

Canon MP-E 65/2.8 Macro

By Gary Sun

The Canon MP-E 65/2.8 Macro lens was introduced in September 1999. It is a manual focus lens, dedicated to macro photography with EF lens mount for Canon EOS series SLR. The magnification ratio is between 1:1 and 5:1.

As it is MF only, there is no built-in drive motor. The MF feels very smooth. When the magnification is 1:1, the length is the shortest at 98mm; and when the magnification ratio is 5:1, the length is the longest at 228mm. The change in length is 130mm!

The first three internal lens elements incorporate a floating design. UD glass lens is used to eliminate the dispersion that is prone to large magnification in macro photography.

At 5:1 reproduction, the magnification is particularly large and it is not easy to use this lens. There are also strict requirements for the tripod. The image may be blurry if the tripod vibrates a little so it is better to use a high-speed shutter to create a black background and reduce the chance of photo blurring. Also, without enough patience, it is difficult to make good use of this lens.

Working distance

For MP-E65, it is not that important to understand the normal concept of closest focusing distance. The focusing distance (i.e the distance between film plane and subject) announced by the manufacturer is within 0.243m ~ 0.313m. However, the key parameter is the working distance in front of the lens, i.e, the distance from the lens front to the subject. According to the marking on the lens, the working distance is as below:

For Magnification Ratios 1X, 2X, 3X, 4X, 5X the Working Distances are 101mm, 63mm, 51mm, 44mm and 41mm respectively. It cannot focus beyond this range.

Effective aperture

Although MP-E65 nominal maximum aperture is f/2.8, this aperture is the effective aperture only in 1X. In other magnifications, the effective aperture is decreasing and the principle is similar to an ordinary lens + extension ring. From the optical structure of the lens drawing, at the areas beyond 1X, it is equivalent to adding an extension ring in the middle of the two optical groups



Goby Baby 4mm

Nauticam housed Canon EOS 5D Mark III in M mode with 2X Inon Z-240 Canon MP E-65 4:1. Sensitivity: ISO 500. 1/160 @ f/11

and the magnification can be greatly improved.

I have the following suggestions to help you use this lens:

1. I recommend that beginners to macro photography practice with a

100 mm Macro lens before using this lens, as you will be easily frustrated if you cannot autofocus or focus properly.

2. The bigger the magnification, the more shallow the depth of field



Hairy Shrimp 4mm
Nauticam housed Canon EOS 5D Mark III in M mode with 2X Inon Z-240 Canon MP E-65 4:1. Sensitivity: ISO 200. 1/200 @ f/16



Isopod 1mm
Nauticam housed Canon EOS 5D Mark III in M mode with 2X Inon Z-240 Canon MP E-65 4:1. Sensitivity: ISO 320. 1/250 @ f/16

will be. In the more shallow depth of field, it is more difficult to control the focal plane as well as the main focus. Regarding to the port selection, I use 100 Macro port with a 7cm extending ring to obtain a four times magnification, so the depth of field is a little deeper than 5-times. Moreover, the distance of the subject to the glass in front of the port reaches 44cm, which is beneficial to position the strobe light.

3. The more shallow depth of field, the more difficulty will be to find the subject to focus through the viewfinder. Generally in the high-power magnification, people take much longer time to find the subject, even causing the front lens to touch the subject. It requires certain degree of practice and familiar with the lens to be able to quickly find the subject through the viewfinder and focus in different magnification. It is better to use a focus light, as the magnification gets bigger, the

viewfinder is becoming darker, you will not be able to locate the subject clearly without additional light source illuminating it, not even mentioning to focus.

4. It is recommended that the minimum aperture to choose is f14. If using the lens's minimum aperture of f16, my personal experience is that the image quality (sharpness, contrast and saturation) will be slightly worse. However, if the magnification is 4:1 or 5:1, in order to achieve the maximum depth of field, we have to choose f16.

5. You will need to be "very good" at holding your breath, stabilizing your hand or be able to find the support (lens, camera body, hand or other body parts). It is difficult to focus under high magnification when only relying on hands.

6. Increase the shutter speed at least to 1/160 and above to reduce the effects of shakiness and to obtain a better and sharper image quality. I usually choose M mode and shutter speed of 1/200 to shoot,

with the aperture size depending upon zoom times or depth of field needed.

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Don't settle for 2nd best



Film - No Filter
No White Balance



Digital - No Filter
Manual WB



Magic Filter
Manual WB

Digital cameras have opened up new possibilities to underwater photographers. For available light photography manual white balance is an invaluable tool for restoring colours. But when you use it without a filter you are not making the most of the technique. You're doing all the hard work without reaping the full rewards.

These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter, using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

www.magic-filters.com