

Nikon

ニコノス水中接写装置

(ニコノスV・IV-A・III用)

Nikonos Close-Up Outfit

(For Nikonos-V, Nikonos IV-A and III)

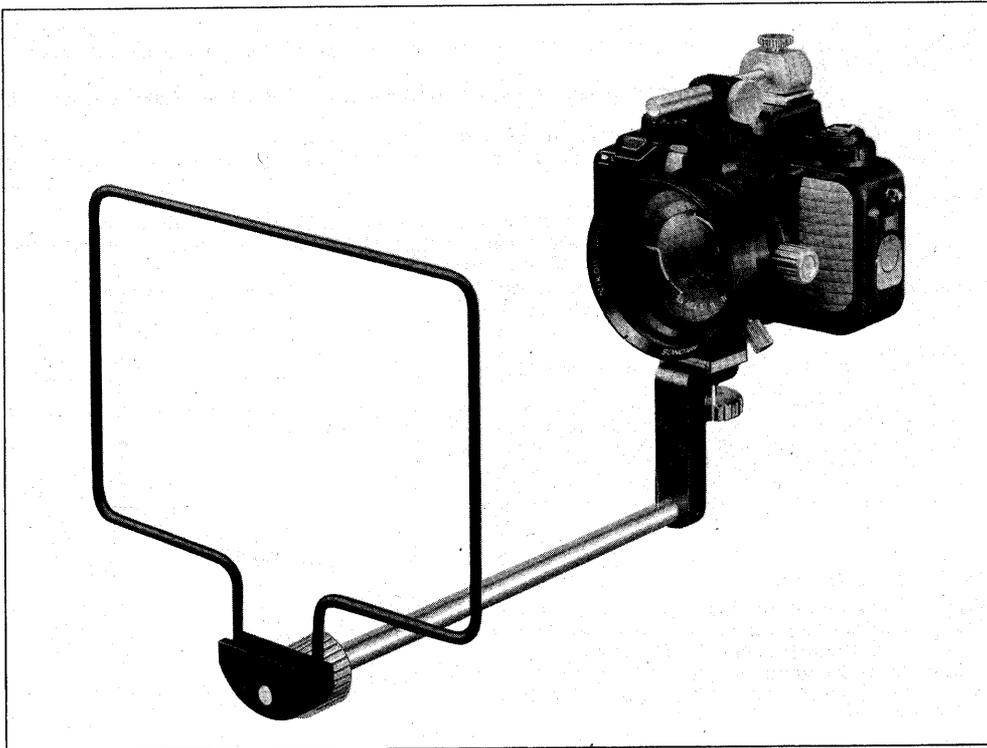
Nikonos Unterwasser- Nahaufnahme-Ausrüstung

(für Nikonos-V, Nikonos IV-A und III)

Dispositif pour proxiphotographie sous-marine Nikonos

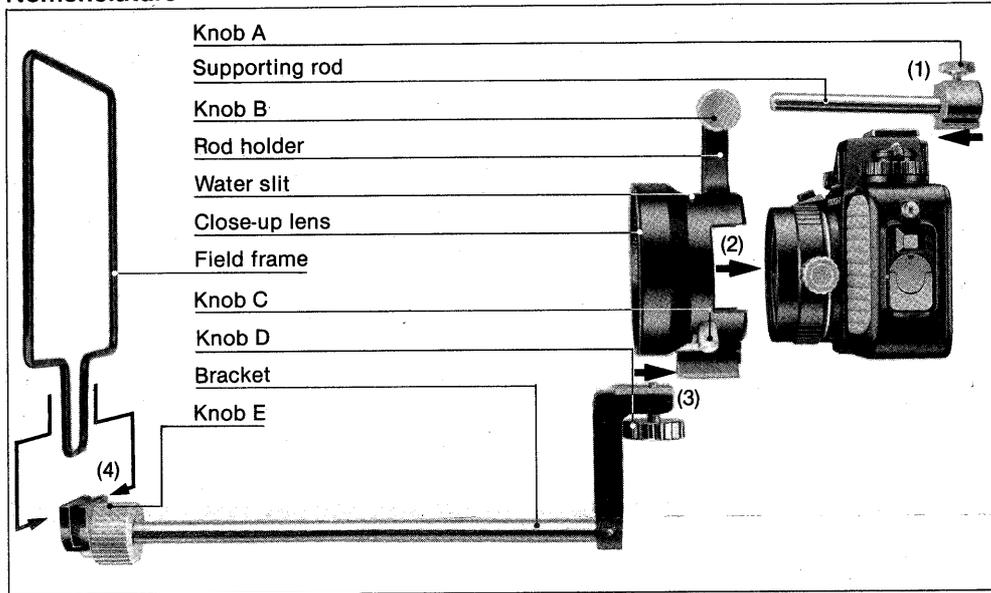
(pour le Nikonos-V, Nikonos IV-A, III)

J
E
G
F



Designed for underwater close-up photography, the Nikonos Underwater Outfit consists of a close-up attachment lens, field frames for each of three lenses (UW-Nikkor 28mm, W-Nikkor 35mm or Nikkor 80mm), a supporting rod, and a bracket. The outfit enables the photographer to frame and focus his subject accurately without looking through the viewfinder. The outfit can also be used on land as a focusing guide with 35mm and 80mm lenses. By the way, this close-up outfit can be used with the Nikonos-V, Nikonos IV-A and Nikonos III.

