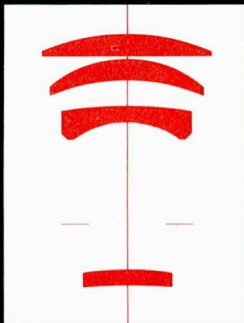


Vivitar®

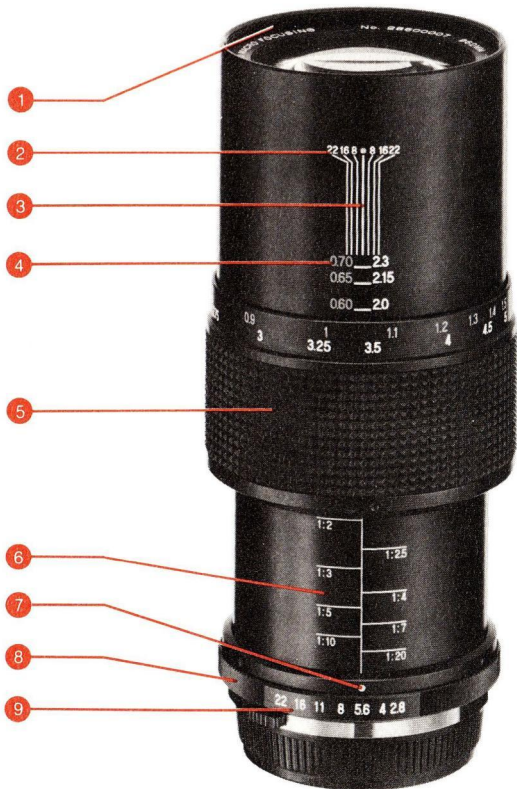
135mm f2.8



Lens—

Close-Focus Fixed Mount

Owner's Manual



Getting acquainted with your Lens

- 1 Accessory Thread
- 2 Depth of Field Scales
- 3 Distance Index Line
- 4 Distance Scales
- 5 Focusing Ring
- 6 Magnification Scale
- 7 Aperture Reference Dot
- 8 Aperture Ring
- 9 Aperture Scale

Mounting your Lens

You'll find that your Vivitar 135mm lens mounts on your camera with the same smoothness and precision as your normal lens. When mounting your lens, consult your camera's Owner's Manual for the proper mounting procedures.

Holding your Lens

For maximum stability when hand-holding your camera/lens combination, place your left hand under the lens as shown (see photo "A"). This leaves your right hand free to operate your camera's controls and assures proper balance and stability when shooting.

Focusing

Your Vivitar 135mm f2.8 Close-Focus lens will focus from infinity(∞) to 0.6m (2 ft.) from a subject to your

camera's film plane. To focus, turn the Focusing Ring ⑤ until the subject appears sharpest in your camera's viewfinder.

For properly exposed photographs, always make any exposure adjustments *after* focusing.

Aperture Control

Your Vivitar lens has Automatic Diaphragm Control. As you turn the Aperture Ring ⑧, the diaphragm remains open to the lens' maximum aperture (f2.8). When the shutter is released, the lens automatically stops down to your pre-selected f-stop and instantly reopens after the exposure is completed. To select a specific f-stop:

1—Turn the Aperture Ring ⑧ until the desired f-stop aligns with the Aperture Reference Dot ⑦. (see photo "B")

The Aperture Ring is equipped with click-stops at each indicated f-stop and at each intermediate half-stop between f2.8 and f16.

NOTE: Universal Thread Mount lenses (U/M-42) have an AUTO/MANUAL Switch which must be set in the "A" (Auto) position for Automatic Diaphragm Control. In the "M" (Manual) position, the lens diaphragm opens and closes as the Aperture Ring is turned.

Canon Mount lenses have an AUTO/MANUAL Lever which must be at the clockwise end of its slot for Automatic Diaphragm Control. In the counter-clockwise position, the lens diaphragm opens and closes as the Aperture Ring is turned.

EE Coupled Lenses

Canon Mount lenses have a click-stop at the "O" marked, EE position. The Aperture Ring may be set at and removed from this position in the same manner as selecting a specifically marked f-stop.

