

# T2i Experience

The Still Photographer's Guide to Operation and Image Creation with the Canon Rebel T2i/EOS 550D



an eBook by:  
Douglas J. Klostermann

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Full Stop. *good writing for better photography*

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### **T2i Experience**

*The Still Photographer's Guide to Operation and Image Creation*

*With the Canon Rebel T2i / EOS 550D*

by: Douglas J. Klostermann

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## **1. INTRODUCTION**

With the introduction of the Rebel T2i (also known as the EOS 550D) Canon has continued its well respected line of powerful, affordable, and easy to operate digital SLR cameras. Boasting features such as its 18 megapixel sensor, 63-zone dual-layer exposure metering system, high ISO performance expandable up to 12800, and Digic 4 image processor, the T2i shares many of the capabilities of Canon's prosumer models. And with its 3.7 frames per second shooting speed, high resolution rear LCD Monitor, and customization options it has the ability to meet most enthusiast photographers' needs. The Canon Rebel T2i / EOS 550D is a powerful, advanced tool for digital photography and is fully capable of capturing professional quality images in most any situation you wish to use it. But it is merely a tool.

It is up to you to make use of its features and capabilities to create the images you envision. While the camera's manual can tell you about the settings and controls and how they function, this guide will build upon that and tell you when and why you want to use them. Every button, menu item, and Custom Function setting of the T2i is there for a reason: to help you capture the images you want. Some of them are more useful to different types of photographers and shooting situations and you don't need to learn and use them all immediately, but this guide should help to give you the knowledge to confidently use the ones that turn your Canon Rebel T2i into an image capturing tool that works best for you.

### **Take Control of Your Camera**

Since the camera is a tool to take the images *you* want to take, you can't always allow the camera to make decisions for you. You have to take control of the camera to ensure that you capture exactly the images you intend - by autofocusing where you want, setting the aperture or shutter speed that you want, and obtaining the exposure you want. While the T2i is an intelligent camera, it cannot read your mind and your intentions and does not know that you wish to focus on and properly expose the small blossoms in the foreground, while making the background appear out of focus, and the branches to be caught still and not be blurred from the motion of the wind, on this bright, sunny day (see *Figure 1*). You have to tell the camera to do all of this, through the various controls and settings, such as the autofocus AF Mode (focus on the blossoms), the Exposure Metering Mode (properly expose the blossoms), the Aperture setting (the out-of-focus background), the Shutter Speed (freezing the motion of the branches), the ISO (bright day) and the White Balance (sunny day).



*Figure 1 - Japanese Garden, Brooklyn, NY - Autofocus, exposure metering mode, aperture, shutter speed, ISO, and white balance all considered in creating this image. Shutter speed 1/125, aperture f/6.3, ISO 200*

One has to think about all this stuff for every photo? Well, yes, that is what digital SLR photography is all about. At least if you wish to consistently create dramatic and compelling images. That is why the T2i has all these controls and features for you to make use of. You're not in the realm of point-and-shoots anymore!

Learning to use and get the most out of a versatile dSLR camera like the T2i takes time, practice, patience, mistakes, and experimentation. If you are not yet familiar with all the controls of a dSLR and the exposure concepts of digital photography, don't expect to just pick it all up at once, in one or two readings of a single book. (In fact, you wouldn't want to, as the never ending task of learning and mastering photography is a big part of what it's all about!) Try not to become frustrated when you don't quite understand something or aren't yet getting the results you desire. Instead learn the controls, functions, settings, and concepts bit by bit, try them out in real life shooting situations, and return to this guide, the manual, and other photography books to address questions and problems you encounter. Continue to learn and to photograph often and it should all begin to come together, sometimes slowly and sometimes in rapid spurts of discovery and understanding.

If you have upgraded from an older dSLR to the T2i, you should find that many of the basic controls and features are similar. And its additional features and capabilities will more easily help you to capture images and photographs that you may have been

limited in consistently attaining before. If you are new to dSLR photography, this book will help guide you through its features, controls, and capabilities. Be sure to take it slowly and patiently and start with the basic features and concepts that I will explain. With practice and experience you will soon be shooting with confidence and can begin to take advantage of the camera's more advanced functions.

