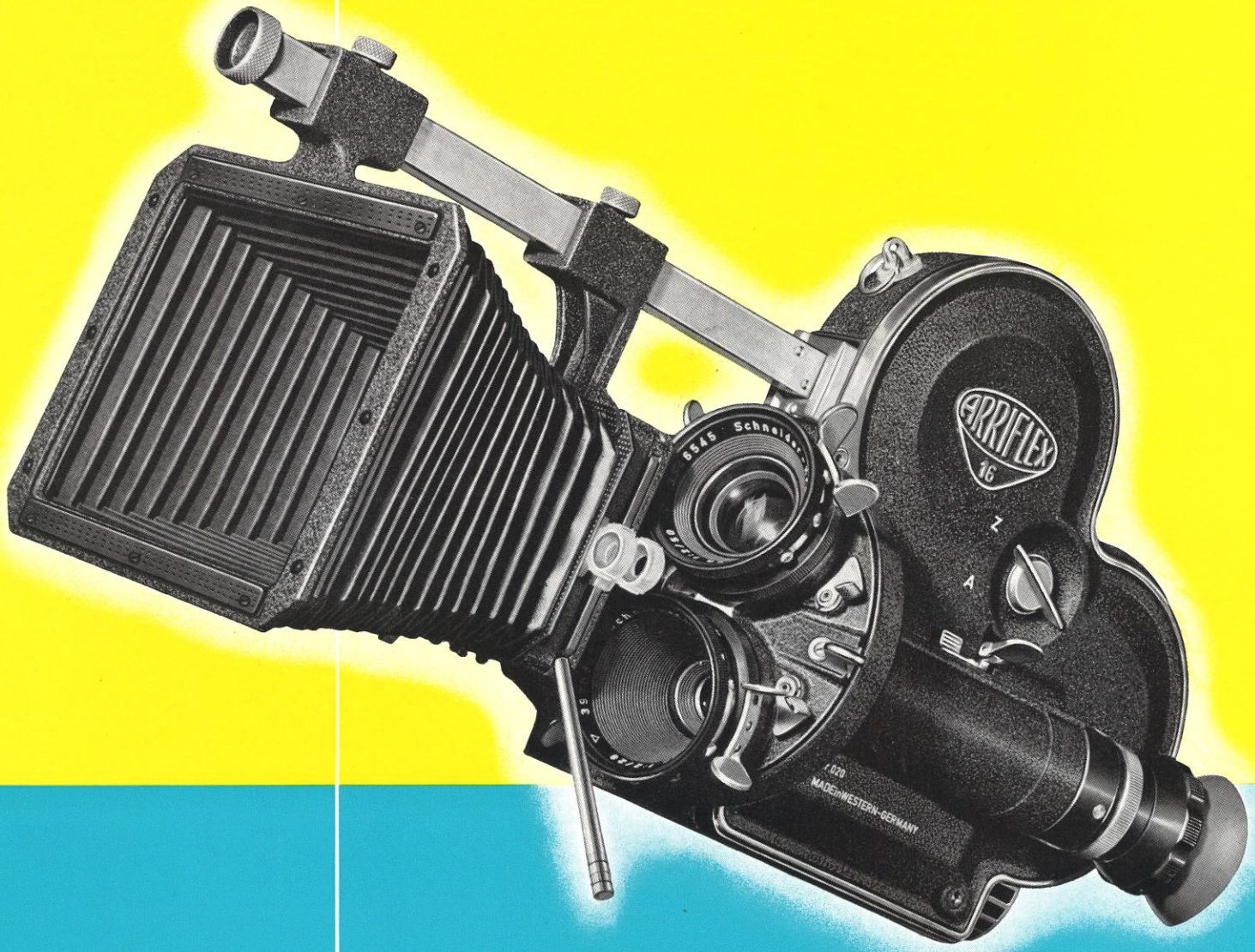
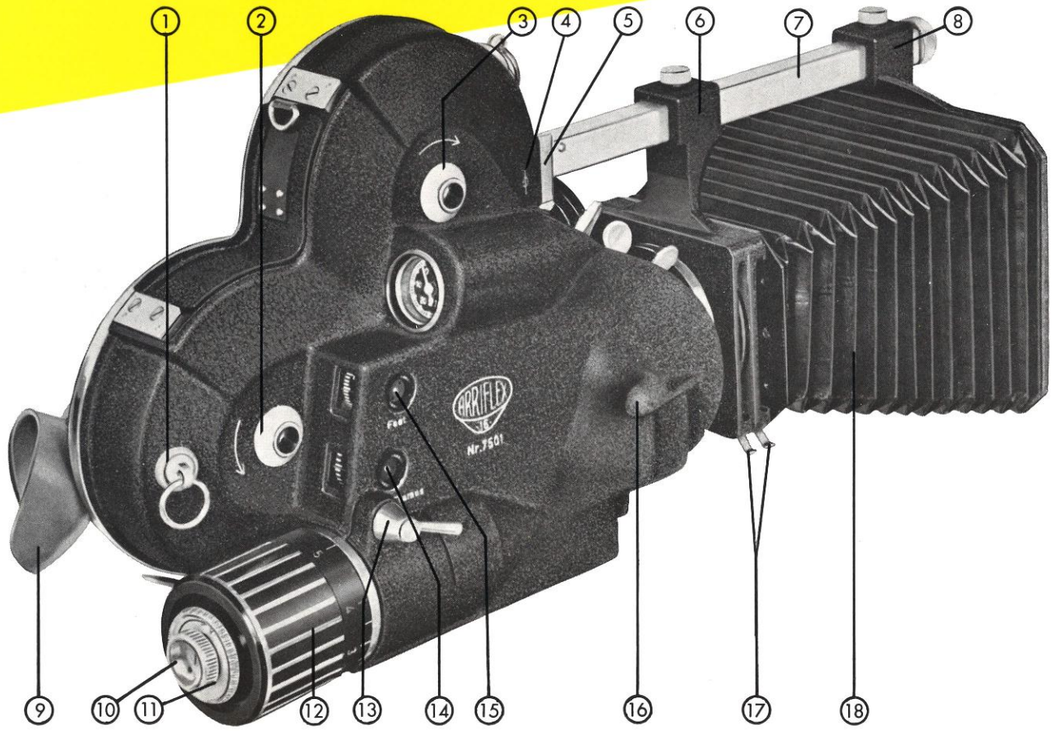
ARRI



ARRIFLEX 16

Mirror Reflex Motion Picture Camera for 16 mm Film with Electric Motor Drive

For many decades the mirror reflex viewfinder in cine cameras seemed to be an unattainable dream. It was not until the late 1930's that ARNOLD & RICHTER, after many years of research, finally succeeded in producing and patenting the world's first mirror reflex motion picture camera. The new system was incorporated in the Arriflex 35 and proved an immediate success, due to its reliability and the perfection of its design. The enthusiastic acceptance of this camera encouraged ARNOLD & RICHTER to proceed with plans for adapting this system to a 16 mm motion picture camera. Many more years of development work finally produced the Arriflex 16.

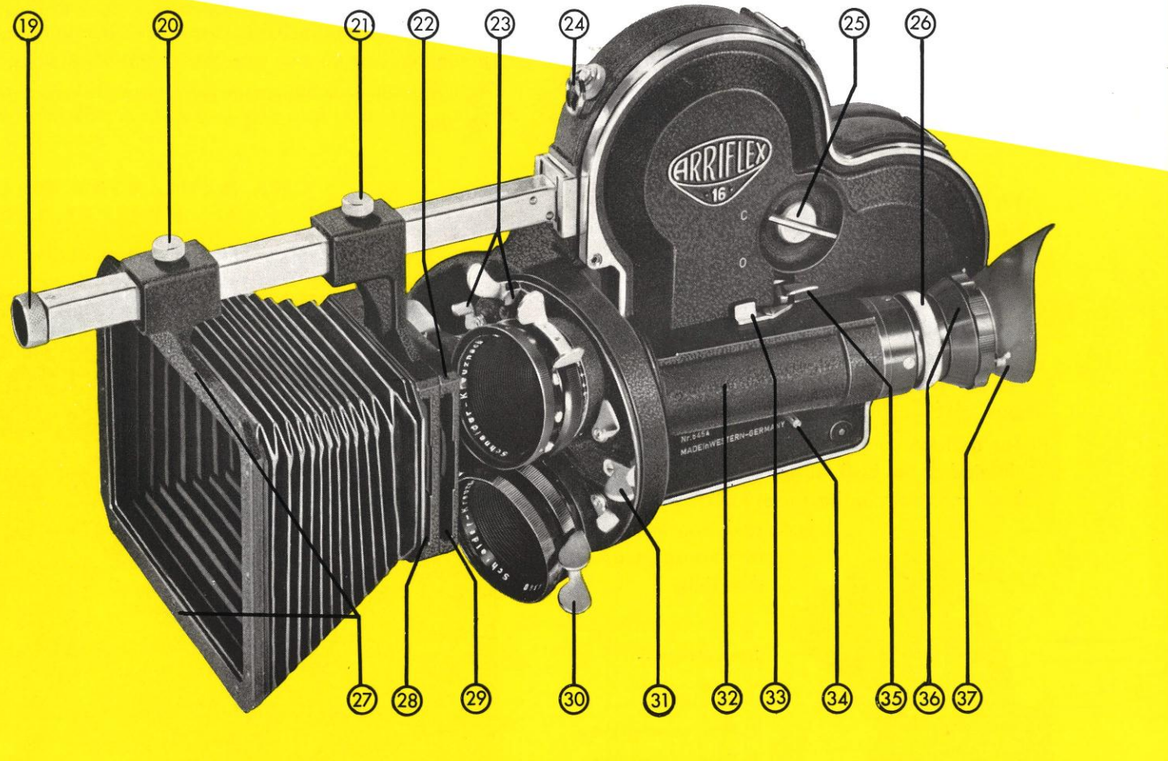


1 Eyelet for neck strap
2 Spindle knob for taking up film slack on take up spool
3 Spindle knob for taking up film slack on supply spool
4 Marking of film plane
5 Holder for matte box boom
6 Back matte box adjustment
7 Matte box boom
8 Front matte box adjustment
9 Rubber eyecup
10 Inching knob for turning shutter over by hand for loading and sighting
11 Forward and reverse switch of motor (provided on variable speed motor only)
12 Rheostat to control camera speed (provided on variable speed motor only)
13 Locking lever for electric motor
14 Setting knob for frame counter
15 Setting knob for footage counter
16 Contour hand grip
17 Filter retaining springs
18 Leather bellow

