

- Completely waterproof to depths of 160 feet (26.7 fathoms)
- All-weather construction for safe use in rain, snow, sleet, hail, dust, sand...
- Automatic aperture-priority exposure control
- Accepts four interchangeable Nikonos/Nikkor lenses
- Incorporates dedicated, automatic electronic flash system
- Complete system of accessories for close-up photography

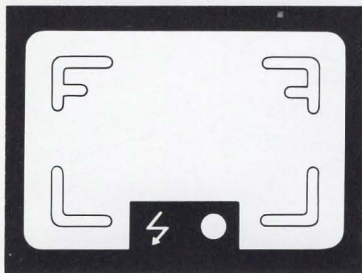
Nikonos the ideal camera to use in situations where you wouldn't risk a regular camera, from boating to mountain climbing or exploring caves.

Since illumination fades fast as you dive, a flash unit becomes an indispensable accessory. And with the Nikonos IV-A/Speedlight SB-101

Oversized controls, from the shutter release to the focus and aperture controls on the lens, make it very easy to use the Nikonos IV-A, even when wearing gloves. And, the Nikonos system further extends the camera's capabilities. In addition to the SB-101 flash, four interchangeable Nikonos/Nikkor lenses are available as well as a special kit for close-up photography.

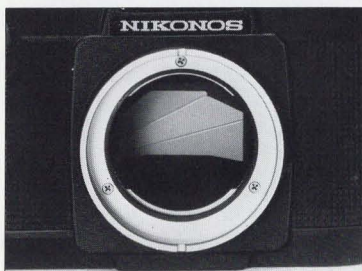


# Nikonos IV-A



## High-Eyepoint Viewfinder

High-eyepoint optical design permits full field visibility at up to 1.6 in. from eyepiece, as when wearing diving goggles. Albada finder has luminous framelines with parallax correction marks which correlate use with the 35mm lens in or out of water. LED at bottom of finder lights to indicate proper exposure; blinks if exposure is out of camera's range. Flash ready lightning bolt symbol is activated by dedicated Nikonos SB-101 flash.



## Heavy Duty Metal Shutter

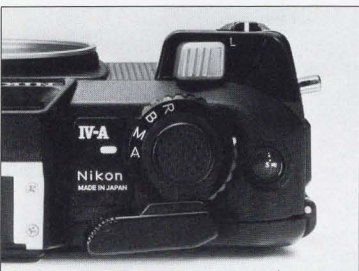
Provides stepless, electronically-timed shutter speeds from 1/30-1/1000 sec. plus mechanical "M" (1/90 sec.) and "B" settings for manual control or flash photography, independent of camera batteries—a vital fail-safe feature found on all Nikon cameras. All-metal construction is impervious to rot, mildew, fungus or pinholes for long-lasting trouble-free operation. Special meter reflector on front of shutter blades directs light up to SPD metering cell for TTL exposures.



## O-Ring Seals

Nikonos IV-A's die-cast metal chassis is sealed against moisture and particulate infiltration with a corrosion resistant coating and 13 special O-ring seals. Used at every joint where water may get into the camera, these special gaskets tighten the seal as water pressure increases. This unique construction makes it impervious to natural elements and completely waterproof down to 160 ft. underwater.\*

\*Nikonos cameras have been successfully used in corrosive tear gas and some chemical applications. While cameras have been successfully employed, they are not guaranteed to perform under or survive such conditions. Individuals should perform appropriate tests to determine effect prior to exposing their Nikonos cameras to such an atmosphere.



## Control Dial/Film Advance Lever

Four-position control dial can be set at "A" for aperture-priority automatic, "M" for mechanical 1/90 sec., "B" for time exposures or "R" for rewinding film. Positive click-stop detents prevent accidental movement. Ratcheted film advance lever winds film in single or multiple strokes. Its special design allows easy operation even when wearing diving gloves.



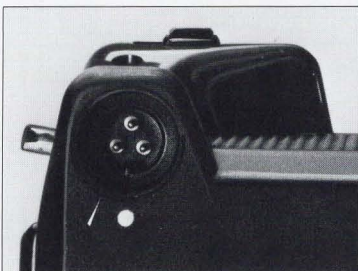
## Meter Switch/Shutter Release

Conveniently located at the top of the IV-A's action grip is the bright orange oversized shutter release button. It's ribbed for non-slip operation. The release doubles as the meter switch. Pushing it halfway down turns on the meter; depressing fully fires the shutter. To save energy, the meter shuts off automatically 20 sec. after the button is released. Switch on the front of the grip locks shutter release to prevent accidental exposures.



