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# Camera Lens News



A newsletter for all who use, buy, sell, like, report about and are interested in Carl Zeiss camera lenses.

We make it visible.

## Joe Farace on Landscape Photography with the Zeiss Ikon SuperWide Camera

When I was a student at the Maryland Institute, College of Art I discovered my interest for landscape photography. I developed a series of guiding principles on the "what" and "how" for photographing landscapes that I still follow today:

### 1. Photograph Locally

While it may be a gross oversimplification to say that anybody can make a great photograph in Monument Valley the truth is that the art of landscape photography often seems to be reduced to the location. But it does not need a legendary site to capture a great picture.



"Picnic Shelter", Zeiss Ikon SW Camera, Distagon T\* 2,8/15 ZM, Joe Farace

I made this photograph one block from the front door of my house as I set out on my daily walk one evening. These are scenes you might ordinarily walk or drive by. But when you take the time to photograph them, you'll discover that these private landscapes are the ones that will mean the most to you.



"Elk Mountain", Zeiss Ikon SW Camera, Distagon T\* 2,8/15 ZM, Joe Farace

### 2. Wide Angle-of-view

Angle of view describes the angular extent of a given scene that can be imaged by a lens. So-called "normal" lenses generally cover an angle of view of between 50 and 25 degrees. A wide-angle lens' field of view typically covers between 100 and 60 degrees. Super wide-angle lenses can cover up to 180 degrees.

For these images I used the Biogon T\* 2,8/21 ZM. It shows extremely sharp image details and low distortion. There is no "magic bullet" or perfect lens for photographing landscapes but I find this wide-angle lens produces a dynamic perspective especially in those situations where you cannot back up enough up to capture those wide vistas.

### Tip: Be sure to use a lens hood!

Capturing large chunks of sky in your photographs increases the chance of flare. It is caused by the front lens element being struck directly with light from the sun. This can create the traditional flare artifacts on film but can also reduce contrast and affect apparent sharpness.



Shot with a Kodak Professional BW400CN film



Mount Evans, near the town of Idaho Springs, USA



Captured with the 21mm Zeiss Biogon T\* 2,8 ZM lens set at f/8 with focus set at hyperfocal distance.

### 3. Max Depth-of-field

When you focus a Carl Zeiss T\* ZM-mount lens on a specific subject, all subjects at that same distance are sharp. Objects that are not at the same distance are theoretically out of focus and not as sharp. But there is a range of acceptable sharpness that is referred to as the depth of field. Increasing the depth of field increases the overall level sharpness of an image. My personal rule for landscapes was to always use the lowest smallest possible aperture to produce the greatest amount of depth-of-field.

**Tip:** Depending on the ISO of your film, you may have to use a tripod to steady your camera because of the slow shutter speeds produced by these small apertures.

### 4. Saturated Colors

There are at least three ways to produce highly saturated color images. One of the easiest ways is to start with a film that produces saturated color. Fuji's Velvia color slide film is legendary for its warmth, saturation, and contrast. For those of us who prefer to shoot color negative film, you might want to try Kodak Professional Ultra Color film that available in both 100 and 400 ISO versions.

The way you expose your film also determines saturation: I slightly underexpose color slide film (and overexpose color negative film) to produce the most vibrant colors. The third way is to use digital methods and I leave that up to you to decide whether manipulating images saturation through film and exposure choices is any different than doing it with Adobe Photoshop.

**Joe Farace** is the co-author of "Better Available Light Photography," a book aimed at film shooters. Be sure to visit his website at <http://www.joefaraceshootscars.com>

## The challenge of wide-angle photography

### The interplay of possibilities

The most important basic rule in the composition of a photographic image is to concentrate on what is truly essential when selecting a subject. Too much detail or an angle of view which is too wide often allows the eye of the person looking at the picture to wander randomly around the image. The main subject cannot be clearly recognized and only becomes apparent at a second glance.

These rules do not necessarily apply to wide-angle images, photography with short and very short focal lengths. Photographs of this type confront the photographer with particular creative challenges as the depth of field cannot be used as an additional compositional element. The calculated interplay of light and shade, foreground and background, sharpness and haziness, lines and surfaces, vistas and viewpoints is the most important requirement for a successful wide-angle photograph.



"Harbor", Distagon T\* 4/18 ZM, Michael Ankenbrand



Zeiss Ikon SW - the super-wide angle camera.

### The right system

Depending on the system, rangefinder cameras are particularly suitable for this demanding type of photography. The absence of a mirror box allows a slim, compact design for the camera case which, in turn, enables compact lenses offering outstanding performance to be built for wide-angle photography. Carl Zeiss Biogon lenses feature these capabilities.

Biogon lenses achieve superb results particularly through their lack of distortion, in other words straight lines appear truly straight. Thus, when photographing architectural subjects, the ugly curvature on what should be straight lines near the edge of the picture is avoided.

