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Operating the Konica IIIA and the Konica IIIM

Good photography requires the mastery and coordination of many individual operations, each of them relatively simple to learn. The photographer must combine these simple procedures until technique becomes instinctive. In taking pictures, we want to be free to turn our eyes upon the world and look more deeply than we normally do. What we see that excites us and has significance we want to transform into satisfying black-and-white and color pictures. Technical matters should not interfere.

While there are few specific operations in photography that are difficult to grasp in themselves, it is very important to become thoroughly familiar with each procedure. And it's sensible to "make haste slowly."

By the way, you will get the most out of the following sections, if you keep your Konica IIIA unloaded and nearby so you can practice as we go along.

HOW TO OPERATE THE KONICA IIIA

A Note on the Konica III: As we have indicated in Chapter I, the Konica IIIA is an outgrowth of the earlier model Konica III. Consequently, if you own a Konica III, you will be glad to know that the following sections written on the Konica IIIA also apply to the Konica III: The Lens, Loading and Unloading, The Automatic Exposure Counter, Rewinding and Unloading, The Cocking Lever, Intentional Double Exposures, The Shutter Release Button, Delayed

Action Shutter Release, How to Focus, The Shutter and the Diaphragm, The Light Value System (first two paragraphs), Depth of Field.

In addition, all of the other chapters in this book will be useful to the Konica III owner.

There's an old saying that a camera is as good as its lens. That statement is still true. The Konishiroku-made Hexanon lenses are optical instruments of proven excellence. Here is some basic information about your Konica lens.

The Lens

The Konica IIIA comes equipped with either a Hexanon f/1.8 50mm lens or a Hexanon f/2 48mm lens. (The Konica IIIM has a Hexanon f/1.8 50mm lens.) These lenses are the result of nearly a hundred years of progress in design. The Hexanon lenses have a five-group, six-element con-

struction. They are extremely sharp with high resolving power over the whole lens area. The Konica lenses have an improved amber-blue hard coating, which not only increases their light transmission characteristics, but also gives complete color correction. In addition, the amber-blue coating enhances the functions of yellow, red, and green filters in black-and-white photography.

Since your camera has a fine lens, it is important to take good care of it. Here are a few suggestions on lens care:

1. The removable lens cap that comes with your Konica is the lens' best friend. Keep it on at all times when the camera is not in use. It keeps out dust, grit and also permits you to handle the camera freely without worrying about getting finger marks on the lens which often appear in the final picture.

2. Never allow your fingers to touch the coated surface of the lens. It's a good idea to purchase an inexpensive camel's hair brush at your photo dealer. Check the lens

before shooting and during a long picture-taking session. Dust the lens *gently* with the camel's hair brush.

3. Sometimes finger marks get on the lens no matter how careful you are. Get a few packages of lens tissue at your camera store. Any other tissue may injure your lens. First, brush the lens carefully, then breathe on it lightly until the surface is clouded and wipe it gently with the lens tissue. *Do not rub*. While modern lenses are hard-coated they are not indestructible.

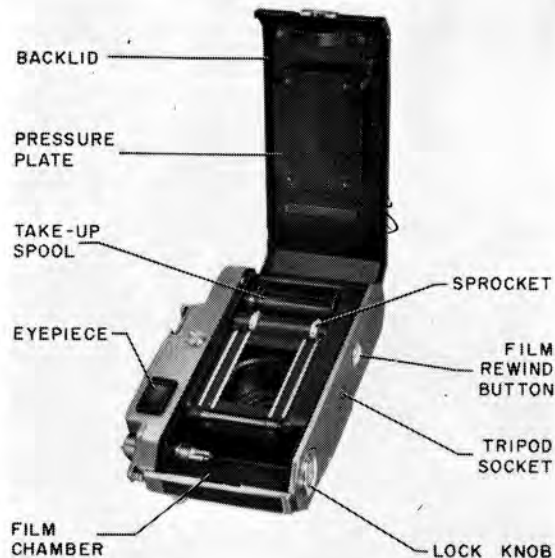
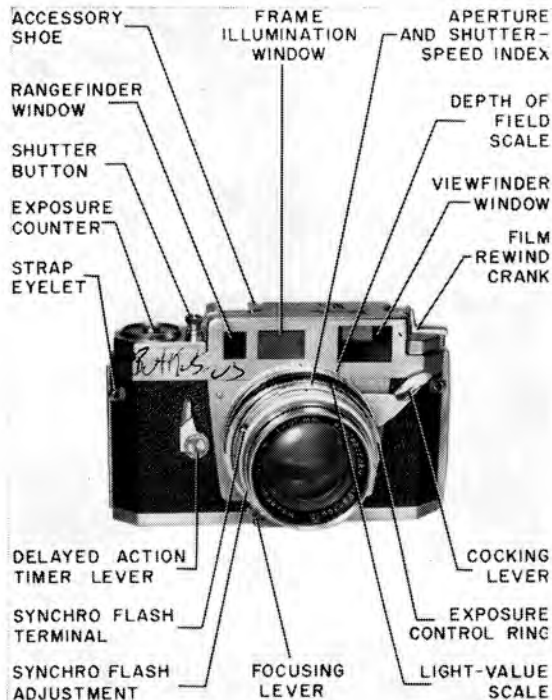
4. It's also a good idea to keep a bottle of lens cleaner handy in case the lens becomes very dirty. Follow the instructions on the bottle. There are a number of good cleaning preparations on the market.

5. The rear element of the lens should be cleaned occasionally, *but most carefully*. With the camera back open, brush the lens once or twice with the camel's hair brush.

All of these precautions will take only a few moments of your time. They will have a very favorable effect on the quality of your

pictures. Dust spots and finger marks can spoil enlargements and show up annoyingly when color slides are projected. These few precautions will enable you to enjoy picture-taking with the Konica for many years.

It is essential that you study carefully the following pictures of the Konica IIIA and its nomenclature. Make sure you can locate every feature of your camera.



FIGURES 1 AND 2. *Konica IIIA and Nomenclature*

Loading the Camera

It is suggested you read this book through before you actually load your camera and start taking pictures. Read this section on loading through now, following the steps with your camera and a practice roll of film. Your dealer will likely be able to supply you with a practice roll for a few cents. It's even worth sacrificing a regular priced roll of black-and-white film to get the loading procedure straight.

I am going to take up the loading and unloading procedure in some detail because it is important to carry out these operations exactly as recommended by the manufacturer. The operations are simple and you won't have to give them a second thought once you have them accurately in mind. If you are unfamiliar with cameras, it is this author's hope to prevent confusion and make things easy for you. Read the section on loading over again before you start on your first roll.

Loading the Konica IIIA (IIIM or S) is

a simple operation that will become automatic once you have the steps down pat. Here's a case where simplicity of design works to make this operation easy for you.

(If you are loading the Konica S skip the next two paragraphs. Instead simply open the back of the Konica S by pulling out back lid catch. See nomenclature in chapter 3. Close camera by snapping back lid shut. The rest of this section applies equally to the Konica S.)

To open the Konica IIIA or IIIM, lift the half-ring and turn it until the arrow points to *O*. Turn the half-ring *down* towards the *O* and press it firmly with your thumb. (See figure 3.) The camera back will pop open. Turn the camera so it is resting on the lens cap and open the back with the lid facing *away* from you.

Pull out the film rewind crank, located on top of the camera, all the way. (See figure 4.) Place the cartridge of film in the film chamber so the knob end of the cartridge



FIGURE 3. *Half Ring*



FIGURE 4. *Film Rewind Crank*



FIGURE 5. *Cartridge Fits in Slot, Bottom*

fits snugly in the slot provided for it inside the film chamber. (See figure 5.) Return the film rewind crank to its former position—and make sure the crank is pushed in all the way. (See figure 6.)



FIGURE 6. *Push Crank Back In*



FIGURE 7. *Insert Film in Take Up Spool Slot*

Now the film leader should be pointing away from you. Take the film leader and insert it in the slot provided in the take-up spool. (See figure 7.)

There are two possible ways of inserting the film leader in the take-up spool. *The following illustration indicates the correct*

way. (See figure 8.) If you follow this method, when you are through shooting and ready to rewind, the film will detach easily from the take-up spool.

It is possible to insert the film leader in the take-up spool in another manner. *This is not recommended. However, should you*

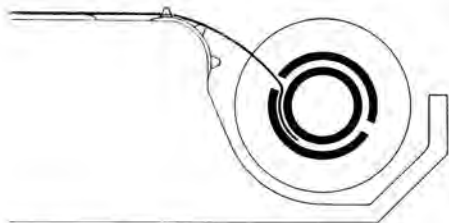


FIGURE 8. *Correct Way of Inserting Film*

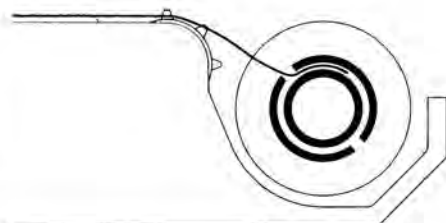


FIGURE 9. *Incorrect Way of Inserting Film*

accidentally use this procedure, there is nothing to worry about. Here is how the film leader will look when it is inserted *incorrectly*. (See figure 9.)

If you insert the film in this manner, it will not detach from the take-up spool when you have finished rewinding. *In this case, do not force the film rewind crank.* Open the back lid and release the film from the take-up spool with your finger.

