KATZ EYE™ OPTICS

Focusing Screen Installation Guide

For the Canon 20D & 30D

November 16, 2008

Installation Guide: *Canon 20D & 30D*

Thank you very much for your purchase of a Katz Eye™ focusing screen. This document provides installation instructions for the Canon 20D & 30D. While these instructions are based on a 30D installation, the procedure is equally applicable to the 20D. The installation of the Katz Eye™ screen requires no modifications to the camera, and when properly performed, is completely reversible. For best results, please read completely through the instructions before beginning the procedure.

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Note: All pictures are available in larger format on the internet. Just click the links.

1. Set up a work area which is relatively free of dust and has a soft surface on which to place the camera.
2. Collect the necessary tools and supplies. You will need:

    a. Miniature screwdriver.
    b. Tweezers.
    c. Bulb blower.
    d. Pec-Pads or lens cloth (optional).

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3. Remove the lens from the camera and place the camera flat on its back (on the LCD side).

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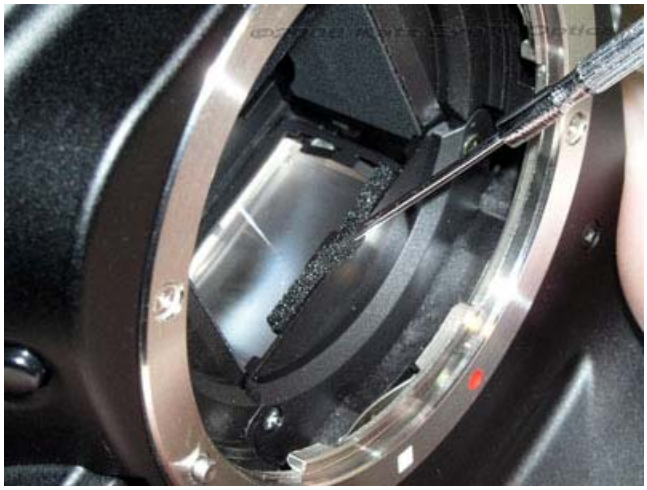
4. Place a folded Pec-Pad or lens cloth against the reflex mirror for protection. The pad is not used in these illustrations for clarity of view. While this step is not absolutely necessary, it is a good general precaution.
5. The catch for the screen retainer clip is shown in the left photo below. The foam is only being lifted to show the catch; this is <u>not</u> necessary to release the clip. Release the screen retainer clip by inserting your screwdriver as shown in the right photo. There is a small notch in the clip which can be used as an insertion point for the tool to help prevent slippage. <u>Gently</u> pry the retainer clip out from under the mirror damping foam.



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6. Pivot the clip away from the focusing screen and lift out with tweezers.

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7. Tip the camera so that the focusing screen falls toward the main mirror. Grasp the screen by one of the nearest tabs and lift out the focusing screen. Be **very** careful to touch only the tab, so the screen face does not become damaged! Store the screen in a safe place, such as wrapped in a lens cloth and placed in the Katz Eye™ box. The plastic bag in which the Katz Eye™ screen is packed may also be reused to store the OEM screen.

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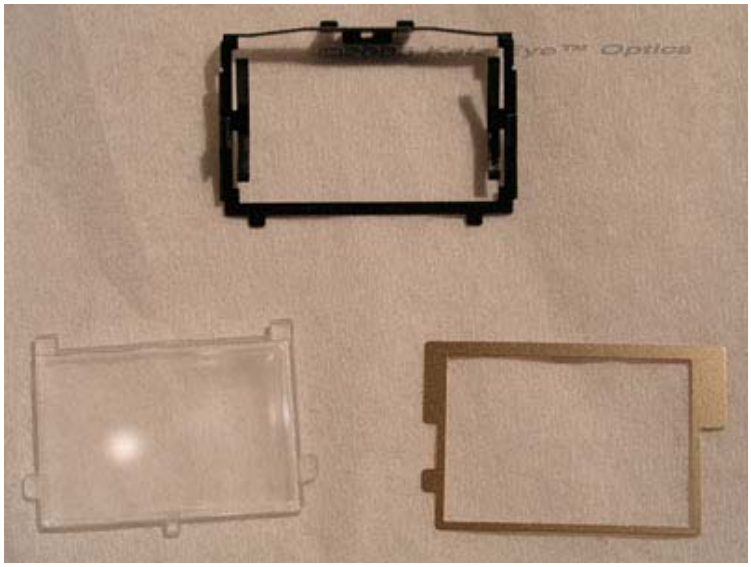
8. The shim behind the focusing screen should **not** be removed – it is shown below with the focusing screen and retainer for reference only. Normally, the shim will stay in place during the installation. However, if the shim is accidentally removed or dislodged during the installation process, it requires a special technique to reinsert the shim. In the event this occurs, please see Addendum B, at the end of the installation guide, to correctly reinsert the shim before continuing.



