

**THE**  
**eclair**  
**ACL**



**ECLAIR-DEBRIE OF ENGLAND**

**INSTRUCTION BOOK  
FOR  
THE 16mm ACL CAMERA**

**ECLAIR-DEBRIE (UK) LTD,  
ORION PARK,  
NORTHFIELD AVENUE,  
LONDON, W13 9SW,  
ENGLAND,**

**Telephone: 01-579 3831  
Telex: 934032**

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# 1. DESIGN PHILOSOPHY

**Low profile and portability** not only gives the ECLAIR ACL camera an elegant appearance, but it is a practical feature which enables the cameraman to take pictures while in a very confined space. The ACL rests low on the shoulder; in fact wherever there is headroom there is space for him to operate his camera.

Examples:- seated in a moving car next to or behind the driver; in a cockpit; in a bunker; up a tree; or in any confined space where a camera is called for. The ACL is unobtrusive.

**Total weight** is important where there is plenty of action and mobility is the key word. The ACL with its 60m (200 ft) magazine, fully loaded, weighs 3.6 kg (8 lbs).

With all its ancillaries, this camera presents no problem when climbing any structure or following any action. The ACL is truly a professional camera.

**A self-blipped quiet running** camera permits candid shots and unselfconscious action. The moving parts in the ACL have been kept to a minimum; it's wedge-shaped claw slides quietly into the film perforation; it's plane shutter and oscillating mirror reduce the whir of rotating mirror shutters; the overall noise level is better than 32 dB at 1 m (3 ft).

**A crystal controlled brushless motor** has been specially designed for the ACL. Incorporated in this motor are some of the features developed for spaceflight - miniaturised control, high efficiency, freedom from static etc. It is based on The Hall Effect; runs silently, draws only 0.8 A from the small rechargeable battery. No hash is added to the radio microphone signals. The speed is accurately regulated to 24 or 25 frames per second by crystal control.

**Snap-on magazines**, made famous throughout their range of cameras, afford the film maker the advantages of a 3 second effective re-load time and the ability to change quickly to different film stocks by pre-loading magazines. The cameraman has the choice of 60m (200 ft) core loads, standard 30m (100 ft) or 60m (200 ft) daylight loading spools.

**The viewfinder** can be rotated through 360° parallel to the camera's side and is one of the many practical features in the design of the ACL. For low angle shots and for shooting over the shoulder, the fully adjustable viewfinder enables the cameraman to position the eyepiece and compose his picture without being a Contortionist. Normal diopetre adjustment and exit pupil shutter for excluding stray light are part, of the design.

**Lens mounting** is basically "C" mount surrounded by a large threaded shoulder to which a TS adaptor for Cameflex, Arriflex, Nikon, and other professional mounts can be attached without affecting the back focal distance and putting undue strain on the C mount threads.

**Image steadiness:** movement is less than one thousandth of the picture height.

**The ground glass** on the entry face of the prism is engraved with 2 frames. The smaller has rounded corners for TV format 8.41 x 6.30mm. The larger, academy frame, for the motion picture format 10.2 x 7.4mm has square corners. A cross indicates the centre position of these frames. The area outside the academy format is a "safe" area, thus minimizing the possibility of the intrusion of microphones and other unwanted objects in the picture.

**An automatic marker light** is mounted adjacent to the camera aperture. It is controlled by a switch located in the base of the camera. Automatic operation causes the clapper bulb to glow for 0.3 secs. thereby fogging approx. the first 8 frames (24 f.p.s.) of each scene when the camera is started. The last maximum fogged frame becomes the visual cue mark, being the point where the motor has attained its nominal running speed. For crystal controlled operation this facility can be switched off as a clapperboard is normally employed in this application. An 8v pulse duration 0.3 secs. simultaneous with the glow of the clapper bulb provides the receiving "BLOOP" signal for the tape recorder oscillator which triggers the audio cue.

**A pilotone module** incorporated with a lateral handle mount and switch is an optional extra for the ACL. This module provides a pilotone signal at 50Hz for 25 f.p.s., at 60Hz for 24 f.p.s. and also at 100Hz for 25 f.p.s. The pilotone signal can either be cut out for the duration of the bloop or be present at the same time as the bloop, according to client's requirement.

**The rechargeable battery** supplied for use with the ACL is a SAFT type VR1. It consists of cadmium nickel cells enclosed in a plastic flatpack. The battery has a shoulder strap and is small enough to fit into a jacket pocket. A fully charged battery will supply power for running 720m (2400ft) of film.

**The fast recharger** enables a flat battery to be fully charged within 30 minutes. It operates on 220/240 volts 50Hz or 127V 60Hz mains supply. Indication of full charge is provided.



## 2. TECHNICAL SPECIFICATIONS

<b>ACCESSORIES:</b>	handgrip, lateral handgrip bracket, pilotone module, filter wallet, selection of TS lens mounts, transport case, crystals, soft protective cover, tripod, range of lenses.
<b>ASPECT RATIO:</b>	1.33 to 1.
<b>BATTERY:</b>	12 volt. Capacity : 1 Amp-hour equivalent to 12 magazines, i.e. approximately 720m (2400 ft).
<b>CAMERA DIMENSIONS:</b>	275 x 175 x 150mm (11 1/2 x 7 x 6in) including magazine but without lens.
<b>CHARGER:</b>	approximately 35 minutes fast charge with automatic cut out.
<b>CRYSTAL:</b>	983,040 Hz or 1,024,000 Hz.
<b>EXPOSURE:</b>	1/48 sec. at 24 f.p.s. 1/52 sec. at 25 f.p.s.
<b>FILM:</b>	16mm double perforation. single perforation A winding emulsion out. B winding emulsion in. 50mm (2 inch) core 60m (200 ft) only daylight loading 30 or 60m (100 or 200 ft).
<b>GELATINE HOLDER:</b>	Sandwich Type.
<b>HANDLE FIXING :</b>	Three positions - top, bottom and side.
<b>IMAGE STABILITY:</b>	vertical unsteadiness better than 1/1000th of frame height.
<b>LENS MOUNTS:</b>	'C' and 'CA'. Arri, Nikon, etc. available as accessories.
<b>MAGAZINE:</b>	coaxial snap-on pattern, core or spool loads.
<b>MARKER:</b>	automatic or manual by selector switch.
<b>MOTOR:</b>	brushless, crystal controlled. 25 f.p.s. and 24 f.p.s. versions available.
<b>MOVEMENT:</b>	single claw intermittent.
<b>NOISE LEVEL:</b>	better than 32dB at 1 metre.
<b>OPERATING TEMP:</b>	-50C to +600C (-230F to +1400F) normal. -200C after special winterising treatment.
<b>POWER CONSUMPTION:</b>	less than 0.8A at 12V at 200C (680F)
<b>SHUTTER:</b>	plane type, fixed 1750 opening.
<b>TRIPOD FIXING:</b>	standard 3/81n Whitworth tapped hole in base.
<b>VIEWFINDER:</b>	rotatable through 360 with eyepiece shutter, adjustable through 3 dioptries. Magnification x 8.
<b>VIEWING:</b>	reflex via oscillating mirror.
<b>WEIGHTS</b>	CAMERA 1.56kg (3 lb 7 oz) MAGAZINE 1.84kg (4 lb 1 oz) FILM 60m (200ft) 0.23kg approximately (8 oz) BATTERY 0.60kg, (1 lb 5 oz) CHARGER 1.98kg (4 lb 6 oz)

### 3. DESCRIPTION

The camera consists of four main units

1. Camera body
2. Motor
3. Viewfinder
4. Magazine

#### 3.1. THE CAMERA BODY

This comprises the mechanism plate (fig 2) on which is mounted the claw mechanism, the oscillating mirror, the plane shutter, the magazine drive shaft, and the prism/ground glass. The body also supports the lens mounts, the gelatine holder, the viewfinder, the magazine lock and safety catch and the embase unit which contains the camera's electronics.

