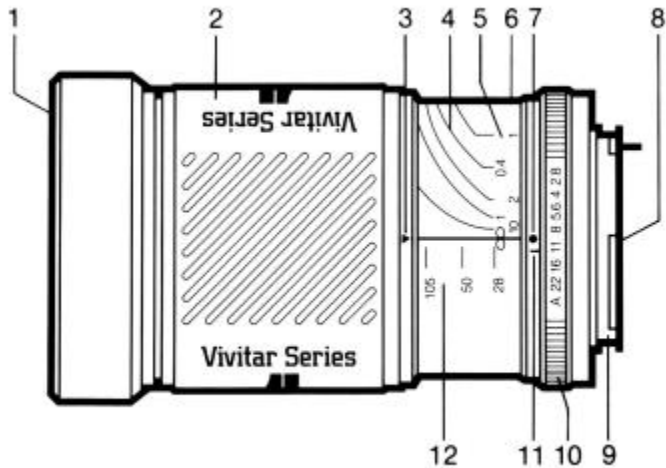


Vivitar Series

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28-105mm f2.8-f3.8



## Controls and Components

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1. Accessory Thread
2. Zoom/Focus Control
3. Distance Indicator
4. Distance Index Lines
5. Distance Scale
6. Macro Range Position and Index
7. Aperture Index Dot
8. Lens Mounting Alignment Dot
9. Lens Mount
10. Aperture Ring
11. Variable Aperture Indicator
12. Focal Length Scale

## Mounting the Lens

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Your Vivitar zoom lens will mount on your camera in the same manner as your normal lens. While mounting your lens, leave the front lens cap on to avoid smudging the front element. Make sure the Lens Mounting Alignment Dot on the lens and the similar dot on the camera are aligned before attempting to mount the lens.

**NOTE:** Canon mount Vivitar lenses have a black locking ring at the back of the lens mount. To mount the lens on your camera, grasp the lens firmly in your right hand with the lens mount facing away from you. With the left hand, turn the locking ring counter-clockwise so that the red index dot on the locking ring is aligned with the red aperture index dot. Remove the rear lens cover. The locking ring is now in the correct position for mounting the lens on the camera. Holding the camera in your left hand, mount the lens onto the camera, making sure that the red index dot on the camera is aligned with the red index dots on the lens. Turn the locking ring clockwise to lock the lens on your camera.

To remove the lens from the camera, simply reverse the process. Remember, in order to remove or mount the lens or to remove or replace the rear protective lens cover, the red index dots on the lens must be in alignment.

## Holding the Camera and Lens

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For best balance during use, support the lens/camera combination with your left hand under the lens. This leaves your right hand free to operate the camera controls.

## Setting the Aperture

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The Aperture Ring controls the amount of light allowed to reach the film by varying the size of the lens diaphragm opening. As the lens is set to higher *f*/stop numbers, the diaphragm becomes smaller, allowing less light to reach the film.

This lens has an automatic mechanism which allows you to focus and compose the picture with the diaphragm wide open. At the moment of shutter release, the diaphragm will automatically stop down to the aperture pre-selected manually or as determined by the camera's metering and exposure control system.

NOTE: Certain model lenses have an auto/manual selector which must be set at the auto position for automatic diaphragm control. In the manual position, the *f*/stop is selected by rotating the Aperture Ring.

## **Variable Aperture Lens**

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This is a variable aperture lens which means that the effective aperture changes from the set aperture as the lens is zoomed from the shortest focal length to the longest focal length. For correct metering, the aperture is always set at the red Aperture Index Dot. At the shortest focal length the aperture is  $f/2.8$ . The shortest focal length is color-coded in red and corresponds to the aperture set at the red index dot. The longest focal length is color-coded in green. The maximum aperture at that focal length is approximated by the green Variable Aperture Indicator.

If you are using a camera equipped with automatic shutter control, automatic aperture control, or both, your camera will automatically compensate for the variable aperture. If you are using the manual mode on cameras so equipped, follow metering procedures as outlined in your camera manual, remembering that changes in focal length may require manual adjustments in shutter speed or aperture due to the actual EFFECTIVE aperture values at the 105mm focal length.

## **Lenses for Automatic Cameras**

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Many of today's cameras are designed to automatically set the lens aperture. Your Vivitar zoom lens is fully compatible with these systems.

**Canon:** Canon mount lenses have a click stop at the green dot for automatic operation. The Aperture Ring may be set and removed from this position in a manner similar to your normal lens.

**Pentax KA (P/K-A):** Pentax KA mount lenses have a green "A" position on the aperture ring for automatic modes of operation. Set the green "A" to the red Aperture Index Dot.

**Minolta:** On Minolta mount lenses, the minimum aperture setting is engraved in green. When using this lens in automatic mode on correspondingly equipped cameras, set this minimum aperture position to the red Aperture Index Dot.

## Focusing and Zooming

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Vivitar's "one-touch" design lets you focus and compose your picture quickly and easily. Focusing and zooming are both controlled by the single Zoom/Focus Control.

