

Why would you choose the option of recording images in Raw and JPEG at the same time? If you’re taking pictures of a one-time event such as a wedding or graduation, you may want to preserve them in Raw for highest quality and later processing with software, but also have them available for quick review on a computer that might not have software that reads Raw files. Or, you might want to be able to send the images to friends or post them to social media sites without translating them from Raw into a JPEG format that most people can easily view on their computers. Also, as I discussed earlier, if you are using Creative Control mode or the Filter Settings menu option to add special effects to images, those effects will not show up in Raw files when the files are opened on a computer. In order to have the benefit of the special setting as well as the benefits of a Raw file, you can use the Raw & Fine or Raw & Standard option to record images both ways.

AFS/AFF/AFC

This next menu option lets you choose how the autofocus system operates when the camera is using autofocus. With AFS, for autofocus single, when you press the shutter button halfway, the camera locks focus on the subject and keeps it locked while the button is held there, even if the subject moves. With AFF, for autofocus flexible, the camera locks focus but will adjust focus if the subject (or the camera) moves. With AFC, for autofocus continuous, the camera does not lock focus, but adjusts it continuously as the subject or camera moves.

If you are shooting images of a landscape or other stationary subject, AFS will work well. The camera will lock focus and keep it there, and the battery will not be drained by adjusting focus. If you are shooting handheld shots at a fairly close distance, though, you might want to use the AFF setting because the camera will adjust the focus if the camera moves slightly, and the focus could be thrown off by that movement, especially when the focus distance is small or the lens is zoomed in.

If you are shooting pictures of children or pets moving around unpredictably, you may want to use the AFC or AFF setting and let the camera continue to adjust focus as needed. With these settings, the camera’s battery will be drained faster than with AFS, but it may be worth it to capture an action shot in sharp focus.

This setting is fixed at AFS in Panorama mode. With 4K Photo shooting, AFF is not available. Only AFS is available with the 4K Photo S/S setting.

SENSITIVITY (ISO)

This next setting lets you set the camera’s ISO, or sensitivity to light. On the C-Lux, the available ISO settings range from 125 to 12500, though the range varies in some situations. With the lower settings, the camera produces the best image quality, but exposures require more light. With higher settings, the camera can produce good exposures in dim light, but there is likely to be an increasing amount of visual “noise” in the image as the ISO value increases.

Generally speaking, you should shoot images with the lowest ISO that will allow them to be exposed properly. (An exception is if you want the grainy look that comes with a high ISO value.) For example, if you are shooting indoors in low light, you may need to set the ISO to a high value (say, 800) so you can expose the image with a reasonably fast shutter speed. If the camera were set to a lower ISO, it would need to use a slower shutter speed to take in enough light for a proper exposure, and the resulting image would likely be blurry and possibly unusable.

The ISO setting is available only when the camera is set to one of the advanced shooting modes, including the PASM modes, Panorama, and Creative Video. To make the setting, select this menu option and a horizontal menu will appear at the bottom of the display, as shown in Figure 4-22.

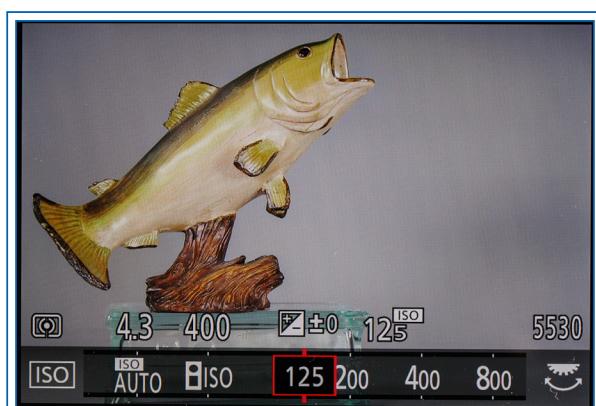


Figure 4-22. ISO Menu

You can scroll through the values on this menu by pressing the Left and Right buttons, by turning the thumb dial, or by scrolling the menu with the touch

screen. The possible numerical values are 125, 200, 400, 800, 1600, 3200, 6400, and 12500, unless you change some menu settings, discussed below, to add values below 125 and above 12500, as well as intermediate values.

