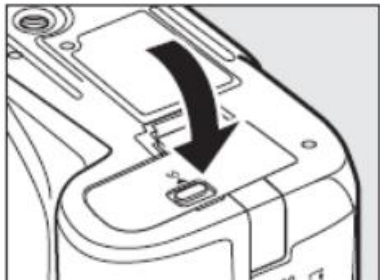
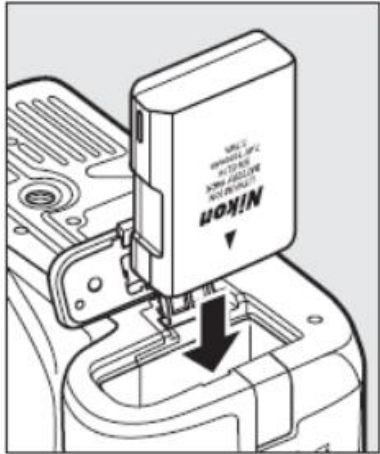
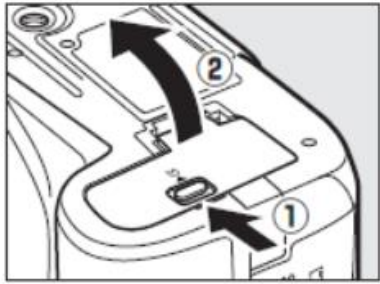




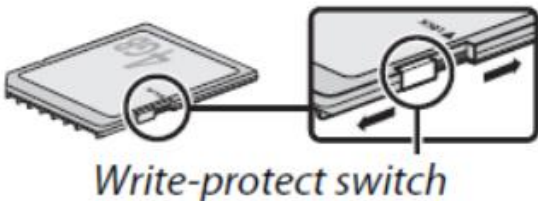
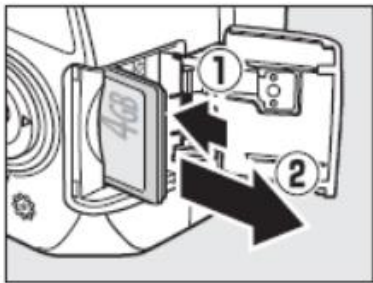
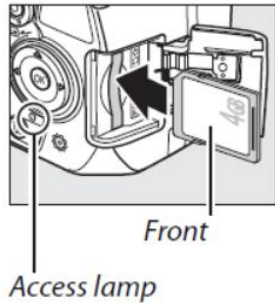
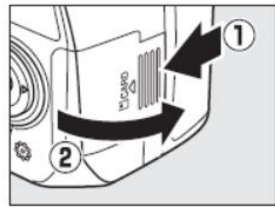
# Photography Tech Workshop

Mr. Schoenhals  
Riverside Secondary

# Insert the Battery



1. Turn the camera off
2. Open the battery-chamber cover
3. Insert the battery (can only go in one way)
4. Close the battery-chamber cover

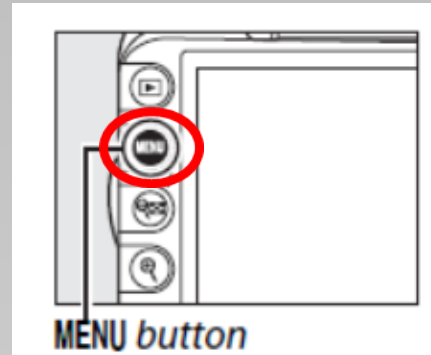


# Insert the SD Card

- Turn the camera off
- Open the card slot cover
- Insert the memory card (it only goes in one way!)
- Close the card slot cover






# Camera Menus

- Set the date and time










**Tabs**

Choose from the following menus:

- : Playback (129)
- : Shooting (131)
- : Setup (136)
- : Retouch (151)
- : Recent settings (165)

**SETUP MENU**

	Reset setup options	--
	Format memory card	--
	LCD brightness	0
	Info display format	Info
	Auto info display	ON
	Clean image sensor	--
	Mirror lock-up	--

