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The large manuals are split only for easy download size.

Nikkormat

FT3

INSTRUCTION MANUAL

NOMENCLATURE

Coupling Lever Release

Meter Coupling Lever

Couples the exposure meter to the lens' auto diaphragm.

Neck Strap Eyelet

Shutter-Speed Index

Align with the desired shutter speed.

Self-Timer

Trips the shutter in 8 seconds delay.

ASA Film-Speed Index

Adjusts the meter for the speed of the film used.

ASA Film-Speed Scale

Range: 12-1600 ASA.

Tripod Socket

Rewind Button

Press to rewind the film.

Lens Mounting Index

Mirror Lock

Slide downward to lock the mirror up out of the optical path.

Lens Release Button

Unlocks the lens for removing or changing lenses.

Shutter-Speed Lever

ASA Lock

Camera Back Latch

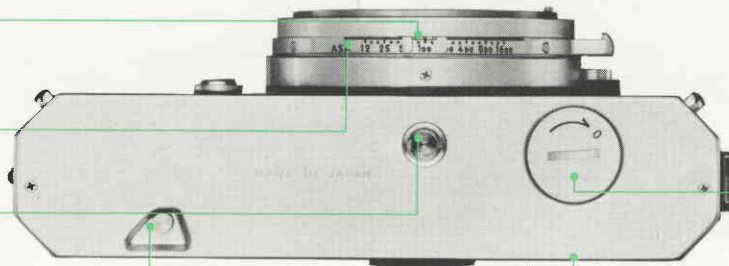
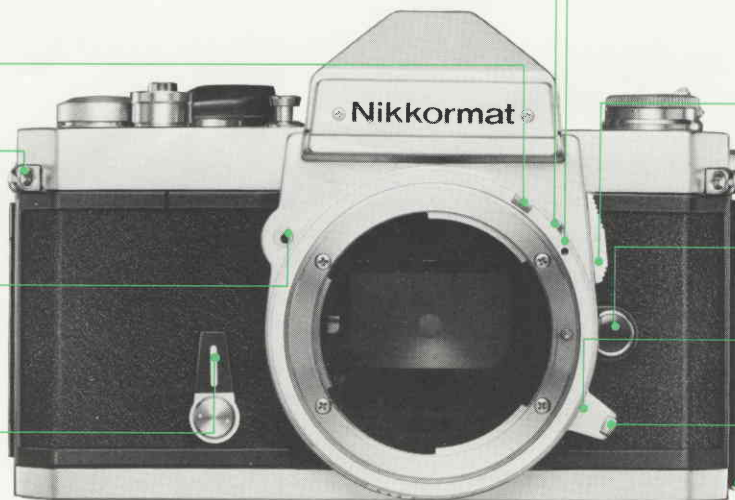
Press to open the camera back.

Battery Chamber

Houses the silver-oxide battery that powers the meter.

Camera Back

Hinged to swing open from the side.



Aperture/Distance Scale Index

Infrared Mark

Lines up with the prefocused distance to compensate for shift in focus.

Meter Coupling Shoe

Aperture Ring

Sets the lens diaphragm to the desired *f*/number.

Depth-of-Field Preview Button

Press to preview how much background or foreground is in or out of focus.

Flash Terminal

Accepts a flash sync cord.

Rewind Crank

Fold out to rewind the film.

