A Smartphone Field Guide to the
Canon 5D Mark II

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This field guide is the perfect companion to your Canon EOS 5D Mark II camera when you are on the road and need to know how to change the settings. Copy it to your smartphone and you will never again be befuddled by your camera's controls.

This Guide is designed to accompany the textbook *Photography—A Textbook for the Digital Era*—a comprehensive and heavily illustrated introduction to digital photography. The numbered Topics in this guide and accompanying book are identical so its easy to cross reference back and forth.

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TOPIC 1–1. IN THE BEGINNING

For information on this topic refer to *Photography: A Textbook for the Digital Era.*

TOPIC 1–2. WHAT IS A DIGITAL PHOTOGRAPH?

For information on this topic refer to *Photography: A Textbook for the Digital Era.*

TOPIC 1–3. TYPES OF DIGITAL CAMERAS

ANATOMY OF THE CAMERA

The 5D Mark II has a number of buttons and dials that quickly change important settings without the time-consuming need to work your way through menus.

1. Mode Dial selects any of the camera's shooting modes.

2. Shutter button sets exposure and focus and turns on metering, the viewfinder, and LCD panel displays when pressed halfway down, and takes the photo when pressed all the way.

3. Main Dial is used by itself and with buttons to change camera settings in shooting modes. In playback mode, turning the dial jumps you through pictures you've taken.

4. LCD Panel Illumination button lights the LCD panel.

5. Metering/WB button selects the metering mode in conjunction with the Main Dial and sets white balance in conjunction with the Quick Control Dial.

6. AF-DRIVE button specifies autofocus modes in conjunction with the Main Dial and cycles the camera among the drive modes single-shot, continuous, and self-timer in conjunction with the Quick Control Dial.

7. ISO/Flash Exposure Compensation button, in conjunction with the Main Dial changes the ISO, and sets flash exposure compensation in conjunction with the Quick Control Dial.

After pressing a button that has two functions, turning the Main Dial changes the first setting and turning the Quick Control Dial changes the second.
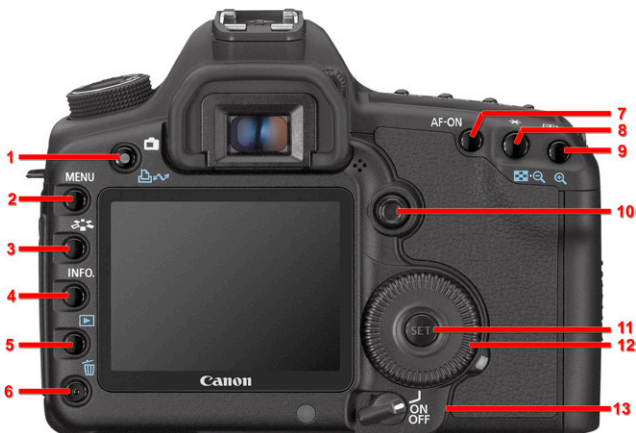
1. Live View/Print/Share button, when pressed in shooting mode, turns on Live View when it's enabled. In playback mode, it lets you print or transfer images when connected to a printer or computer.

2. MENU button displays and hides the menu on the monitor.

3. Picture Style selection button changes picture styles.

4. INFO button cycles you through information about camera settings in shooting mode, or images in playback mode.

5. Playback button displays the last image you captured.

6. Erase button deletes the image displayed on the monitor.

7. AF-ON button autofocuses in P, Tv, Av, M and B modes.

8. AE/FE lock/Index/Reduce button (*) locks exposure and flash exposure. In playback mode, it unzooms a zoomed image and switches to index view.

9. AF point selection/Magnify button, in conjunction with the Main or Quick Control Dial, manually selects which AF point is used to set focus. In Playback and Live View modes it zooms images up to 10x.

10. Multi-controller, a small joy stick, moves in 8 directions plus straight down. It selects AF points, makes white balance corrections and scrolls around an enlarged image in playback mode.

11. SET button in the middle of the Quick Control Dial confirms settings and starts and stops movie recording.

12. Quick Control Dial adjusts exposure by itself, and works in conjunction with buttons to change settings in shooting mode. In playback mode it scrolls through images, and in menu mode it highlights menu commands.

13. Power switch turns the camera on and off, and when set to the white line, activates the Quick Control Dial in shooting modes.

TOPIC 1–4. JUMP START—TAKING PHOTOS IN AUTO MODE

The 5D Mark II's Full Auto mode sets everything for you. All you have to do is frame the image and push the shutter button. This is a good mode to use in most situations because it lets you focus on the subject rather than on the camera.
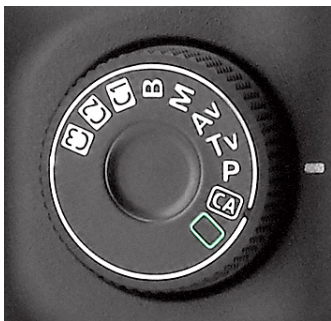
The Mode Dial. For full Auto operation it should be set to the green box.

1. With the Power Switch on the back of the camera set to ON or the white line above it, set the Mode Dial to Full Auto (the green rectangle icon). Set the focus mode switch on the lens to AF.

2. Compose the image in the viewfinder, making sure the area that you want sharpest is covered by one of the nine AF points.

3. Press the shutter button halfway down and pause so the camera can automatically set focus and exposure. When it's done so, it beeps, the round green focus confirmation light in the viewfinder glows, and the AF point(s) being used to set focus briefly flashes red.

4. Press the shutter button all the way down to take the picture.

    ● The shutter sounds, buSY may be briefly displayed in the viewfinder, and the red access lamp on the back of the camera glows while the image is being saved. You can take another photo at any time.

    ● The image is displayed on the monitor for 2 seconds so you can review it, press Erase to delete it, or press INFO to change the display.

5. When finished, turn the Power Switch to OFF.

TOPIC 1–5. GOOD THINGS TO KNOW

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 1–6. WHEN THINGS GO WRONG

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 1–7. USING MENUS

USING THE QUICK CONTROL SCREEN

You can use the Quick Control screen and Multi-controller to change settings on the monitor.

1. Press the joystick-like Multi-controller straight down to activate the Quick Control screen displaying the current camera settings on the monitor. The currently selected setting is highlighted in green and remains highlighted for only 10 seconds if you don't use any camera controls.

2. Press the Multi-controller in any direction to highlight the setting you want to change and its function is indicated at the bottom of the screen.

3. Press SET to display a settings screen (this is optional), then turn the Main or Quick Control Dial to scroll through choices for the selected setting. If you displayed a setting screen, press SET after selecting your choice to return to the Quick Control screen.

USING MENUS

When menus are displayed on the monitor, you can press the shutter button halfway down at any time to instantly return to shooting mode.

- To display the menu, press the MENU button.

- To select a tab, turn the Main Dial. Colors, dots, and icons help you identify which menu tab is displayed.