## Fast, Convenient Film Loading

Hinged camera back (with special safety lock) and multi-slotted take-up spool expedite film loading and changing. On AUTO, camera automatically fires at fastest speed until film is advanced to frame #1. This prevents annoying delays otherwise possible in dim light or with the lens cap on.



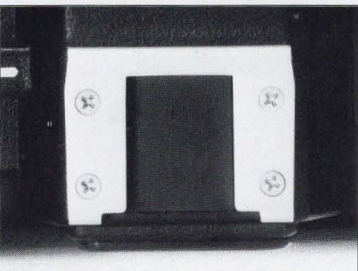
## Dedicated Flash Socket

Sealed, water-tight attachment socket accepts connecting cord for Nikonos SB-101 flash. When activated, the SB-101 automatically programs the Nikonos IV-A's shutter to the correct X-sync speed (1/90 sec.) and activates the viewfinder ready-light symbol. Out of water, special Nikon adapters permit the use of standard Nikon PC-cord and ISO-type hot shoe electronic flash units at the camera's M90 setting.



## Focus/Aperture Controls

Interchangeable lenses for Nikonos IV-A incorporate extra-large, heavy-duty controls for focus and aperture setting. Red depth-of-field pointers on focusing distance scale vary with lens aperture set for easy judgment of overall range of sharp focus.



## Accessory Shoe

Sturdy accessory shoe accepts accessory optical viewfinders, action frame finders, flash unit adapter or remote sensor for the Nikonos Speedlight SB-101 flash unit.



## Dedicated electronic flash for underwater or all-weather photography.

The Nikonos Speedlight SB-101 was designed exclusively for use with the Nikonos IV-A camera, providing dedicated and automatic operation. Like the Nikonos IV-A, the SB-101 can be used underwater to depths of 160 ft. and in virtually any other environment, with assured success.

When attached to the IV-A's special waterproof sync terminal and turned on, the SB-101 programs the camera's shutter to the correct X-sync speed (1/90 sec.) from the AUTO exposure mode. At full charge, a viewfinder flash ready-light signals the user that both camera and flash are ready to fire. Exposures are automatic at either of two shooting aper-

tures (f4 or f8 at ASA/ISO 100). Its powerful light output enables auto-flash pictures at up to 26 feet on land or about 13 feet underwater, depending on depth and clarity. On manual, the SB-101's maximum shooting distance is extended to about 42 ft. on land and about half that distance in water. Its variable power control permits reduced light output for close-up applications.

The Speedlight SB-101 attaches to the Nikonos IV-A by means of a quick release bracket and incorporates a heavy duty swiveling ball head that can rotate up to 180°. The remote sensor attaches to the camera's accessory shoe so automatic flash exposures

are always based on the subject, regardless of the direction the flash is pointed. When accessory finders are used on the Nikonos IV-A, the SB-101's remote sensor may be attached to the camera mounting bracket with no loss of automatic function. Energy-saving thyristor circuitry can deliver more than 150 flashes per set of eight AA alkaline batteries with recycling times as quick as one second.

The SB-101 also provides auto flash photography to Nikonos III owners, but without dedicated camera functions.

See page 4 for complete product specifications.





# Nikonos IV-A

## Technical Specifications: Nikonos IV-A

**Type of Camera:** 35mm amphibious camera with auto exposure control

**Picture Format:** Standard 35mm film format (24mm x 36mm frame size)

**Lens Mount:** Nikonos bayonet type

**Lenses:** W-Nikkor 35mm as standard; three other interchangeable lenses available

**Auto Exposure Control:** Aperture-priority automatic via TTL center-weighted metering at stopped down aperture; meter incorporates one SPD (silicon photo diode)

**Shutter:** Electronically controlled, vertical-travel, metal focal-plane type

**Shutter Speed:** Stepless speeds from 1/30 to 1/1000 sec. at "A" setting on shooting mode selector; mechanically controlled speed of 1/90 sec. at "M" setting; long exposures at "B" setting

