



GAF® SUPER 8 SOUND MOVIE CAMERA INSTRUCTIONS

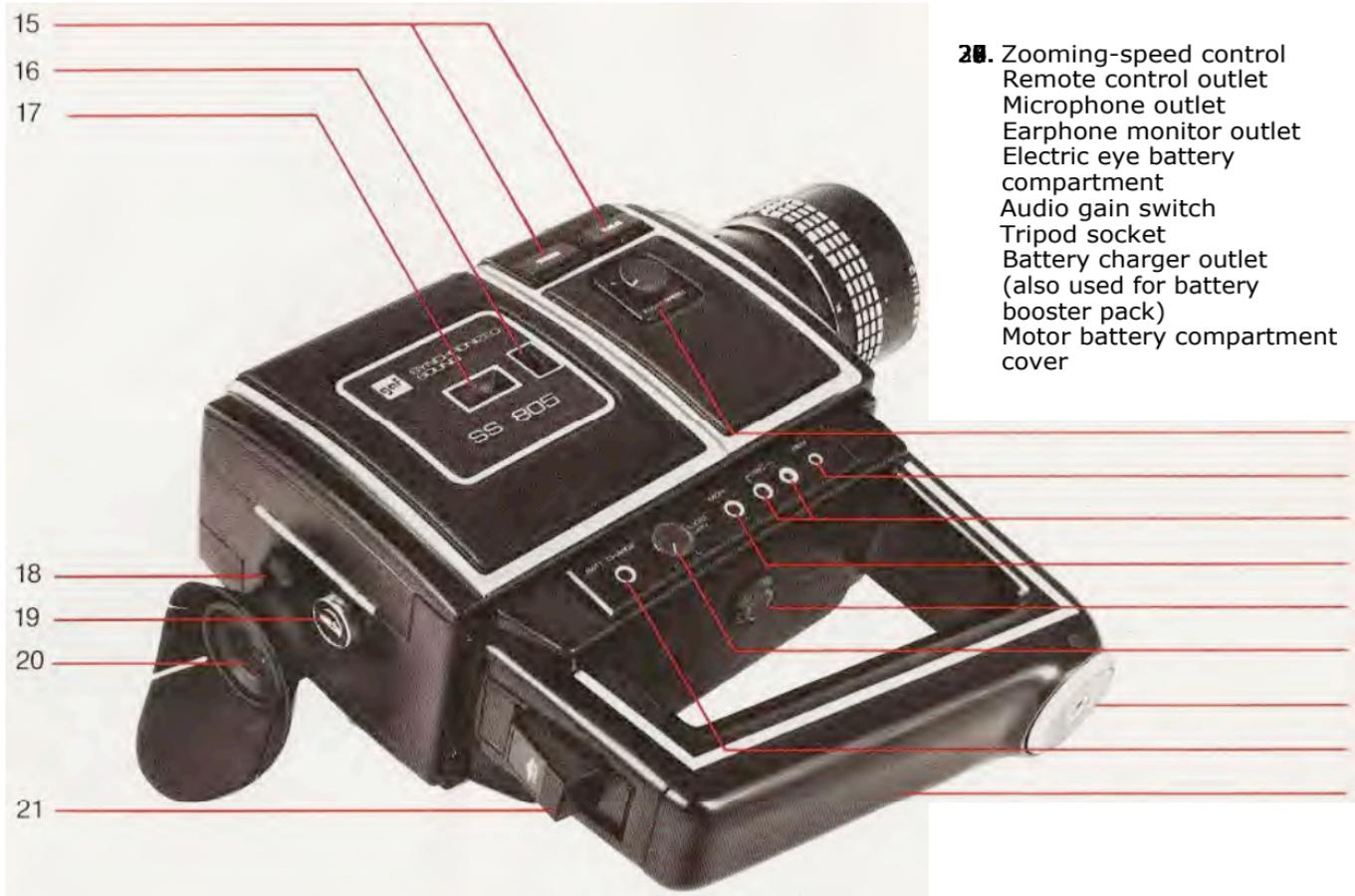
SS 805



FEATURES

1. Automatic/Manual exposure selector wheel
2. Movie light socket
3. Filter button
4. Zoom ring with focal length scale and zoom handle
5. Focusing ring with distance scale
6. Neutral density filter switch
7. Viewfinder eyecup
8. Viewfinder eyepiece adjustment wheel
9. Footage indicator
10. Fade control switch
11. Backlight button
12. Exposure battery tester/monitor button
13. Battery test light
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15. Power zoom switches
16. Film cartridge compartment cover latch
17. Film type identification window
18. Viewfinder light stop
19. Automatic exposure adjustment switch
20. Viewfinder
21. Trigger release





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Marca Deposee; GAF Corporation, New York, N.Y. U.S.A

Camera appearance
subject to minor changes

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INSTALLING ELECTRIC-EYE BATTERY

A 6-volt silver oxide battery (Eveready 544) powers the electric eye. It is supplied with the camera, either installed, or packed separately in the camera box.

To insert battery:

1. Place camera on flat surface, upside down. Turn battery compartment cover on bottom of camera about $\frac{1}{4}$ turn in direction of arrow, counterclockwise, as shown in **Fig. 1**. Remove cover.



2. Place battery in compartment with plus (+) side towards the bottom of the compartment (**Fig. 2**).
3. Replace cover.

INSTALLING MOTOR BATTERIES

Swing open motor battery compartment cover on the bottom of the camera handle (**Fig. 3**).

Load battery compartment with six AA size 1.5 volt alkaline batteries. The correct orientation of the plus (+) and minus (-) ends



of each battery is shown on label in compartment and in **Fig. 4**. Close cover.

Standard (non-rechargeable) alkaline batteries will drive up to 8 sound or 15 silent cartridges of film through camera. When alkaline batteries are not available, zinc-carbon flashlight batteries may be used above 55F, but will be good for about 2 sound or 5 silent cartridges.

Important: Clean all battery contacts before inserting and thereafter at regular intervals.

