



# BACK FOCUS

Journal of the Australian Photographic Collectors Society inc.

Incorporation Registration No. A16888V

ABN 55 567 464974

Issue No 103

December, 2016



Han Fokkelman presents - Bauer 16mm Projectors.



From the Queen Mother to Damien Parer,  
Pt 2 of Dickinson-Monteath from John Fleming.



'Bullseye' - 'Cyclops', call it what you will.....  
The Zeiss Contarex from Geoff Harrison is always a Classic!



From Roger Burrows...  
the story of a true Australian Icon.





# THE AUSTRALIAN PHOTOGRAPHIC COLLECTORS SOCIETY Inc.

Incorporation Reg. No. A16888V

ABN 55 567 464 974

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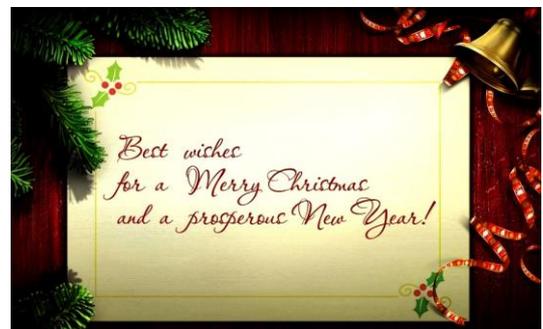
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## Notes from the desk of the Editor:

**With 2016** now coming to a close, it has been another good year for the APCS. Our auctions remain a top attraction, some with jaw-dropping bid fights and our thanks go to Margaret Mason and helpers for the work involved behind these events. Our markets also remain a large success story thanks to the hard work of Leigh Harris. Our September market saw just over 450 through the doors. The input of these two members is more than many realise. 2016 also saw our journal finally go to full colour production. A new writer has started contributing and Australian photographic history seems to be his main theme. A welcome addition indeed. The story on the extraordinary enlarger and Chris Alger (see page 25) brought back memories of a true gentleman. Back when adapting a piece from brand 'A' to brand 'B' was often the go, Chris would be there to machine up the required piece. In my days as a tech sales rep, I got to know him well and he was a true wizard in his workshop. In closing, on behalf of myself and your committee, our best wishes for Christmas and the New Year and may 2017 fill that hole or holes in your collection with that pesky item that's been eluding you!



**Ian Carron. Ed.**

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# Jack Hannes.....and a couple of Box Cameras.

Roger Burrows.

The tall poppy syndrome is alive and well, even in the photographic collecting game. I'll wager very few of us have much in the way of Hanimex branded items in our collections but we should, even if only as a token gesture to a quite remarkable man.

Jack Dieter Hannes was born in the year 1923 on April 12 in Berlin. From 1934 he attended Buxton College in Derbyshire England until 1939 when he and his family fled Germany and travelled to Australia arriving here at the age of 16. He enrolled at Sydney University where he studied mechanical and electrical engineering graduating with degrees in both. He worked for a couple of years for STC (Standard Telephone Company). He went back to University and studied economics while lecturing in physics. From this snapshot of his life it can be seen he was a very disciplined and driven person, one who was going to succeed.



Jack Hannes. 1982.



Durst Duca.

Jack developed an interest in photography and researched the various European companies who were starting to get their act together after the war and soon started an importing arrangement with an Italian Company. He imported sun glasses, Duca cameras and Durst enlargers, the Duca (apparently derived from **DURst CAmera**) being the first 35mm camera imported to Australia after the war. It used the Agfa Karat film system. Seeing the potential and also liking the industry Jack incorporated a company and with a staff of three set up business above a newsagency in Sydney. He called it Hanimex. The name being derived from **HAN**nes **IM**port and **EX**port. When creating a brand name it is very important to make it simple and easy to say. When George Eastman was looking for his brand name he researched many languages to make sure that the name was

inoffensive and easy to say in all of them and not even similar to any other word in that language. Looking at the word Hanimex I dare say it would have filled most of George Eastman's criteria. In the first year and at the age of only 24 the turnover of the company was £25,000.



Some of the early Hanimex product range.

Jack was having trouble getting people to sell his product because there were very few retailers and Kodak had tied most of them up forbidding other brands to be stocked in their shops. Needing more capital he persuaded a friend, John Howie, to invest £20,000 in the company and become a partner in the business. In 1952 he took a trip to Europe and secured the agencies for Finetta, Iloca, and Futura

in Germany and Praktica from East Germany. He also opened his first overseas branch in New Zealand. He next started to import the consumables, flash globes from Wotan and projector globes from Osram.

In 1954 he went to Japan, one of the first Australians in the photographic industry to do so and secured dozens of agencies including Nikon. In 1956 after the government introduced import restrictions it limited the stock he was able to get and one of the answers was to build Argus projectors under licence. Jack travelled to Ann Arbor in the USA the headquarters of Argus to get a deal to assemble Argus projectors in Australia. He came away with the Argus Agency for Australasia and the dies for making the Argus 75 camera. This was duly produced and proudly bore the label 'Made in Australia'. All this was done on the shake of a hand, a sign of the man and a sign of the times. In 1957 the company Hanimex Corporation was listed on the Sydney and Melbourne stock exchanges.



*Argus Seventy-Five.*



*Projection Lamps branded Hanimec.*

In 1958 he convinced Boots Chemists in England to buy 10,000 projectors and in 1960 Dixons placed an order and within 3 years had sold 40,000 units. During the 1960s Hanimex established factories in Ireland, the USA, Hong Kong and Japan and established offices all over Europe and was listed on the London stock exchange. By the 1970s Hanimex was the second largest manufacturer of projectors in the world and employed over 2,000 people. The brand was sold in more than 70 countries. By the mid-1960s Hanimex had its own design department and had achieved 24 patents.



*The Jerry Arnott designed 110, opened.*

Though mostly relating to projectors, one related to a 110 camera. This camera had push pull advance and cocking system like the Minox. A later



*The VEF 110 and flash.*



*Fuji film and x-ray products quickly became top sellers.*



model also incorporated electronic flash with a tele and wide angle lens built in.

Jerry Arnott was the designer and he was also responsible for the Reflex 35. This was a fixed lens 35mm reflex with built in flash and was also another first.

One of the important agencies that Jack brought back to Australia in 1954 was that of Fujifilm and this turned out one the most enduring and profitable of his many deals. He received many awards in his lifetime, the Queen's medal for services to Australian industry and membership of the Japanese Photo Industry Association, the only non-Japanese to do so. Jack resigned from the company in 1982 having managed it for 35 years and growing it at a cumulative rate of 20% per year. Jack resigned because the main share-holder at the time, Burns Philp and Co. stacked the board against him and he

was unable to run the company as he wished. In 1989 Gestetner Corp. bought the company and in 1996 it was Ricoh. In 2004 Fujifilm stepped in and bought the company as a wholly owned subsidiary and owns the rights to the Hanimex name. Kind of fitting really.

