Digital Camera Manual Lens

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Book Descriptions:

Digital Camera Manual Lens

From superwide fisheye to ultratelephoto, interchangeable lenses have given SLR cameras the versatility to tackle almost any photographic challenge, and enabled 35mm film SLRs to dominate the market for “serious” photography for decades, until the advent of digital SLRs DSLRs beginning around the year 2000. Digital SLRs are all autofocus cameras, most of which have evolved from the autofocusing 35mm film cameras of their respective manufacturers. They use the same lens mounts, and often, the same lenses as their filmbased predecessors. However, the history of the development of autofocus film cameras shows that only two camera companies have preserved their lens mounts from the days of manual focus film cameras to today’s digital SLRs. These are Pentax and Nikon. Minolta did the same thing when it switched from its manual focus SR mount in favor of the electronic Maxxum mount. Olympus abandoned its OM mount for the FourThirds system. Only Nikon and Pentax retained their bayonet mounting hardware while adding the electronic features required for automatic focusing. This means that the old manual focus lenses will mount on the new DSLRs with certain restrictions and can be used for photography also with certain restrictions, which we will discuss shortly. One of the advantages of retaining the lens mount is that it allows photographers who own the older lenses to continue using them on the newer cameras, and it opens up the possibility for today’s photographers to avail themselves of the literally millions of older lenses that were produced for film cameras and are still available in used condition. My own experience is with the Nikon system and I currently own a number of manual focus Nikkor lenses. For this reason I will limit my discussion to the Nikon system. I have no experience with the Pentax digital SLR system, although presumably many of the issues and concepts involved with using manual focus Nikon lenses on DSLRs will be the same for Pentax users.http://ecosolar-energy.com/piceditor/buick-century-1994-repair-manual.xml

- **digital camera with manual focus lens, best digital camera for manual focus lenses, kamera digital lensa manual, digital camera manual lens, digital camera manual lenses, digital camera manual lens camera, digital camera manual lens reviews, digital camera manual lens replacement, digital camera manual settings, manual lenses on digital camera.**

Of course, they will also work with Nikon DX cameras, subject to the normal 1.5X “crop factor” that is wellknown to DX photographers. One advantage to DX users of this situation is that the smaller DX sensor only utilizes the central region of the image circle produced by the FX lens. This central region is generally the area of highest image quality. One disadvantage is that because of the 1.5X crop factor, the field of view of any given lens is narrower on a DX body, and a wide angle lens is never as wide on DX as it is on FX. These lenses are manual focus only, of course. When camera manufacturers made the switch from manual focus SLRs to autofocus models, changes were made in the cameras’ viewfinders which optimized them for autofocus, often at the expense of the ease and accuracy of manual focus. The old film cameras had excellent viewfinders with manual focusing aids, such as splitimage rangefinders and microprisms, that enabled very accurate focus. These aids were dropped with the advent of autofocus and are absent in digital SLRs, making manual focus more difficult and less accurate. To replace these manual focusing aids and improve photographers’ results when manually focusing, camera manufacturers incorporated “electronic rangefinders” into their DSLR viewfinders. These basically use the camera’s autofocus system to tell the photographer when the image is in focus. A circle or dot lights up in the viewfinder to indicate correct focus; some cameras include arrows to tell the photographer which way to turn the focusing ring on the lens in

order to improve focus. The accuracy of such systems is variable. You can often detect a range of focus ring positions in which the “in focus” dot is illuminated. One technique to achieve more accurate manual focus is by using Live View on the rear LED screen rather than by focusing through the optical viewfinder.http://www.termosystem.pl/userfiles/buick-century-1998-manual.xml

