

Photographic Developments

In chemical-based photography, light passes through the camera lens to expose the film. The variation in light intensity, from the photographed scene, creates the continuous-tone (analog) latent image on the film. Once developed, these photographs can be placed into your photo album, and with the use of special equipment converted into digital images for use on a computer.

In digital photography, images aren't recorded on light-sensitive film. Digital cameras have hundreds of thousands of microscopic resistors that convert each point of light from the subject into individual pixels of a digital image.

The Advanced Photo System (APS) is a hybrid digital/chemical photographic technology recently developed by five major manufacturers of photographic film and camera equipment—Kodak, Fuji, Canon, Nikon, and Minolta.

The APS film cartridge that is central

to the system is interchangeable among all APS cameras. This film stores the

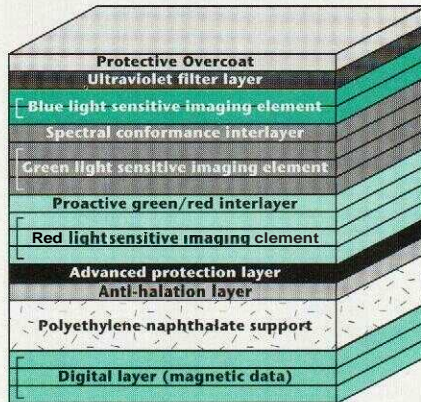


Illustration courtesy Kodak

Kodak Advantix 100 film

image as a standard latent photographic image with digital information for use during photographic processing. (See

figure.) On some camera models, the digital strip can also record captions, the number of prints you want for each individual shot, and the time and date when the picture was taken. All APS cameras have drop-in loading. Most allow you to remove a roll of film before it is completed so that you can keep different rolls of film for specific subjects.

APS cameras let you choose the final print shape when you snap the picture. Your selection and other information about photographic conditions are recorded digitally on the data strip. The "Classic" shape prints in the same 2:3 aspect ratio as 35 mm pictures, producing 3-1/2" x 5" or 4" x 6" photos. The "HDTV" choice prints in the 9:16 aspect ratio of high definition television, for prints of 3-1/2" x 6" or 4" x 7". "Panoramic" prints are designed to capture tall, narrow, and long subjects and print in sizes of 3-1/2" x 10" or 4" x 11-1/2".

Once processed, the film is returned to you in its original cartridge along with a special index print that contains postage-stamp size prints of every picture on the roll. Each of these "thumbnail" prints has crop marks to show how the original picture was made. You never see or touch the film,

Reordering is done by print number from the index print. You can also change the shape to a different format each time you order new prints. Digital recording for each picture is now limited to about 80 bytes of information. This capacity will soon be raised to 400 bytes. In time, the digital part of the system will do more than just interface with the developing equipment. Kodak and Fuji have already demonstrated new display hardware that will let you scan photos directly from the APS cartridge into a computer. With this equipment, you will be able to turn your TV or computer into a new type of slide projector with zoom, pan, fade, and even narration capabilities.

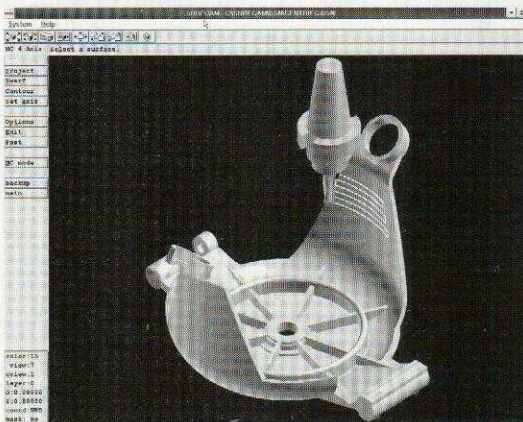
Recalling the Facts

1. How does a photographic camera record a picture on film?
2. How does a digital camera picture differ from what you just described?
3. What are the significant features of the new APS photographic system? S3

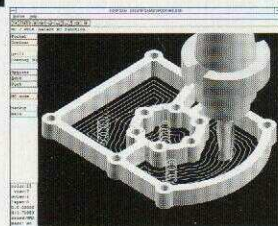
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