OLYMPUS OM SYSTEM

Lens Group **Zuiko lens terminology**

Physical lens parts

1. Aperture Ring

All Zuiko lenses have the smallest F-stop value on the ring hand side. The focal length is printed to the right of this smallest value, in green characters. The lens is stopped down by turning the Aperture Ring clock-wise. Only whole F-stop values are marked, and only whole F-stops have click-stops, but intermediate values can be set for fine exposure adjustments. All Zuiko lenses feature automatic diaphragms, except both shift lenses and a few macro lenses. All fix focal length lenses have the Aperture Ring located on the front side, near the Front Mount Ring. All zoom lenses have it located on the rear side, near the camera. Remarkable exception to this rule is the 90mm/F2 Macro, which has it near the camera. The AF/PF lenses for the OM-707 and OM-101 have no Aperture Ring since the aperture is controlled by the camera.
The manual macro lenses 38mm/F3.5 and 80mm/F4 also have a **Preset Aperture Ring** with click-stops. The desired aperture is set with this ring, the diaphragm is manually closed with the Aperture Ring.

2. Focusing Ring

By turning this ring, which is covered with non-slip rubber, clock-wise, the lens is focused to its closest distance. All manual focus Zuiko lenses have this Focus Ring, except the 600mm/F6.5 and 1000mm/F11 super tele lenses, which have a **Rack-And-Pinion Focusing Knob**, and the macro lenses. The automatic macro lenses have a **Fine-Focusing Ring** instead. Macro lenses are focused primarily by changing the distance between subject and film plane, once the extension has been set to determine magnification. The AF/PF lenses for the OM-707 and OM-101 have no Focusing Ring since focus is controlled by the camera.
On one-touch zoom lenses, the Focusing Ring has a double function: by pushing or pulling it, the focal distance changes. On two-touch zoom lenses, the focal distance is changed by turning the **Zoom Ring** (clockwise for shorter focal length).

3. Meter Coupling Lever

This lever changes position as the Aperture Ring is turned, and thus informs the camera how much the lens is stopped down. This information is passed to the exposure meter, changing the position of the meter needle / meter LED / shutter speed indicator.

4. Depth of Field Preview Button

Pressing down this button closes down the lens diaphragm to the preselected aperture for viewing depth of field. This button is located on the right hand side of the lens. Manual macro lenses have no Depth of Field Preview Button. The AF/PF lenses for the OM-707 and OM-101 don't have it either. Both shift lenses have a Depth of Field Preview Button that locks in place when pressed and releases when it is pressed again. On a shift lens, this button must be locked while performing manual metering, and before the exposure is made.

5. Distance Scale
Depth of Field Scale

Distance values are indicated both in meters (white) and in feet (orange). Some lenses coming from production batches made entirely for the US market have the

scale only in feet. The red dot and the red line on top of it, printed on the chrome part of the lens mount, represent the index for the Distance Scale.
The aperture values on the chrome part of the lens mount are used together with the distance values to get a global impression of the depth of field for a given distance. The depth of field for aperture values that are not printed on this scale can be estimated by interpolation.
Macro lenses have no Distance Scale or Depth of Field Scale. The AF/PF lenses for the OM-707 and OM-101 have a Distance Scale / Depth of Field Scale Window.

6. Protective Tabs

These tabs protect the rear lens element when the lens is put down in a hurry on a hard surface without its rear lens cap. It is advised to use the rear lens cap always when putting down the lens. Some lenses have a Protective Ridge, or two small bolts, instead of two individual tabs. Lenses without protruding rear elements, such as all telelenses of 100mm and longer have no protective parts at all. Lenses with Protective Tabs can't be mounted on the Olympus 2xA Teleconverter.

7. Rear Lens

Great care should be given to avoid scratches on the surface of the rear lens, especially when the rear element is protruding. Lenses can only be mounted on the Olympus 1.4xA Teleconverter when Rear Lens lies very deep inside the lens, because of the protruding Front Lens of this converter.

8. Automatic Diaphragm Lever

This lever closes down the lens diaphragm to the preselected aperture at the moment the shutter is released. This lever only exists on manual focus lenses with an automatic diaphragm.

9. Lens Release Button

Bayonet type interchangeable lenses are quickly removed by pressing this button and turning 70° counterclockwise. During mounting the button should not be pressed. The manual macro lenses 20mm/F3.5 and 38mm/F3.5 have a screw thead; the Release Button is on the Objective Lens Mount PM-MTob instead.

10. Infrared Index Mark

This small red line next to the Distance Scale Index Mark is a reference line to adjust focusing when using infrared films. The normally determined distance reading should be aligned with this mark.