Meter Window

Accessory Shoe

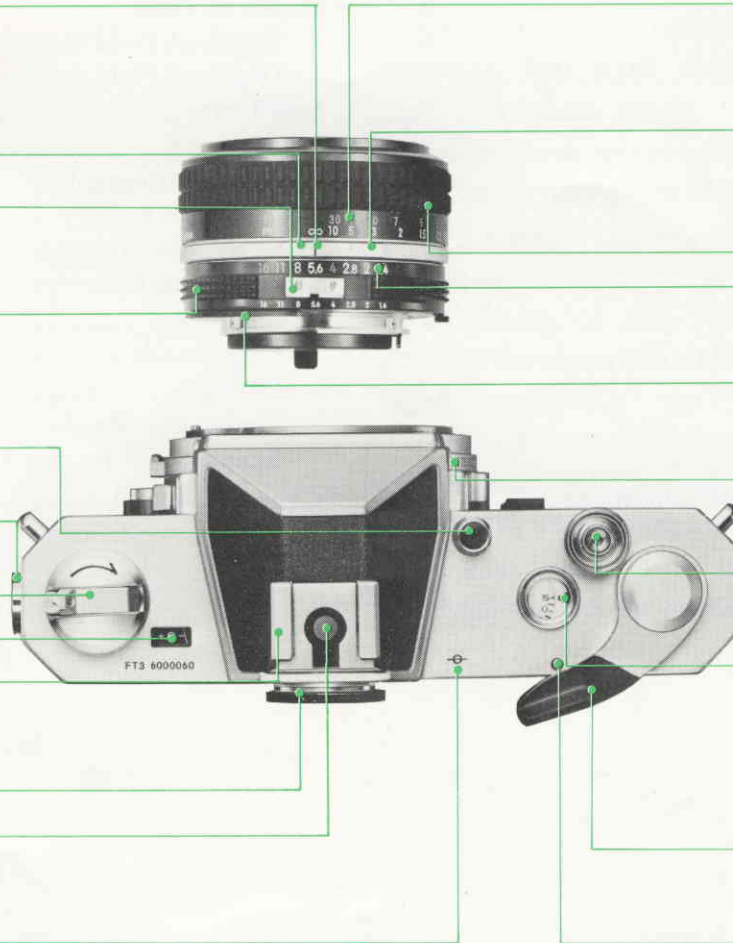
Finder Eyepiece

Permits comfortable viewing, composing and focusing.

Hot-Shoe Contact

Film-Plane Indicator

Shows the exact position of the film plane.



Distance Scale

Depth-of-Field Scale

Color-coded markings give depth-of-field markings at different apertures.

Focusing Ring

Easy-to-grip, knurled surface for quick, accurate focusing.

Aperture Scale

Meter Coupling Ridge

Connects to the meter coupling lever.

Shutter-Speed Scale

Speeds from 1/1000 to 1 second plus B.

Shutter Release Button

(With screw thread for cable release).

Frame Counter

Indicates the number of frames exposed.

Film-Advance Lever

Advances the film, cocks the shutter and operates the frame counter. Also switches the built-in exposure meter on or off.

Meter ON Index

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The Nikkormat FT3 offers the high quality performance and durability common to Nikon cameras, but with the basic simplicity of design that has made the Nikkormat camera popular with amateur and professional alike. Systematically-positioned controls for picture-taking ease, a convenient flash unit mount for simplified flash photography and the extensive possibilities of the Nikon System of Photography further enhance the capabilities of the Nikkormat FT3.

To ensure you get the best results from your Nikkormat FT3, read this instruction book carefully and practice using the controls before you load film into the camera. Follow the suggestions on camera care on page 30 and you will receive many years of reliable service.

