

# The New Eclair ACL II



**SOREMEC** U.S.A. INC.  
**eclair**

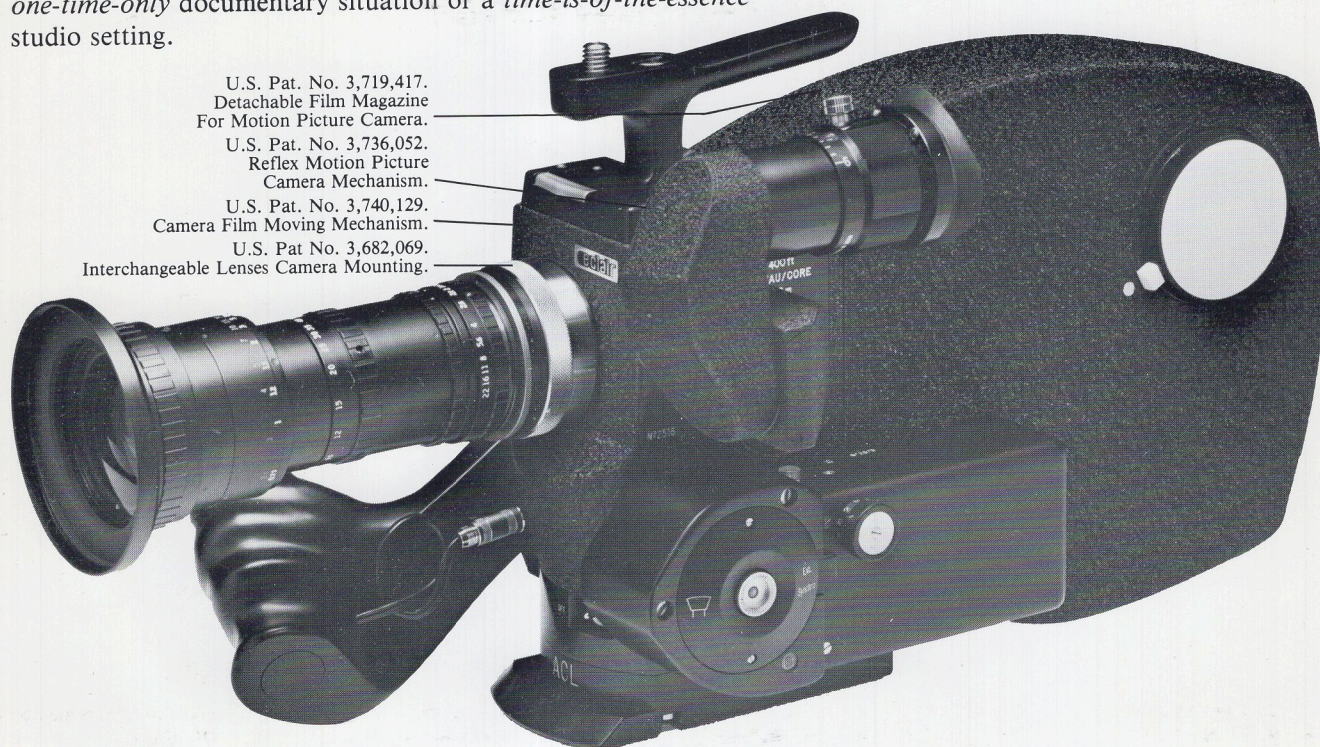
905 N. COLE AVE., HOLLYWOOD, CA 90038

TWX: 910-321-4192 Eclair USA LSA

The Eclair ACL II is a precision, handcrafted, professional 16mm camera that has revolutionized the making of motion pictures. From the beginning, the ACL II was designed to incorporate many of the successful features of the world-famous Eclair NPR. But the ACL II is even smaller and lighter. With a 200 ft. magazine and without a lens, the ACL II measures 10 $\frac{7}{8}$  inches from front to back and weighs 7 pounds 7 ounces. Perhaps just as important is how the weight is distributed, and how the camera fits your body. The ACL II's instant snap-on coaxial magazine is mounted on the back of the camera, so there's practically no weight to support in front of you. The ACL II is actually shoulder-rested instead of hand-held. In this position, the viewfinder is right at eye level, with the controls at your fingertips. And the ACL II's profile is lower than your head. So it will fit anywhere you will.