Live View gives you a realtime view of what the camera’s imaging sensor is seeing, and it’s possible to zoom in very closely on the image for critical focusing. Many mirrorless cameras are starting to include a feature known as “focus peaking,” which highlights the areas in the Live View image which are in sharpest focus. This is a very useful aid for manual focusing, and I expect it will be included in more and more future Nikon cameras, but at the moment it seems that only the D850 incorporates this feature. This information includes the lens in use, the focal length, aperture, and focused distance, and it aids the camera in determining exposure and other values. Lenses that have this capability have a central processing unit “CPU” built in. The older manual focus lenses lack these electronic contacts and processors, and have very limited information exchange with the camera body. These are called “nonCPU” lenses. One piece of information that is required for the camera to provide exposure metering is the aperture value set on the lens. This is reported automatically to the camera by the CPU if the lens has one; in fact, the camera itself sets the aperture electronically. For nonCPU lenses, this is reported by the meter coupling lever on the camera. In 1977, Nikon altered its lens mount which had been introduced in 1959 to make it easier to use. The change was called “auto indexing,” or AI. Before the advent of auto indexing, photographers had to manually index each lens to the camera’s meter when the lens was mounted. Auto indexing made this process automatic. Most Nikon film cameras made after 1977 had a meter coupling lever on the lens mount to read the position of the aperture ring; in the digital age this mechanical coupling has been dropped from many cameras, since they are designed to function primarily with CPUequipped lenses see Figures 1 and 2 below. Figure 1 Lens mount of a Nikon D7100.

Note the AI meter coupling tab at approximately the 1 o’clock position, just above the screw in the bayonet ring. Figure 2. Lens mount of a Nikon D3400. Compare it to the D7100 and note the absence of a meter coupling tab. Most of the higherend Nikon DSLRs have this meter coupling tab a notable exception being the D7500; most of the lowerend cameras do not. If you use a nonCPU lens on a camera without the lever, the light meter will not operate. You can still mount and focus the lens, but you must estimate the exposure yourself, or use an external light meter. WARNING Do not mount preAI lenses on any digital camera other than the Nikon Df. Such lenses can be converted to the AI standard, but lenses that have not been converted can damage the camera or themselves be damaged. For DSLRs that do have the meter coupling tab, you must still give the camera some information in order for the exposure metering to work properly. The camera needs to know both the focal length of the lens, and its maximum aperture. The Nikon AI lens mount has a mechanical linkage to report the maximum aperture of the lens to film camera bodies, but the digital bodies do not use it. Instead, you must set the focal length and maximum aperture of the lens manually, using the camera’s menu system to input “NonCPU Lens Data”. The Nikon Df is unique among digital SLRs in that not only can it meter with manual focus AI Nikkors, but also with older nonAI Nikkors. The earliest cameras designed for AI lenses, such as the Nikon FM, FE, and F3 film cameras, all had such folding tabs, but the feature was dropped over the years as the use of nonAI lenses became less common. In keeping with its role as a “legacy” camera, the Df is the only recent camera to incorporate this feature. This is the only Nikon digital camera on which you can safely mount a nonAI lens.

http://www.bosport.be/newsletter/bose-sound-system-instruction-manual

For those cameras that have an AIindexing tab and can meter with these lenses, you must go into the menu system of the camera and manually input the focal length and maximum aperture of the lens Press the MENU button on the back of the camera. Scroll down to the SETUP menu the wrench

icon. Highlight NonCPU lens data and press ENTER. Choose a lens number typically between 1 and 9. The lens number merely means that the camera can store data for up to 9 different lenses; it's not an intrinsic property of the lens. Enter the focal length and maximum aperture. You choose these from a list. If the exact focal length is not listed, Nikon says to choose the closest value greater than the actual focal length of the lens. Select DONE You can do this for typically up to 9 lenses. Zoom lenses present a bit of a challenge for this system, since the focal length, and sometimes the maximum aperture, vary as the lens is zoomed. Nikon says that the data for different focal lengths can be entered as separate lens numbers, or the data for a particular lens can be edited to reflect the new values for focal length and maximum aperture each time the focal length is adjusted. Admittedly this is a cumbersome system, but it's what is necessary to use these older lenses on newer cameras. Now that your camera knows your nonCPU lens data, to use it you must tell the camera you're mounting a nonCPU lens and which one it is. The exact buttons available vary by model and you should consult your instruction manual for the particulars of how to do this with your particular camera. Here's how to do it on a Nikon D7100, and let's use the Fn button Press the MENU button. Choose the CUSTOM SETTINGS menu the pencil icon. Choose CONTROLS and press OK. Select ASSIGN FN BUTTON and press OK. Select CHOOSE NONCPU LENS NUMBER and press OK. Back out of the menu system.

