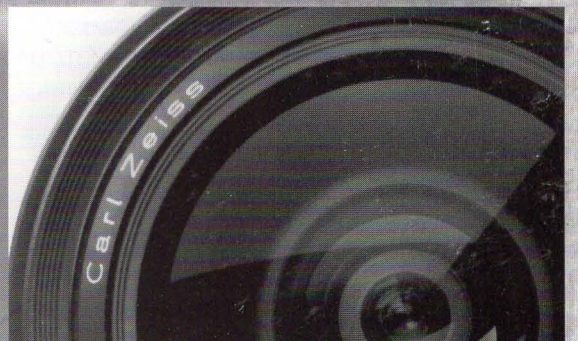
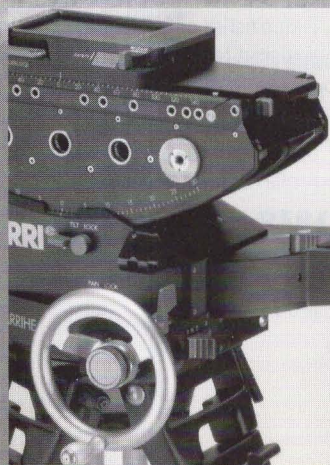
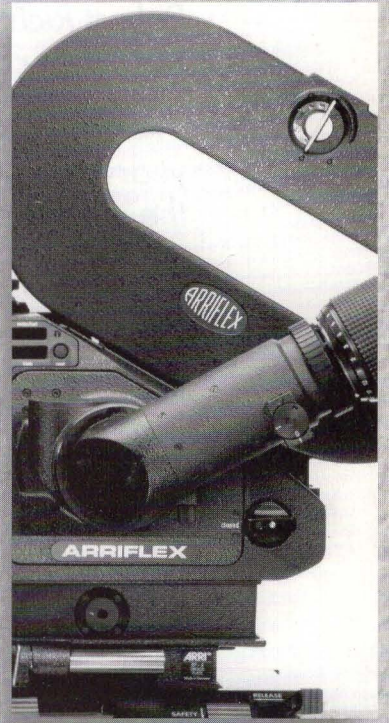
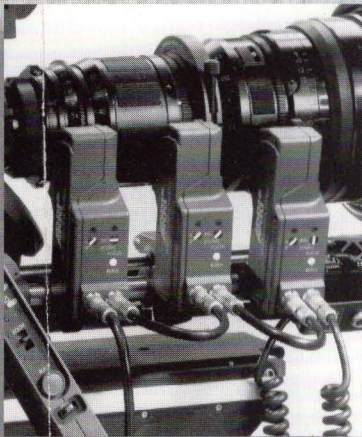
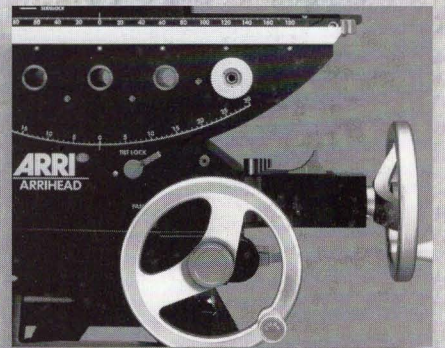
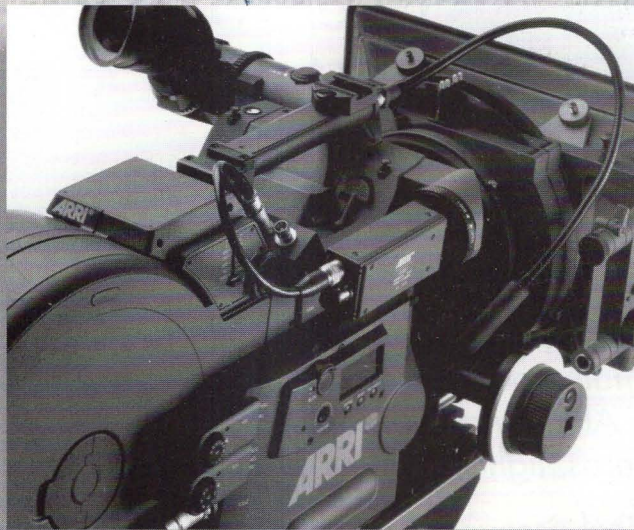
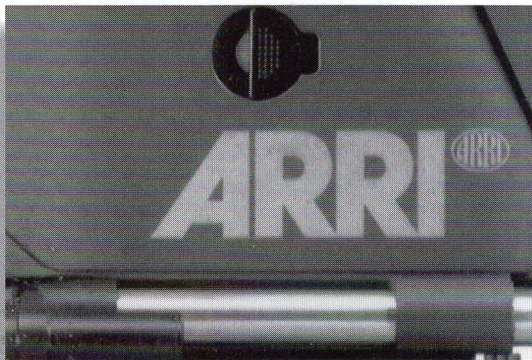


ARRITM

ARRIFLEX CAMERA SYSTEMS





Over 75 years of Motion Picture Technology

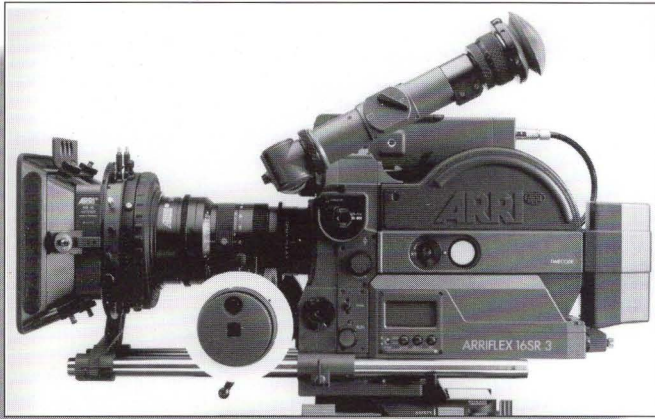
Since its founding in 1917, ARRI has been an innovator in all areas of motion picture technology.

