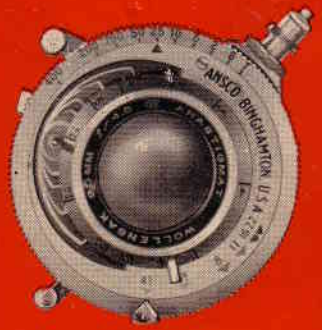
Ansco

BINGHAMTON, NEW YORK

ANSCO TITAN 20



Instruction Manual

TITAN 20 • PARTS AND CONTROLS

1. Film Supply Knob
2. Shutter Release Button
3. Shutter Cocking Lever
4. Color-Coded "Zone Focusing Scale"
5. Eye-Level Viewfinder
6. Shutter Speed Scale
7. Opening Button
8. Film Winding Knob
9. Side Brace
10. Cable Release Socket
11. Focusing Post
12. Color-Coded Lens Opening Scale
13. Bayonet Flash Connector
14. Camera Back Latch

Your new Titan 20 takes pictures this size (2¼" x 2¼") on Ansco 120 Roll Film.

Spread out this double page

and a picture of the Titan Camera will be visible while you read the rest of this booklet.

Photographs unlimited

The Ansco Titan Camera is a superb folding camera you will be proud to own. Its precision construction, dependable performance and durability are backed by Ansco's long experience in making fine cameras. With a top-quality coated f/4.5 Ansco Anastigmat Lens and a shutter internally synchronized for flash, you will find it easy to take pictures anytime, day or night, with your Titan. And don't forget that the 90mm Titan lens, color-corrected and coated, produces excellent color photographs, as well as fine black-and-white pictures.

You will get the following number of pictures with your Titan on Ansco 120 Roll Films:

Black-and-White Films—(standard 2¼" x 3¼", 8-exposure rolls) . . . 12 - 2¼" x 2¼" pictures

Color Films—(standard 2¼" x 3¼", 8-exposure rolls) . . . . . 12 - 2¼" x 2¼" pictures

Color Films—(standard 2¼" x 3¼", 6-exposure rolls) . . . . . 9 - 2¼" x 2¼" pictures

Getting acquainted with the TITAN . . .

Before you actually go out to take pictures, take time to get acquainted with your new Titan. The Titan is a precision instrument which can give you excellent results under widely-varied conditions, but it is important to learn just how to operate the camera controls. So, **before** you load your Titan, sit down with the camera and this instruction booklet and actually operate the controls as you read through the following section.

Opening the camera . . .

To open the camera, depress the button (7) on top of the camera next to the film winding knob. The front panel will then spring down to form a platform for the lens mount. (To close the camera, press down on the side braces (9) and press the platform up and in until it clicks shut.)

The "Zone-Focusing" feature . . .

One of the first things you will notice about your Titan is the multi-colored design on the lens panel. This is the new "Zone-Focusing" feature which greatly simplifies everyday focusing problems. Focusing the Titan is a simple manual operation; the estimated camera-to-subject distance (in feet) is placed opposite the focusing post by turning the focusing ring. The zone-focusing feature then automatically enables the photographer to tell the nearest and farthest distance that subjects in the view will be in acceptable focus. This is accomplished by "reading" the color of the lens opening or aperture he is using.

The accuracy with which you focus the Titan is, of course, dependent upon your ability to judge distances. The following "yardsticks" may be helpful in developing an ability to judge distances accurately:

Height of the average man ..... About 6 feet
Length of an automobile ..... About 15 feet

Setting the shutter speed . . .

The shutter speed scale (6) on the Titan is calibrated in fractions of seconds indicated as follows: 400, 200, 100, 50, 25, 10, 5, 2 and also T and B. The markings designate the fractional part of a second your lens will remain open (400 is 1/400th, 50 is 1/50th, etc.,); shutter speeds are selected by rotating the large milled ring until the appropriate figure is opposite the black triangular shutter speed indicator. You will notice that the numbers 400, 200, 100 and 50 are in black. This indicates that SM and SF type flash lamps **only** are to be used at these speeds.

The shutter is a precision set-and-release type; the shutter must be set, or cocked, before it can be released. The shutter is cocked by pressing the cocking lever (3) up as far as it will go. The shutter should be released by pressing down **slowly** on the shutter release button (2) on top of the camera. It will pay you to practice this slow steady pressure several times, for quick jabs on the shutter release often cause camera movement and blurred pictures. (You can actually watch your shutter work by opening the camera back by sliding the latch (14) and pointing the lens toward the light. Operate the shutter at various settings noting the differing times it remains open.)