### Personalized composition

The choice of a meaningful and interesting scene is the first step towards taking a successful wide-angle photograph. In the picture of the harbor it is possible to see how an interesting foreground emphasizes the extension of the background into the distance. This effect is reinforced by the color contrast with the more monotone background. Prominent, dense shadows, which further increase the suspense of the scene, are cast by the vertical midday sun.

It is possible to include subjects in the composition which are only just in front of the camera, like the sunshade in this case, in order to animate an image which would otherwise be very average. The shaded side of the sunshade forms a pleasant contrast with the surrounding blue of the sky, while the color of the sand is partially echoed in the sunshade. The repetition of the shape of the sunshade in the background also lends a certain harmony to the structure of the picture.



*"Sunshade", Distagon T\* 4/18 ZM, Michael Ankenbrand*

## Unusual views

Unusual angles such as a frog's or bird's-eye perspective or vertical, upward views, as in this picture, often create subjects with greater suspense than images taken from eye level. The brilliant blue sky and its reflections in the glass facades provide an almost monochrome feel which was achieved in this case without digital processing. The almost distortion-free Biogon lenses are therefore excellently suited for this subject.



*"Glass facades", Distagon T\* 4/18 ZM, Michael Ankenbrand*

## The golden rule

The proven arrangement of the main subject or the important details of the subject in line with the "golden rule" produces pictures conveying an impression of harmony, even in the case of wide-angle pictures without dominant details in the foreground. The horizon with the ice floes divides the photograph more or less in a ratio of 2:1. Using a grid focusing screen on SLR cameras or a clip-on spirit-level in the case of cameras with range-finders enables the camera to be aligned so that it is exactly horizontal, therefore making the structure of the picture appear more balanced and harmonious.



*"Ice floes", Distagon T\* 2,8/25 ZF, Sabine Unterderweide*

## Full format DSLR needs the right lenses

### Changing the focusing screen allows manual focusing of SLR lenses.

If you are looking both for quality and seeking to use every possibility of picture composition, you will happily turn to "classic" lenses. Demanding photographers are increasingly asking for high-quality lenses for use on digital SLR cameras (DSLR) cameras – and manual focusing is also very welcome. This is precisely why a growing number of photographers are using Carl Zeiss SLR lenses.

Digital SLR cameras, too, are turning more frequently to sensors which image the entire 35 mm format.

But in the case of many lenses, this just reveals the weaknesses around the edge of the picture. Carl Zeiss lenses have always been optimized for the entire 35 mm format and offer outstanding imaging performance across the entire image field.

### Precision focusing

Precise focusing is essential if the capabilities of Carl Zeiss SLR lenses are to be fully utilized. But if you ever tried to use traditional lenses with manual focus with a digital or analog SLR camera you will know the problem: The standard focusing screens of modern auto focus SLR cameras are designed to show a bright, brilliant viewfinder image. Most of them, however, lack optical focusing aids (e.g. split/micropism screens).



*Changing the focusing screen allows manual focusing of SLR lenses*

That makes it hard to visually assess and quickly adapt the definition of the image.

Therefore, it is worth paying particular attention to the focusing screen already fitted when using these lenses in digital SLR cameras.

### Interchangeable focusing screens

A quick look through the viewfinder will tell you whether the focusing screen is "fit for the purpose". The standard focusing screen of many commercially-available camera models is well suited for manual focusing, for example due to the fitting of a micro-prism field in the middle.

But if this is not the case, help is at hand. Camera dealers or independent manufacturers offer interchangeable focusing screens. Specialist dealers who stock the Carl Zeiss SLR range can also provide help. Information is also readily available on the Internet.

You will find focusing screens for many modern SLR and DSLR cameras at:

[www.katzeyeoantics.com](http://www.katzeyeoantics.com)

# An anniversary just like in the movies: ARRI celebrates its 90th birthday, and 70 years of partnership with ZEISS

The ARRI brand has a unique reputation in the world of movie-makers and the cinema. ARRI – or, to give them their full name, Arnold & Richter – has been supplying movie-makers with high quality film-making and processing equipment for 90 years. In 1916, the founders, August Arnold and Robert Richter, opened a small workshop in Munich. To this very day, the city remains the location of the company's headquarters and also the site of the ARRI cinema and film studios.

A milestone was reached in 1937 with the Arriflex 35 camera which changed the world of cinematography. At long last it was possible to see the actual image in the viewfinder during filming. The cooperation between ARRI and Carl Zeiss, the world's best optical instrument maker, also goes back to this time. It is one of the oldest partnerships

anywhere in the world of cinema. Carl Zeiss high-speed lenses for cine cameras, known as "cine lenses", have made a major contribution to the fame of the ingenious cameras also in Munich.