Starting as a small shop repairing and modifying cameras used by the two founding partners and film pioneers, August Arnold and Robert Richter, ARRI quickly developed into an enterprise which built their own cameras, lights, printers and processing machines.

A chronological account of the most significant events in over 75 year history of Arnold & Richter indeed reads like a chronology of the motion picture industry itself.

- 1917** Company founded by August Arnold and Robert Richter, and ARRI trademark created from first two letters of Arnold and Richter's last names.
- 1924** First Arriflex camera, KINARRI 35, introduced.
- 1925** Introduced first ARRI lighting fixture. Lighting product line has been manufactured continuously to the present.
- 1927** First ARRI film-developing machine with friction drive introduced.
- 1932** Spinning-mirror reflex shutter invented at ARRI by Chief Design Engineer Erich Kaestner, allowing reflex viewing in a motion picture camera for the first time.
- 1937** ARRI 35 camera, forerunner of the famed ARRI 2C camera series, introduced.
- 1952** ARRI 16S camera introduced, the first professional, reflex viewing, pin registered, 16mm motion picture camera system.
- 1966** Academy Award. Scientific and Engineering Award for the design and development of the Arriflex 35mm portable motion picture reflex camera.
- 1968** Introduced the ARRI 35BL lightweight, sync-sound production camera system.
- 1972** Introduced the ARRI 16SR 16mm production camera system.
- 1972** Introduced first HMI lighting fixtures, co-designed with Osram, at Munich Olympics.
- 1972** Introduced Zeiss Super Speed lenses, first continuous F-stop series of fast lenses, designed for cinematography.
- 1973** Academy Award. Scientific and Engineering Award for the development and engineering of the Arriflex 35BL motion picture camera.
- 1979** Introduced the ARRI 35-3 MOS camera, today's standard for TV commercial, second unit and MOS production.
- 1982** Academy Award of Merit, for the concept and engineering of the first operational 35mm hand-held, spinning-mirror reflex, motion picture camera.
- 1988** Introduced Arriflex 765, first truly new 65mm camera system in over 50 years.
- 1988** Academy Award. Scientific and Engineering Award for the concept and engineering of the Arriflex 35-3 motion picture camera.
- 1991** Introduced Arriflex 535, most advanced 35mm motion picture camera.
- 1992** Academy Award for 35BL series culminating with 35BL-4s.
- 1993** Academy Award for design of the Arriflex 765.

ARRIFLEX 16SR-3



The new 16SR-3 is based on one of the most reliable 16mm camera designs now in use, a design that's been proving itself since 1975 — the Arriflex 16SR. The 16SR-3 retains the familiar 16SR shape and its operational look-and-feel, but it has a wide variety of new, advanced features and technologies built-in, some new to 16mm production itself.

It's equipped with an offset 54mm PL mount which makes it easy to change the format from normal to Super 16 filming, and permits the use of all commonly available 16mm and 35mm prime and zoom lenses. It has full 80 bit SMPTE time code; bright, high quality color and B&W flicker-reduced CCD video assist with frame store and comparison modes; a mechanical variable mirror shutter; a new, brighter Swingover Viewfinder that completely covers the Super 16 format, and provides the brightest and largest finder image of any camera; ArriGlow illuminated viewfinder format markings; full LCD readouts for frame rate, footage, shutter angle, time code, battery voltage, film end and asynchronous running; and compatibility with a wide variety of 535 electronic accessories.

