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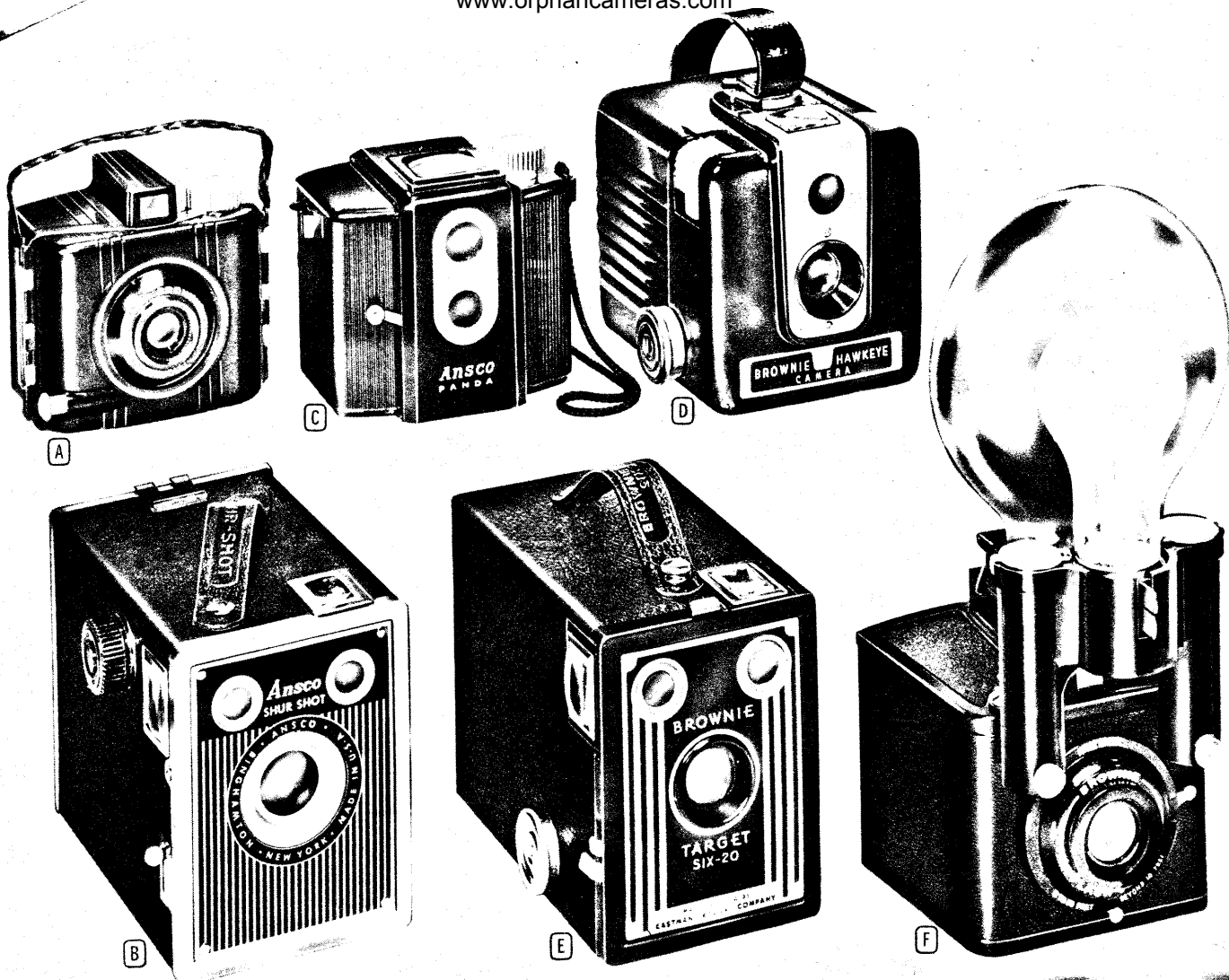
It'll make you feel better, won't it?

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Photographic Catalog

Camera shown is the Stereo Realist, which makes color pictures in full 3-dimension. For this camera, viewer, and projector see pages 16 and 17.



Capture that Big Moment Forever...with an

(A) BABY BROWNIE SPECIAL. A compact, inexpensive Kodak camera. Just load, aim, and shoot. Produces good contact prints, $1\frac{1}{2}$ by $2\frac{1}{2}$ inches, sharp enough for moderate enlargement. Tubular optical view finder. Single meniscus lens takes sharp pictures from 5 feet to infinity... no focusing necessary. Plunger shutter release.

Smartly designed black plastic body. Removable back affords quick and easy loading. Handle for carrying. Size about $3\frac{1}{2}$ by 3 by $2\frac{1}{2}$ in. Shoots eight $1\frac{1}{8}$ by $2\frac{1}{2}$ in. black and white or six $2\frac{7}{8}$ by $4\frac{1}{2}$ -in. Kodacolor pictures on 127 size film. 67 HN 1—Postpaid.....2.75

(B) ANSCO SHUR-SHOT "20." A box camera with a reputation for dependable picture taking and simple operation. Fixed focus single meniscus lens takes clear snapshots from about 8 feet to infinity. Shutter has snapshot speed (about $1/40$ sec.). Horizontal and vertical waist level view finders show brilliant magnified image of subject.

Ansco's Shur-Shot "20" is a sturdy little camera with metal lens plate, water-resistant fiber body, and hinged back for quick and easy film loading. Camera measures about $3\frac{1}{4}$ by 4 by 5 inches. Black imitation leather covering with bright metal trim. Takes eight $2\frac{1}{4}$ by $3\frac{1}{4}$ -in. black and white or six $2\frac{7}{8}$ by $4\frac{1}{8}$ -in. Kodacolor pictures on 120 roll film.

67 HN 35—Mailed Postpaid.....3.95

PORTRAIT BACKGROUND

A large window shade makes an excellent background for home portraits. One with both a light and a dark side gives you a choice of two values.

WARDS 2+

(C) ANSCO PANDA OUTFIT. An easy-to-shoot camera with four rolls of Ansco All-Weather Plenachrome film. The Panda is small enough to carry in your coat pocket, yet it uses film large enough to give album size contact prints.

The Panda has a magnifying reflex type viewfinder that gives you a bright image almost as large as the finished print. Single meniscus lens takes good quality pictures from 6 ft. to infinity. Camera and film formerly sold for \$6.06.

Modern, ribbed, black plastic body. Red plastic shutter release lever. Lucite winding knob. Removable back for easy loading. Braided carrying cord. Size about 3 by $3\frac{1}{4}$ by $3\frac{1}{2}$ in. Shoots twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -inch black and white or nine $2\frac{7}{8}$ by $2\frac{7}{8}$ -in. Kodacolor pictures on 620 roll film. 67 H 14—Panda Outfit—Camera with four rolls of 620 film. Ship. wt. 1 lb. 3 oz.....3.95
67 H 45—Outfit and Case. Ship. wt. 2 lbs....\$4.98

(D) BROWNIE HAWKEYE. An up-to-the-minute streamlined box camera to give you new ease and pleasure in snapshot taking. Shows you a bright, clear image in the easy viewing, oversized viewfinder and permits vibrationless exposures when your thumb squeezes the shutter release bar mounted right in the camera body.

Kodak single meniscus lens provides excellent quality pictures, both snapshots and time exposures, from 6 feet to infinity without focusing. Strong shiny black $3\frac{1}{4}$ by $4\frac{1}{4}$ by $3\frac{1}{2}$ -inch plastic body has attractive gray Tenite trim. Simplified film loading. Shoots twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -inch black and white or nine $2\frac{7}{8}$ by $2\frac{7}{8}$ -inch Kodacolor pictures on 620 roll film.

67 HN 60—Mailed Postpaid.....5.50

(E) KODAK BROWNIE TARGET. An improved box camera in two sizes. Negatives provide contact prints of album size. Horizontal and vertical view finders show magnified images—are conveniently used at waist level when shooting. Single meniscus lens takes snapshots or time exposures from 8 feet to infinity without focusing. Artificial leather covering. Postpaid.

67 HN 2—BROWNIE TARGET SIX-20. Size about $3\frac{1}{2}$ by $4\frac{1}{4}$ by 5 in. Takes eight $2\frac{1}{4}$ by $3\frac{1}{4}$ -in. black and white or six $2\frac{7}{8}$ by $4\frac{1}{8}$ -in. Kodacolor pictures on 620 film.....5.75

67 HN 3—BROWNIE TARGET SIX-16. Size about $3\frac{1}{2}$ by $5\frac{1}{2}$ by $5\frac{1}{2}$ in. Takes eight $2\frac{1}{2}$ by $4\frac{1}{4}$ -in. black and white or six $2\frac{7}{8}$ by 5-inch Kodacolor pictures on 616 film.....6.95

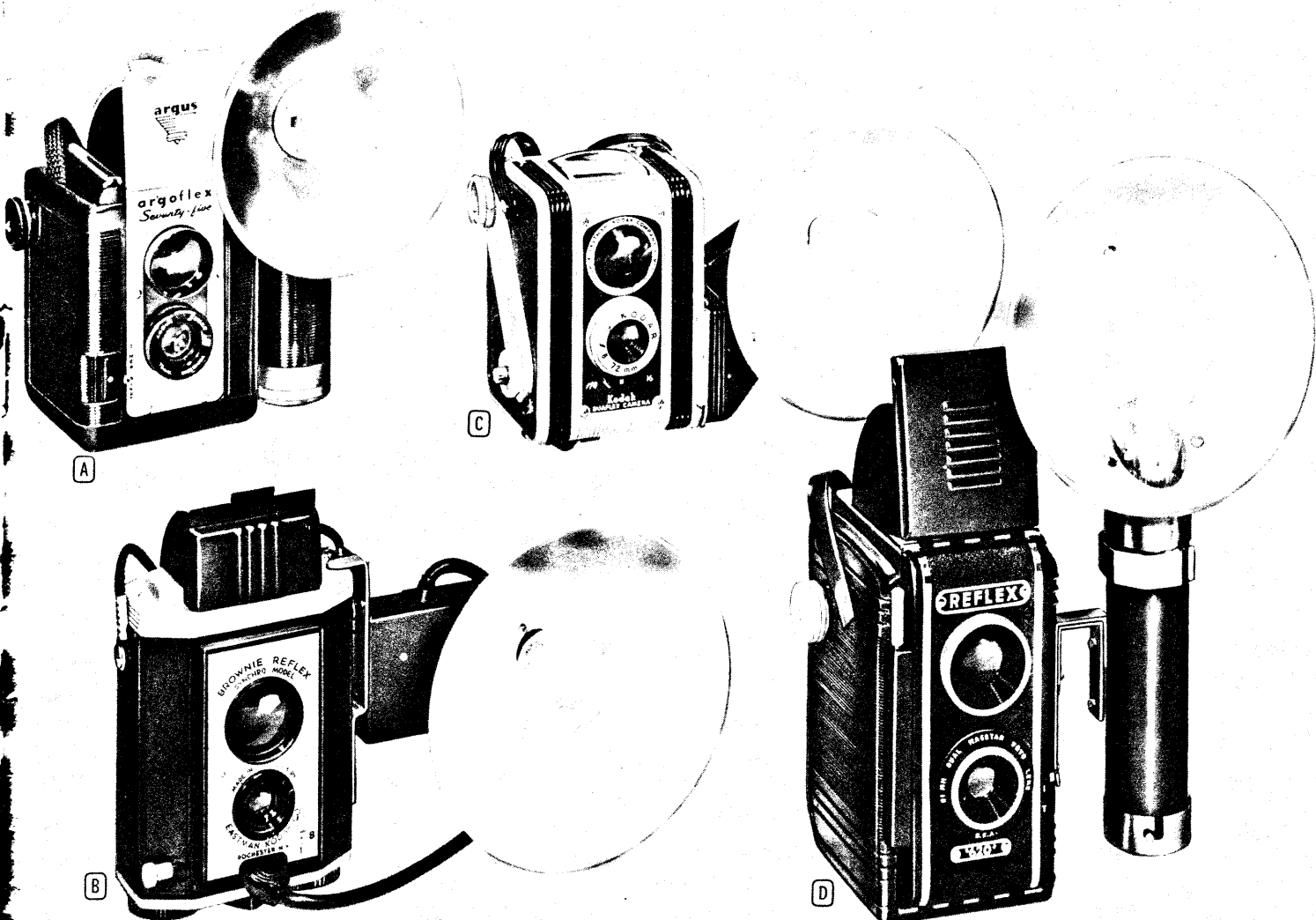
(F) KODAK FLASH BROWNIE. SIX-20. With detachable synchroflash unit that permits door and night snapshots. Two-position focus single meniscus lens takes clear pictures about 10 feet to infinity—snapshots or time exposures. Eye level optical viewfinder for shooting. Flash unit has 4-in. aluminum plastic battery case. With 2 penlight. Use medium base No. 11 flash bulbs. Flash unit has black artificial leather covering. Size about $3\frac{1}{4}$ by $3\frac{1}{4}$ by $4\frac{1}{4}$ in. Shoots eight black and white or six $2\frac{7}{8}$ by $4\frac{1}{8}$ -in. Kodacolor pictures to a roll of 620 film.

67 HN 16—Camera and Flash Unit.....5.95

67 HN 4—Camera only. Postpaid.....5.45

67 HN 5—Flash unit with battery case. Postpaid.....5.45

67 HN 3173—G.E. No. 11 Flash Unit. Postpaid.....5.45



Easy-to-own, Easy-to-operate Box Camera

(A) NEW ARGOFLEX "75." Sturdy, easy to aim, reflex type camera with many quality features—double exposure preventative—you can't click shutter until you've advanced the film. Trigger type shutter release minimizes vibration. Argus Lumax 75mm single meniscus lens takes snapshots or time exposures from 7½ feet to infinity without focusing. Plastic neck-strap holds camera at waist level for convenient shooting and easy carrying. Modern design, metal trimmed, plastic body measures 3 by 3¼ by 4⅝ inches. Argoflex "75" takes twelve 2¼ by 2¼ inch black and white or nine 2⅞ by 2⅞-in. Kodacolor pictures on 620 roll film.

67 HN 57—Argoflex "75" Camera Only. *Postpaid*.....14.89

FLASH UNIT FOR ARGOFLEX "75." Bakelite unit has 4½-inch polished reflector, plugs in and out of camera in a moment. Uses low cost SM midget flash bulbs, order separately below. Batteries for unit included.

67 HN 58—Flash Unit and Batteries. *Postpaid*.....4.08

67 H 53—Case for Argoflex 75. Ship. wt. 8 oz.....1.29

67 HN 3175—SM Midget Flash Bulbs. *Postpaid*.....16 for 2.54

(B) KODAK SYNCHRO-BROWNIE REFLEX. With or without detachable synchronized flash unit that makes indoor pictures as simple as outdoor snapshots. 5-inch nickel plated reflector takes No. SM flash bulbs or any standard bayonet base bulb. Reflex finder shows you your picture in full negative size before you snap it—makes good pictures easy. Tested, fixed focus single meniscus lens takes pictures 6 ft. to infinity, sharp enough to enlarge. Instantaneous and bulb action shutter with plunger release. Black molded body with Morocco grain surface. Aluminum end and front plates. Tripod socket. Size: 4¾ by 3½ by 2¼ in. Weighs 15 oz. Shoots twelve 1⅞-in. square black and white or nine 2⅞ by 2⅞-in. Kodacolor pictures on 127 roll film. For black and white film see Pages 68 and 69; for Kodacolor film see Page 64.

67 HN 17—Camera with flash unit. *Postpaid*.....14.95

67 HN 6—Camera Only. *Postpaid*.....10.95

67 HN 7—Flash Unit with batteries. *Postpaid*.....4.00

67 H 8—Case for Synchro-Brownie Reflex. Ship. wt. 8 oz.....2.29

67 HN 3175—SM Flash Bulbs for flash unit. *Postpaid*.....16 for 2.54

(C) KODAK DUAFLEX CAMERA WITH KODAR LENS. Efficient easy-to-use Kodak with three different aperture openings so you can take properly exposed pictures under different light conditions: f/16 for bright sunlight; f/11 for bright, sunless days; and f/8 for cloudy days. Focusing Kodar doublet lens takes clear pictures from as close as 3½ feet to infinity. Film advance lock prevents double exposure. Aluminum trimmed black bakelite body has oversize reflex type viewer. Plastic shield protects lens. Body size about 4½ by 3¼ by 3¼ inches. Shoots twelve 2¼ by 2¼-inch black and white or nine 2⅞ by 2⅞-in. Kodacolor pictures on 620 roll film.

67 HN 52—Duaflex Camera only. *Postpaid*.....19.85

67 HN 47—Standard fixed focus Duaflex without lens stops and double exposure prevention device. Single meniscus lens. *Postpaid*.....\$12.75

67 HN 50—FLASH UNIT FOR DUAFLEX CAMERAS. Uses SM or any other low cost bayonet base bulbs (order below). Batteries included. *Postpaid* 3.25

67 HN 3175—No. SM Midget Flashbulbs for above. *Postpaid*.....2.54

67 H 69—Case for Duaflex Cameras above. Ship. wt. 9 oz.....1.29

(D) REFLEX 620 WITH FLASH ATTACHMENT. New all-plastic reflex camera with detachable flash unit—at the amazing price of only \$9.95. Easy to use too, simply aim and shoot—no focusing. Large, extra bright viewfinder shows you actual size picture. Synchronized single meniscus lens give you clear, bright pictures from 6 ft. to infinity either snapshots or time exposures. Finger-tip plunger-type shutter release. Handsome black plastic case has overall size of 6 by 3¾ by 3¾ in. Weighs only 15 oz. Neck strap. Reflex 620 shoots twelve 2¼ by 2¼ in. black and white or nine 2⅞ by 2⅞-in. Kodacolor pictures on 620 roll film. Batteries included.

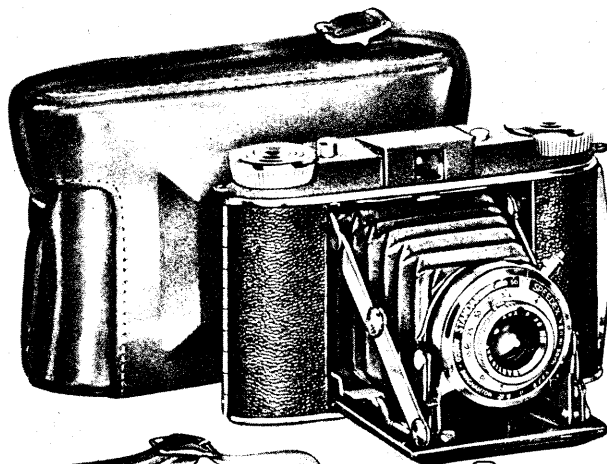
67 H 65—Camera with Flash Attachment. Ship. wt. 2 lbs.....9.95

67 H 66—Camera, Flash, and Carrying Case. Ship. wt. 2 lbs. 8 oz.....12.95

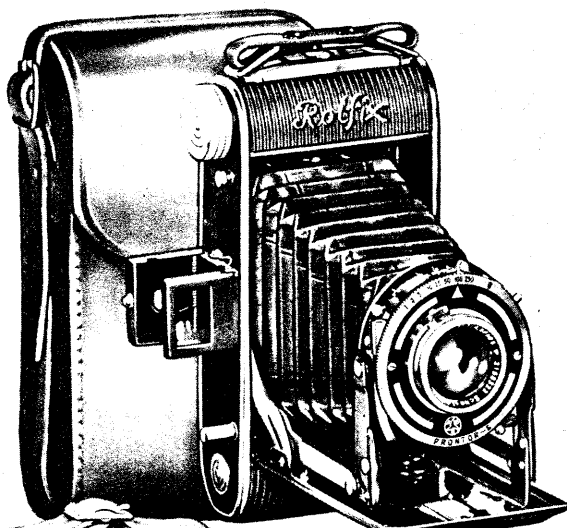
67 HN 3173—G.E. No. 11 Flash bulbs for above. *Postpaid*.....16 for 2.54

A HANDY FLASH BULB SAFETY TIP

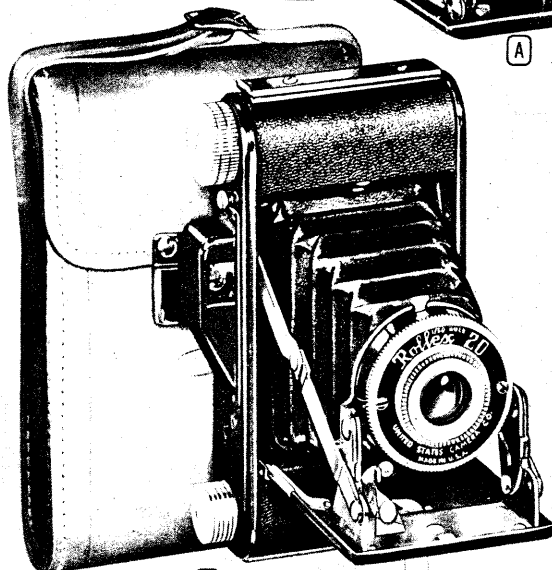
To avoid burned fingers from accidental firing of flash bulbs, leave the cardboard sleeve on the bulb until the bulb is safely in the socket.



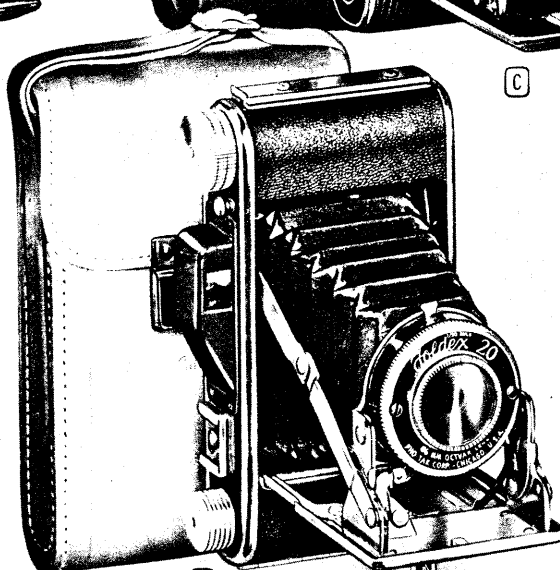
A



C



B



D

It's Easy to Take Good Pictures With

A ANSCO STANDARD F/6.3 SPEEDEX. A new, moderately priced folding camera for black and white, Kodacolor, Ektachrome, and Ansco color. Takes Bantam (828) Kodachromes, too, if used with adapter (E) on Page 44. Small and compact, with anastigmat lens and built-in flash for clear, sharp pictures anytime, anywhere. With Ansco color exposure guide and neck cord.

LENS—Coated 90mm. Ansco f/6.3 anastigmat, stops to f/22. Focuses from 3 ft. to infinity. SHUTTER—precision shutter with speeds of 1/25 to 1/100 second and time. Body release. Flash synchronized for use with flash guns (E), (F), or (G) on Page 32. FINDER—enclosed optical eye level. FILM SIZE—2 1/4 x 2 1/4 in., 120 roll film. EXPOSURES—12. CONSTRUCTION—all metal body, black artificial leather covering. SIZE—about 5 1/2 x 3 3/4 x 1 1/2 in. ACTUAL WEIGHT—about 31 oz. LENS MOUNT DIAMETER—1.06 in. (27mm.). \$4 Down, \$5 Monthly on Terms. No extra charge for credit.

67 HN 155 L—Speedex f/6.3 Standard Camera only Postpaid. 39.50
67 H 156 —Leather ever-ready case for above camera. Ship. wt. 1 lb. . . . 6.75

B ROLLEX "20" CAMERA. Combines box camera simplicity with folding camera compactness at an exceptionally low price. Takes clear, sharp pictures without focusing. For black and white and Kodacolor photography. Vibration-free shutter release on camera bed. Tripod socket.

LENS—F/11 fixed focus meniscus. SHUTTER—Time and snapshot (1/50 second) settings. FINDER—enclosed optical type. FILM—eight exposures 120 or 620 roll film, 2 1/4 x 3 1/4 in. CONSTRUCTION—all metal, black artificial leather covering. SIZE—5 x 3 1/2 in. ACTUAL WEIGHT—about 1 lb. 8 oz. Use Cloud-on filter and portrait lens set (L) on Page 42 for background clouds and closeups.

67 H 134—Ship. wt. 2 lbs. 9.95
67 H 135—Leather sheath type carrying case. Ship. wt. 1 lb. 2.29

USES FOR WAX IN DARKROOM

Here are some dark-room uses for hard, paste-type waxes such as automobile or furniture wax. Keep a can handy in your darkroom. Wax grooves of developing reels for easy loading and quick drying. Wax rails of enlarger for easy adjustment and rustproofing. Wax floor and furniture for easy cleaning. Wax drawer slides to prevent their sticking. Wax prints for high gloss.

6 WARDS

C ROLFIX WITH F/4.5 LENS. Made in American Zone of Germany . . . handy, moderately priced folding camera with a fast lens and a Prontor S eight-speed, flash synchronized shutter. For black and white, Kodacolor, Ektachrome and Ansco color. Delayed action mechanism . . . enables you to get into the picture yourself before the shutter clicks. Pressure spring back. Two tripod sockets for horizontal or vertical shots. Body shutter release folds flush when camera is closed—rises into position when opened.

LENS—F/4.5 (105mm.) Schneider Radionar anastigmat lens—stops down to f/32, adjustable from 3 ft. to infinity. SHUTTER—Prontor S, eight speeds from 1 to 1/250 second, plus bulb. Synchronized for use with flash guns (E) or (F) on Page 32 or (H) on Page 33. Body shutter release. Delayed action. FINDER—optical eye level type. FILM—eight exposures, 2 1/4 by 3 1/4 in. or twelve 2 1/4 by 2 1/4 in. respectively, on 120 film. CONSTRUCTION—All metal body with black artificial leather cover. SIZE—6 by 3 by 1 1/2 inches. ACTUAL WEIGHT—about 1 lb. LENS MOUNT DIAMETER—1 1/4 in. (32mm.).

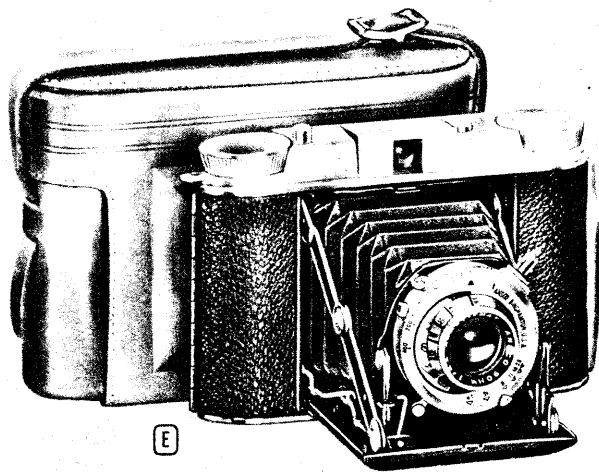
67 H 124 L—Camera only. Ship. wt. 2 lbs. Only \$3 Down . . . or Cash 29.98
67 H 101 —Leather sheath case. Ship. wt. 9 oz. 2.98

D FOLDEX CAMERA. A low-priced folding camera with a flash synchronized shutter. Just the camera for those who want folding camera compactness with box camera simplicity. No shutter speeds or lens apertures to think about. Just find your picture and snap it. Takes either black and white or Kodacolor film. And you can use it indoors or at night with the Foldex Flash Unit below.

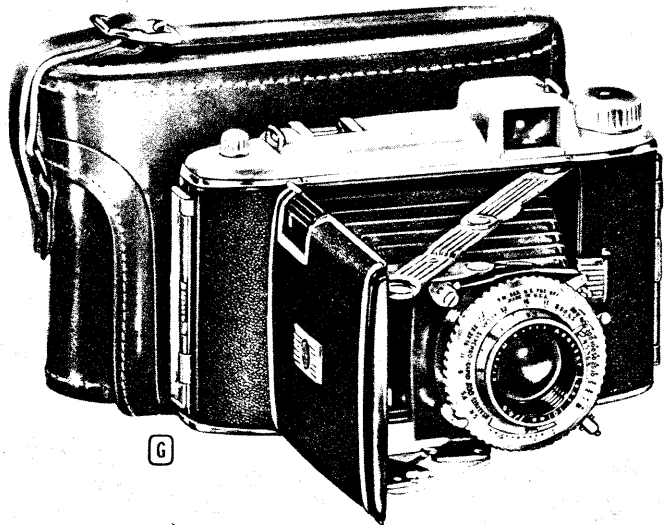
LENS—F/11 fixed focus meniscus, behind-the-shutter type with ground glass in front of shutter for protection. SHUTTER—Time and snapshot (1/50 second) settings; synchronized for flash with Foldex Flash Unit. FINDER—enclosed optical type. FILM—eight 2 1/4 by 3 1/4 in. exposures, 120 or 620 roll film. CONSTRUCTION—Sturdy all metal body, artificial leather covering. SIZE—6 x 3 3/4 x 1 3/8 in., folded. ACTUAL WEIGHT—about 1 lb. 8 oz. Use Cloud-on filter and Porton portrait lens attachment.

67 H 132—Foldex Camera. Ship. wt. 1 lb. 12 oz. 13. As camera is compactness with box camera simplicity. No shutter speeds or lens apertures to think about. Just find your picture and snap it. Takes either black and white or Kodacolor film. And you can use it indoors or at night with the Foldex Flash Unit below.

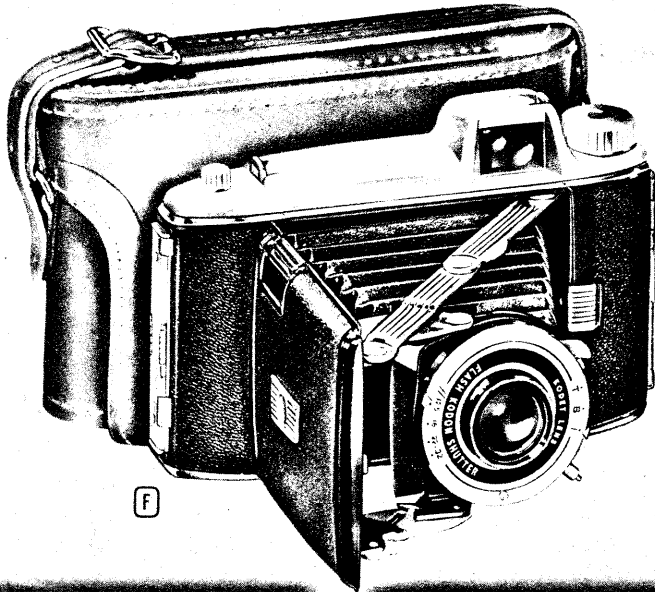
67 H 133—Leather carrying case for Foldex Camera. Ship. wt. 9 oz. 2.98
67 H 3160—Foldex Flash Unit. Without batteries. (Batteries sold separately on Page 32; No. 5, 25, bulbs on Page 36). Ship. wt. 1 lb. 1.98



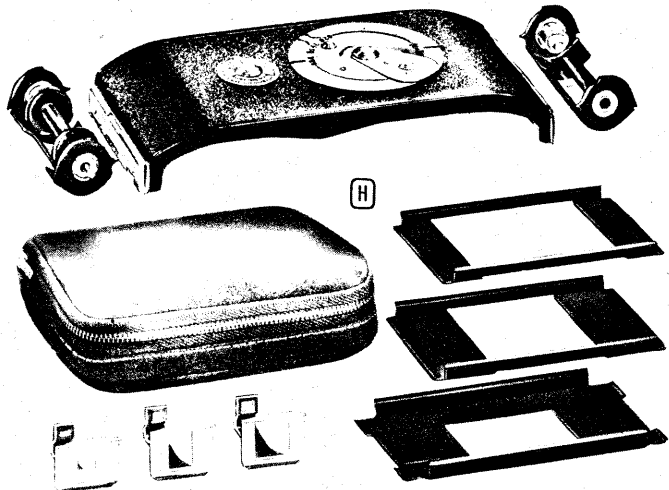
E



G



F



H

Any of These Compact Folding Cameras

E **ANSCO TITAN.** A high quality folding camera with colored depth-of-focus scale on lens mount. Tells you nearest and farthest points in focus at various combinations of distances and lens openings. Accurate shutter has wide range of speeds plus time and bulb . . . allows the correct speed for practically all subjects. Built-in flash synchronization. Takes black and white Kodacolor, Ektachrome, and Ansco color equally well. Comes with neck strap and top grain ever-ready carrying case.

LENS—f/4.5 coated, color corrected, stops to f/22. Focuses from 3½ ft. to infinity. SHUTTER—speeds from ½ to 1/400 second, time, and bulb. Body release and cable release socket. Built-in synchronizer uses Flashholders (F) or (G) on Page 32. FINDER—optical, eye-level type. FILM SIZE—2¼x2¼-in. 120 roll film. EXPOSURES—12. CONSTRUCTION—All metal, genuine leather covering. Chrome trim. SIZE—about 5½x3¾x1½ in. folded. ACTUAL WEIGHT—about 31 oz. LENS MOUNT DIAMETER—1½ in. (26mm.). Postpaid. No extra charge for credit.