Jack died of a heart attack in a restaurant in Zurich on January 31<sup>st</sup> 2005 surrounded by his family. Here we have the life of a very interesting man who influenced photography not only in this country but all over the world and we hardly give him shelf-space. Hanimex is a brand that made a difference and would have, via its various products, started a lot of Australians along the road to the enjoyment that is photography.



*Small, simple and fast turnover.*



*Who wouldn't remember (or have used) these Hanimex branded items?*

The next part of this story is about two makers of cameras that featured in the beginning of Hanimex. We all know the Duca but there was a camera made by Fototecnica of Turin and another by Vrededorch of Germany.

**Ed.'s Note:** *During my years as a technical sales rep, I spent a number of them with Hanimex in Port Melbourne. One story I well recall was when they were setting up to manufacture La Ronde projectors in Ireland. The Paddy in charge of the injection moulding machine for the rotary slide trays was fitting the master mould, (worth a squillion and the only one they had) into the machine when he dropped it, shattering it into a thousand pieces!*

*Fujifilm product was a rep's dream. For years Kodak had monopolised the market in both X-ray and the D&P (photo processing) fields, taking the attitude, "we're the only band in town, you'll dance to our tune!" All I did with the former was walk in to see the radiologist at a given hospital, give them a sample packet of Fuji x-ray film and when I came back they were rapt! Here was a product with far better contrast and much better coating, not one sheet in the entire pack required a repeat. Result: One new client for myself and Hanimex.*



*The La Ronde Rotary Slide Tray.*



*Eiki 16mm Projector.*

*Another winner was the Eiki 16mm projector. Education Department approved, auto threading (which worked), this was a solid and wonderfully reliable machine. To go against the competition of the time with one of these was a 'no brainer'. The Eiki won hands down every time.*

*On the D&P scene, one of the worst things for a processing lab is printer downtime. When a paper roll runs out and a new batch has to be started, that printer is out of production while the new paper emulsion is tested and balanced. And that is a serious loss of production revenue when these printers would be knocking out prints at the rate of many thousands per hour. What I was able to offer with Fuji paper, over and above Kodak, was not only a top quality product but a unique service. When paper is*

*manufactured, it is coated on to a 50-inch (127cm) wide roll, 7,218 feet (2,200 mtrs) long. These rolls are referred to as Jumbos. From these, the various roll sizes, 3½", 5" etc. are cut down in slitting machines. For a Fuji client, Brookvale would devote an entire Jumbo (or more) to them, slit to their requirements! Held in the freezers at Brookvale and shipped as needed. No more rebalancing printers for around 6-months to a year! All I needed to do was say..... "Just sign here please." Ah yes, them were the days!*

**Ian Carron. Ed.**

# Vredeborch and their Boxes

Roger Burrows

Vredeborch was a company based in Nordenham on the German North Sea coast. The company was formed in 1945 and its purpose was to make large numbers of box cameras and in this it certainly succeeded. In fact it produced its basic model the Vredebox with 32 different names for customers around the world including Hanimex. (Pic. 1.)



Pic. 1. Vredeborch and Hanimex version.

Picture number one shows us the Vredebox in its own guise and in the Hanimex branded version. With careful design the front plate of a box camera is all that needs to change to have an infinite variety of brands and it has been done many times before. In (Pic. 2.) we have another Vredeborch and this one has a clever little trick up its sleeve. I think it would have to be the only box camera made with a built in self timing device. It's operated by the red knob on top of the camera. This camera was made c1950.

The next Hanimex box camera also harks back to that



Pic. 2 Vredeborch with self-timer.

first trip to Europe, it's called the Eaglet. It was made by Fototecnica of Turin in 1950. The home market version is dual format taking photos 4.5 x 6 and 6 x 9 but the Hanimex branded version is 6 x 9 only. Now I would like you to look at these two pictures carefully because I think that this camera would have the worst viewfinder system



Pic. 3 Eaglet in portrait mode.

since George Eastman's old No. 1 Brownie with its two lines on the top of the body.

In (Pic. 3.) we show the camera with viewfinder all tucked in and ready for portrait style photos and it may even work though it is very small and not very bright. In (Pic. 4.) the arm is raised carrying the viewfinder into a landscape position except that it is very wobbly and easily bent and thus totally useless. I don't think this camera was a great sales success. To have survived at all is remarkable. Other cameras from this company are not nearly as eccentric.



Pic. 4. Eaglet in landscape mode.

# TRIBUTES TO A TRIO.

John Fleming

The Australian photographic fraternity is the poorer for losing during the last 12 months Ray Harrison, Bill Beams and Reg Grundy. Despite their varied later careers, all shared a lifelong passion for photography.

**Ray Harrison**, who passed away in September 2015, started his working life with Kodak in Perth. After moving to Melbourne in the 1950's, he joined Wagners, and later still spent many years with Bentons of Alphington. In later years Ray was at Tessar Photographics in East Malvern. Always a Leica fan, Ray also had a great interest in classic Borgward cars and making model ships. A camera collector, he often shared a table at the Camberwell APCS Markets with the late Lyle Tabateu. **Pic. 1.**



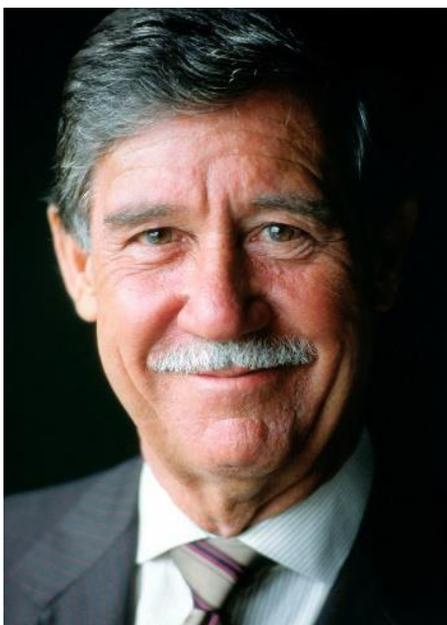
*Pic. 1. A young Ray Harrison in a familiar setting, photographing ships with his Leica's.*

**Bill Beams** is perhaps best known for his involvement with television and Channel GTV 9, as cameraman, then producer and director in live variety shows including the pioneering 'In Melbourne Tonight'. He began his career with 'The Argus' newspaper as a cadet photographer in 1948, and when that paper ceased publication, moved into TV. He had a lively sense of humour and was an integral part of those pioneering television days. Bill lost his battle with cancer in May 2016. **Pic. 2.**



*Pic. 2. Bill Beams (centre) in the Channel 9 control booth. A playful Hal Todd in background.*

**Reg Grundy** being a photographer may surprise many as he is best known as a producer of quiz & game shows as well as drama series including the internationally known 'Prisoner' and 'Neighbours'.

