Nikon D200 User's Guide

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INTRODUCTION

(Added by Paul Deakin)

I made this printable version of Ken Rockwell's Guide as a handy reference I could carry round with my D200 – I suggest spiral-binding it with clear plastic front and back covers. I did mine at A4 (letter to you in the USA), but the .PDF should print just as well smaller.

To save space I left out a few pictures and trimmed some words. The links should work on a computer, but of course they won't if you print it. If you want the all-singing, all-dancing version with all the photos and links to many useful articles, go to www.kenrockwell.com and search for it. Ken has User Guides for the Nikon D40, D80 and Canon 20D, 30D too.

Paul Deakin,
Hong Kong January 2007

Intro by Ken Rockwell continues:

This guide will teach you to be an expert on the Nikon D200's controls and menus. It also includes a lot of tips, tricks, and the settings I prefer to use.

This took a long time to explain clearly because the D200 isn't clearly organized itself. I set my D200 and leave it alone most of the time because many settings are so well hidden.

BASICS:

CAMERA

I leave most settings at their defaults.

I reset everything every time I use my camera, much as a pilot uses a checklist before flight to prevent any switches from being in the wrong position.

Nikon has an easy reset feature. My standard operating setting is only one click different from the defaults, and that's only because I use one trick I'll explain in the menus to improve image file size.

RESET: Find the * QUAL and +/- * buttons on the top of the camera. Hold them both down for a few seconds. The top LCD blinks and everything is back to normal.

I may have the resolution or White Balance or ISO set to something screwy and spoil all my shots. I'll see WB problems on the LCD, but I won't notice if I left my D200 at ISO 1,600 from the night before. That's why I always use **reset**.

Reset leaves the detailed menu tweaks alone and is smart enough to reset only the big dumb things I might have moved overnight.

QUALity: Large, JPG, BASIC, Optimal Quality Mode.

Reset brings you to NORMAL JPG. Once I've reset I'll immediately change to my preferred QUAL setting: BASIC. Do this by pressing the QUAL button and spinning the rear dial one click to the right. This shows as L and BASIC on the top LCD.

This is the only thing I change from the **reset** mode. Everything else I tweak below is unchanged by **reset**.

I use a hidden menu option to set the JPG compression mode to Optimal Quality instead of the default Size Priority. Do this at MENU > SHOOTING (green camera icon) > JPEG Compression > Optimal Quality.

I'll set the size down to Medium JPG BASIC, Optimize Quality mode for parties and sports when I'm shooting hundreds of images. In these cases I'm more concerned with time for the files to transfer, copy and archive than I am about the 1% quality loss.

ISO: I use 100 and Auto ISO. Auto ISO increases the ISO automatically as it gets dark so I don't have to. It shoots at ISO 100 in good light, and at 1/15 of a second it starts ramping up the ISO to a maximum of 1,600 as it gets darker. Only if it gets still darker will it let the shutter speed go below 1/15 at ISO 1,600, exactly as I'd do manually.

I explain how to select the shutter speed at which the ISO starts to increase and the maximum ISO to which it will increase in the Custom Setting Menu.

I set Auto ISO to 1,600 max because the noise from the D200 at ISO 1,600 looks much better than blur. I set 1/15 because my 18 - 200mm gives great results down to 1/15. I adjust the lowest shutter speed setting in the AUTO ISO menu if I change conditions or lenses. Unlike film, the D200 looks great at high ISOs, so I use them anytime I need them.

White Balance: I use AUTO and a clear UV filter to protect my lens. The D200 has a much warmer color balance than earlier cameras like the D70 so I don't need the 81A filter or the -3 trim. White balance is how you set the color balance, and color is critical.

Luckily AUTO works great most of the time. I look at my LCD, and if it's not right, I'll set it to whatever looks good. Usually that's the Direct Sun or Cloudy positions. These settings give much warmer results than earlier cameras. I rarely use the warmer Shade setting on my D200 while I used Shade often on my D1H and D70.

OPTIMIZE IMAGE: This is set in the menus. I crave vivid color! I tweak my D200 to give color as vivid as I can get. If it went to 11 I'd use that, too.

I go to MENU > Shooting Menu (green camera icon) > Optimize Image > Custom.

Image Sharpening: Auto (default).

Tone Compensation (contrast): Auto (default). The D200 automatically adjusts its contrast and dynamic range to each and every shot. It works great.

Color Mode: III (three). This is critical: this gives brighter colors than the default of I. No, color mode II is pronounced "two" and not to be confused with 11 (eleven). I had Nikon lock mode II out of production cameras. You don't want Mode II even if you could use it.

Saturation: +, of course. This gives brighter colors in addition to the boost from Color Mode III.

Hue: 0 (Default). Don't touch this! it will subtly mess around with your colors. Leave it at 0.

After setting this it's critical to save it by selecting " Done" and clicking to the right actively to select OK. If you forget to hit OK it won't remember all these settings!

Shooting Menu Banks

Shooting Menu Banks let you save and name groups of all these settings.

Once I have my Optimize Image options set, I save them as a Shooting Menu Bank and name it BOLD.

For photos of people I like this bold look on the D200, they look vibrant and alive. If you prefer a more subtle look for people, use a different Shooting Menu Bank, leave the colors alone, and name it PEOPLE (I call mine DULL, sorry). Now you can select either of these depending on your conditions.

Color Space: sRGB (default). I don't touch this.

FOCUS:

Still subjects: AF-S, set as "S" (single; focus once and hold) on the C-S-M lever switch on the bottom front by the lens, and single AF area, set on the AF area mode switch on back of the D200.

Moving subjects (sports): AF-C (continuous), the C position on the C-S-M switch on the bottom front of the camera. Set the rear AF area mode switch to either of the two middle positions. These middle positions let the D200 use all its sensors to track moving objects! It really works for tracking birds in flight, runners, and anything that moves.

Wild times, or handing my D200 to someone to take my picture: Set the rear AF Area Mode selector to the top position, which looks like a big white rectangle. The D200 will now look at all the sensors and guess which is your subject. If I'm too lazy to define a focus area, or things are happening around me faster than I can respond, I use this position.

I use AF-C (continuous AF) if shooting wild times. Either AF-S or AF-C is OK if handing your camera to a stranger to take your picture.

METERING: Matrix. Switch to the right of the viewfinder window. Matrix is the middle position. I always use Matrix. I never use center weighted (top), and I certainly never use spot (bottom position). I use the exposure compensation control if I need to correct it.

LENS SETTINGS

Many lenses have no switches or settings. If so, don't worry.

If the switch says "M/A - M ", use M/A. This gives autofocus. If I grab the focus ring it lets me make manual corrections. As soon as I tap the shutter button again I get autofocus.

EXPLICIT DETAILS:

FRONT CONTROLS

Depth-of-Field Preview Button (upper button on the left of the lens as seen from the front): It lies naturally under your middle finger. Tap this to stop the diaphragm down. The viewfinder probably gets darker, but look carefully and you can see what's in focus or not. This is a legacy feature from film days. Today most people look at the LCD playback.

FUNCTION Button (lower button to the left of lens as seen from the front): It lies naturally under your ring finger.

I program this button for setting flash exposure, eliminating people blinking with flash and for easy setting of manual focus lens data. This button is programmed in the Custom Function Menu.

Built-in Flash Release Button (unmarked black button on the top right of the viewfinder as seen from the front): Press it to pop up the flash.

Flash Bolt +/- Button (right side of flash hump as seen from front)**:** This sets the flash sync mode and the brightness of the flash. Flash brightness is more formally called flash exposure compensation.

Press and hold the flash button and turn the front dial to change the flash exposure compensation. + makes the flash brighter, - makes it dimmer. This setting only changes the brightness of the flash. It leaves the background ambient exposure alone. Set it to - if your subjects are getting washed out. If you run out of flash power beyond 10 to 20 feet then setting it to + can't make the flash any brighter.

If you set flash exposure compensation to anything other than zero you'll see a little "+/-bolt" icon in the finder and on the top LCD. This resets when you do a green **reset**.

FLASH SYNC MODES

Press and hold the flash button and turn the rear dial to change the flash sync mode. You'll see the mode shown on the top LCD in the box with the bolt.

Normal (blank on the top LCD): this is the default position.

In Program and A exposure modes, the shutter won't stay open longer than about 1/60 second. You can change this minimum speed in Custom Setting Menu option e2, which defaults to 1/60 second. I have mine set to 1/30. Set a longer time like 1/8 to allow more

ambient light in the photo and prevent inky black backgrounds. Set it shorter to prevent subject motion blur.

This is brilliant. In the old days we'd have to use Manual exposure to set this to a reasonable number like 1/8. The problem with using the slow mode, explained below, is that in dark locations the shutter may stay open a stupid long time and ruin the shot. This Custom Setting lets you have the camera adjust itself automatically and stop at the longest time with which you feel comfortable.

I usually use Normal mode, since if I don't I can get some scary long exposures if I'm not expecting them in the dark.

Red-Eye (eyeball icon): I never use this. It shines an obnoxious light in your subject's eyes for a couple of seconds and then releases the shutter. Use this only if you have some people you want to get rid of at a party. **WARNING:** If I set this mode by accident it bugs the heck out of me, because the camera doesn't go off until several seconds after I've pressed the shutter, but I've set no self timer! It doesn't do much to reduce redeye anyway. Skip this mode. You won't know you've set it, since there is no in-camera indication.

SLOW (called SLOW on the top LCD): This mode is very useful. It lets the shutter stay open as long as it needs to so dim ambient light can expose properly with flash. Of course if it's dark these exposure times can get stupid long, in which case you want to use the setting I covered under Normal.

In daylight SLOW is the same as NORMAL, since exposure times are short. SLOW unlocks the camera in P and A exposure modes to make exposures as long as it wants to in dim light.

Have a look at most issues of National Geographic and you'll see many indoor shots made in this mode. The background exposes correctly, people may be blurred, and a burst of flash freezes them along with the blurry ghost images.

Normal and SLOW do the same thing in S and M exposure modes, since you or the camera may select any shutter speed in these modes regardless of flash sync.

Default apertures and shutter speeds are unchanged in Program mode, unlike in the D70.