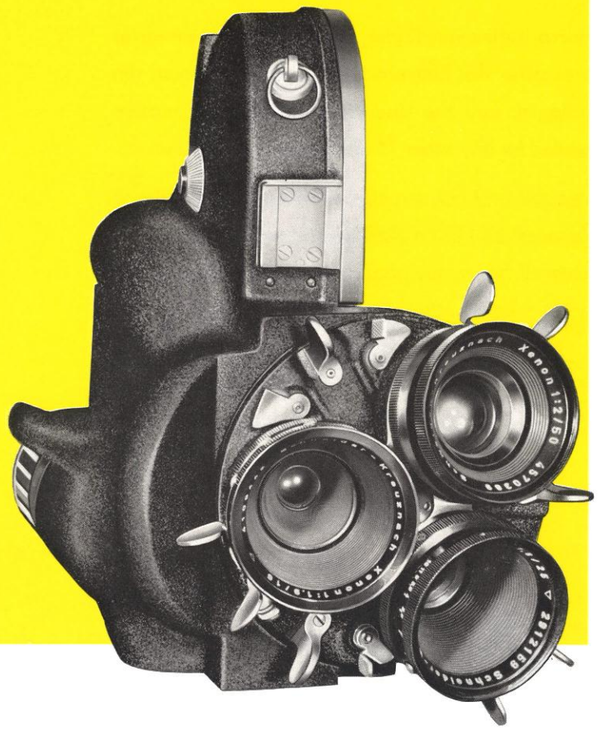
The Arriflex 16 is a 16 mm motion picture camera with mirror reflex viewfinder, three lens divergent turret and electric motor drive. Numerous other special features offer the film producer and cameraman, the newsreel and television reporter, the scientist and technologist, and the discriminating amateur motion picture photographer, a versatile precision tool not equalled by any other 16 mm motion picture camera.

This prospectus gives full details of the design of the camera and surveys the numerous possibilities it has to offer. Together with its wide range of invaluable accessories, the Arriflex 16 represents a complete system capable of mastering any difficulty encountered, however great this may be.

This prospectus cannot, of course, demonstrate the simplicity of operation and the reliability of the camera, but the large number of Arriflex cameras in use all over the world bears ample witness to its popularity among experienced cinematographers.



19 Knurled locking screw of matte box boom
20 Screw of front matte box adjustment
21 Screw of back matte box adjustment
22 Thread for rod of rotating filter stage
23 Lens retaining levers
24 Eyelet for neck strap
25 Latch of camera door
26 Ocular retaining screw
27 Holder for special effects masks
28 Front filter stage
29 Back rotating filter stage
30 Focusing lever of lenses
31 Grips for rotating lens turret
32 Viewfinder
33 Release lever locking device
34 Push-button of buckle switch override mechanism
35 Release lever
36 Diopter focusing ring
37 Locking lever for diopter focusing ring



DIVERGENT THREE-LENS TURRET

The turret of the Arriflex 16 is designed to take three lenses and can be rapidly rotated so as to bring the required lens into position. The lens mounts are of the same size and type as those of the Arriflex 35. The distance between the lens flange and the film plane is exactly the same in all three sockets, so that any and every one of the entire series of Arriflex lenses available can be used. The shortest focal length available is 5.7 mm. There is practically no upper limit to the focal lengths that can be used.

The three-lens turret is designed so that the optical axes of its three lens sockets diverge. In this way it is possible to use lenses with short focal lengths and wide angle of view alongside others of long focal length without physical and optical interference.

The Arriflex 16 three-lens turret has the additional advantage that the two idle lenses can be left without lenscaps, since no light can pass through them onto the film.

TACHOMETER, FOOTAGE, FRAME COUNTER

The tachometer visible at the back of the camera registers film speeds between 0 and 50 frames per second. The film speed is set on the cap of the motor. The normal film speed – 24 frames per second – is indicated on the tachometer by a red mark.

The footage counter and a frame counter are also situated at the back of the camera over the motor. Both counters can be re-set to "0" by means of a knob and register the amount of film transported in both directions.



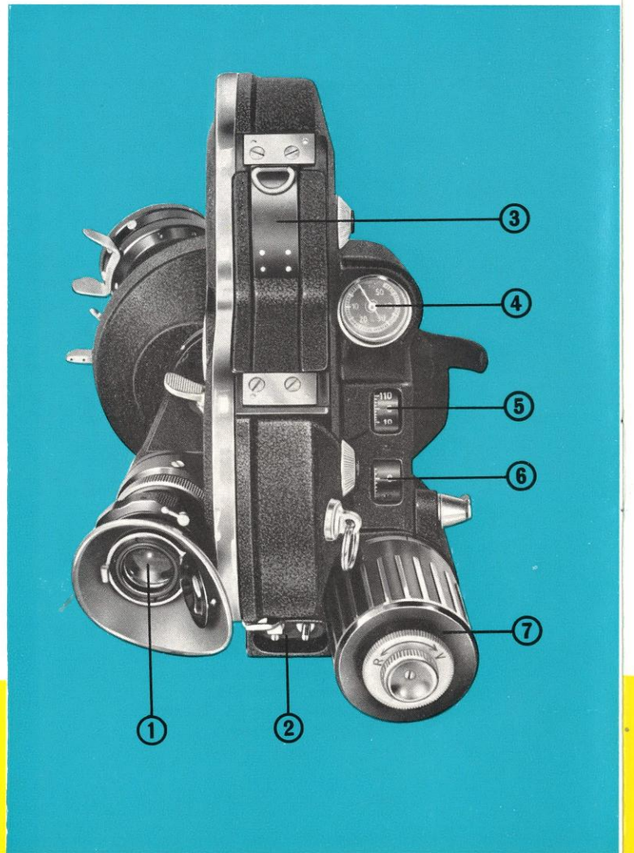


Figure at right: —

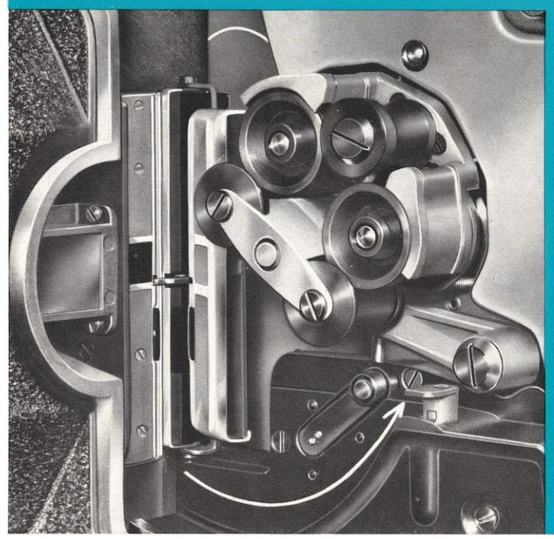
1 Eyepiece, 10 x magnification
2 Socket for battery cable
3 Magazine cover plate
4 Tachometer for film speed
5 Footage counter
6 Frame counter
7 Motor (variable speed model)

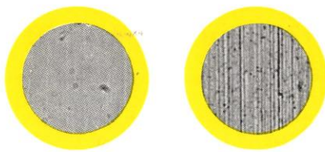
FILM GATE

The film gate – together with the claw mechanism – is the most important part of a motion picture camera. It ensures that the film is perfectly centred and absolutely flat in the film plane. For this reason greatest care was taken in the design of the film gate for the Arriflex 16. It consists of a front plate with aperture on the lens side and a spring loaded rear pressure pad. In addition, it is provided with a fixed side rail on the claw side and a spring-cushioned rail on the opposite side in accordance with the latest designs. All parts which come in contact with the film are made of special stainless steel, compressed under high pressure, hardened and lapped. The surfaces of the gate are plated with hard chromium and otherwise specially treated. The effect of this special treatment is clearly visible under a microscope of 500 x magnification. It contributes considerably to the elimination of emulsion deposit, which could cause film scratches.

An additional advantage is that the film gate can be opened wide to facilitate threading of the film and for cleaning.

A buckle-switch stops the camera automatically when the film is at its end, and also when there is a film jam.





500 x microphotographs demonstrate the precision finish of the Arriflex 16 Film Gate (left), as contrasted with film gate finish of other well known 16 mm camera (right).

