

INON UWL-100 28AD

Wide Conversion Lens

User Manual

Safety Precautions

- Before using your lens, please ensure that you have read and understood the safety precautions described below and user manuals. Please retain user manuals handy for easy reference.
- The safety precautions are intended to instruct you in the safe and correct operation of the strobe to prevent injuries or damage to yourself, other persons and equipment.



WARNING

Failure to observe the precautions described below may lead to possibility of serious injury or death.

Never attempt to see the sun or strong light source through the lens or camera to avoid irreparable injury to the eyes, or temporary visual impairment which may affect your performance requiring safety aspects.

Do not leave the lens in a place subject to direct sunlight to prevent fire which may be caused by the lens collecting sunlight

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INON UWL-100 28AD Wide Conversion Lens

Thank you for purchasing INON product.

INON UWL-100 28AD Wide Conversion Lens is an attachment lens to acquire ultra wide shot by simply attaching the lens on compatible digital camera/housing through 「28AD Mount Base」 / 「28AD Port」. The lens can be easily attached or detached underwater.

Optional 28AD Mount Base/28AD Port is necessary to mount the lens on compatible housing.

The lens can not be attached on AD Mount Base. AD Mount series attachment lens is available for AD Mount Base.

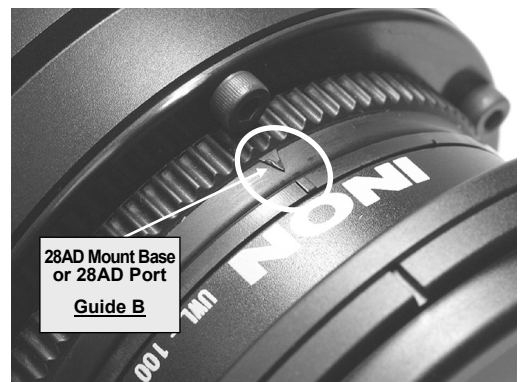
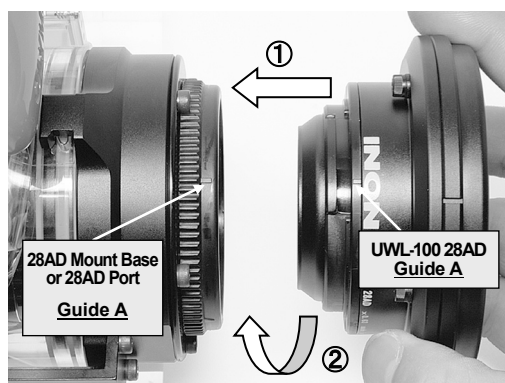
Features

- **Dual use for land/underwater.** **Ultra Wide Converter** underwater and **Fish-eye Converter** in air(100.0° underwater / 179.0°^④ air: with Canon S70/S60+WP-DC40). Optional 「Dome Lens Unit for UWL-100」 widens its view angle and enables to get almost same view angle underwater as in air.
- Unique optical design allows to shorten minimum focal distance with ultra wide view angle and is effective for **Wide Macro shot** (focus range : $\infty \sim 14.9\text{cm}(5.87\text{in.}) \sim 0\text{cm}$ [S70/S60: ∞ (standard mode) $\sim 44\text{cm}$ (17.32in.) (macro mode) $\sim 4\text{cm}$ (1.58in.)]^⑤).
- Optical construction exclusively designed for 28mm(equivalent to 35mm film) master lens at wide end. 4 groups 4 elements of coated optical glass lens. Optical design of the lens effectively control aberrations and elicits optimal performance of camera's master lens.
- **INON 28AD Mount** compatible. Easy and speedy handling can be obtained.

