

# Basic Troubleshooting Guide



FOCUSED CAMERA™

## Introduction

This e-book offers practical solutions to common camera issues. If you want to embark on a photography journey where you can work at your full potential, then you will need the ability to resolve technical glitches, understand which settings might be causing a problem, and handle exposure and focus problems. This guide will empower you with tips and tricks to overcome these camera hurdles so you can handle them with confidence.

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### Basic Troubleshooting Guide

There is nothing more frustrating than pulling out the camera and taking an image only to find that what the camera “sees” is not what you expected. Or worse, the camera “acts up” and won’t even take a picture at all.

Before we get started, if you don’t have a camera manual, you can download one from your camera’s manufacturer by [following this link](#).

If the camera won’t take a photo at all it is probably because the camera can’t focus, there is a memory card issue, or you have an error code. Let's discuss each of these and how to possibly fix the issue.



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An error code can be serious and may require repair at a camera dealer. Check your camera manual for what each code means. Many times the error code is something simple like a full memory card, a locked memory card, or no memory card in the camera. These are easy to resolve by switching or putting in a memory card.

An error code can also indicate your camera lens contacts need to be cleaned. Follow the instructions in your camera manual, or find tutorials online for cleaning contacts (never clean your sensor until you have had proper training and have the proper tools). Contact cleaning is relatively easy to do, just do so in a place where you won't have too much dust or dirt that could get into the camera body during the process (in other words, don't clean them while standing on a windy beach).



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If you don't have any error codes and you've checked your memory card, but the camera still won't take a photo, it is probably related to the camera's ability to focus. If the subject and background are too similar then the camera's autofocus might "hunt" back and forth for focus.

For instance, if you were taking a photo of a snow covered branch and behind the branch is more snow, the camera may not be able to determine where to focus. It then stubbornly decides it won't take a photo. You can try switching to manual focus (a switch on or near the lens or in your camera's menus). You will have to manually focus, but that should solve the problem.



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You can have the same issue if there is not enough light. If your camera cannot create a combination of settings that will allow proper exposure, it will refuse to take a photo. This happens most often when the subject and area are dark. You can try overriding this by using a combination of manual mode and manual focus.

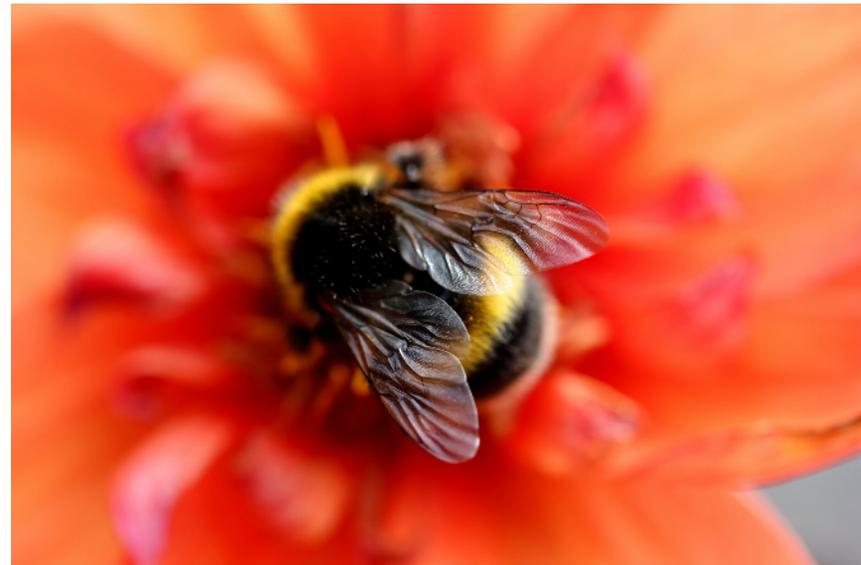


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Another possible issue is that you are exceeding the minimum focus distance for your lens, in other words, you are too close to the subject. Each lens has a minimum focus distance. That number is usually indicated on the lens in meters and feet, or it can be found online. Those numbers represent how far away you have to be from the subject to get the lens to be able to focus.

