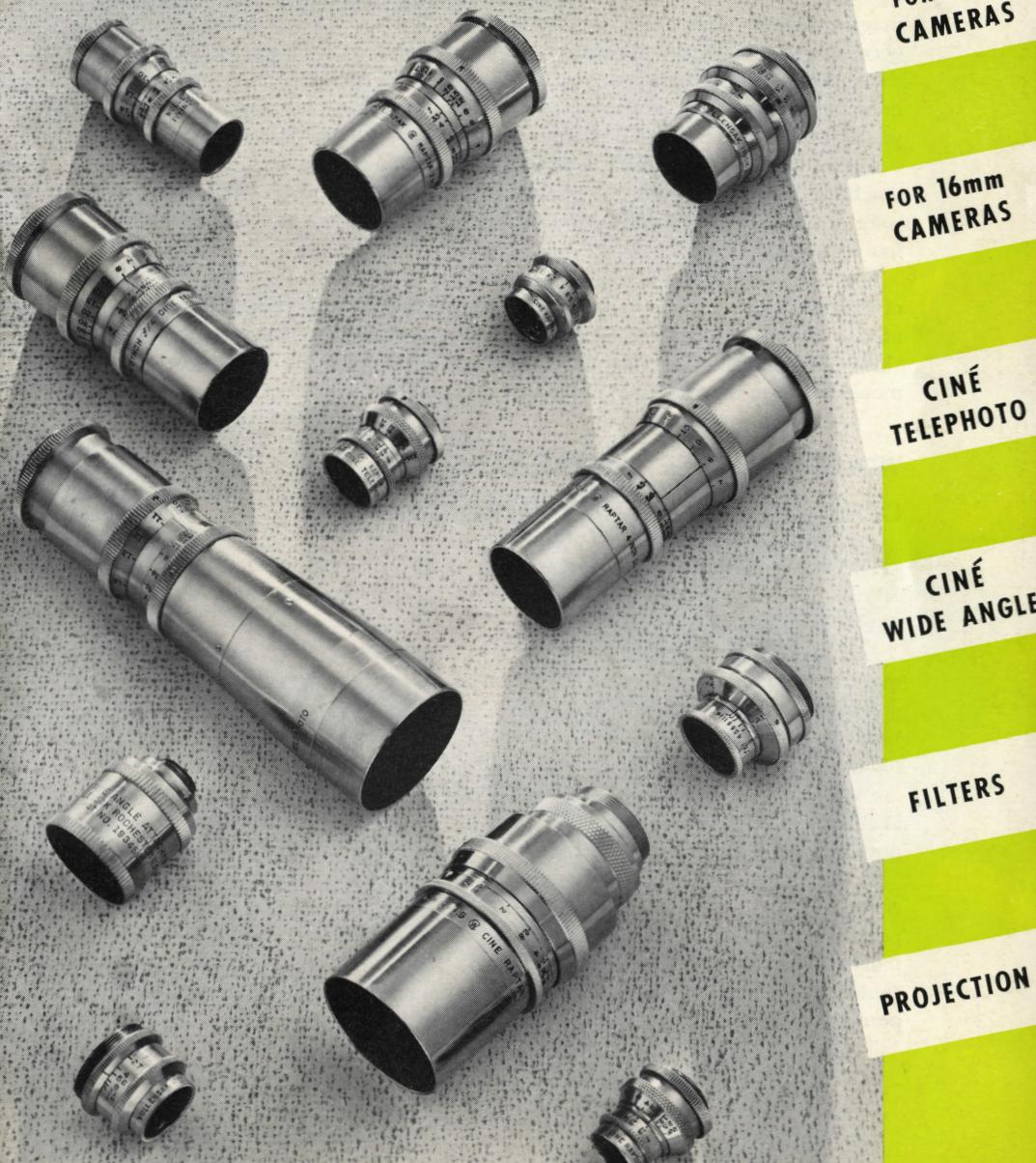


Wollensak

CINÉ LENSES



FOR 8mm
CAMERAS

FOR 16mm
CAMERAS

CINÉ
TELEPHOTO

CINÉ
WIDE ANGLE

FILTERS

PROJECTION

Wollensak

CINÉ RAPTAR LENSES

for better movies, more fun from movies

• Far more than in still pictures, the excellence of amateur or professional movies depends on the lenses employed. In projecting movies, tiny flaws in the film are magnified many times on the screen. If your movie camera lens doesn't give you good all-over detail, your screen images will be fuzzy at the edges or all over. If the lens isn't highly corrected, you may get distorted images . . . imperfect color definition in your color movies. If it isn't treated with anti-reflecting hard coating, you may get flare spots or ghost images resulting from internal reflections in the lens.