- Package contents:**
- UWL-100 28AD Wide Conversion Lens
 - Lens Cap(object side×1/ camera side×1)
 - Anti Ghost Sticker
 - This user manual

- Compatible housing/ Necessary parts (as of May 2005)**
- Canon 「WP-DC40」 + INON 「28AD Mount Base·DC40」
 - Olympus 「PT-027」/「PT-020」 + INON 「28AD Port·PT-027/020」

- How to attach :**
- Put the UWL-100 28AD in 「28AD Mount Base」 / 「28AD Port」 so that 『Guide A』 of UWL-100 28AD is coupled to 『Guide A』 of the 「28AD Mount Base」 / 「28AD Port」.
 - Rotate the UWL-100 28AD clockwise until the 『Guide A』 of UWL-100 28AD match to the 『Guide B』 of the 「28AD Mount Base」 / 「28AD Port」 where you should feel and hear clicking.



- Attach the lens underwater or re-install underwater to escape air between housing lens port and UWL-100 28AD.

- How to use** :
- **Zoom position of camera**
Set camera's zoom position at wide end. If vignetting is observed, crop after taking an image. The product is designed to acquire optimal performance at the position.
 - **Focus setting of camera**
UWL-100 28AD can be used in all focus range of compatible camera. Actual shooting distance(distance between a subject and subject side lens) with UWL-100 28AD shifts to subject side comparing to focus range without UWL-100 28AD. Please see a table at the end of this manual.
 - **Built-in flash setting**
Built-in flash light could be blocked depending on housing type, shooting distance or view angle. If no external strobe is used, "no flash" mode is recommended.
When using an external strobe, compatible external auto strobe(INON D-2000 etc.) with INON 「Clear Photo System」 would be recommended.
There might be limitation in available shooting situation or problem in an image if Clear Photo System is not used. Please see boxed column in this page for detail.
 - **「Anti Ghost Sticker」**
Flare/ghost caused by reflection of front part of camera lens barrel, can be effectively reduced by attaching 「Anti Ghost Sticker」. Please see instruction manual of the sticker.

- Maintenance** :
- Make sure to detach the UWL-100 28AD from 28AD Mount Base/28AD Port and soak the lens in fresh water (below 30 deg C / 86 deg F) for several hours after use to dissolve any salt build up. Blow off water drop by air gun/blower and dry the lens in shaded and well ventilated area without any water drop being on lens surface. It may take several days to completely dry.
 - Attach lens cap after completely dry and keep the lens in shaded and well ventilated area. Do not store the lens in the area near chemical, in high humidity or temperature fluctuation to avoid malfunction, flooding, damage to lens surface or mold.
 - Be careful not to scratch/damage slope portion of the lens barrel (see image right) where O-ring contacts when optional Dome Lens Unit is attached. If this part gets scratched/damaged, Dome Lens Unit can not be attached.
 - Black plastic screws (as shown in right image) are to protect screw holes for optional Lens Hood for UWL-100 28AD. Not necessary to take off the screws when you exercise maintenance.



- Handling precautions:**
- Do not leave any water drop(seawater/fresh water) on lens surface after using or store in wet carry pouch. Remaining water could cause spot/burn of coating or glass itself. Slight spot/burn would not affected to an image, but heavy one affects an image and the damaged lens needs to be replaced at user's cost.
 - DO NOT disassemble the lens. Improper disassembly could cause malfunction or flooding. Please make sure NOT to hold lens frame (which holds subject side lens) but to hold lens barrel where INON logo/product name is printed and rotate it when detaching the lens from 28AD Mount Base/28AD Port. Excessive pressure on lens frame could damage it and lead to possibility of flooding.
 - DO NOT exercise thumping vibration or excessive shock on the lens to avoid malfunction or flooding.
 - DO NOT leave the lens under direct sunlight. The lens may collect the sunlight and cause fire. Never attempt to see the sun through the lens to avoid serious damage to eyes.
 - DO NOT leave the lens under direct sunlight like beach or boat deck and in area of high temperature like in sun-heated car to avoid malfunction or flooding.


※ When using built-in flash with attachment lens without Clear Photo System . .