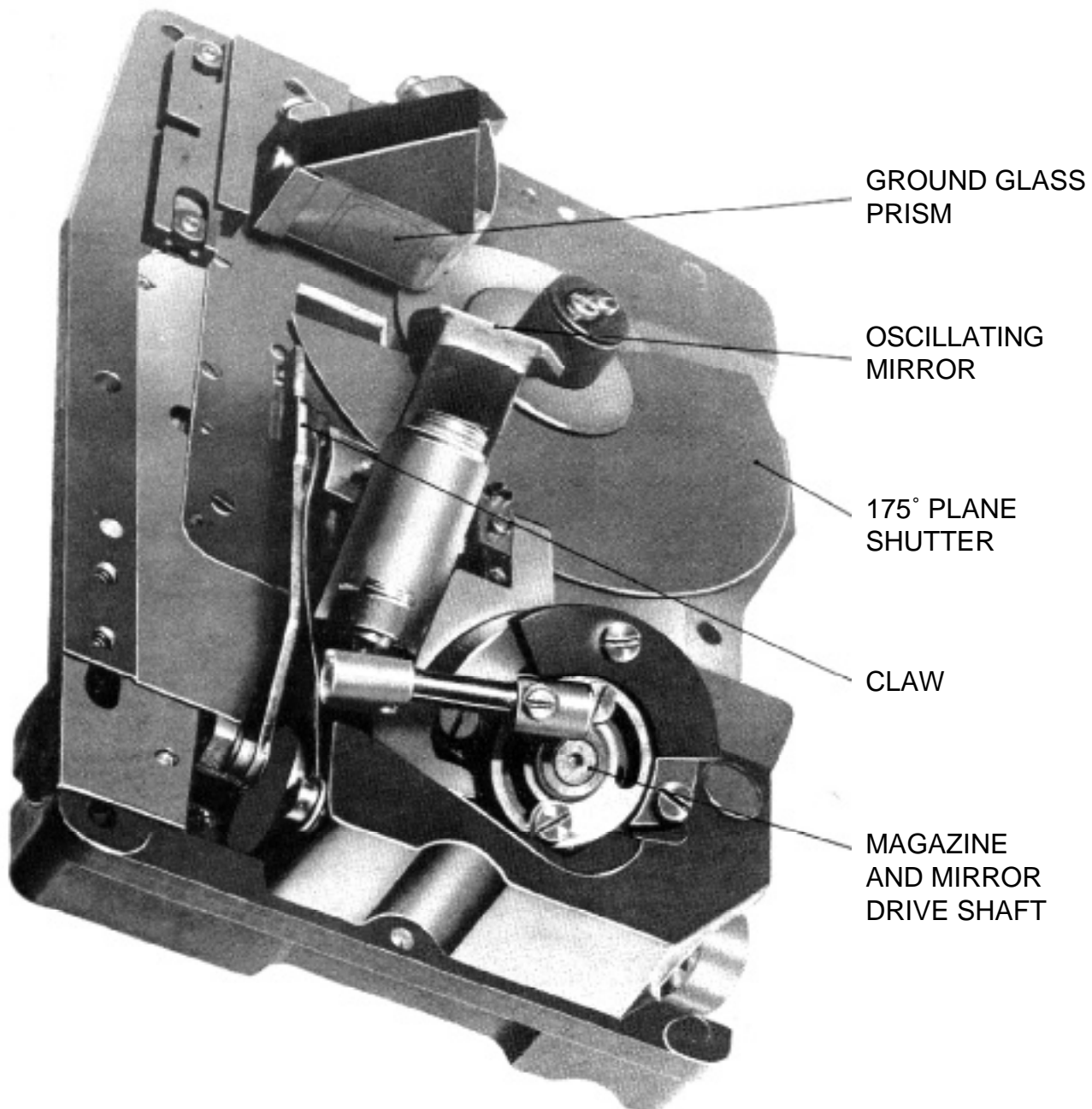


FIG. 2. MECHANISM PLATE

**The mechanism plate.** The complete mechanism is mounted on a plate for rigidity and ease of servicing. An eccentric and a fixed cam produces the claw movement which is rendered positive by counter tension. There are four drive shafts operating on self-lubricated bearings.

**The aperture plate** (fig.3) is manufactured from stainless steel hard chromium plated. On the left hand edge there is a fixed guide which is the edge reference for the film. On the right hand side is a spring loaded guide which controls the lateral stability of the film. The two guides on the back cover, position the nose of the magazine on the mechanism plate.

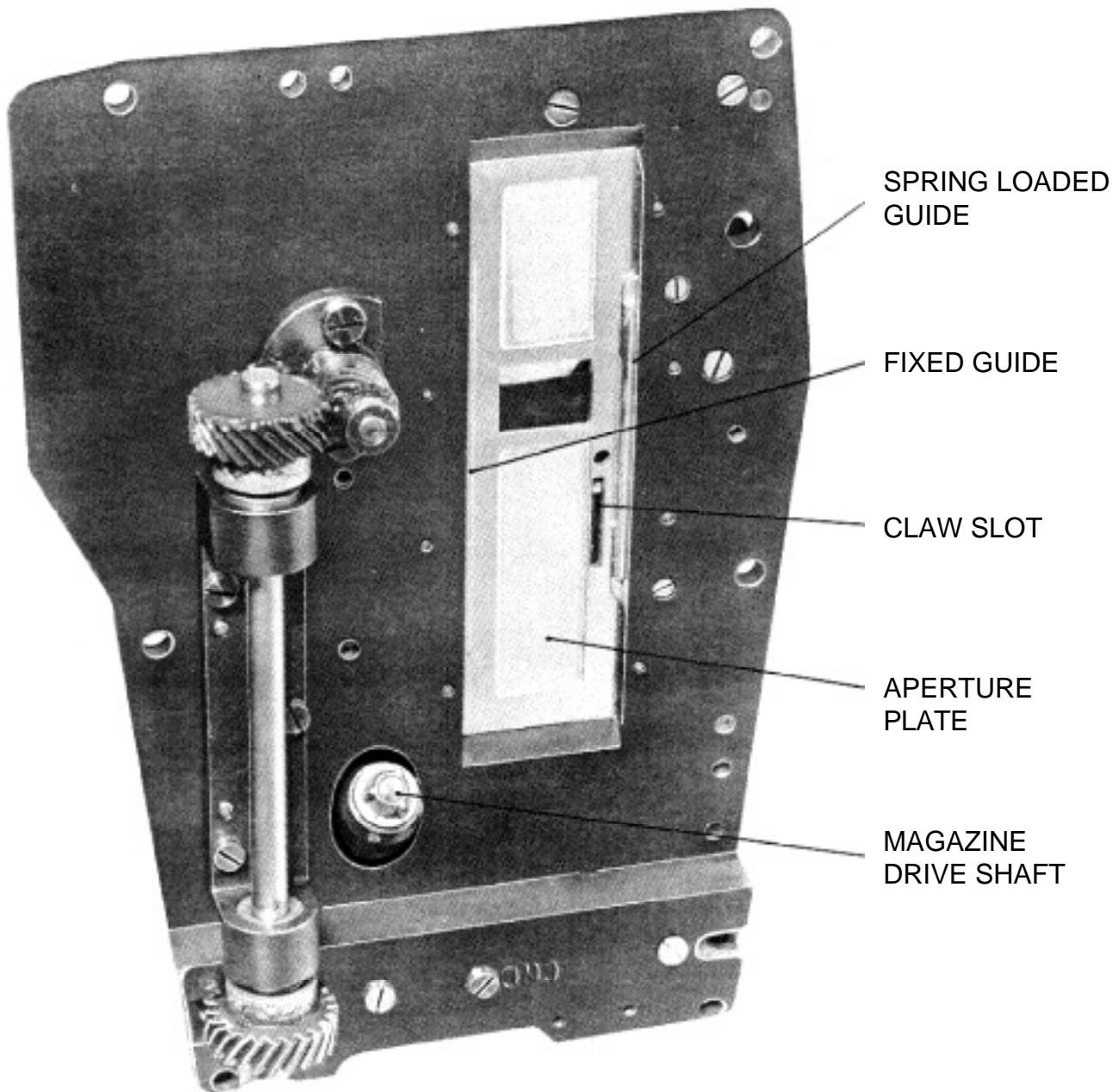


FIG. 3. APERTURE PLATE



**Lens Mounts.** 'C' mount, lenses, as well as other professional mounts such as 'CA', Arriflex etc. may be used on the ACL. The mechanical back focal distance for these other lenses is- therefore greater than 17.52mm. The mount is designed like a flange of which the internal thread matches the 'C' mounts and the external thread matches the Eclair 'TS' mounts. Correct orientation of each lens is ensured by a slot at the top of the flange.

**The gelatine holder.** Each ACL camera is supplied with a gelatine holder, which is positioned between the 'C' mount and the reflex mirror, (fig. 1)

The advantages of this design are -

1. It is not necessary to change the filter at each lens change.
2. It is easy to check the presence and type of gelatine through the viewfinder.
3. It is not necessary to have different filters for different lens diameters.

**The oscillating mirror.** A reflex image is achieved by means of the oscillating mirror travelling at half the frame speed. The image formed by the lens is transmitted on to the ground glass during the descent of the film. The reflecting surface of the mirror is glass fixed to a magnesium support.

**The plane shutter.** In the ACL, unlike other reflex cameras where the mirror is also used as a shutter, a large diameter, plane shutter having an exposure angle of 1.750 operates in front of the film. The shutter cuts off the image in the direction of the smallest dimension, i.e. from top to bottom, and is so shaped to ensure an even exposure.

**The ground glass** has three engravings:-

1. For academy motion picture format 10.20 x 7.42mm.
2. For TV format 8.41 x 6.30mm.
3. A cross denoting the centre of the two formats.