When you set a numerical value for ISO, the ISO Auto Upper Limit (Photo) option (discussed later in this chapter) does not apply. When you set ISO to Auto ISO, the camera automatically adjusts ISO up to the maximum value set with ISO Auto Upper Limit (Photo), based on the brightness of the scene. As discussed in Chapter 3, you can use Auto ISO with Manual exposure mode for still images, which lets you keep shutter speed and aperture fixed while the ISO varies.

When you use the Intelligent ISO setting, the camera adjusts the ISO based on the movement of the subject as well as the brightness, so the camera can set a higher shutter speed to stop the motion. Intelligent ISO is available with the Snapshot, Program, and Aperture Priority modes, but not with the Shutter Priority or Manual exposure modes, or when using the Post Focus option.

When would you want to use a numerical value for the ISO setting, rather than setting it to Auto ISO or Intelligent ISO? One example is if you want the highest quality for your image, and you aren't worried about camera movement, either because you are using a tripod so a slow shutter speed won't result in blur, or the lighting is bright enough to use a fast shutter speed. Then you could set the ISO to its lowest possible setting of 125 (or 80 if Extended ISO is turned on) to achieve high quality. On the other hand, if you definitely want a grainy, noisy look, you can set the ISO to 3200 or even higher to introduce noise into the image. You also might want a high ISO setting so you can use a fast shutter speed to stop action or in low light. In many cases, though, you can just leave the setting at Auto or Intelligent and let the camera adjust the ISO as needed.

It is important to be aware of how much a high ISO value can affect the quality of your images. Figures 4-23 and 4-24 are two images of the same subject; Figure 4-23 was taken at ISO 125 and Figure 4-24 was taken at ISO 12500. As you can see, the high-ISO image shows considerable deterioration, both in the subject itself and in the plain background. You can use this high

setting when absolutely necessary to get a shot, but it's advisable to avoid the highest ISO values when possible.



Figure 4-23. ISO Set to 125

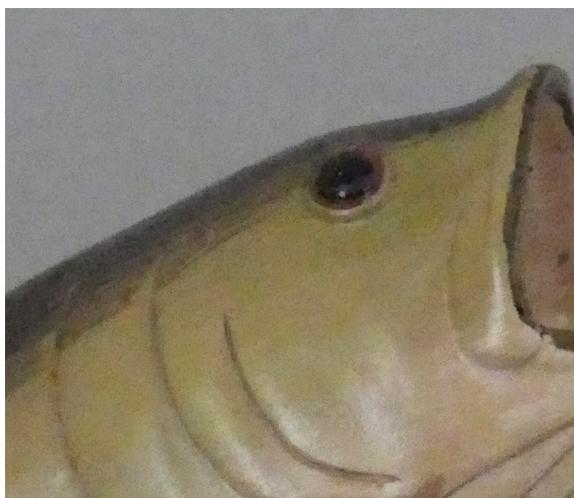


Figure 4-24. ISO Set to 12500

AF MODE

This next menu option controls what area of the scene the camera focuses on when using its autofocus capability. (You select an autofocus or manual focus mode by pressing the Left button to bring up the focus mode menu from the shooting screen.)

When you select the AF Mode menu option with the focus mode set to AF, AF Macro, or Macro Zoom, the camera displays a line of icons representing the six choices available for the AF Mode setting: Face/Eye Detection; AF Tracking; 49-Area; Custom Multi; 1-Area; and Pinpoint, as shown in Figure 4-25.

Use the thumb dial or the Left and Right buttons (or the touch screen) to highlight the choice you want. Then

press the Menu/Set button or the Set icon, followed by the Fn3 button, or press the shutter button halfway, to select that setting and return to the recording screen.



Figure 4-25. AF Mode Menu Options Screen

In Snapshot or Snapshot Plus mode, only two of these options are available: Face/Eye Detection and AF Tracking. Following are details about all six options that are available in other recording modes.