Technical Data

Formats:	16mm, Super 16
Lens Mount:	54mm PL; user adjustable for Super 16
Viewfinder:	<ul style="list-style-type: none"> • Swingover Viewfinder. Swings 190° for full left or right side operation, with fully upright image in any position. Swings 120° with CCD video attached. Rotatable 360° parallel to and 25° out from body. • Arriglow, for both 16mm and Super 16 • 10" Finder extension with 2x magnification
Viewfinder Magnification:	10x; 10/17x with finder extender
Mirror Shutter:	<ul style="list-style-type: none"> • Single blade variable mirror shutter; manually variable in 90°, 135°, 144°, 172.8°, and 180° shutter openings • Shutter angle opening indicated on LCD display during electronic inching mode.
Displays, Viewfinder:	Out-of-sync; film end; low battery.
Displays, Camera:	<ul style="list-style-type: none"> • LCD on camera left • Set/display Frame Rates • Set/display Film Counter • Display Mirror Shutter Opening (during electronic inching mode) • Time Code/User Bits; Time Code Sensitivity readout • Battery Voltage, with warning for low battery (BAT) • Film End (END) • Out-of-Sync (ASY) • Many functions can be programmed with the Camera Control Unit (CCU) • Running light illuminates red if camera is not ready for operation, green if ready
Filming Speeds:	<ul style="list-style-type: none"> • On-camera selectable, preset speeds of 24, 25, 29.97 and 30 fps • Variable speeds of 5-75 fps in 16SR-3 and 10-150 fps in 16HSR-3 Highspeed camera, programmable in 0.001 increments at crystal accuracy without external accessories. • Speeds are continuously variable with the off-camera Remote Unit (RU), and can also be controlled with the Camera Control Unit (CCU).
Out-of-Sync Display:	LCDs; in viewfinder.
Run Test:	At standby, approximately 1 fps
Phase Shifter:	Phase Shift Button in STANDBY is electronic inching button, approx. 1 fps; in RUN, button is manual Phase Shifter. External Sync Unit (ESU) can also be used for automatic phase shift lockup.
Movement:	Multi-link, single-pin pulldown movement, with single registration pin.
Drive System:	Quartz-controlled DC motor.
Power Requirements:	24V DC.
Power Consumption:	Approximately 1.8A
Battery Types:	On-board 24V, or 24V/7Ah via power cable
Magazines:	400' (120m) coaxial, with or without time code recording module built in. Older 16SR magazines can be used. Non-TC 16SR-3 magazines can be retrofitted with TC. TC recording module built into magazine. Records SMPTE RP 114 80-bit SMPTE TC. Uses standard 535 CCD color and B&W video assist with flicker-reduction electronic unit (AFP), frame store and comparison mode, BNC output and Gen Lock (VD) input. Requires optical/video unit and beam splitter for color or B&W video cameras. Available in 50Hz (PAL) or 60Hz (NTSC) versions.
Time Code:	
Video Assist:	
Exposure Meter:	TTL silicon system (16 to 1000 ASA working range with ±2 F-stop over- or under-exposed indications).
Weight:	Approximately 15.4 lbs (7kg) with loaded magazines on on-board battery
Dimensions:	With 400' magazine, no lens: Length: 10.4" (264mm) Width: 6.8" (172mm) Height: 7.7" (195mm)
Temperature Range:	-4°F (-20°C) to +122°F (+50°C)

ARRIFLEX 535



The 535 is a fundamentally new, silent camera design that incorporates, integrates and expands the features added onto other cameras over the years.

The 535 camera system has a Swingover Viewfinder that allows comfortable viewing from any angle; advanced microprocessor control technology that permits shutter angle and speed changes while running; integral SMPTE Time Code; integrated color & B&W CCD video, with flicker reduction, frame store, and comparison modes; patented variable beam splitter; multiple, programmable format masks; and a patented multi-link film transport with dual registration pins for optical-printer accuracy.

Technical Data

- Formats:** 35mm, Super 35
- Lens mount:** 54mm PL; adjustable for Super 35
- Viewfinder:**
- Swingover Viewfinder. Swings 210° for full left or right side operation, with fully upright image in any position. Rotatable 360° parallel to body, and finder shifts for left or right eye viewing.
 - Lightweight handheld finder
 - Telescoping finder extension
 - Programmable ArriGlow; special groundglass masks available upon request.
 - Deanamorphoser; 2x magnification; 3-way video beam splitter; pivoting contrast viewing filters; heated eyecup.
- Viewfinder Magnification:** 6.5x, or 13x with 10x super wide-angle eyepiece; 5.2x, or 10.4x with 8x eyepiece
- Mirror Shutter:**
- Single blade, 11-180° electronically and steplessly controlled variable shutter.
 - On-camera selectable fixed shutter openings of 144°, 172.8° and 180°.
 - Unique programmable shutter angle/frame rate changes with CCU
 - Angle can be selected on-board with Shutter Control Unit (SCU), and off-camera with the Remote Unit (RU), and the Camera Control Unit (CCU).
 - As backup, mechanically adjustable through lens opening.
- Displays, Viewfinder:** Out-of-sync; low battery; film end warning; up to three simultaneous ArriGlow formats.
- Displays, Camera:**
- LCDs on camera left and right
 - Frame Rate
 - Exposed Film (running count)
 - Shutter Opening
 - Exposed Film per take
 - Battery Status
 - Time Code
 - User Bits
 - Behind-the-lens Filter Indicator
 - Indicates Out of Sync, Film Jam, Film End, Improper Movement Position, Magazine Improperly Mounted and Sprocket Guides Disengaged
 - Running light illuminates red if camera is not ready for operation, green if ready

- Filming Speeds:** On-camera mechanical speed selector switch for 24, 25, 29.97, and 30 fps.
- Speeds are continuously variable with the on-camera Variable Speed Unit (VSU) and the off-camera Remote Unit (RU), and can be controlled at 0.001 fps increments with the Camera Control Unit (CCU).
 - Speeds can easily be combined with shutter angle changes with CCU.
 - Reverse filming at 24 and 25 fps.
- Run Test:** At STANDBY, approximately 1 fps
- Phase Shifter:** Phase Shift Button in STANDBY is electronic inching button, approx. 1 fps; in RUN, button is manual Phase Shifter. External Sync Unit (ESU) can also be used for automatic phase shift lockup.
- Beam Splitter Ratios (viewfinder:video):** Switchable 80:20; 50:50; 10:90 (remote applications)
- Contrast Filters:** Switchable: ND 03, ND 06
- Movement:** Multi-link film transport, with dual pin registration that conforms to optical printer standards, and dual-pin pull-down claws. Adjustable pitch control, and reverse running. Universal aperture plate with 8 inter changeable format masks.
- Drive System:** Quartz-controlled, disk-type DC motor
- Power Requirements:** 24V DC
- Power Consumption:** Approx. 2.0A at room temperature and 24/25 fps with loaded 400' (120m) magazine
- Battery types:** 24V 7Ah block; 24V 2Ah on-board battery
- Magazines:** 1,000' (300m) and 400' (120m) coaxial, with dedicated torque motors and electronic LCD and mechanical footage counter. Quick thread – no pre-set film loop required. Connection and data transfer to camera via multi-pin plug. TC sensitivity selector.
- CCU:** The CCU is ARRI's standard camera-control unit. It is not necessary for basic camera operation, but is required for all programming functions.
- Time Code:** Standard 535 plug-in TC module for recording SMPTE RP 135 and RP 136 80-bit SMPTE TC
- Video assist:** Plug-in Video Optics Module (VOM) with integral flicker reduction electronics, frame storage, frame-store comparison mode, BNC output and Gen Lock (VD) input. Use with selectable 3-way beam splitter. Color and B&W CCD video cameras, with flicker reduction, available in 50Hz (PAL) and 60Hz (NTSC) versions
- Dimensions:** **With standard viewfinder, 400' [120m] magazine, w/o lens:**
 Width: 13.7" (349mm)
 Height: 11.0" (279mm)
 Length: 19.3" (490mm)
- Temperature Range:** -4°F (-20°C) to +122°F (+50°C)