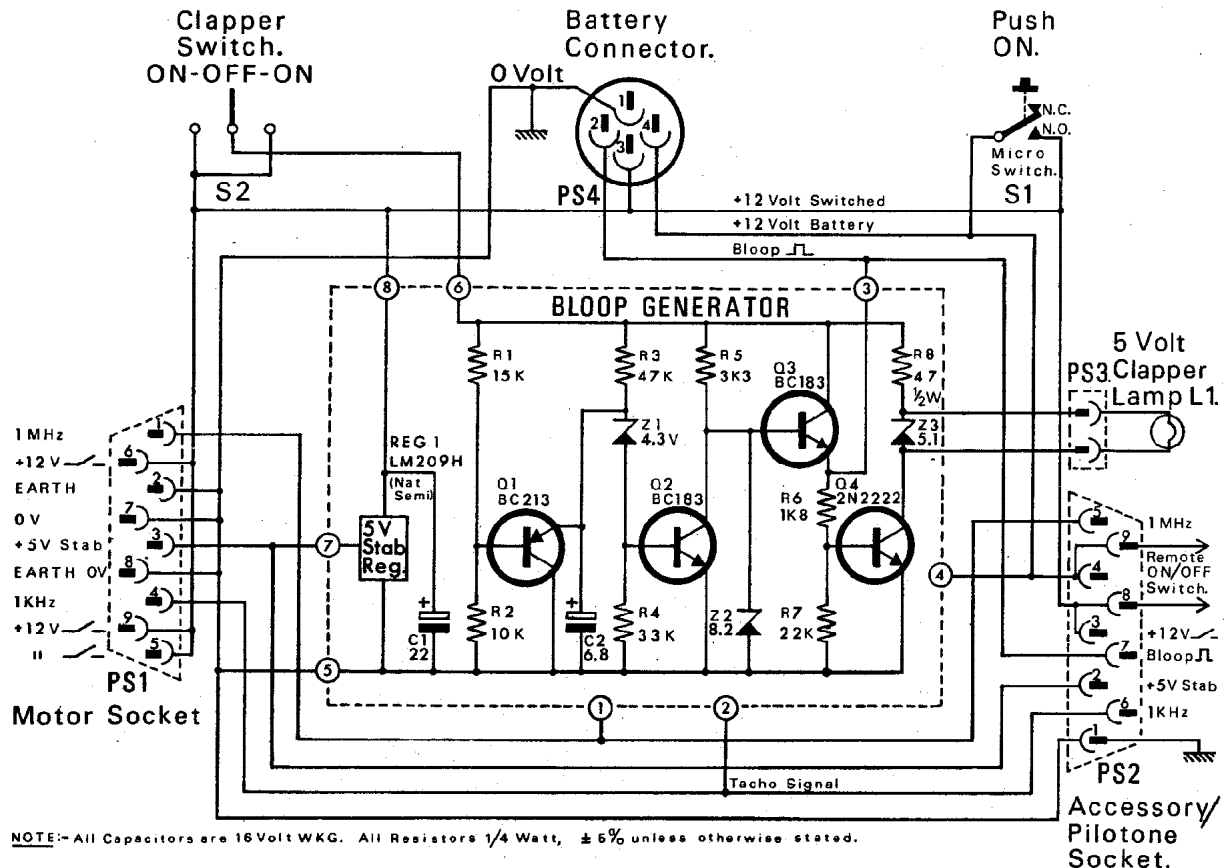


FIG. 4. EMBASE UNIT CIRCUIT DIAGRAM

These advantages are, however, accompanied by a slight change in the optical back focal distance when

the gelatine filter is in position. However this is compensated when visually focusing through the viewfinder.

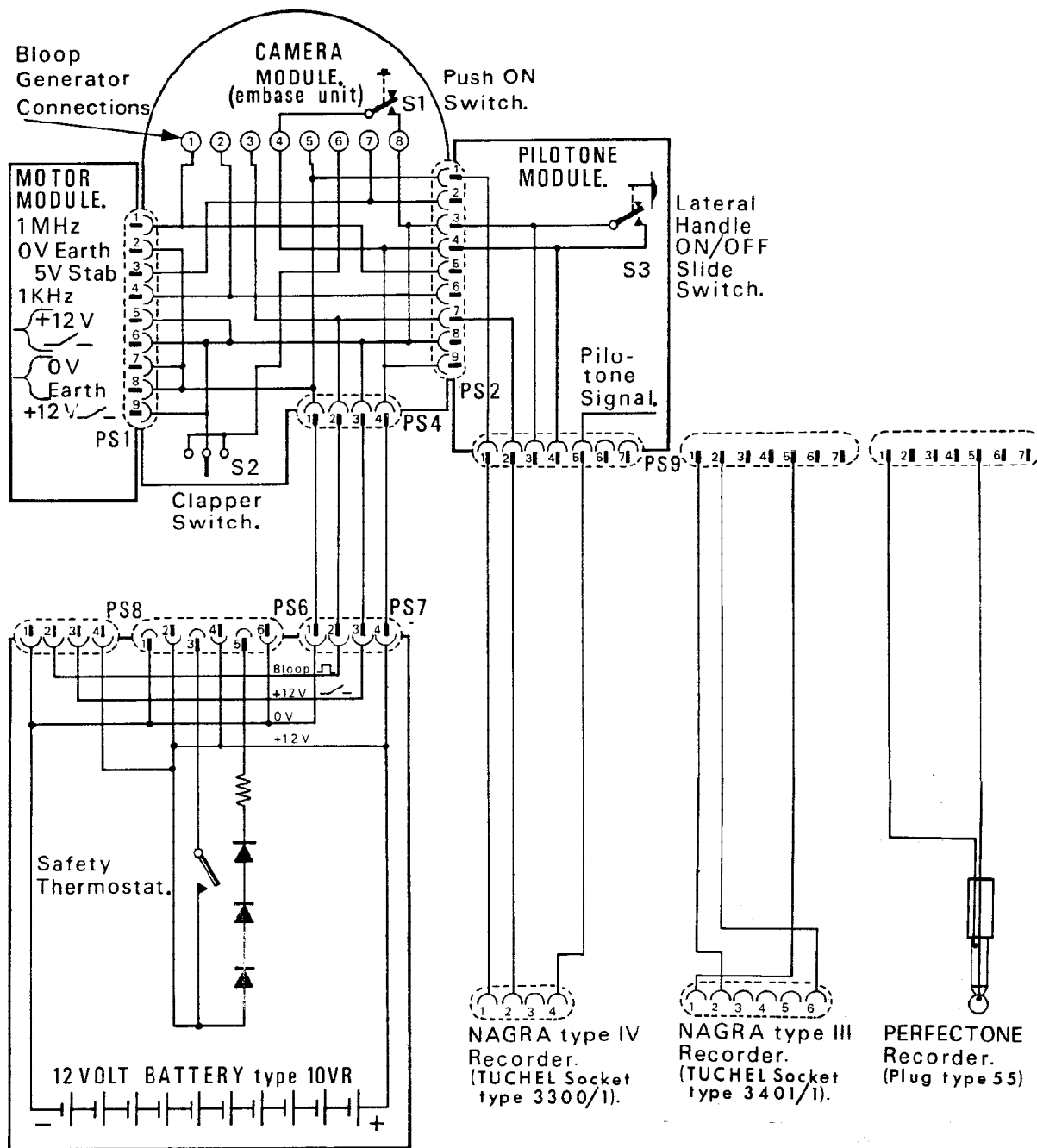


FIG. 5. INTERCONNECTION DIAGRAM.

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Nagra Recorder type 3 connector cableform.

- 1) Pin 1 of plug PS9 should be connected to socket 2 of Tuchel socket type 3401/1.
- 2) Pin 5 of plug PS9 should be connected to socket 1 of Tuchel socket type 3401/1.

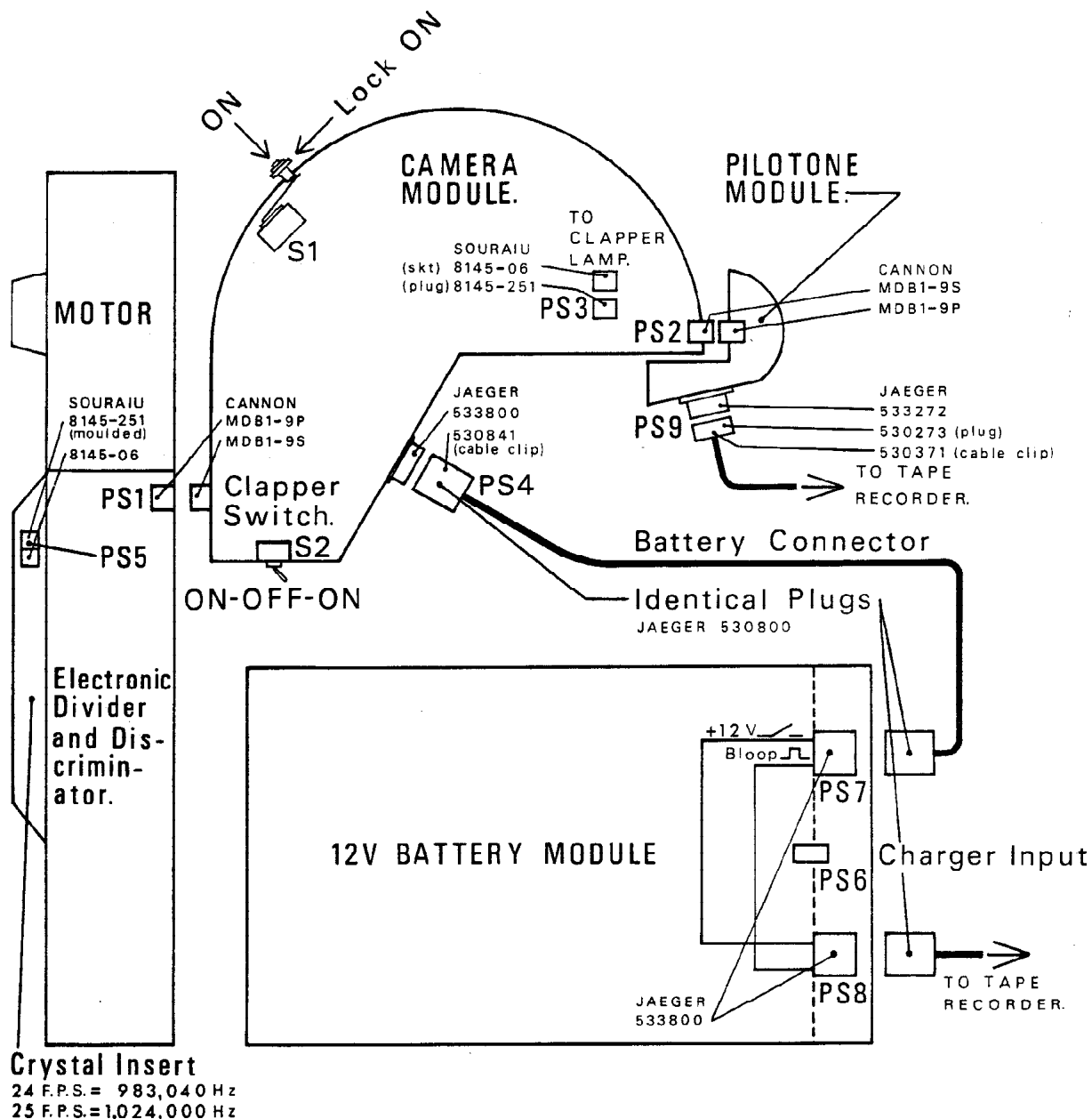


FIG. 6. MODULE INTERCONNECTIONS.