11. Front Mount Ring

Lenses produced in the early seventies have a silver colored Front Mount Ring ('silver nose'), lenses from a more recent production date have a ring that's painted black. Care should be taken not to damage the screw thread since it is used to mount filters or lens hoods. Lenses with protruding front elements (both fisheyes and the 24mm/F3.5 Shift Lens) have no filter thread. See the Lens Group Main Features Table for the various filter sizes used.

12. Front Lens

Great care should be taken to avoid damage on the Front Lens. When holding the lens in daylight, various colors can be seen reflected from the lens, depending on the number of groups, elements and the coatings (see picture below).

13. Screws in bayonet mount

All Zuiko lenses (and Olympus teleconverters, extension tubes, etc.) have *three* screws in the lens bayonet. This is important for owners of an OM-3(Ti) or OM-4 (Ti), because these cameras have a nylon spot reset button in the lens mount, that can be damaged by (frequently) mounting off-brand lenses (or teleconverters, or extension tubes, etc) that have more than three screws, as some do.

Inscriptions on the Font Ring (manual focus lenses only)

a. OLYMPUS OM-SYSTEM

Very early lenses, dating from the time of the Olympus M-1, have the inscription 'OLYMPUS M-SYSTEM' instead. The 'M-' before 'SYSTEM' is almost always made black, for the same reasons the M-1 was rebadged to OM-1. These M-System lenses are collectors items.

b. E.ZUIKO
F.ZUIKO
G.ZUIKO
H.ZUIKO
I.ZUIKO
J.ZUIKO
L.ZUIKO
ZUIKO MC
ZUIKO
S ZUIKO

The letter in front of the word Zuiko (except the S) indicates the number of elements of the lens, by its position in the alphabet: 5, 6, 7, 8, 9, 10 or 12. The only 'L.Zuiko' (12 elements) was the 18mm/F3.5 prototype that was never put into production - the final version with the adapter filter ring has 11 elements.
By the time single coated lenses were replaced by multicoated versions, the preceding characters were dropped and the characters MC (=multicoated) were put after the word ZUIKO. The first lenses that were labeled as such were the lenses that were never made in a single coated version: the 18mm/F3.5, 21mm/F2, 24mm/F2, 28mm/F2 and 35mm/F2 lenses. Strangely enough these lenses appear in early lens tables *with* the preceding characters but they were put into production the the MC inscription.
Fisheye lenses, Shift lenses, Zoom lenses and Macro lenses never carried the preceding characters.

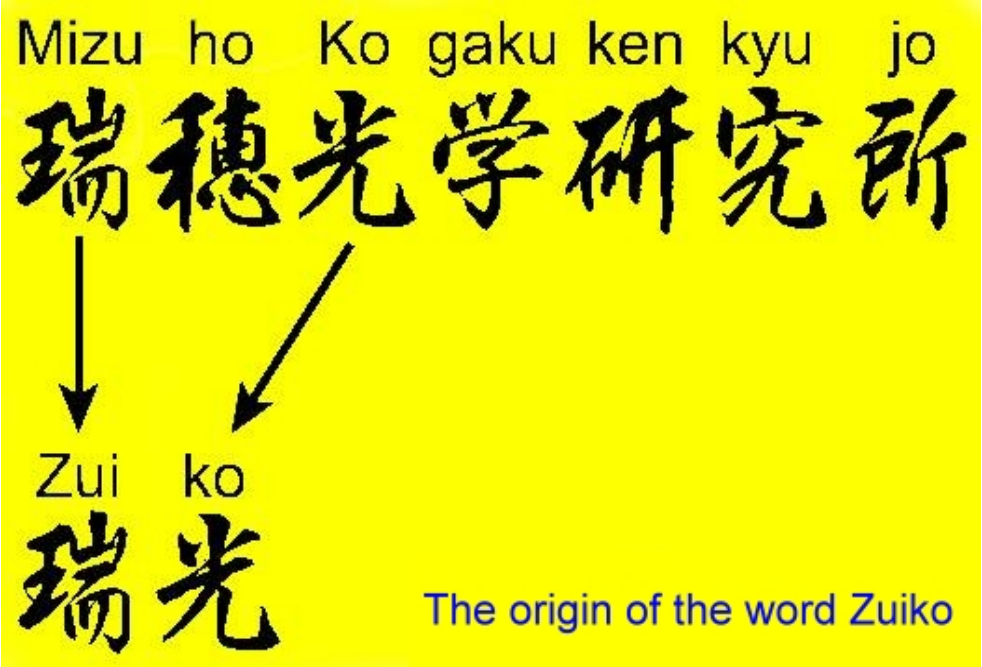
Once multicoating was so self-evident, that all lenses were produced multicoated, the MC addition was also dropped and the lenses only contained the word ZUIKO.

