

●100mm F2.8 ED UMC MACRO

Instruction manual

We believe that this new 100mm F2.8 ED UMC MACRO lens will give you a special photographic experience.

100mm F2.8 ED UMC MACRO lens completes an optical system based on superior optical technologies, and maintains excellent resolution by adopting a high refractive low dispersive lens and an UMC (Ultra Multi Coating).

Advantages of the 100mm F2.8 ED UMC MACRO

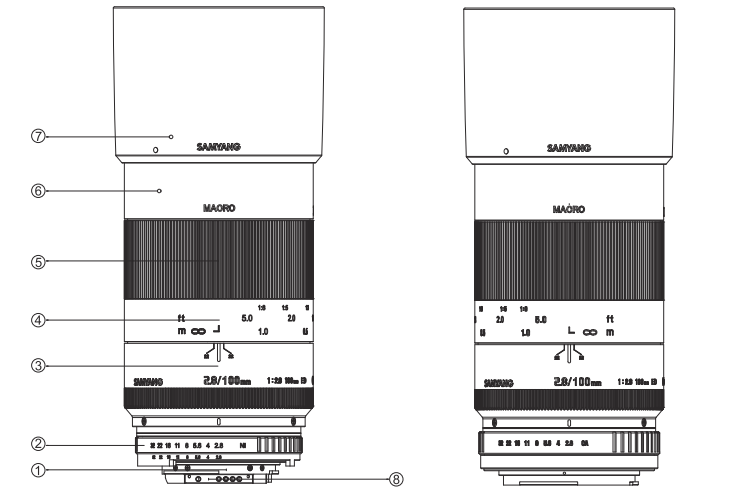
1. 35mm full frame image size.
2. It compensates for aberrations by using a high refractive low dispersive lens and high class optical glass, and at the fully opened position, produces a high resolution and a high contrast at the center of the lens as well as around the periphery.
3. Allows precision focus control with smooth operation.
4. Coating design by controlling ghosting as much as possible and reproducing vivid color images.
5. Produces smooth focusing by means of the aperture design, which comes close to a circular shape with its 9 diaphragm blades.
6. This lens is applicable on various purposes for taking pictures not only for close-ups but also landscape and portrait as well as normal lens.

The 100mm F2.8 ED UMC MACRO lens for photo shooting is designed with its own mount. You can mount the lens directly onto the camera without using an additional adaptor. Read this manual carefully to familiarize yourself with your lens for correct use.
※ Please read the 'Safety Precautions' at the back of this instruction manual prior to use.

● Please read this instruction manual prior to use. ●

1. Component Names

【Figure】



- ① Mount (camera locking area)

④ Focus scaling

⑦ Hood
- ② Aperture adjustment ring

⑤ Focusing ring

⑧ CPU (Electronic contact)
- ③ Distance scale indicator mark

⑥ Hood locking tube

2. Attaching and Detaching

The 100mm F2.8 ED UMC MACRO lens mount is uniquely designed for Canon, Nikon (Fujifilm) F, Pentax (Samsung GX) K, Sony *α* (Minolta), Canon M, Sony E, Fujifilm X, Samsung NX, Four Thirds and Micro Four Thirds cameras.

【Attaching】

Hold the hood locking area of the lens softly, align the depth of field scale of the lens with the lens ring mount of the camera, push the lens into the camera and turn the lens softly until it makes a clicking sound and the depth of field scale is positioned on the upper part of the camera.

【Detaching】

Hold the hood locking area of the lens gently, press the lens release button on the camera, turn the lens until the depth of field scale of the lens is aligned with the lens attachment reference point on the camera, and then pull the lens out.

3. Focus Adjustment

You can adjust the focus by turning the focusing ring when using the 100mm F2.8 ED UMC MACRO lens, as it is a Manual Focus (MF) adjustment lens.

【Nikon / Pentax K Mount】

- ① To change the focus from a subject that is far away to a subject that is close,turn the focusing ring to the left (from ∞ to 0.307m) and focus on the clearest subject by using the indication signal on the camera or by checking visually.
- ② To change the focus from a subject that is close to a subject that is far away,turn the focusing ring to the right (from 0.307m to ∞) and focus on the clearest subject by using the indication signal on the camera or by checking visually.