When using built-in flash with attachment lens being mounted and Clear Photo System is not used, there may be possibility to have ghost/flare in an image depending on shooting condition/camera housing/Mount Base being used.


This is because built-in flash light gets into the attachment lens from its mounting part. In the case, it is recommended to use External Strobe with Clear Photo System. If you have to use built-in flash only by necessity, ghost/flare could be reduced by preventing built-in flash light from being get into attachment lens from its mounting part. INON Inc. assume no responsibility whatsoever for any direct/indirect damage resulting from user's modification on camera system.


Accessories


- Lens Hood for UWL-100 28AD
The Lens Hood shades unnecessary light from outside of view angle and reduce flare/ghost which could happen in backlit condition. The hood also protects lens surface. We recommend to attach the lens hood on UWL-100 28AD always when shooting.



- Dome Lens Unit for UWL-100
The Dome Lens Unit is exclusively designed for UWL-100 lens(PAT. P). By attaching Dome Lens Unit for UWL-100 on UWL-100 28AD, view angle of UWL-100 28AD can be widen to same degree of max view angle of UWL-100 28AD on land. The Dome Lens Unit is equipped with protector which protects Dome Lens Unit surface and reduce flare/ghost by shading unnecessary light from outside of view angle.
Optional Dome Spacer for UWL-100 28AD is necessary to use the Dome Lens Unit for UWL-100 28AD.



- Dome Spacer for UWL-100 28AD
Necessary to attach Dome Lens Unit for UWL-100 on UWL-100 28AD.


- UWL-100 Carry Pouch
Carrying pouch made from neoprene same material as wet suits. The carry pouch can be used underwater. By storing the lens in the carry pouch, accidental damage during transportation can be avoided.


- 28AD Mount Base ·DC40
Mount Base equipped with 28AD Mount for a housing of compatible digital camera with wide master lens; 28mm at wide end (equivalent to 35mm film) to have INON 28AD Mount Series Attachment Lens and/or compatible INON strobe. INON offers 28AD Mount Base for Canon WP-DC40 as of May 2005.


- 28AD Port ·PT-027/020
The 28AD Port equipped with 28AD Mount for a housing of compatible digital camera with wider master lens; 28mm at wide end (equivalent to 35mm film). By replacing genuine port part of a housing with 28AD Port, INON 28AD Mount Series Attachment Lens and/or INON strobe can be mounted. INON offers 28AD Port for PT-027/PT-020 as of May 2005.


- AD Lens Holder
The AD Lens Holder is attached to INON Arm/Grip Base DII/DIII and hold 28 AD Mount Series Lens/AD Mount Series Lens. The AD Lens Holder helps you for speedy replacement of lens underwater.



INON Wide Conversion Lens UWL series

Specification [①]	
Model	UWL-100 28AD
Outer diameter	φ 87.4mm (3.44in.)
Length	43.2mm (1.7in.)
Mount system	INON 28AD Mount
Weight	Air: 370g (11.94oz) U/W: approx.190g (6.13oz)
Depth rating	60m (196.9ft)
Material / surface finishing (lens body)	corrosion-resistant aluminum alloy, rigid black almite/ PC etc.
Glass / Coating	Optical glass / both side coating
Lens construction / magnification [②]	4 groups 4 elements / 0.630 (afocal)
Max. view angle [③]	100.0°(underwater) / 179.0°(air)

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Focus range of compatible camera at wide side

Housing	Camera	Focus range[④] (without wide converter)		Vignetting[⑤]	
		Normal Mode	Macro Mode	Underwater	Air
WP-DC40	S70/S60	∞~14.9cm (∞~44cm)	14.9~0cm (44cm~4cm)	No vignetting	No vignetting
	PT-027	C-7070WZ	∞~29.2cm (∞~80cm)	29.2~5.4cm (80~20cm)	[⑥]
PT-020	C-5060WZ	∞~29.2cm (∞~80cm)	29.2~5.4cm (80~20cm)	[⑥]	[⑥]
	C-5060WZ	∞~29.2cm (∞~80cm)	29.2~5.4cm (80~20cm)	[⑥]	[⑥]