Cine lenses have an extraordinarily difficult job to do. Images are created on the small surface of a 35 mm film which must meet unique demands. These images are enlarged up to 1000 times when they are projected onto the cinema screen. With their outstanding image properties, Carl Zeiss lenses offer directors and camera crews the creative compositional possibilities that allow them to transform their visions into supremely stirring film sequences. Leading international film productions such as "The Lord of the Rings", "King Kong" and "Perfume" therefore all set great store by



ZEISS cine lenses. Outstanding definition, superb contrast correction and freedom from image distortion are all an absolute must if the critical cinema-going public is to enjoy an unforgettable experience with truly breathtaking images.

Carl Zeiss today offers a wide program of cine lenses for motion pictures which are developed and manufactured exclusively for ARRI. The proven Ultra Prime lenses now include 16 focal lengths. High-speed Master Prime lenses are particularly suitable for takes in even the most difficult light conditions – a capability which opens up a whole new field of opportunities for creative expression to film-makers. With these high-performance lenses Carl Zeiss is the world market-leader for professional cine lenses.



Master Prime Lenses in use when filming "Perfume"

### ZM lenses on the digital M8 range-finder cameras



*"Downtown Aalen", Biogon T\* 2,8/28 ZM, Dr. Hubert Nasse*

Carl Zeiss lenses with ZM bayonet mounts are exceptionally well-suited for use on Zeiss Ikon and Zeiss Ikon SW cameras. But they can also be easily used on all other M-bayonet compatible camera models.

All ZM lenses offer outstanding imaging performance for both analog and digital cameras. Carl Zeiss ZM lenses without 6 bit coding can even be used with a digital M8 without any appreciable limitations.

#### **6 bit coding**

The digital M8 is equipped with a system which can read 6 bit coding (black and white markings) integrated into the lens bayonet. According to information provided by the manufacturer, this serves to recognize the lens type and optimize image quality. The 6 bit code is designed to recognize a maximum of 64 historic, current and future M lenses from the manufacturer. It is therefore not possible to retrofit Carl Zeiss ZM lenses with 6 bit coding.

#### **Later correction**

The M8 uses the lens recognition system to note the lens used in the exif image data. The system is also used for internal vignetting correction. In many fields of practical photography, automatic or manual vignetting correction does not play an important role. Even when using super wide-angle lenses and an open aperture, reprocessing or vignetting is usually not needed. The images shown were taken with uncoded Carl Zeiss ZM lenses and, apart from the picture size, were not reprocessed.

ZM lens	Focal length*	Lever position	Displayed frames	Compatibility
Distagon* T* 2,8/15	20 mm	center	50 mm, 75 mm	Recommended: 21 mm Zeiss Ikon clip-on viewfinder
Distagon* T* 4/18	24 mm	center	50 mm, 75 mm	Recommended: 25 mm Zeiss Ikon clip-on viewfinder; conversion to 2.8/28 bayonet is possible
Biogon* T* 2,8/21	28 mm	center	50 mm, 75 mm	Recommended: 28 mm Zeiss Ikon clip-on viewfinder; conversion to 2.8/28 bayonet is possible
C Biogon* T* 4,5/21	28 mm	center	50 mm, 75 mm	Recommended: 28 mm Zeiss Ikon clip-on viewfinder; conversion to 2.8/28 bayonet is possible
Biogon* T* 2,8/25	33 mm	inside	28 mm, 90 mm	Conversion to 2/35 bayonet useful
Biogon* T* 2,8/28	38 mm	inside	28 mm, 90 mm	OK
Biogon* T* 2/35	47 mm	outside	24 mm, 35 mm	OK
C Sonnar* T* 1,5/50	67 mm	center	50 mm, 75 mm	OK
Planar* T* 2/50	67 mm	center	50 mm, 75 mm	OK

In some rare cases when vignetting interferes with the subject of the picture, this can be effectively and easily corrected with commercial image processing software. If an IR blocking filter is used with uncoded lenses with a focal length under 35 mm, a certain green tinge can appear around the edges of the picture. This effect can also be corrected by appropriate reprocessing using image processing software, for example "Vignette Corrector".

Link: *Website Vignett Corrector* (<http://www.richardrosenman.com/software/downloads/>)

### Viewfinders for wide angle lenses

When Carl Zeiss ZM lenses with a focal length of 28 mm and longer are used, suitable bright line frames are reflected into the viewfinders of digital M8 cameras to define the picture. If focal lengths fewer than 28 mm are used, we recommend the use of an appropriate viewfinder. In the case of the Biogon T\* 2,8/25 ZM, the lens bayonet can be modified so that the correct viewfinder frame (corresponding to 24 mm) is also reflected into the M8. If requested by the customer, Carl Zeiss will undertake appropriate bayonet modifications on ZM focal lengths under 28 mm.

### Publisher's Imprint

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