S Zuiko Zoom lenses are lenses targeted at the consumer market for economy prices. These include the 28-48mm/F4, 35-70mm/F3.5~4.5, 35-70mm/F3.5~4.8, 35-70mm/F4, 70-210mm/F4.5~5.6 and 100-200mm/F5.

The word Zuiko appeares not only on OM System lenses - all lenses designed and produced by Olympus until the mid 1980's carry this name (after this, the term Olympus lens became more popular; this is also used for the AF and PF lenses for the OM-707 and OM-101).

The word Zuiko (pronounced as Z(u)w**ee**ko) has a dual meaning; it was invented as an abbreviation of the name of Olympus' optical plant: **Mizu**ho **Ko**gaku-kenkyujo, written in Chinese, but it is also an existing ancient Chinese word that means "light showing a sign of auspicious events". A free translation could be 'golden light'.

Other translations that can be found in Olympus literature like 'origin of light' or 'sharp point' are not accurate.



c.	**AUTO-FISHEYE** **AUTO-W** **AUTO-S** **AUTO-T** **SHIFT** **MACRO** **AUTO-MACRO** **AUTO-ZOOM**	These inscriptions indicated the lens type: Fisheye Lens, Wide Angle Lens, Standard Lens, Telephoto Lens, Shift Lens, Manual Macro Lens, Auto Macro Lens or Zoom Lens, respectively. The 'AUTO-' part indicates that the lens has an Automatic Aperture; the additions '-W', '-S' and '-T' stand for 'Wide', 'Standard' and 'Tele', respectively.
d.	**Lens Speed (1:x.x)**	The value of the largest aperture diameter.
e.	**Focal Length (f=xx mm)**	The focal length of the lens, in mm.
f.	**Serial Number**	Some versions of the Standard Lens 50mm/F1.8 have their Serial Number on the lens mount instead of the Front Ring.

Pitfalls when buying off-brand lenses

When you buy an off-brand lens you may want to check how compatible it is with the Zuiko specs, especially when you also own Zuiko lenses and want to use them in a mixed set-up.

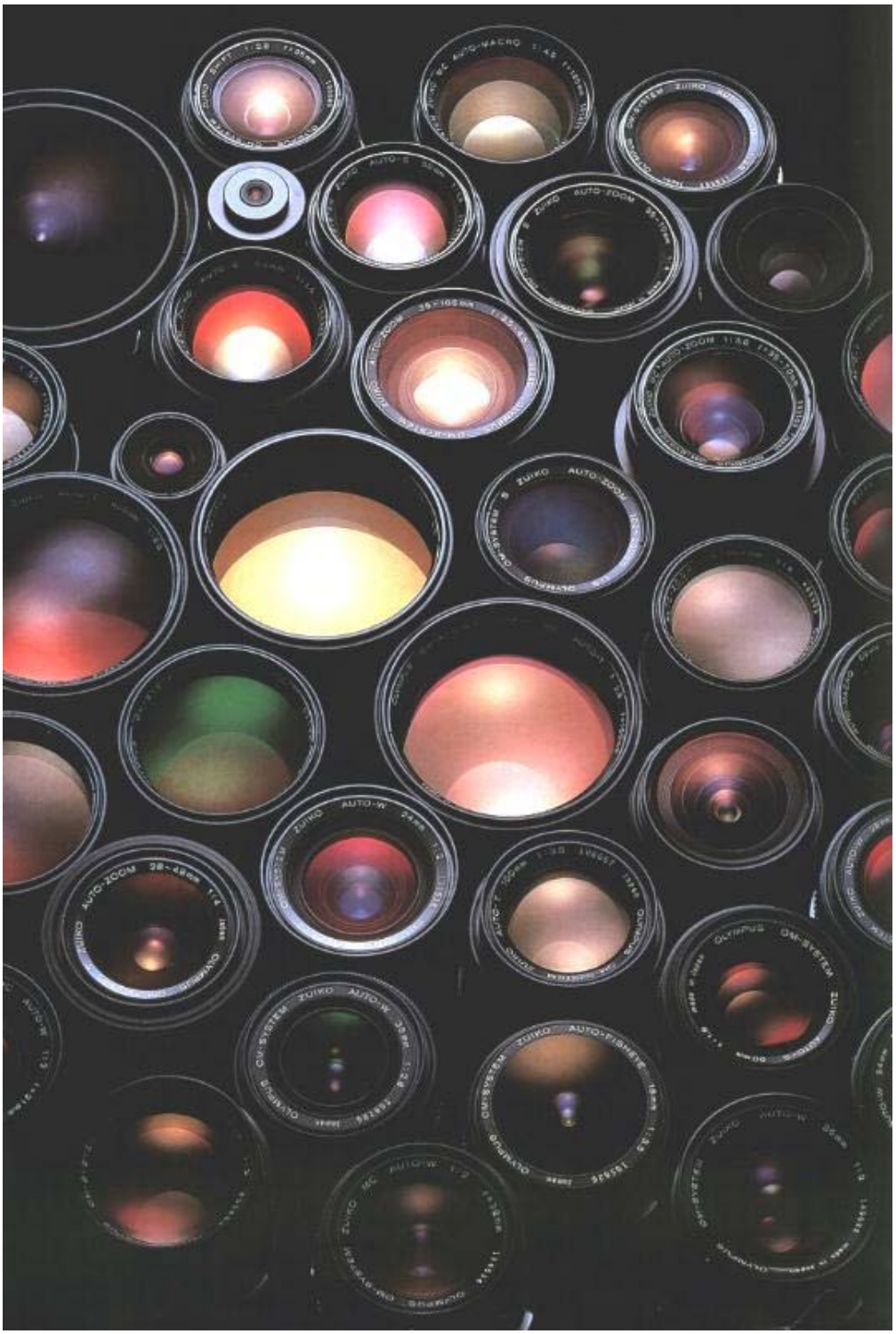
Aperture Ring. Some fix-focal length lenses have it near the body instead of near the front; some have click stop in between (not very comfortable when you want to change aperture without looking at the lens); some turn in opposite direction.

