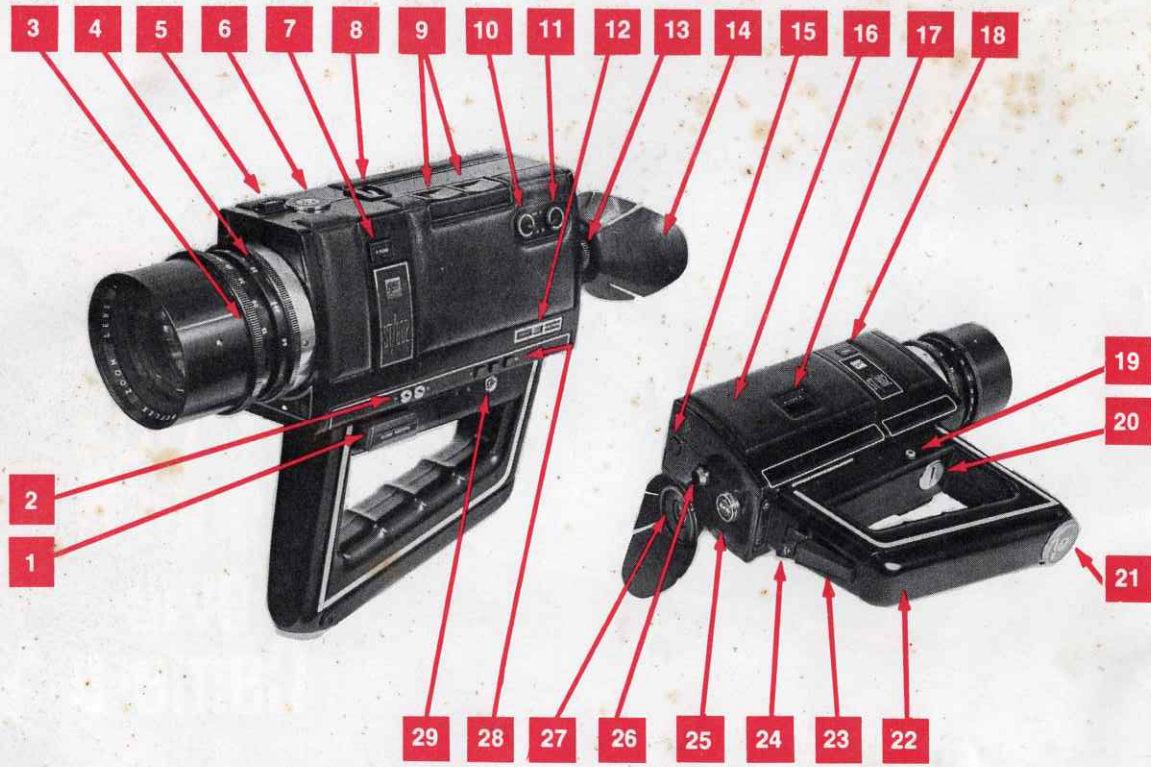


**ST/802**  
**Super 8**  
**Movie**  
**Camera**  
**INSTRUCTIONS**





**GAF Corporation**  
 140 West 51 Street  
 New York 10020

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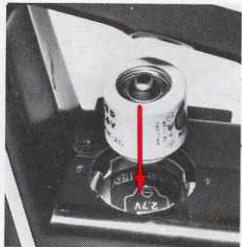


FIG. 1

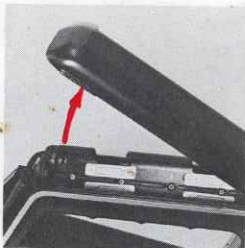


FIG. 2

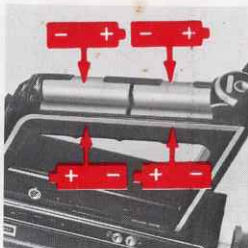


FIG. 3

## INSTALLING ELECTRIC-EYE BATTERY

The CdS electric eye is powered by a 2.7 volt mercury battery\* (Mallory PX-14 or equivalent). With a coin, turn battery-well cover [20] on the camera bottom counterclockwise, as far as it will go (less than  $\frac{1}{4}$  turn). Turn over camera, let cover fall into your palm. Drop in battery (Fig. 1), flat (+) side down, side with protrusion (-) on top. Replace cover.

