

Canon T2i - Reference Guide - Photos

Welcome to the reference guide for shooting photos with the Canon Rebel T2i! My name is Jack Wolfe and I'm the New Media Technology Lab Assistant for the Art Department at Wellesley College. I'll be guiding you through setting up and using your digital camera. Let's get started!

Item Checklist:

Your kit should include the following items:

- A camera
- A battery
- An SD Card
- A lens cap
- A micro USB cable
- And a battery charger

Check the tag attached to the kit bag for a list of all included items.

The number one rule of using anything from the film cage is to treat it better than you treat your own equipment. Additionally, be sure to bring back all accessories and equipment included in your kit when you return it. Cameras and equipment are very expensive, so be careful and gentle with them!

Powering on the Camera:

The power button is the switch located on the top of the camera next to the mode dial.

Swapping/Charging the Battery:

To charge the battery, open the door on the bottom of the camera and push on this plastic tab to remove the battery. Place the battery on the included charger. Wait a few hours until the battery is fully charged. Remove the fully charged battery from the charger. Reinsert the battery until the plastic tab pops into place and close the door.

Using SD Cards:

To connect the camera to your computer, you can plug the included micro USB cable into the hole located on the left side of the camera underneath the rubber flap that is labeled "AV Out Digital" and connect it to your computer. Turn on the camera and put it in image review mode to have it show up as a hard drive.

You can also plug the SD card directly into a USB card reader. To access the SD card, slide and open the slot cover on the side of the camera. Push down on the SD card to pop it out for removal. Reinsert the card and close the door to continue using the camera.

You may want to format your SD card, either before returning it to the cage (highly recommended)

or to clear someone else's photos from the card. To do so, press the Menu button and navigate to the tab which has the option Format. THIS WILL ERASE ALL DATA FROM THE CARD, SO BE CAREFUL!

Changing Lenses:

You should only change the lens if the included 18-55mm kit lens is insufficient for your needs and you require an additional lens from the cage, since doing so makes both the lens and the camera most susceptible to damage and dust particles.

To change the lens of the camera, grip the lens, press the button next to the lens on the front of the body and rotate counterclockwise until the lens comes off. Screw the plastic lens caps onto both the lens and the camera while you are not using them to protect the optics or mirror from dust and damage. Align the red or white dots on the new lens with the corresponding dots on the camera and turn clockwise until the lens clicks into place.

Changing the Lens Focus Mode/Image Stabilization Setting:

There are two switches on the side of the lens. The AF/MF switch allows you to switch between Auto Focus mode, where the lens automatically chooses a subject to focus on and Manual Focus mode, where you can adjust the focus by turning the lens focus ring. The Stabilizer switch allows you to turn on the lens's image stabilization to reduce blurring from camera shake in your photos.

Stabilization is unnecessary (and sometimes counterproductive) when the camera is mounted to a tripod, so make sure to disable it if you are using a tripod.

Holding The Camera Properly:

To hold the camera properly for taking photos:

- Wrap your right hand around the camera grip firmly
- Hold the lens bottom with your left hand
- Press your arms and elbows lightly against the front of your body
- Rest your right hand's index finger over the shutter button
- Press the camera against your face and look through the viewfinder

Using the Viewfinder or Live View:

You can either use the Viewfinder or the Live View to preview your subject. Using the viewfinder for capturing images is recommended, as it provides the clearest preview of your subject and variable lighting conditions may make it difficult to see the Live View screen. To switch between the Viewfinder and Live View, press the Live View shooting button to the top right of the screen.

The Live View displays useful shooting information such as shutter speed, aperture, ISO and other camera settings. The Viewfinder displays information such as shutter speed, aperture, ISO and other camera settings at the bottom of the screen. In the center of the screen, you can see an array

of points used for auto focusing and a spot-metering circle used to automatically determine camera settings when not in manual mode.

Taking Photos:

Zoom in or out of your subject by turning the zoom ring on your lens. Once you are ready to shoot, press the shutter button located by the hand grip halfway to focus on your subject if you are in autofocus mode. With the subject in focus, fully press the shutter button to take a photo. If your lens is set to manual focus mode, you can simply adjust the lens focus ring and fully press the shutter button without having to press it halfway.

Using The Flash:

To enable the flash, press the small Flash button on the front of the camera body next to the lens. The flash will pop up and fire when you take your shot. Push down on the flash to close it onto the camera. The flash may or may not fire depending on your shooting mode and current lighting conditions. To mount an external flash, slide the metal bracket on top of the camera into the hotshoe mount.

See the additional tutorial for help with shooting with an external flash.

To use a tripod for shooting photos, please refer to the tutorial on tripod usage.

Reviewing Images:

After taking a photo, it will pop up on the screen for approximately two seconds. To display the image again, press the playback button located to the bottom right of the screen. You can zoom in and out and move around your image with the Magnify, Reduce and Arrow buttons located to the right of the screen. This allows you to quickly check that your image is in sharp focus. You can also use this zoom feature while shooting with the Live View to preview image focus prior to taking your photo.