Face/Eye Detection

When you select this setting, the camera does not display any focusing brackets or rectangles until it detects a human face. If it does, it outlines the general area of the face with a yellow rectangle. Then, after you press the shutter button halfway down, the rectangle turns green when the camera has focused on the face. If the camera detects more than one face, it displays white rectangles for secondary faces, as shown in Figure 4-26.

Any faces that are the same distance away from the camera as the face within the yellow rectangle will also be in focus, but the focus will be controlled by the face in the yellow rectangle. If Metering Mode is set to Multi, the camera will also adjust its exposure for the main detected face.

With this setting, the camera also will look for human eyes. It will place a set of crosshairs across the closest eye it finds and fix focus there. If you want, you can change the eye that the camera focuses on. To do that, when the camera is displaying frames over detected faces, press the touch screen over the eye you want the camera to focus on, then press the shutter button halfway to focus. (Touching a different eye does not work in Snapshot mode; in that mode, if you touch the screen, the AF Mode setting will change to AF Tracking.)

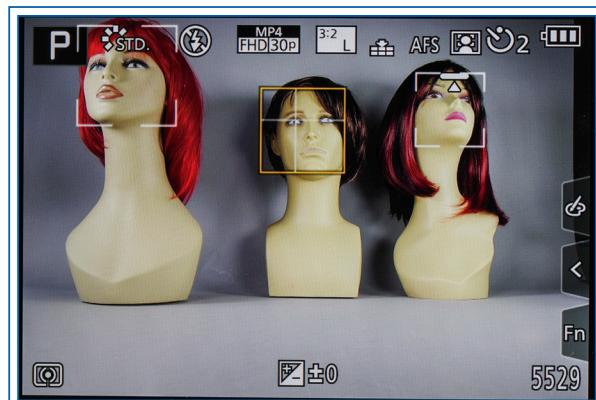


Figure 4-26. Face Detection in Use

You also can change the face that the camera focuses on. One way to do this is to touch the screen and move the focus frame with your finger. To use that system, go to the Touch Settings item on screen 3 of the Custom menu and, under Touch Settings, set Touch AF to AF. Another way to do this is to use the Direct Focus Area option. To do that, turn on the Direct Focus Area option on screen 2 of the Custom menu. Then, when the Face/Eye Detection frame is displayed on the screen, press any of the four cursor buttons to start moving the focus frame to the location where you want it. When the frame is being moved, you can also turn the thumb dial to change the frame's size.

When the focus frame is sized and located as you want, press the Menu/Set button to lock it in place. The camera will then shift its focus to the area inside that frame. You might want to use this option if you are aiming at two faces, but you want to focus on the one that is farther away from the camera. Ordinarily, the camera will focus on the closest face, but if you move the frame over the other face, the camera will direct its focus there. To reset the frame to its original position, press the Display button while the frame is movable.

AF Tracking

This next setting for AF Mode allows the camera to maintain focus on a moving subject. On the menu screen, highlight the second icon, which is a group of offset focus frames designed to look like a moving focus frame. Press the Menu/Set button or half-press the shutter button to select this option.



Figure 4-27. AF Tracking Focus Frame

The camera will then display a special focus frame with spokes sticking out of it, in the center of the display, as shown in Figure 4-27. Move the camera to place this focus frame over your subject and press the shutter button halfway, then release the button. If the camera can identify a subject at this location, the frame will turn yellow. The camera will then do its best to keep that target in focus, even as it (or the camera) moves. The yellow bracket should stay close to the subject on the display.

When you are ready, press the shutter button to take the picture. If you want to cancel AF Tracking, press the Menu/Set button.

If the camera is not able to maintain focus on the moving subject, the focus frame will turn red and then disappear. AF Tracking will not work when Time Lapse Shot is in use. With several Creative Control mode settings, including all of the Monochrome options; the camera will use 1-Area mode if AF Tracking is set.

To use this option with the touch screen, just touch the subject on the screen to select it, and press the AF Off icon on the screen to cancel the tracking focus.

Using AF Tracking can reduce the time to take a picture of a moving subject. If you are trying to snap a picture of a restless four-year-old child or a fidgety pet, AF Tracking can give you a head start, so the camera's focus is close to being correct and the focusing mechanism has less to do to achieve correct focus when you suddenly see the perfect moment to press the shutter button.