For instance, if you went out to the garden and saw a bumblebee and tried to get really close to take a detailed photo, the camera may not take the photo. Back up, you are likely too close for the lens, and try again.

Most of the kit lenses for the major camera brands have a minimum focus distance of about one foot. That is why photographers who take macro photos (like the one shown here) often buy special lenses that allow them to get much closer.

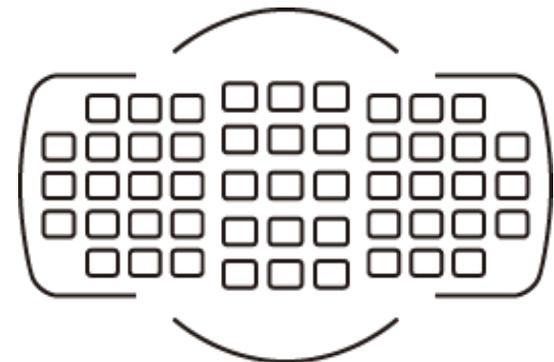


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What about when the camera takes the photo, but the focus isn't right? If you are in Manual or Aperture Priority Modes, this could be an aperture setting. A wide open aperture gives a more narrow depth of field so parts of your image will be out of focus. Try adjusting the aperture to a more narrow setting like f/8 or f/11. For more information on depth of field check out our [other e-books on our website](#).

Another possible issue with focus could be the autofocus points are not set (check your manual for how to fix this), or they are set to center while your subject is off to the side. On most cameras you can set the autofocus points to blink or indicate which areas are the areas of focus when you  $\frac{1}{2}$  press the shutter button. If you see points light up or indicate an area that you don't want to focus on, you may need to set them differently or change your position/recompose the image.

On the right is an example of one typical layout of autofocus points. Camera settings will determine which point or points can or will be used for focus on a subject.



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Additionally, some cameras have different autofocus modes or focus area modes, such as AI Focus, One Shot (single), and Servo (continuous), or Single Point AF and Dynamic AF. These are more complicated than what we will cover in this article and there are lots of tutorials and articles online that go into those details. If you think this may be the issue, try switching to a different option – if you are in One Shot (single), try switching to Servo (continuous), or vice versa.

Lastly, make sure autofocus is turned on. The switch for this is usually on or near the lens (label usually says AF/MF) or it is in the camera's menu options. When set to MF (manual focus) you must adjust focus yourself by turning the ring on the lens, then press the shutter once you have it set.



Some cameras have the ability to set the focus button to what is called “back button” focus. This means that in the camera settings a different button (other than the shutter release button) has been assigned to focus. On my Canon 5D it is set to the AF-ON button on the back of the camera. If you are  $\frac{1}{2}$  pressing the shutter and you have tried all these other solutions and the camera still won't focus, make sure it is not set to back button focus. You can go into your menu to change this or go into the menu and totally reset everything to start fresh.

The final possibility is that the autofocus function of your lens is broken (this often will produce an error code) , or that the lens is not fully compatible with the camera body. For example, Nikon has complex lens compatibility charts (see the Nikon website) and some of their cameras will require AF-S model lenses for full function of autofocus. This can also happen if you have a specialty lens such as a Lensbaby, when the lens is a vintage lens, or if the lens is connected using extension tubes or other adapters. For example, I have a vintage Nikon lens that I can attach to my Canon camera with an adapter, but it will not autofocus. I have to use manual focus with that lens.

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Now let's discuss what to do if the camera is “acting up” by producing an image that is either all white, or mostly too light, or the opposite, all black and too dark. These indicate that you have an exposure issue.

First you need to take a couple of test shots in some different lighting. If moving around to different lighting changes the photo (better or worse) then you have already begun to solve the problem.