Current is drained only when light enters the lens of the *loaded* camera. To prolong life of battery, keep lens cap on when loaded camera is not in use.

\*Supplied with the camera, either installed, or packed separately in the camera box.

## INSTALLING MOTOR BATTERIES

Swing open motor battery compartment cover [22] on the bottom of the contour grip (Fig. 2).

Load the battery compartment with 4 AA size 1.5 volt alkaline batteries. The correct orientation of the plus (+) and minus (-) ends of each battery is shown on labels in the compartment and in Fig. 3.

Standard (non-rechargeable) alkaline batteries will drive up to 25 cartridges through the camera; zinc-carbon flashlight batteries may also be used but will be good for about 8 cartridges.

**IMPORTANT:** Clean all battery contacts at regular intervals. To remove deposits, wipe both ends of electric eye and motor batteries with fine sandpaper or other abrasive material. Since batteries may leak in time, remove them when camera is stored for a prolonged period.

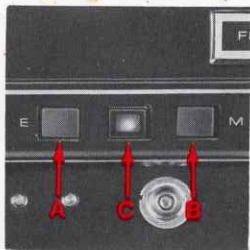


FIG. 4



FIG. 5

## TESTING THE BATTERIES

Depress the tester button marked "E" ("A" in Fig. 4) to test the electric-eye batteries.

**NOTE:** Electric-eye battery tester operates only if motor batteries are installed.

Depress the tester button marked "M" ("B" in Fig. 4) to test the motor batteries.

If the batteries are good, depressing either button will turn on a green light in the battery tester window ("C" in Fig. 4). If the battery tester window remains dark while a button is held depressed, the batteries indicated by that button must be replaced. Rechargeable motor batteries may be recharged.

Battery testing should take only a second or two. Holding either tester button depressed longer may cause excessive battery drain.

## RECHARGING THE MOTOR BATTERIES

The GAF Super 8 Recharger unit is designed for use with alkaline batteries marked "Rechargeable" (Mallory SA-15AA or equivalent).

When the tester indicates that the rechargeable motor batteries are weak, push battery charger plug *all the way* into the remote control and battery charger socket [19]. Insert line plug into 120 volt AC electric outlet. Charge batteries overnight (from about 6 to 12 hours). Test battery condition again after recharging.

## LOADING THE CAMERA

Depress latch [15] and swing down film compartment cover [16]. Insert a Super 8 film cartridge, label side up, with the film toward the lens. The notch in the cartridge must be *under* the cartridge-locking pin (Fig. 5). Press down the rear corners of the cartridge until it clicks into place. Close cover firmly.

As the camera is loaded, the cartridge automatically sets the correct film speed for exposure control. Films with the following daylight/tungsten ASA film speed combinations may be used: 16/25, 25/40, 40/64, 64/100, 100/160, and 160/250.

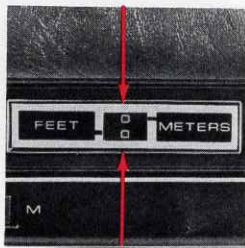


FIG. 6

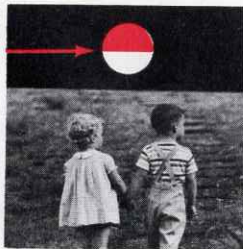


FIG. 7

## FOOTAGE INDICATOR

The footage indicator [12] shows how many feet (yellow figures) or meters (white figures) of UN-EXPOSED film is in the cartridge. All the film in the cartridge has been exposed when the zeros appear opposite the lines (Fig. 6).

## FILM-END SIGNAL

When almost all the film in the cartridge has been used, a red signal appears at the top of the film-movement indicator in the viewfinder (Fig. 7). The red area extends gradually; the entire circle is covered when all the film has been exposed.

## UNLOADING EXPOSED FILM

When all the film has been exposed, run the camera for an additional 10 seconds, then open the

film compartment cover. Remove the cartridge by lifting its rear edge up and out; the word "EXPOSED" now appears on the film.

