

# CHAPTER 3: THE RECORDING MODES FOR STILL PHOTOS

Chapter 2 discussed basic settings for quick shots, relying heavily on Intelligent Auto mode, in which settings are controlled mostly by the camera's automation. Like other sophisticated cameras, though, the ZS70 has many options for setting up the camera to take pictures. One of the goals of this book is to explain those options clearly. To do this, I need to cover several areas, including recording modes, menu items, and physical controls. In this chapter, I will discuss the camera's recording modes and how the selection of one of these modes affects your images.

## Choosing a Recording Mode

Whenever you set out to capture still images or videos, an important first step is to select a recording mode, sometimes called a shooting mode. This "mode" controls the camera's behavior for adjusting exposure and other options. As with most advanced cameras, the ZS70 provides a standard set of modes: Intelligent Auto, Program AE (also known as Program), Aperture Priority, Shutter Priority, and Manual exposure. These last four are often known as the PASM modes, for the first letter of each mode. This camera also offers some more specialized modes: Creative Video, Custom, Panorama, Scene, and Creative Control.



Figure 3-1. Mode Dial at Creative Control

Each of the ZS70's ten shooting modes is assigned a slot on the mode dial; you select the mode by turning the dial so the mode's icon is next to the white selector

mark. For example, Figure 3-1 shows the dial when Creative Control mode is selected.

With that introduction to the recording modes, I will provide more detailed explanations of the modes in this chapter.

## Intelligent Auto Mode

This is the mode to choose if you need to have the camera ready for a quick shot in an environment with fast-paced events when you won't have time to fuss with settings. It's also handy if you need to hand the camera to a stranger to take a picture of your group.



Figure 3-2. Mode Dial at Intelligent Auto

To make this setting, turn the mode dial on top of the camera so the iA icon is next to the white indicator mark, as shown in Figure 3-2. You then should see a red camera icon with white characters for iA in the upper left corner of the screen, as shown in Figure 3-3.

If the icon has a white plus sign at the right, as shown in Figure 3-4, the camera is set to Intelligent Auto Plus mode. To change it back to the standard Intelligent Auto mode, press the Menu/Set button to enter the menu system, navigate to the iA icon on the far left of the screen, and then, on the right side of the menu screen, select the icon for iA instead of iA Plus. (I will discuss the differences between the two iA modes later in this section; for now, it will be simpler to leave the

camera in iA mode.) Or, you can just touch the iA+ icon to bring up a screen for changing to iA mode.



Figure 3-3. iA Icon on Shooting Screen



Figure 3-4. iA+ icon on Shooting Screen

In iA mode, the camera limits the settings you can make, in order to simplify things. For example, you cannot adjust items such as exposure compensation, white balance, ISO, Photo Style, metering mode, Filter Settings, most options for AF Mode (setting the area for autofocus) and several others. You cannot select manual focus.

The camera turns on several settings, including Auto White Balance, scene detection, image stabilization, and backlight compensation, all of which are useful settings that will not unduly limit your options in most cases. I'll discuss all of those items in Chapter 4 in connection with Recording menu settings, except scene detection and backlight compensation, which I will discuss here, because they are not menu options; the camera uses them automatically in Intelligent Auto mode.

With scene detection, the camera attempts to figure out if a particular scene type should be used for the current situation. The camera uses its programming to detect

certain subjects or environments. For example, it looks for people; babies (if you have registered them using the Face Recognition menu option); night scenes; close-ups; sunsets; food; and portraits. It will identify scenes calling for the iHandheld Night Shot setting if that option is turned on through the menu system. That feature is discussed in Chapter 4. If the camera detects one of these factors, it displays an icon for that type of scene and adjusts its settings accordingly. Otherwise, it displays the standard iA icon.

For example, in Figure 3-5, the camera detected the mannequin's face and displayed the icon for portrait scene detection.