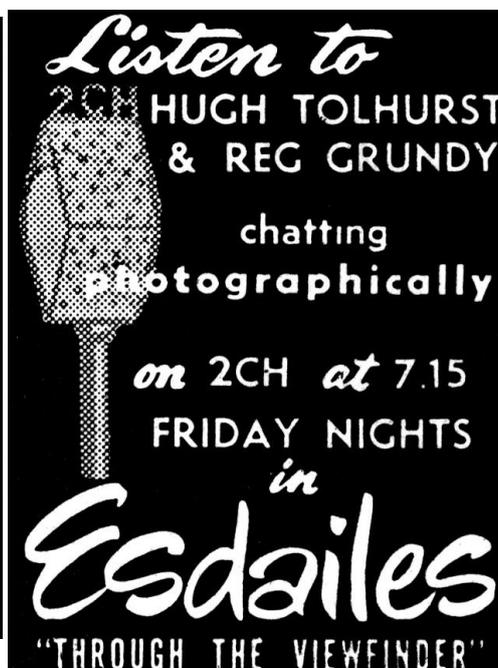


*Pic. 3. Reg Grundy.*

From an early age though, Reg was involved in photography, and in the mid 1950's he had a radio

program in Sydney (which he co-compered with camera retailer Hugh Tolhurst) entitled 'Through the Viewfinder'. In later life Reg took up wildlife photography and produced several superb books. (Google rgwildlife.com for previews.) He married Joy Chambers, a hostess on one of his early TV game shows, and for many years they lived in Bermuda.

Reg Grundy was aged 92 when he died in early May 2016. **Pic. 3.**



# The Watergate Break-In Cameras

Ralph London

Watergate, one of the greatest scandals in American history and government, raises a relevant question for photo historians. What cameras and accessories actually played a role in Watergate? The exact details of the photographic equipment used have been limited and unclear. My research reveals new discoveries, a portion of which corrects some of the old information.

A quick review of Watergate: In June 1972, a group of burglars were caught breaking into the offices of the Democratic National Committee, which were housed in Washington, DC's Watergate office complex. Investigators eventually discovered that senior leaders in Richard Nixon's presidential administration in an effort to stop leaks of classified information—and later to gather information for partisan purposes—had arranged for a team to break into the offices to plant listening devices and to photograph documents. The five Watergate burglars were Bernard Barker, Virgilio González, Eugenio Martínez, James McCord, and Frank Sturgis. The leader and co-leader of the team of burglars, but not themselves burglars, were G. Gordon Liddy and E. Howard Hunt, respectively. After the burglars were arrested in the DNC offices, the administration began a cover-up that ended with Nixon's 1974 resignation.



Fig. 1. Two views of Ralph London's black and chrome Tessina. Front (left) and rear (right). Photos by Don Anderson.

## The Tessina Theory

The Tessina camera (**fig. 1**) is a small 35mm camera “about the size of a package of regular-sized cigarettes.”<sup>1</sup> A number of credible sources assert that a black Tessina camera was used in the June 1972 Watergate break-in. The earliest dated citation of this theory I have found was written by William White in 1990: “It was a Tessina that the famous Watergate burglars had with them when they were apprehended.”<sup>2</sup> The statement is repeated in other sources; for example a website describing variations of Tessina subminiature cameras says, “In the Watergate, Washington, DC, the capital of the United States, when the Plumbers were taken into custody, a black Tessina was seized as evidence.”<sup>3</sup> Indeed, numerous websites about the Tessina repeat the claim. A book on spy cameras adds, “In one of the most thoroughly documented spying cases in history, a Tessina camera played an important role. It happened in Washington, DC, the capital of the United States. The name Watergate has become synonymous with espionage and dirty tricks. When the Plumbers were taken into custody, a black Tessina was seized as evidence.”<sup>4</sup> It is possible, even likely, that White's statement is the basis for the subsequent repetitions.

I acquired a chrome Tessina in 1988 because I was told it was related to Watergate. From around 1990 to 2015, I would tell visitors to my collection that the Tessina had a connection to Watergate. Starting about 2011, I seriously began trying to locate and identify the actual Watergate camera. I gathered some useful information by doing many Google searches and contacting various people and DC-based organisations, including the International Spy Museum, the Smithsonian, the FBI and its press office, and the Metropolitan Police Department and its press office. In early 2015, I discovered that the Watergate break-in camera was not a Tessina.

## Two Minoltas and a Polaroid

My research reveals two Minolta SRT 100 35mm cameras photographed documents during the Watergate burglaries, not the Tessina. In addition, a Polaroid camera, model unknown, recorded the original scene so it could be properly restored later to leave no traces of the burglary. The instant pictures were also to be shown to Liddy's bosses, demonstrating what had been accomplished.<sup>5</sup> No other cameras were used. I have found one evidence photo (**fig. 4**) showing camera equipment found on the Watergate defendants at the time of arrest which includes a close-up of a Minolta SRT 100.<sup>6</sup> A second photo of more evidence seized (**fig. 3**) includes two Minoltas and rolls of film.<sup>7</sup> Notes from the FBI file on the break-in confirm my observation of the photos. The investigative report lists items taken into evidence with the following description: "...also located in the office was a brown 'AWOL-type bag' containing approximately 85 rolls of high speed film, 2 Minolta cameras rigged for photographing documents...." The burglars also possessed Mace, lock picks, screwdrivers, transceivers, a transistor radio, batteries, miniature radio transmitters, and an amplifier circuit board with a miniature microphone.<sup>8</sup>

With two Minolta cameras available, either Barker or Martínez took the pictures while the other unloaded and reloaded the cameras, achieving faster photography. Sturgis probably was involved also.<sup>9</sup> Liddy confirms the second camera and the rolls of film: "Tell them to bring another camera and fifty rolls of 35mm [film]. Thirty-six exposure rolls." That would be enough to photograph eighteen hundred pages.<sup>10</sup> The film was brought as Liddy asked: The close-up evidence photo (**fig. 4**) shows 35mm film wrapped in some sort of paper and marked "TX." That indicates Tri-X film, a high speed film. The overall evidence photo (**fig. 3**) shows in two places 35mm film in boxes plus 35mm film

canisters. Barker also took the Polaroid pictures.<sup>11</sup> The team in addition had spare bulbs for high-intensity lights.<sup>12</sup>

To the right of the film canisters (**fig. 3**) is a spring-loaded clamp or grip, used by photographers to hold a photo light in place. The burglars had at least two such clamps with light sockets for the high-intensity lights, each socket attached to the clamp with two ball-and-socket connectors. Extension cords were included.

