

# KODAK PANATOMIC-X FILM

IN ROLLS AND 135 MAGAZINES

FILM SPEED  
ASA 32

Use this black-and-white film when you want prints with a very high degree of enlargement. It has extremely fine grain and extremely high sharpness.

## HANDLING

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



## DAYLIGHT PICTURES

Set your exposure meter or automatic camera at ASA 32. 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 PANATOMIC-X FILM

For average subjects, use *f*-number below appropriate lighting condition.

Shutter Speed 1/100 or 1/125 Second		Shutter Speed 1/50 or 1/60 Second	
Bright or Hazy Sun (Distinct Shadows)	Cloudy Bright (No Shadows)	Heavy Overcast	Open Shade†
<i>f</i> /8*	<i>f</i> /4	<i>f</i> /4	<i>f</i> /4

\**f*/11 at 1/100 or 1/125 second for brilliant scenes, such as those containing much sand or snow—OR  
*f*/4 at 1/100 or 1/125 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				
		For X Sync	M Synchronization			
			1/30	1/30	1/60	1/125
	Flashcube	55	40	38	32	26
	AG-1B	40	28	28	24	20
	AG-1B	55	40	40	34	28
	M2B	50	NR	NR	NR	NR
	AG-1B	80	60	60	50	40
	M2B	75	NR	NR	NR	NR
	M3B, 5B, 25B	80	80	70	60	45
	6B†, 26B†	NR	75	55	38	28
	M3B, 5B, 25B	110	110	100	80	65
	6B†, 26B†	NR	105	80	55	38

\*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.



For successful flash operation, clean battery ends and electrical contacts in equipment often with a pencil eraser or a rough cloth. Use live batteries. Have them tested regularly and replace weak ones.



## 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	24	28	32	40	50	55	65	80	95	110



## FILTERS

When you use a filter, increase the normal exposure by the factor indicated in the table.

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	4*	1.5	5	2.5

\*For correct gray-tone rendering of colored objects.



## PROCESSING

Take the exposed film to your photo dealer 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 lift the upper end cap off the magazine.

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

### DEVELOPING TIMES IN MINUTES

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)	3	2¾	2½	2¼	2	3½	3	2¾	2½	2¼
HC-110 (Dilution B)	5	4½	4	3¾	3½	6	5	4½	4¼	3¾
POLYDOL	8	7	6	5	4½	9	8	7	6	5
MICRODOL-X	11	9	8	7	6	12	10	9	8	7
MICRODOL-X (1:3)*	—	—	13	12	11	—	—	15	14	13
D-76	8	7	6½	6	5	9	8	7½	7	6
D-76 (1:1)	11	9	8	7	6	12	10	9	8	7

\*For greatest sharpness (see developer instructions).

**Note:** Do not use developers containing silver halide solvents.

**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 rinse bath is not available.

**Fix** in KODAK Fixer or KODAK Fixing Bath F-5 for 2 to 4 minutes, or KODAK Rapid Fixer or KODAFIX Solution for 1 to 2 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

For additional information, ask your photo dealer to show you the many KODAK Photo Information Books and guides dealing with all phases of picture-taking.

**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.

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