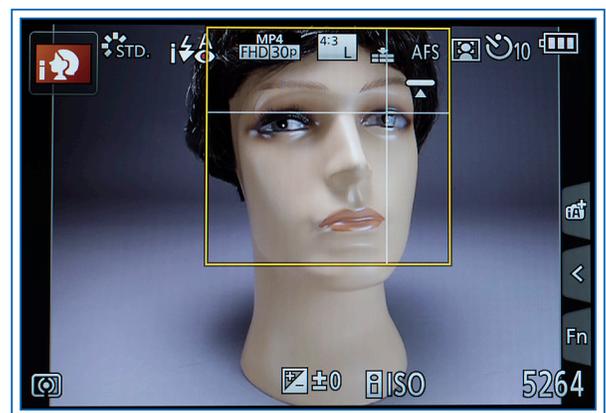


Figure 3-5. Scene Detection for Portrait Setting

In Figure 3-6, the camera detected a closeup situation when I took a picture of a small toy soldier, and it displayed the flower icon that indicates a macro shot.



Figure 3-6. Scene Detection for Macro Setting

When shooting motion pictures or using the 4K Photo or Post Focus features, the camera detects fewer scene types: only portraits, scenery, low light, and macro shots.

With backlight compensation, the camera will try to detect situations in which the subject of the photograph is lighted from behind. This sort of lighting can “fool” the camera’s metering system into making the exposure too dark, because of the light shining toward the lens. The result would be a subject that is too dark, without backlight compensation. With this setting, the camera automatically adjusts its exposure to be brighter, to overcome the effects of the backlighting.

Even though the ZS70 makes several automatic settings in Intelligent Auto mode, there are still some options you can adjust using the menu system and, to some extent, the physical control buttons.

First, you can use the Recording menu to select certain settings, although the choices are sharply limited compared to the many options that are available in other still-shooting modes. In those other modes (including Intelligent Auto Plus), there are seven screens of options available on the Recording menu; in basic Intelligent Auto mode, there are only three screens of options. I will discuss those options in Chapter 4. I included a table of recommended settings for general picture-taking in this mode in Chapter 2.

Second, you can press the Right button, marked with a lightning bolt icon, to bring up the flash mode menu. You can select only Auto or Flash Off. With Auto, the flash will fire if the camera decides it is needed; with Flash Off, the flash will not fire under any circumstances. You can choose that option when you are in a museum or other area that does not permit the use of flash.

Third, you can press the Down button to call up the drive mode menu, which I mentioned briefly in Chapter 2. In Intelligent Auto mode, you can select burst shooting, 4K Photo, Post Focus, or the self-timer from this menu. I will provide further information about these options in Chapter 5.

You also can use other controls for their intended purposes in this mode, such as the Fn1 button to get access to the 4K Photo settings and the Fn2 button to get access to the Post Focus feature. I will discuss those options, among others, in Chapter 5.

In summary, although the Intelligent Auto shooting mode lets the camera make most of the technical decisions, you still can have a fair amount of

involvement in making settings for photographs (and movies). Especially when you’re just starting out to use the ZS70, the basic Intelligent Auto mode provides a good start for exploring the camera’s features. The automation in this mode is sophisticated and will often produce excellent results; the drawback is that you don’t have as much creative control as you might like. But for ordinary picture-taking opportunities, vacation photos, and quick shots when you don’t have much time to decide on particular settings, Intelligent Auto is a useful tool to have at your fingertips.

## INTELLIGENT AUTO PLUS MODE

If you want the camera to make its own decisions for several options but you want to be able to make more settings from the menus and physical controls, you can select Intelligent Auto Plus mode. As I discussed earlier, to set this mode, navigate to the iA icon at the top of the line of menu icons at the far left of the menu system, then move back to the right side and select the iA icon with a plus sign, as shown in Figure 3-7.



