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# argus C-20

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# This is your

Your new Argus C20 is a precision camera with outstanding ease of operation. Its many fine features put it in an advanced class, yet the Argus system of Color-matic settings will give you beautiful color slides or black-and-white pictures your very first try.

This book provides detailed information on the features of the C20 and how it operates. Familiarize yourself with the lens, the shutter, and the rangefinder *before you load the first roll of film*. This will acquaint you with the camera and prevent your missing an important picture through lack of familiarity with its operation.

Because Argus products are constantly being improved, minor changes in the appearance of this product may not be included in this instruction book.

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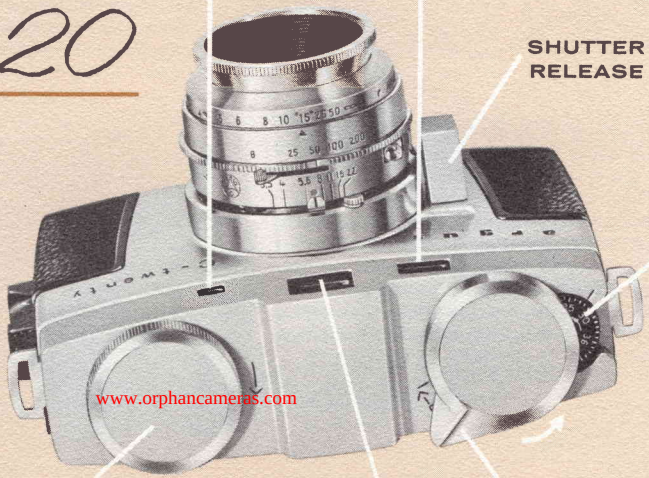
C-20

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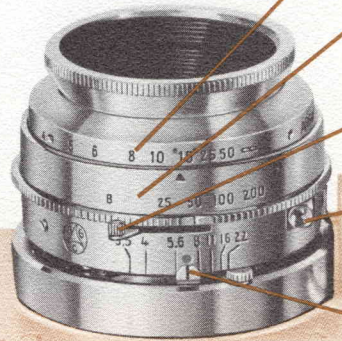
# The C-20 Shutter

The shutter speed setting controls the length of time the shutter is open when the picture is taken. Numbers on the scale are fractions of a second and have "click stops." They are selected by turning the knurled ring to bring the index mark directly in line with the desired number. *Always set the index mark on the number.*

When the index mark is set on "B", the shutter will remain open as long as the shutter release is held down. This is for time exposures. A tripod and cable release are recommended to prevent camera movement when making these longer exposures.

To work the shutter without film in the camera, or to intentionally double expose, move the wind lever into the "R" position (indicated on the top of your camera), then release.



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**DISTANCE SCALE AND INDEX**

If you focus with the rangefinder, this scale gives you the distance from the camera to the subject.

**SHUTTER SPEED**

Controls opening and closing of the shutter according to exposure necessary or type of subject.

**SHUTTER COCKING LEVER**

This lever cocks the shutter for each exposure.

**CABLE RELEASE SOCKET**

Your C20 shutter accepts a standard ASA tapered thread cable release—recommended for time exposures.

**APERTURE SETTING**

This adjustment controls the amount of light that passes through the lens while the shutter is open.

# The C-20 Lens

The 44mm f/3.5 Cintar lens is coated and fully color-corrected for brilliant pictures. The lens is automatically focused by the rangefinder.

The amount of light passing through the lens when the picture is taken is controlled by the aperture (f/stop). In the C20, you have a wide range of aperture settings from the smallest opening, f/22, to the largest, f/3.5. You can set the aperture on each number or on any intermediate position. The setting clicks into position at each number and at the Color-matic setting between f/5.6 and f/8.

If the aperture is too large for the lighting conditions, pictures will be light and washed-out. If the aperture opening is too small, pictures will be dark and lacking in detail. You can use the Color-matic aperture settings on page 7 for outdoor pictures in bright sunlight. For other lighting conditions, see the outdoor exposure guide on page 12 and the flash exposure guide on page 14.

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SUBJECT OUT OF FOCUS



SUBJECT CORRECTLY FOCUSED

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# Focusing the Lens

The C20 lens is automatically focused when the rangefinder images are lined up as shown on the opposite page.