Distance Scales

Because your Vivitar lens focuses to very close distances, the Focusing Ring ⑤ makes more than one revolution as it turns from the infinity setting to the minimum focus setting. For this reason, the lens has *two* numbered Distance Scales ④ engraved on the Focusing Ring ⑤ and on the lens barrel. The *white numbers* indicate distance in *feet* and the *green numbers* indicate distance in *meters*.

When focusing from infinity (∞) to 0.75m (2½'), refer to the distance Scales engraved on the Focusing Ring. The distance to an object-in-focus is indicated on these scales at the Distance Index Line ③. For focusing between 0.70 m and 0.60 m (2' -4 '' and 2'), refer to the Distance Scale engraved on the lens barrel.

Depth of Field

Depth of field is the area of acceptable sharpness in front of and behind an object-in-focus. For precise depth of field information for selected aperture/distance combinations, refer to the Depth of Field Tables in the back of this Owner's Manual.

Close-Focus Photography

Your Vivitar 135mm f2.8 is designed to give you close-focus capability, without having to use any close-up attachments. In the close-focus mode, your 135mm lens produces an image reproduction ratio of 1:2 (half life-size) at the minimum focus distance setting: approx. 0.60 m (2') from the subject to your camera's film plane.

Distance Scales

The Distance Scales ④ engraved on the lens barrel are read at the leading edge of the Focusing Ring (see photo "C") to determine the subject-to-film-plane distance for any given focus setting between 0.70 m and 0.60 m (2'-4" and 2').

Magnification Scale

The Magnification Scale ⑥ is read at the trailing edge of the Focusing Ring ⑤ (see photo "D") to determine the image reproduction ratio for any given focus setting between 2.5 m (8') and 0.60 m (2').

Depth of Field in Close-Focus Photography

Depth of field becomes critical to your photograph during close-focus photography. At image reproduction ratios of 1:3 and larger, you are dealing with depth of

field that can be measured in centimeters and millimeters (inches and fractions of inches). For best results, stop the lens down to f11 or f16 (lighting conditions allowing) when the lens is set up for an image reproduction of 1:3 and larger.

Caring for your Lens

- 1**—It's a good idea to keep a filter (Vivitar Skylight or UV haze) on your lens at all times. A filter will protect your lens' front element from dust and dirt that can cause scratches.
- 2**—When attaching threaded accessories to your lens, carefully align the accessory with the Accessory Thread ① to prevent damage.
- 3**—After removing the lens from your camera, put both front and rear lens caps on the lens to prevent any foreign particles from entering.
- 4**—Clean your lens with an air brush or can of compressed air (available at your photo dealer). To remove a fingerprint, use lens cleaning solution and a lens cleaning tissue. DO NOT RUB your finger, cloth, or clothing on the lens surface. Doing so will scratch the lens coating and will affect your photos.
- 5**—Always store your lens in a cool, dry place. In extremely humid climates, EXTRA CARE should be taken when storing your lens. NEVER store your lens in a moisture-retaining enclosure. Let your lens adapt to room temperature before storing. It's a good idea to store your lens with a fresh silica gel packet to prevent moisture from forming on or inside the lens.

Specifications

Optical Contruction: 4 elements in 4 groups

Angle of Acceptance: 18°

Aperture Range: f2.8 to f22*

Minimum Focusing Distance from Film Plane: 0.6 m (2')

Maximum Reproduction Ratio: 1:2

Weight: 430 g (15 oz.)

Length at Infinity 87.5 mm ($3\frac{7}{16}$ ")

Lens Coating: Multicoating (MC)

Maximum Barrel Diameter: 70 mm ($2\frac{3}{4}$ ")

Accessory Size: 62mm

Slip-On Lens Cap Size: 65mm

*f16 on Konica Mount

Specifications subject to change without notice.

