

Using AF Focus Adjustment in the Olympus E-30

Overview

This article introduces the autofocus focus adjustment (**AF FOCUS ADJ**) function and provides tutorials to illustrate its proper use.

Purpose of AF focus adjustment

AF FOCUS ADJ offers photographers the option to customize and save autofocus settings for use with Four Thirds[®] system lenses, including those manufactured by third parties. Specifically, it enables the AF sensor to shift the AF focusing position – and therefore the range of the depth of field – nearer to, or farther from, the imaging sensor. Adjustments are made using a 40-step scale and can be fine-tuned in precise increments of up to 20 steps closer (-) or farther (+) from the default AF focusing position.

In normal shooting situations, adjustments are not necessary.¹ However, the function can be useful for [calibrating the AF focusing position](#) of Four Thirds lenses or manipulating the depth of field for creative effect. For example, a portrait photographer may choose to allow a lens to front focus in order to ensure that a subject's eyes and nose are both in crisp focus.

Adjustment options

The degree of control afforded by AF FOCUS ADJ can be as granular or as broad as desired. It is possible to [customize the AF focusing position of a specific prime or zoom lens](#) or to globally change the behavior of the AF system by [customizing the default AF focusing position](#) used with any attached lens. When registering custom settings for a zoom lens, AF FOCUS ADJ can record separate values for the maximum wide angle and maximum telephoto zoom positions. (The camera uses these data points to calculate adjustments for focusing positions that fall elsewhere within the zoom range.) It is also possible to customize settings for individual AF targets.

For registration purposes, a lens used in combination with an accessory such as a teleconverter or extension tube is treated as a single unit called a “lens group”; settings registered for a lens are distinct from those registered for the same lens when it is part of a lens group.

A single lens or lens group can be registered multiple times with different settings – for example, one custom setting may be optimized for telephoto shooting and another optimized for shooting at full wide angle. In addition, multiple lenses or lens groups of the same type can be registered because AF FOCUS ADJ maps custom settings to individual serial numbers.

In all, up to 20 distinct registrations can be saved.

Operational sequence

Adjustments for individual lenses and lens groups must be registered before setting a custom default AF focus adjustment.

If settings are registered for individual lenses or lens groups and also for the camera's default AF focusing position, the camera will use the lens-specific customizations for the registered lenses or lens groups, and it will use the default values when any other lens or lens group is attached.

The AF FOCUS ADJ menu

AF FOCUS ADJ is found in the camera's \mathcal{I}_1 menu under \mathcal{I}_1 UTILITY. To access the function, press the [MENU] button, and then use the arrow pad to navigate the menu system. Press the Down or Up arrows to select menu items, and press the Right arrow to advance to submenus.



The AF FOCUS ADJ menu contains two items:

1. **SET AF DATA:** Select this item and then press the Right arrow to advance to the SET AF DATA submenu. The controls on the submenu are used to customize and register AF focus adjustment settings and also to configure when and how the camera applies those settings.

The options are:

- **OFF:** In this mode, the camera disregards all customizations and uses the factory AF autofocus settings. Selecting **OFF** is a convenient way to return to default operation without erasing registered customizations.
- **LENS DATA:** This selection is used to [customize the AF focusing position of a specific lens or lens group](#). Individual adjustments can be designated for each AF target and, for zoom lenses, for the telephoto and wide angle zoom positions.
- **DEFAULT DATA:** This selection is used to globally change the behavior of the AF system by [customizing the camera's default AF focusing position](#). The selected AF FOCUS ADJ value is applied to all AF targets for all lenses and lens groups except those for which individual settings have been registered. For zoom lenses and lens groups, the same adjustment value is used at all zoom positions.