- To move the colored selection frame up and down the menu to highlight settings, turn the Quick Control Dial.

- To display the options or settings screen for a highlighted command, press the SET button in the center of the Quick Control Dial.

- To select a listed option (not all commands list options), turn the Quick Control Dial to highlight it, then press SET to confirm the change.

- To backup without changing a setting, press MENU or the shutter button before pressing SET.

- To hide the menu, press the MENU or shutter button.

RESETTING CAMERA SETTINGS

As you change settings, it is sometimes easy to forget what you've done or it's time consuming to reset them to their original values. In these situations you can quickly reset all of the settings to their original factory default settings as shown in the table that follows. This command does not affect Custom Functions or the Set up 3 menu's *Camera user setting* that registered settings to C1, C2 and C3 modes.

1. With the Mode Dial set to P, Tv, Av, M or B mode, press MENU and select the Set up 3 menu tab.

2. Turn the Quick Control Dial to highlight Clear settings and press SET, the highlight Clear all camera settings and press SET.

3. Turn the Quick Control Dial to highlight OK and press SET to clear the settings and return to the menu.

4. Press the MENU or shutter button to hide the menu.

TOPIC 1–8. USING THE SCREEN—MONITOR AND VIEWFINDER

• The histogram can be displayed when [Expo. simulation: Enable] is set.

• When <g> is displayed in white, it indicates that the Live View image brightness is close to what the captured image will look like.

• <g> is blinking, it indicates that the Live View image is not being displayed at the suitable brightness due to low- or bright-light conditions. However, the actual image recorded will reflect the exposure setting.

ADJUSTING MONITOR BRIGHTNESS

You can adjust the brightness level of the monitor so it better matches the lighting under which you are viewing it.

1. With the camera in any mode, press MENU and select the Set up 2 menu tab.

2. Turn the Quick Control Dial to highlight LCD brightness and press SET to display a menu listing Auto and Manual. Turn the Main Dial to select one to display a thumbnail, the brightness adjustment scale and a gray scale.

3. Turn the Quick Control Dial so all segments of the gray scale can be distinguished from one another and the thumbnail looks good, press SET, then press the MENU or shutter button to hide the menu.

TOPIC 1–9. LIVE VIEW

USING LIVE VIEW FOR STILLS ONLY

In any shooting mode other than Full or Creative Auto, you can use the monitor, or even a connected computer, to compose and focus still images—a

procedure called *Live View*. (You can do stills in auto modes, using the *Stills+movie* setting discussed in the next section.) In most ways using Live View is just like using the viewfinder. The difference is that in Live View the camera lifts the mirror up and out of the way (the viewfinder blacks out) and opens the shutter so the image sensor can capture the scene in real time and display it on the monitor.

1. With the camera in P, Tv, Av, M or B mode, set the lens focus mode switch to MF or AF, press MENU and select the Set up 2 menu tab.

2. Turn the Quick Control Dial to highlight Live View/ Movie func set. and press SET.

3. Turn the Quick Control Dial to highlight LV func. setting and press SET to display the Live View function settings screen with three choices:

   • To turn off Live View select Disable.

   • To capture still images with Live View select Stills only then select Stills display or Exposure simulation and press SET.

   • To capture movies and stills, select Stills+movie.

4. Press the Live View button to raise the mirror and open the shutter so the scene is displayed on the monitor and the viewfinder blacks out.

5. Manually focus the image by turning the focus ring on the lens, or press AF-ON to focus it automatically using the current AF mode, and if necessary:

   • To adjust exposure, turn the Quick Control Dial.

   • To magnify the image on the monitor for very precise manual focusing, press the Magnify button repeatedly to cycle through 5x, 10x and back to full view.

6. Take the picture and after image review ends, the camera automatically returns to Live View shooting.

7. When done using Live View for the moment, press the Live View button. When finished, repeat Steps 1–3 but select Disable.

The Live View button on the back of the camera.

The *Live View/Movie func set* command on the Set up 2 menu displays a submenu with the choices in the following table. Those grayed out are not available in Full or Creative Auto modes. All choices are discussed on the pages that follow.

1. With the camera in any shooting mode press MENU and select the Set up 2 menu tab.

2. Turn the Quick Control Dial to highlight Live View/ Movie func set. and press SET.

3. Turn the Quick Control Dial to highlight your choice and press SET to display options. Highlight your choice, and press SET again.

4. Press MENU twice to hide the menu.

Command	Description	Page
Movie re-cording	Enables movie recording in Full and Creative (CA) auto modes.	145
LV func. setting.	Turns Live View mode on and off and lets you set the Live View function settings and Screen settings type.	139
Grid dis-play	Turns on and off a grid on the monitor.	141
Silent shoot.	Selects one of three modes to make Live View camera opera-tion quieter.	141
Metering time	Specifies how long metering stays on and AF Lock measure-ments are retained.	142
AF mode	Specifies one of three autofo-cus modes—Quick, Live, or Live face.	142
Movie rec. size	Specifies movie frame size	145
Sound recording	Turns sound recording with movie on or off	145

USING LIVE VIEW FOR STILLS+MOVIES

You can shoot movies in all shooting modes including Full and Creative Auto. Just by pressing the SET button in Live View you can capture HD movies at 1920 x 1080 pixels or standard 4:3 TV quality (SD) movies at 640 x 480 pixels—both formats at 30 frames per second (fps). While doing so you can press the shutter button to interrupt the movie and capture a still image.

1. With the Mode Dial set to any shooting mode, press MENU, display the Set up 2 menu, highlight Live View/Movie func. set, press SET and then do one of the following:

   • In auto modes highlight Movie recording and set it to Enable.

   • In P, Tv, Av, M or B mode select LV func. setting, select Stills+movie, then select Movie display.

2. To set the movie recording size select Movie rec. size and set the size to 1920 x 1080 (Full High-Definition) quality or 640 x 480 (standard quality).

3. To display the Live View image press the Live View button.

4. Focus the subject using AF or manual focus.

5. To begin recording the movie, press SET and while it's being recorded, a recording indicator (a red dot) is displayed on the upper right of the screen.

6. To stop recording the movie press SET again.

TOPIC 1-10. CARING FOR YOUR CAMERA

CLEANING THE SENSOR

The self cleaning sensor unit's ultrasonic anti-dust shake activates automatically for one second whenever you turn the camera on or off, ensuring that the camera will be as relatively dust free as possible, and can be activated at other times through a simple menu selection. If you want to manually clean the camera or disable this function, you can do so as follows:

1. With the Mode Dial set to any mode, press MENU, display the Set up 2 menu tab, highlight Sensor cleaning and press SET.

   ● To turn auto cleaning on or off, highlight Auto cleaning and select Enable or Disable.

● To clean now, highlight Clean now and press SET. When prompted to confirm, highlight OK and press SET

● To manually clean the sensor, highlight Clean manually and press SET. See the next page and follow the instructions on pages 152–152 of the user guide that came with your camera.