ARRIFLEX 535B



The Arriflex 535B is the 535 system's new lightweight companion camera. It's smaller and lighter than the 535, but as convincingly quiet. It's expandable and retains the 535's modular design and many of its most-used features, including the options of standard SMPTE time code, and the new ARRI CCD flicker-reduced color video assist. The 535B has a new, lightweight Swingover Viewfinder that pivots on two axis, with full left or right side viewing and a fully upright image no matter where you place it. The entire finder is easily removed without tools and accepts a 100% video module for remote or Steadicam use.

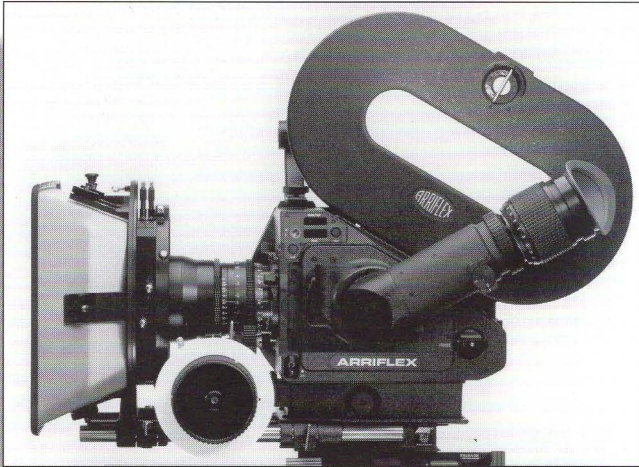
The 535B has the same optical-printer-accurate movement as the 535, and operates at crystal-accurate speeds from 3 to 60 fps. It has a mechanically adjusted mirror shutter, but retains most of the 535's microprocessor controlled electronic features. It also has a new, ergonomic handle and grip design, and uses all systems accessories of the 535 program. The 535B is the ideal companion camera to the 535, and a perfect successor camera to the popular 35BL series.

Technical Data

- Formats:** 35mm, Super 35
- Lens Mount:** 54mm PL; adjustable for Super 35
- Viewfinder:**
- Lightweight, modular Swingover Viewfinder that pivots on two axes, with full left or right side operation, with fully upright image in any position.
 - Removable; can be replaced with lightweight video finder only and CCD video assist.
 - Add-on anamorphic element.
 - Arriglow slide-in format masks.
 - Telescopes for left or right eyed viewing.
 - Finder extension with 2_x magnification.
 - Switchable ND filter.
 - Heated eyecup.
- Viewfinder Magnification:** 6.5x, or 13x with 10x super wide-angle eyepiece; 5.2x, or 10.4x with 8x eyepiece
- Mirror Shutter:**
- Single blade variable mirror shutter.
 - Manually variable from 11° to 180° in 15° steps, and 144° and 172.8°.
- Displays, Viewfinder, Displays, Camera:**
- Out of Sync; Low Battery; End of Film; ArriGlow formats
- LCD on camera left for footage
 - Camera Speed
 - Time Code sensitivity (TC)
 - Battery Voltage
 - Time Code
 - User Bits
 - Behind-the-lens Filter indicator
 - Out-of-sync
 - Film Jam
 - Film End
 - Improper Movement Position
 - Magazine Improperly Mounted
 - Rear Sprocket Guides Disengaged
 - Running light illuminates red if camera is not ready for operation, green if ready
- Filming Speeds:**
- On-camera selectable pre-set speeds of 24, 25, 29.97 and 30 fps
 - Variable speeds of 3-60 fps, programmable in 0.001 increments at crystal accuracy without external accessories.
 - Speeds are continuously variable with the off-camera Remote Unit (RU), and can also be controlled with the Camera Control Unit (CCU)