Figure 3-7. iA+ Icon Highlighted for Selection

In this mode, the camera displays six screens of the Recording menu, instead of only three screens, as in the basic Intelligent Auto mode. (The camera lists seven screens, but skips over screen 6.) However, some of the menu items, such as Filter Settings, Sensitivity, white balance, metering mode, and others, are dimmed and unavailable for selection because the camera chooses those settings automatically in this mode. The ZS70 also gives you access to many more options on the Custom menu than are available in basic Intelligent Auto mode, including items such as Half Press Release, Focus/Release Priority, MF Assist, and others. Those features are discussed in Chapter 7.

## Using the Up Button: Defocus Control and Exposure Compensation

In addition, with Intelligent Auto Plus mode in effect, you can press the Up button to get access to the exposure compensation function, as well as to the exposure bracketing options and the defocus control feature.

To use exposure compensation, press the Up button, and the adjustment scale shown in Figure 3-8 appears.



Figure 3-8. Exposure Compensation Scale

With that scale on the display, use the control dial, the Left and Right buttons, or the touch screen to select a value for positive or negative exposure compensation, up to 5 EV (exposure value) units in either direction. The screen will grow brighter or darker to indicate the effect of the setting.

Press the Menu/Set button to return to the shooting screen with the compensation value you selected, or press the Q.Menu button to cancel. A scale at the bottom center of the screen will show the degree of exposure compensation that is in effect, as seen in Figure 3-9, which shows -1.0 EV (exposure value). I will discuss the use of exposure compensation in Chapter 5.



Figure 3-9. Exposure Compensation Adjusted by -1.0 EV

To use exposure bracketing, press the Up button to get access to the exposure compensation scale, as discussed above, and make any exposure compensation adjustment that you want. Then, press the Up button or Down button to make changes to the bracketing options window in the upper left corner of the display. Each press of either button cycles to another of the choices for bracketing. The first number for each choice states the number of exposures that will be taken and the second number states the exposure interval between those exposures.

For example, with 5•1/3, the camera will be set to take five shots at an interval of 1/3 EV between any two shots. Once that choice is made, press the Menu/Set button to return to the shooting screen. When you press the shutter button, the camera will take the chosen number of exposures at the selected interval. To turn bracketing off, press the Up button until the Off section appears in the upper left corner of the screen.

The defocus control option lets you set a wider aperture than is currently set, which may result in a pleasantly blurred background. As I will discuss later in this chapter, in Aperture Priority mode you can control the aperture setting more directly. The wider the aperture (the lower the aperture number, such as f/3.3), the more likely it is that the background will be blurred, while the foreground remains sharp.

In Intelligent Auto Plus mode, the camera selects the aperture initially, based on its automatic exposure reading. However, you can activate the defocus control option by pressing the Up button followed by the Fn1 button. (After you press the Up button, the camera will display for a few seconds the Fn1 label on the screen along with an icon indicating that you can press that button to activate the defocus control feature, as shown in Figure 3-8.)

When you press the Fn1 button in this context, the camera displays two simulated dials, as shown in Figure 3-10. The top dial shows the shutter speed and the bottom one shows the aperture. When you turn the control dial, these settings will change, if conditions permit. The lower the aperture number you can set, the better the chance there will be of having a blurred background.



Figure 3-10. Two Graphic Dials for Defocus Control

Figure 3-11 shows an image that was taken using this option, with the aperture set to  $f/3.3$ , the widest possible, resulting in a nicely blurred background.



Figure 3-11. Image Captured Using Defocus Control

When the defocus control option is in effect, the camera sets the autofocus mode to 1-Area, which I will discuss in Chapter 4. The camera uses a single autofocus frame, which you can move around the screen with your finger.

### Using the Left Button: Color Control

When the camera is in Intelligent Auto Plus mode, if you press the Left button, the camera will display a screen for adjusting color tone, as shown in Figure 3-12.

If you then turn the control dial to the right, colors will be adjusted to the bluish, or “cooler” side; if you turn it to the left, they will be adjusted to the reddish, or “warmer” side. If any such adjustment is made, a small color block will appear in the lower right corner of the shooting screen, as shown in Figure 3-13.