### Using This Guide

There are many different ways to use a digital SLR camera and its controls to capture images, and many diverse situations in which photographers work. I'm going to concentrate on the techniques that I believe are the most practical, useful, and effective for the majority of intermediate and dedicated photographers. The settings and controls I discuss can apply to various types of photography including everyday general photography, action, and travel photography. Once you have a firm grasp of the controls, settings, and basic techniques you will have the tools and knowledge to address different issues and challenging situations, and I encourage you to experiment and continue to learn.

Since this guide is intended to help you get the most out of your T2i, it will not go into detail about all the automatic features. The Canon T2i is a sophisticated tool that deserves to be used to its full potential, and that involves taking control of the camera and its functions, which means taking it off Auto, off Program, off automatically selected auto-focus points, off Auto ISO. While this may be more challenging at first, these are the techniques that are necessary to take full advantage of the capabilities of any dSLR including the T2i, and will lead you to having more control and consistency over your image making. Hopefully this will inevitably lead to better images!

This guide is intended to be used with the camera in your hands. That is the best way to directly follow and understand the controls, functions, and settings as they are being explained. It is also intended to be used in conjunction with and in addition to the camera's manual, not to completely replace it, so every bit of information in the *Canon EOS Rebel T2i / EOS 550D Instruction Manual* will not be repeated here. Among the official manual's sometimes brief descriptions or frustratingly incomplete explanations, there is some very valuable information, as well as the basics for buttons, controls, and how to change all the settings. Note that the T2i manual can also be obtained as a PDF file from the Canon website:

<http://gdip01.c-wss.com/gds/9/0300003169/01/eosrt2i-eos550d-im-en.pdf>

As you can see, there is a lot to make sense of regarding terminology and controls, so I recommend that you familiarize yourself with the controls and displays of the camera body, as shown on pages 16-20 of the *Canon EOS Rebel T2i / EOS 550D Instruction Manual*, as well as read through the manual and attempt to understand as much as possible. Yes, some of it may be complicated and confusing at first, but this guide will explain and clarify the numerous essential buttons, controls, menus, and settings and explain *when and why* you will want to use them in your photography.

## ***Shooting 2 menu***

### **Exposure compensation/AEB**

You can use the [Av+/-] Button and Main Dial for quickly changing exposure compensation rather than using this menu item, but you need to access this item for Auto Exposure Bracketing (AEB). More about **Exposure Compensation** and **Auto Exposure Bracketing** later. Put this in **My Menu** (discussed in upcoming Section 2.3) if you bracket often, such as for High Dynamic Range (HDR) shooting.

### **Auto Lighting Optimizer**

Once you start to take control of your camera and your exposures, you will want to *Disable* this setting so that the camera isn't doing something with your exposures without you having control over it. After reading this guide you will know how to meter, read your histogram, and use **Exposure Compensation** to make proper or desired exposures. Auto Lighting Optimizer is further addressed in the **Highlight Tone Priority and Auto Lighting Optimizer** section.

### **Metering Mode**

Metering modes will be discussed in detail in the **Metering Modes** section of this guide. For now, leave it on the default, *Evaluative Metering*. Put this item in **My Menu** in order to access it easily, or else you can access and change Metering Modes using the Q Button and the Quick Control Screen.

### **Custom White Balance**

This is for setting a custom white balance rather than using one of the standard White Balance (WB) settings like Auto, Cloudy, or Fluorescent. For advanced users. Particularly handy for studio work where the lighting will remain constant or in a situation with difficult mixed lighting. This will be covered in the **White Balance** section.

### **WB Shift/BKT**

This is White Balance Shift and White Balance Bracketing and is used for adjusting to a very precise WB, or bracketing exposures using different WB settings. Also for advanced users. This will be covered in the **White Balance** section.