Adjusting the lens opening . . .

Your Ansco Titan is equipped with a 90mm Ansco Anastigmat f/4.5 Lens. This is a high-quality, color-corrected lens, coated to reduce reflections and flare. Note: The blue appearance of the Titan lens is due to the special anti-reflection coating on all air-glass surfaces. This coating decreases internal lens reflections and gives brighter, crisper pictures.

Lens openings from f/4.5 to f/22 are engraved on the lower right side of the lens panel. Set the lens opening indicated by the exposure table, your meter or your calculator by merely moving the lever next to the lens opening scale (12) to a position opposite the appropriate "f" number. The lens opening, as its name implies, is a circular hole or aperture which regulates the amount of light which can reach the film in a given time. It is important to remember that **the LARGER the f number, the SMALLER the opening.** (The effects of moving the aperture lever can be observed by setting the shutter on T, cocking it and tripping it open. Hold the camera toward a source of light with the back open and watch the results of moving the lens opening lever.)

As a part of the zone-focusing feature, each lens opening is designated with a different color, f/4.5 is white, f/5.6 is orange, etc. Corresponding colors on the zone-focusing scale indicate distance limits of acceptable definition in the field of view.

The picture-taking routine . . .

Most photographers favor using a standard procedure when taking pictures. This avoids forgotten details and mistakes. Now that you are acquainted with your camera controls, run through the following sequence before you load the camera with film. It's a good investment in better future pictures.

1. Carefully estimate camera-to-subject distance and focus the camera by setting the number of feet opposite the focusing post.

2. Select the shutter speed and lens opening indicated by the exposure table, your calculator or meter.

3. Cock the shutter. *DON'T FORGET THIS!*

4. Hold the camera level and steady against your face.

5. Aim the camera accurately being sure all of the subject is in the viewfinder.

6. Depress the shutter release button slowly and steadily.

7. Wind the film immediately after each "exposure".

Now load the TITAN

Now that you are familiar with the Titan Camera controls, you are ready to load the camera with film for real picture-taking.

Choose the right film . . .

Getting the kind of pictures you want depends a lot on using the film best suited for the purpose. There are fine Ansco Films to fit almost every picture-taking need. The following Ansco Films are available for your Titan in the 120 roll size:

plenachrome

The great outdoor film. Plenachrome is a speedy, dependable orthochromatic film. It has a wide latitude which compensates for ordinary exposure errors.

supreme

The all-purpose film. A high-speed, fine-grain panchromatic film for all-around picture-taking. It has the wide latitude characteristic of Ansco black-and-white films and is suitable for pictures by either natural or artificial light.

superpan press

For pictures at night. With exceptionally high speed, Ansco Superpan Press is the choice for action pictures and for picture-taking under adverse lighting conditions. Superpan Press is ideal for indoor and night photographs.

Ansco Color, Daylight Type

The **True-Color film.** Ansco Color Film gives beautiful full-color transparencies suitable for viewing, projection or printing on Ansco Color Printon. Daylight Type Ansco Color is balanced for use outdoors in bright sunlight.

Ansco Color, Tungsten Type

For **True-Color** pictures indoors. Tungsten Type Ansco Color Film is designed for picture-taking indoors with the popular 3200K lamps—or with other illumination, providing suitable filters are used over the Titan lens.

Loading

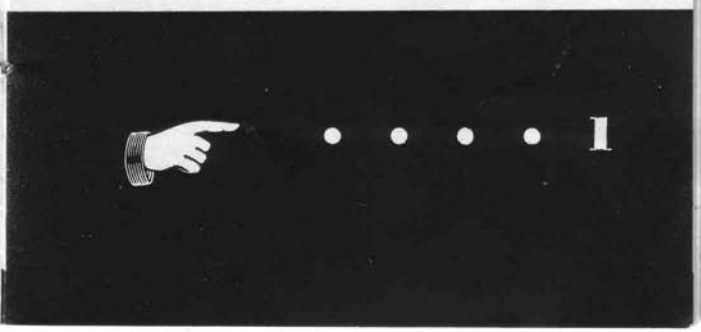
After you have selected the film you want to use in your Titan, follow these four steps for easy loading. (Incidentally, it is a very good idea to standardize on two or three films so that you learn their exact performance and characteristics).

1. Open the camera back by sliding the camera back latch (14) in the direction of the arrow.

2. Pull out film supply knob (1). Insert the new roll of film into the supply chamber. Push knob back in after the film has been placed in the chamber. You will find an empty spool at the winding knob end of the Titan. It is on this spool that the film is wound.

