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## QuickGuide to EOS DSLR Video Recording

Ever since high-definition video recording capability was introduced in the groundbreaking Canon EOS 5D Mark II, still and video photographers alike have been exploring the exciting capabilities of EOS HD video. This QuickGuide is written to help all photographers, from beginners to advanced, to produce high-quality videos with the least amount of unnecessary effort.

### General Tips

1. Make sure you have ample battery power. Live View and movie recording draw more power than still photography. A fully-charged battery with a back-up or two will avoid your camera running out of power during a video shoot.
2. Make sure you are using a memory card that has a continuous read/write speed of **8MB/second or faster**. We recommend CompactFlash cards that have an Ultra DMA (UDMA) specification or SD Cards that have a Class 6 specification or higher.
3. Keep in mind EOS DSLRs allow a maximum video file size of 4GB. Larger memory card capacities will allow you to store more files, but each video file will have a maximum size of 4GB.

4. You will need a powerful computer for smooth playback of HD video files. Minimum Mac or Windows requirements include a Core 2 Duo processor that is 2.6GHz or faster and a minimum 2GB of RAM. Also make sure you have ample hard drive space available. A 15-minute HD video with sound could require at least 5GB of storage space, not including out-takes.
5. Avoid shooting in direct sunlight and high temperatures. Video recording generates more heat than still photography. Prolonged recording at high temperatures can degrade image quality and may cause your camera to temporarily shut down to prevent over-heating. If a thermometer icon appears on the LCD display you should shut off the camera for a few minutes to allow it to cool down before you resume video recording.

### How to Start and Stop Recording

#### EOS-1D Mark IV

1. In the second **Set-up Menu** select **Live View/Movie Function Set Screen**. Set your choice to **Movie**.
2. Press the **Set Button** to activate Live View.
3. Press the **Flash Exposure Lock (FEL) Button** on the rear of the camera to start recording. A red icon will appear on the rear LCD monitor. Press FEL again to stop.

#### EOS 5D Mark II

1. In the second **Set-up Menu** select **Live View/Movie Function Set Screen**, then select **Stills+Movie**.
2. Press the **Set Button**. The **Screen Setting** options will appear. Select **Movie Display**, then press the **Set Button** again.
3. Press the **Live View Button** (to the left of the viewfinder) to display the Live View image.

4. Press the **Set Button** to start shooting a movie. To stop shooting the movie, press the **Set Button** again. A red icon will appear on the rear LCD monitor. While shooting a movie, you can take a still photo at any time by pressing the shutter button.



#### EOS 7D

1. Set the **Live View/Movie Switch** on the back of the camera to **Movie** (the red video camera icon). The rear LCD monitor will display Live View.
2. Press the **Start/Stop Button** to begin recording. A red icon will appear on the rear LCD monitor. Press the **Start/Stop Button** again to stop.

#### EOS Rebel T1i and T2i

1. Turn the **Exposure Mode Dial** to the **Movie Camera** icon. The monitor will display Live View.
2. Press the **Live View/Movie Button** on the back of the camera to begin recording. A red icon will appear on the LCD monitor. Press the **Live View/Movie Button** again to stop.

### Movie Recording Size Options

EOS DSLRs offer a choice of recording sizes:

- 1920 x 1080 (Full HD—the default)
- 1280 x 720 (HD)
- 640 x 480 (SD)
- 640 x 480 Crop (Rebel T2i/EOS 550D only)

Recording size selections are available on your camera's **Movie Shooting Menu**. In general, Full HD is best for larger HD displays such as televisions and SD is best for videos intended for the Internet. If in doubt, choose Full HD. You will have a full-resolution file and you can always downconvert to SD later.

## Movie Recording Size Options (continued)

In **Movie Crop** mode (Rebel T2i/EOS 550D only) you can achieve 7x magnification when shooting SD video for a significantly increased telephoto effect. This mode crops the image directly from the sensor at 640x480 resolution, providing good image quality and a highly magnified view of distant subjects. It's best to mount the camera on a tripod to avoid a shaky image.

## Frame Rate Options

The following frame rates are available on all video-capable EOS DSLRs (except the Rebel T1i, which offers either 20 fps at 1080 HD or 30 fps at SD and 720 HD):

- **24 fps (23.98 actual)** – This provides a more “film-like” effect, however, rapid motion will not be as smooth as with 30 fps.
- **25 fps** – This is the standard rate for video broadcast in Europe and other PAL standard countries. Your camera's **Video System** menu must be set to PAL.
- **30 fps (29.97 actual)** – This is the standard rate for video broadcast in the U.S and other NTSC standard countries.
- **50 fps** – This is the standard frame rate for 720p HD video broadcast in Europe and other PAL standard countries.
- **60 fps (59.94 actual)** – This faster rate gives motion a very smooth look and can be easily edited down to 30 fps for playback on DVDs or on the web.

In general, North American users should choose either 30 fps or 60 fps for smooth results and easy transition to the most popular playback methods.

## Picture Styles and White Balance

Video recording will apply whatever Picture Style and white balance settings your camera is set to. Raw mode is not available. For optimum quality you should

therefore adjust the white balance to the prevailing light source and adjust the Picture Style to your subject or preference.

## Exposure Options

### Automatic Exposure with Auto-ISO

All EOS DSLRs with movie mode allow automatic exposure with AE Lock and AE Compensation. The EOS 5D Mark II with firmware version 2.0.4 also provides Av/Tv functionality. Keep in mind, however, that normal variations in scene and subject brightness can cause undesirable exposure fluctuations during recording. Many pros prefer full Manual Exposure because exposure will stay consistent, even when the camera moves or the light changes.

### Manual Exposure with Auto-ISO

This option provides a fixed shutter speed and aperture while allowing the ISO to move up or down in response to changing light levels. Keep in mind, however, that similar to automatic exposure with auto-ISO, you lose control over how the camera responds to changes in subject brightness. Also note that higher ISOs lead to higher signal noise.

### Manual Exposure with Fixed ISO

In this mode the exposure is “locked in.” This is ideal for when light levels are consistent, less so when they are not. Manual exposure gives you the added benefit of being able to use a fixed shutter speed, which should be approximately twice the frame rate. For example, if your frame rate is 30 fps, an ideal shutter speed would be 1/60 second. You can then set your aperture accordingly. If this requires an aperture smaller than what is available on your lens or if you prefer to use a larger aperture for a more shallow depth-of-field, place a neutral density (ND) filter over the lens. Depending on how dark a filter you choose you can reduce incoming light by up to four stops.



## Focusing Options

Although EOS DSLRs with HD video allow autofocus, the focusing speed will be slower than if you were doing still photography with the optical viewfinder. Also note that although it is possible to autofocus during video recording, AI Servo AF is not available. Many pros therefore prefer to pre-focus before shooting and to focus manually if necessary during shooting. Remember to set the focus switch on your lens to "MF" when focusing manually.

## Sound Options

All EOS DSLRs with HD video have a built-in microphone that will allow you to record sound simultaneous with video. This includes an automatic gain feature that attempts to amplify all sounds it hears to the same level. (The EOS 5D Mark II with firmware v. 2.0.4 allows you adjust audio levels manually.) You should therefore avoid autofocusing or handling the controls while recording because the microphone will pick up the noise and amplify it. It's also a good idea to be as close to the sound source as possible and to avoid areas that have a lot of unwanted background noise.

All EOS DSLRs except the Rebel T1i have a stereo audio jack that allows you to attach an external microphone. You also have the option of using a separate digital audio recorder and adding audio during editing.