2. Press the MENU or shutter button to hide the menu.

OBTAINING DUST DELETE DATA

In addition to removing dust, the 5D Mark II will also work around it if it can't be removed. You just photograph a white wall or sheet of paper (or, in a pinch, removing the lens from the camera) and the camera's Dust Delete Data function maps the size and position of the dust particles remaining on the low pass filter. Once the dust is "mapped", that information is attached as metadata to all subsequently shot images regardless of recording format, RAW or JPEG. (It's a good idea to periodically update this information to keep it accurate.) When the images and appended dust data map are transferred to a computer using the 5D Mark II's Digital Photo Professional software, the dust information can be subtracted from the images simply by selecting the "apply dust delete data" option. You can update the Dust Delete Data at any time as follows:

1. Get ready:

● Find a solid white surface without texture or pattern.

● Set the lens focal length to 50mm or more.

● Set the lens focus switch to MF and set focus to infinity. (If the lens has no focus scale, face the front of the lens and turn it all the way counterclockwise as viewed from the back of the camera.

2. With the Mode Dial set to P, Tv, Av, M or B mode, press MENU, select the Shooting 2 menu tab, highlight Dust Delete Data and press SET to display a confirmation screen.

3. Highlight OK to display an instructional screen.

4. At a distance of 0.7–1.0 feet (20–30cm) completely fill the viewfinder with the white surface and press the shutter button all the way down.

● If successful, you see the message Data obtained. (The image data is stored internally and is not saved to the CF card.) OK is highlighted so press SET.

● If unsuccessful, you'll be asked if you want to try again. If so, select Cancel and then repeat Step 3–4.

5. Press the MENU or shutter button to hide the menu.

TOPIC 1–11. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

TOPIC 1-12. CONTEMPORARY ARTIST'S GALLERY

For the Artist's Galley, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 2 PLAYING BACK AND MANAGING IMAGES

TOPIC 2–1. DISPLAYING IMAGES AND MOVIES

1. Press MENU and display the Playback 1 menu tab.

● *To protect selected images* so they won't be inadvertently erased, or to unprotect previously protected images, turn the Quick Control Dial to highlight *Protect images* and press SET. Turn the Quick Control Dial to scroll through images and press SET to protect or unprotect selected images.

(When you select a protected image, the protect icon is displayed at the top of the screen.)

● *To rotate selected images,* turn the Quick Control Dial to highlight *Rotate*, and press SET. Turn the Quick Control Dial to scroll through your images and press SET one or more times to rotate an image.

● *To erase selected images*, turn the Quick Control Dial to highlight *Erase images* and press SET. Turn the Quick Control Dial to highlight *Select and erase images* and press SET. Turn the Quick Control Dial to scroll through images and press SET to check those to be deleted. (Press Index and Magnify to toggle between 1 or 3 images.) When finished selecting images, press the Erase button to delete them and select *OK* when asked to confirm.

● *To erase all images in a folder*, turn the Quick Control Dial to highlight *Erase images* and press SET. Turn the Quick Control Dial to highlight *All images in folder*, and press SET to display a list of folders. Turn the Quick Control Dial again to select a folder and press SET, then turn it again to select *OK* and press SET.

● *To erase all images on the card*, turn the Quick Control Dial to highlight *Erase images* and press SET. Turn the Quick Control Dial to highlight *All images on card*, and press SET, then turn it again to select *OK* and press SET.

2. When finished, press MENU.

PLAYING BACK MOVIES

You can playback movies on the camera's monitor or a connected TV.

1. Press the Playback button and turn the Quick Control Dial to select a movie. Press the INFO button to switch to the information display you want to use.

   • In single-image display, a movie icon is displayed in the upper left corner of the monitor when a movie is displayed.

   •In index display, the perforations on the left edge of the image indicates that it is a movie. Movies cannot be played from the index display so press the Magnify button to switch to the single-image display.

2. With the movie displayed in single-image view, press SET to display the movie playback panel at the bottom of the monitor.

3. Turn the Quick Control Dial to highlight the Play icon on the playback panel and press SET to start the movie.

   • To pause and restart the movie at any point, press SET.

   • To adjust the sound volume on the camera turn the Main Dial. If the camera is connected to a TV set, adjust the sound volume on the set.

   • To cancel playback, press the Playback button or press the shutter button halfway down.

Movie icons on the playback panel include (from left to right) Exit, Play, Slow Motion, First Frame, Previous Frame, Next Frame, Last Frame.

TOPIC 2–2. CONNECTING TO A TV

You can display your images as a slide show on the camera's monitor or on a connected TV.

• *To show your images on a non-HD TV*, turn both the TV and the camera off while you connect the supplied video cable (don't use any other) to the A/V OUT terminal on the camera. On the TV connect the red plug to the audio right channel, the white to the audio left channel, and the yellow to video in. Turn on the TV and set it for video input.

• *To show your images on a High Definition HD TV* connect the camera and TV using the camera's built-in HDMI OUT terminal and an optional HDMI Cable HTC-100. Output resolution is automatically set to match the model of HDTV you are using and photos are displayed in their original 3:2 aspect ratio.

Once the camera and TV are connected, turn on the camera and set it to *Slide show* as described below. Shows can include all of the still images and movies on the memory card, just movies or still images, or specific photos selected by their date or folder. For added convenience you can control the playback rate (from one to five seconds per image) and set the show to end or loop when finished. Auto power off does not operate in slide show mode so you have to remember

to turn it off. If you are traveling and need to switch between NTSC and PAL video systems see page 161.

GIVING SLIDE SHOWS

You can display your images as a slide show on the camera's monitor or on a connected TV.

1. Press MENU and select the Playback 2 menu tab.

2. Turn the Quick Control Dial to highlight Slide show, and press SET to display the slide show settings screen.

3. Do one of the following:

   ● Turn the Quick Control Dial to highlight All images and press SET. Turn it again to select All images, Folder, Date, Movies or Stills and press SET. If you select Folder or Date, before pressing SET press INFO to display a list of folders or dates from which to choose. Use the Quick Control Dial and SET to select a folder or date and press MENU to return to the slide show screen.

   ● Turn the Quick Control Dial to highlight Set up and press SET. Turn it again to select Play time or Repeat and press SET. Use the Quick Control Dial and SET to select a setting and press MENU to return to the slide show screen.

4. Turn the Quick Control Dial to highlight Start and press SET to begin the show.

   ● To pause and restart the show, press SET. When paused, a pause icon is displayed in the upper left corner of the monitor.

   ● To manually scroll through images, turn the Main or Quick Control Dial.

   ● To specify what information is displayed, press INFO.

5. To stop the show at any point, press the MENU or shutter button.

TOPIC 2–3. MANAGING IMAGES

MANAGING IMAGES—USING BUTTONS

When taking photos, there are many times when you want to review the images you've taken, ideally before leaving the scene.