**Shutter Release Button:** Switches meter on when depressed halfway; meter stays on for approx. 20 sec. after finger is lifted off button

**Film Speed Range:** ASA/ISO 25-1600

**Auto Exposure Range:** EV 8-19 at ASA/ISO 100 with f/2.8 lens

**Viewfinder:** Bright frame finder for use with 35mm lens; high-eyepoint construction allows viewing entire field with eye up to 40mm away from finder; frame coverage of approx. 85%; 0.55X magnification; diopter 0.9; parallax correction marks provided

**Viewfinder Display:** Red LED lights up when shutter speed is between 1/30 sec. and 1/1000 sec. at "A" setting; blinks if shutter speed is out of this range; flash ready-light provided for use with SB-101 Speedlight

**Flash Synchronization:** Via flash socket; automatic flash sync at 1/90 sec. with SB-101 Speedlight when shooting mode selector is set to "A"; "M" setting for other speedlights; bulb-type flash not usable

**Film Advance Lever:** Wound in single stroke or series of strokes; 144° winding angle; hinged for compact storage

**Frame Counter:** Additive type; auto exposure operation starts from frame 1

**Film Rewind:** By film rewind crank after shooting mode selector is set to "R"

**Camera Back:** Hinged type; camera back latch and safety lock provided

**Pressure Plate:** Hinged type with locking catch

**Batteries:** Two 1.5V silver-oxide batteries; battery check by viewfinder LED

**Dimensions (W x H x D):** 5.9" x 3.9" x 2.3" (149 x 99 x 58mm), body only

**Weight:** 26.1 oz. (740g), body only

**Product Number:** 10060 (body only)/10061 (with 35mm f2.5 standard lens)

## Technical Specifications: Nikonos Speedlight SB-101

**Light Output Control:** Automatic: Silicon-controlled rectifier (thyristor) and series circuitry using Sensor Unit SU-101, choice of two f/stops; Manual: Full power, 1/4 power

**Guide Number (ASA/ISO 100, ft.):** On land: 105 (full output), 52 (1/4 output); Underwater: 52 (full output), 26 (1/4 output)\*

**Automatic Shooting Range (ASA/ISO 100):** On land: 2-26 ft. (0.6-8m)\*; Underwater: 2-13 ft. (0.6-4m)\*

**Angle of Coverage:** On land: 66°; Underwater: Approx. 50° (Both cover 35mm lens angle)

**Film Speed Range:** ASA/ISO 25-800

**Recycling Time:** Automatic: Variable depending on shooting distance; Manual: Approx. 8 sec. with fresh batteries

**Number of Flashes:** Automatic: Depends on shooting distance; Manual: Approx. 150 at full power with fresh set of alkaline-manganese batteries

**Power Source:** Eight 1.5V AA-type penlight batteries

**Ready-Light:** Provided

**Mounting:** Bracket-type

**Dimensions (W x H x D):** 3.7" x 15.9" x 6.2" (94 x 403 x 157mm), excluding bracket

**Weight:** 4 lb. 3 oz. (1.9kg), body only

**Product Number:** 10740

\*The numbers and ranges specified are applicable only in clear water and will vary depending on water conditions.  
Supplied with Sensor Unit SU-101, mounting bracket, sensor holder, battery clip, and O-ring set in Carrying Case SS-101.

## Technical Specifications: Nikonos/Nikkor Lenses

Specifications	15mm f2.8 UW-Nikkor	28mm f3.5 UW-Nikkor	35mm f2.5 W-Nikkor	80mm f4 Nikkor
<b>Lens Construction:</b>	9 elements in 5 groups*	6 elements in 5 groups*	7 elements in 5 groups	4 elements in 4 groups
<b>Picture Angle:</b>	94° underwater	59° underwater	62° on land; 46°30' underwater	30°20' on land; 22°45' underwater
<b>Aperture Scale:</b>	f2.8—f22	f3.5—f22	f2.5—f22	f4—f22
<b>Distance Scale:</b>	∞—1 ft. (0.3m)	∞—2 ft. (0.6m)	∞—2.75 ft. (0.8m)	∞—3.5 ft. (1m)
<b>Attachment Size:</b>	84mm (P = 0.75)	58mm (P = 0.75)	58mm (P = 0.75)	58mm (P = 0.75)
<b>Dimensions (dia. x length)</b>	3.5 x 3.1 in. (90 x 79.5mm)	2.4 x 1.7 in. (62 x 43.8mm)	2.4 x 1.5 in. (62 x 39.5mm)	2.4 x 2.6 in. (62 x 66mm)
<b>Weight:</b>	11.3 oz. (320g)	6.2 oz. (175g)	5.6 oz. (160g)	9.7 oz. (275g)
<b>Optional Finders:</b>	Optical	Optical; frame	Frame	Optical; frame
<b>Product Number:</b>	10309	10310	10311	10312

\*Including water-shielding flat glass

Specifications subject to change without notice.