49-Area

This next option for AF Mode causes the camera to focus on up to 49 small focus zones within the overall autofocus area, which is the same area as that of the

current aspect ratio setting. The camera then looks within the focus zones and selects however many subjects it detects that are at the same distance from the camera and can be focused on.

To make this setting, select the third icon on the AF Mode menu, which looks like a screen with multiple focus points. Then, when you push the shutter button down halfway, the camera will display green rectangles to show you which of the multiple focus areas it has selected to focus on, as shown in Figure 4-28.

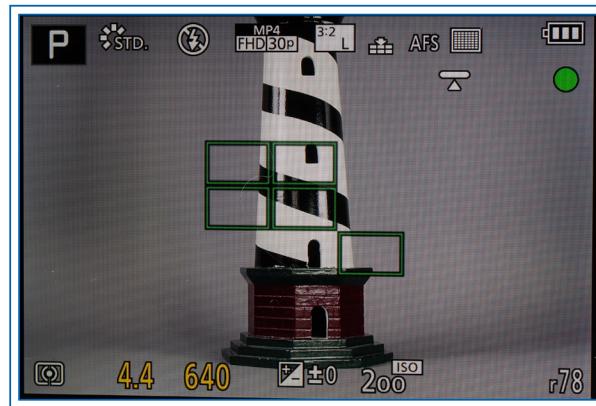


Figure 4-28. Green Focus Frames with 49-Area Setting

The name of this setting is somewhat misleading, however, because, even though the camera has 49 focus zones, it will only use a few of those zones at any one time in this mode. By default, the camera uses the nine zones in the center of the screen. With the default setting, if you focus on a scene with a prominent object at the far right, the camera will choose whatever object it can find in the center of the display to focus on, and will ignore the object at the right.

If you want the camera to direct its focus somewhere other than the center of the scene, press the Down button while the 49-Area icon is highlighted on the menu screen, and then move the block of focus zones where you want them using the cursor buttons, as shown in Figure 4-29.

If the Direct Focus Area option is enabled, you can use the cursor buttons to move the focus area around the screen when the camera is in shooting mode with the 49-Area option selected. If the Touch AF option is turned on through the Touch Settings item on screen 3 of the Custom menu, you can touch the screen in shooting mode to select the area for the focus zone.

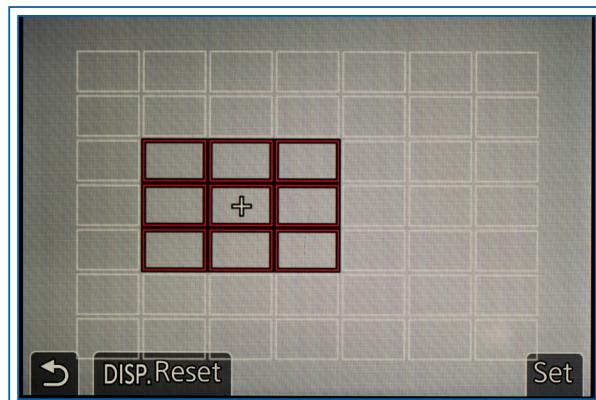


Figure 4-29. Screen for Moving Focus Blocks

When you have set the focus area using the touch screen or cursor buttons, the camera displays a small white cross on the screen to indicate the center of the block of focus zones it is currently using. (The cross will disappear if you press the Menu/Set button or the AF Off icon.)

The blocks near the center of the overall focus area have nine zones each, but the blocks near the edges of the display area have only six or four blocks.

The 49-Area method can be useful if your subject is likely to be located within a predictable area, and you want to have the option to adjust that area somewhat. It is a good mode to use when you are shooting landscapes or general scenes that do not require you to focus on faces or on any one particular object.

Custom Multi

This setting lets you create a custom-tailored focus zone out of the 49 available blocks. For example, you can create a horizontal focus area that is seven blocks across, or a vertical one of the same size. You can create a zone that has 13 blocks arranged in a pattern in the center of the screen. Or, you can create a completely free-form zone with any arrangement of blocks. Somewhat oddly, with the free-form option you can create a focus area that uses all 49 of the focus blocks, resulting in a true 49-Area focus mode, unlike the mode with that name, which can use only up to nine blocks. The process for using this option is a bit complicated, so I will lay out the steps below.