James Davey, Clerk of the District of Columbia Circuit Court, describes in a handwritten note some of his activity: "Began inventory of 1827-72 exhibits on 6/13/79. I had moved these exhibits from the second floor

vault to the financial vault several weeks ago for two reasons. One, the impending move of second floor vault to first floor, and two, I noticed one of the Minolta cameras—Exhibit 24(b), a government exhibit, 24(b), was apparently missing when I was in vault a month or so ago. It had been in a gym bag on top of the file cabinet. I can't be positive, but I'm almost certain that it would have to have been taken in the last few months. I have been up to the vault on a number of occasions and recalled seeing the two Minoltas within the last few months."<sup>13</sup> The burglars may not have gotten to use their cameras before they were arrested. A television newscast shortly after the break-in reported the burglars were "carrying cameras [plural]" and added, "The film in the camera [singular] hadn't even been exposed."<sup>14</sup>

### The Evidence List

For Criminal Case 1827-72 in the District of Columbia Circuit Court, which case involves at least the five Watergate burglars plus Liddy and Hunt, there is a more detailed list of items of evidence with their Government Exhibit (GX) Numbers.<sup>32</sup> Here are just the photography-related items. Note the differing colors of clamps on the two Minolta cameras (GX24A and B).

GX8 Gym Bag  
GX15 Photo of Gym Bag and Contents  
GX22 39 rolls of Tri-X Film  
GX23 Box containing Tri-X Film  
GX24A 1 35mm Minolta Camera – Blue Clamps  
GX24B 1 35mm Minolta Camera – Grey Clamps  
GX25 Movie Light Dan 200 Watt Bulb  
GX26 Portable clamp type Light Socket, 3 way plug  
GX27 Extension Cord  
GX28 Sylvania Light Bulb with Clamp  
GX29 GE 40 watt Photo Dan Light Bulb  
GX52 Minolta Camera Case  
GX53 GE Photo Lamp

Items GX8 - GX29 above were all marked for identification on 1-16-73 and received into evidence also on 1-16-73; items GX52 - GX53 on 1-17-73.

About two weeks before the failed Watergate break-in, the burglars had gotten in and out of the Democratic National Committee offices without being detected. From that activity, Barker had two rolls of 36-exposure, 35mm film containing pictures of material on the desk of Lawrence O'Brien, the Democratic Committee chairman.<sup>15</sup> Hunt essentially agreed about the two rolls: "Martínez opened the Minolta camera, took out one cartridge of 35mm film, then handed it to me with another he added from his pocket. 'We shot one roll and part of another,' ... he told me."<sup>16</sup>

## The Los Angeles Job

The confusion or misunderstanding in identifying the cameras as Tessinas or Minoltas may arise because Liddy used a Tessina while preparing for an earlier break-in of Dr. Lewis Fielding's psychiatry office in Los Angeles in September 1971. Fielding was Daniel Ellsberg's psychiatrist; Ellsberg had released the secret *Pentagon Papers*, and the Nixon administration sought material to discredit him. The psychiatrist's office burglars were Barker, Felipe De Diego, and Martínez, also led by Liddy and Hunt. In late August, before the actual break-in, Hunt went to Fielding's office with "[his] trusty 35mm camera." Liddy accompanied him and used the Tessina to photograph the inner office.<sup>17</sup> Liddy recalled using the Tessina to photograph the interior of the office and to take a close-up of the office door's exterior lock.<sup>18</sup> The Tessina camera, supplied to Hunt by the CIA hidden in a tobacco pouch, produced photographs which proved the camera to be unsuitable, a conclusion with which Liddy certainly concurred: "I would not have used it again." Liddy believed "the lens wasn't fast enough for the available light."<sup>19</sup> The available light may also have made focusing difficult on the camera's small viewing screen.

Prior to this break-in, Liddy, possibly with Hunt's help, bought a significant stock of Minox equipment, which they called the "attack kit," consisting of a Minox C, mini-tripod, copying stand, flash unit, waist level finder, right-angle finder, binocular attachment, darkroom equipment, developing equipment, and chemicals. "I don't think there was a Minox accessory available we didn't plan to acquire," Liddy observed.<sup>20</sup> Liddy used the Minox C and its measuring chain to take a close-up of the front door lock of Fielding's apartment to assist in later picking the lock. Liddy also used his own Retina IIIC rangefinder model with an 80mm Schneider lens to take pictures of the building's exterior.<sup>21</sup> However, no break-in of the apartment was ever attempted. During the actual break-in of the psychiatrist's office, the burglars had a 35mm camera with them, possibly Liddy's Retina IIIC or Hunt's trusty 35mm camera. Barker used a Polaroid to photograph the burglar-damaged filing cabinets to prove they had been entered and searched. There is some question whether any psychiatric files themselves were photographed. Barker said they found nothing, according to Liddy.<sup>22</sup> De Diego "testified to a House Committee that 'the Ellsberg file was ... photographed ... with the Minox' spy camera."<sup>23</sup> Presumably that would have been the Minox C. Although a second source states that Barker claims Ellsberg's file was not found, this second source says De Diego claims he held the contents of the file while Martínez photographed them.<sup>24</sup>

## An Enticing Black and Chrome Tessina

In connection with my research, I bought a black and chrome Tessina (**fig. 1**) through eBay in early 2015 shortly before discovering the real Watergate break-in camera to be the Minolta. The seller of the Tessina gave a tantalizing description of his camera: "I have acquired these cameras and recorders [in my espionage collection] from renowned enthusiasts, collectors, and a variety of governmental agencies over the last 40 years. This black Tessina was acquired after the resignation of Richard Nixon, from an individual who used the same camera model (different finish) in what may be the most memorable event in the history of subminiature photography that came to public knowledge."

From that description, three obvious questions immediately arise: Who used the same camera model? What is the different finish, which could be either chrome, red, gold, or all black (rather than black and chrome)? Which of at least two possible events, Watergate or the psychiatrist's office, is the most memorable?

Repeated attempts seeking answers and potentially useful information proved completely futile. The seller’s “clarifying” replies included, “I am obliged to honor the trust given to me not to disclose the name of the original owner.” Furthermore, “Given another Tessina from her/his collection I owned and sold years ago, the most I was allowed to reveal was the general circumstance.” The seller was really offering a provenance—real or created—which he would not or could not support. And using “her/his” seems rather misleading. Because no women were involved in the Watergate or psychiatrist’s office break-ins, this leaves “her” to be a wife or a secretary, or as remote possibilities, a daughter or granddaughter.