Again, in movies you can't compensate for poor negatives by cropping or re-touching. You have to get the picture you want when you take it, whether in color or black and white. Thus, you need not only a high quality lens but the *right lens for your specific need*.

For these reasons and because Wollensak lenses have been for years the choice of thousands of home movie fans, prominent movie camera and projector manufacturers have selected Wollensak lenses as standard equipment on their machines. Wollensak Ciné Raptar Lenses produce color and black-and-white movies sharp to the very edge of the frame, superb in detail, contrast and sparkle.

WOLLENSAK CINÉ RAPTAR LENSES OFFER IMPORTANT NEW IMPROVEMENTS

• This line of Wollensak Ciné Raptar Lenses is the finest ever produced by Wollensak's optical engineers and skilled craftsmen for the amateur, commercial, and professional photographer.

Major emphasis in design has been given to increase resolving power with the result that the new Ciné Raptars give you much finer definition (of extreme importance when the negatives are greatly enlarged in projection). Also, because Wollensak's new anti-reflection treatment, WOCOTE, has proved so effective in reducing flare and internal reflections, all the new Wollensak Ciné Raptar Lenses are WOCOTE-treated. As a result you get remarkably increased contrast and brilliance . . . greater detail, even in the shadows, than has ever before been possible . . . purer, richer colors in your full-color movies.

You will find these Raptar Lenses are specially corrected for spherical and chromatic aberration, coma, distortion and flare. These corrections are important in producing good color movies—another big reason why experienced movie makers choose Wollensak. Hand-lapped micrometer focusing mounts enable easy handling—one indicator for diaphragm and distance markings permits quick, accurate setting.

THERE'S A WOLLENSAK CINÉ RAPTAR LENS FOR EVERY MOVIE-MAKING NEED

• No one lens can serve every movie purpose, of course. That's why most home movie makers want these four, as a minimum:

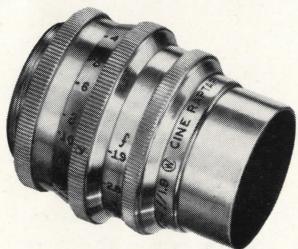
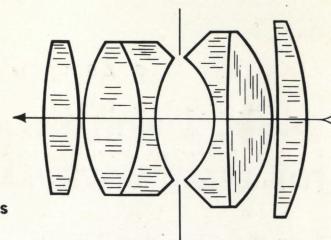
- 1 A fast "all-purpose" lens.
- 2 A telephoto lens for closeups of distant objects.
- 3 For 16mm, a wide angle lens for confined areas.
- 4 For projectors, at least one additional lens—to fit rooms of different sizes.

Your experienced dealer, himself a Wollensak enthusiast, will help you choose the lenses that best fit your own special needs. Consult him.

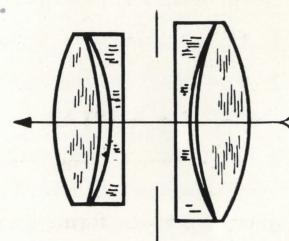




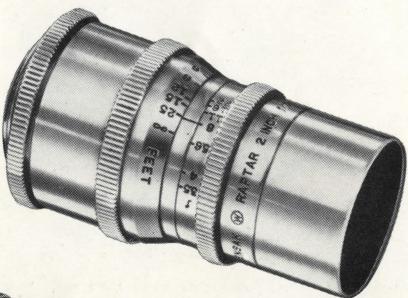
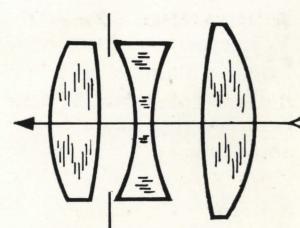
1" f/1.5 Normal Focus