4. Brightness Control

You can set the depth of field and brightness by turning the aperture adjustment ring when using the 100mm F2.8 ED UMC MACRO lens.

【Aperture adjustment ring markings】

- ① Canon, Nikon F, Pentax K, Sony *α*, Canon M, Sony E, Fujifilm X, Samsung NX, FT, MFT

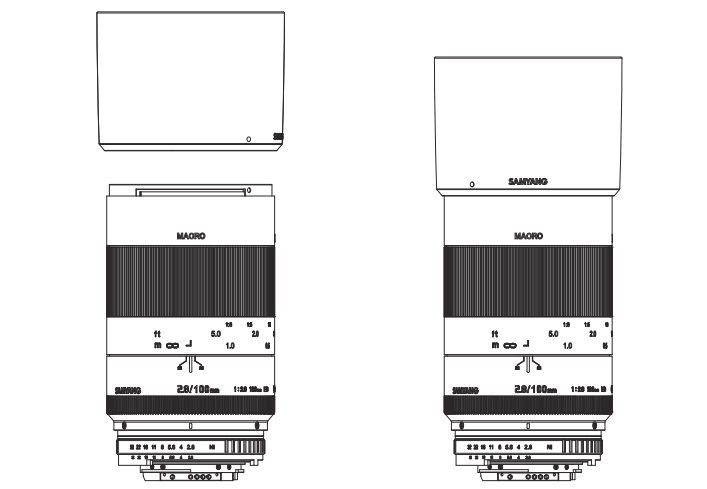
32	22	16	11	8	5.6	4	2.8
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- ② Pentax K

A	• 32	22	16	11	8	5.6	4	2.8
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5. Attaching the Hood

The hood has a bayonet system, which guarantees speedy, efficient, safe and precise installation and facilitates the enjoyment of shooting that is free from ghosting or flaring.



Align the hood indicator and the hood locking indicator on the lens, push the hood in softly, and then rotate to the left until it makes a clicking sound.

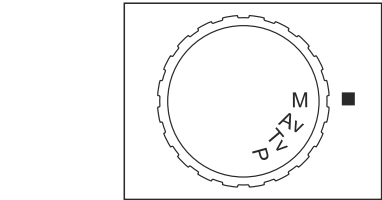
6. Camera Settings

Some cameras require special settings when using this lens.Please read the information below and set your camera accordingly.

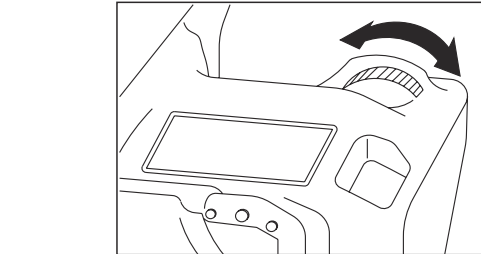
○ Canon Mount

The aperture of the 100mm F2.8 ED UMC MACRO Canon mount is not geared to the camera.
If the F stop is set to above 8, the user may not be able to set the correct focus due to a difficulty in viewing a subject through the camera viewfinder. Therefore turn the aperture adjustment ring and fully open it when attaching this lens to the camera, and then turn the aperture adjustment ring again to set the depth of focus and brightness you want to express prior to shooting.

- 1) Set the camera mode dial to M.



- 2) Adjust the shutter speed to achieve the appropriate exposure according to brightness.



※ The shutter speed of some Canon cameras changes automatically if the shooting mode dial is set to Av and the brightness is set by turning the aperture adjustment ring. Therefore the shutter speed is not required to be set additionally as with the M mode.

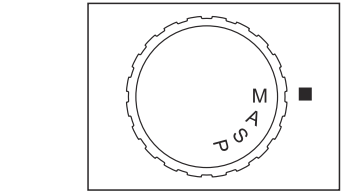
(The above procedure applies to the 40D. The settings for the camera or the menu may be changed depending on the model or due to a menu upgrade. Therefore refer to the camera manual or contact the camera manufacturer for detailed information.)

