Canon

# RF

# 28-70mm F2.8 IS STM

## Instructions

ENG

# Thank you for purchasing a Canon product.

Canon RF28-70mm F2.8 IS STM is a standard zoom lens for use with EOS R series cameras.

- “IS” stands for Image Stabilizer.
- “STM” stands for Stepping Motor.

### Conventions used in these instructions

Warning to prevent lens or camera malfunction or damage.

Supplementary notes on using the lens and taking pictures.

## Camera Firmware and Camera Applications

Please use the latest versions of firmware and applications with the camera in use. For details on whether the firmware and applications in use are the latest version or not, and for details on updating them, please check the Canon website.

If the camera’s* firmware is not a compatible version, the following limitations will apply.
- Magnified view functionality is not available.
- In some cases, the camera malfunction may occur.

* Applies to the following camera models:
EOS R and EOS RP

# Safety Precautions

Precautions to ensure that the camera is used safely. Read these precautions thoroughly. Make sure all details are observed in order to prevent risks and injury to the user and other people.

**⚠ Warning** Details pertaining to risks that may result in death or serious injury.

- **Do not look directly at the sun or other strong light sources through a lens.** This may result in loss of sight.
- **Do not leave a lens in the sun without the lens cap attached.** The lens may concentrate entering sunlight and cause a malfunction or fire.

**⚠ Caution** Details pertaining to risks that may result in injury or damage to other objects.

- **Do not leave the product in places exposed to extremely high or low temperatures.** The product may cause burns or injury when touched.
- **Do not insert your hand or fingers into the product.** This may result in injury.

# General Precautions

## Handling Precautions

- Do not leave the product in excessive heat such as in a car in direct sunlight. High temperatures can cause the product to malfunction.
- If the lens is taken from a cold environment into a warm one, condensation may develop on the lens surface and internal parts. To prevent condensation in this case, first put the lens into an airtight plastic bag before taking it from a cold to warm environment. Then take out the lens after it has warmed gradually. Do the same when taking the lens from a warm environment into a cold one.
- In order to optimize aperture control, there are occasions in which the aperture blades will move during zooming and focusing, even when the aperture value is set for aperture-priority AE or manual exposure, etc.
- Please also read any lens related handling precautions listed in your camera's instruction manual.

## Shooting Precautions

- Focus again after recovering from the auto power off status.
- To maintain the focus position in the shooting-ready status, set [Auto power off] to [Disable] on the camera.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

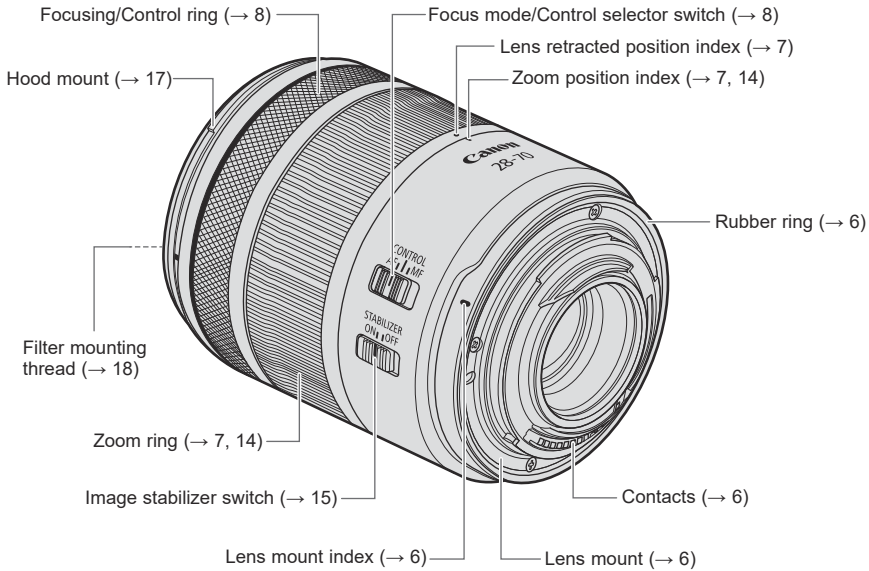
This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

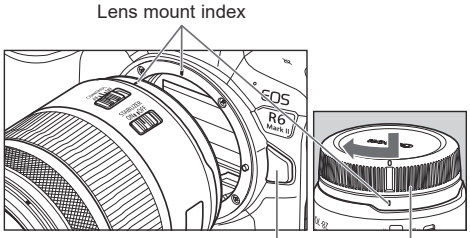
CAN ICES-3 (B) / NMB-3 (B)

# Nomenclature




- For detailed information, reference page numbers are provided in parentheses (→ **).