1. Press the Playback button and use any of the following procedures:

   ● To display one image after another, turn the Quick Control Dial.

   ● To display 4 or 9 small thumbnails in index view, press the Index button once or twice. Turn the Quick Control Dial to scroll the blue frame to select a specific image. To return to single-image view, press the Magnify button.

   ● To jump by the specified method, turn the Main Dial.

   ● To magnify an image up to 10x, display it in single-image view and press or hold down the Magnify button. When an image is magnified, a small square on the screen indicates which part of the image you are viewing as you press the Multi-controller to scroll around. To reduce the image and return to single-image view, press or hold down the Index/Reduce button or press the Playback button.

   ● To erase the image displayed in single-image view or the one highlighted in index view, press the Erase button (marked with a trash can icon). To confirm the erasure, turn the Quick Control Dial to highlight Erase and press SET.

   ● To change the information displayed, press INFO.

2. To resume shooting, press the Playback button or press the shutter button halfway down.

SELECTING A JUMP METHOD

In playback mode, it takes time to navigate through images when there are many of them on a card. To speed things up you can turn the Main Dial to jump in single-image, magnified, and index modes.

1. Press MENU and display the Playback 2 menu tab.

2. Turn the Quick Control Dial to highlight Image jump, and press SET to display a list jump methods.

3. Turn the Quick Control Dial to highlight your choice, and press SET to select it.

4. When finished, press MENU and turn the Main Dial in playback mode to jump by the specified

method. The current jump method and location are displayed in the lowerright corner of the monitor.

The Playback menu tabs list a variety of commands. Although only Protect images, Rotate, and Erase images from the Playback 1 menu tab are discussed here, the other playback commands are discussed elsewhere in this book.

1. Press MENU and display the Playback 1 menu tab.

● To protect selected images so they won't be inadvertently erased, or to unprotect previously protected images, turn the Quick Control Dial to highlight Protect images and press SET. Turn the Quick Control Dial to scroll through images and press SET to protect or unprotect selected images. (When you select a protected image, the protect icon is displayed at the top of the screen.)

● To rotate selected images, turn the Quick Control Dial to highlight Rotate, and press SET. Turn the Quick Control Dial to scroll through your images and press SET one or more times to rotate an image.

● To erase selected images, turn the Quick Control Dial to highlight Erase images and press SET. Turn the Quick Control Dial to highlight Select and erase images and press SET. Turn the Quick Control Dial to scroll through images and press SET to check those to be deleted. (Press Index and Magnify to toggle between 1 or 3 images.) When finished selecting images, press the Erase button to delete them and select OK when asked to confirm.

● To erase all images in a folder, turn the Quick Control Dial to highlight Erase images and press SET. Turn the Quick Control Dial to highlight All images in folder, and press SET to display a list of folders. Turn the Quick Control Dial again to select a folder and press SET, then turn it again to select OK and press SET.

● To erase all images on the card, turn the Quick Control Dial to highlight Erase images and press SET. Turn the Quick Control Dial to highlight All images on card, and press SET, then turn it again to select OK and press SET.

2. When finished, press MENU.

TOPIC 2–4. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

TOPIC 2-5. CONTEMPORARY ARTIST'S GALLERY

For the Artist's Gallery, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 3 IMAGE SETTINGS

TOPIC 3–1. PIXELS AND COLORS

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 3–2. IMAGE QUALITY

SELECTING IMAGE SIZE & QUALITY

The size of an image file and the quality of the picture it contains depends in part on the image's size (the number of pixels), quality (the amount of compression), and format (JPEG or RAW).

1. With the Mode Dial set to any mode, press MENU and display the Shooting 1 menu tab.

2. Turn the Quick Control Dial to highlight Quality and press SET to display a list of quality choices.

   ● Turn the Main Dial to select a RAW format or select – if you don't want to capture RAW images.

● Turn the Quick Control Dial to select a JPEG size and quality or select – if you don't want to capture JPEG images.

3. Press SET to confirm your setting and return to the Shooting 1 menu.

4. Press the MENU or shutter button to hide the menu.

Menu	File size (in MB)	Image size (in pixels)	# on 2GB card
Large/Fine	6.1	5616 x 3744	310
Large/Normal	3.0	5616 x 3744	610
Medium/Fine	3.6	4080 x 2720	510
Medium/Normal	1.9	4080 x 2720	990
Small/Fine	2.1	2784 x 1856	910
Small/Normal	1.0	2784 x 1856	1680
RAW	25.8	5616 x 3744	72
RAW+Large/Fine	25.8+6.1	5616 x 3744	57
sRAW1	14.8	3861 x 2574	120
sRAW1+Large/Fine	14.8+6.1	3861 x 2574	89
sRAW2	10.8	2784 x 1856	170
sRAW2+Large/Fine	10.8+6.1	2784 x 1856	110

Image sizes are indicated by letters L, M, and S (large, medium, and small). Compression modes are indicated with pie-slice-like icons. Fine mode has a smooth edge and Normal mode has a rough stair-step edge.

TOPIC 3–3. IMAGE SIZES

Image sizes are discussed in Topic 3.2

TOPIC 3–4. ASPECT RATIOS

The 5D Mark II supports on the 3:2 aspect ratio.

TOPIC 3–5. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 4 UNDERSTANDING EXPOSURE
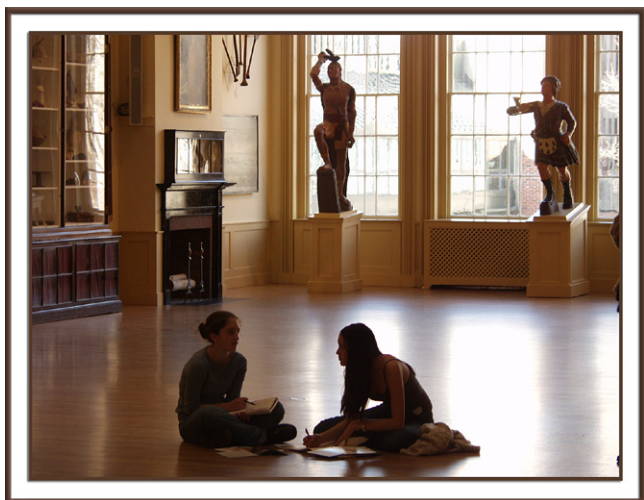
TOPIC 4–1. UNDERSTANDING EXPOSURE

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 4–2. THE RELATIONSHIP OF SHUTTER SPEED AND APERTURE

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 4–3. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

TOPIC 5–1. AVAILABLE SHOOTING MODES

CHANGING SHOOTING MODES

The Mode Dial lists seven shooting modes, each of which has unique advantages in specific situations.