2. **DATA LIST:** Select this item to [check](#), [edit](#) or [delete](#) registered AF focus adjustment settings. It can also be used to select from among multiple customizations registered to the same lens.²

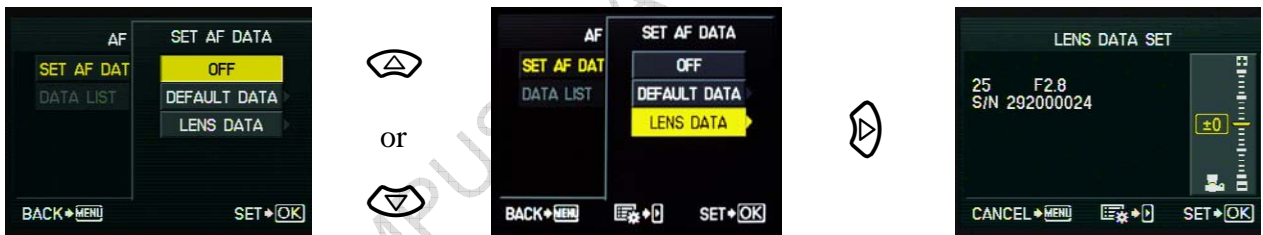


Using the AF focus adjustment scale

Autofocus customizations are set using a 40-step scale. The center value on the scale represents the default setting, ± 0 , which indicates that no adjustment will be applied. Pressing the Down arrow moves the marker down the scale toward the minus (-) sign. This adjusts the AF focusing point closer to the camera. Pressing the Up arrow moves the marker toward the plus (+) sign. This adjusts the AF focusing point farther away from the camera toward infinity. Adjustments can be fine-tuned in precise increments up to 20 steps in either direction. Pressing the [OK] button registers the value. When customizing the camera's default AF focusing position, use the AF focus adjustment scale located on the **DEFAULT DATA** screen. To access the scale, navigate to the **SET AF DATA** submenu, select **DEFAULT DATA** and then press the Right arrow. Adjustments registered from this screen are applied to all 11 AF targets and, for zoom lenses, to all zoom positions.

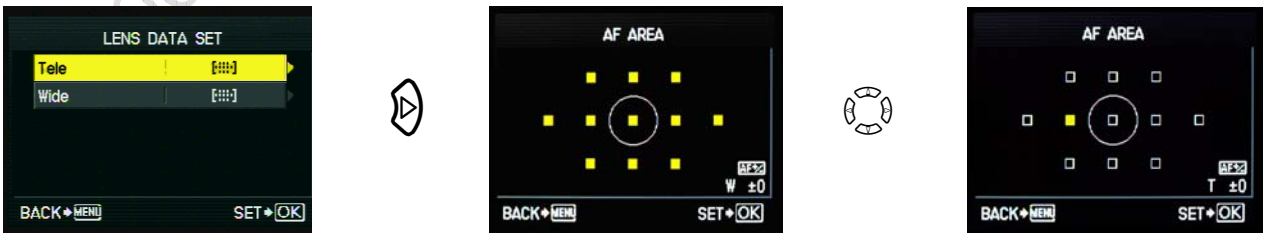


When customizing AF settings for a particular lens or lens group, use the scale located on the **LENS DATA SET** screen. To access the scale, navigate to the **SET AF DATA** submenu, select **LENS DATA** and then press the Right arrow. AF adjustments registered from this screen affect only the listed lens or lens group, and they are applied only to pre-selected AF targets.



To simplify configuration, in the factory default operation, all 11 AF targets are pre-selected. Also, customizations are applied only to the telephoto zoom position. To customize individual AF targets, or to apply customizations to the wide angle zoom position, additional steps are required.

From the **LENS DATA SET** screen, press the Right arrow, select the zoom position to which the adjustments should be applied (**Tele** or **Wide**), and then press the Right arrow again. The **AF AREA** screen is displayed. Use the arrow pad to select one or more AF target(s), and then press [OK].



The **LENS DATA SET** screen will be re-displayed. Use the Up or Down arrow to set the desired AF focus adjustment. Press the [OK] button to register the setting for the selected AF target(s). Repeat as necessary until all AF targets have been configured as desired.

