Chapter 3: Shooting Modes for Still Images

Until now, I have discussed the basics of setting up the camera for quick shots, using Intelligent Auto mode to take pictures and video clips with settings controlled mostly by the camera's automation. As with other advanced cameras, though, with the Sony a7C there is a large range of other options available. To explain this broad range of features, I need to discuss shooting modes and the Camera Settings1 and Camera Settings2 menu options. In this chapter, I'll discuss the shooting modes; in Chapters 4 and 5, I'll discuss the Camera Settings1 and Camera Settings 2 menus.

In order to capture still images, you need to select one of the shooting modes available on the mode dial: Intelligent Auto, Program Auto, Aperture Priority, Shutter Priority, Manual exposure, or Memory Recall. (The other two modes on the dial are for movies, which I will discuss in Chapter 9.) So far, I have discussed primarily the Intelligent Auto mode. Now I will discuss the others, after some review of the first one.

Intelligent Auto Mode

I've already discussed this shooting mode in some detail. This is a good choice if you need to take a quick shot and don't have much time to fuss with settings such as ISO, white balance, aperture, shutter speed, or focus. It's also a good mode to select when you hand the camera to someone else to take a photo of you and your companions. For example, I used Intelligent Auto mode for a quick shot of a group of people walking their dog in a local park, as seen in Figure 3-1.

To make this setting, turn the mode dial to the green AUTO label, as shown in Figure 3-2. When you select this mode, the camera makes several decisions for you and limits your options in some ways. The camera will select the shutter speed, aperture, and ISO setting, along with several other settings over which you will have no control.

Figure 3-1. Intelligent Auto Mode Sample Image

Figure 3-2. Mode Dial at AUTO

For example, you can't set white balance to any value other than Auto, and you can't choose a metering method or use exposure bracketing. You can, however, use quite a few features, as discussed in Chapter 2, including some settings of flash mode, some settings of drive mode, focus mode, and others. You also can use sophisticated options such as the Raw format, which I will discuss in Chapter 4 when I discuss the items on the Camera Settings1 menu.

One interesting aspect of this mode is that the camera tries to figure out what sort of subject or scene you are shooting. Some of the subjects the camera will attempt to detect are Infant, Portrait, Night Portrait, Night Scene, Landscape, Backlight, Low Light, and Macro. It also will try to detect certain conditions, such as whether a tripod is in use, and it will display

appropriate icons for those situations. So, if you see different icons when you aim at various subjects in this shooting mode, that means the camera is evaluating the scene for factors such as brightness, backlighting, the presence of human subjects, and the like, so it can use the best possible settings for the situation.

For Figure 3-3, the camera evaluated a scene with a human face and appropriately used its Portrait setting. A Portrait icon is in the upper-left corner of the screen.

Figure 3-3. Scene Recognition: Portrait

Figure 3-4 shows the use of automatic scene recognition for a toy soldier located closer to the lens. The camera interpreted the scene as a macro, or closeup shot, and switched automatically into macro mode, indicated by the flower icon.

Figure 3-4. Scene Recognition: Macro

Of course, scene recognition depends on the camera's programming, which may not interpret every scene the same way that you would. If that becomes a problem, you may want to make individual settings using one of the more advanced shooting modes, such as Program, Aperture Priority, Shutter Priority, or Manual.

Program Mode

Choose this mode by turning the mode dial to the P setting, as shown in Figure 3-5.

Figure 3-5. Mode Dial at P for Program Mode

Program mode (sometimes called Program Auto mode) lets you control many of the settings available with the a7C, apart from shutter speed and aperture, which the camera chooses on its own. You still can adjust the camera's automatic exposure to a fair extent by using exposure compensation and bracketing, as discussed in Chapter 4, and Program Shift, discussed later in this section. You don't have to make a lot of decisions if you don't want to, because the camera will make reasonable choices for you as defaults.

The camera can choose a shutter speed as long as 30 seconds or as short as 1/4000 second. If the Silent Shooting option on screen 5 of the Camera Settings2 menu is turned on, the fastest shutter speed available is 1/8000 second.

The Program Shift function, which is available only in Program mode, works as follows. Once you have aimed the camera at your subject, the camera displays its chosen settings for shutter speed and aperture in the lower left corner of the screen. At that point, you can turn the control dial or the control wheel, and the values for shutter speed and aperture will change, if possible under current conditions, to select different values for both settings while keeping the same overall exposure of the scene.

If the Exposure Settings Guide option on screen 7 of the Camera Settings2 menu is turned on, the camera will display two bands graphically showing the aperture and shutter speed values as they change.

With this option, the camera "shifts" the original exposure to your choice of any of the matched pairs that appear as you turn the wheel or dial. For example, if the original exposure was f/2.8 at 1/30 second, you may see equivalent pairs of f/3.2 at 1/25, f/3.5 at 1/20, and f/4.0 at 1/15, among others. When Program Shift is in effect, the P icon in the upper left corner of the screen will have an asterisk to its right, as shown in Figure 3-6.