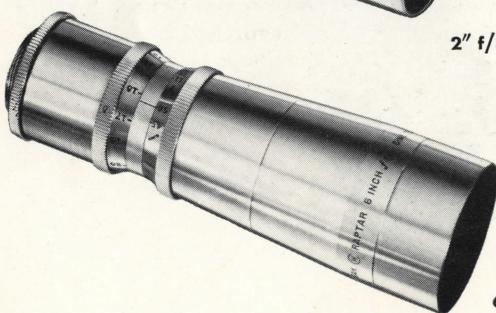
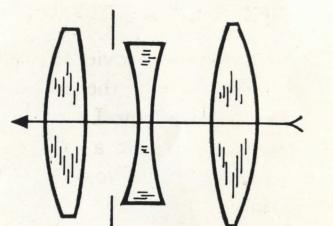
1" f/1.9 Normal Focus



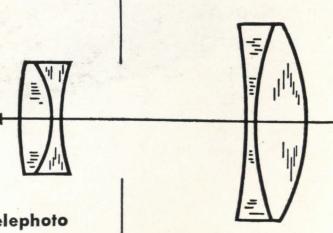
17mm f/2.7 Wide Angle



2" f/3.5 Telephoto



6" f/4.5 Telephoto



**f/1.5 CINÉ RAPTAR WITH CLICK STOPS;
DEPTH-OF-FIELD SCALE.**

- This special six element lens offers the most discriminating photographer all he could ask for. Extra speed— $2\frac{3}{4}$ times faster than the f/2.5. Click diaphragm stops for quick precise setting of f numbers. Depth-of-field scale on the lens mount to facilitate accurate focusing. Here precision shaping and aligning of elements results in the most complete elimination of image errors. Sharp at full aperture, the spherical correction is so complete that no focus change results when the diaphragm is stopped down. Critically corrected for the finest color work.

f/1.9 CINÉ RAPTAR

- A four element lens possessing the same fine optical characteristics and critical sharpness, the f/1.9 is $1\frac{3}{4}$ times faster than the f/2.5. Moderately priced, it offers superb performance for the less professional photographer who does not require the ultra-fast speed of f/1.5.

WIDE ANGLE 17mm f/2.7 RAPTAR

- For 16mm movies indoors . . . for picture-making aboard ship . . . *anytime* you want a large field of view when working in limited quarters . . . you'll be glad you have your Wollensak Ciné Raptar Wide Angle Lens. It gives you an angle of view approximately 69% wider than is obtained with a 1" lens.

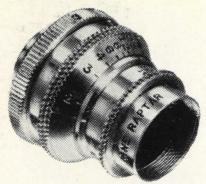
It is fully corrected to give good all-over detail. Unusual depth of field affords a full range of sharpness at all distances. (See wide angle picture on page 6. Also, Wide Angle Attachment.)

CINÉ RAPTAR TELEPHOTO LENSES

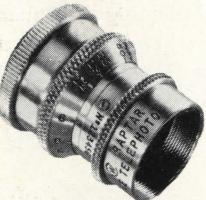
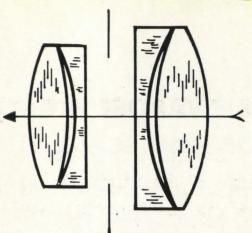
- Professional movie makers rely on lenses of varying focal lengths to help them achieve some of their most striking shots. Like a Telescope, A Wollensak Ciné Raptar Telephoto Lens *brings the picture to you*—enables you to get sharp images of scenes taken from a distance. Excellent for change of pace and interest in taking candid movies of your family and friends . . . for shooting outdoor sports, races and games . . . for making surgical or industrial studies. On 16mm cameras a Ciné Raptar Telephoto magnifies the equivalent of its focal length compared to the normal 1" focus lenses (e.g., 3" focus magnifies 3 times). Because these Ciné Raptar Telephotos are highly corrected anastigmat lenses, you can successfully use them for both color and black-and-white work. You'll find they give excellent definition—crisp, clean-cut images right to the edge of the frame. Focal lengths available—2, 3, 4, and 6 inches.