The 35mm Tessina, manufactured in Switzerland by Concava, is a small, *side-by-side* twin lens reflex camera. The viewing lens image is reflected up to the finder or viewing screen as usual, but the taking lens image is *reflected down* to the film running along the bottom of the camera, accounting for the Tessina’s small height. Automatic film advance and shutter setting are achieved by a spring-powered motor. The Tessina uses regular 35mm film but in special cassettes. An impressive list of accessories was available. Numerous spy agencies, such as the United States CIA, Russian KGB, and East German Stasi, used this camera for espionage and spying.

The regular, boxed 35mm film pictured in the overall evidence photo (**fig. 3**) would not have been ready for a Tessina. This is because a Tessina uses either film supplied with the special cassettes, or it uses regular 35mm film cut to length and loaded into the special cassettes.

Concava advertised two unusual Tessinas, each available only by special order: a noise-reduced version of the Tessina using nylon gears and a noiseless version without a spring motor, both in black finish. My Tessina is a regular model, neither noise-reduced nor noiseless. In fact, collectors know of no noiseless examples because none have surfaced, although intelligence agencies could have obtained a noiseless version and never revealed that they had done so.<sup>25</sup> Often a noise-reduced Tessina, usually with nylon gears, is asserted to be the Watergate camera. An amazing and imaginative query—or fabrication—even asked if “the Watergate burglars were caught in ’72 with black Tessinas strapped to their wrists.”<sup>26</sup> A wrist strap is a common Tessina accessory.

## Acquiring the Duplicate Minoltas

Once I discovered that Minoltas were involved, I quickly acquired two look-alike or duplicate Minolta SRT 100 camera bodies for my collection. My first, an eBay purchase in March 2015, has an f2.0, 50mm lens. My second, acquired at the April 2015 Puget Sound Camera Show, has an f1.9, 55mm lens (**fig. 2**). This lens is very likely the same lens shown in the close-up evidence photo (**fig. 4**) even though the pictured lens has a lens cap on it. That deduction is possible because John Christensen, an expert on Minolta cameras and lenses, noticed that the diaphragm adjusting ring in the picture (closest to the camera body) is chrome, the same color as my second lens. The first lens has a black adjusting ring. Christensen believes only the f1.9, 55mm lens has the chrome ring.<sup>27</sup> He also found the second camera and lens for me and then provided an appropriate lens cap. The Minolta SRT 100 is a single lens reflex or SLR camera.



Fig. 2. Ralph London’s Minolta SRT 100.  
Photo by Don Anderson.

In the overall evidence photo, the apparent size of the lenses on the two Minoltas could well indicate regular 55mm or 50mm lenses on the cameras rather than some sort of special lens.

## Unanswered Questions

I do not know for certain what happened over the years to the Watergate break-in cameras or to the psychiatrist’s office cameras, including their current locations. The Watergate ones were taken as evidence; other cameras may or may not have been seized. However, a picture caption states, “Marking the 30th anniversary of the break-in . . . , the US National Archives opened up and displayed some of the police evidence (13 June 2002) that has been sealed in archival warehouses for almost 30

years.”<sup>28</sup> Only some evidence and no cameras are pictured. As previously noted by Davey, the two Minolta cameras were still being held by the Court in 1979. Elsewhere in Davey’s Oral History Interview, he mentions that material was transferred from the Court to the National Archives, presumably in College Park, Maryland.<sup>29</sup> The Archives adds, “In 1981 when the National Archives received the exhibits [from Case] 1827–72 from the DC District Court, the two Minolta cameras were not among the items transferred. We do not know where they are.”<sup>30</sup> The evidence may have been moved for use in various Watergate court trials in 1972–73.

I have never seen, and do not know of, any images of photographed documents taken with the Minoltas or with any other camera during the break-ins. The Polaroid model or models involved remain unidentified, but they almost certainly could not have been the SX-70, which was not introduced until October 1972 although it was demonstrated at the Polaroid shareholders meeting in April 1972.<sup>31</sup>

I am still trying to gather more evidence and facts, including possible implications of the haunting phrase used by the eBay seller, “that came to public knowledge.” For many reasons, intelligence and investigative agencies often strive very hard to hide their tools and capabilities. These agencies may also attempt to suppress evidence or make it extremely difficult to uncover. Nevertheless, the phrase about public knowledge may not be so alarming after all because, as desired, I did find plenty of information about the two related break-ins. I did not set out to discover the cameras used in various other covert activities. Operatives such as Liddy and Hunt, from whose books I have taken much information, may consciously or unconsciously present incorrect recollections. In spite of these difficulties, I firmly believe I have created a coherent, credible account of the cameras used in the Watergate and related break-ins. If readers have more information, I hope they will contact me at [London@imagina.com](mailto:London@imagina.com) or by using the *PHSNE Membership Directory*. It’s never too late to add to the story.

## About the Author

*Long-time PHSNE member Ralph London began collecting cameras in 1987 and now collects mainly early wood and brass cameras from the 1840s to the early 1900s, plus relevant catalogs and advertisements. His extensive collection includes items from the Daguerreian era. Ralph has also been a member of the APCS since 2010.*

*A retired computer scientist living in Portland, Oregon, USA, London contributes frequently to photo history publications. His articles have appeared as a book chapter in *Antique Photographica: The Collector’s Vision*, as well as the journals *Photographic Canadiana*, *The Photogram*, *Photographica World*, *Back Focus*, *The Photographer*, and *PHSNE’s* two publications, *The Journal* and *snap shots*. For many years London edited *Cascade Panorama* for Oregon’s *Cascade Photographic Historical Society*, including its 2010 reunion issue. His article, “*First Flight Photo Facts*,” also involving a camera in American history, appeared in the 2013 *Journal*.*

**Note from the Ed:**  
**The low resolution of figures 3 and 4 kept them out of the original article. I have for reader interest chosen to include both.**  
**They are also viewable at**  
**[phsne.org/archive/TheJournal/Links#London2015](http://phsne.org/archive/TheJournal/Links#London2015)**