Red-Eye SLOW (eye and SLOW icon): This is the SLOW mode and redeye. I don't use it for the same reason I don't use Redeye mode.

REAR (called REAR on the top LCD): Normally the flash goes off the instant the shutter opens. This looks stupid if you have a motion blur as part of your photo. Select REAR mode to have the flash go off as the shutter closes.

Another reason to select REAR is because the flash goes off at the end of the exposure. People presume photos are made the instant a flash fires, then leave. If you use REAR mode with long exposures they'll stay put until your long exposure completes.

REAR doesn't do anything with short exposures. REAR also engages SLOW, but SLOW doesn't light up on the LCD until you take your finger off the flash mode button.

Trick Flash Exposure Lock Mode: I set my FUNC button in the Custom Menus to lock flash exposure and eliminate preflashes which make people blink.

AF Mode Switch: I set it to S. This is the little lever at the bottom of the lens marked C, S and M (hidden in the above). This means AF-S, or Single Auto Focus. Once the camera gets good focus, it locks until you take the picture. Use this to focus and then compose without the subject in the center. I do this for almost every shot.

By default the D200 won't release the shutter until perfect focus is achieved and locked, shown by the green focus confirmation dot on the bottom left of the viewfinder. This makes some people think their D200 locked up.

C means AF-C, or Continuous AF. The D200 will track and keep tracking the subject for as long as you hold the shutter. By default the D200 will shoot regardless of being in focus. The D200 will fire any time you press the button, and you could get tons of fuzzy photos.

I explain in the menus how to change this so the D200 only goes off when in perfect focus. It slows down the frame rate a little, and ensures all frames are in focus.

M means manual focus. In manual focus you have to twist the focus ring yourself and look for a sharp image in the viewfinder. In manual you also can look for the green dot at the bottom left in the viewfinder. The green dot lights up when you're in focus. It's not very precise and you'll probably lose sharpness with f/1.4 lenses. With f/4 lenses it's good enough.

TOP PANEL CONTROLS

The Three Kings: WB, QUAL and ISO: Hold any of them and spin the control knobs to adjust. In detail:

White Balance (WB): spin the rear knob for broad changes. Spin the front knob to fine tune. See my White Balance Examples page and my White Balance page for the specifics.

Here is a run down of the individual settings from left to right, as shown on the bottom of the top LCD:

Auto (A): I use this all the time. It makes its best guess for WB. It's usually very good. Indoor tungsten can be too orange unless you have some bright tungsten light also in the image. If you do, it removes the orange and compensates completely. If not, the D200 only partly compensates and you have a nice warm image instead.

Tungsten (hanging light bulb that's easy to confuse with the sun): This makes the picture very blue. Use this only for deliberate freezing Arctic effects, or under conventional tungsten light bulbs.

Fluorescent (glowing tube icon): Used to make crappy fluorescent light look less crappy. These settings rarely work; use the preset setting for better results.

Direct Sunlight (sun): Use this outdoors with sun on the subject. It looks great.

Flash (lightning bolt): I never use this. It's almost the same as direct sun. I'm told it's really for studio strobes, since the Auto mode compensates magically for flash if you use it on-camera. The reason to use this is if you use a different trim value for your strobes than you do for sunlight. I'll get to trims in a bit.

Cloudy (cloud): Warmer than the sunlight position. I use this in shade, too.

Shade (house casting a shadow): very warm. Use this for sunset shots.

Continuously Variable (K): This setting lets you choose any amount of blue or orange. Once you select "K" you choose the value, from 2,500 to 10,000, with the front knob while holding WB. The calibrations are abstract in what we scientists call (degrees) Kelvin, Forget that, because it's backwards to how it really works. More degrees look warmer!

2,500 K is very, very blue. I'll use something around 2,650 K in dim home lighting to get neutral results. 3,200 K is the same as tungsten above. 5,400 K is the same as direct sun above. I'll use something around 4,000 K indoors with a mixture of sun and tungsten light. 10,000 K is very orange. The shade setting is similar to 7,500 K, and 10,000 K is warmer.

Preset (PRE): You use this setting with a white or gray card to get perfect color matching. The D200 can recall five settings: just hold "WB" and spin the front know after choosing PRE with the rear knob. You need to use **menus**, explained later, to save the five settings.

To set it to a white or gray card:

1.) Ensure your card or other neutral object is in the light representative of the light on your subject.

2.) Hold WB and spin the rear dial to get to the PRE setting.

3.) Release WB.

4.) Press and hold WB again for a few seconds.

5.) PRE starts to blink.

6.) Release the WB button.

7.) Point your D200 at the card and press the shutter.

8.) If the display flashes "good" you're set.

9.) If the display flashes "ng" then repeat from step 4.)

The D200 stores this as value d-0. Recall other saved values by holding WB and spinning the front knob. The five values are d-0 through d-4. d-0 is always the value you just saved. Thank God you can use this without menus. THe menus (explained later) are only for storing, sorting and managing these. I have mine set to 1.) indoors under crummy residential light, 2.) the screen of my laptop computer, 3.) mercury street lights and 4.) a cloudy day. I'm sure you will be more inventive.

Quality (QUAL * [also has a green dot]): This sets the file format and compression levels. Hold it and turn the rear dial to choose JPG compression and raw or not. Hold and turn the front dial to change JPG image size in pixels. I use Large JPG BASIC. I have an entire page with explanations and examples at <u>D200 Quality Settings</u>.

The green dot is used with the other green dot button to reset most of the common shooting parameters. I explained that back on <u>page one</u>.

ISO: Hold this and spin the rear dial to change ISO. Default is 1/3 stop steps. I prefer to change ISO in more meaningful in full stops as you can set in the menu. Above ISO 1,600 Nikon calls ISO 2,000 "H+0.3," ISO 2,500 "H+0.7" and ISO 3,200 "H+1.0."

HINT: Since ISO is displayed in the finder you can set this without taking your eye from the eyepiece.

HINT: If you've selected <u>Auto ISO</u> then you cannot set a manual ISO higher than you allow in Auto ISO. To get to ISO 3,200 (cryptically called H+1.0 by Nikon) you must turn off Auto ISO.

Frame Advance Mode Dial (S, CL, CH, clock and Mup): This sets the frame advance rate, the self timer, and the mirror lock up. It's located in the same protuberance on the top left as the Three Kings above.

S: Single Frame. One frame for each press of the shutter button.

CL: Continuous Low. I always use this setting. Press the shutter once and you get one photo. Hold it down and the D200 takes pictures continuously at 3 FPS. You can set this in a menu (d4) to be 1, 2, 3 or 4 FPS. 3 FPS is default and where I leave mine.

If I need one shot I get one shot. If the light is dim and I want a few shots to ensure I get a sharp one I hold the release down and make several from which I'll pick the sharp one.

CH: Continuous High. The D200 runs at 5FPS as long as you hold the shutter. I don't use CH because it's so fast I often get 2 shots where one will do.

Self Timer (clock): Press the shutter and the D200 takes a picture some seconds afterwards. We can set the delay in a **menu** later.

Mup: Mirror Up: Press the shutter and the mirror flips up. Nothing happens until you press the shutter again, at which time the picture is taken and the mirror flips back down.

NOTE 1: The Self Timer and Mirror Up modes are defective. If you forget to set either back to the other modes you'll still be in these weird modes tomorrow! Worse, the Mirror up mode is still stupid, since you need to buy a $100 cable release to release the shutter after the mirror goes up. The correct design for these two functions is to add a dedicated button. Press this button and the shutter fires several seconds later. On an SLR the correct implementation is to have the mirror flip up at the beginning of the self timer interval. You'd get sharper pictures, not have to screw with caps and cable releases, and not miss tomorrow's shots because you forgot and left the D200 selector in last night's position.

NOTE 2: If you have no cable release, you can use the Mup mode and wait 30 seconds. 30 seconds after you press the shutter and the mirror flips up the D200 gets tired of waiting and fires the shutter anyway.

NOTE 3: At default the D200 needs perfect locked focus to take a picture in S mode, and locked focus to start the Mirror Up or self timer modes. If you don't have perfect focus the D200 ignores you in these modes.

Power Switch (right side): Tap it past ON to turn on the LCD illuminator and the meter.

There's no need to turn OFF the D200 except to prevent accidental operation when squashed in a camera bag. The D200 turns off by itself after a few seconds of ignoring it.

Exposure Mode Button (MODE, right side): Hold it and spin the rear dial to select among P, S, A and M.

P: Program

I use "P" for program auto exposure. In this mode the camera chooses the f/stop and shutter speed for you. If I want different apertures or shutter speeds I rotate the rear command dial, which selects alternate combinations of f/stops and shutter speeds which give the same exposure. Nikon calls this "Program Shift." An asterisk (*) shows up next to the P on the top LCD to let you know you've chosen a different combination for exposure. The asterisk doesn't appear in the finder, but you can see the apertures and shutter speeds. The asterisk goes away when you return to the standard combinations. The standard combinations are f/1.4 @ 1/8, f/2 @ 1/15, f/2.8 @ 1/30, f/4 at 1/60, f/5.6 @ 1/125, f/8 @ 1/250, f/11 @ 1/500, etc.

An easy way to return to these standard combinations is to flip to a different mode and back to P, or turn the D200 off and back on.

A, S and M Modes

If you want to use only one aperture or one shutter speed then use S or A mode and the camera will automatically pick the other value.

If you want to set both the hard way, use M, manual, mode.

In these three modes you select the aperture with the front dial and the shutter speed with the rear dial. You can reverse which dial does what in the Custom Setting: Controls Menu.

A Mode: Aperture Priority

In A mode you choose the Aperture and the D200 chooses the shutter speed.

S Mode: Shutter Priority

In S mode you set the Shutter and the D200 sets the aperture.

If the D200 runs out of good apertures you easily can get under or over exposure in S mode: watch that the D200 can select a correct aperture for your lighting.

M Mode: Manual

You set everything the hard way. I look at the LCD to check exposure. You can use the bar graph in the finder - but why? If you wanted to do that use another mode and let the D200 do the setting for you.

HINT: AUTO ISO doesn't deactivate in Manual mode. I always turn off AUTO ISO when I enter Manual Mode.