Wollensak

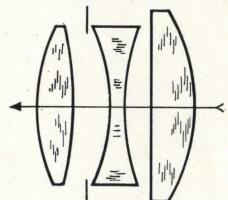
CINÉ RAPTAR LENSES
AND ATTACHMENT FOR BRILLIANT 8mm MOVIES



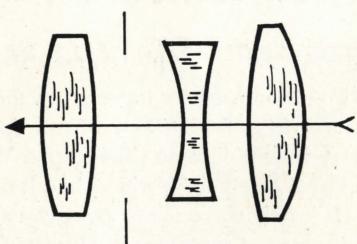
1/2" f/1.9 Normal Focus



1" f/2.5 Telephoto



1 1/2" f/3.5 Telephoto



Wide Angle Attachment



Typical wide angle shot. The area enclosed by the white line indicates the coverage of a normal focal length lens . . . shows you how part of a picture may be lost without a wide angle lens or attachment.

FAST, ALL PURPOSE f/1.9 RAPTAR*

• This lens is fast enough to take well-exposed movies under almost any lighting conditions, indoors or out. Incorporating the same fine optical qualities and corrections found in the 16mm f/1.9 Ciné Raptar, it gives you sharp edge-to-edge pictures in color or black-and-white. It provides the amateur with a lens fully capable of producing inexpensive 8mm movies up to the best professional standards when projected at normal distance. Due to the greater resolving power and WOCOTING, 8mm film taken with this lens may be projected many times its size and produce sharp, brilliant movies.

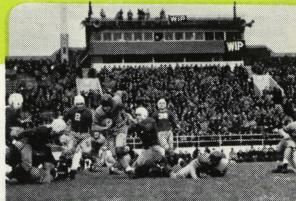
*NOTE: the f/1.9 lens for 8mm cameras can be used as a universal focus lens by setting the focusing scale at 18 feet and the diaphragm scale at f/5.6 or smaller.

CINÉ RAPTAR TELEPHOTO LENSES

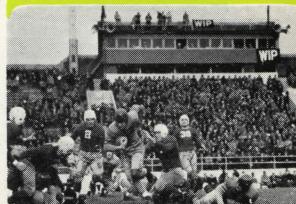
• Just as professional moviemakers vary their movie scenes with close-ups, so can you with a Wollensak Raptar Telephoto Lens. You'll use it often, not only to bring distant objects closer, but to add "punch" to many sequences that may become monotonous without a change of object size. These Ciné Raptar Telephoto lenses are critically corrected to give you fine definition—crisp, clear images to the edge of the frame. On 8mm cameras a Wollensak Ciné Raptar Telephoto magnifies the equivalent of its focal length compared to the normal 1/2" focus lenses (e.g., 1 1/2" focus magnifies 3 times). Focal lengths available—1 and 1 1/2 inches.

CINÉ WIDE ANGLE ATTACHMENT

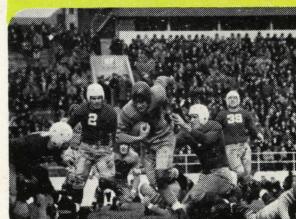
• By reducing the focal length of the normal 8mm lens to 6.5mm and the 16mm lens to 13mm, this attachment doubles the field size . . . covers twice the area to enable you to include much more subject matter at normal distances, and cover all that is required when confined shooting space might otherwise cause a sequence to be cropped, or missed entirely. Lens speed and exposure are unaffected. The Wide Angle Attachment is color corrected to produce excellent contrast and definition on color film as well as black-and-white. To be used with normal focal length lenses set at infinity.



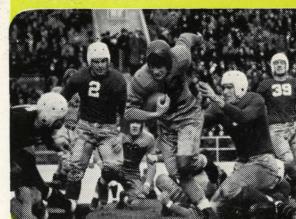
1" 16mm, 1/2" 8mm Lens



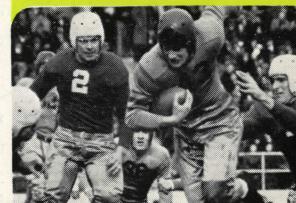
2" 16mm, 1" 8mm Lens



3" 16mm, 1 1/2" 8mm Lens



4" 16mm Lens



5" 16mm Lens



6" 16mm Lens

Vary Your
Movie Effects
With Lenses of
Different Focal
Length

Wollensak COLOR FILTERS



for better tone values



RED

Chiefly for use with panchromatic materials. Produces such special effects as fake moonlight scenes and scenes of sunlit water against the light, where strong contrasts—dramatic cloud effects and dark skies—are desired. Also for showing detail in subjects strong in red and brown (for example, to bring out the grain in walnut and mahogany furniture). Not intended for general use.