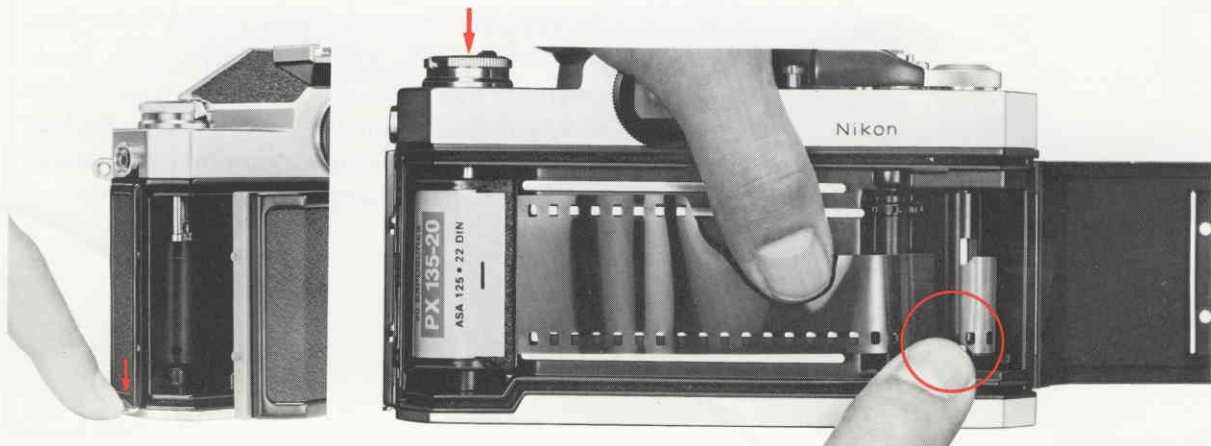
LOADING THE CAMERA

Press down the camera back latch on the side of the camera and the hinged back will spring open. Pull up on the rewind knob and drop a film cartridge into the film chamber with the film leader pointing towards the take-up spool. Now, push down the rewind knob to hold the cartridge in place and insert the end of the film leader into any one of the three slots in the take-up spool. Rotate the take-up spool as shown in the illustration so that the film passes under the spool with its emulsion side (dull side) facing out. Make sure

that the perforations along the edges of the film mesh with the sprockets.

Close the camera by pressing on the back until it snaps into place. Fold out the rewind crank and turn it gently in the direction of the arrow until you can feel a slight tension. This will take up any slack in the film cartridge. Be careful not to exert too much pressure on the rewind crank.

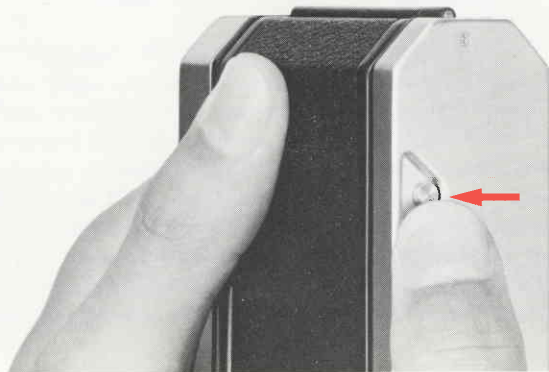
Loading exposes the first few inches of the film. To dispose of this exposed film, wind the film advance



lever and make two blank exposures. Watch the rewind knob to see if it rotates in the direction opposite the arrow while the film is being advanced. This will indicate that the film has been loaded correctly and is being advanced.

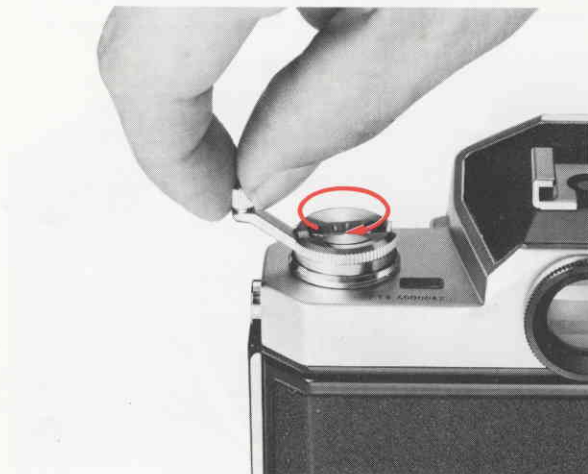
The frame counter on top of the camera should now rest at "0". Advance the film one more frame and you are ready to take the first picture.

Caution: Do not load the camera in bright sunlight. If no other shade is available, shade the camera from the sun with your body while loading.



To unload, press the rewind button on the camera baseplate, unfold the rewind crank and turn it with a constant, gentle pressure in the direction of the arrow. Avoid uneven or excessively fast rewinding. When no more tension can be felt and the crank turns loosely, the film has left the sprockets and the camera may be opened. Pull the rewind knob up slightly and the film cartridge will drop out.

The rewind button will pop out again as soon as the film advance lever is stroked.



LOADING THE CAMERA — continued

Film-Plane Indicator

The (⊖) mark on top of the camera body shows the exact position of the film plane. This is important to know when measuring the film-to-subject distance, especially in close-ups and macrophotography.



Film-Advance Lever

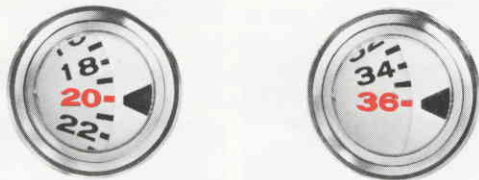
The film-advance lever simultaneously advances the film, cocks the shutter and operates the frame counter. It also serves as an on-off switch for the exposure meter.