# 1. Attaching and Detaching the Lens




### Attaching the Lens

Align the lens mount indexes of the lens and camera, and turn the lens clockwise until you hear a click.

### Detaching the Lens

Turn the lens counterclockwise while pressing the camera's lens release button. Detach the lens once it has stopped turning.

Please refer to the camera's instructions for details.

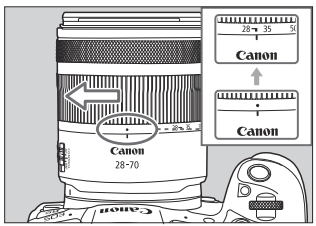
- Set the camera's power switch to OFF when attaching or detaching the lens.
- Attach the lens cap before detaching the lens from the camera.
- After detaching the lens, place the lens with the rear end up and attach the dust cap to prevent the lens surface and contacts from getting scratched. Make sure the lens and dust cap mount indexes are aligned when attaching the dust cap.
- Contacts that are scratched, soiled, or have fingerprints on them may result in faulty connections or corrosion, which may lead to malfunctions. If the contacts get soiled, clean them with a soft cloth.
- The lens mount has a rubber ring to improve dust-resistance and water-resistance performance. This rubber ring may cause friction marks to appear around the camera's lens mount, although this will have no effect on usage.

- Rubber rings can be replaced at a Canon Service Center. (chargeable)

# 2. Shooting Preparations and Retracting Lens

The lens is fitted with a retraction mechanism.
This enables the length of the lens to be shortened in comparison to when shooting.
Shooting is not possible when the lens is stored.
Observe the following procedure to set the lens in the position for shooting.

### Preparations from Retraction to Shooting




Rotate the zoom ring in the direction of the white arrow until you hear a click to set the lens in the preparatory shooting position.

- If the lens retraction position indicator is aligned with the zoom indicator, add slight pressure to rotate the zoom ring in the direction of the arrow.

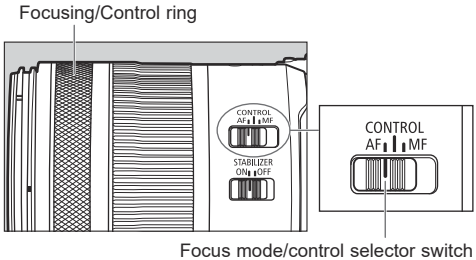
### Retracting Lens

1. Rotate the zoom ring from the shooting position in the opposite direction to the white arrow.
2. Continue rotating after it exceeds the wide-angle position (28 mm).
3. Rotate it to the end to align the lens retraction position indicator with the zoom indicator and store it.

- Please be careful not to let your fingers get caught in between the lens portion that extends and the lens body when retracting.

# 3. Focusing/Control ring

The focusing/control ring can be used as either a focusing ring or a control ring.




### Use as a Focusing Ring

Set the focus mode/control selector switch to AF or MF.
To shoot in autofocus (AF) mode, set the focus mode/control selector switch to AF. Table*1
To use only manual focusing (MF), set the focus mode/control selector switch to MF, and focus by turning the focusing ring (focusing/control ring). Table*2

Table: List of Focus Mode and Focusing/Control Ring Functions Using the Focus Mode/ Control Selector Switch

| | Focus mode/ Control selector switch | | |
|---|---|---|---|
| | *1 AF | *3 CONTROL | *2 MF |
| Focus mode | AF | *4 AF/ *5 MF | MF |
| Focusing/ control ring functions | Focusing ring | Control ring | Focusing ring |

### Use as a Control Ring

Set the focus mode/control selector switch to CONTROL. Table*3
Set the control ring function using the camera's menu. The control ring can be assigned the functions that are commonly used with cameras, such as shutter speed and aperture settings. Please refer to the camera's instructions for details on how to use the control ring.

## Focusing/Control ring

- Delayed focus may occur if the focusing ring (focusing/control ring) is quickly turned.
- Setting the focus mode/control selector switch to CONTROL will fix the focus mode as AF. Table*4
  However, depending on the camera used, it is possible to switch the focus mode to MF on the camera. Table*5
  Please refer to the camera's instructions for details.