The same design principles that allow the ACL II to be so small and lightweight also make it quiet and reliable. The ACL II achieves this with maximum simplicity because of a minimum of moving parts. So there are fewer parts to generate noise. Fewer parts to create friction. And fewer parts to wear out. With fewer sources of noise, the ACL II requires less noise suppressant material. The result is a camera high in strength and reliability, and low in weight and noise.

These factors can make a critical difference whether you're shooting in a *one-time-only* documentary situation or a *time-is-of-the-essence* studio setting.

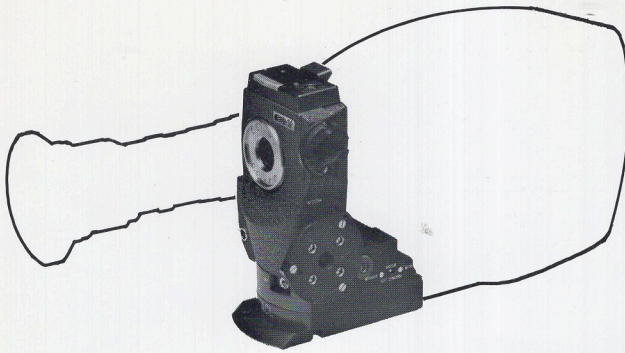


The simplicity of the ACL II's design is innovative enough to warrant four separate U.S. and International patents.

There is one patent on the film pull-down claw and another on the reflex mechanism. These two features make the ACL II quieter and simpler. The ACL II's wedge-shaped claw slides quietly into the film perforation and makes contact with its lower edge *before* pull-down begins. So unlike other cameras, there is no chatter from the claw hitting the lower edge of the film as it descends. The ACL II's reflex mechanism consists in part of an oscillating mirror working in conjunction with a high-efficiency focal plane rotating shutter. This eliminates the whir caused by a rotating mirror shutter.

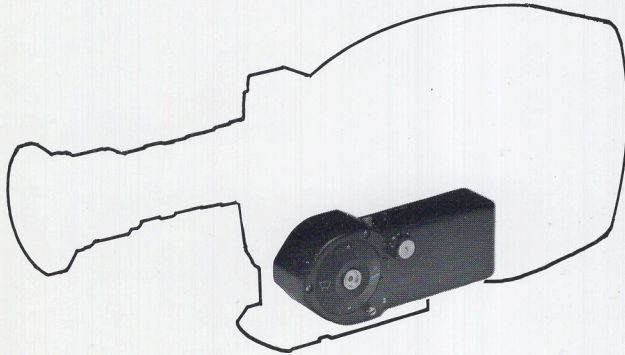
There is also a patent on the interchangeable lens mount system. This feature allows you to use lenses with any of the well-known professional mounts. There is also the added versatility of a "C" mount. So, instead of mere adaptors, the ACL II has a true universal lens mount system.

Finally, there is a patent on the instant snap-on coaxial magazine. This design makes it simpler, quieter and more reliable. And the magazine can be changed in less than five seconds, without touching the film.



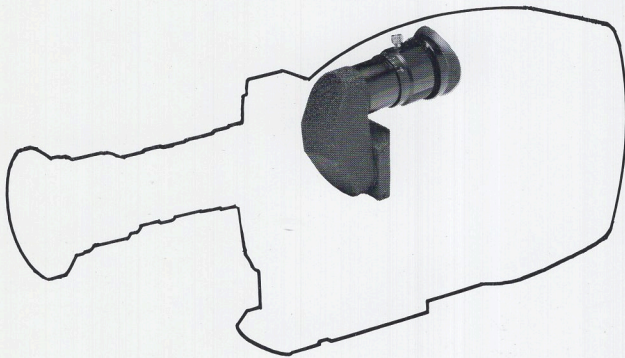
## The Camera Body

The ACL II's camera body is ingenious in its simplicity. It contains the movement, the patented pull-down claw and the patented reflex mechanism. This mechanism consists of a hard chromed steel aperture plate, a rotating focal plane shutter with an opening of 175° and an oscillating mirror that allows brilliant reflex viewing through the finder. Built-in LED 7, new square electronic base equipped external sync to use phase shifting unit (Botex) for eliminating Bar when shooting TV monitor.