HINT: You can see P, S, A and M displayed in the finder, so you can adjust this without taking your eye from the finder.

Format **(combined with MODE button):** Hold this along with its brother on the back of the camera (combined with the trash button). You'll get a blinking "For" on the top LCD. Release and hold both of these again and you'll completely reformat your memory card.

Professionals reformat a card each and every time a card is put in in the camera. This is because files and folder structures are sometimes messed up or changed when read with a card reader or used in any other camera. Professionals prefer to be safe than sorry. We don't use cards to archive previous photos. Reformatting completely renovates the card. Erasing does not, and may leave the potential for errors.

Exposure Compensation Button (+/- * [a green dot]): Hold the button and spin the rear dial. + makes the picture brighter and - makes it darker. If your photo is too dark or light, just change the setting and try again. This is easy!

Remember to set it back to zero when you're done. If you don't, you'll see a "+/-" in the viewfinder and the top LCD.

See more at How to Set Exposure. Ignore Nikon when they suggest you don't use this with Matrix Metering; I do it all the time.

The green dot means if you hold it and the QUAL button down for a few seconds the D200 returns to it's default settings as I explained on page one. This clears any compensation values and other crazy things you may have set yesterday.

HINT: You can see the + or minus value displayed in the finder as well as the top LCD, so you can adjust this without taking your eye from the finder. The two displays only read the value when the button is held, otherwise those digits read exposures remaining.

REAR CONTROLS

BKT: Bracketing. I don't use bracketing. Hold it and spin the two control rings on the right of the camera while looking at the top LCD to choose how many shots and the exposure increments. Nikon always has designed their cameras defectively here: you have to make as many exposures as the bracket sequence is expecting. If you count wrong, your next shot will be at some weird exposure offset from the last shot. Canon had this down years ago: you held down the shutter and made as many auto bracketed exposures as you wanted. When you stopped, so did the bracketing sequence.

Trash (doubles as one of the two FORMAT buttons): With an image on the LCD, press once. You'll get an "Are you sure?" message. Press again and the shot's gone. The D200 ignores this button if it's not playing back.

Hold this along with its brother (the MODE button) to format a memory card.

Play [>] Button: Press it to see your pictures. Press again to turn them off.

There are a lot of trick play modes. My favorite is explained under the settings for the rear thumbswitch and the Command Dials.

MENU: This gets you inside your D200.

I'll cover what you can screw up with this in the 11 long pages that follow.

Checkerboard Button: Hold it and turn the rear dial to selector one, four or nine shots up at once.

TRICK: Hold the checkerboard and spin the front knob to flip quickly between these pages of images!

? / Key:

Playback: It protects (locks) the image from erasure. Warning 1.): it marks the file so well that it won't empty out of my trash on my computer unless I go in and remark the file on my computer first. Warning 2.): these images are erased from your memory card when you format anyway. Now you see why I don't use the lock feature.

Menus: Press for more information about whatever you're setting.

TRICK: Hold the "?" as you turn on the power and the D200 creates a new folder and saves the new images you make to it. This is extremely handy because when you

load the images into your computer they already will be sorted into folders. I find this extremely helpful!

Magnifying Glass / ENTER:

During playback: Press to zoom in on image. When you do this you can zoom in more by pressing the checkerboard button and spinning the rear dial. You can use the thumb switch to scroll around the image. I prefer to set a trick mode to zoom in a lot more by pressing the center of the thumb navigation button.

While in the menus: takes action on what you've set.

AE-L AF-L (Top center): Hold this to lock settings while shooting. You can alter what this button does in the Custom Setting Menu c1 and c2.

AF-ON: Focuses the lens but doesn't take a picture.

This button is helpful if you disable the AF from activating when you press the D200's shutter in this menu. If you do then you can focus with this button, and have an AF lock when you release it. I'd rather it was a self-timer, but Nikon didn't ask me about this one.

Thumb Button: Used for menu navigation, selecting AF areas , scrolling through playback images and a whole lot more.

You can configure this button in custom setting f1 and f2. I set mine to zoom way into an image when pressed in the center.

TRICK: If you set a center push to zoom on playback, you can spin the rear dial to move to different images at the same position and zoom! This makes it easy to pick out the sharpest image. Unfortunately as soon as you hit the delete key it goes back to unmagnified, sort of making this less useful for in-camera selection and deletion.

L / * on Thumb Button: this is a lock. It's smart: it only locks the AF selection. It doesn't lock you from anything else.

Focus Area Mode Selector Switch

The **Focus Area Mode Selector Switch** lets you choose how the D200's brilliant AF system uses all 11 sensors. This switch is important for switching from shooting static subjects to action.

Little Box: Leave it as shown to use just one sensor. That's how I shoot still subjects. You use the thumb button to choose which sensor. Nikon calls this "Single-area AF."

Cross: The next position up is for sports and action. Set AF-C mode on the front of the D200. Choose the AF sensor with the thumb switch. The D200 sets focus using that sensor and tracks your subject, even if it moves around the frame! It really works. It will track birds, runners, cars or anything. It's easy for the D200 to track a bird against a blank sky. It's tougher for it to stay locked you have a lot of other things immediately in front or behind your subject. Nikon calls this "Dynamic-area AF."

Diamond: This does the same as the previous position, except it limits the D200 to the AF areas next to the chosen sensor. Nikon calls this "Group-dynamic AF." You can tweak some of this function in the Custom Settings Menu a4. I never use this setting.

White Rectangle: The D200 chooses the best sensor automatically. It ignores your input. Use this when you hand your camera to a non-photographer or when the action is too fast for you to be able to choose sensors. It works great: I got lazy one day and photographed a bunch of kids this way, and everything looked perfect. Nikon's name for this, even less understandable than the others, is "Dynamic area AF with closest subject priority."

The D200 doesn't display the focus area that it has chosen while shooting in three modes. You can see which it chose in playback if you go to MENU > PLAYBACK MENU > Display Mode, check "Focus Area" and select OK.

Pac Man Switch: this cool switch does nothing but pop open the CF card door.

PLAYBACK MENU ("[>]" icon)

How to Get Here

Press MENU, click to the left and then up to select the top "[>] " (play) icon. You'll then see PLAYBACK MENU on the color LCD.

What it Does

It sets various playback options, including what data you see on playback.

What I Change

I activate the correct color histograms and set the image to show after every shot.

Delete: This is helpful if you want to delete all images while saving those for which you pressed the "? / Key" button to lock. I don't use this. I do in-camera deletions one-by-one.

Playback Folder: The camera can record to and play back from different folders.

ALL shows you everything on the card. I leave my D200 set to ALL.

CURRENT ignores photos in folders other than the one to which you're recording. If you create new folders for different scenes as you shoot by holding the "?" key as you power-on then you wouldn't see the other shots on the card!

D200 plays all the shots made on the D200 but ignores shots made on other cameras. You shouldn't be using cards with data from other cameras since that might lead to errors. Always format a card anytime it's put into a camera.

Slide Show lets you amaze your friends with an exciting slide show on the tiny screen. I don't bother with this. You could plug the D200 into a TV or video projector, but video resolution is so bad everything will look awful.

Hide Image: This is used to hide embarrassing photos of your friends from playing back before you get to download them. The images are on the D200, however when marked this way they will be skipped on playback as if you deleted them.

Move the cursor left and right to select images, press the center to mark as Hide or Unhide, and press ENTER to save. Now the camera won't play these images, even though it still tallies them in it's counter on the top right that reads "34/284." You can detect a hidden image because this counter will skip.

Print Set: I never use this. This lets you mark images for printing if you sorted and then printed directly from your D200, and had a lab which could read this data.

Display Mode: This lets you select which data screens come up in rotation when you look at each image. You can choose or refuse:

Data: this is three pages of f/stop, white balance, etc.

Histogram: don't check this. This is the worse-than-useless green-only histogram which can cause you to overexpose your shots and not know it. See my [Color Histogram](#) page for an explanation.

Highlight: Equally useless, this only reads the green channel. You can blow out your reds, blues or anything other than gray or green and never notice.

RGB Histogram: Yes, use this! See my [Color Histogram](#) page.

Focus Area: This shows which focus area was active. It shows the area you set, or the area(s) chosen by the D200 in it's dynamic modes, as little red rectangles on the LCD.

Image Review: This sets the LCD to show each image after you shot it. Nikon hid this well! It defaults to OFF to save the battery.

After Delete: You may choose to see the next or the previous image after you delete one. The third choice, "continue" keeps going in the same direction as you were going.

Rotate Tall: Who translates these? I leave this off. If you set it ON, your vertical shots, if shot with **[Auto Rotate ON](#)**, will playback as tiny little vertical images. Luckily the D200 is smart enough to magnify using the whole screen if you choose this mode.

The D200 is not smart enough to use the rotation sensor during playback. Canon's point-and-shoots are. Many Canon point-and-shoots expand these images to full screen if you rotate the camera during playback! The D200 doesn't. I don't use Autorotate.

SHOOTING (FILM) MENU
(camera icon)

How to Get There

Press MENU, click left and then up and down to select the camera (shooting) menu. You'll then see "SHOOTING MENU" on the top of the screen when you select it.

What it Sets

It sets parameters related to what film used to do. The Shooting Menu sets ISO, grain, contrast, color and a zillion other critical things that set the look of your images.

The shooting menu would make more sense if it were called the Film menu, since many other menus also affect shooting.

What I Change

I change a lot here. This is where I make the D200 give me the wild colors I love.

Clarification and Complaints

A more sensible icon would have been a piece of film since the Custom Setting Menu (pencil menu) has more to do with shooting and camera mechanical settings than the Shooting Menu does.

Don't worry about what is in what menu. It doesn't make complete sense and you'll forget where things are. The Recent Items Menu is the only way I find most of the menus I use, which is great except that that menu doesn't recall items from every menu!

By comparison, the Nikon D70s is great. Its menus make perfect sense. The D80 and D2Xs have the same wasted menu structure as the D200.

OK, enough whining. Here's how to use everything and what it does.

I use Nikon's menu names in **bold**, and then explain them in simple English.