*Slider shows position in current menu.*

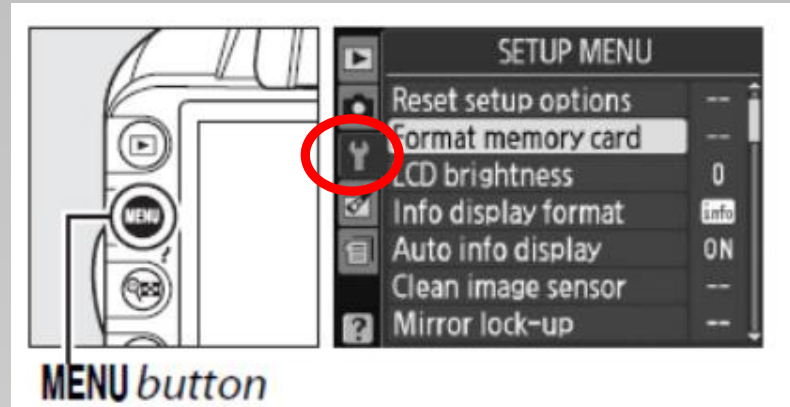
*Current settings are shown by icons.*

**Menu options**

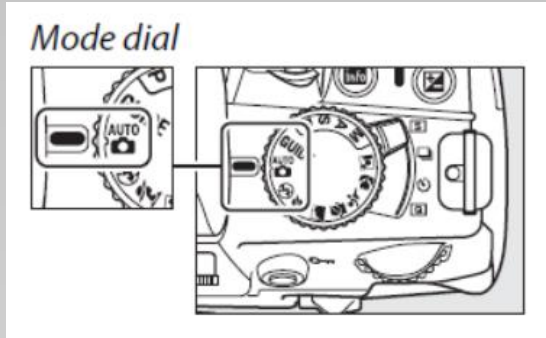
*Options in current menu.*

# Format the Memory Card

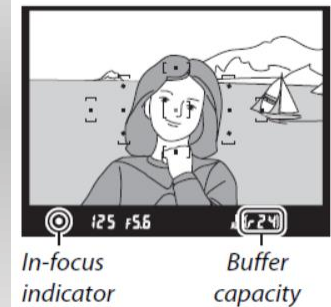
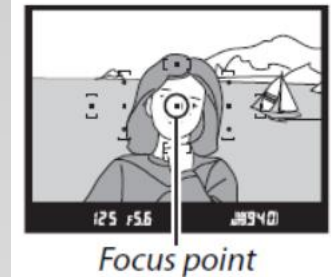
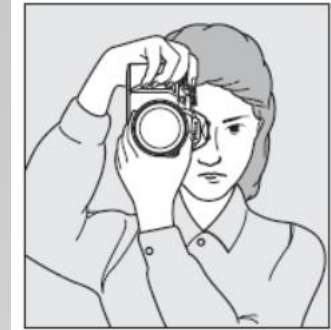
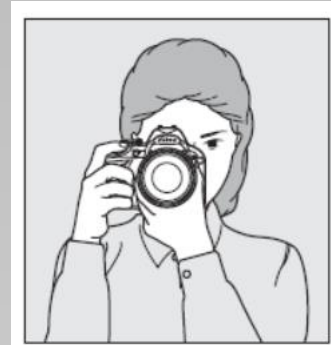
- Turn on the camera
- Click the Menu button and then click on the wrench icon.
- Highlight the Format memory card option
- Highlight Yes
- Press OK




# Basic Photography



1. Select auto from the mode dial.
2. Ready the camera
3. Frame the Photo
4. Press the shutter release halfway
5. Check the indicators in the viewfinder. If there's a blinking indicator, it is either too dark or can't focus. Otherwise, ready to go!
6. Shoot your photo!




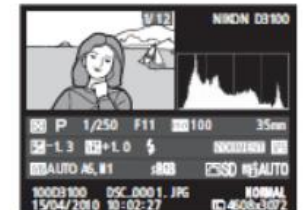
# Playback Photos

- 1 Press the  button.  
A photograph will be displayed in the monitor.



- 2 View additional pictures.  
Additional pictures can be displayed by pressing ◀ or ▶ or rotating the command dial.

To view additional information on the current photograph, press ▲ and ▼ ( 100).



To end playback and return to shooting mode, press the shutter-release button halfway.