Wipe both sides of each battery with a rough material to remove deposits. Since batteries may develop a leak, remove them before camera is stored.

Note: In cold weather keep batteries warm, as cold batteries tend to become inactive. To assure adequate power, an auxiliary battery pack (available as an accessory) may be plugged into battery charger socket. Keep battery pack warm by carrying it in inside coat pocket.

TESTING BATTERIES

Depress tester button marked "Exp." ("A" in **Fig. 5**) to test electric eye battery.

Note: Electric-eye battery tester operates only when motor batteries are installed.

Depress tester button marked "Mot." ("B" in **Fig. 5**) to test motor batteries. If the batteries are good, depressing either button will turn on a green light in the battery tester window ("C" in **Fig. 5**). If the window remains dark while a button is held depressed, the battery(ies) indicated by that button must be

replaced. Rechargeable motor batteries may be recharged according to instructions supplied with accessory battery recharger. Test batteries again after recharging.

LENS CAP

To remove:

Depress protruding tabs simultaneously and pull cap away from lens.

To attach:

Depress protruding tabs, press cap against front opening of lens barrel and release tabs.



LOADING THE CAMERA

Pull back latch and swing open film compartment cover (**Fig. 6**). Insert Super 8 sound movie film cartridge, label side up, film in smaller opening toward lens. The wider notch in the cartridge near the label must be **under** the cartridge-locking pin (**Fig. 7**). 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. Use a film with 25/40 or



100/160 daylight/tungsten ASA film speed combination, or the universal (type G) ASA 160 film. The camera also accepts regular (silent) Super 8 film cartridges having the same ASA speeds

Important: While handling cartridge, avoid touching the film. Moving film in either aperture may cause the cartridge to jam, making it unusable. As the footage indicator will continue to operate even when the film is jammed, make sure that the film advances properly by observing the "Film Movement Indicator" described below.

FILM MOVEMENT INDICATOR

A fast or slow flickering in the film movement indicator above the viewfinder image (shown in **Fig. 8**) 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.

