

Vivitar®

Automatic Fixed Mount Lens

55mm f2.8

Macro

Owner's Manual



Before you begin . . .

To use your new Vivitar Automatic Lens, please study this Owner's Manual carefully. Keep it handy as a guide and refer to it whenever questions arise on the use and care of your lens. The information it contains should help you get maximum enjoyment from your lens . . . enjoyment that comes from the satisfaction of taking pictures with that "professional touch." With careful handling and good care your lens will give you many years of reliable operation.

Getting acquainted with your Lens

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| 1 Filter Thread | 7 Magnification Scale |
| 2 Built-in Lens Shade | 8 Aperture Reference Dot |
| 3 Distance Index Mark | 9 Aperture Ring |
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Mounting your Lens

Your Vivitar Macro Lens is designed to mount in the same manner as your normal lens. Before mounting, set the Focusing Ring ⑥ to infinity "∞". (See photo "A")

Holding your Lens

While using your lens, it is best to support the camera/lens combination with most of the weight resting in the palm of the left hand (see photo "B"). This leaves your right hand free to operate the controls of your camera and helps to ensure proper balance and stability.

Focusing

Your new Vivitar lens is designed to provide you with the utmost in fast and easy focusing. It enables you to focus at magnifications up to 1:1 (life-size), where the image on the negative is the same size as the subject. To focus, turn the Focusing Ring ⑥ until the subject appears sharpest in the camera's viewfinder.

Distance Scales

The green and white Distance Scales ⑤ engraved on your lens indicate the distance from the subject in focus to the film plane. The white numbers denote this distance in feet while those in green represent the distance in meters.

Because your Vivitar Macro Lens focuses to extremely close distances, the Focusing Ring makes more than one revolution as it turns from the infinity " ∞ " setting to the closest focus setting. For this reason, two separate distance scales are provided. Starting at infinity " ∞ " and focusing to 0.79 feet (0.24 meters), read the Distance Scales engraved on the Focusing Ring ⑥ to find the subject-to-film plane distance (see photo "C"). When focusing at distances of 0.75 feet (0.23 meters) or closer (magnifications greater than 1:2), read the Distance Scales on the Built-in Lens Shade ②. (See photo "D")

Distance Indexes

The Distance Index Mark ③ is the reference point for the correct focus of your lens when using the Distance Scales engraved on the Focusing Ring. Reading the number of feet or meters indicated on the Distance Scales opposite this mark allows you to estimate the distance from the subject in focus to the film plane. As you turn the Focusing Ring from ∞ to 0.79 feet (0.24 meters), the Distance Index Mark begins to extend farther away from the Distance Scales. As this occurs, use the center white line leading to the Distance Index Mark as the reference point for focusing.

EXAMPLE: To focus on a subject 5 feet (1.5 meters) from the film plane, turn the Focusing Ring until the white "5" (green "1.5") on the Distance Scale aligns with the white center line. (See photo "E")

When focusing on subjects 0.75 feet (0.23 meters) or closer to the film

plane, read the distance engraved on the Built-in Lens Shade ② that aligns with the edge of the Focusing Ring.

EXAMPLE: To focus on a subject 0.72 feet (0.22 meters) from the film plane, turn the Focusing Ring until the edge of the Ring aligns with the indicator line for "0.72" feet ("0.22" meters) engraved on the Lens Shade. (See photo "F")

Magnification Scale

In some instances you may want to take pictures at a specific magnification such as life-size (1:1) or ½ life-size (1:2), etc. For this purpose, a magnification scale ⑦ is engraved on the lens barrel to indicate the approximate magnification at which you are shooting.

To set your lens for a specific magnification, turn the Focusing Ring ⑥ until the edge of the Ring aligns with the desired setting on the Magnification Scale. Then move the camera and/or subject back and forth until the image appears sharpest in the viewfinder.

EXAMPLE: To photograph a subject at 1:2 magnification (½ life-size), align the edge of the Focusing Ring with the orange line above the "1:2" on the Magnification Scale (See photo "G"). Then, move the camera and/or subject to focus.

Aperture Control

The Aperture Ring ⑨ controls the amount of light allowed to reach the

film by controlling the size of the lens diaphragm opening. As you set your lens to higher f-stop numbers, the diaphragm opening becomes smaller, allowing less light to reach the film.

The automatic diaphragm operation of your lens allows you to focus and compose your picture with the diaphragm at maximum aperture or "wide open." The diaphragm will automatically stop down to the pre-selected aperture at the moment of exposure and immediately reopen.