After the film leader is inserted in the take-up spool correctly (as in figure 8 above) press the shutter release button. Next, make sure the perforations at the edges of the film fit over the sprocket teeth—this is quite important. The film will not feed unless the perforations are fitted over the sprocket teeth. (See figure 10.)

Now gently operate the cocking lever twice to transport the film and make sure



FIGURE 10. *Film Perforations Fit Over Sprocket Teeth*

it is winding smoothly on the take-up spool. Close the back lid. It will snap shut. (If you are using the Konica S, skip rest of this paragraph. Last paragraph of section applies to the Konica S.) Turn the Konica IIIA or IIIM bottom up. The arrow inside the lock

knob will still be pointing to O. Lift the half-ring until it is vertical, and turn it clockwise until the arrow points to C. Turn the half-ring down towards C until the ring is in flat position. Now your Konica is loaded and closed. (See figure 11.)



FIGURE 11. *Arrow Points to C (Closed)*

Lift the rewind crank and turn gently in the direction of the arrow marking on crank to take up any slack in the film. Then, return the rewind crank to its normal position.

The Automatic Exposure Counter

On top of your camera, right next to the shutter release button, you will find the window of the automatic exposure counter. (See figure 12.) This is a remarkably well-designed device. It resets itself to the start position as soon as you open the back of the camera after shooting a roll. Should there be a couple of extra shots on your roll beyond the normal 36 exposures, the counter simply remains inactive.

Having completed the loading operation up to the last point in the previous section, you must advance the film so you will be ready to take the first picture.

The exposure counter has two arrow markers: one imbedded in the metal outside the counter window and one inside, beneath the glass. Now that you have loaded



FIGURE 12. *Automatic Exposure Counter*

the film into the camera, the two arrows will coincide. Press down twice on the cocking lever and you will see the exposure counter advance to the first dot. Press the shutter release button, making sure your

lens cap is on. Repeat this operation until the counter arrow points to No. 1, and you are ready to take your first picture.

While you are advancing the film to 1, you can check to make certain that the film is feeding correctly. The rewind crank spindle (see figure 13) should be turning counter clockwise when the film is feeding properly.

Here are a few precautions worth remembering in loading any camera:

1. It is best not to load in direct sunlight. If you can't get into the shade, turn your back to the sun.

2. No matter what is happening, a wedding or an earthquake, *take your time loading and unloading your camera*. I learned this lesson while shooting a TV show. I was trying to unload and reload two cameras very quickly, and became confused and opened the back of one before rewinding, accidentally exposing the film. I managed to snap the back lid closed quickly and saved all but a few pictures.



FIGURE 13. Rewind Crank Spindle

The moral: no matter what's happening take your time.

3. Always keep your lens cap on while loading and unloading and while you are advancing the film to No. 1.

4. If you are shooting an important event and you know the moment when the most exciting activity will take place, make sure you have enough film in your camera to cover it without reloading in the middle. If you have six frames left before the activity starts, it's best to sacrifice them and start with a new roll.

Anticipating interesting activities about to happen and preparing for them in advance will give you many satisfying photographs. Time is a significant element in the art of photography. Exciting events are spaced out in time; there are lulls and sudden moments of great activity. This is as true for photographing a family celebration at home as it is for covering a public event, say the inauguration of a president. The element of time that is pres-

ent in photography is one of the factors that makes this art different from painting. More could be written on this subject but for the moment it is useful to say that anyone wanting to take good pictures should be aware of time and how to space their shooting in time.

Rewinding and Unloading

All Konica cameras take rolls of 35mm film in 20- or 36-exposure cartridges. After you have finished shooting a roll, the film within the camera will be wound neatly around the take-up spool. Incidentally, Konica design has provided for the film to feed onto the take-up spool *emulsion side out*, which means greater protection for the sensitive emulsion and no troublesome scratches.

Now it is necessary to return the film from the take-up spool to the cartridge before the camera back is opened. On the bottom of the camera, you will find the rewind button. (See figure 14.) Push it down with your



FIGURE 14. *Rewind Button*

finger nail until it clicks into place. This little button stays down once it clicks and also resets itself automatically after rewinding.

Once you have pushed the rewind button, unfold the rewind crank. Turn the rewind crank in the direction of the arrow on the crank handle. As you begin to rewind,

pressure on the crank handle will increase as the film is wound back into the cartridge. There will be some slight resistance when the end of the film comes off the take-up spool. When the crank again turns easily, you will know the film is back in the cartridge and the operation is completed.

Open the back lid as described in section on Loading The Camera, and pull out the rewind crank spindle all the way. Remove the cartridge from the chamber. The film should be entirely within the cartridge. Now you are all set to put in another roll.

Let's take a look at the controls on your Konica.

The Cocking Lever

The uniquely designed front-positioned cocking lever takes two strokes to operate. The first stroke advances the film half the distance and cocks the shutter; the second stroke carries the film the rest of the way, releases the double exposure prevention lock and counts the frame. By dividing these

operations into two strokes instead of one, the film is advanced more gently and carefully; scratches, tears in the film perforations and a number of other hazards are avoided. (See figure 15.)

The cocking lever is positioned at the front of the camera to make it easier to take vertical pictures. It is really quite impossible to make a mistake in using the lever. For example, with your *unloaded* camera in front of you, push the lever down one and a half times instead of the correct two, and see what happens when you try to push the shutter release button. You will find that it is impossible to release the button. This is a gentle hint that you have not finished cocking. Now push the lever down the rest of the way and let it snap up. You will find that the shutter release button is ready to go. In other words, any partial cocking short of the necessary two strokes will not allow you to release the shutter button. You can't make a mistake and get half a picture.

Furthermore, suppose you have given the



FIGURE 15. *Cocking Lever*

lever the necessary two strokes but your attention is distracted before you push the

shutter release button, and you don't remember whether or not you have cocked the shutter. Again, it is impossible to make a mistake. Once the lever has been pushed down the necessary two times, you can not repeat this operation until you have pushed the shutter release button.

The two-stroke cocking lever works so swiftly that it is quite possible to take five, and even more, pictures in 10 seconds, if a fast-moving action situation demands it. Naturally, this sort of shooting is not generally recommended; however, it is very useful to know that the Konica can be operated rapidly if you happen to be shooting a child at play or some sports activity.

Should the cocking lever ever jam part way through a stroke, press the film rewind button to disengage the sprocket; then, push the lever to the end of its stroke.

Once the film has run out, never force the cocking lever because you may strip the film perforations and cause other difficulties which might prevent rewinding the film into the cartridge. Should this ever

occur, the camera should be opened in a dark room, if the film is to be saved.

Intentional Double Exposures

The Konica IIIA and the IIIM are fully protected against accidental double exposures. However, should you want to make a double exposure, just follow these steps:

1. Operate the cocking lever twice (once for the Konica S) and press the shutter release button to take the first picture.
2. Unfold the film rewind crank and turn it in the direction of the arrow to take up the slack.
3. Press the film rewind button.
4. Rewind a small portion of film—about one turn of the crank.
5. Operate the cocking lever normally and press the shutter release button.

While you can take intentional double exposures in this manner, the superimposed pictures will not be in exact register. How-

ever, this procedure can give you some interesting night shots of fireworks, neon lights, carnival Ferris wheels and the like.

Also, you may want to use this technique to test the synchroflash circuit. In addition, it may come in handy if you have shot a picture without remembering to remove the lens cap or if you have failed to insert a flashbulb in the gun.

The Shutter Release Button

It is very important to depress the shutter release button firmly *as far as it will go* whenever you are shooting a picture. But make sure to press *gently!* Operate the cocking lever and press the shutter release a few times. You will notice the release has some slack that is taken up before the shutter is set off. It is extremely useful to get in the habit of taking up the slack on the shutter release button before actually taking the picture. Why? For two reasons: first, you will release the button gently and avoid

spoil the picture by jarring the camera. Second, you will be ready to release the shutter at the exact instant to catch the fleeting expression you want to put on film. A painter can see the same fleeting expression, think about it and paint it later in the studio. You must be as ready as you can be at the very moment the expression occurs. Therein lies much of the excitement of photography. If you are ready and succeed, some of the drama of *reality-as-it-happens* will be in your picture. If you are shooting fast-action pictures you will have to push the shutter button rapidly, but even in this case be as gentle as possible.

There is provision made for the use of a cable release instead of the regular shutter release button. (If you are using the Konica S skip rest of paragraph.) Turn the knurled shutter release button on the Konica IIIA and IIIM counter clockwise and it will unscrew. Remove it and insert an appropriately threaded cable release in the hole. (See figure 16.) It's best to put the tiny regular shutter release button away in a sealed en-



FIGURE 16. *Cable Release Screwed Into Position*

velope so you won't lose it. Replace the regular button as soon as you are through using the cable release.

Delayed Action Shutter Release

You can release the shutter either in regu-

lar or in flash photography at all shutter speeds other than *B* by means of the delayed action shutter release located on the front of the Konica IIIA. First operate the cocking lever in the regular manner; then, rotate the delayed action lever all the way down, (180°). (See figure 17.) Press the shutter release button and the shutter will go off after about a ten-second delay. If you rotate the delayed action lever down half way—about 90° —you will get a delay of about five seconds. The delayed action mechanism will not function if it is pressed down much less than half way.