- [①] Specification is subject to change without prior notice. ~
 [②] UWL-100 performance itself (telescopic magnification : ~).
 [③] Actual view angle may vary depending on camera/housing to be used.
 [④] Actual distance on land or visual distance underwater. For actual distance underwater, multiply by 1.33.
 [⑤] View angle/vignetting may vary depending on a housing to be used though using same camera.
 [⑥] Slightly vignetting on image corners at wide end. Crop the image after taking shot.

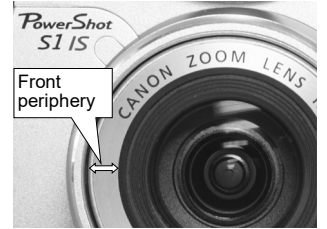
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Anti Ghost Sticker

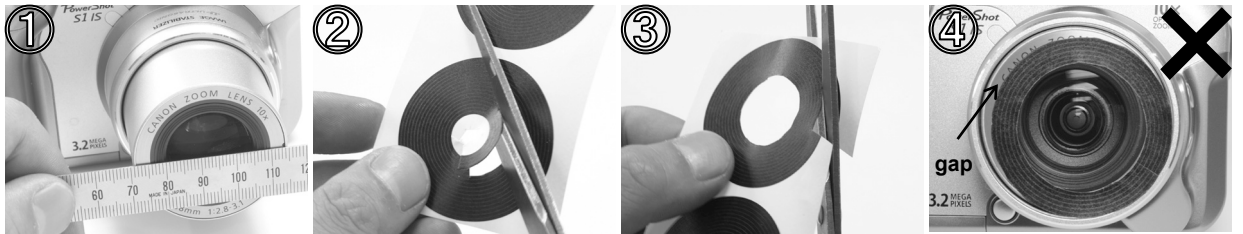
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By sticking "Anti Ghost Sticker" around the camera master lens (NOT on the lens but on its lens barrel), reflection of lens specification print or flare/ghost could be reduced especially when attachment lens being used.

- Compatible digital camera:**
- Outer diameter of 「Camera Lens Front Periphery (*1)」 is less or equal to 44mm (1.732in.) and inner diameter is greater or equal to 12mm (0.4724in.) and satisfy following conditions:
 - A) 「Camera Lens Front Periphery (*1)」 does not have any coating/painting for antireflection.
 - B) 「Camera Lens Front Periphery (*1)」 does have some characters in print or punch mark.
 - (*1) A metal/plastic doughnut shape part which wrap around a camera lens. (see picture above)



- How to apply :**
- Accurately measure outer / inner diameter of 「Camera Lens Front Periphery (*1)」 (see ①).
 - Cut Anti Ghost Sticker out to measured size from inner side(②) then after cut out outer side (③) . Do not cut inner side too much. Otherwise you may have vignetting.
 - Attach the sticker on the 「Camera Lens Front Periphery (*1)」 so that the sticker covers all part of the 「Camera Lens Front Periphery (*1)」 and NOT to cover camera master lens. (④).



Flare/Ghost : Please note that effect of "Anti Ghost Sticker" is depending on camera/housing/shooting condition and "Anti Ghost Sticker" is not universally effective in every situation. Also flare/ghost could be caused by built-in strobe / external strobe / ambient light being through back of camera lens, where "Anti Ghost Sticker" does not work.

Using built-in strobe without "Clear Photo System"

When using only built-in strobe without "Clear Photo System", ghost/flare could be observed. The light from built-in strobe coming through transparent housing/housing lens port may get into attachment lens and reflect inside of attachment lens. This type of flare/ghost can be prevented by using external strobe and "Clear Photo System".

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