With your image zoomed out, use the left and right arrow buttons to navigate between images. Zoom out further to view multiple images at once in the grid view and back in to review individual shots. To delete a photo, press the Trash can button, arrow key over and press Set to confirm deletion. THIS IS PERMANENT, SO BE CAREFUL!

Press the playback button again to switch back to showing either the Quick Control Screen or the Live View. To turn the screen on and off, press the Display button located next to Menu.

Shooting Modes:

By adjusting the Mode Dial on the top of the camera, you can change the current shooting modes. The Modes are broken up into two basic areas:

- Shooting modes described by a series of letters are known as the Creative Zone modes.

These require manual adjustment of camera settings, and include:

- **P:** Program Auto Exposure
 - Shutter speed and aperture are set automatically
 - **Tv:** Shutter-priority Auto Exposure
 - Turn the dial to set shutter speed; aperture is set automatically
 - **Av:** Aperture-priority Auto Exposure
 - Turn the dial to set aperture; shutter speed is set automatically
 - **M:** Manual Exposure
 - All settings are set manually
 - **A-DEP:** Automatic depth-of-field
 - Objects in the foreground and background will be in focus automatically.
 - All the AF points will function to detect the subject, and the aperture required to attain the necessary depth of field is set automatically.
- Shooting modes described by an icon or rounded box are known as Basic Zone modes, and adjust all camera settings automatically. These include:
- Full Auto, Creative Auto, Flash Off, Portrait, Landscape, Close-up, Sports and Night Portrait

Setting ISO:

To change the ISO when in one of the Creative Zone shooting modes, press the ISO button and turn the dial or use the arrow keys ; ISO will be automatically set in any of the Basic Zone modes. Higher ISO increases the light sensitivity, but will also add more noise to your image. Therefore, always shoot at the lowest possible ISO while still maintaining proper exposure; increasing exposure in post-production is easier than decreasing noise.

Using the Quick Control Screen:

When not in the Live View or Image Review modes, the Quick Control Screen allows you to view and edit various camera settings based on what shooting mode you are in. When a setting is being set automatically, as with the Basic Zone modes, it is greyed out and inaccessible to you. The Creative Zone modes (Program, Shutter-priority, Aperture-priority, Manual and Automatic depth-of-field) offer a lot more customization and control over your camera's operation.

To navigate between settings on the Quick Control screen, press the "Q" button and use the arrow keys to switch between settings. Press "set" to access an individual setting, turn the dial or use the arrow keys to change the setting and press "set" again to finalize the setting change.

Quick Control Screen Settings:

Switching to Manual mode enables all camera settings so that I can demonstrate them. The different camera settings are:

- **Shutter speed:** The length of time for which the camera aperture is open, measured in either fractions of a second or seconds. Lower shutter speeds are used in situations with

more light, and vice versa.

- **Aperture:** The size of the camera aperture opening. Higher numbers indicate a smaller opening, letting in less light, and larger numbers indicate a larger opening, letting in more light.
- **ISO Speed:** The image sensor's sensitivity to light. Use the lowest ISO speed as possible, as higher ISO's will increase the sensitivity, but also add noise to your image.
- **Highlight Tone Priority:** Improves the highlight detail; leave at default settings
- **Shooting Mode:** The selected shooting mode.
- **Exposure Compensation Indicator/:** Adjust this setting by holding the "AV" button and turning the dial. Change to increase or decrease the exposure without flash by up to two stops in $\frac{1}{3}$ stop increments. Adjusts Exposure Compensation in every Creative Zone mode EXCEPT manual mode, where it adjusts Auto Exposure Bracketing (more on that later).
- **Flash Exposure Compensation:** Adjust this setting to increase or decrease the exposure with flash by up to two stops in $\frac{1}{3}$ stop increments.
- **Picture Style:** Built-in camera effects to change the color of the image. Stick with either the Neutral or Faithful settings for the most accurate color reproduction; you can edit the photos later on the computer.
- **White Balance:** Setting for making the white areas of your image look white. Choose from either automatically setting the white balance, a series of presets based on different lighting conditions or a custom white balance. To manually set the white balance:
 - Photograph a white subject, such as a piece of paper or coffee cup lid, with a bit of natural light shining upon it.
 - Under the second Menu tab, select Custom White Balance
 - Navigate to the photo of the white subject and press Set to confirm
 - Choose the Custom White Balance setting to apply the white balance imported from your photo
- **Auto Lighting Optimizer:** Automatically compensate for dark or low contrast images. Leave disabled and edit photos later.
- **Image Quality:** The resolution of the image captured. You should almost always set this to "RAW" or "RAW+Large" to take advantage of the extra dynamic range contained within the RAW file. RAW files contain the raw image data before it is converted into a lossy, compressed format such as JPEG or PNG. Working with RAW allows you to bring out exposure information contained in the file which would otherwise be lost by using editing software such as Photoshop or Lightroom.
- **Auto-focus Mode:** Change the auto-focus mode (set automatically in Basic Zone Modes). The various settings are:
 - **One Shot:** Only focuses once when shutter is pressed halfway. Suited for still subjects.
 - **AI Servo:** Focus continuously when shutter is pressed halfway. Suited for moving subjects when the focusing distance keeps changing.
 - **AI Focus:** Automatically switch the AF mode based on the movement of the

subject.