**Fig. 3. Overall evidence photo.**  
*(Photo courtesy of Paul Leeper/WTOP)*



**Fig. 4. Close-up evidence photo.**

## Endnotes

- <sup>1</sup> James M. McKeown and Joan C. McKeown (eds.), *McKeown's Price Guide to Antique and Classic Cameras*, Twelfth Edition, 2005–2006 (Grantsburg, WI: Centennial Photo Service, 2004), p. 210.
- <sup>2</sup> William A. White, *Subminiature Photography* (Boston and London: Focal Press, 1990), p. 215.
- <sup>3</sup> The White House Plumbers, sometimes simply called the Plumbers, were a covert White House Special Investigations Unit formed to stop leaks of classified information. The name arose because plumbers stop leaks. The burglars were not part of the Plumbers; “35 mm—Variations in Tessina Subminiature Cameras,” *Submin.com*, September 2006, <http://www.submin.com/35mm/collection/tessina>.
- <sup>4</sup> Michael Pritchard and Douglas St. Denny, *Spy Camera: A Century of Detective and Subminiature Cameras* (London: Classic Collection Publications, 1993), p. 83.
- <sup>5</sup> E. Howard Hunt with Greg Aunapu, *American Spy: My Secret History in the CIA, Watergate and Beyond* (Hoboken, NJ: John Wiley & Sons, 2007); G. Gordon Liddy, *Will: The Autobiography of G. Gordon Liddy* (New York: St. Martin's Press, 1980).
- <sup>6</sup> John Lubell, Robert Sheridan, Robert Slosser, and *New York Times* staff (eds.), *The Watergate Hearings: Break-In and Cover-Up*, (Toronto, New York, London: Bantam Books, 1973) p. 6 of photo insert.
- <sup>7</sup> Brennan Haselton, “Watergate Remembered: 40 Years Since the Break-In,” *wtop.com*, June 16, 2012, <http://wtop.com/news/2012/06/watergate-remembered-40-years-since-the-break-in/slide/1/> The photo was supplied to Haselton by Paul Leeper, a 34-year-old Washington, DC Metropolitan Police Department sergeant at the time of the Watergate break-in. Leeper arrived first on the scene along with officers John Barrett and Carl Shoffler. The three soon arrested the five burglars. None of the available photos were of sufficient resolution to be reproduced in this (the original) article.
- <sup>8</sup> Federal Bureau of Investigation, “Watergate Burglary of the Democratic National Committee Headquarters, 6/17/72,” <https://vault.fbi.gov/watergate/watergate-part-01-02-of/view>, pp. 5–6.
- <sup>9</sup> Liddy, p. 241; Hunt, p. 227.
- <sup>10</sup> Liddy, p. 238.
- <sup>11</sup> Liddy, pp. 233–234; Hunt pp. 227–228.
- <sup>12</sup> Hunt, p. 227.
- <sup>13</sup> James F. Davey, interview by Steven P. Hollman, June 10, 2008, interview 3 transcript, Oral History Project, The Historical Society of the District of Columbia Circuit, Washington DC, [http://dcchs.org/JamesDavey/JamesDavey\\_complete.p](http://dcchs.org/JamesDavey/JamesDavey_complete.p)
- <sup>14</sup> Garrick Utley, NBC News, June 17, 1972 Broadcast, included in *The Seventies: United States vs. Nixon*, CNN, June 18, 2015, <http://www.cnn.com/go>.
- <sup>15</sup> Liddy, p. 233.
- <sup>16</sup> Hunt, p. 218.
- <sup>17</sup> *Ibid*, p. 184.
- <sup>18</sup> Liddy, p. 164.
- <sup>19</sup> *Ibid*, p. 164.
- <sup>20</sup> *Ibid*, p. 165.
- <sup>21</sup> *Ibid*, pp. 168–169.
- <sup>22</sup> *Ibid*, p. 168.
- <sup>23</sup> Lamar Waldron, *Watergate: The Hidden History: Nixon, The Mafia, and the CIA* (Berkeley, CA: Counterpoint, 2012), p. 492.
- <sup>24</sup> “The Plumbers,” *New York Times Magazine*, July 22, 1973, p. 16, <http://jfk.hood.edu/Collection/Weisberg-Watergate%20Files/Chronology%20Of%20Cover-Ups/Chronology%2004.pdf>.
- <sup>25</sup> Peter Barz, Jost Simon, and Rolf Häfliger, “The Tessina Story Part 1: The People, Companies, and Design,” *Photographica World*, no. 124 (2008), pp. 6–18; “Part 2: Technology, Development and Prototypes,” no. 126 (2008), pp. 12–26; “Part 3: The Range and Variety of Cameras,” no. 127 (2009), pp. 14–15; “Part 4: The Accessories,” no. 128 (2009), pp. 26–34.
- <sup>26</sup> User junebug1701 to Yahoo Subminiature Photography group, March 19, 2000, <https://groups.yahoo.com/neo/groups/subminiaturephotography2/conversations/topics/1142>.
- <sup>27</sup> John Christensen, interview with author, April 2015.
- <sup>28</sup> Paul J. Richards, Getty Images, <http://www.gettyimages.com/detail/news-photo/marking-the-30th-anniversary-of-the-break-in-at-the-news-photo/127974723>.
- <sup>29</sup> Davey, p. 23.
- <sup>30</sup> David Paynter, National Archives archivist, email message to author, July 2015.
- <sup>31</sup> Ronald Fierstein, *A Triumph of Genius: Edwin Land, Polaroid, and the Kodak Patent War* (Chicago: Ankerwycke, 2015), p. 153–154.
- <sup>32</sup> Davey, Table 13; Davey, Appendix 13.

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Whenever I looked at our Editor’s camera collection it was his Contarex ‘Bullseye’ with a Planar 50mm f2 lens and the big round meter ‘eye’ staring back at me that always got my attention. ‘I’d like to get one of those one day,’ I thought to myself. Just recently, through the generosity of another Society member, Dr Peter Smith, I have at last obtained one. It has a 35mm Distagon lens and came with the original 1960 instruction book. When I started researching details about the camera I found it to be even more interesting than I’d expected. Peter had also kindly included his copy of *Zeiss Compendium* and I will start with a couple of quotes from that excellent book.\*

A prototype Contarex was shown at Photokina in 1958 but cameras were not available until late 1959 or early 1960. A Zeiss brochure dated October 1959 stated that ‘*Zeiss Ikon engineers had spent over two years generating 2450 drawings with over 25,000 measurements and specifications, so that the resulting camera consisted of over 1100 parts and needed almost 4000 tooling operations with an accuracy of 0.001mm.*’

***‘The Contarex system was Zeiss Ikon’s first serious entry in the professional 35mm SLR camera market, and its last.’***



*Pic 1. Contarex Bullseye.*

I couldn’t guess what was in the large black ever-ready case in my hand. From the size I thought it must be some type of reflex camera for 120 film. When I opened the case and saw it was a ‘Bullseye’ my first impression was ‘it’s really heavy for a 35mm camera’. In fact it weighs a very solid 1241gm with lens. The next obvious feature is, of course, the prominent selenium meter cell above the lens (**Pic. 1**). This is the reason it quickly gained the nickname of ‘Bullseye’; it was also called ‘Cyclops’. The meter has a range of speed settings in ASA from 10 to 1300. The camera was designed so that all settings – distance, aperture, depth-of-field, shutter speed and exposure indication, could be read from above (**Pic. 2**). It also featured

a microprism and split-image focussing screen with an instant return mirror. It was the first focal-plane shutter SLR with a coupled exposure meter. All exposure parameters are coupled to the meter: film speed, shutter speed and aperture.

