • White balance: Cloudy • Sensitivity: ISO 640

PICTURE CONTROL GRID

Pressing the [Thumbnail/Playback Zoom] button while making adjustments changes the screen to a grid display, causing the Picture Controls stored in your camera to be shown as relative Contrast and Saturation coordinates.

Unlike the slider display of the Picture Control adjustment screen, the grid display shows Contrast and Saturation positions* based on a common Picture Controls standard. With use, it becomes visually clear that the Contrast 0 and Saturation 0 settings for Standard are not exactly the same as those for Vivid, despite the fact that they both appear as 0 on their respective Picture Control adjustment screens.

*In Monochrome, only Contrast is shown.

SHARPENING

Enables you to alter the strength of your subject's contours in ten levels, starting from [0] (no sharpening). You can also set the camera to [A] (auto), where it makes adjustments automatically to match shooting conditions. The lower the number, the softer your image will be; the higher the number, the more distinct.

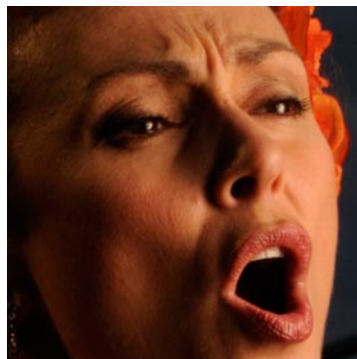


Sharpening [+5]



• Camera: D3S • Lens: AF-S NIKKOR 70-200mm f/2.8G ED VR II • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/125 second, f/20 • White balance: Auto • Sensitivity: ISO 640

Sharpening [0]



Sharpening [+7]





• Camera: D700 Lens: AF-S VR Zoom-Nikkor 24-120mm f/3.5-5.6G IF-ED • Image quality: 12-bit RAW (NEF) • Exposure: [A] mode, 1/200 second, f/4.2 • White balance: Color Temperature (5000K) • Sensitivity: ISO 640

Contrast [0]



Contrast [-3]



CONTRAST

For fine-tuning the contrast of your images in seven levels, from [-3] to [+3]. You can also set the camera to [A] (auto), where it makes adjustments automatically to suit shooting conditions. Adjusting toward the minus side provides softer image tones; adjusting toward the plus side results in harder image tones. The minus side is suitable for shooting portraits in sunlight or situations where you might be concerned about lost highlights; the plus side is better for situations such as distant scenes shrouded in mist.



Note: Unless Active D-Lighting is set to OFF, the level of Contrast cannot be adjusted.

BRIGHTNESS

While making adjustments for overall image brightness, you can choose from [-1], [0], or [+1] for even richer expression of gradations, in either the black or the white areas.

Setting to [-1] creates subdued brightness while the gradations of the shadowy areas are intensified; setting to [+1] increases overall brightness while deepening the gradations of the highlighted areas.



Note: Unless Active D-Lighting is set to OFF, the level of Brightness cannot be adjusted.

Brightness [-1]



Brightness [0]



SATURATION

Lets you control the saturation of images in seven levels, from [-3] to [+3]. You can also set the camera to [A] (auto), where it makes adjustments automatically to suit shooting conditions.

Moving toward the minus side results in a softer degree of brightness; moving toward the plus side provides a deeper brilliance.



Saturation [-3]



Saturation [+3]



Saturation [+1]



• Camera: D300S • Lens: AF-S DX NIKKOR 16-85mm f/3.5-5.6G ED VR
 • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/160 second, f/7.1
 • White balance: Cloudy • Sensitivity: ISO 500



Brightness [+1]

• Camera: D300S • Lens: AF-S DX Zoom-Nikkor 17-55mm f/2.8G IF-ED • Image quality: 14-bit, lossless compressed RAW (NEF)
 • Exposure: [M] mode, 1/125 second, f/5.6 • White balance: Cloudy • Sensitivity: ISO 640

HUE

Allows you to adjust the hue of images in seven levels, from [-3] to [+3]. In terms of skin tones, the minus side increases reddishness, while the plus side enhances yellow tones.



Hue [-1]



Hue [-3]



Hue [+3]



• Camera: D300S • Lens: AF-S DX NIKKOR 16-85mm f/3.5-5.6G ED VR • Image quality: 14-bit RAW (NEF)
 • Exposure: [M] mode, 1/160 second, f/16 • White balance: Cloudy • Sensitivity: ISO 500

FILTER EFFECTS Y/O/R

This function provides an effect similar to shooting black-and-white photographs with a color filter. It emphasizes the contrast of [Yellow], [Orange], and [Red], with contrast strengthening in the order [Y] -> [O] -> [R]. Use for landscape shots where you wish to soften the brightness of the sky for a deeper expression.