FOOTAGE INDICATOR

The needle in the footage indicator shows how many feet (yellow figures) or meters (white figures) of film have been exposed. All the film in the car-

tridge has been exposed when the needle reaches 50 (feet) and 15 (meters).

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 (shown in **Fig. 8**). The red area extends gradually. All the film has been exposed when the entire circle is covered and the film advance indicator stops flickering.



*When silent cartridges are used, the camera will run slightly faster, at approximately 20 frames-per-second.

UNLOADING EXPOSED FILM

When all the film has been exposed, open the film compartment cover.

Depress all the way red "Eject" button (shown in **Fig. 9**) and lift out cartridge. The word "EXPOSED" now appears on the film in the smaller opening.

HAVE THE FILM PROCESSED WITHOUT DELAY

If a partially-exposed cartridge is removed from the camera, some film is lost and the needle in the footage indicator returns to zero.

LOCKING THE TRIGGER RELEASE

The trigger release can be locked in two positions:

1. To prevent accidental operation of the camera, lock trigger by pushing it up, in the direction of the arrow (**Fig. 10**).
2. To get into the scene, place camera on a tripod, aim it at the scene, focus, turn the light-stop knob to the left* (**Fig. 11**), depress trigger release, then push it up to lock it. The camera will keep running until the trigger release is unlocked.



IMPORTANT: When camera is operated in the remote mode, either with microphone switch or accessory remote control, **be sure to unlock trigger release BEFORE removing film cartridge.**

*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.

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 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".
2. Align the ∞ (infinity) symbol on the focusing ring distance scale with the reference line on top of

"If the view is blocked, turn the light-stop knob to the right.

the lens barrel (**Fig. 12**), then look through viewfinder at an object at least 500 feet away.

3. Turn the milled adjustment wheel (**Fig. 13**) first clockwise, then counterclockwise, until image is sharpest in the circular microprism area.

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 milcroprism focusing

disk in viewfinder (**Fig. 14**). If the microprism area is blurred (as in **Fig. 15**), the image on the film will be blurred, also.

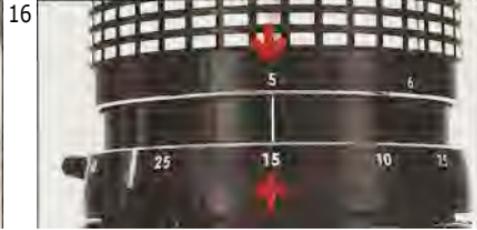
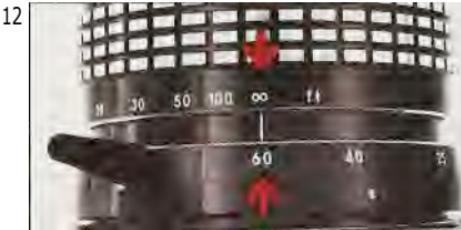
The distance scale may also be used for focusing. Line up with the reference line the figure on the focusing ring that corresponds with the camera-to-subject distance in feet.

For example, if the camera-to-subject distance is 5 feet, then the figure 5 is lined up with the reference line (**Fig. 16**).

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. To keep the camera steady when the lens is used in the 40 to 60mm telephoto range, use a tripod, where feasible, or steady camera by placing elbows on a firm support.



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 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. 16**), 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 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 in 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 raising and lowering handle attached to zoom ring.

The power-zoom speed control set to "S" (slow) provides a satisfactory zooming rate for most movies. When a faster zooming rate is desired, turn the continuously-adjustable speed control toward "F" slowly and stop when the required zooming speed has been reached.

EXPOSURE

The through-the-lens CdS exposure meter provides completely automatic exposure control when the exposure selector wheel is turned to the click stop in the "AUTO" position (**Fig. 17**). 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. 18**.

To check light level, depress trigger release halfway.

When the light is too low to pro-



* When the camera is packed or stored, make sure that the zoom switches are not pressed against an object. Depressing either zoom switch will keep the zoom motor operating, exhausting the batteries.

duce properly-exposed movies, the needle remains in the red area at the left side of the f/stop scale (**Fig. 19**).