1. Go to the AF Mode item on the Recording menu and scroll to the fourth icon from the left, with the label Custom Multi below it, as shown in Figure 4-30.

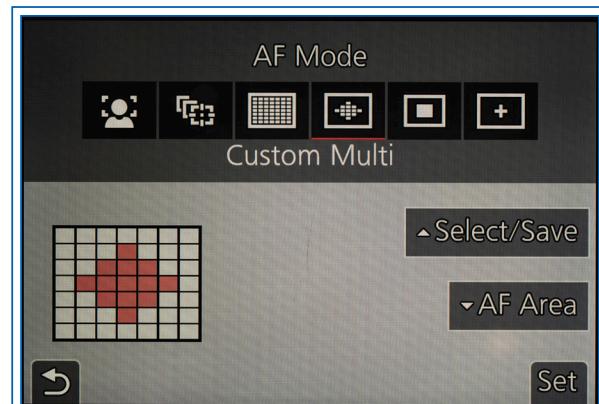


Figure 4-30. Custom Multi Option Highlighted on Menu

2. Press the Up button to move to the line of possible patterns for the focus zone, as shown in Figure 4-31.

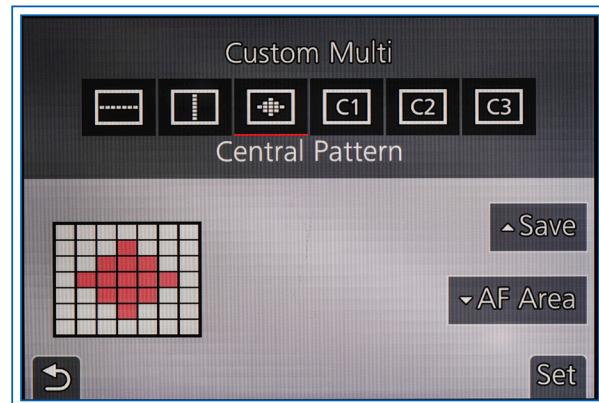


Figure 4-31. Choices for Custom Multi Pattern

3. Scroll through these icons to select the one you want. The last three—C1, C2, and C3—are for free-form custom patterns you can create and save to these numbered slots.
4. When you have selected horizontal, vertical, or central, or free-form for the shape, press the Down button to move to the AF Area option. There you will see a screen with all 49 blocks, some of which will be highlighted in red for the horizontal, vertical, or central choices, but all of which will be blank for the free-form options.
5. For the horizontal, vertical, or central option, turn the thumb dial to the right to increase the size of the focus area, or turn it to the left to reduce it. You can move the line or lines across the display by pressing the appropriate direction buttons or by touching the screen. When you have the focus area positioned where you want it, press the Fn2 button, to the right of the LCD screen, to set the focus area.

in place. The blocks will display for a moment and then disappear, and this focus area will be in effect.

6. For any of the three free-form options, after pressing the Up button, scroll to the icon that says C1, C2, or C3, then press the Down button to move to the AF Area screen. You will then see a display with all 49 blocks, none of which are highlighted, with a cross in the center block. Use the direction buttons to move the cross to a block you want to add to the focus pattern, and press the Menu/Set button to highlight it. You also can touch a block with your finger to highlight it. Figure 4-32 shows this screen after several blocks have been selected in this way.



Figure 4-32. Several Focus Blocks Selected for Custom Multi

7. The blocks do not have to be contiguous; they can be in any pattern, up to and including selecting all 49 blocks. When you have finished selecting blocks, press the Fn2 button to lock in the pattern you have created.
8. To create and save a custom focus pattern, use the same procedure as in Steps 1 through 7. When you have finished, press the Menu/Set button and select the AF Mode menu option to bring the AF mode menu back on the screen. Then scroll to the Custom Multi option. Press the Up button to move to the line of options, and scroll to the focus pattern you just created, whether horizontal, vertical, central, or free-form, then press the Up button. The camera will display a screen like that in Figure 4-33, asking which Custom slot you want to save it to.
9. Highlight the one you want and press Menu/Set, then select Yes when asked if it should overwrite the existing settings. To select the saved pattern in

the future, just select C1, C2, or C3, depending on what slot the pattern was saved to.