Filter Effects
[OFF]



Filter Effects
[Y]



Filter Effects
[O]



Filter Effects
[R]



FILTER EFFECTS G

Provides an effect similar to shooting black-and-white photographs with a green filter. Lends a finely composed finish to skin colors or lips, for example. Beneficial for portrait photography.



• Camera: D300S • Lens: AF-S NIKKOR 10-24mm f/3.5-4.5G ED
• Image quality: 14-bit, uncompressed RAW (NEF) • Exposure: [A] mode, 1/2,000 second, f/10
• White balance: Auto • Sensitivity: ISO 200

Filter Effects [OFF]



Filter Effects [G]



• Camera: D300S • Lens: AF-S NIKKOR 24-70mm f/2.8G ED • Image quality: 14-bit RAW (NEF)
• Exposure: [M] mode, 1/60 second, f/4.5 • White balance: Auto • Sensitivity: ISO 200

TONING

Enables you to modify color tones for the overall image, in a manner similar to toning photographic paper. Select from ten colors, including the default [B&W] setting.



Toning [Sepia]



- Camera: D3S • Lens: AF-S NIKKOR 24-70mm f/2.8G ED
- Image quality: 14-bit, lossless-compressed RAW (NEF)
 - Exposure: [A] mode, 1/200 second, f/13
 - White balance: Auto • Sensitivity: ISO 200

Toning [Green]



- Camera: D300S
- Lens: AF-S DX NIKKOR 18-200mm f/3.5-5.6G ED VR II
 - Image quality: 14-bit RAW (NEF)
 - Exposure: [A] mode, 1/500 second, f/7.1
 - White balance: Auto • Sensitivity: ISO 200

Toning [Blue]



- Camera: D3S • Lens: AF-S NIKKOR 14-24mm f/2.8G ED
- Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/40 second, f/4.5
 - White balance: Auto • Sensitivity: ISO 1600

Toning [Purple Blue]



- Camera: D3S • Lens: AF-S NIKKOR 400mm f/2.8G ED VR
- Image quality: 14-bit, lossless compressed RAW (NEF)
 - Exposure: [A] mode, 1/8000 second, f/3.2 • White balance: Cloudy
 - Sensitivity: ISO 2500

TONING SATURATION

You can also choose from seven different levels of color saturation (except [B&W]).



Cyanotype [2]



Cyanotype [6]



- Camera: D300S • Lens: AF-S NIKKOR 24-70mm f/2.8G ED • Image quality: 14-bit RAW (NEF)
 - Exposure: [M] mode, 1/125 second, f/10 • White balance: Cloudy • Sensitivity: ISO 200

Yellow [2]



Yellow [6]



- Camera: D3S • Lens: AF-S VR Zoom-Nikkor 70-300mm f/4.5-5.6G IF-ED
- Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/1250 second, f/5
 - White balance: Auto • Sensitivity: ISO 200

Custom Picture Controls and Optional Picture Controls

Create your own image style using Custom Picture Controls

Allows you to name in-camera Picture Controls that you've created to suit your needs, registering them as Custom Picture Controls. You can also use Picture Controls created with Picture Control Utility, available via the ViewNX 2 software supplied with the camera, or use Picture Controls created on other cameras by importing them to the camera on a memory card and registering them as Custom Picture Controls. With a Nikon digital SLR camera that supports Picture Control, you can store as many as nine Custom Picture Controls*.

* With future camera models, the number of custom Picture Controls you can install may differ.

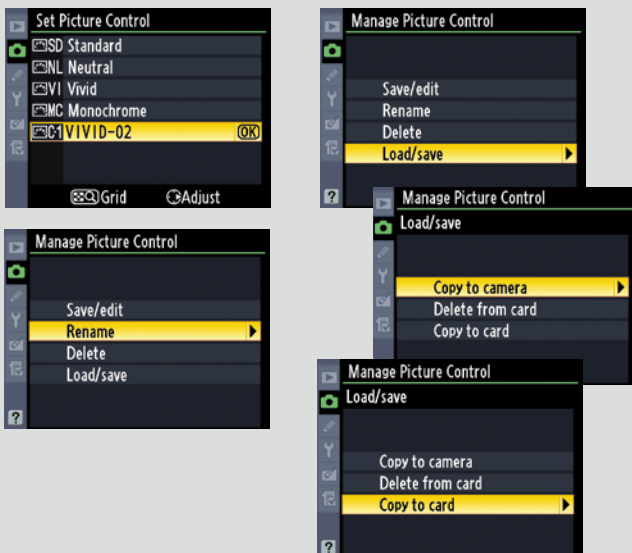


Using Custom Picture Controls

Custom Picture Controls can be edited and registered in the camera. You can also change their names, delete them, and copy them to a memory card.