Calibrating the AF focusing position of a Four Thirds lens

Before registering AF focus adjustments, photographers may wish to take several test shots to establish a baseline calibration that is optimum for their lens(es) and usage requirements. If a lens is to be calibrated for use in a lens group, attach any lens accessories before testing.

Controlling test conditions

To maintain consistency when making fine adjustments, attention must be paid to controlling test conditions. The following guidelines should be observed:

- The test target must be easy to evaluate on the camera LCD screen.
A good target for testing AF accuracy would be a two-page spread of a newspaper's color comics section taped to a wall.
A good target for customizing depth of field would be a deck of cards, placed as shown at right.
- The sensor (camera) should be parallel to the test target and mounted on a tripod positioned no more than 10 feet from the target with Image Stabilization turned off.
- Use the **A** (Aperture Priority) shooting mode, and set the f-stop to the maximum aperture.
- Set the camera's record mode to **LSF**, and choose a medium ISO.
- If possible, test in light and temperature environments similar to those in which the lens will be used. Avoid shooting tests into backlight as flare may skew the results.



Shooting test shots

To calibrate a particular lens or lens group, test shots should be taken while the Live View LCD is displaying the AF focus adjustment scale on the [LENS DATA SET](#) screen. To calibrate the camera body's AF system, take the shots while the LCD is displaying the AF focus adjustment scale on the [DEFAULT DATA](#) screen.

For the first test shot, use the camera's default AF FOCUS ADJ value, " ± 0 ," which is the center mark on the scale. No adjustment is applied when the value is set to " ± 0 ." Change the **AF FOCUS ADJ** value after each shot. Take some shots with positive adjustments and some with negative adjustments so that the images can be compared for relative sharpness.

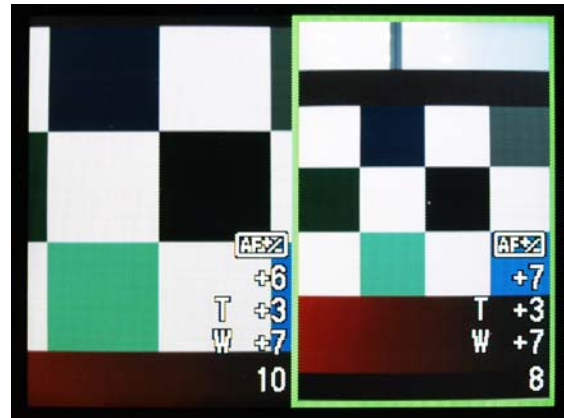
Do not press the **[OK]** button while shooting test shots, as doing so will register the selected value.

Evaluating test shots using Light Box

The camera's Light Box tool is a convenient resource for comparing test shots because it displays images side-by-side on the LCD and also shows any AF focus adjustments used to capture them.

To use Light Box, first exit the **AF FOCUS ADJ** menu by pressing the **[MENU]** button. Then place the camera in Playback mode by pressing the blue arrow button to the right of the LCD. Next, press the **[■•■]** (AF target) button to access the Light Box feature.

The sample image at right shows two test shots in the Light Box. Three values are displayed for each shot. The value labeled “T” is the AF focus adjustment to be applied when the attached lens or lens group is set to its maximum telephoto position. The “W” value is the adjustment to be applied when the lens or lens group is set to its full wide angle position. The top value is the actual adjustment applied to the shot. The camera uses the registered “T” and “W” values to calculate this value for zoom lenses when the zoom is set to focus at a point within the zoom range between the extreme telephoto and wide angle positions.



The procedure for [customizing AF focus adjustments for a particular zoom lens](#) allows different values to be set for telephoto and wide angle positions, as reflected in the sample image above. When [customizing a default AF focus adjustment for all lenses](#), the selected adjustment value is assigned to both telephoto and wide positions for all 11 AF targets. When customizing the AF focus adjustment for prime lenses or lens groups, all Light Box values reflect the set value.

