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Reflex-Nikkor

500mm

f/8

Nikon

使用説明書

INSTRUCTION MANUAL

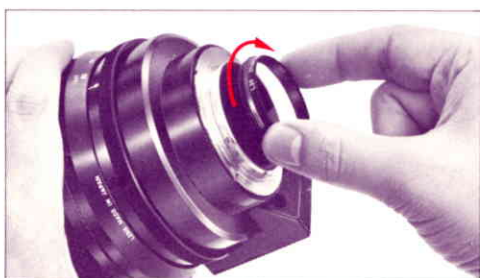
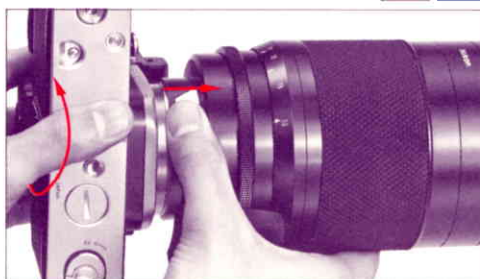
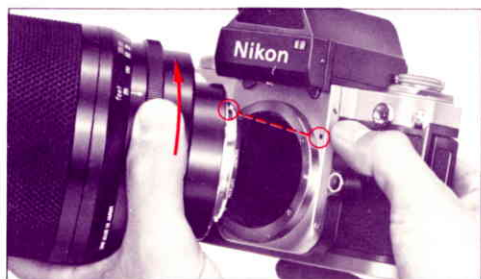
GEBRAUCHSANWEISUNG

MODE D'EMPLOI

MANUAL DE INSTRUCCIONES



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NOMENCLATURE

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| 1 Filter | 5 Spring Catch |
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FOREWORD

The Reflex-Nikkor 500mm f/8 is one of the catadioptric type Nikkor super telephoto lenses. Its mirror construction reduces bulk and overall length and also helps to correct aberrations, especially chromatic aberration, thus the lens does not even require refocusing for infrared photography. Multi-layer coating reduces reflection, thus minimizing flare and ghost images. This results in improved contrast and excellent color rendition. Because of its optical design, the lens has no aperture diaphragm. However, its fixed aperture of f/8 provides ample depth of field. For all the extra-long focal length, the lens can focus down to as close as 13 feet (4m), and comes with a set of five filters including a neutral density filter that can be used to "stop down" the lens further.

MOUNTING THE LENS A1, A2

Position the lens in the camera's bayonet mount, aligning the red dot on the lens with the black dot on the camera. Grasp the lens by the knurled ring and twist it counterclockwise until it clicks into place.

The lens mount which bayonets to the camera can be rotated 90° to permit shooting in either horizontal or vertical format with the lens mounted on a tripod. To rotate the camera, press in on the spring catch protruding from the rear end of the lens mount and turn the camera until it clicks into place. To remove the lens, press the lens release button on the camera and twist the lens clockwise.

FOCUSING B

Turn the focusing ring until the image on the focusing screen appears sharp and crisp. The Reflex-Nikkor can focus down to as close as 13 feet, which represents approximately 1:7 reproduction ratio. To compensate for the image displacement which may occur when the lens is warmed by the sun, the focusing ring can be turned 14° past the infinity mark (∞).

Since a telephoto lens magnifies every focusing error and every vibration, careful focusing and solid support are essential. Although the lens can be hand held, the use of a tripod is recommended. The Reflex-Nikkor's tripod socket is designed for correct balance with the lens mounted on a camera body.

The use of a lens hood is recommended to prevent stray light from entering the lens and to protect it against damage. The Reflex-Nikkor comes with a

lens hood.

Recommended Focusing Screens

Nineteen different focusing screens are available for Nikon F and F2 cameras to suit any type of lens or picture-taking situation. Those which are recommended for use with the Reflex-Nikkor 500mm f/8 are listed below.

Screen Camera	A/L	B	C	D	E	G1	G2	G3	G4	H1	H2	H3	H4	J	K/P	M	R
F	⊙	⊙	○	○	⊙									⊙	⊙		⊙
F2	⊙	⊙	○	○	⊙									⊙	⊙		⊙

⊙ = Excellent

⊙ = The split-image rangefinder or microprism is dim. Focus on the surrounding matte area.

○ = Although portions of the screen image may not be clear enough, this hardly affects picture taking.

Blank means inapplicable.

With the Nikkormat EL or Nikkormat FT_N, focus on the matte area surrounding the central focusing circle.