### **Color Space**

Most users can safely leave this on *sRGB*. You can read the various blogs, forums and books that endlessly debate sRGB vs. AdobeRGB, then continue to leave it on sRGB. sRGB is a slightly smaller color space than AdobeRGB, but will display properly on computer screens and printers. AdobeRGB is intended for uses like commercial printing. Unless you are calibrating your monitor, printing with a printer that has 5 or more ink cartridges, shooting for a commercially printed publication, and well versed in using color spaces and profiles in Photoshop and printing, you will never miss the difference and AdobeRGB images will possibly not display or print properly. If you are doing all these things, then use *AdobeRGB*.

### **C.Fn I-2 - ISO Expansion**

This allows for ISO speed H, or the high ISO of 12800 to be selected when you or the camera are choosing an ISO setting. If you don't often need incredibly high ISO settings, I suggest leaving this off until you are in a situation that may truly need it, so that you or your camera does not choose ISO 12800 in an unwanted situation. Maybe put this in your **My Menu** if you plan to use it every once in a while.

*recommend: 0*

### **C.Fn I-3 - Flash Sync. Speed in Av Mode**

This setting determines the flash sync shutter speed setting or range that will be selected by the camera when using a flash (internal or external) in Av (Aperture Priority) mode. This really depends on your use and experience with a flash, and whether or not you are using a tripod. Setting 0 will choose a wide range, which may give you a 1 second or even slower shutter speed, which will obviously be too long to hand-hold. Setting 1 will keep it in a more reasonable range for hand holding, but won't allow you to "drag the shutter" slower than 1/60s (*drag the shutter* means to use a slow shutter speed to let in more ambient light to better expose the background as the flash illuminates the subject). Setting 2 keeps it fixed at the camera's sync speed of 1/200 at all times. If you use *0: Auto* you must keep a close eye on the shutter speed to make sure it doesn't get too slow. If you have less experience with flash and with shooting, it would be wise to keep it on 1.

*recommend: 1*

## **C.Fn II: Image**

### **C.Fn II-4 - Long Exposure Noise Reduction**

This setting is for the camera to apply noise reduction to long exposures, just as its title describes. It does this by taking a blank image right after you take your image, for the same length of time as your image. It then compares where the noise is on your image and on the blank image, and cancels it out. This setting will most likely result in more accurate noise reduction than any attempt in Photoshop. If you typically take long exposures, especially at high ISOs, you should determine if you want to apply this sometimes when the camera thinks it should, setting 1; or all the time, setting 2. Note that if you take a 10 second exposure, the noise reduction will take a second 10 second blank exposure and you will not be able to take another picture until it is complete. If you never take long exposures, leave it off. If you sometimes take them, I suggest you set it on 1 so that it functions when you need it to.

*recommend: 1*

### **C.Fn II-5 - High ISO Speed Noise Reduction**

This, obviously, reduces noise that appears due to using high ISO speeds. This type of noise appears at all shutter speeds when using high ISO settings, so it is not the same as the previous setting. You should try to avoid high ISO speeds (1600 or above) but I think you will find the T2i produces acceptable noise at 1600 and perhaps even at 3200. Decide if you wish to have the camera do this in-camera or if you wish to do it in post-

and make note of the aperture and shutter speed in the viewfinder (you selected one of these variables, and now the camera is telling you which other setting needs to be used for an optimum exposure). Then set your Mode Dial on M, and dial in those settings. Use the Main Dial to set shutter speed then press and hold the [Av+/-] Button and turn the Main Dial to set the aperture. Focus and take the picture. The Exposure Level Mark in the viewfinder will indicate if the scene will be properly exposed (if the line is aligned with 0), underexposed (if the line is on the negative side), or overexposed (if the line is on the positive side). You can adjust the aperture or shutter speed to bring this line to 0, or to your desired level. When the indicator is at 0, the camera believes that is the optimum exposure. However, this may not be the exposure you desire based on how and where you metered the subject or scene, or your creative intentions. This is explained in detail in the **Metering Modes and Exposure** section and should be understood before attempting to use M mode.