Figure 3-6. Asterisk on Shooting Screen for Program Shift

To cancel Program Shift, turn the control wheel or the control dial until the original settings are in effect or move the mode dial to another shooting mode, then back to Program.

Program Shift is useful if you want a slightly faster shutter speed to stop action or a wider aperture to blur the background, or you might have some other creative reason. This option lets the camera quickly evaluate the exposure, but gives you the option to tweak the shutter speed and aperture to suit your current needs.

Of course, if you need to use a specific shutter speed or aperture, you probably are better off using Aperture Priority, Shutter Priority, or Manual exposure mode. However, having Program Shift available is useful when you're taking pictures quickly using Program mode, and you want a fast way to tweak the settings somewhat.

Another important aspect of Program mode is that it expands the choices available through the Camera Settings1 menu, which controls many of the camera's settings that directly affect your images. You will be able to make choices involving ISO sensitivity, metering mode, DRO/HDR, Creative Style, Picture Effect, and others that are not available in Intelligent Auto mode. See the discussion of the Camera Settings1 menu in Chapter 4 for information about the many selections that are available.

Aperture Priority Mode

You select Aperture Priority mode by turning the mode dial to the A setting, as shown in Figure 3-7.

Figure 3-7. Mode Dial at A for Aperture Priority Mode

In this mode, you select the aperture and the camera chooses a shutter speed for proper exposure. With this mode, you can exercise control over depth of field of your shots. When you select a narrow aperture, such as f/16.0, the depth of field will be broad, with the result that more items will appear to be in sharp focus at varying distances from the lens. On the other hand, with a wider aperture, such as f/2.8, the depth of field will be relatively shallow, and you may be able to keep only one subject in sharp focus.

In Figures 3-8 and 3-9, I took two pictures using the Sony SAL5014 50mm f/1.4 lens, which was mounted to the a7C using Sony's LA-EA4 Mount Adaptor because it is an A-mount lens, not designed for the E-mount used by the a7C. The settings for the two images were the same except for aperture values.

Figure 3-8. Aperture Set to f/1.4

For Figure 3-8, I set the aperture to f/1.4, the widest possible for this lens. With this setting, because the

depth of field at this aperture was quite shallow, the items in the background are fairly blurry. I took Figure 3-9 with the aperture set to f/22, the narrowest possible setting, resulting in a broader depth of field, making the background appear considerably sharper.

Figure 3-9. Aperture Set to f/22

These photos illustrate the effects of varying aperture by setting it wide (low numbers) to blur the background or narrow (high numbers) to enjoy a broad depth of field and keep subjects at varying distances in sharp focus. A need for shallow depth of field arises often in the case of outdoor portraits or photographs of subjects such as flowers. If you can achieve a shallow depth of field by using a wide aperture, you can keep the subject in sharp focus but leave the background blurry, as in Figure 3-8.

This effect is sometimes called "bokeh," a Japanese term for a pleasing blurriness of the background. In this situation, the fuzzy background can be an asset, minimizing distraction from unwanted objects and highlighting the sharply focused portrait of the subject.

Here is the procedure for using this shooting mode. With the mode dial at the A setting, use the control wheel or the control dial to select the aperture value. The available settings depend on the lens you are using and the setting of the Exposure Step option on screen 9 of the Camera Settings1 menu. For example, using the Sony 28mm-60mm kit lens with Exposure Step set to 0.5EV, the available settings are f/4.0, f/4.5, f/5.6, f/6.7, f/8.0, f/9.5, f/11.0, f/13.0, f/16.0, f/19.0, and f/22.0.

When you set the aperture, as seen in Figure 3-10, the f-stop (f/13 in this case) will appear at the bottom of the screen next to the shutter speed. If you turn on the Exposure Settings Guide option on screen 7 of the Camera Settings2 menu, you will see a graphic display of the aperture values on a moving band as you turn the control wheel or control dial, as shown in Figure 3-11.

Figure 3-10. Aperture Value on Shooting Screen

Figure 3-11. Aperture Value Displayed with Exposure Setting Guide Turned On

The camera will select a shutter speed that will result in a normal exposure given the aperture you have set. The camera can choose shutter speeds from 30 seconds to 1/4000 second, or as fast as 1/8000 second if Silent Shooting is turned on.

Although in most cases the camera will be able to select a corresponding shutter speed that results in a normal exposure, there may be times when this is not possible. For example, if you are taking pictures in a very bright location with the aperture set to f/4.0, the camera may not be able to set a shutter speed fast enough to yield a normal exposure. In that case, the fastest possible shutter speed will flash on the display to show that a normal exposure cannot be made using the chosen aperture. The camera will let you take the picture, but it may be too bright to be usable.

Similarly, if conditions are too dark for a good exposure at the aperture you have selected, the slowest possible shutter speed (30”, meaning 30 seconds) will flash.

If conditions are too bright or dark for a good exposure, the camera’s display may become bright or dark, giving you notice of the problem. This will happen if the Live View Display item on screen 8 of the Camera Settings2 menu is set to Setting Effect On. If that option is set to Setting Effect Off, the display will remain at normal brightness (if there is sufficient ambient light for that purpose), even if the exposure settings would result in an excessively bright or dark image. I will discuss that menu option in Chapter 5.

