

# Digital Photography School

## Moving Toward Manual Settings: Understanding Basic Daylight Exposure and Equivalent Exposure

In this post, Hawaii photographer [Natalie Norton](#) wraps up the 4th post in her series on manual camera settings - this one exploring Basic Daylight Exposure and Equivalent Exposure.

Don't miss other installments.

- [Part I: Understanding Aperture](#)
- [Part II: Understanding Shutter Speed](#)
- [Part III: Understanding ISO](#)

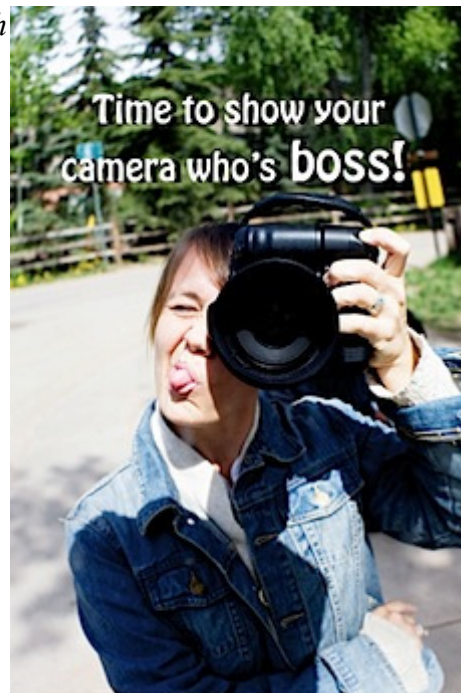
Wow! Is anyone else as excited as I am about the stuff we've been learning about manual settings?

I know that for a lot of us it's old news and rudimentary to say the least, but to quite a few DPSers out there, this has been just what the doctor ordered.

Thank you for all the email love letters!

I'm SO glad the info has been helpful and that it's starting to click! Congratulations!!

Today we're going to wrap it all up in fancy cellophane and call it a day! We're so close. Again, if you haven't read first 3 articles in the series I suggest checking them out before you read the rest of today's post.



The first thing you need to understand today is BASIC DAYLIGHT EXPOSURE (BDE). This is also referred to as the SUNNY 16 rule. Basically this is how it looks if you're one of the remaining wackos who understand equations ;):

$$\text{BDE} = 1/\text{ISO} @f16$$

If equations aren't your cup-o-joe, then think of it like this: To achieve proper exposure on a bright sunny day, your ISO and your shutter speed are going to be the same when your aperture is set at f16. This will ALWAYS be the same as long as it's a bright sunny day. Now from here, and I'm not gonna lie to you, we get to run our brains over repeatedly with a Mack truck. BUT, I promise you it will all click if you give it a second and you'll be a superstar photographer forevermore.

**Equivalent Exposure**

Basically what the phrase "equivalent exposures" is referring to is achieving the same exposure while manipulating the depth of field in different ways.

### Let me illustrate:

Let's say you're out at the beach on a bright sunny day. So you think to yourself, "Hey, Natalie taught me all about Basic Daylight Exposure! I'm gonna try it out!"

So you [set your ISO](#) to 100 (see here if you're like "a whoobie what's that now!?") and thus you're going to have a shutter speed of 1/100th. . . because what's the equation for BDE?? Basic Daylight Exposure =  $1/\text{ISO}$  at f16. So you've got your shutter speed and your ISO matched up and you shoot your aperture on up to f16 and SNAP! You've got a great, perfectly exposed beach scene. You can see mom and dad clearly in the foreground. You can also see the kids playing in the water behind them, also in clear focus. You can see the boogie boarders in the background in clear focus as well. Your image is perfectly exposed, not too bright, not too dark, JUST RIGHT!