- Run Test:** At STANDBY, approximately 1 fps
- Phase Shifter:** Phase Shift Button in STANDBY is electronic inching button, approx. 1 fps; in RUN, button is manual Phase Shifter. External Sync Unit (ESU) can also be used for automatic phase shift lockup.
- Beam Splitter Ratios (viewfinder:video):** 50/50%; 10/90%; 80/20%; beam splitter requires manual installation by user for change of ratios.
- Contrast Filter:** Switchable ND 06
- Movement:** Multi-link film transport, with dual pin registration that conforms to optical printer standards, and dual-pin pull-down claws. Adjustable pitch control, and reverse running. Universal aperture plate with 8 interchangeable format masks.
- Drive System:** Quartz-controlled, disk-type DC motor.
- Grip System:** Ergonomic grip system, with crossbar carrying handle attached to body, with standard tripod thread bolt holes permitting attachment of handles, mini-monitors, small lights. Handles can be changed without tools.
- Power Requirements:** 24V DC
- Power Consumption:** Approx. 2.0A at room temperature and 24/25 fps with loaded 400' (120m) magazine
- Battery Types:** 24V 7Ah block; 24V 2Ah on-board battery.
- Magazines:** 1000' (300m) and 400' (120m) coaxial, with dedicated torque motors and mechanical footage counters. Quick thread - no pre-set film loop required. Connection and data transfer to camera via multi-pin plug. TC sensitivity selector.
- Time Code:** Standard 535 plug-in TC module for recording SMPTE RP 135 and RP 136 80 bit SMPTE TC.
- Video Assist:** Uses standard 535 CCD color and B&W video assist with flicker reduction electronics unit (AFP), frame store and comparison mode, BNC output and Gen Lock (VD) input. Requires 535B video elbow. Available in 50Hz (PAL) or 60Hz (NTSC) versions.
- Accessories:** Add-on Arriglow; finder extension with built-in magnifier; plug-in universal LCD display, rotatable for viewing; most 535 electronic accessories such as CCU, Variable Speed Unit (VSU), Remote Unit (RU), Time Code Recording Module.
- Dimensions:** **With standard viewfinder, 400' (120m) magazine, w/o lens:**
 Width: 11.8" (300mm) (with finder on left)
 Height: 11.1" (280mm) (with grip)
 9.1" (230mm) (without grip)
 Length: 19.3" (490mm)
- Temperature Range:** -4°F (-20°C) to +122°F (50°C)

ARRIFLEX 35-3



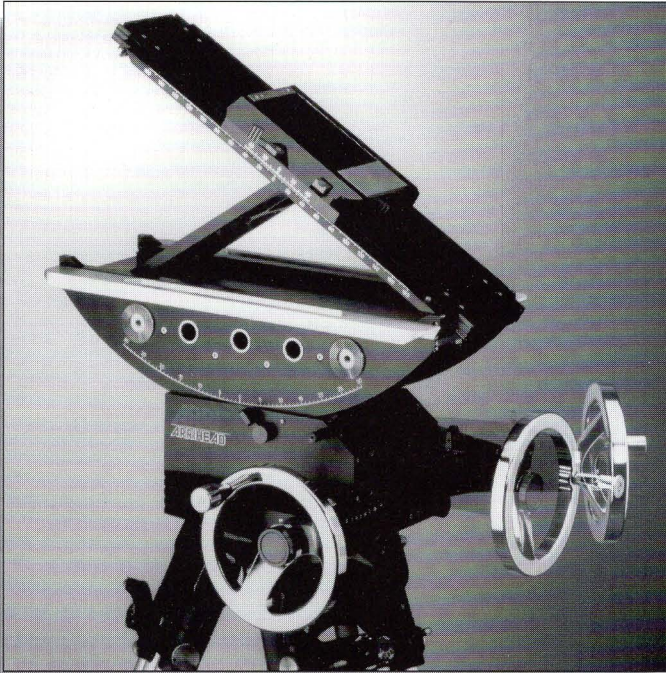
The Arriflex 35-3 camera is today the most popular and most widely used 35mm MOS and second-unit production camera in the world. The rugged and reliable camera is used on every aspect of today's major feature, commercial documentary and special venue productions.

The camera is equipped with a low-friction film-gate assembly and pin-registered film transport to safely handle any film stock at frame rates of 5-130 fps in forward or reverse operation modes. The single-blade 180° shutter is mechanically adjustable from 15-180°, and a long list of ARRI accessories completes this popular camera system.

Technical Data

Format:	35mm
Lens mount:	54mm PL
Viewfinder:	<ul style="list-style-type: none">• Mirror reflex viewing• Offset finder door for handholding• Pivoting finder door• CCD Video Assist finder door• Finder extensions - 9" standard, 9" anamorphic and 12" standard
Viewfinder Magnification:	6.5 x
Mirror Shutter:	<ul style="list-style-type: none">• Single 180° blade• Mechanically adjustable in 15° increments from 15° to 135°, and 144°, and 172.8°
Displays, Camera:	<ul style="list-style-type: none">• Footage Exposed• Frames per Second
Filming Speeds:	<ul style="list-style-type: none">• 24, 25, 30 fps preset and selectable• 5 to 50 fps internal control• 5 to 130 fps with HSU; reverse filming at• 5-130 fps with reverse running plug and reversible registration pin
Movement:	Double-pin pulldown, with single registration pin. Operates up to 130 fps with High Speed Accessory. Reversible registration pin.
Drive System:	Quartz-controlled DC disk-type motor
Power Requirements:	12V DC up to 50 fps; speeds of 50-130 fps require two 12V DC sources
Battery Types:	NC 12/7 Block; Switchable NC 24/7 - 12/14 Block above 50 fps
Magazines:	1,000' (300m) and 500' (160m) forward/reverse operation; 200' (60m) displacement; 400' shoulder mag
Video Assist:	Uses standard 535 CCD Color and B&W Video Assist with flicker-reduction electronic unit (AFP) and frame store and comparison mode. Requires new Optical Video Module. Available in 50Hz (PAL) and 60Hz (NTSC) versions. External Sync Unit for phase shift; Variable Speed Unit
Accessories:	
Dimensions:	With 400' magazine, no lens: <ul style="list-style-type: none">Length: 12.7" (322mm)Width: 7.2" (183mm)Height: 13.2" (335mm)
Temperature Range:	-4°F (-20) to +122°F (+50°C)