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.

Do not make movies with the camera pointed at the sun or other bright light source. The

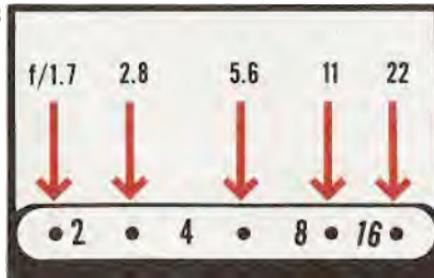
bright light will influence the electric eye and make the pictures too dark.

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 (see "Neutral Density Filter" section below).

To set the lens opening manually, turn selector wheel clockwise, toward "MANUAL", until needle in viewfinder is over the desired f/stop. **Fig. 20**, 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. Set the camera lens opening 1.5 stops

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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.

NEUTRAL DENSITY FILTER

To prevent overexposure, the camera features a built-in .6 neutral density (ND) filter. When the needle in the viewfinder reaches the red area at the right side of the scale, turn ND button to the left, as far as it will go, to align the **red** dot with the white index line on the camera body (**Fig. 21**). With the neutral density filter positioned in the lens system, the needle will swing to the left, out of the red area. Remember to retract neutral density filter when it is no longer needed by turning button to the right to align white dot with index line (**Fig. 22**).

Important: Always turn the ND button as far as it will go; do not leave it in an "in-between" position.

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 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. 23**. For more exposure (lighter image), turn the knob clockwise with a coin. The amount of exposure increase de-

pends 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.

MAKING MOVIES

Important: Turn Automatic/Manual selector wheel to the click-stop at the "AUTO" position. Make sure trigger is unlocked. **Always** depress release **slowly**.

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 camera handle.

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 depressed (**Fig.24**) while the camera is running.

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OUTDOOR MOVIES

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

Bright or hazy sunlight coming from behind or from either side of the camera is best for outdoor movies. For backlit 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 on top of the camera.

Attaching the movie light adjusts the camera automatically to filming under artificial illumination by retracting the daylight (orange) 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 must be held depressed while the camera is running (**Fig. 25**). As an alternate method, the movie light plug, supplied with camera, may be screwed into the movie light socket (**Fig. 26**).

Do not forget to remove the movie light plug for outdoor movies.

When loaded with the universal type G film, camera will operate correctly under any type of illumination, without adjustment.

FADE-IN/FADE-OUT CONTROL

The automatic fade-in/fade-out 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

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will emerge gradually from complete darkness. To fade-in a scene, depress trigger release halfway, then depress fade control switch and watch the movement of the needle in the viewfinder. As the needle comes to a stop at the extreme right end (**Fig. 27**), start the camera and release the fade control switch.

When the control is used for a fade-out, the image in the projected scene will turn dark gradually. To fade-out at the end of a scene, depress the fade control switch while the camera is run-

ning and hold it depressed. Keep the camera running until the needle in the viewfinder reaches the black portion within the red segment (as shown in **Fig. 27**).

REMOTE CONTROL

The accessory 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, focus, then turn the viewfinder light-stop knob to the left. Insert the plug into the remote control socket, 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.

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.



FILTER SIZE

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

CAMERA CARE

Protect camera from dirt, rain, dampness, and excessive 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. 28**). Do not attempt to remove or oil any part of the camera. If anything goes wrong, don't try to repair it yourself. Take it to a dealer, or send it to the nearest GAF Consumer Photo Service Center listed below.

