A PICTORIAL HISTORY OF ARRI

SHAPING THE FUTURE OF FILMMAKING

Robert Richter and August Arnold

THE POWER TO DREAM, THE VISION TO INNOVATE

Aside from simply entertaining us, motion pictures have offered us some of the most memorable images of our times. Film can reflect our culture, our history and who we are. Behind this artistry is the technology necessary to communicate these fascinating and compelling visions. Awe-struck by the magic of flickering images in a dark cinema, ARRI founders August Arnold and Robert Richter were so moved by this newly invented art form that they set out, as young students, to become filmmakers and later designers and manufacturers of precision engineered equipment that would revolutionize the industry.

Today the ARRI Group is the world's largest manufacturer and distributor of motion picture camera, digital intermediate and lighting technologies. With headquarters in Munich, Germany and ARRI Group subsidiaries in the US, UK, Austria, Italy, Canada and Australia, as well as a network of over forty accredited agents, ARRI offers professional service and distribution across the globe.

The ARRI Group also includes camera, lighting and grip rental companies located all over Europe and the US, and a worldwide network of rental partners providing productions with direct access to an extensive range of the latest high quality equipment, the experience and expertise of dedicated staff and the backup of a renowned international organization.

ARRI's product development, manufacturing and distribution are accompanied by an ever-growing service offering. ARRI Film & TV has made a name for itself in postproduction for domestic and international feature films, TV productions and commercials. Today, it offers a complete postproduction workflow, providing everything from lab services to state-of-the-art image and audio post services.

The close relationship between all of ARRI's businesses creates something truly unique: a company that can supply everything to see a project through from script to screen.

Recognizing that the imagination of filmmakers is limited only by the tools and technology at their disposal, ARRI constantly strives to offer something better to assist the artist in realizing their vision. More important than looking back at past achievements is the company's determination to look ahead to the future and what can be done to equip the filmmakers of tomorrow with tools that will unlock their imaginations and give free rein to their creativity.

In the Beginning

It was two friends and aspiring cinematographers, August Arnold and Robert Richter, who founded a company that would revolutionize the film and television industry. Their collaboration began with a chance meeting at grammar school, where the pair recognized in each other a passion and flair for all things technical. To supplement their pocket money they repaired bicycles and carried out installation work for a local electrical company. As their friendship flourished, so too did their interest in the new-born but fast-evolving technology of moving pictures.

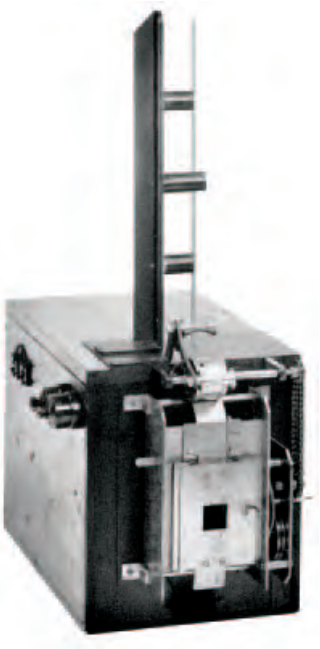
August Arnold and Robert Richter working together on a grinding machine and lathe.

1915

During their pre-military training Arnold and Richter become acquainted with Martin Kopp, a cameraman working for Messter Newsreels. Captivated by this medium of moving images, the two friends discover their true passion and destiny. They force themselves on Kopp, working as his assistants on documentaries and inundating him with questions about the industry. When they are not filming, they spend their free time in a laboratory, constantly pushing boundaries to discover new and exciting ways to expose film and create new effects. Saving diligently soon pays off; before long they are able to purchase a second-hand Urban 35 mm camera. With their technical expertise they make various improvements to the camera, while at the same time building a reputation as respected freelance cameramen.

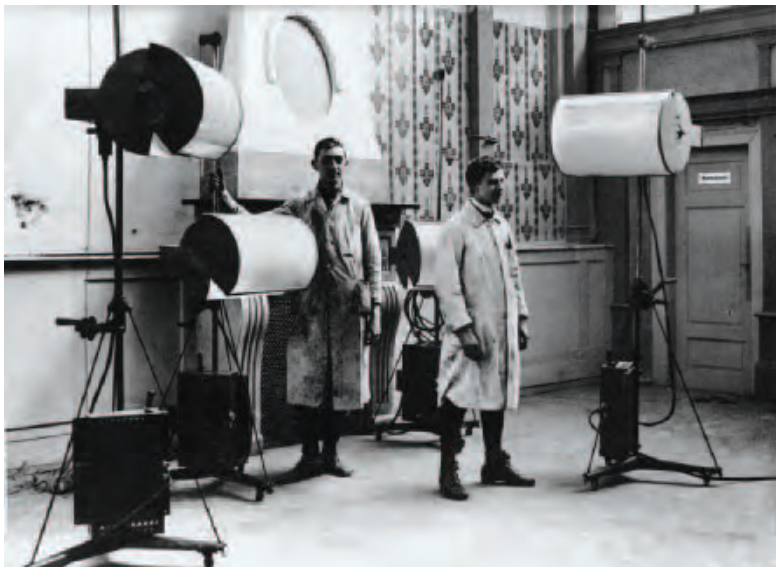
1916

The industrious pair design and build their first film printing machine, made from various sprockets and drive parts taken out of an old film projector bought at a second-hand goods stall in a local Munich market. Arnold and Richter officially establish their company in 1917 and name it ARRI, after the first two letters of each of their surnames. They set up a modest shop on Türkenstrasse in Munich; the same address continues to be in use today, but on a much grander scale – it houses the international headquarters of the organization



1917

It isn't long before Arnold and Richter have their first official success with the sale of several printers. Both have gained an extraordinary amount of technical knowledge and expertise by assisting filmmakers Michael Kopp and Peter Ostermayer.



Robert Richter *(left)* and August Arnold with Jupiter lamps.

1918

In the Weiss-Blau studio at Schellingstrasse the two friends learn the secrets of existing lighting techniques.

1918

In September, under the direction of Fred Stanz, they make a successful first foray into the world of motion pictures with the western-style feature film *Black Jack*, shot in a valley on the outskirts of Munich. They continue to shoot feature films in the early years, making over 100 in total – many of them westerns, a popular genre at this time. Titles include *The Yellow Strangler*, *Texas Fred's Honeymoon* and the thrilling *High Voltage – Caution! Danger!*

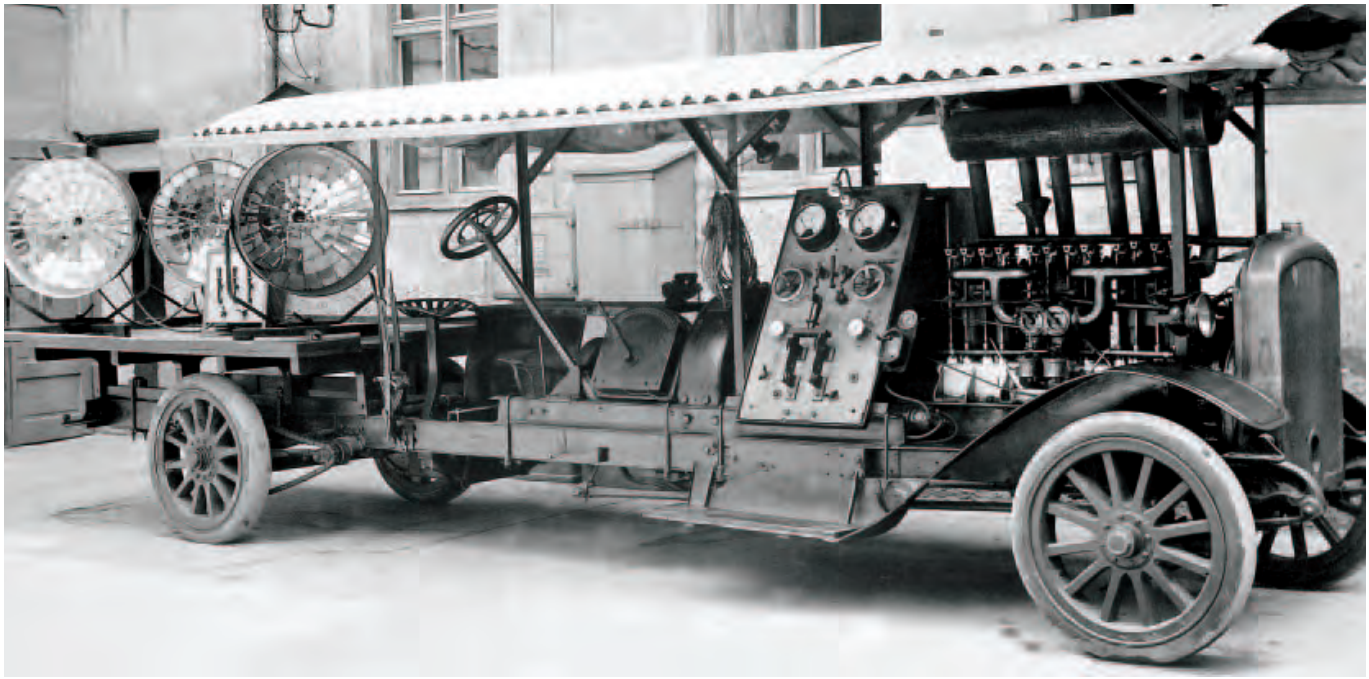
This experience in the field only fuels their drive to make technical improvements to existing products and design entirely new products that they can manufacture at their shop.

1920

Arnold and Richter work hard and in 1920 shoot their first independent productions, *The Train Robbers* and *Deadly Cowboys*, with the help of a Pathé camera. As these were their own productions they earn a substantial amount of money, which they immediately put into the manufacture of their second-phase, improved-design printers. An Italian film producer purchases 12 with an order for 12 more to follow. It is the sale of their printers and the money they make on their film productions that allows them to finance the design and manufacture of their first film cameras and lighting products.

1924

ARRI begins production of the first mirror facet reflector with an electric light bulb and designs a mobile generator, fully equipped and powered by an aircraft engine. With the development of these pioneering technologies, combined with the expansion of its film processing laboratory and the installation of further printing machines and developing rooms, the small company continues to grow at an impressive rate.



Mobile generator.

1924

The first camera developed is the KINARRI 35, a hand cranked 35 mm camera housing 100 ft of standard film.

Between productions they rent their cameras out to other cameramen for a fee, giving birth to the idea of combining sales with an equipment rental business, which would one day become the ARRI Rental Group.

The next model, an improved version named the TROPEN, is built with an adjustable rotary shutter.

1925

The mid-1920s sees the first sales success in the USA, with the exportation of a new and improved printing machine.

1927

After expanding the printing department in 1925 with self-constructed machines, ARRI builds the first large film processor with friction drive. By this time the company has 20 employees.

1928

The KINARRI 16 is developed and built, an amateur camera with a hand crank that is quickly followed by an advanced version with a spring mechanism.

1937

The first ARRI Fresnel lampheads are introduced.

1937

A landmark year comes in 1937 with the design and construction of the first reflex mirror shutter camera, the ARRIFLEX 35. The design is so efficient and inspired that it continues to be incorporated into every modern motion picture film camera today. For the first time in movie-making history, a camera operator can focus through the viewfinder and frame the subject without any parallax errors. This ability to actually see through the lens empowers filmmakers to have more control over their creative vision.

The ARRIFLEX 35 proves so enduring that in 1982, 45 years after its first release, an Academy Award of Merit is presented for the concept and engineering of this camera.

1944

During World War II production is relocated to the old Brannenburg Castle on the River Inn and to Buch on Lake Ammersee. This precautionary measure turns out to be a wise one, as on 13 July 1944 large bomber formations drop incendiary bombs on a section of the Munich headquarters. Within moments the ARRI plant has gone up in flames; all that remains is smoking debris.

Brannenburg Castle, one of ARRI's production sites duing World War II.

1945

After the end of the war Arnold and Richter, together with members of staff, start building new premises on the ruins of the previous structure. Reconstruction is carried out in several phases and takes approximately 10 years to complete.

The ruins of the old ARRI factory at Türkenstrasse.

1946

Business builds up again rapidly after the war: by 1946 more than 70 ARRIFLEX 35II cameras have been produced. Over the years, more than 17,000 ARRIFLEX 35s will be built.

ARRIFLEX 35II photographed in the sixties.

Dark Passage (1947)

The third of four films starring Humphrey Bogart and Lauren Bacall, *Dark Passage* was released in late 1947. Shot partly on location in San Francisco and partly on the Warner lot in LA, this highly stylized film noir was directed by Delmer Daves, who had risen from prop boy, to actor, to writer, and would become best known for directing a string of well received westerns over the next 20 years.

Dark Passage is notable mainly for its use of a dramatic device that is most commonly referred to as subjective camera, a technique whereby action is viewed through the eyes of a particular observer, rather than through the usual objective, impersonal point of view. The film opens with Bogart's character, Vincent Parry, escaping from prison by concealing himself in one of several barrels on an outbound truck. Having managed to topple the barrel from the moving vehicle and career down a hill without injury, he stumbles into undergrowth without the audience having seen his face. For the next 30 minutes of its running time, the film utilizes the subjective camera technique almost exclusively. Actors perform directly into the camera as Parry sets about clearing his name of the murder of his wife, accompanied by a Bogart voice-over. This and other deceits, such as the appearance of Parry's hands performing functions immediately in front of the lens, seek to give the impression that we in the audience are seeing precisely what the character is seeing. Only after Parry undergoes plastic surgery to alter his appearance is Bogart's face finally revealed, from which point the movie adopts a more conventional and objective filming style.