You can also freely share files between cameras or between users using a memory card, as well as importing custom Picture Controls created with Picture Control Utility and registering them in your camera. Moreover, you can import custom Picture Controls created in your camera to a computer via Picture Control Utility, then apply them to images using the ViewNX 2 (comes with the camera) or Capture NX 2 (optional).

You can even attach custom Picture Controls to e-mail messages to share with other users (depending on your e-mail environment; Nikon does not provide a special service for this purpose).



Optional Picture Controls

Optional Picture Controls Portrait (for natural-looking images with a real sense of depth and for smooth reproduction of skin tone) and Landscape (for lively natural scenes and vibrant city streets), both pre-installed in the D7000, D90, D5000, D3100 and D3000, can be downloaded from Nikon's website for installation in the D3X, D3, D700, D300S and D300. The ViewNX 2 software included with the camera and the optional software Capture NX 2 feature D2X/D2XS Optional Picture Control, which enables you to apply color reproduction approximating that of the D2X and D2XS. You can download the D2X/D2XS Optional Picture Control from Nikon's website and install it in the D3X, D3, D700, and D300.

With the D3X, D3S, D3, D700, D300S and D300, you can store as many as four Optional Picture Controls*.

*The number of Optional Picture Controls that can be installed may differ with future camera models.

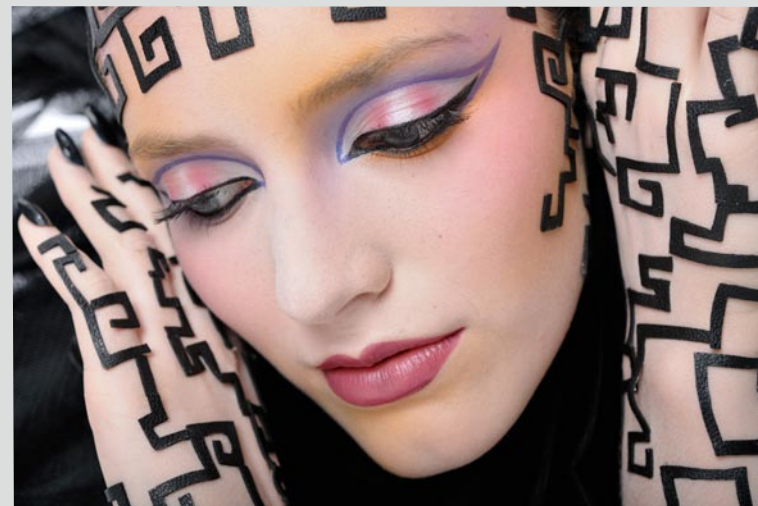
URL

<http://nikonimglib.com/opc/>

Standard



D2XMODE1



- Camera: D3X • Lens: AF-S Micro NIKKOR 60mm f/2.8G ED
- Image quality: 14-bit, lossless compressed RAW (NEF) • Exposure: [M] mode, 1/250 second, f/8
- White balance: Color Temperature (4500K) • Sensitivity: ISO 100

PICTURE CONTROL UTILITY

The Picture Control Utility application, which manages and adjusts Picture Control files can be launched from either the ViewNX 2 software, included with the camera, or the optional Capture NX software.

Main Functions of Picture Control Utility

- Management of custom Picture Controls

For import/export of custom Picture Controls to or from the Picture Control list and memory card, as well as for changing the names of custom Picture Controls in the Picture Control list, and deleting them.

- Picture Control Level Adjustments

For non-Monochrome Picture Controls, allows you to adjust the Sharpening, Contrast, Brightness, Saturation, and Hue (coloration), while checking the effects on a sample image in real time. For Monochrome-related Picture Controls, permits you to adjust the Sharpening, Contrast, and Brightness and to set Filter Effects and Toning.

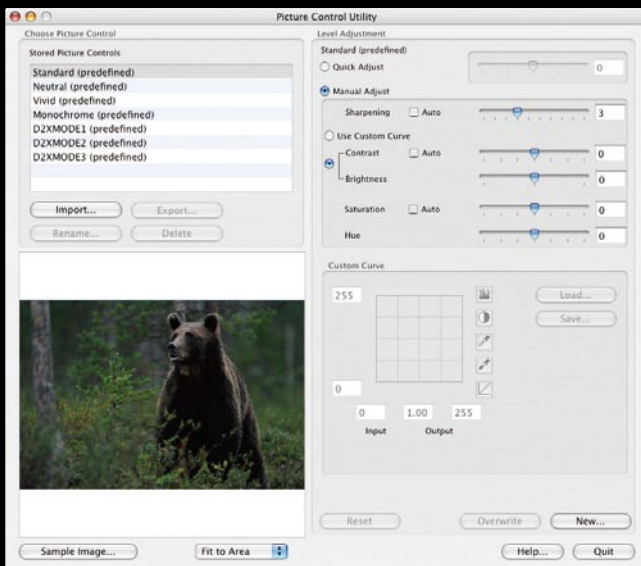
For Standard, Vivid, Portrait, Landscape, D2XMODE1, D2XMODE2, and D2XMODE3, adjustments can also be made using Quick Adjust.