GAF CORPORATION Consumer Photo Service Center

Emma St.
Binghamton, N.Y. 13902

3500 North Kostner Ave.
Chicago, Ill. 60641

16217 Kittridge St.
Van Nuys, California 91406

58-10 Broadway
Woodside, New York 11377

P.O. Box 490
Portland, Ore. 97207

4601 Winters Chapel Road
P.O. Box 47999
Atlanta, Ga. 30340

IN CANADA GAF (Canada) Limited Consumer Photo Service Center

70 Alexdon Road
Downsview, Ontario

9411 Cote De Liesse
Dorval, Quebec

1195 West 8 Ave.
Vancouver 9, Brit. Col.

Important: The original bill of sale (dated sales slip with name and address of dealer) is now accepted as proof of purchase for establishing the warranty period. No warranty card is provided. To help identification in case of loss or theft, keep among your personal records the camera model designation (GAF SS 805) and the serial number appearing near the tripod socket on the bottom of the camera handle.

SOUND MOVIES

Making sound movies with the GAP(R) SS 805 camera is simple. However, to fully utilize its sophisticated sound components for recording clear, true sound on your film, study and follow the "Tips for Better Sound Movies" section below.

MICROPHONE

The microphone is equipped with an on/off switch and a 15-foot wire that permits placing the microphone near the subject. The wire ends in a two-pronged plug. Insert the plug into the microphone outlets of the camera, as shown in **Fig. 29**. Push in plug all the way. Depress each battery tester button in turn, for an instant, to be sure that batteries are O.K. Slide microphone switch to "ON". You are now ready to make sound movies.

If the wire is too short for proper placement of the mike, use an accessory microphone extension cord.

RECORDING LEVEL

The camera is equipped with a gain control that automatically adjusts the sound level as it is being recorded. A high-low audio gain switch is also provided. In most instances this switch is set at the "H" (high) position, as shown in **Fig. 30**. The "L" low position is used to suppress background noise and when the to-be-recorded sound is too loud.

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RECORDING SIGNAL

A flickering green light is visible inside the viewfinder when sound is being recorded while the camera is running*. When the sound source is too weak, the green light will not appear, while it will stay on without flickering if the sound is too loud or when there is too much background noise.

MICROPHONE USED AS REMOTE CONTROL

The camera can be started and stopped by operating the On/Off switch on the microphone. This allows the camera operator to be in the picture without using film while he gets there. It also permits filming and interviewing by one person.

To use the microphone as a remote control: Place camera on tripod, aim it at the subject. Plug in microphone and slide switch on microphone to "Off". Focus. Close viewfinder by turning light-stop knob to the left. Depress shutter

*The flickering green light appears only when the camera is loaded with sound film, the microphone is plugged in, and the electric eye battery is good (as it also powers the sound system).

release and lock it. Take your place in the scene and start camera by sliding microphone switch to "On". Camera will keep running and sound will be recorded until mike is switched "Off".

EDITING SOUND MOVIES

Sound movies may be edited as silent movies, with some restrictions. The sound recording for each frame precedes the image by 18 frames. As a result, the film cannot be cut at just any point: entire scenes must be cut out and spliced together. To provide room for cutting, without transferring sounds to the wrong scene, run the camera for about two seconds before starting to record sound for the scene and stop recording about two seconds before the camera is stopped after the scene. These gaps will permit editing without cutting away portions of the sound.

MONITORING THE SOUND

The flickering recording signal in the viewfinder shows that sound is being recorded.

With the earphone plugged into the monitor outlet of the camera it is possible to hear the sound being recorded while it is being recorded. This allows the operator to constantly check (and correct at the source, if necessary) the recorded sound.

MONITORING SOUND WITHOUT RUNNING THE CAMERA

This valuable feature permits the operator to check and adjust the sound before filming begins. It can save a lot of film: the camera does not have to be started until microphone placement and sound source have been checked and found satisfactory.

To check the recording signal without running the camera, position microphone near sound source, turned toward it, look into viewfinder and depress monitor button (same as electric eye tester button, "A" in Fig. 5). The flickering green light will appear and continue to flicker as long as the monitor button is held depressed and sound of satisfactory level reaches the microphone.

To monitor sound with the earphone without running the camera, plug in earphone and depress monitor button (electric eye tester button). The sounds reaching the microphone will be heard while the button is held depressed.