Now when you mount a nonCPU lens to your camera, you can press the Fn button and view your lens choices on the camera's top LCD or by pressing the i or info buttons to view them on the rear LCD screen. While holding the Fn button, rotate either one of the camera's command dials to scroll through all the nonCPU lenses in the camera's database, and select the one you have mounted. At this point, you can use the camera in A aperture priority mode or in M manual exposure mode. If you choose A, you can select your desired aperture by turning the aperture ring on the lens; the camera will choose a shutter speed to give you proper exposure. If you choose M, you select the aperture on the lens and adjust the shutter speed using the main rear command dial on the camera. If you're using the Nikon Df, you have the additional flexibility of using a nonAI lens on your camera. Since these lenses cannot communicate the position of their aperture ring to the camera using the AIindexing system, you have some additional steps When you input the nonCPU lens data into the camera, you must add a third value in addition to maximum aperture and focal length. This is the type of exposure meter coupling. Select AI or nonAI, as appropriate. Now when you use a nonAI lens on your Df, you select the lens number as you would any other nonCPU lens, but you have a little more work to do. When you mount the lens, you must make sure the AI indexing tab is flipped out of the way. FAILURE TO DO THIS COULD DAMAGE THE CAMERA OR THE LENS, so be very sure you have the lever in the appropriate position. Mount the lens in the normal way, select its data from the nonCPU lenses you have encoded into the camera, select exposure mode A or M, and set the aperture value you want on the lens aperture ring. Once you have done this, you must now select the same aperture on the camera using the sub front command dial. This is because the camera has no other way of knowing what aperture you're using.

You must set the new aperture on the camera in this way each time you change the aperture setting on the lens. As I mentioned earlier, the Nikon Fmount dates from 1959. The focusing ring of the GN Nikkor turned in the opposite direction from all other Nikkors, i.e., counterclockwise to focus further away. This guest post was contributed by Dr. Steven J. Schiff. Subscribe to Our Newsletter If you liked this article, please subscribe below to our weekly email to get more great content like this. Email Address First Name By checking this box I consent to the use of my information, as detailed in the Privacy Policy. I have a Nikon D5600 and have just purchased a Kelda 500 mm f6.3 lens totally manual of course.Nikon has removed metering functions, depth of field preview, and a usable

focusing screen from their “low end” cameras. DX cameras work well with DX lenses but are a pain with manual focus glass. I think I paid too much for too little. All you can do is 1 shoot and check your results 2 take a light meter with you 3 use Live View if you have it 0 Reply Prasn Reply to Ken July 29, 2020 149 pm Is an old post, but I figure I might as well add info! You are completely misinformed about nonusability of the lenses. I frequently use AI lenses on my D90, which is just a slightly different version of a D80. There is a manual focus indicator within the Eyepiece that lights up to show whether something is in focus or not. Its so much more fun manually focusing, it gives you the feeling that you are actually taking a photograph, and once you master me MF it becomes a breeze to do it. Just a modest opinion and advice, try them out guys, guaranteed you will love them. 0 Reply Peter Hawtin July 12, 2019 332 pm Hi, I use a Nikon D3200 with a variety of F mount lenses vivitar Nikon yongnuo and Tokina I operate in manual mode and everything appears to be fine. its a learning curve of course. On your photo of the Nikon D3400 at the 9 o clock position there is another lever.