67 HN 123 L—Camera with case. Only \$7 Down on Terms . . . 69.50

F **LOW-PRICED KODAK TOURIST CAMERAS.** Folding cameras for both black and white and Kodacolor photography. Built-in flash synchronization for use with Kodak Flashholder (G) on Page 32. Steady-squeeze type shutter release on camera bed gives vibrationless operation. Cable release socket.

LENS—Kodet f/12.5 fixed focus meniscus. SHUTTER—Flash Kodon. FINDER—direct view. FILM—2¼x3¼-in. 620 roll film. EXPOSURES—8. CONSTRUCTION—lightweight aluminum alloy. SIZE—6¾x4x1⅞ in., folded. ACT. WT.—about 1 lb. 13 oz. LENS MOUNT DIAMETER—1⅞ in. (28.5mm.).

67 HN 147 L—Postpaid. No extra credit charge. Only \$2.50 Down . . . 24.50

67 HN 146 L—Same as above, but with f/8.8 lens. Diomatic Shutter. Lens mount diameter 1⅞ inches (33mm.). Postpaid. Only \$4 Down . . . \$38.50

67 H 111—Leather sheath case for above cameras. Ship. wt. 1 lb. . . . 4.50

SOFTENING STIFF BELLOWS

Preserve and soften the stiff leather of your camera bellows by rubbing it with castor oil or sweet oil. Repeat this treatment every day until the leather becomes soft and flexible. (Does not apply to artificial leather bellows).

G **KODAK TOURIST WITH NEW SYNCHRO-RAPID 800 SHUTTER.** World's fastest between-the-lens shutter—10 speeds up to 1/800 second. Widens the picture-taking scope of folding camera lens—permits "freezing" fast sports action. Wide choice of lens openings and shutter speeds make indoor shots with needed depth come easy, too. Gives excellent results in both black-and-white and color. Flash synchronized for use with Kodak Flashholder (G) on Page 32. Flash scale on diaphragm with markings for medium-delay, fast, and speedlamp settings. New type shutter release on camera bed gives steady control. Depth-of-field and exposure calculator. Accessory clip.

LENS—coated four element Kodak Anastar 101mm. f/4.5 lens. Stops down to f/32. Focuses from 3½ feet to infinity. SHUTTER—Synchro-Rapid with speeds from 1 to 1/800 second plus time and bulb. FINDER—optical eye-level type. FILM—2¼ by 3¼-inch 620 roll film. EXPOSURES—eight. CONSTRUCTION—lightweight die-cast aluminum alloy body, black Kodadur covering. SIZE—6¾ by 4 by 1⅞ inches, folded. ACTUAL WEIGHT—1 lb. 13 oz. LENS MOUNT DIAMETER—1¼ inches (31.5mm.). Postpaid.

67 HN 152 T—No extra charge for credit. Only \$9.50 Down . . . 95.00

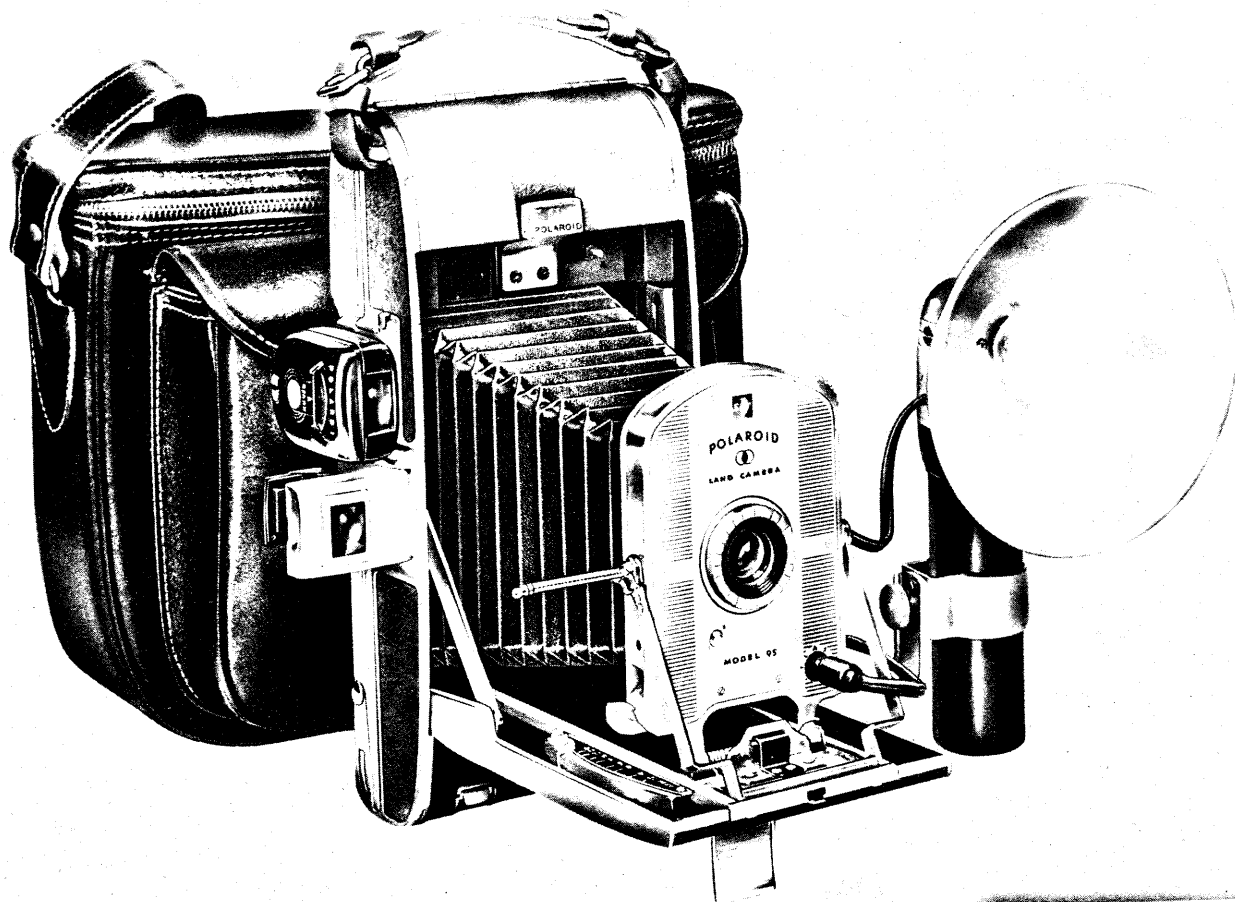
67 HN 143 L—Kodak Tourist above, but with f/4.5 Kodak Anaston lens, stops to f/32. Flash Kodamatic shutter, speeds from 1/25 to 1/200 second, time and bulb. Postpaid. No credit charge. Only \$7.50 Down . . . \$71.00

67 HN 145 L—Kodak Tourist above, but with f/6.3 lens, stops to f/22. Flash Diomatic shutter—speeds from 1/25 to 1/100 second, time and bulb. Postpaid. No credit charge. Camera only \$5 Down on Terms . . . \$47.50

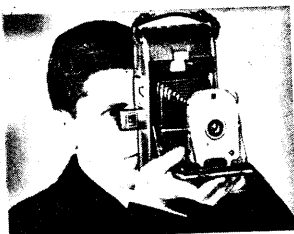
67 HN 144—Leather ever-ready case for above cameras. Ship. wt. 1 lb. 5.95

H **KODAK TOURIST ADAPTER KIT.** Enables you to change the picture size of your Tourist camera (f/4.5, f/6.3 models only). You can take full-color Kodachrome transparencies on Bantam (828) film; or shoot twelve easy-to-compose 2¼ by 2¼-inch pictures on 620 black-and-white film or nine shots on Kodacolor, Ansco color, or Ektachrome; or cut your film cost in half by shooting sixteen "split 620" black-and-white 1½x2¼-inch pictures. Kit consists of Bantam spool adapter, set of accurate view-finder masks for each negative size, three film masks, and a special replacement back with proper red film metering windows . . . all in a neat zipper pouch.

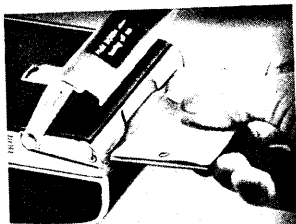
67 HN 153 —Postpaid. No charge for credit . . . 14.50



From Snap to Print in 60 Seconds!



SNAP THE PICTURE... It's even easier than with most cameras.



PULL THE TAB... This starts development inside the camera.



TAKE OUT THE PRINT... In 60 seconds it's ready for your album.

8 WARDS

POLAROID LAND CAMERA. Now at last you can take pictures and see them completely finished in only 1 minute. No long waiting or sending the film out to be developed... everything is done for you right inside the camera. And, if the picture isn't just the way you want it, you can shoot another immediately.

The Land Camera is simple to operate too—just snap the picture, pull the tab, wait only one minute, then take out the finished print. It will be sharp, full of detail, and a large 3¼ by 4¼-inch size with deckle edges and a sepia-toned surface. The print will be almost dry, and it will be permanent—ready for your album.

THE FILM is a double roll of film and printing paper joined together. At intervals on the paper are sealed pods of a jellied compound. When you pull the tab, these pods are broken, paper and negative come together, and the compound develops the negative, transfers the image to the positive paper, and lacquers the print. You never see or feel this compound, all you do is just load the dry film.

THE LENS is a three-element, coated, color-corrected anastigmat. Because of the fast speed of Polaroid film (over 100 A.S.A.) the lens could be designed with apertures from f/11 to f/45. The Land takes fine quality pictures on bright beaches or on rainy days, close up portraits or distant landscapes—always with great depth of focus. Pictures will be sharp even if you're a poor judge of distance. Quick-action lever focuses lens from 3½ ft. to infinity—this same focus scale also tells you the exact depth of field.

THE SHUTTER is built on a new principle that assures accuracy at all settings. Shutter has built-in synchronization for use with flash attachment and a bulb setting for time exposures. After bulb exposure shutter returns automatically to instantaneous.

Shutter and lens opening are coupled together and set with a single dial. Speeds range from 1/3 to 1/60 second, as required by the amount of light available. There are no f stops or shutter speeds to set—just eight numbers on the setting dial. In poor light you use a low number, which gives you both a wide opening and a slow shutter speed; in bright light a higher number provides a smaller opening and a faster shutter speed. Exposure chart with the film tells you which number to use—or special light meter reads directly in these numbers.

THE VIEW FINDER is accurate for correctly composed pictures and also shows you a clear, brilliant image. View finder can be used without interference with eyeglasses. Its "front sight" (on the side of the lens mount) spots the center of the picture and is accurately marked for parallax correction in close-ups.

CONSTRUCTION. The Land Camera's all metal body is covered with attractive brown artificial leather—exposed metal parts are handsome brushed chrome plate. Body size closed is about 4½ by 9½ by 2½ inches. Actual weight about 4 pounds 2 oz. Lens mount diameter 1¼ inches (32mm). Only \$9 Down, \$8 Monthly on Terms; no extra charge for credit. *Postpaid.*

67 HN 150L—CAMERA ONLY, no meter or flash...89.75

67 HN 2196—LIGHT METER. Made by GE especially for Land cameras. Fits accessory clip on camera as shown in picture. Meter reads directly in 8 exposure numbers on Land shutter. *Postpaid*...15.75

67 HN 2197—METER CASE (not shown). Top-grain natural cowhide. Fits on camera strap. *Postpaid*...1.50

67 HN 3176—KODAK FLASH HOLDER for Land camera. Plastic case, 5-inch reflector, and 2 batteries included. Uses GE No. 5 flash bulbs. *Postpaid*...11.00

67 H 3172—GE No. 5 Flashbulbs. Ship. wt. 1 lb. 16 for \$1.89

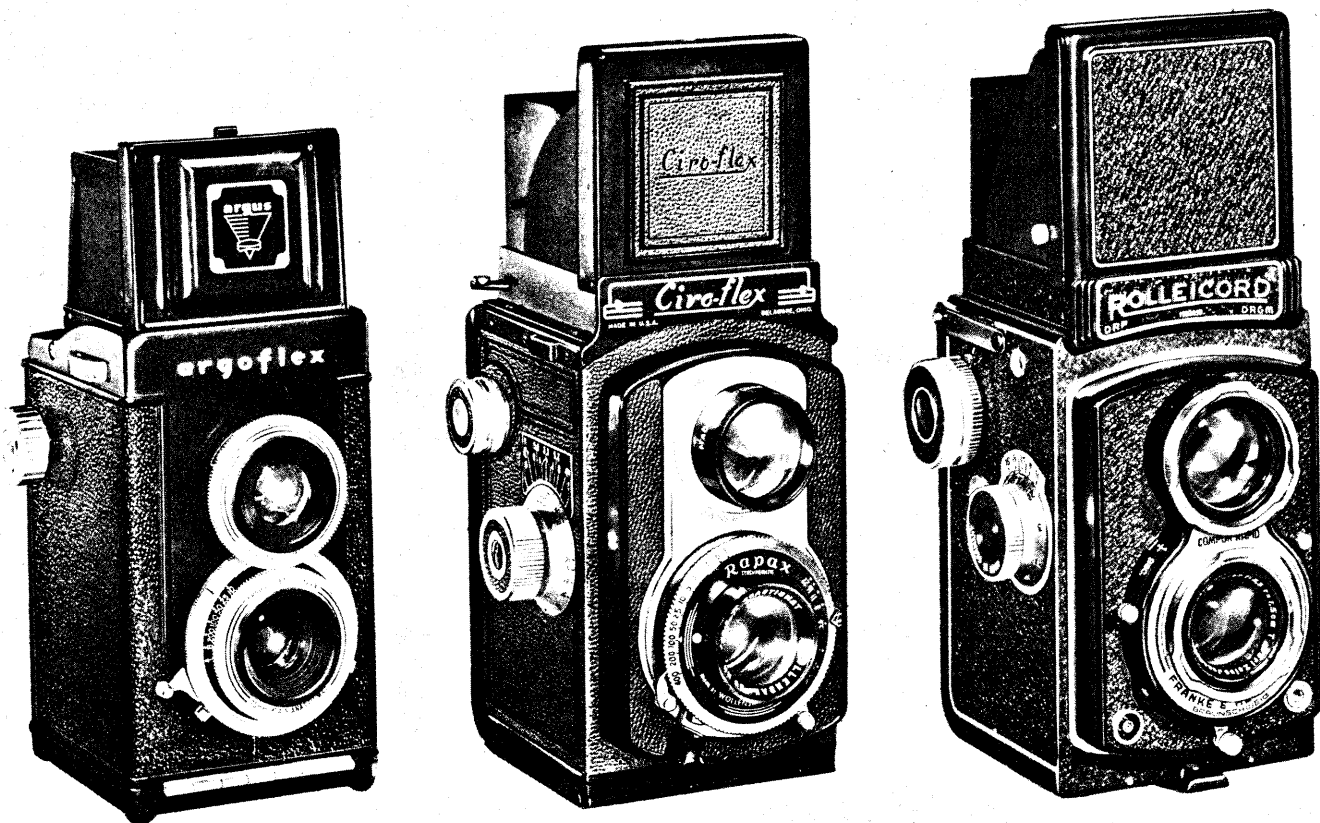
67 H 3339—GADGET BAG. Kordovan brown cowhide. Size 9½ x 11½ x 3 in. Holds Polaroid Land Camera, film, flash, accessories. Ship. wt. 2 lbs. 12 oz.19.50

67 HN 151—CARRYING CASE (not shown)—Top-grain cowhide. Holds camera, two rolls of film. Pocket for finished pictures. Shoulder strap. *Postpaid*...14.95

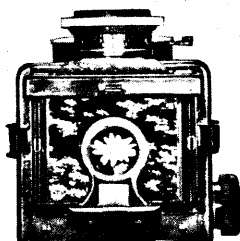
67 HN 1616—POLAROID FILM. Each package is a complete unit of film, paper, developer for 8 pictures. Includes order blank and carton for ordering duplicate prints. *Postpaid*...1.75

WATCH FOR EXCITING LAND CAMERA DEVELOPMENTS

Later this year you'll have a choice of black-and-white or sepia toned film, and it will be possible to obtain enlargements from your Land camera prints. So this fall write to Bob Adams at Montgomery Ward and ask for the latest information (see opposite page).



See What You Shoot with a Reflex Camera



ADVANTAGES OF REFLEX TYPE CAMERA

BETTER COMPOSITION. No more off center or "cut off" prints—you see the picture you are going to get right in the ground glass, right side up, before, during, and after snapping it.

ELIMINATES DISTANCE ERRORS. Makes guessing unnecessary. Focuses by turning knob until image is clear on ground glass. Taking lens is coupled to the viewing lens. When the image in the ground glass is in focus, your subject is then in focus on the taking lens.

FULL SIZE VIEWER. Actual size ground glass is full $2\frac{1}{4}$ by $2\frac{1}{4}$ inches. You can evaluate the picture before shooting.

ECONOMY OF OPERATION. Takes twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -inch pictures on black and white roll film; nine to a roll of color film.

10 WARDS

ARGOFLEX "EF" FLASH REFLEX CAMERA. An improved reflex camera at a new low price. Has metal body and flash synchronized shutter. Takes twelve black and white or nine color pictures, $2\frac{1}{4}$ by $2\frac{1}{4}$ inches, to a roll of 620 film.

LENS AND SHUTTER. Coated $f/4.5$ (75 mm.) Vortex anastigmat (color corrected) taking lens stops down to $f/18$. Matching $f/4.5$ anastigmat viewing lens is coupled with taking lens—focus together from $3\frac{1}{2}$ feet to infinity. Shutter speeds $1/10$ to $1/200$ second plus time and bulb. Synchronized for use with Argus Flash Unit below—order separately.

OPERATING CONTROLS. Self-erecting viewfinder hood has folding magnifier for critical focusing, becomes sports finder when front panel is folded down.

CONSTRUCTION FEATURES. Sturdy die-cast all metal body. Cable release socket and tripod socket. Depth of field table tells exactly what is in sharp focus. Body size $5\frac{1}{2}$ by $3\frac{1}{4}$ by 3 inches when folded. Lens mount diameter $1\frac{1}{4}$ in. (31.5 mm). No extra charge for credit. *Postpaid.*

67 HN 219 L—"EF" Camera only..49.95
67 HN 220—Ever-ready Case for EF. 6.50

ARGUS FLASH UNIT. For Argoflex Flash Reflex Camera. Black plastic body, $5\frac{1}{2}$ -inch polished aluminum reflector. With adapter so you can use medium screw base or bayonet base flash bulbs—order from Page 36. Penlight type batteries included.

67 HN 3262—*Postpaid*.....8.63
67 H 3284—6-foot extension for Flash Unit.
Holds 2 units. Ship. wt. 1 lb.....\$3.39

KEEPING PHOTO DATA HANDY

For quick reference print filter factors, exposure charts, etc. on a card, then paste it inside your camera's case.

CIROFLEX REFLEX CAMERA. With features usually found only in higher priced cameras—flash synchronized shutters, automatic parallax correction, convenient side focusing knob, and depth of focus chart. Takes twelve black and white or nine color pictures, $2\frac{1}{4}$ by $2\frac{1}{4}$ inches, to roll of 120 film.

LENS AND SHUTTERS. Wollensak Vellostigmat $f/3.5$ (85 mm.) lens, color corrected and coated to reduce reflection. Stops down to $f/22$. Viewing lens is coated Wollensak $f/3.2$ anastigmat. Accurate focusing for all objects from $3\frac{1}{2}$ feet to infinity. Choice of two fine flash synchronized shutters—Alphax, with speeds from $1/10$ to $1/200$ seconds and Rapax, from 1 to $1/400$ second—both with time and bulb settings—both shutters synchronized for use with Kodak Flashholder (67 HN 3256T) on Page 32.

OPERATING CONTROLS. Viewing hood pops up automatically, has magnifier attached for critical focusing. Shadow appears on ground glass during short distance focusing—automatically corrects parallax error. Depth of focus chart shows you the area of sharp focus at all distances for any "f" stop.

CONSTRUCTION FEATURES. Welded steel body with black pebble grain leather covering. Attractive chrome plated metal trim. Hinged back. Size closed $5\frac{1}{2}$ by $3\frac{1}{4}$ by $4\frac{1}{2}$ inches. Lens mount diameter $1\frac{1}{4}$ in. (31.5 mm). No extra charge for credit. *Postpaid.*

67 HN 222 T—Ciroflex Camera with Alphax Flash Shutter.....83.50
67 HN 223 T—Leather ever-ready Carrying Case for above camera...\$8.50
67 HN 224 T—Ciroflex Camera with Rapax Flash Shutter.....\$113.70
67 HN 225 T—Leather ever-ready Carrying Case for above camera...\$8.50

ROLLEICORD II. Provides outstanding Rollei performance at a moderate price. With many exceptional Rollei features such as a parallax-correcting viewfinder, eye-level reflex focusing, and metered film advance. Both shutter speeds and diaphragm settings are visible from above. Shoots twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -inch black and white or nine color pictures on 120 roll film.

LENS AND SHUTTER. Fast $f/3.5$ (75mm) anastigmat, color corrected, coated Zeiss Triotar taking lens is rigidly coupled to an $f/2.8$ viewing lens. Taking lens stops down to $f/22$ and has a depth of focus scale to tell you exact area focus is sharp. Compur Rapid flash-synchronized shutter (synchronized up to $1/50$ second) provides speeds from $1/250$ second to 1 full second plus Bulb. Double bayonet lens mount accepts all Rollei lens accessories. For accessories write Bob Adams, see Pg. 9. Uses Flash 67 HN 3177 (F) on Pg. 32.

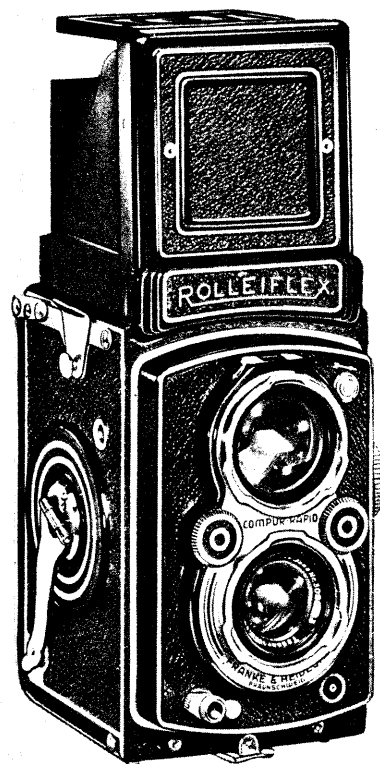
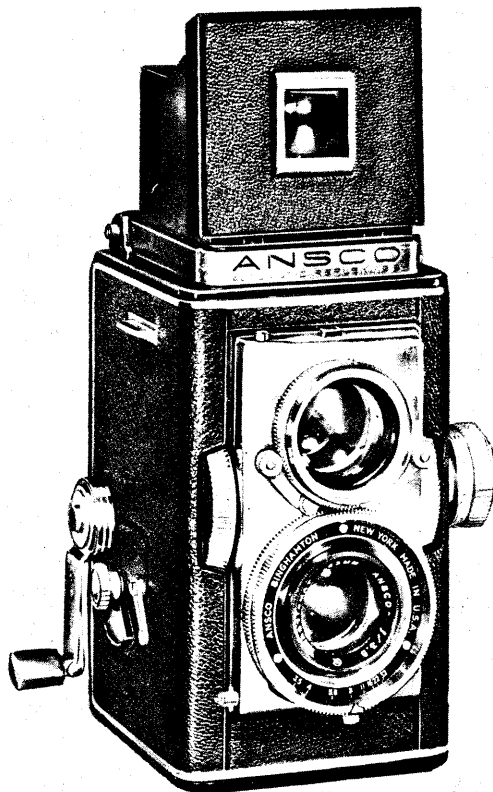
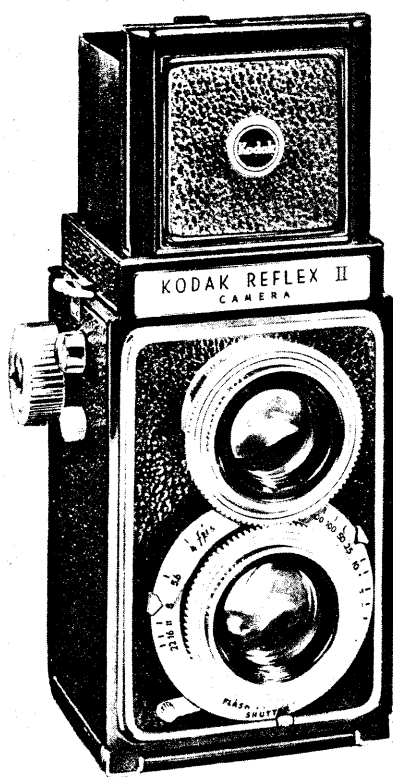
OPERATING CONTROLS. Self-erecting hood has folding mirror for eye-level reflex focusing and viewing. Magnifying glass for critical focusing. Exposure table simplifies shooting. Single control both cocks and trips shutter.

CONSTRUCTION FEATURES. Strongly built body of light metal has handsome black pebble-grained leather covering. Size: $5\frac{1}{4}$ by $4\frac{1}{4}$ by $3\frac{1}{2}$ -in. Cable release, tripod sockets. Complete with brown leather ever-ready case and lens cap. No credit charge. *Postpaid.*

67 HN 233 T—\$13 Down..... 130.00

WRITE BOB ADAMS

If you want other Rollei or Rollei-flex cameras or accessories write to Bob Adams, Department 67, Montgomery Ward, Chicago 7, Illinois.



... Full Print Size and Right Side Up!

KODAK REFLEX II. A new, improved reflex camera built to Eastman's highest standards. With fast $f/3.5$ twin lenses, a flash synchronized shutter, and an Ektalite finder which uses an entirely new principle of illumination. Takes twelve black and white or nine color pictures, $2\frac{1}{4} \times 2\frac{1}{4}$ inches, to each roll of 620 film.

LENS AND SHUTTER. Picture taking lens is the Kodak anastigmat $f/3.5$ color corrected lens with 80 mm ($3\frac{1}{2}$ -inch) focal length—stops down to $f/22$. Focuses from $3\frac{1}{4}$ feet to infinity. Matching $f/3.5$ viewing lens. All optical surfaces are Luminized (coated) to give better light transmission. Flash Kodamatic shutter has speeds from $\frac{1}{2}$ to $1/200$ second plus time and bulb. Synchronized for use with Kodak Flashholder.

OPERATING CONTROLS. Self-actuating reflex viewing hood snaps into position by pressing release button—front part can be pressed down to use as sport frame for action shots. Ground glass reflex viewer is full negative size— $2\frac{1}{4}$ by $2\frac{1}{4}$ in. Interior collecting lenses under ground glass produces extra bright image. Hinged magnifier on hood for pin point focusing. Depth of focus scale works automatically with lens focusing. Film stops automatically in correct position.

CONSTRUCTION FEATURES. Body is all metal with morocco grain finish—bright chrome plated trim. Mounting bracket for installing flash gun attachment. Film winding knob has dial which can be set to remind you which kind of film is in camera. Hinged back for easy film loading—film held in place by spring tension. Extra tripod socket at side of body for use in close quarters. Lens mount diameter $1\frac{1}{2}$ inch (38 mm). Brown molded leather ever-ready carrying case with shoulder straps included. Only \$15.50 Down, no extra charge for credit. Postpaid.

67 HN 221T—Camera and Case.....\$15.00

67 HN 3256T—Kodak Flashholder for Kodak Reflex II and Ansco Reflex. Postpaid.....\$11.00

67 HN 232T—Bantam Adapter Kit for shooting Bantam film in Kodak Reflex. Postpaid....\$5.00

ANSCO REFLEX CAMERA. Now priced \$100 less than last year. The same efficient Ansco Reflex with shutter, "4" stops, and distance settings all readable from top of camera; fast and easy focusing with side knob control; automatic film transport and double exposure prevention to help make every shot a good one. Takes twelve black-and-white or nine color pictures, $2\frac{1}{4}$ by $2\frac{1}{4}$ inches, to standard 120 roll film.

LENS AND SHUTTER. Fast $f/3.5$ Wollensack Vellostigmat, color corrected lens with 83 mm focal length—coated to cut out reflections and insure better light transmission—stops down to $f/32$. Focuses sharply from 3 feet 8 inches to infinity. Matching $f/3.5$ viewing lens is directly coupled with taking lens, produces full size $2\frac{1}{4}$ by $2\frac{1}{4}$ -inch brilliant image on ground glass screen. Pre-cocking Ansco shutter has speeds from 1 to $1/400$ second plus bulb. Kodak Flashholder (67 HN 3256T) on Page 32 is recommended for use with this shutter. (For speeds from $1/50$ to $1/400$ second use SM or SF type flash lamps only—other lamps may be used at slower shutter speeds.) Lens mount diameter $1\frac{1}{8}$ in. (33 mm).

OPERATING CONTROLS. Film transport lever advances film, stops automatically when next frame is reached. Locking device makes accidental double exposure practically impossible. Special release lever permits double or multiple exposures on single frame if desired. Viewing hood springs into position by pressing button—folds automatically when pressed down. Built-in hinged magnifier in hood for critical focusing. Extra optical lens in focusing hood panel in conjunction with magnifier forms an accurate eye-level sports finder.

CONSTRUCTION FEATURES. Camera body is durable metal with rich black pin seal leather covering. Satin finish chromed trim. Tripod socket and cable release socket. No extra charge for credit. For Terms see Page 101.

67HN227T—Postpaid. \$16.50 Dn. on Terms \$165.00

67 HN 228T—Brown molded leather Case for Ansco Reflex Camera. Postpaid.....\$12.50

AUTOMATIC ROLLEIFLEX CAMERA. With new flash synchronized Compur shutter (up to $1/50$) and a newly designed hood that gives you eye-level and waist-level reflex viewing and a direct vision sportsfinder. This fine German-made camera has lenses by Karl Zeiss, automatic parallax correction, and shoots twelve black-and-white or nine color pictures, $2\frac{1}{4}$ by $2\frac{1}{4}$ inches, on 120 roll film.

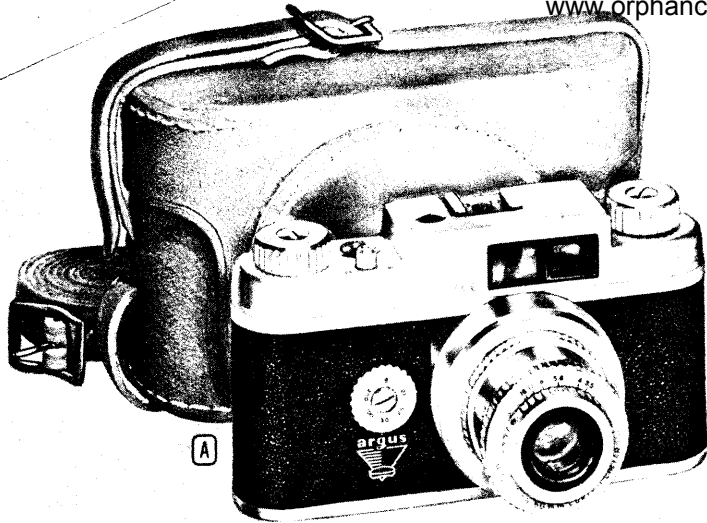
LENS AND SHUTTER. The taking lens is the famous Zeiss Tessar $f/3.5$ (75 mm), now coated to eliminate reflection and flare. Stops down to $f/22$. In bayonet mount for ease in changing filters quickly. Focuses from 3 feet 8 inches to infinity. Viewing lens is fast $f/2.8$ —faster and larger than the taking lens and always open at full aperture width to assure bright, clear image for sharpest focusing. High-speed Compur shutter has speeds from $1/500$ to 1 second plus bulb. Delayed timing device so you can take your own picture. Uses flash guns: flash sync. use F (67 HN 3177) Pg. 32; mechanical sync. use H Pg. 33.

OPERATING CONTROLS. Self erecting focusing hood. Built-in hinged magnifier for critical focusing. Special mirror adjustment enables you to do eye-level as well as waist level reflex viewing. Film transport automatically stops when next frame is reached, cocks shutter at the same time, eliminates double exposures. Transport arm folds flat against camera when not in use.

CONSTRUCTION FEATURES. Solidly built metal body has black grained top grain leather cover, bright chrome plated trim. Removable back for accessory cut film or film pack adapter. Focusing knob, distance, and depth of focus scale are all one unit. Lens is recessed into camera, body acts as sunshade. Body size about $5\frac{1}{2}$ by $3\frac{3}{4}$ by $3\frac{3}{4}$ inches with hood closed. With lens cap, cable release, and molded leather ever-ready case. No extra charge for credit. Mailed Postpaid.