Nomenclature



Setting Up

- (1) Loosen Knob A; slide the supporting rod into the accessory shoe on top of the camera until it is fully seated into position; then tighten the Knob A.
- (2) Loosen both Knobs B and C. Then snugly fit the close-up lens over the camera lens so that the supporting rod passes through the slot in the top of the close-up lens. Push the close-up lens towards the camera body until the front edge of the camera lens can be seen through the water slits on the close-up lens. Finally tighten both Knobs B and C completely.

Note: When you attach the close-up lens to the Nikonos-V or Nikonos IV-A camera, position the supporting rod at the top of the slot; with the Nikonos III, position it at the bottom.

- (3) Slide the bracket into the shoe at the base of the close-up lens. Tighten Knob D.
- (4) Loosen Knob E and insert the appropriate field frame into the small holes at the end of the bracket, with the engraved side facing the camera. Each frame is engraved with a number corresponding to the focal length of the lens it is used with, e.g., the W28 frame with the 28mm lens. Tighten Knob E, thus securing the frame.

Taking Close-Ups

Underwater

- (1) Set the distance scale of the camera lens at infinity (∞).
- (2) Move the camera towards the subject until the required area is positioned within the field frame. The boundary of the subject field is 10mm inside the field frame thus ensuring that the field frame will not appear in the picture.

On Land

The Nikonos Close-up Outfit is also useful on land, especially for following live close-up subjects such as insects. However, use the W28 frame for the 35mm lens and the W35 frame for the 80mm lens as a focusing guide, since the picture angle on land is larger than that underwater. For details, refer to the table below which shows the subject field both underwater and on land.

Notes:

1. The depth of field decreases in close-up photography. To ensure ample depth of field, stop down the lens as much as possible. With the 80mm lens, the lens should be stopped down more than f/11. When in doubt about the depth of field for an important scene, refer to the depth-of-field table.
2. Before shooting, make sure there are no air bubbles in the water between the camera lens and the close-up lens.

Lens	Application	Subject field	Repro. ratio
28mm	Underwater	144×216mm (5.68×8.51 in.)	1/6
35mm	On land	155×233mm (6.11×9.18 in.)	1/6.5
	Underwater	109×164mm (4.30×6.38 in.)	1/4.5
80mm	On land	71×106mm (2.80×4.18 in.)	1/3
	Underwater	53×79mm (2.09×3.11 in.)	1/2.2

Depth of Field Table

Lens	Application	Depth of Field						
		Open	f/4	f/5.6	f/8	f/11	f/16	f/22
28mm f/3.5	Underwater	+6.3mm (+0.252 in.)	+7.2mm (+0.284 in.)	+10.2mm (+0.402 in.)	+14.8mm (+0.583 in.)	+21.5mm (+0.847 in.)	+31.3mm (+1.233 in.)	+45.1mm (+1.776 in.)
		-5.9mm (-0.233 in.)	-6.7mm (-0.268 in.)	-9.3mm (-0.368 in.)	-13.2mm (-0.520 in.)	-17.8mm (-0.706 in.)	-25.1mm (-0.989 in.)	-33.3mm (-1.311 in.)
35mm f/2.5	On land	+3.7mm (+0.146 in.)	+6.0mm (+0.236 in.)	+8.5mm (+0.335 in.)	+12.3mm (+0.485 in.)	+17.3mm (+0.682 in.)	+26.1mm (+1.035 in.)	+37.4mm (+1.474 in.)
	Underwater	-3.6mm (-0.142 in.)	-5.6mm (-0.221 in.)	-7.8mm (-0.308 in.)	-11.1mm (-0.438 in.)	-14.9mm (-0.587 in.)	-21.1mm (-0.832 in.)	-27.8mm (-1.095 in.)
80mm f/4	On land	+2.8mm (+0.110 in.)	+4.5mm (+0.177 in.)	+6.4mm (+0.252 in.)	+9.2mm (+0.362 in.)	+12.8mm (+0.504 in.)	+19.1mm (+0.753 in.)	+27.0mm (+1.063 in.)
	Underwater	-2.7mm (-0.106 in.)	-4.2mm (-0.166 in.)	-5.9mm (-0.232 in.)	-8.4mm (-0.331 in.)	-11.4mm (-0.449 in.)	-16.2mm (-0.638 in.)	-21.7mm (-0.855 in.)
80mm f/4	On land	+1.3mm (+0.051 in.)	+1.8mm (+0.071 in.)	+2.5mm (+0.099 in.)	+3.4mm (+0.138 in.)	+5.0mm (+0.197 in.)	+6.9mm (+0.272 in.)	
	Underwater	-1.1mm (-0.043 in.)	-1.5mm (-0.059 in.)	-2.2mm (-0.087 in.)	-3.1mm (-0.124 in.)	-4.5mm (-0.177 in.)	-6.2mm (-0.244 in.)	
80mm f/4	On land	+1.0mm (+0.039 in.)	+1.3mm (+0.051 in.)	+1.9mm (+0.075 in.)	+2.6mm (+0.102 in.)	+3.7mm (+0.149 in.)	+5.1mm (+0.201 in.)	
	Underwater	-0.8mm (-0.032 in.)	-1.2mm (-0.047 in.)	-1.7mm (-0.067 in.)	-2.3mm (-0.091 in.)	-3.4mm (-0.138 in.)	-4.7mm (-0.185 in.)	