USING THE FILTERS

C₁, C₂

A set of five 39mm-diameter filters is supplied with the lens: ultraviolet (L37), yellow (Y52), orange (O56), red (R60) and neutral density (ND4X). The ultraviolet filter comes already screwed into the rear lens mount while the others are stored inside the top flap of the leather lens case. Since the filter is part of the lens system, one of them must be screwed in place in the rear lens mount at all times. Normally the ultraviolet filter is left on the lens when no change in contrast or f/number is desired. To change filters, simply unscrew and remove the one on the lens and replace it with a different filter. With the exception of the ND4X filter, the filters supplied with the Reflex-Nikkor are used to cut down on haze or to increase contrast. Contrast increases from yellow to orange to red with black-and-white film. However, these filters are not used with color film except for special effects. The ultraviolet and ND filters are used with either type of film, and the ND filter may also be used to produce the same effect as stopping down the lens.

Caution: The thickness of the glass used in the filters for the Reflex-Nikkor is matched carefully to the optical properties of the lens. Do not use filters intended for other purposes as they may cause a shift in focus.

Type of filter		Filter factor	
Color and shade	Designation	Daylight	Tungsten light
UV	L37	1	1
Yellow	Y52	2	1.4
Orange	O56	3.5	2
Red	R60	6	5
ND	ND4X	4	4

STOP-DOWN EXPOSURE MEASUREMENT

D

The Reflex-Nikkor does not couple with the Nikkormat and Photomic-series thru-the-lens meters. However, you can still use the meters to measure exposure by the stop-down method. First, push the coupling pin up into the Photomic finder with a coin or similar object (with the Nikkormat cameras, push the camera's coupling pin to the right as far as it will go). Mount the lens on the camera and switch on the meter in the usual way. The next procedure for each camera is as follows:

Nikon F2 Photomic, Nikon Photomic FT_N and Nikkormat FT_N cameras

Adjust the shutter speed until the meter needle in the viewfinder centers.

Nikon F2S Photomic camera

Use the same procedure as above until the two signal lights glow.

Nikkormat EL camera

Set the shutter-speed dial at "A" and the black needle gives the shutter speed. If it is impossible to center the needle even at the camera's fastest shutter speed, the neutral density filter may be screwed into place. The filter will work in the same way as a smaller lens aperture.

CONTROLLING THE APERTURE

Since the Reflex-Nikkor has no aperture diaphragm, a neutral density (ND) filter is used to give the same effect as a smaller aperture. The filter supplied with the lens has an exposure factor of 4X, which is equivalent to stopping down the lens to f/16.

Since the ND filter does not actually stop down the lens but only cuts down on the amount of light striking the film, note that it has no effect on depth of field.

FEATURES/SPECIFICATIONS

Focal length/aperture: 500mm f/8

Picture angle: 5°

Lens construction: 5 elements in 3 groups

Diaphragm: Fixed

Meter coupling prong: Not provided

Focusing range: Infinity (∞) to 13 feet (4m)

Distance scale: Graduated both in feet and meters

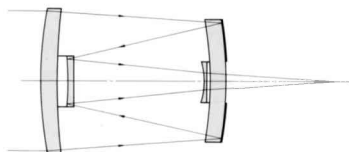
Filter: 39mmØ screw-in; L37, Y52, O56, R60 and ND4X

Mount: Nikon F bayonet mount

Attachment size: 88mm (p=0.75)

Dimensions: 93mmØ x 142mm

Weight: 1kg



Supplied in a leather case with hood, five filters and front and rear lens caps.

被写界深度表

SCHÄRFENTIEFETABELLE

TABLE DE PROFONDEUR DE CHAMP

TABLA DE PROFUNDIDAD DE CAMPO

(m)

摄影距離 Eingestellte Distanz Distance de Mise au Point Distancia Enfocada	被写界深度 Schärfentiefe Profondeur de Champ Profundidad de Campo (f/8)	摄影倍率 Vergrößerungsbereich Rapport de Reproduction Relación de Reproducción
4	3.99–4.01	1/7.2
5	4.98–5.02	1/9.2
6	5.97–6.03	1/11
7	6.96–7.04	1/13
8	7.95–8.05	1/15
10	9.92–10.1	1/19
12	11.9–12.1	1/23
15	14.8–15.2	1/29
20	19.7–20.4	1/39
30	29.2–30.8	1/59
50	47.9–52.4	1/99
100	91.0–111	1/208
∞	1090–∞	1/∞

DEPTH-OF-FIELD TABLE

(ft)

Focused Distance	Depth of Field (f/8)	Reproduction Ratio
13	12'11"–13'1"	1/7.2
15	14'11"–15'1"	1/8.4
18	17'11"–18'1"	1/10
20	19'11"–20'1"	1/11
25	24'6"–25'2"	1/14
30	29'9"–30'3"	1/18
40	39'7"–40'5"	1/24
50	49'4"–50'8"	1/30
70	68'8"–71'4"	1/42
100	97'5"–103"	1/60
150	144'–156'	1/91
300	278'–328'	1/182
∞	3580'–∞	1/∞