67 HN 226T—\$27.50 Down, \$16 Monthly, 275.00

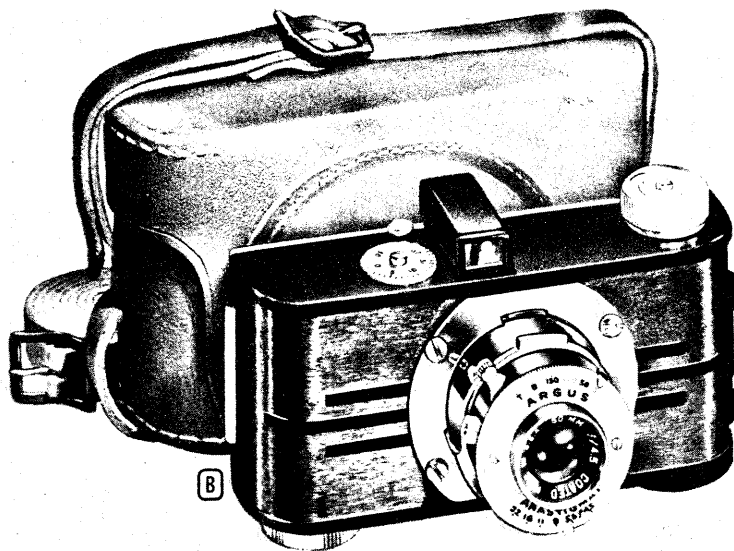
Notice: for Rollei accessory backs for cut film, lens hoods and filters, and lenses write Bob Adams, Dept. 67, Montgomery Ward, Chicago 7, Ill.



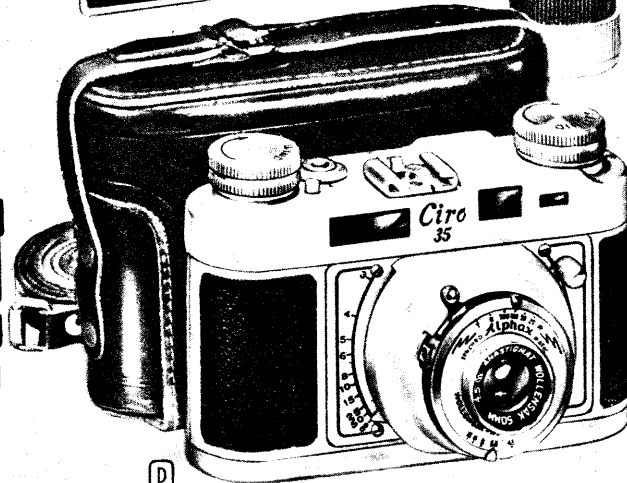
A



C



B



D

Miniature Cameras... Preferred for

A ARGUS "21" CAMERA. Viewfinder gives illusion of a frame of light around subject. Built-in flash synchronization. Advancing film automatically cocks shutter, prevents double exposures. Metering device stops film when it has reached next frame.

LENS—50 mm. Cintar f/3.5 coated anastigmat, stops to f/16, focuses from 3 ft. to infinity. SHUTTER—pre-cocking, speeds from 1/10 to 1/200 second, plus Bulb, body release and cable release socket. FINDER—enclosed optical. FILM SIZE—18, 20, or 36-exposure 35 mm. NEGATIVE SIZE—1 by 1½ in. CONSTRUCTION—metal body, black leather and chrome trim. BODY SIZE—about 1¼ by 2 by 5 in. ACTUAL WEIGHT—about 14 oz. LENS MOUNT DIAMETER—7/8 in. (21 mm.). No extra credit charge. *Postpaid.*

67 HN 346L—Argus "21" with leather ever-ready carrying case...\$59.95

67 HN 347L—Argus "21" Camera only.....\$51.75

67 HN 3262—Argus flash unit for Argus "21" camera above. For medium screw base or bayonet base flash bulbs on Page 36. With two penlight type batteries. *Postpaid.*.....\$8.63

B NEW ARGUS FA. A low-priced, easy-to-use miniature camera with simple two-position focusing. One position for sharp pictures of all subjects at distances between 8 and 15 feet; the other for 15 feet to infinity. Flash synchronized shutter. Automatic exposure counter. Lens barrel telescopes into camera front for safer, more compact carrying.

LENS—50 mm. Argus f/4.5 coated anastigmat, stops to f/18, focuses from 8 feet to infinity. SHUTTER—self-cocking, 4 speeds from 1/25 to 1/150 second, time and bulb, lever release and cable release socket. FINDER—enclosed optical. FILM SIZE—18, 20, or 36-exposure 35 mm. NEGATIVE SIZE—1x1½ in. CONSTRUCTION—black plastic chrome plated fittings. SIZE—about 1¼x2½x5 in. ACT. WT.—about 14 oz. LENS MOUNT DIAMETER—1 inch (25.5 mm.). No credit charge. Flash unit uses SM flash bulbs. Order from Page 36.

67 HN 375L—Camera only. *Postpaid.*.....\$29.95

67 H 376—Case for Argus FA. Ship. wt. 1 lb.....\$4.95

67 HN 58—Flash Unit and Batteries for Argus FA. *Postpaid.*.....\$4.08

LOOK OUT FOR OIL

Never put oil—in any amount—on your camera shutter. Sooner or later the speeds will be so far off the beam, an expensive repair job will result.

12 WARDS

C ARGUS C-3 CAMERA. Accurate, split-image type, built-in rangefinder is coupled to camera lens. Focusing the rangefinder on any subject from 4 feet to infinity automatically brings the camera lens into sharp focus. Built-in flash synchronizer is internally coupled to the shutter—just plug the flash gun into side of camera and you're ready for flash pictures. (Uses medium screw base bulbs and standard flashlight batteries—not included.) Automatic frame counter shows number of frames exposed.

LENS—Cintar f/3.5 coated anastigmat, 50 mm. focal length, stops down to f/16, focuses from 3 feet to infinity. SHUTTER—pre-cocking type, seven speeds from 1/10 to 1/300 second and bulb, body release and cable release socket. FINDER—enclosed optical type. FILM SIZE—35 mm. NEGATIVE SIZE—1 by 1½ in. NUMBER EXPOSURES—18, 20, or 36. CONSTRUCTION—metal and plastic with black leather and chrome plated trim. BODY SIZE—about 2 by 2¾ by 5 inches. ACTUAL WEIGHT—about 24 oz. LENS MOUNT—Uses No. 18 screw-in adapter ring on Page 41. 10% down—no charge for credit. *Postpaid.*

67 HN 344L—Camera with flash unit and leather ever-ready case...\$59.95

67 HN 340L—Camera with flash unit only.....\$52.95

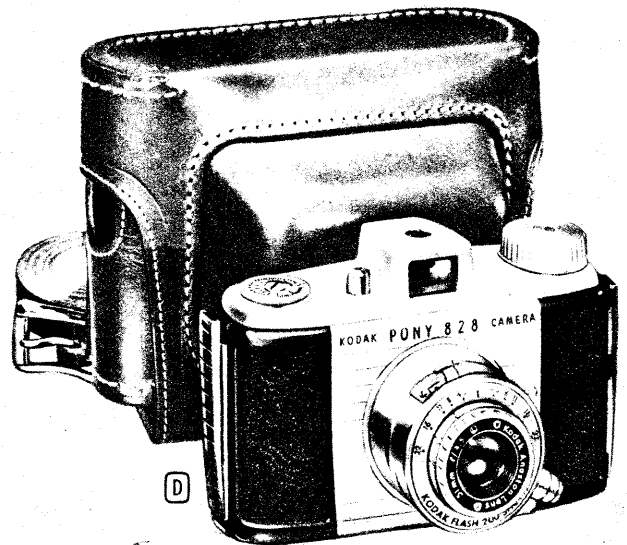
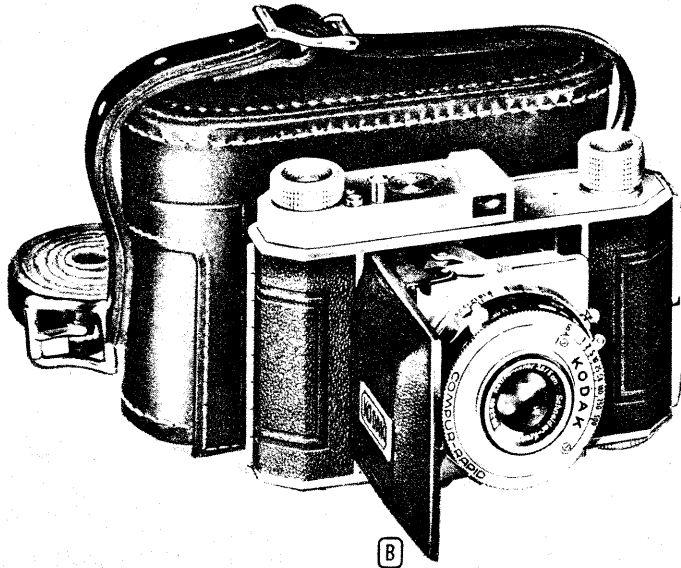
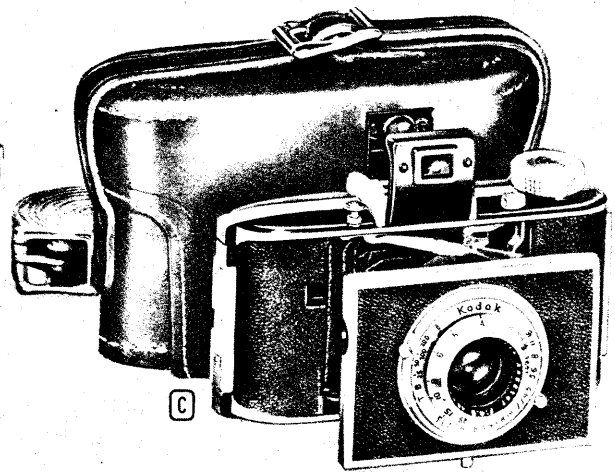
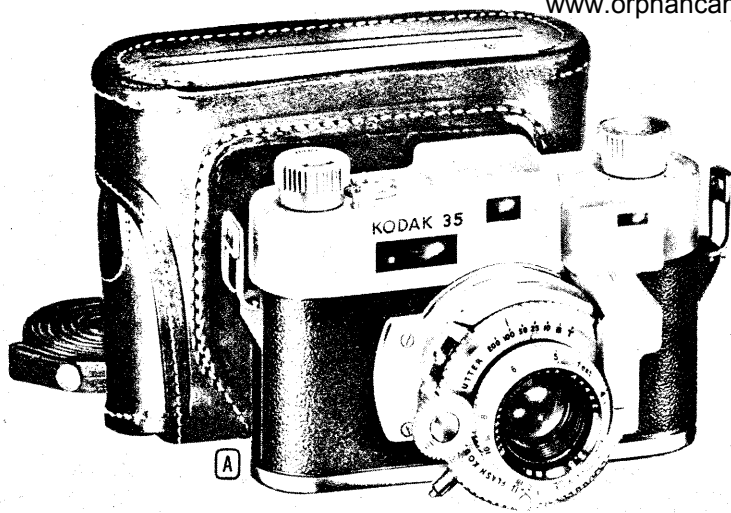
D NEW CIRO "35" CAMERA has features of an expensive camera, yet is moderately priced. Flash synchronized shutter for picture-taking under most conditions. Built-in rangefinder with both superimposed and split images—assures you of a quick, sharp focus on every shot. Range-finder is operated by large fingertip focusing handle with easy-to-read prominently marked distances. Bright, eye level view finder. Accessory clip on top of camera for Ciro flash unit—order separately below.

LENS—Wollensak 50 mm. f/4.5 coated anastigmat, stops down to f/16, focuses from 3 feet to infinity. SHUTTER—Self-cocking Alphas with 4 speeds from 1/25 to 1/150 second plus Time and Bulb. Cable release socket. FINDER—Enclosed optical. FILM SIZE—18, 20, or 36 exposure 35 mm. NEGATIVE SIZE—1 by 1½ in. CONSTRUCTION—black leather covering, satin metal finish trim. BODY SIZE—2 by 2¾ by 5 in. ACTUAL WEIGHT—1 lb. 4 oz. LENS MOUNT DIAMETER—15/16 in. (23.5mm.). *Postpaid.* No extra charge for credit.

67 HN 461L—Ciro "35" only. \$5 Down, \$5 Monthly on Terms.....\$39.50

67 H 462—Top grain cowhide case for Ciro "35." Ship. wt. 1 lb.....\$5.95

67 H 469—Flash Unit for Ciro "35." Uses bayonet base bulbs (Page 36), Penlight batteries included. Ship. wt. 1 lb.....\$5.50



Economical Color... Black and White too

A KODAK "35" WITH RANGEFINDER. Accurate, split-image type, built-in rangefinder is coupled directly to camera lens. Focusing rangefinder on any subject from 4 feet to infinity automatically brings the camera lens into sharp focus. Kodamatic shutter has built-in flash synchronization for use with Kodak Flashholder on Page 32. Advancing the film automatically cocks shutter. Frame counter automatically records number of exposures taken. Film loading dial shows type of film with which camera is loaded.

LENS—Kodak Special f/3.5 coated anastigmat, 50 mm. focal length, stops down to f/16, focuses from 4 feet to infinity. SHUTTER—pre-cocking type, five speeds from 1/10 to 1/200 second, time and bulb, lever release and cable release socket. FINDER—enclosed optical type. FILM SIZE—18, 20, or 36-exposure 35 mm. NEGATIVE SIZE—1 by 1½ inch. NUMBER EXPOSURES—18, 20, or 36. CONSTRUCTION—metal and black plastic body with black pin-grain covering and satin finished metal parts. BODY SIZE—about 3 by 3½ by 5½ inches. ACTUAL WEIGHT—about 24 oz. LENS MOUNT DIAMETER—1¼ inch (31.5 mm.). Only 10% down—no charge for credit. Postpaid.

67 HN 318 L—Camera only, without case 86.75

67 H 319—Leather ever-ready case for camera above. Ship. wt. 1 lb. 6.75

B KODAK RETINA I. A fine 35 mm. camera made in Germany for Eastman Kodak to Kodak's high specifications. With Schneider Xenar lens and Compur Rapid Shutter. Provides best possible results in color and black and white. Body release, shutter, and film wind are coupled, prevent double exposures. Depth of field scale. Film advance and rewind mechanism. For flash photography, the Kalart Master Automatic speed Flash (H) on Page 33 or Service Flash (F) on Page 32 is recommended.

LENS—Schneider Xenar f/3.5 coated anastigmat, 2-inch (50 mm.) focal length, stops down to f/16, focuses from 3½ feet to infinity. SHUTTER—Pre-cocking type—nine speeds from 1 to 1/500 second, plus Bulb. Body release and cable release socket. FINDER—optical type. FILM SIZE—20 or 36-exposure 35 mm. NEGATIVE SIZE—1 by 1½ inches. NUMBER EXPOSURES—20 or 36. CONSTRUCTION—metal body, black leather cover, satin finished chrome trim. BODY SIZE—about 4¾ by 1½ by 3¾ inches. ACTUAL WEIGHT—about 17 oz. LENS MOUNT DIAMETER—1¾ in. (20.6 mm.). No extra charge for credit.

67 HN 324 L—Kodak Retina I. Only \$7.50 Down. Postpaid 72.75

67 H 325—Ever-ready carrying case for Retina I. Ship. wt. 1 lb. 9.95

C KODAK BANTAM WITH F/4.5 LENS. A favorite because of its compact, pocket size, ease of operation, and wide picture-making ability. Built-in flash synchronization for use with Kodak Flashholder on Page 32. Coated lens.

LENS—F/4.5 Special Kodak anastigmat, stops to f/16, focuses from 2½ ft. to infinity. SHUTTER—pre-cocking, speeds of 1/25, 1/50, 1/100, 1/200, bulb and time, body release and cable release socket. FINDER—optical, folding eye-level type. FILM SIZE—828 roll film. NEGATIVE SIZE—about 1x1½ in. EXPOSURES—8. CONSTRUCTION—aluminum, Kodadur covered. SIZE—about 4½x2¾x1½ in., folded. ACT. WT.—9 oz. LENS MOUNT DIAM.—1½ in. (23.5 mm.).

67 HN 309 L—Kodak Bantam Camera. Postpaid. No charge for credit. 49.50

67 H 310—Leather field case for camera above. Ship. wt. 1 lb. 5.50

D NEW KODAK PONY CAMERA. An inexpensive camera in choice of two film sizes—828 Bantam or 35mm. Excellent for both color and black and white. Synchronized for use with Kodak Flashholder on Page 32. Body shutter release. Depth of field scale, film type indicator visible from above. Average settings for color and black and white marked in red.

LENS—F/4.5 Kodak Anaston anastigmat, stops to f/22, focuses from 2½ ft. to infinity. SHUTTER—Kodak Flash 200 pre-cocking, speeds of 1/25, 1/50, 1/100, 1/200, and bulb. FINDER—optical, eye-level type. CONSTRUCTION—molded body, bright metal fittings. SIZE—about 5½x3½x2¼ in. ACT. WT.—about 13 oz. LENS MOUNT DIAMETER—1½ in. (28.5mm). No credit charge.

67 HN 328 L—Pony 828 Camera only. Uses 828 size film. Postpaid ... 29.95

67 H 329—Leather ever-ready Case for Pony 828. Ship. wt. 1 lb. 5.95

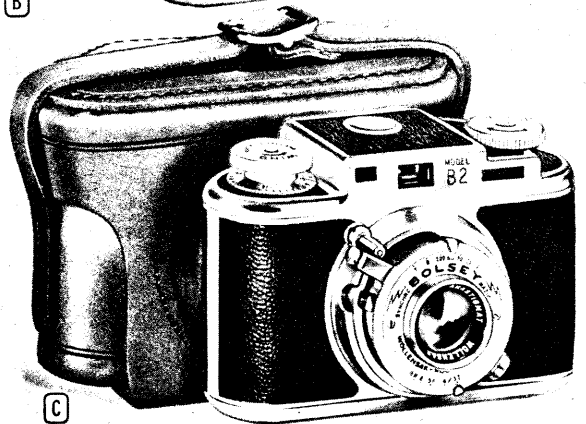
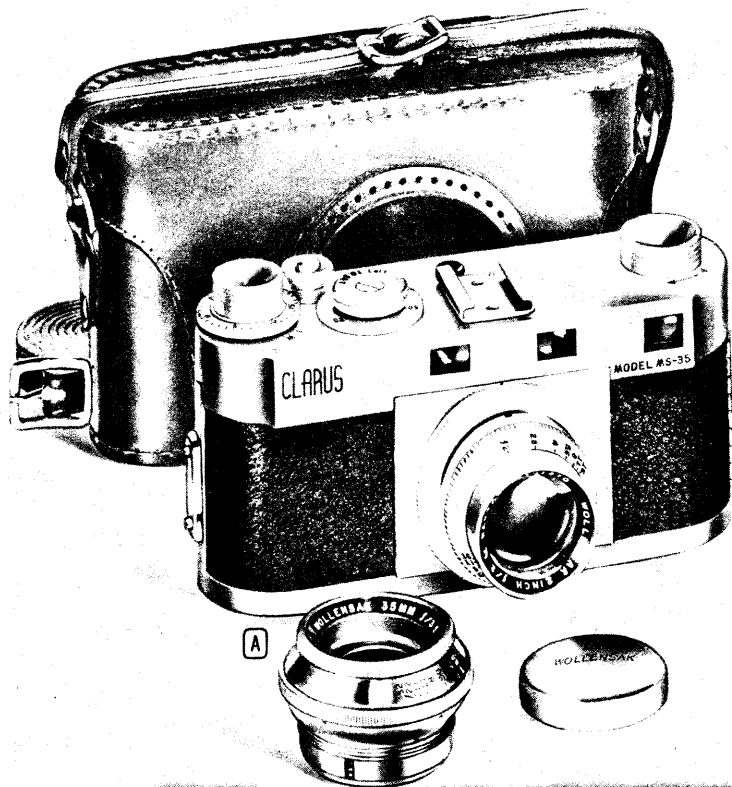
67 HN 302 L—Pony 135 Camera only. Uses 35mm size film. Postpaid... 34.75

67 H 303—Leather ever-ready Case for Pony 135. Ship. wt. 1 lb. 5.95

PROJECTED PICTURE SIZES OF SLIDES AT VARYING DISTANCES

Sizes in table are for 35 mm. slides—Bantam slides produce slightly larger pictures. Table gives longest dimension of projected picture. In projecting slides, the size of the picture on the screen is determined by distance from projector to screen, and the focal length of the lens.

Projector to screen distance	Length of picture in feet			
	3-in. lens	4-in. lens	5-in. lens	7-in. lens
10 ft.	4.6	3.4	2.6	1.9
20 ft.	9.0	6.8	5.4	3.9
30 ft.	13.6	10.2	8.0	5.9
40 ft.	18.2	13.6	11.0	7.8
50 ft.	22.4	16.8	13.6	9.6



35mm. Cameras for Color or Black and White

A CLARUS 35MM. CAMERA. A moderately priced, high quality 35mm. camera adaptable to normal, closeup, or telephoto work. Lenses are interchangeable for special requirements—both wide angle and telephoto lenses are available. Screw in lens mount makes them easily and quickly alternated. This precision-built camera has coated lenses, split-image type coupled rangefinder for quick, accurate focusing, and a flash synchronized focal plane shutter made of rubberized nylon for accuracy at all temperatures.

Camera comes with your choice of the Wollensak Velostigmat f/2.8 lens or the Wollensak Raptar f/2.0. Lens mount accepts Clarus Wide Angle f/3.5 and Clarus f/3.5 Telephoto accessory lenses available below. Built-in flash synchronization for use with Clarus Flash Unit below. Shutter is cocked with the film advance mechanism—double exposures are impossible.

LENS—Wollensak f/2.8 Velostigmat or Wollensak Raptar f/2.0 coated lens, focuses from 3½ feet to infinity. **SHUTTER—**Focal plane intermittent action. Speeds from 1/25 to 1/1000 second, Time and Bulb. Body release and cable release socket. **FINDER—**Built-in optical. **FILM SIZE—**18, 20 or 36 exposure 35 mm. **NEGATIVE SIZE—**1 by 1½ inches. **NUMBER EXPOSURES—**18, 20 or 36. **CONSTRUCTION—**Metal body, satin finished, Redolite (artificial leather) cover. **BODY SIZE—**2¾ by 3 by 6 in. **ACTUAL WEIGHT—**30 oz. **Postpaid:** no credit charge.

67 HN 307 K—Clarus with f/2.8 lens. Without case. \$12 Down. \$116.25

67 HN 349 K—Clarus with f/2.0 lens. Without case. \$17 Down. \$168.50

67 HN 354 K—Leather ever-ready carrying case for the Clarus Camera. Flash can be attached while camera is in case. **Postpaid:** \$7.50

67 HN 3159 K—CLARUS FLASH UNIT. Synchronized at all speeds to shutter. Order No. 31 flash bulbs for focal plane shutters (P. 36). **Postpaid:** \$8.37

67 HN 2268 K—35 mm. F/3.5 WIDE ANGLE LENS. Coated Wollensak—couples to range finder. **Postpaid:** \$69.75

67 HN 2340 K—VIEWFINDER FOR F/3.5 WIDE ANGLE LENS. Shows exact field of coverage of wide angle lens above. **Postpaid:** \$8.95

67 HN 2275 K—101 mm. F/3.5 TELEPHOTO LENS (shown at left). Fine coated Wollensak lens couples to rangefinder of Clarus camera above. **Postpaid.** Only \$10 Down. \$98.80

67 HN 2347 K—VIEWFINDER FOR TELEPHOTO LENS. Shows exact field of coverage of telephoto lens above. **Postpaid:** . . . \$6.95

KEEPING YOUR 35mm. FREE OF DUST

While the elimination of dirt and dust is important in all photography, it is especially important with 35 mm. miniature cameras. Make a pocket of cloth or cellophane and attach it to the inside of the top of your camera's carrying case. Then you can keep a package of lens tissues or a small camel's hair brush where it is always handy.



B BOLSEY C TWIN LENS REFLEX. The only 35mm. twin lens reflex with both ground glass reflex focusing and eye level viewfinder with coupled rangefinder. Use the reflex finder for posed shots, landscapes, and for better compositions; the eye level range and view finders for fast action shots. Shutter is synchronized for use with flash unit 67 HN 3157 below. Camera has double exposure prevention device, depth of focus scale, and new type easy loading film lead catch. Film load indicator on outside of camera tells whether camera is loaded with color or black-and-white film.

LENSES—Both lenses are Wollensak anastigmat coated 44mm. f/3.2, corrected for color. Stops down to f/16, focuses from 2 feet to infinity. **SHUTTER—**Self-cocking, flash synchronized. Five speeds from 1/10 to 1/200 second, plus Bulb and Time. Lever release and Cable release socket. **FINDERS—**Actual size reflex, and eye level optical. **FILM SIZE—**18, 20, or 36-exposure 35 mm. **NEGATIVE SIZE—**1 by 1½ inches. **CONSTRUCTION—**metal body covered in black artificial leather with satin trim. **BODY SIZE—**about 4¼ by 3½ by 2¼ inches. **ACTUAL WEIGHT—**about 18 oz. **LENS MOUNT DIAMETER—**15/16 inches. (24 mm.) Only 10% Down. No extra charge for credit. **Postpaid.**

67 HN 312 T—Bolsey C Twin Lens Reflex Camera, without case. \$99.50

67 HN 313 T—Top grain leather ever-ready Carrying Case for Model C. 8.50

C BOLSEY B-2 35MM. WITH COUPLED RANGEFINDER. Moderately priced, but has features usually found only in higher priced cameras: built-in flash synchronization, split-image rangefinder, double exposure prevention, depth of focus scale, film load indicator, and a fast coated lens.

LENSES—Wollensak f/3.2 coated Anastigmat, 44 mm. focal length, stops down to f/16. Color corrected. Focuses from 2 ft. to infinity. **SHUTTER—**Pre-cocking, 5 speeds to 1/200 second plus Bulb and Time. Lever release and cable release socket. **FINDER—**Enclosed eye level optical type. **FILM SIZE—**18, 20, or 36-exposure 35 mm. **NEGATIVE SIZE—**1 by 1½ inches. **CONSTRUCTION—**metal body covered in black imitation leather with satin chrome plated trim. **BODY SIZE—**4½x2¾x2¼ in. **ACTUAL WEIGHT—**15 oz. **LENS MOUNT—**15/16 in. (24 mm.).

67 HN 311 L—Camera only. No credit charge. **Postpaid:** 66.90

67 HN 316—Leather ever-ready Case. **Postpaid:** 7.25

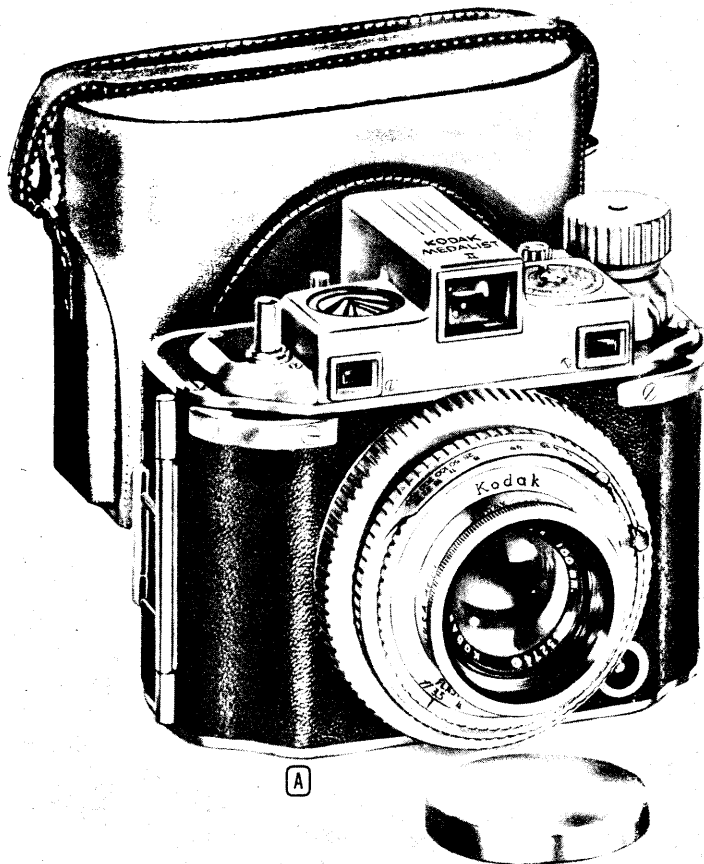
67 HN 3157—BOLSEY FLASH UNIT FOR MODELS B-2 AND C. Uses either screw base or bayonet base bulbs, Pg. 36. Automatic bulb ejector. Extension light connection. With 2 medium batteries. **Postpaid:** \$8.95

BOLSEY B WITH RANGEFINDER (not shown). Same as above except it has a Wollensak f/3.2 anastigmat lens and no flash synchronization, double exposure preventative, depth of focus scale or film load indicator. **Postpaid.**

67 HN 305 L—Camera only. No extra credit charge. \$6 Down. 55.90

67 HN 306—Top grain cowhide ever-ready case 7.25

67 HN 3165—Flash Unit for Bolsey B. Similar to 67 HN 3157 above for speeds no faster than 1/50 second. No extension light connection. \$9.95



Kodak Medalist

A KODAK MEDALIST II. A highly versatile camera for the most critical photographer. Built with the precision and compactness of a fine miniature, yet it uses 620 film, and with attachments, can be used with plates, sheets, and film packs. It is unexcelled for color work.

Operated like a precision miniature, the Medalist has the mechanical refinements that lend assurance and simplicity to picture making: automatic film stop, accidental double exposure prevention, automatic shutter cocking, and a body shutter release. Conveniently located scales, all visible from above, indicate distance, depth of field, shutter speed, lens stop, exposure number, and film type. The Medalist has built-in flash-synchronization for use with flash guns (F) and (G) on Page 32.

LENS—Critical, fully color corrected Kodak Ektar f/3.5 lens stops down to f/32. 4-inch focal length (100 mm.). Focuses from 3½ feet to infinity. **SHUTTER**—Kodak Supermatic shutter has nine speeds from 1 second through 1/400 second plus Bulb. Cable release socket. **FINDER**—Parallax correcting optional. **FILM SIZE**—Shoots eight black-and-white or six color pictures on 620 roll film (see attachments below). **NEGATIVE SIZE**—2¼ by 3¼ in. **CONSTRUCTION**—Rigid die-cast metal construction makes possible positive connection of lens mount to camera body. Interlocking joints of body form light traps. Body has handsome black pinseed grain leather covering. Exposed metal parts are satin finished. **BODY SIZE**—5½ by 4¾ by 3¾ in. **ACTUAL WEIGHT**—3 lbs. 2 oz. **LENS MOUNT**—Adapter ring insert supplied for using series VI Kodak lens attachments. No extra charge for credit, see Page 101. *Postpaid.*

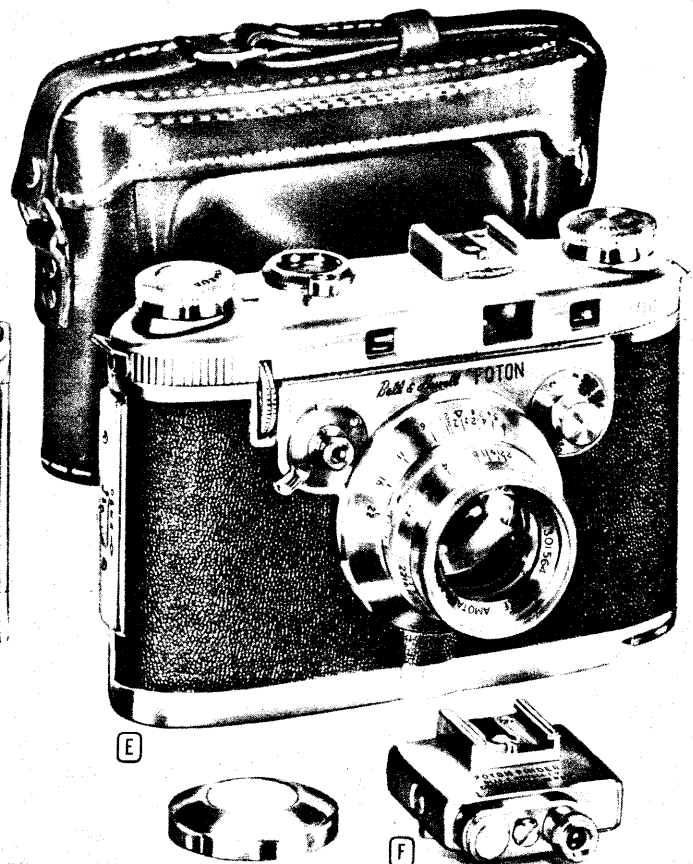
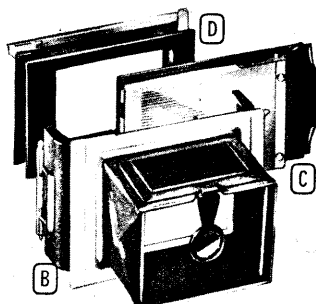
67 HN 320 T—Kodak Medalist Camera and Carrying Case. With lens cap, leather carrying strap, brown ever-ready case with removable top and front, cable release. Only \$31.50 Down.....No credit charge 312.50

B 67 HN 333 T—Accessory Back. Permits use of holder 67 HN 337 T below. Includes ground glass focusing screen, folding hood with magnifying glass. Adapts camera for use with enlargers, for close-up or copying work, and for film pack and cut film holders.....49.50

C 67 HN 337 T—2¼x3¼ cut film and plate holder. Holds one film. Use with accessory back. 5.25

67 HN 334 T—Film Pack Adapter. For use with 2¼x3¼ in. film packs. For use with accessory back above.....7.50

D 67 HN 335 T—Extension Unit for close-ups or copying. No supplementary lens needed when copying. Use one or more on accessory back.....14.50



Bell & Howell Foton

E BELL & HOWELL FOTON. A superlative still camera with a motor-driven film advance—enables you to take four to six shots a second, ten to fifteen shots per motor winding. With a Foton, you're always ready for the next picture. Ready to catch fleeting facial expressions or rapid sequence pictures. Ready because you can concentrate on your subject without stopping to cock your shutter or advance the film. The Foton's perfect performance is matched by its extreme beauty, compactness, and ruggedness. Bell & Howell offers lifetime guarantee against defects in materials and workmanship.