So you're thinking you're hot stuff until you think, "You know, there's a lot going on in this photo. There's really no focal point. It's TOO BUSY!" You decide you'd like to focus only on mom and dad and throw everything else in the image out of focus. . . you're going for a shallow depth of field. SOOOOO what's a girl to do? . . . or a boy as the case may be. Well, clearly you need to open up your aperture, right? Open that baby up to give you a more shallow depth of field. Now we understand from the post Understanding Aperture that in order to OPEN our aperture to let in more light and cause a shallow depth of field, we're actually going to be setting the camera on a LOWER aperture number. So we open that baby on up to f4 and SNAP! . . . uh oh, what the heck happened?? We have an image that is just pure white! All light. Completely blown out. NOW WHAT? This is where Equivalent Exposures come into play. . . this is also the point where you really need to have read the other articles in the series. [Part I](#), [Part II](#), [Part III](#). GO! For the rest of you, let's break this down:

- You had a correct exposure of the beach scene when your camera was set to ISO 100 at 1/100th of a second f16.
- When you dropped the fstop down to f4, you let in WAY too much light and ended up with an image that was completely blown out.
- The obvious answer would be to increase the shutter speed, right? To let in less light? You got it! BUT, by how much? How do we know how fast our shutter speed should be? Equivalent Exposures. That's how.

Since you started at f16 and went down to f4, how many stops did you change your aperture by? Look at the chart below, that you **SHOULD** have memorized if you did your homework from Part I. . . and see how many **FULL STOPS** you had to move to get from f16 to f4. Go on and count 'em.

1, 1.4, **2, 2.8, 4, 5.6, 8, 11, 16,** 22, 32, 45, 64, 90

In the chart above you see the **TRUE** apertures. Those highlighted in blue are the common apertures for most lenses.

That's right, 4 stops. You went down 4 **FULL F STOPS** to get from f16 to f4. . . now here's the secret of life. . . you simply have to match that number of stops with your shutter speed to achieve the same exposure with a different depth of field! In other words, since you opened your aperture by 4 stops, you simply need to speed up your shutter speed by 5 stops in order to ensure that the same amount of light hits your sensor as it did at f16. . . **THUS ACHIEVING THE SAME EXPOSURE WITH A DIFFERENT DEPTH OF FIELD.** "Bing!" That was the sound of the light bulb going off in your brain. It's OK to be excited. It really **IS** that simple. Don't be scared to go back and read it again if you need to, but don't make it harder than it is.

### Equivalent Exposure Chart

<b>f1.4</b> 1/1000	<b>f2</b> 1/500	<b>f2.8</b> 1/250	<b>f4</b> 1/125	<b>f5.6</b> 1/60	<b>f8</b> 1/30	<b>f11</b> 1/15
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The chart above is an illustration of Equivalent Exposures. Each setting above will allow the **SAME** amount of light to hit your sensor. The exposure will be the same in each instance, the only difference would be the depth of field.

### Let's do another little quiz:

You're at a horse race. . . because that's something normal people like me do all the time, we go to horse races. Anyway, so you're at a horse race and it's bright and sunny out, but with a few clouds in the sky. You decide to use an ISO of 200. So, using BDE, what's your camera going to be set at? ISO 200, 1/250th (250 because it's the closest shutter speed to your ISO of 200) at f16.

You take a shot of Ocean Muffin, the fastest horse in the race, check your LCD and decide that you'd like to see more movement in the shot. You want to show just how fast Ocean Muffin really is! What are do you need to do?? Slow down your shutter speed, that's right. So let's say you decide to drop your shutter speed by 2 full stops. So you're now at what? You should have these memorized by now if you've read the other posts in the series. You're now at 1/60th of a second. But remember, when you slow down your shutter speed, you're going to be letting in more light, so what else do you need to do? Close down your aperture (higher fstop) by 2 stops. Now your aperture would be at what? F32, right.

That way you can keep the same exposure and still show Ocean Muffin in all his magnificent glory. **HOWEVER!** What if your camera only goes up to f22? OH NO NO NO! What ever will you do now?

You need to drop your shutter speed by 2 stops to catch O.M's movement, but you can only close down your aperture by one! What else can you do? I'll give you a hint, check out Part II in the series on shutter speed (the link's up top). That's right, your ISO also affects your exposure, right? So, I'd go ahead and move my aperture by one stop and adjust my ISO by one stop, taking it from 200 to 100. .that way I've adjusted my exposure by 2 stops to compensate for slowing down my shutter speed by 2 stops! YAY, the world is right again!!