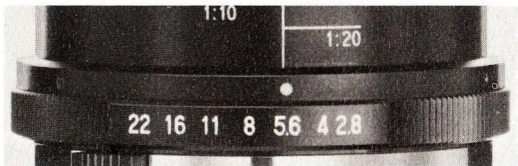
Depth of Field Tables

f.l.	f	2.5	4	5.6	8	11	16	22
2		1'-11 3/8" ~ 2'-3/8"	1'-11 1/2" ~ 2'-1/4"	1'-11 3/8" ~ 2'-3/8"	1'-11 3/8" ~ 2'-3/8"	1'-11 3/8" ~ 2'-3/8"	1'-11 3/8" ~ 2'-3/8"	1'-11 3/8" ~ 2'-3/8"
2.15		2'-1 1/8" ~ 2'-1 1/8"	2'-1 1/8" ~ 2'-1 1/8"	2'-1 1/8" ~ 2'-1 1/8"	2'-1 1/8" ~ 2'-2 1/8"	2'-1 1/8" ~ 2'-2 1/8"	2'-1 1/8" ~ 2'-2 1/8"	2'-1 1/8" ~ 2'-2 1/8"
2.3		2'-3 1/2" ~ 2'-3 1/2"	2'-3 1/2" ~ 2'-3 1/2"	2'-3 1/2" ~ 2'-3 1/2"	2'-3 1/2" ~ 2'-3 1/2"	2'-3 1/2" ~ 2'-4"	2'-3 1/2" ~ 2'-4"	2'-3 1/2" ~ 2'-4"
2.5		2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"	2'-5 1/4" ~ 2'-6 1/4"
2.75		2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"	2'-8 3/8" ~ 2'-9 3/8"
3		2'-11 3/8" ~ 3'-3/8"	2'-11 1/2" ~ 3'-1/2"	2'-11 3/8" ~ 3'-1/8"	2'-11 1/2" ~ 3'-1/2"	2'-11 3/8" ~ 3'-1/8"	2'-11 3/8" ~ 3'-1/8"	2'-11 3/8" ~ 3'-1/8"
3.25		3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"	3'-2 1/8" ~ 3'-3 1/8"
3.5		3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"	3'-5 1/2" ~ 3'-6 1/2"
4		3'-11 3/8" ~ 4'-3/8"	3'-11 1/2" ~ 4'-3/4"	3'-11 3/8" ~ 4'-3/4"	3'-11 1/2" ~ 4'-3/4"	3'-10 3/8" ~ 4'-1 1/4"	3'-10 3/8" ~ 4'-1 1/4"	3'-10 3/8" ~ 4'-1 1/4"
4.5		4'-5 1/2" ~ 4'-6 3/8"	4'-5 1/2" ~ 4'-6 3/8"	4'-5 1/2" ~ 4'-6 3/8"	4'-5 1/2" ~ 4'-7 1/4"	4'-4 1/2" ~ 4'-7 1/4"	4'-3 3/8" ~ 4'-7 1/4"	4'-3 3/8" ~ 4'-7 1/4"
5		4'-11 3/8" ~ 5'-1 1/2"	4'-11 1/2" ~ 5'-1 1/2"	4'-11 3/8" ~ 5'-1 1/2"	4'-10 3/8" ~ 5'-1 1/2"	4'-10 3/8" ~ 5'-1 1/2"	4'-9 3/8" ~ 5'-2 1/2"	4'-9 3/8" ~ 5'-2 1/2"