- The lens' focusing ring (focusing/control ring) is electronic.
- With a camera capable of electronic full-time manual focus, manual focusing is possible while the camera is operable. However, this requires a change in camera settings.
- When AF operation is set to One-Shot AF, manual focus is possible after autofocusing has been completed by continuing to press the shutter button halfway (electronic manual focus function). However, this requires a change in camera settings.
- When movie recording, the AF speed will be slower than the still photo shooting mode. It is possible to adjust the AF speed on the camera by setting Movie Servo AF to [Enable].

Please refer to the camera's instructions for details.

# 4. Taking Closeup Shots in the Manual Focusing (MF) Mode

When using this lens, shots taken with the manual focusing (MF) mode within a range of less than 64 mm from the wide end make the subject seem closer and larger than with the autofocus (AF) mode.

The focusing distance ranges of the wide end are shown below.

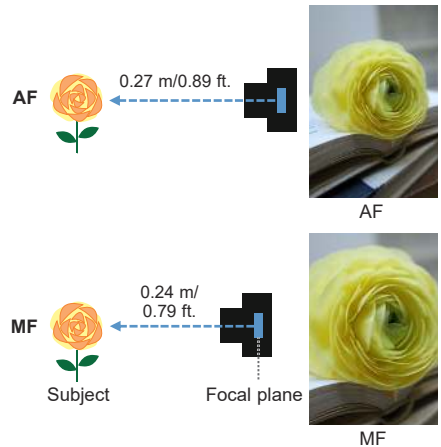
- AF in-focus range: 0.27 m/0.89 ft. to ∞
- MF in-focus range: 0.24 m/0.79 ft. to ∞

Focusing within a range of 0.24 m/0.79 ft. to less than 0.27 m/0.89 ft. is possible only when using the MF mode. (MF-only range)

- The [MF in-focus range] will differ in accordance with the focal length within a range of less than 64 mm from the wide end.
- Refer to the specifications on page 19 for details on the range of focusing distances apart from with wide-angle lenses.

- The focusing distance represents the distance between the [⊖] mark (focal plane mark) on the camera and the subject.

**Wide-end Examples:**



## Taking Closeup Shots in the Manual Focusing (MF) Mode

Take the following steps for shooting in the [MF-only range].

1. Set the focus mode/control selector switch to MF.
2. Set the focal length to a wider setting than 64 mm with the zoom ring.
3. Turn the focusing ring in the short-range direction to move the focusing position from [AF in-focus range] to [MF-only range]. (*Notes 1 & 2)
4. Manually focus on the subject while in the [MF-only range] and take the picture.

Note 1: It is possible to focus within the [MF-only range] only when the focus mode is set to MF.
The lens cannot focus within the [MF-only range] when the focus mode is set to AF.

Note 2: Changing the focus mode from MF to AF will automatically move the focus position to the short-range side of the [AF in-focus range].

## Taking Closeup Shots in the Manual Focusing (MF) Mode

The following limitations are in effect when the focus point is within the [MF-only range].

- The image quality will decline compared to the [AF in-focus range]. It is therefore recommended that you shoot while checking the images after each shot.
- When mounted on EOS R cameras, detection accuracy levels for the focus guide function will be lowered. Use the focus guide function within the [AF in-focus range].
- It is not possible to align the focus when taking remote shots with PCs and smartphones.

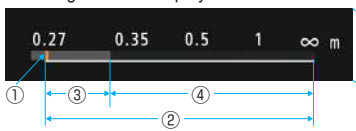
The following limitations are in effect when the focus point is within the [MF-only range] unless set to MF as indicated in Table*5 on page 8.

- Even when the focus mode/control selector switch is moved to [CONTROL], AF mode is not possible as the focusing position is made in the [MF-only range]. Also, manual focus is not possible as the ring function is set to control ring at this time. Therefore, it is not possible to adjust focus by moving the focus lens.
- Use the following steps when switching to [CONTROL] when focus is made in the [MF-only range]. After switching to [CONTROL], you can focus using AF.
  - Turn the focusing ring in the direction of [Infinity] until the focusing position moves from the [MF-only range] to the [AF in-focus range], then switch to [CONTROL].
  - Alternatively, switch the focus mode/control selector switch from MF to AF, then return it to [CONTROL].

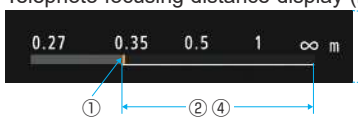
## Taking Closeup Shots in the Manual Focusing (MF) Mode

It is possible to check the focusing position with the use of the camera's focusing distance display function*1.