Stroke the film-advance lever with the right thumb in a single stroke. A built-in locking device prevents the shutter from being released unless it is fully cocked and the film has been advanced a full frame. The film-advance lever springs back to its original position, with ample clearance for the thumb, after each stroke. However, the meter will remain in the “on” position until the lever is pressed flush against the camera body.

Caution: Be careful not to push the rewind button (on the camera's baseplate) during film advance operation. Should this occur, temporary stoppage of film transport and double exposure of the negative may result.

Frame Counter

The frame counter located on top of the camera works automatically to show how many frames have been exposed. The numbers 20 and 36 are colored red to correspond to the number of frames in a standard 35mm cartridge. The frame counter stops just past the 36-frame mark and resets itself automatically to "S", two frames before "0", when the camera back is opened for reloading.



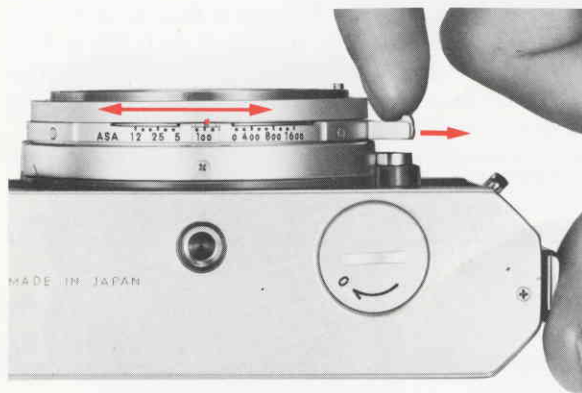
Film-Speed (ASA) Setting

Some films are more sensitive to light than others. A film's sensitivity is commonly known as its "speed," expressed in ASA numbers.

In order to work with films of different speeds, the Nikkormat FT3's light-meter circuit must be adjusted for the ASA number of the film used. This is done by means of a slotted index pointer located on the bottom of the shutter-speed ring. The ASA film-speed scale has numbered settings for speeds from ASA 12-

1600 with dots between each pair of numbers for intermediate settings such as ASA 64, 80, etc. Pull up the ASA lock on top of the shutter-speed lever and, while holding the lock up, slide the slotted ASA index pointer until it lines up with the ASA number of the film in use. After releasing the ASA lock, check that the ASA index pointer is securely locked into position.

Film-Speed (ASA) Scale

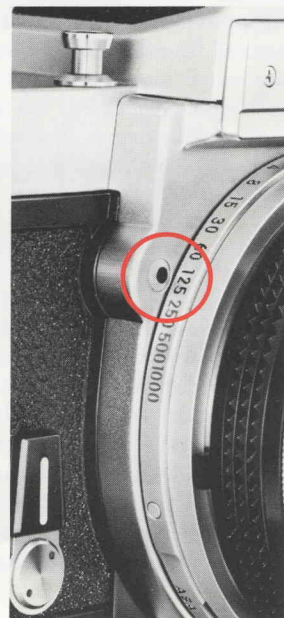
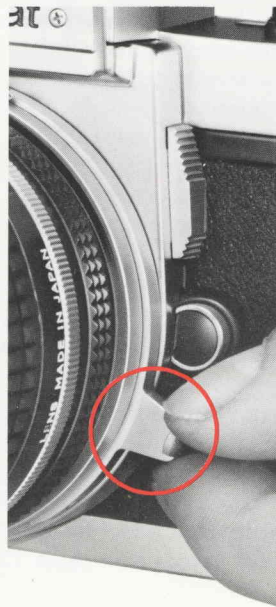


EXPOSURE CONTROLS

The amount of exposure the film receives is determined by a combination of shutter speed and aperture. The larger the lens aperture, the more exposure. Likewise, the slower the shutter speed the greater the exposure. Aperture is expressed in f/numbers with larger numbers representing smaller apertures and vice versa. For example, f/8 gives twice as much exposure as f/11. Shutter speed is expressed in seconds or fractions of a second. The numbers on the Nikkormat shutter-speed scale are reciprocals of the actual speeds (250 represents 1/250 second, etc.).

Camera aperture and shutter-speed controls are calculated so that an increase of one f/number compensates for a one-step decrease in shutter speed. For example, 1/250 at f/8 is equivalent to 1/125 at f/11. The table below shows how aperture and shutter-speed are interrelated. All the combinations give the same exposure.