3. Break the seal and pull the colored-paper backing across the camera back, making sure the black side of the paper faces the lens. Engage the end of the paper in the longest slot of the take-up spool and give the winding knob at least one turn to insure that the paper is securely engaged.

4. Close the camera back and wind the film by turning the winding knob (8) in the direction of the arrow until the number "1" appears in the window. (You will see a pointing hand and four dots just before the number "1" appears).



Zone focusing

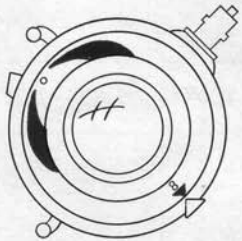
Your Titan, like most adjustable folding cameras, is focused by placing the estimated camera-to-subject distance opposite the focusing post on the camera (11). If the distance has been accurately judged, the subject will be in sharp focus. With the Ansco Titan "Zone-Focusing" feature, you also have a convenient way of knowing what zone in front of and what zone behind your subject will be in acceptable focus.

This information is contained in the colored crescents adjacent to the focusing scale and in the colored marks (triangles) along the lens opening scale. Just note the color of the triangle beneath the lens opening used and refer to the corresponding colored crescent to determine the zones in which the view will be in acceptable focus. (This is commonly called Depth-of-Field. Here is how the feature is used:

- The lens opening and shutter speed are selected.
- The distance from lens to subject is estimated.
- This distance is set opposite the focusing post.
- Now, reading the color on which your lens opening lever is set, you can tell at a glance from what near distance to what far distance your picture will be in acceptable focus.

Example:

1. Camera-to-subject distance is 10 feet.
2. A lens opening of f/8 is being used, (f/8 has a red triangle adjacent).
3. Using the red part of the Depth-of-Field Scale with camera focused at 10 feet, the red bars intersect the footage scale at about 8′ and at about 13′ INDICATING THAT ALL OBJECTS WITHIN THOSE DISTANCES FROM THE LENS WILL BE ACCEPTABLY SHARP.



For exact distances in inches and feet, refer to the following Depth-of-Field Table:

Depth of field table for TITAN camera

Distance in Feet	White f/4.5	Orange f/5.6	Red f/8	Green f/11	Blue f/16	Black f/22	Distance in Feet
Inf.	65′ —Inf.	52′ —Inf.	37′ —Inf.	26′10″—Inf.	18′ 5″—Inf.	13′ 5″—Inf.	Inf.
50 ft.	28′ 5″—Inf.	25′ 8″—Inf.	21′ 2″—Inf.	17′ 6″—Inf.	13′ 5″—Inf.	10′ 7″—Inf.	50 ft.
25 ft.	18′ 1″—40′ 6″	17′ —47′ 6″	14′11″—75′ 7″	12′11″—Inf.	10′ 7″—Inf.	8′ 9″—Inf.	25 ft.
15 ft.	12′ 3″—19′ 6″	11′ 8″—21′	10′ 8″—25′ 3″	9′ 7″—34′	8′ 4″—73′9″	7′ 1″—Inf.	15 ft.
10 ft.	8′ 8″—11′10″	8′ 5″—12′ 4″	7′10″—13′ 8″	7′ 4″—16′	6′ 6″—22′	5′ 9″—39′ 3″	10 ft.
8 ft.	7′ 2″— 9′ 1″	6′11″— 9′ 5″	6′ 7″—10′ 3″	6′ 2″—11′ 5″	5′ 7″—14′ 2″	5′ —19′10″	8 ft.
7 ft.	6′ 4″— 7′10″	6′ 2″— 8′ 1″	5′11″— 8′ 8″	5′ 7″— 9′ 6″	5′ 1″—11′ 4″	4′ 7″—14′ 8″	7 ft.
6 ft.	5′ 6″— 6′ 7″	5′ 5″— 6′ 9″	5′ 2″— 7′ 2″	4′11″— 7′ 9″	4′ 6″— 8′11″	4′ 2″—10′10″	6 ft.
5 ft.	4′ 8″— 5′ 5″	4′ 7″— 5′ 6″	4′ 5″— 5′ 9″	4′ 2″— 6′ 2″	3′11″— 6′10″	3′ 8″— 8′	5 ft.
4 ft.	3′ 9″— 4′ 3″	3′ 8″— 4′ 4″	3′ 7″— 4′ 6″	3′ 6″— 4′ 8″	3′ 3″— 5′ 1″	3′ 1″— 5′ 8″	4 ft.
3½ ft.	3′ 4″— 3′ 8″	3′ 3″— 3′ 9″	3′ 2″— 3′10″	3′ 1″— 4′	2′11″— 4′ 4″	2′ 9″— 4′ 9″	3½ ft.