The left eyepiece on the back of the camera is the rangefinder window. To use the rangefinder, hold the camera as illustrated and turn the focusing ring with the thumb and forefinger until the images are lined up. Then look through the viewfinder window to take the picture.

The camera can be held horizontally or vertically. Illustrations at right show how to hold it comfortably. As you become acquainted with the camera, you may develop your own techniques for holding and focusing.

It is usually best to focus on the main subject in your picture. However, more than the main subject will be in focus in the picture due to what is called a *range of sharp focus*. This range of sharpness increases with smaller aperture settings and greater camera-to-subject distances. It decreases with larger aperture settings and as you move closer to the subject.





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# Color-matic Settings

**The Argus C20 Camera has a full range of adjustments, but can be used like the simplest camera.**

Color-matic settings on the aperture, distance, and shutter speed scales provide correct exposures for average subjects in bright sunlight. If desired, Color-matic settings can be used for the shutter speed and aperture only, and each picture can be focused using the rangefinder.

For *outdoor* snapshots, use the Color-matic settings for your film, then wind film and snap each picture without any further adjustments.

**Yellow markings** are used with Kodachrome Daylight Color Film (ASA 10).

**Red markings** are used with Ektachrome or Anscochrome Daylight Color Films and with Plus-X, Supreme, and similar black-and-white films (ASA 32-80).




*When using all the Color-matic settings, subjects from 6 feet to 60 feet will be in focus. When your subject is outside this distance range, focus as explained on page 6.*

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# FUNDAMENTALS OF GOOD EXPOSURE

On your C20, the aperture, shutter speed, and distance scales work together to properly expose the film and provide a sharp, clear picture. The right combination of shutter speed and aperture opening always provides correct exposure for the picture you are taking.

Color-matic settings provide best exposure in bright sunlight with average subjects; however, other settings are necessary for other light conditions. Faster shutter speeds with larger aperture openings can be used when you wish to stop action. Smaller aperture openings may be used for a greater range of sharp focus.

For example, an average exposure in bright sunlight might call for 1/100 of a second at f/8. A faster shutter speed can be used if some compensation is made in the aperture setting. If you change the shutter speed from 1/100 to 1/200 of a second for example, the shutter is open only half as long. To compensate for this, move the aperture setting from f/8 to f/5.6 (one stop) and this provides an opening twice as large. In this way you compensate for the faster speed of the shutter.

In the same way, a shutter speed decreased from 1/100 of a second to 1/50 of a second would require the aperture opening to be changed from f/8 to the smaller opening of f/11 (one stop). *Any of these combinations will provide the same exposure.*

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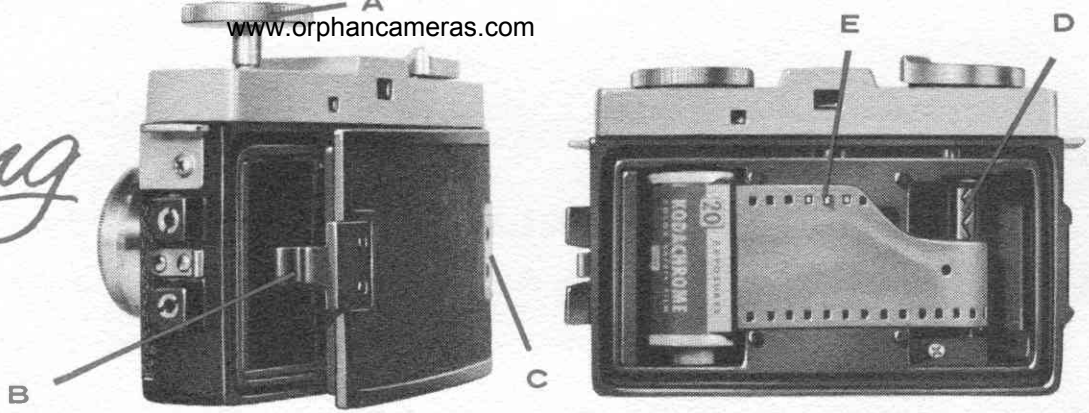
# Loading




Pull up rewind knob (A), lift up back latch (B), and remove back from camera. Note how hinge clip (C) fits into camera body.