6		5'-11 3/8" ~ 6'-1 1/2"	5'-11" ~ 6'-1"	5'-10 3/8" ~ 6'-1 1/4"	5'-10 3/8" ~ 6'-2 1/8"	5'-9 3/8" ~ 6'-2 1/8"	5'-8 3/8" ~ 6'-2 1/8"	5'-8 3/8" ~ 6'-2 1/8"
7		6'-11 3/8" ~ 7'-1 1/2"	6'-10 3/8" ~ 7'-1 1/2"	6'-10 3/8" ~ 7'-1 1/4"	6'-9 3/8" ~ 7'-2 1/8"	6'-8 3/8" ~ 7'-3/4"	6'-6 3/8" ~ 7'-5 1/4"	6'-5 3/8" ~ 7'-8 1/4"
8		7'-10 3/8" ~ 8'-1 1/2"	7'-10 1/4" ~ 8'-1 1/2"	7'-9 3/8" ~ 8'-2 1/4"	7'-8 3/8" ~ 8'-3 1/4"	7'-7 3/8" ~ 8'-5 1/4"	7'-5 3/8" ~ 8'-7 1/4"	7'-3 3/8" ~ 8'-10 1/4"
10		9'-10 3/8" ~ 10'-1 1/2"	9'-9 3/8" ~ 10'-2 1/4"	9'-8 3/8" ~ 10'-4"	9'-6 3/8" ~ 10'-5 1/4"	9'-4 1/2" ~ 10'-8 1/4"	9'-1 1/2" ~ 11'-1 1/4"	8'-10 3/8" ~ 11'-5 1/4"
12		11'-9 3/8" ~ 12'-2 3/8"	11'-8 3/8" ~ 12'-4 1/4"	11'-6 3/8" ~ 12'-5 1/2"	11'-4 1/2" ~ 12'-8 3/4"	11'-1 1/2" ~ 12'-11 3/8"	10'-9 3/8" ~ 13'-5 1/4"	10'-5 3/8" ~ 14'-1 1/4"
15		14'-7 3/8" ~ 15'-4 3/8"	14'-6" ~ 15'-6 3/8"	14'-3 3/8" ~ 15'-9 3/4"	14'-3/4" ~ 16'-1 1/4"	13'-8 3/8" ~ 16'-8 3/8"	13'-2 3/8" ~ 17'-4 3/4"	12'-7 3/8" ~ 18'-8 3/8"
20		19'-4 1/2" ~ 20'-8"	19'-1 1/2" ~ 20'-11 3/8"	18'-9 1/2" ~ 21'-4 1/2"	18'-3 3/8" ~ 22'-1/2"	17'-9 3/8" ~ 22'-10 1/8"	16'-10 3/8" ~ 24'-6"	15'-11 3/8" ~ 26'-9 3/8"
30		28'-7 3/8" ~ 31'-6 3/8"	28'-3 3/8" ~ 32'-2 1/4"	27'-4 3/8" ~ 33'-2 3/4"	26'-4 3/8" ~ 34'-9 3/8"	25'-2 3/8" ~ 37'-3/4"	23'-6 3/8" ~ 41'-5"	21'-9 3/8" ~ 48'-3 3/8"
60		54'-8 3/8" ~ 66'-4 3/8"	52'-8 3/8" ~ 69'-7 3/8"	50'-3 3/8" ~ 74'-4 1/4"	47'-3/4" ~ 82'-9 3/8"	43'-6 3/8" ~ 96'-7 3/4"	38'-8 3/8" ~ 133'-8 1/4"	34'-1 3/8" ~ 247'-10 3/8"
∞		621'-11 1/2" ~ ∞	435'-4 3/8" ~ ∞	310'-11 1/4" ~ ∞	217'-8 1/4" ~ ∞	158'-3 3/8" ~ ∞	108'-10 3/8" ~ ∞	79'-1 1/4" ~ ∞