NOTE: Because I don't use a light meter, I almost always start out using BDE and then adjust accordingly until I find the right exposure for the light I am in. This is one of the many reasons to hail the LCD screen as king of the world and all things that are good. . . you can SEE if your exposure is dead on and tweak it bit by bit until it is! I'll start out with BDE and then see that my image is too dark. . . so usually I'll work with the fstop first. I'll open it up until the image is properly exposed and from there I'll use Equivelant Exposures to find the right exposure and depth of field I'm looking for! Easy cheesy.

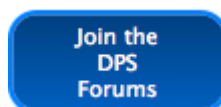
I KNOW that some of you are ready to rip your hair out, because this can be really confusing. HOWEVER, go back and read the first 3 posts (I, II, III all the links are up top) . . . then read and re read this one, and I promise you it will become clear. PLEASE PLEASE PLEASE feel free to ask follow up questions in the comment section. . . also PLEASE offer tips that have helped you move toward manual settings that may be able to help the rest of us! Let's make it an open dialog and help each other out!!

Happy Shooting!

*Natalie Norton is a wedding and portrait photographer who resides on the North Shore of Oahu, Hawaii. Check her work and more tutorials on her popular blog, Pics and Kicks at [www.natalienortonphoto.com](http://www.natalienortonphoto.com).*

## Read more posts like 'Moving Toward Manual Settings: Understanding Basic Daylight Exposure and Equivalent Exposure'

- [Moving Toward Manual Settings: Understanding Shutter Speed \(a beginner's guide\)](#)
- [Understanding Exposure by Brian Peterson - a Reader Review](#)
- [Moving Toward Manual Settings: Understanding ISO \(a beginner's guide\)](#)



## 49 Responses to "Moving Toward Manual Settings: Understanding Basic Daylight Exposure and Equivalent Exposure"

- [Pete Langlois Says:](#)

Great tips and explanation on Sunny 16.

Pete

<http://www.petelanglois.net>

- [Fernando Says:](#)

Nice! I will give it a shot next time im out on a nice sunny day (which we havent had much of lately!)

- Ian [Says:](#)

A couple slight errors that may confuse someone new to manual exposure settings:

f16 to f4 is 4 stops not 5! Count the gaps between the numbers not the numbers themselves. Each of these steps is one stop; f16 to f11, f11 to f8, f8 to f5.6 and finally f5.6 to f4. Think of the clicks on an old fashioned aperture dial on a manual camera. And it should be added that 4 stops faster shutter than 1/125th is 1/2000th sec.

In the horse race 2 stops slower aperture than f16 is f32, again f16 to f22 is one stop, f22 to f32 is one stop for a total of two.

- [G. Chai Says:](#)

*This will ALWAYS be the same as long as it's a bright sunny day.*

Isn't that something like a recipe which calls for a cup of sugar? What size of cup are they talking about? I mean, what's a 'bright sunny' day? Is it in the morning? Noon? Afternoon? After sunrise but before sunset? It is not clear.

*. . . so usually I'll work with the fstop first. I'll open it up until the image is properly exposed...*

What good is a 'rule' then? Looks more like trial and error, doesn't it?

- [Rosh Says:](#)

I had forgotten about this rule. I don't think I've used it in a long time.

I know it was used much more when our cameras didn't have software powerful enough to run the space shuttle.

But, you never know when you might need it. I do shoot manual 100% of the time and little tricks can be valuable.

Rosh

<http://www.newmediaphotographer.com>

- [Sunnyman Says:](#)

Haha, funny article! This guy must be one of the few remaining people who don't use an exposure meter.

This is how it was done back in Ansel Adams' days, kind of the Stone age before gizmos like exposure meters were invented. And, sure, it worked fine for Ansel Adams...

Well, good to have this info in the back of your mind in case your exposure metering system breaks.

I try to explain these things in a more simplistic way on my site [alphototips.com](http://alphototips.com)

– Which is more geared to the rest of us amateurs who are addicted to exposure metering...

- Mick [Says:](#)

That's a great explanation of the Sunny 16 rule, thanks.