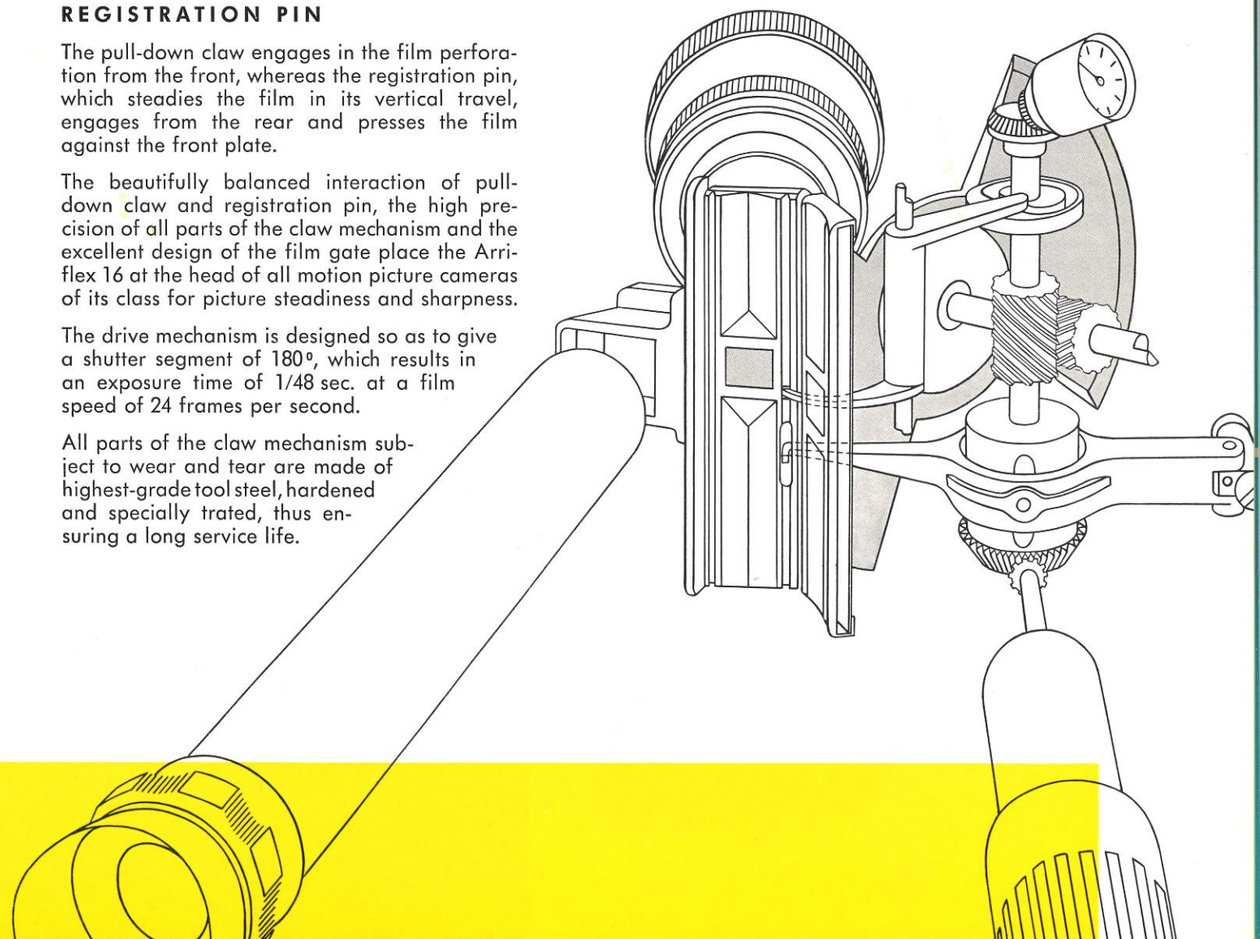
CLAW MECHANISM AND REGISTRATION PIN

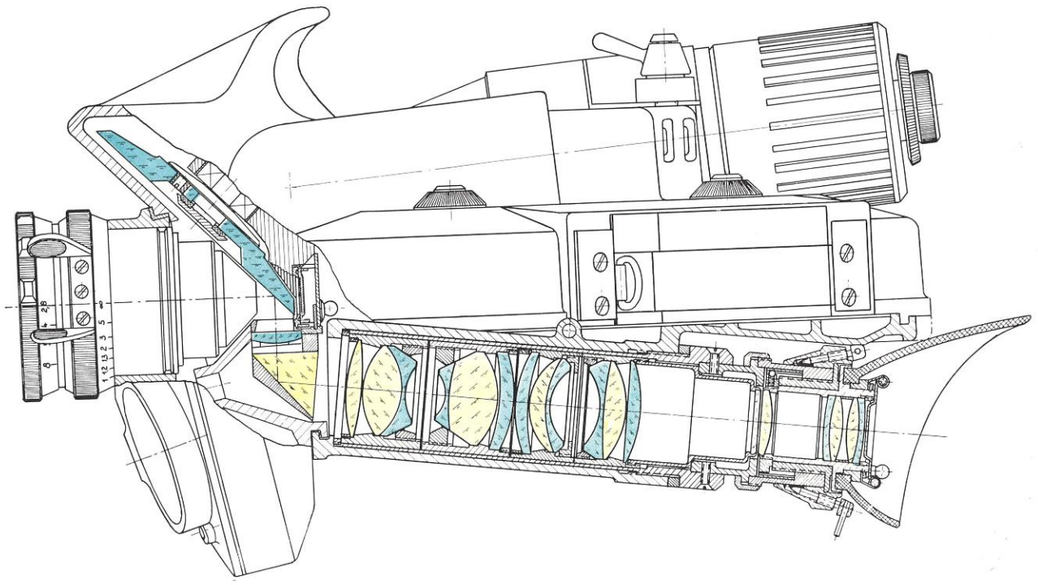
The pull-down claw engages in the film perforation from the front, whereas the registration pin, which steadies the film in its vertical travel, engages from the rear and presses the film against the front plate.

The beautifully balanced interaction of pull-down claw and registration pin, the high precision of all parts of the claw mechanism and the excellent design of the film gate place the Arriflex 16 at the head of all motion picture cameras of its class for picture steadiness and sharpness.

The drive mechanism is designed so as to give a shutter segment of 180°, which results in an exposure time of 1/48 sec. at a film speed of 24 frames per second.

All parts of the claw mechanism subject to wear and tear are made of highest-grade tool steel, hardened and specially trated, thus ensuring a long service life.





THE MIRROR REFLEX SHUTTER OF THE ARRIFLEX 16

The Arri mirror reflex shutter for motion picture cameras was invented by Arnold & Richter in 1937, and was introduced in the Arriflex 35. It has since become world-famous. In 1951, it was adapted to the dimensions and requirements of 16 mm film. While the fundamental principle of the system remained unchanged, it was incorporated, together with numerous additional features, in the Arriflex 16.

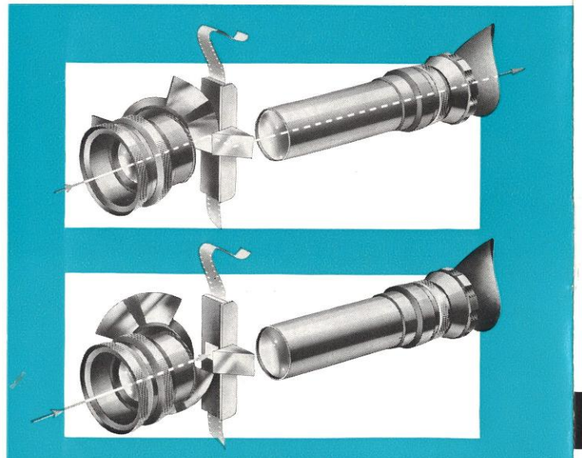
The rotary shutter of the Arriflex 16 takes the form of a mirror reflex shutter. It differs greatly from other reflex systems in which the light beam entering through the lens is split by means of a partially transparent mirror. In the Arriflex 16 the beam of light is allowed to pass unhindered to the film. It is merely deflected, while the film is being transported, by means of the rotating mirror shutter, which is arranged at an angle of 45° to the optical axis of the lens and turns at half the speed of the film, i. e. it makes one complete turn for every two frames. In this way all the light entering the lens is available alternately for viewing and filming.

The shutter is double-bladed, made in one piece and carefully balanced out. The surfaces of the blades are provided with mirrors of flat optical glass. The balancing of the shutter ensures smooth vibration-free running, a feature not always possible with asymmetrical or oscillating mirrors. The precision of the shutter (tolerance 2–3 μ) ensures absolute steadiness and sharpness of the viewfinder image.

The mirror reflex shutter of the Arriflex 16 is factory-adjusted with the most modern tools and produces a parallax-free, dead-centre and clear viewfinder image on a special ground glass, irrespective of whether the camera is running or not and whether the aperture is wide open or stopped down. The ground glass image is viewed through an eyepiece with 10 x magnification, which can be adapted to individual eyesight by means of a diopter adjustment. A comfortable eyecup and a hinged cover for closing the eyepiece when not in use prevent light from penetrating into the camera and fogging the film.

The sharpness of the film and ground glass images is adjusted with the greatest precision, so that the viewfinder can be used to obtain a perfect focus. This is a great advantage, since the clear magnified image in the viewfinder enables the sharpness to be controlled at all times, even in follow-focus shots. The eyepiece with its 10 x magnification presents the operator with a large and clear viewfinder image for easy sighting and framing.

The eyepiece of the camera can be fitted with a special extension for use with the Blimp or with a special periscopic finder attachment – described later on in this brochure – without affecting the adjustment of the viewfinder in any way. In either case, only the eyepiece itself is replaced, whereas the viewfinder proper remains unchanged.



FILTERS FOR THE ARRIFLEX 16

All filters for the Arriflex 16 are inserted in the matte box which is so universal that in addition to the original Arri filters 60x75x3mm and 60x100x3mm (graduated filter), also filters with threaded mounts and — in combination with the filter holder kit — also filter foils and 2x2 inch glass filters can be used.

In order to make this list of filters clearer, five divisions have been made according to size. Filters of the neutral density type can be used equally well for black and white and colour films.

Group 1: 60 x 75 x 3 mm (original Arri-filter), made from selected, dyed in the mass optical filter glass, for black and white film:

light yellow, medium yellow, orange-yellow, orange-red, green, ultraviolet (haze).

Solid optical glass filters, for colour correction with colour film:
R 12, R 6, R 3, R 1.5 (Skylight), ultraviolet (haze), B 12, B 6, B 3.

Solid optical glass filters, neutral density, for black and white and colour films:

light (filter factor 2)
medium (filter factor 4)
dark (filter factor 8)

Polarizing filter, cemented, neutral

Group 2: 60 x 100 x 3 mm (original Arri graduated filter), made from selected, dyed in the mass optical filter glass for black and white film:

Graduated red — yellow — clear

Group 3: Round screw-in filter with thread M 58 x 0.75, for attachment to rear of matte box.

Available on request in special cases:

Colour correction filters, grey filters, polarization filters, ultraviolet filters.

Group 4: 2x2 inch (50 x 50 mm) for use with our filter holder kit (Cat. No. 1195):

Commercial **glass filters for black and white or colour film** (some filters of this variety can be obtained from film manufacturers).

Group 5: Gelatine filter foils 2 x 2 inch (50 x 50 mm) for use with our filter holder kit (Cat. No. 1195)

Commercial **gelatine filter foils for black and white or colour film** in the colour range offered by film manufacturers. This size of filter can also be cut from larger sheets of gelatine foil.

For the filters listed under groups 4 and 5 we supply a filter holder kit (Cat. No. 1195) consisting of 5 holders for filter foils, 1 frame for these holders or 2x2 inch glass filters, and leather case (see figures above). The parts are also available separately.