○ Nikon (Fujifilm) AE Mount

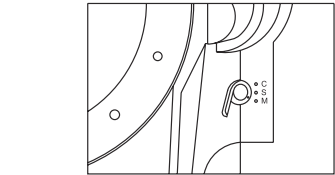
Your Nikon mount has electronic contacts that allow it to communicate with Nikon AF cameras. These contacts enable the A, S, and P modes of the camera. When a subject is correctly in focus, the camera emits a beep or an indicator light comes on.

○ Nikon (Fujifilm) F Mount

1. Set the camera mode dial to M.



2. Set the focus adjustment lever of the camera to 'M'.



3. When an MF lens is attached, some Nikon cameras allow you to enter the focal length and the brightness. With these Nikon cameras, you can use the MF lens more efficiently by entering the focal length and the brightness.

※ For some Nikon cameras, if the focal length and the brightness are set, and the desired brightness is set in **A/S/P** mode by turning the aperture adjustment ring, the camera automatically changes the shutter speed. Therefore you don't need to adjust the shutter speed as well, which is required in M mode.

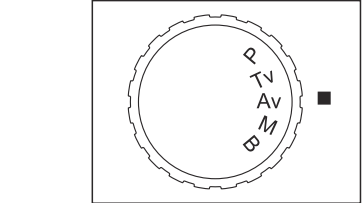
(The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera manual or contact the camera manufacturer for detailed information.)

○ Pentax (Samsung GX) K Mount

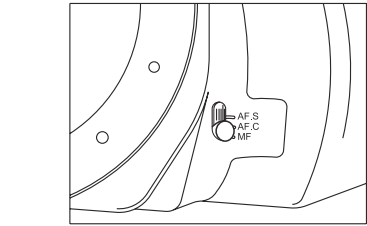
1. Av Mode (Aperture Priority Mode)The 100mm F2.8 ED UMC MACRO Pentax K mount Av mode is supported.

- 1) Align the A mode indicator with the distance scale indicator mark by pressing the A button on the aperture adjustment ring of the lens.

- 2) Set the mode dial of the camera to Av.

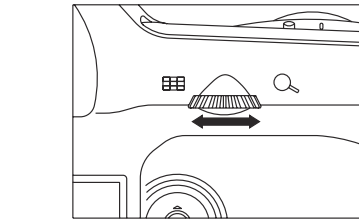


- 3) Set the focus adjustment lever of the camera to MF.



- 4) Set the menu on the camera.
User settings ⇒ Use aperture ring ⇒ Not allowed

- 5) Adjust the brightness by turning the dial at the back of the camera.

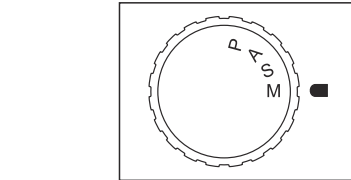


(The above procedure applies to the K20D. The settings for the camera or the menu may be changed depending on the model or due to a menu upgrade. Therefore refer to the camera manual or contact the camera manufacturer for detailed information.)

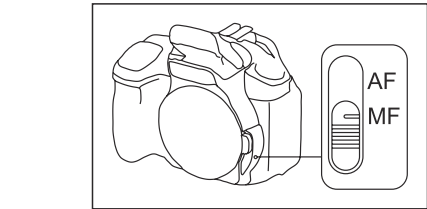
○ Sony (Minolta) α Mount

The aperture of the 100mm F2.8 ED UMC MACRO Sony (Minolta) α mount is not geared to the camera.
If the F stop is set to above 8, the user may not be able to set the correct focus due to a difficulty in viewing a subject through the camera viewfinder. Therefore turn the aperture adjustment ring and fully open it when attaching this lens to the camera, and then turn the aperture adjustment ring again to set the depth of focus and brightness you want to express prior to shooting.

