

## **Backgrounder**

### ***New Minolta Single Lens Reflex (SLR)-type Digital Camera: The DiMAGE Z1***

Minolta Corporation's stylish new DiMAGE Z1 is the first in a series of easy-to-use powerful SLR-type digital cameras. The first Minolta digital camera to include Minolta's new built-in 10x Mega-zoom lens, the DiMAGE Z1 possess advanced technology and the world's fastest autofocus among digital cameras with a built-in 10x or greater optical zoom.\* Key features include:

- 3.2 Megapixels
- Minolta's new Mega-Zoom lens (10x optical/4x digital zoom)
- Rapid Autofocus (AF)
- Progressive Capture
- High-Quality VGA Movie (640 x 480, 30 frames per second)
- Minolta's CxProcess II
- Ultra High Speed (UHS) Continuous Advance (10 frames per second rapid fire)
- LCD and Eye-level Electronic Viewfinder

#### **Main Features:**

##### **Minolta's 10x Mega-zoom Lens**

The new Minolta 10x Mega-zoom is a fast f2.8 – f3.5 lens allowing fast shutter speeds for sport or natural-light photography. The ten-element seven-group design employs two aspheric lenses to minimize aberrations and produce sharp images. With a focal range of 5.8mm to 58mm, it is equivalent to a 38 - 380mm 35mm camera lens. When combined with the seamless 4x digital zoom, it has an amazing 40x zoom range, equivalent to a 38 – 1520mm lens.

To extend the versatility of the powerful 10x Mega-zoom, an optional 0.75x wide-converter is available. This lens attachment increases the lens' angle of view giving it a maximum coverage approximately equal to a 28mm lens on a 35mm camera. The adapter ring supplied with the wide-converter allows 52mm filters to be used with the camera.

With such powerful optics, the affect of camera shake, a slight blurring of the image when the camera is handheld, can be a significant problem. Minolta engineers have developed an advanced program exposure line to maximize shutter speeds by controlling the aperture and camera sensitivity based on the subject program and focal length in use.

##### **Rapid AF**

Such powerful optics combined with a high-resolution 3.3 megapixel 1/2.7 interline primary-color CCD requires a powerful autofocus system. The Minolta DiMAGE Z1 employs Rapid AF to ensure sharp images with minimum delay. Rapid AF uses a passive AF sensor to instantly estimate the distance to the subject and the camera's CCD to determine the precise focus point. A high-speed drive focuses the lens quickly and smoothly. The CCD uses a 60 frame per second

sampling rate to determine the optimum focus, twice the rate of most digital cameras on the market today. All this translates into a 0.3 second focusing time at a focal length of 5.8mm and 0.4 seconds at 58mm, giving the Minolta DiMAGE Z1 the world's fastest AF among digital cameras with a built-in 10x or greater optical zoom.\*

Although the DiMAGE Z1 uses complex AF technology, focusing the camera couldn't be easier. The user simply places the subject anywhere within the focus frames and the camera does the rest; an AF sensor is briefly displayed so the subject can be confirmed.

### **Minolta's Progressive Capture**

Minolta's new drive mode, Progressive Capture, makes sure photographers never miss a shot. When the shutter-release button is pressed and held down, Progressive Capture begins saving images in the buffer memory. A user simply watches the action on the monitor and when it is over, releases the shutter button and the images in the buffer memory are saved to the memory card catching the moment. Six frames are saved when using standard continuous advance and 10 frames when using UHS continuous advance. Standard continuous advance records at approximately 1.5 frames per second at any image size or quality setting. Ultra High Speed (UHS) continuous advance records 1.2 megapixel images at 10 frames per second.

### **High Quality VGA Movie**

The Minolta DiMAGE Z1 doesn't just capture still images. High-quality VGA (640 x 480) movies at 30 frames per second can be recorded. Image size and frame rate can be selected to balance image quality with file size. Three image sizes are available: 640 x 480, 320 x 240, and 160 x 120. Because of the high frame rate of the CCD, movies may be shot at 30 frames per second to create natural flicker-free images, or 15 frames per second to maximize recording time. The length of the movie is only limited by the memory card capacity, image size, and frame rate.

Because the Minolta DiMAGE Z1 can capture large, high-quality VGA (640 x 480) movies, image sharpness and brightness is very important. During recording the DiMAGE Z1 will continue to focus to provide the sharpest possible image. The night-movie mode can make color recordings under extreme low-light conditions.

### **Minolta's CXProcess II**

CxProcess II, Minolta's new image-processing technology, is employed to bring out the best in the 3.3 megapixel 1/2.7 interline primary-color CCD. CxProcess II controls the essential image qualities of color, contrast, and sharpness while minimizing noise. Brilliant, saturated color remains vibrant without becoming unnatural or flat. Subtle contrast is rendered to retain the richness and depth of the subject while preserving details in the highlights and shadows. Sharpness is controlled by balancing resolution with acutance to show fine detail while minimizing hard, unnatural edges.