One question though. You say at the end "NOTE: Because I don't use a light meter, I almost always start out using BDE and then adjust accordingly until I find the right exposure for the light I am in." - Why don't you start out using the camera's built in light meter? Presumably you rely on the meter as you make adjustments to find 'the right exposure'? I'm assuming you are using a digital SLR.

I've been forcing myself to use the manual mode more often as a teaching aid. As a variation on your technique I usually start in Aperture Priority mode to find the right shutter speed at my desired f-stop/iso combination, take a few sample shots and double check via the histogram, and then dial in the appropriate shutter speed via manual mode. And unless I walk into/out of shade or happen to be in a very contrasty area I don't worry about it any more.

Another point worth noting (a recent discovery for me) is that using manual mode like this tends to give a more consistent exposure level across a series of photos than having Aperture Priority mode continually fine-tune the exposure (e.g. as I move towards and away from my subject). When shooting an event the series of pictures look better together when they are consistent like this. Strong whites and darks also tend to suffer less from being under & over exposed.

Thanks again.

- Jon [Says:](#)

I'd like to point out that moving from F16 to F4 is not opening up by 5 stops. There are 5 stops within that interval (16, 11, 8, 5.6, 4), but only a 4 stop change.

Also in your horse race example, stopping the aperture down 2 stops from F16 would bring you to F32 (F45 would be 3 stops down).

- [Sunnyman](#) [Says:](#)

Mick, if I read this right this fellow isn't using any light meter!

And, sure, your observation on using manual mode for more consistent exposure in a series is excellent and makes a lot of sense.

- [Targophoto.com](#) [Says:](#)



Shouldn't the big equation be " $BDE = 1/\text{iso} @ f/16$ "?

It currently says "...f/iso..."

- [Soraxtm AKA Maurice A. FitzGerald Says:](#)

Interesting I wonder why the sunny sixteen thing works. I certainly have never taken a picture using that rule. Exposure Meters? Is that the deal on the camera itself? I never use anything but full manual control including manual focus. I never (very rarely) shoot anything except on the lowest ISO setting because it looks better that way. All this Auto stuff is insane. Maybe back in the past when you took a picture blindly then developed it it was important but now it's pointless. One never even has to look into the viewfinder unless you can't see your display. Maybe all this is more important when taking pictures of people. And another thing the whole F/stop thing is so stupid and so is the shutter speed. It would be much easier if everyone just talked about the radius of the opening and the decimal equivalent of the shutter speed. Finally you aren't a real photographer if you don't use full manual controls.

Thank you

My name is Jerk ass and I approved this message

- [Brian Says:](#)

You say at the end ... I'll start out with BDE and then see that my image is too dark. . . so usually I'll work with the fstop first. I'll open it up until the image is properly exposed and from there I'll use Equivelant Exposures to find the right exposure and depth of field I'm looking for!

Does this mean that you leave the ISO at 100?

Thanks. I have learned so much from your series and really appreciate it.

- [Colin Says:](#)

"This fellow" who wrote the post is named Natalie, Sunnyman. :)

- [william lee Says:](#)

isnt moving from f/16 to f/4 4 stops down and not 5? from f/16 to f/11 is one, from f/11 to f/8 is two, from f/8 to f/5.6 is three and from f/5.6 to f/4 is 4 stops down. correct me if i am wrong. i dont want to put out wrong info. thanks

- [Bakari Says:](#)

I might not get it either. There are times when you shoot in "bright sunny days," but most often photographers will often be challenged to shoot in shaded or mixed light areas. It seems that the f/16 rule is most appropriate for landscape shots on a bright sunny day. But other than that, you're better off learning to use the camera's light meter and history gram.

- [aloha Says:](#)

All,

I love the emphasis on Sunny 16 in the comment section, but the article is more geared to helping beginning photographers understand equivalent exposure. Sunny 16 is important as a basic starting point for beginners with no concept of where to begin.

And just a side note, it is dangerous in my opinion to rely completely on an in camera meter. . . often they aren't as accurate as people assume. For example: I shoot with a canon 5d and when my light meter reads the correct exposure, my shots come out overexposed by 1-2 stops, EVERY TIME.