You can also change the AF mode by pressing the AF button (or right arrow). The point from which the camera auto focuses is in the center by default, but you can change it by pressing the AF point button (zoom in), moving the AF point with the arrow keys and pressing set to finalize it. However, for most instances you should leave it centered.

- **Metering Mode:** Measures the subject's brightness to determine the correct exposure.

The different modes are:

- **Evaluative:** All-around automatic metering. Set by default and highly recommended in most instances.
- **Partial:** Effective when background is much brighter than subject.
- **Spot:** Meters a specific part of the subject; for more advanced users.
- **Center-weighted average:** Metered at the center and then averaged for entire scene; also for more advanced users.
- **Drive Mode:** The different drive modes available are:
 - **Single shot:** Take one photo for every press of the shutter button
 - **Continuous:** Continue to take shots at up to 3.7 per second until the camera's buffer is full.
 - **10 Second Self-timer**
 - **2 Second Self-timer**
 - **10 Second Self-timer Continuous:** Take between 2 and 10 shots with the self-timer
- **Battery Level:** Has four levels that correspond to the remaining battery life
- **Shots Remaining/Self-timer Countdown/Bulb Exposure Time (when using external flash)**

Menu Options:

Press the Menu button to access a variety of different camera settings, depending on what shooting mode you are currently in. Again, I will switch to Manual mode to have access to the most shooting options:

- First Tab:

- **Quality:** Image quality. Remember to always shoot in RAW or RAW+L
- **Beep:** Enable camera beeping.
- **Release shutter without card:** DO NOT MODIFY.
- **Image review:** Change image review time or disable image review altogether
- **Peripheral illumination correction:** DO NOT MODIFY.
- **Red-eye reduction:** Turn on red-eye reduction, leave Disabled.
- **Flash control:** Flash shooting controls. Change to manually enable/disable flash firing.

- Second Tab:

- **Exposure compensation/Auto Exposure Bracketing:** Select and adjust the camera wheel to enable Auto Exposure Bracketing. When the camera is set to Continuous Drive Mode, this feature takes two additional exposures at higher and lower exposure for each

photo. Using Photoshop and other software, you can combine these multiple exposures into a High Dynamic Range photograph that captures much more exposure information than a regular photo.

- **Auto Lighting Optimizer:** Leave disabled.
- **Metering Mode:** Change the metering mode.
- **Custom White Balance:** Choose an image to use as the custom white balance source.
- **White Balance Shift/Braketing:** DO NOT MODIFY.
- **Color space:** Change the color space. DO NOT MODIFY.
- **Picture Style:** Change the picture style. Leave at Neutral.

- **Third Tab:**

- **Dust Delete Data:** DO NOT MODIFY.
- **ISO Auto:** Maximum ISO to use for when the camera automatically determines the ISO setting. Bumping up to 6400 will give you more light but at a significant increase in noise, so be careful. Leave at 3200 unless absolutely necessary; you can always pull in some additional light detail in post-production.

- **Fourth Tab:**

- **Protect images:** Protect images from being accidentally deleted. Note that this does not protect the images when the SD card is formatted.
- **Rotate:** Rotate images manually.
- **Erase images:** Select and erase images manually, or erase all images from SD card.
- **Print order:** Order prints from card; pretty much useless.
- **Slide show:** View images in a slide show. Useful if displaying images on TV directly from camera, but not much else.

- **Fifth Tab:**

- **Histogram:** Change the display style of the Histogram to show either image brightness or RGB balance.
- **Image jump with wheel:** Change image jump increment with wheel.
- **Ctrl over HDMI:** Enable or disable control of the camera over an HDMI cable.

- **Sixth Tab:**

- **Auto power off:** Change the time before the camera powers off to save battery life.
- **Auto rotate:** Choose when to enable auto rotate.
- **Format:** Format the memory card. BE CAREFUL, THIS WILL DELETE ALL DATA FROM THE CARD!
- **File numbering:** Choose to either continuously number the files created by the camera, reset from 0001 every time the card is replaced or manually reset to 0001. Can be useful for organization, but can also get confusing.
- **LCD auto off:** Enable or disable auto screen shut-off.
- **Screen color:** Change screen color. DO NOT MODIFY.

- **Seventh Tab:** DO NOT MODIFY.

- **LCD brightness:** Adjust LCD brightness to improve visibility at the cost of battery life.
- **Date/Time:** Set date/time.

- **Language:** DO NOT MODIFY.
- **Video system:** DO NOT MODIFY.
- **Sensor cleaning:** DO NOT MODIFY.
- **Live View function settings:** Settings for Live View mode.
- **Eighth Tab:** DO NOT MODIFY.
 - **Custom Functions:**
 - **Copyright information**
 - **Clear settings:**
 - **Firmware version number**
- **Ninth Tab: My Menu settings.** DO NOT MODIFY

This concludes our overview of the Photo shooting features of the Canon Rebel T2i. For help shooting high-definition video, be sure to check out the corresponding tutorial. Thanks for watching; now go out there and take some great photos!