To assure top picture quality, each Foton lens is individually measured for actual light transmission, then calibrated in T-stops. This exclusive T-stop measurement eliminates the inaccuracies found in lenses calibrated in f-stops. Focusing is quick and easy too, with the lens-coupled superimposed image type rangefinder. Accessory clip over film speed dial takes Foton flash unit and also permits use of both flash attachment and accessory viewfinder at the same time. All controls on the Foton are conveniently placed for your right forefinger. Governor controlled ratchet-wound motor assures accurate performance. Easy-to-read depth of focus scale.

LENS—Finest T2.2 (f/2.0) Cooke Amotal anastigmat coated and color corrected. 2-inch focal length. Focuses from 3½ feet to infinity. **SHUTTER**—Exclusive four-leaf design flash synchronized focal plane shutter assures uniform exposure from corner to corner of the film. All-metal construction shutter has ten speeds from 1 second to 1/1000 second plus bulb—all settings are extremely accurate and on one dial. Safety shutter prevents heat of direct sunlight from damaging focal plane shutter. **FINDER**—Enclosed, dirt-proof, optical type. **FILM SIZE**—18, 20, or 36-exposure 35mm. **NEGATIVE SIZE**—1 by 1½ inches. **CONSTRUCTION**—Smart-looking, die-cast aluminum frame is finished in attractive, durable brown plastic-leather. Exposed metal parts are polished chrome trim. **LENS MOUNT DIAMETER**—1½ inches (37mm). No extra charge for credit. Only \$50 Down, \$28 Monthly on Wards Monthly Payment Plan—see Page 101. *Postpaid.*

67 HN 321 T—Foton Only.....498.00

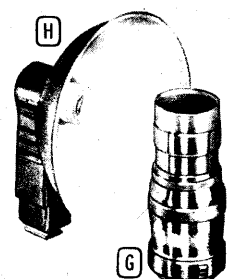
67 HN 317 T—Ever-ready Case..... 22.15

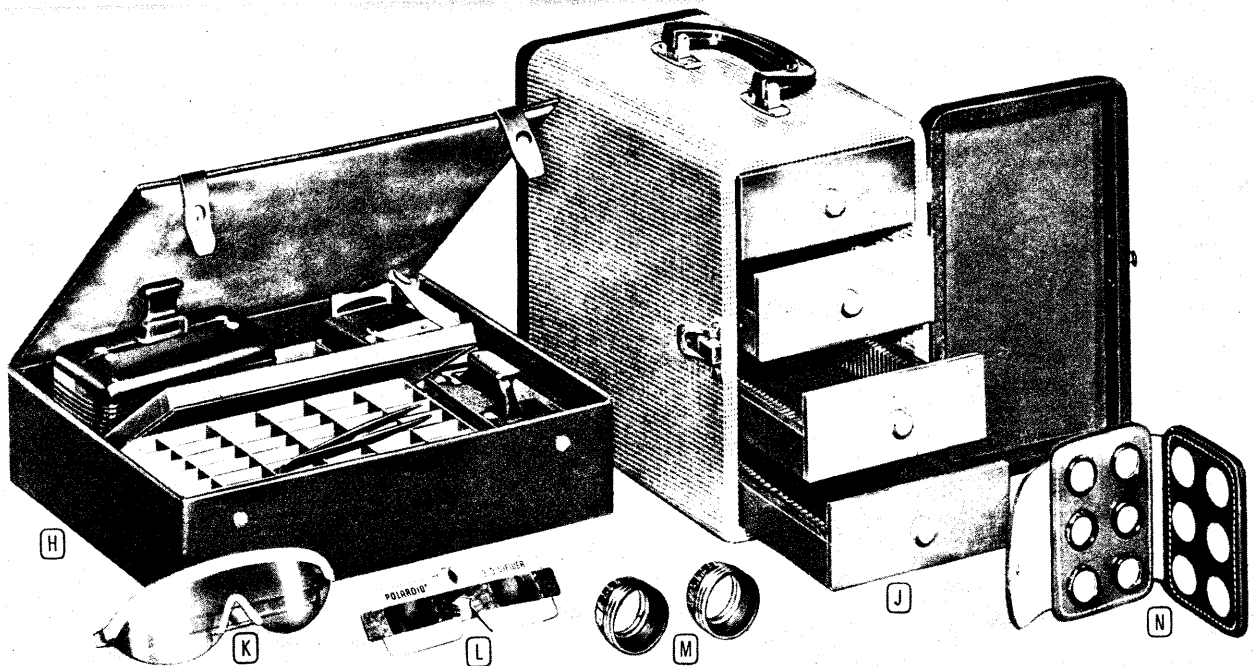
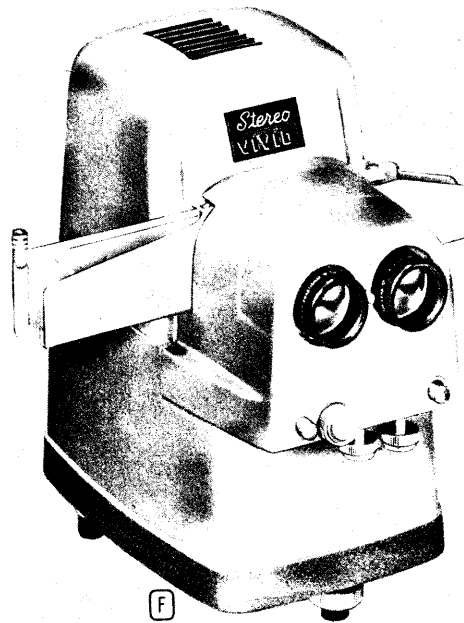
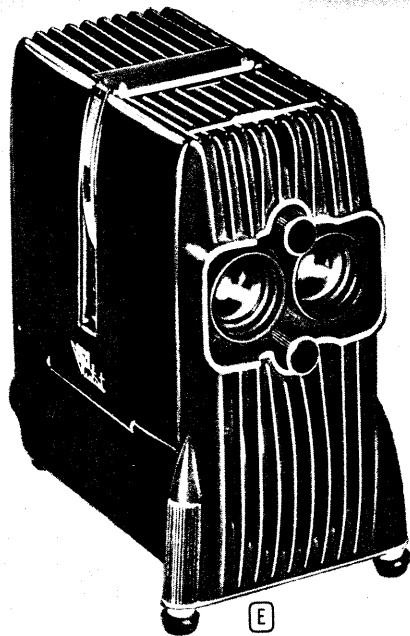
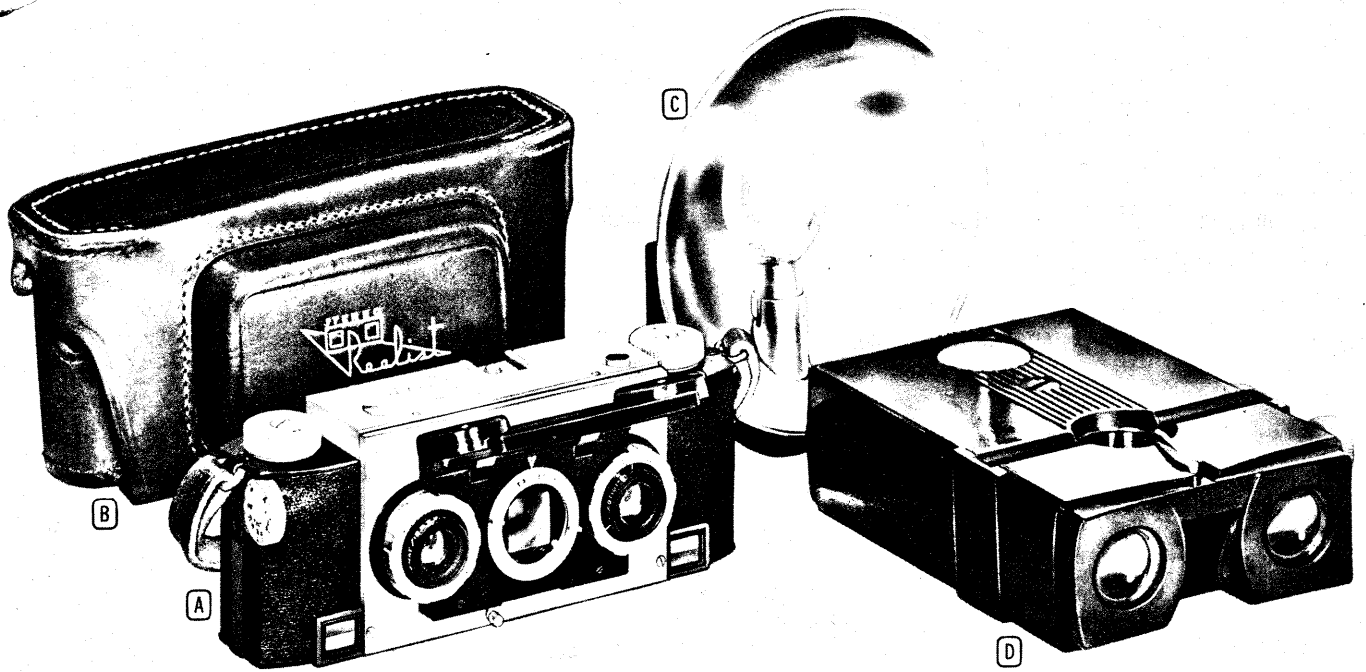
F 67 HN 2302 T—Parallax correcting Viewfinder. Revolving turret for use with 2 or 4-inch lens..... 70.00

G 67 HN 2301 T—4-in. (100 mm) Telephoto Cooke deep-field Pancro T3 (f/2.5) Lens. Stops to T33. Use with rangefinder 348.25

H 67 HN 3158 T—Flash Unit. Uses medium screw or bayonet base focal plane bulbs, penlight batteries..... 22.50

67 HN 308 T—De Luxe Case. Saddle leather. Compartmented for camera, exposure meter, and accessories..... 32.50





The Realist Camera and Accessories

FOR THREE-DIMENSION STEREO PICTURES

How Stereo Works

Hold one finger up at arm's length and look at it with first one eye and then the other. Notice how it seems to jump back and forth in front of the background. That is because your eyes see it from two different angles. In effect, they take two different pictures of it.

Now notice that, with one eye, it is difficult to judge how far the finger is from the background. If you didn't know their relative size you might think they were at the same distance. But with both eyes the finger stands out in front. This is because your brain takes these two pictures, combines them into one, and interprets the two eye angles for each point or object into relative distance—much like a rangefinder does. The result is an impression of roundness and depth that we call three-dimension.

The important point is that to get this three-dimensional effect two different pictures are necessary—one for the left eye and one for the right eye. The Stereo Realist Camera takes these two pictures at the same time and at normal eye spacing—just as your eyes do. These are then mounted on the slide at this same spacing and viewed through the Stereo-Realist viewer, which allows each eye to see only its own picture. The result is the scene itself—with all the depth and roundness and color and natural realism of life. It's as though you could walk right into it.

PROJECTING STEREO. Individual frames of stereo slides can be projected the same as any other transparencies, but to get the three-dimensional effect it is necessary to project both pictures at once, and sort them out so that the left eye sees only the left eye picture and the right eye sees only the right eye picture. This requires one of the two projectors on this page, each of which is like two complete projectors coupled together, with controls to register the two images on the screen. Over each lens is a Pola Screen, with their axes at right angles to each other, and the audience wears glasses that are like Polaroid sun glasses except that the axis of each lens is turned to match the axis of the corresponding Pola Screen in the projector. Thus each eye sees only its own image. (See "Controlling Reflections" on Page 41 for explanation of Pola Screens.)

Just one other provision is necessary; the screen must have a metallic surface such as the special screens or screen material on this page. Ordinary projection screens would destroy the polarization of the projected pictures, and you would see them as two separate images. Screen suitable for stereo, however, can also be used for other projection.

The Stereo-Realist Camera

(A) (See Front Cover.) A precision built, beautifully styled camera for shooting stereo exposures. The Stereo-Realist is easier to operate than most fine quality 35mm cameras because its extra long based, split-image rangefinder assures focusing of pin-point accuracy. All controls are positively synchronized for taking twin pictures of identical quality.

Two perfectly matched and coupled Ilex-Paragon 35mm f/3.5 coated anastigmat lenses with mechanically coupled iris diaphragms provide critically excellent pictures from 2 1/2 feet to infinity. Synchronized shutters assure equal exposures at all 8 speeds from 1 second through 1/150 second plus Time and Bulb. Hinged plastic cover protects lenses. Built-in flash synchronization. Centered optical viewfinder completely eliminates parallax.

Die-cast aluminum body is covered with Morocco grained leather. Size: 6 3/4 by 2 3/4 by 2 3/4 inches. Actual weight 1 lb. 13 oz. Uses regular 35mm film cartridges of 20 and 36 exposures in either full color or black-and-white. Takes sixteen stereo pairs of pictures on 20-exposure rolls—twenty-nine on 36 exposure rolls. Includes instructions for having stereo pictures factory mounted in ready-mounts for about 6c each—or mount them yourself with the mounting kit listed below. Only \$16.50 Down; \$11 Monthly on Terms.

(A) 67 HN 463—Camera only. No credit charge. *Postpaid*... 162.50

(B) 67 H 464—Ever-ready carrying case. Made of fine quality top grain leather. With neck straps. Ship. wt. 1 lb. \$9.95

(C) 67 HN 465—Flash Unit for above with 3 penlight batteries. Uses No. 5 bayonet base flash bulbs. *Postpaid*.....\$9.75

(D) 67 HN 466—THREE-DIMENSIONAL VIEWER (see cover). A precision optical instrument with fine achromatic lenses, interocular (eye) spacing adjustments, focus adjustments, and built-in illuminating system. Sturdy black plastic case. Uses two standard flashlight batteries included. *Postpaid*.....19.75

GADGET BAG FOR STEREO-REALIST (not shown). Especially made for Stereo-Realist. Constructed of beautiful top-grain saddle leather. Partitioned for Stereo-Realist camera, flash unit, flash bulbs, film, and accessories. Size overall: 8 1/2 by 4 1/4 by 11 inches.

67 H 479—Gadget Bag. Ship. wt. 3 lbs.29.50

Projectors For 3-Dimension Pictures

(E) **STEREO REALIST PROJECTOR.** For spotlight brilliance to bring out the vivid colors and details of your three-dimensional slides. The Realist's precise optical system provides evenness of illumination throughout the slide area—gives twice the screen illumination of the T.D.C. Vivid below. Twin 3 1/2-inch f/2.8 coated projection lenses, twin sets of condensers, and clear, heat-absorbing glass to project critically sharp images.

Smoothly operating optical controls have separate adjustments for focus, tilting, and image convergence. Convenient rotating slide holder takes all 35 mm stereo plus 2 by 2-inch slides. The Realist uses two 500-watt bulbs, but with minor modifications can take up to 1000 watts. Patented turbo blade noiselessly forces more than 120 cubic feet of cooling air per minute through the projector.

Strongly built, streamlined body has rich black finish—size: 13 1/2 by 12 1/2 by 7 in. Rubber feet; adjustable balancing leg. UL approved sealed bearing motor uses 110-120 volts, AC only. With 3 plastic and 12 cardboard polarized glasses. Complete with carrying case. No credit charge. **READY FOR DELIVERY ABOUT JUNE 1.**

67 HN 480F—Projector. \$29 Down. *Postpaid*.....290.00

(F) **TDC STEREO VIVID.** medium-price three-dimensional projector with fine matched optical system to project brilliant images. The Vivid has twin, coated, anastigmat f/3.5 5-inch lenses, twin three-element condenser systems, plus heat-ray filters. Smooth operating controls provide images of pin-point sharpness. Handles any standard stereo or 35MM 2 by 2-inch slides.

Separately controlled 500-watt projection bulbs. Blower system keeps projector cool and protects your slides. Cast aluminum body has light brown crackle finish. Adjustable rubber-tipped tripod legs. Size overall: 12 1/2 by 13 by 7 1/2 inches. Uses 110 to 120 volts, AC or DC. Complete with six cardboard stereo polaroid glasses. No credit charge. For Terms see Page 101.

67 HN 482F—TDC Vivid. Only \$16.50 Down. *Postpaid*.... 165.00

67 HN 483F—Carrying Case for above. *Postpaid*..... 20.00

Three-Dimensional Accessories

(H) 67 HN 474 K—SLIDE MOUNTING KIT. For easy home mounting of your slides. Contains film cutter, sorting tray, aligning jig, heating unit, sealing iron, and tweezers. Case. *Postpaid*....29.50

SLIDE MASKS. Box of 50 aluminum foil coated, with adhesive for attaching film. Use Regular mask for most scenes. Ship. wt. 10 oz.

67 H 476—Regular Slide Masks. Windows placed for 10 ft.75c

67 H 468—Close-up Slide Masks. Windows placed for 3 ft.75c

67 H 477—SLIDE GLASSES. 1 3/8 by 4 in. Ship. wt. 1 lb.\$2.45

67 H 478—100 SLIDE LABELS. Adhesive back. Ship. wt. 6 oz.25c

(J) 67 H 475—SLIDE AND VIEWER CASE. Three drawers hold slides; lower drawer holds viewer. Plastic impregnated fabric covering—two-tone tweed finish. Ship. 6 lbs.12.00

(K) **STEREO POLAROID GLASSES** necessary for viewing stereo projections. For explanation read "How Stereo Works."

(K) 67 H 486 K—Plastic Frame Glasses. Smart modern designed glasses for permanent use. Shipping weight 4 ounces.Each \$2.00

(L) 67 H 487 K—Cardboard Frame Glasses. Economical glasses suitable for guests and large audiences. Ship. wt. 6 oz.12 for \$1.69

(M) 67 HN 472—SUNSHADE AND FILTER HOLDER (pair). Takes any Series V filters (Pg. 41, 42). *Postpaid*.....5.00

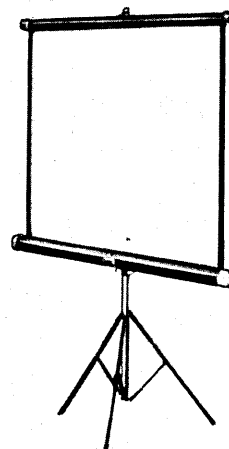
(N) 67 HN 467—FILTER SET. Three pairs of coated optical glass filters in leather case. Consist of two Type A, two Haze, and two Flash (for explanation see Page 41). *Postpaid*.....26.00

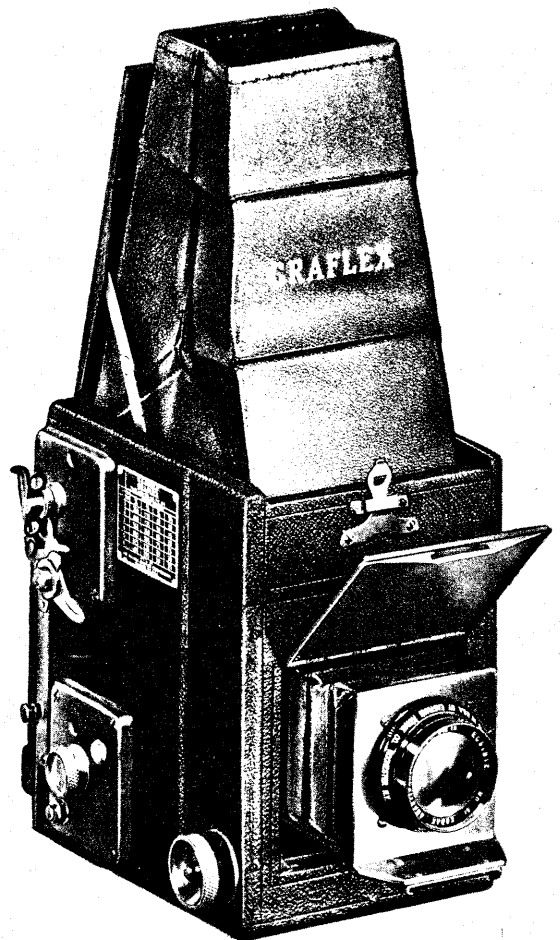
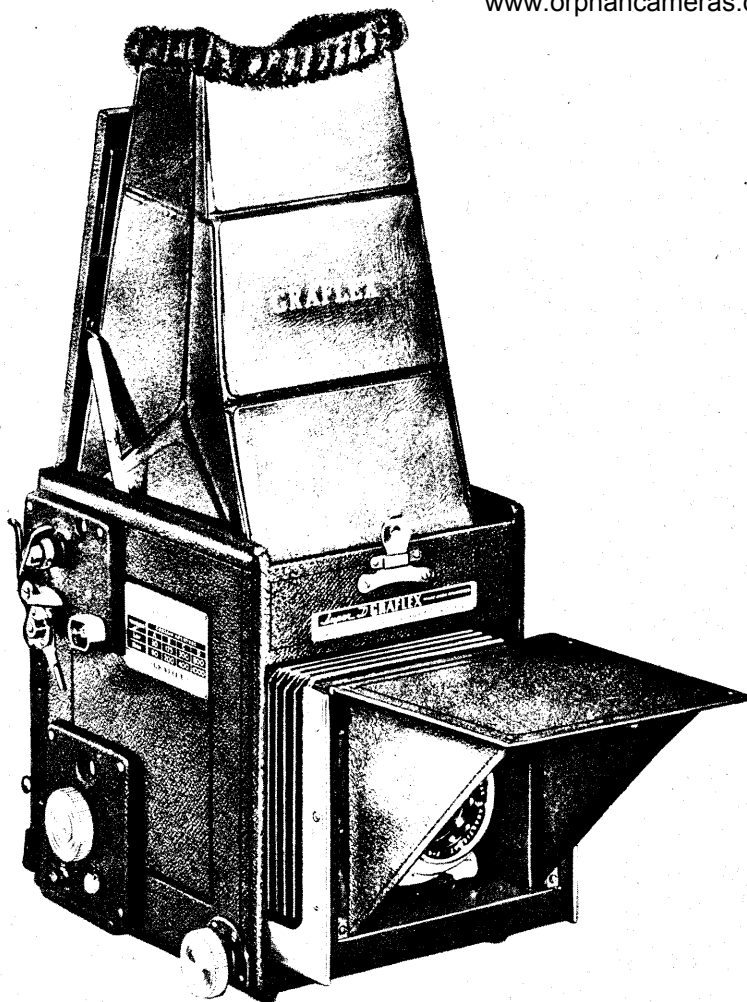
STEREO PROJECTION SILVER SCREEN. Metallic surfaced screen especially for three-dimensional projection. Non-sagging top slat and tension spring roller hold screen flat. Rolls into gray hammerloid finished case. *Postpaid*.

67 HN 1045F—Size 40x40 in.22.75

67 HN 1046 F—Size 50x50 in.31.00

67 HN 1047 K—Metallic surfaced material for making your own screen. Up to 70 in. wide.....Per Sq. Ft. 75c





Graflex Cameras for Outstanding Pictures

RB SUPER D GRAFLEX—Single lens reflex camera with fast, accurate focusing through the new Ektalite Field Lens—gives you brighter images for more accurate focusing under all conditions. This versatile, high quality camera has built-in flash synchronization, single lens focusing with Automatic Diaphragm, eight-speed focal plane shutter, and these standard Graflex features: revolving back, Ektar lens in barrel mount, compactness and dependability. Available in 3¼ by 4¼ and 4 by 5-inch film size.

NEW EKTALITE FIELD LENS—Enables you to examine entire ground glass area even in poor light, or with diaphragm stopped down. (See story of Ektalite Lens at right).

SIMPLE FOCUSING WITH AUTOMATIC DIAPHRAGM—Pre-select your diaphragm opening, then focus with lens wide open. When the mirror rises before exposure, the diaphragm automatically stops itself down to the pre-selected aperture. Eliminates squinting into a darkened viewfinder—enables you to focus more accurately, obtain better compositions, and stops down further for sharper pictures.

BUILT-IN FLASH SYNCHRONIZATION—Accurate synchronization with all short peak flash lamps at drop curtain setting, with long peak lamps (GE No. 31) at 1/1000 and 1/400 sec. Graflite Flashing Unit (K) on Page 32 is recommended.

SIMPLIFIED FOCAL PLANE SHUTTER AND COATED LENS—Only two tension settings give you eight shutter speeds: 1/30, 1/60, 1/125, 1/200, 1/300, 1/400, 1/800, and 1/1000 second. Kodak Ektar lens on removable lens board for quick changing of lenses. Lens is coated to eliminate reflections.

REVOLVING BACK—Camera stays upright—back turns from vertical to horizontal position for tall or wide pictures.

STRONGLY BUILT—Camera body is covered with black-grained leather. With film pack adapter. Graflex back.

Buy your Graflex on Terms—no credit charge. *Postpaid.*

67 HN 265 T—For 3¼x4¼-in. cut film or pack. With f/4.5, 6-in. (152mm.) Ektar lens. Lens mount diam. 1¾ in. (34.5mm.). Size overall 7½x5½x7¾ in. closed. \$19 Down..... 189.00

67 HN 266 T—For 4x5-in. cut film or pack. With f/5.6, 7½-in. (190mm.) Ektar lens. Lens mount diam. 1¾ in. (43.5mm.). Size overall 8¾x6¼x8¼ in. closed. \$20 Down..... 199.00

RB SERIES B GRAFLEX—Single lens reflex camera with the new Ektalite Field Lens—gives bright, even illumination over the entire ground glass area. This means more accurate, easier composition and focusing—results in better pictures for you. Has all the standard Graflex features: efficient focal plane shutter, full-vision single-lens reflex focusing, coated Ektar lens, revolving Graflex back. Uses economical 2¼ by 3¼-inch cut film or film packs.

COATED LENS AND FOCAL PLANE SHUTTER—Kodak Ektar f/4.5 anastigmat lens, 5-inch focal length. Focal plane shutter has 25 controlled speeds from 1/10 to 1/1000 second, and time. Rigid metal front is threaded to accept Graflex Tele-Optar, 10-inch focal length, accessory telephoto lens sold on Page 23. Bellows has 73/16-inch capacity.

Lens assembly retracts into camera body, is protected by hinged metal door. Focusing hood folds into top of camera, protected by strong hinged top. Body is covered with rich black grained leather. 6½x4¼x7¼ inches closed—carrying handle built into top. Back accepts Graflex type sheet film holders, sheet film magazines, film pack adapters. Camera will take Roll Film Holders 67 HN 272T and 67 HN 273T on Page 20. Lens mount diameter 1⅞ in. (39.5mm.). No extra charge for credit. Only \$12.50 Down on terms—see Page 101. 67 HN 290T—With lens, film pack adapter. *Postpaid.* 124.50



Illustration at right shows image with Ektalite Field Lens; that at left with ground glass. Lightweight, wafer-thin plastic Ektalite Lens has all the curves and surfaces of thick glass lens. The Ektalite Lens improves the brilliance of the image, permits you to focus and compose easily, accurately.

Exposure Guide for Finding Flash Factor for Flash Photography

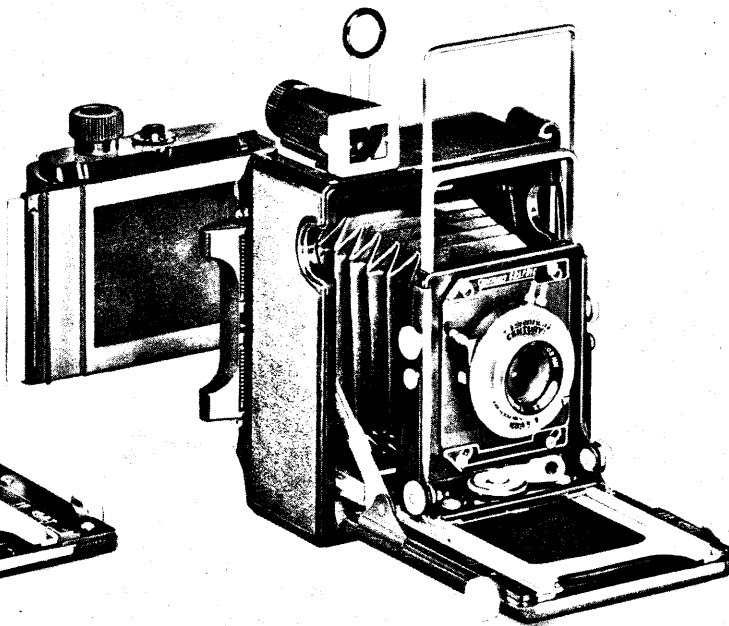
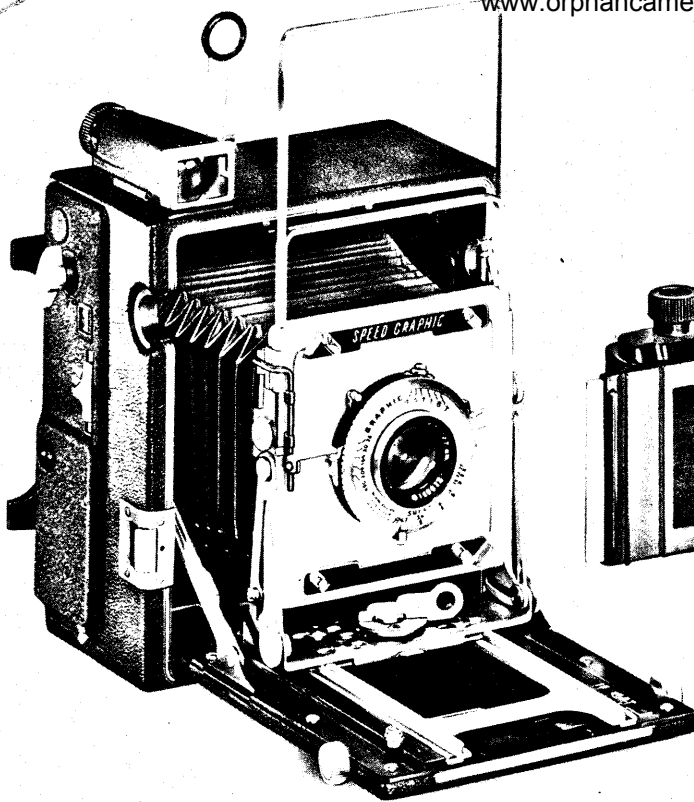
To find the f/stop to use for flash shots, locate film speed and flash bulb you plan to use in table at right. The number in the table where these two lines meet is the "Flash Factor." Divide flash factor by distance in feet between lamp and subject; answer is the f/stop to use at that distance at 1/100 second. Table is based on shutter speed of 1/100 second.

EXAMPLE: If you use Super XX film (A.S.A. 80 Tungsten) with a GE No. 5 bulb at 10 ft. from your subject. The table shows a flash factor of 225. Divide 225 by 10

(distance), the answer is about 22—use f/22 at 1/100 second. To use a different speed, change aperture setting accordingly: f/16 at 1/200, f/32 at 1-50, etc. See "Lens Speed" Page 98.

Flash Bulb	A.S.A. Speed				Color Film	
	20	40	80	160	Type A	Daylight
GE No. 5b.....	—	—	—	—	—	30
GE No. 5.....	115	160	225	315	75	55*
GE No. 11.....	125	180	225	355	80	55*
GE No. 22.....	190	270	380	530	115	75*
Wabash No. 0...	90	130	180	220	75	50*
Wabash Press 25 or 40.....	110	160	230	300	85	60*

*Indicates film speed with proper filter.