Shooting Menu Bank

Shooting Menu Banks are presets which store combinations of the settings you will set in the Shooting Menu. These Shooting Menu Banks don't store everything I'd like them to. They aren't Shooting Settings; they are Film settings. Drive and focus modes aren't remembered with them.

You have four memory positions: A, B C, and D. Nikon was stupid to use the same names, A, B, C and D, instead of 1, 2, 3, and 4, for the Custom Setting Menu Banks! These confuse me and I have an engineering degree.

You can add a name to each one. I set my A bank for normal operation with the settings I described on page one, and name it BOLD.

I set my second bank, B, to defaults, and call it DULL.

I set my third, C, for comparing lenses. I call it TEST. I also use this if shooting for time lapse or stitching. I deactivate the default auto contrast, auto white balance and auto sharpening so that these won't change between shots. Don't use this for normal photography - you want the D200 to adjust these for you.

Want to know what bank you used to make a shot? Each bank recalls your [file naming convention](), so you can use different file names for each bank.

How to Recall a Setting

Easy: MENU > SHOOTING MENU > Shooting Menu Bank > (select one) > OK.

I don't know of a shortcut. You have to use the Menus.

You'll see SHOOT and A, B, C or D on the top LCD.

How to Save a Setting

You can't save or lock any of these settings. This is a design defect.

The D200 continuously alters whichever Shooting Menu Bank is selected. Choose a different Menu Bank and you're changing that Menu Bank as you're shooting.

Menu Banks are confusing because all they do is return you to where you were when you last left them.

If you haven't selected a bank, the D200 defaults to Shooting Menu Bank A. You see that on the top LCD as "SHOOT A."

As you tweak settings, these are updated for Shooting Menu Bank A.

If you choose Shooting Menu Bank B the settings for A are saved until you select Bank A again. Bank B is then modified as you work the camera.

When you switch to a different Menu Bank the D200 recalls whatever settings you had when you left that Menu Bank for a different one.

This is retarded, but the way the D200 works. This is why my settings were always changing by themselves. If you are using a bank and change your WB, you just changed that bank. If you change a setting and then realised you were in the wrong bank, you just screwed up the wrong bank. There is no "back" button.

If you want to reset a bank to its defaults, select it, then use the next menu item to reset it.

(I suggest Nikon fix this by treating these Menu Banks as they treat preset White Balances. They should have one Bank which changes as you shoot, as they all do today. The other banks should only change if you save to them deliberately.)

How to Name a Setting

You can save a name for the setting, even if you can't save the setting itself.

Choose MENU > SHOOTING MENU > Shooting Menu Bank > (select one) > Rename. Select the bank you want to name. Enter the name, and remember to press ENTER when done. If you forget to press ENTER, it forgets the name and you have to start over! **Hint:** there's no obvious way to delete a character if you make a mistake. Use the Trash button to delete characters.

Menu Reset

This resets everything in the selected Shooting Menu Bank (just explained above) to the defaults. You reset only the bank in which you're working.

As soon as you select "Menu Reset" and "Yes" it resets. It doesn't ask "Are you sure?" first. Be careful.

Play with everything to your heart's content, since if you do screw anything up this reset will fix it. Choose a bank you don't use and you won't change the bank you do use.

Folders

You can create, name and rename folders on your CF card. They are named with a 3-digit number from 100 through 999.

New is self explanatory. Choose a number and go. I never use this. I use this trick all the time, every day, instead:

TRICK: Hold the "?" button when you turn on the power. A new folder is created, and your photos are recorded into it. I do this every time I have a new subject or location or day's shooting. This way I have my shots organized in folders even before I download them!

Select Folder selects the folder into which new photos are put. You could use this to record images into a previous folder. I never do this: if I want to get that complicated I wait until I get to my computer where it's much easier to sort.

File Naming

You can choose the first three letters which will be used to name all of your files. I use KEN. If I had four letters I'd use ROCK.

You can select different letters for each Shooting Menu Bank, making it easy to swap among four sets of letters. Maybe you share a camera and want to know which shots you made. I use this to remind me which menu bank I used: I left DSC as the name for banks other than my preferred BOLD bank A.

The D200 always begins AdobeRGB file names with an underscore. You choose the three letters and the D200 chooses where they go.

TIP: You can't delete as you enter characters. Since you only have three, change a bad one by moving the cursor over it and entering the correct character.

Optimize Image

This is where you set the important things, like the saturation I love.

I'll tell you what I use. Ignore me if you prefer a different look.

Preset Choices

Nikon hid the preset scene modes under Optimize Image. These alter the look as if you changed film. They don't affect the apertures and shutter speeds and flash modes as scene modes do on simpler cameras.

These preset modes are:

    N Normal

    SO Softer

    VI Vivid

    VI* More Vivid

    PO Portrait

    BW Black-and-White

You might think I would use Vivid or More Vivid, except that they crank up some of the contrast and sharpness settings and leave them there. I want vivid colors, but leave the contrast and sharpness on Auto. This way as subjects get contrastier I don't have to stop and turn the contrast back down. In VI* you can easily blow out a slightly high-contrast scene.

Therefore I use the Custom (pencil icon) setting:

Custom (pencil icon)

This is where Nikon hides the critical adjustments others make more obvious.

Done is the most important Custom Optimize Image menu item. If you forget to select it and then click to the right to select OK it forgets everything! Always remember to select DONE and OK after you change any of the settings below, otherwise they will be ignored.

Image Sharpening: I leave mine on AUTO. I've never messed with the manual settings. Sharp*ening* is an artificial effect not to be confused with sharp*ness*. When I first got a digital camera I thought: "cool, I'm cranking this to 11," and realized my error. Don't turn it up for no reason, since the image can start to look artificial. Play with it if you want. I've played with it out of curiosity, and always leave it on AUTO.

Tone Compensation (Contrast): Nikon meant to say Contrast. I always leave mine set to AUTO. In AUTO the D200 automatically applies the [Zone System](#) and adjusts contrast to match your subject, for each and every shot! The D200 automatically lowers contrast and increases dynamic range for very contrasty subjects, and cranks it up for dull subjects.

Saturation also varies with this setting. If you crank it to + it looks vivid and bold for flatter subjects, but when you have a contrasty subject it's too much and blows out. Leave it in AUTO and you won't have to piddle with it.

Avoid **Custom** tone compensation. Most people call this a custom curve. I've never used it. To use it you have to buy Nikon Capture and create a curve. You then use Nikon capture to load it into the D200. Once you've done that you select it here. If you haven't loaded your own custom curve and select this you get the default Normal curve. Custom curves are way beyond anything with which I want to bother. The curves in the camera are the best ones anyway. Real photographers pay more attention to their subject's lighting.

Color Mode has three settings:

Color Mode I (one) is default. It's normal.

Color Mode II (two) give duller colors. It only works if you've selected AdobeRGB.

Color Mode III (three) gives bolder colors. I use it all the time.

I have no idea how Nikon cooked up these numeric designations.

Saturation is the vividness of colors.

A Auto: I don't use this. I suspect it cranks up the color for dull scenes and puts it back to normal for scenes that are colorful. I prefer always to have my saturation cranked up.

0 Normal: For normal people shots you're probably better off with 0. This is the default.

- Moderate: tones down the colors, which I've never liked. Moderate sounds like British understatement. In America we call this "dull and boring." Personally I want colors so bright you have to put on sunglasses, or I go directly to B/W.

+ Enhanced: I prefer violent color, so I crank it up to +. I'd use ++ or +++ if my D200 had it.

Hue Adjustment: Don't touch this! This rotates all your colors to different spots around the color wheel. If you use this to fix one color it screws up all the other colors.

Color Space

Don't touch this unless you *really* know what you're doing *and* print your own work.

sRGB is default. It's the world standard for digital images, printing and the Internet. Use it and you'll get great, accurate colors everywhere all the time.

sRGB is specified in IEC 61966-2.1, which you may also see when examining color profiles. That gobbledygook means the same thing as sRGB.

Adobe RGB should never be used unless you really know what you're doing and do all your printing yourself. If you use Adobe RGB you will have to remember to convert back to sRGB for sending your prints out or sharing them, otherwise they look duller than sRGB!

Adobe RGB squeezes colors into a smaller range (makes them duller) before recording them to your file. Special smart software is then needed to expand the colors back to where they should be when opening the file.

If you have the right software to re-expand the colors you theoretically might have a slightly broader range of colors. If at any point in the chain you don't have the right software and haven't attached the AdobeRGB profile, you'll get duller colors as recorded!

Web browsers don't have, and print labs rarely have, the right software to read AdobeRGB. This is why people who shoot it are so often disappointed. If a place has the right software, but you forget to add AdobeRGB profiles to your files you'll get dull colors.

Adobe RGB may be able to represent a slightly larger range of colors, but no screen or print material I've used can show this broader range, so why cause yourself all the trouble? I've experimented with 100% saturated grads in these two color spaces and never seen any broader range from Adobe RGB either on my screen or on SuperGloss Light jet prints.

Worse, if you're the sort of geek who wants to shoot AdobeRGB because you read about it in a magazine, did you realize that because the colors are compressed into a smaller range there is more chroma quantization noise when the file is opened again? Ha!

I know this stuff. Did you know I conceived the world's first dedicated digital colorspace converter chip, the [TMC2272](), back in 1990 when I worked at TRW LSI Products?

Image Quality duplicates half of the [QUAL]() button. It chooses JPG, raw or both and the JPG compression level.

Whether you use the QUAL button or this menu you're also changing your [Shooting Menu Bank]().

See my discussion of the [QUAL]() button for details, and see examples of these settings at my [D200 Quality Settings]() page.

Image Size duplicates the other half of the [QUAL]() button. It chooses the JPG image size in pixels. It does not directly choose the size of the file in bytes.

See my discussion of the [QUAL]() button for details, and see examples of these settings at my [D200 Quality Settings]() page.

JPEG Compression is an important but obscure menu choice. It chooses the algorithm used. It works in addition to the BASIC, NORMAL and FINE choices, giving you six different JPG settings for each image size!

Size Priority is the default. It was the only option in older cameras like the [D1X](), [D50]() and [D70s](). Since it was the only option in those cameras they have no menu option for it.