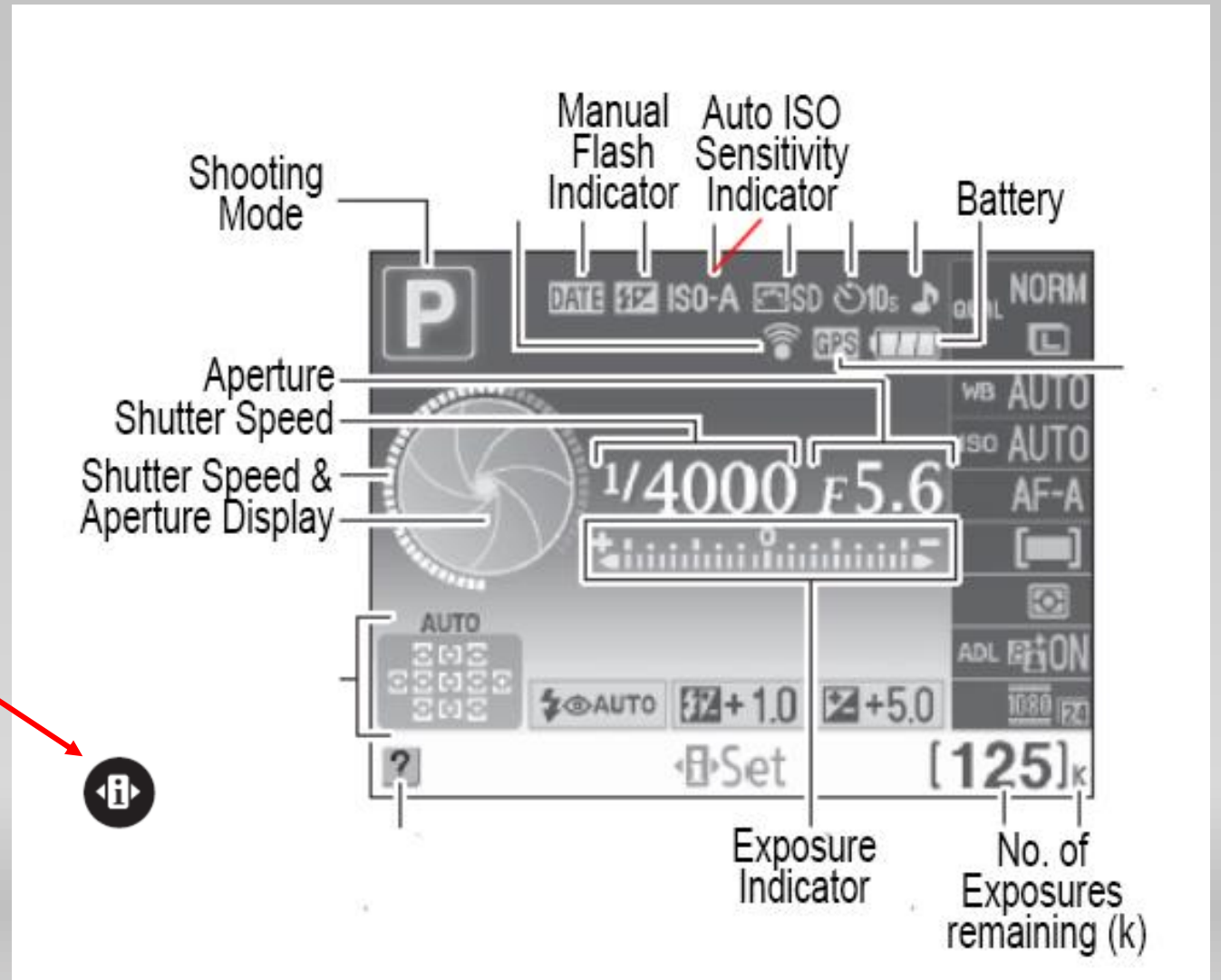


# Advanced Settings



# Information Display

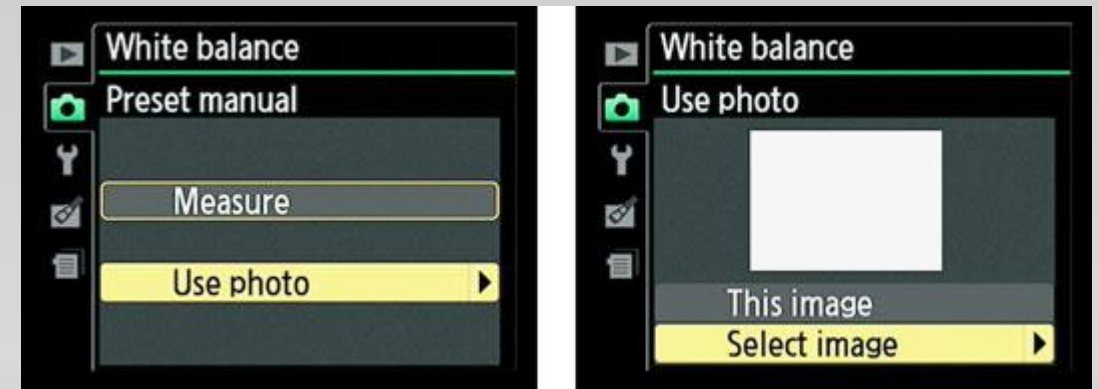
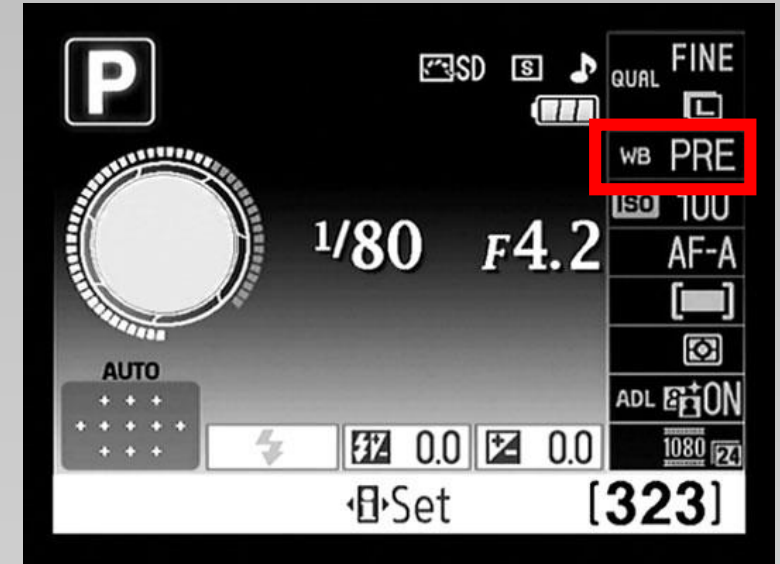
- Highlight items using the multi selector and press OK to view options for the highlighted item.
- To change these settings in M Mode, you need to press the Information Edit Button on the bottom left of the camera.