Picture Controls you've adjusted can be overwritten or saved as new ones; in either case the Picture Control function in the original software will automatically reflect the changes.

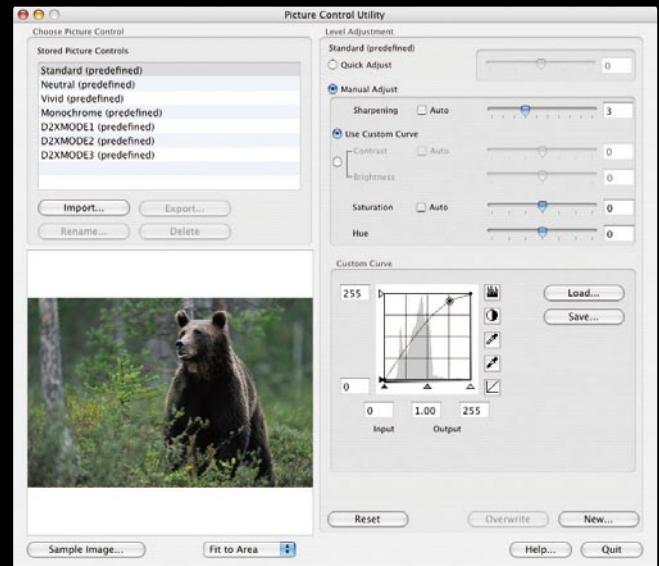
- Custom Tone Curves

Rather than making individual adjustments to Contrast and Brightness, you can use custom tone curves to make adjustments to both at the same time. Custom tone curves created with Picture Control Utility can be read from files and saved.

Picture Control Utility screen (custom tone curves not used)



Picture Control Utility screen (custom tone curves used)



VIEWNX 2



The Picture Controls for [Advanced RAW] allow you to apply Picture Controls to any RAW image (NEF) file.

Picture Controls can even be applied to RAW image (NEF) files taken on earlier models, such as the D2XS.

ViewNX 2



CAPTURE NX 2

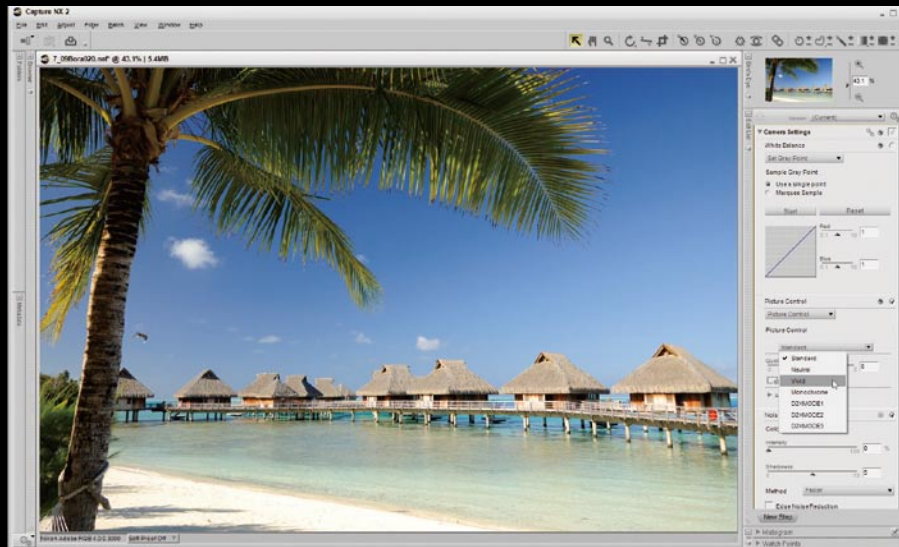


In the Edit List, Picture Controls can be applied to any RAW image (NEF) file using Base Adjustments -> Camera Adjustments -> Picture Control.

With the exception of Custom Tone Curves, you can also make adjustments to custom Picture Controls in the same way as with Picture Control Utility.

Picture Controls can even be applied to RAW image (NEF) files taken on earlier models, such as the D2XS.