The delayed action mechanism will allow you to get into the picture yourself. It is also useful in many cases when your camera is on a tripod. Tripods, except the most expensive, tend to shake a bit after you have set the camera controls. If you are shooting at slow shutter speeds, as you likely will be when using a tripod, a slight shake can make for a blurred picture. Using the delayed action device will give you just enough delay to allow the tripod to become



FIGURE 17. *Delayed Action Shutter Release.
Rotate Down.*

firm before the picture is taken. In some cases, if you want to take a hand-held time exposure of $1/5$ or $1/2$ a second, using the

delayed action mechanism will give you a chance to brace yourself firmly so there is no movement. Naturally, the delayed action mechanism is very useful during the precise operations of copying or in scientific photography.

Using the Viewfinder-Rangefinder

The Konica viewfinder-rangefinder is one of the best on the market today, regardless of price. This statement, I believe, can be backed up and proved. When you become familiar with the Konica IIIA or IIIM viewfinder-rangefinder, compare it with the ones on your friends' cameras, whatever their make or price, and judge for yourself. Check particularly for over-all brightness and ease in focusing.

The Konica viewfinder-rangefinder is of unusual design and incorporates several features that do not appear on any other camera. Let's take a look at what this instrument can do for you:

1. Look through the viewfinder of the Konica IIA or IIIM and you will see a life-size image. (The popularly priced Konica S has a slightly reduced but very bright image.) The image you get permits you to sight, focus and compose with *both eyes open*. In fact, it's best either to work with both eyes open or one just slightly closed. This makes for less strain and allows you to catch action, out of the corner of your eye, that is about to move into your sighting area.

2. Notice the bright-line frame with its four lines and dots. Your picture falls within this area. You get precisely what you see, no more and no less. No error in sighting the full picture can occur as long as the four sides of the bright-line frame are in view. There is no aberration if your eye is positioned a little off from where it should be.

It's important to become really familiar with your viewfinder-rangefinder as quickly as possible. For a picture to be exciting, memorable and expressive of the subject

and what you feel about it, you must see it within the four lines of the bright-line frame. *If you can't see it in the viewfinder, you won't get it on film.* I stress this point because very often we are overwhelmed by a landscape, very excited by a certain candid scene—we shoot. The pictures are developed and we are disappointed. Why aren't those exciting moments we remember recorded on the film? There is a good reason: unless the excitement and beauty that intrigued us was framed within the four bright lines of the viewfinder, they cannot be in the picture. Behind human eyes is a lifetime of perceptions and emotions, behind the camera's precision-made optical eye lies sensitized film. The beauty and excitement that lie in the world before us must be composed within the four lines of the viewfinder so that what is outside may enter the high-speed lens and be recorded on film. The lens can see exactly, but it can not feel, compose, or express itself.

It is quite important to give this matter some thought. Remembering that only what

you see in the viewfinder will appear in the picture, will help you to do good photography, avoid disappointment and save money that otherwise will be wasted on film. Of course, even when you see the excitement in the viewfinder, you must still know how to transfer it to the final enlargement, color slide or print. The purpose of this book is to help you accomplish that.

3. Since the viewfinder-rangefinder is extremely important on a 35mm camera, the fact that you have one of the best is a distinct advantage. For example, your viewfinder-rangefinder is compensated for parallax. Parallax refers to the fact that in all rangefinder cameras the viewfinder is positioned in a slightly different spot from the lens. Consequently, as you change your focus from infinity to 3.5 feet, the picture area covered by the lens and the area covered by the viewfinder will be slightly different unless compensation is made for their different positions. As you move the lens from the infinity position to 3.5 feet, the picture area covered by the lens decreases. If the

viewfinder is *not* compensated for parallax, as you move in closer you are seeing more in the viewfinder than you are getting on film. This often means that the tops of heads will be missing unless proper allowance is made.

Set your rangefinder on the infinity marking (∞) found on the second row of numbers on the lens barrel out from the camera body. Now, while looking through the viewfinder-rangefinder, push the focusing lever slowly to 3.5 feet—3 feet on the Konica S. Watch the four bright lines converge slightly as you move the focusing lever—this is parallax compensation.

Quite a number of current cameras are compensated for parallax. However, the Konica IIIA, the Konica IIIM and the Konica S viewfinder-rangefinders also compensate for the change in angle of view. The angle of view and, therefore, the field of view covered by the lens, becomes narrower as the distance changes from infinity to 3.5 feet. The Konica viewfinder-rangefinder compensates automatically for this change.

Surprisingly enough, the Konica IIIA, IIIM and S are the only cameras made anywhere in the world, at any price, that not only compensate for parallax but also for the angle of view. In practical shooting terms this means that within the bright-line frame you see exactly what the lens sees—no more, no less.

The Konica viewfinders are actually more accurate than the viewfinders of most single-lens reflex cameras. In the single-lens reflex, you see right through the lens itself, not through a separate system. However, single-lens reflex cameras tend to get a little more on the film than they show through their viewing systems.

Here is an indication of just how accurate the Konica viewfinders are. The outside edges of the four sides of the bright-line frame correspond precisely to the area covered by the lens. The inside edge of the four bright lines corresponds exactly to the area of a regular 35mm color slide that has been mounted in a cardboard Kodak Readymount. In other words, every card-

board mounted color slide trims a small portion off the picture. The inside edge of the bright-line frame shows you the exact picture you will get when your color slide returns from the processor trimmed slightly by having been placed in a cardboard mount.

How to Focus

The Konica rangefinder is a precise and rugged instrument that is mechanically coupled to the lens system. It has been adjusted to extremely close tolerances by expert technicians. Consequently, the position of the focusing lever is always in a precisely correct relation to the moving image of the subject within the bright-line frame. Here is how you focus on the subject:

1. Look through the viewfinder. At the center of the bright-line frame you will see a small, bright square area. Now sight through this area at a subject about 10 feet away. If you look through the bright spot at a corner of the subject, you will

see a double image of the corner.

2. Move the focusing lever slowly from one side to another and you will see one of the double images of the subject move horizontally. When the two images coincide exactly you are in focus. (See figures 18 and 19.)

Now if you look through the bright focusing area and move the lever ever so slightly so the subject is out of focus, you will notice that one of the double images has a lavender tinge while the other has a yellow tinge. Move the lever until the two images coincide, and you will see the subject in *natural color* within the focusing area. In short, when the subject is *out of focus* you get a double image—one lavender and one yellow; when the subject is *in correct focus*, you will see a single image in natural color.

This arrangement is of special Konishiroku design, and it is a great help in getting your subject quickly into focus. The patented system is based on a color complementing arrangement. A triple coating uti-



FIGURE 18. *Out of Focus. Double Image of Plane's Door in Center.*

lizes the principle of light wave interference and imparts complementary hues (lavender and yellow) to the stationary and moving images of the subject on which you are focusing.

Here are some suggestions that will help you in focusing:

1. While the focusing arrangement on



FIGURE 19. *In Focus. Single Image of Plane's Door in Center.*

the Konica is excellent and easy to use, it's still a good idea to practice. Spend some time picking out a subject and seeing how quickly you can bring it into focus. Keep on practicing until you are really at home with the controls.

2. Many of your photographs will depend on exact focus. Remember that your black-and-white photographs will be enlarged

many times their original 24 x 36 mm size. Your color slides will likely be projected many times their size. The Hexanon lens on your camera is one of the sharpest in the world, *but your picture won't be sharp unless you are in exact focus.*

3. Very often photography demands that you be able to focus accurately in an instant. Some of the most moving expressions and meaningful situations only last a moment. Photography has the unique ability of making permanent, and in a way eternal, a particular instant in time in which a person or an everyday situation suddenly reveal more of what they really are and take on universal meaning. The ability to focus swiftly and accurately plays an extremely important part in the art of photography. The best subjects have a way of popping up surprisingly, like fish jumping out of the sea for an instant. We must be ready to catch them. So it's a good idea to practice focusing, especially for the first few days you go out photographing.

4. In the beginning, it's best to place

the focus on your main subject of interest, but sometimes you will want to vary this for effect. Generally, what is in sharpest focus attracts attention first. However, there are many exceptions to this "rule."

Occasionally, the mood or meaning of a scene may suggest to you that the focus be on some other less important object, while the main subject would be better blurred. There are no "rules" in the ordinary sense of that term in the art of photography. All the "rules" can be violated, provided your motive is to give a deeper and more suggestive expression to your subject and your feelings about it. However, it is fundamental that you know the "rules" thoroughly before you break them to achieve a certain effect. Placing subjects in and out of focus—it is sometimes called "selective focus"—is an important photographic tool.

5. Keep your viewfinder-rangefinder windows clean and free from fingermarks. The window portion of the viewfinder is one face of an optically true prism. Clean it with as much care as you would the lens.

The Shutter and Diaphragm

Every camera has either a shutter or some arrangement that serves as a shutter. When the daguerreotype operator of the 1850's took the cap off his lens and replaced it after a certain time, he was performing the shutter operation.

The shutter allows the light to enter the camera for a specific length of time so it will fall upon the film's light-sensitive emulsion and register the picture's image.

The diaphragm, or aperture, is an opening, the size of which can be varied to let in more or less light.

In other words, there are two ways you can control the amount of light falling on the film—by allowing the shutter to be open for a longer or shorter time and by changing the diaphragm to a larger or smaller opening.

Exposure depends on the way in which the shutter speeds and diaphragm openings are varied. And, the matter of correct exposure is most crucial to all photography.