2 1/4 x 3 1/4 to 4 x 5 Graphic Press Cameras

Pacemaker Speed Graphics

Now you can select a Speed Graphic to suit your individual requirements and pocketbook. All the cameras on this page are precision built with features that have made Speed Graphic the outstanding favorite among press photographers. Truly a versatile camera, the Speed Graphics give you a full set of swings including a rising, tilting, and laterally shifting front board to correct distortion—swings return to a positive neutral. Drop-bed front provides an unobstructed field for your wide angle lenses.

In addition you'll have a quickly interchangeable metal lensboard, parallax correcting optical and action view finders, double extension bellows, adjustable leather handle, and factory calibrated focusing scales. All Graphic camera bodies except the plastic Century are made of cherry wood and are strongly reinforced with aluminum for lightness, and stainless steel for strength and rigidity. All have handsome black leather covering—leather edges are metal bound to prevent loosening. *Postpaid—no credit charge.*

PACEMAKER SPEED GRAPHIC. The familiar Speed Graphic with body shutter release and flash bulb synchronized focal plane shutter—for flash shots up to 1/1000 second. Front shutter on 3/4 by 4 1/4 and 4 by 5 are "X" type for use with Strob lights—for flash bulbs on front shutter, order cameras fitted with Graflite (see K on Page 33) outfits. 2 1/4 by 3 1/4 cameras are flash bulb synchronized for both front and rear shutters.

4 BY 5 PACEMAKER SPEED GRAPHIC. Size overall 8 1/2 by 8 by 4 1/2 in. Weight about 5 lbs. 7 oz. With one 4 by 5 Graphic cut film holder.

67 HN 408 T—Fitted with 135mm Graflex Optar f/4.7 coated anastigmat lens in #2 Supermatic (X) shutter. 207.85
67 HN 409 T—Above with Kalart rangefinder installed. 249.35
67 HN 429 T—Above, Kalart rangefinder, Graflite flash unit installed. 293.00
67 HN 410 T—Fitted with 127mm Kodak Ektar f/4.7 coated anastigmat lens in #2 Supermatic (X) shutter. \$207.50
67 HN 411 T—Above with Kalart rangefinder installed. 249.00
67 HN 430 T—Above, Kalart rangefinder, Graflite flash unit installed. 292.00

3 1/4 BY 4 1/4 PACEMAKER SPEED GRAPHIC. Size about 8 by 7 by 4 inches. Weight about 4 lbs. 11 oz. With one 3 1/4 by 4 1/4 Graphic cut film holder.

67 HN 407 T—Fitted with 127mm Kodak Ektar f/4.7 coated lens in #2 Supermatic (X) shutter and Kalart rangefinder installed. 241.00
67 HN 428 T—Above with Graflite flash unit installed. 284.00

2 1/4 BY 3 1/4 PACEMAKER SPEED GRAPHIC. New "Grafluk" ground glass backs with metal, self-erecting focusing hoods. Spring backs permit use of Graphic film pack adapters, Graphic film holders, or they can be removed for use of the accessory Roll Film Holder listed at right. Size about 7 by 6 1/4 by 4 in. Weight about 3 lbs. 11 oz. With one 2 1/4 x 3 1/4 cut film holder and Kalart rangefinder, factory installed. Flash synchronized front shutter. Graflex back.

67 HN 401 T—Fitted with 101mm Graflex Optar f/4.5 coated anastigmat lens in #1 Synchronized Graphex shutter. 249.75
67 HN 403 T—Fitted with 101mm Kodak Ektar f/4.5 coated anastigmat lens in #1 Flash Supermatic shutter. \$241.00

New Century Graphic Cameras

A low-priced 2 1/4 by 3 1/4 Graphic with the new Grafluk back that accepts both the new Roll Film holder (see description below) or conventional Graphic type cut film holders. Has most Speed Graphic features—full set of front swings, tubular and sports finders, drop bed for use with wide angle lens. No focal plane shutter, revolving back, or body shutter release. With coated Graflex 103mm Trioptar f/4.5 lens mounted in flash synchronized shutter. Use with flash gun (K) on Page 33 is recommended. Sturdy, new type plastic body. Size about 7 x 5 x 3 in. No credit charge. *Postpaid.*

67 HN 274—With 2 1/4 x 3 1/4-in. Graphic Cut Film Holder. \$11 Down. 106.50
67 HN 288—With 2 1/4 x 3 1/4-in. Roll Film Holder (for 120 film). 122.40
67 HN 285—Basic Model (not shown) Has all Century features but no tubular finder. With 2 1/4 x 3 1/4-in. Graphic cut film holder \$99.50

Pacemaker Crown Graphic Cameras

Medium-priced camera in the Graphic line (not shown) with all Speed Graphic features except the focal plane shutter. 4x5 and 3 1/4 x 4 1/4 cameras have "X" type shutters for use with Strob lights. If you prefer to use flash bulbs, order models equipped with Graflite unit. No credit charge. *Postpaid.*

4 BY 5 CROWN GRAPHIC CAMERAS. Size overall about 8 1/2 by 7 1/4 by 4 inches. Weight about 4 lbs. 3 oz. With one 4 by 5 Graphic cut film holder.
67 HN 422 T—Fitted with 127mm Kodak Ektar f/4.7 coated anastigmat lens in #2 Supermatic (X) shutter. 167.50
67 HN 423 T—Above with Kalart rangefinder installed. 209.00
67 HN 433 T—Above with Kalart rangefinder and Graflite unit installed. 252.00

3 1/4 BY 4 1/4 CROWN GRAPHIC. Size overall about 8 by 6 1/2 by 3 inches. Weight about 3 lbs. 13 oz. With one 3 1/4 by 4 1/4 Graphic cut film holder.
67 HN 416 T—Fitted with 135mm Graflex Optar f/4.7 coated anastigmat lens in #2 Graphic (X) shutter. 161.85
67 HN 417 T—Above with Kalart rangefinder installed. 203.35
67 HN 431 T—Above with Kalart rangefinder, Graflite unit installed. 247.00

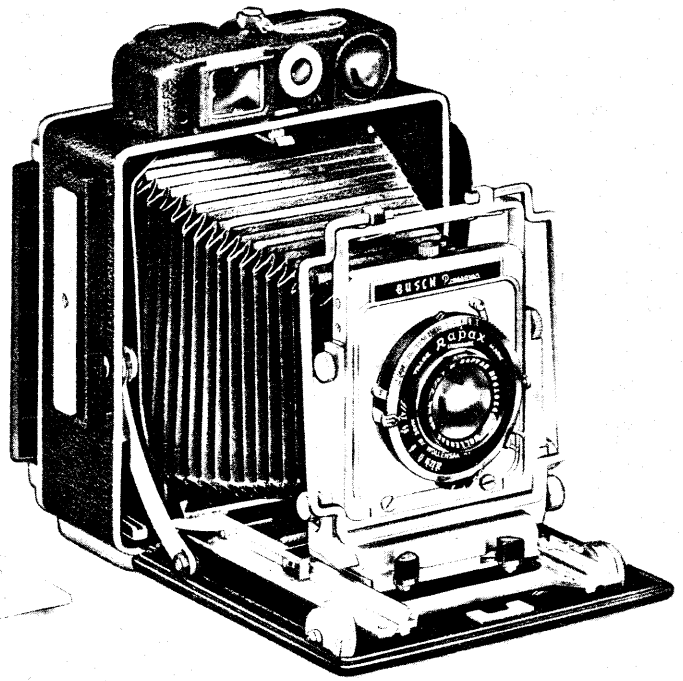
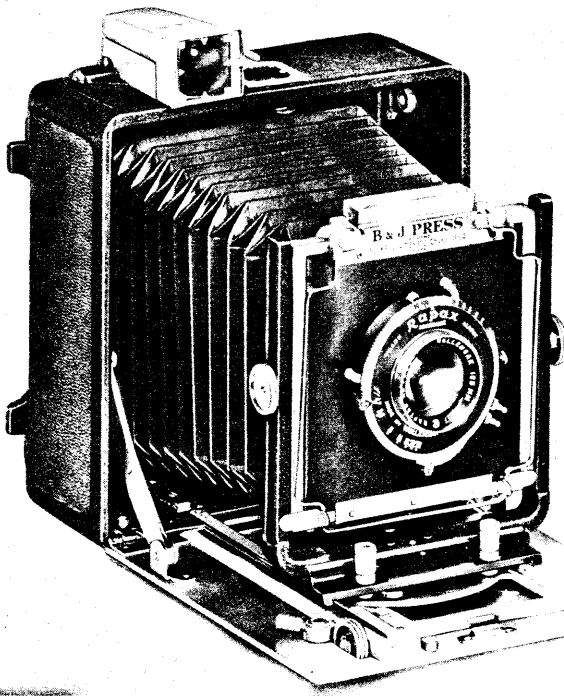
2 1/4 BY 3 1/4 CROWN GRAPHIC. Size overall about 7 by 5 1/2 by 3 inches. Weight about 3 lbs. 13 oz. Complete with one 2 1/4 by 3 1/4 Graphic cut film holder and Kalart rangefinder. Grafluk back. Flash synchronized shutter.

67 HN 414 T—Fitted with 101mm Kodak Ektar f/4.5 coated anastigmat lens in #1 Flash Supermatic shutter. 161.50
67 HN 415 T—Above with Kalart rangefinder installed. 203.00

Roll Film Holder

For shooting economical 120 roll film in your 2 1/4 by 3 1/4 Graphic or Graflex cameras. Holder automatically stops film in correct position and has a film slide for removing holder—permits interchanging of films. For Roll Film holders to fit 2 1/4 by 3 1/4 Graphic cameras with Graphic backs write Bob Adams (see Page 9). Graflex cameras have Graflex backs.

67 HN 286 —Shoots 2 1/4 by 3 1/4-inch pictures. Fits Grafluk backs. 19.95
67 HN 287 —Shoots 2 1/4 by 2 1/4-inch pictures. Fits Grafluk backs. 19.95
67 HN 272 T—Shoots 2 1/4 by 3 1/4-inch pictures. Fits Graflex backs. 19.95
67 HN 273 T—Shoots 2 1/4 by 2 1/4-inch pictures. Fits Graflex backs. 19.95



B & J and Busch 4x5 Press Cameras

BURKE AND JAMES 4 BY 5 PRESS CAMERA. An economical press camera built to the rigid specifications called for in modern press photography. Its design combines the ruggedness necessary for knock-about work plus the mechanical precision that perfect negative making demands. Combined with the fast Wollensak f/4.7 lens, the B and J Press makes a perfect camera for press, commercial, and advanced amateur photographers.

NEW SIMPLIFIED OPERATION. The B and J Press has rack and pinion focusing with dual controls which enable you to focus with either your right or left hand. Parallax compensating telescopic view finder shows you a brilliant image masked with vertical and horizontal compensation for use with the revolving back. Back rotates from vertical to horizontal instantly—an invaluable aid when working with a tripod. The B and J Press weighs only 4½ lbs., light enough to carry on a day's assignment without being a burden, but is strong enough to stand on.

DROP BED AND TILTING LENSBOARD. The versatile B and J Press provides you with a full set of swings that simplify some of the most difficult types of angle photography. Front board has a lateral displacement of 3½ inches from center and also rises and lowers as needed. Drop bed adapts camera for difficult close up work or may be used with other adjustments.

WOLLENSAK LENS AND SHUTTER. Precision ground and coated 135mm Wollensak Raptar f/4.7 lens shoots negatives of exceptional quality—stops to f/32. Rapax Synchro shutter has built-in flash synchronization and provides a wide range of speeds from 1/400 to 1 full second, time, and bulb.

OTHER B AND J PRESS FEATURES. All metal construction. Handsome black pebble grained leather covering—polished chromed metal trim. Conveniently placed accurately calibrated vernier type focusing scale. Large 4 by 4-inch removable lensboard—for quick interchanging of lenses. Track lock anchors focusing adjustment at any desired point. Double extension bellows provide maximum span of 14 inches—fine for big image close-ups and long focus lenses. Heavy leather side handle. Tripod socket. Calibrated ground glass with four sided hood for quick easy composition. Powerful retaining spring back uses standard 4 by 5 cut film holders and film pack adapters, such as Graphic holders and adapters on Page 44.

Accommodates all standard press camera equipment such as the Graflite flash gun (K) on Page 33. One 4 by 5 sheet film holder included. Shipped from Factory in Chicago, Illinois. Allow 5 days extra. For Monthly Payments see Page 101. Ship. wt. 5 lbs.

67 H 434K—Only \$14 Down and \$10 a Month.....Cash 137.50

FOR YOUR PARTICULAR NEEDS, WRITE TO BOB ADAMS

We have tried to make these press camera pages as complete as possible. However, there are innumerable combinations of press cameras and equipment. If you do not see the combination you desire, or if you have a particular need, write to Bob Adams at Montgomery Ward. See Page 9 for details.

A HANDY PLACE FOR KEEPING EXPOSURE DATA NOTES

Attach a sheet of plastic or white celluloid that has been rubbed with fine sandpaper to the side of your camera or case. Notes penciled on the sheet will resist rubbing off but can be removed with a damp cloth.

BUSCH 4x5 PRESSMAN WITH VUE-FOCUS RANGE FINDER. The Busch Pressman is a well balanced, compact newspaper type camera built to withstand the heavy demands of continuous hard usage. Its sturdy construction, extreme versatility, fast Wollensak f/4.7 lens, and attractive price make the Pressman an unusually fine camera for newspaper, commercial, or advanced amateur photographers.

VUE-FOCUS RANGEFINDER (see picture below). The single, all-in-one window Vue-Focus contains all focusing and viewing apparatus. The Range Finder, Optical View Finder, Night Focus-light, and automatic Parallax Corrector are combined in the Vue-Focus and operate simultaneously as the lens is moved on the focusing rack. This permits you to make all necessary focusing adjustments in seconds without taking the camera from your eye. Range-finder can be adjusted to synchronize with various focal length lenses by a simple external adjustment.

WOLLENSAK LENS AND SHUTTER. Coated 135mm. Wollensak Raptar f/4.7 lens in Wollensak Rapax Synchronomatic shutter with built-in flash synchronizer. Close manufacturing tolerances assure dependable controlled operation. Wide range of speeds from 1/400 to 1 full second, Time and Bulb. Diaphragm settings from f/4.7 to f/32.

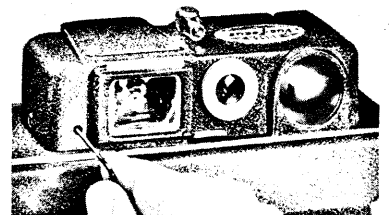
DROP BED AND TILTING LENSBOARD. Lensboard can be raised up and down and from side to side for full control of distortion. Bed can be dropped for shooting from high angles or for use with wide angle lenses. Lensboard is quickly removable for rapid changing of lenses.

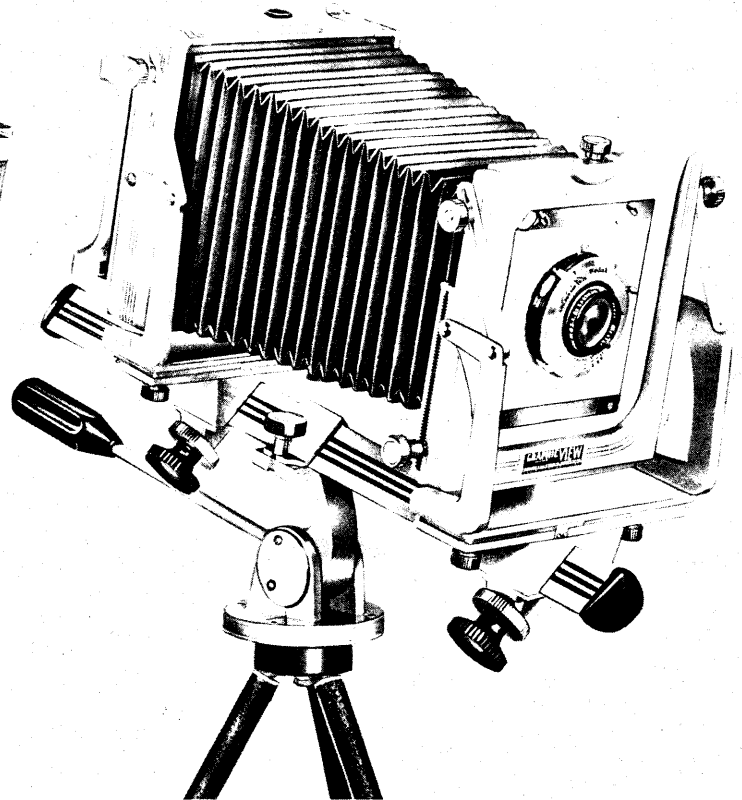
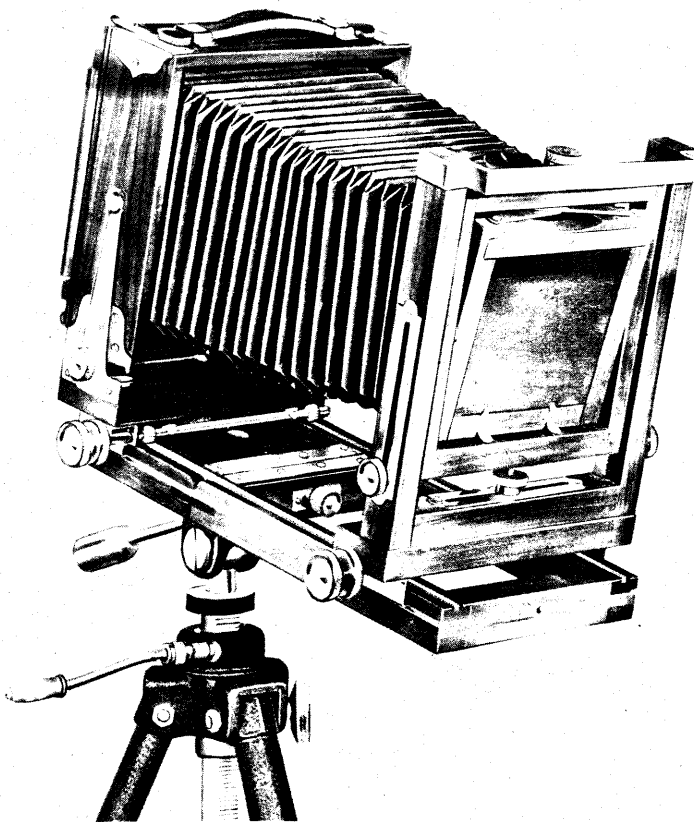
OTHER BUSCH PRESSMAN FEATURES. All metal construction assures years of dependable operation. Black pebble grained leather covered—polished chrome trim. Completely revolving back snaps automatically into vertical or horizontal positions. Slide rule type focusing scale with magnifying lens enables you to make footage readings quickly, accurately. Dual knobs for focusing with either hand. Large frame Sportsfinder for following rapidly moving action. Exclusive adjustable hand strap gives you a custom fit for your individual requirements and comfort. Perfectly balanced for hand-held operation. Coiled spring pressure on film carriers retains resilience for the life of the camera, eliminates bothersome replacements. Flip-back infinity stops. Ground glass and hood permits studio type critical focusing and composing. Double extension bellows for closeups and maximum lensboard movement. Uses all standard 4x5 cut film holders and film pack adapters, such as the Graphic type holders and adapters on Page 44.

Order the correct flash equipment for your Busch Pressman from Page 33—see (K) the various models under Graflite Flashing Unit.

The Busch Pressman is mailed from Factory in Chicago, Illinois—pay postage from there—allow five extra days. Ship. wt. 4 lbs. 8 oz. For Wards Monthly Payment Plan see Page 101. Only \$22.50 Down, \$14 a Month on Terms.

67 H 424K.....Cash 225.00





View Cameras with Complete Flexibility

KORONA 4x5 VIEW CAMERA. A moderately priced view camera with a complete set of swings which enable you to correct or obtain practically any linear perspective on the negative. Strong hardwood construction and double track bed give you accurate and vibrationless movement.

ACCURATE, SURE ADJUSTMENT CONTROL. Both front and back have rising, falling, and lateral and side manipulations. Rack and pinion knobs control all manipulations, lock firmly in place. Spring type back can be changed from horizontal to vertical position. Bellows extend up to twelve inches on front track—permit one-to-one copies with 6-inch lenses, direct magnifications with shorter lenses. Removable back track gives you about nine inches more of focusing distance—permits use of even longer lenses and higher magnifications. Removable wood lensboard is $3\frac{3}{4}$ inches square. Ground glass spring back accepts 4 x 5-inch Graphic type cut film holders.

PRECISION CONSTRUCTION. Made of attractive, high grade red cherry wood, polished to a cabinet finish. All metal parts are nickel plated. Flexible black artificial leather bellows extend to about 21 inches. Camera folds to compact 6 inches thick, $9\frac{3}{4}$ inches high, 8 inches wide—can be set up quickly.

The Korona View Camera comes with wood lensboard—no lens. Order the lens you want from the opposite page, or write to Bob Adams for the longer focal lengths—see Page 9. No extra charge for credit. *Postpaid.*

62 HN 289 T—Korona View Camera without lens. Only \$5.50 Down. . . \$55.00

EXPOSURE GUIDE FOR PHOTOFLOOD LIGHTING

Locate guide number under speed of your film—opposite right lighting and shutter speed. Divide the guide number by average lamp-to-subject in feet. The result is your "f" stop. Fo. example, with film speed of 64, two No. 1 floods, and shutter speed of 1/25 sec., the guide number (found in table) is 46. If average light-to-subject distance is 10 feet the correct stop is f/4.5. These exposures are for lamps in metal reflectors, or reflector photofloods. Double exposure when using floods in ordinary table lamps.

Photoflood Lamps	Shutter Speeds	A.S.A. Tungsten Film Speeds					
		10	16	20	40	80	100
Two No. 1	1	80	100	115	160	230	257
or	1/5	37	45	50	74	100	115
One No. 2	1/25	16	20	23	32	46	52
or	1/50	12	14	16	24	32	36
One RFL2	1/100	8	10	12	16	24	26
Four No. 1	1	115	140	160	230	320	340
or	1/5	50	63	73	100	146	153
Two No. 2	1/25	23	28	33	46	66	70
or	1/50	16	20	23	32	46	50
Two RFL2	1/100	12	14	16	24	32	38

NEW GRAPHIC VIEW II. The Modern light metal view camera with new refinements. New, longer bellows extend to $15\frac{1}{2}$ inches. New focusing panel with removable four-sided viewing hood. New stronger supports for front and rear focusing assemblies. And new action possibilities. New design permits tilting as well as swinging on the optical axis—a time-saving convenience for making quick readjustments for field of sharp focus and perspective corrections. The new Graphic View II affords almost limitless adjustment. Subjects which could not be photographed with any other camera can be brought into sharp focus. All manipulations are made by geared knobs.

EXTREME RIGIDITY AND FLEXIBILITY OF ADJUSTMENT. Rising and falling front activated by smooth, knob controlled rack and pinion movement. Front standard and camera back tilt forward and backward. Guiding braces for front and back are accurately notched and reinforced. Front and back of camera have wide lateral shift and swing movements. Built-in spirit level and centering indicators afford positive square alignment.

Special pan-head base clamps to monorail camera bed at any point. By clamping the pan head at the extreme end of monorail the camera can be moved all the way to the front of the track for positioning the lens close to the subject. Both front and back of camera can be transported through the full length of the monorail bed with smooth rack and pinion movement.

Removable, 4-in. square metal lensboard permits use of a wide variety of lenses. Large bellows capacity for long focal length lenses. One-to-one copies can be made with $7\frac{1}{2}$ -in. lens, direct magnifications with shorter lenses.

Built-in ground glass focusing panel with hinged focusing hood. Quick action graphic back takes 4x5-in. graphic type sheet film holders and film pack adapters—readily changes from horizontal to vertical.

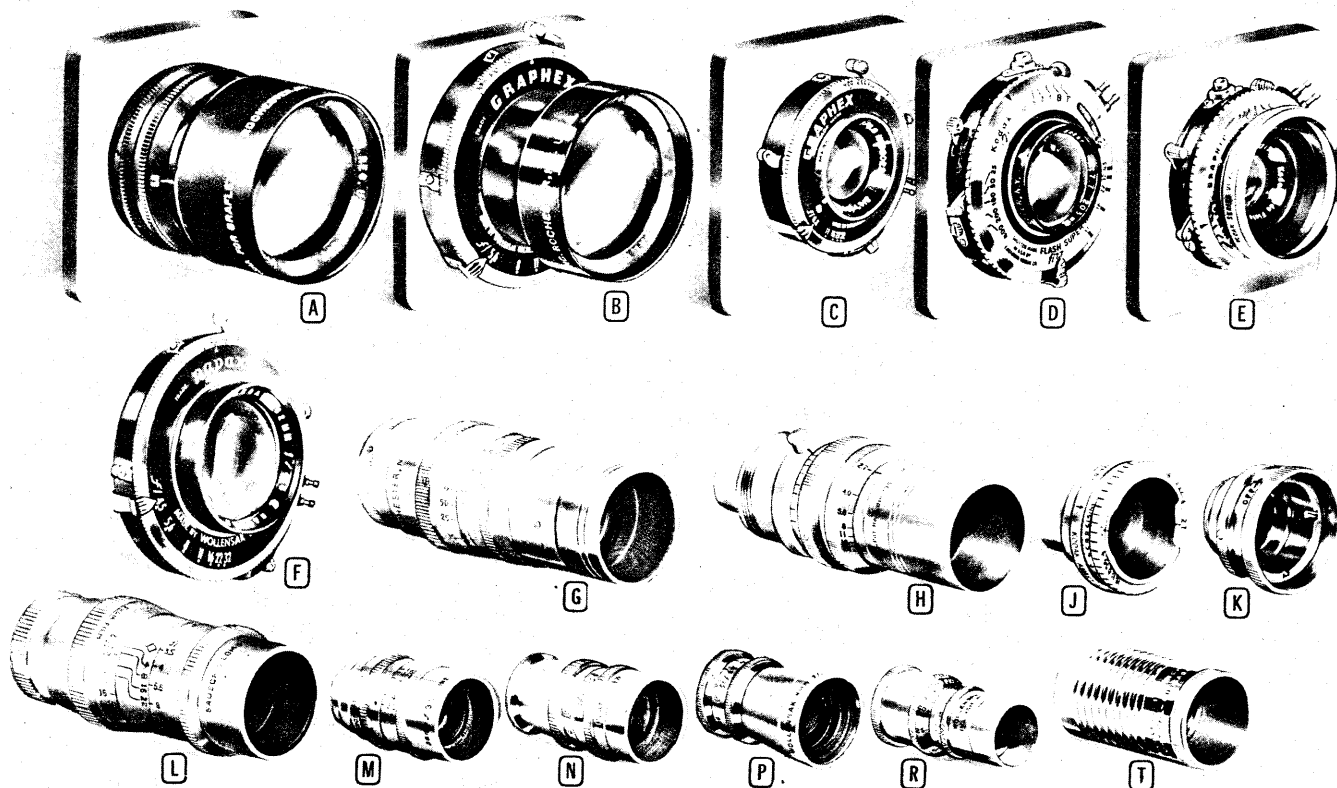
PRECISION CONSTRUCTION—All-metal aluminum alloy construction for portability and durability. Incorporates the same dependable engineering and skill that have made Speed Graphic and Graflex cameras famous.

Smooth working pan head revolves and tilts—clamps securely at any position along monorail bed—supports camera rigidly. Rack and pinion focusing track is under monorail bed for protection. Positive locking devices hold adjustments in exact positions. Metal parts have durable hammertone (gray) finish. Red artificial leather bellows have full $15\frac{1}{2}$ -inch extension.

Graphic View Camera is furnished complete with metal lensboard, pan-head base, one sheet film holder, and Heavy-duty fiber carrying case, which holds camera in place on monorail base, twelve sheet film holders, focusing cloth, and additional lenses and accessories. Order lens on opposite page, or, for longer focal lengths Write Bob Adams—see Page 9. No extra charge for credit. Only \$14.50 Down, \$11 Monthly on Terms. *Postpaid.*

67 HN 291 T—Graphic View Camera without lens. 145.00

67 HN 293 T—GRAPHIC VIEW CAMERA. Complete as above, but with Kodak Anastigmat 203 mm. (8-inch) 1/7.7 lens. In Supermatic shutter with built-in synchronization, 9 speeds from 1 to 1/400 second, Time, Bulb. On metal lensboard. Lens mount diam. $1\frac{1}{16}$ in. (33 mm.) 225.50



Lenses for Still and Movie Cameras

A GRAFLEX TELE-OPTAR TELEPHOTO LENSES. Wollensak coated lenses in barrel mount with iris diaphragm; no shutter. No extra charge for Credit—See Page 101. Postpaid.

67 HN 2237 T—10-inch $f/5.6$ lens covers $2\frac{1}{4}$ by $3\frac{1}{4}$ -inch negative. Back focus $5\frac{5}{16}$ inches. Mounted on metal lensboard for $2\frac{1}{4}$ by $3\frac{1}{4}$ Speed Graphic. Flange diameter $1\frac{1}{16}$ in. \$140.00
67 HN 2238 T—15-inch $f/5.6$ lens covers 4 by 5-inch negative. Back focus $8\frac{7}{16}$ inches. Mounted on metal lensboard for 4 by 5 Speed Graphic. Flange diameter $2\frac{5}{16}$ inches. \$199.50

B GRAFLEX TELE-OPTAR LENS. Coated 10-in. $f/5.6$ lens. Back focus $5\frac{5}{16}$ in. Covers 4x5-in. negative. In No. 3 Graphex shutter; speeds from 1 to $1/200$ sec., Time and Bulb. Press focus lever. On metal lensboard for $3\frac{1}{4}$ x $4\frac{1}{4}$ and 4x5 Graphics. Flange diam. $1\frac{1}{16}$ in. No credit charge. Postpaid.
67 HN 2341 T—State camera model, size. \$159.00

C GRAFLEX-OPTAR WIDE ANGLE LENS. Coated 90mm $f/6.8$ anastigmat. Back focus $3\frac{3}{16}$ in. Covers 4 by 5-in. negative. Mounted in Graphex shutter, 9 speeds from 1 to $1/400$ sec., Time and Bulb. Press focus lever. Built-in flash synchronization. Mounted on lens board to fit 4x5 Graphic cameras. Flange diameter $1\frac{3}{16}$ in. No extra credit charge.
67 HN 2236 T—Postpaid. \$9 Down. \$89.50

D KODAK EKTAR F/7.7 LENS. 8-inch (203 mm.) lens. In No. 2 flash supermatic shutter. Speeds from 1 to $1/400$ second, Time and Bulb. Mounted on lensboard for 4 by 5 Graphic cameras. Flange diameter 2 in. No extra credit charge.
67 HN 2220 T—Postpaid. Only \$8 Down. \$78.90

E KODAK EKTAR F/6.3 WIDE FIELD LENS. 80mm. (3-inch) lens. Back focus $2\frac{7}{8}$ inches. Covers up to $2\frac{1}{4}$ x $3\frac{1}{4}$ -in. negative. In No. 1 Flash Supermatic shutter with speeds from 1 to $1/400$ sec., Time and Bulb. Built-in flash synchronization. Mounted on lensboard to fit $2\frac{1}{4}$ x $3\frac{1}{4}$ Graphics. Flange diameter $1\frac{7}{8}$ in. No extra credit charge.
67 HN 2221 T—Postpaid. \$12 Down. \$119.00

F WOLLENSAK F/4.5 RAPTAR. In Rapax pre-setting shutter. Speeds from 1 to $1/200$ sec., Time, Bulb. Stops to $1/32$. Pay postage from St. Louis, Mo.; allow 5 extra days. Ship. wt. 8 oz.

67 H 2363 K—4-inch lens covers $2\frac{1}{4}$ by $3\frac{1}{4}$ -in. negative. Synchronized for flash. Flange diameter $1\frac{1}{2}$ in. Only \$6 Down or Cash \$55.50
67 H 2364 K—6 $\frac{3}{8}$ -in. lens covers 4 by 5-in. negative. Synchronized for flash. Flange diameter 2 in. Only \$9.50 Down. or Cash \$93.50
67 H 2365 K—6 $\frac{3}{8}$ -in. lens covers 4 by 5-in. negative. Flange diameter 2 in. \$73.50

G ELGEET 16MM MOVIE LENSES. Coated. Fit standard screw-in mounts. Pay postage from Chicago. Allow 5 extra days. Ship. wt. 8 oz.

67 H 2351 K—Focusing 75 mm $f/2.9$ telephoto. Magnifies three times normal lens. \$61.00
67 H 2399 K—Focusing 13mm $f/1.5$ extreme wide angle, high-speed lens. \$86.50

H J KODAK MOVIE LENSES. Coated anastigmats in focusing mounts—fits both 8 and 16mm cameras. Require adapters below. No extra charge for credit—see Page 101. Postpaid.