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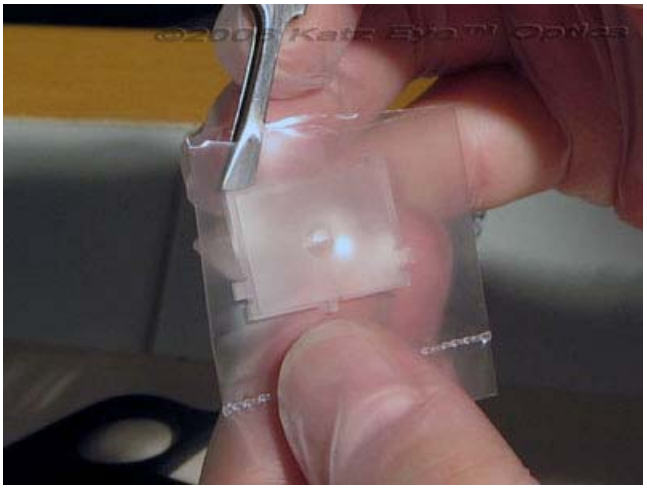
9. Remove the bagged Katz Eye™ screen from the plastic case. Orient the screen so that the protruding prism is facing you. Grasp the Katz Eye™ focusing screen by its handling tab and withdraw from the protective bag. Be **very** careful to touch only the tab, so the screen faces do not become damaged!



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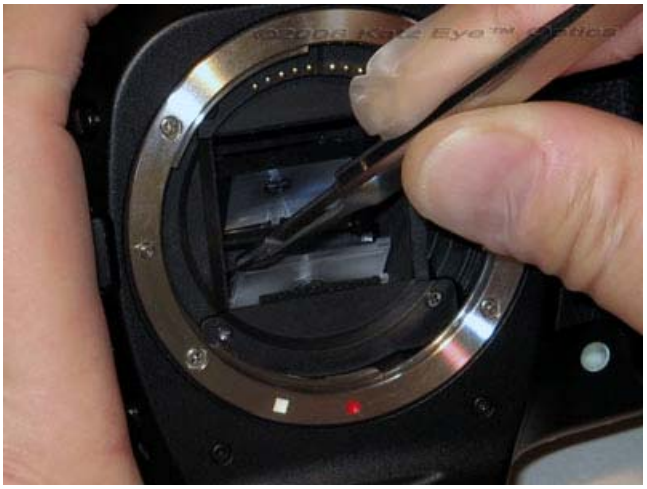
10. Insert the screen into the camera. The screen may require a slight nudge to fall completely flat into its recess.



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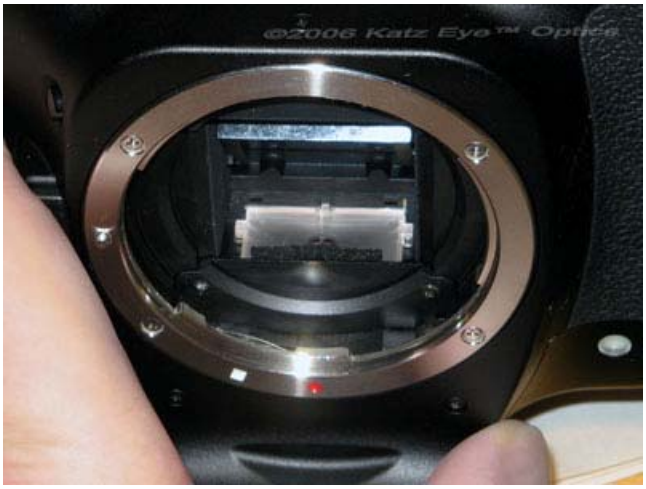