### Waterproof, interchangeable lenses for all-weather Nikonos photography.

#### **15mm f2.8 UW-Nikkor**

Designed exclusively for underwater use, the 15mm f2.8 UW-Nikkor provides the same coverage as a 20mm lens on land. Its rectilinear (non-distorting) ultra-wide angle optical formula provides tremendous depth of field and almost eliminates the need for focusing. The 15mm takes in more than four times the area compared to the normal 35mm lens, making it ideal for photographing in confined spaces or for taking in expansive views in clear water. An optical finder showing the area of coverage is available as an accessory (see page 6).

#### **28mm f3.5 UW-Nikkor**

The 28mm f3.5 UW-Nikkor is also

for underwater use only. Due to water's magnifying effect, its field of view corresponds to that of a 35mm lens on land. The 28mm can be used as an all-around wide angle lens and also provides stunning close-ups when used with the Nikonos Close-Up Outfit. Special optical and plastic frame finders are available (see page 6).

#### **35mm f2.5 W-Nikkor**

Considered the standard lens for the Nikonos IV-A, the 35mm f2.5 W-Nikkor can be used on land and underwater without any modifications. Underwater, it's virtually the same as using a 50mm normal lens on land. Out of water, the 35mm Nikonos lens is a good choice for

scenics and general photography. The 35mm can also be used with the Nikonos Close-Up Outfit.

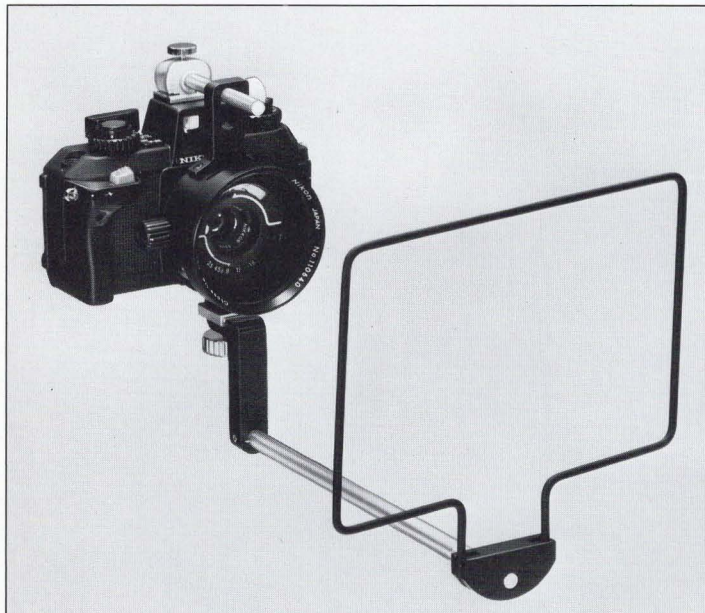
#### **80mm f4 Nikkor**

This telephoto lens for Nikonos cameras is for use above or below the water. Underwater, it approximates a 105mm lens. The 80mm can also be used with the Nikonos Close-Up Outfit. A plastic frame finder is available for use underwater, while an optical viewfinder can be mounted on the camera's accessory shoe for on-land usage (see page 6).

See page 4 for complete product specifications.



## Nikonos Accessories



### Nikonos Close-Up Outfit

For close-up photography in or out of water with the Nikonos camera. Outfit consists of universal close-up lens which mounts in front of the 28mm, 35mm or 80mm lens, three wire framing fields matching the area of coverage of these three lenses, plus a frame support bracket mounted on the camera which is used to determine the exact camera-to-subject distance. Photographers simply place the subject being photographed within the frame to take a critically sharp close-up photograph. Supplied with compartment case.