In Intelligent Auto Plus mode, as in basic Intelligent Auto mode, you can use the flash mode menu by pressing the

Right button. The only two choices are Auto and Flash Off. If you choose Auto, the camera will evaluate the lighting and decide whether or not to fire the flash. If you choose Flash Off, the flash will not fire under any circumstances. If you want to choose other flash options, you need to choose a different shooting mode, such as Program or one of the others discussed below.

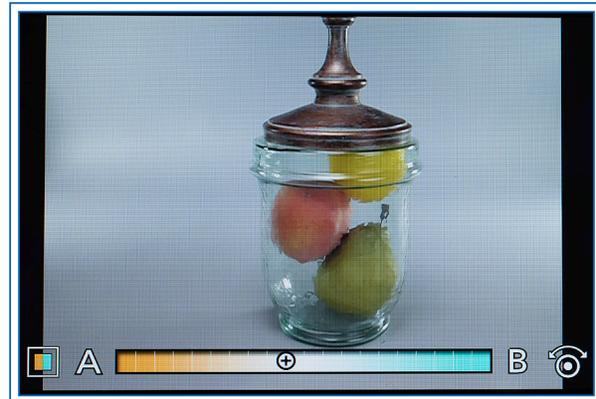


Figure 3-12. Scale for Adjusting Color Tone



Figure 3-13. Color Tone Adjustment Icon on Shooting Screen

## Program Mode

Program mode, also known as Program AE (for autoexposure), with the mode dial set as shown in Figure 3-14, is the most automatic of the advanced (PASM) recording modes.



Figure 3-14. Mode Dial at Program

In this mode, the camera displays a P icon in the upper left corner of the display, as shown in Figure 3-15.



Figure 3-15. Program Mode Icon on Shooting Screen

When you aim the camera at your subject, the exposure metering system will evaluate the light and choose both the shutter speed and aperture, which will be displayed in the lower left corner of the display when you press the shutter button halfway.

If those two values flash in red, that means the camera is unable to find settings that will yield a proper exposure. In that case, you may need to adjust the ISO setting or change the lighting conditions by using flash or taking other steps. In this mode, the camera can use its full range of aperture settings, from  $f/3.3$  to  $f/8.0$ , and shutter speeds from  $1/2000$  second to four seconds if the mechanical shutter is in use, or from  $1/16000$  second to four seconds if the electronic shutter is in use.

If you want to alter the camera's settings by selecting a different shutter speed or aperture while keeping the same overall exposure, you can do that (if conditions permit) by using a feature called Program Shift. After you press the shutter button halfway to evaluate exposure, you can turn the control dial (on back of the camera) or the control ring (around the lens) within the next 10 seconds, and the camera will try to select another combination of shutter speed and aperture settings that will result in a normal exposure.

For example, if the camera initially selects settings of  $f/4.5$  and  $1/125$  second, when you turn the control ring or the control dial, the camera may change the settings to  $f/5.0$  and  $1/100$  second, or  $f/5.6$  and  $1/80$  second. If you turn the ring or dial in the other direction, the camera may change the settings to  $f/4.0$  and  $1/160$  second, or  $f/3.5$  and  $1/200$  second.

If ISO is set to Intelligent ISO, Program Shift is not available. (ISO settings are discussed in Chapter 4.)

Program Shift can be useful if you want to have the camera make the initial choice of settings, but you want to tweak them to use a slightly higher shutter speed to stop action, or a wider aperture to blur the background, for example. When Program Shift is in effect, the camera displays the P icon with a double-headed arrow in the lower left corner of the screen, as shown in Figure 3-16.