If a partially exposed cartridge is removed from the camera, some film is lost and the footage indicator returns to 50 (feet) and 15 (meters).

Have the film processed without delay.

## USING THE VIEWFINDER

The bright, through-the-lens reflex viewfinder shows each scene as it will appear projected on the screen\*. The rubber shield on the viewfinder eyepiece [14] may be turned to fit either eye.

To adjust the viewfinder to your eye:

1. Zoom lens to the 60mm telephoto position by depressing front power-zoom switch, marked "Tele" [9].
2. Align the  $\infty$  (infinity) symbol on the focusing ring distance scale [3] with the reference line on top of the lens barrel, then look through the viewfinder at an object at least 500 feet away.
3. Turn the milled adjustment wheel [13] (Fig. 8) first clockwise, then counterclockwise, until image is sharpest in the circular microprism area.

\*If the view is blocked, turn the light-stop knob [26] to the right.

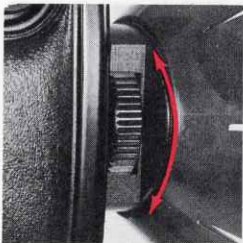


FIG. 8

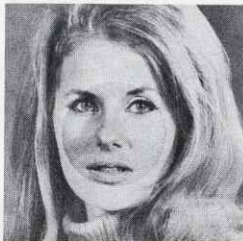


FIG. 9

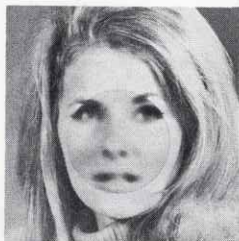


FIG. 10

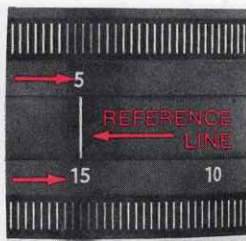


FIG. 11

## FOCUSING

Zoom lens to telephoto position (align figure 60 on zoom ring with reference line). Turn focusing ring until subject's image appears sharp on microprism focusing disk in viewfinder (Fig. 9). If the microprism area is blurred (as in Fig. 10), the image on the film will be blurred, also.

The distance scale may also be used for focusing. Line up with the reference line the figure on the focusing ring that corresponds with the camera-to-subject distance in feet.

For example, if the camera-to-subject distance is 5 feet, then the figure 5 is lined up with the reference line (Fig. 11).

## USING THE ZOOM LENS

The zoom lens does the work of several separate lenses. It has an 8 to 1 focal length range and is continuously adjustable from the 7.5mm wide-angle setting to the 60mm telephoto setting.

**IMPORTANT!** When the zoom lens is in the long telephoto position (40 to 60mm), the *slightest* camera motion will result in a jumpy screen image. Use a tripod to keep the camera steady when the lens is used in the 40 to 60mm telephoto range.

When lined up with the reference line, the figures 7.5, 10, 15, 25, 40, and 60 on the focal-length scale around the lens [4] indicate in millimeters the focal length of the lens at that setting. For example, when 15 is lined up with the reference line (as in Fig. 11), the effective focal length of the lens is 15 millimeters.

The zoom feature is used to control the subject's image size and the area included in the scene. At the 7.5mm wide-angle setting the subject's image is the smallest and the surrounding area included is the greatest. From the same camera position the 60mm telephoto setting will make the subject largest and it will reduce the amount





FIG. 12

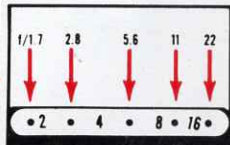


FIG. 13

of surrounding area. At in-between settings, the subject's size and the area covered will vary between the two extremes.

When the front power-zoom switch (marked "Tele") is depressed, the lens zooms toward the telephoto (60mm) position.

When the rear power-zoom switch (marked "Wide") is depressed, the lens zooms toward the wide-angle (7.5mm) position.

The zoom feature may be utilized two ways:

1. To control the subject's size in the image, depress either zoom switch to bring the lens to the end of the zoom range, then depress the other zoom switch and observe the subject in the viewfinder. When the size is right, stop zooming and start the camera.
2. The subject's size may be changed while the camera is running. To get a moving-toward-the-

subject effect, depress the front ("Tele") power-zoom switch. Depressing the rear ("Wide") switch will result in a moving-away-from-the-subject effect.