Capture NX 2



CAMERA CONTROL PRO 2

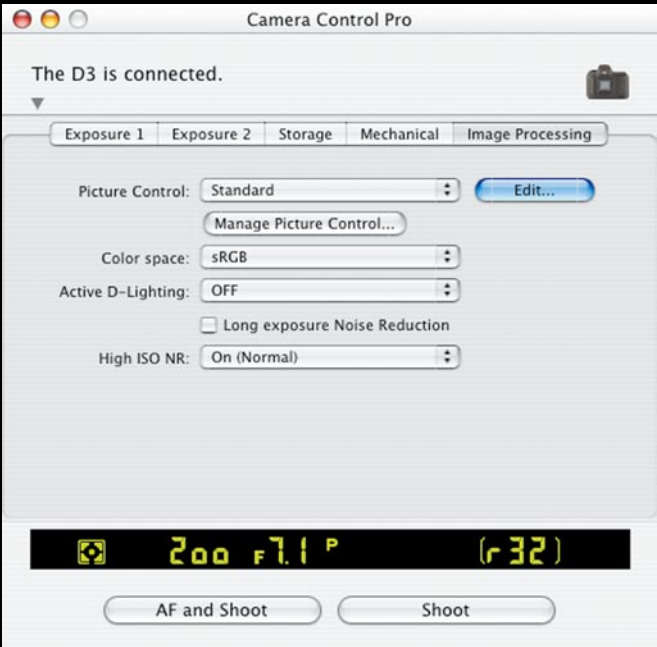


When a Nikon digital SLR camera that supports Picture Control is connected to a computer by USB, the Picture Controls can be selected and set in the Processing Panel of the Camera Control Pro panel.

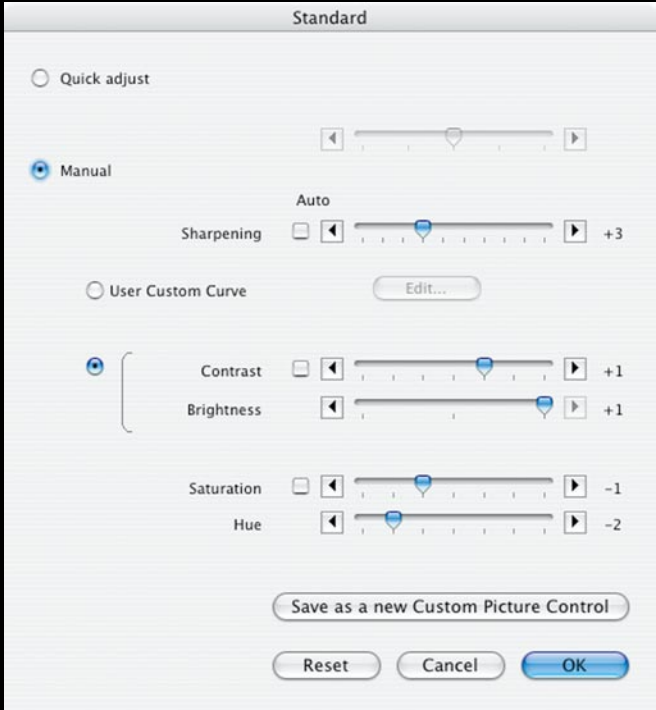
Pressing the [Edit] button causes Adjustment Dialog to appear, allowing you to modify the currently selected Picture Control.

Pressing the [Custom Picture Control] button causes Custom Picture Control Dialog to appear, allowing you to change the names of the camera's custom Picture Controls or delete them.

Camera Control Pro 2: Processing panel



Camera Control Pro 2: Adjustment dialog



Camera Control Pro 2: Custom Picture Control dialog



Reproducing images generated with Picture Control more accurately — Calibrating the display/Color management of printer —

To ensure accurate reproduction of the colors you create with Picture Control, we recommend calibrating your display and setting up the printing printer printing color management output as described below.

Display Calibration

Calibrate display and create profile as follows, according to your computer operating system (for details, see your computer's user guide).

- Windows: Install and run display Calibration Utility
- Macintosh: Run the Correction Utility located within the Color tab, inside the Display folder of the System Preferences

[Note]

Display performance decreases as time passes. For optimum results, we recommend that you update display calibration and make profiles once a month. For more accurate reproduction, a recognized calibrating tool is recommended.

Color Management of Printer

1. Using an image management application, assign an ICC profile* that corresponds to the specific combination of printer and paper.
2. Turn OFF the printer's tone correction function.

* For the optimum results, download the ICC profile that most closely corresponds to your needs from the printer manufacturer's website. Printer manufacturers' ICC profiles are designed for various specific combinations of their printers and original papers.