Figure 4-33. Confirmation Screen to Save Custom Multi Pattern

The Custom Multi option is useful if you have a need for specially shaped focus zones. You might want to use a horizontal zone if you are focusing on a group of artifacts that are displayed in a straight line, to make sure the camera does not accidentally focus on an object outside of that line. You also might want to create a pattern that uses all 49 focus zones, so the camera will focus on the closest object, regardless of whether it is in the center of the image, or in a particular sector of the image.

However, there is one quirk with this setting: If you don't select any blocks at all, the camera will treat the focus area as containing all 49 blocks, and will focus on any object in its view. So, to use all 49 blocks for the focus area, select Custom Multi and leave all blocks unselected. If you select one or more blocks, the camera will focus only on an object within those blocks, but if you select no blocks, the camera will use all 49 blocks.

1-Area

This AF Mode setting is selected with the next-to-last icon on the AF Mode menu, as shown in Figure 4-34. With this option, the camera uses a single focus frame, which by default is in the center of the screen. You can customize the setting by moving the frame to any position on the display and changing its size.

When you have highlighted the 1-Area icon on the AF Mode menu, press the Down button to move directly to setting the location of the autofocus frame using the direction buttons or the touch screen, as shown in Figure 4-35. You can change the size of the frame by turning the thumb dial or by pulling or pinching on the touch screen.

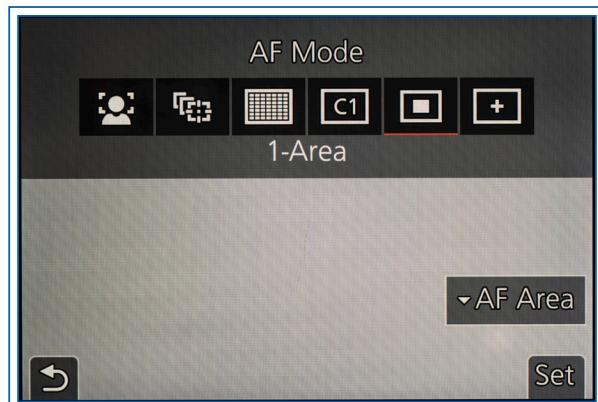


Figure 4-34. 1-Area Highlighted on AF Mode Menu

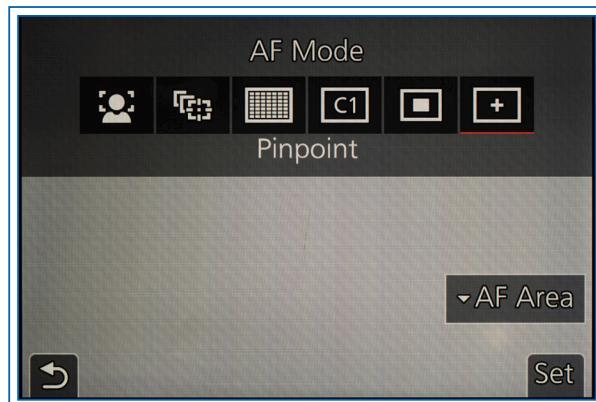


Figure 4-36. Pinpoint Highlighted on AF Mode Menu

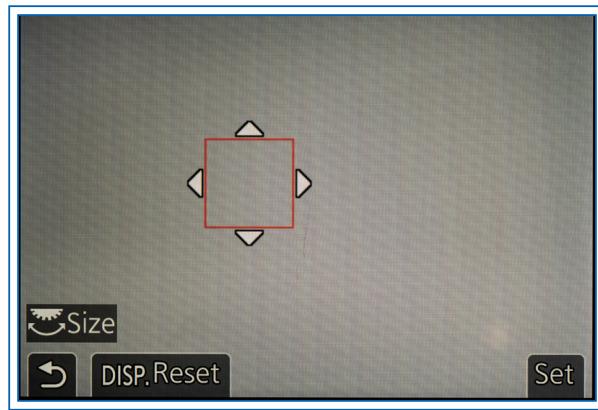


Figure 4-35. 1-Area Focus Frame Ready to be Moved

When you have finished moving and resizing the frame, press the Menu/Set button or touch the Set icon to fix the frame in place. To move the frame back to the default location in the middle of the screen or reset its size to normal, press the Display button at the bottom right of the camera's back. If the frame has been both moved and resized, you have to press Display once to reset the location and once more to reset the size.