Exposure will be dealt with in a separate chapter of this book. At the moment, it seems best to discuss the workings of these controls—shutter and diaphragm—and their simplification in the increasingly popular Light Value System (LVS).

Let's take a look at the shutter and diaphragm on your Konica IIIA. Many persons are unnecessarily afraid of the camera's controls. Using the controls to get correct exposure is not difficult in itself, especially if we approach the matter step by step.

The Shutter

The Konica shutters are made by two of the largest and most respected shutter manufacturers in Japan, Seikosha and Copal. Consequently, in the Konica IIIA's Seikosha MXL shutter you are getting a precision-made device that will take tremendous wear and tear. These shutters are thoroughly

tested and even 10,000 repetitive operations have failed to cause changes in speed or other malfunctioning.

The shutter on your Konica IIIA is attached to a light value scale which permits shutter speeds to be coupled with diaphragm openings (apertures). Before we go into the light value system, let's see how the shutter works.

If you look at the camera controls located on the lens barrel, you will notice that the ring of numbers farthest from the camera body is marked 500, 250, 100, 50, 25, 10, 5, 2, 1, B. (See figure 20.) These numbers indicate the following shutter speeds in fractions of a second—1/500, 1/250, 1/100, 1/50, 1/25, 1/10, 1/5, 1/2 and one second. The position *B* indicates bulb release, which will be explained later.

On the Konica IIIM and the Konica S shutter speeds are slightly different—1/500, 1/250, 1/125, 1/60, 1/30, 1/15, etc.

The shutter speeds, as we have indicated, govern the amount of time the film is exposed to light. If you turn the shutter speed

ring you will notice the numbers are marked off in click stops, so you can change speeds without taking the camera away from your eye.

It is important to remember that the shutters on all Konicas are designed so you will get the speed indicated at the click stop point *and not in between*. For example, take the 1/100 and 1/50 of a second click stops. Setting the shutter ring in between these numbers *does not* give you 1/75 of a second. If the shutter ring is accidentally set between two of the numbered positions, the shutter will function at the higher or lower speed—whichever speed is nearest the marker.

You can set the shutter speeds before or after operating the cocking lever the necessary two times—with the exception of 1/500 of a second. When you want to use this speed you must set the speed on that click stop *before* you operate the cocking lever.

Coming back to the *B* setting on the shutter ring—*B* indicates the bulb release

position. To use *B*, cock the shutter in the regular manner, set the shutter ring on *B* and press the shutter release button. The shutter will remain open, exposing the film, as long as you keep pressing the shutter release button down. When you release the button, the shutter will close. This shutter position is useful for extended time exposures at night with the camera on a tripod or other firm resting place to shoot fireworks, Christmas trees or the like.

The creative use of different shutter speeds available on your camera is properly part of a discussion of exposure and will be dealt with in Chapter 4.

The Diaphragm (Aperture)

The diaphragm is an iris-type mechanism which serves much the same function as the pupil of the eye. It opens wide to let in more light and closes down to let in less light. Looking at the camera controls again (see figure 20), you will notice that the



FIGURE 20. *Light Value Ring Set on Light Value (LV) 12.*

second row of numbers in from the shutter speed ring is marked 1.8, 2, 2.8, 4, 5.6, 8, 11, 16, 22. These are the diaphragm openings or apertures, usually referred to as f /stops— f /1.8, f /2, f /2.8 and so forth. Here is an important point to remember: the lower

the f /stop number, the *wider* the actual diaphragm opening. The higher the f /stop number, the *smaller* the actual diaphragm opening. In other words, at an f /stop of f /1.8 the diaphragm is open as wide as the lens will permit, at an f /stop of f /22, it is closed to its smallest opening.

Despite the fact that diaphragm openings seem to be numbered haphazardly, the diaphragm's iris is designed in such a way that from one f /stop to the next the amount of light entering the camera is either increased or decreased by a factor of 2. For example, let's take the wide diaphragm opening of f /2: the next full stop, f /2.8, *decreases* the light by one half. Taking it from the other end of the diaphragm ring, f /22 lets in the least amount of light, while the next stop f /16 gives an *increase* of twice as much light.

The Konica Hexanon lenses are extremely sharp even at their widest opening of f /1.8. This is a very useful factor because you will often find yourself in situations where you will want to photograph with the dia-

phragm wide open at $f/1.8$. Very likely you will want to take color on a cloudy day or in deep shadows or you will want to shoot black-and-white under dim household illumination at night.

The Light Value System (LVS)

The light value system of photography was invented a few years ago to simplify the setting of shutter speed and diaphragm opening combinations. In the light value system, the shutter and diaphragm are coupled; in the old system, they were operated separately. Here's an idea of the difficulties the old system posed. Suppose with a given type of illumination you were shooting at a shutter speed of $1/25$ of a second and a diaphragm opening of $f/8$. After a couple of shots, while *in the same light*, you wanted to stop some faster action and shift to $1/100$ of a second. Remember the light is the same—now you have to compensate and figure out how much wider to

open the diaphragm to give the same exposure. The answer is $f/4$, but you would have to spend time calculating unless you remembered you have increased the shutter speed four times and must therefore increase the diaphragm four times. The light value system has greatly simplified things. Here is how it works.

Since the shutter speed and diaphragm opening *together* regulate the amount of light permitted to fall on the sensitized emulsion of the film, it is possible to designate specific numbers for a given series of shutter speed and diaphragm opening combinations with each specific combination of shutter speed and diaphragm opening in a given series allowing exactly the same amount of light to reach the film.

After careful study, photographic engineers came up with a simple numerical scale in which each number represents a given series of shutter speed and diaphragm opening combinations. If you look at the controls of your Konica IIIA you will notice that the third numbered ring in from the

front of the lens is black with white numbers. This is the light value or exposure control ring. (See figure 20.) Before we go into how to operate the ring, let's take a look at what the numbers mean. You will notice that the numbers run from 2 to 18. Each light value number will give you a series of shutter speed and diaphragm combinations that allow precisely the same amount of light to enter the camera.

Let's take light value 12 as an example; from now on we will refer to them as LV numbers. For example, LV 12 has the following range of diaphragm openings and shutter speeds, each giving the same amount of light: 1/500 at f/2; 1/250 at f/4; 1/100 at a little more than f/5.6; 1/50 at a bit more than f/8; 1/25 at just above f/11; 1/10 at nearly f/22. You will notice in most cases the arrow marker will not point to the exact diaphragm opening number, such as f/5.6. There's nothing to worry about. While the shutter speeds can not be set in between say 1/50 and 1/100, as explained previously, diaphragm openings

can be set anywhere in between the regular f/stop numbers. The LV system on the Konica IIIA most often sets the diaphragm just off the f/stop number.

The widest range of shutter speed and diaphragm openings will be found at LV 12, the shortest at LV 18 and LV 2.

On the Konica IIIA, the light value ring is coupled directly to the shutter speed ring. As you turn the light value ring, the shutter speed changes with it. Once the light value ring has been set at the LV number you have chosen, the diaphragm openings will change automatically to give you the correct diaphragm opening for your selected shutter speed.

You will find that the LV system built into the Konica IIIA will make for greater ease and swiftness in shooting, once you become familiar with the system. A few minutes of practice will pay off in better photographs. Here is the recommended manner of operating the light value ring:

1. We are going to start off by setting

the light value ring on LV 13—white numbers on black, third ring in from the front of the lens. (See figure 21.)

2. *Grip the light value ring with your thumb and index finger, one on each side, and press the ring in toward the camera body. This will release the light value ring from the diaphragm opening controls. Still pressing the ring in, turn it until the number 13 is set at the red marker. Then release the ring and it will snap into place.* (See figure 21.) If the light value ring should stop before you reach LV 13 or any other number you choose, here's what you do. Just take your fingers off the light value ring and let it snap back. Then, without pressing the ring, simply turn it as far as it will go in either direction. Now repeat the italicized steps at the beginning of this paragraph. It's really a simple operation and essentially consists of racking the light value ring back and forth until you are set at the LV number you want. Furthermore, you will find that most times you will set the number in one or two movements.



FIGURE 21. *Setting Light Value Ring on LV 13.*

3. Now turn the light value ring, and all the shutter speed and diaphragm opening combinations will allow the same amount of light to reach the film. Turn the ring so you see all the combinations at LV 13. While you are shooting at LV 13 you need not depress the ring any more; just turn it to the combination you want.

4. The LV control ring is designed so you can set it between regular numbers. For example, if you position the ring between LV 12 and 13, the diaphragm open-

ings will change automatically to the correct setting. What's more, set between the numbers, the ring works just as well and does not easily snap out of position. Setting the ring between the regular LV numbers will give you a half stop smaller or larger diaphragm opening. You will find this flexibility very useful in color photography where exposure must be exact.

5. Due to the construction of the shutter mechanism, the light value ring must be corrected when going to $1/500$ of a second or shifting back to $1/250$. When you are shooting at $1/500$, use an LV number one step higher than normal. For example, if the strength of the light calls for using LV 12 and you want to shoot at $1/500$, change to LV 13. *Remember, when you go back to $1/250$ or any other speed, reset the light value ring on the number you would normally use, in this case LV 12.*

Practically speaking, there is great value to the LV system of photography. Once you have chosen the LV number and set the

ring, you need make no more calculations; just choose the shutter speed or diaphragm opening you want and the rest is automatic. The LV system is very helpful in the demanding field of candid photography, where speed at the camera controls often means the difference between getting a fine picture or losing it.

