Exposure Modes

Turn the exposure mode dial to P, S, A, M or one of the symbols representing the auto modes.

**Auto** The Auto mode is the simplest exposure mode available. The camera controls most of the settings, giving you limited control. The D90 is truly in a “point-and-shoot” mode. The exposure modes indicated by symbols are specialized auto modes.

**Flash Off** (lightning bolt) The flash will not fire. This can be useful if you’re not allowed to use a flash or there is low lighting but you don’t want to use the flash. In this mode the camera focuses on the closest subject.

**Portrait** (person with hat) Photos are processed to produce soft, natural-looking skin tones. The camera focuses on the closest subject and the flash is in auto mode. If your subject is far from the background and/or you’re using a telephoto lens, the background will appear out of focus.

**Landscape** (mountain) Renders greens and blues in your scene more vivid. The camera focuses on the closest subject and the flash is turned off.

**Action** (person running) The purpose of the Action mode is to freeze motion by using a fast
shutter speed. The camera continuously focuses in order to keep the moving subject sharp. The flash is turned off.

**Close-up** (flower) Use for close-up pictures of small objects. The camera focuses on what is in the center of the viewfinder. The flash is in Auto mode.

**Night Portrait** (person with star) Use when photographing a person in low light. This mode works to balance the light on the person with the light in the background. The camera will focus on the closest subject. The flash is in Auto mode. A slow shutter speed will be used so you’ll want to have the camera on a tripod to get a sharp picture.

**Program** (P) The camera chooses the aperture and shutter speed for you. You are still able to control the rest of the camera’s settings. Great mode when you want to take a quick snapshot, but still have some choice in what settings the camera uses.

**Shutter Priority** (S) You set the shutter speed and the camera chooses the aperture. Turn the command dial (back of camera) to pick the shutter speed. Choose Shutter Priority when it’s important to use a specific shutter speed; for instance, you’re photographing a soccer game and you need a fast shutter speed to freeze the action.
Aperture Priority (A) You set the aperture and the camera chooses the shutter speed. Turn the sub-command dial (front of camera) to pick your aperture. Aperture Priority mode is useful when you want to control how much of your picture is in focus.

Manual (M) You control both the shutter speed and aperture. To set the shutter speed turn the command dial. To set the aperture turn the sub-command dial. This is a more advanced exposure mode because the camera is not choosing any settings.

Exposure Compensation Allows you to force the camera to make an exposure that’s lighter or darker than the camera thinks it should be. To use exposure compensation press and hold the button (top of camera) then turn the command dial left or right to set the amount. The compensation range goes from +5.0 to −5.0. Numbers in the “+” range will make your photos lighter, numbers in the “−” range will make it darker.

Exposure Compensation Tips:
- It only affects the exposure of future pictures you take. It will not change a picture you have already taken.
- It will not reset itself (even when you turn the camera off).
- Can only be used in the P, S, or A exposure modes.
The ISO setting refers to how sensitive the sensor is to light. The higher the ISO, the less light the camera needs to make a good exposure. With higher ISO’s you can use faster shutter speeds or smaller apertures while still achieving a proper exposure. To change the ISO press and hold the “magnifying glass” button (back of camera) then turn the command dial. The ISO range goes from 200 to 3200, plus L 1.0 (ISO 100 equivalent) H 1.0 (ISO 6400 equivalent). High ISO’s produce noise which causes a loss of fine detail (hair, for example) and gives a mottled appearance to areas of solid color (such as blue sky). Noise is also more noticeable in dark areas of a photo. To avoid noise it’s best to use the lowest ISO possible. If you’re outside on a sunny day photographing landscapes use ISO 200. If you need to stop action, or are photographing in dim lighting try ISO 400 or 800. Avoid regularly using ISO 1600, 3200, and especially HI 1.
Metering refers to how the camera reads the light on your subject or scene. To select the metering mode press and hold the button to the left of the on/off switch (top of camera) then turn the command dial.

**Matrix** (rectangle with four dark corners) Good all-purpose metering setting. The camera takes separate readings of the brightness and color from all parts of the scene in your viewfinder.

**Center-weighted** (parentheses with dot in between) Places emphasis on what’s in the middle of the viewfinder; a good option when your primary subject is in the center. The camera takes a reading of everything in the viewfinder, but when calculating the exposure it gives more weight, or importance, to what is in the center.

**Spot** (dot) A very precise metering option. It only reads the light from the active focus box in the viewfinder (the one with the rectangle around it).
To choose the autofocus mode press and hold the “AF” button (top of camera) then turn the command dial. In the viewfinder there are eleven focusing boxes. The autofocus system focuses on the subject in the selected box. Press left/right or up/down on the multi selector to change which box is selected.

**Single-Servo Autofocus** (AF-S) Good for subjects that are not moving. Press the shutter release button down halfway to lock the focus on your subject (focus stays locked as long as the button is pressed).

**Continuous-Servo Autofocus** (AF-C) Choose continuous when photographing moving subjects. When you press the shutter release button halfway, the camera focuses on the subject in the active focus box. The camera doesn’t lock focus, it continually refocuses as the distance between you and your subject changes.

**Auto-Servo Autofocus** (AF-A) Chooses between AF-S and AF-C modes. The camera will sense if the subject is still or moving, then pick the appropriate autofocus mode.

**Manual Focus** To use manual focus flip the AF/M switch on the left side of the camera. You control where the camera focuses by turning the focusing ring on the lens.
To change the white balance mode press and hold the “?/key” button (back of camera) then turn the command dial. White balance helps avoid an unattractive color cast when photographing under various light sources. Picking the right white balance is pretty easy: choose the setting that matches the type of lighting you’re under.

**Auto** (A) The camera sets the white balance for you. Like other auto modes it’s convenient because the camera does the work for you. The Auto setting might not always produce perfect results.

**Incandescent** (light bulb) Household light bulbs.

**Fluorescent** (rectangle) Go to the Shooting Menu (White Balance option) to choose from different fluorescent settings.

**Direct Sunlight** (sun) For use on sunny days.

**Flash** (lightning bolt) When primary light source is flash.

**Cloudy** (cloud) For use on overcast days.

**Shade** (house) Use when your subject is in the shade.
To activate live view press the “LV” button (back of camera). To exit live view press the “LV” button again.

The D90’s monitor now shows what the lens is seeing. Live view is useful when it’s not convenient or possible to look through the viewfinder. You can use autofocus or manual focus in live view. The autofocus method for live view is not as fast as the regular autofocus (go to setting “a7” in the Custom Setting Menu to see the autofocus options). Whether you are using autofocus or manual focus you can zoom in on the screen to more accurately focus on your subject. Press the “+ magnifying glass” button to zoom in and the “− magnifying glass” button to zoom out. Once zoomed in use auto or manual focus.
The video mode is part of live view. Press the “LV” button (back of camera) to switch to live view. Then press the “OK” button to start recording a video. A red circle flashes at the top of the monitor to tell you the camera is recording. To stop recording press the “OK” button again. You can change quality and sound options in the Shooting Menu (Movie Settings option).

**Video Tips and Notes**

- Focus on your subject in live view before starting the recording. Autofocus does not work while recording. However, you can still manually focus.
- When recording there’s a countdown of the maximum time remaining in the top right of the monitor.
- 1280x720 movies can’t be longer than five minutes. Movies taken at the other two quality settings can be up to twenty minutes long.
- Exposure compensation can be used if you are in P, S, A or M exposure modes.

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