[Note]

For more accurate printing, it is recommended that you use a recognized profile-making tool. When using an ICC profile that you created with a recognized profile-making tool, the printer driver's auto correction function has to be OFF.

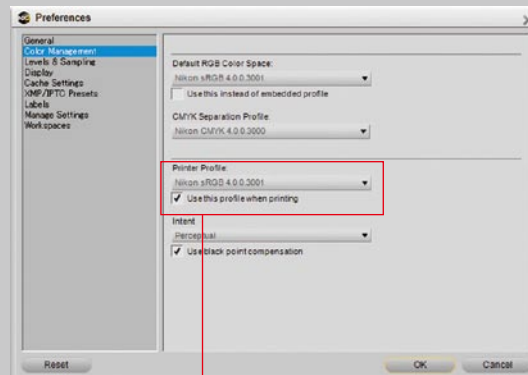
Color Management of Capture NX 2

How to print using Capture NX 2 Picture Control settings

The [Preferences: Color Management] menu on Capture NX 2 allows you to make changes to existing profiles and to apply customized color management profiles.

To select an ICC profile for printing, go to "Use this file when printing", then select your desired ICC profile from [Preferences: Color Management] in the printer profile menu.

Note: Even if you do not make a selection in the [Preferences: Color Management] menu, if you have previously made a selection at [Print Layout: Color Management], that selection will be applied.



Choose your desired ICC profile from the pull down menu and check the relevant box.

Picture Control Guidelines for creating images taken with cameras that do not support Picture Control

Using Picture Control, images taken with the D3X, D3, D700, D300S and D300 can be modified to approximate the color and other factors of images taken with cameras that are not compatible with Picture Control.

The chart below indicates examples of settings.

Models/Color mode and Image optimization settings		Settings for approximation with Picutre Controls						Notes
Models	Color mode/Image optimization	Picture Control	Sharpening	Contrast	Brightness	Saturation	Hue	
D1		Standard	1	0	-1	0	0	Color space of D1 is NTSC (See Remark 8 below).
D1H/D1X	Mode I	Standard	1	0	-1	0	0	
	Mode II	Neutral	1	2	-1	0	0	
D2H/D2HS	Mode I	Standard	1	0	-1	-1	0	
	Mode II	Neutral	1	2	-1	1	0	
	Mode III	Vivid	1	0	-1	-1	0	
D2X/D2XS (Case 1)	Mode I	Standard	1	0	-1	-1	0	Approximate settings in case of not using Optional Picture Controls. If you want higher level of approximation, download [D2XMODE1], [D2XMODE2], or [D2XMODE3], register it on camera via memory card, and then set up like [D2X/D2XS (Case 2)] (except D300S).
	Mode II	Neutral	1	2	-1	0	0	
	Mode III	Vivid	1	0	-1	-1	0	
D2X/D2XS (Case 2)	Mode I	D2XMODE1	1	0	-1	0	0	This is a case of downloading Optional Picture Controls [D2XMODE1], [D2XMODE2], or [D2XMODE3] from the Nikon website, registering on camera via memory card, and using them (except D300S). Note: This is not a perfect match, but you can get extreme accuracy.
	Mode II	D2XMODE2	1	0	-1	0	0	
	Mode III	D2XMODE3	1	0	-1	0	0	
D100	Mode I	Standard	1	0	-1	0	0	
	Mode II	Neutral	1	2	-1	1	0	
	Mode III	Vivid	1	0	-1	-1	0	
D70/D70S	Normal	Standard	3	0	-1	-1	0	
	Soft	Standard	1	0	-1	-1	0	
	Vivid	Vivid	4	-1	-1	-1	0	
	Portrait	Standard	2	0	-1	-1	0	
	Landscape	Vivid	4	-1	-1	-1	0	
	Sharp	Standard	5	0	-1	-1	0	
	Direct Print	Standard	4	0	-1	-1	0	
D50	Normal	Standard	3	0	-1	0	0	
	Soft	Standard	1	0	-1	0	0	
	Vivid	Vivid	4	-1	-1	-1	0	
	Portrait	Standard	2	0	-1	-1	0	
	Landscape	Vivid	4	-1	-1	-1	0	
	Sharp	Standard	5	0	-1	0	0	
	Direct Print	Standard	4	0	-1	-1	0	
D200	Normal	Standard	3	0	-1	-1	0	
	Soft	Standard	1	-2	-1	-1	0	
	Vivid	Vivid	4	0	-1	0	0	
	More Vivid	Vivid	5	2	-1	0	0	
	Portrait	Standard	2	0	-1	-1	0	
D80	Normal	Standard	3	0	-1	0	0	
	Soft	Standard	1	-2	-1	0	0	
	Vivid	Vivid	4	-1	-1	0	0	
	More Vivid	Vivid	5	1	-1	0	0	
	Portrait	Standard	2	0	-1	0	0	
D40	Normal	Standard	3	0	-1	0	0	
	Soft	Standard	1	-2	-1	-1	0	
	Vivid	Vivid	4	-1	-1	0	0	
	More Vivid	Vivid	5	1	-1	0	0	
	Portrait	Standard	2	0	-1	-1	0	
D40X	Normal	Vivid	3	0	-1	-1	0	
	Soft	Standard	1	-2	-1	0	0	
	Vivid	Vivid	4	-1	-1	0	0	
	More Vivid	Vivid	5	1	-1	0	0	
	Portrait	Standard	2	0	-1	0	0	