JPGs need more data (file size) to maintain quality as the subject's contrast and complexity climbs.

Size Priority keeps the file size constant regardless of image detail or subject complexity. This is bad because quality will get worse (add artifacts) as detail goes up.

Optimal Quality lets the file size grow if needed to maintain quality, and otherwise keeps it smaller. I love this option.

The Optimal Quality option lets the camera allocate bits intelligently based on the subject, instead of making big files when they aren't needed for flat subjects like blank skies.

Using the Optimal Quality option in BASIC JPG lets the file grow to the same size as JPG NORMAL if the subject needs it, and lets the size shrink back to JPG BASIC when it's not.

Firmware Defect: Nikon accidentally reversed the two icons! The icon which shows an arrow from above directing all the little identical images to fit next to each other in the same space, which means "same size," is used for Optimal Quality. The icon showing little images of different sizes working together is used for Size Priority.

RAW Compression

NEF (RAW) OFF (default): NEFs are saved as huge uncompressed 16MB files.

Comp. NEF (RAW) ON: Lossless [LZW]() compression reduces the data to only 9MB for storage. I always use this setting if I shoot NEF.

Nikon is quiet about the algorithms used and their manual writers are clueless, so the hacker world freaks out about Nikon's wording sometimes saying the compressed file is "virtually" identical to the uncompressed one.

The data compression is lossless. Nikon may or may not be doing some curve shaping and fitting before the file is saved, and this shaping is happening before the file is saved as NEF regardless of compression. Hackers who reverse engineer the code saw that an LUT is used to shape the highlights and reduce 12 bit linear data to 10 bit semi-log.

Thus the only thing you lose with the compressed option is file size.

Nikon removed the uncompressed option from the D70 because improvements in compressor speed eliminated the need for the wasteful uncompressed option. The world thought Nikon was cheating them by removing the uncompressed option, so Nikon added it back in in the D200. You don't want to use it.

White Balance duplicates the [WB]() button.

I use AUTO. See more on my [first page about the WB button](), my [Examples of D200 WB Settings]() and my page on [Setting White Balance]().

Long Exp. NR (Long Exposure Dark-Frame Subtraction Noise Reduction)

OFF: Default. Leave it here.

ON: Don't use this. If you do, the D200 will double the amount of time you have to wait around for time exposures of 10 seconds or longer. The D200 is so good you don't need this. Nikon only includes this because old-timers would get peeved if it was missing.

I have details with examples at [D200 Dark Exposures](#).

Firmware Defect: the help menu says exposures need to be 8s or longer for this NR to take effect. It's wrong - they have to be 10s or longer, or longer than 8s.

High ISO NR (High ISO Noise Reduction)

This lets you control the strength of the noise reduction (smoothing) applied at high ISOs.

I find the default NORMal position optimum.

You can set it higher, but it removes subject texture.

You can set it lower and get more noise.

I have details with examples at [D200 High ISO Noise Reduction](#).

ISO Sensitivity duplicates the [ISO](#) button.

I use 100 and AUTO.

Nikon really screws up, because the AUTO ISO controls are hidden **[here](#)** in the Custom Settings Menu!

Image Overlay is a parlour trick. It allows you to overlay two images.

It only works with NEFs.

Multiple Exposure is unique. It lets you do what we did back on film.

This works and it's easy to use. Unlike film, it's smart enough to compensate the exposures so they add together without overexposure.

To use it:

1.) Choose the number of shots to combine (2 - 10).

2.) Hit OK.

3.) Go up to DONE.

4.) Hit OK. It only works if you remember to scroll up and hit OK.

You'll see a tiny flashing icon on the top LCD that looks like two rectangles mating.

Make your shots. You'll see each on the color LCD as you make it. You'll also see the mating rectangle icon on the color LCD.

You'll keep seeing the flashing mating rectangles icon on the top LCD until you complete all the exposures for which you asked in step 1.).

The D200 won't tell you how many you've made until you're done. You can cancel it in the same menu if you want. Choose RESET.

When you've made the last shot the D200 shows it as it did for the other shots for a moment, then goes off and adds them all together. After the CF light blinks a few times you'll see the composite image on the color LCD. The single images are not saved.

It works with JPGs and NEFs.

Don't turn off the automatic exposure compensation, called Auto Gain. If you do you'll get at least a stop of overexposure.

Intvl Timer Shooting (intervalometer)

This works and it's fun. This lets you set the D200 to fire automatically at preset intervals.

The D200 is better than a video security camera because it has so much more resolution. You can point this outside, cover a wide angle and have more than enough resolution to read the plates of a perp's car.

The basics are easier to figure out on your own than for me to explain here, so I'll only cover some specifics below.

Calculations

You tell the D200 the interval between shots and how many shots to take.

The D200 doesn't calculate how long the series will take.

You can't tell the D200 to run for a certain period and make so many shots. You have to do the math yourself and tell the D200 how many shots and how much time between them.

Battery

It's easy to run down the D200 battery since you can program it to make so many shots. Long night exposures will kill the battery, too. You'll wonder why it stopped halfway.

You may want to get an AC adapter if you really get into this.

Be sure to turn off the LCD review.

Select Intvl*Shots Menu

The D200 does more than a regular intervalometer. The D200 lets you shoot one shot at each interval, or a burst of them. The interval is set in another menu. The default interval is a minute and can be set from one second to many hours.

The Select Intvl*Shots menu is as clear as a lens cap. The Select Intvl*Shots menu in in the format of 001 x 1 = 0001.

The first 001 number sets the total number of intervals at which shots are made. If you set "060" and a one minute interval, the D200 shoots each minute for an hour (60 x 1 minute = 60 minutes).

The second single digit is how many rapid-fire shots are fired at each interval. Set it to one and you get the usual one shot at each interval. Set it to several and you'll make several rapid shots at each interval. You'd do this if you intend to cherry pick one shot from each burst, for instance, to recover if someone walks in front of your camera at one interval.

The last number is the total number of shots. This is calculated by the D200. You don't enter it. It's the number of bursts (the 001 part) multiplied by the number per burst.

Time Lapse

Want to see some intensely cool stuff? Check out ThomasKranzle's time lapse reels. He makes a shot about every 4 seconds, runs for about 640 shots, and assembles them in a film editing program at 24 fps for motion pictures.

To do cool stuff like this you need to:

1.) Turn off every auto anything, including auto contrast and auto saturation. If you don't, your sequences will flicker from the auto WB, sharpening or anything from frame-to-frame.

2.) Import all your shots to your Mac.

3.) Open iMovie or Final Cut.

4.) Create a new project. Thomas selects HD to get good enough resolution for film-out.

5.) Select all the stills and drag them into the clips pane.

6.) Find the command to sequence them together in the timeline as independent frames, one frame each. I forget where this command is and will vary with your software.

7.) Hit go and voila! Time lapse!

8.) Save it as you prefer. Thomas saves them as .MOV files.

Of course you can do this down at video resolution, but using HD resolution (1,920 x 1080 24p) looks incredible and is easy from a digital still camera. This looks insane projected

digitally from a computer, since regular video is only 720 x 483i. My old iBook can do this and output in HD easily with the software that came with it; good luck in Windows.

Exposure is set manually and left alone. For sunrises and sunsets it looks much better to have it fade to or from black than to twiddle the exposure frame-to-frame.

Non-CPU (Manual Focus) Lens Data

This is how you get Matrix metering, automatic exposure and EXIF data compatibility with old AI manual focus lenses.

You enter the focal length and f/stop via this menu. You also get aperture data in the finder and can use manual and Aperture priority exposure.

You can set the FUNCTION button to do this without needing a menu. After you've set this option, ensure the flash is off (otherwise the FUNC button works as the flash exposure lock button) and hold the FUNC button. Spin the front dial to set the maximum f/stop of the lens. Hold FUNC and spin the rear dial to set the focal length.

CUSTOM SETTING MENU
(pencil icon)

How to Get Here

Press MENU, go to the left and select up and down to the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD.

What it Does

The Custom Setting Menu is primarily concerned with the camera's mechanics and meters and timers and focus etc.

Nikon has subdivided these various menu functions into groups, and color coded them as Autofocus, Metering/Exposure, Timers/AE&AF Lock, Shooting/Display, Bracketing/Flash and Controls. The seemingly unrelated things separated by slashes (/) are Nikon's grouping. I use Nikon's names as headers for each section, so please excuse me if they make little sense. I explain each function and it's choices in simple English in the text which follows each entry.

What I Change

I change a zillion things, all explained on the next pages where I detail each subsection of this menu on its own page.

Complaints and Organization

This menu is also all about shooting, just like the Shooting Menu. It's tricky to remember if something is in the Shooting Menu or the Custom Setting Menu.

I would rename these. If I did, I'd rename the Custom Setting Menu as the Camera Menu and the Shooting Menu as the Film Menu.

I use my D200 daily and rarely can remember in what menu Nikon has hidden what. Instead I use the Recent Settings Menu and hope it's remembered there.

[C] Bank Select: There are four selectable memory locations which store all the settings in this menu. They are called A, B, C and D. You may add your own names to them for convenience. I call my A "NORMAL," and I call D "Remote Flash."

Nikon did another bone-headed thing by naming the Shooting Menu Banks A, B, C and D and then using the same names (A, B, C and D) for these Custom Menu Banks.

Since there are so many things to reset to get remote flash to work and then to turn it off, I saved them in one of these presets.

If you have anything set away from the defaults you'll see CUSTOM and A, B, C or D on the top LCD. Regardless of which is selected, if all the defaults are selected (you can do that with Reset below) you won't see CUSTOM on the top LCD.

There is no "SAVE" command. The bank you have selected is updated immediately as you change settings. If you've never selected one then you've been working in the A bank.

You can save names for each, but you can't lock any of these banks. If you have a bank you don't want altered, don't shoot actively with it. To save a Bank you must work in another, since there's no way to lock them. Nikon confuses us all by letting us save names while the settings wander all over the place as we change them in shooting.

[R] Menu Reset resets everything in the selected Custom Shooting Menu Bank (just described above) to the defaults. The next six pages describe all the settings affected. Reset only affects the bank in which you're working.

