

KODAK TRI-X PAN FILM

IN ROLLS AND 135 MAGAZINES

FILM SPEED
ASA 400

This is a high-speed, fine-grain film with excellent sharpness. Its high speed makes it especially useful for photographing dimly lighted subjects and fast action, for extending the distance range for flash pictures, and for photographing subjects requiring good depth of field and high shutter speeds. Use this film in cameras with adjustable shutter speeds and lens openings.

HANDLING

Always load and unload your camera in subdued light. After you make the last exposure and before you open the camera, rewind 135 film into its magazine.



DAYLIGHT PICTURES

Set your exposure meter or automatic camera at **ASA 400**. If your negatives are consistently too light, increase exposure by using a lower film-speed number; if too dark, reduce exposure by using a higher number.

If you don't have an exposure meter or automatic camera, use the exposures given in the following table.

DAYLIGHT EXPOSURE TABLE FOR KODAK TRI-X PAN FILM				
For average subjects, use <i>f</i> -number below appropriate lighting condition.				
Shutter Speed 1/500 Second	Shutter Speed 1/250 Second			
Bright or Hazy Sun on Light Sand or Snow	Bright or Hazy Sun (Distinct Shadows)	Cloudy Bright (No Shadows)	Heavy Overcast	Open Shade†
<i>f</i> /22	<i>f</i> /22*	<i>f</i> /11	<i>f</i> /8	<i>f</i> /8
* <i>f</i> /11 at 1/250 second for backlit close-up subjects. †Subject shaded from the sun but lighted by a large area of sky.				

For handy reference, slip this table into your camera case.



FLASH PICTURES

BLUE FLASHBULBS: Determine the *f*-number for average subjects by dividing the guide number for your reflector and flashbulb by the distance in feet from the flash to your subject. Use these numbers as *guides*—if your negatives are consistently too light, increase exposure by using a lower guide number; if too dark, reduce exposure by using a higher guide number.

GUIDE NUMBERS FOR BLUE FLASHBULBS						
Type of Reflector	Flashbulb	Shutter Speed				
		X Sync	M Synchronization			
		1/30	1/30	1/60	1/125	1/250
	Flashcube	200	140	130	110	90
	AG-1B	140	100	100	90	70
	AG-1B	200	140	140	120	100
	M2B	190	NR	NR	NR	NR
	AG-1B	290	200	200	170	140
	M2B	270	NR	NR	NR	NR
	M3B, 5B, 25B	280	270	250	220	170
	6B†, 26B†	NR	260	200	130	95
	M3B, 5B, 25B	400	400	350	290	240
	6B†, 26B†	NR	380	290	190	135

*Polished bowl. †Bulbs for focal-plane shutter. NR—Not Recommended.

Caution: Since bulbs may shatter, use a flashguard over your reflector. Flashcubes have a built-in flashguard. Do not flash bulbs in an explosive atmosphere.



ELECTRONIC FLASH

This table is for use with electronic flash units rated in beam candle-power seconds (BCPS). To determine the *f*-number, divide the guide number for your flash unit by the distance in feet from the flash to your subject. If exposure is unsatisfactory, change the guide number as described under "Blue Flashbulbs."

GUIDE NUMBERS FOR ELECTRONIC FLASH										
Output of Unit BCPS	350	500	700	1000	1400	2000	2800	4000	5600	8000
Guide Number	85	100	120	140	170	200	240	280	340	400

EXISTING-LIGHT PICTURES

Use an exposure meter or automatic camera if you have one. For cameras without exposure meters, try the settings in the table. These exposures are *guides*; for more assurance, bracket your exposures one or two stops on each side of the suggested exposure.

Picture Subject and Lighting	Shutter Speed	Lens Opening
Home Interiors at Night— Areas with Bright Light Areas with Average Light	1/30	f/2.8 ↓ 4
	1/30	f/2
Interiors with Bright Fluorescent Light	1/60	f/4
Indoor, Outdoor Christmas Lighting at Night	1/30	f/2
Brightly Lighted Downtown Street Scenes at Night	1/60	f/2.8 ↓ 4
Neon Signs, Other Lighted Signs at Night	1/125	f/4 ↓ 5.6
Store Windows at Night	1/60	f/4 ↓ 5.6
Floodlighted Buildings, Fountains, Monuments	1/15*	f/2
Fairs, Amusement Parks at Night	1/30	f/2.8 ↓ 4
Night Football, Baseball, Racetracks	1/125	f/2.8 ↓ 4
Basketball, Hockey, Bowling	1/125	f/2 ↓ 2.8
Stage Shows—Average Bright	1/60	f/2.8 ↓ 4
	1/125	f/4 ↓ 5.6
Circuses—Floodlighted Acts	1/60	f/2.8 ↓ 4
Ice Shows—Floodlighted Acts	1/125	f/2.8 ↓ 4
Ice Shows, Circuses—Spotlighted Acts (carbon arc)	1/125	f/4 ↓ 5.6
School—Stage and Auditorium	1/30	f/2 ↓ 2.8