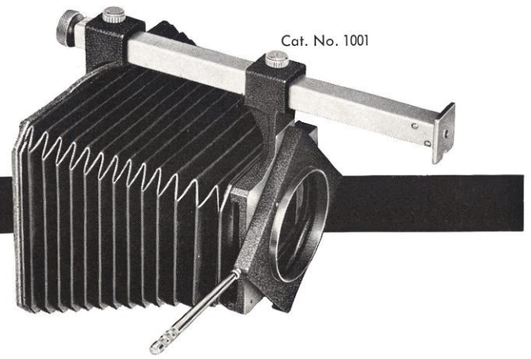
In special cases, filters for attachment in front of certain special lenses can be supplied on request.



MATTE BOX

The matte box (Cat. No. 1001) is one of the most important accessories for the Arriflex 16. It is strongly advisable to use it as a sunshade for all lenses between 16 and 75 mm focal length, in order to obtain maximum picture quality. Even with lenses of short focal length, which offer a certain degree of protection from stray light because of the deep setting of the front element, it is still advisable to use the matte box for extra protection.

The back of the matte box features two stages for the insertion of 60x75x3 mm filters or gelatine foil holders. One of these stages can be rotated and is designed for use with graduated or polarizing filters. It is also threaded for the attachment of M 58x0.75 screw-in filters. The front of the matte box accepts slide-in masks for special effects.



ARRIFLEX 16 - THE CAMERA WITH THE LARGE SELECTION OF LENSES

Rodenstock



Heligon f/2, 16 mm
Cat. No. 1100
No. of elements: 6
Horizontal angle of view: 35°
Aperture range: f/2—16
Focusing range: 0,5 m—∞
with follow focus grips,
T-stops



Heligon f/1,5, 25 mm
Cat. No. 1101
No. of elements: 6
Horizontal angle of view: 23°
Aperture range: f/1,5—16
Focusing range: 0,5 m—∞
with follow focus grips,
T-stops



Heligon f/2, 50 mm
Cat. No. 1102
No. of elements: 6
Horizontal angle of view: 12°
Aperture range: f/2—16
Focusing range: 1 m—∞
with follow focus grips,
T-stops

Schneider



Cine Xenon f/2, 16 mm
Cat. No. 1116
No. of elements: 6
Horizontal angle of view: 35°
Aperture range: f/2—22
Focusing range: 0,5 m—∞
Diaphragm click stops (can
be optionally disengaged),
fully closing diaphragm,
T-stops



Cine Xenon f/1,4, 25 mm
Cat. No. 1117
No. of elements: 7
Horizontal angle of view: 23°
Aperture range: f/1,4—22
Focusing range: 0,5 m—∞
Diaphragm click stops (can
be optionally disengaged),
fully closing diaphragm,
T-stops



Cine Xenon f/2, 50 mm
Cat. No. 3101
No. of elements: 7
Horizontal angle of view: 12°
Aperture range: f/2—22
Focusing range: 1 m—∞
Diaphragm click stops (can
be optionally disengaged),
fully closing diaphragm,
T-stops

Schneider



Cinegon f/1,8, 10 mm
Cat. No. 1115
No. of elements: 9
Horizontal angle of view: 54°
Aperture range: f/1,8—22
Focusing range: 0,2 m—∞
Diaphragm click stops (can
be optionally disengaged),
fully closing diaphragm,
T-stops



Xenon f/2, 75 mm
Cat. No. 3102
No. of elements: 6
Horizontal angle of view: 8°
Aperture range: f/2—22
Focusing range: 1,5 m—∞
with follow focus grips



Xenon f/2, 100 mm
Cat. No. 2113
No. of elements: 7
Horizontal angle of view: 6°
Aperture range: f/2—22
Focusing range: 1,5 m—∞

Kilfitt



Makro Kilar f/2,8, 40 mm
Cat. No. 2160
No. of elements: 4
Horizontal angle of view: 15°
Aperture range: f/2,8—22
Focusing range: 0,10 m—∞



Makro Kilar f/2,8, 90 mm
Cat. No. 2161
No. of elements: 4
Horizontal angle of view: 6,5°
Aperture range: f/2,8—32
Focusing range: 0,30 m—∞



Tele Kilar f/5,6, 300 mm
Cat. No. 2165
No. of elements: 4
Horizontal angle of view: 2°
Aperture range: f/5,6—32
Focusing range: 3 m—∞

MORE LENSES FOR THE ARRIFLEX 16 ARE LISTED IN OUR

Zeiss



Planar f/2, 16 mm
Cat. No. 1501
No. of elements: 6
Horizontal angle of view: 35°
Aperture range: f/2—16
Focusing range: 0,25 m—∞
with follow focus grips
and diaphragm click stops



Planar f/2, 25 mm
Cat. No. 1502
No. of elements: 6
Horizontal angle of view: 23°
Aperture range: f/2—16
Focusing range: 0,35 m—∞
with follow focus grips
and diaphragm click stops



Planar f/2, 50 mm
Cat. No. 3111
No. of elements: 6
Horizontal angle of view: 12°
Aperture range: f/2—16
Focusing range: 1,1 m—∞
with follow focus grips
and diaphragm click stops

Zeiss



Planar f/2, 32 mm
Cat. No. 3110
No. of elements: 6
Horizontal angle of view: 18°
Aperture range: f/2—16
Focusing range: 0,6 m—∞
with follow focus grips



Sonnar f/2,8, 85 mm
Cat. No. 3112
No. of elements: 7
Horizontal angle of view: 7°
Aperture range: f/2—22
Focusing range: 2 m—∞
with follow focus grips



Sonnar f/4, 135 mm
Cat. No. 2125
No. of elements: 4
Horiz. angle of view: 4,5°
Aperture range: f/4—22
Focusing range: 2 m—∞

Taylor, Taylor & Hobson (Cooke)



Kinetal T/2, 17,5 mm
Cat. No. 1120
No. of elements: 9
Horizontal angle of view: 33°
Aperture range: T 2—22
Focusing range: 0,3 m—∞
with follow focus grips



Kinetal T/2, 25 mm
Cat. No. 1121
No. of elements: 6
Horizontal angle of view: 23°
Aperture range: T 2—22
Focusing range: 0,3 m—∞
with follow focus grips



Kinetal T/2, 50 mm
Cat. No. 1122
No. of elements: 6
Horizontal angle of view: 12°
Aperture range: T 2—22
Focusing range: 1 m—∞
with follow focus grips

Kinoptik



Tegea f/8, 5,7 mm
Cat. No. 1145
No. of elements: 6
Horizontal angle of view: 84°
Aperture range: f/1,8—16
Focusing range:
fixed focus, 1,20 m
(depth of field at full
aperture 60 cm—∞)

Angénieux



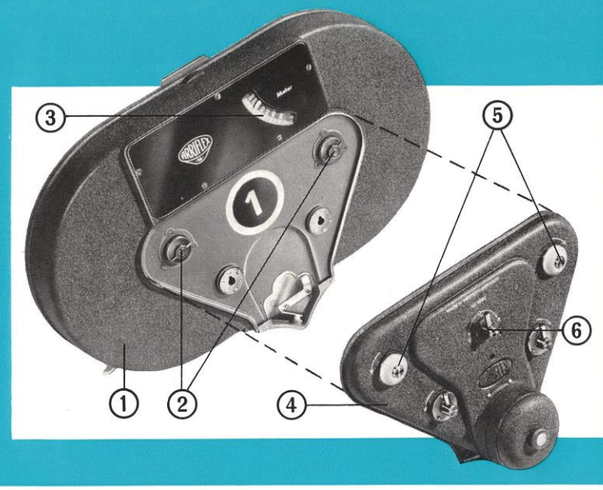
Multifocus L 4, f/2,2
Cat. No. 1140
Continuously adjustable
focal length
from 17,5 mm to 70 mm
No. of elements: 12
Horizontal angle
of view:
from 33°
to 8,25°,
continuously adjustable
Aperture range: f/2,2—22
Focusing range: 1,2 m—∞



Som Berthiot

Pan Cinor 85, f/2
Cat. No. 1133
Continuously adjustable
focal length
from 17 mm to 85 mm
No. of elements: 16
Horizontal angle of view:
from 34° to 7°
continuously adjustable
Aperture range: f/2—22
Focusing range: 2 m—∞

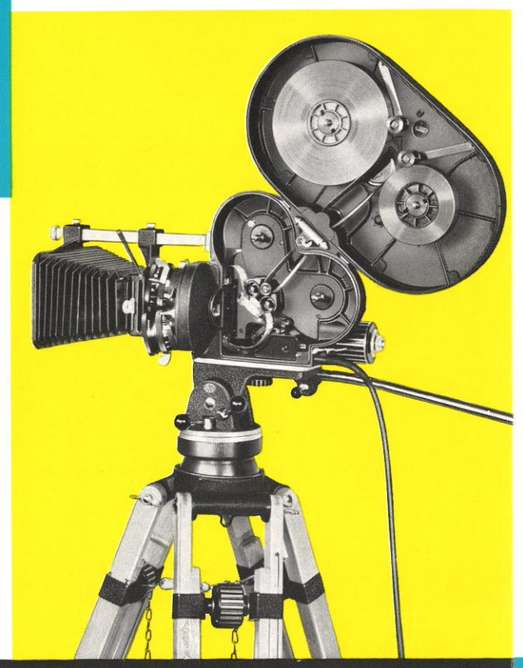
PRICE-LIST, WHICH WILL BE SENT TO YOU ON REQUEST

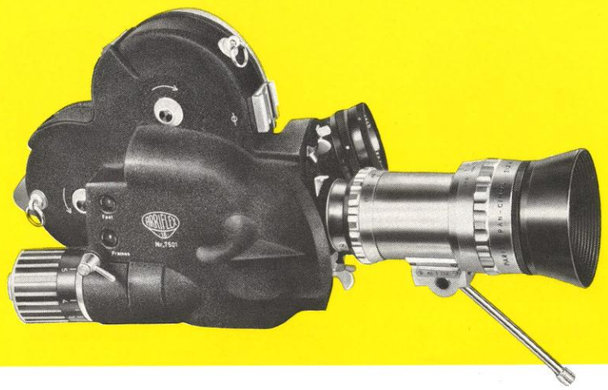


1 120 m (400 ft) magazine (Cat. No. 1170)
2 Spool core spindles
3 Counter, in metres or feet
4 Torque motor (Cat. No. 1171)
5 Knurled screws for taking up film slack
6 Forward/reverse switch for take-up motor