Exposure is important . . .

Exposure errors account for more lost pictures than any other single fault. Therefore, check carefully to be sure you have picked the correct table and set the camera for the correct picture-taking situation. Further details on exposure can be found in the Ansco booklets, "Expert Camera Operation Made Easy' and "Better Photography Made Easy".

Exposures outdoors . . .

For use with Plenachrome and Supreme Films (For Superpan Press Film, give one-half the indicated exposure—use next **smaller** lens opening or next **higher** shutter speed. For Ansco Color Films, see exposure charts packed with the film).

OUTDOOR EXPOSURE TABLE

Lens Openings:	f/4.5	f/5.6	f/8	f/11	f/16	f/22
Bright Sunlight	.....	1/400	1/200	1/100	1/50	1/25
Hazy Sunlight, Soft Shadows	1/300	1/200	1/100	1/50	1/25	1/10
Bright Overcast, No Shadows	1/200	1/100	1/50	1/25	1/10	1/5
Dull Overcast	1/100	1/50	1/25	1/10	1/5	1/2

Double above exposures when taking pictures during the hour after sunrise or hour before sunset and for winter scenes with no snow and for backlighted subjects.

Pictures by artificial light . . .

You have probably noticed the "T" and "B" on the Titan shutter speed scale. The "T" stands for Time. When the shutter is tripped at this setting, it will remain open and will not close until the shutter is tripped the second time.

"B" stands for Bulb (a survival from days when photographers used a rubber bulb). When the shutter is tripped at this setting, it remains open as long as the shutter release button is held down. When the button is released, the shutter automatically closes again.

These two settings are generally used for photographs at night and indoors. They are used on the Titan for exposures of more than 1/2 second duration. "Bulb" is normally used for exposures **less than** 15 seconds; "Time" for **longer** exposures.

It is desirable to use a cable release for Bulb and Time exposures, since it serves as a shock absorber preventing movement of the camera as the shutter is tripped. The cable release screws into the socket (10) at the left side of the lens body.

Bulb and Time exposures are not automatically timed. Therefore, such exposures must be measured either by counting or by timing with a clock or watch.

Use the following tables for Instantaneous exposures by artificial light. *Always use a tripod or other firm support when using shutter speeds of less than 1/25th of a second.*

Pictures by flash . . .

Don't put your Titan away when the sun goes down. There are many excellent opportunities to get indoor and outdoor pictures at night. Your Ansco Titan shutter has built-in flash synchronization. You won't need a separate synchronizer; any flash gun with a bayonet-type connector can be used to take flash pictures with your new Titan. Carefully attach the flash gun to your camera and use the flash exposure table below to get good flash pictures.

This table is for flash exposures of average subjects indoors in rooms with light-colored walls and surroundings. For dark-colored walls or outdoors at night, double the indicated exposures.

FLASH EXPOSURE TABLE

Ansco Films	Flashlamp	Shutter Speed
Supreme	SM, SF	1/200
Superpan Press	SM, SF	1/200
Ansco Color Daylight Type	5B	1/25
	22B	
	25B	
Ansco Color Tungsten Type	5	1/25
	22	
	25	

IMPORTANT: Your Ansco Titan is fitted with a factory-adjusted internal synchronizer and a shutter speed scale marked in red and black. Use black shutter speed settings (1/400th to 1/50th) with SM and SF type bulbs only.

The red shutter speed settings (1/25th and slower). Permit use with all flashlamps at their open-flash guide numbers.

For f/ numbers not shown on the lens opening scale, set the lens opening lever at a point between the number next higher and next lower than the desired f/ number. For f/6.3, for example, set the lever between f/5.6 and f/8.

Distance in Feet — Lens to Subject					
4	6	8	10	15	25
f/16	f/11	f/8	f/6.3	f/4.5	.....
f/22	f/16	f/11	f/9.5	f/6.3	f/4.5
f/13	f/8	f/6.3	f/5.6	.....	.....
f/16	f/11	f/8	f/6.3	f/4.5	.....
f/13	f/8	f/6.3	f/5.6	.....	.....
f/19	f/13	f/9.5	f/8	f/5.6	.....
	f/22	f/16	f/13	f/9.5	f/5.6
f/19	f/13	f/9.5	f/8	f/5.6	.....