The LV system also greatly simplifies the use of a light meter. In the chapter on exposure, there will be a detailed discussion of the use of light meters. There is a very small, efficient Konica meter that reads in LV numbers. Properly used, the Konica LV meter will give you the right number. Then, all you have to do is set the light value ring and you are ready to take the picture.

While the LV system is the easiest to use, the Konica IIIA is designed so it is possible to set the shutter and the diaphragm in the conventional manner—*without using the LV system*. While this is not recommended, since the camera is really designed for the LV system, here is how you operate it conventionally:

1. Set the shutter speed by turning the shutter speed ring to the desired setting. With one finger depress one side of the LV ring next to the cocking lever. When you depress this side of the LV ring, the aperture control ring is uncoupled and you can move it to any desired setting.

2. There is another way of operating the shutter speed and diaphragm without using the LV system. Turn the LV ring to the desired diaphragm opening. Then grasp the LV ring between thumb and forefinger and press the ring in towards the camera body. With the LV ring pressed in, turn to the desired shutter speed.

3. If you change your shutter speed and diaphragm openings in either of the ways described above, you can get back into the LV system by simply turning the LV ring *without depressing it*—the ring will snap into place automatically.

Depth of Field

Perhaps you have noticed the two rings

of numbers on your lens barrel that have not been mentioned. The ring of numbers nearest the camera body is the depth-of-field scale. It is marked off:



FIGURE 22. *Depth of Field Scale*

These numbers represent the diaphragm openings from f/22 on one side, to f/1.8 in the center to f/22 again. (See figure 22.)

The second ring of numbers out from the camera body (white numbers on black) is marked:

∞ , 50, 25, 15, 10, 8, 6, 5, 4, 3.5 in feet, or 10, 5, 3, 2 in meters.

Move your focusing lever and you will see that this ring of numbers moves. The exact distance from the subject on which you have placed the focus will show in feet against the small triangular mark on the depth-of-field scale.

The depth of field depends, for any given lens, on the size of the diaphragm opening (f/stop), and on the distance from the subject on which you have placed the focus to the surface of the film within the camera.

When you focus on a particular subject, naturally that subject will be in sharpest focus. However, and this is important, other objects in front of your subject and behind it will also be rendered sharply up to a certain distance. This distance is the depth of field. It extends both in front of and behind the subject on which you have focused. The area of sharpness extends further *behind* the subject than in front of it.

At a distance, say of 10 feet, a small dia-

phragm opening, such as f/22, will give you the *greatest* depth of field. A larger lens opening, such as f/1.8, will give you the *smallest* depth of field.

Let's take an example, suppose you focus on a subject 10 feet away and you are shooting at f/1.8 with the diaphragm wide open. With the 50mm Hexanon f/1.8 lens, your depth of field will extend 8 inches in front of the subject on which you have focused to 9 inches behind it (the depth of field goes from 9 feet 4 inches from where you are standing to 10 feet 9 inches). In other words, focused on a subject 10 feet away at f/1.8 your depth of field or area of sharpness is 17 inches deep. Within this area the picture will be very sharp, but it will be sharpest at 10 feet.

Now suppose your subject is still 10 feet away, but you want to shoot at f/22, the smallest diaphragm opening on your lens. Your depth of field will be much greater. The area of sharpness will start 4 feet 6 inches in front of the subject and end at 67 feet 2 inches behind it.

The smaller the diaphragm opening you use, the greater will be the depth of field. Also, the farther away you are from the subject, the greater the depth of field. For example, at a diaphragm opening of $f/1.8$ the depth of field is 2 inches deep if your subject is 3.5 feet away. The same diaphragm opening of $f/1.8$ gives you a 17 inch depth of field, if the subject on which you are focusing is 10 feet away.

The depth of field scale on your camera is easy to read. Move the focusing ring so 10 feet is at the tiny triangular marker. This is the way it would appear if you had focused on a subject exactly 10 feet away. Now let's say you are shooting at a diaphragm opening of $f/16$. Look at the depth of field scale with the marker set at 10 feet. You will notice there are two 16 ($f/16$) markings on the depth of field scale, one at each side of the triangular marker which is set at 10 feet. Opposite $f/16$ on each side is the distance in feet in white numbers on black. Opposite $f/16$ on one side is approximately 25 feet, opposite $f/16$ on the other

side is a little more than 6 feet. This means if you are shooting at $f/16$ *and you are focused on a subject 10 feet away*, the depth of field will extend from approximately 6 feet in front of you to a little more than 25 feet. Within that area the picture will be sharp.

A constant awareness of depth of field in photography is a must. The subject on which you have focused will always be sharp, providing you have used the correct shutter speed to avoid camera shake. But what about the foreground or background? How much of it will you want in focus for a particular picture? For example, suppose you are shooting a portrait on an overcast day. Such days are fine for outdoor portraits, as the sun, veiled by clouds, gives a soft diffused light with few troublesome shadows. Behind your subject's head is a group of buildings, telephone poles or the like. If you choose to shoot at $f/16$ with the appropriate slower shutter speed, you will get a greater depth of field and, likely, the buildings and telephone poles will be in sharp

focus too. In fact, when the picture is processed, they may very well seem to be growing out of the subject's head. Photographs, other than stereo, have only a two-dimensional surface, and unpleasant effects, such as the one just described, are always a danger.

You can avoid this by choosing a diaphragm opening with a small depth of field, say $f/2.8$ (naturally you must compensate with a faster shutter speed). The result: the features of your portrait will be sharp, the buildings and telephone poles will be reduced to an unobtrusive and suggestive blur.

At other times you will want a longer depth of field. In shooting a beach scene or a landscape, for instance, you will want to choose a small diaphragm opening, say $f/16$ (and compensate with a slower shutter speed).

You will find that selecting the point of focus and the depth of field (the area of sharpness) is crucial in giving emphasis to those portions of the subject which are most

important and about which you feel the most. Like the human eye, the camera lens does not have an over-all sharpness from lens to infinity. If we look at a near object closely, objects at a greater distance will be out of focus, and the background will be dimly visible. Similarly, in a photograph, we may become aware of everything in it but usually not at the same instant. Sharpness can be used to attract our first glance, also blurring can sometimes be used for the same purpose.

Every object in a photograph, sharp or blurred, is important and plays its part in the total effect. Depth of field is important because most often what is sharp attracts our attention; usually we are sharply aware of that which is in focus, less aware of objects out of focus. To be sure, very fine pictures have been made where the center of interest is blurred. But, in pictures like these, something true and consciously demanding insists both within the subject itself and in the photographer's mind on blurriness as the best means of expression

for that particular shot. This, however, is the exception.

As we start out in photography we can not be too keenly aware of depth of field as a means of controlling those two crucial opposites—sharpness and blur. Before each series of shots check the depth of field and make sure it is long enough for the subject. If your depth of field is too shallow, use a smaller diaphragm opening with an appropriately longer shutter speed.

Your area of sharpness may also be controlled by the use of hyperfocal distance. The hyperfocal distance is simply the distance at which a given lens must be set in order to register everything in sharp focus from the nearest object to infinity at any given aperture. To determine the hyperfocal distance for $f/8$, set the distance scale at infinity. Check what is the distance in feet opposite $f/8$ on the right side of the depth of field scale. Move this number to the focusing marker. Your area of sharpness will extend from one half the distance now at the focusing marker to infinity.

Synchroflash Photography with the Konica IIIA

Your Konica IIIA is adjusted for use with flash at all shutter speeds. The special Koniflash III attachment presents the most convenient way to use flashbulbs with the Konica IIIA. The Koniflash III fits into the accessory shoe and includes a synchro cord which is plugged into the flash terminal next to the *B* position of the shutter speed ring.

When you are using *M* class bulbs, timed to peak intensity in 20 milliseconds, set the red MFX selector at *M*. Now you are synchronized for all shutter speeds. With the MFX selector set at *F*, you are synchronized for all shutter speeds with *F* class bulbs, which normally require from 5 to 10 milliseconds to reach their peak. When the MFX selector is set at the *X* position you are synchronized for electronic flash at all shutter speeds.

Note: It is preferable to keep the MFX selector set at X when you are not using flash.

See Chapter 8 for more information on flash techniques.

Operating Sequence for the Konica IIIA

Here, in brief, is the operating sequence for your Konica IIIA so you will know just what to do in shooting your first picture.

In this sequence, we are assuming the camera has been loaded and the exposure counter reads No. 1:

1. *Remove the lens cap.* Always remember to do this first. It's rather easy to forget in the beginning unless you are careful. Naturally, with the lens cap on nothing registers on film—which can be annoying.

2. Attach the lens hood, Konihood, which prevents unpleasant reflections, flare, etc., from spoiling your pictures. Use the lens hood at *all* times.

3. Determine the correct LV setting by using your LV meter.

4. Set the light value ring on the LV number you have obtained from your meter.

5. Work the shutter cocking lever twice.

6. Sight your subject through the viewfinder-rangefinder and focus on it.

7. Compose the picture within the bright-line frame.

8. Gently press the shutter release button.

Note: It is suggested that you read Chapter 4 on exposure next.