GEARED HEAD



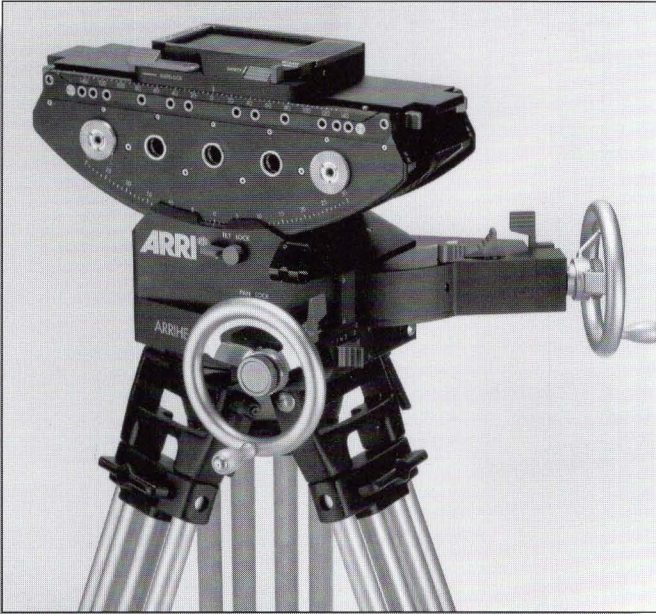
The ARRI Geared Head is the most popular, smoothest, and rugged geared head in use today. Its patented drive and V-rail guide system assures service-free operation in any climate. A patented swingout tilt drive mechanism can be set for the most comfortable operating position.

The built-in, removable, double-hinged wedge-plate system allows reversing of the tilt position without removing or reversing the camera system. Its quick-release camera mounting system reduces set-up time. The system is equipped with individual dual-tilt and single panlocks, combination friction/brake levers comfortably located near the handwheels for pan and tilt operation. Reduction gear units, battery bracket and round contoured handwheels are available as accessories.

Technical Data

Tilt Angle:	±30° without wedgeplate; ±90° with wedgeplate. Wedgeplate increments are 13°, 20°, 25°, 30°, 40°, 50° and 60°
Camera Mounting:	Sliding quick release bridgeplate; ±180mm balance adjustable system; ARRI Bridgeplate System.
Cradle:	Tilt via precision drive chain/pulleys, user adjustable tension, V-cradle rails, ball bearings.
Tilt/Pan Drive:	Tilt Unique laterally movable tilt handle up to 38° to right. Selectable 3-speed gear drive, plus neutral.
Tilt Speeds:	Slow – 17.5 turns for 60° full tilt Medium – 9.25 turns for 60° full tilt Fast – 4.75 turns for 60° full tilt
Pan Speeds:	Slow – 65 turns for full 360° pan Medium – 35.5 turns for full 360° pan Fast – 19 turns for full 360° pan
Lock-Off Brakes and Friction Levers:	Tilt: two positive lock-off brakes Pan: single positive lock-off brake
Gear Head Base:	Standard Mitchell
Miscellaneous:	<ul style="list-style-type: none"> • Self-illuminating level • Removable wheel knobs • Dovetail for battery bracket • Two mounting studs for Assistant's box • Viewfinder support bracket • Four panhandle mounting rosettes
Weight:	With wedge and quick release bridgeplate: 42 Lbs. (19 Kg) Tilt/pan wheels: 7.8 Lbs. (3.6 Kg)
Temperature Range:	-4°F to +122°F (-20°C to +50°C)
Maximum Load:	110 Lbs. (50 Kg)
Dimensions:	<p>With handwheels</p> <p>Height: 13" (336mm) Length: 24" (597mm) Width: 13" (342mm)</p> <p>Without handwheels</p> <p>Height: 12" (305mm) Length: 20" (508mm) Width: 11" (267mm)</p>
Accessories:	<p>Battery bracket</p> <p>Reduction gear for tilt and pan, ratio 5:1</p> <p>Handwheels with round contour</p> <p>Universal handgrip</p> <p>Adapter for bridgeplate system</p>

GEARED HEAD 2



The new ARRI Geared Head 2 is a smaller and lighter version of the most popular geared head in production today, the ARRI Geared Head.

The new ARRI Geared Head 2 is 8.5 lbs. lighter and 3.2 inches lower top-to-bottom, and handles all Arriflex and other 16mm and 35mm camera systems. It offers all the same operating features and efficient handling as the larger ARRI Geared Head.

Technical Data

- Tilt Angle:** $\pm 30^\circ$ without wedgeplate; $\pm 90^\circ$ with wedgeplate.
Wedgeplate increments are 20° , 25° , 30° , 40° , 50° and 60°
- Camera Mounting:** Sliding quick release bridgeplate; ± 140 mm balance adjustable system; ARRI Bridgeplate System.
- Cradle:** Tilt via precision drive chain/pulleys, user adjustable tension, V-cradle rails, ball bearings.
- Tilt/Pan Drive:** Tilt
Unique laterally movable tilt handle up to 38° to right. Selectable 3-speed gear drive, plus neutral.
- Tilt Speeds:**
Slow – 17.5 turns for 60° full tilt
Medium – 9.25 turns for 60° full tilt
Fast – 4.75 turns for 60° full tilt
- Pan Speeds:**
Slow – 65 turns for full 360° pan
Medium – 35.5 turns for full 360° pan
Fast – 19 turns for full 360° pan