EE Coupled Lenses

Many cameras today have an EE feature which automatically determines the correct aperture for a given photographic situation when a specific shutter speed is selected. Some Vivitar Automatic Lenses designed with EE coupling mechanisms have an EE Lock Button to ensure that the lens is not accidentally removed from EE operation. On these lenses, the Aperture Ring locks with a positive click when placed in the "EE" position. When you wish to set the aperture manually, press the EE Lock Button to move the Aperture Ring from the "EE" position. (See photo "H")

Depth of Field

Depth of field is the area of acceptable sharpness in front of and behind the subject in focus. This depth is determined by the aperture you have selected and the distance from the subject in focus to the film plane. As you get closer to your subject or as you open your lens (e.g. from f16 to

f2.8), the depth of field becomes shallower (see photo "I"). By stopping your lens down (e.g. from f2.8 to f16) or getting farther away from your subject, this depth of field or zone of acceptable sharpness can be increased. (See photo "J")

Depth of Field Scale

During the first revolution of the Focusing Ring ⑥ (from ∞ to 0.79 feet [0.24 meters]) your lens has a double set of numbers representing f-stops engraved on the Depth of Field Scale ④. Once you have focused on your subject (up to 1:2 magnification), everything within the distance range indicated between the two aperture numbers you have selected will be in the zone of acceptable sharpness.

EXAMPLE: with your lens focused at 5 feet (1.5 meters), and the Aperture Ring set to f16, everything between about 4 and 7 feet from the film plane will be in focus. (See photo "E")

Depth of Field Preview

You can actually see depth of field in your camera's viewfinder by using the depth of field preview control located either on your camera or on your lens. Vivitar Automatic Lenses designed for use on cameras not having depth of field preview controls on the camera body provide them built into the Lens Mount ⑪.

Your lens may have one of the following depth of field preview controls:

Preview Button —

Press to stop diaphragm down. When released, diaphragm returns to automatic operation. (See photo "K")

Auto/Manual Switch —

Set to "M" position to stop diaphragm down. Return to "A" position to re-activate auto diaphragm mechanism. (See photo "L")

Depth of Field in Macrophotography

In close-up and macrophotography, depth of field is directly related to magnification and aperture.

As magnification increases, depth of field decreases drastically. In most cases you are working with a zone of acceptable sharpness that measures in inches and fractions of inches, particularly at higher magnifications. Since depth of field increases as the aperture becomes smaller (e.g., from f2.8 to f16) you can compensate for this shallow depth of field by stopping your lens down as far as lighting conditions will allow.

If inadequate lighting conditions prevent you from stopping your lens down for satisfactory depth of field, add supplementary artificial lighting or adjust your shutter speed until the proper exposure can be obtained. If this is not possible, make sure you focus carefully on your subject and position it in a way that great depth of field is not critical to a good photograph. For

example, if you place an elongated subject on a plane parallel to the film plane, the need for greater depth of field is minimized.

Great depth of field not required for sharp picture. (See photo "M")

Requires great depth of field for entire subject to be in focus. (See photo "N")

Helpful Hints

1 — Because exposure in close-up photography is critical to getting the best possible picture, it's a good idea to shoot several pictures of the same subject varying the exposure slightly. This method, called "bracketing," involves shooting the pictures at the f-stop indicated by your through-the-lens meter, underexposing by $\frac{1}{2}$ to 1 stop and overexposing by $\frac{1}{2}$ to 1 stop. The results will be well worth the small extra expense for film.

2 — Always try to use a tripod or other support for your camera when shooting at higher magnifications to assure that slight movements or vibrations do not degrade the picture quality. If for some reason a support cannot be used, take the picture at the fastest possible shutter speed lighting conditions will allow.

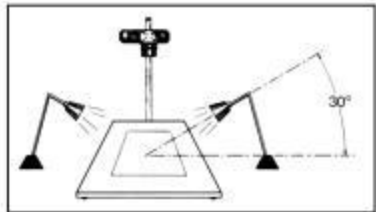
3 — It's always a good idea to use a cable release to trigger the shutter of your camera. Even the slight movement caused by your hand pressing the shutter release can affect the quality of pictures taken at high magnifications. If your camera has a self-timer, you can use it to prevent this movement if a cable release is not available.

4 — The unique design of your lens allows you to get crisp, clear pictures without using a conventional lens hood. However, when using filters on the front of the lens it is recommended that you use a lens hood to minimize flare.

Copying

Your Vivitar macro lens is ideally suited for photographing flat subjects such as documents, photographs, or postage stamps. For best results when copying it is recommended that you mount your camera on a copystand or macrophoto stand. This allows you to conveniently adjust the camera position to change magnification, and stabilizes the camera for maximum sharpness. If possible, place a piece of non-glare glass over the subject to keep it flat.