Aperture	f/1.4	f/2	f/2.8	f/4	f/5.6
Shutter speed (seconds)	1/500	1/250	1/125	1/60	1/30



Setting the Shutter Speed

Shutter speeds are controlled by a ring around the base of the bayonet mount rather than the usual dial on top of the camera body. To set the shutter speed, grasp the lever and turn the ring until the desired speed appears next to the indicator dot on the front of the camera body. For added convenience when measuring exposure, the shutter speed in use as well as the next highest and lowest speeds appear in the bottom of the viewfinder, so the shutter speed can be adjusted while observing the exposure meter needle. Click-stopped settings for shutter speeds from 1/1000 to 1 second plus "B" are engraved on the shutter-speed ring. At the "B" (bulb) setting, the shutter remains open as long as the shutter release button is depressed.

Note: Intermediate shutter-speed settings are not recommended except in the 1/250 to 1/1000 second range.

Setting the Aperture

To preset lens aperture, turn the aperture ring on the lens barrel until the desired f/number appears opposite the black indicator line on top of the milled ring; this line also serves as the distance scale index. The aperture diaphragm can be set for intermediate openings between the click-stopped settings for more precise exposure.



EXPOSURE MEASUREMENT

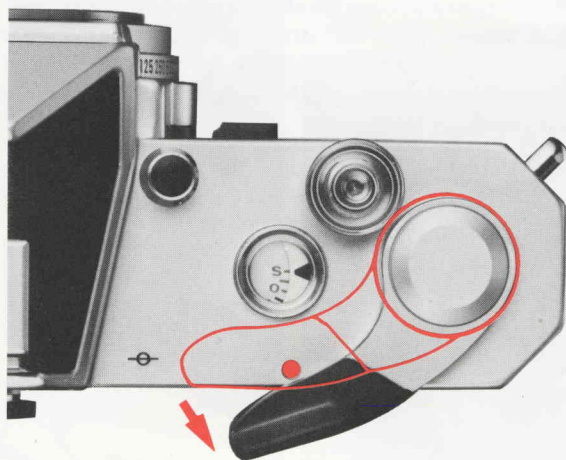
The Nikkormat FT3 features a center-weighted, through-the-lens metering system. The exposure meter reads the light intensity over the entire focusing screen, but its sensitivity is concentrated on the 12mm diameter spot in the center. This ensures you of perfect exposures in everyday picture-taking situations, while still retaining the selectivity essential for specialized applications or advanced photographic techniques.

Full-Aperture Exposure Measurement

When a Nikkor lens fitted with a meter coupling ridge is mounted on the camera, the metering system is cross-coupled to both the camera's shutter speed dial and the lens' aperture diaphragm setting ring. This allows you to continue viewing at full aperture while determining the exposure settings, thus eliminating finder dim-out and minimizing the influence of stray light entering the finder eyepiece.

Turning On the Meter

To switch on the Nikkormat FT3's CdS exposure metering circuit, pull out the film advance lever just enough to uncover the red dot on top of the camera body. When the meter is not in use, press the lever flush against the camera body, since the battery is being drained continuously as long as the lever is in the "on" position.



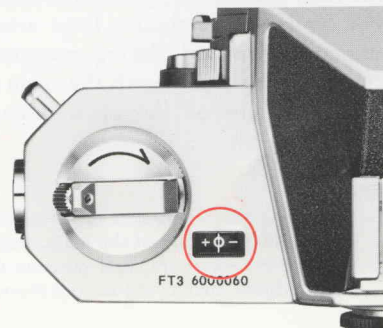
A number of different shutter speed-aperture combinations will usually result in the same exposure. The “best” one depends on the results desired. Use fast shutter speeds to “freeze” motion or slow ones to create deliberate blur. Small apertures give greater depth of field, large ones let the subject stand out against an out-of-focus background (see “Depth of Field,” p.21.).

Centering the Needle

To determine correct exposure, adjust the aperture and/or shutter speed until the meter needle in the viewfinder is centered (the – and + marks let you know whether you are under- or overexposing). A second meter needle is conveniently located on top of the camera for use with the camera held at waist-level or mounted on a tripod. For fine adjustments of less than one f/number, use the aperture ring as it permits reliable intermediate settings.