THE MAGAZINES

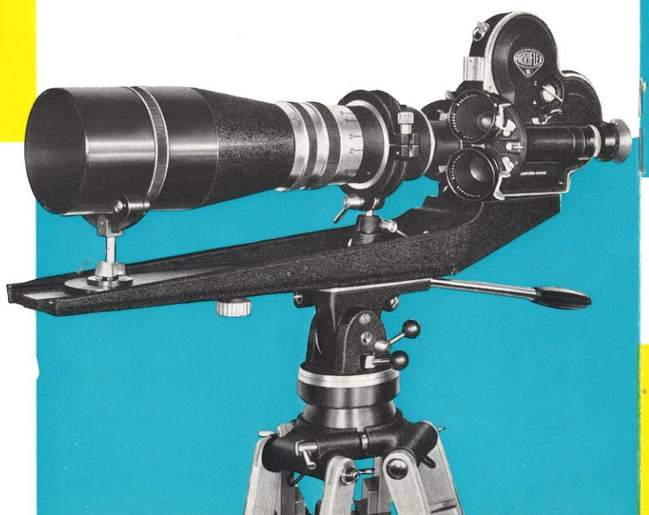
The camera housing of the Arriflex 16 is designed to accept 15 m (50 ft) or 30 m (100 ft) daylight-loading spools. However, auxiliary magazines enable filmloads of 120 m (400 ft, Cat. No. 1170) or 60 m (200 ft, Cat. No. 1172) to be used. The magazines are equipped with their own torque motors (Cat. No's. 1171 or 1173) which can be installed and removed quite simply. The same motor can thus be used for any number of magazines. The advantage of separate motors for the auxiliary magazines lies in the fact that the camera drive always operates at an even load, irrespective of the amount of film wound on the spool, thus guaranteeing the maximum degree of smoothness in running. The magazine torque motors — like the camera motor — are designed for operation on 8 Volts DC and are equipped with a switch for forward or reverse drive. The amount of film in the magazines is indicated by a counter, which can be supplied in feet or metres as required. It is possible to use 60 m (200 ft) daylight loading film in the 120 m (400 ft) magazine, in addition to usual 120 m (400 ft) darkroom loads. In this case the take-up film core must be changed.





The Pan Cinor shown above is a lens with adjustable focal length. It enables interesting dolly shots to be made without having to change the position of the camera. The Arri mirror reflex system is ideal for lenses of this type, as every change in the image scale can be closely followed and a watchful eye kept on the sharpness at the same time.

A lens support cradle is required for all telephoto lenses over 200 mm focal length. This consists of the actual support cradle, which can be used for the Arriflex 16 and the Arriflex 35, and the camera adapter (Cat. No's. 2202/2204).



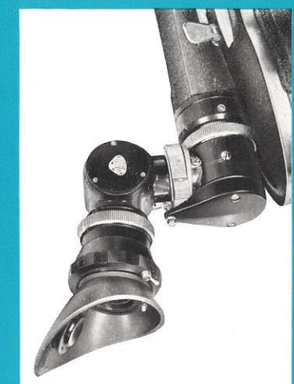
THE PERISCOPIC FINDER ATTACHMENT

A rotating and swivel-mounted periscopic finder attachment (Cat. No. 1150) is available to supplement the standard eyepiece of the Arriflex 16. It consists of a system of lenses and prisms, the mounting of which can be swivelled and rotated to any desired position. The cameraman is thus able to view from any angle.

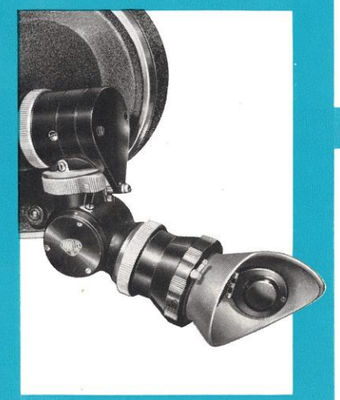
The periscopic finder attachment was chiefly intended for use with the 120 m (400 ft) magazine, the relatively large dimensions of which frequently make it difficult to sight through the normal eyepiece. It is also a boon for "left-eyed" cameramen. However, it is just as good for shots from a worm's-eye-view, over the top of obstacles, for vertical or oblique shots, or for filming through a microscope. In all these cases the view-finder can be readily adapted to existing situations, and the advantages of the mirror reflex system remain unimpaired.

A special model of the periscopic finder attachment can be supplied for Arriflex 16 cameras used for X-ray cinematography.

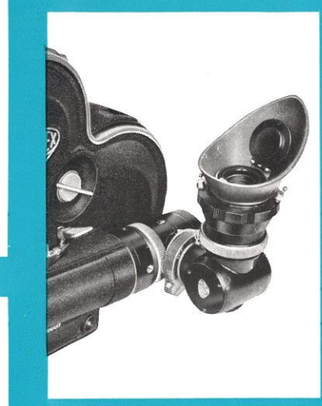
A special leaflet illustrating and describing the periscopic finder attachment in full detail, is available on request.



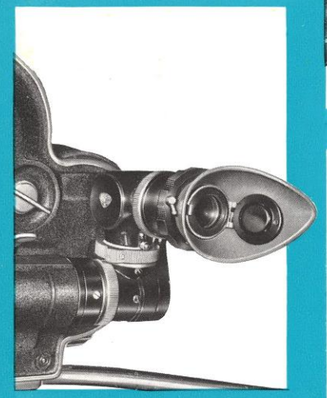
This is the position of the periscopic finder attachment for viewing with the left eye when the 120 m (400 ft) magazine is in position.



In this way the Arriflex 16 can be used to film over the top of obstacles.



Worm's-eye-view shots can be made quite simply with the viewfinder in this position.



Position of the viewfinder when filming with an obstacle directly behind the camera.



The Arriflex 16 with 120 m (400 ft) magazine in position and eyepiece extended by means of the periscopic finder attachment.

MOTORS FOR THE ARRIFLEX 16

The various types of motors available for the Arriflex 16 are readily interchangeable and no tools whatsoever are required. The following motors are offered for the Arriflex 16:

Variable speed motor (Cat. No. 1160) for 8 V battery operation with built-in rheostat for regulation of camera speed between 4 and 48 frames starts. This manually regulated motor is usually operated from one of the batteries shown on opposite page, or in certain cases by a suitable power supply unit (Cat. No. 1214). Up to speeds of about 24 frames per second this motor can also be run from a 6 V car battery. A knurled disk situated behind the rheostat cap enables the motor to be switched to "forward" or "reverse". A knurled head screw behind this disk is for turning the camera by hand for loading and to place the mirror reflex shutter in viewing position when camera is not running.



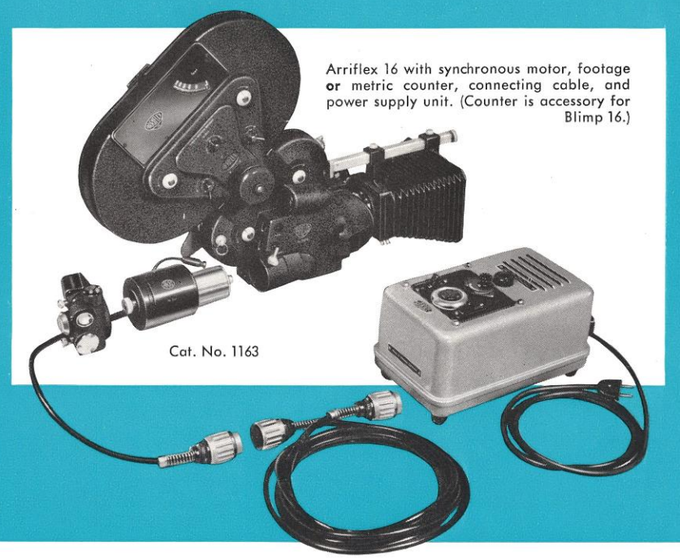
Variable speed motor (Cat. No. 1160)



Governor controlled motor (Cat. No. 1161)



Single frame gear (Cat. No. 1220)



Arriflex 16 with synchronous motor, footage or metric counter, connecting cable, and power supply unit. (Counter is accessory for Blimp 16.)

Cat. No. 1163

Synchronous motor with power supply unit for connection to voltages between 110 and 250 V A.C., 50 or 60 cycles, single-phase. This motor can be supplied in three models: 50 c.p.s. for 24 frames per second (Cat. No. 1163), 50 c.p.s. for 25 frames per second (Cat. No. 1164), 60 c.p.s. for 24 frames per second (USA) (Cat. No. 1165).

The frequency of the mains supply and the desired speed should be stated when placing order. Motors for other speeds and mains frequencies can be supplied on request. The power supply unit is furnished with motor. This unit serves to transform the mains voltage to the operating voltage required for the three-phase synchronous motor, which has been designed for 42 V for safety reasons. It also provides the additional phase for the synchronous motor and the 8 V D.C. required for the magazine torque motor. A relay circuit in the power supply unit makes it possible to switch the camera on and off at the usual single-pole release lever.

The power supply unit also contains a magnetic direct-current brake which acts on the synchronous motor. It is also equipped with a change-over switch for forward and reverse drive. The synchronous motor enables the Arriflex to be perfectly synchronized with other motion picture and sound recording apparatus.

A mechanical phase-adjustment device for tele-recording is also available as accessory for the synchronous motor. This ensures that the correct phase position is obtained, thus preventing the reproduction of the line between the television pictures on the film of the Arriflex 16.

Governor controlled motor for 8 V battery operation with fixed film speed of 24 (Cat. No. 1161) or 25 frames per second (Cat. No. 1162). This speed is automatically maintained and cannot be changed. The speed required should be stated when placing an order. Other speeds can be adjusted on request. This motor is only designed for forward drive, and a knurled head screw for turning the camera by hand is also provided.

