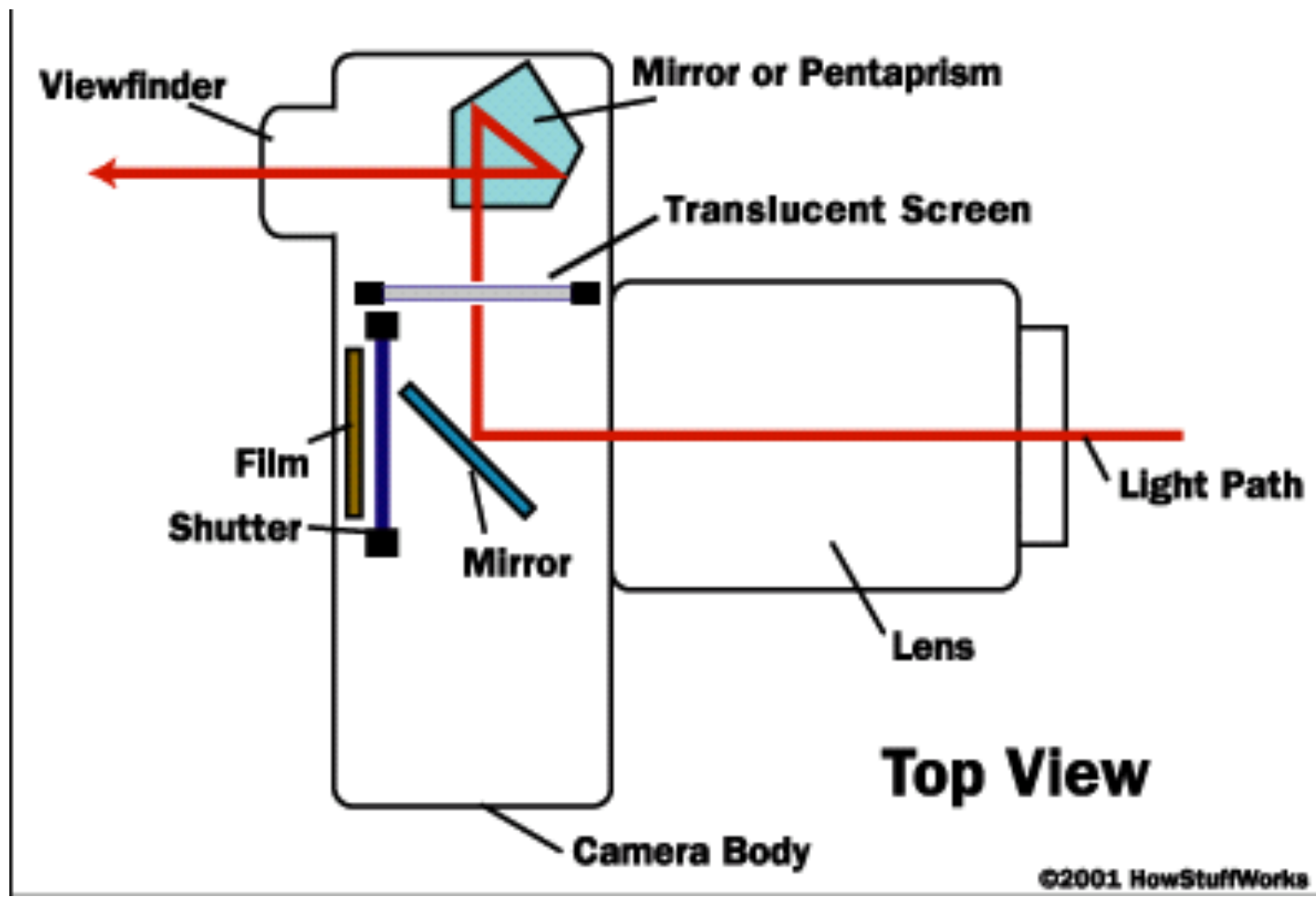


UNDERSTANDING:

Aperture, shutter speed, exposure
depth of field



The Mode Dial

The camera offers a choice of the following eleven shooting modes:



■ ■ P, S, A, and M Modes

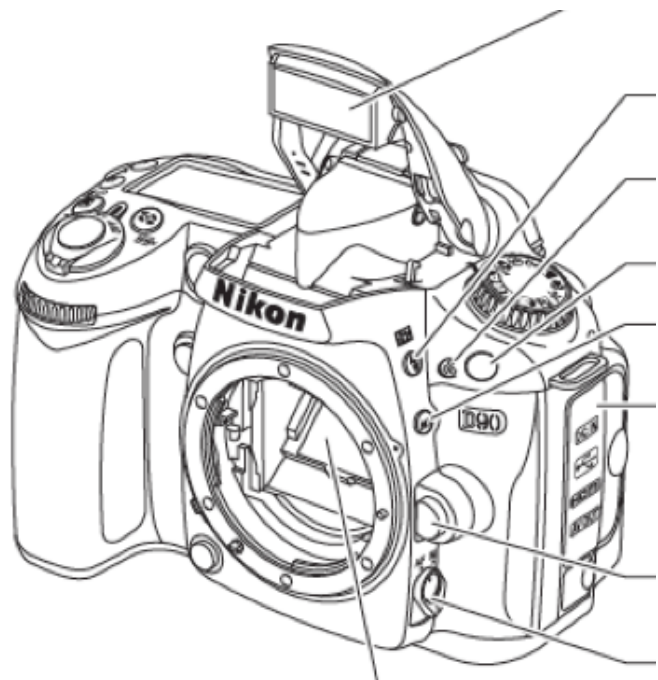
Select these modes for full control over camera settings.

P— **Programmed auto** (pg. 80): Camera chooses shutter speed and aperture, user controls other settings.

S— **Shutter-priority auto** (pg. 81): Choose fast shutter speeds to freeze action, slow shutter speeds to suggest motion by blurring moving objects.


A— **Aperture-priority auto** (pg. 82): Adjust aperture to soften background details or increase depth-of-field to bring both main subject and background into focus.


M— **Manual** (pg. 83): Match shutter speed and aperture to your creative intent.



■ ■ Auto Modes


Select these modes for simple, point-and-shoot photography.


 **Auto** (pg. 34): Camera adjusts settings automatically to produce optimal results with “point-and-shoot” simplicity. Recommended for first-time users of digital cameras.


 **Auto (flash off)** (pg. 34): As above, except that the flash will not fire even when lighting is poor.


■ ■ Scene Modes


Selecting a scene mode automatically optimizes settings to suit the selected scene, making creative photography as simple as rotating the mode dial.

 **Portrait** (pg. 41): Shoot portraits with background in soft focus.

 **Landscape** (pg. 41): Preserve details in landscape shots.

 **Close up** (pg. 42): Take vivid close-ups of flowers, insects, and other small objects.

 **Sports** (pg. 42): Freeze motion for dynamic sports shots.

 **Night portrait** (pg. 42): Shoot portraits against a dimly-lit backdrop.

APERTURE

f-stop number is the measurement size of the lens opening (or aperture)

APERTURE



f 1.4
f 2
f 2.8
f 4
f 5.6
f 8
f 11
f 16
f 22

Largest opening



Smallest opening

SHUTTER SPEED

- Shutter speed is the exposure time
- Shutter speed is the amount of time the camera's shutter is open
- Shutter speed is how long the film is exposed to light when the shutter is open

SHUTTER SPEED

The standards for shutter speeds are:

hand held

- $1/1000s$
- $1/500s$
- $1/250s$
- $1/125s$
- $1/60s$

tripod

- $1/30s$
- $1/15s$
- $1/8s$
- $1/4s$
- $1/2s$
- $1s$

SHUTTER SPEED

- Short shutter speeds freeze movement
- Long shutter speeds create motion blur

EXPOSURE

APERTURE

SHUTTER SPEED

f 1.4
f 2
f 2.8
f 4
f 5.6
f 8
f 11
f 16
f 22

Most light



1s
1/2s
1/4s
1/8s
1/60s
1/15s
1/30s
1/60s
1/2s
1/500s
1/1000s

Least light

EXPOSURE

LIGHT METER

- A light meter measures light and translates that measurement into workable f-stop and shutter speed combinations.
- Meters average the light they read

EXPOSURE SYSTEMS

- Read light meter
- Use gray card
- Expose off skin
- Read incident light
- Average the shadows and highlights
- Bracket
- Expose for the shadows and compensate

DEPTH OF FIELD: DOF

Depth of field is the distance between the closest and furthest objects in the viewfinder/image that appear acceptably sharp.

DEPTH OF FIELD: DOF

DOF is determined by three controllable factors:

- Aperture
- Focal distance
- Focal length of lens