When using M mode, the goal is not necessarily to align the Exposure Level Mark with the 0 position, as the camera does not know how you wish to expose the image. You may wish to purposefully over-expose or under-expose the image, or you may be metering off of a certain tone and know you need to compensate a few stops to properly expose it. If you are simply going to use Manual Mode in this method by letting the camera determine the optimum exposure and then manually adjusting the settings to align the line with 0, you can more easily use Av or Tv mode and let the camera automatically do this for you.

### 3.6 Metering Modes

As with most Canon dSLR cameras, the Canon T2i provides you with four different metering modes to choose from, Evaluative, Partial, Spot, and Center-Weighted Average. If you plan to take advantage of them it is important to understand how they differ and when and how to use them in real-life photo situations. The 63-zone metering system of the T2i is an excellent improvement over the metering system of the T1i from just a couple years back, and is the same as the system used in the more expensive Canon 60D and 7D. The default Evaluative Metering Mode can be counted on to determine the proper exposure for your images nearly all of the time. But there are situations you may want or need to use the other modes.

#### 3.6a Evaluative Metering

This is the default mode for your camera, and it can be used for almost every situation you shoot. Maybe 90% of the time, maybe more. The camera evaluates the entire scene, as divided into 63 zones, and chooses the best exposure based on its algorithms and database of thousands of images. The metering system is so good it can even be relied on for backlit or other challenging lighting situations. An important feature of this mode is that the Canon T2i takes into account the selected or active focus point in its determination of exposure settings. It assumes the active focus point is on your most important subject, so under challenging and critical situations, it is wise to confirm that the camera has chosen the focus point you want (well, this is always wise). Even

better, as was previously discussed, you should manually choose the focus point. In some situations the exposure that the camera determines may not be the exposure you desire. This may happen when photographing scenes with very bright and/ or dark areas, or some other type of dramatic lighting. Since dramatic and interesting lighting can make for compelling images, you will need to know how to deal with this. In these situations you can make use of either **Exposure Compensation**, **Exposure Lock (AE Lock)**, or one of the other Metering Modes below. Of more likely, a combination of these three solutions.

### 3.6b Partial Metering

This mode meters a small central area, about 9% of the viewfinder area of the T2i. The area is approximately a circle that is larger than the spot metering circle you see in the viewfinder, and reaches to about the inside edges of the nearest focus points (see *Figure 14*).



*Figure 14 - Harbor, Gloucester, Mass. - Partial and Spot Metering Areas of the T2i - Partial Metering Mode evaluates only the area under the superimposed grey circle to determine the exposure settings. Spot Metering Mode evaluates only the area inside the black circle seen in the viewfinder to determine the exposure setting. Shutter speed 1/400, aperture f/4.0, ISO 100*

This mode is useful where there is a dramatic difference in lighting between the foreground or subject and the background. For example, when your subject is backlit - maybe standing in front of a bright window or the sun - and consequently their face is in

shadow. I know I said evaluative mode can often handle this type of situation, but if you want the face or the subject to be properly exposed and not risk blowing the shot, it is worth it to use Partial Metering mode. Another time to use this is when there is a wide range of light in your scene, from bright sunlight to deep shadows. You will need to determine and lock the exposure settings of a critical area of the scene - a face or a middle tone in the area you want properly exposed (see *Figure 15*). Remember, this mode is *not* linked to your focus point. The partial area that is metered is always in the center, so meter on a face or middle tone in the part of the scene that is most critical and that you want properly exposed, using the central area of the viewfinder. Lock in that exposure using **Exposure Lock** (explained below), then focus, recompose and take the shot.



*Figure 15 - Lion Sculpture in Museum - Partial Metering used to properly expose for the subject, then focus and exposure locked, and framing recomposed to place subject off center. (Very carefully hand-held at very slow shutter speed.) Shutter speed 1/13, aperture f/4.0, ISO 800*

### 3.6c Spot Metering

This mode meters a smaller center area, approximately 4% of the viewfinder area. This area is indicated by the small circle in the center of the viewfinder (see *Figure 14*). So when do you want to use Spot metering? This, again, is useful for scenes with great variation in light and shadow, or in very critical situations. It is used like Partial Metering, but when the critical area that you are metering is even smaller and more precise. One of the most common ways to use it is when metering for proper exposure

on a dramatically lit face or subject, where the proper exposure of that part of the image is critical (see *Figure 16*).