The focal length of the lens may also be adjusted manually by turning the zoom ring [4].

The power-zoom speed control [11] set to "S" (slow) provides a satisfactory zooming rate for most movies. When a faster zooming rate is desired, turn zoom speed control to "F" (fast).

## EXPOSURE

The through-the-lens CdS exposure meter provides completely automatic exposure control when the exposure selector wheel [8] is turned to the click stop in the "AUTO" position (Fig. 12). The needle in the viewfinder shows the f/stop set by the electric eye.

Some lens openings on the f/stop scale are indicated by dots. The lens openings represented by the dots are shown in Fig. 13.

When the light is too low to produce properly-exposed movies, the needle remains in the red area at the left side of the f/stop scale (Fig. 14).

Movies made with the needle in that position will be too dark, underexposed. In extreme cases of underexposure the film may not even show an image.

To prevent underexposure, stop making movies when the needle touches or is in the red area on the left side of the scale.





FIG. 14

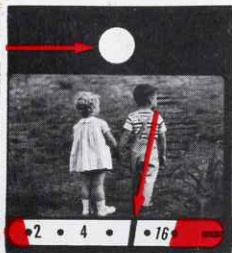


FIG. 15

When the light is too bright, the needle touches or enters the red area on the right end of the scale in the viewfinder. This may occur when the camera is loaded with fast film and is used in bright light (in sunlight or under extremely bright artificial illumination). Movies made with the needle in the red area on the right side of the scale will be too light, overexposed.

Overexposure can be prevented by placing a .6 neutral-density (ND) filter over the camera lens, in a screw-in or slip-on mount (see "Filter Size" on page 14). With the filter in place, the needle in the viewfinder will move to the left, out of the red area.

**NOTE:** The automatic exposure control operates only when the camera is loaded, or the small white button in the film compartment is depressed manually.

To set the lens opening manually, turn selector wheel clockwise, toward "MANUAL", until needle in viewfinder is over the desired f/stop. Fig. 15, for example, shows the lens opening set at f/8.

In the manual mode, use an exposure meter to establish the correct lens opening for the prevailing light level. Set film speed scale of exposure meter at ASA speed of film (as indicated on film box or in film instruction sheet), then read lens opening at the 1/40 second shutter speed for 18 frames-per-second filming speed, at 1/50 second for 24 fps, and at 1/100 second for 48 fps. Set the camera lens opening 1.5 stops larger than that indicated by the exposure meter to provide the usual exposure compensation required by all wide-range zoom lenses calibrated in f/stops. For example, if the exposure meter indicates a lens opening of f/5.6, set needle in viewfinder halfway between f/2.8 (dot) and f/4.



FIG. 16

## ADJUSTING AUTOMATIC EXPOSURE

The factory-adjusted automatic exposure corresponds to international standards. Most users find it ideal. Since tastes vary, however, an exposure-adjustment knob [25] is provided for increasing or decreasing the exposure set by the automatic electric eye.

In the normal position, the zero mark on the exposure-adjustment knob is set at the white index line, as shown in Fig. 16. For more exposure (lighter image), turn the knob clockwise. The amount of exposure increase depends on how far the knob is turned. Each dot near the word "Lighter" represents a plus  $1/3$  f/stop exposure increase. Therefore, aligning the first (closest to the zero) dot with the index line will result in a  $1/3$  f/stop exposure increase (about 30%). The second dot set at the index line will give a  $2/3$  stop increase (about 65%), while the third dot will provide a full f/stop (100%) exposure increase. For finer adjustment, the index line may be set between the dots.

For a darker image, turn knob counterclockwise. Each dot near the word "Darker" indicates  $1/3$  f/stop less exposure, with the maximum full f/stop exposure decrease reached at the third dot from the zero. Use in-between settings for finer adjustment.

## BACKLIGHT BUTTON

When the sun is behind the subject, the area facing the camera is usually too dark. To lighten the dark areas in the image, keep the backlight button [18] depressed while the camera is running.