HOW TO OPERATE THE KONICA IIIM

Good photography requires the mastery and coordination of many individual operations, each of them relatively simple to learn. The photographer must combine these simple procedures until technique becomes instinctive. In taking pictures, we want to be free to turn our eyes upon the world and look more deeply than we normally do. What we see that excites us and has significance we want to transform into satisfying black-and-white and color pictures. Technical matters should not interfere.

While there are few specific operations in photography that are difficult to grasp in themselves, it is very important to become thoroughly familiar with each procedure. And it's sensible to "make haste slowly."

By the way, you will get the most out of the following sections, if you keep your Konica IIIM unloaded and nearby so you can practice as we go along.*

The Konica IIIM with its built-in, electrically coupled exposure meter is one of the most advanced cameras being made today. It is also one of the easiest cameras to use. If you are just starting out in photography you should have a really enjoyable time learning with the IIIM. Furthermore, the design of this camera is such that there are no limitations in it for advanced use. The Konica IIIM may, of course, be used without the light meter if that is preferred.

Here is a very interesting fact about the best cameras made in the world today. If

you think over the names of some cameras with the best reputation in the highest price range, you will realize that the camera design is basically the same as it was years ago, although many improvements have been made. The cameras look the same and their basic construction is the same. This is often the sign of an excellent basic design. The basic construction of the Konica IIIM is the same as the Konica IIIA and the Konica III. By this we mean that the method of loading, rewinding and unloading the camera and a number of other operations are the same.

To make matters simpler and save valuable space, it is suggested that you read the following sections dealing with the Konica IIIA, as these operations are the same on the Konica IIIM: The Lens, p. 24; Loading the Camera, p. 27; The Automatic Exposure Counter, p. 32; Rewinding and Unloading, p. 34; The Cocking Lever, p. 35; Inten-

** These three paragraphs are important, and they also serve as an introduction to the sections on the Konica IIIA and the Konica S.*

tional Double Exposures, p. 37; The Shutter Release Button, p. 38; Using the Viewfinder-Rangefinder, p. 40; How to Focus, p. 43; It is also recommended that you read the sections on The Shutter and The Diaphragm (Aperture) pages 46 to 50 for general information on the shutter and diaphragm. The shutter speeds on the Konica IIIM are slightly different from those of the IIIA; the diaphragm openings are the same. Lastly, make sure to read the section on Depth of Field, page 54, it is very important. *The above mentioned* sections should be read in the sequence given. I suggest you check off the sections on the above list as you read them.

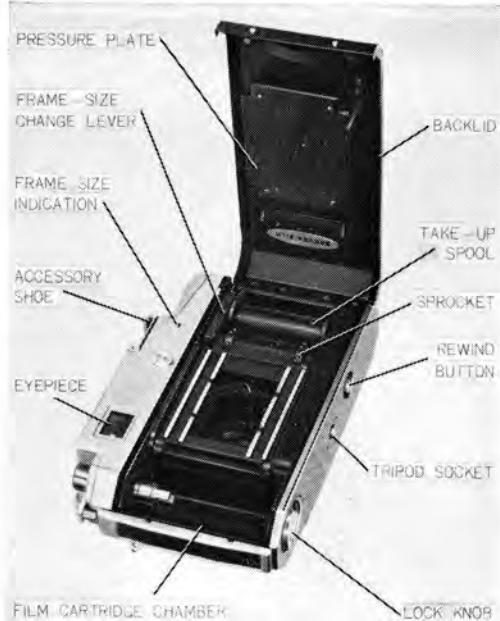
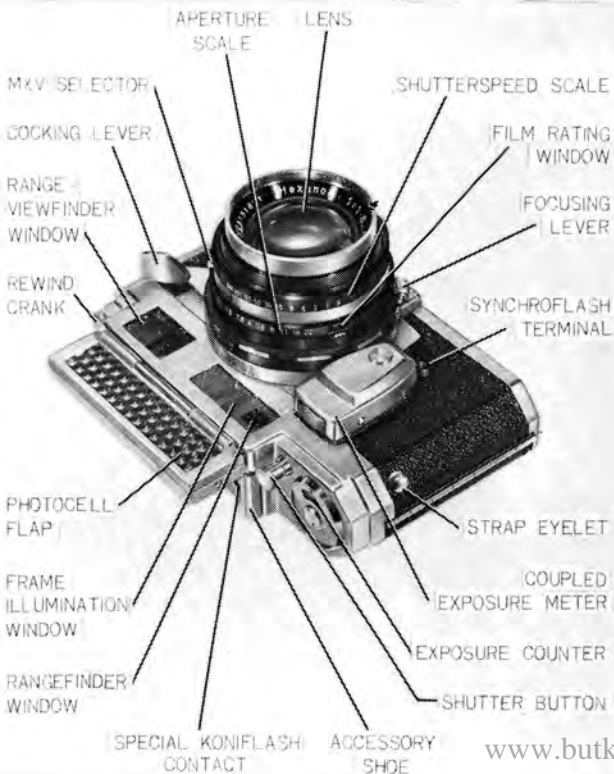
It is essential that you study carefully the following pictures of the Konica IIIM and its nomenclature. Make sure you can locate every feature of your camera.

The remainder of this chapter will be devoted to a discussion of those features of the Konica IIIM which are uniquely its own. With this information you should be

able to get excellent results from the Konica IIIM with your first roll of film.

When you read the section on the Konica IIIA's viewfinder-rangefinder and then checked your Konica IIIM, you probably noticed that the IIIM's viewfinder has a small inner bright-line frame as well as an outer one. The inner bright-line frame—two small vertical lines, mark the edges of single-frame shots. Single-frame shots are half 35mm size or 17 x 24mm—you get 72 shots per roll instead of the usual 36 exposures. The Konica IIIM has the advantage of being easily convertible from regular 35mm size to single-frame size. How to use the Konica IIIM for single-frame shooting is the subject of a special section included further along in this chapter.

Most of the time you will likely be using your Konica IIIM for regular 35mm size shooting. In this case, the viewfinder-rangefinder operates exactly like the system on the Konica IIIA. However, here is one caution. When you are shooting a fast action sequence with the Konica IIIM using regu-



FIGURES 23 AND 24
Konica IIM and Nomenclature

lar 35mm size, make sure that you frame the picture within the *four outside lines* of the bright-line frame. Shooting at a fast rate, it is possible to mistake the inner bright lines which are for single-frame shooting for the outside edge of the 35mm size. Just remember that the four outside bright-lines give you the 35mm size and you will be all right even if you are doing some rapid shooting. Get in the habit of ignoring the inner lines unless you are doing single-frame picture taking.

You will find the Konica IIIM's viewfinder-rangefinder easy to use. In this writer's opinion, the IIIM's viewfinder is just a shade brighter than the IIIA's and that is saying something. The Konica IIIM's extra brightness is due to the addition of a special light-collecting window in the viewfinder system. On some cameras, installing a built-in meter has meant less space for the viewfinder and greater difficulty in viewing and focusing. On the Konica IIIM, you not only have a built-in meter, but also an improved viewfinder-rangefinder.

Using the IIIM's Built-in Light Meter

The built-in light meter of the Konica IIIM gives semi-automatic exposure control. What do we mean by semi-automatic? Semi-automatic in this case refers to the fact that the light meter is fully coupled to the shutter speed and diaphragm (aperture) controls by means of a newly developed electrical resistance system. This means that when the light reflected off your subject actuates the electrical resistance system, getting correct exposure becomes a relatively simple matter of lining up the luminous needle with the black marker. (See figure 25.) The photo cell of your light meter has an extremely wide range of sensitivity similar to that of the human eye. Among other things this means you can get excellent color pictures.

Your first move in using the Konica IIIM's (or Konica S's) coupled light meter is to set the ASA number of the film you are



FIGURE 25. *Must Line Up Exposure Meter Needle and Index Mark.*

using in the film-rating window. (See figure 26.) The ASA number can be found in the instruction sheets that come with all film cartons. There will be a full discussion of ASA and exposure ratings in the chapter on exposure. However, a few words on the ASA index are necessary here.

At present, film manufacturers rate their

films, both black-and-white and color, according to a system devised by the American Standards Association (ASA). The ASA rating is the rating given the film by its manufacturer. For example, Kodachrome, Daylight Type, has an ASA rating of 10.

At present, it is enough to say that you must set the film's ASA rating in the film-rating window. If you are using Kodachrome, Daylight Type, set the ASA number at 10. You will notice that the film-rating window has a wide range of ASA numbers available for use with different types of film, color and black-and-white.

Now that you have set the ASA number in the film-rating window to ASA 10, you are ready to begin shooting with Kodachrome in daylight. You keep the same rating while you are using this film under the same conditions. *Remember: the ASA number must be checked and changed in the film-rating window whenever you use a differently rated film.* For example, Super Anscochrome, Daylight Type, is ASA 100—ten times faster than Kodachrome.