Registering the preferred autofocus adjustment settings

Once the preferred autofocus adjustment settings have been determined, return to the appropriate AF focus adjustment scale (use the [LENS DATA SET](#) screen to register settings for a particular lens or lens group; use the [DEFAULT DATA](#) screen to register an adjustment for use with all lenses or lens groups except those for which a separate adjustment has been registered), set the desired adjustment value, and then press the [OK] button.

Customizing autofocus settings

The E-30 features a precise, 11-point AF system. Using the **AF FOCUS ADJ** function, it is possible to customize the AF focusing position of each of the 11 AF targets individually. For zoom lenses, separate AF focus adjustments can be applied for the telephoto and wide angle positions.³ All of these settings can be registered for individual lenses and saved for future use.

Alternatively, **AF FOCUS ADJ** can be used to adjust the camera’s default AF focusing position, so that the custom value is applied to any lens attached to the camera body except those for which individual adjustments have been registered. When the default data is customized, the adjustment value is applied to all AF targets, and, for zoom lenses, to all zoom positions.

For registration purposes, a lens used in combination with an accessory such as a teleconverter or extension tube is treated as a single unit called a “lens group”; settings registered for a lens are distinct from those registered for the same lens when it is part of a lens group.

If settings are registered for individual lenses or lens groups and also for the camera’s default AF focusing position, the camera will use the lens-specific customizations for the registered lenses, and it will use the default values when any other lens or lens group is attached.

Adjustments for individual lenses and lens groups must be registered before setting a custom default AF focusing position. If lens-specific adjustments are registered after the default AF data has been customized, the default adjustment will not be applied until it is re-registered.

Customizing the AF focusing position of a Four Thirds lens

To customize the AF focusing position of a prime lens using all 11 AF targets:

1. (Optional) If registering the lens for use in a lens group, attach any required lens accessories.
2. [Using the camera menu](#), navigate to the **LENS DATA SET** screen.
3. Use the arrow pad and AF focus adjustment scale to set the preferred autofocus setting for the listed lens or lens group.

To adjust the AF focusing point closer to the camera, press the Down arrow. The marker will move down the scale toward the minus (-) sign.

To adjust the AF focusing point farther away from the camera toward infinity, press the Up arrow. The marker will move up the scale toward the plus (+) sign.
4. Press the **[OK]** button to register the custom value.
5. (Optional) [Check](#) the settings in the **DATA LIST** to confirm successful registration.

To customize the AF focusing position of a prime lens using individual AF targets²:

1. (Optional) If registering the lens for use in a lens group, attach any required lens accessories.
2. [Using the camera menu](#), navigate to the **LENS DATA SET** screen.
3. Press the Right arrow once. **Tele** will be selected, and **Wide** will be inactive (grayed out).
4. Press the Right arrow again to view the **AF AREA** screen.
5. Use the arrow pad to select an AF target, and then press **[OK]**. The **LENS DATA SET** screen will be displayed.
6. Use the arrow pad and AF focus adjustment scale to set the preferred autofocus setting for the selected AF target.
7. Press the **[OK]** button to register the custom value.
8. (Optional) Repeat steps 2 through 7 as necessary until all AF targets have been configured as desired.
9. (Optional) [Check](#) the setting in the **DATA LIST** to confirm successful registration.

To customize the AF focusing position of a zoom lens set at its maximum telephoto position using all 11 AF targets:

1. (Optional) If registering the lens for use in a lens group, attach any required lens accessories.
2. [Using the camera menu](#), navigate to the **LENS DATA SET** screen.
3. Use the arrow pad and AF focus adjustment scale to set the preferred autofocus setting for the listed lens or lens group.
4. Press the **[OK]** button to register the custom value.
5. (Optional) [Check](#) the setting in the **DATA LIST** to confirm successful registration.