The 1-Area method is a good setting for general shooting, because it lets you quickly position the focus area just where you want it. It is particularly helpful when you need to make sure the camera focuses on a fairly small item that is not in the center of the scene.

Pinpoint

The last icon at the right of the line of AF Mode icons, highlighted in Figure 4-36, is used to select the Pinpoint option. With this setting, you can move a single focus frame around the display and resize it, and the camera will enlarge the focus area to help you get the focus frame positioned precisely where you want it.

After selecting AF Mode on the Recording menu, highlight the Pinpoint icon and press the Down button to move to the AF Area screen. Move the focus area around the display using the four direction buttons and resize it using the thumb dial, then press the Menu/Set button to set the focus area in place. You also can move and resize the focus area using the touch screen.

You can control the amount of enlargement for this display using the Pinpoint AF Display item under the Pinpoint AF Setting item on screen 2 of the Custom menu. If you select Full for that item, the image will be enlarged from three times to ten times and the enlargement will fill the display. If you select PIP, for picture-in-picture, the enlarged area will not take up the entire display, and the enlargement will only range from three times to six times. While the display is enlarged, you can vary the amount of enlargement within the specified range by turning the thumb dial or by pinching/pulling on the screen. When the focus frame is located where you want it, press the Menu/Set button to exit to the recording screen.

When you focus on an item using this setting, place the small white cross over the subject and press the shutter button halfway. The camera will enlarge the display at that area for a short time while you keep the shutter button half-pressed, to help you determine whether focus is sharp. The length of time that the display remains enlarged with this option is determined by the Pinpoint AF Time option under the Pinpoint AF Setting item on screen 2 of the Custom menu; the time can range from 0.5 second to 1.5 second. The display then returns to normal size so you can evaluate the entire scene before pressing the shutter button to take the picture.

Moving the Focus Frame or Focus Area

With all of the AF Mode options except AF Tracking, you have the ability to move the focus frame or zones. There are several ways to do this, even after you have returned the camera to the recording screen. One way to do this is to go to the AF Mode option on the Recording menu and select the current AF Mode option. Then press the Down button (or touch the AF Area icon on the screen) to go to the screen for moving the frame. Move the frame with the cursor buttons or touch screen and resize it with the thumb dial or touch screen if necessary, then press Menu/Set and you're ready to focus again with the frame in a new location.

For a faster way to move the focus frame (or broader focus area, for the 49-Area or Custom Multi setting), there are three other options. First, you can set one of the function buttons to the Focus Area Set option through the Function Button Set option on screen 3 of the Custom/Operation menu, as discussed in Chapter 5. Then, if you press that function button, the screen for moving the focus area will appear immediately. Second, you can turn on the Direct Focus Area option on screen 2 of the Custom menu. Then, from the recording screen, as soon as you press any of the four direction buttons, the focus area moving screen will appear. (A drawback of that option is that you cannot then use the direction buttons to call up options such as white balance, focus mode, and drive mode. You can use the Quick Menu to activate those items, though, or you can assign function buttons to those settings.) Third, you can use your finger to move the focus frame, if the Touch AF option is turned on through the Touch Settings item on screen 3 of the Custom menu.

PHOTO STYLE

This next item on the Recording menu gives you several options for choosing a setting that determines the overall appearance of your images. These settings yield differing results in terms of warmth, color cast, and other attributes.