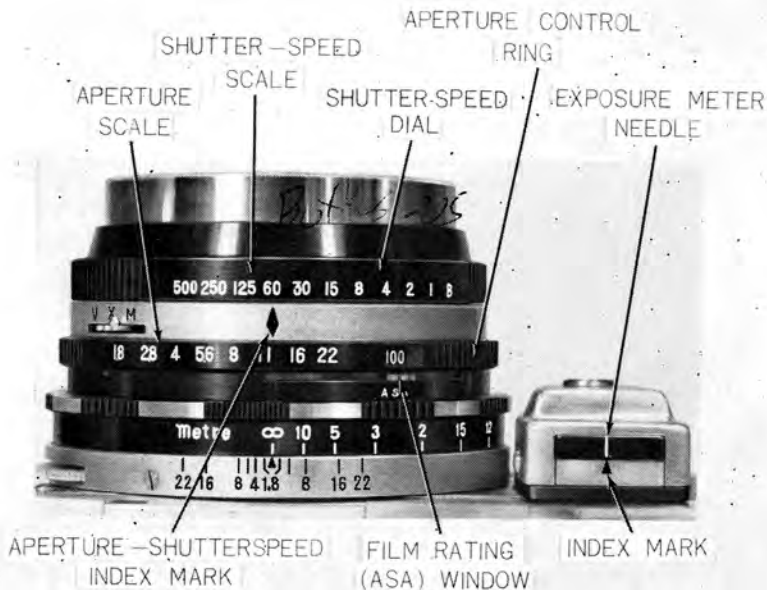


FIGURE 26. *Film Rating Window Set Now on ASA 100. Exposure Meter Needle and Index Mark Are Lined Up Here*

(If you are using the Konica S, skip the next paragraph as the S model has a permanently exposed light meter. Continue with the paragraph following.)

With the ASA rating set in the film-rating window, your next step is to lift up the photo cell flap and snap it into the erect, vertical position. Make sure the snap button on the camera body clicks in the opening at the bottom of the photo cell. When the button clicks into the photo cell, the electrical circuit is complete and the meter is ready to work.

Next you will want to pick the shutter speed you are going to use. On the Konica IIIM (or the Konica S) the shutter speeds on the ring farthest out on the lens barrel are marked off as 500, 250, 125, 60, 30, etc. As you know, these numbers equal 1/500, 1/250 of a second, etc. A shutter speed of 1/60 will eliminate most blurring from camera shake, and if you want to be certain, you can set the shutter speed ring at 1/125 of a second.

The diaphragm openings on the Konica

IIIM run from $f/1.8$ to $f/22$ (on the Konica S they either run from $f/1.8$ or $f/2.8$). Remember: the lowest number of $f/1.8$ means the *largest* actual opening of the diaphragm; the highest number $f/22$ means the *smallest* opening of the diaphragm. Also, you will recall from the section on depth of field that the smallest opening, $f/22$, has the *longest* depth of field (area of sharpness) and the widest opening, say $f/1.8$, has the *shortest* depth of field. You will also remember that the depth of field increases, at all diaphragm openings, *the farther you are from the subject*.

With this brief review out of the way, you will find that using the Konica IIIM's light meter is quite simple. You have set the ASA number of the film in the film-rating window, and the photo cell of your IIIM is erect and snapped into place. (This is not necessary on the Konica S.) Let us suppose that you choose the shutter speed of 1/125 of a second on an average sunny day. Now, point the photo cell at the subject and swing the diaphragm ring back and

forth until the exposure meter needle coincides exactly with the black marker. When needle and marker coincide, your exposure is correct and you are ready to shoot. It's as easy as that.

However, like anything else there is a technique to using your meter correctly so that you get the best results consistently. Here are a few important things to keep in mind:

1. It's best to make your exposure needle coincide with the marker by large swings of the diaphragm ring. When the light is very bright, the needle may disappear from view. Swinging the diaphragm ring widely will bring the needle back to the marker.

2. You can also make the exposure needle coincide with the marker by swinging the shutter speed ring. This is not recommended unless you want a certain depth of field at, say, $f/16$; then, you may want to use the shutter speed ring to make the exposure needle coincide with the marker.

3. Your diaphragm openings may be set

anywhere between the numbers *on the diaphragm ring*, depending upon where the exposure meter needle coincides with the marker.

(Numbers 4, 5 and 6 following do not apply to the Konica S.)

4. On the Konica IIIM, when the exposure meter needle is set at the marker, you can read the light value (LV) number from the *bottom* of the lens barrel.

5. If you want to use your Konica IIIM without a meter, lift the photo cell flap half way up so the flap is at about a 110° angle from the camera body. The photo cell flap is designed to stay in this position when you are not using the meter.

6. Care of your IIIM's meter is important. *Treat it just as carefully as you would your watch.* Make sure the photo cell flap is turned to the closed position when the camera is not in use. The closed flap will also protect your viewfinder-rangefinder windows.

7. Note: You may occasionally find that the exposure meter needle will not move at

all. This simply means that your combination of ASA rating, shutter speed and diaphragm setting is not adequate to take a picture under the conditions you happen to be in. For example, if your ASA setting is 10, your shutter speed is 1/500 and your diaphragm opening is f/22 *and you are in a dimly lit room*, your exposure needle will not move, since it is not possible to take a photo with this combination. The same thing may happen in brightly lit situations when your ASA rating, shutter speed and diaphragm setting are completely out of keeping with the picture-taking situation. As soon as you change your film, ASA rating, shutter speed or diaphragm opening to be more in keeping with the possibilities of the conditions you are in, the exposure meter needle will start to move.

While the chapter on exposure will take up the use of light meters in detail, a preliminary word is necessary here. Having a

camera with a built-in meter, no matter how sensitive and well-designed it may be, will not guarantee correct exposure. You must use the built-in meter correctly. If you will follow these suggestions, you will get consistently good results:

1. You can not rely on exposure meter settings made from the picture-taking position, or what is often called the camera position. Suppose you are shooting a picture of a friend standing 10 feet away. You can not rely on exposure settings made with the camera 10 feet away. Take the camera up to the person and make your setting at about 8 inches away from his face; then, return to your position 10 feet away to take the picture. If you are photographing someone with her face partly in shadow, partly in sunlight, take your camera and meter up to her face and set for an exposure between the light and shadow. This goes for all built-in meters that read reflected light. If you make your

exposure setting too far from the subject, you may get light reflected from areas other than your subject. The "extra" light will register on the photo cell and throw your readings off. For example, if you are photographing a person in a blue shirt against a white wall in sunlight and you take a reading from 15 feet away, you will get a reading of the white wall. The light reflected from the white wall will be many more times intense than that reflected from the person in the blue shirt. You will expose correctly for the white wall and be underexposed for the person. In this case, it would have been better to take your reading from the person's face and shirt, averaging the two, *at a distance of about 8 inches.*

2. If you have experience in using a reflected light meter, use the meter on the Konica IIIM (or the Konica S) in exactly the same way.

3. Do not let the intense light of the sky throw your readings off. For the best results, point your meter down *slightly* toward the ground. When you are making

an exposure setting of a person's face, make sure the meter is pointing right at the face. *Be careful not to cast a shadow into the area you are reading.* Sometimes it's easy to accidentally read a portion of the sky behind the person. Similarly, shooting indoors in available light, if you are photographing someone near a lighted table lamp, *do not* take a reading from a distance. The lamp will throw you off. Take your reading from the dark and light sides of your subject's face and average them.

4. If you can not get near your subject, take a reading from a similar object, but make sure it is receiving the same light. If you are shooting portraits, you can take a reading off the palm of your hand, providing the light falling on your hand and on the subject is the same. With the Konica IIIM (or Konica S) you need one hand to swing the diaphragm needle, while you take a reading of the other hand. This is quite easy to accomplish with your camera in its case hanging from your neck. The neck-strap will give you support.

5. The light meter in your Konica IIIM will read in almost all light conditions. However, like all other light meters, yours has its limitations, too. Your meter will not register in extremely low or extremely bright light. The range in which it will register is very great and it will suffice for almost all situations. For instance, your meter will read under most household illumination and in generally well-lit indoor areas at night. It will also read under a variety of fluorescent lighting. Test it out for yourself. It's a good idea to practice making settings with your meter, this will also give you a better idea of how the light varies in intensity from situation to situation. If the light is too low for a reading and you still want to take a picture without flash, you can always use the "pro's" emergency technique—open the diaphragm to f/1.8 and shoot at the slowest shutter speed you can hold without shaking.

6. If you are using a filter with the Konica IIIM (or Konica S), there are several ways you can adjust for the filter factor. Suppose the filter has a factor re-

quiring 2x more exposure. You can compensate by using method A or B: A. *Either* cut the shutter speed by one half *or* widen the diaphragm opening by one stop; B. cut exposure index (or ASA index) in the film rating window by one half.

Always make sure to change back to your former setting when you remove the filter, provided the conditions are the same. Change shutter speed *or* diaphragm opening to adjust for filter factor, *not both*. Check the instruction sheets that come with filter for proper filter factor.

7. Here is an interesting advanced technique for use when you become more familiar with the light meter on your Konica IIIM (or Konica S). The shutter speeds and numbered diaphragm openings on both of these cameras are scaled in such a way that each shutter speed is equidistant from the next and each numbered diaphragm opening is equidistant from the next. What's more you will find that the spacing of the numbers of the shutter speed ring matches the spacing of the numbers on

the diaphragm ring. Here's what this means in practical terms. Let's say your meter gives you a reading of 1/60 at f/8. Now if you grasp the milled edges of *both* the shutter speed ring and the diaphragm ring *firmly* between thumb and forefinger and move them *together* you will get 1/30 at f/11, 1/15 at f/16, etc., in one direction; and you will get 1/125 at f/5.6, etc., in the other direction. Each of these combinations will allow the same amount of light to reach your film. *Be sure you grasp both rings firmly and do not let them slip, as this may throw your setting off.*

As it happens, the Konica IIIM may also be used with the Light Value System. Light Value numbers are on the bottom of the lens barrel. Line up the white marker with desired Light Value Number and then use thumb and forefinger as described above to proceed. (Konica IIIM owners who are curious about the Light Value System will find a section on it in the earlier part of this chapter on the Konica IIIA.)