**Product Number 10705**

#### Technical Data

Nikonos/Nikkor		Underwater	Out-of-Water
28mm f3.5	Field Size Mag. Ratio	5.7 x 8.5" 1:6	unusable unusable
35mm f2.5	Field Size Mag. Ratio	4.3 x 6.4" 1:4.5	6.1 x 9.1" 1:6.5
80mm f4	Field Size Mag. Ratio	2.1 x 3.1" 1:2.2	2.8 x 4.2" 1:3

Specifications subject to change without notice.



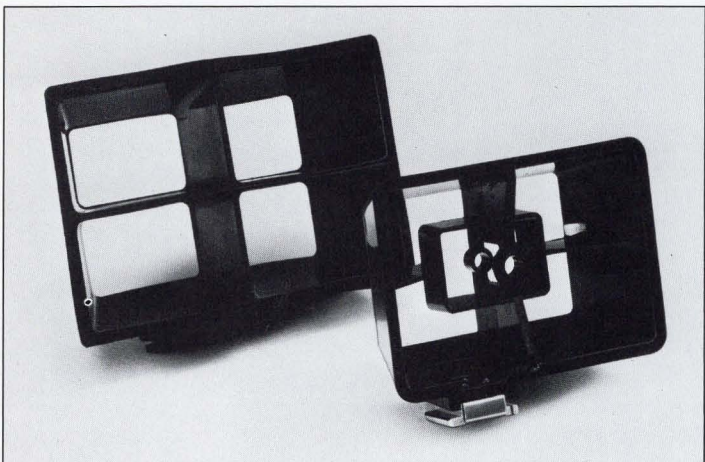
### Nikonos Optical Viewfinders

The Nikonos IV-A is a non-SLR camera and therefore requires accessory viewfinder attachments to accurately gauge the coverage of its interchangeable lenses, other than the 35mm.

**For 15mm f2.8: Product Number 10754**

**For 28mm and 35mm: Product Number 10755**

**For 80mm f4: Product Number 10756**



### Nikonos Open-Frame Finders

For underwater use, open-frame finders permit accurate composition with the photographer's eye away from the eyepiece, as when wearing a diving mask.

**For 28mm f3.5: Product Number 10751**

**For 35mm f2.5 and 80mm f4: Product Number 10753**





## Nikonos Lens Protector and Lens Hood/ Filter Holder

The Nikonos plastic lens protector threads into the Nikonos/Nikkor 28mm f3.5, 35mm f2.5 or 80mm f4 lens for added safety against damaging their water-shielding cover glass. The lens hood/filter holder, for the 35mm and 80mm lenses, shields against extraneous light and permits attaching Nikon 52mm filters to these lenses.

**Lens Protector: Product Number 10620**

**Lens Hood/Filter Holder: Product Number 10625**



## Nikonos Rubber Lens Hood

For the ultimate in protection when using the standard 35mm lens, the Rubber Lens Hood slips over the entire lens to prevent scratches and block out stray light.

**Product Number 10626**



## Nikonos Lens Cases

To take along accessory Nikonos/Nikkor lenses, attractive, hard leatherette cases with soft lining are available. Complete with carrying strap. Model CL-50 accommodates the 28mm or 35mm lens; Model CL-51 accepts the 80mm lens.

**CL-50: Product Number 10418**

**CL-51: Product Number 10419**



## Nikonos Accessories



### Nikonos Pouch Case

Smartly styled compartment case holds Nikonos IV-A camera with 28mm or 35mm lens mounted. Front storage pocket can be used for extra film, filters, etc.

**Product Number 10420**



### Nikon PC Flash Unit Adapter

Permits use of standard Nikon Speedlight flash units with PC connection cords out of the water. Does not activate dedicated Nikonos IV-A functions.

**Product Number 10729**

**Not illustrated.**

### Nikonos Hot Shoe Adapter SC-10

Permits use of standard, hot shoe mount Nikon Speedlight flash units with the Nikonos IV-A for out of water usage. Does not activate dedicated camera functions.

**Product Number 366**

Requires Flash Unit Adapter, **Product Number 10729.**

### Nikon Optical Glass Filters

More than 20 available with 52mm thread size including a CC30R which is especially favored for underwater photography when using daylight-balanced color films. See Lens Section, page 20, for complete information on all Nikon filters.