## The Crystal Controlled Motor

The ACL II boasts a heavy-duty, variable speed motor that lets you film at speeds of 8, 12, 24/25, 50 and 75 frames per second, with all speeds driven under crystal control. This allows the versatility of selecting frame rate to shoot fast and slow motion, as well as normal speed. This is a rugged, reliable Hall effect, brushless motor of incredible accuracy. Within 400 ft. of continuous running, the maximum discrepancy between picture and sound is 1/12th of a frame. This crystal control accuracy is the key to being able to shoot professional sync sound anywhere with no connection between the camera and the tape recorder. And the ACL II maintains this accuracy over a wide temperature range.

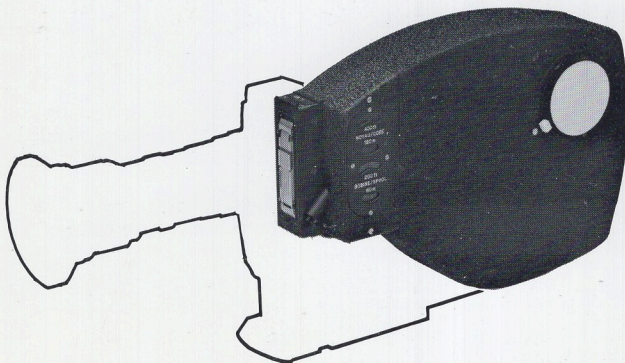


## The Kinoptik HC Auto-erect Image Viewfinder

Specially designed for the ACL II, both viewfinder and eyepiece rotate 360 degrees and can swing up vertically for low shooting, and even backwards for candid shots.

The eye piece is adjustable, with the pressure of the head opening the eyepiece iris,  $\pm 6$  diopters, and an eyepiece shutter to keep out stray light when running the camera with your eye away from the viewfinder. The groundglass is at the film aperture instead of at the eyepiece. So the viewfinder's optics are simpler and transmit more light. This combined with improved glass on the magnesium surface of the reflex mirror and the fine grain of the groundglass provide brilliant viewing. The groundglass is engraved with TV safe cutoff, as well as the standard 1:1.33 16mm aperture.

In addition, there is extra viewing on the groundglass to allow you to see what is offscreen. So you can see a microphone or the edge of a set before it enters the shot.



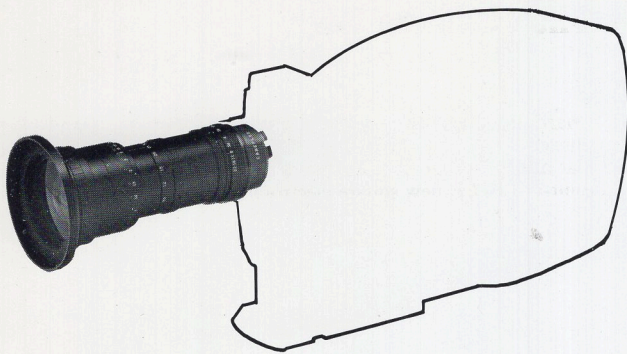
## The Instant Snap-on Coaxial Magazine

Now designed as an NPR Magazine with the pressure plate in two (2) parts, the ACL II's patented coaxial magazine features a proven drive and takeup system to insure unquestioned reliability. It is available in both 200 and 400 ft. versions. Both are designed to accept daylight loading spools or core loads. The raw stock can be double perforation film, wound with the emulsion in or out; or single perf film, emulsion in (B winding) or emulsion out (A winding).

The loading of the magazine is accomplished with a minimum of handling in the dark. The film is simply placed into position inside the magazine and the end of the film is pushed into a light trap. There are no sprockets or capstans. Everything else is done in daylight. So there is less changing bag time than any other camera on the market.

Once loaded, magazines can be changed in less than five seconds, without ever touching the film again.

The 400 ft. magazine features a double counter system indicating the amount of unexposed footage remaining in both feet and meters.