Under extremely low light conditions the meter needle may center at the “B” setting on the shutter speed dial. If so, correct exposure time is 2 seconds. If the needle moves erratically or cannot be centered even after all possible aperture-shutter speed combinations have been tried, then the light is too bright or dim for the meter’s range. Effective range (coupl-

ing range) varies according to the lens and film speed used. For example, with the 50mm f/1.4 lens and a film speed of ASA 100, it extends from f/1.4 at 1/4 second to f/11 at 1/1000 second.



EXPOSURE MEASUREMENT – continued

Getting the Right Exposure

The central part of the focusing screen should always be aimed at the main subject when centering the needle. Otherwise unimportant bright or dark areas may give an exposure reading which is too high or too low, resulting in under- or overexposure.

If an off-center composition is desired, first measure the light striking the main subject and set the aperture and shutter speed to center the needle. Then move the camera until the desired composition appears in the viewfinder.

For subjects of uniform tonal brightness, a reading may be taken from any part of the subject. However, if the subject is contrasty (sidelighted portraits, for example), measure the light falling on the most important part of the subject in which detail is desired in the final picture.

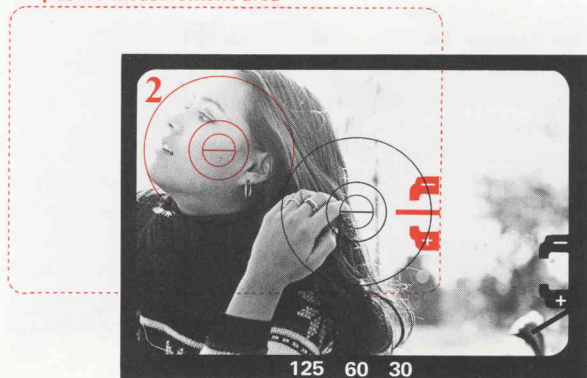
For landscapes including large areas of sky, tilt the camera downward during measurement or fill the center of the finder with the main subject to prevent underexposure of the main subject caused by the bright skylight.

Photos:

1. Measuring the bright area in the center of the screen will cause underexposure of the main subject.
2. For correct exposure, first measure the light striking the main subject, then compose and shoot.



Exposure measurement area



Stop-Down Exposure Measurement

With some lenses and accessories, full-aperture exposure measurement is not possible, either because the lens has no automatic aperture diaphragm or because the diaphragm will not couple to the meter. In these cases, the stop-down metering method must be used. This means that you must determine the exposure with the lens aperture diaphragm stopped down to the taking aperture.

To set the meter for stop-down metering, depress the coupling lever release and push up the meter coupling lever. You can now mount the lens or accessory as you would an ordinary lens. The meter is switched on in the usual way.



For automatic diaphragm lenses without a meter coupling ridge, set the desired shutter speed; then, depress the depth-of-field preview button to stop down the lens aperture diaphragm; keeping the button depressed, adjust the aperture ring until the meter needle indicates correct exposure. Be sure to release the preview button before making the exposure.

For fixed-aperture lenses, such as Reflex-Nikkor lenses, simply adjust the shutter speed until the needle is centered.

For bellows units, extension rings and preset lenses, set the desired shutter speed; then, stop down the lens manually until the needle is centered.

Since focusing may be difficult or impossible at small apertures, due to viewfinder darkening, you are advised to focus first at full aperture. Then, stop down the lens to determine the exposure.

EXPOSURE MEASUREMENT – continued

Special Cases

Repro-Copying

For originals such as photographs which have tonal gradation, exposure is determined in the usual way. In the case of originals having strong contrast and no gradation, such as documents or line drawings, measure brightness of the white portion of the original (if the original is predominantly black, a sheet of white paper may be substituted) after decreasing film speed by four marks. Or increase exposure about 1-1/3 stops.

Slide Copying

For originals with continuous tone gradations, determine exposure in the usual way by the stop-down method. To copy slides with letters or figures on transparent background, decrease film speed four marks or increase exposure about 1-1/3 stops. In the case of transparent figures or letters on a dark background, either increase film speed five marks or decrease exposure about 1-2/3 stops.

Important: The above are only approximate guidelines. Exact exposure determination is extremely difficult, especially with color reversal films. Therefore, it is advisable to make several different exposures for each subject to be sure of getting one that is correct.