Unless you desire special shading, use two identical light sources, one on each side of the camera to eliminate distracting shadows. Place the lights about 30° above the subject plane and adjust their position to avoid glaring highlights in the picture.





After positioning the lights and camera and focusing on the subject, remove the subject and substitute an 18% reflectance gray card face up. Take your exposure reading off the gray card. This will indicate the proper exposure for an average subject without excessive white or black areas. For predominantly light subjects, open your lens an extra f-stop (i.e. from f11 to f8). For predominantly black subjects, stop down the lens one f-stop. It is always a good practice to "bracket" your exposures when doing copywork.

Caring for your Lens

A — Keep your lens dust-free by using both the front and rear lens caps when the lens is not in use.

B — When attaching threaded accessories (filters, etc.) to your lens, align the accessory very carefully with the Filter Thread ① to prevent damage to the threads.

C — Clean your lens with an air-brush, anti-static brush, good quality camel-hair brush, or use a lens tissue to gently brush away loose particles. To remove fingerprints or smudges, use a small amount of lens cleaning fluid and gently swab the lens surface with a lens tissue on the end of a cotton swab. *Never rub the lens elements with your fingers, clothing, or other abrasive material which may scratch the lens coating and damage the glass surface.*

D — Always store your lens in a cool, dry place. It's a good idea to store it with the silica gel packet supplied, especially during wet or humid weather. A lens case with a silica-gel packet is a handy means of storage, and provides excellent protection for your lens.

Specifications

Elements/Groups: 5/4

Angle of Acceptance: 43°

Aperture Range: f2.8 — f16

Minimum Focusing Distance from Film Plane: 8½" (0.215 m)

Maximum Magnification: 1:1 (life-size)

Weight: 11 oz. (312 g)

Length at ∞: 2½" (63.5 mm)

Maximum Barrel Diameter: 2¾" (70 mm)

Accessory Size: 62mm

Slip-on Lens Cap Size: 65mm

Accessories Included: Front and rear lens caps

Specifications subject to change without notice. Weights, lengths, and other specifications may vary slightly depending on lens mount.





United States 8c

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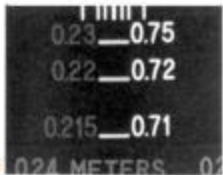
United States 8c
Tom Sawyer

Depth of Field Tables

f _t \ f	2.8	4	5.6	8	11	16
0.71	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"
0.72	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"	8 1/2" ~ 8 1/2"
0.75	8 1/2" ~ 9"	8 1/2" ~ 9"	8 1/2" ~ 9"	8 1/2" ~ 9"	8 1/2" ~ 9"	8 1/2" ~ 9"
0.83	9" ~ 10 1/2"	9 1/2" ~ 10 1/2"	9 1/2" ~ 10 1/2"	9 1/2" ~ 10 1/2"	9 1/2" ~ 10 1/2"	9 1/2" ~ 10 1/2"
0.90	10 1/2" ~ 10 1/2"	10 1/2" ~ 10 1/2"	10 1/2" ~ 10 1/2"	10 1/2" ~ 10 1/2"	10 1/2" ~ 10 1/2"	10 1/2" ~ 10 1/2"
1.00	11 1/2" ~ 1 1/2"	11 1/2" ~ 1 1/2"	11 1/2" ~ 1 1/2"	11 1/2" ~ 1 1/2"	11 1/2" ~ 1 1/2"	11 1/2" ~ 1 1/2"
1.25	1 1/2" ~ 1 3/4"	1 1/2" ~ 1 3/4"	1 1/2" ~ 1 3/4"	1 1/2" ~ 1 3/4"	1 1/2" ~ 1 3/4"	1 1/2" ~ 1 3/4"
1.50	1 1/2" ~ 1 4 1/2"	1 1/2" ~ 1 4 1/2"	1 1/2" ~ 1 4 1/2"	1 1/2" ~ 1 4 1/2"	1 1/2" ~ 1 4 1/2"	1 1/2" ~ 1 4 1/2"
2.00	1 1/2" ~ 2 1/2"	1 1/2" ~ 2 1/2"	1 1/2" ~ 2 1/2"	1 1/2" ~ 2 1/2"	1 1/2" ~ 2 1/2"	1 1/2" ~ 2 1/2"
3.00	2 1/2" ~ 3 1/2"	2 1/2" ~ 3 1/2"	2 1/2" ~ 3 1/2"	2 1/2" ~ 3 1/2"	2 1/2" ~ 3 1/2"	2 1/2" ~ 3 1/2"
4.00	3 1/2" ~ 4 1/2"	3 1/2" ~ 4 1/2"	3 1/2" ~ 4 1/2"	3 1/2" ~ 4 1/2"	3 1/2" ~ 4 1/2"	3 1/2" ~ 4 1/2"
5.00	4 1/2" ~ 5 1/2"	4 1/2" ~ 5 1/2"	4 1/2" ~ 5 1/2"	4 1/2" ~ 5 1/2"	4 1/2" ~ 5 1/2"	4 1/2" ~ 5 1/2"
7.00	5 1/2" ~ 7 1/2"	6 1/2" ~ 7 1/2"	6 1/2" ~ 7 1/2"	6 1/2" ~ 7 1/2"	6 1/2" ~ 7 1/2"	6 1/2" ~ 7 1/2"
10.00	7 1/2" ~ 11 1/2"	8 1/2" ~ 11 1/2"	8 1/2" ~ 11 1/2"	8 1/2" ~ 11 1/2"	8 1/2" ~ 11 1/2"	8 1/2" ~ 11 1/2"
20.00	15 1/2" ~ 24 1/2"	15 1/2" ~ 27 1/2"	14 1/2" ~ 31 1/2"	13 1/2" ~ 42 1/2"	11 1/2" ~ 74 1/2"	9 1/2" ~ 90
∞	102" ~ ∞	76" ~ ∞	54" ~ ∞	38" ~ ∞	28" ~ ∞	19" ~ ∞