Lock-Off Brakes and Friction Levers:

Tilt: two positive lock-off brakes
Pan: single positive lock-off brake

Gear Head Base:
Miscellaneous:

- Standard Mitchell
- Self-illuminating level
- Removable wheel knobs
- Accessory shoe
- Battery bracket 2
- Two mounting studs for Assistant's box
- Viewfinder support bracket
- Four panhandle mounting rosettes

Weight:

With wedge and quick release bridgeplate: 33 Lbs. (15 Kg)
Tilt/pan wheels: 5.5 Lbs. (2.5 Kg)

Temperature

Range: -4°F to $+122^\circ\text{F}$ (-20°C to $+50^\circ\text{C}$)

Maximum Load:

110 Lbs. (50 Kg)

Dimensions:

With handwheels

Height: 13" (330mm)
Length: 22" (566mm)
Width: 13" (343mm)

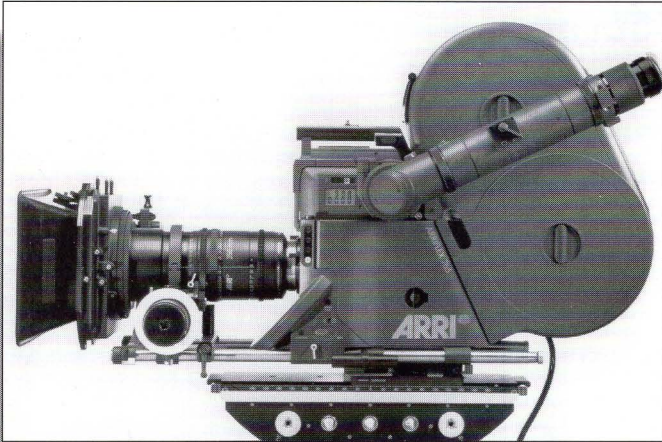
Without handwheels

Height: 12" (305mm)
Length: 18" (468mm)
Width: 11" (267mm)

Accessories:

- Battery bracket 2
- Reduction gear for tilt and pan, ratio 5:1
- Handwheels (standard)
- Universal handgrip
- Adapter 2 for bridgeplate system

ARRIFLEX 765



The Arriflex 765 is a completely integrated camera system for 65mm film productions, incorporating many innovative features not available in any other 65mm camera. The Arriflex 765 camera is quiet, versatile and capable of running at slow, normal, high and reverse speeds, with CCD video and electronically controlled magazines, and utilizes a microprocessor-controlled two-motor drive system.

The 765 is effectively two cameras; its microprocessor-control technology and mechanical design combine to make the 765 a quiet, sync-sound camera rated at under 25dBA, and a high-speed effects-oriented camera capable of operating from 2 to 100 fps.

65mm** LENSES

ARRI LENSES

30mm	T3.6	120mm	T4.2
40mm	T4.2	150mm	T3.0
50mm	T3.0	250mm	T4.2
60mm	T3.6	350mm	T4.2
80mm	T1.9	2x Mutar Extender	
80mm	T3.0	38-210mm	T6.2
100mm	T3.6		
110mm	T2.1		**Incorporates patented noise reduction system.

Scientific and Engineering Award, 1993

"To Arnold & Richter, Otto Blascheck, and the Engineering Department of ARRI Austria for the design and development of the Arriflex 765 camera system for 65mm motion picture photography."

Academy of Motion Picture Arts and Sciences.

Technical Data

Format:	65mm
Lens mount:	64mm PL; incorporates patented noise reduction elements
Sound level:	Less than 25dBA at 24 fps; 28.5 dBA at 30 fps
Run-up time:	Less than one second at 24 fps
Viewfinder:	<ul style="list-style-type: none"> • Mirror reflex viewing • Standard finder, rotatable 360° • Viewfinder extension with 2x magnification • Video beam splitter; Pivoting contrast filter • ArriGlow • Special ground glass/registered matte holder
Viewfinder Magnification:	8x, with 2x magnifier built into finder extender
Mirror Shutter:	Single blade, manually adjustable from 15° to 180° in 15° steps, and 144°, 172.8°
Displays, Viewfinder:	Out-of-sync; low battery; film-end
Displays, Camera:	<ul style="list-style-type: none"> • LCDs on camera left and right • Unexposed Film • Shutter Angle • Exposed Film • Camera Speed • Indicators for Film Jam (JAM); Out-of-Sync (ASY); Low Battery (BAT); Film End (END)
Filming Speeds:	<ul style="list-style-type: none"> • 12, 15, 24, 25, 29.97, 30, 60, 75, and 100 fps preset • 2-100 fps continuous via the CCU, at 0.001 of a frame accuracy • Reverse running at 24 fps
Out-of-Sync Display:	LCDs; in viewfinder; acoustically
Run Test:	At approximately 1 fps, electronic inching with phase button in standby mode.
Phase Shifter:	Manually by on-board Phase Button Automatically with VSSU accessory
Beam Splitter Ratios: (viewfinder:video)	80:20 with standard viewfinder 50:50 interchangeable
Contrast Filter:	Switchable ND filter
Movement:	Patented, dual, triple-pin pulldown movement, with dual registration pins; five-perforation pulldown stroke, and adjustable pitch control; movement needs to be locked for high-speed operation above 35 fps.
Drive System:	Two quartz-controlled DC disk-type motors in a direct drive configuration to shutter and movement, coupled and controlled by microprocessor CPU with two safety backups. No mechanical couplings or belts used between mirror shutter and movement between mirror shutter and movement.
Power Requirements:	24V DC
Power Consumption:	With 1000' magazine load Approx. 3A at 24/25 fps Approx. 8.5A at 100 fps
Battery Types:	NC 24/7Ah block up to 30 fps; NC 24/14Ah block above 30 fps
Magazines:	1,000' (300m) and 500' (160m) displacement magazines, with torque motors and electronic LCD counters. Connection and data transfer to camera via multi-pin plug
Video assist:	Plug-on CCD video camera with 2/3" pick-up area; BNC output and Gen Lock input.
Dimensions:	With 500' magazine, no lens: Length: 22.4" (570mm) Width: 14.6" (370mm) Height: 15.7" (400mm) With 1000' magazine, no lens: Length: 24.8" (630mm) Width: 14.6" (370mm) Height: 20.9" (530mm)