The embase unit forms the flat base of the camera body. It consists of :-

1. A 3/8 Whitworth mounting thread.
2. A Jaeger socket for power supply to the camera.
3. A camera start button.
4. Two cannon sockets for the motor power and ancillaries.
5. A stabilized 5V supply for the motor control module.
6. The clapper light circuit. (fig.4)
7. A Souriau socket for electrical connection to the clapper lamp.
8. A clapper switch.
9. The bloop generator. (fig. 4)

The camera start button activates the supply to the motor and starts the camera. The marker switch has three positions of which the centre position is the neutral, i.e. no marker.

### 3.1.1 THE BLOOP GENERATOR

The marker switch must be in an ON position and the motor circuit energized for the bloop generator to function. When the motor is running, the bloop generator can be started as soon as the marker switch is pushed into either of the two ON positions. Alternatively, the marker switch can be left in either of the ON positions and the bloop generator will start as soon as the camera motor starts.

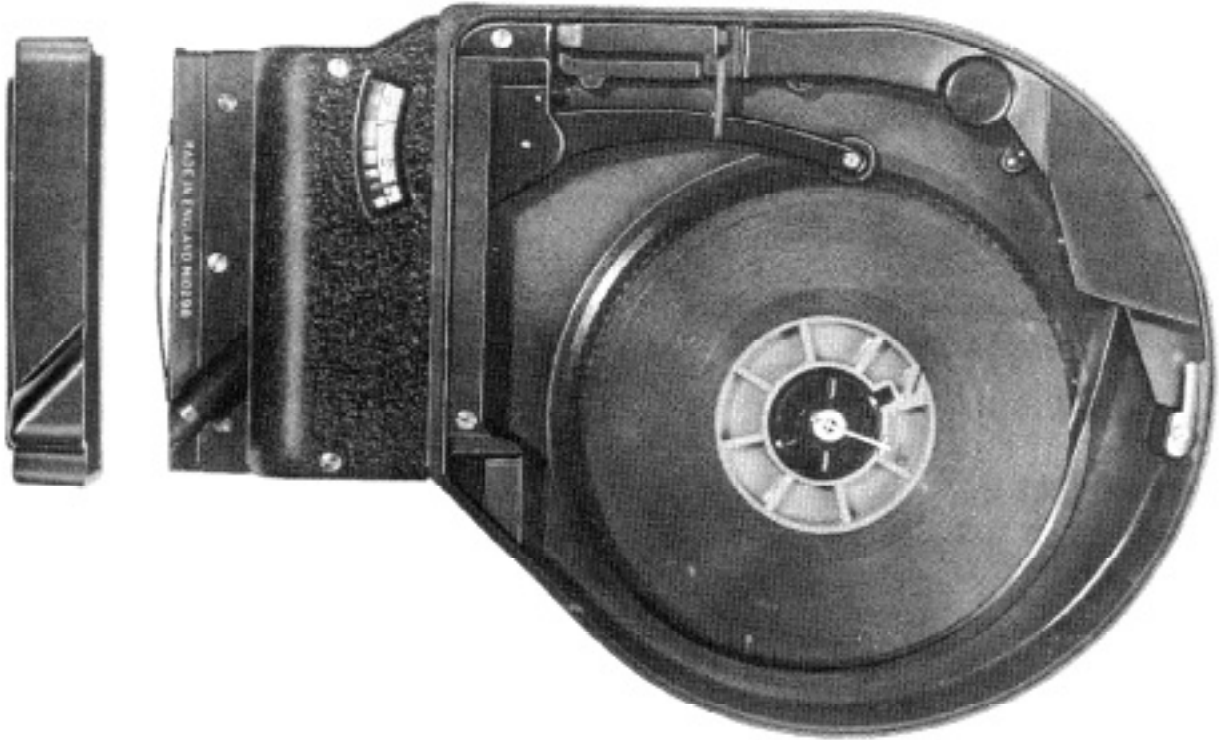


FIG. 7. MAGAZINE FEED SIDE.

### 3.1.2. OUTPUT SIGNALS

available from the accessory socket.

1. A tacho signal in the form of a square wave of approximately 3.8V peak to peak is generated by the motor.

At 25 f.p.s. the repetition frequency of this pulse is 1kHz and at 24 f.p.s. the repetition frequency is 960 Hz.

This frequency can be divided down for pilotone functions.

2. A crystal signal in the form of a sine wave of approximately 100mV peak to peak is made available for test purposes.

At 25 fp.s. the test frequency is 1024 kHz.

At 24 f.p.s. the test frequency is 983 kHz.

### 3.1.3 SYNCHRONIZING THE CAMERA TO THE TAPE RECORDER.

**Tape recorder with internal crystal control** (clapper switch in the ON position)

By using the switched 12V.d.c. supply on pins 1 and 3 of the battery cable to key the ON time of the tape recorder.

**Tape recorder withow internal crystal control** (clapper switch in the ON position)

1. Synchronised by the PILOTONE MODULE working at one of the three frequencies. 50 Hz for 25 f.p.s. 60 Hz for 24 f.p.s. 100 Hz for 25 f.p.s.
2. If the PILOTONE MODULE is connected to the recorder via a sync cable the 8V bloop signal - triggers the audio cue.

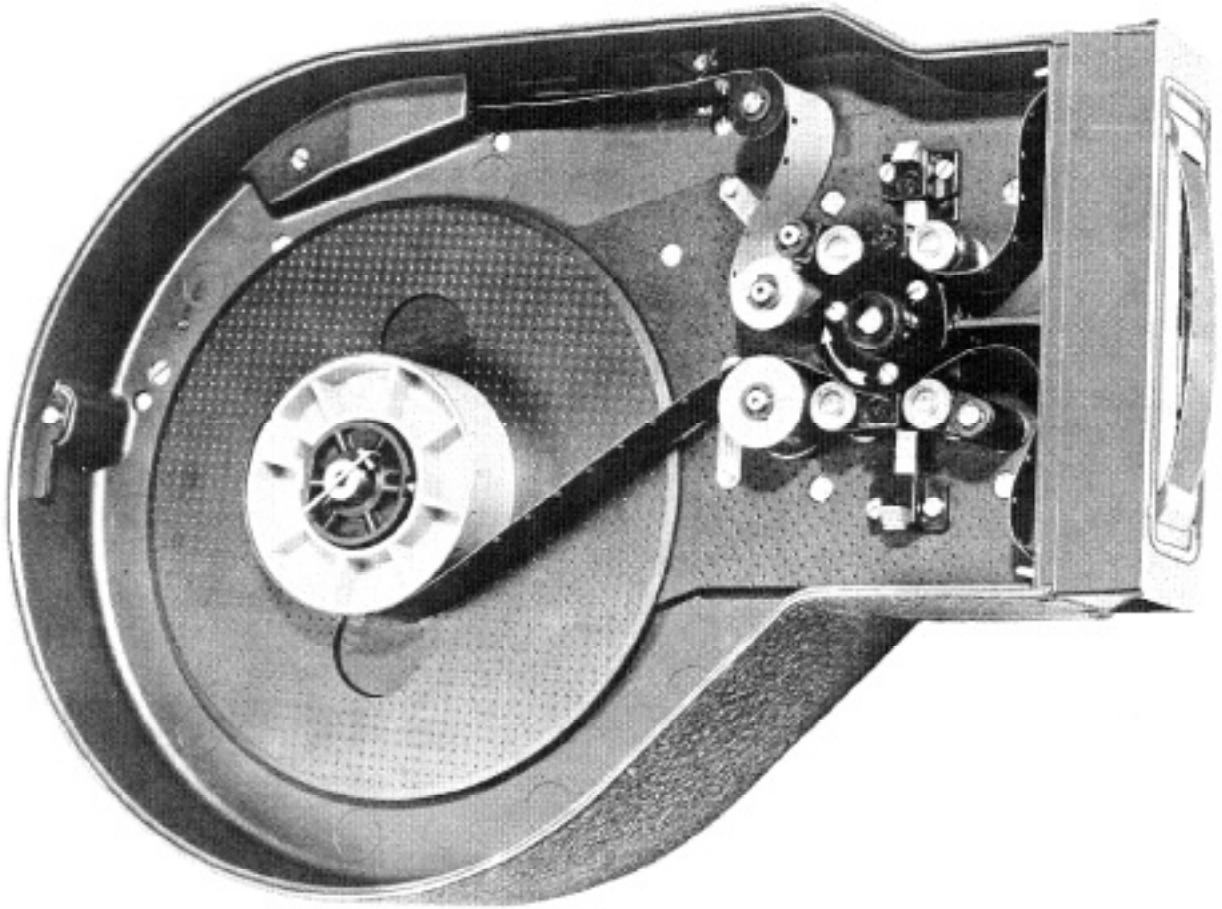


FIG. 8. MAGAZINE TAKE UP SIDE

### 3.2. THE MAGAZINE

The distinguishing feature of an ACL 60m (200ft) magazine is that the major part of the film transport mechanism is an integral part.

The co-axial magazine is divided into two sections each having a separate lid.

Loading is simplified as there is no feed sprocket to negotiate in the dark. Six inches of film is fed through a light trap into the take-up compartment. From this stage the entire loop forming procedure is made in the light.

A single sprocket acts as a feed to the gate via the top loop and following film transportation by the claw displaces the lower loop prior to the take-up assembly which is friction driven.

The sprocket is driven through a universal joint and gear which is automatically coupled to the camera body when the magazine is in position.