## Optics

The ACL II's patented universal lens mount system consists of a threaded "C" mount receptacle (mechanical back focal distance of 17.52mm) set flush into the camera body face, surrounded by a collar of raised threads of larger diameter. Camera mounts with a stainless steel collar can quickly be locked into position on the raised threads. You can use any of the well-known professional lenses with accessory camera mounts that fit the raised threads. Including, of course, the heavy-duty Eclair CA-1 bayonet lens mount, (mechanical back focal distance of 48mm) which is supplied standard with the camera.

These are no mere adaptors. Lenses are rigidly and precisely held against the camera face. So you can use zooms, or other long or heavy lenses without any other lens supports.

A slot for gelatine filters is set into the camera body between the lens mount and the reflex mirror. So there is no need for separate filters for each lens, and you can see the filter through the viewfinder.

## LED 7

The ACL II features an exclusive through-the-lens light exposure monitoring device called LED 7. The LED 7 system incorporates seven light emitting diodes in the viewfinder which light up to alert you instantly to any deviation in exposure level from a given setting. With this system you first measure light level with a hand-held meter and set the lens aperture accordingly. Then the LED 7 is adjusted so the center diode is lit. If there is any deviation in exposure level, the diodes above or below center will activate as the light levels either increase or decrease. Each successive diode represents half an f-stop. This allows you to readjust the aperture setting to compensate for changes in light, without your eye leaving the viewfinder. You simply adjust the aperture until the center diode is again lit, and you know that the exposure level is the same as you originally chose.

The system is always temperature compensated ( $-25^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ).



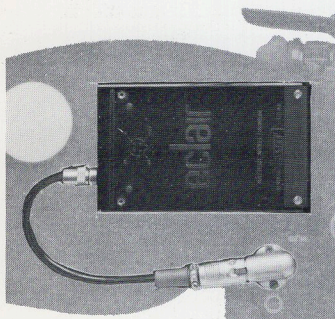
## Accessories

The Eclair ACL II system features a complete line of accessories to make the camera adaptable to almost any shooting situation. The following are a representative sample, but since new accessories are constantly being added, consult your Eclair dealer or Soremec Eclair U.S.A. Inc. about any accessory not listed.

**LENSES** — The ACL II's patented universal lens-mount system lets you use most popular lenses in any of the well-known professional mounts, including the heavy-duty Eclair CA-1. You can choose from a wide variety of primes and zooms, including Angenieux, Zeiss, Schneider, Cook, Nikon, Canon, and Kinoptik.

**BATTERIES** — On board the ACL II camera is a lightweight Mini-Module 12 volt DC nickel cadmium sealed battery rated at 1.2 amperes per hour. This is enough power to drive eight 200 ft. film loads on a single charge.

It takes only thirty minutes to charge this battery on a special fast charger which is equipped with an automatic trickle position and works on 110 volt or 220 volt AC power.



**CASE** — Heavy-duty and custom-made, the case is constructed of high-impact ABS plastic laminated to plywood, with structural aluminum moulding throughout its periphery. The interior is fully-lined with high-impact Ethafoam for additional impact resistance.

It contains the complete ACL II package No. 2109, plus zoom lenses and other accessories.

