

Lesson 06

Digital Inputting

Digital Positive Image Processing

Digital Negative Image Processing

Digital Inputting

There are two kinds of digital inputting technology.

1. Digital Photography
2. Digital Scanning

Digital files can also be created by computer software such as digital illustrations, which are usually being created by Adobe Illustrator.

Digital Inputting

1. Digital Photography

It is be most common inputting method. All people including amateurs use digital camera to capture images for computerized retouching. The advantage of using digital camera is on-camera color separation. The image will be separated into RGB color space image.

Digital Inputting

1. Digital Photography

The digital image can be brought forward to the graphic art software such as Adobe Photoshop for further manipulation or retouching. If desired, the image can also be manipulated on-camera, if the camera operation system is available.

Digital Inputting

1. Digital Photography

There are three kinds of camera formats for both of the conventional and the digital usage. All of them were being created for different purposes, and still exist due to their characteristics and advantages.

The Three Camera Formats

1. Single Len Reflex, SLR — 135mm
2. Medium Format — 2 1/4"
3. Large Format — 4 X 5 and 8 X 10

Digital Inputting

1. Digital Photography — Single Lens Reflex, SLR

This is the most portable camera format that fits for motion capturing. It applies the smallest image capturing device (film/CCD). Moreover, the device is being mounted onto the camera back. It is not removable. If an upgrade is desired, then the whole camera set has to be changed.

Best For Shooting

Picture in Motion

Journalism

Outdoor Portrait

Fashion

Digital Inputting

1. Digital Photography — Single Lens Reflex, SLR



Digital Inputting

1. Digital Photography — Medium Format – 2¼

This camera format applies the leaf shutter technology, so its shutter speed is not being limited under flash photography. Its capturing device size is bigger than SLR. More details can be captured, which fits for image enlargement.

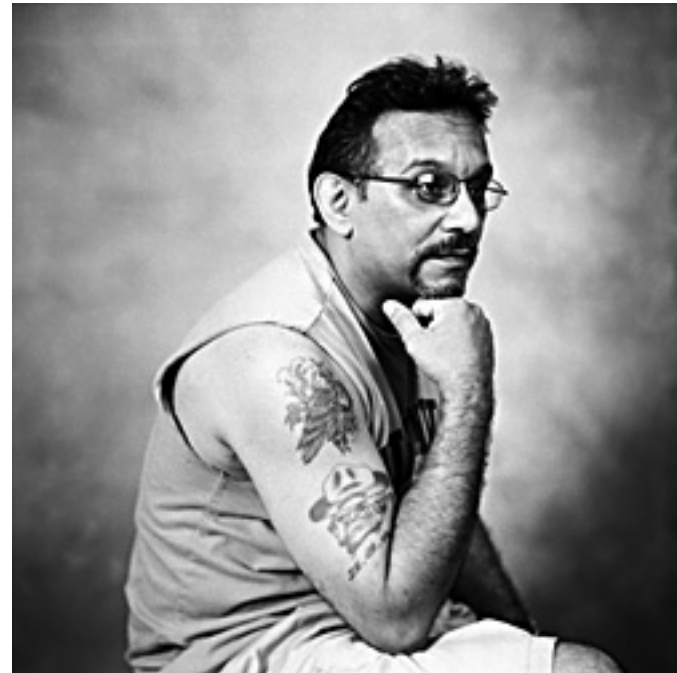
Best For Shooting

Indoor Portrait

Fashion

Digital Inputting

1. Digital Photography — Medium Format – 2¼



Digital Inputting

1. Digital Photography — Large Format – 4X5 or 8X10

This camera format applies the leaf shutter technology, so its shutter speed is not being limited under flash photography. Its capturing device size is the biggest in size among all of the rest. It is the best for enlarging images. It is totally not portable, there a tripod is required.

Best For Shooting

Still Life

Architecture

Digital Inputting

1. Digital Photography — Large Format – 4X5 or 8X10



Digital Inputting

1. Digital Photography

Large format camera such as 4X5 or 8X10 are capable to capture images that the other formats cannot. It can distort the one point perspective rule by the back panel adjustment such as **Tilting**, **Swinging**, and **Sliding**.



Digital Inputting

1. Digital Photography

Large Format Camera Adjustment

1. Tilting

It means pulling the back panel top towards or away from the user.

2. Swinging

It means turning the back panel to the left or the right.

3. Sliding

It means moving the back panel to the right or the left.

Digital Inputting

1. Digital Photography

Charge Couple Device, CCD is the light capturing device within a digital camera. It the soul of the whole camera system.

For all of the 135mm format (professional and point and shoot) digital cameras, the CCD is being built within the camera body, and it cannot be detached.

For all of the 2¼, 4 X 5, and 8 X 10 cameras, the CCD is being built as a separated device, which can be detached from the camera body. It is being called, the Digital Back.

Digital Inputting

1. Digital Photography — Charge Couple Device, CCD



135mm CCD

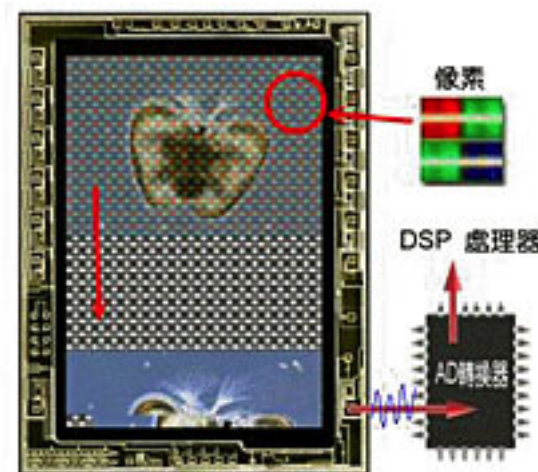


Digital Back, CCD

Digital Inputting

1. Digital Photography

Charge Couple Device, CCD is a light sensitive electronic device, which converts the light energy into electronic signal. In front of the CCD, there are three layers of the red, the green, and the blue filters which perform color separation. The separated signals, RGB digital file will be transferred to the camera IC.



Digital Inputting

2. Digital Scanning

Scanner is an older form of digital inputting technology. There are three kinds of scanner for different outputting purposes.

The Three Types Of Scanner

1. Drum Scanner
2. Hybrid Scanner
3. Desktop Scanner

Digital Inputting

2. Digital Scanning

Both of the Desktop and the Hybrid Scanners apply the Charged Couple Device, CCD as their image capturing device. The different is their light source. The Hybrid Scanner applies a blue-green light for scanning, but the Desktop Scanner applies an orange-yellow light.

The Drum Scanner is the most difficult to operate, as the aperture of the scanner and the drum size are changeable. Different combinations are required to be applied for different job purposes.

Digital Positive Image Processing

Both of the digital camera and the digital scanner input positive images. The digital image might have to be further retouched with the application of Adobe Photoshop.



Digital Negative Image Processing

Digital scanner can input negative images and remains it into negative digital file. It is recommended to bring forward the negative file into Adobe Photoshop for further retouching.