Can you tell me the function of this lever please. The reason I ask is because even with the 1855 kit lens fitted I have noticed that when the shutter button is depressed, my lens aperture opens fully for a second before returning to its Fstop selection. What is going on here. I have seen this with all of the lenses I have mounted This lever is pushing against a similar lever on the lenses My pictures are fine, I am adjusting my shutter speed to suit the manually set aperture and everything looks ok. I owned a manual Vivatar camera and am not using it. Now i like to purchanse Nikon DSLR. So. My question is that, can i use my old manual lenses for this new DSLR Nickon camera. Thank you, Ashok.S 0 Reply Ashok.S April 3, 2019 639 am Hi, This is Ashok, read your article and learned some important points from this. Thank you, Ashok.S 0 Reply Garzonetto March 15, 2019 1024 pm You can mount pre AI lenses on a Nikon D7500. It still offers focus assist, but no metering as they left out a DOF button. Not a big deal on a digital camera, though. 0 Reply Tom Reply to Garzonetto April 2, 2019 125 am I have a Nikon D7500 and please help me out on this. If I mount a preAI or nonAI lens on the D7500, since the lens has no contacts, the Nikon camera will see it as a “nonCPU” lens and cannot meter it right By the way this camera also does not have a way to input nonCPU lens data so the camera does not know much about the lens. But the camera will still let me manually set the exposure. When you purchase through links on our site, we may earn an affiliate commission. Learn more Despite the advances that camera manufacturers have made in terms of autofocus performance, with systems that include more sensitive and precise AF points, faster acquisition times and better tracking, there are still occasions where only manual focusing will do.

Autofocus isn’t infallible it can lock onto the wrong part of the scene that you’re photographing, and it can struggle when there’s not enough light available or when there’s not enough of a contrast between the subject and the rest of the scene for the AF sensors to detect it. Shooting through obstacles such as long grass, branches or windows can also prove frustrating, as the camera’s autofocus system will tend to settle onto the object closest to it rather than the subject beyond. Unsurprisingly, moving subjects pose a particular set of problems for autofocus, especially if they enter the frame at speed or from an unexpected location. Manual focus vs Autofocus Manual focusing can get you out of tight spots like these. You can correct autofocus inaccuracies and set the focus distance in situations where the camera can’t find anything to bite onto. Manual focusing provides consistency once the focus is set, the camera can’t focus anywhere else. That doesn’t mean it’s a walk in the park. If you’ve tried focusing manually while you look at the scene through a digital SLR’s bright optical viewfinder, you’ll know how hard it can be to judge where the sweet spot of sharpness is positioned as you turn the focusing ring, especially if you’re using a wideangle lens, where pretty much everything can appear sharp pretty much all of the time. Fortunately, you’re not left to fly solo. The camera’s focusing sensor continues to work, with the focus indicator in the viewfinder displayed when the feature covered by the active AF points is in focus. Using AF with a small subject, you might find that even a single AF point covers a relatively large area and is unable

to pick out the precise detail you want to be sharp. Manually focusing with a magnified Live View display is the solution. Frame the shot, then move the camera slightly back or forward to adjust the focus point. Live View with manual focus Live View has redefined the manual focusing experience.

Not only does the large, backlit screen make it easy to focus in low light, where you can hardly make anything out through an optical viewfinder, being able to magnify an area of the image enables you to check that the smallest details are in sharp focus. And you can do all of this before you take the shot. However, there are some drawbacks to using Live View to help place the focus. Apart from the additional drain on battery power, it can be harder to support the camera during an exposure when you're shooting without a tripod, and any movement of the camera backwards or forwards will change the focus distance. It can also be difficult to see the screen when you're shooting in daylight. When to use manual focus Some types of photography are a natural fit for manual focusing. The slower pace of landscape photography, for example, means you can afford a bit more time to position the focus exactly where you want it. Working with a tripodmounted camera also means that you can take advantage of the rear Live View display. With a lens or camera set to manual focus, the focus distance that you set will be locked in. This means you'll get consistent results from frame to frame. Benefits of electronic viewfinders Mirrorless cameras equipped with electronic viewfinders EVFs have largely made these challenges null and void. As a result, you aren't faced with the same problems shooting in bright light or supporting the camera during an exposure. Of course, there's the same risk of getting outoffocus results if you move the camera after setting the focus distance. This means you don't have to take your eye away from the scene in front of you while you focus. You also get a better guide to depth of field with an EVF an optical viewfinder gets darker when you use a camera's depth of field preview, so you can see which parts of the image will appear acceptably sharp beyond the point you're focusing on.

