



Backgrounder

New Konica Minolta Single Lens Reflex (SLR)-type Digital Camera: The DiIMAGE A1

Konica Minolta Photo Imaging U.S.A., Inc.'s new DiIMAGE A1 5-megapixel digital camera builds on the success of the highly acclaimed DiIMAGE 7 series of digital cameras. This next generation SLR-type digital camera includes these key features:

- World's Fastest Autofocus Speed*
- Shutter speed of 1/16,000 of a second
- Dual-focal macro system
- New image quality and image-size settings
- 3-D Predictive Focus Control and Subject Tracking
- Anti-Shake function
- New CxProcess II image processing technology
- Compatibility with accessory and studio flash systems

Main Features:

World's Fastest Autofocus (AF) Speed*

The new DiIMAGE A1 features the world's fastest AF speed among 5-megapixel SLR-type digital cameras with a non-interchangeable 5x or greater optical zoom.* Full-time AF continually focuses when the grip sensor is activated to reduce focusing time as well as to continually display a sharp image on the monitors.

Fast Shutter Speed

The DiIMAGE A1 has an incredible top shutter speed of 1/16,000 of a second. This is not only an advantage in sport photography, but also gives greater control over depth of field in brightly-lit scenes by allowing the entire aperture range to be used. In low-light conditions, shutter speeds up to 30 seconds can be selected as well as thirty-second bulb exposures.

High-Precision Electro-Optical System

The DiIMAGE A1 is built around a high-precision electro-optical system designed to maximize image quality. The system starts with a 5.3 megapixel 2/3-type progressive primary-color CCD with 5.0 million effective pixels for fine high-resolution images. The pixel resolution of the CCD will produce 13" x 17" 150dpi prints or 6.5" x 8.5" photo-quality prints; this creates a print size larger than both 11" x 17" and 5" x 8" respectively.

The DiIMAGE A1 uses 14-bit A/D conversion to record the richness and infinite subtleties of light. 14-bit A/D conversion can distinguish 16,384 levels in each color channel. This is a fourfold increase over the fidelity of 12-bit systems. Images simply come alive.

7x Optical Zoom Lens

A high-resolution CCD is as good as the lens in front of it. The fast f2.8 – f3.5 7x optical zoom is an advanced apochromatic (APO) lens employing anomalous dispersion (AD) glass to minimize chromatic aberration at all focal lengths and produce sharp, contrasty images. With a focal range of 7.2mm to 50.8mm, it is equivalent to a 28mm to 200mm 35mm zoom lens. This lens encompasses the most used focal lengths in photography today. It can range from wide angle for landscapes and interiors to telephoto for portraits and details of distant landmarks. A straightforward manual zooming ring makes framing quick and easy. The lens aperture can be adjusted in 1/3 stops allowing fine control over exposure.

Dual-focal Macro System

The DiMAGE A1 zoom features a dual-focal macro system that allows the lens to be set at the wide-angle or telephoto position to take advantage of different focal lengths. At the wide-angle position, the larger field of view and depth of field create a strong perspective and a sense of space. The telephoto position isolates the subject and minimizes distortion with a narrow field of view and shallow depth of field.

High Quality Images

For photographers who demand high-quality images, new image-quality and image-size settings have been added to the DiMAGE A1. The extra-fine image-quality option joins the fine and standard settings to produce a high-quality JPEG file with little compression or loss of detail. The new 2080 x 1560 image size gives the photographer the ability to switch between 5 megapixel, 3 megapixel, and 2 megapixel images smoothly to match the final use of the image with the optimum resolution to maximize storage space on the memory card. A 640 x 480 (VGA) image size is also available for web images.

3-D Predictive Focus Control

All cameras suffer from a slight delay between pressing the shutter-release button and when the image is captured. And at long focal lengths, this slight delay can be significant when photographing fast moving subjects. With continuous AF, the Minolta DiMAGE A1 uses a new 3-D Predictive Focus Control to track the subject from when the shutter-release button is pressed all the way down until the exposure is made ensuring optimum focus. This new predictive focus control continually follows the subject through three-dimensional space not only to give the sharpest images possible, but also to reduce focusing time to catch the perfect moment.