Play with everything below to your heart's content, since if you screw anything up this reset will fix it. Choose a bank you don't use and you won't change the bank you do use.

Once you hit YES it resets. It doesn't ask "are you sure?" first.

CUSTOM SETTING MENU

a1 - a10: AUTOFOCUS

How to Get Here

Press MENU, select the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to a AUTOFOCUS and click to the right.

What it Does

It sets many options for the advanced AF system.

What I Change

I change a1 and leave a2 - a10 at their defaults.

---

a1 AF-C Mode Priority: This sets whether or not the D200 can fire if it's not in perfect focus in the AF-C (continuous AF) mode.

Set it to "Focus" and the D200 will only fire when it's in focus, ensuring a sharp sequence.

FPS Rate: The default mode, lets the D200 run at 5 FPS, whether or not it's in focus.

FPS Rate + AF: This is a halfway setting. It makes the D200 slow down a little hoping to get more shots in focus.

Focus: I use this setting. It makes the D200 wait until it's in focus before firing each shot. It saves me from having to delete all the fuzzy ones. The D200 slows down a bit in this mode, but who cares about more shots if they're out of focus?

---

a2 AF-S Mode Priority: At the default setting the D200 only fires after getting perfect focus. Nikon call this "Focus Priority." It's the opposite of the default for AF-C mode, which lets the D200 fire at any time.

Focus (Default): D200 only fires after it's gotten and locked perfect focus.

Release: D200 fires anytime you press the shutter, regardless of if it's in focus or not. Try this setting if your D200 seems to lock up with some lenses.

---

a3 Focus Area Frame rearranges the AF areas from 11 small ones to 7 bigger ones. I use the default of 11 small ones.

Normal Frame: 11 small AF sensors.

Wide Frame: 7 bigger AF sensors. This setting may be helpful for moving subjects. I've always gotten great results from the default of 11. If you have more than one thing inside one of the big AF areas weird things may happen.

---

a4 Group Dynamic AF I never use this.

This function is selected at the diamond position on the rear Focus Area Mode Selector Switch. This menu only modifies what happens in that position of that switch.

If you've selected this position, this menu lets you select giving priority to the center of each group of AF sensors (faster), or letting the camera identify and choose the sensor with the closest part of the subject in it (slower).

More confusing, there are two sets of patterns for this mode. They are selected by pressing the center of the big rear thumb switch after you've selected the center group.

This menu lets you select which mode (center or closest) is applied for each group. You can select this separately for each of the two patterns which are selected via the center button of the thumbswitch.

Sound confusing? It is. Ignore it. I never use the Group AF mode.

---

a5 Lock-On controls how long the D200 focus tracking system waits to start looking for the subject if it loses it behind a tree or person. This only applies in the AF-C (continuous) AF position.

I leave this alone.

Long: The D200 presumes the subject has run behind something big, like a billboard, if it loses it. The AF system keeps running without it for a while, expecting the subject to return on the same path from before. In LONG the AF system has a lot of patience for subjects disappearing.

Normal (default): The D200 presumes the subject has run behind something like a tree or another player if it loses it. The AF system keeps running without it for a little while, expecting the subject to return on the same path from before.

Short: The D200 has little patience for subjects evaporating. It doesn't wait very long after it loses your subject to start looking for it again from scratch.

Off: The D200 wastes no time tracking. If it loses your subject it immediately starts looking around again. You might want to use this if you're shooting a bunch of fixed things at varying distances one after another, but I use AF-S for that.

I've never moved this setting from its default of Normal.

---

a6 AF Activation allows the AF system to ignore the shutter button.

In its default position the AF system turns on when you press the shutter.

You would use this setting if you preferred the D200 only focus when you press the dedicated AF button on the back.

I've never used this. It might be helpful with an AF telephoto that lacks easy manual override. You'd use the AF button to focus, and remove your finger to lock.

---

a7 AF Area Illumination controls when or if the AF areas light up in the finder.

I leave it at the default of Auto.

You can set them to be on all the time, or stay off if you prefer.

---

a8 Focus Area selection normally stops when you hit the edge of the AF areas.

If you keep pressing the selector to the left it stops at the far left. I prefer this, the default.

Selecting "Wrap" lets your selection wrap around to the other side of the AF areas.

---

a9 AF Assist lets you deactivate the AF assist light. Normally it comes on in the dark to help focus. Turn off the AF assist light if you want to keep a lower profile.

---

a10 AF-ON for MB-D200 lets you choose what this button does if you have an MB-D200.

CUSTOM SETTING MENU

b1 - b7 METERING/EXPOSURE

How to Get Here

Press MENU, go to the left and select up and down to the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to b METERING/EXPOSURE and click to the right.

What it Does

Here we set important metering and ISO options.

What I Change

I change b1 and b2. I leave the rest alone.

---

b1 ISO Auto Increases sensitivity in dim light to prevent blur from low shutter speeds.

I use this all of the time, unless I'm using manual exposure mode.

You can choose the highest ISO to which the Auto ISO will go. I let my D200 go all the way to to ISO 1,600, since it looks fine at ISO 1,600 and any small amount of grain is better than a blurry photo. If you prefer blur to grain, feel free to limit the D200 to ISO 800 or 400. Try ISO 1,600: the D200 is better at high ISOs than film ever was.

You also may set the minimum shutter speed below which the D200 starts raising the ISO. Select the slowest shutter speed at which you'll get sharp images under your present shooting conditions.

I wish this function was smart enough to recognize which lens I'm using and adjust accordingly, but it's not.

Instead of adjusting ISO I adjust the minimum shutter speed as I change lenses and conditions. This is a time-saving step towards the future, just as program exposure was a step ahead of aperture priority in the 1970s.

HINT: I set this a lot. It comes up on the [Recent Items](#) menu more easily than looking for it deep inside the Custom Setting Menu.

HINT: If you've selected Auto ISO then you cannot set a manual ISO higher than the maximum ISO set as part of Auto ISO. To get to ISO 3,200 (cryptically called H+1.0 by Nikon) you must turn off Auto ISO.

HINT: You set the lowest ISO used in Auto ISO with the ISO button, of course.

Firmware Defect: Nikon's firmware leaves Auto ISO active even in manual exposure mode. This makes the D200 change the ISO automatically and defeat the purpose of manual exposure. Remember to deactivate Auto ISO when using Manual exposure mode.

---

b2 ISO Step Value defaults to 1/3 stops. That's silly.

I set mine to change the ISO in full stops. I shoot at 100, 200, 400, 800, 1,600 or 3,200. By not bothering with thirds I can select my ISOs with fewer clicks.

Grain (noise) only becomes significant above ISO 1,600. If you shoot above ISO 1,600 you may want to play with the third stop settings of ISO 2,000 and ISO 2,500 before going to the grainy ISO 3,200.

HINT: Nikon calls ISO 2,000 "H+0.3," ISO 2,500 "H+0.7" and ISO 3,200 "H+1.0."

---

b3 EV Step Defaults to 1/3 stops. You need this precision in manual exposure.

In the Auto modes I set it to full (1) stops. This lets me make my settings faster, since they take fewer clicks. Depth of field or motion control doesn't need more precision than a full stop.

FIRMWARE WEAKNESS: Ideally Nikon would provide separate settings for manual and auto exposure. I'd set 1/3 stops for manual exposure and full stops in auto exposure (P, S and A modes). You need the precision in manual mode, but not in the auto modes, because the values chosen by the D200 are set steplessly regardless of how they are displayed.

---

b4 Exp Comp/Fine Tune Leave this at 1/3. It's silly to fine tune in full stops. I tune in thirds.

---

b5 Exposure Comp. If you turn this on you can alter your exposure by turning the rear dial without having to press the [Exposure Compensation](#) (lighten/darken) button.

I love "Easy," which is the name of this feature, but it's too easy. I hit the rear dial too often by accident, so I don't use it. I leave it at its default of OFF.

RESET is a great idea if you use the EASY setting. RESET automatically resets the exposure compensation to zero every time you turn the camera back on. This is a very good idea. Otherwise you may lose a lot of shots from having a wrong value set from yesterday's last shot.

---

b6 Center-Weighted sets the diameter of the center weighted circle. These settings only take effect when you've selected center weighted metering.

I never use center weighted metering, so I certainly never play with this.

You also have the option of metering from the entire image, called "Average."

These modes went out in 1986 when the [Matrix Meter](#) was invented. I always use Matrix.

---

b7 Fine Tune Exposure Don't do this!

This is a service adjustment that allows you to make semi-permanent tweaks to the exposure meter calibrations. These settings do not show up on the control panels!

Don't do this. If your shots are too dark or light you should have your camera repaired, or use the regular [Exposure Compensation](#) button.

CUSTOM SETTING MENU

c1 - c5: TIMERS/AE&AF LOCK

How to Get Here

Press MENU, go to the left and select the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to c TIMERS/AE&AF LOCK and click to the right.

What it Does

AF and AE lock are important to getting perfect files straight from the D200 without editing in rare instances where the lighting might confuse the Matrix meter. If you're using them a lot you're probably doing something wrong and should fix your lighting.

Timers optimize battery life vs. convenience.

What I Change

I change all of them except c1. I leave c1 at default.

---

c1 AE Lock lets you lock the exposure with the shutter button, like a point-and-shoot camera. You don't want that, so leave this one alone.

The D200 has a dedicated AE Lock button. You don't want the shutter button to lock exposure.

AE normally only locks if you hit the AE-L button explained next.

When I use AE lock I:

1.) Fill the frame with something in the same light as the subject,

2.) Press the AE Lock Button and keep holding it,

3.) Point an AF sensor at something the same distance as the subject (or the subject itself),

4.) Press the shutter halfway to acquire and lock focus,

5.) Compose the shot and

6.) Press the shutter the rest of the way.

This becomes second nature, and gives great JPG files ready for printing without editing.

Keep holding the AE Lock button to save that exposure for the next shot.

I only use AE lock with harsh lighting that might confuse the Matrix meter. You shouldn't be using this very much. If you do you're probably doing something wrong.

---

c2 AE-L/AF-L sets the function of the AE-L/AF-L button on the rear of the D200.

I set mine to AE lock. This way I point the camera where I want my exposure, and hold the button until I recompose and make my exposure.