The **Contarex lenses** (from 35mm to 135mm) are unusual in that they have no aperture adjustment ring or settings on them. Apertures are set using the knurled wheel on the front behind the Contaflex name. This was also geared to an iris diaphragm in the meter and the set aperture could be read on a scale in the meter housing. The meter baffle could be removed for incident readings in low light, giving a four-stop increase in sensitivity (**Pic. 3**).

A yellow dot on the meter window rim was now visible to remind you to re-set the film speed against a yellow dot instead of the normal marker. The shutter speed or aperture was adjusted so that the meter needle was centred in the small oval window on the top plate. It was also visible in the viewfinder, illuminated by the small round window on the front panel. The cloth focal-plane shutter has a speed range of 1 second to 1/1000<sup>th</sup> and B; speeds are set by a ring around the wind knob. Below this ring are the settings for film speed. The lever wind has a short stroke of about 180°.

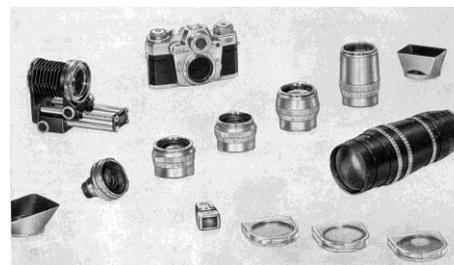


*Pic 2. Top view shows all settings visible.*



*Pic 3. Meter baffle removed showing iris diaphragm.*

The camera back is completely removed for easy film loading. There is a removable take-up spool so you can also use cassette to cassette with Zeiss reloadable cassettes, as the film travels in a straight path. Film rewind is by a fold-out crank on top of the rewind knob. One of the locking keys in the base is turned to the R position to unlock the winding sprockets. The back was designed to take film magazines but these were not available at first.



Pic 4. Contarex system 1960.



Pic 5. Lens mount showing tab for mirror lock up.

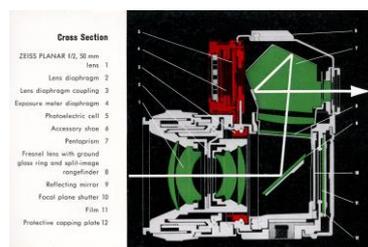
The basic **Contarex System** originally was the camera, a bellows unit and six lenses (Pic. 4). The lenses were the 21mm f4.5 Biogon, 35mm f4 Distagon, 50mm f2 Planar, 85mm f2 Sonnar, 135mm f4 Sonnar and 250mm f4 Sonnar. They attach with a quarter-turn via the large (44mm) bayonet lens mount. A lever below the meter housing transfers the maximum aperture of the lens to the readout window above. The super-wide-angle Biogon had an impressive 90° angle of view. Its rear section extended into the camera body so it had to be mounted with the mirror locked up. First the shutter was cocked then a tab below the mirror was pressed down (Pic. 5). An accessory viewfinder was needed; it was mounted in the accessory shoe. Close focussing was a feature of two of the Zeiss lenses: the 50mm standard lens focussed to 12 inches (30 cm), the 35mm lens to 8 inches (20 cm): better than most other SLR lenses available in 1960. They were even equipped with a cam that increased the effective opening to compensate for the light loss at close distances. Along with ball-bearing races for the iris mechanisms and beautifully smooth focussing, the lenses are a fine example of Zeiss Ikon's high quality standards in engineering and manufacture.

My camera is a first version Bullseye (Zeiss No. 10.2400); the next version, Model D (10.2400D), was released in 1964 and had a few minor changes. The meter baffle was altered to make it more secure and it was unlocked by a small release tab. The ASA range had been extended to 5 to 1600. Interchangeable focussing screens were an added feature. Also, in the area near the viewfinder eyepiece, there was now a 6mm slot that enabled a plastic data strip to be inserted and the written data recorded on the film. As the Contarex system was also aimed at the technical and scientific user this was another unique sales feature, along with the interchangeable film magazines. Another lens was added to the range at this time, a 50mm f2.8 Tessar; it is almost identical in size to the 35mm Distagon.

After a total of 32,000 Bullseyes were manufactured the newly-designed **Contarex Super** and **Contarex Professional** replaced the Bullseye in 1966. It was still being sold in Australia in 1967 priced at \$490 (Pic. 6). While its scientific sales appeal was the System with its many lenses and accessories, the new Japanese SLRs were more affordable to the professional and amateur buyer. You could buy a Nikon F for \$290, a Minolta SRT for \$230, or a Pentax Spotmatic for \$210.

There's no doubt the camera was a technical masterpiece (Pic. 7), but so complicated you would never find a repairman to tackle it. Several complex assemblies would have to be disassembled before you could even remove the top (Pic. 8). There are no visible screws on the top plate, the only external screws are four on the front panel. It has been said that Zeiss were so confident of its dependability that all screws were cemented into place, as repairs would never be needed. Well, I'm very pleased that this one is still working nicely!

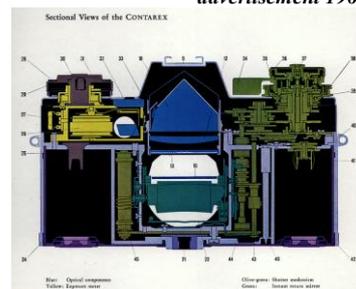
\* *Zeiss Compendium East and West – 1940 – 1972*, by Marc James Small and Charles M. Barringer, Hove Collectors Books, 1995.



Pic 7. Cross section diagram.



Pic 6. AP Directory advertisement 1967.



Pic 8. Sectional view showing the mechanical complexity!

# DICKINSON-MONTEATH Part Two. John Fleming

At the conclusion of Part One- In late 1938, Arthur Dickinson planned a family trip to England and Europe, partly to personally collect his freshly gained F.R.P.S (Fellowship of the Royal Photographic Society) but also as a well-earned holiday. His wife Winifred and their two children, 8 year old Brian and 5 year old daughter Ann were also booked to travel on the gloriously art-deco luxury liner 'Orion'.