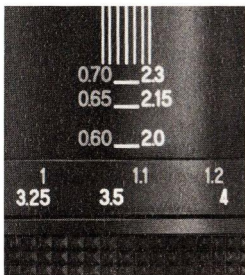
m \ i	2,8	4	5,6	8	11	16	22
0,5	0,598 ~ 0,602	0,597 ~ 0,603	0,596 ~ 0,604	0,595 ~ 0,605	0,593 ~ 0,608	0,589 ~ 0,611	0,585 ~ 0,615
0,65	0,648 ~ 0,652	0,647 ~ 0,653	0,646 ~ 0,654	0,644 ~ 0,656	0,641 ~ 0,659	0,638 ~ 0,663	0,633 ~ 0,668
0,7	0,697 ~ 0,703	0,696 ~ 0,704	0,695 ~ 0,705	0,693 ~ 0,707	0,690 ~ 0,710	0,686 ~ 0,715	0,680 ~ 0,721
0,75	0,747 ~ 0,753	0,746 ~ 0,754	0,744 ~ 0,756	0,742 ~ 0,759	0,739 ~ 0,762	0,733 ~ 0,767	0,727 ~ 0,774
0,8	0,797 ~ 0,803	0,795 ~ 0,805	0,793 ~ 0,807	0,790 ~ 0,810	0,787 ~ 0,813	0,781 ~ 0,820	0,774 ~ 0,827
0,9	0,896 ~ 0,904	0,894 ~ 0,906	0,892 ~ 0,909	0,888 ~ 0,912	0,884 ~ 0,917	0,876 ~ 0,925	0,868 ~ 0,935
1	0,995 ~ 1,005	0,993 ~ 1,008	0,990 ~ 1,011	0,985 ~ 1,015	0,980 ~ 1,021	0,971 ~ 1,031	0,960 ~ 1,043
1,1	1,094 ~ 1,106	1,091 ~ 1,109	1,087 ~ 1,113	1,082 ~ 1,119	1,075 ~ 1,126	1,065 ~ 1,138	1,052 ~ 1,153
1,2	1,192 ~ 1,208	1,189 ~ 1,211	1,185 ~ 1,215	1,179 ~ 1,222	1,171 ~ 1,231	1,158 ~ 1,245	1,143 ~ 1,263
1,3	1,291 ~ 1,309	1,287 ~ 1,313	1,282 ~ 1,318	1,275 ~ 1,326	1,266 ~ 1,336	1,251 ~ 1,353	1,234 ~ 1,374
1,4	1,390 ~ 1,410	1,385 ~ 1,415	1,380 ~ 1,421	1,371 ~ 1,430	1,361 ~ 1,442	1,343 ~ 1,462	1,323 ~ 1,486
1,5	1,488 ~ 1,512	1,483 ~ 1,517	1,477 ~ 1,524	1,467 ~ 1,535	1,455 ~ 1,548	1,435 ~ 1,571	1,412 ~ 1,599
1,7	1,68 ~ 1,72	1,68 ~ 1,72	1,67 ~ 1,73	1,66 ~ 1,74	1,64 ~ 1,76	1,62 ~ 1,79	1,59 ~ 1,83
2	1,98 ~ 2,02	1,97 ~ 2,03	1,96 ~ 2,04	1,94 ~ 2,06	1,92 ~ 2,09	1,89 ~ 2,13	1,85 ~ 2,18
2,5	2,47 ~ 2,53	2,45 ~ 2,55	2,44 ~ 2,57	2,41 ~ 2,60	2,38 ~ 2,64	2,32 ~ 2,70	2,27 ~ 2,79
3	2,95 ~ 3,05	2,93 ~ 3,07	2,91 ~ 3,10	2,87 ~ 3,14	2,82 ~ 3,20	2,75 ~ 3,30	2,67 ~ 3,43
4	3,92 ~ 4,09	3,88 ~ 4,12	3,84 ~ 4,18	3,77 ~ 4,26	3,69 ~ 4,36	3,57 ~ 4,55	3,43 ~ 4,79
5	4,87 ~ 5,14	4,82 ~ 5,20	4,75 ~ 5,28	4,65 ~ 5,41	4,53 ~ 5,58	4,35 ~ 5,89	4,14 ~ 6,31
7	6,75 ~ 7,27	6,65 ~ 7,39	6,52 ~ 7,56	6,33 ~ 7,83	6,11 ~ 8,19	5,78 ~ 8,87	5,43 ~ 9,86
10	9,5 ~ 10,56	9,30 ~ 10,81	9,05 ~ 11,18	8,69 ~ 11,77	8,28 ~ 12,61	7,68 ~ 14,31	7,07 ~ 17,08
20	18,09 ~ 22,36	17,38 ~ 23,55	16,52 ~ 25,35	15,37 ~ 28,63	14,14 ~ 34,16	12,48 ~ 50,36	10,94 ~ 116,91
∞	189,57 ~ ∞	132,7 ~ ∞	94,79 ~ ∞	66,35 ~ ∞	48,25 ~ ∞	33,18 ~ ∞	24,13 ~ ∞



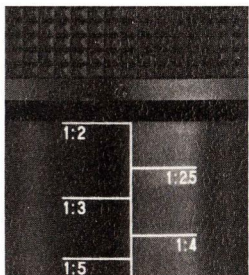
A



B



C



D

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