The (+) sign indicates rear depth, i.e., the distance beyond the field frame.

The (-) sign indicates front depth, i.e., the distance from the field frame in the direction towards the camera.

Underwater Close-up Photography with the Nikonos Speedlight SB-102, SB-103 and SB-101

Light is absorbed by water, and as you descend red is the first color to go. Below approximately 5 m (16 ft), everything takes on a blue-green tone. Nikonos speedlights are therefore designed to restore natural colors, especially those at the red end of the spectrum, and to give subjects additional illumination. Determining the correct exposure depends on such shooting conditions as water transparency, subject color and form, and reflection. The following instructions are designed to aid you in the use of the Nikonos Speedlights for underwater close-up photography.

When using the Nikonos Speedlight SB-102 or SB-103

When using the SB-102 or SB-103 with the Nikonos-V, TTL automatic flash exposure control is possible to offer the great range of usable apertures from $f/5.6$ to $f/22$ (with ASA/ISO 100 film). It is also designed to be used on manual with the Nikonos IV-A and Nikonos III. For best results, attach the Wide-Flash Adapter SW-102 before shooting close-ups underwater.

1. When using the Nikonos-V on the TTL automatic flash mode, set the shooting mode selector on "TTL"; with the Nikonos IV-A and Nikonos III, set it at "M1/4" or "M1/16".
2. Set the camera's synchronization shutter speed.
(For specific information on synchronization speeds, see the camera's instruction manual.)
3. Turn on the SB-102 or SB-103.
4. Set the appropriate lens aperture.

When using the Nikonos-V in the TTL mode, select an appropriate aperture for the shooting distance of 0.3 m (1 ft) from the speedlight's exposure calculation dial. When using the Nikonos IV-A or III, or the Nikonos-V on manual, determine the correct aperture for the shooting distance of 0.3 m (1 ft) from the speedlight's exposure calculation dial. For example, when using ASA/ISO 100 film and the wide-flash adapter, set the lens aperture to $f/11$ or $f/16$.

5. Direct the flash head of the SB-102 or SB-103 toward the subject or the center of the field frame, referring to the flash head positioning scales on the joint. In this time, it is best to activate the target-light lamp for easy and precise flash head positioning.

The Nikonos Speedlight SB-101

Set the SB-101 on manual for underwater close-up photography with the Nikonos-V, Nikonos IV-A or Nikonos III. For best results, attach the optional Wide-Flash Adapter SW-101 before shooting close-ups underwater.

1. Turn on the SB-101's power switch, aligning the white dot with the "1/4" index.
2. Set the camera's synchronization shutter speed.
(For specific synchronization speed information, see the camera's instruction manual.)
3. Set the appropriate lens aperture.
As a rule of thumb, with ASA/ISO 100 film with the SW-101, set the lens aperture between $f/11$ and $f/16$.
4. Direct the flash head of the SB-101 toward the subject or toward the center of the field frame, referring to the alignment index on the ball-head.

Notes:

1. The SB-102, SB-103 and SB-101 cannot be used on non-TTL or the automatic mode via the Sensor Unit SU-101.
2. See the respective speedlight instruction manual for information on how to attach the SB-102 or SB-101 to the camera body. For further information, see the camera instruction manual.
3. Which apertures are usable depends upon the water quality, surroundings, subject, position of the flash head, and so on. For complete information about aperture selection, refer to the speedlight's instruction manual.

Specifications

Lens construction: 2 elements in 2 groups

Fixed focusing distance: 235 mm (9.25 in.) from the front of close-up lens

Weight (with field frame W28): 570 g (1.2 lb)

Accessories: field frames (one each for the 28 mm, 35 mm, and 80 mm lenses); carrying case