1. To focus in the normal (non-macro) mode, turn the Zoom/Focus Control until the subject appears in sharpest focus in the camera viewfinder.
2. To zoom from one focal length to another, slide the Zoom/Focus Control along the lens barrel to the desired position. The Focal Length Scale shows the most commonly used focal lengths. This zooming capability gives you excellent

creative control over the composition of your photo, since unwanted backgrounds can be "cropped out" from around your main subject by increasing the focal length.

3. This lens has a varifocal design and it is necessary to refocus slightly after changing zoom positions. Turn the Zoom/Focus control to the right or left until you achieve the sharpest image in the camera viewfinder.
4. Under extremely cold conditions, all lenses experience a shift in focus. When operating under these conditions, you may observe that the lens will come into focus just prior to reaching the infinity mark and stop position. This is a normal condition.

## **Distance to Subject**

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Once focused, you can determine the approximate distance between camera and subject, if desired, (useful in flash photography) by finding the Distance Index Line closest to the Distance Indicator.

## **Depth of Field**

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Depth of field is the area of acceptable sharpness in front of and behind the subject in focus. This depth is determined by three factors: the lens aperture, the



focal length, and the distance to subject. Increasing aperture size and/or focal length reduces the depth of field around a given subject. Decreasing aperture and/or focal length has the opposite effect. Conversely, depth of field increases as distance to subject increases and vice versa. This variability of the depth of field offers you creative possibilities — by opening the lens to wider apertures you can blur out unwanted backgrounds and foregrounds—something which is particularly pleasing in portrait and still-life photography.

## Macro Mode Operation

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1. Move the Zoom/Focus Control to the MACRO mark at the beginning of the distance scales.
2. The maximum reproduction ratio of 1:2.5 is obtained with the Zoom/Focus Control at the position closest to the camera at 28mm (even though the lens cams *outward* and appears to move away from the camera when rotated to the right).
3. Move your camera and lens toward the subject until the image comes into sharp focus. This is the maximum reproduction ratio.
4. Longer focal length positions provide smaller reproduction ratios.

**NOTE:** "Reproduction Ratio" refers to the relationship between the actual size of

your subject and the size of its image on the film. For example, a reproduction ratio of 1:4 means that the size of the image on the film is 1/4 lifesize. A ratio of 1:2 means the size of the image is 1/2 lifesize.

## Helpful Hints in Macro Operation

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1. Because exposure in macro photography is critical to getting the best possible picture, it is a good idea to shoot several pictures of the same subject, varying the exposure slightly. This method involves shooting the pictures at the *f*/stop indicated by your camera metering system, underexposing by 1/2 to 1 *f*/stop and overexposing 1/2 to 1 *f*/stop. (Your particular camera may require use of the exposure compensation control.)
2. Always try to use a tripod or other stable support when shooting at higher reproduction ratios to assure that no slight movements occur to degrade picture quality. If a stable support is unavailable or impossible to use, take the photo at the fastest shutter speed that lighting conditions will allow.
3. We recommend using a cable release to trigger the shutter of your camera. Even the slightest movement caused by your finger depressing the shutter release can affect the quality of macro photos at high reproduction ratios. If your camera has a self-timer, you can use it to prevent this movement if a cable release is not available.

4. When shooting pictures in macro mode, the depth of field is diminished. It is therefore recommended you use the smallest f/stop possible.

## Lens Care

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Please consider the purchase of a VIVITAR PRO PACK for the care and long life of your new lens. It consists of a 1A Skylight filter, collapsible lens hood, soft pouch lens case, and a lens cleaning kit containing a blower brush, chamois cloth, lens tissue, and cleaner. The items we selected for the kit and the reasons are as follows:

1. It is a good idea to keep a Skylight 1A or UV filter on your lens at all times. This not only improves photographs, but also protects the front lens element from dirt and scratches.  
NOTE: To help keep your lens dust free, be sure both front and rear lens caps are in place when the lens is not in use.
2. Clean your lens with an airbrush, anti-static brush or wipe it lightly with a camel-hair brush or lens tissue to gently brush away loose particles. To remove fingerprints or smudges use a lens chamois or clean, soft cotton cloth moistened with lens cleaning fluid. Never rub the lens surface with your finger, clothing or any other possibly abrasive material. This will scratch the lens coating and cause damage to the element surface.

3. Always store your lens in a cool, dry place. It is a good idea to store it with the silica gel packet supplied, especially during wet or humid weather. A lens case with a silica gel packet is a handy means of storage and provides excellent protection for your lens.

## Specifications

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**Focal Length:** 28 — 105mm

**Aperture Range:** f/2.8 — 1/22

**Optical Construction:** 14 Multicoated Elements in 12 Groups

**Angle of Acceptance:** 71 to 22 degrees

**Minimum Focusing Distance:** 0.2 m (7.87 in.)

**Maximum Reproduction Ratio:** 1:2.5

**Length at infinity:** 104.5 mm (4.1 in.)

**Weight:** 620 g (21.84 oz.)

**Maximum Barrel Diameter:** 70 mm (2.76 in.)

**Accessory Size:** 67mm

Specifications subject to change without notice. Length and weight may vary slightly depending on lens mount.

# Vivitar

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