Pictures by floodlamps . . .

Expensive equipment is not required for good pictures indoors. All you need is one or two floodlamps, your Ansco Titan and either Ansco Superpan Press or Supreme Film.

FLOODLAMP EXPOSURE TABLE

For Use With Superpan Press Film

(For Supreme Film, double the indicated exposure—next **larger** lens opening or next **lower** shutter speed. For Ansco Color Film, see exposure information packed with the film.)

Suggested Exposure in Seconds with 1 No. 1 and 1 No. 2 Floodlamp in Metal Reflectors at Distances Shown

Lens Opening	4 Feet	6 Feet	8 Feet
f/22	1/10	1/5	1/2
f/16	1/25	1/10	1/5
f/11	1/50	1/25	1/10
f/8	1/100	1/50	1/25
f/5.6	1/200	1/100	1/50
f/4.5	1/400	1/200	1/100

How to unload your TITAN

When the last picture has been taken, wind the film until you can no longer see the paper through the red window. Then open the back of the camera. The exposed roll may be removed by pulling out the film winding knob (8).

Fold the pointed end of the colored paper and seal the spool with the "Exposed" sticker. Your film is now ready to be processed at home or taken to your Ansco dealer for finishing.

Be sure to remove the empty spool from the supply chamber of the camera and place it in the take-up chamber so as to be ready for the next roll of film.

Care of your TITAN 20

Your new Titan, like a fine watch, is a precision instrument and should be treated with care. Do not subject it to conditions of high temperatures and humidities. Do not allow it to lie in the sun for extended periods of time. Do not leave it in the glove compartment of your car.

The front and rear elements of your Titan lens should be carefully cleaned from time to time with a soft lens tissue or fine linen handkerchief. If fine particles accumulate inside your Titan, blow them out carefully. Protect your camera from sand, snow and rain.

Hints for better pictures

1. Always load and unload the Titan in subdued light—never in direct sunlight.

2. Adopt a picture-taking routine (see pages 6 and 7).

3. Do not allow strong light to shine on the camera lens as you take the picture.

4. Focus accurately. If you are not sure of distances, pace them off. One step equals about three feet.

5. Estimate light conditions carefully. Use an exposure meter or calculator, if possible.

6. When you must "stop" subject motion, use a higher shutter speed, or choose a camera position so that the line of movement is toward you.

7. Hold the camera level and steady as you release the shutter. **Always use a tripod or firm support for exposures longer than 1/25th of a second.**

8. Immediately after making an exposure, wind the film to the next frame.

The TITAN Eveready Case

An excellent eveready case for your Titan Camera is offered in genuine top-grain cowhide leather complete with shoulder strap. Finished in smooth, golden-suntan leather with contrasting linen stitching and equipped with a duraluminum tripod screw, this case is one you will be proud to own.

It is a convenient way to carry your Titan wherever you go. It also affords excellent camera protection. The eveready front falls away when the case is opened and the camera is ready for immediate picture-taking.

Accessories for the TITAN

GLASS FILTERS FOR COLOR PHOTOGRAPHY

Ansco glass filters for color photography will help make your color photographs even better. Use these handy, durable filters (your Ansco Titan takes size 5 in a standard adapter ring or filter-accommodating sunshade. All Ansco glass filters are made with selected glass mounted in a protective spun-aluminum ring. Each filter is clearly labeled and comes in a felt-lined aluminum box which serves as a storage compartment for the filter when not in use.

Choose your Titan filters from the following:

1. **The Ansco UV-16 Filter** — for medium haze correction in outdoor photographs. Also for clear flash-lamp exposure with Ansco Color Film, Tungsten Type, (no increase in exposure necessary).
2. **The Ansco UV-17 Filter**—for greater haze correction than is available with the UV-16 filter. Also for use in snow, mountain and aerial photography, (no increase in exposure necessary).
3. **The Ansco Conversion Filter No. 10**—for use with Ansco Color Film, Daylight Type, under 3200K illumination, (increase exposure to four times that which would be necessary with Tungsten Type Ansco Color Film under the same circumstances).
4. **The Ansco Conversion Filter No. 11**—for exposing Ansco Color Film, Tungsten Type, under daylight illumination conditions (use the same exposure that would be required by Daylight Type Ansco Color Film under the same circumstances).

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NOTE: If you want further information on Ansco Products or if you would like help with photographic problems, write to: Customer Service Department, Ansco, Binghamton, N. Y.

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