To customize the AF focusing position of a zoom lens set at its maximum wide angle position using all 11 AF targets:

1. (Optional) If registering the lens for use in a lens group, attach any required lens accessories.
2. [Using the camera menu](#), navigate to the **LENS DATA SET** screen.
3. Press the Right arrow once. **Tele** will be selected.
4. Press the Up or Down arrow to select **Wide**.
5. Press the Right arrow to advance to the **AF AREA** screen. By default, all 11 AF targets will be selected.
6. Press the [OK] button. The **LENS DATA SET** screen will be displayed.
7. Use the arrow pad and AF focus adjustment scale to set the preferred autofocus setting for the selected AF target.
8. Press the [OK] button to register the custom value.
9. (Optional) [Check](#) the setting in the **DATA LIST** to confirm successful registration.

To customize the AF focusing position of a zoom lens using individual AF targets³:

1. (Optional) If registering the lens in a lens group, attach any required lens accessories.
2. [Using the camera menu](#), navigate to the **LENS DATA SET** screen.
3. Press the Right arrow once. On the next screen, **Tele** will be selected by default.
4. Using the arrow pad, select the zoom position to which the adjustments should be applied (**Tele** or **Wide**), and then press the Right arrow to view the **AF Area** screen.
5. Use the arrow pad to select an AF target, and then press [OK]. The **LENS DATA SET** screen will be displayed.
6. Use the arrow pad and AF focus adjustment scale to set the preferred autofocus setting for the selected AF target.
7. Press the [OK] button to register the custom value.
8. (Optional) Repeat steps 2 through 7 as necessary until all AF targets have been configured as desired.
9. (Optional) [Check](#) the settings in the **DATA LIST** to confirm successful registration.

Customizing the camera's default AF focusing position

To customize the camera's default AF focusing position using all 11 AF targets:

1. (Optional) [Perform a baseline calibration](#) to determine the AF focus adjustment required to achieve the preferred default AF focusing position.
2. [Using the camera menu](#), navigate to the **DEFAULT DATA** screen.
3. Use the arrow pad and AF focus adjustment scale to set the preferred default adjustment.
4. Press the [OK] button to register the custom value.
5. (Optional) [Check](#) the setting in the **DATA LIST** to confirm successful registration.

DATA LIST menu operations

Check the AF FOCUS ADJ settings registered for a lens

The **CHECK** function is used to confirm custom **AF FOCUS ADJ** settings previously registered for individual lenses and lens groups. The settings can be reviewed but not edited.

To check the **AF FOCUS ADJ** settings registered for a lens or lens group:

1. Navigate to the **DATA LIST** screen, and select the desired lens or lens group.
2. Press the Right arrow to continue.
3. Select **CHECK**, and then press the [OK] button.

The next screen will show, for each AF target, the telephoto (top value) and wide angle (bottom value) settings that have been registered for the specified lens or lens group. For prime lenses, the top and bottom values will be the same.



Delete an AF FOCUS ADJ registration

To delete a custom **AF FOCUS ADJ** registration:

1. Navigate to the **DATA LIST** screen, and select the desired lens or lens group.
2. Press the Right arrow to continue.
3. Select **DELETE**, and then press the [OK] button.

Edit an AF FOCUS ADJ registration

To edit autofocus settings previously registered for a lens or lens group:

1. Navigate to the **DATA LIST** screen, select the registration, and then press the Right arrow.
2. Select **EDIT**, and then press the Right arrow to continue to the **LENS DATA SET** screen. It will display the number of the registration, the identity of the lens or lens group, and the autofocus adjustment value of the selected AF target(s).
3. Customize the desired settings, following the same procedures used to set the registration.



Notes

¹AF FOCUS ADJ is not designed or intended to be an in-camera lens repair function. If the AF focus accuracy of a given lens is suspect, send the camera and lens to an authorized Olympus Repair Center for evaluation. Click [here](#) for a list of repair centers and shipping instructions.

²Multiple registrations using different AF targets for the same lens can be registered. Up to 20 total registrations can be set using **AF FOCUS ADJ**.

³AF FOCUS ADJ automatically calculates an appropriate AF focus adjustment for zoom positions in between the extreme telephoto and wide angle positions. In cases where a separate adjustment has not been registered for the wide angle position, the value is calculated assuming a adjustment of 0 (no adjustment).

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