THE SINGLE FRAME GEAR

A single frame gear for taking single pictures can also be supplied as an accessory for the Arriflex 16. The illustration at left shows this device, which is inserted between camera and motor. The device can be operated by means of a manual release or — if the process is to be controlled automatically — by means of an intervalometer. A 4-digit frame counter is built into the device. A remote frame counter can also be supplied. The single frame gear can be set to exposure times of 1/10, 3/10 and 9/10 of a second by changing some of the gear wheels. Special models for other exposure times can be supplied on request. Minimum exposure time is 1/10 of a second. Details of the single frame gear in conjunction with time lapse and animation equipment can be found on page 16.

BATTERIES FOR THE ARRIFLEX 16

The direct current motors of the Arriflex 16 are operated from special 8 V wet cell lead batteries. These are available in two models:

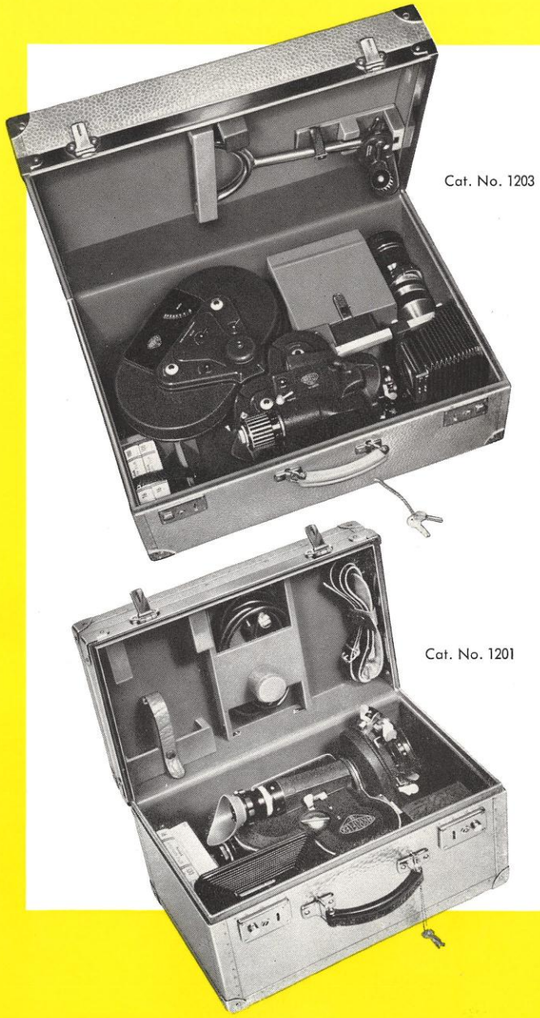
1. Light-weight battery, type "Permanent", 8 V, 3.5 A/h, weight approximately 2 lbs. together with case and shoulder strap. When fully charged, this battery is sufficient for 300—360 m (1000—1200 ft) of film. It should be recharged immediately when empty. If fully charged the battery can be left standing for up to six months when not in use, without suffering any damage (Cat. No. 1210).

2. Special wet cell lead battery, 8 V, 7.5 A/h, sufficient for 600 to 700 m (2000—2400 ft) film at normal temperature when fully charged. This battery weighs approximately 4 lbs. together with case and shoulder strap. It should be recharged immediately after use. When fully charged it can be stored up to 4 weeks (Cat. No. 1211).

Both batteries must be filled with sulphuric acid of 1.28 spec. gravity. This is readily obtainable everywhere. Full instructions for filling and charging are supplied with every battery.

For charging the above batteries the Arri universal battery charger (Cat. No. 2270) with voltage selector switch for all standard voltages between 110 and 240 V, 50/60 cycles, is available. A built-in ammeter serves to check the charging current. This charger can also be used for charging batteries for the Arriflex 35.

A power supply unit (transformer/rectifier, Cat. No. 1214) is available for operating the DC camera motors from the mains.



Cat. No. 1203

Cat. No. 1201



Cat. No. 1210

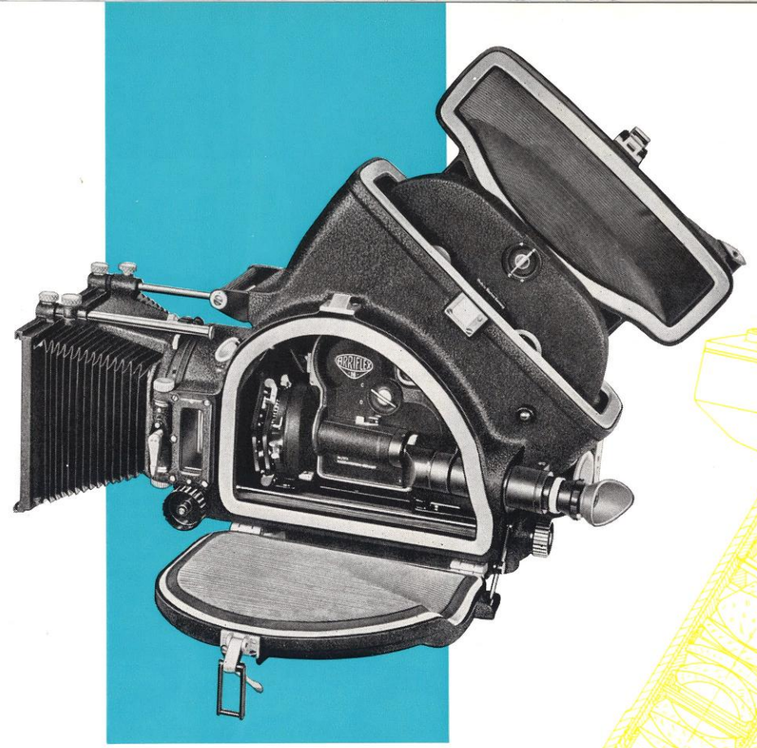
Cat. No. 1211

Cat. No. 2270

Cat. No. 1214

CARRYING CASES

A series of sturdy cases suitable for use in all climates are available for the safe transport and storage of the Arriflex 16 and its accessories. They are all covered with corduroy or hammered aluminium, which reflects the heat of the sun. A patent rim ensures that the case is hermetically sealed against dust and moisture. The case measuring 39.5 x 24 x 22 cm (Cat. No. 1200 with corduroy cover, Cat. No. 1201 with aluminium cover) is designed to take the camera complete with lenses, matte box, daylight loading spools and small accessories. A larger case measuring 60.5 x 42 x 25.5 cm (Cat. No. 1202 with corduroy cover, Cat. No. 1203 with aluminium cover) is available for the camera with 400 ft magazine attached and two further 400 ft magazines in reserve. Another case measuring 25 x 26 x 36 cm, which is only available with aluminium cover (Cat. No. 1204), is designed to take four 400 ft magazines (without take-up motor and camera).



THE BLIMP 16

is a soundproof housing for the Arriflex 16. It is indispensable for high-quality synchronous sound recording. Due to the efficiency of its sound-absorbent lining, which consists of 10 layers of different material, and its practical design, the Arri Blimp 16 fulfills its purpose in an exemplary fashion. It converts the Arriflex 16 into a fully-fledged studio camera. The most important features of the Blimp 16 are:

Light weight: – The total weight of the camera, complete with Blimp 16, auxiliary magazine etc., is approximately 70 lbs. ● The mirror reflex system of the Arriflex 16 functions also with the Blimp ● Generously proportioned hinged covers with knee-action locks facilitate operation of the camera inside and enable operator to change magazines or thread film without hindrance. ● Camera can be installed and removed quickly and without tools. All standard Arriflex 16 cameras with divisible eyepiece (serial number higher than 5900) can be installed in a Blimp 16. ● Lens focused from outside by means of large knobs. Each lens is provided with a specially calibrated focusing scale, which can easily be read through a large window in the housing. ● The synchronous motor is used to drive the camera when used with the Blimp. A red pilot lamp lights up when the camera is running ● Filter stage for glass filters measuring 75 x 75 mm (3 x 3 inches) and large adjustable matte box.

A special leaflet with full details will gladly be furnished on request.

Cat. No. 1300





ARRI TRIPODS

From the simple shoulder-pod to the heavy-duty friction tripod, the emphasis in the Arri tripod programme is on versatility, too.

A screw-on pistol grip handle with built-in release (Cat. No. 1151) is available for the cameraman who is accustomed to the hand grip of the Arriflex 35 or prefers this type of operation.

For extra support cnd steadiness, however, the Arri shoulder-pod is to be recommended (Cat. No. 2300). This can be used together with the pistol grip handle, and can also be used for the Arriflex 35.

Being made of seasoned wood, the Arri special tripods are unusually light and sturdy. They can be supplied with pan and tilting heads or gyro heads as required. The gyro heads have a particularly fine pan and tilting action and can be ordered as an accessory for use in place of the pan and tilting head..

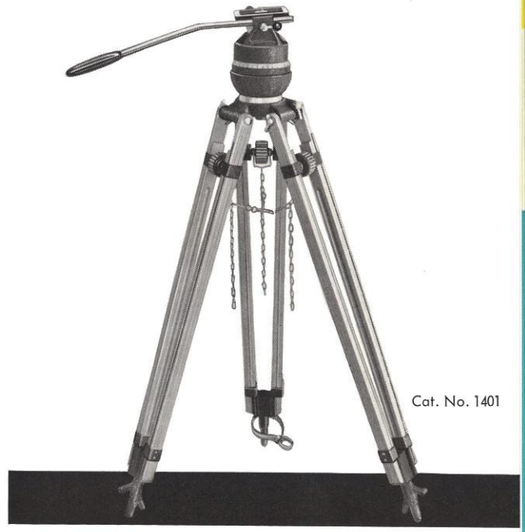
The special tripod for the Arriflex 16 (Cat. No. 1400) is equipped with a pan and tilting head, control handle, two locks and a spirit level. It can be extended from 1.10 to 1.75 m. The special gyro tripod is equipped in the same way (Cat. No. 1401), except that it has a gyro head in place of the pan and tilting head. The special gyro tripod can also be extended from 1.10 to 1.75 m.

The same models can also be supplied as baby tripods with an extension from 65 to 80 cm. They are admirably suited for worm's-eye-view shots, for filming flowers and plants, animals etc. The baby tripod is also available without head (legs only, Cat. No. 1405).