# White Balance

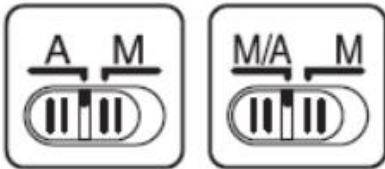
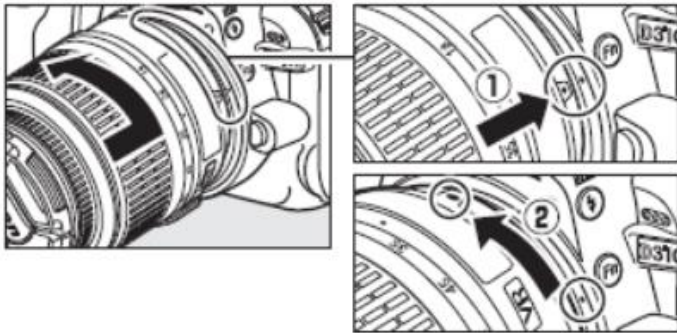
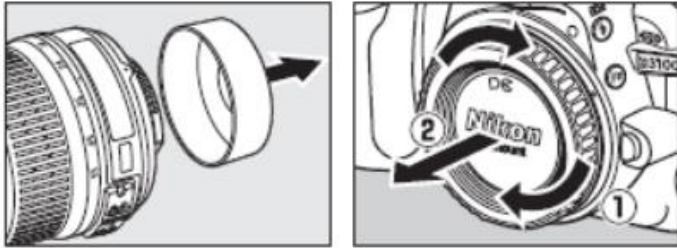
Custom:

1. Select White Balance from the Shooting Menu
2. Select the PRE option
3. Highlight use Measure and press OK
4. Shoot a photo of white or grey. Make sure the white card is in the light that you will be shooting on!



**Note:** when using Custom, make sure you set the white balance in the menu AND select PRE in the info window!

# Attach A Lens



- Make sure the camera is OFF!
- Push down on the Lens Release Button
- Remove the Lens
- Line up the new lens with the white dots
- Turn until you hear a click
- A or M is for focus on the lens

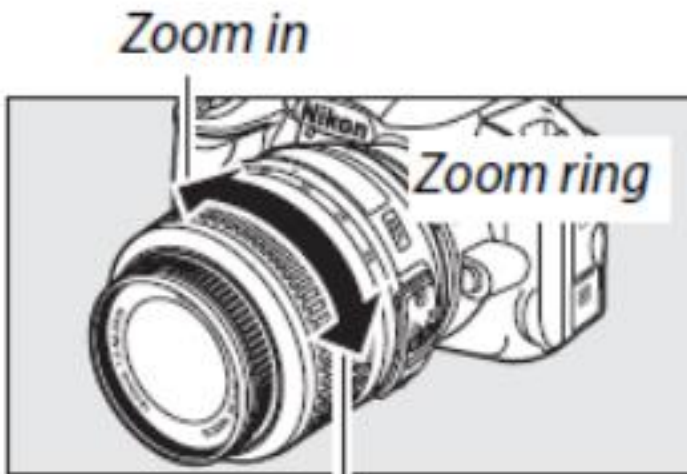


# Camera Modes

- (P)Programmed Auto – camera sets shutter speed and aperture for optimal exposure. Recommended for snapshots and in other situations in which there is little time to adjust camera settings.
- (S)Shutter-priority auto – user chooses shutter speed; camera selects aperture for best results. Use to freeze or blur motion.
- (A)Aperture-priority auto – User chooses aperture; camera selects shutter speed for best results. Use to blur background or bring both foreground and background into focus.
- (M)Manual – User controls both shutter speed and aperture. Set shutter speed to bulb for long time-exposures.



*Focus point*



*Zoom out*

# Zooming

---

- Frame a photograph in the viewfinder with the main subject in at least one of the 11 focus points.
- Use the zoom ring to zoom in on the subject so that it fills a larger area of the frame or out to increase the area visible.



*In-focus  
indicator*

*Buffer  
capacity*

# Focus

---

Warning: Do Not manually operate the focus ring while in Auto Focus!