A displacement indicator registers the amount of unexposed film and is automatically reset when the feed side lid is fitted.

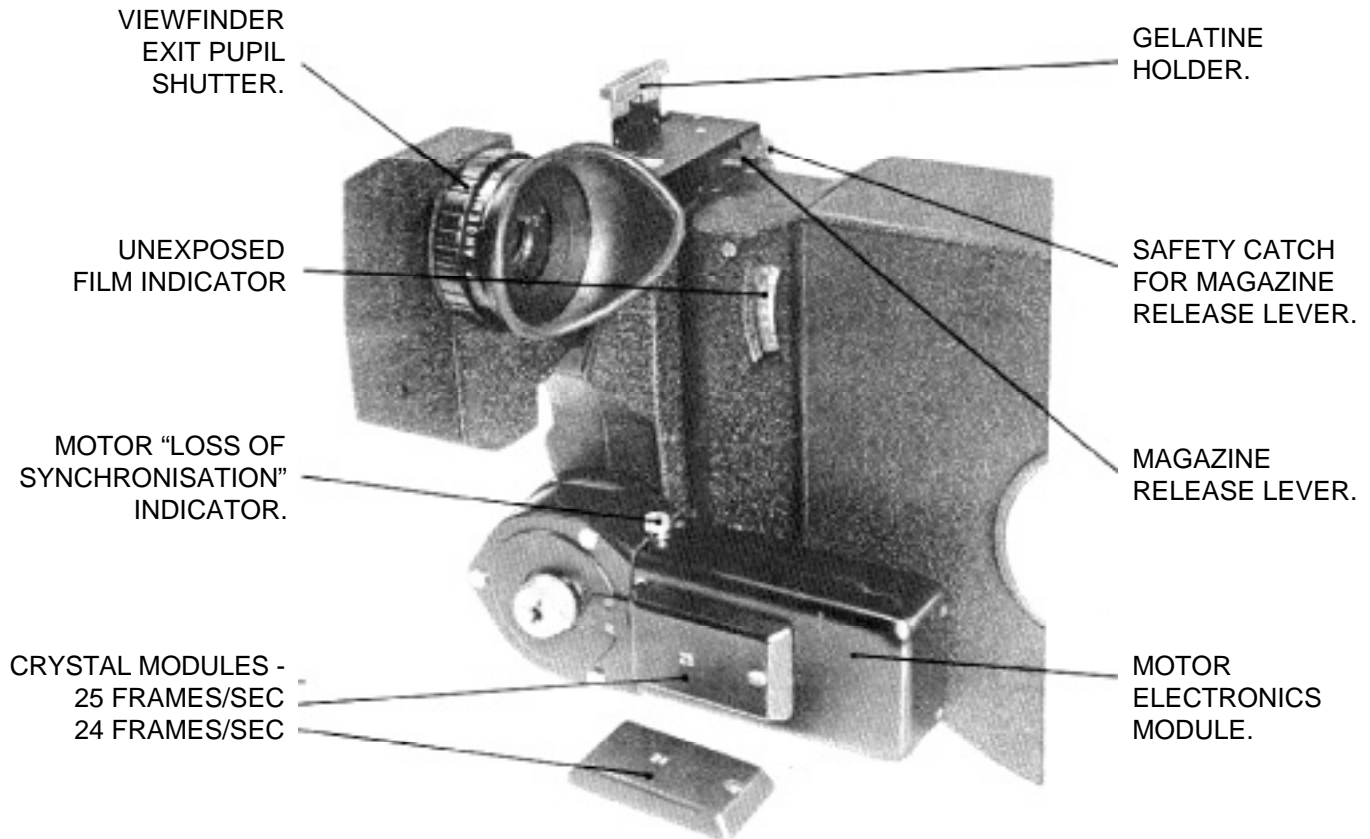


FIG. 9. CAMERA AND MOTOR MODULE DETAIL

### 3.3. THE MOTOR

The motor takes a load of 0.8A at 12V at an operating temperature of 200C (680F) under full load.

Accurate speed control has been achieved by the use of a comparator circuit containing a crystal. The crystal is located under the small cover on the motor assembly (see fig. 9 ) and can be changed easily. The motor will only operate when it is connected to the camera. Should the operating speed of the motor fall below the working level, then a warning light on the side will come on indicating loss of synchronisation. This condition applies if the output power of the battery is low.

### 3.4 THE BATTERY.

Contained in the battery unit are a) The safety thermostat to prevent overheating.

b) A negative temperature co-efficient device to counteract the positive co-efficient of the battery cells.

This allows the accurate sensing of the battery voltage at any temperature. The power requirement for driving the camera is low. The capacity of the battery is 1.2 Amp-hour at 200C (680F) and this is approximately equivalent to 720m (2400 ft) of film. The connections to the battery are from either of the Jaeger 4-pin sockets. A central Socapex socket is used in connection with high speed charging.

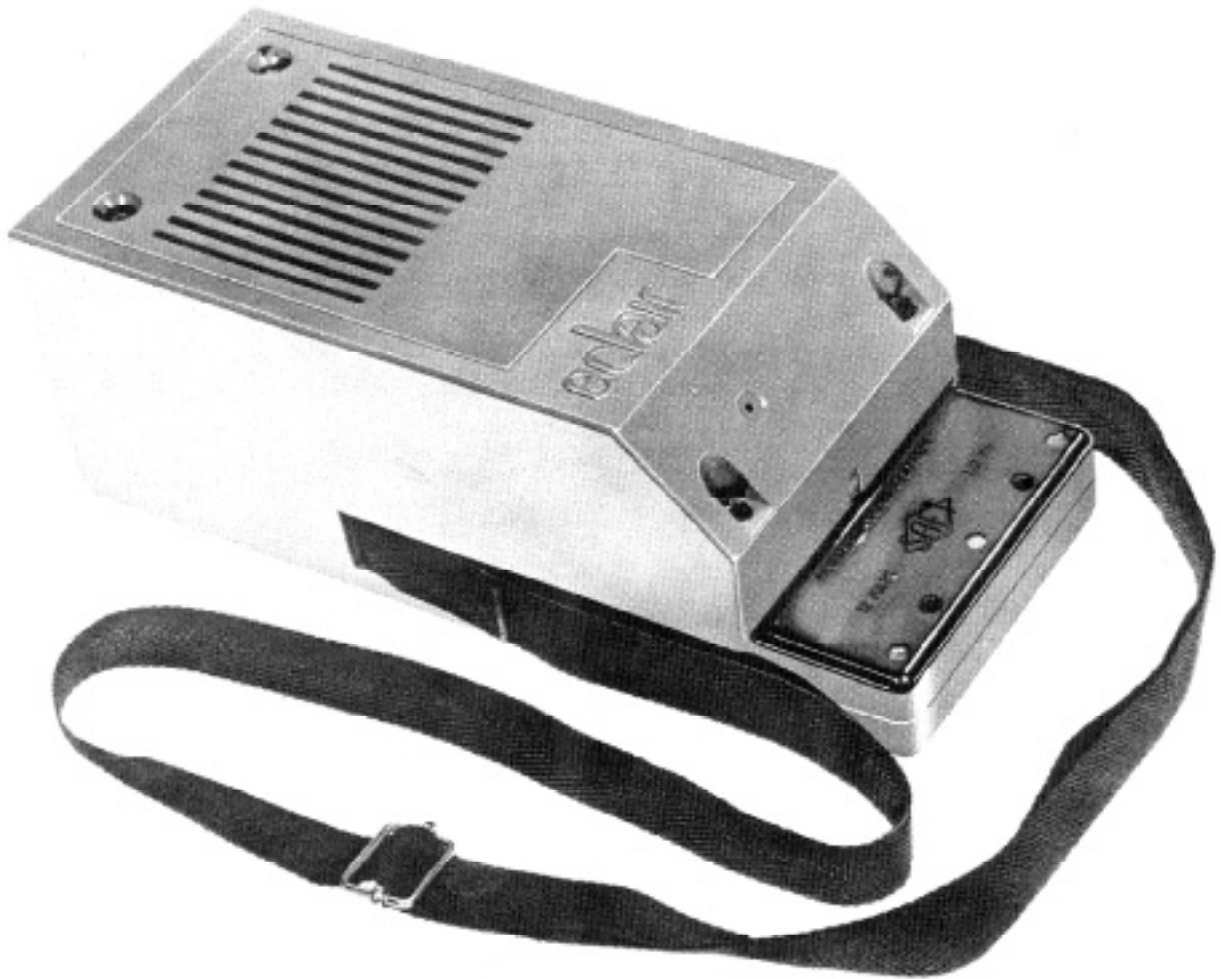


FIG. 10. CHARGER WITH BATTERY IN POSITION.

### 3.5. THE CHARGER

This is fitted in a plastic case and supplied with suitable cable. It operates from mains supplies. There is an automatic cut out at full charge. A safety fuse (0.8 amp) has been inserted into the circuit for protection against overload. Spare fuses are kept under the two chrome studs in the base of the charger.

### 3.6 ACCESSORIES

Transport Case (Code MIKOF) of aluminium alloy with non-absorbent foam lining contoured to accommodate ACL complete with magazine and zoom lens ready for use, 2 spare magazines, 2 batteries, rapid charger, leads and other small accessories. Its (hammered) finish gives a lasting new appearance and is strong enough to stand on. Fitted with a dust/damp

proof seal between hinged lid and base. The dimensions are 565mm (221/41in) x 210mm (81/4in) x 350mm (0 3/8in).