### **Unique LCD & Viewfinder**

The DiMAGE Z1 is equipped with Minolta's unique Switch Finder. This unique system allows the camera's LCD monitor to be viewed directly or through the viewfinder. Since a single monitor is used, photographers won't need to worry about the color, contrast, and resolution difference between separate rear and viewfinder monitors. Because of the viewfinder's large apparent angle of view, the monitor image is large and clear.

The camera's Real Motion LCD monitor uses a 60 frames per second frame rate. This Real Motion frame rate brings the live image to life by the ability to show action smoothly compared to the slower 30 frames per second rate of conventional monitors.

### **Performance and Design**

Minolta engineers have pushed every aspect of the DiMAGE Z1's performance to the limit. Startup time is 2 seconds and shutdown time is 2.4 seconds. After focus has been locked in, the shutter-release time lag is 0.06 second, comparable to an SLR film camera. The camera will be ready to capture another image in 1.2 seconds after the exposure.

The DiMAGE Z1 incorporates Minolta's most powerful flash built into a digital camera yet. With a guide number of 39 (feet), the built-in flash can illuminate a subject up to approximately 20 feet when used at the wide-angle position with autoexposure and auto camera sensitivity.

The DiMAGE Z1 design reflects the sophistication and future of digital technology. Significantly smaller than a compact 35mm SLR camera with a built-in flash and zoom lens, this powerful imaging system can easily slip into a fanny pack or hip bag. And weighing only 11 ounces, it will not be a burden. Easy-to-find AA batteries power the DiMAGE Z1. Easy-to-find alkaline or rechargeable Ni-MH can be used.

### **Intuitive Controls**

The controls and dials are laid out for clear, intuitive operation. The large exposure mode dial and zoom lever are located on the top of the camera grip for quick changes to camera settings to meet changing shooting conditions. The controller, placed on the back of the camera, is a straightforward five-way array used to control many of the camera's advanced features, functions, and menus. The large grip gives the DiMAGE Z1 secure, comfortable handling. When handholding the camera in low-light conditions or when using long focal lengths, nothing is more important than a well-balanced grip to keep the camera steady.

In the past, photographers always had to make time-consuming manual adjustments as the subject and shooting environment changed. The DiMAGE Z1's Automatic Digital Subject Program Selection analyzes the shooting conditions and selects among five subject programs (portrait, sports action, landscape, sunset, and night portrait) and programmed autoexposure (AE) to optimize the camera's exposure, white-balance, and image-processing controls.

When working in less than ideal lighting conditions, precisely framing an image on the monitor is difficult. Automatic monitor amplification brightens the monitor under low light so the live image is always visible.

Operations can be tailored to meet the photographer's needs. The function set using the flash-mode button can be customized to control the flash mode, white balance, drive mode, focusing mode, or color mode. Images can be rotated to orient them correctly so users don't need to twist their head to the left or right when playing back vertically composed shots.

Dark noise, an ever-present problem in electronic systems, manifests itself by giving a grainy or sandy appearance to images taken with long exposures. The DiMAGE Z1 combats this with a selectable noise-reduction function, which automatically activates for exposures of one second or longer.

Four exposure modes are available: program, aperture priority, shutter priority, and manual. 30-second bulb exposures can be made in manual exposure. The DiMAGE Z1 has three metering modes: multi-segment, center-weighted, and spot. Multi-segment metering uses 256 segments to determine exposure.

As well as Natural Color and black and white, the DiMAGE Z1 has two color modes for creative control: Vivid color and Sepia. Vivid Color increases the saturation to produce vibrant color images. Sepia creates the feel of antique photographs with its warm tone.

White balance controls how the camera interprets the color of the ambient lighting. Auto white balance compensates for changes in lighting automatically. Five preset white-balance settings, daylight, cloudy, tungsten, fluorescent, and flash, can be selected for specific light sources. And for critical control over color, the custom setting allows the camera to be calibrated to the lighting conditions at the scene.

Being able to see the images that have been taken immediately enhances the excitement of digital photography. With the flick of a switch, users can access their recorded images. And playback is fluid from frame to frame.

#### **Accessory Flash Compatibility**

The DiMAGE Z1 is compatible with the Minolta Program/Maxxum Flash 3600HS (D) or 5600HS (D) units as well as the latest addition to the Minolta accessory flash line, the Program/Maxxum Flash 2500 (D). These powerful flash units can be used directly on the camera. The 3600HS (D) and 5600HS (D) have a zoom head that automatically adjust as the camera's lens is zoomed in and out, and their heads can be tilted for bounce illumination. The 5600HS (D) also has a swivel head and the flash output can be controlled with power ratios. The new 2500 (D) is a compact, automatic flash unit with a tilting head and an affordable price tag.

*\* As of July 1<sup>st</sup>, 2003.*

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