Make sure you haven't accidentally turned on spot metering. There are different metering modes – matrix/evaluative, zone multi/multiple, partial, center weighted, and spot metering. Go to your camera manual and set it to matrix (Nikon), evaluative (Canon), or zone multi/multiple (Sony, Olympus, Fuji). We could go into lots of detail here, but just like focusing modes, we don't need to right now. There are tons of videos and articles and tutorials online if you want to know more. If you have checked this and still have issues, then the next step is to see if it may be a lighting issue that is affecting the exposure.

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If the image is too bright/white, you are getting too much light. If you are in auto mode, move into the shade or away from windows. Move your angle or direction so you aren't shooting into a bright sky. You can also take a look at the settings on auto, then go into manual and plug those in as starting points. Adjust the aperture farther closed (larger  $f/\#$  = smaller aperture diameter = less light allowed in). Keep changing the aperture dial a bit at a time until you get the right exposure. You can also increase your shutter speed.



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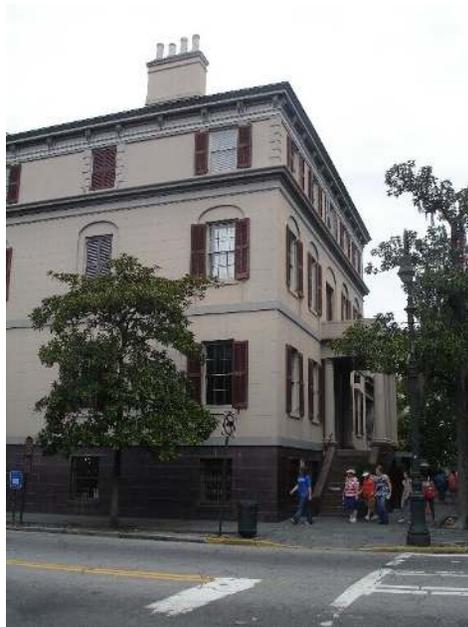
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If the image is too dark/black, then you have the opposite problem. You are not getting enough light. Turn on the lights, go to a room with windows, move outdoors, or move out of the shade and into the brighter sunlight. You can also take a look at the camera settings in auto, then go into manual mode and plug those in as starting points. Open the aperture (smaller f/# = wider aperture diameter = more light allowed in) or decrease the shutter speed. Decreased shutter speed to about 1/80 can help, but may introduce blur or camera shake unless you have a tripod. You especially don't want to go slower than 1/80 if you are shooting handheld, using a giant lens, or taking pictures of fast moving things (like kids and dogs).

Extreme contrasts can also “trick” your camera into not seeing what you see. Our eyes can see a much higher dynamic range than the camera can, so if you are on a white sand beach in bright sun trying to take a photo of a black wild stallion, that contrast of white and black will be very difficult for the camera to “see.” Anything in your image that is very bright/white or very dark/black can confuse the camera and cause it to take a photo that is too dark or too bright.

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The camera is not smart enough to know what you are taking a photo of, so it has to take its best guess, and that is why your exposure and/or focus may be off. If you have ever taken a picture of a person or building outside and the sky in the background looks white instead of blue (see image below), then you have experienced “blow out” from improper exposure in that part of the image (even if the rest of the image is fine). On the left you cannot see where the sky ends and the paper begins because the sky is "blown out" or clipped. With a black border around the image we can see where the sky should be.



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If your image is too white or too black try to decrease (or increase) the contrast by adding or reducing lighting, moving your position or angle, and/or changing out the scenery/background or subject. For instance if you are taking a portrait of your child in a dark green dress, don't put him/her in the shade in front of green bushes. In the case of a blown out area of sky, changing position may not help and you obviously cannot change the background (at least not while you are there, but you can do sky replacement in editing). Changing the camera's metering to Spot or another available option might help. You can also try focusing on a different area of the image which may change the way the camera sets the exposure.

One final approach to try is to take multiple images. If you take two images, one exposed for one area and a second image for a different area, then you can blend them in an editing program like the images on the right.