• Set the Power Switch to ON, or the white line above it, and turn the Mode Dial to any shooting mode so it aligns with the small silver marker.
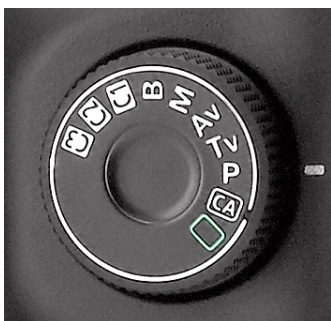
The Mode Dial has settings for full Auto, creative auto, programmed, time-value, aperture value, manual, bulb and three custom shooting modes.

USING CREATIVE AUTO (CA) MODE

1. With the Mode Dial set to Creative Auto (CA) press the Multi-controller straight down to activate the settings screen with the selected setting highlighted in green. (If the setting screen isn't displayed, press the INFO button one or more times.)

2. Press the Multi-controller in any direction to high-light any setting in green and display a description of the setting at the bottom of the monitor.

3. Turn the Main or Quick Control Dials to change the selected setting. (If selecting image quality, press SET first to display a settings screen.)

4. When finished, take photos with the changed settings. When you change the shooting mode or turn off the camera, the Creative Auto settings revert to their defaults although image quality, self-timer/remote control settings are retained.

TOPIC 5–2. USING PROGRAM AUTO (P) MODE

USING PROGRAM AE (P) MODE

In Full and Creative Auto modes, your camera is automatically set to produce the best possible exposure. Program AE (P) mode is also fully automatic, but only the aperture and shutter speed are set automatically. You can change other settings including all of those you can change in Tv, Av, M and B modes.

● With the Power Switch to ON or the white line above it, set the Mode Dial to P (for Program AE).

USING PROGRAM SHIFT

One feature of Program AE mode (and Creative Auto), called program shift, let's you cycle through pairs of aperture/shutter speed settings that offer identical exposures. By choosing the right combination you can

choose to emphasize depth of field or motion capture. When using flash, you cannot shift the program.

1. Set the Power Switch to the white line above ON and turn off the flash if one is attached.

2. With the Mode Dial set to P or CA, press the shutter button halfway down, and then release it to activate metering and the exposure readouts in the viewfinder and on the LCD panel.

3. Turn the Main Dial to scroll through pairs of aperture/shutter speed settings and select the pair you want to use.

4. Press the shutter button all the way down to take the photo. The shifted program setting is cancelled automatically if you pause a few seconds after the picture is taken before taking another one. If you take another picture before metering turns off, the shifted settings are used. You can also hold the shutter button halfway down to keep the shifted setting from changing. When ready, press it all the way down to take the picture.

TOPIC 5–3. USING SHUTTER-PRIORITY (S) MODE

When controlling motion is the most important goal, you use shutter-priority, what Canon calls time-value (Tv) mode, so you can set the shutter speed directly.

1. With the Mode Dial set to Tv (time value) press the shutter button halfway down and then release it to activate metering and the exposure readouts in the viewfinder and on the LCD panel.

2. Turn the Main Dial to select a shutter speed and if the aperture value isn't blinking, the exposure is OK. However;

   ● If the lens' largest aperture (smallest f/number) blinks, the image may be underexposed and too dark, so turn the Main Dial to select a slower shutter speed.

   ● If the lens' smallest aperture value (largest f/number) blinks, the image may be overexposed and too light so turn the Main Dial to select a faster shutter speed.

3. Press the shutter button all the way down to take the picture.

1. With the Mode Dial set to Av (aperture value), press the shutter button halfway down and then release it to activate metering and the exposure readouts in the viewfinder and on the LCD panel.

2. Turn the Main Dial to select an aperture and if the shutter speed isn't blinking, the exposure is OK. However;

   • If the *30″* shutter speed blinks, the image may be underexposed and too dark so turn the Main Dial to select a larger aperture.

   • If the *8000* shutter speed blinks, the image may be overexposed and too light so turn the Main Dial to select a smaller aperture.

3. Press the shutter button all the way down to take the picture.

TOPIC 5–5. USING MANUAL (M) MODE

When you want total and absolute control over exposures, you can switch to manual (M) shooting mode. In this mode, you manually select both the shutter speed and aperture setting.

1. With the Mode Dial set to M (Manual), press the shutter button halfway down and then release it to activate the exposure level indicator that shows how much you are over or under the recommended exposure.

The exposure level indicator in M (Manual) mode.

2. With the Power Switch set to the white line above ON, turn the Main Dial to select a shutter speed and the Quick Control Dial to select an aperture as you watch the viewfinder, LCD panel or monitor.

   • If the bar below the exposure level indicator is centered (0), you're set to the exposure recommended by the camera.

● If the bar below the exposure level indicator is on the minus (-) side of the scale, you may be under-exposing and darkening the image. To lighten it, select a slower shutter speed or larger aperture.

● If the bar below the exposure level indicator is on the plus side (+) you may be overexposing and lightening the image. To darken it, select a faster shutter speed or smaller aperture.

3. Press the shutter button all the way down to take the picture.

USING BULB EXPOSURES

At night you can use the Bulb (B) mode to capture light trails from moving cars and star trails as the Earth rotates under a canopy of stars. When in this mode, the timer goes to 999 seconds (over 16 minutes) as long as you hold down the shutter button and moving lights paint lines in the image. To avoid blur from camera shake, you must use a tripod or other secure support.

1. Set the Mode Dial to B (Bulb) and the Power Switch to the white line above ON.

2. Turn the Quick Control Dial to select an aperture.

3. Press and hold down the shutter button for as long as you wish. A timer is displayed on the LCD panel to guide you and counts up to 999 seconds.

Pressing the LCD Panel Illumination button lights the LCD panel so it's readable in the dark. It turns off after 6 seconds of inactivity. Turning the Mode Dial or pressing any shooting related button extends it.

TOPIC 5–6. USING SCENE MODES

See Topic 5-7 for the 5D's picture styles.

TOPIC 5–7. USING SPECIAL EFFECTS

SELECTING PICTURE STYLES

The styles from which you can choose include the following (only Standard, Portrait, Landscape and
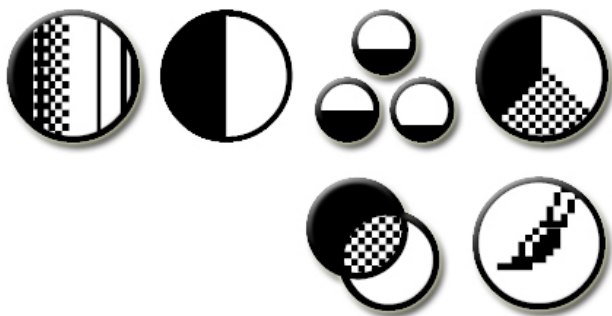
Monochrome are available in Creative Auto mode.)

1. With the Mode Dial set to P, Tv, Av, M or B mode, press the Picture Style selection button to display choices on the monitor. (You can also select Picture Style from the Shooting 2 menu tab.)