Depending on the lens you are using, not all apertures may be available at all times. For example, with the 28mm-60mm kit lens, the widest aperture, f/4.0, is available only when the lens is zoomed out to its wide-angle setting. As soon as the lens is zoomed in slightly beyond the 28mm focal length, the widest aperture available is f/4.5. At the highest zoom levels, the widest aperture available is f/5.6.

Some zoom lenses, however, are constant-aperture lenses, which maintain their widest aperture at all zoom levels. For example, the Sony E 10-18mm f/4 OSS lens provides a constant aperture of f/4.0 throughout its zoom range. Lenses of that sort tend to be fairly expensive, but it may be worthwhile to have the constant aperture, so you can blur the background and shoot in relatively dim light. Of course, you also may use a prime lens with a fixed focal length, such as 35mm or 50mm, in which case the aperture will be constant because the lens does not zoom.

Shutter Priority Mode

In Shutter Priority mode, you choose the shutter speed you want and the camera will set the corresponding aperture to achieve a proper exposure of the image.

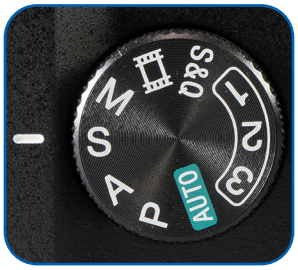

Figure 3-12. Mode Dial at S for Shutter Priority Mode

In this mode, designated by the S position on the mode dial, as shown in Figure 3-12, you can set the shutter to be open for a time ranging from 30 seconds to 1/4000 of a second, or 1/8000 second if Silent Shooting is turned on, which causes the electronic shutter to be used.

If you are photographing fast action, such as a bird in flight, a baseball swing, or a hurdles race at a track meet, and you want to freeze motion with a minimum of blur, you should select a fast shutter speed, such as 1/2000 of a second. For Figures 3-13 and 3-14, I used different shutter speeds for images of a group of colored beads as I poured them into a clear plastic pitcher.

Figure 3-13. Shutter Speed Set to 1/4000 Second

Figure 3-14. Shutter Speed Set to 1/30 Second

In Figure 3-13, I used a shutter speed setting of 1/4000 second. In this image, you can see the individual beads clearly. In Figure 3-14, with the shutter speed set to 1/30 second, the beads blur together into what looks almost like a continuous stream.

You select this shooting mode by turning the mode dial to the S indicator, as shown in Figure 3-12. Then you select the shutter speed by turning the control wheel or the control dial.

If you turn on the Exposure Settings Guide option on screen 7 of the Camera Settings2 menu, you will see a graphic display of the shutter speeds on a moving band as you turn the control wheel or dial, similar to the display of aperture settings, shown earlier in Figure 3-11.

Although the a7C uses the letter "S" to stand for Shutter Priority on the mode dial and to designate this mode on the live view screen, it uses the notation "Tv" on the Shooting mode display in Shutter Priority mode, next to the control dial and control wheel icons, as shown in Figure 3-15. Tv stands for time value, a term often used for shutter speed.

Figure 3-15. Shutter Speed Setting on Shooting Screen

As you cycle through various shutter speeds, the camera will select the appropriate aperture to achieve a normal exposure, if possible. As I discussed in connection with Aperture Priority mode, if you set a shutter speed for which the camera cannot select an aperture that will yield a good exposure, the aperture reading at the bottom of the display will flash. The flashing aperture means that proper exposure at the selected shutter speed is not possible at any available aperture, according to the camera's calculations.

For example, if you set the shutter speed to 1/350 second in a fairly dark indoor environment with a low ISO setting in place (such as 100), the aperture number (which will be the widest setting for the lens in use, if the lens is at its wide-angle setting) may flash, indicating that proper exposure is not possible. As I discussed for Aperture Priority mode, you can still take the picture if you want to, though it may not be usable. A similar situation may take place if you select a slow shutter speed (such as four seconds) in a relatively bright location. (This situation is less likely to happen in Aperture Priority mode, because of the wide range of shutter speeds the camera can use to achieve a good exposure.)

If the current settings in this mode would result in an image that is excessively dark or bright, the LCD display will grow dark or bright to show that effect, but only if the Live View Display option on screen 8 of the Camera Settings2 menu is set to Setting Effect On. If that option is set to Setting Effect Off, the display will show a normal image even in unusually bright or dark conditions, if possible with the current ambient lighting situation.

Manual Exposure Mode

The technique for using this mode is similar to what I discussed for the Aperture Priority and Shutter Priority modes. To control exposure manually, set the mode dial to the M indicator, as shown in Figure 3-16.

Figure 3-16. Mode Dial at M for Manual Exposure Mode

You now have to control both shutter speed and aperture by setting them yourself. To set the aperture, turn the control dial; to set the shutter speed, turn the control wheel. (You can reverse the roles of the dial and wheel using the Dial/Wheel Setup option on screen 9 of the Camera Settings2 menu.)

Figure 3-17. Aperture and Shutter Speed Values on Shooting Screen