I've just found it to be safer to know the way exposure works MANUALLY so you can do it yourself if you need to. Or . . . you could buy a hand held meter as they tend to be more accurate. But for day in and day out portraits of family and friends. . . there's probably no need. If however you're photographing a wedding. . . etc. you really need a clean grasp on equivalent exposures and shouldn't be relying on your in camera meter exclusively. But, that's just how I do things. There are a million ways to do this and it's simply important that each photographer finds what inspires the most confidence for them personally.

Cheers,

Natalie Norton

PS- I'm not a fella. . . I am a sister.

- richard [Says:](#)

This is incredible! You're so good at making confusing things simple. Understanding equivalent exposure is one of the most empowering things you can learn/do as a beginning photographer because you don't have to rely on anything or anyone but yourself--and that is the ONE thing you can completely control. 3 cheers for Natalie!

- georg [Says:](#)

maybe dumb question but what is "light meter" ?

- Gayle [Says:](#)

Natalie, thank you. I am a beginner in photography and your series has helped me understand aperture, shutter speed and ISO. As a beginner who photographs mainly my kids and my pets, I don't see myself buying a light meter. But I still want to achieve the best shots that I can. I want to understand my camera enough that I can take it out of Auto. You are helping me do that! So, thanks again.

- Claudia [Says:](#)

"In other words, since you opened your aperture by 4 stops, you simply need to speed up your shutter speed by 5 stops" <-- should that be 4 stops? If not, why one extra SS stop? Am I missing something?

- taryn [Says:](#)



i don't get it.

lol.

i guess i'll just have to practice. thanks for the post!

[taryn](#)

- Roger [Says](#):

Claudia Said:

““In other words, since you opened your aperture by 4 stops, you simply need to speed up your shutter speed by 5 stops” <– should that be 4 stops? If not, why one extra SS stop? Am I missing something?”

You're not missing anything; it must have been a typo.

Natalie said:

“So, using BDE, what's your camera going to be set at? ISO 200, 1/250th (250 because it's the closest shutter speed to your ISO of 200) at f16.”

Actually the closeset shutter speed is... 1/200 sec. How many DSLRs do they sell that don't have shutter speeds in third stops?

- Darren [Says](#):

Natalie, thank you...for educating the beginners out here. Unfortunately, far too many feel the need to point out possible mistakes in your post.

Instead of closing your 4 part series with this post, please consider expanding on this to include 'night-time' shots and extremely cloudy weather shots. Living up north, our winters are spent with 4 months of solid grey clouds. Is there a formula for BNE or BCE (basic night/cloud exposure)??

Thanks again!

- [Digital Photography Tutorial Says](#):

Great tutorial. I love the formula that you give. Typically I just take a number of shots at different settings until I get the results I was looking for. Now if I take a minute to do some figures I should be able to cut out a bunch of my garbage shots.

- [Neil Says](#):

Another tip is to meter towards the sky in manual mode. It will give you great exposures, too. It even works at dusk and dawn. I got that from Bryan Peterson's Understanding Exposure book.

- Gerry Boughan [Says](#):

Thanks so much for this, Natalie. This opens a significant creative window for me. Also, I second Darren's recommendation that you write tutes on BNE and BCE. Thanks, again.

Gerry

- jay [Says:](#)

Natalie:

I'm fairly new to this website, and silly me, I kinda assumed that this community of photographers would be naturally kind people since they're all involved in the art of pictures.

But, as I said...silly me. They've jumped on you like a pack of rabid dogs in the comments.

So, aside from the people with a raisin up their arse, the rest of us really appreciate the info and article. I'm not brand new to photography, but fairly new to some of the technical side behind one, so I really enjoyed the article. I appreciate knowing the way-things-are-working behind the settings. And would look forward to any more in this series, like "Darren" suggested: nighttime, snowy, etc.

And lastly, appreciate your time.

Thanks.

PS: I hope this comment doesn't throw you off...it does, in fact, lack in pointing out all of your errors. It may feel foreign.

PPS: a big shout-out to Mr. Sunnyman for knocking you, knocking the post, and then utilizing this successful photo-blog to try to redirect to his....hmm, successful?...photo-blog.

