REVISED 4-79

KODAK TRI-X PAN FILM

35 mm and 70 mm Films in Rolls

• Fast, panchromatic film • Ideal for all types of black-and-white photography where sharp images, high speed, and fine grain are required.

Safelight: Handle and process the film in total darkness. After development is half completed, a KODAK Safelight Filter No. 3 (dark green) in a suitable safelight lamp with a 15-watt bulb can be used for a few seconds only. Keep the safelight at least 4 feet from the film.

EXPOSURE

Speed: ASA—400

This number is for use with meters and cameras marked for ASA speeds, in either daylight or artificial light. It will normally lead to approximately the minimum exposure required to produce negatives of highest quality.

If, with normal development, your negatives are consistently too thin, increase exposure by using a lower number; if too dense, reduce exposure by using a higher number.

Outdoor Exposure Guide for Average Subjects:

Set Shutter at 1/500 Second				
Bright or Hazy Sun on Light Sand or Snow	Bright or Hazy Sun (Distinct Shadows)	Weak, Hazy Sun (Soft Shadows)	Cloudy Bright (No Shadows)	Open Shade† or Heavy Overcast
f/16	*f*/11*	*f*/8	*f*/5.6	*f*/4.0

f/5.6 for backlighted close-up subjects.
†Subject shaded from sun but lighted by a large area of sky.

Filter Factors: Multiply normal exposure by filter factor given below:

KODAK WRATTEN Filters	No. 6	No. 8	No. 11	No. 15	No. 25	Polarizing Screen
Daylight	1.5	2*	4	2.5	8	2.5
Tungsten	1.5	1.5	3*	1.5	5	2.5

*For gray-tone rendering of colors approximating their visual brightness.

Electronic Flash Guide Numbers: To determine the *f*-number for average subjects, divide the proper guide number by the distance (in feet) from flash to subject.

Output of Unit (BCPS or ECPS)	350	500	700	1000	1400	2000	2800	4000	5600	8000
Guide Number for Trial	85	100	120	140	170	200	240	280	340	400

Reciprocity Effect Adjustments:

If Indicated Exposure Time Is (seconds)	Use Either			And, in Either Case, Use This Development Adjustment
	This Lens Aperture Adjustment	Or	This Adjusted Exposure Time (seconds)	
1/1000	none		no adjustment	10% more
1/100	none		no adjustment	none
1/10	none		no adjustment	none
1	1 stop more		2	10% less
10	2 stops more		50	20% less
100	3 stops more		1200	30% less

DEVELOPMENT

Recommended Development for Long Rolls (Up to 100-Ft Lengths) on Spiral Reels:

KODAK Packaged Developers	Developing Time (in Minutes)	
	68°F 20°C	75°F 24°C
HC-110 (Dilution B)	9	6
POLYDOL	8½	6

In loading the reel, secure the end of the film with a rubber band or waterproof tape to prevent the film from unwinding during processing. Then use the following agitation procedure.

1. Lower the reel into the developer, giving it a vigorous turning motion sufficient to cause the reel to rotate one-half to one revolution in the developer. Raise and lower the reel approximately one-half inch (keeping the reel in the solution) for the first 15 seconds of the development, tapping it against the bottom of the tank to release air bubbles from the film.

MINOR REVISION 1-80

KODAK PLUS-X PAN PROFESSIONAL FILM

PXP220 and PXP120

• Medium-speed panchromatic film with extremely fine grain and high resolving power • Medium contrast, wide exposure latitude • Very high sharpness even at high degrees of enlargement.

PXP220

Important: PXP220 film is for use in professional roll-holders and cameras designed to accommodate the longer length of film. Some cameras that take 120 film can be modified to accept the PXP220 film. The 220-size roll of film is about twice the length of the 120-size roll, and has no backing paper on the film itself. The film has a paper leader and trailer. Be sure that the processing equipment used can accommodate the extra length of 220-size film.

Caution: Since this film does not have the usual backing paper wound the length of the film, special care in loading and unloading the camera is necessary to avoid light fog on this sensitive emulsion. Load and unload the camera in subdued light.

PXP120

PXP120 film is a normal-length roll film, and it can be used in cameras accepting 120-size film.

To use this film, load and unload your camera in subdued light, never in direct sunlight or exceptionally strong artificial light.

Exposure

Speed:

ISO 125
ASA 125

These speed numbers are for use with meters and cameras marked for ISO and ASA Speeds or Exposure Indexes, in either daylight or artificial light. They will normally lead to approximately the minimum exposure required to produce negatives of highest quality.

Note: An ISO (International Standards Organization) film-speed number is given in anticipation of future worldwide use.

Outdoor Exposure Guide for Average Subjects: For shutter speed of 1/250.

Bright or Hazy Sun on Light Sand or Snow	Bright or Hazy Sun (Distinct Shadows)	Weak, Hazy Sun (Soft Shadows)	Cloudy Bright (No Shadows)	Open Shade† or Heavy Overcast
f/16	*f*/11*	*f*/8	*f*/5.6	*f*/4.0

*For backlighted, close-up subjects, increase exposure by 2 stops.
†Subjects shaded from the sun but lighted by a large area of clear, unobstructed sky.

Filter Factors: Multiply normal exposure by filter factor given below.

KODAK WRATTEN Filter	No. 6	No. 8	No. 11	No. 15	No. 25	No. 47	No. 58	Polarizing Screen
Daylight	1.5	2*	4	2.5	6	6	8	2.5
Tungsten	1.2	1.5	4*	1.5	4	12	8	2.5

*For a gray-tone rendering of colors approximating their visual brightness.

Flash Exposures: To determine the *f*-number for average subjects, divide the appropriate guide number by the distance (in feet) from flash to subject.

Guide Numbers for Blue Flashbulbs: Select the guide number on the flashbulb package for the film speed listed above, and for the type of reflector, shutter, and synchronization on the camera you are using.

Caution: Since bulbs may shatter when flashed, use a flashguard over the reflector. *Do not flash bulbs in an explosive atmosphere.*

Electronic Flash Guide Numbers:

Output of Unit (BCPS or ECPS)	350	500	700	1000	1400	2000	2800	4000	5600	8000
Guide Number for Trial	45	55	65	80	95	110	130	160	190	220