- Change from manual to auto and back by selecting A or M on the lens.
- In A mode, press down on the shutter release button part way and the camera will focus on your subject based on where you have chosen the focus point of the shot.

In-focus indicator	Description
●	Subject in focus.
● (blinks)	Camera unable to focus using autofocus. See page 56.



# Focus Issues – in Auto Focus, shutter release may not work due to:



*There is little or no contrast between the subject and the background.*

**Example:** Subject is the same color as the background.



*The focus point contains areas of sharply contrasting brightness.*

**Example:** Subject is half in the shade.



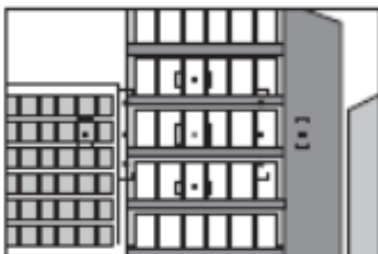
*The focus point contains objects at different distances from the camera.*

**Example:** Subject is inside a cage.



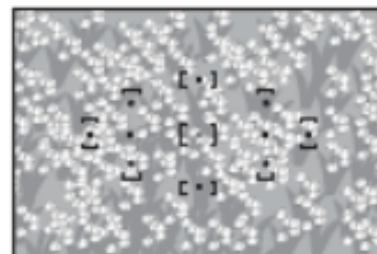
*Background objects appear larger than the subject.*