---

c3 Auto Meter-Off sets how long the meter stays awake.

Shorter times will save the battery. Set it longer if you have to keep hitting the shutter to wake the meter in the middle of composing shots.

---

c4 Self-Timer sets the self-timer delay.

10 seconds is for taking Christmas card photos.
2 seconds is for replacing a $100 cable release when using a tripod with long exposures.

---

c5 Monitor-Off sets how long the rear LCD stays lit when you ignore it. This is a big drain on the batteries, so I set this to 10s, the minimum.

CUSTOM SETTING MENU

d1 - d8 SHOOTING/DISPLAY

How to Get Here

Press MENU, go to the left and select the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to d SHOOTING/DISPLAY and click to the right.

What it Does

This menu is a random jumble. These ideally belong in other menus. I'm sorry that Nikon put a menu called Shooting inside a menu called Custom Setting, since it has nothing to do with the larger [Shooting Menu](#).

What I Change

I change items d1, d2 and d6. I leave d3, d4, d5 and d7 alone.

---

d1 Beep Turn this OFF!!!

This is the idiotic and annoying focus confirmation beep. Turn it off!

---

d2 Grid Display are hairlines in the finder. I set them ON.

---

d3 Viewfinder Warning superimposes warnings on top of the finder image if you do anything like have no memory card, have the D200 set to B/W or if the battery is low.

I leave these ON. I want to know these things!

---

d4 Shooting Speed selects the maximum frame rate of the [CL (continuous low)](#) frame advance setting. I leave mine on 3 FPS.

---

d5 Exp. Delay Mode makes the D200 wait 4/10s of a second to release the shutter.

It flips up the mirror first. Try this if you're using a long lens on a tripod with exposures of between 1/60 and 1/2 second, where mirror shake is the biggest problem.

---

d6 File No. Sequence ensures your file number keep counting up. Set this ON.

If you leave it at default you'll start from DSC_0001 every time you reformat. Over time you'll have hundreds of photos on your computer all called DSC_0001.

Set it to ON, which should be the default but isn't.

---

d7 Illumination turns on the top LCD light anytime the meter is on. Default only turns this on when you press the light button located with the [power switch](#).

I leave this option off.

---

d8 MB-D200 Batteries tells the D200 what sort of batteries are in this grip. You'll get more accurate battery readings if you set this.

Leave this alone if you're using the usual EN-EL3e battery.

CUSTOM SETTING MENU

e1 - e8: BRACKETING/FLASH

How to Get Here

Press MENU, go to the left and select the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to e BRACKETING/FLASH and click to the right.

What it Does

It sets flash function and completely unrelated bracketing options.

What I Change

I change e1, e2 and e4. I leave the rest alone.

---

e1 Flash Sync Speed lets you select a lower flash sync speed. You might want to choose a slower speed to let in more ambient light, but I select that with the next option.

This menu lets you select 1/60 through 1/250.

Also where you select AUTO FP if you wish to use the trick [FP high-speed sync](#) modes.

---

e2 Flash Shutter Speed selects the slowest shutter speed with flash in the P and A modes.

1/60 is default. I usually set about 1/30 or 1/15 to let in more ambient light to prevent my backgrounds from blacking out.

---

e3 Built-in Flash selects what the built-in flash does.

By default it works like a TTL flash. That's good. It works great.

You also may set it manually, or play with a repeating strobe mode.

Hidden in the C(bolt) menu is how to set the flash to become the commander to talk to a wireless remote flash, which today is only the SB-600 or SB-800.

Under this menu you can set two groups of external flashes separately, as well as how much light comes from the built-in flash.

"Comp" is the exposure compensation (brightness) for each of these groups of lights.

You can set lighting ratios of remote flashes, right from the D200!

Here's how to get it to work:

Select C mode.

TRICK: You have to set Channel 3, not the default of 1, to get this to work! My SB-600 defaults to channel 3. You can use any channel, but the flash and camera have to match.

Leave the rest of it alone. Set your flash for remote operation, and away you go. I prefer to save all this in a bank as explained at the Custom Setting Menu page. This saves a lot of twiddling when I want to use remote flash, and when I want to go back to normal.

---

e4 Modeling Flash Turn this off!

Otherwise it fires a zillion flash shots if you tap the Depth-of-field preview button.

---

e5 Auto BKT Set controls what exposures change when you have the D200 bracket.

You can have everything change exposure, or just the flash, or the ambient light, or have the WB bracket.

I never use these.

---

e6 Manual Mode Bracketing controls what changes when letting the D200 bracket itself in manual exposure mode.

I never use this.

---

e7 Auto BKT Order sets the order in which the various bracketed exposures are made.

---

e8 Auto BKT Selection lets you choose from preset numbers and levels of change, or choose them yourself.

I never use these.

CUSTOM SETTING MENU

f1 - f7: CONTROLS

How to Get Here

Press MENU, go to the left and select the pencil icon. You'll then see CUSTOM SETTING MENU on the color LCD. Click down to f CONTROLS and click to the right.

What it Does

These change what some of the buttons and knobs do.

What I Change

I change f1, f4 and f5. I leave the rest alone.

---

f1 Center Button lets you select what happens when you press the center of the rear thumb selector.

You may select different things for shooting and for playback.

In shooting I prefer to have mine select the center AF area.

In playback there is a very clever trick I suggest everyone set:

TRICK: under playback mode, select ZOOM ON/OFF. Now pressing the center of the selector zooms in. I choose MEDIUM.

TRICK OF TRICKS: Once you set this and use it, you may use the rear dial to flip through all the shots at the same position and magnification! I do this all the time.

It's great for selecting which shot is sharp or not. Sadly once you use the Delete key the D200 reverts to non-zoomed mode, so you'll have to zoom and scroll back to the same spot to continue in-camera editing.

---

f2 Multi-Selector You can set the rear thumb selector to turn on the meter or the AF system.

I never use this.

---

f3 Photo Info/Playback lets you choose which directions do what on the rear thumb when playing back.

You can select this switch to match Canon or Nikon's convention - tapping left and right or up and down to go forwards and back or to see the data about an image.

---

f4 FUNC. Button selects what the magic [Function Button](#) does.

I prefer Flash Exposure lock.

TRICK: Set FV (flash) Exposure lock. Tap this, the flash goes off and meters itself - once. Now every succeeding shot needs no preflashes! This means that, so long as your distance stays unchanged, that you'll get instant shutter release, and more importantly, no blinking from the preflashes. This choice fires the preflashes only once, and uses that information for every succeeding shot until you reset it.

It resets itself when the meter turns off, or if you tap the Function Button again.

TRICK OF TRICKS: I actually use the FV Lock + Lens Data selection. This does what I described when the flash is on. When the flash is off you can enter manual focus lens data by holding this button and spinning the front and rear dials. If you enter the maximum aperture and focal length you get Matrix metering, Manual and A exposure modes, and full lens and exposure data in the EXIF data!

This is my favorite. See for yourself if you prefer any of the other modes, like flash off and others. Of course if you select any others than you lose the tricks I described.

---

f5 Command Dials let you change directions of rotation and swap functions between the command dials.

TRICK: You can choose to use these in playback to select among images and data in addition to the thumb switch. I select MENU > CUSTOM SETTING MENU > Controls > f5 > Menus and Playback > ON.

---

f6 Buttons and Dials lets you tap a button once to adjust instead of having to keep holding it. You can keep adjusting until you tap the shutter, at which time it cancels.

---

f7 No Memory Card? Prevents me from taking pictures with no memory card!

SET UP MENU (wrench icon)

How to Get Here

Select the Set Up Menu by pressing MENU, moving to the left and then up or down to select the wrench icon. You'll then see SET UP MENU on the color LCD.

What it Sets

This sets the usual housekeeping like rotation, the clock and file numbering.

What I Change

This menu contains the secret message mode I use to encode my © and contact information into every file shot with my D200.

I also read the Battery Info often. You can't change it, just read it.

Format duplicates the function of the two red FORMAT buttons.

I format my card every time I put it in my D200, and every time I go out shooting.

It's always best to be using a freshly formatted card.

To be safe, always reformat the card in the D200 after the D200 has been connected to any computer.

Of course formatting completely wipes any photos off your card. Be sure to have these photos transferred and backed up to at least two locations before formatting. See my Field Workflow page for more.

LCD Brightness changes the midtones on the LCD. It doesn't appear to change the intensity of the backlight. It seems to be a gamma (contrast) control.

For the adjustment to take effect you must remember to hit OK after making a selection.

I leave mine at 0.

Mirror Lock-up isn't. It's not a lock up for telephoto lenses on tripods.

This setting is used to lock up the mirror to clean the CCD. I never use this, since I find it easier to set the camera to Bulb and hold open the shutter.

Video Mode sets the format of the video output.

NTSC (525 lines, 59.94Hz) in the Americas and Japan, PAL (625 lines, 50Hz) in Europe.

This output will always look much worse on a TV or projector than images do on a computer or projected through a computer.

World Time is where you set the date and time.

There is a nice map for finding time zones. You can swap among time zones without having to reset the seconds, a boon for me who keeps his D200 set to the exact second.

Language sets English or other languages.

Image Comment lets you add a secret text message into every file. Mine is set to (c) KenRockwell.com with my phone number! You see this text looking at the EXIF data in software on a computer. Sadly Nikon provides no real © symbol.

Go to MENU > Set Up Menu > Image Comment > Input Comment > (add your message like you did on 1970s video games) > Enter. You must hit ENTER to save it.

To edit or remove a character, select it in the Input Comment screen by holding the checkerboard button and clicking the big thumb selector. Select a new character and press the center of the selector to add it. Press the Trash button to delete a character.

When you get your text message spelled out, go to Attach Comment and hit SET so a small checkmark shows. Now go to and select DONE. It's great having everything you shoot have your contact info embedded.

Auto Image Rotation sets a flag in vertical images which keys most software to display the image vertically. It does not actually rotate the images; it just sets a flag.

I turn this off for serious work and rotate the images later in iView.

For fooling around I leave it on to save myself the trouble of rotation later.

Recent Settings lets you delete or lock the entries in the Recent Settings Menu. I leave these alone.