Place film cartridge in camera and push rewind knob down, turning if necessary, to engage cartridge spool. Turn wind lever until beveled side of zig-zag slot (D) appears and thread film into slot.

Move wind lever back and forth until holes in film engage sprocket (E). Fit back hinge clip (C) into camera body and close back. Make certain back latch (B) is firmly fastened. (1) Advance film by moving wind lever back and forth, as many times as necessary, until film will wind no further. Cock and release shutter. (2) Advance film and cock and release shutter again. *Winding film for each picture requires about 2½ full strokes (or more shorter strokes) at the beginning of the roll, less towards the end of the roll.* (3) Wind film another frame and cock and release shutter again, and (4) wind film one more frame. Set exposure counter dial in direction of arrow to 20 or 36, according to exposures in cartridge. Counter then indicates exposures left on film. You are now ready to cock the shutter for the first picture.

Wind film and cock shutter for each exposure.

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# Unloading

Your film has been completely exposed when the exposure counter reads "O". BEFORE BACK IS OPENED, film must be rewound into film cartridge. To rewind, hold wind lever in "R" position (F) to disengage the winding mechanism. *Do not force lever against "R" position stop as this will cause film to bind.* Then turn rewind knob in direction of arrow until you feel a change of tension (a slight tug) as the film leaves the take-up spindle.

Turn rewind knob several extra turns to make certain film is completely in cartridge. Back can then be opened and rewind knob pulled up to remove film cartridge.

Have film processed as soon as possible after exposing. All types of film may be taken to your Argus dealer.

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# Using your C-20 outdoors

Beautiful outdoor pictures and color transparencies are easy with the C20. Check the picture composition through the camera viewfinder before snapping the shutter. This will always result in pictures with more interest, and you will be certain that you are not cutting off an important part of the subject. Try framing the scene with some nearby object in the foreground, and include people when you can to add human interest. Watch for that unusual angle from which to take the picture, or try a close-up using a neutral background to place emphasis on the subject.

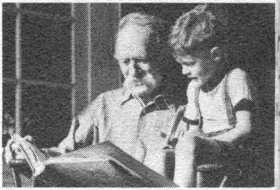
The outdoor exposure guide on page 12 will help you to select the correct aperture and shutter settings for different light conditions with *average* outdoor picture subjects such as nearby people, gardens, houses, or light and dark objects in about equal proportions. Close aperture one stop from chart setting for *light subjects* (distant scenery, marine, beach, and snow scenes, light colored subjects dominating). Open aperture one stop more for *dark subjects* (dark foliage, flowers, animals, and buildings).



Shoot head-on to stop action.



Scenes make fine color slides.



Your C20 takes excellent portraits.

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| COLOR FILMS | SHUTTER SPEED | BRIGHT SUN | HAZY SUN | CLOUDY BRIGHT | CLOUDY DULL |
|---|---|---|---|---|---|
| Ektachrome Daylight<br>Anscochrome Daylight | 50 | f/11 | f/8 | f/5.6 | f/4 |
| Kodachrome Daylight (or indoor type with filter*) | 50 | between f/5.6 & f/8 | between f/4 & f/5.6 | f/3.5 | **1/25** at f/3.5 |
| Ektachrome Type F*<br>Anscochrome Flash Type*<br>(*with filter) | 50 | between f/8 & f/11 | between f/5.6 & f/8 | between f/4 & f/5.6 | f/3.5 |
| Super Anscochrome Daylight | 100 | f/16 | f/11 | f/8 | f/5.6 |

## OUTDOOR EXPOSURE GUIDE for average subjects

| BLACK-AND-WHITE | SHUTTER SPEED | BRIGHT SUN | HAZY SUN | CLOUDY BRIGHT | CLOUDY DULL |
|---|---|---|---|---|---|
| Kodak Plus-X<br>Ansco Ultra-Speed Pan | 100 | f/16 | f/11 | f/8 | f/5.6 |
| Ansco Supreme | 100 | f/11 | f/8 | f/5.6 | f/4 |
| Kodak Panatomic-X | 50 | f/11 | f/8 | f/5.6 | f/4 |
| Kodak Tri-X | 100 | f/22 | f/16 | f/11 | f/8 |

*Filters must be used with indoor-type color films exposed in daylight. Consult manufacturer's instructions.