TIPS FOR BETTER SOUND MOVIES

You may have heard of people who live near the elevated tracks and are able to conduct a conversation in normal tones as a train passes by with deafening roar, while their visitors cannot hear a word. Or you may have taken part in a conversation while someone was watching TV in the room. Usually the people conversing are not aware of the TV sounds, while the TV watcher is oblivious of the conversation. The above are examples of the human mind's ability to be selective, to hear only what it wants to hear, at the exclusion of other sounds also picked up by the ear. In the case of the train this takes considerable conditioning, while the TV example is quite common.
The microphone of your sound

camera is like the human ear: it will pick up all sounds reaching it. However, it is not backed up by a selective human mind. Remember this when you plan your sound movies. For clean, clear sound in your movies you have to make sure that only clear, clean sound is allowed to reach the microphone. The most common causes of unsatisfactory sound recording are background noise, more than one sound source, microphone placement and poor location. Let's discuss these one by one and see what can be done about them.

Background noise

Background noise or ambient noise level (as it is often called) is the sum of sounds that exists at the time of sound movie making, in addition to the sound intended to be recorded. A surprisingly high level of background noise can remain unnoticed by the moviemaker due to his mind's ability to ignore undesirable sounds.

Checking the sounds reaching the microphone with the earphone is the best way to detect background noise. With the earphone all sounds reaching the microphone will be heard as the earphone represents a single sound source, here the selectivity of the human mind does not apply.

What can you do about the unwanted background noise.

Before we can answer, the function of the automatic gain control must be described. The function of the automatic gain control is to provide the soundtrack recording head with an optimum input that will result in the best recorded sound quality. To achieve this, the control seeks out the loudest sound that reaches the microphone and adjusts it to optimum recording level. This works fine when the loudness of the to-be-recorded sound is far above the level of the background noise (ambient noise level). As the automatic gain adjusts the main sound source, it also adjusts the background noise in proportion, so that the background noise will be barely heard in the recording.

However, if the loudness of main sound and background noise are not too far apart, the background noise will be recorded at a disturbingly high level. This can be prevented to a degree by turning the audio gain control of the camera to "L" (low), as shown in **Fig. 31**, and placing the microphone closer to the to-be-recorded sound source. The lowered audio gain will reduce the level of recorded background noise, while the decreased source-to-microphone distance will raise the level of sound from the main source. The result will be a cleaner, clearer recording. The "L" (low) setting of the audio gain control may be used to prevent another undesirable effect caused by background noise. When the main sound source pauses momentarily, as when a speaker stops talking, the automatic audio gain will amplify the only sound available to it at the moment, the background noise. The resulting effect can be quite disturbing: in one moment the speaker is heard clearly, the next moment noises can be heard, almost as loudly. The remedy here is the same: turn the audio gain control to "L" (low), and place the mike closer to the speaker.

There is another, and perhaps best way to prevent background noise from interfering with the recorded sound: eliminate it. It is often possible to silence the offending background noise: an air conditioner, TV, vacuum cleaner in the next room, loud-ticking clock, etc. may often be turned off or stopped. Another way of preventing background noise is by changing location: move camera and subject to a quieter place.

Wind can also cause background noise in outdoor movies. While itself silent, wind blowing over the mike often causes a whistling sound in the recording. To minimize wind noise, protect the microphone with a shield formed from approximately $\frac{1}{4}$ to $\frac{1}{2}$ inch thick plastic foam sheet (available in most 5 & 10 cent stores). Attach the plastic foam to the microphone with a rubber band, as shown in **Fig. 32**. Wind screens made for the purpose are also available in many hi-fi stores. To prevent camera noise from being recorded, keep microphone at a distance of **at least** 3 feet from the camera. If (particularly in small rooms) the camera noise persists, turn the audio gain control to low ("L").

Handling the microphone can also result in distracting background noise. Rather than holding it in the hand, it is better to place the mike on its stand, or tape it to some convenient object. Professionals often hang up the mike in front of and just above the subject, outside of the picture area. If there is an extra person to hold it, the mike can be dangled in place from the end of a fishing pole.