LENSES & ACCESSORIES



Each Zeiss lens is designed for its specific motion picture format, either 16mm or 35mm. There are no design compromises. Multi-layer T* coatings are used on all glass-to-air surfaces to optimized color saturation and purity. All Zeiss lenses with the T* multi-layer coating guarantee uniform color correction, and are interchangeable without sacrifices.

Floating lens elements and aspheric surfaces are used wherever these techniques add to the lens' performance.

All lenses are corrected for exceptional short-focus distances and incorporated expanded focus for accurate focus adjustments.

16mm

ZEISS SUPERSPEEDS	
9.5mm	T1.3
12mm	T1.3
16mm	T1.3
25mm	T1.3
50mm	T1.3

ZEISS STANDARDS

8mm*	T2.1
16mm	T2.1
20mm	T2.1
24mm	T2.1
28mm	T2.1
32mm	T2.1
40mm	T2.1
50mm	T2.1
60mm	T3.0 Macro
85mm	T2.1
100mm	T2.1
135mm	T2.1
180mm	T3.0
300mm	T3.0
w/2x Mutar Extender	

ZEISS ZOOMS

10-100mm*	T2.1
10-100mm*	T2.1 Auto
11-110 mm	T2.2 (SIG)

*Does not cover Super 16 format.

35mm

ZEISS SUPERSPEEDS*

18mm	T1.3
25mm	T1.3
35mm	T1.3
50mm	T1.3
65mm	T1.3
85mm	T1.3

*Scientific and Engineering Award, 1987

"To the Carl Zeiss Company for the design and development of a series of super-speed lenses for motion picture photography." Academy of Motion Picture Arts and Sciences.

ZEISS STANDARDS

12mm	T2.1
14mm	T2.0
16mm	T2.1
20mm	T2.1
24mm	T2.1
28mm	T2.1
32mm	T2.1
40mm	T2.1
50mm	T2.1
60mm	T3.0 Macro
85mm	T2.1
100mm	T2.1
135mm	T2.1
180mm	T3.0
300mm	T3.0
w/2x Mutar Extender	

ARRISCOPE ANAMORPHICS

32mm	T2.2
40mm	T2.2
50mm	T2.2
75mm	T2.2
100mm	T3.2
135mm	T3.2

ARRI MACROS

16mm	T2.1
24mm	T2.1
32mm	2.1
40mm	T2.1
50mm	T3.0
100mm	T3.0
200mm	T4.3



The ARRI LCS is an easy-to-use, modular remote lens control system design to drive iris, focus and zoom on all prime and zoom lenses. It consists of three interchangeable electronic motor drive modules that can be easily switched from iris to zoom to focus, or to left or right side operation; a handheld control unit with optional memory modules; two interchangeable follow-focus-type handles for pulling focus and iris; and a set of interchangeable cables. Once the system is mounted on either 15mm or 19mm support rods, a single button automatically calibrates all three motor drives to the iris, focus and zoom ranges of the lens.

LENS CONTROL SYSTEM

Technical Data

Description of System Components:

Motor unit	CLM-1
Zoom unit	ZMU-1
Focus-Iris unit	FIU-1
Power Cables	LC-SI

Temperature Range:

Operating temperature:	-20°...50°C
Storing temperature:	-40°...50°C

Power Supply:

Voltage:	24V DC (or 12V DC, reduced operating speed)
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Current Consumption without Motor running:	24V/12V
Motor Unit:	0.09/0.15A
Zoom Unit:	0.08/0.13A
Focus-Iris Unit:	0.10/0.10A
Power Cable:	0.04/0.04A
LCS with Motor Unit:	
operating at full speed:	1.60/1.90A

Torque Information:

Torque information of Motor Unit Maximum torque available on drive gear:	1 Nm
Maximum speed of the drive gear at 24V DC:	120RPM at a torque of 0.25 Nm

Adjustment Range

on drive gear:	8 Revolutions
Accuracy of adjustments:	Max. 1/2 of thickness of the lens barrel witness mark

Weight of Individual Components:

Motor Unit:	0.6kg
Zoom Unit:	0.4kg
Focus-Iris Unit:	0.4kg
Power Cable	0.1kg

Operating Noise:

Noise Level for RPM on Drive Gear:	
n<30RPM	<20dBA
n<60RPM	<25dBA

Memory Module:

Recording Time in Seconds for:			
Amounts of units	1	2	3
Range 1, 2 separate	242	162	81
Range 1+2 koppelled	485	242	162
Trigger voltage required between TRIG+ and TRIG-:	+30V DC		
Allowable voltage range between TRIG+ and TRIG-:	-5...+30V DC		