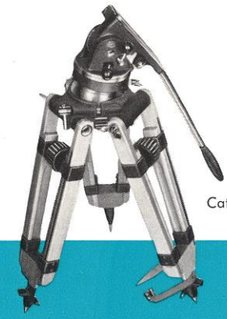
The Arri tripod programme also includes a heavy-duty friction tripod (Cat. No. 2310). This is intended for use with the Blimp 16 and can be extended from 1.10 to 1.70 m. This tripod can also be used with the Arriflex 35 and Blimp 120 (not illustrated).



Cat. No. 1400



Cat. No. 1401



Cat. No. 1404



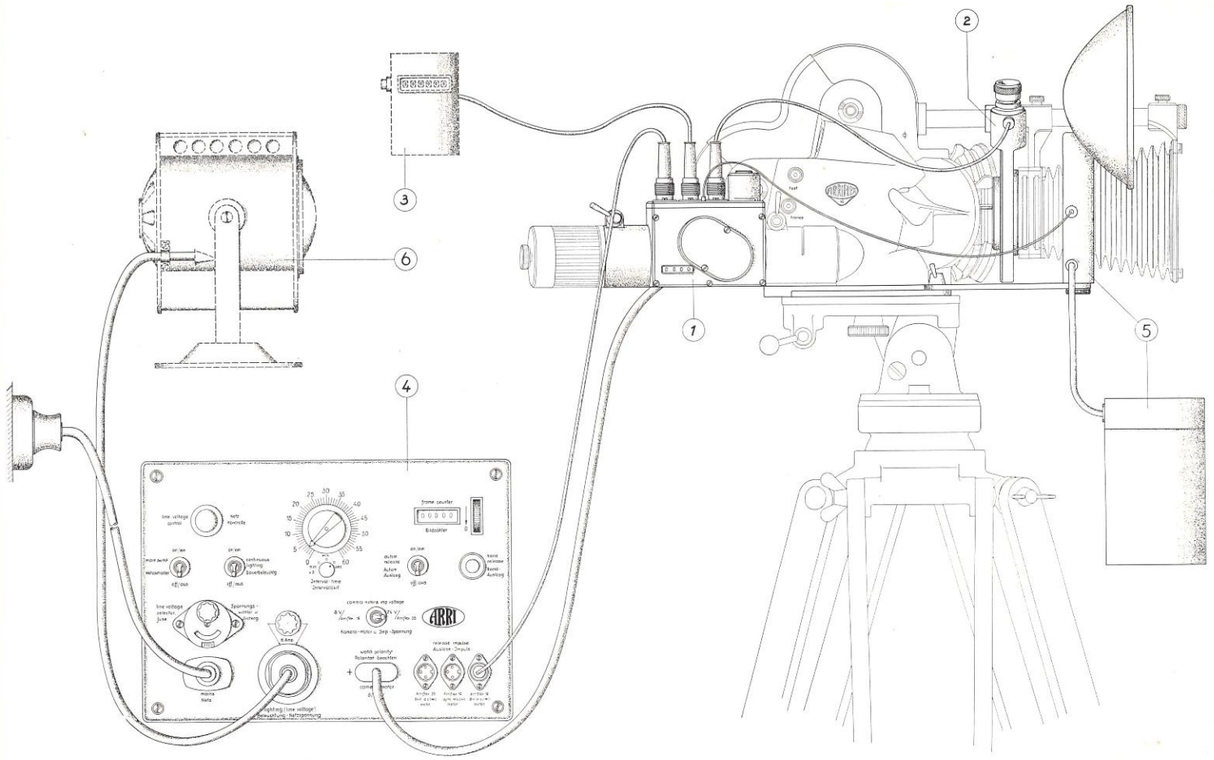
Cat. No. 1402



Adapter



Cat. No. 1151



TIME LAPSE AND ANIMATION EQUIPMENT

In order to be able to use the Arriflex 16 for time lapse and animation filming in all its variations, the following special accessories have been designed (figures 1 to 8): —

1 **Single frame gear** with base plate for flashgun (Cat. No. 1220)

2 **Auxiliary shutter** to prevent fogging during long exposure intervals (Cat. No. 1221)

3 **Frame counter** for remote metering, registering forward and reverse (Cat. No. 1225)

4 **Intervalometer** for automatic control of camera, adjustable to intervals between 4 seconds and 3 hours (Cat. No. 1222), serves also as power supply unit for DC camera motor.

5 **Electronic flashgun** with power supply

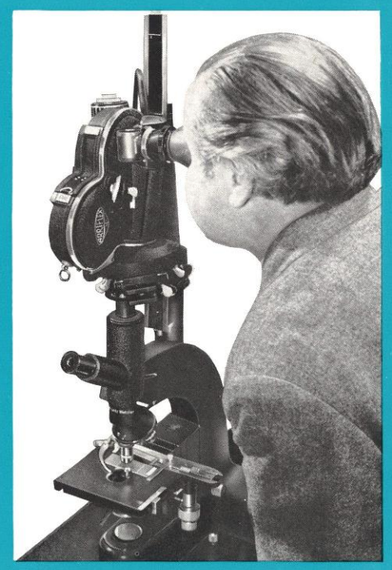
6 **Arri film spotlight**

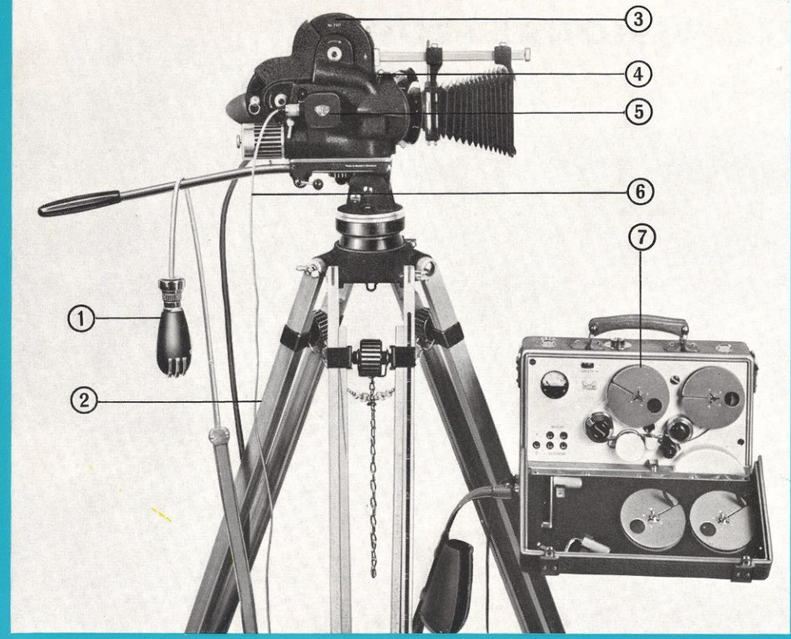
7 **Fading device** with polarizing filters (not shown) (Cat. No. 1223).

8 **Power supply unit** for DC camera motor (not shown, see illustration on page 13) (Cat. No. 1214)

The illustration at right shows the Arriflex 16 combined with a **microscope** for cine micrography. The Arriflex 16 can be used in conjunction with any microscope with vertical eyepiece, but must under no condition be in contact with it. Intermediate lenses are not required, as the mirror reflex system of the Arriflex 16 permits all microscopic processes to be followed clearly and accurately.

As there are many different types of microscopes and innumerable applications, we cannot go into detail in this brochure. Further details are available on request.





1 Microphone

2 Arri tripod

3 Arriflex 16

4 Control lamp of start marking device

5 Pilot tone generator

6 Pilot cable

7 Maihak tape recorder

THE ARRIFLEX 16 AND THE PILOT TONE SYSTEM

With the aid of the pilot tone system, ¼" magnetic recording tape of the unperforated variety can be used for lip-synchronized picture and sound recording. Synchronization of the film and tape is achieved by means of a pilot tone frequency generated by a small alternating current generator attached to the camera. This pilot tone frequency is recorded on the tape along with the sound. The sound track must later be played back on perforated tape, using either the direct or indirect playback method. In some systems the pilot tone frequency is amplified and then used to control the motor of the perforated tape recording apparatus, in order to produce a sound track that can be played in synchronization with the film.

The pilot tone recording system therefore requires a minimum of apparatus which can readily be transported with the camera. A very small pilot tone generator is attached to the Arriflex 16 and does not interfere with the operation of the camera in any way. It also contains a slating device, which makes a light mark on the film and cuts in the pilot tone frequency as soon as the motor has reached its full speed. The commencement of the pilot tone frequency and the end of the light mark on the film can then be used as synchronizing marks. However, if so desired, a manually operated scene start and cueing device can also be incorporated.

The cameraman films in conventional manner. The normal 8 V battery, which can be carried in a leather case attached to one's belt or on a strap, provides the necessary power supply for the camera. The sound man uses the tape recorder which is scarcely larger than a briefcase and contains its own power supply unit. For synchronous work the Arriflex 16 must be connected to the tape recorder by means of the pilot cable. Both operators can also make recordings and film shots independent of one another if required.

X-RAY CINEMATOGRAPHY WITH THE ARRIFLEX 16

Mirror reflex viewer and electric motor drive make the Arriflex 16, and the Arriflex 35, specially suitable for X-ray cinematography in conjunction with image intensifiers. For more details please contact the manufacturers of X-ray equipment, or write direct to us.

MAGNETIC SOUND ATTACHMENT

for single-system picture and sound recording

Compact and readily transportable equipment is most essential for newsreel filming with simultaneous sound recording, especially for the "flying cameraman". Arri comes to his aid with a magnetic sound recorder, made by Gaumont-Kalee, for magnetic sound track recording on the blank side of the single-perforated 16 mm film.

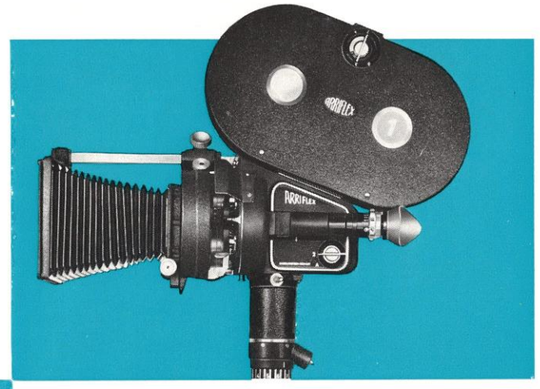
The illustration shows the complete set of equipment, consisting of the Arriflex 16 with 120 m (400 ft) magazine attached, together with the Gaumont-Kalee sound recording equipment. Battery, transistor amplifier, and headphones are not shown. Further details can be found in our special prospectus, which is available on request.