Subject Tracking

The camera's Subject Tracking AF uses the 3-D Predictive Focus Control system to lock on to and track a subject as it moves through the frame. A photographer simply places the subject in the AF frame and presses the shutter-release button partway down to engage the subject lock. The camera will then track the subject regardless of the direction of motion of the subject or camera.

Versatile Autofocus System

The DiMAGE A1's AF system works in low-light conditions, the fading light of twilight or dimly lit interiors, without the need of a special AF illuminator. The monitor and viewfinder images are automatically amplified in these conditions so the subject is always visible.

Flex Focus Point adds unlimited versatility to the camera's AF system. When the camera is placed on a tripod or when the position of the focal plane is critical as with close-up photography, it can be very difficult to use most autofocus systems because the camera must be moved to focus and then repositioned to compose the image. Flex Focus Point is a single crosshair sensor that can be placed anywhere within the field of view. With the camera on a tripod, a photographer simply

uses the four-way key of the controller to position the Flex Focus Point on the subject. The camera's AF system will then use that point for each exposure. The spot metering area can also be switched between a center spot and the Flex Focus Point.

Direct Manual Focus

The DiMAGE A1 incorporates Direct Manual Focus (DMF) – a feature found in professional-level 35mm film cameras such as the award-winning Minolta Maxxum 7. After the AF system has focused and locked on the subject, the focus can be fine-tuned manually.

The new Flex Digital Magnifier (FDM) can enlarge a section of the live image by two or eight times so sharpness can be judged in manual focus or when using DMF. The FDM marquee can be moved to frame the section of the image to be enlarged. Once enlarged, the live image can be scrolled so the entire image area can be examined.

Anti-Shake Function

The camera's new Anti-shake function minimizes the effect of camera shake, a slight blurring of the image when the camera is handheld, to provide the sharpest image possible. The Anti-shake system is valuable when shooting at long focal lengths or in low-light conditions without a tripod. This allows the camera to be handheld with exposures approximately eight times longer than usual. When using the camera at the telephoto setting, approximately 90% of the images recorded will be sharp with a shutter speed of 1/25 second. The Anti-shake button glows to indicate the function is active.

Minolta's CXProcess II

The camera's new image-processing technology – 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 details while minimizing hard, unnatural edges. Dark noise can be reduced with exposures of one second or longer with the noise-reduction menu option.

Digital Hyper Viewfinder

The redesigned Digital Hyper Viewfinder gives the camera the same feel as a 35mm SLR camera. It can be tilted between 0° and 90° for comfortable shooting at low angles or in confined spaces. The viewfinder has a new precision 235,000-pixel TFT monitor. Because the viewfinder LCD is shielded, it makes the perfect tool when working under bright light.

Unique LCD Monitor

The DiMAGE A1 is fitted with a 1.8-inch low-temperature high-contrast color LCD monitor that can be tilted from –20° to +90°. The monitor has an extended color gamut, contrast, and dynamic range. The monitor has a wide-viewing angle so that the camera does not need to be held perpendicularly to clearly view the live image.

Digital Effects Control (DEC)

The Digital Effects Control (DEC) is an image-processing center built into the DiMAGE A1. Contrast, color, and saturation can be adjusted before the image is captured to maximize image data at the scene. Contrast expands or contracts the tonal range to match the subject contrast. Saturation accentuates or subdues colors. The Filter effect controls the overall color of the image. When taking color images, the filter can affect the mood of the picture by making it cooler or warmer in eleven levels. When used with black and white images, the filter creates a warm or

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cool toned image similar to sepia or gold toners with photographic prints as well as the unique tones of magenta and green. Ten tones are available.

To guaranty the correct level of adjustment is made with the DEC, a Digital Enhanced Bracket can be made, a series of images with a slight increase and decrease in the quality selected. A photographer simply selects the bracketing drive mode and the image quality to be bracketed. The camera will automatically make a three-image bracket of the selected quality.