Crystals. Two crystals are available. These have fundamental frequencies of 1024 kHz and 983.04 kHz for 25 f.p.s. (code MIQBI) and 24 f.p.s. (code MIQUA) respectively. Each crystal is moulded to a block engraved with the corresponding camera speed and is attached by means of a "penny slot" screw to the side of the motor case. Electrical connection is via a miniature two pin connector. The accuracy is guaranteed to be within  $\pm 50$  p.p.m. over a temperature range of  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+149^{\circ}\text{F}$ ). This is equivalent to less than 1/2 frame in 60m (200ft) of film.

**Side Mounting** (Code MIPS1) enables a hand grip to be fitted to the side of the camera when the pilotone module is not fitted. This mounting contains a sliding ON/OFF switch for camera start.

**Pilotone Module** (Code PI MOD) can be fitted instead of the side mounting. This also contains a sliding ON/OFF switch for camera start, and location for a side fitted handgrip is provided.

The pilotone module performs the following functions:

- a) generates a pilotone signal for
  - 50Hz at 25 f.p.s.
  - 60Hz at 24 f.p.s.
  - 100Hz at 25 f.p.s.
- b) depending on requirement, the pilotone signal can be present or cut out for the duration of the bloop signal.

The pilotone signal frequency is very accurate since it is controlled by the motor speed, in turn controlled by the crystal. The connections to the pilotone recorder socket are shown in fig.5. The three frequencies are clearly marked on the pilotone rotary switch.(fig.12)

The pilotone module is supplied with two lengths of sync cables, 1.2 metres (4 ft) and 7.6 metres (25 ft). Each cable is available as an accessory and is fitted with a Jaeger plug type 530273 and clamp type 530371 for the Pilotone Module and a suitable plug at the other end to suit the recorder.

**Handgrip** (Code MIGRI). The handgrip is constructed in two sections; the bracket which fits into the base or the top 3/8" Whitworth thread and the grip which is connected to the bracket by means of a thumb screw. Its position can be varied to suit the individual and it is securely located in any position by locking the serrated rings which are fitted to both sections. A similar serrated ring is fitted to the Pilotone Module housing to provide a fixing for the same grip when used as a lateral support. The grip is constructed to house two spare filter slides.

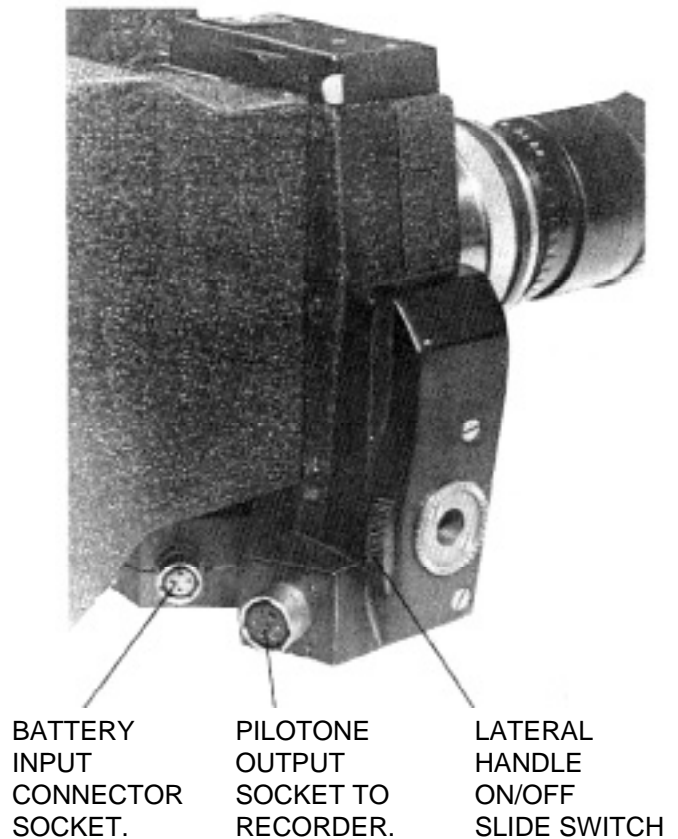


FIG. 11. PILOTONE MODULE

**Filter Slides** (code MIGEL). These slides are designed to sandwich a gelatine filter which is then cut to shape. It is then inserted at the top of the camera and when in position behind the lens can be seen through the viewfinder. If no filter is necessary when filming, an empty holder must always be in position to prevent flare.

N.B. See section 3.1 on use of gelatine filters behind the lens.

**Filter Wallet** (Code M ITU 1). This is a flat container for five filter holders (code MIGEL) for spare or different Coloured filters.



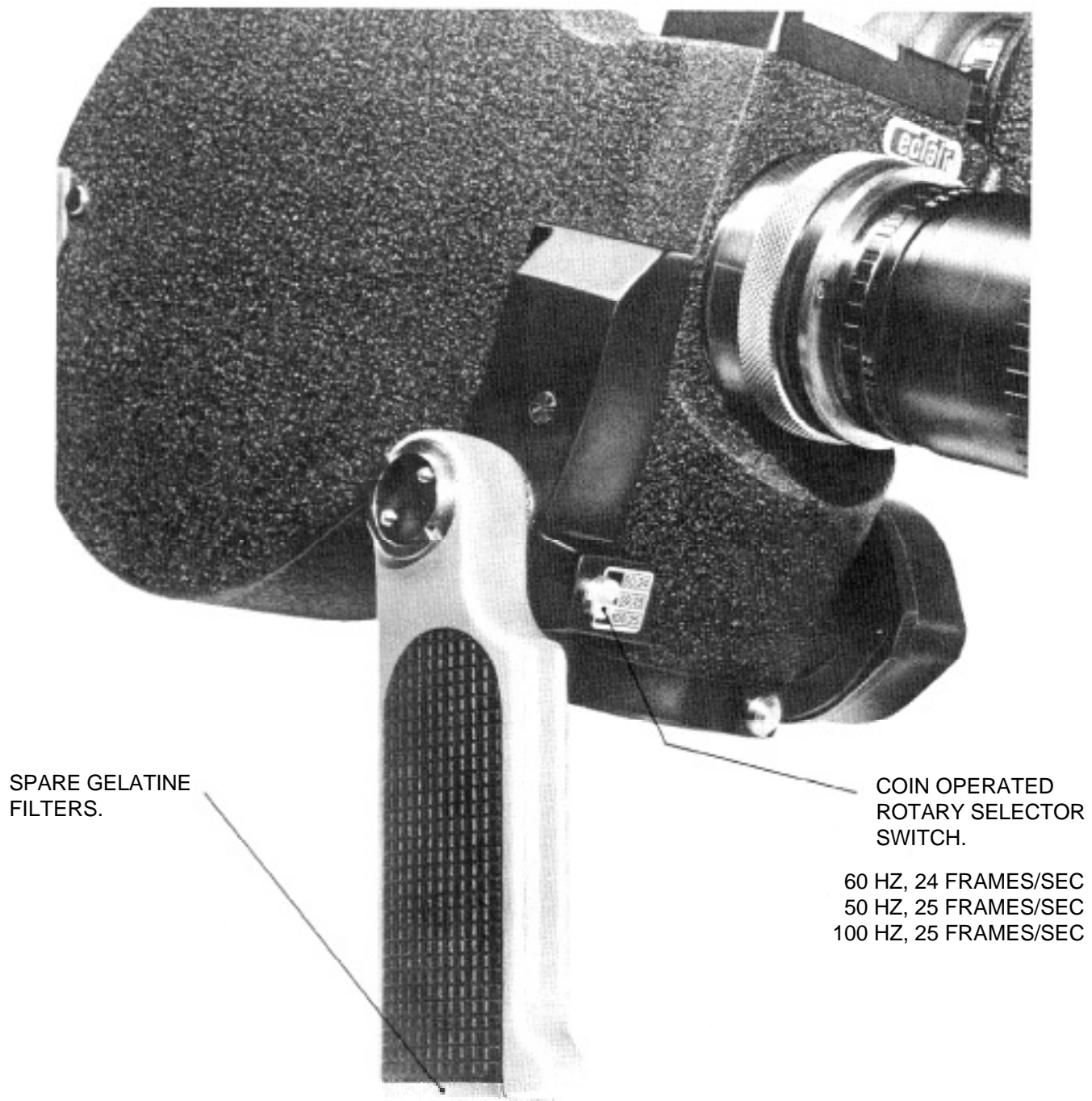


FIG. 12. HANDGRIP MOUNTED ON PILOTONE MODULE

## 4. OPERATING INSTRUCTIONS

When preparing the camera for filming the following procedure should be adopted.

### 4.1. CHARGING THE BATTERY

Select the appropriate mains tapping on the back of the charger. Slide the battery into the charger ensuring that the red dot on the front of the charger faces the red dot on the battery. Ensure that the indicator lamp comes on when plugged into the mains.

The battery will charge to full capacity in about 30 minutes. Full charge has been reached when the charging indicator light goes out. Remove the battery from the charger. Disconnect charger from the mains.

### 4.2. DIOPTRE ADJUSTMENT OF VIEWFINDER

Remove all plastic dust covers, depressing magazine release lever to remove plastic aperture protection plate. Open the shutter and adjust the mirror to the viewing position by turning the knurled knob on the side of the motor anticlockwise.

Mount a lens and adjust for the shortest focal length. Adjust the aperture to darken the ground glass. Release the inner viewfinder knob so that the viewfinder can slide away from the camera body.

Point the camera to the sky or an evenly illuminated surface and adjust the position of the viewfinder until the grains of the ground glass appear sharp. Lock the viewfinder in this position.

Release the outer viewfinder locking knob to allow the viewfinder to rotate through 360° about the flange axis and lock in a convenient operating position.