Focusing Ring, Zoom Ring. Sometimes these turn in opposite directions.

Depth of Field Preview Button. Sometimes it is missing! Example: Panagor 100-300mm/F5.6
Meter Coupling Lever. When the Aperture Ring is set to wide open, this lever must have one single position. If this position is shifted, the camera will assume the lens is stopped down and indicate the wrong exposure value.
Automatic Diaphragm Lever. Be sure it works as smooth as the one on Zuiko lenses! When too much force is needed it can damage the camera.
Front Mount Ring. Zuiko lenses use only a few different filter sizes, the most popular lenses accept either 49mm or 55mm filters. Third party lenses can use any possible filter size.
Screws in bayonet mount. If the lens has more than three screws one of them can damage the spot reset button in the lens mount of the OM-3(Ti) or OM-4(Ti). This can be fixed by filling the screw hole with epoxy. You may wish to remove the screw first. This obviously also applies to off-brand teleconverters, extension rings, macro converters and bellows.
Size and weight. Zuiko lenses are built as small and light as possible. This philosophy is not always followed by third party lenses.
Image quality and strength. This is probably an open door. Most off-brand lenses in OM mount can't compete with Zuiko lenses in terms of image quality (resolution, contrast, vignetting, distortion etc.) and physical quality. There are, however, good exceptions. Brands like Tokina AT-X, Vivitar Series 1, Kiron and Tamron are commonly appreciated and praised for their high quality. Especially lenses built for professional use, like 80-200mm/F2.8 zooms and 300mm/F2.8 super tele lenses can be expected to have extraordinary specs.

Single Coating (SC) vs. Multi Coating (MC)

It can be quite tricky to determine whether a lens is single coated or multi coated. The presence of the characters MC on the lens front ring is more or less an evidence, with one pitfall: the ring may have been replaced during a repair or maintenance job... The absence of the MC designation doesn't mean anything either - at a certain moment Olympus decided it had enough of this multicoating marketing hype, all new lenses were supposed to be multicoated anyway, and just removed the two characters. The X.Zuiko type designation also doesn't prove anything. The fast wide angles and the 18mm/F3.5 were designed multicoated from the very beginning and were initially designed (and maybe also produced and marketed) with the X.Zuiko designation!
The fact that the lens has a silver nose certainly has nothing to do with the coating. Although the gradual replacement of the silver nose by the black nose of all Zuiko lenses happened more or less simultaneously with the replacement of single coated lenses by multicoated lenses, the early multicoated lenses (the fast wide angles) had the MC designation but still had the silver nose.
Finally the color of the reflection from the lens is frequently mentioned. Multicoated lenses are supposed to have greenish reflections. Well just have a look at the picture below, scanned from The OM System Lens Handbook, edition October 1984, at the time most if not all lenses were multicoated. All colors are present, and no two coatings are identical.
Are single coated lenses, if and when you think you can determine them as such, to be avoided? Most certainly not! All Zuiko lenses are guaranteed to produce excellent results. To avoid unwanted reflections you are advised to use a lens hood all the time, which will help much more than even the best coating...



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