## FILM MOVEMENT INDICATOR

A fast or slow flickering in the film movement indicator above the viewfinder image (shown in Fig. 15) indicates that the film is advancing properly. If the flickering does not start, or stops before the end of the film is reached, the cartridge may be defective and should be replaced.

## MAKING MOVIES

**IMPORTANT:** Turn Automatic/Manual selector wheel [8] to the click-stop at the "AUTO" position. Set speed control [10] at 18\* and make sure that the exposure-adjustment knob is in the zero position (Fig. 16)†.

\*Camera also features the 24 frames-per-second "sound" speed usually required for synchronized-sound movie making. To shoot at 24 fps, turn speed control to 24. For normal projection, movies made at the 24 fps speed will have to be projected at that speed.

†Unless the knob is set at a different value to obtain an exposure adjustment, as described under "Adjusting Automatic Exposure."

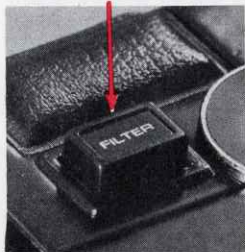


FIG. 17

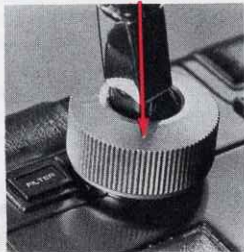


FIG. 18

When the camera is loaded, the lens focused, and the viewfinder adjusted to your eye, just press the trigger to make movies automatically. Keep camera level and steady. Camera movement and inaccurate focusing are especially noticeable when the lens is used in the telephoto position. Use a tripod whenever feasible; the tripod socket is on the bottom of the contour grip.

## OUTDOOR MOVIES

A built-in orange filter, positioned behind the lens, adjusts the camera to outdoor work with indoor film.

Clear or hazy sunlight coming from behind or from either side of the camera is best for outdoor movies.

For backlighting scenes, remember to keep the backlight button depressed while the camera is running.

## INDOOR MOVIES

Accessory GAF® movie light models and similar units fit the socket [6] on top of the camera. Attaching the movie light adjusts the camera automatically to filming under artificial illumination by retracting the daylight filter from the optical system.

If a movie light of a type that does not fit the socket, a floodlight, or existing artificial light is used, the filter button [5] must be *held* depressed while the camera is running (Fig. 17). As an alternate method, the wrist-strap screw may be driven all the way into the movie light socket (Fig. 18). **Do not carry the camera by the wrist strap in that position.**





FIG. 19

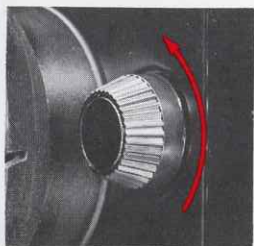


FIG. 20

## LOCKING THE TRIGGER RELEASE

The trigger release may be locked in two positions: 1. To prevent accidental operation of the camera, lock the trigger by pushing *down* the locking lever [24] (Fig. 19). To release the trigger, push the locking lever up.

2. To get into the scene, place the camera on a tripod, aim it at the scene, turn the viewfinder light-stop knob to the left\* (Fig. 20), then press the trigger and push the locking lever down. The camera will keep running until the trigger is released.

\*The light-stop knob closes the viewfinder to prevent light from entering the optical system from the rear. To open the viewfinder, turn the light-stop knob to the right.

## SLOW MOTION

To make "slow-motion" movies at 48 frames-per-second, depress the slow-motion button [1], then press the trigger release. The slow-motion button must be *held* depressed to keep camera

running at 48 fps. Release button when a return to the standard 18 fps camera speed is desired. In the projected movie everything will move slowly; each scene will stay on the screen for more than twice the time it took to photograph it. The 24 frames-per-second "sound" speed (control [10] set at 24) may also be used for a moderate slow-motion effect. Projected at the standard 18 fps, action movies taken at 24 fps will appear to be slowed down slightly.

## FADE-IN/FADE-OUT CONTROL

The automatic electro-fade feature may be used to add a "professional" touch to movie presentations.

When the fade-in control is used, the image in the projected scene will emerge gradually from complete darkness.