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# Flash with your C-20




Unscrew bottom cap of flashgun and install two size C PHOTO-FLASH batteries or a BC unit. To attach the flashgun, plug it into side of camera. Insert flashbulb by pushing it in as far as it will go. Do not twist flashbulb after it is in.

Since the intensity of light changes with the distance from the subject, it is necessary to change aperture settings when camera-to-subject distances change. The guide number system on page 14 will help you to determine correct flash exposures.

Guide numbers are given in the table for combinations of popular films and Sylvania flashbulbs. With other make flashbulbs consult the flashbulb carton. Divide the appropriate guide number by the number of feet between your camera and the picture subject to obtain the correct aperture setting.

Your C20 is automatically synchronized for bayonet-base bulbs and for electronic flash with "X" delay.

*To eject used flashbulb, push red button on top of flashgun.*

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# FLASH EXPOSURE GUIDE

EXAMPLE: For Ektachrome Type F and Sylvania Bantam 8 flashbulbs, the guide number is 80. With a subject at 10 feet, divide 80 by 10, which equals 8. Set the aperture at f/8.

Use a shutter speed of 1/25 second with wire-filled (8, 25, 25B) flashbulbs. Use either 1/25 or 1/50 second with gas-filled (SF) flashbulbs.

With electronic flash units, any shutter speed between 1/25 and 1/200 may be used.

M2-type flashbulbs require a special reflector. Guide numbers are supplied by film and bulb manufacturers.

Guide numbers for electronic flash units are furnished by the unit's manufacturer.

| FILM ▼ BULB ▶ | Sylvania SF | Sylvania Bantam 8 | Sylvania Press 25 | Sylvania Press 25B |
|---|---|---|---|---|
| Ektachrome Type F Anscochrome Flash Type | 55* | 80 | 130 | — |
| Kodachrome Type F | 45* | 65 | 100 | — |
| Kodachrome Type A | 55 | 60** | 80** | — |
| Ektachrome Daylight Anscochrome Daylight | Use blue flashbulbs with Daylight Color Film | | | 95 |
| Kodachrome Daylight | | | | 52 |
| Super Anscochrome Daylight | | | | 170 |
| Kodak Tri-X | 160 | 205 | 320 | — |
| Ansco Ultra-Speed Pan Kodak Plus-X | 115 | 135 | 230 | — |
| Ansco Supreme | 80 | 95 | 160 | — |
| Kodak Panatomic-X | 65 | 75 | 125 | — |

*82B-type filter required. **81C-type filter required.

Flashbulbs occasionally shatter, and to avoid any possible damage, a shield of translucent material may be used over the face of the reflector. Never use flash in an explosive atmosphere.

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# Caring for your Argus C20




Your Argus C20 is a precision optical instrument. To keep your C20 in perfect working order, protect it from dust, moisture, and heat. Do *not* store the camera in your car's glove compartment or any other place where temperature tends to rise. The fine lens of your C20 is ground, polished, and coated with extreme precision. If it needs cleaning, blow off dust first, then use a soft brush with a light touch or clean it with lens tissue. Use lens cleaning fluid only if it becomes absolutely necessary. Working parts of your C20 contain fine threads, tiny screws, and sensitive adjustments. Never force any parts of the camera to work if they resist.

*For service or replacement parts contact your local Argus Dealer or write to:*

PRODUCT SERVICE DEPARTMENT, ARGUS CAMERAS, ANN ARBOR, MICHIGAN, or ARGUS CAMERAS OF CANADA, LTD., TORONTO, ONTARIO.

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# SPECIFICATIONS

**PICTURE SIZE:** 1″ x 1 7/16″ transparencies in 2″ x 2″ mounts; or 3¼″ x 4½″ standard photo-finishers' black-and-white prints.