**Example:** A building is in the frame behind the subject.



*The subject is dominated by regular geometric patterns.*

**Example:** Blinds or a row of windows in a skyscraper.

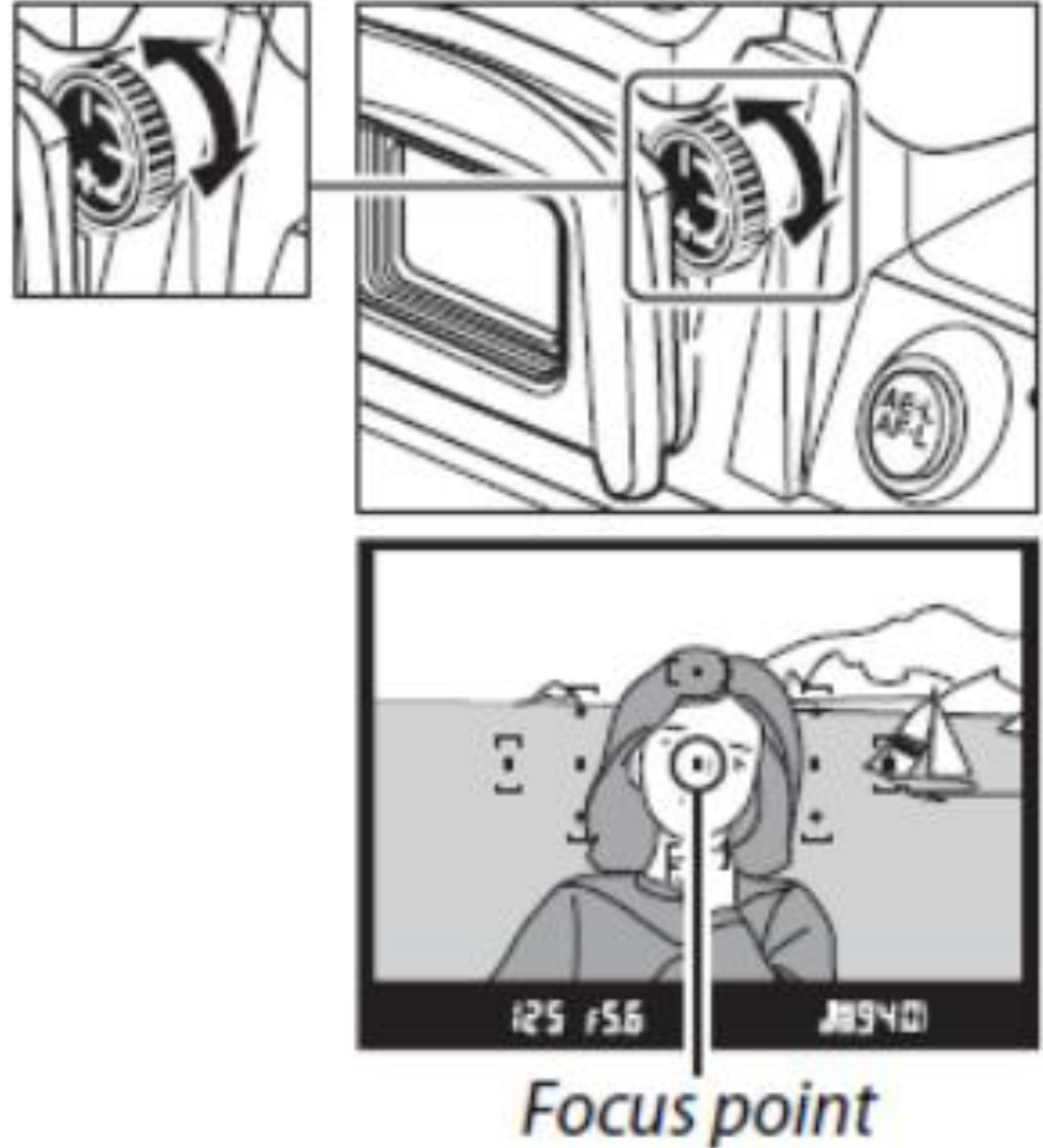


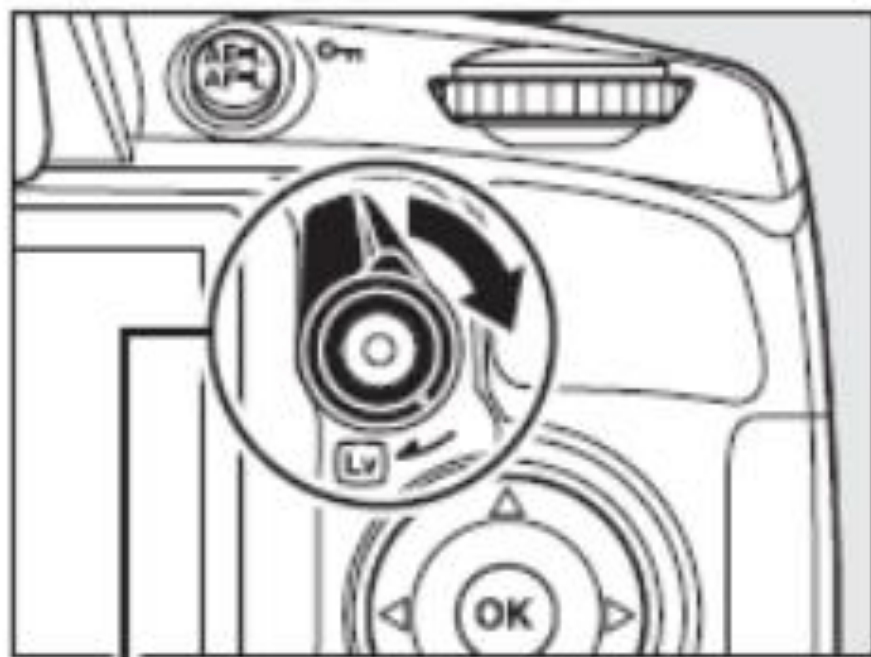
*The subject contains many fine details.*

**Example:** A field of flowers or other subjects that are small or lack variation in brightness.

# Viewfinder Focus

Use the Diopter adjustment  
control to focus the viewfinder.





*Live view switch*



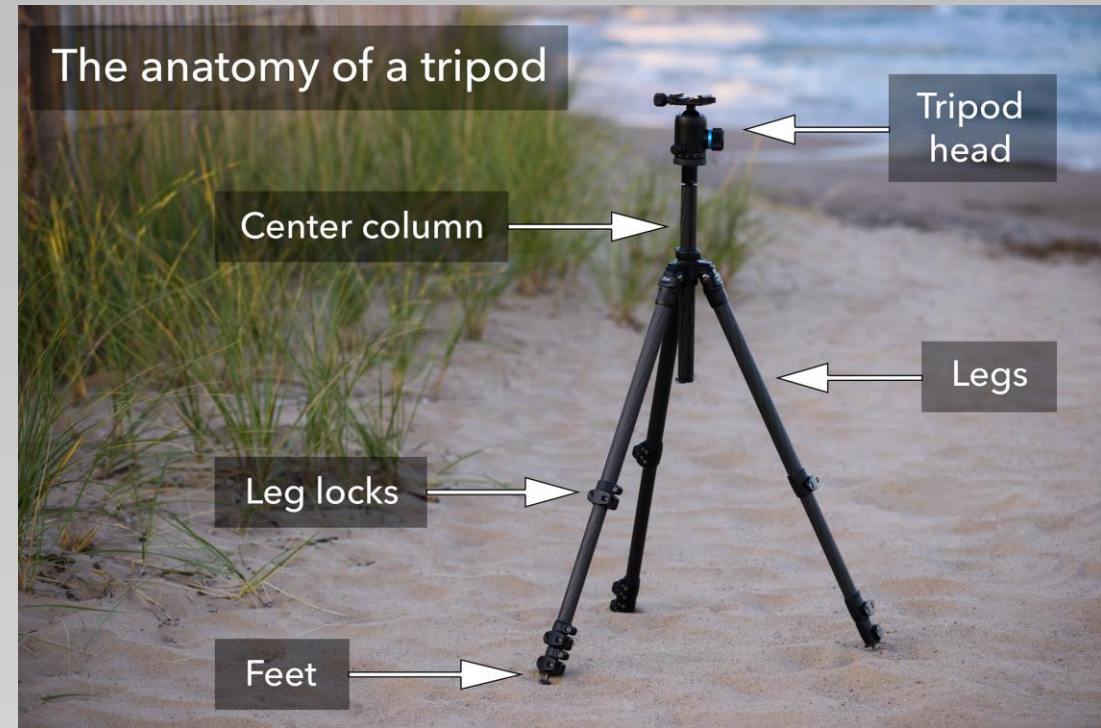
Item	Description	
① Shooting mode	The mode currently selected with the mode dial. Select  or  for automatic scene selection (autofocus only;  41).	23, 28, 73
② Audio recording indicator	Indicates whether sound is being recorded with movies.	47
③ "No movie" icon	Indicates that movies can not be recorded.	45
④ Time remaining	The amount of time remaining before live view ends automatically. Displayed if shooting will end in 30 s or less.	42
⑤ Focus mode	The current focus mode.	38
⑥ AF-area mode	The current AF-area mode.	38
⑦ Focus point	The current focus point. The display varies with the option selected for AF-area mode ( 38).	39
⑧ Time remaining (movie mode)	The recording time remaining in movie mode.	46
⑨ Movie frame size	The frame size of movies recorded in movie mode.	47
⑩ Self-timer	Displayed in self-timer release mode.	54