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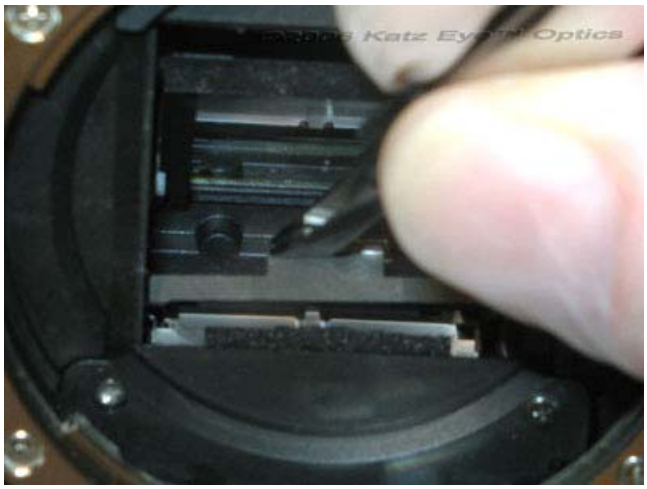
11. Insert the retainer clip into the camera. Be sure the two tabs at the rear of the clip engage the matching notches in the frame.



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12. Press the retainer clip gently toward the top of the camera until it engages. It is important not to catch the mirror damping foam strip in the retainer as it is closed. The easiest way to accomplish this is to gently roll the foam strip back slightly with your fingertip and press the clip home in the same motion.

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13. If necessary, blow any dust out of the mirror chamber with the bulb blower. Attach a lens, test the camera functions, and check the alignment of the focusing screen to the in-camera marks. Please note that because the focusing screen and the in-camera marks are at a different distance from the viewfinder, if your eye is off-center in the viewfinder, the marks may appear not to align even if they are positioned correctly. The alignment of the focusing screen to the in-camera marks is a purely aesthetic issue and will NOT affect the correct calibration of the manual focus. However, if the alignment is off in a bothersome way, please proceed to Addendum A, at the end of the installation guide, for the alignment procedure. If the alignment is visually satisfactory, then the installation is complete.

Installation Complete

Technical Support

Technical support is available by email to customerservice@katzeyeoptics.com. We strive to return all emails within 24 hours. Technical support is also available by phone at +1.413.743.2523 between the hours of 8:00am and 6:00pm Eastern Standard Time (GMT-5:00), Monday through Saturday. If we are not available, please leave a brief message, including your name and phone number, and we will call you back as soon as possible and always within 24 hours.

If you do not wish to complete the installation yourself, Katz Eye™ Optics can provide installation services. Please visit the Katz Eye™ Optics website, www.katzeyeoptics.com to purchase our installation service. We would also be happy to advise your choice of local camera shop regarding the installation procedure. Thank you very much for your purchase of a Katz Eye™ focusing screen and may the world favor you with abundant photo opportunities.

Take care,

Rachael Katz – Co-Owner, Katz Eye™ Optics

Addendum A: *Screen Alignment Procedure*

Alignment of the focusing screen to the in-camera marks (focusing points, composition circle, etc.), while not essential for correct manual focus, can provide a pleasing visual improvement. When the Katz Eye™ screen is correctly aligned, the prism of the Katz Eye™ will be concentric with the spot metering circle of the 30D. In the 20D, the partial metering circle will exactly coincide with the outer aspect of the microprism collar. The split prism will bisect the central focusing point and be laterally centered on that point as shown below:

Click Photo to Enlarge

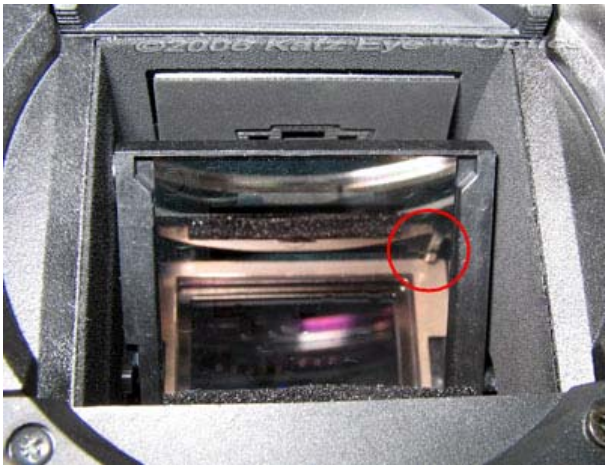
The alignment should be quite close without any special procedure, as long as the screen is installed correctly. If the alignment appears very far off, it is recommended to check for correct installation before proceeding with any adjustment. It also bears repeating that the apparent alignment can shift substantially based on the position of your eye in the viewfinder, so you might want to move your eye around a bit to be sure that it actually needs correction. If it is determined that altering the alignment is necessary, please proceed as follows.

The design of the camera is such that the screen can be shifted slightly in its frame; so if the alignment is off by only a small amount, and this is troubling, it is possible to move the screen to achieve perfect alignment. It is not necessary, nor desirable, to completely remove the focusing screen to perform the alignment. Simply unlatch the retainer clip, give the camera a gentle nudge, re-latch the retainer clip, re-check the alignment visually, and repeat as necessary. While seemingly unscientific and obviously based on trial and error, this seems to be the least problem-prone method in our experience. It is also possible to move the screen while the retainer clip is latched, by pushing on any of the tabs around the edge with a small tool. But because of the high probability of the tool slipping and damaging the screen, this method is not recommended.

Please note that because of the optics of the pentaprism, left/right motion of the screen is reversed; in other words, if the prism appears too far to the right, it will actually need to move to the right to correct the alignment. And if it appears too far to the left, it will need to move to the left. Vertical movement is in the intuitive direction; moving the screen toward the front of the camera will make it higher in the viewfinder and moving the screen rearward will lower it in the viewfinder. Once the alignment is close enough to be visually acceptable, the installation is complete.

Addendum B: *Shim Installation Procedure*

In the Canon 20D and 30D models, the shim is retained by two small projections on the underside of the retaining plate which holds the mirror damping foam. These projections normally keep the shim from falling out during the installation procedure. However, should the shim become dislodged, these same projections also make the re-installation of the shim a bit tricky. It is not possible to directly view the two projections, but they can be seen by looking at their reflection in the main mirror. The right-hand projection is shown below, circled in red. There is a matching projection out of view to the left.



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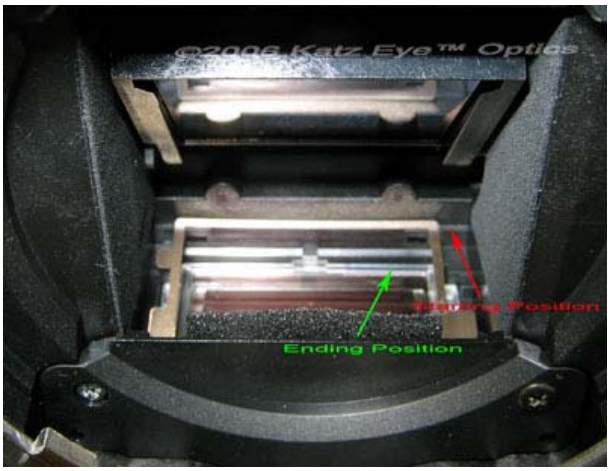
When inserting the shim, the intuitive method of inserting the back edge first and allowing the shim to fall into position will not work, as the shim will be stopped by the two projections before reaching the correct position behind the projections. Instead, it is necessary to set the shim rearward of the correct position and slide it forward until it drops into place. To accomplish this, set the shim in the camera, in the starting position, as shown in the left photo. Then, slide the shim in the direction indicated in the right photo until it falls into the ending position.



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When the shim is correctly installed, it will be possible to observe the two projections in front of the shim by viewing the reflection of the retaining plate and the shim should stay in place when the camera is tilted forward. Do not attempt to continue with the installation until you are certain the shim is in the correct position – damage to the shim or retainer could result!