2. To select a style, turn the Quick Control Dial to highlight the Picture Style you want to use and press SET.

3. Take your photos and when finished repeat Steps 1–2, then highlight Standard style (the default) and press SET.

ADJUSTING PICTURE STYLES

For each of the styles, you can adjust sharpness, contrast, saturation and color tone. In Monochrome the color saturation and tone choices in the other styles are replaced by choices for filter and toning effects. Toning effects add an overall tint to the image, and filters act like the glass filters that can be attached to lenses.

1. With the Mode Dial set to P, Tv, Av, M or B mode, press the Picture Style selection button. (You can also select Picture Style from the Shooting 2 menu tab.)

2. Turn the Quick Control Dial to highlight the style you want to edit and press INFO to display the Detail set screen for that style.

3. Turn the Quick Control Dial to highlight a setting you want to adjust, and press SET to activate its scale or display a list of choices.

4. Turn the Quick Control Dial to adjust the setting or select a choice from the list, and press SET to return to the Detail set screen. (You can return a style to it's default values by highlighting Default set and pressing SET.)

5. Adjust other settings or press MENU to return to the Picture Style Screen. Any setting for the selected style that's been changed is displayed in blue.

6. Press the MENU or shutter button to hide the menu.

On the Picture Styles screen, the icons refer to (from left to right) sharpness, contrast, saturation, and color tone. When you select the Monochrome style, the last two icons are replaced with ones for filter effects and color toning.

REGISTERING PICTURE STYLES

You can adjust any existing Picture style, and save those changes in one of the three user definitions. This allows you to reuse the settings at some point in the future without having to readjust them.

1. With the Mode Dial set to P, Tv, Av, M or B mode, press the Picture Style selection button. (You can also select Picture Style from the Shooting 2 menu tab.)

2. Turn the Quick Control Dial to highlight one of the three User Def settings and press INFO to display the Detail set screen.

3. Highlight Picture Style, press SET, turn the Quick Control Dial to highlight the style you want to base your user definition on, and press SET again to return to the Detail set screen.

4. Turn the Quick Control Dial to highlight a setting you want to adjust, and press SET to activate its scale.

5. Turn the Quick Control Dial to adjust the setting or select a choice from a list, and press SET to return to the Detail set screen.

6. Repeat Steps 4–5 to adjust other settings or press MENU to return to the Picture Style Screen. Any setting for the selected style that's been changed is displayed in blue.

7. Press the MENU or shutter button to hide the menu.

TOPIC 5–8. CONTINUOUS MODE

SELECTING A CONTINUOUS MODE

To be sure you catch those fleeting moments so common in people, sports and wildlife photography, you can use continuous mode to capture up to 3.9 images per second as long as you hold down the shutter button.

1. With the Mode Dial set to CA, P, Tv, Av, M or B mode, press the AF-DRIVE button and then turn the Quick Control Dial until the continuous mode icon is displayed on the LCD panel and monitor.

2. To run off photos, hold down the shutter button until you or the camera decides enough is enough. When you release the shutter button, the shots remaining count is displayed at the bottom of the viewfinder next to the focus confirmation indicator. The last photo in the burst is briefly displayed on the monitor.

3. When finished, repeat Step 1 but select a different drive mode.

TOPIC 5–9. SHOOTING MOVIES

For information on shooting movies see Topic 1–9. *Live View*.

TOPIC 5–10. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

TOPIC 6–1. USING HISTOGRAMS

DISPLAYING HISTOGRAMS

You can check histograms in playback mode or while reviewing an image you have just taken.

● In playback mode with an image displayed in single image view, or when reviewing an image you just shot, press the INFO button until the desired histogram for the current image is displayed.

SELECTING THE HISTOGRAM AND HIGHLIGHTS

1. With the Mode Dial set to any mode, press MENU and select the Playback 2 menu tab.

2. Turn the Quick Control Dial to highlight Histogram or Highlight alert and press SET to display the choices Brightness and RGB or Enable and Disable. Select one and press SET.

3. Press the MENU or shutter button to hide the menu.

EVALUATING HISTOGRAMS

The horizontal axis of a histogram represents the range of brightness from 0 (shadows) on the left to 255 (highlights) on the right. Think of it as a line with 256 spaces on which to stack pixels of the same brightness. Since these are the only values that can be captured by the camera, the horizontal line also represents the camera's maximum potential tonal range or

contrast.

- If the histogram shows most pixels toward the left (darker) side of the graph, use exposure compensation to add exposure.

- If the histogram shows most pixels toward the right (lighter) side of the graph, use exposure compensation to reduce exposure.
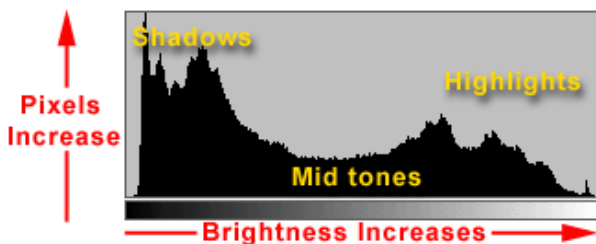
The vertical axis represents the number of pixels that have each of the 256 brightness values. The higher the line coming up from the horizontal axis, the more pixels there are at that level of brightness.

TOPIC 6–2. HOW YOUR EXPOSURE SYSTEM WORKS

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–3. CHOOSING A METERING METHOD

CHANGING THE METERING MODE

All parts of a scene are usually not equally important when determining the best exposure to use. In a landscape, for instance, the exposure of the foreground is usually more important than the exposure of the sky. For this reason, P, Tv, Av, M and B modes offer various metering methods.

- With the Mode Dial set to P, Tv, Av, M or B, press the Metering button on top of the camera and then turn the Main Dial to cycle from evaluative (the default) through center-weighted, spot, partial, and back to evaluative metering.
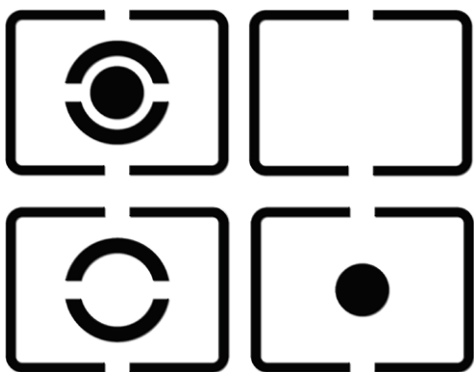
Metering mode icons displayed on the LCD panel include (left to right, top to bottom) evaluative, center weighted, partial and spot.

TOPIC 6–4. WHEN AUTOMATIC EXPOSURE WORKS WELL

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–5. WHEN TO OVERRIDE AUTOMATIC EXPOSURE

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–6. HOW OVERRIDING AUTOEXPOSURE WORKS

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–7. EXPOSURE COMPENSATION

USING EXPOSURE COMPENSATION

Exposure compensation in P, Tv and Av modes lets you lighten or darken the photograph that the camera would produce if autoexposure were used. To lighten a picture, you increase the exposure; to darken one, you decrease the exposure.