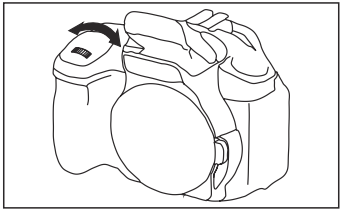
- 1) Set the camera mode dial to M.



- 2) Set the focusing lever of the camera to MF.



3) Adjust the shutter speed to achieve the appropriate exposure according to brightness.



(The above procedure applies to the α350. The settings for the camera or the menu may be changed depending on the model or due to a menu upgrade. Therefore refer to the camera manual or contact the camera manufacturer for detailed information.)

○ Konica Minolta (Minolta) DYNA Series

If this lens is used on some Konica Minolta (Minolta) DYNA series cameras, the release lock function (misuse prevention function) of the camera must be disabled.It is required to disable the release lock function only on the first use as below.Procedure for disabling the release lock function

- ① Set the main switch of the camera to OFF.
- ② Detach the lens from the camera body and set the main switch of the camera to ON by pressing the two following buttons.

9xi...function button + AE lock button	303si...AV button + self mode button
7xi...function button + AE lock button	303si SUPER...drive button + spot button
5xi...function button + spot button	101si...self-timer button + flash button
3xi...Need to modify at the service center	360si...self-timer non-intermittent shooting button + scene select button

807si...AEL button + shooting scene select button	α-Sweet...self-timer non-intermittent shooting button_spot button
707si...card button + spot button	α-Sweet S...(Set the function dial to the multiple exposure)
507si...lens exchange button + ISO lock button	P button + self-timer button
DYNAX3L...shooting scene select button + button	DYNAX30...self-timer button+turn the left dial on the main body away from the OFF.

α-Sweet II, II L...Set the camera to the custom function 14 and change the selection number 1 to 2 (N.A).

α-7, -9 -Ti...Set the camera to the custom function 16 and change the selection number 1 to 2 (N.A).

α-Sweet Digital...Carry out the following operation.

MENU ⇒*2⇒Release lock with a lens ⇒ To the right ⇒ N.A ⇒ ● Execute ⇒ MENU

α-7 Digital...Carry out the following operation.

MENU ⇒*3 ⇒ Release lock without the lens ⇒ To the right ⇒ N.A.⇒● Execute ⇒ MENU

※ If the release lock is disengaged in the above way, the state of disengagement is maintained even though the main switch is turned off. If the release lock function is disabled by performing the procedure above, the disabled state is maintained even when the main switch is set to OFF. If you want to enable the release lock function, perform the procedure above again.

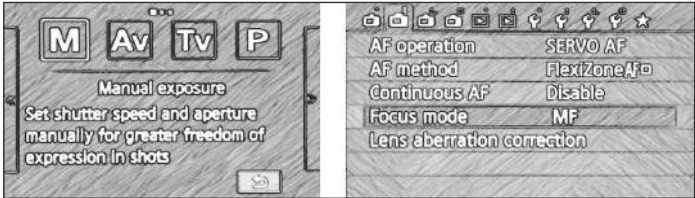
(Settings for the camera or the menu may be changed depending on the model or due to a menu upgrade. Therefore refer to the camera manual or contact the camera manufacturer for detailed information.)

○Mirrorless Cameras (Canon M, Samsung NX, Sony E, Fujifilm X)

The diaphragms of the 100mm F2.8 ED UMC MACRO Canon M, Samsung NX, Sony E and Fujifilm X mounts are not compatible with the cameras. If the brightness is set to F8 or above, you may not be able to set the correct focus due to a difficulty in viewing the subject through the camera viewfinder. Turn the aperture ring so it is fully open when attaching the lens to the camera, and then set the depth of field and brightness you want prior to shooting.

【Canon M Mount】

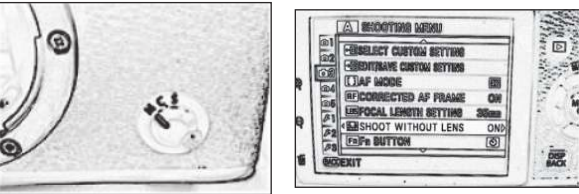
1) Set the exposure to manual exposure (M) and change the focus mode to MF.