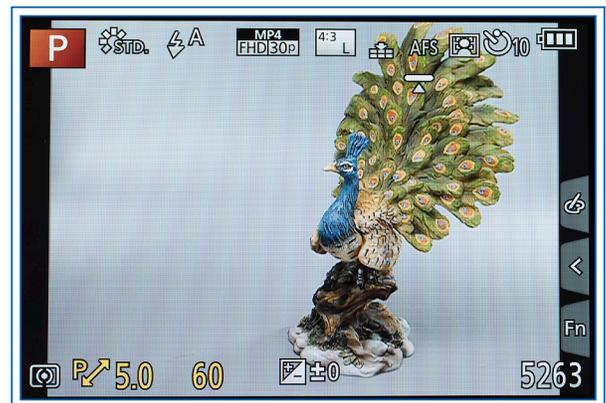


Figure 3-16. Program Shift Icon on Shooting Screen

In addition, if the Exposure Meter option is turned on through screen 5 of the Custom menu, the camera will show the shutter speed and aperture settings in two moving strips, as seen in Figure 3-17. Program Shift is not available when recording motion pictures or 4K photos, or when using the Post Focus feature.

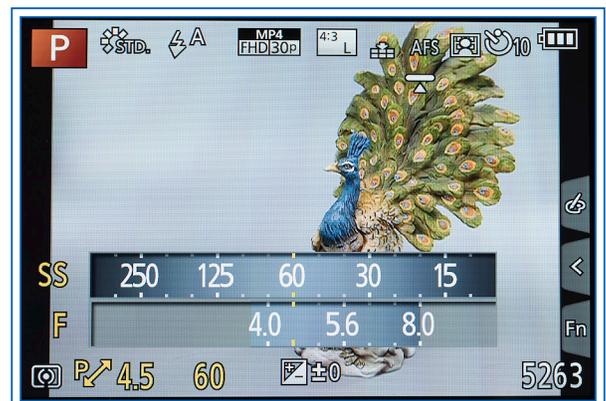


Figure 3-17. Program Shift Display with Exposure Meter On

With Program mode, as with Intelligent Auto mode, the camera will select both the shutter speed and the aperture. However, unlike Intelligent Auto mode, with Program mode you can control many settings besides shutter speed and aperture. You don't have to make a

lot of decisions if you don't want to, however, because the camera will make reasonable choices for you as defaults.

Program mode greatly expands the choices available through the Recording menu. You will be able to make choices involving white balance, image stabilization, ISO sensitivity, filter effects, metering method, autofocus area, and others. I won't discuss all of those choices here; if you want to explore that topic, see the discussion of the Recording menu in Chapter 4.

Besides unlocking many options in the Recording menu, choosing Program mode provides you with access to settings in the Custom menu that are not available in Intelligent Auto Mode, such as various focus-related settings and options for setting how the camera's controls operate, including the AF/AE Lock settings. I will discuss those options in Chapter 7.

Using Program mode does involve some tradeoffs. The most obvious issue is that you don't have complete control over the camera's settings. You can set many options, such as Photo Style, Quality, Picture Size, and ISO, but you can't directly control the aperture or shutter speed, which are set according to the camera's programming. You can exercise a good deal of control through exposure compensation and exposure bracketing (discussed in Chapter 5) and Program Shift (discussed above), but that's not the same as selecting a particular aperture or shutter speed at the outset. If you want that degree of control, you'll need to select Aperture Priority, Shutter Priority, or Manual exposure for your recording mode.

## Aperture Priority Mode

This mode is similar to Program mode in the functions available for you to control, but, as the name implies, it gives you more control over the camera's aperture.



Figure 3-18. Mode Dial at Aperture Priority

In this mode, set by turning the mode dial to A, as shown in Figure 3-18, you select the aperture setting and the camera will select a shutter speed that will result in normal exposure, if possible. The camera will choose a shutter speed anywhere from four seconds to 1/2000 second when ISO is set to 400 or lower; with higher ISO values, the slowest shutter speeds are not available. The range is one second to 1/16000 second when the electronic shutter is in use; that feature is discussed in Chapter 4. If none of these values results in a normal exposure, both the shutter speed and aperture values will turn red and flash. In that case, you may need to adjust the aperture or the ISO setting, or change the lighting conditions.