Remarks:

- The chart above shows a setting guideline that approaches color mode or image optimization settings of cameras that do not support Picture Controls.
- The Hue of Picture Controls is designed differently from any color mode or image optimization setting of cameras that do not support Picture Controls. Because of this, completely the same Hue and image creation cannot be realized, even if Picture Controls are set and well balanced. The settings of the chart show examples of the possibly closest result achievable within the limitations.
- Each setting of image creation on the chart above shows the ones judged to have strong approximation in comparisons conducted by Nikon. With some subjects, you may feel approximation level is low.
- Each setting of image creation on the chart above shows the settings in order to approximate the default settings of cameras that do not support Picture Controls.
- Image creations of cameras that do not support Picture Controls change automatically depending on the conditions of subjects since each factor of image creation is handled by Auto. Because of this, it might occur that the level of approximation seems low even if the settings follow the chart above.
- Image control with Auto setting varies depending on cameras. Because of this, image creation with cameras that do not support Picture Controls and Picture Control-compatible cameras differs when each factor is set to Auto, resulting in seemingly low approximation.
- The chart above is examples of approximation under the condition of the same sensitivity and exposure. The characteristics of determining exposure using Matrix Metering differ depending on cameras. Also, exposure might be altered by composition or slight difference in brightness distribution even with the same camera. Exposure compensation is recommended when necessary.
- The chart above does not include Color Space setting. Color Space can be set up from Color Space in the Shooting Menu.
 - The Color Space for the D1 is NTSC. The setting shown above is applied to images converted to sRGB or AdobeRGB Color Space.
 - If you have programmed a workflow in Mode II = AdobeRGB Color Space, set Color Space to AdobeRGB.

Capture NX 2 (Ver. 2.2.6) System Requirements

	Windows	Macintosh
OS	Windows 7 Home Basic/Home Premium/Professional/Enterprise/Ultimate, Windows Vista Home Basic/Home Premium/Business/Enterprise/Ultimate (Service Pack 2), Windows XP Home Edition/Professional (Service Pack 3) <ul style="list-style-type: none"> This application requires a computer with a pre-installed operating system. 64- and 32-bit versions of Windows 7 and Windows Vista are supported. However, under 64-bit versions, the software operates as a 32-bit application. Only the 32-bit versions of Windows XP are supported. 	Mac OS X 10.4.11, 10.5.8, 10.6.4
CPU	1-GHz or better Intel Celeron/Pentium 4/Core Series	Power PC G4/G5; Intel Core Series/Xeon series
RAM	768 MB (1 GB recommended)	
Hard disk	Requires 200 MB or more for installation	
Monitor	Resolution: 1024 x 768 pixels or higher (1280 x 1024 or higher recommended) Display color: 16-bit color or more (32-bit color recommended)	Resolution: 1024 x 768 pixels or higher (1280 x 1024 or higher recommended) Display color: 64,000 colors or more (16.7 million colors recommended)
Others	<ul style="list-style-type: none"> CD-ROM drive required for installation Internet connection required to utilize the Nikon Message Center function Import/export of Custom Picture Control requires a memory card that can be recognized in your camera. 	