It's this stepchange in the ease and flexibility of manual focusing that has given rise to the rebirth of manualonly lenses, particularly macro and fastaperture primes, which can benefit from the precision afforded by magnifying details on the Live View display. Choosing a manualonly lens might seem odd when autofocus lenses can be focused manually. While this enables faster focusing, it makes it hard to make small manual adjustments. The dos and donts of manual focusing DO Focus before zooming Once you've set your focus distance, avoid zooming the lens as this can cause the focus to shift and you may end with blurred results DO Consider getting a loupe It can be hard to see a Live View display in daylight. An LCD screen viewer or loupe can both shield the screen and magnify the image. DONT Forget your rotation Knowing which way to turn the focus ring to move the focus point can mean you don't miss shots in the heat of the moment. DONT Focus too quickly Focusing steadily back and forth across the detail you want in focus makes it easier to see where the image snaps into sharp focus. Read more Get all of our great cheat sheets here How to mimic the tiltshift effect 23 things you should check when buying a new lens You will receive a verification email shortly. Please refresh the page and try again. You can unsubscribe at any time and well never share your details without your permission. Visit our corporate site. New York. It has processors that are able to run algorithms, for near instantaneous adjustments to compensate for lighting conditions and changing environments. Modern DSLRs can pretty much see in the dark, and still focus reasonably well with a near absence of light, and their performance at extremely high ISO settings is phenomenal. And, in doing so keep us from having to learn some of the essential basics of photography that could make us better. Here is why I think every photographer should spend some time with a manual focus only lens.

All they will ever see is the glass within the barrel of their lens. The reason for this is simple lenses with an automatic iris aperture the camera sets the aperture electronically, focus with the lens wide open aperture blades withdrawn, and only stop down to the chosen aperture in the split second when that the shot is taken. It is pretty amazing how quickly this all happens, when you stop and

think about it. Put simply, very few modern lenses in a Canon mount have an actual aperture ring.Just twist the dial on your camera often in third stop increments and select the aperture you want, or even let the camera choose it for you in an auto mode. It's quick and painless. We can talk about "stopping down" a lens or the advantage of a wide aperture prime, but until you have actually seen the difference in an aperture iris you won't have a full sense of what that really means.She even has a pretty decent eye as a photographer, and has taken some great photos. But despite having been married to a gear guy since 1997, and having a hundred or so lenses going in and out of our house, she still to this day often gets confused about aperture. It can be confusing, as the logic due to the way that fstops often get reported is backwards. Bigger numbers mean smaller apertures and that seems backwards.For this reason many photographers have never seen the true depth of field of any of their wide aperture lenses, or any other lens for that matters. This changes when you use a manual focus lens particularly with a focus screen that shows true depth of field. More on this in a moment. You also don't see how much more light is available, or how much more shallow the depth of field is with a large aperture. You don't really think about your aperture setting at the time of capture, resulting in a loss of creativity because your mind isn't forced to visualize what aperture means to the shot.