1. With the Power Switch set to the white line above ON, and the Mode Dial set to CA, P, Tv or Av, press the shutter button halfway down to activate the readout, and then turn the Quick Control Dial to move the marker on the exposure level indicator displayed in the viewfinder and on the LCD panel.

● To darken the image, move the marker toward the minus (-) end of the scale.

● To lighten the image, move the marker toward the plus (+) end of the scale.

An exposure level indicator shows you how much you are under (-) or over (+) exposed. If the indicator flashes at the -2 or +2 ends of the scale it means you are off by more than two stops.

2. When done, reset exposure compensation to 0 otherwise it will be remembered even when you turn off the camera.

TOPIC 6–8. LOCKING EXPOSURE

When you want to base your exposure on a specific part of a scene, you can do so in P, Tv, Av, M and B modes.

1. With the flash closed, the Mode Dial set to P, Tv or Av and metering set to partial or spot, select the AF point you want to use and focus on the part of the scene on which you want to lock exposure.

2. Press the shutter button halfway down to lock exposure and focus, then press the AE/FE Lock button. An asterisk to the left of the shutter speed in the viewfinder indicates that exposure is locked as long as metering is on, or until you release the shutter or AE/FE Lock button.
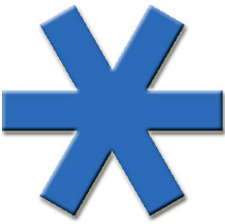
The AE/FE Lock icon.

3. Release the shutter button and recompose the scene. Press the shutter button halfway down to refocus and take your photo. AE lock turns off automatically.

   ● To cancel AE lock without taking a picture, release the shutter button and wait a few seconds for the * icon to disappear.

   ● To keep it locked for other photos keep the shutter button pressed halfway down, or continue holding down the AE/FE Lock button.

TOPIC 6–9. AUTOEXPOSURE BRACKETING (AEB)

Instead of using exposure compensation, or in conjunction with it, you can use autoexposure bracketing (AEB) to run off a series of three images, each at a slightly different exposure—correctly exposed, underexposed, and overexposed.

1. With the Mode Dial set to P, Tv, Av or M, press the Multi-controller straight down to display the Quick Control screen.

2. Press the Multi-controller to select the exposure level indicator then turn the Main Dial to expand or contract the exposure increment between shots (you can optionally press SET at this point). Three small markers under the indicator indicate what the exposure will be for each of the three shots. The middle bar is at the exposure recommended by the camera (or shifted with exposure compensation—page 55) and the left and right markers indicate by how many stops the other images will be underexposed (-) and overexposed (+).

The exposure level indicator used to specify the exposure increment between shots. Here the dots indicate it's one stop.

3. Take each of the three photos just as you normally would.

   ● While AEB is in effect, the AEB icon is displayed on the LCD panel and the three markers are displayed on the exposure level indicator in the viewfinder and on the LCD panel.

   ● After you take the first shot, the markers under the indicator and the AE/FE lock icon in the viewfinder flash as do the markers and AEB icon on the LCD panel. When you press the shutter button halfway down, the marker on the exposure level indicator indicates which of the three images is being captured. When the series is complete, the flashing stops.

4. When finished, repeat Steps 1–2 to reset AEB to 0.

TOPIC 6–10. PLACING A VALUE

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–11. USING A GRAY CARD

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 6–12. CONTROLLING TONES IN YOUR IMAGES

Tones can be controlled using Custom Functions C.Fn II at the end of this guide.

TOPIC 6–13. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

TOPIC 7–1. THE PLANE OF CRITICAL FOCUS

For information on this topic refer to *Photography: A Textbook for the Digital Era.*

TOPIC 7–2. MANUAL FOCUS

USING MANUAL FOCUS

Manual focus is extremely useful when autofocus has problems, when you want to quickly focus on an off-center subject or a subject that is in a busy setting where the camera has trouble isolating the subject you want, or when you want focus fixed no matter how the subject moves.

1. Set the focus switch on the lens to M or MF.

2. Position one of the active AF points over the part of the scene you want critically sharp.

3. Hold the shutter button halfway down and turn the focus ring on the lens. When focus is achieved, the AF point used to set focus flashes red and the focus confirmation light glows a steady green.

TOPIC 7–3. AUTOFOCUS

SELECTING AN AUTOFOCUS MODE

The 5D Mark II has two autofocus modes—One-Shot AF and AI Servo AF, and a third—AI Focus AF—that automatically switches between the first two. (AI stands for artificial intelligence.) In auto modes, the

camera specifies one of these modes for you and you can't change it, but in P, Tv, Av, M and B modes you can choose any of the three modes depending on whether a subject is moving or not.

1. With the camera in P, Tv, Av, M or B mode and the focus switch on the lens set to AF, press and release the AF-DRIVE button.


2. Turn the Main Dial to cycle through ONE SHOT, AI FOCUS, or AI SERVO on the LCD panel.

TOPIC 7–4. AUTOFOCUS AREAS

SELECTING AN AF POINT

The 5D Mark II has nine AF points and the one being used to set focus can be selected automatically or manually. To see which AF point is being used to set focus, press the shutter button halfway down, or press the AF point selector button, to see which flashes red.

1. With the Mode Dial set to any mode in P, Tv, Av, M or B mode, press the AF point selector button (five dot icon) on the back of the camera to display the active AF point(s) in red in the viewfinder and the AF point indicator on the LCD panel.
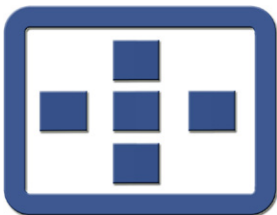
The AF point selector icon.

2. Turn the Main or Quick Control Dial to select an AF point or press the Multi-controller to select a point directly. (When all nine points are selected, the camera is in auto mode and will pick the AF point

for you.) When using the Multi-controller to select AF points, there are shortcuts.
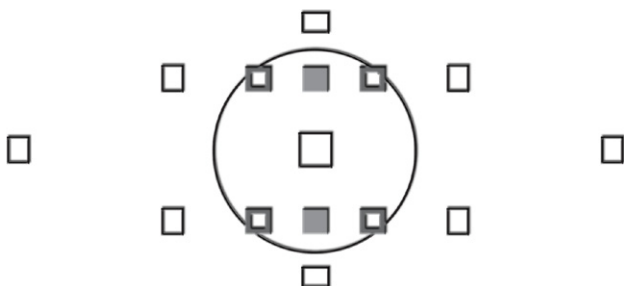
In addition to the 9 visible AF points, there are 6 others you can't see, all within the spot metering circle. Those on the corners are horizontal-line sensitive with f/5.6 lenses. The other two are vertical-line sensitive with f/2.8 and f/5.6 lenses.