Realizing that the choice of camera for point of view shots was of crucial importance, Daves acquired an ARRIFLEX 35 from the US government after discovering that several had been brought back to the USA from Germany at the close of the war. Veteran cinematographer Sidney Hickox, ASC, who had also photographed the two preceding Bogart/Bacall movies, quickly adapted to using the small and portable camera both on set and on location in San Francisco.

Daves thought carefully about how he would assemble the footage: "I learned that we don't use our eyes the way film is edited, so instead of direct cutting I dissolved or cut on pans." The compact design of the ARRIFLEX 35 and its reflex viewing system allowed for more intimate and precisely composed images, which gave a polish to the film's subjective camerawork.

After *Dark Passage* the subjective camera technique fell from favor, appearing mainly in the occasional horror or science fiction film and only for short sequences. Most recently, Brian De Palma brought the device back to film noir by including a subjective camera scene in *The Black Dahlia (2006)*, though such examples are few and far between in contemporary cinema. Unlike the dramatic device for which it was first utilized in Hollywood, the ARRIFLEX 35 mm reflex camera went from strength to strength and was used on a countless number of films.

1948

Post-war reconstruction proceeds at high speed. This phase of construction is completed in the late 1950s.

1952

Property is purchased in Stephanskirchen, near Rosenheim, to house the factory and a foundry for the design and manufacture of ARRI lighting fixtures and camera magazines.

Louisiana Story (1948)

Directed by legendary documentary filmmaker Robert J. Flaherty, this feature was one of the first to use the ARRIFLEX 35II after imports into America began in 1947. Photographed by Richard Leacock, it tells the fictional story of a young Cajun boy from the bayous of Louisiana. The lightweight camera proved useful given the difficult terrain and Flaherty was impressed by the reflex viewfinder, often operating one of two ARRIFLEX cameras himself.

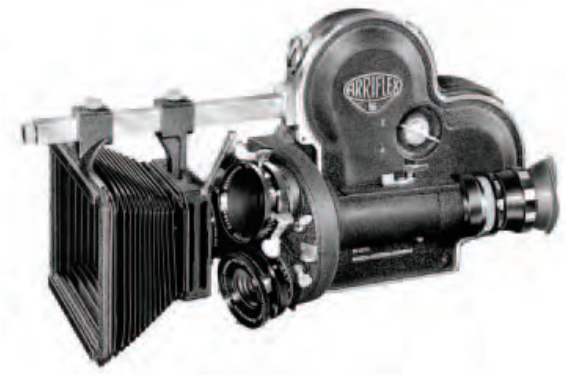
1952

ARRI develops its largest lamphead so far, the ARRI GIGANT 20 kW.

Famous racing driver Graham Hill films a training lap with an ARRIFLEX 16ST mounted on the car.

1952

The mid-20th century brings the golden age of television, prompting changes in the way film cameras are used and the requirements they have to fulfill. The broadening media horizon, first in the USA and then the rest of the world, leads to greater demands for television programs, not only from the publicly owned national broadcasting companies but also the rapidly expanding private sector. This opens up new possibilities, as the insatiable appetite for program content means an increased demand for cameras. The popular mass medium cries out for faster and cheaper production methods, creating the perfect market for 16 mm film technology. In 1952 ARRI releases the ARRIFLEX 16ST, the first professional 16 mm film camera to incorporate a reflex mirror shutter. This is the heyday of 16 mm, with the format in use for sports coverage and news gathering as well as documentaries and narrative film and program making.



1953

The first sound-proof blimps are developed for 16 mm and 35 mm cameras.

1953

In Munich ARRI continues to expand with the completion of two large studios equipped with dubbing rooms and production offices, joined later by a modern motion picture theater.

Satyajit Ray

There can be few directors in the history of cinema to have made their first feature film with as little experience and as much success as Satyajit Ray. Now widely regarded as one of the greatest Indian filmmakers of all time, Ray was first exposed to the world of film production when he volunteered to help Jean Renoir scout locations for *The River* during the French director's visit to his home region of Bengal in 1949.

Employed as a graphic designer at an advertising agency, Ray was seconded to London the following year and took the opportunity to watch every film he possibly could. It was after a screening of Vittorio de Sica's neo-realist masterpiece *Bicycle Thieves* that he resolved to direct his own adaptation of the classic Bengali novel *Pather Panchali*, a story revolving around the family struggles of an impoverished Bengali boy named Apu.

On his return to India in late 1950, Ray set about assembling a crew; fortuitously, his chosen collaborators turned out to be extremely talented individuals. Novice art director Bansi Chandra Gupta would go on to become the most respected practitioner of this discipline in all of India, while production manager Anil Choudhury rose to the challenge of his task with aplomb. Perhaps most crucial to the success of Ray's aesthetic vision was Subrata Mitra, a stills photographer who had never before operated a motion picture camera but who was persuaded to take on the role of cinematographer.

Filming began in 1952, funded by Ray himself, and would continue in fits and starts over four years as money came and went. The director was adamant that the film should be shot in real locations with a combination of actors and non-actors, in the true neo-realist vein. Mitra shot with an ARRIFLEX 35II, while sound was recorded with a Nagra reel-to-reel tape recorder. This lightweight kit allowed for swift and versatile location shooting with a minimum of crew, which was vital to the production in terms of both resources and directorial approach.

Ray and Mitra sought to avoid a slick studio-like lighting style, so Mitra developed a system of bounce lighting whereby lamps were aimed at cheap white sheets angled at the performers in order to create a softer, more natural light. By this method, which would go on to be utilized by lighting cameramen worldwide, Mitra could simulate daylight with extraordinary simplicity and effectiveness. The resulting black-and-white cinematography was stunning and played a big part in the success of the film.

Championed by the American director John Huston, who saw some of Ray's footage while location scouting in India for *The Man Who Would Be King*, the film premiered at New York's Museum of Modern Art in 1955. After its subsequent release in Calcutta, *Pather Panchali* was entered in the 1956 Cannes Film Festival, where it won the special jury prize for "Best Human Document."

The film went on to win over a dozen awards and prizes, launching Ray on his long and distinguished directorial career. *Pather Panchali* became the first of three films concerning the same character that are collectively known as the *Apu Trilogy*. Mitra served as his cinematographer for many years and ARRIFLEX cameras were a staple of their collaboration. When Ray's son Sandip became a director in later years, he too chose to shoot with ARRIFLEX cameras, having assisted on his father's sets throughout his life. Satyajit Ray died on 23 April 1992, just weeks after being awarded an Academy Honorary Award for Lifetime Achievement.

1957

A new color printing laboratory is completed and equipped with ARRI printing and developing machines. Only 12 months later, a further large office building is nearing completion.

1958

ARRI builds a cinema. It is refurbished in 1985 and again in 2002, when it is completely renovated and equipped with the latest technology.

Cinema photographed in 1985.

A Taste of Honey (1961)

An adaptation of Shelagh Delaney's play, this gritty social drama followed the 'kitchen sink' trend set by John Osborne's *Look Back in Anger*. Directed by Tony Richardson, a prominent figure of the British New Wave, the film was photographed by Walter Lassally, BSC, who frequently shot with blimped ARRIFLEX 35II series cameras on a number of different film stocks. This was the first British feature to be filmed entirely on location; it won four BAFTA awards.

1964

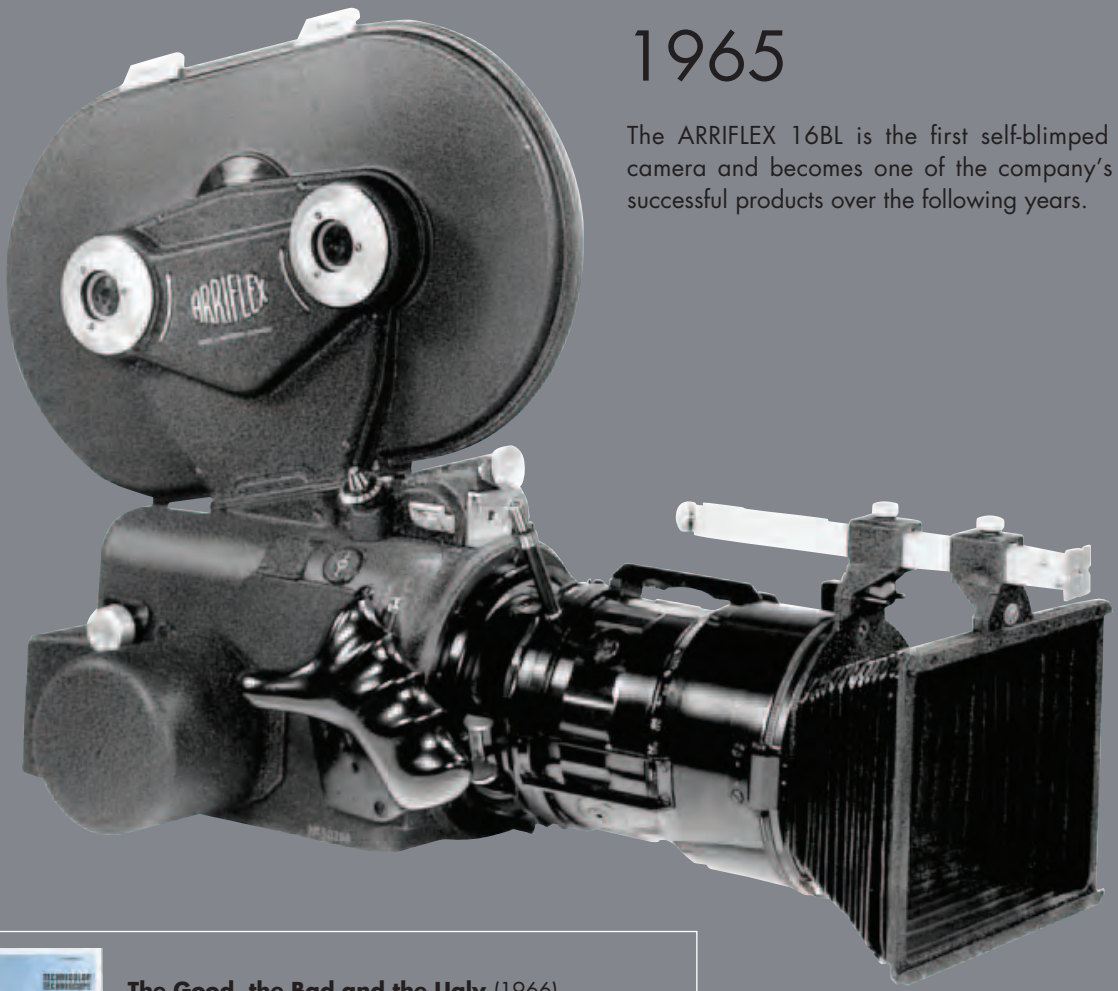
ARRIFLEX cameras film sports events all over the world. A Japanese cameraman records the opening of the 18th Olympic Games in Tokyo with an ARRIFLEX 16ST.

A Hard Day's Night (1964)

Produced on a limited budget to capitalize on the Beatlemania phenomenon, Richard Lester's mad-cap mock-documentary follows the Fab Four as they prepare for a show. The ARRIFLEX 35IIB cameras allowed cinematographer Gilbert Taylor, BSC, ASC, to keep up with John, Paul, George and Ringo as they dashed from screaming fans, while the reflex finder permitted handheld zoom and telephoto shots. The film is credited with inventing a plethora of music video techniques.

1965

The ARRIFLEX 16BL is the first self-blimped ARRI camera and becomes one of the company's most successful products over the following years.



The Good, the Bad and the Ugly (1966)

The third and final western that Sergio Leone made about the 'man with no name', a lone gunman played by Clint Eastwood, *The Good, the Bad and the Ugly* is a story of treasure, greed and treachery, set against an epic backdrop of the American Civil War. Tonino Delli Colli, AIC, shot wild with ARRIFLEX 35IICT/B Techniscope cameras; all dialogue was dubbed in postproduction as some actors were speaking Italian and others English, as was common with 'spaghetti westerns'.

Tonino Delli Colli, AIC

Tonino Delli Colli with the camera on the set of *The Good, the Bad and the Ugly*, while Sergio Leone directs.

After beginning work at the Cinecittà studios in Rome when he was 16, Tonino Delli Colli, AIC, served as an apprentice in the camera department for several years under the tutelage of cinematographers such as Mario Albertelli. Proud until the end of his life of the fact that he never studied filmmaking, nor read even a single book on the subject, Delli Colli learned his craft on the job and eventually began to take the reins himself when Albertelli fell ill.

After World War II, the neo-realist style of filmmaking emerged in Italy, characterized by naturalistic black-and-white photography and location shooting. Delli Colli built his reputation as a cinematographer during this period and later spearheaded the general transition to color by photographing the first color Italian film, *Totò a Colori*, in 1952. The emulsion he used for this film was rated at 6 ASA, necessitating vast quantities of light for studio scenes.

Tonino Delli Colli *(left)* with Pier Paolo Pasolini.

Tonino Delli Colli at work on *Ginger and Fred*. Federico Fellini is at the camera.

In 1961 he teamed for the first time with director Pier Paolo Pasolini, on *Accattone*. Their collaboration, which Delli Colli rated as one of the most rewarding of his working life, would continue for the following 15 years, producing such classics as *The Decameron* and *The Gospel According to St. Matthew*. Together they consistently created different and original images, partly by using equipment not common in the Italian industry at the time, including a 35-140 mm zoom and lightweight ARRIFLEX 35 mm reflex cameras.