Digital Subject Program Modes

The camera's Digital Subject Program modes optimize exposure and image-processing controls for specific shooting conditions and subjects. Simply select the appropriate Digital Subject Program and the camera is ready to shoot. Four subject programs are available:

- Portrait: optimized to reproduce warm, soft skin tones and a slight defocusing of the background.
- Sports action: to make clear, sharp images of fast moving subjects.
- Sunset: optimized to reproduce rich, warm sunsets.
- Night portrait: for deep, subtle night scenes. When used with the built-in flash, the subject and background exposures are balanced.

Color Modes

As well as Natural Color and black and white, the DiMAGE A1 has two color modes for creative control: Vivid color and Solarization. Vivid Color increases the saturation to produce vibrant color images. Solarization creates a partial reversal of image tones to produce unique imaging effects. Two Adobe RGB options are available for color management applications so that the image can be captured with or without the Adobe RGB profile embedded.

Movie Mode

The DiMAGE A1 will not only produce great still-images, but also makes digital movies. There are multiple creative movie formats from which to choose. Standard QVGA (320x240) color movies and monochrome night movies up to 15 minutes with audio can be made. The night-movie mode can make recordings under extreme low-light conditions. The interval function can produce a series of still images taken at regular intervals or it can combine the images into 640 x 480 time-lapse movie. The time-lapse movie plays the images back at 4 frames per second so that normally imperceptible motion springs to life: the blossoming of a flower or changing cloud formations.

Real-time Histogram

Unique to digital imaging, the DiMAGE A1's real-time histogram shows the luminance distribution of the image before it is captured. Displayed with the live image, the histogram allows the subject brightness and contrast to be evaluated to optimize the camera's exposure and contrast controls. The luminance distribution of recorded images can be checked with playback histogram.

Intuitive Controls

The controls and dials are laid out for clear, intuitive operation. Two control dials are located on the front and back of the grip for quick changes to camera settings. Placed on the back of the camera, the controller is a straightforward five-way array used to control many of the camera's advanced features and menus. The controller has been designed with a separate four-way key and central enter button. Separate buttons have been added for exposure compensation and custom

white-balance settings. And a new switch makes it easy to change between single-AF, continuous-AF, and manual focus modes.

Professional Style

The DiMAGE A1 is wrapped in a feather-light magnesium-alloy case with a professional black finish. The camera has been completely redesigned to reflect the utility and sophistication of digital technology. Significantly smaller than a compact 35mm SLR camera with a built-in flash and zoom lens, this sophisticated imaging system can easily slip into a fanny pack or shoulder bag. A new textured grip gives the DiMAGE A1 secure, comfortable handling.

Automatic Camera Sensitivity

Automatic camera sensitivity adjusts between ISO 100 and 200 equivalents as the lighting conditions change to maximize shutter speeds to reduce camera shake. Monitor amplification brightens the monitor image under low light so that composition can be checked. This function can be turned on or off, or set to automatically active in low light conditions.

Data Imprinting

Data imprinting allows the date or time to be printed on the image as well as text and serial numbers. A 16-character subject line describing the images can be added to the exif data and read with the DiMAGE Viewer. This subject line can be printed out with a copy of the image from the DiMAGE Viewer application. The electronic keyboard used to imprint text has an expanded character set for European languages. Diacritical marks are added to certain vowels and the German double "S" is available.

System Accessories

The DiMAGE A1 is compatible with the Program/Maxxum Flash 3600HS (D) or 5600HS (D) units as well as the latest addition to the line, the new 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 adjusts 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.

For close-up photography, Konica Minolta has a high-quality macro lighting system. The Macro Flash Controller can be coupled with the Micro Ring Flash 1200 or the Micro Twin Flash 2400 lighting sets. Both these systems give considerable control over lighting in confined spaces at close working distances.

The DiMAGE A1 can be fired with an optional 1.6 ft. or 16.4 ft. remote cord. The optical zoom accepts standard 49mm filters; a Step-up Adapter 49mm to 62mm is available.

A new built-in flash synchronization terminal allows the DiMAGE A1 to be connected to professional studio and location flash systems. Simply plug the flash's PC cord into the terminal. Designed for center-negative and center-positive polarities, the camera is compatible with most studio and location lighting systems.

For long periods in the field, an external battery pack is available to power the camera. The pack uses either two rechargeable lithium-ion batteries or six AA batteries and is mounted on the bottom of the camera with the tripod socket.