(H) 67 HN 2267 T—63mm $f/2.7$ telephoto. Magnifies $2\frac{1}{2}$ or 5 times normal lens. \$75.83
67 HN 2222 T—50mm $f/1.6$ telephoto. Magnifies 2 or 4 times normal 16 or 8 mm lens. \$94.50
67 HN 2269 T—152mm $f/4.5$ telephoto. Magnifies 6 or 12 times normal 16 or 8 mm lens. \$96.50

(J) 67 HN 2266 T—15mm $f/2.7$ lens, wide angle if used with 16mm camera, normal lens if used with 8 mm camera. \$58.50

K ADAPTERS FOR KODAK LENSES. Required for fitting lenses above to camera. Postpaid.

67 HN 2270 T—For all Magazine Kodaks. \$9.92
67 HN 2271 T—For all 16mm cameras with standard screw-in lens mounts. \$9.92
67 HN 2228 T—For all 8mm cameras with standard screw-in lens mounts. \$9.92

L BAUSCH & LOMB ANIMAR MOVIE LENSES. Bal-coated. Depth-of-field scale. Standard screw-in mount. No extra credit charge. Postpaid.

67 HN 2367 T—50mm $f/3.5$ telephoto for 16 mm cameras. Focusing Mount. \$52.25
67 HN 2368 T—75mm $f/3.5$ telephoto for 16mm cameras. Enlarges 3 times. Focusing. \$68.50
67 HN 2366 T—37 $\frac{1}{2}$ mm $f/3.5$ telephoto for 8mm cameras—enlarges 3 times. Focusing. \$52.25

M ELGEET 8MM MOVIE LENS. Coated 38mm $f/3.5$ fixed focus telephoto—fits standard screw in lens mounts. Enlarges 3 times normal lens. Pay postage from Chicago; allow 5 extra days.

67 H 2345 K—Ship. wt. 8 oz. \$27.35

N PLATAR 8MM MOVIE LENSES. Coated. Fit standard screw-in mounts. Ship. wt. 8 oz.

67 H 2350—38mm $f/3.5$ fixed focus telephoto. Magnifies 3 times normal lens. \$19.95
67 H 2401—7mm $f/2.5$ focusing wide angle lens. Shows 4 times normal area. \$34.50

P R WOLLENSAK COATED MOVIE LENSES. Fit standard screw-in mounts. Mailed from St. Louis; allow 5 extra days. Ship. wt. 6 oz.

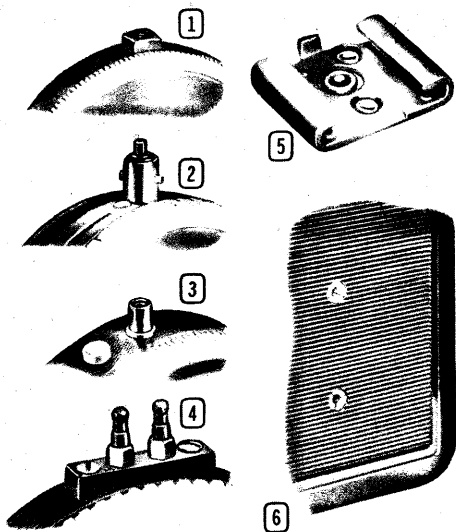
(P) 67 H 2335 K—9mm $f/2.5$ fixed focus wide angle lens for 8mm cameras. Shows four times area of normal lens. \$35.50
67 H 2357 K—17mm $f/2.7$ focusing wide angle for 16mm cameras. Shows 4 times normal area. \$45.50

(R) 67 H 2298 K—12 $\frac{1}{2}$ mm fast $f/1.9$ normal lens for 8mm cameras. Focusing mount. \$37.50
67 H 2231 K—37.5mm $f/3.5$ focusing telephoto for 8mm cameras. Magnifies 3 times normal. \$35.50

T SOMCO PROJECTION LENSES. For 8 or 16mm projectors. Coated. Ship. wt. each, 10 oz.

67 H 2210 T—16mm $1\frac{1}{2}$ -in. $f/1.65$. Fits Ampro, RCA, Natco, Victor, Holmes, Revere. \$12.95
67 H 2211 T—16mm 3-inch $f/2.0$. Fits Ampro, RCA, Natco, Victor, Holmes, Revere, DeVry. \$16.95
67 H 2209 T—3 $\frac{1}{4}$ -in. $f/1.6$ for 8mm Revere. \$13.95
67 H 2403 T—3 $\frac{1}{4}$ -inch $f/1.6$ for 8mm Ampro, De-Jur, and Keystone projectors. \$13.95

IF YOUR REQUIREMENTS CALL FOR LENSES NOT LISTED HERE, WRITE BOB ADAMS—SEE PAGE 9.



What About Flash Guns?

You can take flash pictures with almost any camera, and with a flash gun you can get pictures any place . . . any time. Of course the type of flash gun you need depends on the type of camera you have—so in ordering a flash gun, you'll want to check your camera closely.

Compare pictures (1) through (6) above to the fittings on your camera—(pictures are approximately actual size). If your camera has any of fittings (2) through (6), your camera is flash synchronized, so be sure to read "Flash Units for Synchronized Shutters" below. If your camera does not have a fitting like (2) through (6), but has a cable release socket like picture (1), you should read "Flash Units for Non Synchronized Cameras". If your camera has none of the fittings shown above, read "The Open Flash Method".

FLASH UNITS FOR SYNCHRONIZED SHUTTERS

If you bought your camera recently, chances are it's flash synchronized. This type of camera has a special switch in the shutter that automatically fires the flash bulb when the shutter opens. Check your camera for a fitting like (2) or (3) above. Both these fittings will take one of the units listed under (E), (F), (K), or (L), and fitting (2) will take unit (G) as well. With a fitting like (4), you can use flash units (K) or (L). If your camera has a fitting like (5) or (6), you'll need a flash gun that's made especially for your camera, which you can order from the page of this catalog on which your camera is listed.

FLASH UNITS FOR NON-SYNCHRONIZED CAMERAS

If your camera is not synchronized, you can take flash pictures if you have a cable release socket—as in (1) above. In this case, two conditions govern your choice of flash unit: what speed you need, and what type shutter you have—self-setting or pre-set. Self-setting shutters are those which operate without cocking . . . as soon as you click the shutter it is automatically ready to click again. Pre-set shutters are those you have to cock before taking each picture. Non-synchronized cameras with self-setting shutters will take one of the flash units listed under (E) or (F) at right. These will synchronize up to 1/50 second. Non synchronized cameras with pre-set shutters will use one of the guns listed under (F) or synchronization to 1/50 sec. or units (H), (K) or (L) which can be adjusted to all the speeds your shutter has.

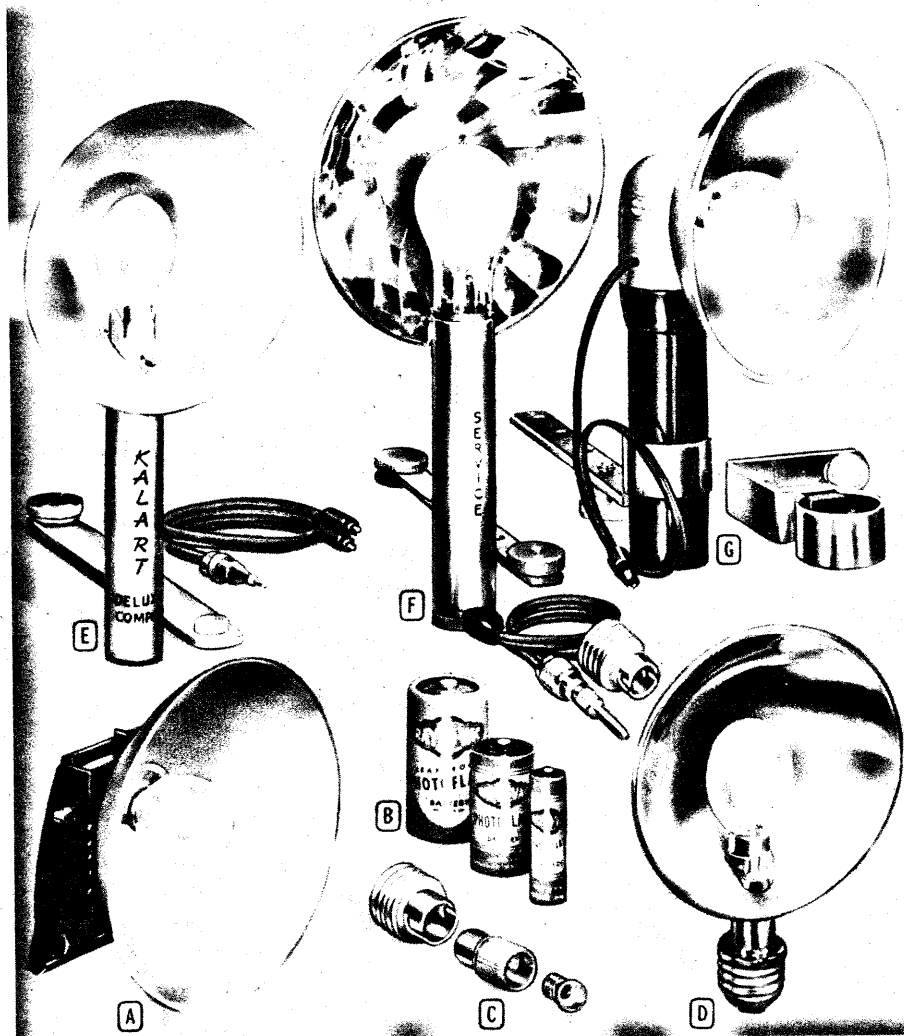
THE "OPEN FLASH" METHOD

"Open flash" pictures may be taken with any camera that has bulb or time shutter settings. All you do is open the shutter, set off hand flash unit like (A) at right, then close the shutter.

WRITE TO BOB ADAMS

If you have any question about selecting the proper flash equipment for your camera, or if you need any special make or model not listed in this catalog, write to Bob Adams (see Pg. 9).

32 WARDS



Get the Picture Anywhere...

A KODAK HAND FLASH KIT. For any camera with bulb or time settings. Anodized 5-in. polished reflector. Handy bulb ejector. Four No. 5 bulbs included (also uses SM Midget bulbs). Plastic battery case. Batteries included.

67 H 3293—Ship. wt. 1 lb.1.98

B PHOTO-FLASH BATTERIES. Extra life, power.

67 H 3228—Regular size, 1 5/16-in. diameter. Ship. wt. for 2, 8 oz.Two for 30c

67 H 3229—"C" type. Medium size, 1-in. diameter. Ship. wt. for 2, 6 oz.Two for 30c

67 H 3230—Penlight size, 9/16-in. diameter. Ship. wt. for 2, 6 oz.Two for 20c

C ADAPTER AND TESTER. Adapts medium screw sockets for bayonet base bulbs. Test unit fits adapter and bayonet flash gun sockets.

67 H 3219—Shipping weight 6 oz.98c

D VICTOR ADAPTA-LAMP. Adapt your medium screw base type flash gun to take low cost bayonet base bulbs. 4 1/2-in. aluminum reflector.

67 H 3279—Shipping weight 4 oz.1.39

E KALART DELUXE COMPAK SPEED FLASH. Two models—for non-synchronized and for synchronized shutters. With bulb ejector. 5 1/2-in. reflector, test lamp, bracket, and batteries. Use bayonet base bulbs (Pg. 36). Ship. wt. 1 lb.

67 H 3270—For cameras with self-setting non-synchronized shutters such as Kodaks with Dak, Dakar, Dakon, Diodak, Kodex, Kodon, and Ball Bearing shutters; and Argus A-2. For synchronization to 1/50 second.9.50

67 H 3271K—For flash synchronized shutters. Shipped promptly from Factory in Chicago. State make, model of camera and shutter.8.50

F UNIVERSAL SERVICE FLASHMAKER. All-metal unit with 5 1/2-inch polished aluminum reflector. Takes medium screw base bulbs (see Pg. 36). Midget bulb adapter and batteries included. Ship. wt. each, 1 lb. 12 oz.

FOR NON-SYNCHRONIZED SHUTTERS. For synchronization to 1/50 second. For both pre-set and self-setting type shutters with cable release socket—see (1) above. Plunger release included.

67 H 3152—Model A. For all cameras with Alphax shutters such as Ciroflex and Argoflex. 9.95

67 H 3162—Model B. For all Kodak cameras; also all cameras with Prontor or Compur shutters such as Rolliflex, Solida and Voigtlander.\$6.95

FOR SHUTTERS WITH BUILT IN SYNCHRONIZATION. For synchronization with all speeds your shutter can synchronize.

67 H 3163—For Rolliflex, Voigtlander, and similar cameras with synchronized Prontor II shutters and fitting like (3) above.5.95

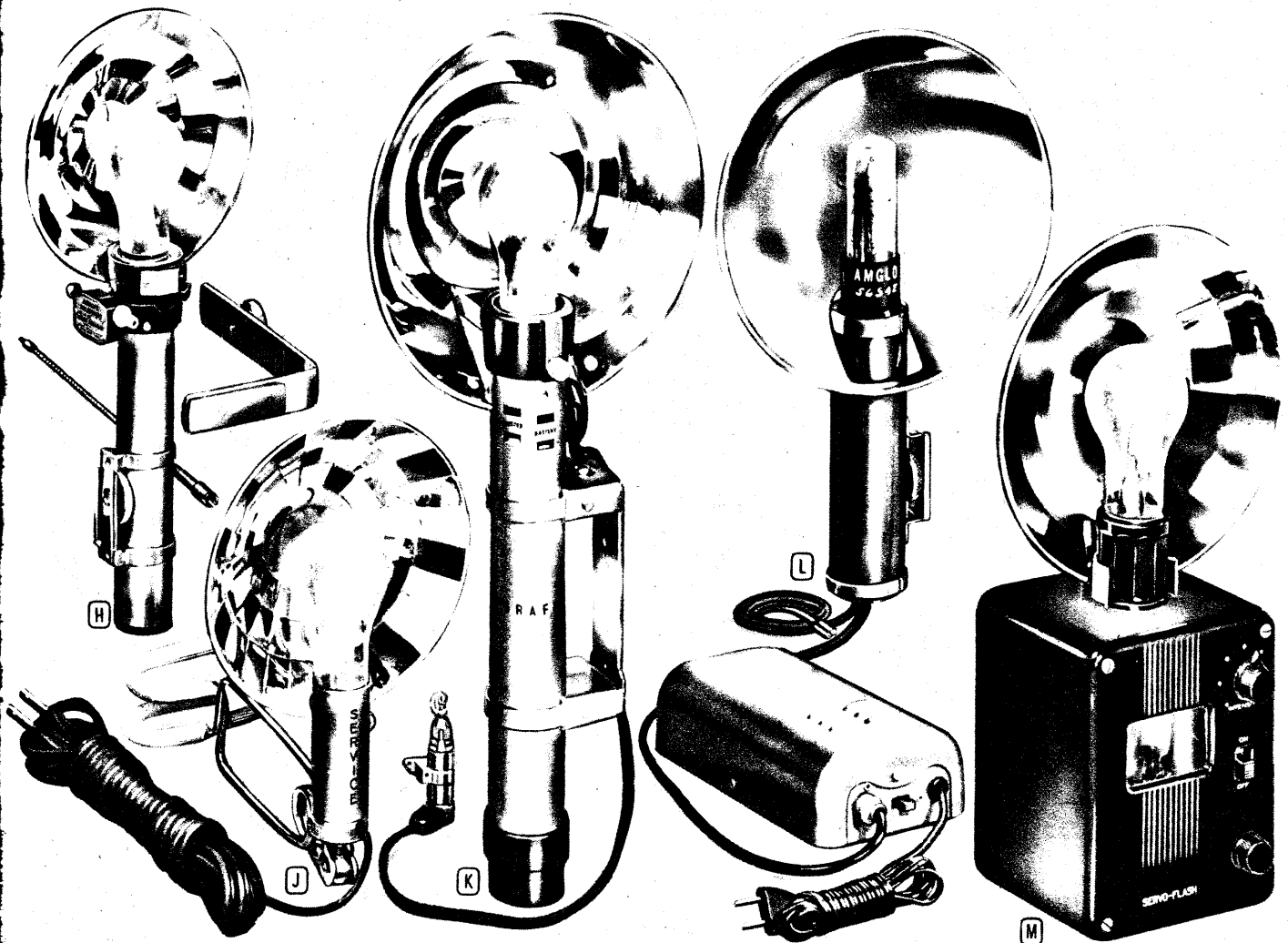
67 H 3177—For Rolliflex, Voigtlander, and similar cameras with synchronized new Prontor "S" shutters and fitting like (3) above.\$5.95

67 H 3164—For synchronized cameras with standard ASA fitting like (2) above.\$5.95

G KODAK FLASHHOLDER. For all cameras with built-in synchronization. Black tenite battery case, socket for bayonet base bulbs, and socket for Kodak extension holder. 5-in. reflector, 14-in. cord, plug, and batteries included. Postpaid.

67 HN 3176—For cameras with synchronized shutters and standard ASA fitting like (2) above. No credit charge.11.00

67 HN 3256T—To fit Kodak Reflex camera only. No credit charge.\$11.00



Anytime...With a Quality Flash Gun

H KALART MASTER AUTOMATIC SPEED FLASH. For all speeds at which your shutter can be set. Fits most non-synchronized shutters—including Rolleiflex, both Ikontas, Kodak Retina I and II, Busch Pressman, Leica, Contax and Kardon. Chrome plated adjustable 6-inch reflector. Takes medium screw base bulbs (order separately from Page 36). All-metal armored flexible cable release. Rubber cushioned angle extension bracket. Batteries and instructions included. Shipped promptly from Factory in Chicago.

67 H 3202K—State make and model of your camera and shutter. Ship. wt. 2 lbs. \$2.50
Down on Terms.....or Cash 23.60

J SERVICE EXTENSION FLASH HOLDER. Use with flash units (H) or (K). 20-ft. rubber covered cord permits use of flash gun away from camera. Swivels in any direction. Satin finished aluminum body, rubber covered spring-jawed clamp. Chrome plated 5-inch reflector takes medium screw base bulbs (see Pg. 36)—also bayonet base bulbs when used with adapters (C) or (D) on opposite page. No batteries needed—just plug into battery case of Kalart Automatic Flash Unit (H)—or Graflite units (K).

67 H 3226T—Ship. wt. 1 lb. 12 oz.5.79

SPORTS ACTION WITH A SLOW SHUTTER

Try to time your exposure for that split second when your subject's action is suspended. An example is a baseball pitcher who is winding up to pitch a ball. At the exact moment between the windup and the pitch, the pitcher's motion is completely stopped. This is the time to shoot. Watch for this split second in all sports and take advantage of it. You will be able to get many action shots you didn't think possible.

K COMPLETE GRAFLITE FLASH GUN. With solenoid for flash bulb synchronization with front shutters of all Speed and Crown Graphics and Graflex Super D—and extra connecting cord to fit focal plane shutters on all Speed Graphics. Extension lighting socket—permits use of extension flash holders (not incl.) Consists of: solenoid tripper, 3-cell battery case, 3 batteries, bracket, 7-in. reflector, 2 connecting cords, instructions. Order medium base bulbs from Pg. 36. For Factory installation, write Bob Adams (Pg. 9).

67 HN 3210T—State make, model of camera and shutter. Postpaid.....40.75

GRAFLITE FLASHING UNIT. For flash synchronization with flash synchronized front shutters on 2 1/4x 3 1/4 Speed, Crown, and Century Graphics and focal plane shutters with built-in synchronization on all Speed Graphics; also other cameras with built-in synchronization having fittings (2) or (3) on opposite page. 3-cell Graflite battery case, batteries, bracket, 7-inch reflector for medium base bulbs, and connecting cord.

67 HN 3211T—State make and model of your camera and shutter. Postpaid.....28.75

GRAFLITE SIDE LIGHTING UNIT. Plugs into Graflite battery cases above—no extra batteries needed. Includes swivel head, rubber covered spring clamp, and 5-inch reflector for bayonet base or 7-inch reflector for medium screw base bulbs. Order bulbs from Pg. 36. Postpaid.

67 HN 3214T—With 5-inch reflector.....23.50

67 HN 3215T—With 7-inch reflector.....22.50

GRAFLITE FLASH REFLECTORS. Fit Graflite battery cases and side lighting units. Postpaid.

67 HN 3212T—5-in. For bayonet base bulbs 7.50

67 HN 3213T—7-in. For medium base bulbs 6.50

L THRIFT-LITE STROBE-FLASH. A new, powerful electronic flash unit that gives about 10,000 individual flashes from the same flash tube. Only \$39.95... costs no more than high quality flash bulb-type guns—yet you save money, time, and bother. No bulbs to buy, eject, and replace... no batteries to replace or recharge. The Thrift-Lite operates from your own household electricity—plugs into any standard 115 V. AC circuit.

Flash can be repeated about every 10 seconds. Light on rear of 7-inch reflector glows to indicate unit is ready. You can take a half dozen shots a minute, as many in succession as you wish—just shoot, wait 10 seconds, and shoot again.

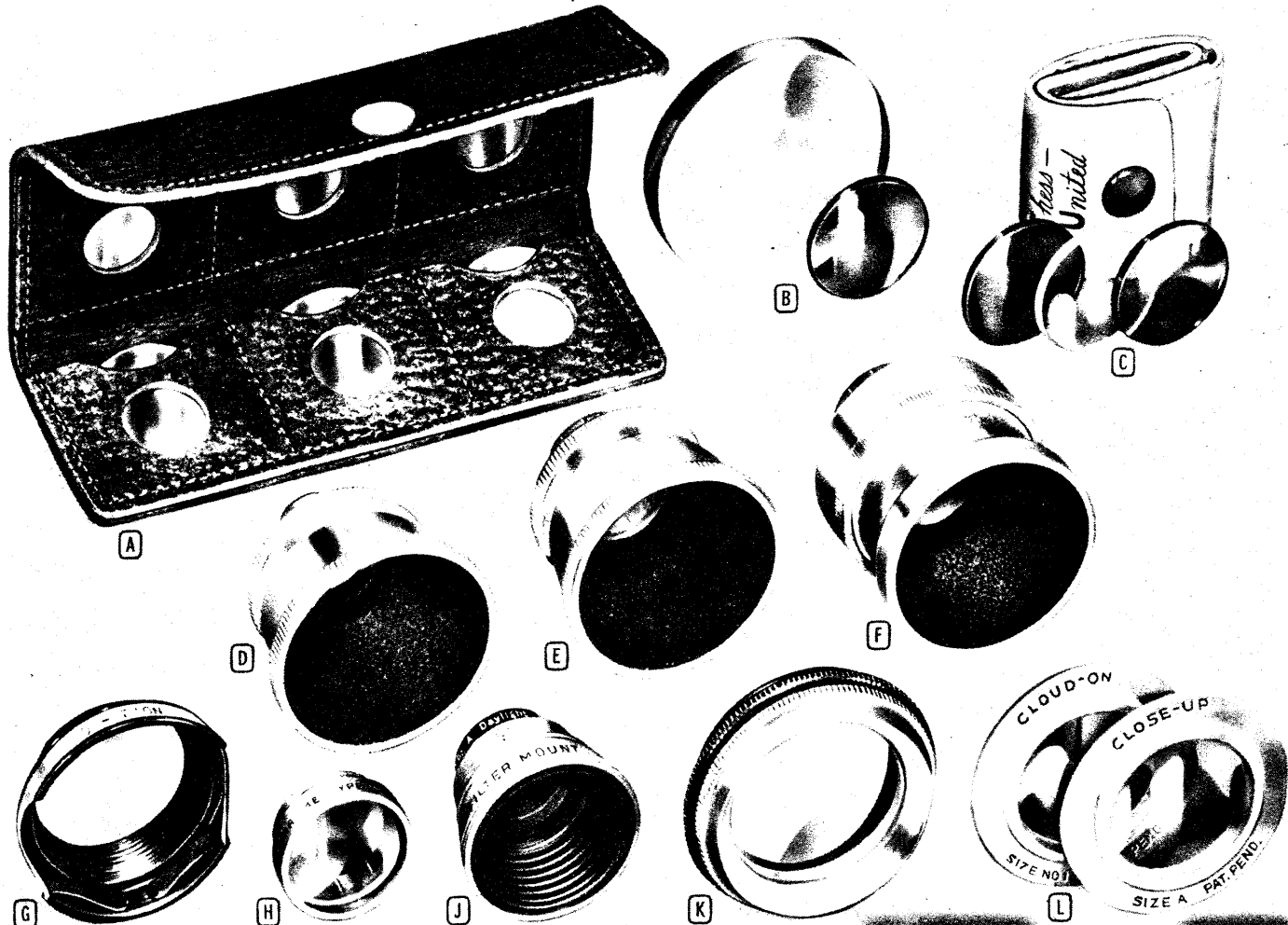
Extra powerful 1/1000-second flash will synchronize with the fastest shutters. Available in models to fit any camera with between-the-lens shutter (see Pg. 99) and any of fittings (1) to (4) on opposite page. Lightweight... weighs only 3 1/2 lbs.—mounts on standard bracket or accessory clip. With flash tube, reflector, power unit, connections, 15-ft. extension cord, instructions. Shipped promptly from Chicago, Ill., Factory.

67 H 3182K—Ship. wt. 4 lbs. State make and model of your camera and shutter...39.95

M SERVO REMOTE CONTROL FLASHER. Gives side lighting perfectly synchronized with camera's flash. Photoelectric cell activated—no wires. Fire camera flash gun, the Servo fires at the same instant. Picks up impulse from camera up to 500 ft. away. Adjusts to pick up any intensity of light impulse. 4 3/8x5 1/4x4 1/4-in. plastic body, adj. reflector. Order medium base bulbs and two 67 1/2-volt "B" batteries separately.

67 H 3218T—Shipping weight 3 lbs.24.95

62 H 43—Batteries for Servo Flasher. Ship. wt. for two, 2 lbs.Two batteries for \$4.90



Optical Glass Filters for Most Cameras

A SIX-FILTER KIT. 21½ mm optical glass filters with leather case. Yellow, Green, Red, Blue, Haze, and Type A Kodachrome. 67 H 2332—Shipping weight 8 ounces. 2.98

THREE-FILTER KIT. 21½ mm optical glass. One each: Yellow, Haze, and Type A Kodachrome. 67 H 2330—Leather case. Ship. wt. 4 oz. ... 1.89

B CHESS-UNITED INDIVIDUAL FILTERS. Precision made from fine quality optical glass. Each filter is identified on frame. With instructions and exposure factors. Ship. wt. 4 oz.

67 H 2372 T—Type A. 21½ mm. 1.39
67 H 2373 T—Haze. 21½ mm. 1.39
67 H 2374 T—K-2. 21½ mm. 1.39
67 H 2375 T—Type "A". Series V. 1.59
67 H 2376 T—Haze. Series V. 1.59
67 H 2377 T—K-2. Series V. 1.59
67 H 2378 T—Type A. Series VI. 1.89
67 H 2379 T—Haze. Series VI. 1.89
67 H 2380 T—K-2. Series VI. 1.89

CHROME FLASH FILTER. For outdoor haze or using indoor color film with flash bulbs. 21½-mm size to fit lens shades (D) and (E). 67 H 2291 T—Ship. wt. 4 oz. 1.39

C CHESS-UNITED THREE-FILTER KITS. Solid optical glass filters of 21½-mm diam. to fit lens shades (D) and (E). In imitation leather case.

BLACK AND WHITE KIT. For black and white film. K2 (yellow), X1 (green), and 25A (red). 67 H 2289 T—Set of 3. Ship. wt. 8 oz. 3.98

COLOR KIT. For color film. Type A filter (for indoor film outdoors), Haze filter (for distance shots), and No. 80 Blue filter (for outdoor film indoors). 67 H 2290 T—Set of 3. Ship. wt. 8 oz. 3.98

SEE PAGE 41 FOR EXPLANATION OF FILTERS.

D **E** CHESS-UNITED LENS SHADES. For both movie and still cameras. Hold your filters and also stop direct light from entering lens. Shade screws in to hold 21½ mm filters. Filters not included—see filters (A), (B), and (C) on this page. Ship. wt. each, 6 oz.

67 H 2282 T—Screw-in type (D) to fit Wollensak-Velostigmat 12½ mm movie lenses. 2.19
67 H 2283 T—Slipover type (E) fits Kodak movie cameras Models 8-20, 8-25, and E. \$2.19

67 H 2284 T—Screw-in type (D) to fit Argus C2 and C3 and Leitz 50 mm Elmar lens. \$2.19

67 H 2285 T—Slipover type (E) fits Argus A2, Bantam i/4.5, and Kodak 90 movie camera. \$2.19

67 H 2395 T—Screw-in type (D) to fit Wollensak Cine-Raptor ½-inch lenses. \$2.19

67 H 2396 T—Screw-in type (D) to fit Wollensak Cine-Raptor 1-in. and Wollensak-De Jur ½-in. lenses. \$2.19

67 H 2404 T—Slipover type (E) fits 8 mm cameras, Bausch & Lomb f/2.8 12½ mm Animar lenses. \$2.19

F UNIVERSAL MOVIE LENS SHADE. Slip-on type. Will fit all 8 mm movie cameras by making slight adjustment of prongs in back so they slip snugly over lens mount. Lens shade screws in to hold any Series V filters (29 mm). Filters not included—see (B) at right and Page 41. 67 H 2297 T—Ship. wt. 4 oz. 1.98

MOVIE CAMERA LENS SHADE. Fits 8 mm cameras with ½-inch Wollensak Velostigmat lenses. Accepts filters (A) and (B). 67 H 2334—Shipping weight 6 ounces. 1.39

GET HIGHLIGHTS WITH A CONCAVE MIRROR

Place a light source to one side of your camera and put a concave mirror on the opposite side, near your subject. Properly positioned, it will give you the effect of an additional light.

G HARRISON THREAD LOCK FILTER-MOUNT for movie cameras. Mount screws into any threaded lens. Filter snaps into position and is held securely in place by lock-spring. For series V filters only—see Page 41. Ship. wt. 4 oz.

Catalog No.	Model	Fits Lens Size	Series	Price
67 H 2392 T	2E	20 to 22mm	V	98c
67 H 2393 T	2F	22 to 26mm	V	98c
67 H 2394 T	2G	26 to 30mm	V	98c

H **J** CINE-KODAK KODACHROME FILTERS. Type A filter for using type A (indoor) Kodachrome outdoors. Haze filter cuts haze. Postpaid.

(H) FILTERS IN "Z" MOUNTS. Fit Kodak movie cameras as follows: 16 mm model E f/3.5; and model B f/3.5 or f/6.5; 8 mm model 20 f/3.5 and model 25 f/2.7. State camera model and lens.

67 HN 2256 T—Type A Kodachrome filter. 2.16
67 HN 2257 T—Kodachrome Haze filter. 2.16

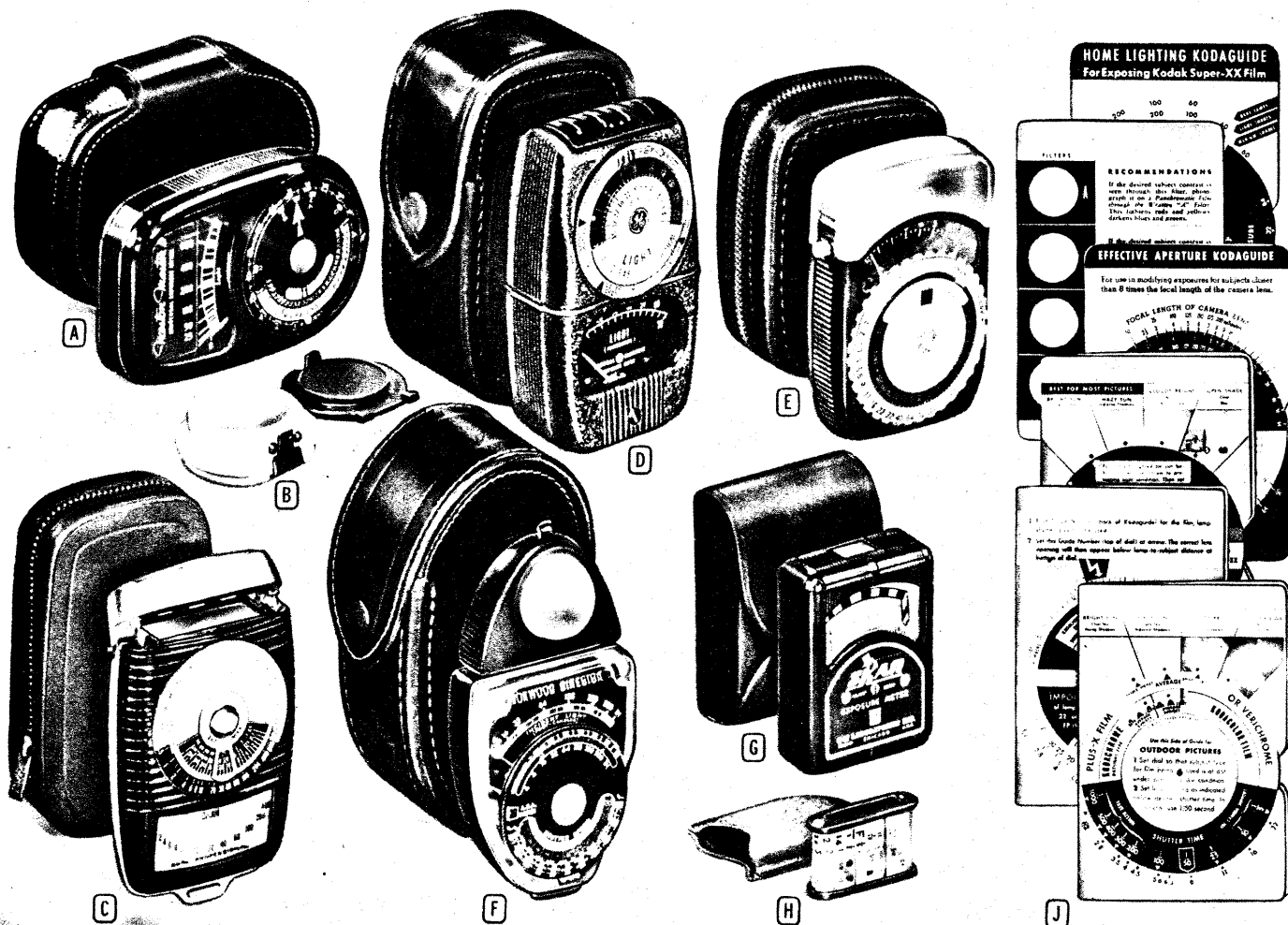
(J) FILTERS IN "W" MOUNTS. Fit Kodak 8 and 16 mm movie cameras with f/1.9 lenses except Model 90. State camera model and lens.

67 HN 2254 T—Type A Kodachrome filter. 3.56
67 HN 2255 T—Kodachrome Haze filter. 3.56

K PARALENS. For correcting parallax on all twin-lens reflex cameras when using Portra lens. Fits series V adapter ring. Ship. wt. 6 oz. 67 H 2397 T—State Portra lens to be used with 5.50

L CLOUD-ON FILTER, PORTRAIT LENS SET. Adhesive holds it on lens mount—use over and over. Cloud-on filter (yellow) brings out clouds. Portrait lens for close-ups. Non-breakable. 67 H 2219—Ship. wt. 4 oz. 1.45

COLOR PICTURES OUTDOORS with indoor film can be accomplished by using Type A Kodachrome filter—saves buying two kinds of color film.



Exposure Meters Mean Better Pictures

A NEW WESTON MASTER II EXPOSURE METER.

The best known of all photo-electric meters—instantly figures correct exposure for you. Has two light scales—one for dim and one for brightly lighted scenes. Flip open baffle and dim scale appears, while bright scale disappears. Diaphragm stops: $f/1.5$ to $f/32$. Shutter speeds: $1/1200$ to 100 seconds. Zero adjusting screw. Molded plastic body. Instructions and film speeds included. No extra charge for credit.

67 HN 2169L—Meter only. *Postpaid*.....29.67

WESTONE CINE MASTER II EXPOSURE METER. Same as meter above except with scale for movie cameras. Tells proper lens opening for use with any camera, any film, at any number of frames per second. No charge for credit.

67 HN 2175L—Meter only. *Postpaid*.....29.67

67 HN 2177—De Luxe ever-ready leather case for above Weston meters. *Postpaid*.....\$1.98

67 HN 2170—Leather sheath Case (not shown) for Weston meters. Belt slot. *Postpaid*.....\$1.98

B WESTON INVERCONE ADAPTER. Incident light attachment for both Weston meters above. Snaps on and off easily.

67 HN 2171—Invercone. *Postpaid*.....3.00

C DE JUR PROFESSIONAL EXPOSURE METER.

A versatile meter that measures both Reflected and Incident light. Incident is the light that falls directly upon the subject. One-hand operation—just a flick of your thumb and this completely automatic meter changes from reflected to incident light. Shutter speeds from $1/880$ to 120 seconds. Stops from $f/1$ to $f/45$. Strong die-cast aluminum housing. Lifetime guarantee—never any repair or service charges. A. S. A. ratings.

67 H 2179T—Meter. Ship. wt. 1 lb.22.95

67 H 2180T—Leather Case. Ship. wt. 6 oz.1.98

D G.E. EXPOSURE METER, MODEL DW-68. Highly sensitive—reads three wide ranges of light values. Readings for diaphragm stops $f/1$ to $f/45$; shutter speeds $1/800$ to 120 seconds. A.S.A. ratings. Crackle finished metal body. Instructions included. No credit charge. *Postpaid*.

67 HN 2162L—Meter19.95

67 HN 2163—Leather Case.....1.65

E G.E. EXPOSURE METER, MODEL PR-1. For both still and movie photography. "The meter with a memory." Indicator stays at reading until you press button to release it. Highly sensitive photo-electric cell. Exclusive new G.E. louver-coupled dial... shifts meter range automatically from dim to bright light scale. G.E. Trident Analyzer reminds you to check range of light in scene. Hermetically sealed light-sensitive cell. Temperature compensation for increased accuracy. Diaphragm stops from $f/1$ to $f/128$, shutter speeds $1/1200$ to 120 seconds. A.S.A. ratings. With Incident light reading attachment and instructions. No extra charge for credit. *Postpaid*.

67 HN 2181L—Meter \$3.50 Down, \$5 Mo.32.50

67 HN 2182—Leather Case.....1.98

F NORWOOD DIRECTOR EXPOSURE METER. Photo-electric cell designed to measure the incident light that falls directly on subject instead of reflected light. Swivel head facilitates reading from any angle. Removable side baffle for accurate readings in all light intensities from 2 to 30,000 foot candles. One-hand operation. Diaphragm stops from $f/1.4$ to $f/45$; speeds $1/2000$ to 140 seconds. A.S.A. readings for both still and moving pictures. Zero adjusting screw. Instructions. Only \$3.50 down, \$5 a month on terms. No charge for credit. *Postpaid*.

67 HN 2192T—Norwood Director.....32.00

67 HN 2193T—Leather Case.....1.98

G SKAN EXPOSURE METER. Sensitive photo-electric cell. Jeweled movement. Diaphragm stops from $f/1.4$ to $f/32$; shutter speeds $1/1000$ to 30 seconds. Sturdy black plastic frame. Easily operated zero adjuster. A.S.A. ratings. With case and instructions. No charge for credit.

67 HN 2167L—*Postpaid*.....14.95

H LEUDI VISUAL EXTINCTION TYPE METER.

Easy to operate. Covers all standard film speeds, shutter speeds, lens stops. A.S.A. film ratings. Brown artificial leather case, instructions.

67 H 2154—Ship wt. 4 oz.1.98

J EASTMAN KODAGUIDES. Helpful pocket exposure guides for all film and conditions. Each 3 by $4\frac{1}{2}$ in. with simple dial calculator.

HOME LIGHTING GUIDE. For Super-XX film under home lighting for still or movie shots.

SNAPSHOT KODAGUIDE. For outdoor and photo-flood exposures for black & white and color.

CONTRAST VIEWING KODAGUIDE. Four viewing filters indicate film and filter for contrast effects.

FLASH KODAGUIDE. How to determine correct lens openings when using photoflash lamps.

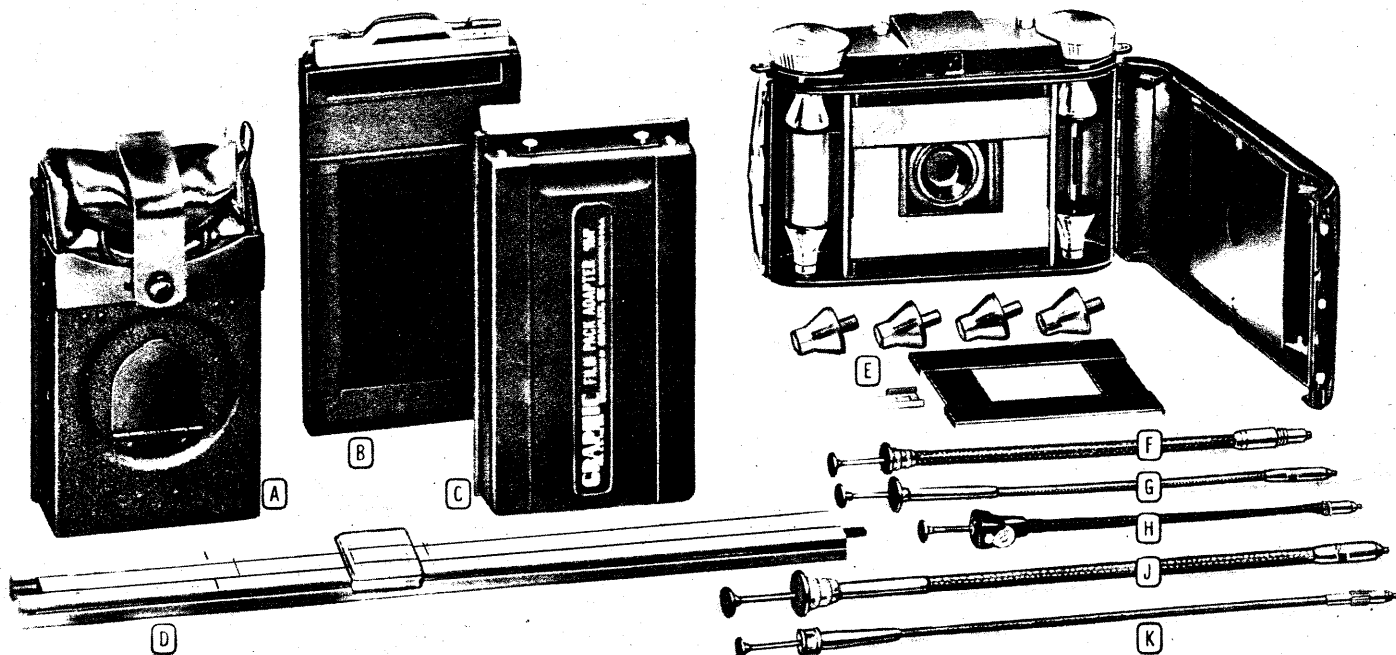
MOVIE KODAGUIDE. How to shoot with Cine-Kodak black and white film or Kodachrome film.

EFFECTIVE APERTURE KODAGUIDE. Tells effective aperture with camera bellows extended.

67 H 2152—Ship. wt. 8 oz.Set of Six for 1.20

LIGHT SHIELD PHOTO TIP

When using certain types of angle lighting, it is necessary to prevent light from shining into the camera lens. You can make a shield with a stiff piece of cardboard and a spring clothespin. Fasten the clothespin near one end of the cardboard by means of thumbtacks; the cardboard can be clipped to reflector in almost any position.



Useful Accessories for Every Camera Owner

A **GRAFLEX SHEET FILM MAGAZINES.** For cameras with graflex type backs. Hold 12 sheets of cut film. No charge for credit. *Postpaid.*

67 HN 294 T—For 2½ by 3¼ cameras.... 26.00
67 HN 264 T—For 3¼ by 4¼ cameras.... 29.50
67 HN 263 T—For 4 by 5 cameras..... 33.00

B **GRAPHIC SHEET FILM HOLDERS.** For cameras with graphic backs. Hold 2 sheets. *Postpaid.*
67 HN 251 —For 2½ by 3¼ cameras..... 4.05
67 HN 255 T—For 3¼ by 4¼ cameras..... 4.15
67 HN 261 T—For 4 by 5 cameras..... 4.40

GRAFLEX SHEET FILM HOLDERS. For cameras with graflex backs. Hold 2 sheets. *Postpaid.*
67 HN 280 T—For 2½ by 3¼ cameras..... 4.95
67 HN 295 T—For 3¼ by 4¼ cameras..... 5.35
67 HN 281 T—For 4 by 5 cameras..... 5.95

C **GRAPHIC FILM PACK ADAPTERS.** For cameras with graphic type backs. Holds 12-exposure film packs. *Postpaid.*
67 HN 252 —For 2½ by 3¼ cameras..... 7.65
67 HN 256 T—For 3¼ by 4¼ cameras..... 8.65
67 HN 262 T—For 4 by 5 cameras..... 9.65

GRAFLEX FILM PACK ADAPTERS. For cameras with graflex backs. Holds 12-exposure packs.
67 HN 283 T—For 2½ by 3¼. *Postpaid.*.... 7.65
67 HN 296 T—For 3¼ by 4¼. *Postpaid.*.... 8.65
67 HN 284 T—For 4 by 5. *Postpaid.*..... 9.65

D **PHOTOGRAPHIC SLIDE RULE.** Gives you quick answers to hundreds of photographic problems: solution of lens equations, exposures for close-up work, and many other valuable pieces of information. Plastic front and back—center slide moves in metal-lined slot. Red and black numerals for easy and rapid reading. 19-page booklet explains uses in detail.
67 H 5044—Shipping weight 6 oz..... 4.69

E **COLOR FILM ADAPTERS.** Adapt certain 120 and 620 cameras to use Bantam (828) size Kodachrome film. Give you a wider selection of film and at a lower cost per shot. Excellent for shooting black and white—Kodachrome shots which come as redi-mounts. Outfit consists of a metal film mask four spool extensions, mask for viewer, and a take-up spool. Easy to install or remove—complete instructions included. Ship. wt. 1 lb.
67 HN 3386—For Ciroflex Cameras..... 5.55
67 HN 3387—For Kodak Reflex..... 5.55
67 HN 3388—For Argoflex Cameras..... 5.55
67 HN 3389—For Ansco Speedex..... 5.55

F **KODAK BANTAM CABLE RELEASE No. 30.** Fits all Bantams except Bantam Special.
67 H 2316—7 in. long. Ship. wt. 6 oz..... 1.39

G **KODAK CABLE RELEASE No. 5.** Fits Kodak 35 and Vigilant cameras with Diomatic, Kodamatic, Supermatic, Dak and Dakon shutters; Kodak Medalist, Kodak Reflex, and all Tourist cameras; also Bantam Special, Argus cameras, and most German shutters such as Compur, and Prontor. Metal covered.
67 H 2356—7 in. long. Ship. wt. 6 oz..... .98¢

H **KODAK T.B.I. NUMBER 2 CABLE RELEASE.** Same as Kodak No. 5 above, but with lock for making time exposures. For cameras with "Instantaneous" and "Bulb" settings only.
67 H 2314—7 in. long. Ship. wt. 6 oz..... 3.15

J **KODAK CABLE RELEASE No. 5.** Same as Kodak Cable Release G above, but 12 in. long. Fits same cameras as those listed under G.
67 H 2387—Shipping weight 6 oz..... 1.15

K **KALART PUSH BUTTON BODY RELEASE.** All metal cable release for synchro shutters. Complete with bracket to fit onto Kalart Range-finder or battery case. About 8 inches long.
67 H 2315 T—Shipping weight 4 oz..... .98¢

L **HUGO MEYER RANGE FINDER.** Super-imposed image type. Dial graduated from 2½ ft. to infinity. Can be held in hand or attached to camera with accessory clip. Black crackle finish.
67 H 2186—Ship. wt. 1 lb. 3/4x1x1 in..... 9.95

67 H 2191—HEIGHT ADAPTER. Raises Hugo Meyer range finder above controls on Kodak 35, Vigilant, Monitor, etc. Ship. wt. 4 oz..... 49¢

M **KODAK SERVICE RANGE FINDER.** Split image type. Shows from two feet to infinity. Chrome plated metal. Attaches to accessory clip. Case.
67 H 2166—3 by 1 by 1 in. Ship. wt. 1 lb..... 13.95

N **MONOCHROME VIEWER.** Enables your eye to see just what the film sees. Improves your picture quality. 1⅞-in. dark blue lens, cord.
67 H 2185—Shipping weight 5 oz..... 1.35

P **"LIPSTICK" LENS BRUSH.** Camel hair bristles. Brush screws in and out from brass case.
67 H 5073—Ship. wt. 5 oz. Abt. 2 in. long... 98¢

R **SERVICE SELF-TIMER.** Hydraulic delayed action release screws into cable release socket—no cable needed. Shutter snaps after interval of about 10 sec. Metal operating parts. Fits all cameras with standard cable release socket.
67 H 2190 T—Shipping weight 6 oz..... 1.89

T **KODAK AUTO RELEASE.** A self timer with an extra booster spring that provides a high tripping force—reduces misfires. Permits varying periods of delay up to ten seconds. Attaches to any standard cable release.
67 H 2386—Shipping weight 8 oz..... 4.25

HOW TO TITLE ENLARGEMENTS

White titles can be placed on enlargements by writing on the unexposed paper with hypo.



Record it in Color!

...WITH EASTMAN KODACHROME

If you haven't yet shot your first roll of Kodachrome, then you've missed one of the biggest thrills in photography—the thrill of seeing your own pictures in all the full brilliance of glorious, natural color. Whether you want to paste them in an album, frame them, or project them in breath-taking life size on a screen, Kodachrome produces natural, almost third-dimensional pictures.

Anyone Can Make Good Kodachromes

Kodachrome film can be used in any camera that will take 35 mm or Bantam (828) film. It is also available in sheet film sizes for press and professional type cameras. It is as easy to use as black and white.

In exposing Kodachrome, however, remember that any color film has far less exposure "latitude" than black and white. That means that camera settings must be more accurate and there should be less contrast between the brightest highlight and the darkest shadow.

Soft lighting is best for color work, in order to record detail in highlight and shadow areas. Since actual color contrast is recorded, little brightness contrast is needed; so lighting should be fairly flat. A slightly hazy sky is an advantage for outdoor shots. If lighting is too contrasty use a white matte reflector or daylight blue flash bulbs (Page 36) to lighten shadows for daylight film.

Daylight Kodachrome is for use with natural light—Type A Kodachrome for use with photoflood or photoflash light. The Type A film can also be used in daylight, but only if a Type A filter (Page 41) is used on the camera lens. A.S.A. Speed Index is as follows: Daylight Type roll film—10; sheet film—12. Type A film—16. Type A film with Type A filter for daylight—10.

Selecting Transparencies for Kodachrome Prints

The best way to tell whether a Kodachrome transparency will make a good print is to view it by light reflected from a white paper. Lay the paper on a table and light it well by tungsten light in a reflector placed about a foot above the paper. Now hold the transparency at an angle near the paper so it can be viewed by reflected light. Transparencies which appear attractive when viewed in this manner can be expected to produce attractive prints.

The transparency must be sharp for good prints. Check the projected image closely, or view it under a magnifying glass.

KODACHROME DAYLIGHT TYPE PROFESSIONAL FILM. Prices include processing and return postage from laboratory. Postpaid.

67 HN 1565 T—Size 2¼ by 3¼ inches.....	10 sheets	9.94
67 HN 1566 T—Size 3¼ by 4¼ inches.....	10 sheets	12.57
67 HN 1567 T—Size 6.5 by 9 centimeters.....	10 sheets	9.94
67 HN 1568 T—Size 9 by 12 centimeters.....	10 sheets	14.17
67 HN 1569 T—Size 4 by 5 inches.....	10 sheets	16.08

KODACHROME MINIATURE CAMERA ROLL FILM. Prices include processing and return postage from developing laboratory. Transparencies are returned in individual Kodaslide mounts. Postpaid.

67 HN 1547—K828 Bantam Daylight Kodachrome. 8 exposures..	1.85
67 HN 1548—K828 Bantam Type A Kodachrome. 8 exposures...	1.85
67 HN 1552—K135 35 mm. Daylight Kodachrome. 20 exposures..	3.45
67 HN 1553—K135 35 mm. Type A Kodachrome. 20 exposures...	3.45
67 HN 1508 T—K135 35 mm. Daylight Kodachrome. 36 exposures.	5.40
67 HN 1509 T—K135 35 mm. Type A Kodachrome. 36 exposures.	5.40

KODACHROME PRINTS. Full color, glossy enlargements on a durable cellulose acetate base. Made from split 35 mm, 35 mm, or Bantam Kodachrome or Ansco color transparencies in readymounts or 2x2-in. glass slides. Also 3x4½, 5x7, and 8x10-in. prints made from Kodachrome, Ektachrome, or Ansco color roll film or sheet film up to 4x5. All sizes are unmounted; for mounts see P. 63. Send transparencies to Wardway Photo Service, Park Ridge, Ill.—authorized Kodak dealer. Do not send to Wards Mail Order Houses. Prints returned by Postpaid mail in about 3 weeks. State size and number of prints wanted.

Print size	From regular 35 mm or Bantam slides	From split 35 mm (Mercury or Robot) and roll or sheet film up to 4x5
	Each	Each
2¼x 3¼ in.	55c	60c (split only)
3 x 4½ in.	75c	85c
5 x 7 in.	\$2.25	\$2.75
8 x 10 in.	4.75	5.75
11 x 14 in.	8.75	....

...OR EASTMAN KODACOLOR

Color Pictures with Roll Film Cameras

New, improved Kodacolor makes it possible for owners of ordinary roll film cameras—even box cameras—to obtain good color photographs that can be handled like ordinary black and white snapshots, cost less than Kodachrome prints, and have more brilliance and color fidelity than ever before. Available in two types—Daylight Kodacolor for taking pictures outdoors in bright sunlight, and Type A Kodacolor for use indoors with photofloods or flash-bulbs. You obtain a color negative from which any number of prints can be made. As colors in the negative are complementary to the original subject, Kodacolor negatives can't be projected, but prints are handier and require less care than Kodachrome transparencies.

Kodacolor film is loaded into the camera and used the same way as black and white film. No filters or special attachments are required, although Type A can be used outdoors with a type A filter. Kodacolor is faster and has a greater exposure latitude than Kodachrome, but like all color film, has little exposure latitude when compared to black and white. A.S.A. Speed Index: for Daylight Kodacolor—25, for Type A—16. For best results, exposures should be made in bright light and computed accurately.

KODACOLOR FILM FOR ROLL FILM CAMERAS. For making complementary negatives from which Kodacolor prints are made... see information above. Cameras which make 8 exposures with black and white film make 6 exposures with Kodacolor. Cameras which make 10, 12, 15, or 16 on regular black and white, make 8, 9, 11, and 12 respectively on Kodacolor rolls. Prices include processing to Kodacolor negatives and return postage from laboratory. Send film to Wardway Photo Service, Park Ridge, Illinois—do not send to Wards Mail Order Houses. Postpaid.

Daylight Kodacolor—for outdoor use			Type A (Indoor) Kodacolor		
Cat. No.	Size	Price	Cat. No.	Size	Price
67 HN 1525	127	\$1.64	67 HN 1619	127	\$1.64
67 HN 1526	120	1.91	67 HN 1620	120	1.91
67 HN 1527	620	1.91	67 HN 1621	620	1.91
67 HN 1528	116	2.22	67 HN 1622	116	2.22
67 HN 1529	616	2.22	67 HN 1623	616	2.22

KODACOLOR PRINTS FROM KODACOLOR NEGATIVES. Rich color prints on paper—made to a standard width of 2½ inches; length depends on proportion of negative size—see table below. Send exposed roll for "Process and Print" service, or negatives for "Prints Only" service, to Wardway Photo Service, Park Ridge, Illinois—an authorized Kodak dealer. Do not send to Ward Mail Order Houses. Prints will be made from each negative of suitable quality when sending rolls marked "Process and Print." Protect negatives for mailing. Be sure to include your name and address, and state number of prints wanted from each negative. Kodacolor work returned in about 3 weeks by Postpaid Mail.

KODACOLOR PRINTS. From any size Kodacolor negative. Each.... 36c

Kodacolor Negative and Print Sizes in Inches.

Roll Size	Neg. Size	Print Size	Roll Size	Neg. Size	Print Size
127	1⅞ x 2½	2⅞ x 4½	620	2¼ x 3¼	2⅞ x 4⅜
127	1⅞ x 1⅞	2⅞ x 2⅞	120 or 620	2¼ x 2¼	2⅞ x 2⅞
127	1⅞ x 1⅞	2⅞ x 3⅜	120 or 620	2¼ x 1⅞	2⅞ x 4
120	2¼ x 2½	2⅞ x 3⅜	116 or 616	2½ x 4¼	2⅞ x 5
120	2¼ x 3¼	2⅞ x 4⅜	616	2½ x 2⅞	2⅞ x 3⅜

NEW KODACOLOR ENLARGEMENTS. Now you can have enlargements made from your Kodacolor negatives too. This new service gives you the same rich-color paper prints as above, but in enlarged sizes with ¼-inch white margins. Enlargement will be made from the biggest area of your negative that can be printed in the proportions of the size you order. If it is impossible to include all of the principal subject in this proportion the enlargement will be made in the next nearest size. Enlargements will be limited in size to not more than 5 times the size of your negative.

Send Kodacolor negatives to Wardway Photo Service, Park Ridge, Illinois—authorized Kodak dealer. Do not send to Wards. Enlargements will be returned in about 3 weeks by Postpaid Mail. Be sure to include your name and address, and state size and number of enlargements wanted from each negative.

4x7, 5x5, or 5x7-in. size Kodacolor enlargements.....	Each	2.25
6x10, 8x8, or 8x10-in. size Kodacolor enlargements.....	Each	4.75
11x14-in. size Kodacolor enlargements.....	Each	8.75

Color You Can Develop and Print Yourself!

Full Color in Standard Film Sizes

Kodak Ektachrome or Ansco Color Film, and Ansco Color Printon, enable you to carry out the entire photographic color process in standard 120 and 620 film sizes. Using little more than the usual darkroom equipment, you can achieve the satisfaction of making your own full color transparencies and color prints. Both Ektachrome and Ansco Color film are available in 120 and 620 sizes (2¼ by 2¼ and 2¼ by 3¼ in.), and Ansco offers 35mm as well.

The development and printing procedures require patience and the explicit following of directions. However, if you are familiar with darkroom work you will find these two processes satisfying and fascinating occupations which are completely within your ability. If, on the other hand, you don't care to develop your own film, you can send it to Pavel, Inc., for processing—see Page 102.

YOU'LL LIKE HOME DEVELOPING COLOR FILMS BECAUSE both Kodak Ektachrome and Ansco Color Film offer several advantages over factory processed film. You can use 120 and 620 film size not presently available in Kodachrome. You don't have to wait to get your transparencies from a laboratory—you can process your film yourself the same day you take your pictures. And you get the satisfaction of acquiring a new skill—the production of your own color transparencies and prints.

COLOR DEVELOPING IS COMPARATIVELY EASY. Development of color film, aside from washing the film after treatment, requires only three more steps than the normal development of black and white film. You can do it with only the usual darkroom equipment, and you get equally good results with either tray or tank. Of the ninety minutes required for the full process, only 15 minutes must be done in complete darkness. Temperature control requirements are broad, and if you can keep your first developer and color developer at 68° F., you can carry on the rest of the process at anywhere between 60° and 75° F. Complete instructions and all the needed chemicals are contained in the Ansco Color Developing Outfit and the Ektachrome Processing Kit.

NOTHING DIFFICULT ABOUT MAKING COLOR PRINTS. If you are a careful darkroom worker you can make successful color prints with Ansco Color Printon. With Printon you make full color prints at a single exposure—neither separation negatives nor complicated masking is required. You can make full color prints from any positive color transparency. There are several more steps than simple development and fixation, but if you can read and follow simple instructions, you should be successful.

Color Film in 35mm, 120, and 620 Roll Film Sizes

Both Ektachrome and Ansco Color Film are for making positive full color transparencies with cameras having achromatic or anastigmatic lenses. Lenses of speeds slower than $f/6.3$ should not be used. Box cameras, of course, can not be used, although they do a satisfactory job with Kodacolor (see Page 64).

Color transparencies made from Ansco Color Film or Kodak Ektachrome can be viewed, projected, or printed in full color. The price of the film does not include processing—develop it yourself or send your exposed color film to Pavelle Color, Incorporated, for professional processing service at reasonable rates—see Page 102.

ANSCO COLOR FILM. You have a choice of two kinds of Ansco Color film—Daylight and Tungsten. The Daylight Type, for taking pictures outdoors or with blue photoflash bulbs indoors (see Page 36), has an A.S.A. Daylight speed of 10 (Weston 8). The Tungsten Type, for taking pictures indoors or with photoflood or Photoflash bulbs, has an A.S.A. Tungsten Speed Index of 12 (Weston 10). Order the same film size you use in black and white film. *Postpaid.*

Cat. No.	Film Size	Film Type	Negative Size	Exp.	Price
67 HN 1557	35 mm.	Daylight	35 mm.	20	\$2.21
67 HN 1558	35 mm.	Tungsten	35 mm.	20	2.21
67 HN 1595	B2 (120)	Daylight	2¼ x 3¼ in.	6	1.37
67 HN 1596	B2 (120)	Tungsten	2¼ x 3¼ in.	6	1.37
67 HN 1597	PB20 (620)	Daylight	2¼ x 3¼ in.	6	1.37
67 HN 1598	PB20 (620)	Tungsten	2¼ x 3¼ in.	6	1.37

EKTACHROME COLOR FILM. Kodak's new home process color film. For taking color pictures outdoors or with blue flash bulbs—has an A.S.A. Speed Index of 10. Order the same film size you use in black and white film. *Mailed Postpaid.*

67 HN 1603 T—Ektachrome Film, 120 size. Six exposures..... 1.37
67 HN 1604 T—Ektachrome Film, 620 size. Six exposures..... 1.37

Color Filters to Use with Color Film

ANSCO FILTERS. For use with Ansco Color Film—enable you to make the most of your color film under circumstances which would ordinarily make color photography unsatisfactory. Gelatin circles cemented in glass, mounted in metal rims to fit lens attachments on Page 41. Filter UV 15 is for slight haze correction outdoors with daylight type Ansco Color film, and for using tungsten type Ansco Color Film with photoflood lighting indoors. Filter UV 16 is for medium haze correction outdoors using daylight film, and for using Tungsten Ansco Color Film with clear flash bulbs indoors. Filter UV 17 is for greatest haze correction. Filter 10 is a conversion filter for using outdoor film with indoor tungsten light;—filter factors 3.5X. Filter 11 is a conversion filter for using Tungsten type Ansco Color Film outdoors—filter factor is 1.5X. *Postpaid.*

67 HN 2217 T—Series V. State filter type wanted..... Each 2.10
67 HN 2218 T—Series VI. State filter type wanted..... Each 2.50

EKTACHROME FILTERS. For use with Ektachrome Film. Kodak color correction filters are gelatin circles cemented in glass and mounted in metal rims. Two types—81 A (CC 14), light haze, and 81 B (CC 15), for medium haze. Filter factor of 81 A is 1½X; of 81 B, 2X.

67 HN 2215 T—Series V. State type wanted. *Postpaid.*.... Each 2.25
67 HN 2216 T—Series VI. State type wanted. *Postpaid.*... Each 2.80

Color Film Processing Outfits

These processing outfits contain all the chemicals you need to develop color film into transparencies or to make prints from any positive color transparency. Chemicals once mixed will remain fully usable for about two weeks if well stored. The size of the outfits described below indicates the amount of working solution. For replacement chemicals write Bob Adams—see Page 9.

ANSCO COLOR FILM PROCESSING OUTFIT. For developing Ansco Color Film. With complete instructions. Quart develops 320 sq. in.
67 HN 4705 T—One-quart size. *Postpaid.*..... 3.05
67 HN 4706 T—Half-gallon size. *Postpaid.*..... 3.90
67 HN 4707 T—One-gallon size. *Postpaid.*..... 6.00

EKTACHROME DEVELOPING KIT. For developing Ektachrome Color Film. Complete instructions. Half-gallon will develop 480 sq. in.
67 HN 4712 T—Half-gallon size. *Postpaid.*..... 3.90
67 HN 4713 T—One-gallon size. *Postpaid.*..... 6.00

ANSCO COLOR PRINTON PROCESSING OUTFIT. For making color prints from positive transparencies. One-quart size makes about 400 sq. in. of prints. Filters and Printon not included.