- [Radek Pilich Says:](#)

This is quite likely the single most enlightening article on manual camera control I have read so far. I'm a beginner with a compact camera with manual control. It was easy for me to grasp the functionality of ISO, aperture and shutter speed, yet until now I didn't understand how to MANUALLY set this trio properly to get the right exposure. I'm going to memorize the f-stops and shutter speeds now.

Big up Natalie!

- Lexy0138 [Says:](#)

The moon should be full in a few days, last night was a 1/2 & very bright. My question is what settings do I use to photograph it ? My camera is a D40x, I have a nikon 50 1.8, 18-55 kit, 55-200 also kit, 35-135 manuel focus, 18-135 nikon af a quantary 2x tel converter I plan on using the 55-200 with the 2x tel converter.  
Thanks OBIE

- shelly [Says:](#)

This was another fantastic article. Some of the things I've been doing haphazardly now make perfect sense...everything clicked! Thank you for explaining things in a way that is easily

understandable to beginners. It makes this photography stuff so much more fun!

- [Paul Says:](#)

“Why don’t you start out using the camera’s built in light meter?”

If you’re using a 2-digit (Dx0) Nikon with older AI lenses, you get no in-camera metering. At all.

So you either need an external light meter, or a good understanding of the sunny-16 rule and equivalent exposure.

Being able to chimp the LCD to fine tune means you can get away without a separate meter, using BDE means you can get reasonably close on the first shot, and equivalent exposure means you don’t have to shoot everything at 1/ISO and f/16!

Good explanation Natalie :)

- [amethystice Says:](#)

Natalie, I have read all of your tutorials and LOVE them! You have a way of explaining things that makes it so simple to understand, Thank you thank you :) I was just reading Darrens post and I too would like to see something on night photography as well as indoor, I have five children and a lot of my photos are indoors and of them so I have a bit of trouble trying to get the right exposure and not blur the image (you know how they move around a lot!) I do not like to use a high ISO and tend to stay between 100 and 400 ISO to keep the noise to a minimum. Can’t wait to read your next article. Thanks again

- [usseryrl Says:](#)

Im not sure if there’s some confusion or something I missed while reading about the F stops. But as I understand it, it does say 4 stops from F16 to F4.

Quote:In the chart above you see the TRUE apertures. Those highlighted in blue are the common apertures for most lenses.

That’s right, 4 stops. You went down 4 FULL F STOPS to get from f16 to f4. :Unquote.

Im just like everyone else and trying to learn more, and so far iv’e found this websight to be a great help for me, but the last thing I want is confusion for anyone.

- [jay Says:](#)

The only time I use the sunny 16 rule is when I take pictures of the moon. this is one of the time the light meter always failed and the rule never does!

- [Sharon :\) Says:](#)

Does this rule apply in the winter on a sunny day? Just wonder if there is a difference.

- [Crystal Says:](#)

Thank you so much for all of your help! You are awesome and I always enjoying reading your

posts. I have a Canon XSi (hoping to upgrade next year) and I agree that the light meter shoots too light if I have it center. What I usually do (in full manual) mode is start with my ISO depending on available light. Then decide my aperture depending on the look I want and then read my light meter for shutter speed. Sometimes it's right, but more often than not, I have to adjust it. But for me personally, it's a good starting off point and usually only have to take about 2 more shots to get it right. That's one of the many things I love about photography. You can personalize it to you and find your own way once you know the basics. What works for one person may not work for the other! GREAT job Natalie!

- Jolene [Says:](#)

Natalie, you rock. Thanks so much!

- French guy [Says:](#)

Brilliant explanations and funny article : a must read !

- KenjiKimura [Says:](#)

Thanks for your concise post. I learned also about manual settings from this site:

<http://www.fredparker.com/ultexp1.htm>

Also on "bright sunny days" there will be lots of shadows when doing "people shots". My shots would be good exposure on the people(but with harsh shadows sometimes) and overexposed background. So I tend to use fill-flash and bracket my shots and shoot RAW(so I can tweak it in Lightroom).Please add as a side-topic on fill flash on bright sunny days. And yes sister, since you're into it, please add indoors, too.