# Using the Monitor



# Using a tripod

Setup your tripod on a stable surface. Test the tripod by pushing down on it prior to mounting camera.



1



2



3






4



# Image Quality

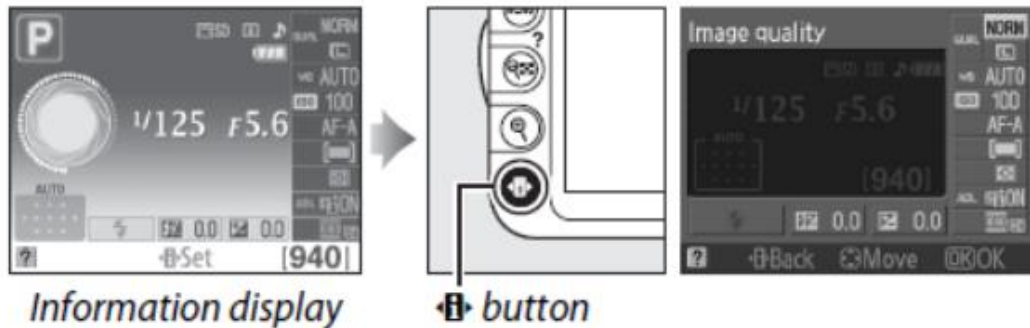
Option	File type	Description
NEF (RAW) + JPEG fine	NEF/ JPEG	Two images are recorded: one NEF (RAW) image and one fine-quality JPEG image.
NEF (RAW)	NEF	Raw 12-bit data from the image sensor are saved directly to the memory card. Settings such as white balance and contrast can be adjusted on a computer after shooting.
JPEG fine	JPEG	Record JPEG images at a compression ratio of roughly 1 : 4 (fine quality).
JPEG normal		Record JPEG images at a compression ratio of roughly 1 : 8 (normal quality).
JPEG basic		Record JPEG images at a compression ratio of roughly 1 : 16 (basic quality).

# Image Size

Image size	Size (pixels)	Print size (cm/in.)*
 Large	4,608 × 3,072	39 × 26/15.4 × 10.2
 Medium	3,456 × 2,304	29.3 × 19.5/11.5 × 7.7
 Small	2,304 × 1,536	19.5 × 13/7.7 × 5.1

\* Approximate size when printed at 300 dpi. Print size in inches equals image size in pixels divided by printer resolution in dots per inch (dpi; 1 inch=approximately 2.54 cm).

# ISO Sensitivity



- ISO measures the sensitivity to light.
- In High Light conditions, you want to use a lower setting (100). In Low Light conditions, use a higher setting (1600).
- Careful: using the higher settings can lead to noise in your image. Consider adding more light to reduce image noise.

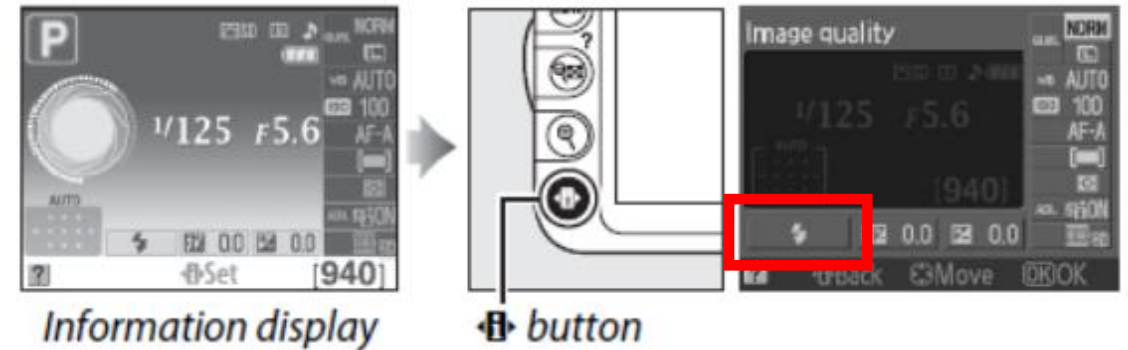


# Using Flash Mode

The flash modes available vary with shooting mode:

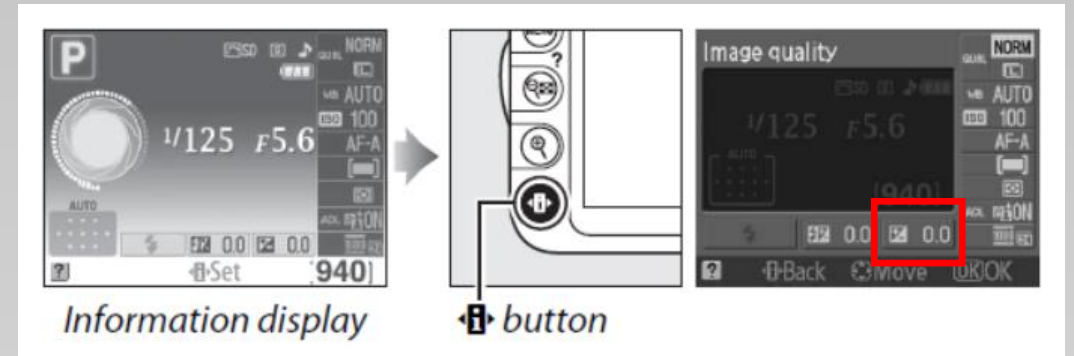
P, S, A, M		P, A	
⚡ AUTO	Auto	⚡	Fill flash
⚡👁 AUTO	Auto + red-eye reduction	⚡👁	Red-eye reduction
🔋	Off	⚡👁 SLOW	Slow sync + red-eye reduction
		⚡ SLOW	Slow sync
		⚡ REAR*	Rear curtain + slow sync
S, M			
⚡👁 AUTO SLOW	Auto + slow sync + red-eye reduction	⚡	Fill flash
⚡ SLOW	Auto + slow sync	⚡👁	Red-eye reduction
🔋	Off	⚡ REAR	Rear-curtain sync

\* SLOW appears in information display when setting is complete.

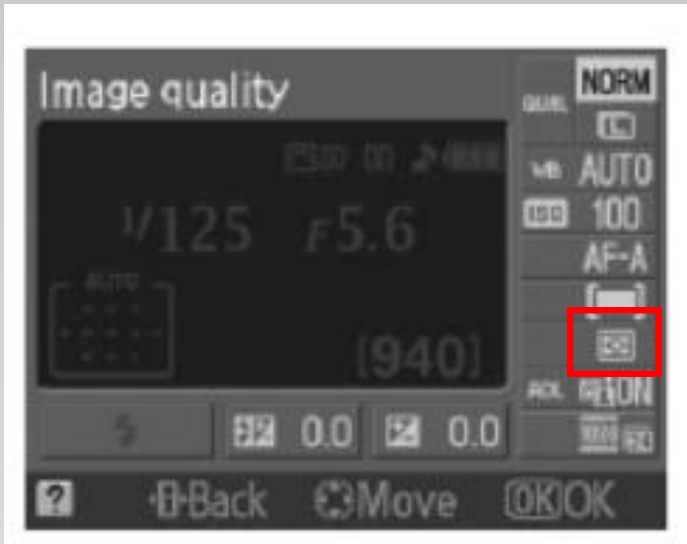


# Exposure Compensation

- You can change the brightness of your image with exposure compensation.
- How the camera changes the exposure depends on what metering you use (explained on the next slide)



# Exposure Metering:



Your D3100 offers three metering modes:

- **Matrix:** The camera analyzes the entire frame and then selects an exposure that's designed to produce a balanced exposure.

Your camera manual refers to this mode as 3D Color Matrix II, which is simply the label that Nikon created to describe the specific technology used in this mode.

- **Center-weighted:** The camera bases exposure on the entire frame but puts extra emphasis, or *weight*, on the center of the frame.
- **Spot:** In this mode, the camera bases exposure entirely on a circular area that's about 3.5mm in diameter, or about 2.5 percent of the frame. The exact location used for this pin-point metering depends on an autofocus option called the AF-area mode.
  - *If you choose the Auto-area mode*, in which the camera chooses the focus point for you, exposure is based on the center focus point.
  - *If you use any of the other AF-area modes*, which enable you to select a specific focus point, the camera bases exposure on that point.