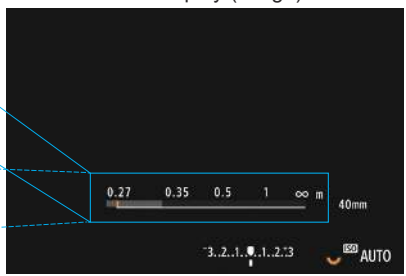
Focusing distance display at 40 mm focal length (image)




Telephoto focusing distance display (image)




Camera monitor display (image)



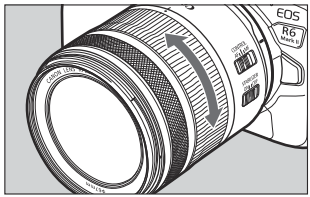

The illustrations on the left above are enlarged images of the camera's focusing distance display areas*2.

- The short-range direction is on the left and the infinity symbol on the right indicates the infinity direction.
- The orange vertical line shown in (1) indicates the current focusing position.
- The range of the white line shown in (2) indicates the range of focusing positions that can be used for shooting.
- The range shown in (3) is the [MF-only range] within which the focus can be aligned only when in the [MF] mode.
- The range shown in (4) is the range within which the focus can be aligned when in both the [MF] and [AF] modes. The focus can only be aligned within the range shown in (4) when in the [AF] mode.

*1 Refer to the camera's instruction manual for details on displaying the [Focusing Distance Display].

*2 The [AF in-focus range] and [MF in-focus range] will differ in accordance with the focal length, which means that the focusing distance display will vary with the focal length.

# 5. Zooming



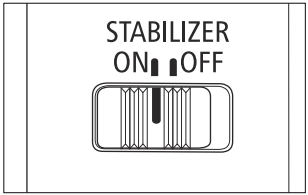

To zoom, turn the zoom ring.

**Minimum focusing distance:**
The minimum focusing distance differs depending on the focal length.

| Focal length | Minimum focusing distance | Magnification |
|---|---|---|
| 28 mm | 0.27 m/0.89 ft. | 0.16x |
| 35 mm | 0.32 m/1.05 ft. | 0.15x |
| 50 mm | 0.35 m/1.15 ft. | 0.18x |
| 70 mm | 0.35 m/1.15 ft. | 0.24x |

- Be sure to finish zooming before focusing. Zooming after focusing can affect the focus.
- Once a close-up subject is in focus, zooming may cause the subject to come out of focus. In this instance, move back from the subject and refocus.
- Blurring may temporarily occur if the zoom ring is quickly turned.
- Please be careful not to let your fingers get caught in between the lens portion that extends and the lens body when zooming.

# 6. Image Stabilizer




Set the image stabilizer switch to ON when you want to use the Image Stabilizer.

- This function provides image stabilization appropriate for shooting conditions (such as shooting still subjects and panning shots).
- The coordinated control will work in combination with cameras with in-body Image Stabilizer.
- Set the image stabilizer switch to OFF when you are not going to use the Image Stabilizer.

- The Image Stabilizer cannot compensate for a blurred shot caused by a subject that moved.
- The Image Stabilizer may not be fully effective if you shoot from a violently shaking vehicle or other transportation.
- When using a tripod, the Image Stabilizer might not be fully effective or it might be better to set the image stabilizer switch to OFF, depending on the type of tripod and where the tripod is located, as well as on the camera's settings such as shutter speed.
- Even with a monopod, the Image Stabilizer will be as effective as during hand-held shooting. However, depending on the shooting conditions, there are cases in which the Image Stabilizer effect may be less effective.

## Image Stabilizer

The Image Stabilizer for this lens is suited to hand-held shots in the following conditions.





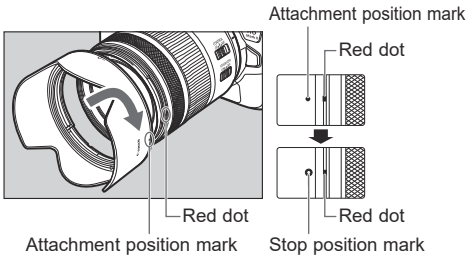
- In semi-darkened areas such as indoors or outdoors at night.
- In locations where the flash cannot be used, such as art museums and theater stages.
- In situations where your footing is uncertain.
- In situations where fast shutter speed settings cannot be used.

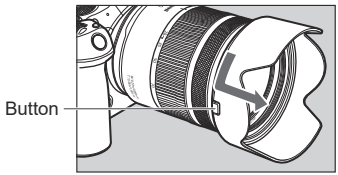


- Panning shots of vehicles, trains, etc.
  It compensates for vertical camera shake during panning shots in a horizontal direction, and compensates for horizontal camera shake during panning shots in a vertical direction.