Perhaps the films for which Delli Colli is best known are those directed by Sergio Leone. The cinematographer had helped and encouraged Leone when he was trying to raise interest in *A Fistful of Dollars*, a low-budget western that adapted the plot of Kurosawa's *Yojimbo*. When the film was finally made it was a runaway success, as was its sequel, *For a Few Dollars More*. Delli Colli got involved for the last in what became known as the *Dollars Trilogy*, *The Good, the Bad and the Ugly*, in 1966. He photographed this film, as well as Leone's next western, *Once Upon a Time in the West*, using Techniscope, a 2-perforation widescreen process that had been developed by Technicolor Italia. The system combined a 2-perforation pull-down with a 2.35:1 gate, resulting in two images being exposed one above the other within the 4-perforation Academy area. Delli Colli shot with Techniscope ARRI 35IICT/B cameras, which made filming in the desert easier due to their portability. The fact that they also halved film stock and development costs gave Leone the freedom to film scenes many times over, which was how he preferred to work.

Another important collaborator was Federico Fellini, with whom Delli Colli made four films, including *The Voice of the Moon* and *Ginger & Fred*, both of which were shot with ARRI 35BL series cameras. Fellini had a habit of changing everything at the last minute, so the cinematographer had to draw on all of his experience and be ready for anything on set each day.

After winning four David di Donatello awards over the course of his long and illustrious career, Delli Colli's final film was *Life is Beautiful* in 1997, which won international acclaim. He died in 2005, the same year he was awarded the ASC International Achievement Award.

1966

SCIENTIFIC AND TECHNICAL AWARD (Class II) to Arnold & Richter KG for the design and development of the ARRIFLEX 35 mm portable motion picture reflex camera.

Easy Rider (1969)

Photographed by the great Laszlo Kovacs, ASC, *Easy Rider* was shot on an ARRIFLEX 35IIC owned by Vilmos Zsigmond, ASC. Stars Peter Fonda and Dennis Hopper produced and directed respectively, as well as writing the film together with Terry Southern. Kovacs adapted a 1968 Chevy Impala with a flat wooden platform and used it as a camera car for the road scenes, operating the 35IIC whilst both zooming and focusing the lens himself.

1970

The ARRITECHNO 35 is the only X-ray movie camera that shoots up to 150 fps on the market. Used in the field of angiocardiography, 13,000 are sold worldwide.

1972

The ARRIFLEX 35BL is the first self-blimped 'studio silent' 35 mm film camera. Previously, blimped cameras were extremely cumbersome and weighed up to 80 lbs, but with the compact 35BL handheld work was possible since it only weighs 33 lbs. Iconic movies shot with the camera from this era include *Taxi Driver*, *Days of Heaven*, *Apocalypse Now* and *The Shining*.

A Clockwork Orange
(1971)

Stanley Kubrick's adaptation of Anthony Burgess' novel follows the adventures of social maladroit Alex and his 'droogs' in a dystopian future very different from that portrayed in Kubrick's previous film *2001: A Space Odyssey*. Photographed by John Alcott, BSC, with both blimped and wild ARRIFLEX 35IIC cameras, *A Clockwork Orange* was filmed almost entirely on location. The cameras were owned by Kubrick himself, who also served as operator for the many handheld sequences.

Across 110th Street (1972)

DP Jack Priestly on the rooftops of New York.

When planning this gritty Harlem-based 'blaxploitation' movie, director Barry Shears was adamant that only by filming in real locations could he bring a suitably raw and genuine feel to its themes of gang warfare and bloody street violence. Hollywood colleagues warned him that New York was the worst city in which to film, due to labor costs and permit nightmares, and Harlem the worst part of New York, due to its status at that time as the most lawless ghetto in the US.

Undeterred, Shears took on Fouad Sa'id, an unrivalled expert in location shooting, as a co-producer. Sa'id had cut his teeth as a cameraman on the pioneering NBC TV series, *I Spy*, which broke new ground for American television by mixing studio work with location footage shot all over the world; a feat made possible by abandoning the ubiquitous but unwieldy Mitchell cameras of the day in favor of the lightweight ARRIFLEX 35IIC.

A fast action sequence is filmed with an ARRIFLEX 35BL.

Sa'id found out during principal photography that the first production model of the much anticipated ARRILFEX 35BL had just arrived in New York. Having established a long and successful relationship with ARRIFLEX over the *I Spy* years, Sa'id persuaded Volker Bahnemann, at that time Vice President of the ARRI division in America, to let his *Across 110th Street* crew be the first to try out the 35BL, for a week.

The camera immediately revolutionized what they were able to achieve on the streets of Harlem. It was self-blimped and featured a dual-compartment coaxial magazine positioned at its rear for perfectly shoulder-balanced handheld shooting. "It's a real winner", affirmed cinematographer Jack Priestley, ASC, at the time. "It's as quiet as a church mouse and has great flexibility, especially as it weighs only 33 lbs. I don't know what I would have done in a lot of spots without it, especially in those small rooms where we often had to shoot. You put it on your shoulder and walk around, bend down, sit down, hold it in your lap – everything. I think it's going to help the film industry tremendously."

One week with the 35BL proved it to be such a valuable tool that Sa'id negotiated keeping the camera for the last four weeks of filming. Camera operator Sol Negrin, later to become a highly respected cinematographer and ASC member, reported of the 35BL: "It was used in major sound sequences shot in confined quarters where it was impossible to use a large camera, but where we needed portability and quietness. We also used it on the rooftops of buildings in Little Italy – buildings that had no elevators. The low noise level of the ARRIFLEX 35BL permits shooting sound sequences in confined quarters, thus eliminating the post-dubbing of dialogue that is usually necessary under such conditions."

A combination of Fouad Sa'id's radical location skills and ARRIFLEX's ground-breaking technology allowed Shears' dream of a realistic backdrop for his story to be accomplished. A staggering 95% of the movie was shot at a total of 60 different interior and exterior locations in Harlem.

1972

ARRI pioneers the development of daylight luminaires. The ARRISONNE 2000 W, the world's first ever daylight lamphead, is produced using Osram HQI technology, an early form of HMI discharge light.

ARRISONNEs in action illuminating the Königsplatz in Munich during the Olympic Games.

1973

SCIENTIFIC AND TECHNICAL AWARD (Class II) to Joachim Gerb and Erich Kaestner of the Arnold & Richter Company for the development and engineering of the ARRIFLEX 35BL motion picture camera.

1975

The ARRIFLEX 16SR is the first professional camera with symmetrical construction, allowing easy operating on both sides. This offers a far wider range as a news and documentary camera. In 1982 its successor, the ARRIFLEX 16SR II, appears on the market.

Bound for Glory (1976)

Hal Ashby originally cast Tim Buckley to star in this biopic of American folk singer Woody Guthrie, but he died before filming began and was replaced by David Carradine. Cinematographer Haskell Wexler, ASC, shot with an ARRIFLEX 35BL and won the Oscar for Best Cinematography at the 1977 Academy Awards for his efforts. *Bound for Glory* is famous for being the first feature film to make use of Garrett Brown's revolutionary Steadicam.

1977

Reflecting ARRI's continuing international growth, subsidiaries in New York and Los Angeles open to support the company's growing presence in the Hollywood market, where a permanent foothold has remained ever since. By establishing American-based subsidiaries, ARRI forms strong relationships with US filmmakers and its technological influence grows.

This strategy for growth paves the way for the opening of other outlets around the world. By the 1980s, ARRI in Munich has become a total end-to-end production entity, offering camera and lighting rental, and complete postproduction facilities.

1979

The ARRI APOLLO Daylight Fresnel series is developed, utilizing double-ended HMI bulbs.

The Shining (1980)

Based on a novel by Stephen King, Stanley Kubrick's seminal horror film was the last he made with cinematographer John Alcott, BSC, and his second with the ARRIFLEX 35BL. The vast Overlook Hotel set at Elstree Studios was lit by 'practicals' as well as 700,000 W of simulated daylight punching through windows, resulting in temperatures so high that the set burned down. *The Shining* is famous for Kubrick's masterful use of a Steadicam rig, operated by its inventor, Garrett Brown.

Stanley Kubrick

Stanley Kubrick on the set of *Eyes Wide Shut*.

At the age of 13 Stanley Kubrick was given a Graflex camera by his father Jacques, a professional physician in the Bronx, New York, and a keen amateur photographer. Stanley was soon taking pictures for his school newspaper and after a very short time image-making had become far more important to him than his classroom studies. By the time he was 17 he had sold his first photograph to *Look* magazine, a national publication to which he contributed further pictures throughout his last year of high school before being employed as a staff photographer upon graduation.

Over the next few years Kubrick honed his photographic skills on a variety of assignments for *Look*, all the while developing his passion for movies by frequenting the cinemas of Manhattan whenever possible, just as he had when playing truant from school. In early 1949 he covered a photo story on middleweight boxer Walter Cartier and was inspired to produce a short documentary film, funded by his own savings, entitled *Day of the Fight*. He sold the film to RKO for $100 more than it cost to make and became, at the age of 22, an entrepreneurial filmmaker who had turned a profit, albeit a modest one.

Giving up his job at the magazine, Kubrick devoted himself to a career in film and produced a number of further shorts before raising the money to shoot his first feature, *Fear and Desire*. Although he later dismissed this as a student-level effort, it taught him a great deal about the dramatization of intellectual ideas and also gave investors the confidence to back another feature. On *Killer's Kiss*, which he again photographed himself, Kubrick made use of an ARRIFLEX 35IIA for certain scenes. The compactness of the camera allowed him to operate personally – handheld if need be – while its reflex viewfinder suited his meticulous eye for composition.

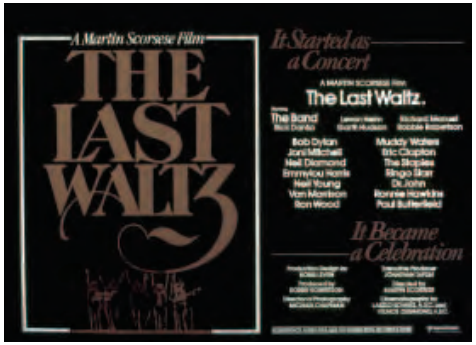
The 35II camera series, which developed through various models over the years, became regular fixtures on Kubrick's sets. They were used when mobility was vital, such as in the scene depicting the siege of Burpelson Air Force base in *Dr. Strangelove*, or when space was limited, such as on the B-52 set of the same film.

In 1970 Kubrick began production on *A Clockwork Orange*, which was shot almost entirely with his own 35IIC cameras. He utilized ARRIFLEX blimps for dialogue scenes when necessary, but reveled in the freedom afforded by the lightweight camera while shooting wild. All of the handheld scenes were operated by the director himself, including the infamous 'Singin' in the Rain' rape sequence and the 'Catlady' fight.

A lifelong camera enthusiast, Kubrick maintained an extraordinary knowledge of motion picture technology and continued to select ARRI cameras as the product line developed throughout his career. The 35BL series was used on both *Barry Lyndon* and *Full Metal Jacket*, while for *Eyes Wide Shut* Kubrick chose a 535B as his principal camera.

In a shot from Jan Harlan's touching tribute *Stanley Kubrick: A Life in Pictures*, released two years after the director's death, Kubrick is seen sitting in his own garden with his daughter on his knee. He points directly at the lens and says, "You know what kind of camera that is? It's an ARRIFLEX."

Stanley Kubrick on the set of *The Shining*.



The Last Waltz (1978)

Hailed by many as the greatest rock film ever made, *The Last Waltz* documents the final concert of The Band, during which they perform with guests such as Bob Dylan and Muddy Waters. Director Martin Scorsese, who had begun his career as an editor on *Woodstock*, Michael Wadleigh's film of the legendary 1969 music festival, employed camera operators including Michael Chapman, ASC; Vilmos Zsigmond, ASC; and Laszlo Kovaks, ASC, to man the seven different cameras, several of which were ARRIFLEX 35BLs.

Apocolypse Now (1979)

Relocating Joseph Conrad's *Heart of Darkness* to the Vietnam War, Francis Ford Coppola's sprawling exploration of the human psyche's response to violence and chaos took 16 months to film in the Philippines. Vittorio Storaro, AIC, ASC, won an Oscar for his extraordinary and colorful cinematography, despite the troubled shoot and intensely challenging conditions. He shot with an ARRIFLEX 35BL and can be seen operating an ARRIFLEX 16ST in a scene where he and Coppola cameo as a TV news team.

Das Boot (1981)

Based on the best-selling World War II U-boat novel by Lothar G. Buchheim, *Das Boot* had actually been in development as an American venture from as early as 1976. The project, however, was impeded and eventually shut down by creative differences between the production team and Buchheim, who had right of veto over the screenplay. In 1979, Producer Günter Rohrbach was head of Bavaria Film Studios and resurrected the film as an all-German production.

Jost Vacano, BVK, ASC, a local cinematographer with 15 years experience shooting features and German TV, was hired to photograph the film. He had never met director Wolfgang Peterson before, though they quickly formed a strong relationship and shared a determination that absolute realism should be the basic credo underlying the endeavor. Vacano ran into difficulty, however, when he expressed a belief that handheld filming would be the best option: "I had very strong feelings about the visuals of this film and it was not easy in the beginning to convince the director and the producers that I was right."

Jost Vacano in the submarine set with a purpose built gyro-rig and prototype 35IIIC. First assistant Peter Maiwald holds the remote focus unit.