More than one sound source

The most typical example of this is several people talking at the same time. As the "director and producer" of a sound movie, be firm with your subjects, stop them from doing it. Occasionally, a rehearsal will be needed to establish the order in which the subjects will speak or the way they are to conduct a conversation. Whatever it takes, make sure that only one person will talk at a time. This, of course, does not apply in a scene where several people wish happy birthday at the same time, and at similar occasions, but the basic rule of clarity in sound recording is that most of the time only one person should be heard. When due to circumstances more than one sound source has to be tolerated, place the microphone close to the source to be recorded and turn the audio gain control to "L" (low).

Microphone placement

The microphone supplied with the camera is omnidirectional: it will pick up sounds coming from all directions. This is desirable when people gathered around the microphone are to be heard, each in its turn: the microphone will pick up the speech of each person with equal efficiency. However, when one sound source is to be favored over others, place the microphone close to that source, turned toward it, otherwise sound from other sources will interfere with the sound from the selected source. If needed, a unidirectional accessory microphone can be used. The camera will accept any microphone with an impedance of 200 to 600 ohms. The unidirectional mike favors sounds coming from the direction it is facing; its use can result in cleaner recorded sound under certain conditions.

Do not let people talk directly into the microphone: it can result in a hissing noise every time a sibilant letter is pronounced. Place the mike lower, pointed upward, and have the subject talk over the top of it, rather than into it.

Poor location

Not every place lends itself to sound recording. Some rooms, for example, with uncovered floor and walls can create an echo that results in garbled recordings. Carpeted floors, drapes and so-called acoustic ceilings tend to absorb sound, rather than reflect it, and usually result in cleaner recording. When monitoring with the earphone shows that sound reproduction is poor in spite of the best mike placement and other precautions, it is better to change location than produce a movie with poor sound.

MORE TIPS

More than anything else, advance planning can help you produce sound movies of high quality. Plan the image and the sound as a unit, let one reinforce the effect of the other. Make notes, then use them as you set up each scene.

When you make movies of "soundless" subjects, such as scenery, add sound in the form of narrative, music, or both, using the recording function of the sound projector.

Make your films more entertaining by telling a story with your camera (instead of just showing a series of disconnected scenes). When you film a child's birthday party, for example, you can create a simple story by including the following scenes: getting up in the morning, the beginning of the "great day"—wrapping presents—baking (or buying) the birthday cake—getting dressed for the party—arrival of guests—party games—cutting the cake—guests leaving—cleaning up after the party—etc. Another example: To turn a travel-movie into a story, include (in addition to the usual "tourist attractions") scenes showing personal aspects of the trip: the family getting ready—leaving home—overnight stops—roadside restaurants—shopping for gifts—unusual people you meet—heading for home—etc.

Utilize your zoom lens: shoot several scenes of each subject, some at the wide-angle, others at the normal and telephoto settings. Use the power-zoom (sparingly) to get striking effects. Vary overall views with closeups in each scene.

Do not restrict yourself to movie-making outdoors in sunny weather. Scenes made on cloudy days, even in rain, add variety, will make your movie more interesting. Mixing indoor and outdoor scenes also helps.

Titles connect scenes into a smooth-flowing presentation. Camera stores sell a variety of titling outfits. Follow the instructions supplied with the titler. You can also make good titles without a titler, by including close-ups of signs in your movies. Practically every place you film has a sign you can use as a title. In addition, road and street signs, billboards, and even mail boxes can be utilized to identify and describe your subject.

The audience will enjoy your movies more if you set up the projector and the screen in advance. When the spectators are seated, you will only have to flick the switch and the show is on.