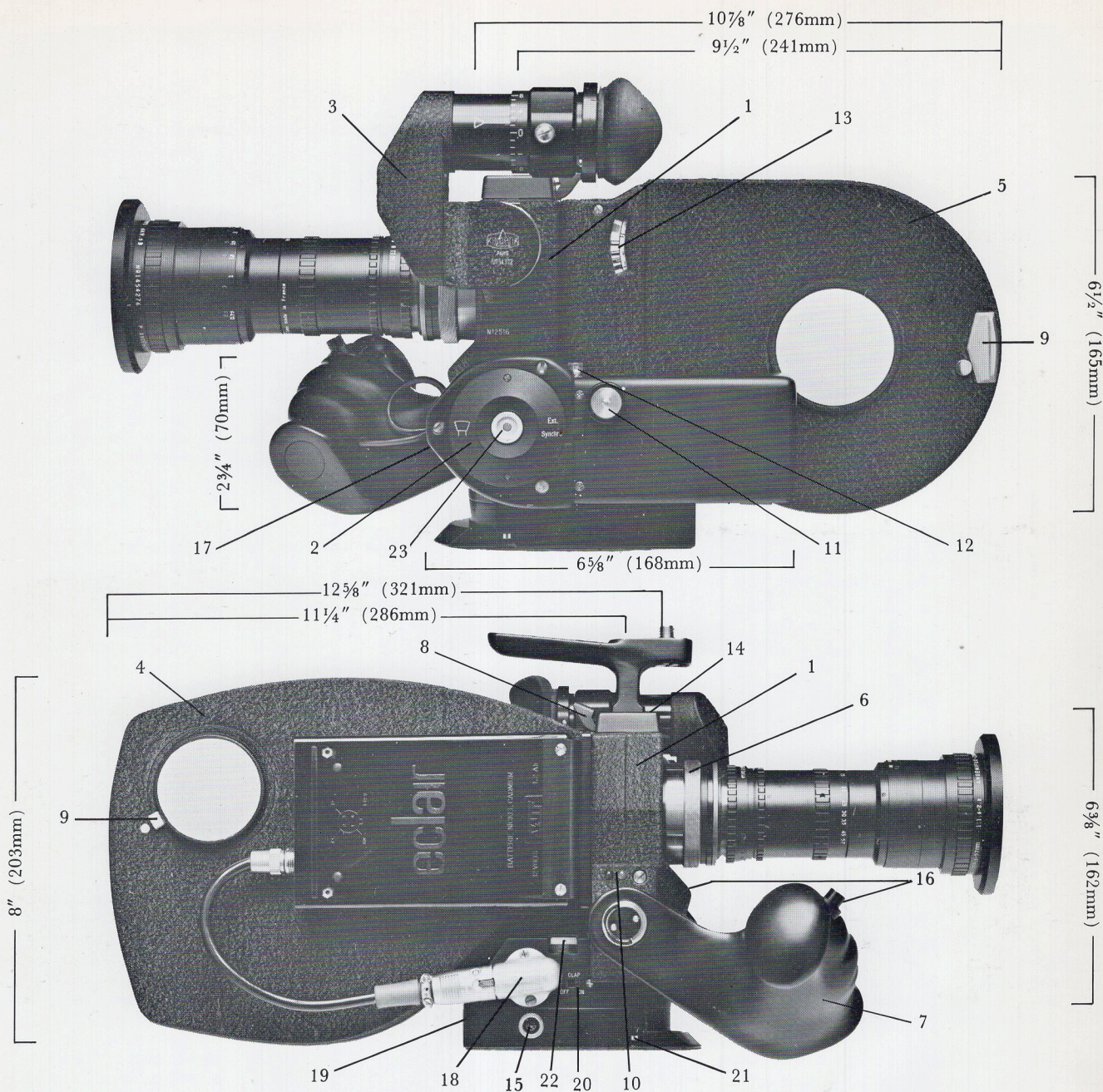
**DATA RINGS** — For focus and aperture opening indications are available for Angenieux zoom lenses.

**SOUND BARNEY** — The ACL II can be equipped with a custom Sound Barney to additionally reduce camera noise of 4dB without adding appreciably to its weight.

**RAIN COAT AND PROTECTIVE MAGAZINE COVERS** — Ideal for shooting in inclement weather conditions or moist surroundings, these covers are constructed with the fabric used for skin diver's suits. The rain coat itself contains one pocket on its side to accommodate NAGRA SN or camera power supply.

**HANDGRIP** — New and anatomically designed, the ACL II's handgrip is orientable and is equipped with an On/Off switch.

**GEL FILTER HOLDERS** — Filter holders in addition are available as accessories.



- |                                 |   |                                 |                                    |
|---------------------------------|---|---------------------------------|------------------------------------|
| 1. Camera Body                  | 7. Adjustable Anatomical Handgrip       | 12. Out-of-Sync Warning Light   | 18. Power Connector                |
| 2. Motor                        | 8. Magazine Release                     | 13. Footage Counter             | 19. Fuse                           |
| 3. Viewfinder                   | 9. Magazine Lid Lock                    | 14. Gel Filter Holder           | 20. Bloop Light Switch             |
| 4. 400' Magazine                | 10. LED Exposure and Running Indicators | 15. Output External Control Use | 21. 3/8" x 16 T.P.I. Tripod Socket |
| 5. 200' Magazine                | 11. Speed Selector                      | 16. On/Off Switches             | 22. Setting Control for LED-7      |
| 6. Interchangeable Camera Mount |   | 17. Remote Connector            | 23. Inching Knob                   |