Vacano built a gyroscopically-stabilized camera rig that he could hold in front of his crouched body as he ran through the set. Though Steadicam was available at that time, it was too cumbersome to get through the tiny circular doors that separated compartments within the submarine. Space was so tight that he had to wear a crash helmet and body armor to prevent serious injury on the many occasions when he fell or struck an obstacle. The rig softened his jarring running motion without eliminating a sense of human body movement that he believed would help pull audiences into the story.

Vacano initially used an ARRIFLEX 35IIC camera on his handheld rig, but ran into difficulty because the rigid viewfinder made low-angle work almost impossible. He lived in Munich and had a good relationship with ARRI, so asked engineers at the company if they might build something that could help him. This conversation brought about the birth of the ARRIFLEX 35IIIC, a single-mount, pivoting-viewfinder camera that represented the last evolutionary step of a body design which began life in 1946 as the ARRIFLEX 35II. Vacano was delighted: "I was always very close with the ARRI engineers", he says. "We would discuss future developments and I would tell them what I would like to see or what particular features might help me. They were always very willing to help and for *Das Boot* they built a completely new camera for me, which was fantastic."

Das Boot was a box-office smash and a towering artistic success. It became the most successful foreign film released in the US up to that time and its record of six Oscar nominations has yet to be matched by a German film. Jost Vacano describes the shoot as physically the toughest of his career, but remembers having no doubt at all that they were creating something special. "You know after this film I worked in the United States for about 15 years and shot many big mainstream films there, but when I look back, *Das Boot* is still one of my favorite pieces; maybe the best one of all."

Sven Nykvist, ASC

Sven Nykvist, ASC, built a career that spanned six decades, over the course of which he worked on over 120 films and collected two Academy Awards for Best Cinematography. As a young boy he was left with relatives in Stockholm when his parents emigrated from Sweden to work as Lutheran missionaries in the Congo. The sense of isolation and abandonment instilled in Nykvist by this separation almost certainly contributed to his emotional affinity with legendary director Ingmar Bergman, whose work often dealt with such themes. Their collaboration, stretching across many years and resulting in more than 20 films, was the most important professional and creative relationship of Nykvist's life.

Starting out in the early 1940s as a camera assistant at studios in Sweden and Italy, Nykvist first took sole responsibility for photographing a film in 1945, on *13 Chairs*. He was working on documentaries immediately prior to sharing a cinematography credit on *Sawdust and Tinsel* in 1953, initiating his association with Bergman. Six years later the director asked Nykvist to shoot *Virgin Spring*, encouraging him to think not just in terms of creating beautiful images, but of actually using light to help tell the story. "Ingmar Bergman has meant more to me more than almost anyone else in my whole life because of what he taught me," Nykvist commented in 1976. "He got me interested in what I think is the most important thing in photography – using light to create a mood."

Virgin Spring won the Oscar for Best Foreign Language Film and was followed by *Through a Glass Darkly*, *Winter Light* and *The Silence*, by which time the two men had formed an unshakeable creative bond. Nykvist's developing style was favoring soft, bounced light, unobtrusive camerawork and intense study of the human face. His propensity for searching close-ups is most notable in *Persona*, a film he shot on an ARRIFLEX 35IIC in 1966. In fact, no matter what studio camera he might use on a film, he almost always included an ARRIFLEX as part of his kit, for handheld shots and setups affording limited space.

After the ARRIFLEX 35BL came out in 1972, Nykvist made use of it on a number of films, including *Fanny and Alexander*, for which he won his second Oscar in 1982. Shot to be released as both a five-hour TV series and a three-hour feature, the production was fraught with difficulty, nearly costing the cinematographer his life when a crossbeam fell in the studio.

Nykvist teamed up with Andrei Tarkovsky for *The Sacrifice*, the celebrated Russian director's final film before succumbing to cancer. Nykvist again shot with the 35BL, producing beautiful, lingering images; the film won an extraordinary four awards at Cannes, including Best Artistic Contribution for cinematography.

Not long after receiving a Lifetime Achievement Award from the ASC in 1996, Nykvist was diagnosed with progressive aphasia and was forced to retire. Respected worldwide and having worked with many other important directors including Woody Allen, Roman Polanski, Louis Malle and Richard Attenborough, Sven Nykvist died in September 2006.

Fanny and Alexander (1982)

Sven Nykvist collected a BAFTA, a BSC Award and the Best Cinematography Oscar for his work on this Ingmar Bergman classic, which tells the story of the Ekdahls, an early 20th century Swedish family. Creating some of the most memorable images of his 25-year collaboration with Bergman, Nykvist asserted his total mastery of natural light with this film. The ARRIFLEX 35BL perfectly suited the director's demand for mobile yet unobtrusive camerawork.

Andrei Tarkovsky and Sven Nykvist on location during filming of *The Sacrifice*.

Ingmar Bergman lines up a shot with Sven Nykvist on *Fanny and Alexander*.

1982

Subsidiary company ARRI Video, now known as ARRI Film & TV, is set up. Today it offers a complete postproduction workflow, providing everything from lab services to state-of-the-art image and audio post services.

1982

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to August Arnold and Erich Kaestner of Arnold & Richter GmbH, for the concept and engineering of the first operational 35 mm, hand-held, spinning-mirror reflex, motion picture camera.

Full Metal Jacket (1987)

Douglas Milsome, BSC, who pulled focus for John Alcott, BSC, on *The Shining*, stepped in as cinematographer for Stanley Kubrick on this film, which the director again opted to shoot with ARRIFLEX 35BL cameras. Despite being set in Vietnam, the entire film was produced and filmed in England, at Pinewood Studios, Bassingbourn Barracks and Beckton Gasworks. Milsome experimented with different shutter angles for battle scenes, a technique Janusz Kaminski borrowed for *Saving Private Ryan*.

The Last Emperor (1987)

Bernardo Bertolucci's tale of Puyi, the last Emperor of China, won a staggering nine Academy Awards, one of them being Vittorio Storaro's third for Best Cinematography. It was the first Western film to be made about modern China with the full co-operation of the Chinese government. Storaro filmed with an ARRIFLEX 35BL and meticulously controlled his color palette, assigning specific colors to different themes and stages in the story.

1988

The ARRI STUDIO range is introduced, a series of high performance lampheads that take advantage of tungsten halogen lamps and utilize wide angle lenses for the first time to provide a 60-degree beam angle.

Vittorio Storaro, AIC, ASC

Vittorio Storaro on the set of *Reds*.

Vittorio Storaro and Bernardo Bertolucci at work together for the first time on *Before the Revolution*.

Vittorio Storaro, AIC, ASC, was introduced to the world of film by his father, a projectionist at the Lux Film Studio in Rome. As a young boy, Storaro would sit in the projection booth and watch films through the soundproof window, learning to follow the stories just by the visuals. At the age of 11 he began studying photography at a technical school and at 18 was accepted into the Italian Cinemagraphic Training Centre. Immediately after completing his studies, he began work as a focus puller on a feature and after a couple of jobs as a camera assistant established himself as an operator. In the early 1960s the Italian film industry slumped and Storaro used the time to throw himself into studies of painting, music, literature and philosophy by reading voraciously and visiting museums at every opportunity. He has been a determined and endlessly curious autodidact since that time and still considers himself a student of art and life.

Adamant that he must concentrate on film, Storaro turned down television work during this difficult time and when he was finally offered another job on *Before the Revolution (1964)*, it was as a camera assistant. Undaunted by stepping down a rung on the ladder, he accepted the offer and for the first time went to work with a director who would become one of the key collaborators of his career, Bernardo Bertolucci. Five years later Storaro took a phone call from Bertolucci and was asked to shoot *The Conformist (1970)*, a film composed of striking and confident images that were clearly the work of a major cinematographic talent.

In 1978 he shot his first non-Italian film for Francis Ford Coppola, who had seen *Last Tango in Paris (1972)* and wanted to take advantage of Storaro's experience with Marlon Brando's improvisational acting. *Apocalypse Now (1979)* was filmed on location in the Philippines with ARRIFLEX 35BL cameras and Technovision anamorphic lenses; it won the cinematographer his first Academy Award.

After this film Storaro became increasingly preoccupied with the thematic use of color, associating different colors with different emotions and story elements. Though he recognized that this code for color symbolism had emerged unconsciously from his earlier work, Storaro first deliberately implemented it on Bertolucci's *La Luna (1979)*. The technique developed and reached its pinnacle with Warren Beatty's *Reds (1981)* and Bertolucci's *The Last Emperor (1987)*, both of which won the cinematographer an Academy Award. Throughout this period he continued to shoot with ARRIFLEX 35BLs, though for *Little Buddha (1993)* he switched to the new generation ARRIFLEX 535 as well as an ARRIFLEX 765 65 mm camera for several sequences.

Vittorio Storaro is a passionate proponent of cinematography as art and lobbies tirelessly for the universal acceptance of formats and processes that will best protect the vision of directors and cinematographers as well as deliver images of the best possible quality to cinema and DVD audiences. In 2001 he became the youngest recipient of the coveted ASC Lifetime Achievement Award.

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1988

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to the Arnold & Richter engineering staff, Otto Blaschek and ARRIFLEX Corporation for the concept and engineering of the ARRIFLEX 35-III motion picture camera.

1989

ARRI earns its place in the history of space exploration when an ARRIFLEX 16 mm camera is taken into orbit by NASA on board the Space Shuttle Columbia in 1989 and then on the Space Shuttle Atlantis in 1990.

1989

The ARRIFLEX 765 represents the world's leading camera concept for 65 mm cinematography and is specifically designed to provide the ergonomics of 35 mm cameras with the ultimate image quality of 65 mm film. The 765 is a sync sound camera with a noise level of under 25 db(A), while also offering an unprecedented speed range of 2 to 100 fps. A bright optical viewfinder, iris-compensated speed ramps and a mechanically adjustable 180-degree mirror shutter are modern features found in no other 65 mm camera.

The ARRIFLEX 765 has significantly expanded the creative possibilities available for filmmakers to produce images of unsurpassed resolution, contrast range and natural color rendition. With the widespread use of the digital intermediate process, which allows multiple formats to be easily combined in a single project, the use of 65 mm film is currently seeing a renaissance. For scanning at 4K there is no better origination medium.

1990

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to the engineering department of Arnold & Richter for the continued design improvements of the ARRIFLEX BL camera system, culminating in the 35BL-4S model.

1990

The ARRIFLEX 535 is a 35 mm silent production camera that combines a brilliant viewfinder and the highest operating convenience with ARRI's well known precision and reliability. An innovative new programmable mirror shutter can vary the open angle while the camera is running, providing new creative possibilities. The cinematographer can now run exposure-compensated speed ramps or simply change exposure quickly without affecting the depth of field. This capability quickly becomes popular, and the ARRIFLEX 435 and the ARRICAM system later expand this technology with innovations such as automated speed/iris ramps and depth of field ramps.

1991

The first of the COMPACT DAYLIGHT Fresnels appears, making use of a single-ended lamp to allow a significant reduction in the size of the lamphead. Superior optical performance, reliability and robustness, combined with light weight and compact size, soon make these fixtures an industry favorite.

Goodfellas (1990)

Martin Scorsese and cinematographer Michael Ballhaus, ASC, teamed up again for this much-loved gangster film, based on the book *Wiseguy* by Nicholas Pileggi. Ballhaus used the ARRIFLEX 35BL4S, which won a Scientific and Engineering Award at the Oscars in 1991; Joe Pesci won Best Supporting Actor for his role in the film at the same ceremony. Larry McConkey operated the famous Steadicam shot that follows Ray Liotta and Lorraine Bracco through the bowels of the Copacabana nightclub.

Michael Ballhaus, ASC

Michael Ballhaus *(right)* with Francis Ford Coppola on the set of *Bram Stoker's Dracula*.

Michael Ballhaus and Martin Scorsese on the set of *The Departed*.

Michael Ballhaus, ASC, has made a point of selecting ARRIFLEX cameras throughout his distinguished career as a cinematographer, utilizing a wide variety of different models as the product range has developed over the years.

Ballhaus was born in Berlin to a family already connected with the dramatic arts. His uncle Carl Ballhaus was a well-known actor of stage and screen; his parents were also performers, as well as theater enthusiasts, who in 1947 moved the family to a castle in Bavaria and founded the Fränkische Theater. The castle had rooms for 20 actors and a stage where his parents regularly put on plays. Ballhaus involved himself to as great a degree as his schoolwork allowed, learning photography by taking pictures of the actors.

At the age of 17, he spent a week on the set of Max Ophüls' *Lola Montès*, observing French cinematographer Christian Matras at work. After studying photography for two years he found employment as a camera operator at a new television station in Baden-Baden. By 25, he had photographed his first feature and was combining freelance work with teaching responsibilities at a film school in Berlin. Working on a documentary in Ireland in 1970, he was offered and seized the opportunity to shoot *Whity* for director Rainer Werner Fassbinder.

Whity was the first of 15 collaborations between Ballhaus and Fassbinder, who relentlessly pushed the cinematographer to create interesting images under pressure. They worked with a minimal crew at breakneck speed, usually completing films in 20 days or less; award-winning feature *The Bitter Tears of Petra Von Kant*, which has a running time of over two hours, was shot in 10 days. During this period, Ballhaus was making heavy use of the ARRIFLEX 35IIC and in 1973 filmed *Martha* with the ARRIFLEX 16BL, though the ARRIFLEX 35BL became his camera of choice after its introduction.

He started making films in America with *Dear Mr. Wonderful* in 1982, followed by John Sayles' *Baby It's You*, which got him noticed by Martin Scorsese, who subsequently asked him to shoot *The Last Temptation of Christ*. This project was delayed, so the first film Ballhaus made with Scorsese was actually *After Hours* in 1985. Since then they have worked together on a further six features, including *The Color of Money* and *Goodfellas*, both shot on the ARRIFLEX 35BL series.