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If the none of the above solved the issue, or when you took those test shots and moved around *all the images* had the same problem, then most likely it is the exposure compensation setting. Find your camera manual and reset it. When exposure compensation is set to +1, +2, etc. the image becomes brighter. When the exposure compensation is set to -1, -2, etc. the image becomes darker.

If exposure compensation is not set or is already set to zero, then you can dial in +1 or more to brighten your image and -1 or more to darken it. Exposure compensation buttons and settings information can be found in your camera manual. The scale will look something like the example below.



Finally, when all else fails, it is possible that the conditions you are trying to shoot in actually exceed the capabilities of your camera or lens and there is nothing you can do about that except to try changing lenses if you have another option. For example, my 18-55mm kit lens when set at 55mm allows only  $f/6.3$  as its widest aperture, but my 50mm lens will go much wider to  $f/1.2$ .

After all of this, if you are still having problems, consider a little more research into your camera's manual. You can also try YouTube. There are so many videos that offer troubleshooting help for cameras of all makes and models. Last option, give us a call or check some of the other e-books we have on [our website](#). We offer one-on-one instruction and mentoring for beginner and amateur photographers as well as online classes. You can also reach out to us with questions on our social media channels.

Hopefully you won't need these additional resources and this guide has helped you solve the problems you were experiencing. The next page offers a quick summary of the troubleshooting solutions which could be printed and kept in your camera bag for quick reference on the go.

# Troubleshooting Summary

### Camera won't take a photo or won't focus...

- Check for error codes, check/swap memory cards, or clean camera contacts.
- Check for autofocus issues by trying manual focus and/or manual mode
- Make sure autofocus is switched on
- Step back from subject (see minimum focus distance requirements of your lens)
- Check your aperture settings for appropriate depth of field
- Check your settings for autofocus points, autofocus modes, or autofocus areas
- Make sure the focus isn't set to "back button" focus
- Make sure the lens is fully compatible

### Image is too bright or too dark...

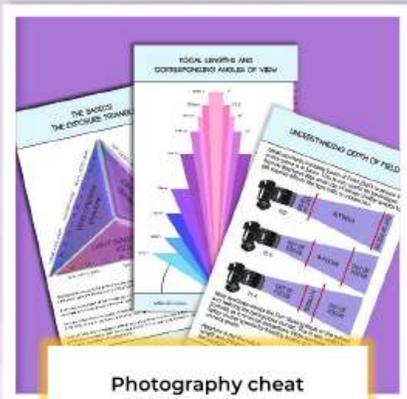
- Try different lighting in a different location
- Check which metering mode is being used and try changing it
- Adjust the aperture (smaller if image is too bright, or wider if image is too dark)
- Check the scene for extremes of contrast; move position or subject/background
- Try focusing on a different point and/or take multiple images to edit together
- Check the exposure compensation setting and either zero it or adjust + to brighten, - to darken the exposure
- Change lenses if the current lens' limitations won't work



Mega Pixel our Superhero Mascot!

## You finished this guide! You're awesome!

You know what else is awesome? These additional photography resources to help you along your photography journey!



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Guides and tutorials covering many popular photography topics



Photography courses and workshops for many genres and all skill levels



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### About the Author

Cheryl Ritzel, founder of FocusEd Camera, is an esteemed instructional coach. Her exceptional talents have garnered recognition and accolades throughout her career. Cheryl's company and her remarkable work have been featured in prestigious publications such as ICM Magazine, Business Insider, Dogster, Spectrum News, and Yahoo News, and on the social media channels of Lensbaby, Canon, and Adaptalux.



# Camera Issues?

Look no further. This guide will cover some of the most common issues faced by beginners and amateur photographers including error codes, inability to focus, and other camera issues.

This guide will empower you with tips and tricks to overcome these camera hurdles so you can handle them with confidence. These practical solutions will help you work at your full photographic potential.