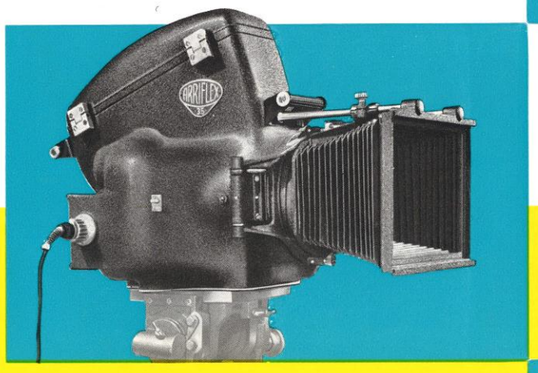


OTHER ARRI PROFESSIONAL PRODUCTS:

THE ARRIFLEX 35

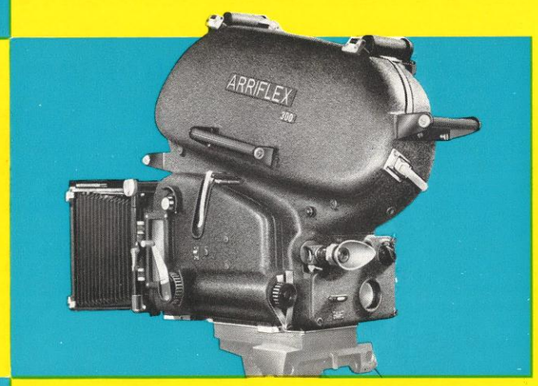
Arriflex 35 — Hand camera for 35 mm film, Model II B with 180° shutter, film transport claw with registration pin action, parallax-free mirror reflex shutter, three-lens turret, film gate of surface treated stainless steel, 12 V special quick starting motor with rheostat built into handle, 60 or 120 m single compartment magazines, matte box, sunshade with filter stage.

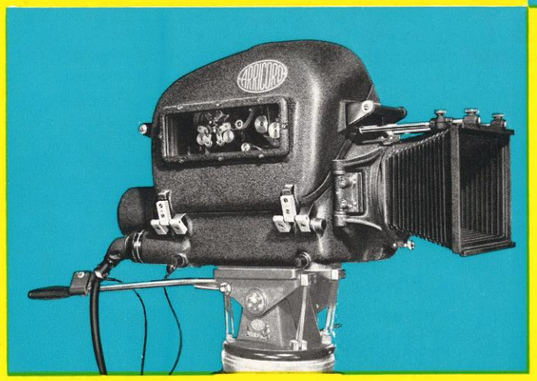




The Arri Blimp 120, like the 300 model, is a soundproof housing for the Arriflex 35, and is intended for use with the 60 (200 ft) or 120 m (400 ft) magazine. It is fitted out in a similar fashion as the Blimp 300. The Blimp 120 converts the Arriflex 35, Model II B into a fully-fledged studio camera with synchronous motor. The lens can be focused easily by means of large remote control knobs, even when taking dolly and travelling shots. This is also a feature of the Blimp 300. Viewing and focusing take place through a specially extended eyepiece. Please write for special literature with full details.

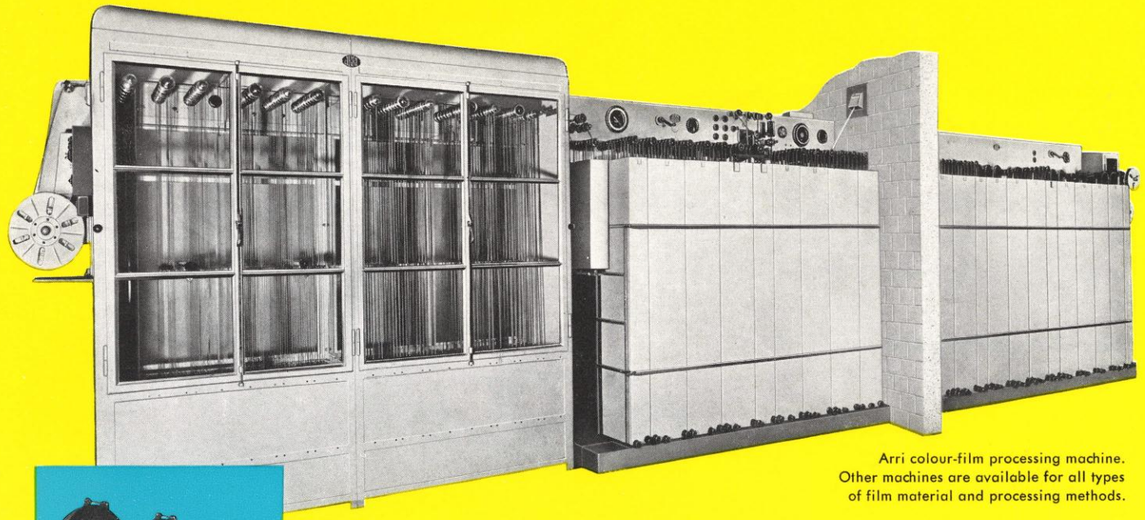
The Arri Blimp 300 is a soundproof housing for the Arriflex 35, Model II B with 300 m (1000 ft) magazine. The sturdy aluminium alloy housing is lined with ten layers of different material in order to obtain the required degree of sound absorption. This serves to screen off the sound of the camera when running, an essential prerequisite of close-up synchronous sound recording, particularly in the studio. The Arri Blimp 300 is also suited for use with anamorphic lenses, such as the Ultrascope Anamorphots.



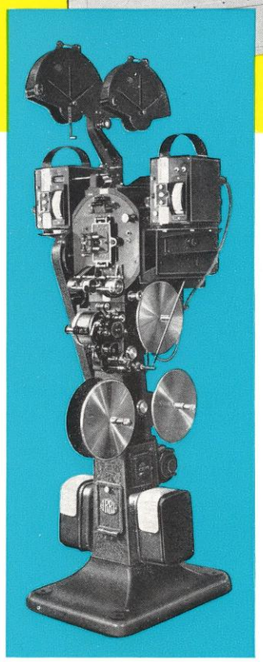


Arricord 35 — Double system combined picture and magnetic sound recording camera for newsreel and studio. Camera section: Arriflex 35 coupled with sound recorder for perforated 17.5 mm magnetic film, parallax-free mirror reflex shutter, driven by governor controlled 24 V direct current motor or synchronous motor, spacious soundproof housing, remote control feature for focusing and diaphragm setting, case for amplifier, battery and accessories.

PLEASE WRITE FOR SPECIAL LITERATURE!



Arri colour-film processing machine.
Other machines are available for all types of film material and processing methods.

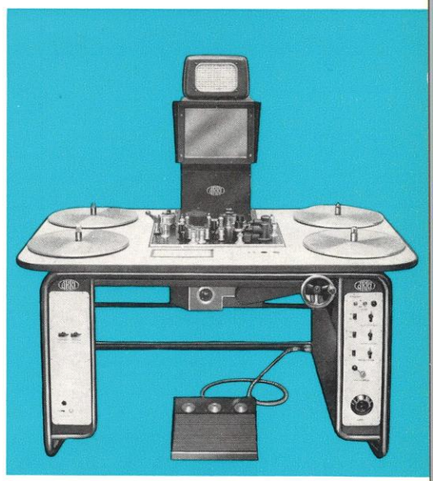


Arri printer for black and white or colour film, 16 or 35 mm, with or without sound.

ARRI PRINTERS AND FILM PROCESSING MACHINES • SPOTLIGHTS • EDITING AND SYNCHRONIZING TABLES

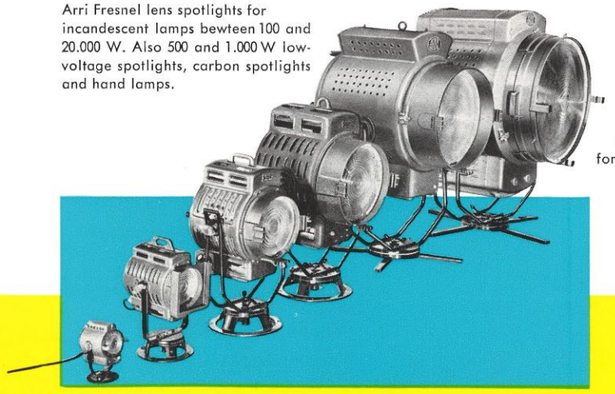
Among cameramen the world over, Arri mirror reflex cameras and their accessories have long been recognized as representing the peak of perfection. Right from the beginning they have kept abreast of the times and have accompanied the development of film technique right up to the high standards of the present day.

However, Arri cameras are merely a part of an extensive production programme. More than forty years of experience are the foundation on which the modern Arri printers and film processing machines were built. An unusually wide range of spotlights, editing and synchronizing tables and other equipment for filming and processing bear the same hallmark of quality as the world-famous Arriflex mirror reflex cameras. Detailed literature giving full information about this equipment is available on request.

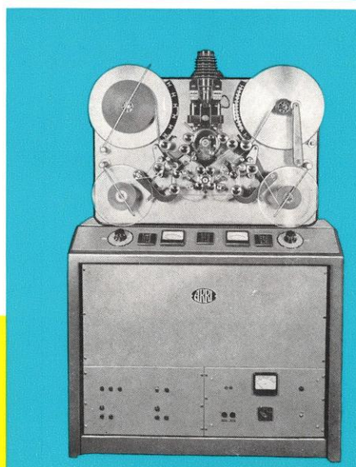


Arri editing table with four 35 mm film plates. Designed for editing picture and optical and magnetic sound, married and unmarried. With electric motor drive, amplifier, and loudspeaker.

Arri Fresnel lens spotlights for incandescent lamps bewteen 100 and 20.000 W. Also 500 and 1.000 W low-voltage spotlights, carbon spotlights and hand lamps.



Sound reduction printer for reducing 35 mm optical sound track to 16 mm.



YOU WILL FIND IN THIS CATALOGUE

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