Ballhaus embraced the ARRIFLEX 535 when it came out, using the camera for further Scorsese collaborations *The Age of Innocence* and *Gangs of New York*, as well as other films including Francis Ford Coppola's *Dracula* and Wolfgang Peterson's *Air Force One*. More recently, he has used ARRICAM cameras and the ARRIFLEX 435 on Scorsese's *The Departed*, for which he also utilized ARRI/Zeiss Variable Prime and Master Prime lenses. In July 2012 he completed principal photography with the ARRI ALEXA on Constantin Film's feature production *3096*, directed by Sherry Hormann.

Michael Ballhaus is one of the most sought-after cinematographers in the world and has worked with many of the most revered directors of his time. He has received three Oscar nominations, for, *Broadcast News*, *The Fabulous Baker Boys* and *Gangs of New York*, and in 2007 was presented with the ASC International Achievement Award.

1992

The ARRIFLEX 16SR 3 can be converted to shoot in the Super 16 format and its 54 mm PL mount accepts the wide variety of 16 and 35 format prime, zoom and specialty lenses.

Bram Stoker's Dracula
(1992)

Francis Ford Coppola's adaptation of Bram Stoker's novel *Dracula* was one of the first films to make use of the new ARRIFLEX 535. Michael Ballhaus, ASC, who photographed the film, took advantage of the camera's ability to change the running speed in shot while the exposure is automatically compensated. Coppola sent his son Roman, the second unit director, out to investigate period special effects and subsequently used a turn-of-the-century Pathé hand crank camera for certain scenes.

1992

The ARRISUN 40/25 Daylight PAR combines a single-ended lamp with a parabolic reflector to provide a highly efficient, narrow-angled spotlight.

1992

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter, Otto Blaschek and the engineering department of ARRI Austria for the design and development of the ARRIFLEX 765 camera system for 65 mm motion picture photography.

1992

GORDON E. SAWYER AWARD to Erich Kaestner, Chief Design Engineer at Arnold & Richter for his technical contributions to the industry.

1992

After servicing the Winter Olympics in Albertville, France and the World Exhibition in Seville, Spain, ARRI equips the opening and closing ceremonies of the Olympic Games in Barcelona with its latest lighting technology.

1992

The ARRIFLEX 535B is lighter in weight, features a modular, detachable viewfinder system and is also equipped with an innovative new grip system.

Little Buddha (1993)

Director Bernardo Bertolucci worked with long-time collaborator Vittorio Storaro, AIC, ASC, on this tale of religious enlightenment. Storaro shot mainly on 35 mm anamorphic, though he used the new ARRIFLEX 765 65 mm camera for flashback scenes depicting the life of Buddha, which he and Bertolucci wanted to seem visually flawless and to evoke an idyllic world. This technique bucked the trend of shooting flashback scenes with diminished photographic clarity, using filtration or diffusion to distinguish them from scenes set in the present.

Schindler's List (1993)

With a running time of over three hours, *Schindler's List* is a highly emotional black-and-white epic. Directed by Steven Spielberg, with cinematography by Janusz Kaminski, it is based on the true story of Oskar Schindler, a German businessman who was instrumental in saving the lives of over 1,000 Polish Jews during World War II.

Spielberg was originally attracted to the story in 1982 when Thomas Keneally's Booker Prize-winning novel, *Schindler's Ark*, was published to critical acclaim. Drawn by the emphasis on the true experiences of individual people, it would be another 10 years before Spielberg felt he was ready to make *Schindler's List*.

Filming took place over a period of 72 days in Krakow, using a fleet of ARRIFLEX 35III and 535 cameras. Shooting in black-and-white, Kaminski utilized handheld camerawork to create a documentary feel, fulfilling Spielberg's desire for the film to appear as if a journalist was recording the event.

Opting for black-and-white had a direct impact on the design of the production. The walls of sets had to be painted dark so that faces did not blend into the background and even the costumes were designed to contrast with skin tones. The entire color palette had to be adapted to ensure that everything looked perfect in monochrome.

The main challenge for Kaminski was that he had to create separation through his lighting. With the absence of color he had to direct light onto the faces of the actors while shooting, so that they became the brightest objects in the frame.

Schindler's List went on to become one of the most honored films of all time, winning an exceptional number of prizes and multiple Academy Awards, including Best Director for Spielberg, Best Picture for Spielberg and producers Branko Lustig and Gerald Molen, and Best Cinematography for Kaminski.

Steven Spielberg directing Ben Kingsley on the set of *Schindler's List.*

1994

The ARRIFLEX 435 is released and quickly becomes a workhorse of the film industry, the worldwide standard for 35 mm MOS high-speed camerawork. A ubiquitous presence on commercials, music videos and feature films, it is a hugely popular choice for second unit work and complex effects shots. The 435 combines robust construction with a super steady movement, 150 fps high-speed capabilities and special in-camera effects like programmable ramps, single frame, motion control and hand cranking. As the most versatile MOS camera ever built, it sells over 1,300 units and can be found in almost every country of the world.

Fargo (1996)

Roger Deakins, ASC, BSC, who had by this time become the Coen brothers' cinematographer of choice, won an Oscar nomination for his work on this critically-acclaimed downbeat comedy crime movie. He selected an ARRIFLEX 35BL4, which he knew could perform without fault through the harsh, winter shoot at locations throughout snow-swept Minnesota and North Dakota. Zeiss 32 mm and 40 mm primes were on the camera frequently, longer lenses than the Coens had tended to use on previous films.

1994

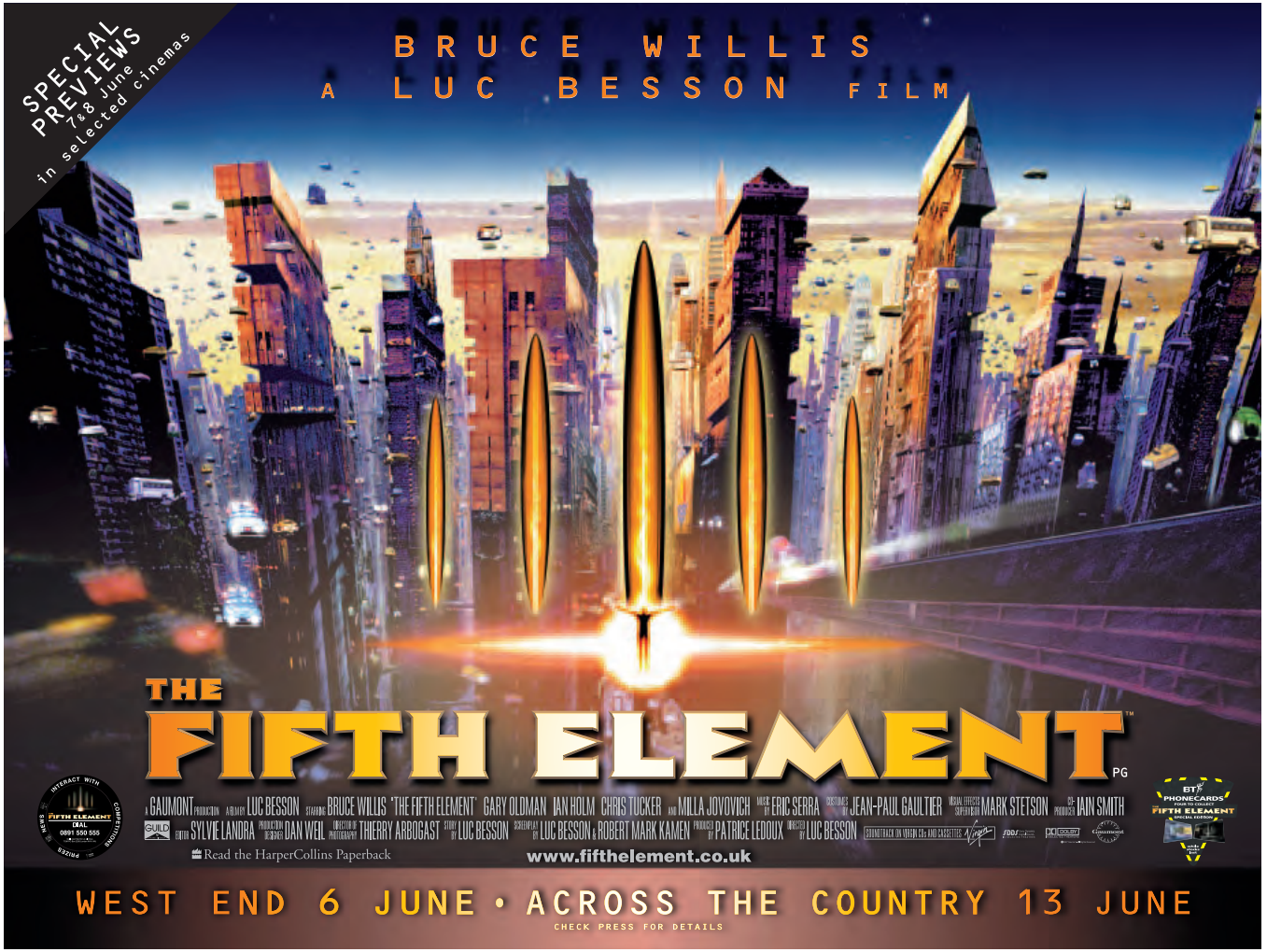
New developments in lenses also gain ground with the ARRI/Zeiss Variable Primes, offering the optical qualities of a prime lens and the ease of use of a zoom. The ARRI/Zeiss partnership continues with the Ultra Prime lenses and more recently with the Master Prime range, which have set new standards for high-speed prime lenses.

1995

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik for the development of the ARRIFLEX 535 series of cameras for motion picture cinematography.

1996

The ARRILUX POCKET PAR 125 W, a small but powerful HMI with a wide range of accessories, provides a highly portable discharge light source.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The Fifth Element (1997)

Luc Besson once stated that it was his intention to direct no more than 10 films in order to avoid the pitfalls of becoming 'burnt out'. In 1996 he made his seventh, the science fiction blockbuster *The Fifth Element*, a tale set in the strange and colorful universe of the 23rd century.

Originally conceived when Besson was just a teenager, it took over 20 years for *The Fifth Element* to reach the big screen. Besson compared the experience of creating the film to scaling a mountain, stating that he would never climb another like it.

Cinematographer Thierry Arbogast, AFC, accompanied Besson on the project, which was filmed in London at Pinewood Studios using an ARRIFLEX 535B as the main camera, ARRIFLEX 35IIC and 35IIICs for handheld, as well as multiple ARRIFLEX 435s for action scenes and visual effect work.

The style of the film was influenced by French graphic artists Jean Giraud (known as Moebius) and Jean-Claude Méziéres, renowned for their work in the world of comics. They both worked closely with Besson in preproduction, designing a comic book look.

Due to the large volume of visual effects work, the film was shot in Super 35, which allowed the effects company, Digital Domain, more freedom during production and digital postproduction. Digital Domain's visual effects cinematographer, Bill Neil, had never previously worked with ARRI cameras, but the ARRIFLEX 435's ability to remain perfectly steady at any frame rate, a trait that has seen the 435 become an industry favorite for second unit work, made a good impression. Neil went on to state in an interview: "I was amazed at the performance of this camera in terms of its steadiness at all speeds. In fact, it was rock steady, good enough for matte work from two frames to 150 frames a second, in both forward and reverse. I've never seen any camera made any place in the world that could do that."

Throughout the entire shoot Besson took a hands-on approach and operated a camera himself. Always conscious about his schedule and maintaining pace on set, he felt that it was a waste of time explaining everything to someone else when he could just do it himself. He set out to shoot 15 to 20 setups a day and spent his time rushing from one set to another, shooting with the second unit while the first was getting ready for the next take.

Altogether, *The Fifth Element* consists of 2,431 shots, including 240 visual effects sequences, which were captured over 109 days of shooting. Besson met his deadline, but the film's extensive preparations and punishing shooting schedule had left him exhausted.

The Fifth Element went on to take 300 million dollars at the box office – more than double the original estimates.

1998

ARRI has manufactured editing tables and film printers, and been a service provider in post and video production, for decades. With this exceptional background it was inevitable that the company would continue to advance tools in this area. The ARRILASER, capable of 4K from its introduction, quickly becomes the industry standard for film recording, with 280 units eventually installed at over 170 companies worldwide. Representing the last link in the digital intermediate chain, it is used on the majority of major motion pictures that go through a DI for the following decade. Archival work is another important element of the ARRILASER, with black-and-white separation masters being the most proven long-term storage medium for movies. The designers of the ARRILASER would be honored with an Academy Scientific and Engineering Award in 2001, and an Academy Award of Merit in 2011.

1998

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik and the Carl Zeiss Company for the concept and optical design of the Carl Zeiss/ARRIFLEX Variable Prime lenses.

Elizabeth (1997)

Indian director Shekhar Kapur had made his name in the West with *Bandit Queen* in 1994 and brought a fresh, outsider's perspective to this study of Elizabeth I's accession and early years as Queen of England. Cinematographer Remi Adefarasin, BSC, a veteran of the BBC, selected an ARRIFLEX 535 as his principal camera and used Zeiss primes to create images that won him a BAFTA, a BSC award, a Golden Frog and an Oscar nomination.

1998

The ARRI/Zeiss Ultra Prime series sets new standards for standard speed prime lenses.

Star Wars Episode I: The Phantom Menace (1999)

16 years after *Episode III: The Return of the Jedi*, George Lucas released the first of his *Star Wars* prequels to a fanfare of publicity. He had not actually directed a film since *Episode IV: A New Hope* in 1977, though he had been a prolific producer and writer during the intervening years. Cinematographer David Tattersall, BSC, who had worked with Lucas on various *Young Indiana Jones* projects, shot with ARRIFLEX 535 cameras, a Data Capture system specially developed by ARRI for Lucas, and the newly released Hawk anamorphic lenses.

1998

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik and ARRI USA, Inc., for the concept and engineering of the ARRIFLEX 435 camera system.

1999

The ARRIFLEX 16SR 3 Advanced boasts a 70% brighter viewfinder, ARRIGLOW, improved video assist and interfaces for modern ARRI accessories. All speeds can be set directly on the camera, and modern in-camera effects like speed/iris ramps are now possible. A new film guide with sapphire rollers improves steadiness, while an optimized movement leads to smoother and quieter operation.

Amelie (2000)

Jean-Pierre Jeunet's charming story of a quirky Parisian girl's explorations of life and love was photographed by Bruno Delbonnel, AFC, ASC. He shot with an ARRIFLEX 535 and occasionally a 435ES, with Ultra Prime lenses and Variable Primes. The film was put through a DI and recorded back out to film on an ARRILASER. This postproduction process allowed director Jeunet full control over the color chemistry, in particular the harmonizing of golds and greens with a range of other colors.

In the Mood for Love (2000)

Thought by many to be one of the most influential modern-day filmmakers, Wong Kar-Wai is a pioneer of Asian cinema. Famous for working without scripts or schedules, his methods are spontaneous and random while shooting.

Best known of his collaborators is cinematographer Chris Doyle, HKSC, with whom he has produced an impressive collection of visually rich films. Both prefer to 'find the film' while working, letting the story evolve through intuitive improvisation.

Wong's *In the Mood for Love* has become a cult film. Originally intended to be a quick, low-budget project it ended up taking 15 months to shoot. This meant that Doyle had to leave the project just before its completion due to other commitments. Taiwanese cinematographer Mark Li Ping-Bing stepped in for the final month of filming.

Set in 1962, the film stars two icons of Hong Kong cinema, Tony Leung and Maggie Cheung. The story is about two neighbors who discover that both their spouses are having affairs. As they try to find out how the affairs started they themselves become drawn to one another, but the restrictions of 1960s Chinese society and their refusal to become like their partners results in a tale of a love affair that never was.

Filming began in early 1999 with a camera package consisting of an ARRIFLEX 535 and ARRIFLEX 35BL4. Although the movement of the camera has always been heavily influenced by music in all of Wong's films, the style of *In the Mood for Love* was a departure from his previous work, which had mainly utilized handheld camerawork. Instead, the camera was placed so that its view was partly obscured, in a closet or at the corner of a building, playing the part of an observer and following the characters as if spying on them: a style influenced by the films of Alfred Hitchcock.

Doyle has stated that he considers it better than average to achieve one image per film that truly works. *In the Mood for Love* has such an image, a scene that is regularly recalled by moviegoers. It sees the male lead descend some stairs and exit screen left. Several seconds pass as the camera lingers on the staircase, then the female lead enters from the same direction and a close-up of her legs as she climbs the stairs follows. The viewer is left wondering whether they spoke as they passed each other off screen. The sequence has no dialogue, its strength lies in its imagery. Doyle once stated, 'Who's going to forget Maggie Cheung walking up those stairs?'

The final film was completed just in time for Cannes 2000 and went on to be awarded the Grand Prix Technique, which was shared by Doyle, Li and also William Chang Suk-Ping, the production designer/editor.

Remi Adefarasin, OBE, BSC

Born in London in 1948, cinematographer Remi Adefarasin, OBE, BSC, first caught the photography bug from his maternal grandfather, a keen amateur. After studying photography and filmmaking at Harrow Art School, he found work as a camera trainee for the BBC at Ealing Studios in the late 1960s. In those days the BBC had a sizeable in-house camera department, through which Adefarasin became familiar with 16 mm and 35 mm ARRI cameras. The training scheme on which he was enrolled gave him the opportunity to shoot countless thousands of feet of film on television productions all over the world. It was the perfect grounding for a distinguished career in visual storytelling.

From the 1990s Adefarasin began to intersperse his television work with feature films, among them the well-received *Truly, Madly, Deeply (1990)* and *Sliding Doors (1998)*. A crucial moment came when Indian director Shekhar Kapur asked Adefarasin to shoot *Elizabeth (1998)*, a biopic of England's Queen Elizabeth I that won international acclaim. The cinematographer worked with ARRIFLEX 535 and 435 cameras and ARRI/Zeiss lenses; his sumptuous images, recreating the late Tudor dynasty, were recognized with an Oscar nomination, an ASC Award nomination, a BAFTA, a BSC Award and a Golden Frog award from Camerimage.

Having made a name for himself as a leading motion picture cinematographer, Adefarasin did not turn his back on television, indeed one of the defining credits of his career was a television miniseries: HBO's groundbreaking World War II drama *Band of Brothers (2001)*. A huge international hit, the series was based on a bestselling non-fiction book by historian Stephen E. Ambrose and told the story of the 101st Airborne Division's Easy Company. Adefarasin shared cinematographic duties with Joel Ransom, CSC, working again with the ARRIFLEX 535 and 435, and Ultra Prime lenses. He often shot handheld, utilizing a 45 or 90-degree shutter to capture rapid movement and maintain image sharpness despite the frenetic, documentary-style camerawork. His images played a significant part in *Band of Brothers* becoming one of the most revered television productions of all time and resulted in an Emmy Award nomination for Outstanding Cinematography.

The mid-2000s saw Adefarasin develop a fruitful working relationship with Woody Allen, who left his beloved Manhattan to make a pair of feature films in London, both starring Scarlett Johansson: *Match Point (2005)* and *Scoop (2006)*. For these films Adefarasin selected the ARRICAM 35 mm system, alongside Ultra Prime lenses.

In 2007, a decade on from *Elizabeth*, Adefarasin re-teamed with Shekhar Kapur to shoot the sequel, *Elizabeth: The Golden Age*. Again, he opted for his preferred kit – ARRICAM Lite and Studio cameras with Ultra Prime lenses, and picked up a BSC Award nomination for his breathtaking photography. This notion of revisiting past work 10 years later was repeated when he signed on for *The Pacific (2010)*, HBO's follow-up to *Band of Brothers*. Being set in the Pacific theater of operations rather than the European, the production required Adefarasin to spend almost an entire year in Australasia, shooting in tropical forests teeming with dangerous animals. His efforts were rewarded with another Emmy nomination.

Adefarasin's recent films include *Cemetery Junction (2010)* and *The Cold Light of Day (2012)*, on which he continued his relationship with ARRI equipment; he has also experimented with the ALEXA digital camera system on some high profile commercials. Reflecting the immense respect and esteem in which he is held worldwide, Adefarasin was appointed Officer of the Order of the British Empire (OBE) in the 2012 Queen's New Year Honours List for his services to the television and film industry.

Remi Adefarasin discusses a scene for *Match Point* with Woody Allen.

Band of Brothers (2001)

Based on a non-fiction book of the same title by Stephen E. Ambrose, HBO's *Band of Brothers* was a 10-part television miniseries about the experiences of Easy Company, part of the US Army's 101st Airborne Division in World War II. Executive producers Steven Spielberg and Tom Hanks recruited two DPs for the 11-hour production, Joel Ransom, CSC, and Remi Adefarasin, OBE, BSC, who heightened the realism of the production by shooting handheld with ARRIFLEX 535 and 435 cameras. The series won six Emmy Awards out of 19 nominations, as well as a Golden Globe and an AFI Award.

2000

ARRI and Moviecam, now a member of the ARRI Group, join forces to design the ARRICAM system, the most advanced 35 mm camera system in the world and an instant best seller. The ARRICAM Studio and ARRICAM Lite cameras join the ARRIFLEX 435 to become the most popular and widely used cameras in the feature film industry.

The ARRICAM system is the ultimate sync sound camera system, combining innovative features, quiet operation and user friendly ergonomics. The ARRICAM's bright optical viewfinder continues to be unsurpassed for operators. For the first time in a motion picture camera, an automated system, the Lens Data System, has been integrated into lenses and cameras to simplify operation and provide full lens information. The extensive range of mechanical and electronic accessories, including four magazines and four viewfinders that work on both cameras, allow great flexibility for the filmmaker. ARRICAM continues to be the 35 mm camera system of choice on high end features such as *Troy*, *Casino Royale*, *Children of Men*, *Munich* and the *Harry Potter* films.

Lord of the Rings: The Fellowship of the Ring (2001)

Peter Jackson's three *Lord of the Rings* films, of which *The Fellowship of the Ring* was the first, were shot back-to-back in New Zealand between 1999 and 2004. Cinematographer Andrew Lesnie, ACS, ASC, had a kit which included up to four ARRIFLEX 535s and seven ARRIFLEX 435s, complemented by Ultra Prime lenses. At times there were up to nine units shooting simultaneously. The film was digitally graded and recorded to film with the ARRILASER, which Peter Jackson purposely bought for the production. Lesnie won the Best Cinematography Oscar for this film; the third and final installment would go on to win 11 Academy Awards, a feat matched only by *Ben-Hur* and *Titanic*.

2001

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Franz Kraus, Johannes Steurer and Wolfgang Riedel for the design and development of the ARRILASER film recorder.

2002

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to Arnold & Richter Cine Technik and Panavision, Inc., for their continuing development and innovation in the design and manufacturing of advanced camera systems specifically designed for the motion picture entertainment industry.

Chicago (2002)

Director and choreographer Rob Marshall translated this stage show to the screen by locating all of its musical numbers in a theater called the Onyx, which represented the fantasy world of a principal character. Dion Beebe, ACS, ASC, who was Oscar nominated for his photography, combined theatrical and film lights to create a highly versatile lighting scheme. He chose ARRICAM Lite and Studio cameras, mainly because of their maneuverability.

2003

As the leading manufacturer of motion picture cameras, ARRI must always look to the future, and at the turn of the millennium the company foresees that digital shooting is soon to become a viable option for high end film and television productions. The ARRIFLEX D-20 film-style digital camera is the company's first foray into digital acquisition and provides a huge amount of information about how to combine sensor technology with the long established form and function of film cameras.

2003

The ARRIFLEX 235, a compact and lightweight 35 mm MOS camera designed for handheld and remote applications, is introduced. Its small size allows unique angles and positioning, from handheld to Steadicam, car rigs, bicycle mounts, underwater applications, crash housings and aerial photography. The 235 can be found on the set of almost every single major 35 mm motion picture.

2004

With the introduction of the ARRISCAN film scanner in 2004, ARRI creates a range of new possibilities for postproduction workflows.

The ARRISCAN bridges the gap between the analogue and digital worlds, between film and data. Using a single CMOS sensor and LED illumination, it captures the extraordinary resolution of 16 mm and 35 mm film stocks, as well as their full dynamic range and colorimetry. Digital data output from the ARRISCAN is unsurpassed in quality, enabling postproduction facilities to rely on perfectly scanned images and concentrate on manipulating them creatively. The final edited and graded work can then be printed back to 35 mm film on the ARRILASER, preserving the full quality of these digital intermediate processes.

2004

The ARRIFLEX 435 conquers Everest. Shots were taken from the highest point on earth 29,028 feet (8,847 metres), a world first for cinema and a world first for the ARRIFLEX 435. Before all the equipment could be taken to Everest it had to be winterized. The ARRIFLEX 435 withstood every test and made the trip all the way to the summit without any modifications, proving the reliability and robust construction ARRI cameras are renowned for.

2004

The ARRI 6000 EB Electronic Ballast is introduced as the smallest 6000 W electronic ballast worldwide. As a pioneer in the introduction of electronic flicker-free ballasts to the movie industry, ARRI's successful relationship with manufacturer B&S Elektronische Geräte GmbH continues to develop over the coming years with ARRI's ballast range becoming an integral part of the ARRI Lighting family.

2004

The ARRI Wireless Remote System is completely overhauled to meet the growing needs of working professionals on the set. The result is a smaller, lighter and even more flexible system for lens and camera remote control. New, modular components provide a plethora of configuration options, allowing just the right system for each job to be easily and quickly assembled.

King Kong (2005)

Andrew Lesnie, ACS, ASC, followed his work on the *Lord of the Rings* trilogy with another Peter Jackson film, *King Kong*. Taking full advantage of the new generation of ARRI cameras, he utilized two ARRICAM Lites, an ARRICAM Studio, two ARRIFLEX 435s and was one of the first to use the new ARRIFLEX 235. The A-camera tended to be on a Steadicam and the B-camera roved around looking for tighter coverage. Lesnie frequently worked with a crane-mounted C-camera, designing and executing shots himself.

2005

ARRI's brightest lighting fixture yet, the ARRIMAX 18/12, is released, taking lighting to new levels. 50% brighter than a 12K PAR, the ARRIMAX uses a unique reflector concept – now known as MAX Technology – for beam control, eliminating the need for spread lenses. Quick to see its benefits, gaffers are soon using the ARRIMAX on sets all over the world for applications requiring an extremely powerful source of illumination. Sometimes mimicking the sun or exposing a large area of space at night, the ARRIMAX's work can be seen in *Indiana Jones 4*, *Batman: The Dark Knight* and *Hanna*.

2005

The ARRI/Zeiss Master Prime series is a revolutionary and unique new generation of high-speed prime lenses. With more resolution, more contrast and virtually no breathing, this complete set of primes provides unequalled performance in any lighting situation.

2005

The ARRI/Zeiss Ultra Prime 8R, an extreme wide angle lens with a unique look, further extends the focal range of the Ultra Prime series to a total of 16 lenses, from 8 mm to 180 mm.

2006

The MaxMover, an automated stirrup, offers remote pan, tilt and focus for a wide range of lighting fixtures, including the ARRIMAX 18/12.

2006

Inspired by the ARRIFLEX 235 and ARRICAM Lite, the compact ARRI/Zeiss Lightweight Zoom 15.5 – 45 is developed as the ideal companion for handheld, Steadicam and remote work.

2006

SCIENTIFIC AND TECHNICAL AWARD (Technical Achievement Award) to Walter Trauninger and Ernst Tschida for the design and engineering of the ARRI WRC wireless remote lens control system.

Sunshine (2007)

Cinematographer Alwin Kuchler, BSC, chose to shoot Danny Boyle's science fiction thriller with a combination of formats, making use of Ultra Prime spherical lenses and also Hawk anamorphics. He selected ARRICAMs and the ARRIFLEX 235 because their modular design and compactness were useful on the tight interior sets. For scenes set in a virtual reality 'earth room' he shot plates in 65 mm with the ARRIFLEX 765 and on several occasions utilized the new Ultra Prime 8R for distortion-free wide angle filming.

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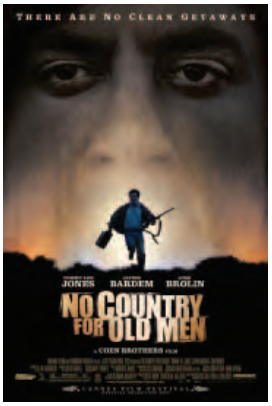
2006

SCIENTIFIC AND TECHNICAL AWARD (Technical Achievement Award) to Klemens Kehrer, Josef Handler, Thomas Smidek and Marc Shipman-Mueller for the design and development of the ARRIFLEX 235 camera system.

2006

The resilience of the 16 mm film format is demonstrated in 2006 when ARRI releases the ARRIFLEX 416. Providing the ergonomics and operational characteristics found in ARRI 35 mm cameras, the 416 is put to use on television and many other productions that appreciate its advanced features and silent operation. Coupled with the new high-speed Ultra 16 lenses specifically developed for the 16 format, the 416 offers cinematographers and producers ARRI's superior technology in an affordable and compact package. New film stocks and the digital intermediate process have also enhanced the 16 mm image, making the medium better than ever.



No Country for Old Men (2007)

For his ninth collaboration with Joel and Ethan Coen, Roger Deakins, ASC, BSC, utilized the ARRIFLEX 535 with ARRI Master Primes to capture their striking vision of an orange-sodium hued New Mexico fraught with danger. Whilst the Coens relied solely upon the HD monitor, Deakins set up an ARRI LocPro film projector in his hotel bedroom in order to view 35 mm dailies, reasoning that the monitor rendered his precise color palette too flat. An Academy Award nomination and a BAFTA in for Best Cinematography followed.

2007

The success of the ARRI/Zeiss Master Prime lenses leads to the launch of the T1.3/14 mm and T1.3/150 mm, extending the range at both the long and short ends. With their unique reduction of flare, chromatic aberrations and breathing, the Master Prime lenses provide even illumination across the whole frame and produce sharp, high contrast images.

2008

Generations of film professionals have learned how to operate follow focus units, matte boxes, baseplates and support bars by working with ARRI products, which are internationally renowned for their precision engineering and durable build quality. In recognition of this, ARRI develops the Pro Camera Accessories range, comprising versatile tools that endow almost any camera with film-style functionality, from small, handheld HDV units and HD-capable DSLRs to broadcast HD and high-end digital models.

2008

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Erwin Melzner for the overall concept including the optical and cooling systems, Volker Schumacher for the optical design, and Timo Mueller for the mechanical design, of the ARRIMAX 18/12 lighting fixture for use in motion picture production.

2008

Based on feedback from cinematographers, camera assistants and rental houses, ARRI examines all parts of the image creation chain of the ARRIFLEX D-20 and redesigns the image processing software. Out of this, combined with various internal hardware upgrades and optimized sensor timing, the ARRIFLEX D-21 emerges, offering cinematographers increased sharpness and color saturation, while still remaining the only film-style digital camera with an optical viewfinder.

Quantum of Solace (2008)

Following the enormously successful reinvention of the James Bond franchise with *Casino Royale*, DP Roberto Schaefer, ASC, aimed to create a look that would compliment, but differ from its predecessor, taking a visual approach that harked back to the films of the 1960s – "retro-with-modern," as he termed it. In order to do so he employed the full range of ARRI 35 mm cameras: ARRICAM Studio and Lite, ARRIFLEX 235, 435 and 535, along with ARRI Master Prime lenses. These he put to striking effect in capturing director and long-term collaborator Marc Forster's explosive action sequences.

2009

The Master Prime lens family expands once again with the launch of the Master Macro 100. With a 1:1 ratio and maximum aperture of T2.0, delivering phenomenal sharpness and contrast for extreme close-ups of the highest visual quality, the lens offers remarkably even illumination and resolution across the whole 35 mm frame. It also benefits from an advanced, multi-bladed iris, resulting in round and natural-looking out-of-focus highlights.

2009

After a successful decade with the ARRILASER, ARRI implements the latest developments in electronics and software, and incorporates customer feature requests before launching the ARRILASER 2. With the new Trillian interface it offers unprecedented flexibility of operation, speeding up daily operations significantly. The main advantage of Trillian is its ability to control and operate multiple lasers with the ease of just one application, with the new client server architecture permitting all ARRILASER software applications to be accessed from anywhere in the network.

2009

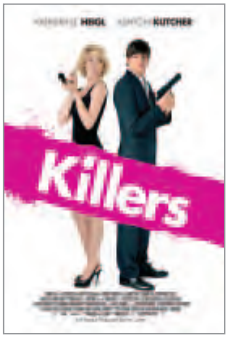
SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Michael Cieslinski, Dr. Reimar Lenz and Bernd Brauner for the development of the ARRISCAN film scanner, enabling high-resolution, high-dynamic range, pin-registered film scanning for use in the digital intermediate process.

The International (2009)

Director Tom Tykwer and long-time cinematographer Frank Griebe travelled from Istanbul to Berlin, Lyon, Milan, and New York for this tension-laden conspiracy thriller. Griebe used the ARRICAM 35 mm camera system with Master Prime lenses, in addition to a 65 mm ARRIFLEX 765 for specific sequences that required exceptional detail. Along with production designer Uli Hanisch, he created a 'color concept' of each city, skillfully contrasting the architectural modernism of Berlin, the gritty streets of New York and the classical beauty of Istanbul. Dailies were developed by the ARRI lab in Munich, whilst DI work took place at ARRI Schwarzfilm in Berlin.

2009

Continuing ARRI's involvement in emerging LED technologies, the ARRI Caster series utilizes a special optical design to present an efficient solution for LED broadcast lighting at an attractive price level. The LoCaster features an easy to use onboard controller with a choice of six color temperature settings and continuous dimming; compact and lightweight, it is an ideal companion for mobile applications. The BroadCaster incorporates a built-in DMX controller and offers versatility when lighting tight spots in small and medium-sized studios.

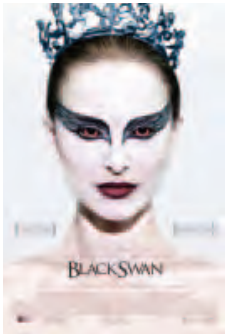


Killers (2010)

Killers was the first Hollywood movie to be photographed with anamorphic lenses on ARRIFLEX D-21 cameras using ARRIRAW in Data Mode. Directed by Robert Luketic and shot by Russell Carpenter, ASC, the film stars Ashton Kutcher and Katherine Heigl as a young couple who discover that their neighbors may be assassins hired to kill them. At the time, the D-21 was the only digital camera with a 4:3 sensor area, allowing 'true' anamorphic images to be captured in the same way as on 35 mm film.

2010

Developed to give filmmakers all the information they need when judging a take, High Definition Video Assist (HD-IVS) uses innovative digital technology to tap 1920x1080 high definition, wide dynamic range video assist images from the ARRICAM and ARRIFLEX 435 cameras. Excellent color reproduction and low noise are combined with ARRI's unique Ground Glass Cancellation (GGC) technology to create stunningly sharp preview images.



Black Swan (2010)

Darren Aronofsky and cinematographer of choice Matthew Libatique, ASC, had long discussed the themes behind this story of paranoia and obsession, determining that the camera must be inextricably linked to their increasingly unbalanced protagonist. Using the ARRI 416 Super 16 mm camera handheld with ARRI Ultra 16 lenses enabled them to capture the pivotal dance sequences with a fluidity and grace that perfectly complimented the ballet dancers on stage, whilst the format itself created a naturalistic and atmospheric texture.

2010

Based on extensive feedback and innovative technologies, the ARRI ALEXA is a revolutionary 35 mm format digital camera and the vanguard of a completely new system of cameras, lenses, accessories and on-board recording solutions. Designed for broadcast and feature film productions, ALEXA offers exceptional image performance with unsurpassed sensitivity and dynamic range, is simple to operate, reliable in even the most extreme environments and versatile enough to cover a wide range of workflow and budget requirements. The camera is an immediate best seller and is quickly followed by the ALEXA Plus, adding built-in wireless remote control, the ARRI Lens Data System (LDS), additional outputs and integrated position and motion sensors.

2010

Motivated by the latest fine grained film stocks and ultra sharp lenses, as well as the advent of the DI, ARRI revives a long forgotten format and develops a 2-perforation movement for the ARRICAM and ARRIFLEX 235 cameras. Ideal for cost-conscious filmmakers looking to work with widescreen aspect ratios, 2-perforation fits two images on top of each other within the normal 4-perforation area. Raw stock and processing costs are effectively halved, while individual takes can now last more than 20 minutes, as showcased in the award-winning film *Hunger*.

2010

A new Archive Gate for scanning delicate, historic film materials joins other ARRISCAN archive options that include Wet Gates and a Sprocketless Film Transport. The market for restoring and preserving classic films is expanding rapidly, with archives all over the world seeking to make the most of their irreplaceable collections.

2010

ARRI releases the Master Prime 12. Combining an extreme wide angle with the highest optical quality and fast speed of T1.3, the Master Prime 12 is perfect for wide establishing shots, sweeping vistas, shooting in small rooms and action sequences. The following year, the Master Prime 135 joins the range.

2011

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Dr. Juergen Noffke for the optical design and Uwe Weber for the mechanical design of the ARRI/Zeiss Master Prime lenses for motion picture photography.

2011

Following the M18 in 2009, a further light fixture incorporating ARRI's patented MAX Technology is unveiled – the M40/25. Combining the advantages of a Fresnel and a PAR, it speeds up workflows on the set by eliminating the need for spread lenses. The M40/25 is open face and very bright, but focusable from 19-60°, producing a crisp, clear shadow.

New CCL ballasts with compensation for cable loss are released with the MAX series, continuing a long-term partnership between ARRI and ballast manufacturer B&S Elektronische Geräte GmbH. Other recent innovations in ballast design include a unique high speed range of ballasts, which were first introduced in 2010.

Extremely Loud and Incredibly Close (2011)

The story of a nine-year-old New Yorker named Oskar Schell, who embarks on an investigative quest after his father is killed in the 9/11 attacks, *Extremely Loud and Incredibly Close* was one of the first major films to shoot with the ARRI ALEXA and record ARRIRAW to Codex Onboard recorders. Legendary cinematographer Chris Menges, BSC, ASC, discovered that ALEXA delivered much of what he had been waiting for in a digital camera, and was particularly taken with the camera's performance in low light conditions.

Hugo (2011)

Martin Scorsese discusses a scene with Ben Kingsley on the set of *Hugo*.

For his first foray into the world of 3D, director Martin Scorsese chose another newcomer to the format, cinematographer Robert Richardson, ASC, to assist him on this ambitious adaptation of Brian Selznick's children's book *The Invention of Hugo Cabret*. The story follows twelve-year-old Hugo, who lives a secret life within the walls of a 1930s Paris train station. Into this narrative is woven the true story of French film pioneer Georges Méliès, who directed groundbreaking silent films at the turn of the twentieth century.

"The visual approach centred initially around Brian's illustrations, the depth of which begged for a provocative translation, and 3D provided that for us," says Richardson. "Marty had selected a large number of images from the book which spoke to what he had in mind and he asked all of us to be faithful to what Brian had captured. This guided us towards a world that was created rather than being bound to reality; in essence, to create a film version of a children's storybook. Atop this he placed the extraordinary accomplishments of George Méliès and allowed us to swim in the waters of which Méliès created his highly imaginative work."

Richardson turned to Vince Pace of Cameron Pace Group (CPG) to provide not just Fusion 3D rigs, but also expertise, guidance and a complete 3D workflow. Tests were carried out at the CPG facilities in Los Angeles and, later, on the set in London, allowing Richardson to explore how he might work with the medium. He notes, "I felt that although I should learn as much as possible about what made a strong 3D image, my vision and the style should lead the 3D, and not the other way around."

Shooting 3D necessitated digital capture, another medium with which Richardson was unfamiliar, though in fact the camera he selected was unfamiliar to almost everyone in the world, because the ARRI ALEXA had not yet been officially released. "I decided to use the ALEXA after testing what was then on the market," he says. "Based upon our first set of tests the ALEXA was by far the finest in respect to quality. The next step was to make sure we could get enough cameras to build two 3D rigs for the start of shooting; that meant four ALEXAs. ARRI made a strong effort and eventually guaranteed us these cameras."

Like Richardson, Scorsese had his own 3D monitor and took an active role in making stereo decisions on set. "Marty demanded an aggressive approach to the 3D and would personally request more or less 3D depending upon the sequence and the intention he had in mind," says the cinematographer. "Not shooting 3D on the set is simply giving away creative choices and opportunities; it doesn't make a great deal of sense for a director to make a 3D film and not to embrace 3D."

Hugo won five Oscars at the 84th Academy Awards, including Best Cinematography for Robert Richardson and Visual Effects for Rob Legato, Joss Williams, Ben Grossmann and Alex Henning.

2011

The ARRI L-Series represents a major step forward in the integration of LED technology into the film and broadcast industries. Fitting perfectly into established working practices, L-Series fixtures can be exchanged with traditional Fresnels on a like-for-like basis, achieving substantial and immediate cost savings with minimal disruption. The L7 launch model features a 7″ Fresnel lens and the option for complete color temperature control.

2011

In response to the increasing popularity of lightweight zooms on modern productions, ARRI adds the ARRI/FUJINON Alura LWZ 15.5-45 / T2.8 and Alura LWZ 30-80 / T2.8 to the Alura Zoom family, which was first introduced the year before with the 18-80/T2.6 and 45-250/T2.6.

2011

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to Franz Kraus, Johannes Steurer and Wolfgang Riedel for the design and development of the ARRILASER film recorder.

Roger Deakins, ASC, BSC

Over the course of the last 30 years, Roger Deakins, ASC, BSC, has produced visually compelling work on such an array of well-loved films that, unusually for a cinematographer, his name has become a familiar one to the movie-going public. At the same time, he is one of the most admired figures within his own profession and has won the universal respect of the wider filmmaking community.

Deakins was born in Devon, England, where he still has a home today. He attended art college before enrolling at the National Film and Television School, just outside London. Upon graduating, he spent several years in remote locations all over the world, shooting documentaries. One of these, Zimbabwe, required Deakins to pretend he was making a tourist film whilst actually recording the events of the civil war. Another particularly formative experience was a nine-month stint as a crewmember on a yacht while filming *Around the World with Ridgeway*.

Concurrent with the documentary years, Deakins developed his cinematographic skills on music videos and television dramas, and was soon working on feature films, first in Britain and then in the US. One of his early efforts was Alex Cox's cult classic, *Sid and Nancy (1986)*, which he largely shot handheld with an ARRIFLEX BL4.

It is for his enduring collaboration with the Coen brothers that Deakins is perhaps best known; starting with *Barton Fink* in 1991, the cinematographer has shot 11 films for the Coens. On *The Hudsucker Proxy (1994)*, he used the newly released ARRIFLEX 535 and found the camera so well suited to his way of working that he shot with it almost exclusively for the next two decades. During this period, however, he was not shy of embracing new technology; his decision to achieve a specific color palette for *O Brother, Where Art Thou (2000)* by digitizing the entire film helped usher in the era of the digital intermediate.

Despite his long-standing commitment to the Coens, Deakins has shot many other memorable films over the years, including *The Shawshank Redemption (1994)*, for which he received an ASC Award and his first Oscar nomination. He has also worked with other notable directors, including Martin Scorsese *(Kundun, 1997)*, Norman Jewison *(The Hurricane, 1999)* and Ron Howard *(A Beautiful Mind, 2001)*.

Deakins has made two films for director Sam Mendes, and is currently working on a third. On *Jarhead (2005)*, he shot with his trusty 535B, but also made use of lightweight ARRIFLEX 35IIIC cameras for handheld shots. For their current collaboration – the 23rd *James Bond* film – Deakins opted to shoot with an ARRI ALEXA digital camera, having already used one on Andrew Niccol's *In Time (2011)*.

"I love that the ALEXA looks and feels like a film camera, but one that is both simple to use and lightweight," says Deakins. "For me, there did not seem a large learning curve going from a 535B to the ALEXA. In terms of the image, I find ALEXA's dynamic range and color rendition particularly striking. The detail in the highlights and shadows is exceptional, as is the falloff from highlights into darker areas."

Roger Deakins has been nominated for nine Academy Awards and has won a multitude of other international plaudits, including three BAFTAS, four BSC and two ASC Awards. In 2011 he was awarded the ASC Lifetime Achievement Award.

Roger Deakins with the ALEXA Studio.

2011

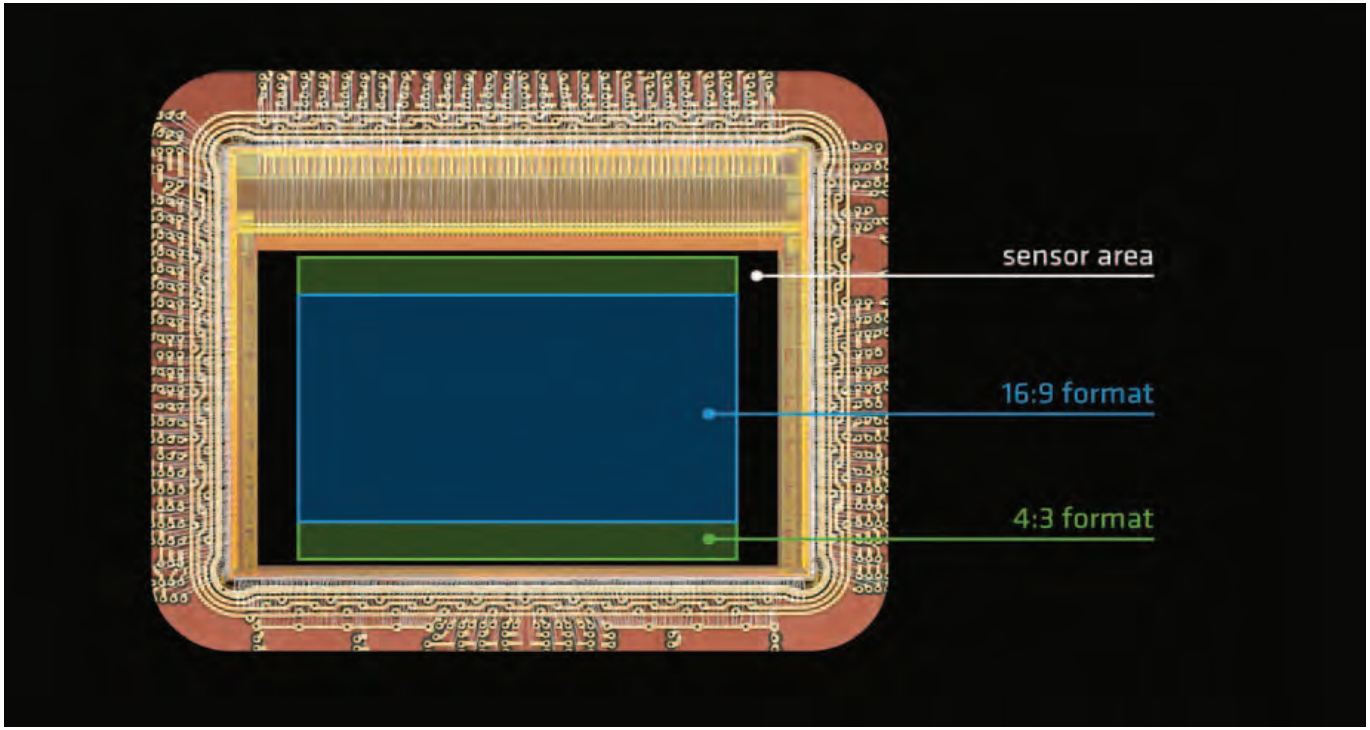
The ALEXA system is developing rapidly, with new models being released and important industry partnerships being formed to maximize workflow options for customers. On productions that require the highest possible image quality, ARRIRAW is fast becoming the format of choice.

Roger Deakins with first assistant Andy Harris, director Sam Mendes *(left to right)* and Judi Dench on the set of *Skyfall*.

As the flagship of the range, the ALEXA Studio is equipped with a mirror shutter and an optical viewfinder, just like a film camera. The Studio also features a 4:3 sensor, making it capable of true anamorphic cinematography.

2012

The ALEXA M is a flexible solution consisting of a separate camera head and body; it is tailored for 3D rigs, helicopter shots, underwater rigs, car interiors, action photography, Steadicam and handheld. Based on cutting edge ARRI technologies, the M model features the same exceptional image quality that has made ALEXA such an international sensation.



The ALEXA family expands again with the addition of the ALEXA Plus 4:3. With similar functionality to the ALEXA Plus, the ALEXA Plus 4:3 joins the ALEXA Studio and ALEXA M with its 4:3 sensor, rounding out a line-up that now represents the perfect solution for anamorphic productions.

Achievements

ARRI has always maintained a commitment to lead the industry by developing products that continually push the envelope of motion picture technology and further the craft of filmmaking. This dedication has been recognized and rewarded time and again by the Academy of Motion Picture Arts and Sciences, as well as many other professional organizations.

2011

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to Franz Kraus, Johannes Steurer and Wolfgang Riedel for the design and development of the ARRILASER film recorder.

2011

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Dr. Juergen Noffke for the optical design and Uwe Weber for the mechanical design of the ARRI/Zeiss Master Prime lenses for motion picture photography.

2009

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Michael Cieslinski, Dr. Reimar Lenz and Bernd Brauner for the development of the ARRISCAN film scanner, enabling high-resolution, high-dynamic range, pin-registered film scanning for use in the digital intermediate process.

2008

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Erwin Melzner for the overall concept including the optical and cooling systems, Volker Schumacher for the optical design, and Timo Mueller for the mechanical design, of the ARRIMAX 18/12 lighting fixture for use in motion picture production.

2006

SCIENTIFIC AND TECHNICAL AWARD (Technical Achievement Award) to Walter Trauninger and Ernst Tschida for the design and engineering of the ARRI WRC wireless remote lens control system.

2006

SCIENTIFIC AND TECHNICAL AWARD (Technical Achievement Award) to Klemens Kehrer, Josef Handler, Thomas Smidek and Marc Shipman-Mueller for the design and development of the ARRIFLEX 235 camera system.

2002

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to Arnold & Richter Cine Technik and Panavision, Inc., for their continuing development and innovation in the design and manufacturing of advanced camera systems specifically designed for the motion picture entertainment industry.

2001

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Franz Kraus, Johannes Steurer and Wolfgang Riedel for the design and development of the ARRILASER film recorder.

1998

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik and the Carl Zeiss Company for the concept and optical design of the Carl Zeiss/ARRIFLEX Variable Prime lenses.

1998

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik and ARRI USA, Inc., for the concept and engineering of the ARRIFLEX 435 camera system.

1995

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter Cine Technik for the development of the ARRIFLEX 535 series of cameras for motion picture cinematography.

1992

GORDON E. SAWYER AWARD to Erich Kaestner, Chief Design Engineer at Arnold & Richter for his technical contributions to the industry.

1992

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to Arnold & Richter, Otto Blaschek and the engineering department of ARRI Austria for the design and development of the ARRIFLEX 765 camera system for 65 mm motion picture photography.

1990

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to the engineering department of Arnold & Richter for the continued design improvements of the ARRIFLEX BL camera system, culminating in the 35BL-4S model.

1988

SCIENTIFIC AND TECHNICAL AWARD (Scientific and Engineering Award) to the Arnold & Richter engineering staff, Otto Blaschek and ARRIFLEX Corporation for the concept and engineering of the ARRIFLEX 35-III motion picture camera.

1982

SCIENTIFIC AND TECHNICAL AWARD (Academy Award of Merit) to August Arnold and Erich Kaestner of Arnold & Richter GmbH, for the concept and engineering of the first operational 35 mm, hand-held, spinning-mirror reflex, motion picture camera.

1973

SCIENTIFIC AND TECHNICAL AWARD (Class II) to Joachim Gerb and Erich Kaestner of the Arnold & Richter Company for the development and engineering of the ARRIFLEX 35BL motion picture camera.

1966

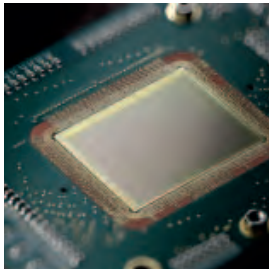
SCIENTIFIC AND TECHNICAL AWARD (Class II) to Arnold & Richter KG for the design and development of the ARRIFLEX 35 mm portable motion picture reflex camera.

ARRI TODAY AND TOMORROW

In the very beginning innovation, reliability and durability were Arnold and Richter's business principles and that same mind-set remains today.

In order to best serve creative professionals ARRI has always adapted to the latest trends and has developed the appropriate technology accordingly. In a rapidly evolving industry ARRI not only provides state-of-the-art products, but equally as important, worldwide service and support.

Despite all the awards and accolades in recognition of technical achievements, ARRI believes that it is about empowering creative professionals to realize their imagination and vision; that philosophy still stands today and will continue into the future.

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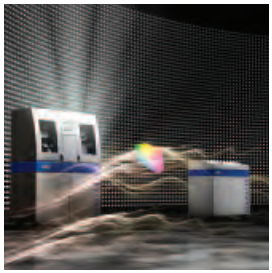





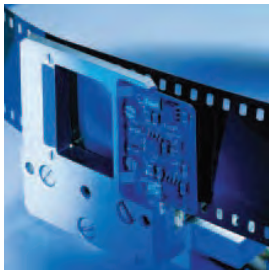

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