The main reason to choose this mode is so you can select an aperture to achieve a broad depth of field, with objects in focus at different distances from the lens, or a shallow depth of field, with only one subject in sharp focus and other parts of the image blurred to reduce distractions. With a narrow aperture (higher f-stop number) such as f/8.0, the depth of field will be relatively broad; with a wide aperture such as f/3.3, it will be more shallow, resulting in the possibility of a blurred background.

Because the range between the widest and narrowest aperture settings available on the ZS70 is not very great, this camera does not readily produce dramatically blurred backgrounds just from changing the aperture. However, there can be a noticeable difference from this setting. For example, in Figures 3-19 and 3-20, I made the same shot with two different aperture settings. I focused on the knight figurine in the foreground in each case.



Figure 3-19. Image Taken with Aperture Set to f/3.3

For Figure 3-19, I set the aperture of the ZS70 to  $f/3.3$ , the widest possible. With this setting, because the depth of field at this aperture was relatively shallow, the items in the background are blurry. I took Figure 3-20 with the camera's aperture set to  $f/8.0$ , the narrowest possible setting, resulting in a broader depth of field, and bringing the background into sharper focus.



**Figure 3-20.** Image Taken with Aperture Set to  $f/8.0$

These two photos show the effects of varying the aperture by setting it wide (low numbers) to blur the background or narrow (high numbers) to achieve a broad depth of field and keep subjects at varying distances in sharp focus. There are two other ways to achieve a blurred background. First, you can zoom the lens in to a telephoto setting, which reduces the depth of field and renders the background blurry, if the foreground subject is not too distant from the lens. Second, if you focus on a subject at a very close distance, the depth of field will be minimal, and the background will be blurry.

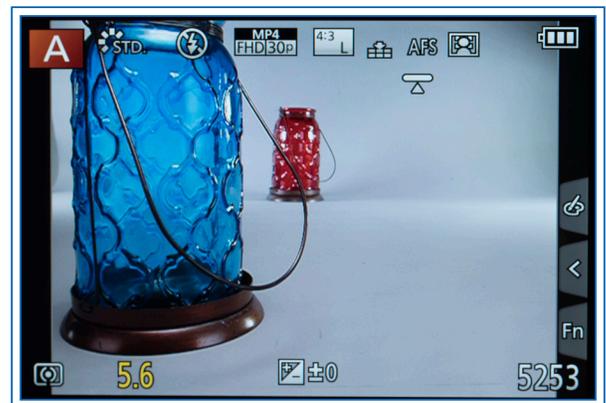
Of course, with either of those techniques, you have to accept the other effects of the setting—either a telephoto shot or a closeup shot, which may not be practical for the image you are making. For example, with a portrait, you may find that the best option for blurring the background is to choose the widest possible aperture.

Figure 3-21 is an image I took with the lens focused very close, in macro mode, to show how that setting can produce a blurred background apart from the aperture setting.



**Figure 3-21.** Example of Blurred Background with Macro Shot

To set the aperture, turn either the control dial or the control ring, and the number of the f-stop will appear in the lower left corner of the screen, as shown in Figure 3-22, where the value is  $f/5.6$ .



**Figure 3-22.** Shooting Screen in Aperture Priority Mode

The shutter speed will be displayed also, but not until you have pressed the shutter button halfway down to let the camera evaluate the exposure.

If you turn on the Exposure Meter option on screen 5 of the Custom menu, the camera will display two dials showing the shutter speed and the aperture, similar to the screen seen earlier in Figure 3-17.

It is important to note that not all apertures are available at all times. In particular, the widest-open aperture,  $f/3.3$ , is available only when the lens is zoomed out to its wide-angle setting (moved toward the W indicator). At higher zoom levels, the widest aperture available changes steadily, until, when the lens is fully zoomed in to the 720mm level, the widest aperture available is  $f/6.4$ .