**FILM SIZE:** 35mm, roll cartridge, color or black-and-white.

**LENS:** 44mm f/3.5 Argus Cintar, color-corrected, coated anastigmat; click-stop aperture openings from f/3.5 to f/22; rangefinder-coupled automatic focusing, 2½ feet to infinity; hyperfocal distance: 35 ft. 9 in. at f/3.5; field covered: 31° x 45° angular at infinity.

**SHUTTER:** Between-the-lens type, speeds of 1/25, 1/50, 1/100, 1/200 plus Bulb (B) with click stop settings; ASA cable release socket; manual cocking lever; synchronized for bayonet-base flashbulbs and x (zero) delay electronic flash units.

**FLASH:** Plug-in type, synchronized through mounting prongs; accepts size "C" PHOTOFLASH batteries or BC power unit; five inch reflector with bayonet-base type socket for all bayonet-base flashbulbs; push-button lamp ejection.

**LENS ACCESSORIES:** Front of lens mount accepts 39.5mm slip-on or set-screw adapter ring and Series VI filters and supplementary lenses.

**OTHER FEATURES:** Molded body with leather grain and satin metal trim, weight 16 oz.; completely removable back; lever film wind; automatic exposure counter; Colormatic settings for aperture, shutter speed, and distance for average subjects in bright sunlight; double exposure prevention with intentional release; tripod socket; leather shoulder strap; genuine leather carrying case available as an accessory.

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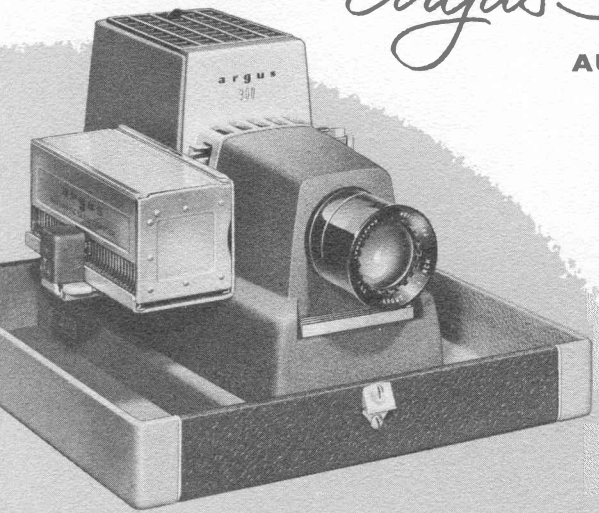
# Argus 300

## AUTOMATIC PROJECTOR




America's newest and finest value in color slide projection equipment. Brilliant 300 watt, blower cooled illumination combines with new 4″ Argus f:3.3 projection lens for big, life-like pictures, even in a small room. All metal changer selects, projects, and refiles 36 slides automatically—each in its own protective metal frame. Roomy carrying case, with space for extra magazines, and single slide editor included. Also available with same optics and basic construction in standard model with changer and case as accessories. Argus Remote Control Power Unit available for both models.

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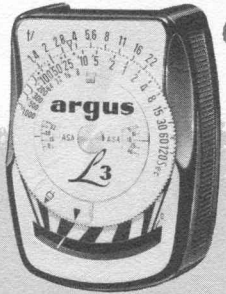
# Sylvania FLASHBULBS

When you're after a good shot, don't lose it because of bulb failure. Sylvania "Blue Dot" flashbulbs are especially designed for consistent, dependable performance—provide split-second lighting when you need it.




# Argus L-3 EXPOSURE METER




A lifetime of "good picture insurance." A perfect companion to any camera. Just one touch of the dial relates apertures from f/1.4 to f/22 with a selection of shutter speeds from 120 seconds to 1/1000 second—perfect exposures every time without guesswork or calculations. Incident light adapter and leather case included. Booster Cell for low-light readings available as accessory.

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# *Lifetime guarantee*

*Your Argus C20 Camera was manufactured, inspected, and tested by skilled craftsmen. It is guaranteed to be free of defects in workmanship or material during its lifetime. If any servicing is necessary because of imperfections in materials or workmanship, your camera will be factory serviced without charge.*

*Argus equipment which has been damaged, mishandled or worn from extensive use will be factory serviced at established rates. Used or rebuilt equipment is not covered by this guarantee.*

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