(The procedures above are for the Canon M. The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera instruction manual or contact the camera manufacturer for detailed information.)

【Fujifilm X Mount】

1) Set the focus mode to M.



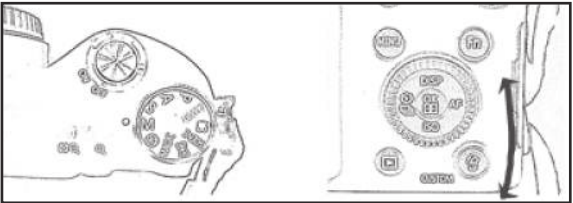
2) Press the MENU/OK button, and select ON at 'Shooting without lens' in the shooting menu.

(The procedures above are for the X-Pro1. The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera instruction manual or contact the camera manufacturer for detailed information.)

【Samsung NX Mount】

1) Set the camera mode dial to M.

2) Adjust the shutter speed by turning the dial to achieve the appropriate exposure for the brightness.



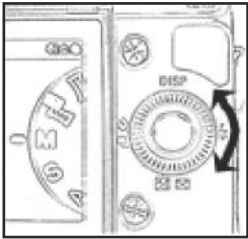
※ For some Samsung (NX) cameras, if you set the camera mode dial to A and set the brightness by turning the aperture adjustment ring on the lens, the camera automatically changes the shutter speed, so you don't have to adjust the shutter speed as well, which is required in M mode.

(The procedures above are for the NX200. The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera manual or contact the camera manufacturer for detailed information.)

【Sony E Mount】

1) Set the camera mode dial to M.

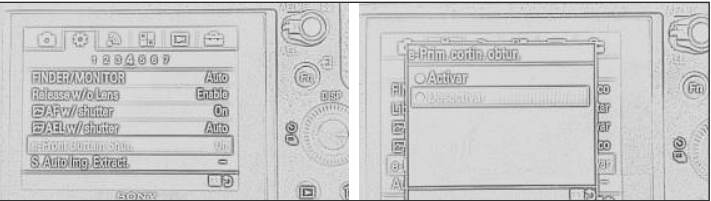
2) Adjust the shutter speed by turning the dial to achieve the appropriate exposure for the brightness.



※ For some Sony E cameras, if you set the camera mode dial to A and set the brightness by turning the aperture ring on the lens, the camera automatically changes the shutter speed. Therefore you don't need to adjust the shutter speed as well, which is required in M mode.

(The procedures above are for the NEX-5. The settings for the camera or the menu may vary based on the model or due to a functional upgrade. Refer to the camera manual or contact the camera manufacturer for detailed information.)

※ When the upper part of image is dark, please follow below instruction.



1) Select fourth function of setting mode.

2) Set "e-Front Curtain shut" off.

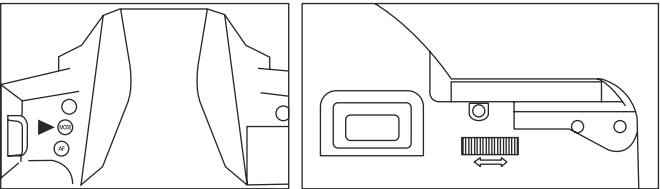
(The above instruction is given based on Sony E. The camera settings may vary depends on the model or due to a menu upgrade. Please refer to the camera manual or contact the camera manufacturer for more information.)

○ Four Thirds, Micro Four Thirds

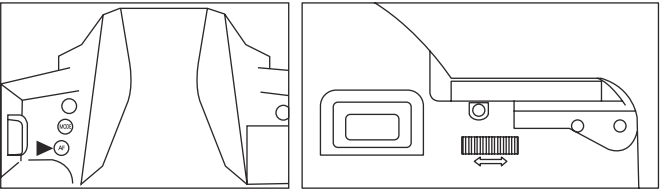
The diaphragms of the 100mm F2.8 ED UMC MACRO Four-thirds and Micro four-thirds mounts are not compatible with the cameras. If the brightness is set to F8 or above, you may not be able to set the correct focus due to a difficulty in viewing the subject through the camera viewfinder. Turn the aperture ring so it is fully open when attaching the lens to the camera, and then set the depth of field and brightness you want prior to shooting.