m \ f	2.8	4	5.6	8	11	16
0.215	0.214 ~ 0.216	0.214 ~ 0.216	0.213 ~ 0.217	0.213 ~ 0.217	0.212 ~ 0.218	0.210 ~ 0.220
0.22	0.219 ~ 0.221	0.218 ~ 0.221	0.218 ~ 0.222	0.218 ~ 0.222	0.217 ~ 0.223	0.215 ~ 0.225
0.23	0.229 ~ 0.231	0.229 ~ 0.231	0.228 ~ 0.232	0.227 ~ 0.233	0.226 ~ 0.234	0.225 ~ 0.235
0.24	0.239 ~ 0.241	0.238 ~ 0.242	0.238 ~ 0.242	0.237 ~ 0.243	0.236 ~ 0.244	0.234 ~ 0.246
0.25	0.248 ~ 0.252	0.247 ~ 0.253	0.246 ~ 0.254	0.245 ~ 0.256	0.243 ~ 0.258	0.240 ~ 0.261
0.27	0.268 ~ 0.272	0.267 ~ 0.273	0.266 ~ 0.274	0.264 ~ 0.276	0.261 ~ 0.279	0.258 ~ 0.283
0.30	0.297 ~ 0.303	0.296 ~ 0.304	0.295 ~ 0.308	0.292 ~ 0.308	0.290 ~ 0.311	0.285 ~ 0.318
0.35	0.348 ~ 0.354	0.345 ~ 0.355	0.343 ~ 0.357	0.340 ~ 0.361	0.338 ~ 0.368	0.330 ~ 0.372
0.40	0.395 ~ 0.405	0.393 ~ 0.407	0.391 ~ 0.410	0.387 ~ 0.414	0.382 ~ 0.420	0.374 ~ 0.429
0.50	0.49 ~ 0.51	0.48 ~ 0.51	0.48 ~ 0.52	0.48 ~ 0.52	0.47 ~ 0.53	0.46 ~ 0.55
0.70	0.68 ~ 0.72	0.68 ~ 0.72	0.67 ~ 0.73	0.66 ~ 0.75	0.65 ~ 0.76	0.62 ~ 0.80
1.00	0.97 ~ 1.03	0.96 ~ 1.05	0.94 ~ 1.06	0.92 ~ 1.09	0.89 ~ 1.14	0.85 ~ 1.21
1.50	1.43 ~ 1.57	1.41 ~ 1.60	1.38 ~ 1.65	1.33 ~ 1.72	1.27 ~ 1.83	1.19 ~ 2.03
3.00	2.75 ~ 3.30	2.66 ~ 3.45	2.54 ~ 3.67	2.38 ~ 4.05	2.21 ~ 4.66	1.97 ~ 6.24
5.00	4.34 ~ 5.89	4.11 ~ 6.36	3.84 ~ 7.17	3.49 ~ 8.81	3.14 ~ 12.30	2.68 ~ 37.10
∞	33.00 ~ ∞	23.10 ~ ∞	16.50 ~ ∞	11.60 ~ ∞	8.41 ~ ∞	5.78 ~ ∞





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