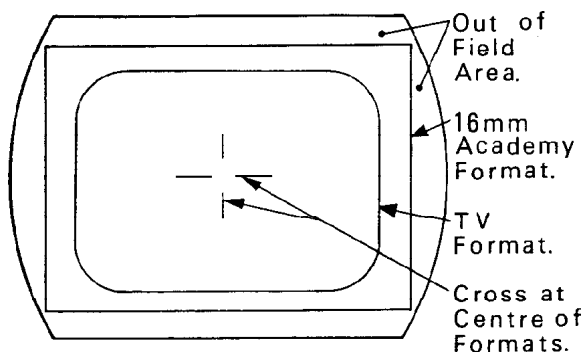


FIG.13. VIEWFINDER FORMAT DETAIL.

### 4.2.1. TO ALIGN THE IMAGE IN THE VIEWFINDER VERTICALLY

Mount the camera on a level support. Focus on a vertical line and rotate the viewfinder until the former appears parallel with one edge of the engraved frame. Lock in this position.

Note: Whatever the position of the viewfinder, the angle of the image within the frame corresponds to the image recorded on the film.

### 4.3. GELATINE FILTER SLIDE (fig. 1)

Fit the holder in the camera carefully with the chamfered face forward.

Check the holder is located by ensuring that the aperture is aligned with the 'C' lens port.

Caution: Always film with a holder in position, with or without a filter, to avoid the possibility of fogging the film.

To insert gelatine filter, carefully pull filter slide upwards to remove from camera. Open the holder by pressing the holder button.

Place a 50mm (2in) square gelatine in the holder and close it. Using a razor blade, cut the gelatine flush with the profile of the holder.

Caution: Never attempt to insert a damaged filter holder or place two gelatines in the holder.

### 4.4. MOUNTING THE LENS (fig. 1)

#### a) Eclair'CA' mounted Lens

Remove the protective cap and dust ring from the steel front plate. Clear away any dust and dirt from the flange with a small brush. Locate the 'TS-CA' mount making sure that the locating pin enters the slot on the flange and then tighten the retaining ring. Insert the lens into the 'TS' mount and lock by turning the lens clockwise.

A lens support is not necessary as the Eclair 'TS' mount is exceptionally robust with a large locating diameter and contact face.

#### b) 'C' mounted Lens

Remove the 'TS' adaptor to reveal the 'C' lens port. Fit black dust ring to 'TS' screw flange. Screw in the lens.

Caution: Heavy telephoto or zoom lenses having a 'C' mount should not be fitted to the ACL camera as this can distort the back focal distance - instead, use lenses with a 'CA' mount in conjunction with a 'TS-CA' adaptor.

## 4.5. REMOVING MAGAZINE FROM CAMERA BODY

Slide the safety catch outwards. Hold the top of the magazine with one hand and the camera body with the other. Press the lock release lever with the index finger. Pull the magazine down and back to clear the camera.

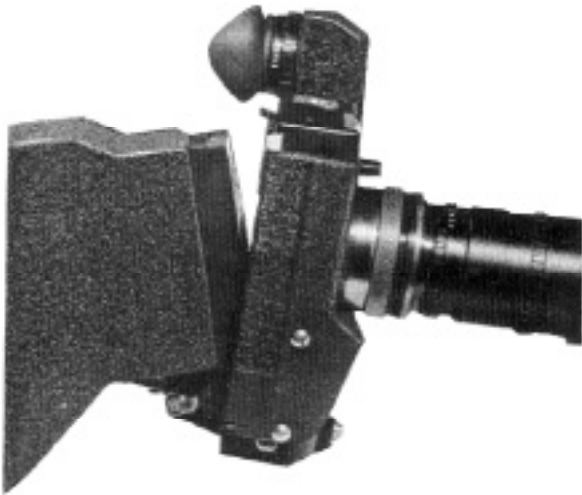


FIG. 14. CAMERA/MAGAZINE LOCATION.

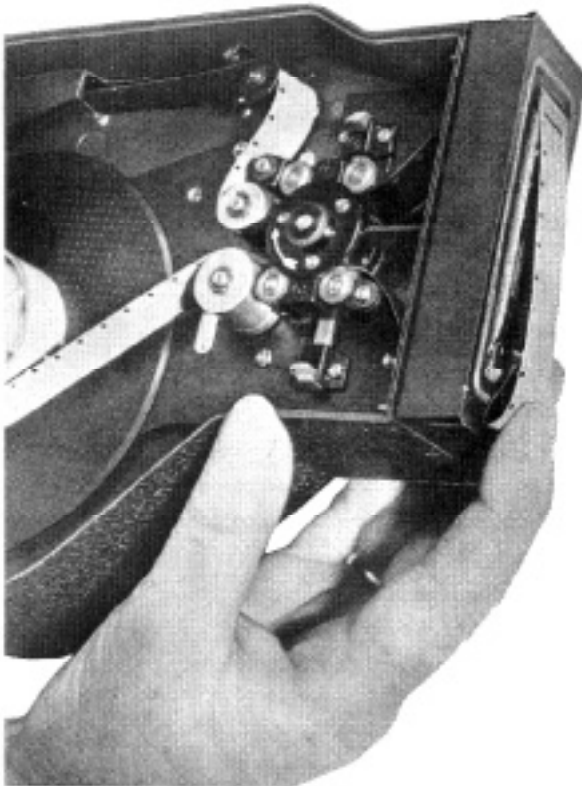


FIG. 15. CHECKING SIZE OF FILM LOOP.

## 4.6. LOADING THE MAGAZINE

### a) Feedside

To load film on a 50mm (2in) core, in a darkroom or changing bag, place the magazine on its side, nose to the left and proceed as follows :

Depress the safety button with the right hand and turn the lid latch anticlockwise.

Lift the lid by the part of the latch that protrudes over the edge of the magazine and simultaneously pull the lid backwards to clear it from the magazine.

Move the film indicator arm until it automatically locks in the UP position.

Hold the film in the left hand and place its end between the two rollers at the entry to the light trap. The emulsion side must face outwards.

Note: For single perforation film, the perforation must be to the centre of the magazine. (perforation down).

Push approximately 150mm (6in) of the film into the light trap. Fit the core on the support flange and check the flange lock is firmly secured.

Replace the lid by inserting the spring strip at the left of the lid into the magazine nose, allowing the lid to rest on the rim of the magazine body. Push the lid forward and down to locate it in the body and turn the catch clockwise to lock. The film indicator arm drops into position automatically when the lid is correctly fitted.

### b) Take-up Side

This side can be loaded in light.

Lay the magazine on its side with the nose to the right.

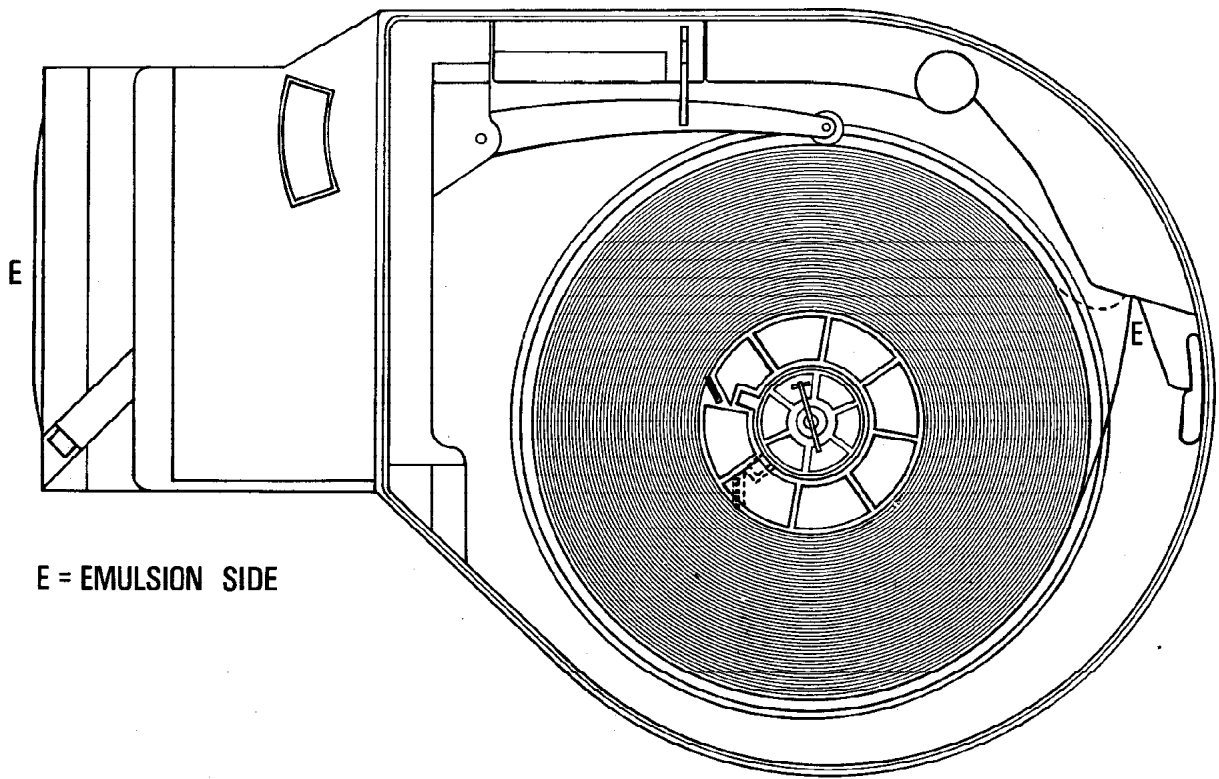
Remove the lid.

Pull the end of the film between the rollers and continue the film path as shown in (fig.17). Depress the pressure pad to facilitate threading. The two sprocket guide shoes are opened by pressing the two adjacent catches.