# 7. Hood (Sold separately)

The custom lens hood cuts out unwanted light and protects the front of the lens from rain, snow, and dust.




### Attaching the Hood

Align the red attachment position mark on the hood with the red dot on the front of the lens, and then turn the hood in the direction of the arrow until you hear a click.

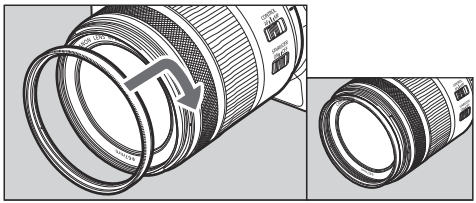
### Detaching the Hood

Keep your finger pressed down on the button located on the side of the hood, and then turn the hood in the direction of the arrow until the attachment position mark on the hood is aligned with the red dot on the front of the lens to detach it. The hood can be reverse-mounted on the lens for storage.

- If the hood is not attached properly, vignetting (darkening of the perimeter of the picture) may occur.
- Grasp and turn the base of the hood when attaching and detaching it. There are cases in which it may become deformed if the hood is turned with it grasped near to the rim.

# 8. Filters (Sold separately)

You can attach filters (Φ67) to the filter mounting thread on the front of the lens.



- Only one filter may be attached.
- If you need a polarizing filter, use the Canon Circular Polarizing Filter PL-C B.
- Detach the hood when adjusting the polarizing filter.

# Specifications

| | | | | |
|---|---|---|---|---|
| **Focal Length/Aperture** | 28-70mm f/2.8 | | | |
| **Lens Construction** | 12 groups, 15 elements | | | |
| **Maximum Aperture** | f/2.8 | | | |
| **Minimum Aperture** | f/22 | | | |
| **Angle of View** | Horizontal: 65°- 29° / Vertical: 46°- 19°30′ / Diagonal: 75°- 34° | | | |
| **AF Mode** | | | | |
| **Focal Length** | 28 mm | 35 mm | 50 mm | 70 mm |
| **Min. Focusing Distance** | 0.27 m/0.89 ft. | 0.32 m/1.05 ft. | 0.35 m/1.15 ft. | 0.35 m/1.15 ft. |
| **Magnification** | 0.16x | 0.15x | 0.18x | 0.24x |
| **Field of View** | Approx. 220 x 146 mm/ 8.66 x 5.75 in. | Approx. 237 x 158 mm/ 9.33 x 6.22 in. | Approx. 190 x 127 mm/ 7.48 x 5.00 in. | Approx. 142 x 94 mm/ 5.59 x 3.70 in. |
| **MF Mode** | | | | |
| **Focal Length** | 28 mm | 35 mm | 50 mm | 70 mm |
| **Min. Focusing Distance** | 0.24 m/0.79 ft. | 0.26 m/0.85 ft. | 0.33 m/1.08 ft. | 0.35 m/1.15 ft. |
| **Magnification** | 0.19x | 0.2x | 0.2x | 0.24x |
| **Field of View** | Approx. 182 x 122 mm/ 7.17 x 4.80 in. | Approx. 176 x 117 mm/ 6.93 x 4.61 in. | Approx. 176 x 118 mm/ 6.93 x 4.65 in. | Approx. 142 x 94 mm/ 5.59 x 3.70 in. |
| **Filter Diameter** | 67 mm | | | |
| **Max. Diameter and Length** | Approx. 76.5 x 92.2 mm/3.01 x 3.63 in. (when lens is stored) | | | |
| **Weight** | Approx. 495 g/17.46 oz. | | | |
| **Hood** | EW-73D (Sold separately) | | | |
| **Lens Cap** | E-67 II* | | | |
| **Lens Dust Cap** | Lens Dust Cap RF* | | | |
| **Case** | LP1116 (Sold separately) | | | |

## Specifications

- The lens length is measured from the lens mount surface to the front end of the lens. Add 24.2 mm/0.95 in. when including the lens cap and dust cap.
- The maximum diameter, length and weight listed are for the lens itself only.
- * comes included with the lens, but can also be purchased separately.
- Close-up Lens 250D/500D cannot be attached because there is no size that fits the lens.
- You cannot use extenders.
- Multiple exposure shooting is not possible when using this lens on certain cameras**.
  ** EOS R, RP, Ra, R5, R6
- There are cases in which using the zoom function during continuous shooting may result in conspicuous image distortion.
- All data listed is measured according to Canon standards.
- Photos shown are for illustration purposes only.
- Product specifications and appearance are subject to change without notice.

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