Single Frame Shooting With the Konica IIIM

There are just a few steps required to change the Konica IIIM from regular 35mm size shooting to single-frame or 17 x 24mm pictures. But before we go into these steps, let's take a brief look at the viewfinder again.

We have mentioned the fact that the inner bright-lines indicate the limits of the single frame. You will notice that with the camera held in a normal horizontal position, the single frame marking will give you a vertical picture. Check this through your viewfinder. And, if you turn the camera to a vertical position you will get a horizontal single-frame picture. Just remember, only the inner bright-lines give you the single-frame size. These inner bright-lines are also compensated for parallax and for change in the angle of view; you get on film what you see in the viewfinder. The proportions of the single-frame size are the same as for 35mm.

Here is how you prepare the Konica IIM for single-frame operation:

1. Cock your shutter by operating the cocking lever twice. This should always be your first move in changing to single-frame shooting.

2. Open the camera back. With camera back open, stand camera on lens cap with camera bottom pointing toward you.

3. Take single-frame mask out of plastic case. Put the case away carefully so you don't lose it. Return mask to case when changing back to regular 35mm photography.

4. You will notice that the single-frame mask has two horizontal indented grooves. Also, you will find that one of the four corners of the mask protrudes. Place the mask over the regular 35mm size opening, so the indentations of the mask are face down and the protruding corner is on the upper right hand side (see figure 27).

5. Fit the left edge of the single-frame mask into the hooked groove of the film gate at left. Now let mask drop so the

parallel shiny metal bars at left come through holes in mask. (See figure 28.)

6. At upper right corner, move frame-size change lever to right all the way (see figure 28), until mask falls into place. Notice how the edge of the frame-size change lever locks by pushing against right upper protruding corner of mask. Now small window directly above frame size change lever should show a red marker.

7. *Remember: whenever the marker is red, you are set for single-frame operation.*

8. Once the single-frame mask is in place, film is loaded in exactly the same manner as when you are shooting regular 35mm size pictures. As you are loading, operate the cocking lever and shutter release button twice or more to make sure the film is feeding onto the sprockets correctly. Do this with the back lid open.

9. Now close the camera and operate the cocking lever and shutter release button until the marker in the exposure counter window is on No. 1. *Once the single-frame mask is in place the cocking lever will*



FIGURE 27. *Placing Single Frame Mask*

operate only once for each shot—one stroke transports the film the full distance for a single-frame shot.

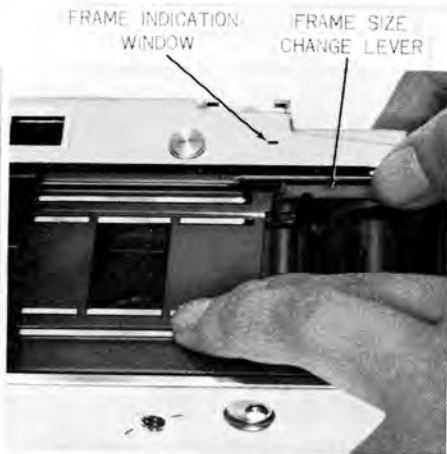


FIGURE 28. *Single Frame Mask in Place*

10. Remember: the exposure counter will move once for every *two* pictures you take. It is very handy to be able to take single-

frame pictures, if you happen to be short of film. Also the single-frame 17 x 24mm size with 1.8mm spacing between frames is useful for documentary type work and the making of film strips. The single-frame size fits the film strip projectors that are often used in scientific and medical photography.

Two important reminders:

1. *When you are taking single-frame pictures make certain that you frame your picture within the inner bright line markers of the viewfinder. Practice sighting and focusing for single-frame shooting before you actually take any pictures. You will soon become familiar with the slight difference in viewing.*

2. *Don't forget to remove the single-frame mask and restore it to its plastic case when you want to return to taking standard 35mm pictures.*

Delayed Action Shutter Release

The Konica IIM has a built-in delayed action timer that is convenient to use. Just shift the MXV selector to the V position. Now select the shutter speed and cock the shutter. When you press the shutter release button, the shutter will go off after a 10 second delay. By the way, you may shift the MXV selector at any time before or after cocking the shutter or releasing the button.

The delayed action shutter release is useful if you want to get in the picture yourself. Your camera must be on a tripod or other firm support. The delayed action device is also useful when you have the camera on a tripod and are shooting at slow shutter speeds of 1/8 of a second or slower. Unless you have a very expensive tripod it is likely to sway imperceptibly after you adjust the controls. The delayed action release will give the tripod time to settle before the shutter goes off. This is especially useful in copying.

If you want to take some hand-held ex-

posures at slow shutter speeds, the delayed action release will give you time to brace yourself firmly.

The delayed action release can be used for all shutter speeds except the *B* position (bulb release). If you use delayed action with the shutter speed set at *B*, you will get a speed of 1/15 of a second. This is not recommended.

Note: Make absolutely certain to shift the MXV selector back to the normal X position when you no longer want delayed action.

Synchroflash Photography

Your Konica IIIM is adjusted for use with flash at all shutter speeds. The most convenient way to use flash with the Konica IIIM is by means of the special Koniflash IIIM attachment which fits into the accessory shoe. The accessory shoe is provided with an internal flash connection that eliminates the need for an external cord.

However, so it can be used with any type of flashgun, the IIIM is also provided

with a standard synchroflash connection at the front of the camera, located just below the light meter. You can use a cord if you prefer.

When using *M* class flashbulbs, timed to peak intensity in about 20 milliseconds, set the MXV selector at the *M* position. Set the MXV selector at *X* for electronic flash.

Note: Synchronization will be adequate with flashbulbs even when the selector is at position *X* provided shutter speeds are slower than 1/30 of a second. This is not recommended. With the MXV selector at the *V* position for delayed action, your IIIM will be synchronized as if the selector were at position *X*. It's best to keep the MXV selector at the *X* position except when you are shooting flash or using delayed action.

See Chapter 8 for more information on flash techniques.

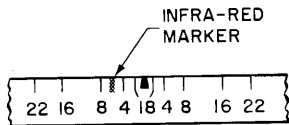
Infra-Red Correction Mark

Infra-red light or invisible long wave radiation is often useful in penetrating haze

or fog. Infra-red photography used to penetrate haze requires that special infra-red film be combined with an infra-red filter. With an infra-red filter and ordinary film it is possible to create spectacular cloud effects that tend to be "unrealistic" unless they are carefully handled. The filter has a factor of 8 to 10X. This means that your exposure must be 8 to 10 times greater than normal.

Infra-red photography using infra-red film also necessitates a change in focusing.

For this purpose, the Konica IIIM, the Konica IIIA and the Konica S are provided with an infra-red focusing marker to the left of center on the depth-of-field scale. The marker is a red line on the Konica IIIA and IIIM; it is a red dot on the Konica S.



When you are using infra-red film with an infra-red filter, first focus in the normal manner and then shift the distance number at which you are focused over to the red marker. If you are focused on a subject 10 feet away, shift the 10 foot marking on the distance scale to the red marking point on the depth of field scale and you are ready to shoot.

Operating Sequence for the Konica IIIM

Make the following steps a habit in operating your Konica IIIM. In this sequence, we are assuming that the camera has been loaded and the exposure counter reads No. 1:

1. *Set the proper ASA number in the film rating window.* You keep this number as long as you are using the same type of film or the same exposure index.
2. *Remove the lens cap and attach the*

lens hood—the Konihood. Use a lens hood at all times. It avoids flare, sunspots and un-



FIGURE 29. To hold Konica IIIA immobile in horizontal position, press firmly against cheek. Keep both eyes open when sighting and focusing. (Make believe you are looking over model's shoulder to get correct viewpoint.)

pleasant reflections; it also protects the lens.

3. Lift photo cell flap and snap it into erect, vertical position. Make sure the but-



FIGURE 30. Method of taking vertical pictures keeping both eyes open. Hold breath for moment; next, let out breath; then, take picture so there will be no body movement.

ton on the camera body clicks into the opening at the bottom of the photo cell and locks. This completes the electrical circuit.

4. Operate the cocking lever twice.



FIGURE 31. Another method of taking vertical pictures. Always place feet firmly apart to obtain solid stance.

(Once if you are shooting single frames.)

5. Set shutter speed ring to desired speed.



FIGURE 32. To hold Konica IIM immobile in horizontal position, press firmly against cheek. Keep both eyes open when sighting and focusing. (Make believe you are looking over model's shoulder to get correct viewpoint.)

6. Take the camera up close to your subject, approximately 8 inches away, and train



FIGURE 33. Method of taking vertical pictures keeping both eyes open. Hold breath for moment; next, let out breath; then, take picture so there will be no body movement.

the photo cell on the subject. Turn the diaphragm ring until the exposure meter needle is in exact alignment with the marker.

7. Return to picture-taking position; focus and compose picture in viewfinder-range-finder.

8. Press shutter release button *gently*.

9. Make sure to repeat step No. 6 if your next shot is in a different light or of another subject.

Note: It is suggested that you read Chapter 4 on exposure next.