The fact that you have to think about selecting the aperture, and see a difference in the viewfinder, in both the depth of field and the amount of light, helps you to realize how shallow depth of field shots with a large aperture and large depth of field shots with a small aperture are going to turn out. I have learned how to mentally visualize how depth of field is going to affect a scene so much more because of using manual aperture lenses.You probably won't always shoot with manual focus lenses, but using one will help train your brain to visualize your shots more effectively and artistically. At close to medium distances you can actually watch focus travel from one thing to another, and subjects pop into focus. It really helps you think about storytelling as a part of your imagery. When you think about what you want in focus, it means that you have become intentional about what you want your viewer to see. Manual focus lenses remove that limitation, and I am more likely to take an image with my subject in focus in an extreme corner when I use one. The rule of thirds for composition is a great starting tool, but sometimes rules are made to be broken. Take a look at this shot of a family games night. The cards are in the extreme bottom corner. Your eye goes there first, but then considers the whole out of focus scene beyond. Your brain allows you to mentally fill in the blanks, and image possibilities, rather than just a looking at a scene. It is often challenging to place an AF focus point right where you need it particularly when using a tripod, but manually focusing allows you to simply focus until what you need to be in focus is sharp. Using the Zeiss MakroPlanar in either a 50mm or 100mm focal length helps you to realize how much the macro range adds to the focus possibilities of such a lens. There are so many extra focus points.

Using a manual focus macro lens will certainly help you appreciate the AF on macro lenses, and will also help you understand why the AF focus distance limiter switch is there and how to properly use it. We want everything to be faster and easier. But great art is rarely created is rarely created in a rush. When I am shooting professional event work and weddings, I tend to use image stabilized, wide aperture, zoom lenses. They are big and heavy, but they are extremely flexible and deliver great results. I need speed in those situations, but some of my most creative shots in my catalogue have been taken with manual focus lenses. I slow down and become more creative. Some of my most critically acclaimed images have been taken with manual focus lenses, both inexpensive and expensive ones. It takes some amazing pictures, and will open a world of appreciation for some of the lenses from another era. It will probably also make you a better photographer. You'll find a number of reviews of different ones on my website. If you are willing to spend more and want the finest optics and image quality available, Carl Zeiss makes some of the best lenses period. They tend to be mostly manual focus, and I've had the privilege of using and reviewing many of them. These are just a few reasons why every photographer should spend some time with a manual focus only

lens. He is married to Lana and they have three children. His work has been published in many publications and used commercially by a number of companies. You can find out more about him or read his reviews at www.dustinabbott.net and watch his video reviews on YouTube here. We wont share it with anyone We wont share it with anyone We wont share it with anyone. Many companies have recently changed the way their lenses and cameras fit together, so older lenses won’t fit or won’t do everything they should. The list below tells the story for each brand.

Please be careful and check your camera and lens manual first, though you can damage your camera or lens by fitting the wrong ones together. They actually zoom in a bit further, as digital SLRs only see the centre half of the picture. This is rarely a problem for long zoom lenses, as they will zoom even further on a digital SLR. But it is a problem for landscape photographers and realestate agents who need wideangle lenses, as the lenses wont see as wide as they did before. Most companies now make a new series of lenses specifically for digital SLRs to fix this. If you shoot moving things, like children playing, its a different story. At first I took the macho approach, thinking that Id been focusing by hand for years, so it wont be a problem to carry on. I was wrong. Most nonprofessional digital SLRs have small, dim viewfinders to keep the cost of the camera down, making manual focusing much harder than it ever was with film cameras. Autofocus is more than just a convenience these days. Its a very small effect, and most people would never notice. Different camera brands have different thicknesses of sensor stack, so lenses for one brand may not give their best if used on another brand with an adaptor. If you want the geeky details, this page is the authority. It makes focusing old lenses easier than it was on their original film cameras due to its bright, stabilised, enlargeable viewfinder. You can zoom into the viewfinder live to get perfect focus and still see what youre doing because the image is stabilised. The picture quality is excellent, the stabiliser counteracts your wobble, and as a fullframe camera you get the full view of the lens. Its relatively affordable now the A7 MkIII is out and few of the advantages of the MkIII version apply to old lenses. Adaptors are available for just about every brand and fit of lens. This page gives all the details of Sony lens adaptors.