

FILM SPEED (ISO/ASA NUMBER)												
											50D	5DMKII
<div style="display: flex; justify-content: space-between;"> Fine Grain Rough Grain </div> <div style="display: flex; justify-content: space-between;"> Low Noise High Noise </div>												
ISO 12	ISO 25	ISO 50	ISO 100	ISO 200	ISO 400	ISO 800	ISO 1600	ISO 3200	ISO 6400	ISO 12800	ISO 25600	
1	0	-1	-2	-3	-4	-5	-6					
2	1	0	-1	-2	-3	-4	-5	-6				
3	2	1	0	-1	-2	-3	-4	-5	-6			
4	3	2	1	0	-1	-2	-3	-4	-5	-6		
5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	
6	5	4	3	2	1	0	-1	-2	-3	-4	-5	
7	6	5	4	3	2	1	0	-1	-2	-3	-4	
8	7	6	5	4	3	2	1	0	-1	-2	-3	
9	8	7	6	5	4	3	2	1	0	-1	-2	
10	9	8	7	6	5	4	3	2	1	0	-1	
11	10	9	8	7	6	5	4	3	2	1	0	
12	11	10	9	8	7	6	5	4	3	2	1	
13	12	11	10	9	8	7	6	5	4	3	2	
14	13	12	11	10	9	8	7	6	5	4	3	
15	14	13	12	11	10	9	8	7	6	5	4	
16	15	14	13	12	11	10	9	8	7	6	5	
		16	15	14	13	12	11	10	9	8	7	
			16	15	14	13	12	11	10	9	8	
				16	15	14	13	12	11	10	9	
					16	15	14	13	12	11	10	
						16	15	14	13	12	11	
							16	15	14	13	12	
								16	15	14	13	
									16	15	14	
										16	15	

APERTURE OF LENS (f/STOP)									
O	O	O	O	O	O	O	O	O	O
Shallow Depth of Field					Deep Depth of Field				
Stopping down (making a smaller aperture) ----->					<-----Opening up (making a larger aperture)				
f/1.4	f/2.0	f/2.8	f/4	f/5.6	f/8	f/11	f/16	f/22	f/32
8 sec	15 sec	30 sec	1 min	2 min	4 min	8 min	16 min	32 min	64 min
4 sec	8 sec	15 sec	30 sec	1 min	2 min	4 min	8 min	16 min	32 min
2 sec	4 sec	8 sec	15 sec	30 sec	1 min	2 min	4 min	8 min	16 min
1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	1 min	2 min	4 min	8 min
1/2 sec	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	1 min	2 min	4 min
1/4 sec	1/2 sec	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	1 min	2 min
1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	1 min
1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec
1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec	4 sec	8 sec	15 sec
1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec	4 sec	8 sec
1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec	4 sec
1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec	2 sec
1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec	1 sec
1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec	1/2 sec
1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec	1/4 sec
1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec	1/8 sec
1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec	1/15 sec
	1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec	1/30 sec
		1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec	1/60 sec
			1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec	1/125 sec
				1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec	1/250 sec
					1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec	1/500 sec
						1/8000 sec	1/4000 sec	1/2000 sec	1/1000 sec
							1/8000 sec	1/4000 sec	1/2000 sec
								1/8000 sec	1/4000 sec
									1/8000 sec

Ideas grabbed from several locations, document compiled and edited by Jim Taylor

- = Handheld at 1/60th with a 50mm lens. It would be 1/250th with a 200mm lens
- = Flash sync speed, use 1/250 or slower
- = The sunny day f16 rule = (ISO 100 @ 1/125 @ f16)
- = A Neutral Density Filter, ND.9 = 3 stops (if camera is on ISO 100, it would be ISO 12)

To use ambient light plus flash you have to keep the shutter speed between 1/60 and 1/250th of a sec (using a 50mm lens) OR use a tripod
 The flash will stop the action like you were using a 1/32000 shutter speed, however any ambient lit items will blur with slow shutter

***Don't forget to look at the EV tab below for the descriptions of EV's**

SHUTTER

EV	TYPE OF LIGHTING SITUATION
-6	Night, away from city lights, subject under starlight only.
-5	Night, away from city lights, subject under crescent moon.
-4	Night, away from city lights, subject under half moon. Meteors (during showers, with time exposure).
-3	Night, away from city lights, subject under full moon.
-2	Night, away from city lights, snowscape under full moon.
-1	Subjects lit by dim ambient artificial light.
0	Subjects lit by dim ambient artificial light. (Zero EV is defined as f/1.0 at one second)
1	Distant view of lighted skyline.
2	Lightning (with time exposure). Total eclipse of moon.
3	Fireworks (with time exposure).
4	Candle lit close-ups. Christmas lights, floodlit buildings, fountains, and monuments. Subjects under bright street lamps.
5	Night home interiors, average light. School or church auditoriums. Subjects lit by campfires or bonfires.
6	Brightly lit home interiors at night. Fairs, amusement parks.
7	Bottom of rainforest canopy. Brightly lighted nighttime streets. Indoor sports. Stage shows, circuses.
8	Las Vegas or Times Square at night. Store windows. Campfires, bonfires, burning buildings. Ice shows, football, baseball etc. at night. Interiors with bright florescent lights.
9	Landscapes, city skylines 10 minutes after sunset. Neon lights, spotlighted subjects.
10	Landscapes and skylines immediately after sunset. Crescent moon (long lens).
11	Sunsets. Subjects in open shade.
12	Half moon (long lens). Subject in heavy overcast.
13	Gibbous moon (long lens). Subjects in cloudy-bright light (no shadows).
14	Full moon (long lens). Subjects in weak, hazy sun.
15	Subjects in bright or hazy sun (Sunny f/16 rule).
16	Subjects in bright daylight on sand or snow.
17	Rarely encountered in nature. Some man made lighting.
18	Rarely encountered in nature. Some man made lighting.
19	Rarely encountered in nature. Some man made lighting.
20	Rarely encountered in nature. Some man made lighting.
21	Rarely encountered in nature. Some man made lighting.
22	Extremely bright. Rarely encountered in nature.
23	Extremely bright. Rarely encountered in nature.