*Figure 16 - Singer - Use Partial Metering or Spot Metering in high-contrast situations to meter for the area you want properly exposed (such as an area of skin tone here), then lock exposure, focus, and recompose for the final image. Shutter speed 1/60, aperture f/4.5, ISO 1600*

Or for advanced users, Spot Metering is used to determine the exposure values of several important parts of the scene, and then the desired exposure is determined and manually set using Manual Exposure Mode. If you have ever read about a photographer metering different elements of a scene in order to determine their relationships and place them in exposure “zones,” that is related to this technique. In this way Spot Metering Mode is used to turn your camera into a light meter, as a tool to

### ***What readers are saying about Canon T2i Experience:***

***Best Guide to Using a T2i*** - I don't know how I could fully take advantage of all the features the T2i has to offer without this publication! It's well-organized, easy to understand, and succinct enough to keep your attention while still containing a wealth of information to get the most out of your camera. I'm very happy that I found this guide.

-Nathan K.

***Essential Travel Companion*** - Alas, a comprehensive and concise guide for hobbyists who desire to enhance their photography experiences. I highly recommend this guide to anyone who wants to ease out of auto mode and learn how to take high-quality photos. It brilliantly explains how to apply advanced techniques and tips, walks you through the daunting task of menu settings, and smoothly guides you through the image-taking process. The instructions and brief explanations are easy to follow and well organized. The guide is a portable class on digital photography! A must-have if you want to learn how to use your camera to its fullest advantage.

-Elizabeth J.

***A Fantastic Book For Beginning T2i Users*** - This book has exactly the practical advice on camera settings that I was looking for. The author has a gift for separating the wheat from the chaff. I didn't have a clue how to operate a digital camera, let alone know the definition of the technical terms. After reading this book, I now understand all the critical functions of the Canon T2i and how to take advantage of them. This is a book I plan to keep handy for years to come.

-T.P.

### ***What readers are saying about Doug's guide Canon T3i Experience:***

***A Must-Have Accessory*** - What a great addition to my bag. This is a well written, full body of work that explains, in plain English, how to get the most out my new camera. Doug provides the knowledge and experience to bring you to the next level. I look forward to learning more every time I open the book.

-Steven

***Definitely reduces the slope of the learning curve to an easy gradient*** - I found that it was easy to read and understand, full of important hints and suggestions and allowed me to get to grips with the tools available in the camera in a very short time indeed. Excellent value!

-O.B.

***Great for New T3i Owners*** - This is an excellent resource for new T3i owners. In my case, I was upgrading from a Rebel XT so I appreciated the "just the facts" point of view. Overall, a great resource - highly recommended!

S. Wheeler

*more...*

**Quite a Helpful Book** - It is a great foundational teaching on the camera and was a lot of help in getting me comfortable with the controls. I also found the personal experiences and thoughts shared by the author to be quite helpful. I have recommended and will continue to do so.

-J.S.B.

**It really made using the Canon Rebel T3i very simple** - I also liked the fact that it is in pdf format, which means I can keep it on my iPhone or iPad while I'm out in the field. The price is right, the product is sound and most of all, the information is useful.

-Michael M.

**Excellent T3i Learning Jump Start** - The book and author do not disappoint. There are so many helpful and practical tips shared and in terms I can understand as a novice.

-Cathryn C.

**Amazing!** - Great and easy to understand and very complete. Very highly recommended. The guy really knows what he's talking about.

-P.M.

**Awesome Book** - Bought this book right after I got the camera - was the best decision I made. It shows the key points of setting up and taking images with the Canon T3i. I am a novice when it comes to DSLR's and I still felt this book helped me a ton. Would highly recommend it to anyone.

-Sean S.

**Purchase Canon T2i Experience at:**

[http://www.dojoklo.com/Full\\_Stop/T2i\\_Experience.htm](http://www.dojoklo.com/Full_Stop/T2i_Experience.htm)