SPECIFICATIONS

Type

Super 8 sound movie camera

Lens

Chinon Reflex Zoom Lens f/1.7
7.5 to 60 mm

Viewfinder

Single-lens reflex type with microprism focusing spot-f/stop, over/underexposure signal, green LED recording signal, film advance and film end indicators are visible in viewfinder—viewfinder eyepiece adjustment range +2/-4 diopters—viewfinder rear light-stop is provided

Exposure

CdS through-the-lens automatic exposure control with ±1 stop adjustment—manual override also provided—f/stop range f/1.7-22

Films accommodated

50-foot Super 8 sound or silent film cartridges

ASA film speed range

Daylight ASA 25, 100 (160 with Type G film), tungsten light ASA 40, 160

Backlight exposure compensation

Pushbutton provides plus one stop exposure

Filming speed

18 frames-per-second with sound cartridge, 20 fps with silent cartridge

Zoom

Variable-speed power zoom with separate "Wide" and "Tele" switches—zoom ring with handle for manual control

Fade-in/Fade-out

Pushbutton controlled fading action with indicator visible in viewfinder

ND filter

.6 neutral density filter with in/out switch

Battery tester

Separate buttons activate signal lamp for motor and electric-eye/amplifier batteries

Footage indicator

Sliding rule type, indicates feet from 0 to 50 and meters from 0 to 15—automatically returns to zero when cartridge is removed

Outlets

Outlets are provided for microphone—earphone monitor—remote control—battery charger/booster pack

Power sources

Motor batteries: 9 volts, provided by six 1.5 volt AA-size alkaline batteries Amplifier/exposure meter battery: 6 volts, supplied by one silver-oxide battery (Eveready 544)

Movie light socket

Accommodates $\frac{1}{4}$ inch screw, coupled to Type A (daylight) filter; insertion of movie light automatically retracts filter. It may also be retracted manually with push button or movie light plug

Tripod socket

$\frac{1}{4}$ inch

Size

Length 9.18 in. (233 mm)
Height 8.82 in. (224 mm)
Width 3.26 in. (82.9 mm)

Weight

4.4 lb (2 Kg)

SOUND SYSTEM**Amplifier**

8 transistors, 5 diodes—has automatic gain control (AGC)

Sound filming speed

18 frames-per-second constant drive by a capstan motor and a drive motor

Image/sound separation

Sound precedes image by 18 frames

Audio gain switch

Sound level can be set at "H" (high, normally used) or "L" (low)

Maximum input voltage

With Audio Gain Switch at "H", 3 mv; at "L" 10 mv

Recording signal

Light from green LED flickers in viewfinder while filming or monitoring

Monitoring

By listening with earphone (having impedance of 600 ohm), or by observing flickering green light in viewfinder—sound can be monitored during filming, or (while monitor button is depressed) without filming

Microphone

Omnidirectional microphone supplied—accessory unidirectional and other microphones with impedance of 200 to 600 ohms may be used

Microphone switch

On/off switch, may be used to operate camera as a remote control switch

Power source

Amplifier is powered by a 6-volt silver oxide battery (Eveready 544), also used to power electric eye



GAF CORPORATION

140 West 51 Street,
New York, N.Y. 10020

Photo and Repro Group

WARRANTY

GAF Corporation warrants the GAF® SS 805 Super 8 Sound Movie camera to be free from defects in material and workmanship for a period of twelve (12) months from the date of original purchase. The camera will be repaired or replaced, at GAF's option, without additional charge to the purchaser, if returned prepaid to the nearest GAF Consumer Photo Service Center shown in the list on page 16, specifying the difficulty encountered and attaching a copy of your bill of sale showing the date and place of purchase. Remove batteries when camera is stored and return camera well packed and insured, as GAF is not responsible for damage caused by leaky or defective batteries and for damage that occurred during

shipment. Cost of work performed at repair shops not authorized by GAF shall not be reimbursed. GAF DOES NOT MAKE AND SHALL NOT BE LIABLE FOR ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY OR ANY OTHER WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO THE GAF® SS 805 CAMERA, EXCEPT AS HEREIN-ABOVE SPECIFIED. GAF'S SOLE LIABILITY ON ACCOUNT OF BREACH OF THE FOREGOING WARRANTY SHALL BE REPAIR OR REPLACEMENT AS ABOVE SET FORTH. IN NO EVENT, IRRESPECTIVE OF THE CAUSE, SHALL GAF BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR OTHER DAMAGES.