 • Pressing it straight down once selects the center AF point and pressing it again selects all of them.

 • Repeatedly pressing it in the same direction toggles between selecting one AF point and selecting them all.

3. When finished taking photos, repeat Steps 1 and 2 to reset AF point selection to auto (all nine AF points). If you don't do so, the setting remains in affect even when you turn the camera off.

DISPLAYING AF POINTS

When you play back images or view them in review mode, you can display the AF point or points used to set

1. With the Mode Dial set to any mode, press MENU and select the Playback 2 menu tab.

2. Turn the Quick Control Dial to highlight AF point disp. and press SET to display the choices Enable and Disable (the default).

3. Turn the Quick Control Dial to highlight your choice and press SET.

TOPIC 7–5. FOCUS LOCK

USING FOCUS LOCK

To change the position of the plane of critical focus in One-Shot AF mode, you can use focus lock.

1. With autofocus set to One-Shot AF, compose the image so the subject you want to lock focus on is covered by one of the AF points in the viewfinder. (It works best if you use the more accurate center AF point.)

2. Press the shutter button halfway down and hold it there to lock in focus. The green focus confirmation light lights up and the AF point being used to set focus briefly flashes red in the viewfinder.

3. Without releasing the shutter button, recompose the scene and press the shutter button all the way down to take the picture.

TOPIC 7–6. TRACKING MOVING SUBJECTS

The Canon 5D tracks objects moving toward or away from the camera using AI Servo mode discussed in Topic 7-3. *Autofocus*.

TOPIC 7–7. FACE DETECT

The Canon 5D does not have a face detect feature.

TOPIC 7–8. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 8. DEPTH OF FIELD

TOPIC 8–1. DEPTH OF FIELD

DECREASING DEPTH OF FIELD

Shallow depth of field, sometimes called selective focus, is a great way to isolate a subject from a distracting foreground or background.

- Use a neutral density filter for a larger aperture.

- Zoom the lens in or move closer to enlarge the subject.

- Use aperture-priority mode or program shift to select a large aperture such as f/2.8.

CHECKING DEPTH OF FIELD

To check depth-of-field in the viewfinder in P, Tv, Av, M and B modes, or on the monitor while using Live View, press the depth-of-field preview button on the lower left side of the lens mount. Pressing this button locks exposure and closes the lens aperture down to the f/stop you've selected so the viewfinder gives you an idea of what's sharp and what isn't. However, when using small apertures, the viewfinder image is very dark, except in Live View, where it remains bright. When the maximum aperture is selected, as it often is in dim light, you'll see no change at all. One trick is to hold down the depth-of-field preview button as you turn the Main Dial to scroll through a range of aperture.

The depth-of-field button.

TOPIC 8–2. CIRCLES OF CONFUSION

TOPIC 8–3. HYPERFOCAL DISTANCE AND ZONE FO-

CUSING

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 8–4. SHALLOW DEPTH OF FIELD

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 8–5. FOCUS STACKING IMAGES

The 5D foes not have this feature.

TOPIC 8–6. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 9 SHARPNESS & BLUR

TOPIC 9–1. SHUTTER SPEED AND SHARPNESS

INCREASING THE SHARPNESS OF MOVING OBJECTS

Blur in an image is caused when all or part of a subject focused onto the image sensor moves when the shutter is open. To show a moving subject sharply,

the shutter needs to open and close before the image on the sensor moves a significant amount. In other words, you need to use a fast shutter speed. But just how fast is fast enough? The answer depends on several factors. Because several variables are involved, you can't always predict how motion will be portrayed in the final photograph. So use different settings and take more than one shot if possible. Try shooting from a different angle or perhaps wait for a pause in the action. You are much more likely to get a good shot if you have several to choose from. Just be aware that sharpness and blur are hard to evaluate on the camera's monitor.

- Photograph fast-moving subjects heading toward or away from you and not from side to side.

- Move farther away from the subject or use a shorter focal length lens.

- Switch to Tv (shutter-priority) mode or use program shift and select a fast shutter speed such as 1/500.

- Increase the ISO so you can use a faster shutter speed although this adds some noise to the image.

TOPIC 9–2. CREATIVE CAMERA MOVEMENT BLUR

CONVEYING MOTION

The creative use of blur can lead to some interesting photos—especially when conveying the feeling of motion. The shutter speed can be selected to blur some or all of an image.

- Try blurring images in low-light situations. In bright light, the shutter will open and close too fast.

- Use shutter-priority mode program shift to select a slow shutter speed.

- Use a neutral density filter to get a slower shutter speed.

- When panning with a moving subject, use AI Servo AF mode to keep the image focused as long as you hold the shutter button halfway down.

TOPIC 9–3. CREATIVE SUBJECT MOTION BLUR

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 9–4. HOLDING THE CAMERA

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 9–5. TRIPODS

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 9–6. THE SELF-TIMER AND REMOTE CONTROL

USING THE SELF-TIMER

The 5D Mark II has a self-timer that gives you a delay of 2 seconds (in P, Tv, Av, M and B modes) or 10 seconds (in all modes) between the time you press the shutter button and the picture is taken.

1. With the Mode Dial set to any mode for the 10-second timer, or to P, Tv, Av, M or B mode for the 2 second timer, press and release the AF-DRIVE button and turn the Quick Control Dial until one of the self-timer icons is displayed on the LCD panel.

The 10 second (left) and 2 second (right) self-timer icons.

2. With the camera on a stable surface or tripod, and pointed at the subject you want to focus on, press the shutter button halfway down to set focus, then all the way down to take the picture. The self-timer lamp on the front of the camera flashes, the camera beeps, and the LCD panel displays a countdown timer. Two seconds before the picture is taken, the lamp glows steady and the beep rate increases. (To cancel the timer, press the AF-DRIVE button.)

3. When finished, repeat Step 1 to return to single-frame mode.

TOPIC 9–7. IMAGE STABILIZATION

On Canon SLRs image stabilization is in the lenses. These lenses are marked with an IS.

TOPIC 9–8. ISO SENSITIVITY

● With the Mode Dial set to P, Tv, Av, M or B mode, press and release the ISO button on top of the camera and then turn the Main Dial to scroll through the available ISO settings displayed on the LCD panel and monitor and in the viewfinder.

TOPIC 9–9. NOISE REDUCTION

For information on reducing noise see Custom Functions C.Fn II at the end of this guide.

TOPIC 9–10. PROJECTS IN PHOTOGRAPHY

For projects, refer to the accompanying book "*Photography: A Textbook for the Digital Era*".

CHAPTER 10 COLOR & WHITE BALANCE

TOPIC 10–1. WHERE DOES COLOR COME FROM?

For information on this topic refer to *Photography: A Textbook for the Digital Era*.

TOPIC 10–2. WHITE BALANCE

The 5D Mark II offers a variety of white balance settings, each for a different lighting situation. In auto modes Auto white balance (AWB) is automatically se-