ViewNX 2 (Ver. 2.0.3) System Requirements

	Windows	Macintosh
OS	Windows 7 Home Basic/Home Premium/Professional/Enterprise/Ultimate, Windows Vista Home Basic/Home Premium/Business/Enterprise/Ultimate (Service Pack 2), Windows XP Home Edition/Professional (Service Pack 3) <ul style="list-style-type: none"> This application requires a computer with a pre-installed operating system. 64- and 32-bit versions of Windows 7 and Windows Vista are supported. However, under 64-bit versions, the software operates as a 32-bit application. Only the 32-bit versions of Windows XP are supported. 	Mac OS X (version 10.4.11, 10.5.8, 10.6.4)
CPU	<ul style="list-style-type: none"> Still images and movies (Motion JPEG): 1.6 GHz or better Intel Celeron/Pentium 4/Core Series H.264 movies: 3.0 GHz or better Intel Pentium D (during playback); 2.6 GHz or better Intel Core 2 Duo (during editing) 	<ul style="list-style-type: none"> Still images and movies (Motion JPEG): 1 GHz or better Power PC G4, PowerPC G5, Intel Core/Xeon Series H.264 movies: 2 GHz PowerPC G5 Dual, 2 GHz or better Intel Core Duo (during playback); 2.6 GHz or better Intel Core 2 Duo (during editing)
RAM	Windows 7 or Windows Vista: 1 GB or more (1.5 GB or more recommended) Windows XP: 512 MB or more (1 GB or more recommended)	512 MB or more (1 GB or more recommended)
Hard-disk space	500 MB or more for OS startup disk unit (1 GB or more is recommended)	
Monitor resolution	Resolution: 1024 x 768 pixels (XGA) or higher Display color: 24-bit color or more	Resolution: 1024 x 768 pixels (XGA) or higher Display color: 6400 colors or more (16.7 million colors or more recommended)
File compatibility	<ul style="list-style-type: none"> JPEG-format images (Exif 2.3 compliant) RAW (NEF, NRW) and TIFF (RGB) format images, AVI and MOV format movies, sound files (WAV) and image dust off data (NDF) created by Nikon digital cameras RAW (NEF, NRW), TIFF (RGB) and JPEG (RGB) format images and MOV, AVI, MPEG1 and WMV format movies saved with Nikon applications 	
Others	<ul style="list-style-type: none"> CD-ROM drive required for installation. 	

Camera Control Pro 2 (Ver. 2.0.0) System Requirements

	Windows	Macintosh
OS	Windows 7 Home Basic/Home Premium/Professional/Enterprise/Ultimate, Windows Vista Home Basic/Home Premium/Business/Enterprise/Ultimate (Service Pack 2), Windows XP Home Edition/Professional (Service Pack 3) <ul style="list-style-type: none"> This application requires a computer with a pre-installed operating system. 64- and 32-bit versions of Windows 7 and Windows Vista are supported. However, under 64-bit versions, the software operates as a 32-bit application. Only the 32-bit versions of Windows XP are supported. 	Mac OS X 10.4.11, 10.5.8, 10.6.1
CPU	1-GHz or better Intel Celeron/Pentium 4/Core Series	Power PC G4/G5; Intel Core Series/Xeon series
RAM	256 MB or more with Windows XP/2000 (512 MB or more with Windows Vista), 768 MB or more recommended for all	256 MB or more (768 MB or more recommended)
Hard disk	Requires 50 MB or more for installation, 1 GB or more for running	Requires 100 MB or more for installation, 1 GB or more for running
Monitor	Resolution: 1024 x 768 pixels or higher, Display color: 24-bit color or more	
Interface	USB: Only built-in USB ports supported*1 IEEE 1394: Only OHCI-compliant boards supported*2 *1 Operation when connected with USB hub is not guaranteed *2 Use operation-guaranteed board	USB: Only built-in USB ports supported Firewire: Only Firewire ports supported * Operation when connected with USB hub or Firewire hub is not guaranteed
Compatible Nikon digital SLRs	D3 series, D2 series, D1 series*, D700, D300 series, D200, D100, D90, D80, D70 series, D60, D50, D40 series, D5000 * Among Intel-based Mac OSs, IEEE 1394 connection (D1 series) is supported only by Mac OS X 10.4.10 Note: D3X, D700, D300S, D90, D60 and D5000 do not support Ver. 2.0.0. Please update the software via (http://www.nikon-image.com/jpn/support/download/digitalcamera/software/other.htm)	
Others	<ul style="list-style-type: none"> CD-ROM drive required for installation Internet connection may be required 	

- Camera control by Wireless Transmitter WT-2 is supported only with Windows XP Home Edition/Professional, Mac OS X (10.3.9 or later). Camera control by Wireless Transmitter WT-3 is supported only with Windows XP Home Edition (SP1 or later)/Professional (SP1 or later), Mac OS X (10.3.9) or later. Regarding Macintosh with Intel Processor, refer to (<http://www.nikon-image.com/jpn/support/whatsnew/2006/wnew060601.htm>)
- Wireless camera control is supported only with Windows Vista (32-bit Home Basic/Home Premium/Business/Enterprise/Ultimate), Windows XP Home Edition (SP1 or later, SP2 recommended) Professional (SP1 or later, SP2 recommended), Mac OS X (10.3.9 or later).

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. December 2010 ©2010 Nikon Corporation

 WARNING	TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTATION IS SUPPLIED ON CD-ROM ONLY.
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