Thanks a lot for your time and effort.

- jeo [Says:](#)

I really liked that tutorial. Especially the equivalent exposure really helps a lot. I just started with studio flashes, so sunny 16 doesn't really matter there, but equivalent exposure should do the trick.

- Lynn [Says:](#)

Natalie,

I have gotten so much from all your articles. I read and reread the last one and still have some confusion. It would help me if you listed all 3 parts together after we made the changes. At times, I thought I had shutter and fstop correct, but then you would surprise me with ISO. Maybe this article could have a part B. Please keep the articles coming!

- [sabra](#) [Says:](#)

This was a great article - I only roughly knew of the relationship between aperture, ISO and shutter speed and am so, so glad to have this laid out in one place! Bravo!  
I did get a bit confused by typos - so I'm wondering if you can drop us a note to let us know

when they are fixed so we can re-read and really digest! I'm not seeing the one mentioned above re: f32 but I am seeing the 4/5 stop issue:

"In other words, since you opened your aperture by 4 stops, you simply need to speed up your shutter speed by 5 stops in order to ensure that the same amount of light hits your sensor as it did at f16. . ."

Just want to make sure I am not missing something!

Again, thanks again - this was well written and wonderfully informative!

- Bob Bevan Smith [Says:](#)

That was a good explanation of Equivalent Exposure. Don't get hung up about the Sunny 16 rule. A Basic Rainy Day Exposure rule could be shutter speed =  $1/\text{ISO}$  @ f5.6

On a typical grey cloudy day, you might be using 100 ISO and 1/100th at f5.6 so to get better depth of field, close down 2 stops to f11 and open the shutter for 2 extra stops = 1/25th (or nearest equivalent = 1/30th). Then close down one more aperture stop to f16, but bump the ISO up to 200.

But all these 'rules' are only a guide. You need to experiment to get the exposure right, depending on the subject. A light meter reading on the ski slopes might give you great snow, but everything else as underexposed dark masses.

- Sumit [Says:](#)

Great article mate!

I have got a question to ask; why do we prefer aperture adjustment to ISO adjustment? In the above horse race example you adjusted ISO only as a last resort!!

Cheers,  
Sumit

- [Shanti Says:](#)

There are few rules I live by as strongly as I follow the Sunny f16 rule! :D Way to go - I think this will help a lot of people understand.

The thing it took me a long time to get was the relationships of all three (ISO, shutter, aperture) and how they each can be moved to achieve the same effect. Aperture controls light AND DOF. Shutter speed controls light and displayed movement.

It took me a long time to realize that bumping up aperture AND ISO each by one would be the same as going up on just one by two stops :)

Thanks!! Great post.

- smcdja [Says:](#)

Great post! I finally understand. So you always start with f16?

- Dianne Says:

Thanks Natalie! I have read your series and find it very helpful and easy to understand. I will be upgrading to DSLR very soon. I have heard of the Sunny 16 rule but never have heard the explanation. I'm trying to read and learn as much as I can before making the jump to full manual mode. My current p & s has aperture and shutter priority modes and I have been trying to stay off of auto mode.

I agree with Darren! Please continue the series for low light situations.

Thanks again for a very informative series.

- lisa Says:

Hi Natalie,

loved the tutorials,you've made it very simple for dummies like me. Only thing is what do I do about Sunny 16 in grey old Ireland? Not many sunny days here I'm afraid...

- Kaushik Says:

Hi Natalie,

Excellent post, very clear and concise. I've written a similar one [here](#) (I mean the photography part not the excellent part :) ). Even made a reference to your post there.

## Leave a Reply

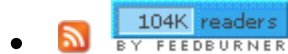
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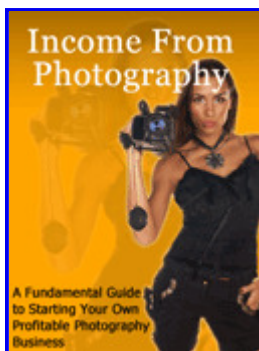
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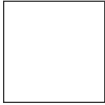
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