2X and 4X YELLOW

For scenes or subjects needing general color corrections throughout (such as beach and water scenes, closeups and general short-distance shots, snow scenes and cloud studies with little foreground). Suitable for use with either orthochromatic or panchromatic materials. These filters reduce atmospheric haze by absorbing some of the blue, and all the violet and ultra-violet rays. These are the filters most generally used for pleasing cloud effects.

2X and 4X NEUTRAL DENSITY

To be used in strong light when the lens cannot be diaphragmed sufficiently for good exposure. Often needed when shooting water, beach and snow scenes in bright sunlight. *These filters reduce exposure without affecting color values.*

GREEN

For better black and white rendition of the green tone values in landscape shots. Our eyes are most sensitive to green, while most panchromatic films are most sensitive to blue. This filter compensates for the discrepancy to lighten greens to their normal tonal relations with other colors.

HAZE FILTERS

For use with Kodachrome film (on which ultra-violet records as violet) . . . for shots of distant scenes and for pictures taken at high altitudes where excess ultra-violet light prevails. With haze removed you get sharper, clearer movies. *These filters are colorless and require no change in exposure.*

WOLLENSAK TYPE "A" DAYLIGHT FILTER

For use with Kodachrome Type "A" film. This filter supplies the color correction needed to enable movie making *in natural light outdoors* with Kodachrome Type "A" Film (which is color-balanced for picture-making *in artificial light*).

- To get the most from your fine Wollensak lenses . . . the rich, true tones, the brilliant contrasts you want in your pictures . . . you'll choose Wollensak Natural Glass Filters.

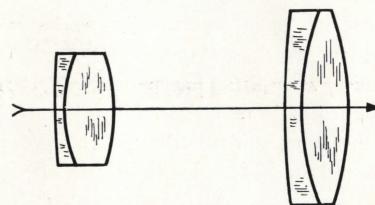
Made of fine natural colored filter glass, Wollensak Filters are color-fast; will not fade or deteriorate under heat, dampness or other extreme climatic conditions. Every Wollensak Filter is precision-made—optically corrected to faithfully reproduce tonal values.

Available in hand-turned screw type mountings to fit practically all lenses. In eight densities:

Wollensak

PROJECTION LENSES

for clear, brilliant screen images . . .



• In home movies, your biggest thrill comes when you and your friends sit down to enjoy the results of your movie making efforts. That's why it's as important to choose a fine *projection* lens as it is to select a good lens for *making* your movies.

Wollensak Sunray Projection Lenses give you the screen brilliance, the critical, all-over definition you want . . . help you get maximum enjoyment from today's advanced types of projection machines.*

Wollensak Projection Lenses are made of high-quality optical glass; ground and polished with extreme accuracy by precision-craftsmen. Like all Wollensak lenses, they are treated with WOCOTE anti-reflecting hard coating to minimize reflections, increase sharpness and detail.

Available in sturdy, carefully fitted mountings in correct sizes for most projection machines.

*Many outstanding manufacturers of 8mm and 16mm projection machines feature Wollensak projection lenses as standard equipment.

WOLLENSAK

CINÉ AND PROJECTION LENSES

SPECIFICATIONS

RAPTOR CINÉ LENSES (WOCOTED) FOR 16mm MOVIE CAMERAS

| Equiv. Focus | | Speed | Focusing | Iris | Filter |
|--------------|-----|-------|----------|-----------|-----------|
| Inch | MM | f | Mount | Diaphragm | Any Color |
| 1 1/6 | 17 | 2.7 | X | X | X |
| 1 | 25 | 1.5 | X | | X |
| 1 | 25 | 1.9 | X | | X |
| 1 | 25 | 2.5 | X | X | X |
| 2 | 50 | 1.9 | X | | X |
| 2 | 50 | 3.5 | X | | X |
| 3 | 75 | 4. | X | | X |
| 4 | 101 | 4.5 | X | | X |
| 6 | 152 | 4.5 | X | | X |

Supplied in either "A" mount (5mm) or "C" mount (4.2mm) thread
ADAPTER available to fit 16mm lenses to 8mm cameras.