To fade-in a scene, hold the fade switch [7] depressed while you watch the movement of the needle in the viewfinder. As the needle comes to a stop at the extreme right end (Fig. 21), start the camera and release the switch.

When the control is used for a fade-out, the image in the projected scene will fade out gradually.

To fade-out at the end of a scene, depress the "fade" switch while the camera is running and hold it depressed. Keep the camera running until the needle in the viewfinder reaches the horizontal line in the red segment (as in Fig. 21).

The fade-in/fade-out control may be used only with the exposure selector [8] set at "AUTO."

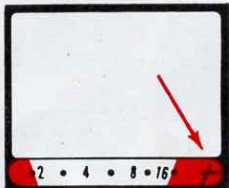


FIG. 21

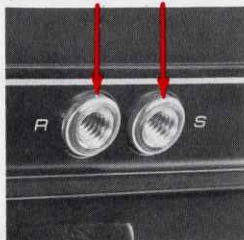


FIG. 22

## REMOTE CONTROL

The accessory 8-foot remote control cord has a plug at one end and a switch at the other.

Place the camera on a tripod or other solid support, aim it at the scene and turn the viewfinder light-stop knob to the left. Insert the plug into the remote control socket [19] on the right side of the camera handle; slide the remote switch to "off," then press the trigger and lock it. Locking the trigger in the "running" position will not operate the camera when the remote control cord is plugged in.

Operate the camera from a distance with the remote control switch.

A long cable release (available at photo dealers) may also be used for remote operation, utilizing the cable-release socket marked "R" (Fig. 22).

## SINGLE-FRAME EXPOSURES

Screw a standard cable release into the cable-release socket marked "S" (shown in Fig. 22). A single frame is exposed when the plunger of the cable release is depressed.

Place camera on tripod to keep subject in same position on film for each single-frame exposure.

## USING ELECTRONIC FLASH

The camera is equipped with standard PC outlet [29] that accepts the PC-cord of electronic flash units.

Plug in the flash unit, turn it on, and make single-frame exposures as previously described. The electronic flash will fire at the instant the shutter is open. For uniform exposures, allow sufficient

time for the electronic flash unit to recharge *fully* between flashes.

When synchronized flash illumination is used, the lens opening has to be adjusted manually, as described on page 9, under "Exposure". Note the guide number\* specified for the daylight speed of the film in the instructions supplied with the flash unit.

\*Make tests to arrive at the optimum guide number for the camera/electronic-flash-unit combination. For the initial test, use a guide number one half of that recommended for the flash unit. For example, if the recommended electronic flash guide number is 48, use a guide number of 24.

If the test movies made with the selected guide number are too light, raise the guide number by 25%.

If the test movies are too dark, lower the guide number by 20%. Once the correct guide number has been established, it will be valid for all movies made with that flash unit (single-frame exposures only).

## LENS SHADE

(black rubber ring packed separately in camera box)

Snap open collapsible lens shade so that smooth side is out. Screw metal center ring, clockwise, into threaded front end of lens mount. Do not force.

Use lens shade outdoors and indoors, to prevent glare caused by stray light falling on lens. Do *not* use lens shade when a movie light is attached to the camera.

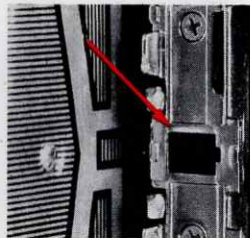


FIG. 23

## FILTER SIZE

The lens accommodates a Series VIII filter in a 58mm diameter x 0.75mm thread-pitch screw-in mount, or in a 61mm slip-on mount.

## CAMERA CARE

Protect camera from dirt, rain, dampness, and excess heat. Avoid touching the lens. To clean lens, breathe on it first, then wipe it gently with a soft, lintless cloth or tissue. Do not use chemically treated eyeglass tissues as they might damage the lens coating.

Clean out the interior of the camera occasionally with a camel-hair brush, paying special attention to the film gate (Fig. 23).

Do not attempt to remove or oil any part of the camera. If anything goes wrong, don't try to repair it. Take it to a dealer, or send it to the nearest GAF Photo Equipment Repair Center shown in the following list: