



BACK FOCUS

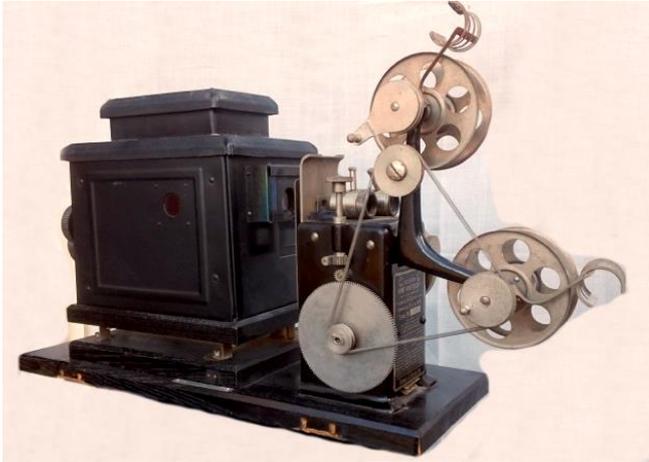
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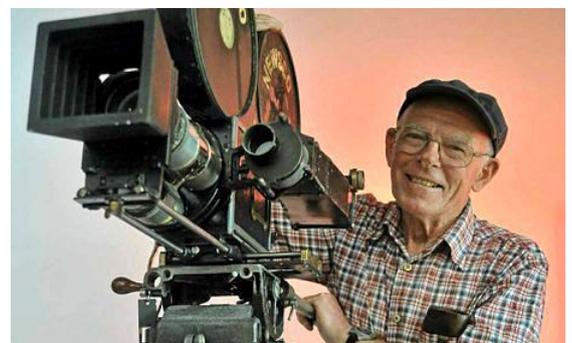
June, 2018



From Mike Trickett:
The Edison Home Kinetoscope.



Michael Parker concludes his Graphic series with the
Graphic 35 Electric.



Courtesy of Kev Franzi, above, the Mina Moore photograph on
the left more than likely appears for the first time ever.

A Back Focus exclusive.

See 'My Mother was a Photographer' inside.



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Incorporation Reg. No. A16888V

ABN 55 567 464 974

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Notes from the desk of the Editor:

VALE: ROGER BURROWS

Regrettably these seem to be becoming a regular part of our announcements. Late March we lost another valuable member and Back Focus writer, Roger Burrows. Roger's enthusiasm for researching things Australiana knew no bounds and many was the time he'd excitedly ring me with some new item he'd discovered. His enthusiasm was catching and it was always a joy to work with him on his articles. With nine of them still in hand, Roger will be with us for a while yet.



The below Vale was sent to me from John Fleming. I first met Helmut when I joined Levinsons, back in my early twenties. They were primarily the importers of Olympus and Exakta and Helmut was a technician in the workshop. The last time I saw Helmut was when the late John Keesing and I were doing a photographic 4WD trip through the Victorian High Country with some other photographic trade identities and, having reached Cobbler Lake, after a rugged climb up Mount Cobbler, who do we run into? Helmut Brix! You never know who you'll meet or where! **Ian Carron, Ed.**

VALE: HELMUT BRIX

Helmut Brix passed away in Atherton, Queensland on Sunday March 18th 2018. Highly regarded as a camera technician and photographic retailer in Melbourne, he began his career working for Zeiss in Germany-building shutters in a Black Forest factory. In 1960 he travelled to Australia and initially spent some time at the Bonegilla Migrant Hostel. Whilst still learning English, he then scored a job as a camera technician in Frankston, a bay side suburb on the Mornington Peninsular, and from there he gained employment with a large city camera store. He opened his own camera shop and repair facility in Acland St, St. Kilda, later still (1984) moving to East Boundary Rd, East Bentleigh where he was long established until retiring to the Atherton Tablelands area of Queensland. There he continued his passion by conducting photography courses for the University of the Third Age-U3A.

John Fleming.

This issue sees the first in some coming articles from a new writer, Mike Trickett. Mike comes to us via our Journal Exchange program and I can promise some interesting articles from him, especially for our ciné collectors. We also welcome another new contributor and member, Kev Franzi, who has jumped in with some nice contributions.



*More recently:
still persuing his passion.*

Index to this Issue:

| | | | | | |
|-----------------------------------|-----------|-----------------------------|------------|--------------------------------|-----------|
| Mother was a Photographer. | 3 | Graphic 35 Electric. | 6 | Fake or Tribute. | 11 |
| Edison Home Kinetoscope. | 12 | Bauer 35mm Proj's. | 14. | Modern Projection. | 19 |
| Lett's to Ed. | 20 | Beattie of Hobart. | 21 | Third War Germans Lost. | 23 |
| Zeiss Ikon Kolibri. | 27 | | | | |

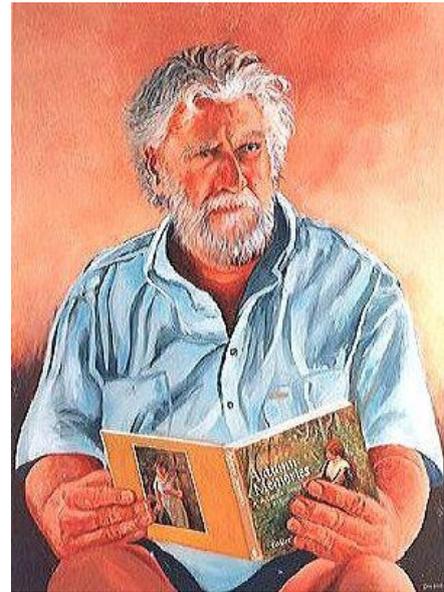
“My Mother was a Photographer”

Kev. Franzi

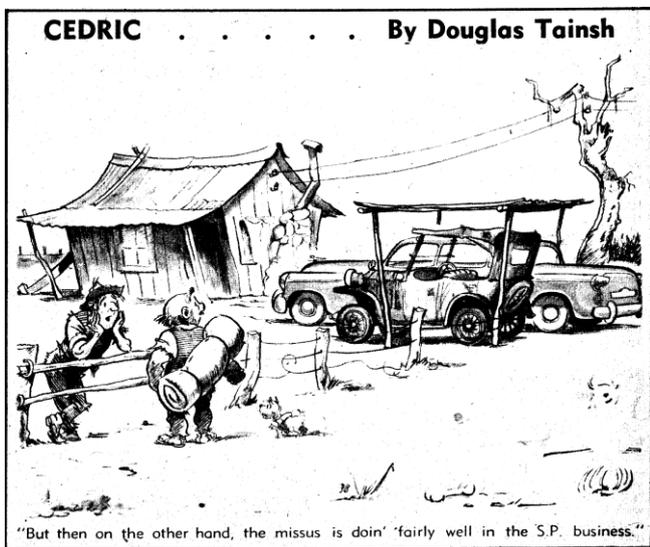
One of the highlights of my life as a filmmaker was the three and a half years I spent as Senior Film Editor at Crawford Productions in Melbourne. From 1966 on, I had the privilege of working on the pioneering series of *Homicide*, then on *Division 4*, *Hunter* and *Showcase*, together with a number of exciting documentaries as editor and/or director. During this time I was asked to edit a number of documentaries being made by Doug Tainsh (Pic. 1).

I soon discovered I was working with the very talented Douglas Tainsh—writer, documentary director, brilliant cartoonist and a quintessential Aussie who was to become my dear friend for many years (Pic. 2). As I edited his documentaries I learnt much about script writing and the film techniques he used, then, with Dudley Robinson behind the camera, we made a very good team.

There is a great story about Doug that has served me well for over 20 years. At one time, he mentioned casually that his



Pic. 1. Doug Tainsh in later life. Oil painting by Ian Grieve.



Pic. 2. ‘Cedric’ featured in Australasian Post magazine for many years.

mother was a photographer, at which point I jumped in with: ‘and so was mine, my mum always had a box camera with her and took most of the photos in our family’, etc., etc. Doug let the subject drop. Some 25 years later I’m reading a wonderful book *Australian Women Photographers* by Barbara Hall (ex-Crawfords) and Jenni Mather. The chapter on May and Mina Moore revealed that in the early 1900s these highly talented sisters, born in New Zealand, dominated the field of theatrical

photography with outstanding portraits of famous people.

Mina excelled in capturing superb pictures of her friend and patron, Dame Nellie Melba. The last line in the chapter states that Mina Moore married the poet William Tainsh. (Pics 3 and 4.)

‘William Tainsh’, Mmm, I wonder if he could be related to Doug? The phone call began with a short explanation about the book and the lady photographer who married a Melbourne



Pic. 3. Even the happy snaps of Mina with her daughter were done in the studio.



Pic. 4. Mina with husband William Tainsh: self-portraits.

poet called William Tainsh. ‘I thought he might be related to you?’ ‘Yes’, replied Doug, ‘William Tainsh was my father.’ A pause followed as the penny dropped. ‘Gee—that means Mina Moore was your mother!’ ‘Yes, I think I told you that.’ Damn—he remembered our conversation from all that time ago.

(Pic. 5.)

I asked if he had any prints of his mother’s work that I might copy for display at my Movie Museum? Sadly all the prints had been given away to Libraries and Galleries for safe-keeping and no record was kept of what went where. ‘We don’t have a single print—all we have are her cameras—would you be interested in those?’ ‘Would I ever!!!’ For over a decade, this story and the working demonstration of Mina’s cameras was a highlight of our shows, enjoyed by thousands of people.

Mina’s big 10 × 8 inch Fallowfield Studio Camera, c.1870, had one double-plate holder with it. In the holder I found a developed glass negative and proceeded to make some contact prints from same. A delightful photo emerged of a little girl in a garden: ‘Doug, I think we have a photo taken by your mother!’

The little girl turned out to be Doug’s sister. He asked why his mum would put a developed negative back in a camera plate holder? I suggested it was the safest place to keep her most valuable negatives, like family pictures, if you were shifting. ‘Oh’, said Doug—followed by a long silence. ‘To save space, I took a whole box full of plate holders to the dump—there must have been well over a dozen of them—I never thought to look. They all could have had negatives in them; I only kept that one to go with the camera.’

At least he had one photo of his sister—the lady who gave all of Mina’s prints away! **(Pic. 6.)**

In the next issue of Back Focus, a detailed look at Mina Moore’s cameras and a very special lens.



Pic. 5. Mina playing with props—this was her favourite self-portrait and the ONLY photo that survived in the family, all the rest of her prints being given away.



Pic. 6. Possibly the first time published anywhere: Mina’s daughter in the garden c.1920. (I made this print from the sole surviving negative found in the Fallowfield plate-holder.)



Pic. 7.



Pic. 8.

Pic. 7. This 1912 photograph of Thea Proctor is a simple theatrical pose—but what elegance—with no distraction from artificial props and painted backgrounds of that period.

Pic. 8. This beautiful profile portrait illustrates Mina's mastery in the use of a single light source (daylight through a large window) to obtain a dramatic but detailed result.



Pic. 9.



Pic. 10.

Pics 9 and 10. The success of the Moore sisters in attracting rich and famous stars of the theatre to their studios is illustrated in many simple but dramatic images like these.

Pic. 11. This study of Danish Ballerina Adeline Genée (with Felix), shot on location in 1913, produced a beautiful result in exactly the opposite key to her studio: light back

ground with dark clothing (and black cat) with amazing detail, soft daylight the single light source.



Pic. 11.



Pic. 12.

Pic. 12. With the outbreak of World War 1, May & Mina, like so many other photographers, shared in the explosion of business generated by that event. They photographed thousands of young Australians about to go overseas and in the process created the most valued image in as many family albums.

The Graphic 35 Electric

Michael Parker

The Graphic 35 Electric was a game changer. It was the first 35mm camera with electric film advance; it used a leaf shutter synchronised for electronic flash at all speeds up to 1/500 Sec; the lens was interchangeable by bayonet with a variety of quality German lenses from 35mm to 135mm and to top it all the camera viewfinder with parallax correction, showed the wide base rangefinder coupled to all lenses, bright line frames for different focal lengths and the pointer for the built-in exposure meter. **Fig. 1.**

In 1959, no other camera could beat it on specifications. The Voigtlander Prominent II came close but had manual lever film wind and no exposure meter. The best available Leica models (IIIg and M3) had manual lever wind, no exposure meter and a focal plane shutter that would synchronise with electronic flash only at 1/50 Sec and below.



Fig. 1: The Graflex Graphic 35 Electric with Iloca-Quinon 50mm f/1.9 lens.



*Fig. 2: The Iloca Electric of 1958.
Photo courtesy of Peter Coeln, Westlicht Vienna.*

Electric motor drive

The electric drive, the first in a production 35mm camera was the standout feature for the Graphic 35 Electric. The motor is housed in the film take-up drum **Fig. 3.** and with a grinding sound, advances one frame per second. A series of pictures at roughly one-second intervals can be produced by maintaining continuous pressure on the shutter release. The motor is powered by two AA cells located in a cavity in the base of the camera **Fig. 4.** The battery compartment can be accessed by removing part of the baseplate and a plastic insulating shield without opening the back. The entry for the Hanimex Iloca Electric in the November 1959 Australian Popular Photography Directory claims that the batteries are sufficient for 1500 exposures.

The Graphic 35 Electric is an Iloca Electric in all but name and was made in Hamburg, Germany by Iloca Kamera-Werk owned by Wilhelm Witt. **Fig. 2.** The differences are the engraved name 'Graphic 35 Electric' on the top plate, the name repeated next to the rangefinder window, a small round Graflex logo on the camera front below the viewfinder window and the addition of strap lugs. In Australia, the camera was marketed as the Hanimex Iloca Electric. I suspect that very few were sold with this branding.

The camera is heavy and the example in Figure 1 with Quinon lens weighs just over 1Kg.



Fig. 3 Film take-up drum in the Graphic 35 Electric housing the electric motor. The tiny red dots on the body and the back must be aligned when replacing the back.



Fig. 4: Battery compartment for the electric drive with insulating shield and baseplate cover.

Exposure automation

Exposure is semi-automated and shutter-priority. The circular disc adjacent to the lens mount is used to select film speed in ASA or DIN. Then, once the desired shutter speed has been selected, it's simply a matter of rotating a second circular dial at the base of the lens mount to change the aperture until the meter needle visible both in the eyepiece and on the top deck moves into the correct range. The shutter speed and aperture are then coupled rather like the EV system and the plastic 'ears' can be rotated around the lens mount to allow linked changes to the shutter speed and aperture while maintaining correct exposure. Fig. 6.



Fig. 6: Showing the film speed dial (left), aperture adjustment dial (bottom) and the two plastic 'ears' for shutter/aperture adjustment.

mechanical linkages for rangefinder actuation and aperture adjustment. Fig. 7.

When an appropriate lens is fitted to the camera, two red pins move across the distance scale to indicate depth of field. Fig. 8. The Deckel mount was also used in the Balda Baldamatic III, the Wittnauer Continental/Braun Super Colorette II, Kodak Retina IIIS and the Voigtlander Vitessa T. Unfortunately, commercial interests dictated that although the cameras shared a common mount, small differences in mounting tabs meant that lenses were not generally interchangeable across camera bodies and consequently, lens manufacturers generally added the camera name to the lens description on the front bezel.

The Robot family of cameras was probably first in 35mm motor wind. But Robots used a clockwork drive and the only Robot competitor for the Graphic 35 Electric with 24x36 format, was the rare and expensive Robot Royal 36 which required an add-on viewfinder for non-standard lenses. Fig. 5.



Fig. 5: The Robot Royal 36 uses a clockwork motor for film advance.

Interchangeable lenses

The camera uses the DKL bayonet mount developed by Friedrich Deckel AG, manufacturers of Compur shutters. The system involves a shutter mounted behind the lens with

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- Compur Quick-Change Mount

You have no longer to take care of the f-stop scale. You can now compose your pictures by using a single setting ring for the simultaneous selection of shutter speed and depth of field. While you are no longer occupied with tedious camera manipulations, you can fully concentrate your attention on your subject. You will be surprised to see how much this feature will benefit your snapshots. Even a beginner will now be successful from the very start by following this simple rule: Where maximum depth of field is required, try to obtain a suitably large range on the focusing scale between the two small red flags of the automatic depth-of-field indicator. But where a fast-moving subject has to be "stopped", just use the proper shutter speed. You may rely on the new Synchro-Compur for sure-fire snapshots as it is indeed the Ultimate in Simplicity.

SYNCHRO-COMPUR

The new COMPUR Quick-Change Mount permits split-second lens changing. Inserting the lens mount into the camera will render the exposure value setting mechanism and the automatic depth-of-field indicator operative. In cameras "fitted" with a range-finder, the lens is automatically coupled with the focusing mechanism. Several lens makes are available with focal lengths of 35 mm., 50 mm. and 85 mm. More lenses of different focal lengths are in preparation.

Fig. 7: Contemporary advertisement for the Synchro-Compur shutter incorporating the DKL lens mount.



Fig. 8: Depth of field indicator tabs integral with the shutter & mount mechanism. The frame counter window is just above the shutter.

Two respected German manufacturers made lenses specifically for the Iloca Electric/Graphic 35 Electric. From Steinheil came the 35mm f/4.5 Culmigon, 50mm f/1.9 Iloca Quinon (see Figure 1) and the 50mm f/2.8 Iloca Culminar. Rodenstock lenses were the 35mm f/4 Iloca Eurygon, 50mm f/1.9 Iloca Heligon, 50mm f/2.8 Iloca Ysarex and the 135mm f/4 Iloca Rotelar. Of the accessory lenses, only the Steinheil 35mm Culmigon and the Rodenstock 135mm Rotelar were marketed by Graflex in the USA and it is unclear how many of the lenses were readily available in Australia or even in Europe as most seem to be particularly scarce.

The camera viewfinder showed the area covered by the 35mm lens and had suspended bright frames for the 50mm and 135mm lenses. In another first, the frames moved with lens focussing to compensate for parallax.

Removing the camera back

Most cameras made by Iloca defy logical assumptions about how to open the back. Moreover, the method of back opening is not consistent across models. To remove the back of the Iloca Electric/Graphic 35 Electric, press sideways the small catch adjacent to the rewind crank on the camera base. While maintaining pressure on the catch, pull the crank upwards to release the back which comes off completely. To replace the back, it is imperative to ensure that the red dots on the back and the body are aligned.

Once the camera back is removed, it's possible to check out the serial number and the date of manufacture because the last three digits indicate the date and year of production. In this example **Fig. 10**, the end numbers 459 indicate production in April 1959. Three examples I have seen all end in 459 suggesting that there was no production of the Graphic 35 Electric before or after 1959.

The next model

The Iloca Electric was the most sophisticated camera made by the company and was accordingly expensive. To reach a wider market, the company developed in prototype, the Iloca Auto-Electric

Not all manufacturers demanded exclusivity. The lenses designated for the Voigtlander Vitessa T could also be used on the Wittnauer Continental/Braun Super Colorette II without modification. And with judicious tinkering, the lenses made for the Kodak Retina IIIS could be used on other cameras with the Deckel mount. **Fig. 9.**



Fig. 9: Graphic 35 Electric with Retina Curtagon 35mm lens. A small modification allowed use of other lenses with DKL mount.



Fig. 10: The serial number is just below the film plane.



Fig. 11: Prototype Iloca Auto-Electric.
Photo courtesy of Peter Coeln, Westlicht Vienna.

with full exposure automation, the same electric drive and body structure but with a lower specification shutter and a fixed f/2.8 lens. **Fig. 11.** The prototype did not reach production before the Iloca company folded but was subsequently slightly modified and marketed by Agfa as the Agfa Selecta-m.

What went wrong?

With such sophisticated and novel specifications, you might expect that the camera would have been in great demand and that examples today would fetch prices comparable with those of

contemporary Leicas. This is not the case.

Several factors militated against the survival of the camera and of the company. A clue is that the Iloca factory closed in mid-1959 while the Graphic 35 Electric was being sold in the US until 1963. According to a report in the German newspaper *Die Zeit* on 8 April 1960, the factory closed because the Zeiss Group, a major competitor for Iloca in the camera market, in 1959 purchased Friedrich Deckel AG the manufacturer of shutters for the Iloca cameras and was unable to, or declined to honour outstanding orders for the Compur shutters.

Iloca was using Compur shutters for the Iloca Automatic and the Iloca Rapid III as well as the Iloca Electric and its name variants so the halt in production resulted in unfilled orders, staff retrenchments and ultimately bankruptcy. According to the same newspaper report, the company planned to buy in 1200 shutters in August 1959 and 2000 in September. Most of these would have been used in the lower-cost cameras.

The short production period for the Iloca Electric probably explains the shortage of accessory lenses and the price premium paid on the collector market for the Iloca branded camera.

A random sample of three Graphic 35 Electric cameras show serial numbers 80 1743 459, 80 2436 459 and 80 2532 459. Courageously extrapolating from this small number, it might be concluded that all Graphic 35 Electric cameras were made in 1959 towards the end of the 1958-59 production period and stockpiled in the US for later sale. Again, looking at the central 4-digit number, the figures show a range of almost 800, suggesting that perhaps 1000 of these cameras were imported. Any orders for delivery beyond 1959 would of course not be filled.

In the US then, the camera, even with its sophistication and features would be an orphan and would have struggled to compete with better known cameras for the advanced amateur. **Fig. 12** shows Australian price information taken from the 1959 Popular Photography Directory, for contemporary competitive cameras and it's



Fig. 12: Australian Price comparison for cameras with similar specifications.

likely that the price relativities reflect those prevailing in the US as well. The Hanimex Iloca Electric cost more than the Voigtlander Prominent Mk II with f/2 Ultron and almost as much as a Leica IIIg. The Japanese Olympus Ace with competitive features could be bought for about one-third of the price. The prices shown are in Australian Pounds. The Australian dollar was adopted in 1966.

Other aspects of the Graphic 35 Electric would have reduced sales. The weight, compared for example with a Leica, would be a factor and the availability of the advertised wide-angle and telephoto lenses would have been patchy at best. While the auto advance could be a positive factor, it was noisy and slower than a lever wind. Moreover, when the batteries failed, there was no way to advance the film until a new set of batteries was inserted.

At the time, most batteries would have been of the carbon-zinc variety with lower capacity than today's alkaline batteries and with a greater tendency to leakage and rupture leading to corrosion in the battery compartment. A large proportion of Graphic 35 Electric cameras surviving today show evidence of this. **Fig. 13.**

Once the terminals are corroded, the motor becomes unreliable and the camera is useless without repair. Spare parts supply from Germany would have ended with the closure of the Iloca factory in 1959.

The Graphic 35 Electric is a landmark camera which deserves a place in history for the innovation of an electric drive, its build quality and classic styling, for its lens interchangeability and other advanced features including exposure automation. Its downfall was price along with market forces in Germany leading to the closure of the Iloca factory.



Fig. 13: Corroded battery terminals typical of many surviving Graphic 35 Electric cameras.

THE OTHER BIG "NEW" FROM GRAFL EX... GRAPHIC · 35 ELECTRIC
... only 35mm with Built-In Power Drive ... automatically winds film and cocks shutter

No sooner had we announced the new Graphic 35 Electric than we were literally swamped with orders. Your prompt, eager response speaks well for the future of this first, really different 35mm camera in years. It is precision-engineered, and designed . . . a fitting complement to the Graflex line of truly fine cameras.

The Graphic 35 Electric has built-in customer appeal, making it a marvelous camera for demonstration. A real exclusive is the completely self-contained powerful electric motor built into the film take-up spool. It winds the film, cocks the shutter and permits sequence or single exposures. As soon as the shutter closes after an exposure, the electromotor advances the film one frame and cocks the shutter automatically for the next exposure. Two little photoflash penlight batteries fitted into an insulated receptacle in the bottom of the camera provide the power for the motor. Approximately 1000 exposures can be made from one set of batteries. The electric motor switches off automatically after each exposure, and batteries can be changed at any time even with film in the camera. Immediately after the last shot, motor automatically cuts off.

Despite the innovation of a built-in motor with batteries, the housing design does not differ from a modern 35mm camera . . . an indication of the thoroughness of design that preceded this camera.

Once you place the Graphic 35 Electric in your customer's hand, one of the hardest parts of your sales task will be over. Each outstanding feature is easily demonstrated. The correct exposure can be obtained without taking the eye from the combination Viewfinder-Range-finder window. The exposure meter pointer is visible in the viewfinder window, at the top. Turning the Exposure Setting Dial centers the pointer for the correct exposure setting. An Exposure Meter Indicator is also located on the chrome-plated top of the camera for convenience when the camera is mounted on a tripod. The coupling of shutter speed and aperture permits the changing of either without affecting the correct exposure setting.

The Graphic 35 Electric has complete lens interchangeability—not just elements—for various focal lengths. A simple, positive bayonet mount gives "switch-in-a-second" ability to normal, wide angle or telephoto lenses. For wide-angle photography, a precision 35mm Steinheil Cullinon f/4.5 lens can be selected. For distant shots, there is the famous 135mm Rodenstock Heliar f/4.0 lens. No finer lenses can be obtained anywhere.

The field of view of the normal, wide-angle and telephoto lenses is indicated by a bright frame line in the Viewfinder. There's no parallax problem as parallax correction is automatic with each lens. Depth of field is quickly and easily read by two moving red arrows that are automatically positioned regardless of the lens used.

The Graphic 35 Electric uses the latest Synchro-Compur M-X Shutter with built-in Self-Timer. Speeds range from a full second to 1/500 plus Bulb. Here is a 35mm camera that is wrapped in sales-appeal. It carries the Graflex reputation for the finest, precision cameras. It will take a back-seat to no other 35mm camera.

If you want your unit sales volume to go up, be sure you place your order today . . . either with your Graflex salesman or direct to your usual Graflex Sales Office.

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Graflex Trade Notes advertisement for the Graphic 35 Electric.

Fake or Tribute?

Roger Burrows

In 1946, after WW2 was over, the Arsenal factory in Kiev, by way of war reparations, received a portion of the German industrial goods taken by the Russian forces. These goods consisted of materials and tooling that once belonged to Zeiss Ikon and Carl Zeiss Jena. Everything that could be taken from Germany was, but for a while it was left in railway sidings around Moscow. Eventually it was decided that KMZ would keep the optics and the Super Ikonta 6 × 9 but the 35mm Contax material would be sent to Kiev. In due course, machine tools, hand tools, moulds, jigs and parts,



Showing top plate and number.

along with German labourers, technicians and engineers, ended up in Kiev. Initially the cameras were basically assembled from Zeiss parts then Ukraine products started to replace the out-of-stock German parts. The lenses were produced by KMZ and were original Zeiss for a time, then copies of the Sonnar and the Biogon. The original parts for the cameras and lenses ran out about 1956. Yearly production reached

about 50,000 units and, by 1975, the millionth Kiev, a model-4 type 2, was produced. Production seems to have ceased around 1987.



Showing camera with lens cap.



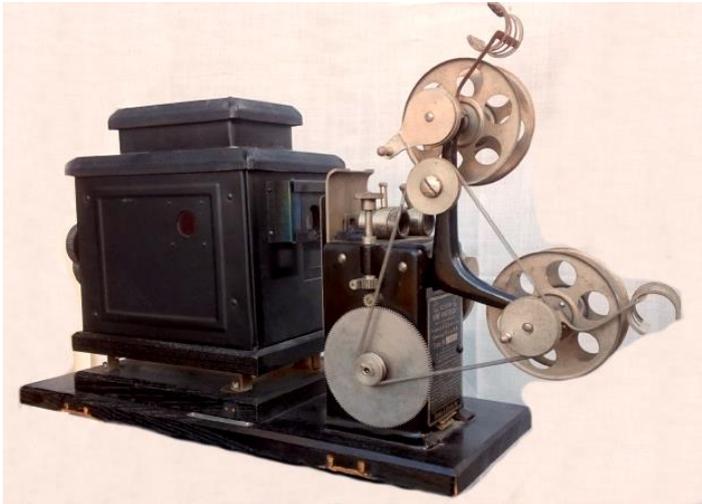
Showing Carl Zeiss Jena Lens.

The story behind my camera starts later, sometime around the year 2010 when the factory was being closed down. A group of old workers decided to use up all the leftover parts of the Kiev they could find and do a limited production run, branded Contax, as a tribute to the original. I am not sure how many were made. Mine is No. 325 with a Sonnar f2 lens and the 1-1/1250 shutter. The Kiev's of the '80s only went to 1/1000. The lens was made by Carl Zeiss Jena. So here is the question: If something is made by the original artisans with the original tools from the original dies and moulds but not in the original factory is it (a) a fake or (b) genuine or (c) a tribute? And if the latter where does it stand in the pantheon of Contax?

The Edison Home Kinetoscope Projector

Mike Trickett

The demand for home movies it seems can be traced right back to the earliest days of the cinema. As early as 1900, enterprising manufacturers had found that by slitting the standard 35mm film down the middle, the cost of making movies for the home screen could be reduced considerably. This technique while reducing the costs involved, continued to use the highly flammable nitrate film of the time.



Edison Home Kinetoscope.

In 1912, Thomas Edison entered the home movie scene with the introduction of the Edison Home Kinetoscope. This little hand-cranked projector was designed around a unique 22mm film; not only did it carry three rows of images, but most importantly the film was made from the recently developed cellulose acetate safety film.

George Eastman had some years earlier developed cellulose acetate film as an alternative to nitrate, but it gained little acceptance at the time with professional users. All Home Kinetoscope films were

printed on this new safety film, this point was used extensively in the advertising and promotion of the machine. It was Edison's boast that the machine was safe in the hands of even the most inexperienced operator.

The Home Kinetoscope is quite small in size, measuring only 41cm long by 15cm wide and 25cm high. With its detachable spool arms removed the projector fits neatly into its handsome metal case, which also doubles as a projection stand.

The handbook for the home Kinetoscope shows it being available with three different lighting systems; an acetylene generator and burner for locations without electricity, a Nernst electric lamp suitable for small screenings and a baby arc lamp for big screen presentations.

The price in 1912 for the Home Kinetoscope ranged from US\$65.00 to US\$97.50 depending on lighting and lens combinations.

Of the half dozen or so home Kinetoscopes that I have seen, all have been fitted with the baby carbon arc and the machine I have in my collection is no exception. The small lamphouse relies on natural ventilation and judging by the scorching inside most machines they would appear to get very hot in operation. The arc was powered directly for the American 120-volt AC mains using a rheostat for current limiting or via a transformer for 220-volt operation. The efficiency of the light system seems to be fairly poor, relying on only a condenser lens without the aid of a reflector.

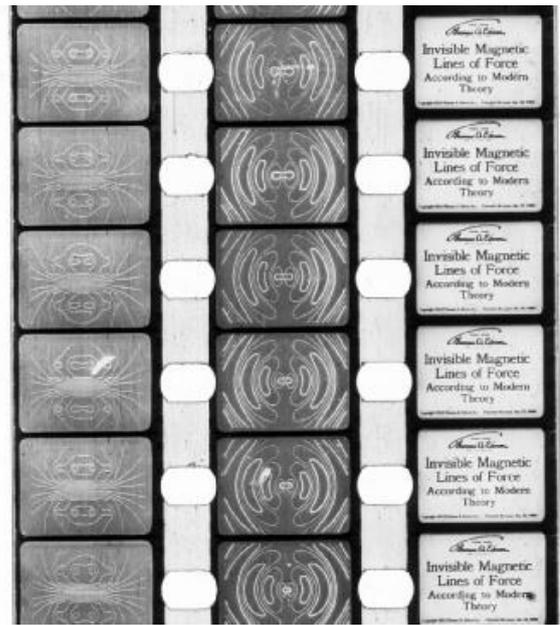
It was claimed in the owner's handbook that a picture six feet wide from a throw of 30 feet could be obtained; brightness level was conveniently not mentioned. An intermittent sprocket located just below the gate provides the film transport. Upper and lower spring loaded arms are used to smooth out the motion of the film. The film is threaded between the rear hinged pressure plate and the gate through a chute under the motion head and then to the take up spool.

A small detachable arm for hand cranking fits to the main drive shaft. The projector does not have a shutter, relying instead on the rapid pull down produced by the intermittent. There is a centrifugally operated safety shutter to protect the film should it become stationary in the gate.

Kinetoscope films have three rows of images each approximately 6mm by 4mm inter spaced by rows of perforations. The complete film is viewed by running it through the projector three times. To make this possible the gate aperture and lens assembly can be moved into three different positions by the rotation of a knob located on top of the motion head. The lamphouse can also be moved sideways to line up with the frame of film being projected, or to illuminate a glass slide holder and lens assembly located along side the motion head.

In operation the row of images nearest the operator is projected first, the gate, lens and lamphouse are then moved to the central position and the central row of images are then projected, this time cranking the machine backwards. Finally the third row is projected again in the forward direction. Upon completion the film is rewound onto the feed spool by means of a small handle attached to the spool arm.

Promotional material for the Kinetoscope claimed 8 feet of this film contained as many pictures as 100 ft of the film used in theatres (35mm) and gives as long a performance of about 10 minutes. Films ranged from 10 to 30 ft in length and appear to have been reduction prints from Edison 35mm theatrical releases covering both entertainment and documentary subjects.



The three rows of images of a Kinetoscope film separated by perforations.

It was claimed a library of over 250 titles existed at the time the Kinetoscope was introduced. Films were sold outright at prices ranging from \$2.50 to \$20, depending on length. An exchange plan also operated whereby films could be sent to the Edison Company in Orange, New Jersey for exchange. Coupons to pre-pay for the service could be purchased from local dealers.

By modern standards the projected picture is fair, and approximates that produced by the average Standard 8mm projector in both brightness and definition. Because the machine has no shutter some vertical streaking is present in the projected image.



The 22 mm film was supplied in sealable film cans.

The Kinetoscope's use of safety film was a big step in the right direction for the home showman, yet the dangers associated with the use of a carbon arc lamp, to say nothing of the optional acetylene generator, in the home by an inexperienced operator seems to have been ignored.

No attempt to produce a camera or provide any service for the amateur moviemaker has been documented.

The Edison Home Kinetoscope was not a commercial success, something less than 2,000 were sold and this

well-made little machine seems to have faded from the scene after only a few years. They are now considered to be a very collectible piece of home movie history.

This article is reprinted by courtesy of the author, Mike Trickett, from 'Reel Deals' magazine. If you are into ciné and movie collecting, you're missing out if you're not subscribing to this great little magazine. See all about it at: www.reeldeals.com.au



Photo 1. Bauer Logo.

BAUER 35 mm Projectors

Han Fokkelman

In 1905 EUGEN BAUER, then 25 years old, opened his own workshop for precision mechanical and electro-technical apparatus in the backyard of a house in Gartenstreet, Stuttgart, Germany. The first products were reduction valves for CO² and oxygen cylinders that were so well received he soon had four employees.

His life was totally changed in 1907 by a Mr. Bayer who owned the only cinema in Stuttgart. It had been open for only a few weeks when its Pathé projector broke down. It needed a part that had to come from Paris. There were none stocked in Germany, so it seemed that the cinema would be closed for weeks. Eugen Bauer repaired it successfully, and Mr. Bayer suggested that he should manufacture 35 mm projectors as all were imported at that time.

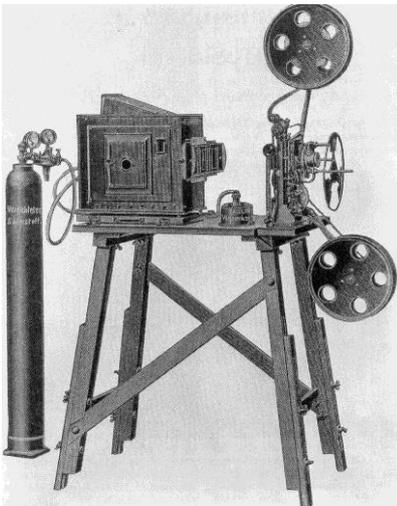


Photo 2. The first Bauer Projector.

He took up the challenge and before the year was out he had placed the first German made cine projector on the market. It was an ultramodern product for 1907. Its most notable feature was a take-up reel, something never before provided. The usual practice until then had been to catch the film coming through the gate in a laundry basket. Bauer introduced the skidding spring so it became possible to use a take-up reel.

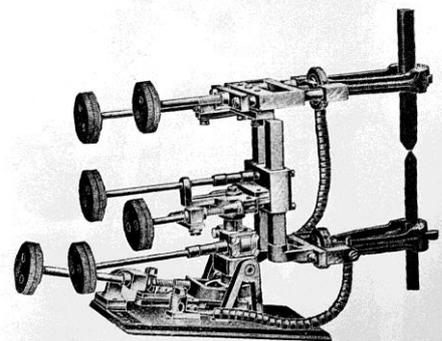
(Photo 2.)

We collectors know that every machine now, from whatever manufacturer, has a take-up reel that was produced after 1907. The rest of the projector was very simple. The motive power was a hand crank and the intermittent mechanism a Maltese cross movement.

Illumination was by limelight, which required oxygen, so you will always find an oxygen cylinder near the machine in old pictures of projectors in use. The light was focussed by a condenser; a mirror behind the lamp was unknown. The sound was provided by a

narrator, who told the story, mostly using a pointer. He was usually assisted by a piano player. Thanks to this projector, Bauer received orders to deliver a machine to the cinema near Feuerbach, and another was delivered to the Hirsch cinema in Stuttgart.

The first changes to the projector occurred in 1910 when the Bauer carbon arc lamp was incorporated. **(Photo 3.)** It was Bauer's policy to make all of the components in his own factory so he had control of the whole product. The development of his own carbon arc lamp was the result of that thinking. The film reels were placed in metal drums to prevent the flammable film base catching fire and the projector could also project promotion slides. The machine had an electric motor but there was still provision for it to be hand cranked. Sometimes it was necessary to assist the motor to get the machine started, but the main function of the hand crank was to give the cinema owner confidence. He could always revert to the old way if anything went wrong.



Erste Bauer Kohlebogenlampe 1910

Photo 3. Carbon Arc Lamp.

In 1914, Bauer had a good position in the export markets to Switzerland, Belgium, France and Finland. But in North Germany the firm had to struggle where the market was growing but there was strong competition from many other local manufacturers. The outbreak of the First World War put an end to the export market. Bauer kept the factory open, and retained his staff by making parts for artillery shells. He took on Christian Wacker as the designer for the next many years.

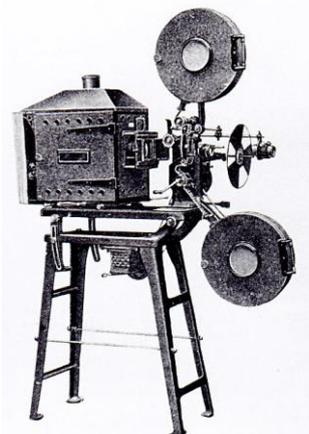


Photo 4. Bauer M 5 Projector.

The first M 5 machine appeared in 1919. Steel replaced brass in the transport system, resulting in less wear. This machine did not have a mirror behind the lamp but the factory was experimenting with mirrors from army searchlights. These mirrors were 140 mm in diameter but the projectors were soon fitted with 190 mm or 200 mm mirrors.

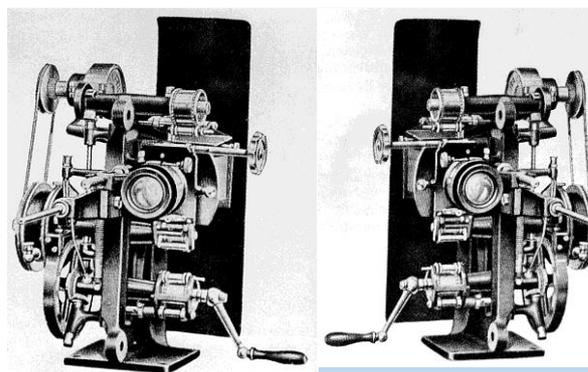
With this machine he was ready to enter the home market and the export market was rising. **(Photo 4.)**

A left-handed version of the projector was offered in 1925. This reduced the space needed in the projection cabin as the operator had only to turn around to operate either of two machines. **(Photos 5 and 6.)**

The Photokino trade fair was held in Berlin in October 1925 and there Bauer demonstrated the M 5, now with the Bauer 35 amp arc lamp, using a screen of 100 square metres. Publicity like this was necessary to keep the competition at bay. There were many other manufacturers in Germany

such as:

| | |
|-------------------------------|------------|
| Zeiss Ikon, formerly Ernemann | Dresden |
| AEG | Berlin |
| Nietzsche | Leipzig |
| Hahn und Görz | Kassel |
| Leitz | Wetzlar |
| Ertl | München |
| Erko | Berlin |
| Liesegang | Düsseldorf |
| Peck und Kehrhoff | Hannover |
| Optik und Feinmechanik | Heidelberg |



Photos 5 & 6. The left and right hand layout.

Meanwhile the number of employees had risen to 70 and the old workshop became too small. They moved to Untertürkheim near Stuttgart where they would stay till 1985.

Developments in the cinema continued. The narrator and the pianist were replaced by gramophone records but the sound was not synchronised. In 1928, Bauer introduced a turntable that was connected with the projector, but it was made obsolete by machines with optical sound, which appeared in 1930.

These created a problem with film transport. The film stops 24 times each second but has to pass the soundhead without stopping. The first solution was a chain that was connected directly to the motor of the projector but, after a short time, the soundhead was fitted with its own motor.

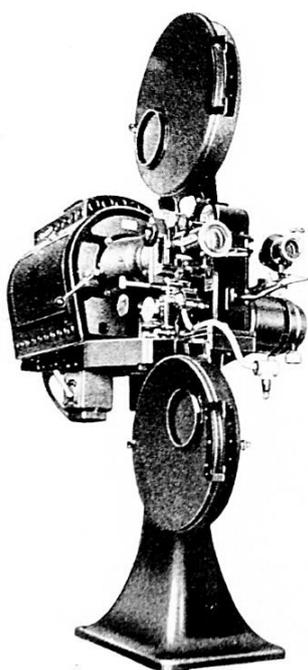


Photo 7. Super Standard 7 Aero.

The worldwide economic crisis made things difficult for Bauer. The American market collapsed and the European market followed. This was one of the reasons why Eugen Bauer sold his shares to Robert Bosch GmbH Company in 1934. Bauer operated as an independent unit within the Bosch organization but could use the facilities of the group. The enormous expansion of Bauer could now start.

No one machine would be suitable for all cinema halls, so Bauer offered the Standard 5, Standard 7 and the Super Standard 7 Aero. **(Photo 7.)**

The Super 7 Aero was the first projector with a totally enclosed film transport. After loading, the machine is closed and from then on the film is situated in a totally closed, fire-free, air-cooled compartment. The shutter, which had previously been located behind the lens, was

now placed between the condenser and the film. While this is the normal construction today, its introduction resulted in a heat reduction of 50 per cent and Bauer was able to capture a good share of the market in countries that had strict fire-prevention regulations.

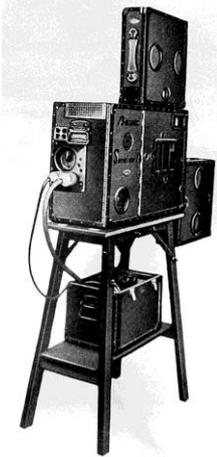


Photo 8. Sonolux.

The Sonolux (**Photo 8.**) was developed for exhibitors like those who travelled from village to village to project films in halls and for use in schools. The lamp was the normal bulb so the Sonolux could be used on any electric system. The Sonolux II, introduced in 1938, was lighter, more compact and gave better projection. The army used more of these projectors than any other; most of them in cinemas at the front. They were made in great numbers at Untertürkheim during the war, which meant that Bauer could carry on projector production and was not obliged to make other military equipment.

Beside the Super 7 a new generation of projectors came in 1938. These were the Bauer B 5, B 6 (**Photo 9.**) and the B 8 and their concept would be maintained for 20 years. These projectors were fire-free, had a totally closed transport system and a powerful film-cooling system that made it possible to use a light source that gave more heat. In addition they made very little noise. A 75-amp arc lamp was fitted and made it possible to get a good picture on the screen in the biggest theatres. A new development was that Bauer did not make the sound system itself, but contracted it out to the Lorenz factory in Berlin.



Photo 9. The B 6.

The B 8 machine was in production during the war and, after the war, Bauer was the only German factory left that made 35 mm projectors. Its biggest competitors were AEG and Zeiss Ikon, but AEG was not able to start the production of cinema projectors again. The Bauer factory had 300 workers in 1939 and around the same until 1944 when it was closed. It reopened in 1946 with a staff of 40 and the number reached 100 in the following year and was still growing. The firm adopted a strategy for the coming years of modernising the 35 mm and the 16 mm projectors and developing the 8 mm sector.

The market required machines for use in ever bigger halls and drive-ins and therefore it was necessary to design a new transport system and new lamps. They did not want to overload the design division so they decided that the amplifiers and the speakers would be supplied by Siemens and Halske. There were hundreds of these combined systems installed in cinemas worldwide and the close cooperation between the design divisions of both firms led to the Cinemascope Technic in 1953, with four channel sound reproduction.

This required the design of a new generation of projectors of which the B 12, (**Photo 10.**) from 1950, was the first. This machine has a cone-shaped shutter giving 35 per cent more light on the screen. In combination with the 110-amp arc lamp and a recalculated mirror, Bauer had a projector that no competitor could match.

Naturally fire and melt safety were reviewed too. By this time the flammable, cellulose nitrate bearer had been replaced by an acetate bearer that did not burn, but it would melt. Therefore, this machine had pressurised air-cooling for film and transport.

They achieved spectacular results with this machine, such as a projection in the open-air theatre in Berlin for 25,000 spectators and the installation of the open-air cinema in Pretoria with a screen of 475 m².

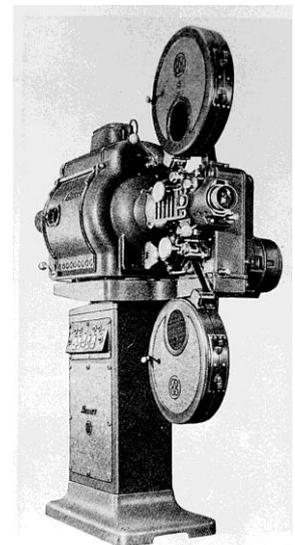


Photo 10. The B 12.

Meanwhile still more cinemas opened in Germany. They required more movies, which were hired from abroad, but the German public did not like subtitling. It was expensive

to put a new German soundtrack on an exhibition print and much cheaper to place an optical track on a separate film bearer. The film with the soundtrack had to be transported in synchronisation with the one projected on the screen so projectors had to be adapted to the task.

A two-bearer version of the B 8 projector was introduced in 1938 (**Photos 11 & 12.**) and stayed on the market until 1958 when the B 14 appeared as a two-bearer projector for both 35 mm and 70 mm film.

Television brought uncertainty. There was very little transmission at first. Most programs were recorded on film, which suggested an opportunity for Bauer. They developed a 35 mm apparatus from the B 8, began deliveries in 1952 and later adapted the machine to 16 mm. (**Photo 13.**)

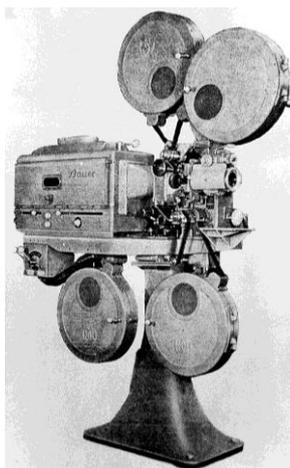


Photo 11. B 8 Two bearer.

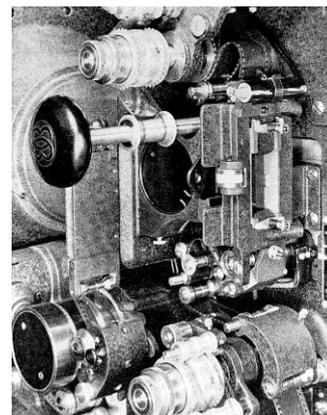


Photo 12. System detail.

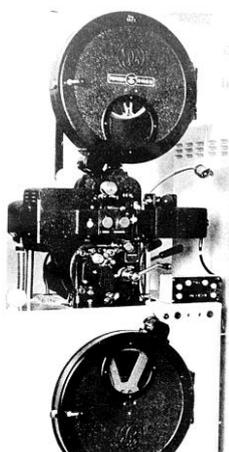


Photo 13. Film-TV connection.

Widescreen cinema with multichannel sound arrived in 1953 after 20th Century Fox developed the Cinemascope system in which the image on 35 mm film was projected through an anamorphic lens onto a double width screen. The first big public demonstration in Germany was scheduled for 25 August at Frankfurt am Main. There were many problems to be solved. A four-channel amplifier was needed but none existed. Siemens and Bauer engineers worked for many months to develop one with assistance from engineers and technicians who came over from 20th Century Fox. The B 12 was the obvious choice of projector.

At the same time MGM and other filmmakers began offering widescreen films without the use of anamorphic lenses. When these were shown for the first time in Europe, in Brussels, Bauer projectors made that possible. In those days Bauer was the only manufacturer able to supply this new kind of machinery and production at Untertürkheim tripled to 100 projectors per week. In 1954 more changes to the machines were needed so that the first 3D stereoscopic movies could be shown in cinemas.

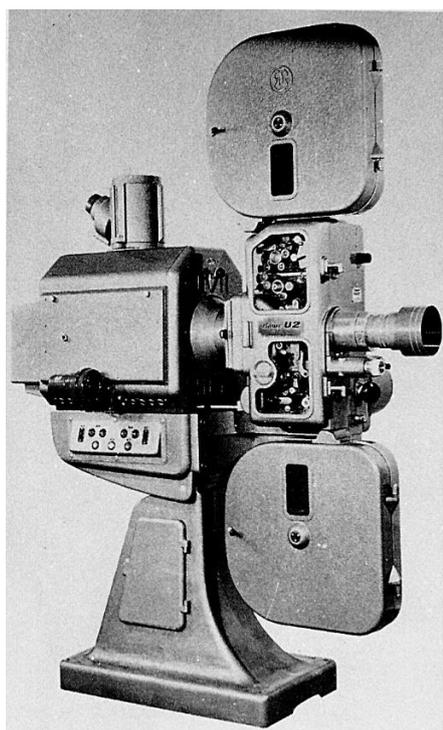


Photo 14. The U 2.

The B 8 and the B 12 were followed by the B 11 and B 14; the B 11 also being offered in a left-hand version.

Meanwhile Bauer developed the Xenon light system, which gave more light and a more dependable machine. With their B 14, which used a 6.5 kW Xenon lamp, Bauer was the biggest supplier to large open-air cinemas and drive-ins.

This machine was superseded in 1959 by the U 2, (**Photo 14.**) which could handle both 35 mm and 70 mm films and six channel soundtracks.

Disaster came to the cinema world at the end of the sixties when the television became strongly entrenched in the home. There had been around 15,000 cinemas in Germany in 1965. By the beginning of the seventies there were less than 6,000. Attendance at big cinemas was so poor that they were either closed or converted into two or more small theatres where patrons found the atmosphere cosier. Cinemas seating 1,500-2,000 had been common; the new theatres typically seated only 300 – 400 patrons.

The operator had to look after more screens at the same time. They could handle starting up easily by staggering commencement times by five minutes, but reel changes were a big problem. They solved that by increasing reel sizes to 2,000 m, and later to 10,000 m. Reel cars had to be introduced because they were too heavy to lift but the result was that a whole program could be shown without interruption.

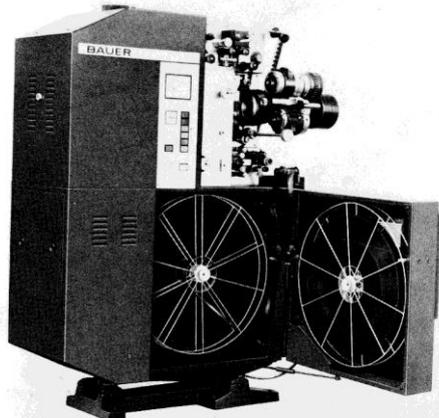


Photo 15. The Bauer U 3.

The U3 (**Photo 15.**) was the first of a completely new range of projectors. It had a new toothed-belt drive, was compact, and could handle 35 mm and 70 mm films on 2,000 m reels. It appeared in 1971 and at the 1972 Photokina fair Bauer introduced 'wholecard direction'. With this card it became possible to dim the hall lights, open the screen curtain and start the projector without the operator doing anything.

In the same year the company won a prestigious order to install two U 2 projectors with 6.5 kW Xenon lamps and its automatic system in the world famous Bolshoi Theatre in Moscow.

The complete system was improved with the U 4 R and U 5 R projectors in which film could be rewound at a speed of 28 frames per second. They could accept 4,000 m reels, which gave over 2½ hours of screening time. Later this was increased to 10,000 m, which enabled one reel to contain three feature films. The last model was the U 4 C Combi, introduced in 1979, which was a theatre machine for 16 mm, 35 mm and 70 mm films. (**Photo 16.**)

The market had declined in the meantime and mass production was no longer feasible, which meant that manufacture was no longer attractive to Bauer. In 1980, the Munich firm, Kinoton, took over the whole 35 mm business with all the service contracts and other obligations Bauer had to its customers.



Photo 16. Bauer U 4.

A success story was over. *With thanks to Robert Bosch GmbH, Productbereich Photokino.*

From Frank Martin in Tasmania Shopping advice for the Camera Collector. (CAVEAT EMPTOR!)

| | |
|--|---|
| <p>Good clean camera. Absolutely as new. Good old workhorse. Pre-loved. Loads of work left in this one. Very quiet camera. A much sought after camera. Years of heavy use left in this one. Only one at this price. Multiple image camera. For soft-focus portraits. Owned by a little old lady. Even a child can use it. Ask for a demo. Make a big saving on this one. Needs minor repairs.</p> | <p>(We fished it out of a lake!) (Just back from the dry cleaners!) (If you've got the grass to keep it going!) (Somebody else got fed up with it!) (For the repairman, that is!) (The shutter doesn't work!) (Stolen!) (We've been using it as a doorstep!) (Unsuccessful prototype!) (Pinholes in the bellows!) (One of the lens elements is missing!) (The pot plant is still in it!) (And unfortunately has!) (We'll talk you into something more expensive.) (You can't get film for it!) (Totally b-----ed!)</p> |
|--|---|

Meanwhile, in the Modern World!

Ian Carron

While completing the layout for the preceding article, the last in Han Fokkelman's excellent series on projectors, it crossed my mind that it could be a good idea to follow it with a short article on the modern projection room. Accordingly, I put in a request to the Village Cinemas 'contact us' website, explaining what I wished to do and telling them about the APCS. Back came a very positive reply from Simone Mottau from their Customer Service Team, asking which cinema complex would be my most convenient? I replied Doncaster as we regularly go there. My request was then forwarded through and I was promptly contacted by Aaron Cornell, the Site Manager for Village Cinemas, Doncaster. My sincere thanks go to these two, particularly Aaron for his time and assistance in preparing this short article.



From this...

to this!

The only other time I have been in a projection room was way back in my teens when a family friend, an usher (remember them?) at the Regent Theatre at Preston, knowing my fanatical interest in all thing photographic, arranged a visit for me. I still recall those big, carbon arc projectors, the changing of the huge reels of 35mm film, and the way they would synchronise the switch from one to another with those little 'star' symbols that flashed up on the top right of the picture.



The feature film of today!
Note data detail inset.

Inserted into the control
rack, ready for playing.

Have things changed now! No more reels of film today. The feature film now comes on what appears to be and, to all extents and purposes is, a computer hard disc drive. These 'cartridges' are encoded and dedicated to the particular theatre and cannot be played back elsewhere. Once inserted into their



The modern projector...no reels! The Barco DP2K-12c
Digital offers native resolution of 2048x1080 pixels.

control racks, the entire system is computer controlled and totally automated.

The carbon arc too is now a thing of the past, illumination is via a Xenon Arc lamp. These lamps, with a life span of 800 – 2000 hours, cost \$1800 to \$3600 each. Think about that next time you mutter "ouch" when buying replacement QIs for your 8mm or 16mm projector at our next market!

Of course, none of this would be worth much without the backup of a decent sound system. Depending on theatre size, this can range on amplifiers of up to 3,000 watts driving as many as ten or more speakers measuring up to 15-inches.



Xenon Arc Lamp. Worth its weight in gold!



The modern control system.
Controls which film shows where and when!

A follow on to our article on Cyril Stevens: A Letter to the Editor:

Mr. Ian Carron.
Editor
Back Focus Journal.
10 Bicton Street
Greensborough. Vic. 3088.

Dear Ian,

I would like to extend to you, all Office Bearers and committee of the Australian Photographic Collectors Society inc. and in particular investigative author John Fleming, this formal expression of deepest gratitude, both from myself, and also all our family and extended family and friends who think this article titled 'Spotlight on Cyril Stevens' in the latest December, 2017 issue of 'Back Focus' is superb. We are most grateful to all involved in making possible the publication.

John Fleming's perseverance, tireless, amazing research skills and dedication, from his first initial contact with me, made this successful publication outcome a miracle of sorts. For, over much of the time of this research, my family and I were operating under severe stress and eventual grief. My late husband Ken was ill, at first at home under my care, and subsequently during a lengthy hospitalisation. Ken passed away suddenly on the day he was to have come home. It was John's determination to get this done which kept me going through all this, and delays on my part were frequent, as a result. John's patience, kindness and optimism never wavered. Along the way, I have learned things and have been shown many historic photos and facts I didn't know – some about my own father, others about other like-minded trailblazers in photography, much history about Dad's photographer, recording and cine companions, and their oft hugely absorbing milestones, careers and achievements. All done in the days of few photographic 'mod cons'. Fabulous people!

I cannot express my personal gratitude enough for John's help, support empathy and generous courtesies and encouragement throughout all the mountains of emails and consultations involved. We are also very grateful for the editorial decision to carry the entire article length within the one issue, giving it the fullest impact.

I know my Dad – always modest and humble – would be saying he's "tickled pink"! My late brother Alan, whose life was sadly cut short so tragically, has, at last, thanks to your Society, gained some well-earned recognition and kudos for his brilliant sound engineering. For yes, Dad and Alan DID produce the VERY first all-Australian 33¹/₃rd LP Vinyl commercial record. I have a copy to hand. Sadly, their immense achievement is mostly unknown or forgotten.

Yours Sincerely,
June Turnbull. (Mrs.)

And some minor corrections from author, John Fleming:

1/ A Wurlitzer organ was in the Capitol theatre OPPOSITE the Melbourne Town Hall. The Town Hall organ is a magnificent traditional pipe instrument, well confirmed by our APCS president Rod Reynolds who recently played it! Cyril Stevens recorded artists in BOTH the Capitol theatre and in the Town Hall in the 1950s.

2/ The absolute 'first' long play vinyl record made in Australia is always debatable. Diaphon in Sydney (W. Hayum) had limited release around 1952. Spotlight L.Ps were more plentiful and widely advertised from the outset.

3/ The Voigtlander SLR Bessamatics of course had a BEHIND the lens leaf shutter, not a 'between the lens leaf shutter' as stated in my article. A momentary lapse by the author.

4/ Whilst there were a few Neumann disc mastering lathes in Australia before about 1953, they had the usual fixed cutting pitch, however Spotlight secured one of the first VARIABLE PITCH lathes. This allowed greater dynamic range on discs, a vast improvement.

5/ With regard to the Lyre bird film (footage subsequently purchased by Walt Disney Studios) June Turnbull realised after the article was published the filming location was the SHERBROOKE state forest, not the Olinda state forest which was adjacent. The entire area today is known as the Dandenong Ranges National Parks. June added her father named the star performing Lyre bird 'Timothy'! A print of this documentary exists in country New South Wales and efforts are underway, if it is salvageable, to secure it for digital transfer.

John Fleming.

BEATTIE OF HOBART

John Fleming

John Watt Beattie was born in Aberdeen, Scotland, in 1859 and learned wet-plate photography from his father, a highly successful portrait photographer. In 1878, aged 19, he arrived in Tasmania with his family to a 320-acre farm at Mt Lloyd, New Norfolk. It was one of the most beautiful places on earth, and young John decided to capture this grandeur with his camera and study and collect records of its history. One of the earliest recorded uses of dry plates in Australia was in 1879 when John Beattie photographed at Lake St Clair. On that expedition a fellow traveller, Alex Riddock, offered to finance John set up a Hobart studio.



Pic 1. John Watt Beattie, taken around 1922.

A year or two later John purchased the old Anson Brothers' Studio in Elizabeth St, Hobart and within a year or two the business expanded to the point John took over the entire building! The basement contained his chemical mixing and printing-paper sensitising areas, there were a framing department, workshops and darkrooms. Other floors were converted to exhibition galleries for portraiture and landscapes. There was the Beattie Lending Library, the Beattie Museum of Van Dieman's Land relics and a large studio capable of taking groups of 70 or more. The rooftop area was used for sun printing. Despite all that, it is said John set his financial margin low-from his fierce Scottish principles he felt uncomfortable to profit by advantage (**Pic. 1**).

Between 1880 and 1925 he travelled Tasmania widely and recorded most of that island state's events. Specialities were his landscapes, many done using a 15 × 12-inch camera, the entire kit weighing almost 60 pounds (30 kg)! He said later how much easier it would have been, and he would have obtained more photographs, using a whole plate camera. Maybe his choice was correct though, the fantastic detail from those enormous negatives is rarely surpassed, even today. The Hobart

Mercury newspaper called him 'The Prince of Landscape Photographers in Australia'. He travelled the South Sea Islands and the Solomons in 1902, making several thousand lanternslides. These photographs were eagerly sought as far away as Russia. His landscapes also appeared on Tasmanian postage stamps in 1899, in the years before 1901 when each Australian state had their own stamps.

One day in 1911 he noticed from his balcony a strange ship in the harbour and upon arrival at work that morning he was met by five men waiting in his office. Four sailors stood surrounding a large trunk and the fifth man was none other than Roald Amundsen. He requested Beattie personally develop several hundred plates and that the four sailors stand guard with them whilst drying overnight. The following day newspapers ran the headline.....

'AMUNDSEN REACHES SOUTH POLE'.

John Watt Beattie was the cousin of a younger Jack Cato and also responsible for Jack becoming a photographer and writer. (There is a Victorian connection too as Jack eventually settled in Melbourne and his son joined Athol Shmith to form the partnership of Athol Shmith & John Cato of Collins Street.) Beattie, after his retirement in 1929, often visited the Cato home, as Jack's father and he were lifelong friends. After one such visit on 24 June 1930 he left to then meet his wife in Sandy Bay. He collapsed and died later that day thus ending an event filled life. He was 71 years



Pic 2. Portrait study by Beattie of Hobart, c1915.

of age. In 1933 John Beattie's Hobart studio building was completely destroyed by fire. Every negative was lost. Fortunately, thousands of prints and lanternslides remain in archives and private collections, including the feature print of this article (**Pic. 2**)



John Watt Beattie with Graflex(?).

This delightful study is almost high key, a full-length portrait taken circa 1915, the subject being Mrs. E. Tempest-Warman. The print measures 7

½ inches × 5 ¼ inches (190 × 135 mm) and is mounted on stylish triple-toned cardboard that also has a separate gold and brown logo attached: 'Beattie Hobart'. The long dress has the very slightest tint of hand-coloured pale blue, and the retoucher has added along the entire left side and above the chair a number of very light oblique strokes. This has been done to further delineate the dress from background. The diffused lighting is very even and soft whilst the lens depth of field and over all look suggest a Petzval-type optic on the camera. The print, in perfect condition, is a memento of another great pioneer Australian photographer, **John Watt Beattie.**



John Watt Beattie with field camera.



Tasmanian Beattie postage stamp.

THE THIRD WAR THE GERMANS LOST

Herb Parker

We all know that, before the war, the German camera industry reigned supreme. If you wanted to buy a quality camera, especially 35 mm or medium format, you bought German. With the exception of press photographers and their Speed Graphics, most self-respecting photographers, professional or serious amateur, used a Leica, Zeiss, Voigtländer, Rollei or Agfa. Japanese goods, including cameras, generally had a reputation for being poor imitations, unreliable and shoddy (although, to be fair, there were some good Japanese cameras made before the war). And yet some 25 years after the war ended all that had dramatically changed and Japanese cameras ruled the roost, especially Nikon and Canon for professionals, and Pentax, Minolta, Olympus, Ricoh, Yashica and others for the serious amateur market.

How on earth did this happen?

There were many factors at work here. The single biggest change is that, after the war, the Japanese made strenuous efforts to overcome their reputation for producing shoddy goods in all areas, especially electronics, cameras and watches. Arguably the decisive turning point was the Korean War. Photojournalists from all over the world travelled to Korea to cover the war, armed with their Leicas, Contaxes and Rolleis. But cameras used in these conditions have a hard life, and when a Leica, Contax or Rollei suffered damage it had to be sent back to Germany for repair, which was not only costly but took time. And so, some of these photographers discovered that the Japanese made very similar but cheaper cameras, especially the Canon and Nikon rangefinders and Yashica TLRs, and that these cameras worked well, were reliable and produced very acceptable results. Furthermore, if they did break down, they could be quickly and cheaply repaired locally. Word spread, and Japanese cameras became regarded with more respect. And once the now-legendary Nikon F came out in 1959 it quickly became the camera of choice for professional photographers.

But there were other contributing factors:

During the war most camera makers in both Germany and Japan had to produce goods for their armed forces, so that when the war ended there was a huge pent-up demand for cameras. Many of the German camera factories had been bombed so that it took some time for the German industry to get going again (this applied to the Japanese too of course). But demand was such that any German camera found a ready market, and many smaller makers, some new to the market, saw this as an opportunity. Relatively cheap 35 mm cameras such as the Kodak Retinette, Braun Paxette, Balda Baldessa, Wirgin Edixa, Iloca Rapid, Arette, Dacora and King Regula sold in large numbers. Some boasted features previously found only in quite expensive cameras, such as coupled rangefinders and built in meters (to meet Japanese competition—see below). But many of them were



Petri and a Beauty CRF (with f/1.9 lens) from Japan, both offering advanced coupled features at affordable prices.



An Arette IB and a Baldessa I, both with Isco lenses.

made to a price so that some had rather poor optics (such as the Staebler Kata or some Isco lenses) or a limited range of shutter speeds, and at least a few were not all that well made. Japanese makers of course saw the same opportunities, and set about exploiting them with a will. Makers such as Petri, Yashica, Beauty and Aries came out

with quite advanced coupled rangefinder (CRF) cameras with fast lenses and good shutters with a full range of speeds, which were well made and performed well. At least at that time the Japanese

enjoyed the advantage of lower labour costs as well. Their designs could be mass-produced at a competitive cost and yet they met most requirements. The Pentax Spotmatic was a good example, an uncomplicated but rugged and up-to-date design with fine optics, and a range of accessories available to cater for almost every photographic need. It offered professional quality an amateur could afford. The Germans were forced to compete, but many of them were mired in the past as we shall see.

Another contributing factor was that, by the late 1950s, the major West German makers were mostly run by older men who had grown up in the era when German cameras dominated. Rollei was run by Paul Franke (born 1888) and Reinhold Heidecke (b. 1881), Leitz by Ernst Leitz (b. 1871), Balda by Max Baldeweg (b. 1877), Zeiss Ikon by Herinrich Eyth (b. 1882) and Dr Heinz Küppenbender (b. 1901), Agfa



Exakta and Praktica from East Germany.



Dr Heinz Küppenbender.

by Dr Alfred Miller (b. 1893), Robot by Hans-Heinrich Berning (b. 1909), Wirgin by Henry Wirgin (b. 1897) and Kodak Stuttgart by Helmut Nagel (b. 1914). These men generally misread the market and underestimated the Japanese competition, and at least some of this can be attributed to complacency bordering on arrogance. At least some of these men believed that the market would buy whatever they offered, and they resisted innovation. They failed to see, until too late, that the 35 mm SLR would be the professional camera of the future. The only exception was Henry Wirgin and his range of Edixa SLRs. The East Germans saw the trend much earlier and met it with their Exaktas, Prakticas and Contax SLRs.

A specific case illustrates this. Dr. Heinz Küppenbender had designed the Zeiss Contax CRF camera well before the war. It was a brilliant design at the time, to compete with the then all conquering Leica, with many new features to get around Leitz



Voigtlander Prototype 132, a lost opportunity.



The Zeiss Contarex. AKA Bullseye, Cyclops. Expensive, bulky, heavy and incredibly complex when it came to service.

patents. But after the war Küppenbender rose to a controlling role in Zeiss. He believed that the CRF camera, and especially his design, would remain the camera of choice for professional and serious amateur photographers, and that the SLR was a passing fad. It was his influence, his faith in his, but by then dated, Contax and his short-sighted view

of the future market that delayed the entry of Zeiss into the SLR market. When Zeiss/Küppenbender finally saw the light they, in their infinite wisdom, decreed that the Contaflex/Bessamatic/Ultramatic range would be good enough for the amateur, despite having blade shutters and hence limited lens interchangeability. For the professional, Zeiss came up with the excellent but complex and therefore expensive Contarex, the famous 'Bullseye'. This decision was partly due to the fact that Zeiss also owned the Compur shutter works.



The Pentax Spotmatic, a best seller and for good reason. It offered simple and rugged build with a range of fine optics to suit even demanding photographers at an affordable price.

Sadly for Zeiss and the German industry, this ultimately fatal error of judgement could have been avoided, because there was a design readily available that could have competed with the Japanese, namely the Voigtländer Prototype 132. The brilliant 132 was designed by Walter Swarowsky, who had previously designed the Bessamatic and Ultramatic SLRs. The prototype 132 was shown at Photokina in 1958 and would have been ready to go into production by 1959. It was a very sleek and compact design, which featured stop down TTL CdS metering coupled with both shutter speed and aperture, an instant return mirror, a metal FP shutter with speeds 1 sec to 1/1000 sec and flash synchronisation to 1/100 sec. The 132 was thus way ahead of its time. TTL metering did not appear on the market until the Topcon RE Super (1963) and the Pentax Spotmatic (1964), but by this time Voigtländer was wholly owned by Zeiss, and hence the management failures at Zeiss meant that the 132 never went into production. Thus this opportunity to really compete with the Japanese was lost, and Zeiss dragged Voigtländer down with them.



The Bessamatic and Ultramatic range from Voigtländer: fine cameras but blade shutters limited lens range.

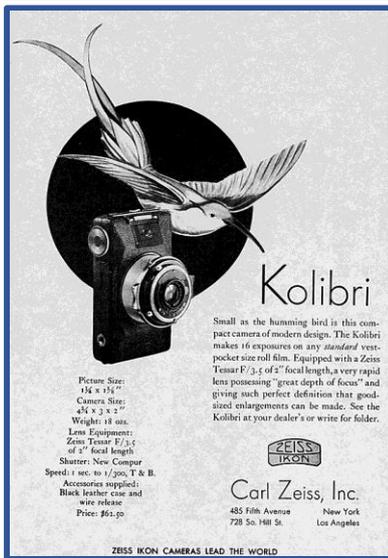
Today the well-known German camera makers of the past have just about disappeared, except Leica, who cater for what I see as a niche market at the top end, although Zeiss at least still makes photographic lenses. But do the Japanese now have the field to themselves? I don't think so, and not all of their formerly popular brands have survived either. We are seeing competition from Korea and I expect to see more Chinese cameras in the future.

Are cameras and photography changing again? Is the smartphone the way ahead? Churchill once said: 'It is always wise to look ahead, but difficult to look further than you can see.' And that's the problem. What does lie ahead? Technology is constantly changing and what was science fiction just a few years ago is now fact. Digital images stored on electronic devices are already replacing the prints and slides we knew in the past—or are they? There are signs that film may be making a comeback, but my guess is that it will only be in a small way for a limited market. Already many, if not most, amateurs are relying on their smartphones or tablets now and that trend will probably escalate. Apart from Apple, the Koreans and Chinese also make smartphones and tablets. My guess is that photography is again undergoing fundamental change, and only those manufacturers who read the future market correctly will survive.

A former prominent Sydney businessman and company director, with whom I once worked for a time, said to me once: 'In a well-managed organisation there should be no surprises!' Perhaps that sums it up! The then movers and shakers of the German camera industry, such as Küppenbender, should have seen what was coming but they didn't, and they paid the price.

The Zeiss Ikon Kolibri

Geoff Harrison



In 1930 the various German camera manufacturers were, in general, making roll film cameras (apart from box cameras) to a design that had evolved from folding plate cameras. A film holder at the back, a bellows in between and a lens/shutter unit at the front. They folded into a more compact size for carrying and, like today's motor cars, it would have been difficult to identify the maker at first glance as they all looked very similar.

The **Kolibri 523/18** was one of the first cameras designed to use the 16-exposure 3x4cm. picture size on 127 roll film and was manufactured in Dresden by Zeiss Ikon A.G. from 1930 until 1935. This is a very compact little camera with quite an original shape and appearance. It has a metal body covered in nicely grained leather. 'Kolibri' is embossed in the leather on the front with a Zeiss Ikon logo embossed in the back

of the camera and the back of its case. When holding it in your hand it feels very solid as it weighs 480 grams. (Pic. 1)

Because it did not have a bellows the Kolibri looked quite different to the many folding roll film cameras of the time. It is described by the National Media Museum in Bradford UK as 'a high-quality pocket camera advertised as 'the new all year round camera, no opening for use, simply draw out the lens in its focusing mount'. Instead of a bellows the lens and shutter are mounted on a tube that springs out into position with a slight turn of the mount. To remind you to do just that, the focusing scale is partly obscured behind a metal strip when the tube is pushed in. (Pic. 2)

While it was made to be a simple to use camera it is quite capable of making excellent pictures, especially as you could purchase one fitted with a Zeiss Tessar 5cm. f3.5 lens in the new rim set Compur shutter. A cheaper model was also offered, it came with a Zeiss Novar 5cm. f4.5 lens in a Telma shutter. As was typical of the many other 1930s Zeiss



Pic. 1. Kolibri with f3.5 Tessar lens, 1930 serial number.



Pic. 2. Focusing scale partly covered.

cameras other variations of these lens/shutter combinations later became available: Novar f3.5 in Telma, Tessar f2.8 in Compur and the rare Biotar f2 in Compur. I have seen a Zeiss instruction book (C2410a in English) that illustrates a Kolibri with a Novar f6.3 lens but I have not seen that lens listed in any printed reference nor any other picture of it.

There is a flip-up two-piece optical viewfinder on one end of the camera that shows a small but bright image. When the camera is held with the viewfinder on top the pictures will be horizontal. The helical focusing is scaled to 3' 6" and closer focusing was possible by using one of the

two Proxar supplementary lenses that were supplied with the camera.

With a Proxar 1 focus was from 3' 5" to 1' 8" and with a Proxar 2 from 1' 8" to 1' 2". The instruction book provided these helpful instructions for framing your subject to allow for viewfinder parallax: *When using a Proxar Lens 1 incline the camera slightly so that the centre of the object to be photographed lies about half way between the centre and the lower edge of the view finder. With a Proxar 2 the centre of the object to be photographed should appear almost on the level of the lower edge of the view finder frame.*

127 roll film had been manufactured since 1912 and the backing paper in 1930 was still only numbered for 8 exposures 4x6.5cm, so Zeiss had to make the Kolibri with two red windows in the back of the camera. (Pic. 3) Each 8-exposure frame number is wound to appear twice: first in the bottom window and then in the top window. While frame numbers for 12 exposure 4x4cm. pictures were added later, 127 film was never numbered for 16 exposures.



Pic. 3. Camera back with two red windows.



Pic. 4. Viewfinder unfolded and strut in position for standing upright.

In 1930-32 other rigid-bodied cameras for the 3x4cm. size were made in Germany: the Wirgin Gewirette, Ihagee Parvola, Nagel Pupille and Mentor Dreivier are four, but I think the Kolibri has the most style!

Footnotes:

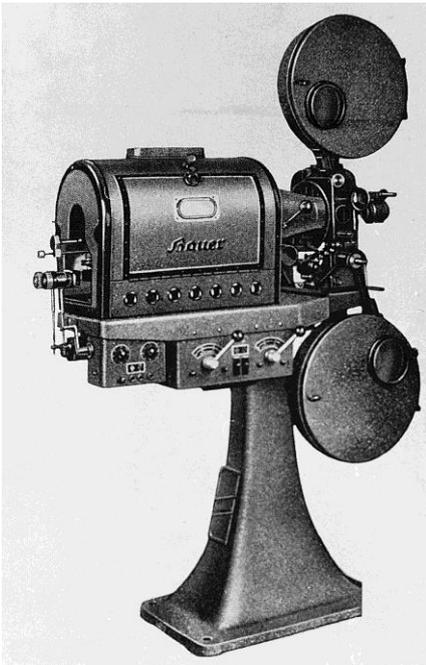
Kolibri is the German word for Hummingbird. A 1931 advertisement in France used the French word for Hummingbird: Colibri. Some bodies were made without a lens or shutter for use as microscope cameras.

When using slow shutter speeds, or for time exposures, you would probably use the supplied screw-in strut (*strut is the word used in the instruction book, not foot as it is often called*). When attached to the focus mount the camera will stand in the upright position. (Pic. 4) For taking vertical pictures, you could stand the camera on its side or use the tripod bush.

The Kolibri came with a fitted velvet-lined 'clamshell' case in either brown or black leather. The case lid held the two Proxars and a cable release, they fitted snugly in place behind two leather snap covers. (Pic. 5) The screw-in strut is screwed into its own small section of the case but over the years many of them have been lost; cameras seen for sale now often do not come with the strut, or even the case.



Pic. 5. Fitted black leather case.



Han Fokkelman concludes his series on projectors with the **Bauer 35mm** Projectors.



Is it a fake or a tribute? Roger Burrows explores the differences!



John Fleming pays tribute to Beattie of Hobart.



Geoff Harrison explores the Zeiss Ikon Kolibri.



Herb Parker tells of the Third War the Germans Lost!