67 HN 4702 T—One-quart size. *Postpaid.*..... 3.00
67 HN 4703 T—Half gallon size. *Postpaid.*..... 4.20
67 HN 4704 T—One-gallon size. *Postpaid.*..... 7.35

ANSCO COLOR PRINTON. Printing material for making full color prints with a single exposure. Each package contains clear, complete instructions for you to follow. See below for color filters required to balance your light source. *Postpaid.*

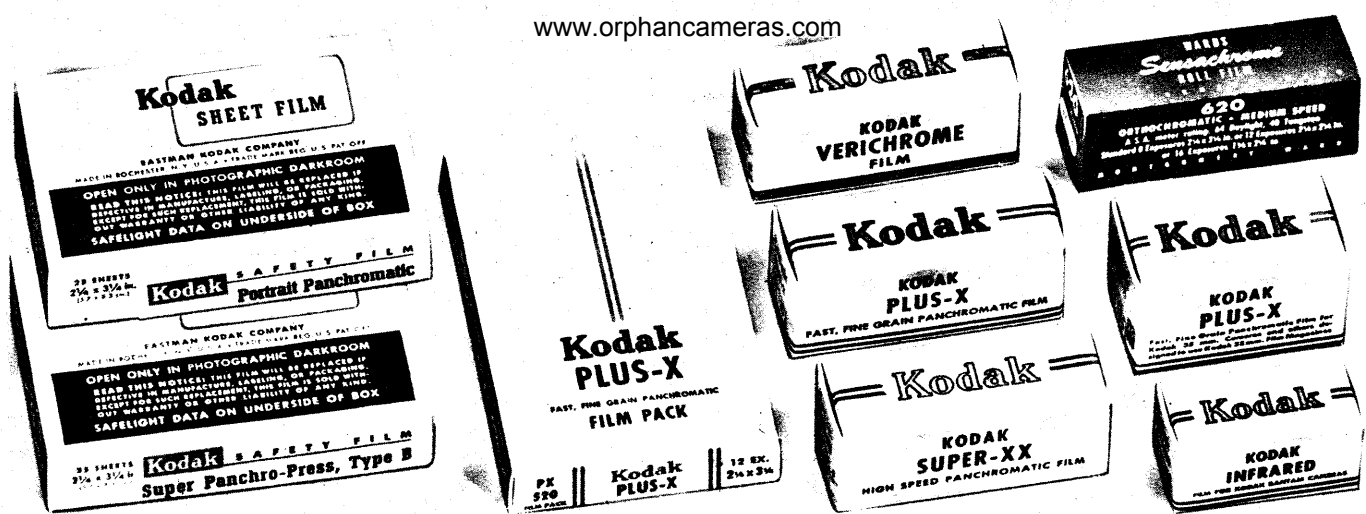
67 HN 4127 T—Ansco Color Printon. One dozen 4x5-in. sheets... 3.00
67 HN 4128 T—Ansco Color Printon. One dozen 5x7-in. sheets.. 5.40
67 HN 4129 T—Ansco Color Printon. One doz. 8x10-in. sheets... 11.39

Ansco Color Printing Filter Sets

Gelatin filters required to balance the light in your enlarger or contact printer to the proper color for exposing Ansco Color Printon. Printing Quality Filters are recommended where it is possible to place filter between light source and transparency; Lens Quality Filters are placed near the lens or in contact with the transparency—more optically perfect.

Each Ansco Color filter set contains ten color compensating filters, one ultra-violet filter, and complete instructions for their use. The color compensating filters consist of: Yellow foils CC-23, CC-24, and CC-25; Magenta foils CC-33, CC-34, CC-35, and CC-36; and Cyan foils CC-43, CC-44, and CC-45. The Lens Quality Filter Set contains the UV-16 ultraviolet filter; the Printing Quality Filter Set has the UV-16P ultraviolet filter. *Postpaid.*

67 HN 2262 T—Set of eleven 4 by 5-inch Printing Quality Filters. In individual envelopes, each numbered..... 4.40
67 HN 2263 T—Set of eleven 8 by 10-inch Printing Quality Filters. In individual envelopes, each numbered..... \$8.25
67 HN 2261 T—Set of eleven 2 by 2-inch Lens Quality Filters.... 7.26



Eastman, Ansco, and Wards Film...in

KODAK VERICHROME. Medium speed orthochromatic film for outdoor snapshots. Wide latitude to compensate for exposure errors. Picks up good detail in shadows. A medium grained film; permits some degree of enlargement. Anti-halation treated. A.S.A. Speed Index: 64 Daylight, 32 Tungsten.

VERICHROME ROLL FILM. Postpaid. State number of rolls wanted.

Catalog No.	Film No.	Exposures	Negative Size	Price, 3 for
67 HN 1500	127	8	1½ x 2½ in.	96c
67 HN 1501	120	8	2¼ x 3¼ in.	\$1.14
67 HN 1502	620	8	2¼ x 3¼ in.	1.14
67 HN 1503	116	8	2½ x 4¼ in.	1.47
67 HN 1504	616	8	2½ x 4¼ in.	1.47
67 HN 1505	118	6	3¼ x 4¼ in.	1.80
67 HN 1506	130	6	2½ x 4½ in.	1.80
67 HN 1507	122	6	3¼ x 5½ in.	2.10

KODAK PLUS-X. A medium speed film that is fully panchromatic—gives excellent rendition of all color values. Low graininess for enlargements up to 10 diameters. Anti-halation treated. A.S.A. Speed Index: 64 Daylight, 40 Tungsten. Postpaid. State number of rolls wanted.

Catalog No.	Film No.	Exposures	Negative Size	Price, 3 for
67 HN 1510	127	8	1½ x 2½ in.	\$1.14
67 HN 1511	120	8	2¼ x 3¼ in.	1.29
67 HN 1512	620	8	2¼ x 3¼ in.	1.29
67 HN 1514	616	8	2½ x 4¼ in.	1.62
67 HN 1545	828	8	28 x 40 mm.	1.14
67 HN 1549	35 mm.	20	24 x 36 mm.	2.61

PLUS-X FILM PACKS. 12 films in each pack. State number of packs desired.

Catalog No.	Pack No.	Size in.	Size cm.	Each pack	6 packs
67 HN 1612	520	2¼ x 3¼	6 x 9	\$1.45	\$8.50
67 HN 1613	518	3¼ x 4¼	8 x 10.5	1.95	10.95
67 HN 1614	541	3½ x 4¾	9 x 12	2.05	11.75
67 HN 1615	523	4 x 5	10 x 12.5	2.20	12.20

KODAK PANATOMIC-X. A medium speed film of extremely fine grain. It is particularly valuable when great enlargement is desired or when extreme detail or texture is desired. Fully panchromatic and anti-halation treated. A.S.A. Speed: 32 Daylight, 20 Tungsten. Postpaid. State number of rolls.

Catalog No.	Film No.	Exposures	Negative Size	Price, 3 for
67 HN 1550	35 mm.	20	24 x 36 mm.	\$2.61

KODAK INFRARED. Sensitive to invisible infra-red rays. Gives exceptional detail in distant landscapes, cutting through haze and often registering what the eye cannot see. Photographs sky and water as very dark, green trees and grass as very light—often used for "moonlight" effects. Used in criminology, medical, and scientific photography to bring out details often invisible to eye. Should be used with red (A) filter (Page 41). Or use infra-red flashbulbs (Pg. 36) to take pictures at night without any visible light. A.S.A. Speed: 10 Tungsten with filter. Exposures cannot be measured by meter in daylight, but average landscape in bright sunlight is ½ second at f/8. Postpaid.

Catalog No.	Film No.	Exposures	Negative Size	Price
67 HN 1605	127	8	1½ x 2½ in.	3 for \$1.14
67 HN 1606	120	8	2¼ x 3¼ in.	3 for 1.29
67 HN 1607	620	8	2¼ x 3¼ in.	3 for 1.29
67 HN 1608	116	8	2½ x 4¼ in.	3 for 1.62
67 HN 1609	616	8	2½ x 4¼ in.	3 for 1.62
67 HN 1610	828	8	28 x 40 mm.	3 for 1.14
67 HN 1611	35 mm.	36	24 x 36 mm.	Each 1.35

KODAK SUPER-XX. A very high speed panchromatic film in all film sizes. Stops fast action and gets your picture even under adverse lighting conditions. Fine for artificial lighting. Twice as fast as Verichrome and Plus-X, it will take outdoor pictures in deep shade. Medium grained, will permit some degree of enlargement. Not suitable for outdoor shots with cameras without adjustable lens diaphragms. Anti-halation treated. A.S.A. Speed Index: 125 Daylight, 80 Tungsten. Postpaid. State quantity.

SUPER-XX ROLL FILM. All sizes including Bantam (828) and 35 mm.

Catalog No.	Film No.	Exposures	Negative Size	Price, 3 for
67 HN 1520	127	8	1½ x 2½ in.	\$1.14
67 HN 1521	120	8	2¼ x 3¼ in.	1.29
67 HN 1522	620	8	2¼ x 3¼ in.	1.29
67 HN 1524	616	8	2½ x 4¼ in.	1.62
67 HN 1546	828	8	28 x 40 mm.	1.14
67 HN 1551	35 mm.	20	24 x 36 mm.	2.61

SUPER-XX FILM PACKS. 12 films per pack. State quantity wanted.

Catalog No.	Pack No.	Size in.	Size cm.	Each Pack	6 Packs
67 HN 1575	520	2¼ x 3¼	6 x 9	\$1.45	\$8.50
67 HN 1576	518	3¼ x 4¼	8 x 10.5	1.95	10.95
67 HN 1577	541	3½ x 4¾	9 x 12	2.05	11.75
67 HN 1578	523	4 x 5	10 x 12.5	2.20	12.50

KODAK PORTRAIT PANCHROMATIC. The standard panchromatic film for portrait use. Gives very good color rendition even with high red content tungsten lamps. Medium to low graininess, allows considerable enlargement without objectionable grain. Anti-halation treated. Medium Speed; A.S.A. speed: 64 Daylight, 40 Tungsten. In cut film sizes only. Postpaid.

CUT FILM. For Speed Graphic, Crown Graphic, Graflex, etc.

Catalog No.	Size, in.	Size, cm.	2 Dozen	4 Dozen
67 HN 1580 T	2¼ x 3¼	....	\$1.54	...
67 HN 1581 T	3¼ x 4¼	....	2.20	...
67 HN 1584 T	4 x 5	....	2.91	...
67 HN 1582 T	....	6.5 x 9	1.65	\$3.25
67 HN 1583 T	....	9 x 12	2.58	5.15

KODAK SUPER PANCHRO-PRESS TYPE B. An extremely high speed film. Has wide latitude of exposure; gives good rendition of detail. Moderate grain, allows some enlargement. Anti-halation treated. A.S.A. Speed Index: 125 Daylight, 80 Tungsten. In cut film sizes only. Mailed Postpaid.

CUT FILM. For Speed Graphic, Crown Graphic, Graflex, etc. State quantity.

Catalog No.	Size in.	Size cm.	2 Dozen	4 Dozen
67 HN 1590 T	2¼ x 3¼	....	\$1.54	...
67 HN 1591 T	3¼ x 4¼	....	2.20	...
67 HN 1594 T	4 x 5	....	2.91	...
67 HN 1592 T	....	6.5 x 9	1.65	\$3.25
67 HN 1593 T	....	9 x 12	2.58	5.15

WARDS SENSACHROME. A medium speed Orthochromatic film priced to save you money. An excellent film made especially for Wards. Excellent for outdoor shots because it picks up fine detail in shadows. Wide exposure latitude compensates for limitations of fixed focus lenses. Medium grain, permits moderate enlargement. A.S.A. Speed Index: 64 Daylight; 40 Tungsten.

Catalog No.	Film No.	Size in.	Ship. wt.	Price, 3 for
67 H 1624	127	1½ x 2½	9 oz.	75c
67 H 1625	120	2¼ x 3¼	9 oz.	89c
67 H 1626	620	2¼ x 3¼	9 oz.	89c
67 H 1627	616	2½ x 4½	9 oz.	\$1.10



Sizes and Emulsions for Every Amateur

ANSKO ALL-WEATHER PLENACHROME. A highly orthochromatic medium speed film. Has a wide latitude of exposure to compensate for variations from correct exposure settings—will save the picture for you many times. Medium grained, permits some enlarging without noticeable grain. Like all AnSCO film, is guaranteed by Manufacturer to give good pictures. Anti-halo protected. A.S.A. Speed: 64 Daylight, 40 Tungsten. *Mailed Postpaid.*

ROLL FILM. State whether 3 or more rolls are wanted.

Catalog No.	Film No.	Exposures	Negative Size	Price 3 for
67 HN 1530	127	8	1½ x 2½ in.	96c
67 HN 1531	120	8	2¼ x 3¼ in.	\$1.14
67 HN 1532	620	8	2¼ x 3¼ in.	1.14
67 HN 1534	616	8	2½ x 4¼ in.	1.47

ANSKO ALL-WEATHER SUPREME. Fine grained, medium speed panchromatic film for pictures indoors or outdoors. Emulsion is balanced to get brilliance in outdoor shots without producing harsh negatives when used indoors or at night with artificial light. Also suitable for portraiture. Permits excellent enlargements without graininess. Guaranteed by AnSCO. Anti-halo treated. A.S.A. Speed Index: 64 Daylight, 40 Tungsten. *Postpaid.*

SUPREME ROLL FILM. 8 exposures per roll.

Catalog No.	Film No.	Exposures	Negative Size	Price 3 for
67 HN 1535	127	8	1½ x 2½ in.	\$1.14
67 HN 1536	120	8	2¼ x 3¼ in.	1.29
67 HN 1537	620	8	2¼ x 3¼ in.	1.29
67 HN 1539	616	8	2½ x 4¼ in.	1.62
67 HN 1556	35 mm.	36	24 x 36 mm.	3.40

SUPREME FILM PACKS. 12 films per daylight loading pack. State quantity.

Catalog No.	Size, Inches	Size, Centimeters	Each	6 for
67 HN 1560	2¼ x 3¼	6 x 9	\$1.45	\$8.45
67 HN 1561	3¼ x 4¼	8 x 10.5	1.95	11.45
67 HN 1562	3½ x 4¾	9 x 12	2.05	12.00
67 HN 1563	4 x 5	10 x 12.5	2.20	12.95
67 HN 1564	5 x 7	13 x 18	3.75	22.25

ANSKO ALL-WEATHER SUPERPAN PRESS. Pioneer high speed film first used by news photographers, now a favorite with amateurs. Extends your camera range where light is poor and action is fast. Combines speed with balanced panchromatic color sensitivity without loss of fineness of grain. Permits some enlarging. A.S.A. Speed Index: 125 Daylight, 80 Tungsten. *Postpaid.*

ROLL FILM. *Mailed Postpaid.*

Catalog No.	Film No.	Exposures	Negative Size	Price 3 for
67 HN 1540	127	8	1½ x 2½ in.	\$1.14
67 HN 1541	120	8	2¼ x 3¼ in.	1.29
67 HN 1542	620	8	2¼ x 3¼ in.	1.29
67 HN 1544	616	8	2½ x 4¼ in.	1.62

ANSKO ULTRASPEED PANCHROMATIC—35 MM. Same sensitivity as Superpan Press above but designed for 35 mm. cameras. A high speed panchromatic film for indoor, night, and high speed shots under artificial light. Secures accurate rendition of shadow details. Medium grain; permits some enlarging. Anti-halo treated. A.S.A. Speed: 125 Daylight, 80 Tungsten. *Postpaid* from nearest Mail Order House. State number of rolls wanted. 67 HN 1555—36 exposure roll in magazine. Each 1.14; 3 for 3.40

FILM REMINDER. Stick a piece of the tape from your film to the back of your camera when you load it as a reminder of the kind of film you're using.

How to Select Your Film

Black and white film is made in different emulsions for various types of picture taking jobs. In making a choice of what film to use, the most important considerations are color sensitivity, speed, and grain.

COLOR SENSITIVITY is the ability of a film to record various colors. Ordinary film, untreated, is sensitive only to blue and violet, and is not generally used. Orthochromatic film is treated to include sensitivity to green in addition to blue and violet, and is excellent for most outdoor snapshots. Wards Sensachrome, Plenachrome, and Verichrome are orthochromatic.

Panchromatic film is further treated to react to yellow and red, thus approximating the range of the eye. With it, use of artificial light is possible. All films except Sensachrome, Plenachrome, and Verichrome are panchromatic.

SPEED means amount of exposure required to produce a satisfactory image on the emulsion. A.S.A. Speed Index are used to show relative speed of films. These ratings are average and can be used with any exposure guide, since all films listed have some degree of exposure latitude, allowing some variation in exposure settings. Each film emulsion has a higher Daylight speed than Tungsten (artificial light) speed since daylight has a larger per cent of blue-violet light to which all emulsions are most sensitive.

High speed film (A.S.A. 125 Daylight) requires a short exposure, is best for pictures taken under minimum illumination. Medium speed film (A.S.A. 64 Daylight) is best all around film for outdoor shots. Slow speed film (A.S.A. 32 Daylight) is used where illumination is maximum, and is the best type for enlargements because of its finer grain.

GRAIN shows in the mottled appearance of the image when greatly enlarged and is due to grouping of silver particles during development. Some grain exists in every emulsion but is not apparent in contact prints. Grain increases with film speed and is more noticeable in out-of-focus negatives. Grain can also be controlled to a degree by using special developing solutions. Superpan Supreme, Plus-X and Panatomic-X, all fine grain films, are recommended for making enlargements.

All films listed are treated against halation, caused by light reflecting from the film base and affecting the emulsion a second time.

SIZES: Sizes 118, 122, and 130 are 6-exposure rolls for folding cameras only. All other rolls are 8-exposure, although some split-negative cameras take more than 8 pictures on this length film. Sizes 120 and 116 have wide spools. Sizes 620 and 616 have narrow spools. Check your old spool before ordering. 35 mm. film in 20 and 36-exposure rolls comes in daylight loading magazines.

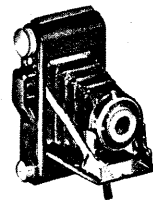
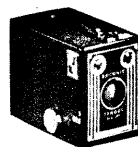
Filter Factors

Since a filter absorbs part of the light ordinarily affecting the emulsion, an increased exposure is needed. The filter factor represents degree of increase needed. This factor varies for filters, with emulsion, and with Day or Tungsten light. ("D" or "T" below). Example: Suppose the correct exposure without filter for daylight on Plus-X film is 1/100th second and a K2 filter is to be used. The table shows the factor is 2; the picture should be taken at 1/50th.

Name of Film	K2		G		X1		A		Polarscreen	
	D	T	D	T	D	T	D	T	D	T
Plenachrome.....	3	2.5	4	3	4	3.5	—	—	2.5	2.5
Wards Sensachrome..	3	2.5	4	3	4	3.5	—	—	2.5	2.5
Supreme.....	2	1.4	2	1.6	3	3	6	3	2	2
Superpan Press.....	2	1.4	2	1.6	4	4	6	3	2	2
Ultraspeed Panchro...	2	1.4	2	1.6	4	4	6	3	2	2
Verichrome.....	2.5	2	5	3	—	—	—	—	2.5	2.5
Plus X.....	2	1.5	3	2	4	3	7	4	2	2
Super XX Roll & Pack.	2	1.5	2.5	2	5	4	4	2	2	2
Super XX Miniature...	2	1.5	3	2	4	3	7	4	2	2
Panatomic X.....	2	1.5	3	2	4	3	7	4	2	2
Portrait Panchro.....	2	1.5	3	2	4	3	7	4	2	2
Super Panchro-Press B	2	1.5	3	2	4	3	7	4	2	2

For description and listings of filters and their applications, see Page 41

Which Camera Shall I Buy?



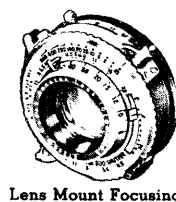
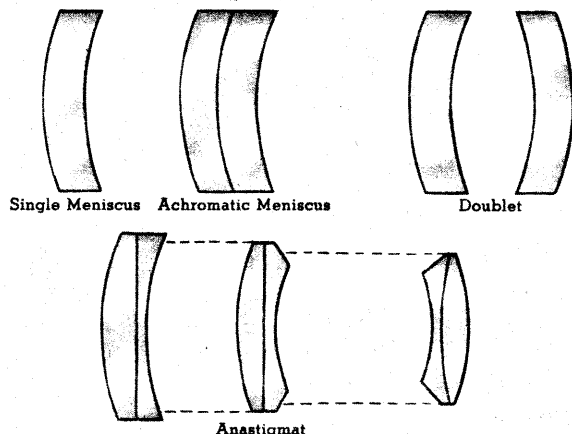
BOX CAMERAS

Box cameras cost the least to buy and are the easiest to use. Although limited in scope, they are capable of good pictures under proper conditions, are reliable in bright light with black and white film and make Kodacolor pictures in brilliant summer sunlight. Many are flash synchronized for indoor or night pictures; most have fixed focus, slow meniscus lenses and single blade shutters with one speed—about 1/50 second—plus either Bulb or Time.

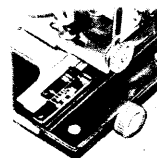
FOLDING CAMERAS

Folding bellows make them more compact than the box camera; many may be conveniently carried in the coat pocket. May be as simple to operate and as limited in picture making potential as the box camera or may have lens, shutter, and accessories which greatly increase their picture taking ability. This type offers album sized negatives and a wide variety of lenses, shutter, and accessory combinations to afford any desired picture taking ability.

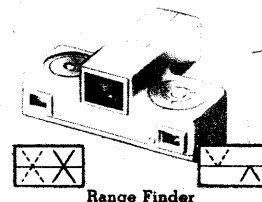
A good camera will serve you faithfully for many years. Choose one whose picture-making ability you will not soon outgrow. At the same time, you will not wish to pay for more "horsepower" than you ever intend to put to use. Consider the types of pictures and subject matter you will wish to take, the variety of lighting conditions you wish to work with, the negative size you desire to use, whether you want to use roll film or cut film or packs, and whether you will wish to make color pictures. This will help you determine the proper combination of camera type and camera features best suited to your needs. The six cameras shown at the right are representative of the types generally used by amateur photographers. Their picture-making abilities depend on the combination of lens, shutter, and accessories they are fitted with. Within reasonable limits, price need not prevent your obtaining the camera you want because Wards Monthly Payment plan enables you to spread the cost over a period of time—see Page 101.



Lens Mount Focusing



Bed Focusing



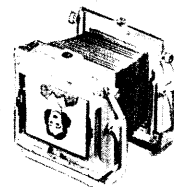
Range Finder



Single Lens Reflex



Double Lens Reflex



Ground Glass Back

WHAT YOU SHOULD KNOW ABOUT YOUR LENS

The lens is the most vital part of your camera. It determines the quality of the pictures, the minimum light with which they may be taken and the minimum exposure for a given light.

The picture taking ability of the lens depends on its construction—how big it is, and how many elements (single optical forms) and cells (groups of elements) it has. It may be composed of one element (single meniscus), one cell (achromatic meniscus), or two or more cells (doublet or anastigmat). In general, the more complex the lens, the greater its ability to bring into focus divergent lines, objects of different colors, light which enters the lens near its margin, all the objects in a plane, and to record the straight lines of the subject as straight lines on the film.

LENS SPEED. The speed of the lens (the amount of light it will gather and focus upon the film) is expressed as the "F" value. This is a number obtained by dividing the distance from the lens to the film (called the focal length of the lens) by the diameter of the lens aperture at its largest opening. Thus a lens having an 8-inch focal length and a 1-inch aperture is called an f/8 lens; one with an 8-inch focal length and a 2-inch aperture is called an f/4 lens, etc.

The smaller the "f" number the faster the lens. If the required exposure for a scene is 1 second at f/22, it will be 1/2 second at f/16, 1/4 second at f/11, 1/8 second at f/8. As the "f" number is halved, four times the volume of light enters the lens; so the exposure time may be reduced one-fourth. As the "f" number is reduced by one-fourth, twice the volume of light enters, so the time may be reduced by one half.

COATED LENSES have an extremely thin, hard chemical coating which reduces reflections at

their surfaces. Since these reflections normally produce haze, coated lenses make clearer, sharper pictures.

SINGLE MENISCUS LENS. A single cell composed of a single element. Only the center portion of this kind of lens is accurate enough for photographic use; therefore it has a maximum aperture of about f/11. It will make good black and white pictures in good sunlight. Single meniscus lenses are used on almost all box cameras and some low-priced folding cameras.

ACHROMATIC MENISCUS LENS. A single cell of two or more elements cemented together. Called achromatic because it has the ability to bring all colors of light from the subject into focus on the film. It is the lowest priced lens satisfactory for use with color film, and it is used on low-priced folding cameras and some box cameras. It usually has a maximum aperture of about f/8.

DOUBLET LENS. Composed of two cells, each having one or more elements. The use of two cells eliminates the distortion of lines and permits using a maximum aperture of about f/6.3—fast enough for indoor pictures with artificial light and fast film. As the cells are usually composed of two or more elements the lens is also achromatic and is suitable for color film. Doublet lenses are used on a few box cameras and on many medium-priced folding cameras.

ANASTIGMAT LENS. The most fully corrected lens type—capable of fast lens speeds because its design and construction permit use of a wide portion of the lens diameter. It is used on the finest cameras. The anastigmat has more cells than other lens types, and its cells have more elements—usually three or four to the cell.

...YOUR FOCUSING

Focus is the means by which you calculate the proper distance setting for your lens. It is particularly important when shooting close-ups, using fast lenses at wide apertures, and when the negative is to be enlarged to any extent.

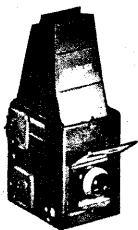
FIXED FOCUS. A lens of slow speed is fixed at a set distance so that all objects beyond 6 or 8 feet are in sharp enough focus for making contact prints. Though limited in ability, fixed focus lenses simplify shooting for the snapshot fan.

SCALE FOCUSING. Camera-to-subject distance is measured or estimated by eye. This distance is set on the lens mount or bed focusing scale, which is calibrated in feet. Accuracy depends on measurement of camera-to-subject distance.

RANGEFINDER FOCUSING. Distance is computed by adjusting rangefinder until the twin images of the subject come together. These are either superimposed or split-image as shown above. The rangefinder's footage scale indicates the distance at which the camera should be focused. Some cameras have coupled rangefinders—as the rangefinder is focused so is the camera.

REFLEX FOCUSING. Subjects brought into focus on the ground glass will be in focus on the film. With single lens reflex, as lens is stopped down, depth of field is shown (area of focus before and behind subject focused upon). With twin lens reflex depth of field is not shown, but image remains bright when lens is stopped down.

GROUND GLASS BACK FOCUSING. As camera is focused, a ground glass occupies film position. Objects in focus on glass will be in focus on film. As lens is stopped down, depth of field is shown. Focusing will be accurate with any lens.



SINGLE LENS REFLEX

The same lens is used when focusing the image on the ground glass for viewing, and when focusing the image on the film for exposing the picture. For focusing and viewing, a hinged mirror is interposed between the lens and the film. The image from the lens is then reflected on the ground glass in the top of the camera. The hinged mirror springs out of the way just before the exposure is made. Various lenses are readily interchangeable.



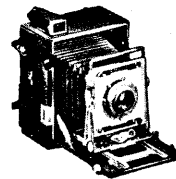
TWIN LENS REFLEX

This type of camera uses two matching lenses of the same focal length. One focuses the image on the viewing ground glass in the top of the camera by means of a fixed mirror. The second lens focuses a similar image on the film. As the lenses are directly coupled, and are of identical focal lengths, they will be focused together at all times. As matching lenses must be used in twin-lens reflex cameras it is usually impossible to interchange lenses.



MINIATURE CAMERAS

These compact, easy-to-carry cameras use economical 35mm and Bantam size film. They usually feature fast lenses and rapid shooting. They have a wide variety of lens, shutter, and accessory combinations. Make sharp black and white negatives or the popular color transparencies approximately 1 by 1½-inch size. Not difficult to use, but require precision because the small picture size makes projection or enlargement almost imperative.

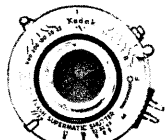


PRESS TYPE CAMERAS

Dependable and versatile. Feature ground glass focusing, large negative sizes, and the use of cut film and film packs. Lenses are readily interchangeable. Adjustable lensboards correct distortion. Readily adaptable to synchronized flash. Some have high-speed focal plane shutters in addition to their between-the-lens front shutters. A good camera for serious amateurs as well as for news cameramen and other professional photographers.



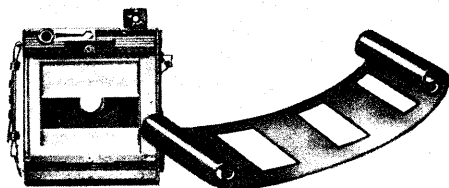
Single Blade Shutter



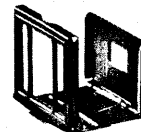
Between-the-lens Shutter



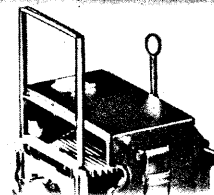
Focal Plane Shutter



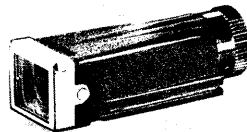
Waist Level Finder



Metal Frame Finder



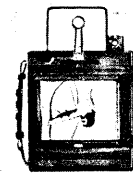
Sport Frame Finder



Tubular Finder



Reflex Finder



Ground Glass Back

...YOUR SHUTTER

High-speed, wide aperture lenses should be coupled with versatile shutters having wide ranges of speed. A slow speed, single meniscus lens requires only the ability of the single blade shutter.

SINGLE BLADE SHUTTER. Usually found on box cameras and lower-priced folding cameras. It has but one exposure time, about 1/30 or 1/50 second, but it may also have Time or Bulb. On Time, the shutter remains open from the time it is released until it is closed by pressing the release a second time. Set for Bulb, the shutter remains open as long as the release is depressed. While a single blade shutter is limited in operation, it simplifies picture making by eliminating the necessity of making choices of exposure times. Its single speed is suitable for most outdoor pictures with good light. When equipped with Time or Bulb, indoor pictures can be made with a flasher kit or with photoflood lights. Many cameras with this type of shutter are synchronized for simple flash guns.

BETWEEN-THE-LENS SHUTTER. So called because the shutter is placed between the cells of the lens. Such shutters usually have a wide range of speeds—often from a full second to 1/400 second or faster, plus Time and Bulb. Some between-the-lens shutters are also equipped with a delayed action release. This enables the photographer to set off the delayed action control and get into the picture himself before the actual shutter release 10 to 12 seconds later. Between-the-lens shutters are readily adapted to flash, requiring the addition only of a flashgun such as the Kalart Compak Speed Gun or Kalart Master Automatic Speed Gun shown on Pages 32 and 33 respectively. Some have built-in synchronization (see below) which permits their use with any battery case and reflector.

FOCAL PLANE SHUTTER. This type is usually a curtain having openings of various widths; it is located just in front of the film at approximately the plane of the focal length of the lens. Exposure is controlled by regulating the width of the opening and speed at which it passes the film. They are usually more efficient than between-the-lens shutters. They usually operate at speeds from 1 to 1/1000 second plus Time.

BUILT-IN FLASH SYNCHRONIZATION. Many shutters have this feature which consists of a switch built into the shutter mechanism. As the shutter is released, the switch closes a circuit and sets off the flash lamps. Synchronized flash pictures can be made with any suitable battery case and reflector. Read more about flash synchronization on Page 32.

...YOUR VIEW-FINDER

The means of finding the field of view (the exact area focused upon the film) is particularly important in action shots, close-ups, and scenes where it is desired to give close attention to details of composition.

WAIST LEVEL FINDERS. Viewed from a foot or two below the eye. The field of view is shown in a small ground glass in the top of the finder. Because of parallax (see below) the field is not exact for close-ups.

DIRECT FRAME FINDER. The field of view is shown when the finder is held at eye level and openings in the metal or sport frames are lined up. Direct vision makes it good for following action. Because of parallax (see below), the field is not exact in close-ups unless corrections are made.

TUBULAR FINDER. An optical viewfinder which is viewed at eye level. It works like a telescope in reverse; shows a small image with brilliance and detail—often adjustable to compensate for parallax in close-ups.

REFLEX FINDER. The image, shown right side up on the ground glass, is large—usually full negative size—a definite advantage where composition detail is important. In single lens reflex cameras the image is a reflection of the exact image shown from the camera lens—there can be no parallax—and when accessory or supplementary lenses are used, the correct field of view is still shown. The image darkens as the lens is stopped down and disappears when the shutter is released. In twin lens reflex cameras there may be parallax in close-ups unless corrections have been made, and lenses cannot be interchanged. However, the image remains bright when the lens is stopped down.

GROUND GLASS BACK. With no film in place ground glass panel occupies the normal position of the film. The image—upside down and reversed from left to right—is full negative size, and pinpoint focusing can be obtained. The camera is usually used on a tripod. There can be no parallax.

PARALLAX. Because of the distance between viewfinder and lens, they look at the subject from a slightly different angle. This angle increases as the camera approaches the subject. Beyond 6 or 8 feet the difference is small, but if not allowed for in close-ups, the top of the picture will be cut off. Some viewfinders are corrected for parallax.