RAPTOR CINÉ LENSES (WOCOTED) FOR 8mm MOVIE CAMERAS

| | | | | |
|-------|----|-----|---|---|
| 1/2 | 13 | 1.9 | X | X |
| 1/2 | 13 | 2.5 | | X |
| 1 | 25 | 2.5 | X | X |
| 1 1/2 | 38 | 3.5 | X | X |

WIDE ANGLE ATTACHMENT (WOCOTED) For the Normal Focal Lenses on 8mm and 16mm Cameras

SUNRAY 107 PROJECTION LENSES FOR 16mm (WOCOTED)

| Focus Inch | mm | Speed f | Mount Diameter Inches |
|---------------|------|------------|-----------------------------|
| 1/2 | 12.7 | 2.4 | 1 3/16 |
| 5/8 | 16 | 2.4 | 1 3/16 |
| 3/4 | 19 | 3. | 1 3/16 |
| 1 | 25 | 2.46 | 1 3/16 |
| 1 1/2 | 38 | 1.8 | 1 3/16 |
| 2 | 50 | 1.6 | 1 3/16 |
| 2 1/2 | 63 | 1.6 | 1 3/16 |
| 3 | 75 | 2. | 1 3/16 |
| 3 1/2 | 90 | 2.3 | 1 3/16 |
| 4 | 101 | 2.5 | 1 3/16 |

Supplied in 1 3/16" diameter spiralled tube, unless otherwise specified.
Available also in spiralled tube, 1" or 1 1/2" outside diameter.
PLEASE SPECIFY PROJECTOR FOR WHICH LENS IS INTENDED.

SUNRAY 117 PROJECTION LENSES FOR 8mm (WOCOTED)

| | | | |
|-------|----|-----|---------------|
| 3/4 | 19 | 1.8 | 7/8 or 1 1/16 |
| 1 | 25 | 1.6 | 7/8 or 1 1/16 |
| 1 1/2 | 38 | 2. | 7/8 or 1 1/16 |

PLEASE SPECIFY PROJECTOR FOR WHICH LENS IS INTENDED.

OTHER FINE *Wollensak* PRODUCTS

PHOTOGRAPHIC LENSES AND SHUTTERS

WOLLENSAK "STILL" LENSES:



- For the advanced amateur, commercial and professional photographer. Includes the Raptar Triple Convertible Series 1a $f/6.3, f/7.7$; the high speed Raptar Series II $f/4.5$ for general studio and portrait work; the moderate-priced Raptar Series IV $f/6.3$ for commercial, architectural, landscape, view work and home portraiture; the Raptar Telephoto Lens and Raptar Wide Angle Lenses.



WOLLENSAK ENLARGING RAPTAR $f/4.5$

- Used by thousands of photographers who want sharp, brilliant detail in their enlargements. Available in sizes from 2" to 9½".

WOLLENSAK SHUTTERS:



- For accurately-timed exposures. The high speed Rapax, a quality pre-setting shutter, is available with or without built-in synchronizer; offers speeds up to 1/400 second in the smaller sizes. The Alphax, an automatic shutter, has fastest speeds possible for this type of shutter—up to 1/200 second in the smaller sizes.

GUARANTEE

All Wollensak products are guaranteed to be optically and technically correct. If any product, with proper care, fails to give satisfaction within one year after leaving our factory, we will repair or replace it free.

OPTICAL INSTRUMENTS FOR THE SPORTSMAN, HOBBYIST AND STUDENT

WOLLENSAK PRISM BINOCULARS

WOLLENSAK FIELD GLASSES

WOLLENSAK TELESCOPES

Wollensak

MEANS FINE LENSES

OPTICAL CO. • ROCHESTER 5, N. Y.