*Use a camera support for exposure times longer than 1/25–1/30 second.

FILTERS

When you use a filter, increase the normal exposure by the factor indicated in the table. However, if your camera has an exposure meter that measures the light coming through a filter placed over the camera lens, see your camera manual for instructions on exposure with filters.

Filter	No. 6 (K1)	No. 8 (K2)	No. 11 (X1)	No. 15 (G)	No. 25 (A)	Polarizing Screen
Daylight	1.5	2*	4	2.5	8	2.5
Tungsten	1.5	1.5	3*	1.5	5	2.5

*For correct gray-tone rendering of colored objects.

PROCESSING

Take the exposed film to your photo retailer for developing and printing. If you want to process the film yourself, follow these instructions:

Handle in Total Darkness. However, when development is half completed, you can use a safelight at 4 feet for a *few* seconds. Equip the safelight with a KODAK Safelight Filter No. 3 (dark green) and a 15-watt bulb.

To open the 135 magazine, hold the magazine with the long end of the spool down and use a lid lifter or hook-type bottle opener to remove the upper end cap from the magazine.

Develop for the following times. The most widely used times and temperature are in heavy type.

KODAK Packaged Developers	DEVELOPING TIMES IN MINUTES									
	SMALL TANK—Agitation at 30-Second Intervals					LARGE TANK—Agitation at 1-Minute Intervals				
	65 F	68 F	70 F	72 F	75 F	65 F	68 F	70 F	72 F	75 F
HC-110 (Dilution A)	4¼	3¾	3½	3	2¾	4¾	4¼	3¾	3½	3
HC-110 (Dilution B)	6	5	4½	4	3½	7	6	5	4½	3¾
POLYDOL	9	8	7½	7	6	10	9	8½	8	7
D-76	10	8	7	6	5	11	9	8	7	6
D-76 (1:1)	13	11	10	9	8	15	13	11	10	9
MICRODOL-X	13	11	10	9	8	15	13	11	10	9
MICRODOL-X (1:3)*	—	—	17	16	15	—	—	19	18	17
DK-50 (1:1)	5½	5	—	4¾	4½	6½	6	5¾	5½	5

*For greatest sharpness (see developer instructions).

Rinse in KODAK Indicator Stop Bath or KODAK Stop Bath SB-5, at 65 to 75 F, for 30 seconds with agitation. You can use a running-water rinse if an acid stop bath is not available.

Fix in KODAK Fixer or KODAK Fixing Bath F-5 for 5 to 10 minutes, or KODAK Rapid Fixer or KODAFIX Solution for 2 to 4 minutes, at 65 to 75 F with agitation.

Wash the film for 20 to 30 minutes in running water at 65 to 75 F. To minimize drying marks, treat in KODAK PHOTO-FLO Solution after washing, or wipe surfaces carefully with a KODAK Photo Chamois or a soft viscose sponge.

You can use KODAK Hypo Clearing Agent after fixing to reduce washing time and conserve water. First, remove excess hypo by rinsing the film in water for 30 seconds. Then, bathe the film in the KODAK Hypo Clearing Agent solution for 1 or 2 minutes with moderate agitation, and wash it for 5 minutes, using a water flow sufficient to give at least one complete change of water in 5 minutes.

Note: For best results, keep temperatures of rinse, fix, and wash close to the developer temperature.

Dry in a dust-free place.

MORE INFORMATION. If you have questions about this film, write to Dept. 841 at the address below. For tips on taking good pictures, see the many Kodak books on sale at your photo retailer.

NOTICE: This film will be replaced if defective in manufacture, labeling, or packaging, even though caused by our negligence or other fault. Except for such replacement, the sale or any subsequent handling of this film is without other warranty or liability.