To select a Photo Style setting, highlight the Photo Style line on the Recording menu and press the Right button or Menu/Set to move to the screen that displays the current setting in the upper right corner, as shown in Figure 4-37. (For all menu settings, you also can use the touch screen to make selections. I will mention

that possibility from time to time, but I won't keep repeating it for every menu option.)



Figure 4-37. Photo Style Menu Screen

Then use the Left and Right buttons or the thumb dial to scroll through the available settings: Standard, Vivid, Natural, Monochrome, Monochrome HC, Scenery, Portrait, and Custom. When your chosen setting is highlighted at the top right of the screen, as shown in Figure 4-37, where the Vivid setting has been highlighted, press the Menu/Set button to select it, then press the Q.Menu button to exit to the shooting screen. Or, if you prefer, after highlighting the new setting, just press the shutter button halfway to select the setting and return to the shooting screen.

If you want to go further and fine-tune the setting, the C-Lux's menu system lets you adjust four parameters that are associated with the Photo Style settings: contrast, sharpness, noise reduction, and saturation. To make adjustments to those parameters, press the Down button when the main setting (such as Vivid or Natural) is highlighted with a red selection line, as in Figure 4-37. A new red highlight line will then appear in the block that contains the value for one of the four adjustable parameters, as shown in Figure 4-38.

In this case, the top line is highlighted, which means you can adjust the contrast setting; the word Contrast appears for a few seconds at the top left of the screen, indicating that that value can now be adjusted.

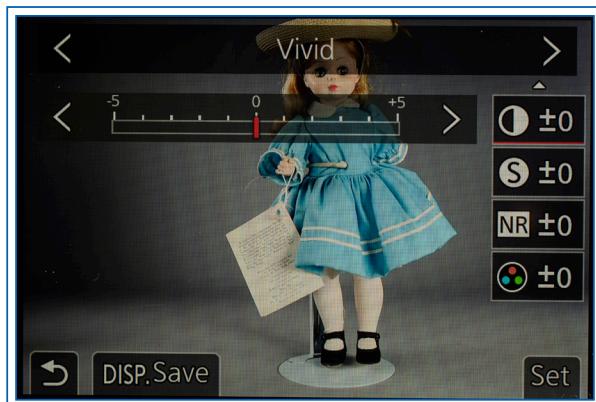


Figure 4-38. Screen to Adjust Photo Style Parameters

Once you have placed the highlight block on one of the four parameters, press the Left and Right buttons or turn the thumb dial to change the value of that parameter up to five levels, either positive or negative. A scale in the center of the screen will reflect those changes, as shown in Figure 4-39. Press Menu/Set or press the shutter button halfway to save the changes. The camera will remember those settings even when it is turned off.



Figure 4-39. Contrast Scale with Adjustment Made

There is one additional point to make about the Monochrome and Monochrome HC settings for Photo Style. Monochrome means there is no color in the image, only shades of black, white, and gray. Therefore, the saturation adjustment does not work to increase or decrease the saturation of colors for either of the two Monochrome settings. Instead of the saturation adjustment, the camera provides two additional parameters at the bottom of the list: color tone and filter effect, as shown in Figure 4-40.

With color tone, a positive adjustment makes the monochrome effect increasingly bluish or “cooler,” while a negative adjustment makes it increasingly yellowish or “warmer.”



Figure 4-40. Adjustment Scales for Monochrome Setting

The filter effect adjustment lets you add a virtual filter, simulating the effect of a glass filter, which can be used on a camera’s lens for black-and-white photography to enhance contrast and for other purposes. You can choose from a yellow, orange, red, or green filter, or choose the last setting, which turns the filter effect off.



Figure 4-41. Monochrome Setting with Yellow Filter Effect

For example, Figure 4-41 shows the screen when the yellow filter effect is selected. The yellow, orange, and red effects provide increasing amounts of contrast for blue subjects and can be used to enhance the appearance of a blue sky. The green effect can be used to reduce the brightness of human skin and lips or to brighten the appearance of green foliage.

When you set Photo Style to Monochrome or Monochrome HC with Quality set to Raw, the picture you take will show up as black-and-white on the camera’s LCD screen, but, when you import the image file into software that reads Raw files, the image may show up in color, depending on how the software interprets the Raw data from the sensor.