USB selects how the camera behaves when plugged into a computer via USB.

I leave it at mass storage, which means the D200 shows up as an external hard drive from which you can copy images and folders in your Mac OSX Finder or Windows Explorer.

PTP is used if you want to control your D200 as an external device, e.g. via Nikon Capture for remote camera control. PTP makes the D200 look like a device instead of like a drive.

Dust Off Ref Photo if you pay Nikon another $100 for Nikon Capture software you can use this to erase the dust more easily from your raw images. I don't do this!

I've made 24,000 shots on my D200 and have no problems with dust. Thankfully the D200 sensor has a filter far enough from the imaging surface to throw dust out of focus.

Battery Info I use all the time.

Bat. Meter reads the battery charge to the nearest one percent. This is the same data shown on the top LCD display, but the top gauge has 5 bars & reads to the nearest 20%.

Pic. Meter shows how many images have been shot on this charge.

Charg. Life shows the battery's health. A new one reads 0 and a near dead one reads 4.

I've made 24,000 shots by alternating between two batteries, and they both still show "new." The trick is not to run them all the way down before charging.

Firmware Version lets you confirm if your camera is up-to-date with Nikons' free firmware updates. Mine reads A 1.01 and B 1.00.

RECENT SETTINGS MENU
(menu icon)

How to Get Here

Press MENU, scroll to the left and select the bottom option which has an icon resembling another menu. You'll then see RECENT SETTINGS on the color LCD.

What it Does

This is a menu which contains the menu items you've used recently. It updates itself automatically. You can lock or erase this menu from the [Set Up Menu](#).

What I Do with It

This feature helps immensely, since Nikon hides so many important menu items in weird locations.

It contains the last 14 menu items you've set. For me it's where I get to [ISO Auto](#). I set ISO Auto all the time, so it's usually on the top of this menu. This saves me from looking around in the other menus, since I forget where it is.

The bad news is that this menu only recalls the items from most of the Shooting Menu and the Custom Setting Menu. It ignores settings made in the Playback Menu and Set Up Menus and some settings from the Shooting Menu and Playback Menu.

I look at the Battery Info in the Setup Menu often, but this isn't stored in the Recent Settings menu. Sorry; I wish Nikon would reorganize all the D200 menus so they made sense.

Appendix 1 - Nikon D200 Image Quality Settings

INTRODUCTION

What's the best image quality setting – Raw, JPG, or raw + JPG? If raw, compressed or uncompressed? If JPG, FINE, NORMAL or BASIC? Size Priority or Optimal Quality JPG Compression? Large, Medium or Small image dimensions?

In a fantasy world you'd use uncompressed NEF or FINE JPG, but after a while you'll get log jammed with all the data you have to store, process and archive.

I used the camera's raw + JPG mode to make pairs of identical images for comparison. I put the same 100% crops from different quality settings on top of each other so you can switch between them by moving your mouse over the image. As you will see, the default LARGE NORMAL JPG is wonderful. Let me stress that this page gives you the ability to see minute differences that none of us would see in prints. The 100% crops are identical to making prints 40" (1m) wide and looking at them from as close as your computer screen.

RECOMMENDATIONS

I use JPG Large image size, BASIC quality, Optimal Image Quality mode. To me it looks the same as uncompressed NEF and only has a file size of 1.7MB. For parties, people, sports and other high-volume uses I use the same setting, with Medium size. It looks 99% as good as uncompressed NEF, with only 1MB per file. This makes a big difference if you have thousands of shots from an event to load and sort and backup to CD on your laptop.

Uncompressed NEF vs. JPG BASIC, Size Priority

This compares a 16 MB uncompressed NEF with the crummiest 1.2 MB BASIC Large (3,872 x 2,592 pixel) JPG. These look pretty much identical. The JPG has the same resolution, but looks slightly softer then the NEF because it uses less sharpening. I can't see any JPG artifacts unless I enlarge the image on my screen to the equivalent of 10 feet wide and stick my nose in it.

Add Sharpening to Make Them Match:

Let's add some sharpening to the JPG. This isn't cheating - the software that opens the NEFs has this sharpening hidden inside as part of the Bayer Interpolation. The JPGs don't have as much sharpening added in-camera because it would require larger files sizes to store well. I added some delicate sharpening at 0.3 pixel radius, 100% to the JPG.

JPG BASIC, Large, with sharpening

They look identical to me, except for some minor contrast variation and some barely visible JPG artifacts. Unless you know how to look, JPG artifacts are invisible and certainly don't affect the picture. The sharpening has exaggerated these artifacts and they are only barely visible at this high magnification. Not bad for the crummiest JPG setting and a 40" wide print! Even I don't use this low a setting, and I'm a data cheapskate.

Uncompressed NEF vs. JPG BASIC, Optimal Quality

On older Nikon DSLRs you can get this same improvement by going to NORMAL JPG. There is an obscure JPG compression menu choice in the D200, D80 and D2X: Size Priority or Optimum Quality. Size Priority, shown above, is the default. It was the only option in older cameras like the D1X, D50 and D70s. JPGs need more data (file size) to maintain quality as the subjects contrast and complexity climbs. Size Priority keeps the file size constant regardless of image detail or subject complexity. The Optimal Quality JPG compression option lets the file size grow if needed to maintain quality, and otherwise keeps it smaller. The Optimal Quality option lets the camera allot bits intelligently based on

the subject, instead of making big files when they aren't needed for flat subjects like blank skies. Using the Optimal Quality option in BASIC JPG lets the file size grow to the same size as JPG NORMAL if the subject needs it, and lets the file size shrink back to JPG BASIC when it's not. Set the Optimize Quality JPG option in the D200 SHOOTING MENU. Once set it stays this way even when the camera is green-dot reset.

JPG BASIC, Large, Optimal Quality, with sharpening
Now they look the same. The minor artifacts from the BASIC Size Priority JPG are mostly gone. This is why I shoot at this setting. It looks great! If anything I see more detail in the green tree in the JPG and more hard contrast between the wall and black tree in the NEF. This is more a function of slight differences in the levels of the two files than differences in sharpness or resolution. The wall is slightly lighter in the NEF.

JPG BASIC, Medium
Any increase in JPG quality to NORMAL or FINE wouldn't get any better, so I won't bother comparing it. Data cheapskate that I am, I wonder how the smaller JPG image sizes compare to the NEF? I shot this Medium JPG (also at BASIC and Optimal Quality JPG) and then increased its image size in Photoshop to match the larger NEF. I added more sharpening (200% @ 0.3 pixels) to get the best match to the NEF:

JPG BASIC, Medium (2,896 x 1,944), Optimal Quality, resized and sharpened
They are similar, but the detail is a little finer in the NEF. This is why I use this setting for people, parties and sports. The image is 99% of the NEF, but the files are 1MB vs. 16MB for uncompressed NEF. Viewed at any reasonable distance they would be the same. Details are a very small part of total image quality.

JPG BASIC, Small

JPG BASIC, Small (1,936 x 1,296), Optimal Quality, resized and sharpened
The difference is visible at this extreme magnification. I see mostly JPG artifacts, and I see them because they have been magnified with the increase in image size and the added sharpening. Even at this 40" wide equivalent print size it's not at all awful.

Compressed vs. Uncompressed Raw
Seeing how well the BASIC JPGs look, why worry? I never even stepped up to NORMAL JPGs, much less FINE, in this comparison. Take a look for yourself: the BASIC JPGs look the same as the NEFs. Uncompressed raw makes 16MB NEFs and compressed raw makes 9MB NEFs. I tried to make duplicate shots to compare. I gave up. The mechanical exposure repeatability of my camera isn't stable enough to let me make two captures close enough to see any possible difference between compressed and uncompressed raw. People do see differences. They are seeing fluctuations in their technique shot-to-shot, not differences due to the compression. Since the compression is lossless and the only potential issue is some curve shaping, I wouldn't worry. I always use compressed raw if I shoot anything raw. When I use raw I always use raw + JPG. I usually throw away most of the NEFs if the JPGs are OK. Using this option saves me from having to convert the NEFs to JPGs manually.

Test Details
I opened each file in Photoshop and cropped them. They were saved at 80% in Save to Web, which shows you exactly what I was seeing on my screen. To open the NEFs I used Nikon's free NEF opener that comes with the camera. Third-party NEF openers, like Photoshop's Camera RAW don't have access to Nikon's secret sauce curves and will have different colors. Then the NEF colors won't match the JPG.

Appendix 2 - Getting Great Battery Life

INTRODUCTION

This isn't about how to get a lot of shots per charge. That's easy: use your LCD sparingly, spend as little time as possible in the menus or with the meter on, turn off LCD review.

This is how to get years of service from expensive batteries. Some people always seem to have problems while others have them last for years.

HOW DO I DO IT?

Battery Type

Li-ion batteries need very different care to the old, heavy Ni-Cds and Ni-MH batteries.

These suggestions only apply to Li-ion batteries. These are the lightweight ones that come with your phone, laptop or camera. They have weird voltages like 3.7V or 7.4V. These are the dedicated batteries used in all modern digital SLRs

This does not apply to ordinary AA or other standard size rechargeable cells. Those are Ni-Cd or Ni-MH and want to be 100% discharged before they are charged.

I've never bothered with off-brand batteries. I always use batteries from the original maker.

Charge Often!

Modern Li-ion batteries love to be charged often. They don't like being fully discharged. This is completely opposite from older style batteries.

I charge my batteries every night. My cell phone goes on its charger at night and comes off in the morning.

Alternate Between Two Batteries

I have two batteries for my D200.

After every use I put the battery on the charger. I take the second battery and put it in my D200. When the first battery finishes charging I put it in my bag as a fully charged spare.I repeat this continuously. This way each battery is used only half of the time and I always have a full battery in my camera and a fully charged spare in my case.

I don't bother if I've used it for only a few shots or used less than 10% of the charge.

I don't know the exact numbers, but you'll get about four times as many charge cycles out of them if you only use 50% of the charge each time, and twenty times as many cycles if you only use 25% of the charge each time.

Even without a second battery I've gotten great life with frequent charging. My D70 only has one battery, and after over two years and tens of thousands of shots it also runs like new.