MODERN PHOTOGRAPHY

reports on the

Canon

ZOOM DS-8

DOUBLE SUPER 8
MOVIE CAMERA

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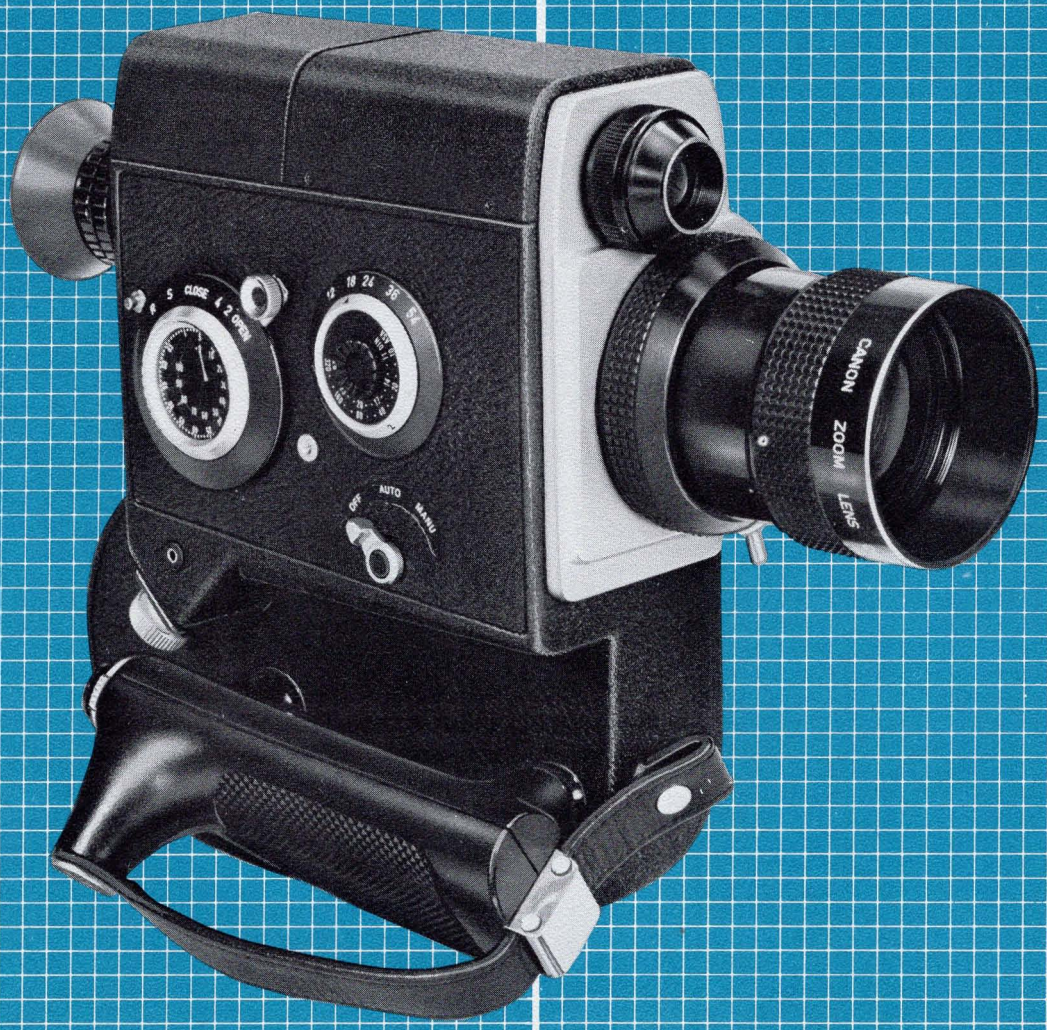

movie equip-ment close-up

MODERN's editors wring out the latest motion picture equipment.

MANUFACTURER'S SPECIFICATIONS: Canon DS-8, double super 8 movie camera. LENS: Canon 7.5-60mm f/1.4 focusing to 4 ft. VIEWFINDER: Through-lens viewing and focusing on full screen with split-image center. FPS: 12, 18, 24, 36, 54 and single frame. POWER: Eight penlight batteries. SHUTTER: Variable from 0° to 165°. Half-closed is 82.5°; quarter-closed, 41.25°. OTHER FEATURES: Automatic CdS metering independent of lens with full manual override, manual zooming, rewinding for lap dissolves, footage and frame counter reversal, semiautomatic film loading using 100-ft. rolls of double-width super 8, sockets for single frame, tape recorder and remote control. PRICE: $1,000. IMPORTER: Bell & Howell, Chicago, Ill.

The first time you look at the Canon DS-8 (double super 8) camera, you may be tempted to utter the word "Scoopic," for it very closely resembles its 16mm cousin. The DS-8 was designed, in fact, with the idea that a super 8—aside from its small format—can be every bit as professional in approach as comparably priced 16mm machines. Let's see how well they've succeeded.

First of all, those not familiar with double super 8 film (only two other cameras accept it) need only think back to the use of regular 8 with film on a roll rather than in a cartridge. You ran the film through once, flipped it over and exposed the second half. The film for double super 8 works similarly. You start out with 100 ft. of film on a daylight-loading spool—actually 16mm stock, resprocketed for super 8. After the film has been run through twice, it's split down the center by your processor and spliced end to end, yielding 200 ft. of film.

Although there is always the danger of edge fogging if film is not loaded in subdued light, you have three times more film stock to work with than a 50-ft. cartridge, and actual threading is simple and brief. You slice off a small piece of film leader with the built-in clipper so that film will have no trouble on its way through automatic threading. Before introducing the leader into the first sprocket wheel, close the loop formers. When this is done, it's only a matter of pressing the shutter release and watching the film snake through the camera's gate and down toward take-up. After the film is firmly on the take-up spool, it's advisable to shoot a short burst just to put your mind at ease that film is indeed advancing properly. The final step, of course, is to close the lid.

Before we do that, however, let's take an even closer look at the inside of this camera. The film chamber is unique. In no other movie camera (other than the Scoopic) are both the feed and take-up reels side by side on the bottom. Whether this facilitates threading is open to question, but it certainly places much of the weight in the proper area for hand-held shooting. Not only is it the right area but also the right form, since its formidably rounded bottom fits snugly against chin and chest for rock-steady support. The sturdy hand grip with release button for the thumb also contributes immeasurably.

Cleaning the camera is as uncomplicated as loading it. The pressure plate can be pushed back or lifted out entirely for blowing away dust particles from the film gate. Likewise, the two guides which keep film flat against sprocket wheels can be unscrewed and pushed aside for easy access. The pressure plate, itself, is of light alloy, highly polished and lacquered to pass film through scratch-free.

Besides the freedom and versatility inherent in using what is essentially a 200-ft. load, there is really no limit to the length of double exposures and lap dissolves that can be performed with the DS-8. Unlike a 50-ft. super 8 cartridge, in which film can only be backwound up to 90 frames in order to overlap an incoming scene on an outgoing scene, the DS-8 can perform dissolves of several seconds or double exposures for the entire length of the film, if required. The only obvious kink in the process is that you must perform all operations manually, save for backwind, but this is true of any professional 16mm camera.

In order to perform a lap dissolve most easily, it's best to first place the camera on a tripod, compose the scene, then watch the footage counter as you fade out. It is also best, we've found, to start out with a modest 72-frame (1-ft.) dissolve, master it, then go on to bigger and better things. Since the frame scale (from 0 to 72) is movable, line it up with the frame counter indicator. Thus, when you begin shooting your scene, observe (or have an assistant observe) exactly when the indicator passes "0" and start fading out at that point. To do this, you simply close the variable shutter, and the camera motor automatically cuts out when the shutter is fully closed.

Now that you've hopefully executed a smooth, even fade-out, what about the next scene which will fade-in over it and take its place? With camera set for the new take, press the rewind safety button next to the footage scale, pull the variable shutter lever all the way back to "R" and you're ready to rewind the faded footage with the camera release. Since the frame counter also reverses, you will be able to determine when you're back at "0." Fading in, then, is simply a matter of good timing, since a smoothly flowing lap dissolve demands that you open the shutter at the same pace and within the exact time it took to close it. You will be able to observe this, however, since one complete pass of the indicator is 72 frames. In shooting field tests, we were able to achieve dissolves which, at times, had three scenes weaving in and out at once. This takes careful planning and accurate timing, however.

The variable shutter also makes it possible to reduce exposure time without touching the speed, since most normal footage would be shot at 18 fps or 24 fps for sync sound. When placing the variable shutter lever at "2," for instance, the shutter is half open (82.5°) and registers 1/79 per sec. at 18 fps, rather than the normal shutter speed of 1/39 when the shutter angle is wide open at 165°. In order to shoot at a reduced shutter angle, however, the ASA value must also be changed to provide the automatic CdS cell with the new value. This is easily accomplished, since the outer ring of the ASA dial contains numbers corresponding to the variable shutter ring. Thus, if shooting 25 ASA film with the shutter angle cut in two, set "25" to match "2" rather than the arrow pointing to the normal ASA setting. Unfortunately, all of this sounds much more involved than it actually is in practice.

Unlike most super 8 cameras, the DS-8 has its electric eye CdS cell coupled to a servomotor which opens and closes an iris diaphragm in a separate metering window near the lens. As this iris compensates for the changes in light volume, so too does the diaphragm in the lens, providing accurate exposures immediately, regardless of the speed at which you pan, zoom, or change angles.

The viewfinder, split-image on an aerial screen, is one of the brightest we've found in a super 8 camera. It also contains clearly etched f/stop markings from f/1.4 to f/22. With a switch on the side of the camera, fully manual operation is possible, by turning the iris window knob which controls the lens aperture. As with any super 8 with full reflex viewing, some of the incoming light is diverted to the viewfinder. When using a separate meter, therefore, you must open up one full stop more than the meter indicates. If your meter reads f/5.6, for instance, open the diaphragm to f/4.

Canon Zoom Lens 7.5mm

Aperture	Center Sharpness	Edge Sharpness
f/1.4	Good	Good
f/2.8	Good	Excellent
f/5.6	Excellent	Excellent

30mm

Aperture	Center Sharpness	Edge Sharpness
f/1.4	Very Good	Acceptable
f/2.8	Very Good	Excellent
f/5.6	Very Good	Very Good

60mm

Aperture	Center Sharpness	Edge Sharpness
f/1.4	Excellent	Excellent
f/2.8	Excellent	Excellent
f/5.6	Excellent	Excellent
f/11	Excellent	Acceptable

The DS-8 also features a run-lock control for continuous shooting, battery checker to see if the eight penlight cells in the upper rear of the camera are at full power, and sockets for tape recorder, single frame and remote.

Besides the obviously impressive resolution results for a zoom lens of its speed and range, the DS-8's 7.5-60mm f/1.4 optics delivered contrast and color rendition to at least equal some of the finer prime lenses for 16mm machines. Although there's no motorized zoom (which may disturb cartridge-load fans), the manual zoom ring, with an unobtrusive lever attached, has a smooth, floating action for steady zooming. The final, subtle *pièce de résistance* is a built-in lens hood which slides out to about an inch in front of the first element, to help control stray light which often causes unwanted flare.

The DS-8 is definitely a machine for the advanced amateur or professional who demands that his camera deliver a high level of performance, yet not do all his thinking for him.—THE END

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