【Four-thirds Mount】

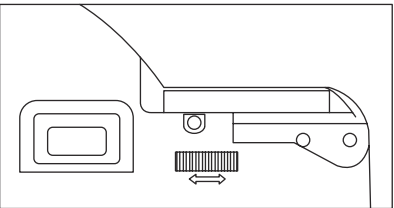
1) Hold down the MODE button and turn the dial until it is set to M. (Shooting conditions) MODE + control dial ► M mode setting (manual shooting)



2) Hold down the AF button and turn the dial until it is set to MF. (Focusing) AF + control dial ► MF setting (manual focusing)



3) Adjust the shutter speed to achieve the appropriate exposure for the brightness by turning the dial.

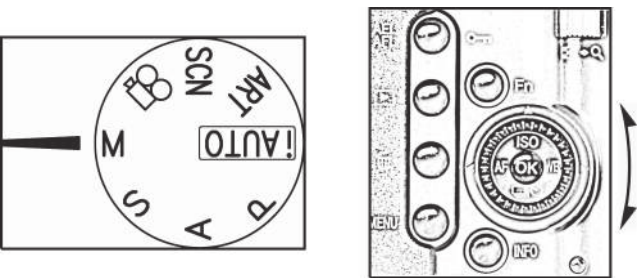


※ For some Four-Thirds cameras, if you set the camera mode dial to A and set the brightness by turning the aperture adjustment ring on the lens, the camera automatically changes the shutter speed, so you don't have to adjust the shutter speed as well, which is required in M mode.

(The procedures above are for the Olympus E-3. The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera manual or contact the camera manufacturer for detailed information.)

【Micro Four Thirds Mount 】

1) Set the camera mode dial to M.



2) Adjust the shutter speed by turning the dial to achieve the appropriate exposure for the brightness.

※ For some Olympus (MFT) and Panasonic (MFT) cameras, if you set the camera mode dial to A and set the brightness by turning the aperture adjustment ring on the lens, the camera automatically changes the shutter speed. Therefore you don't need to adjust the shutter speed as well, which is required in M mode.

(The procedures above are for the E-P2. The settings for the camera or the menu may vary based on the camera model or due to a functional upgrade. Refer to the camera manual or contact the camera manufacturer for detailed information.)

7. Specifications

SPECIFICATIONS		1:2.8 100mm ED UMC MACRO									
APERTURE RANGE		F2.8 ~ 32									
OPTICAL CONSTRUCTION		15 ELEMENTS IN 12 GROUPS									
MINIMUM FOCUSING DISTANCE		0.307m(1.0ft)									
FILTER SIZE		Φ67mm									
MAXIMUM DIAMETER		Φ72.5mm									
MOUNT		CANON EOS	NIKON AE	PENTAX K	SONY α	CANON M	FUJIFILM X	SAMSUNG NX	SONY E	FOUR -THIRDS	MICRO FOUR -THIRDS
ANGLE OF VIEW	35mm	24.8°	24.8°	24.8°	24.8°	-	-	-	24.8°	-	-
	APS-C	15.4°	16.4°	16.4°	16.4°	15.4°	16.4°	16.4°	16.4°	-	-
	FOUR-THIRDS (4/3")	-	-	-	-	-	-	-	-	12.6°	12.6°
LENGTH		123.1mm	120.6mm	121.6mm	122.6mm	149.0mm	149.4mm	141.6mm	149.1mm	128.4mm	147.9mm
WEIGHT		720g	705g	710g	715g	730g	770g	720g	730g	735g	725g
FUNCTION		A / S / M / P mode(NIKON AE)									

※ If more than one filter is attached to the camera, it may cause vignetting (the reduction of an image's brightness at the periphery).If a filter, which has both sides multi-coated, is used when attaching a filter, the user can shoot clear images.