Having threaded the film up to but not attached to the take up spool, check the loop sizes by pulling the film loops outside the magazine at the pressure pad. The correct number of frames is determined when the tip of this large loop can be pulled level with the magazine locking tongues. (see diagram)

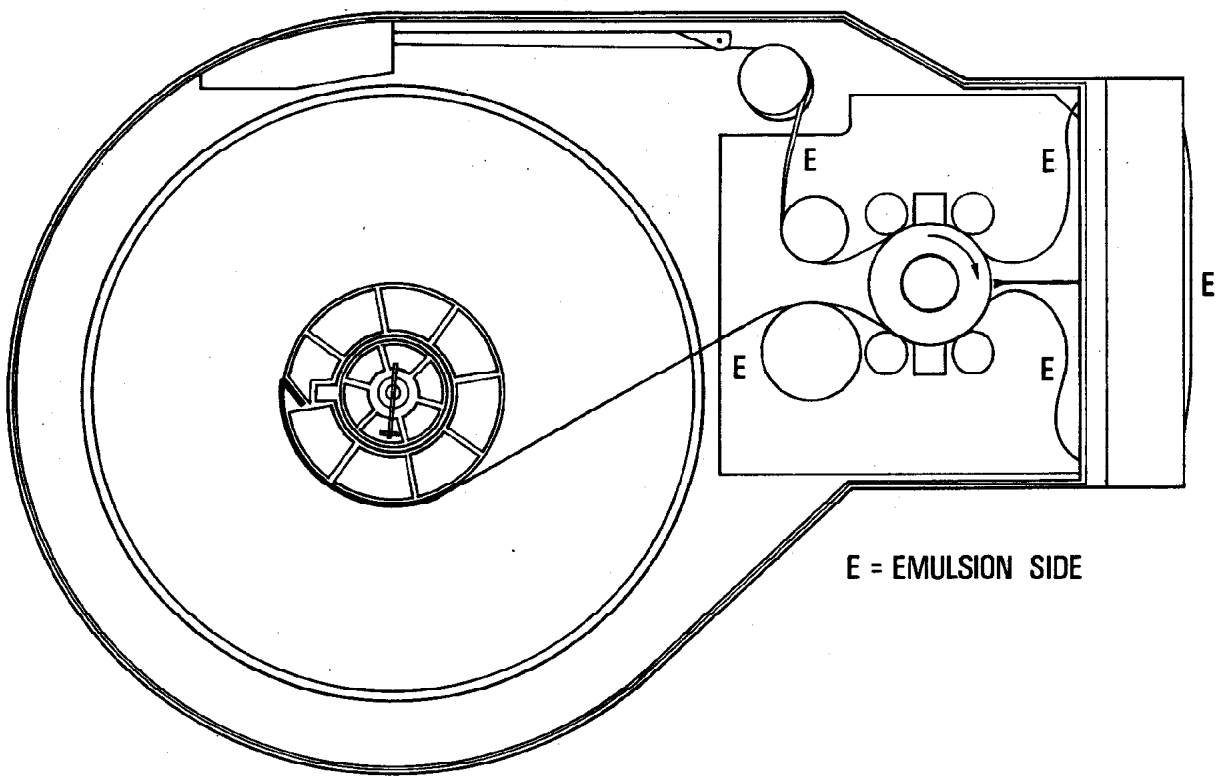
Divide the film in the magazine nose and then adjust the divided loop so that there is one more frame in the bottom loop than there is in the top loop.

Wind the film on to the core, place it on the flange plate and check the flange lock is firmly secured, then replace the lid.



E = EMULSION SIDE

FIG. 16. FILM PATHS FEED SIDE



E = EMULSION SIDE

FIG. 17. FILM PATH TAKE UP SIDE

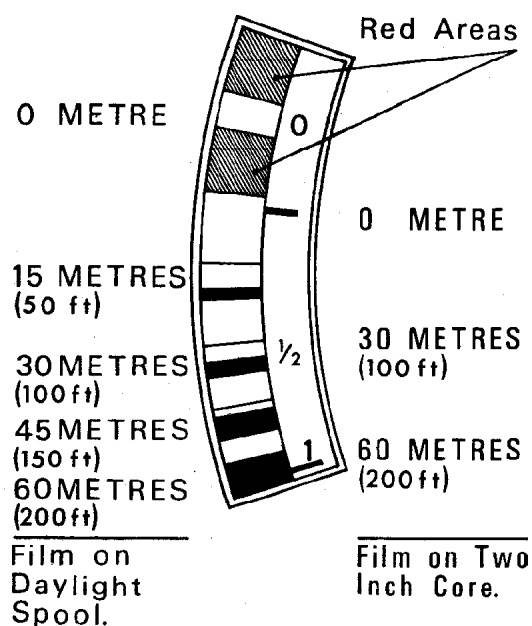


FIG. 18. UNEXPOSED FILM INDICATOR.

#### 4.6.1 DAYLIGHT SPOOLS

When daylight spools are used instead of 50mm (2in) cores the loading and loop forming procedure is the same except that the core flanges on both feed and take-up sides must be removed to reveal the squared shoulder for locating the spool.

#### 4.7 MOUNTING MAGAZINE TO CAMERA BODY (fig 14)

Before engaging the magazine ensure that; the aperture plate is clean, the claw side lateral pressure guide is free and that the magazine safety catch is open.

With the magazine tilted backwards as shown in fig. 14, place the lower part of the magazine nose at the bottom of the aperture plate. Pivot the magazine on its lower locating points and push it home. The lock operates automatically and a sharp click indicates that the magazine is firmly in position.

Push the safety catch inwards. This ensures that the magazine will not be accidentally detached by a knock on the release lever.

- Note: 1) Before attaching magazines, always re-check the loops and the additional frame in the lower loop as described in section 4.6-b.
- 2) Fit dust caps to magazines not in use.

#### 4.8. FITTING THE HANDGRIP

Unscrew the knurled ring.  
Screw the handgrip into the hole provided for that purpose at the base of the camera.  
Adjust the handgrip to a comfortable gripping position and lock in that position by turning the knurled ring.

The angle of the handgrip is easily adjusted by unscrewing the handgrip lock.

#### 4.9. STARTING THE CAMERA

When the lens and magazine are mounted and the viewfinder adjusted, proceed as outlined below :  
Connect the battery to the camera with the MIBLE cable. Adjust the mirror to the viewing position using the knurled knob on the motor.

Set the clapper switch to -the desired position.

Centre = No Clapper.

Right or left = Automatic Clapper.

For manual clapper during filming, move the switch to either side position. The clapper (fogging period) is 0.3 second.

START the camera by pressing the release button. Slide the button towards the motor to lock it in the running position.

If the amber lamp on the motor housing comes ON, it will signify low voltage and that the battery needs recharging.

To STOP the camera, slide the pushbutton away from the motor and allow it to return outward to the OFF position.

Note : After loading, run the camera for approximately five seconds before starting to film. This advances that part of the film which will have been fogged during the loading procedure.

## 5. ESSENTIAL PRECAUTIONS

1. Ensure that all the dust covers and protective plates etc. are fitted when the camera is not in use.
2. Check that the magazine loops are set correctly when loading.
3. Check the aperture plates and film path for cleanliness (remove emulsion dust).
4. Do not use loosely wound film stock on core loads.
5. Check the concentricity of the daylight spools to avoid noise and jamming.
6. Check the correct fitting of the filter slide, i.e. tapered edge facing forward.
7. Ensure that the gelatine holder is in position whether or not it contains a gelatine.
8. Ensure the TS lens mount locating pin is fitted in the notch for correct focussing.
9. Take note and act on special instructions regarding extremes of temperature.
10. Do not pick the camera up by the lens.
11. Do not lubricate the camera.
12. Do not force the battery into the charger.
13. Do not swivel the viewfinder without unlocking.
14. Do not remove the motor from the camera under any circumstances.
15. Do not use a metal object when cleaning the aperture plate; use a match stick or toothpick after ensuring that the mirror and shutter are clear of the aperture.

## ABOUT THIS .PDF DOCUMENT

This document was created in June of 1999 on a crappy Radius 8100/110 Macintosh clone. All items were scanned on a lousy UMax Astra 1220S scanner. Text was OCR'ed with Omnipage Pro 8.0. Adobe Photoshop 5.0.1 was used in the scanning of the images and they were done as 150 d.p.i. TIFFs. PageMaker 6.5 was used to assemble the elements. Adobe Acrobat 4.0 was used to imbed the index links and compress the images.

This .pdf document attempts to recreate the original lame-ass layout of the original ACL manual that came with my camera. If you printed this puppy out on slightly yellow, musty paper, you'd basically have something that looks (and smells) like an original. All pictures and data were included.

The person responsible for this documents creation was:

**Eric Bickernicks**

Some e-mail addresses he can be contacted at: (as of June '99)

**biksco@mediaone.net**

**eclair@biksco.com**

This document most likely originated from this website:

**<http://www.biksco.com/acl/index.html>**

*To learn all sorts of crap about the Eclair ACL camera, please check out the above website!*

I don't claim any copyright on the data within this document. Hopefully I won't be getting flamed by some pissed-off French guys somewhere who had something to do with the original manufacturing of this camera. Do whatever you want with this document. (Here's something fun you could do: at times, certain people on [www.ebay.com](http://www.ebay.com) attempt to sell COPIES of Eclair ACL manuals online. Send them this .pdf document and tell them to fuck off.) :-)

I believe this manual came from the original series of cameras. (Eclair ACL I's as they are sometimes known.) Eclair made some improvements on the camera later on in the manufacturing. (Upgraded the motor, used '400 reels. These are sometimes known as ACL II's.) If anyone has access to one of these later manuals with the additional features to the camera, I'd love to create another .pdf document from that. Please give me a shout.

I also wouldn't mind doing a .pdf on the Eclair NPR camera. If anyone has one of these manuals, give me yell.