### ACL II Specifications

#### SIZE (Height x Width x Length) and WEIGHT:

CAMERA BODY: 6 1/4" x 3 1/4" x 3 3/4" (162mm x 86mm x 92mm); 3.3 lbs. (1.5kg)  
 Camera with viewfinder (extended), motor and 400' magazine: 8" x 7 3/4" x 12 3/4" (203mm x 197mm x 321mm); 11 lbs. (5kg)  
 CAMERA with viewfinder, motor and 200' magazine: 6 1/2" x 6 5/8" x 10 1/4" (165mm x 168mm x 276mm); 9 lbs. (4kg)  
 MOTOR: 2 3/4" x 1 3/4" x 6 3/4" (70mm x 45mm x 168mm); 2 lbs. (.9 kg)  
 400' MAGAZINE: 8" x 3" x 11 1/4" (203mm x 76mm x 286mm); 6 lbs. (2.7kg)  
 200' MAGAZINE: 6 1/2" x 2 1/2" x 9 1/2" (165mm x 64mm x 241mm); 4 lbs. (1.8kg)

#### CAMERA:

FILM: 16mm - double perf or single perf (A winding or B winding) on 2" core or daylight spool  
 FILM TRANSPORT: claw movement controlled by an eccentric and a fixed cam and positively positioned by a counter cam  
 REFLEX VIEWING: oscillating mirror traveling at half camera speed, reflected onto groundglass with 16mm full aperture and TV safe action area markings  
 SHUTTER: 175° rotating focal plane shutter with fixed opening; shutter speed 1/50 second at 24 fps  
 NOISE LEVEL: 28 dB  
 FILTER SYSTEM: gel filter holder located on a plane 1/2" (12.7mm) in front of aperture

#### MOTOR:

TYPE: brushless, Hall effect, crystal controlled, variable speed  
 POWER CONSUMPTION: less than 1.1 amps at 12 volts (68°F or 20°C) at 24 fps; film footage driving capacity remains relatively constant at all speeds

FILMING SPEEDS: 8, 12, 24, 25, 50 and 75 fps (all crystal controlled)  
 OUT-OF-SYNC WARNING LIGHT: detects sync accuracy to ± 8ppm

#### MAGAZINES:

TYPE: 200' or 400' single sprocket belt drive; coaxial; snapon; instant change  
 FOOTAGE COUNTER: Indicates unexposed film in both feet and meters

#### KINOPTIK HC AUTO-ERECT IMAGE VIEWFINDER:

Specially designed for the ACL II; both viewfinder and eyepiece rotate 360 degrees, left or right eye viewing, pressure of the head opens the eyepiece iris, ± 6 diopter adjustments

#### LED 7 EXPOSURE GUIDE:

SENSING ELEMENT: rapid response Cds photo-resistant cell  
 SENSITIVITY RANGE: 4 to 400 ASA  
 TYPE OF MEASUREMENT: behind the lens (T.T.L.); semi-spot (e.g. 4 mm diameter - 10° acceptance with 25mm lens)  
 AREA OF MEASUREMENT: center 30% of viewing area  
 DISPLAY: seven light emitting diodes representing ± 1 1/2 stops in 1/2 stop increments

#### CA-1 CAMERA MOUNT: flange focal distance 48mm

"C" MOUNT: flange focal distance 17.52mm

#### OPERATING TEMPERATURE RANGE:

-13°F to 140°F (-25°C to 60°C); special winterizing available

#### POWER CONNECTOR: Cannon 4 pin Male

WIRING OF PINS: 1) ground; 2) bloop (.3 second fog; .3 second 1000Hz 8 volt signal); 3) 12 volts output to pilotone module; 4) 12 volts input



**SOREMEC** U.S.A. INC.  
**eclair**

Guaranteed factory service:  
Hollywood (213) 464-2125  
New York (516) 889-4810

905 N. COLE AVE., HOLLYWOOD, CA 90038

TWX: 910-321-4192 Eclair USA LSA

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