8. Troubleshooting

Symptoms	Cause	Countermeasures
A lens cannot be attached to the camera.	The reference point on the lens is not aligned with the lens attachment reference point on the camera.	Align the attachment reference point on the lens with the lens attachment reference point on the camera.
A lens cannot be detached from the camera.	Incorrect rotation direction for detaching the lens.If you turn the lens while holding the camera, it may cause damage to the lens.	Hold down the lens release button on the camera, gently turn the lens toward the lens attachment/detachment reference point marked on the camera, and then pull the lens away.
Blurry images	Incorrect focusing.Camera shake, or insufficient shutter speed.	Turn the focusing ring while checking the subject with the indicator in the camera or checking visually to set the focus until the subject is clear, and then press the shutter. After secure a shutter speed of 1/125 secs or faster, steady the camera and take a photograph.
FEE (blinking)	The aperture adjustment ring on the lens is not set to the minimum aperture value.	Turn the aperture adjustment ring to set it to the minimum aperture value. (F22)
Automatic focusing does not work properly.	A manual focusing lens has trouble with automatic focusing.	Turn the focusing ring to focus on a subject.
The pictures are too dark or too bright.	The exposure is incorrect.	Set the aperture adjustment ring of the lens correctly.
The camera flash is not synchronized to the camera.	With a non-CPU lens, the camera flash may not be geared to some cameras.	Refer to the camera manual.
	This lens corresponds to the Nikon AI-P lens.	See the camera manual or flash manual. This lens is not a "D-type" lens (which relays distance information to the camera).
There is no camera finder indication or display.	This lens doesn't have electronic contacts, so there is no electronic communication with the camera.	No problem with shooting.
Zoom failure.	This lens is a single lens.	
The lens can't be attached to other cameras.	This lens is designed for a specific mount type.	Purchase the designated lens mount.
You want to attach our 2X or 1.4X converter lens.	Our converter is designed for the T (M42 SCREW) mount only, thus it cannot be used with this product.	You can use each company's own mount converter.However, be aware that auto focusing is unavailable.

9. Safety Precautions

The following precautions are divided into two types according to the level of danger.		The following pictograms are used in the below precautions:	
⚠ Warning If this instruction is not followed, it may cause death or severe injury to the user.	⚠ Caution If this instruction is not followed, it may cause damage or injury to the user.	⚠ Requires caution, inside the pictogram it shows contents of precautions. (The pictogram on the left shows the caution for ignition.)	⚠ Shows prohibition, inside the pictogram it shows contents of prohibition. (The pictogram on the left shows the prohibition of disassembly.)
⚠ Warning Don't look at the sun through the lens, it may cause blindness.	⚠ Caution Attach the lens to the camera correctly and make sure that the lens is attached firmly. If the lens is not attached correctly, it may not be pulled out or it may fall down, causing injury.	⚠ Do not apply excessive weight on the lens attached to the camera. It may cause damage to the lens and camera mounts. Be sure to hold the lens when operating or moving.	⚠ Ensure that the camera operates properly by checking the lens beforehand or by test shooting for important events such as a wedding ceremony and an overseas trip.
⚠ Keep the lens out of children's reach, it may drop or fall down, causing injury.	⚠ Do not modify or alter the lens, it may lead to failure of the camera. Modified or altered lenses may not be repaired.	⚠ Don't leave the lens in direct sunlight, it may cause a fire, depending on lenses that concentrate light on a close object.	⚠ Don't look at the sun directly through a camera with a lens attached, it may cause damage to one's eyesight.

WARNING!

Do not wet this product or expose it to a moist environment. It may cause a fire or electric shock.

CAUTION!

- Don't use this product or store it close to devices that generate heat i.e., heaters, thermal regulators, stoves, stereo amplifiers.
- Do not expose the lens to drastic temperature changes.
- Don't touch the surface of the lens by hand, and avoid making contact with sharp objects.
- Do not drop the lens.
- Do not soak the lens in water, and avoid water splashing onto the lens.
- If there are foreign bodies on the lens, use a lens cleaning kit only.