Arthur, of course, took a couple of cameras, including his 5x4 Graflex, and secured superb pictorial documentation of the trip. **Pic. 21.** Young Brian Dickinson saw scores of Italian submarines along the way and observed slit trenches being dug in Hyde Park!<sup>2</sup> After visiting the Royal Photographic Society's London headquarters to officially collect his F.R.P.S, Arthur and Winifred visited Germany and noted the ominous signs of the Nazi movement. Nevertheless, he took more memorable and quite historic photographs, including his 'Innsbruck' series. **Pic's 22, 23 & 24.**



*Pic. 21. 'Stromboli' 1938.  
Photo: Arthur Dickinson F.R.P.S.*



*Pic. 22. 'To Market', Innsbruck, 1938.  
Photo: Arthur Dickinson F.R.P.S.*



*Pic. 23. 'The Village', Austria 1938.  
Photo: Arthur Dickinson F.R.P.S.*



*Pic. 24. 'Thunderstorm over Dresden'.  
Photo: Arthur Dickinson F.R.P.S.*

Back home in 1939, he continued in Collins Street and was kept increasingly busy doing commercial work during World War 2. **Pic. 25.** For relaxation Arthur liked nothing better than sitting at the piano at home in Kew and playing his favourite Bach pieces. He was very competent, his grandfather having been organist at Bristol Cathedral in England whilst his mother had been a music teacher. Arthur was also very often a choirmaster and no doubt his musical connections were the reason the Vienna Boys' Choir came to his house in Kew one Sunday for lunch whilst they were touring in 1939. Brian Dickinson said this was memorable for him because the very next day war was declared and the choir was stranded in Australia, adding 'At least they had a jolly good lunch the day before at our place!' Apart from his music, Arthur also enjoyed fishing, having a specially equipped trailer which he towed behind his car, in post war years a conservative Rover 75. Ron Spencer, an A.P.C.S member and photographic industry veteran, says he only ever saw Arthur Dickinson formally attired in a suit! **Pic. 26.**



*Pic. 25. Packing parachutes, Melbourne 1943. Photo: Dickinson-Monteath.*



*Pic. 26.  
Arthur William Dickinson.  
Photo: J. Burgess Watt.*

As flexible based films became scarce and required for defence purposes, most studios reverted to glass plates. This didn't worry Arthur too much as, being a traditionalist, he had resisted the change to flexible sheet film well into the late 1930s! He had only rarely used a 120 roll camera, and never operated a Leica or similar 35 mm instrument. Midway through the war, in 1943, Fred Monteath junior died aged only 47, leaving behind a wife two sons and a daughter. With both Fred Monteaths gone, it was the end of an era. With so much gloom around, it was a joyous occasion when the now highly acclaimed combat photographer and cinematographer Damien Parer visited 296 Collins Street to see Arthur and have his photo taken by him before leaving again for service in New Guinea. **Pic. 27.** Less than 12 months later, on 17<sup>th</sup> September 1944 he was killed whilst shooting footage at the forefront of battle. Parer's 35 mm documentary 'Kokoda Frontline' won a posthumous Oscar. After the war, despite film and paper shortages, Dickinson-Monteath resumed as one of 'the'

society studios, although the style was now becoming quite conservative. This dignified approach suited many clients, and Arthur was a favourite vice-regal photographer, often visiting Government House. In 1948, with 18 year old son Brian as assistant for the day, he photographed the Queen Mother. **Pic. 28.** Perhaps Arthur's most celebrated portrait was of his friend and fellow Savage Club member, Prime Minister Robert Menzies.<sup>3</sup> Taken around 1952, it is the photograph still most widely published of Menzies. **Pic. 29.** Brian Dickinson recalls 'My father gained great pleasure from doing things well and in seeing others do so'.



*Pic. 27. Damien Parer, last leave, Melbourne 1943.  
Photo: Arthur Dickinson F.R.P.S.*



*Pic. 28. The Queen Mother, Melbourne 1948.  
Photo: Arthur Dickinson F.R.P.S.*



*Pic. 29. Prime Minister Robert Gordon Menzies.  
Photo: Arthur Dickinson F.R.P.S.*

On the day of the Robert Menzies sitting, a young assistant named Jack Tuma was present. Jack had arrived from Czechoslovakia in 1949 with his new bride, a suitcase and a Leica, intent on a photographic career. He had worked at first with Elite candid studio in Melbourne, also part time where ever he could. Later he gained enough experience

to enable him and wife, Jannina, to open their suburban Hermes Studio at 356 Neerim Road, Carnegie in 1954, where Jack operated until his retirement in 1998. Ten years after that 1952 Menzies portrait sitting in Collins Street, Jack Tuma was to again feature in the Dickinson saga.

In 1957 the late Ian McKenzie was seeking a career in photography, having won outright a major all-schools photo competition then working two part time jobs so he could purchase a Leica. He answered an advertisement for an assistant at Dickinson-Monteath and gained the position, succeeding Tom Linden and Gordon Hill. Asked about his debut into professional photography, Ian said 'Arthur was very conservative by this stage and still used a vintage wooden studio camera which he wheeled about on castors, the thing probably inherited from Fred Monteath. It was at least 10x8 and had reducing backs for whole plate and smaller.' Ian recalls the darkroom had a De Vere enlarger of 10x8 dating to maybe the 1940s and he had a lot of grief at first developing the large sheet films...they kept flopping out of the stainless steel hangers. As the assistant, he was delegated the studio car, a tired little 1951 Morris Minor side valve. **Pic. 30.** Loaded with camera gear and such, the forward progress was very tedious to say the least. Arthur did little work outside the studio and the only flash was a 1949 English Dawe Portaflash built in a dovetailed wooden box with heavy wet cell battery. In damp weather the high tension voltage used to arc over internally, emitting a sharp 'crack' and a wisp of pale grey smoke!



*Pic. 30. Slow & steady!  
Morris Minor 1951 model.*

Ian McKenzie also recounted how, not long after starting with Dickinson, he was asked did he have equipment and the knowledge to take Kodachrome colour transparencies-a special request for an upcoming important wedding. Ian's Leica came in very handy that time, and he believed Arthur had never used a 35 mm camera in his life! When, due to health reasons, Dickinson decided to close the Collins Street studio and re-locate to home at 52 Normanby Road, Kew, Ian decided to move on to bigger and better things. He certainly achieved that, going on to become one of the very best advertising and architectural photographers as well as president of the Institute of Australian Photographers (I.A.P). He was also a member of the A.P.C.S until his death in 2014.

Arthur Dickinson continued to work from his smaller home studio in Kew from 1959, still producing traditional portraiture. **Pic. 31.** Heavily retouched, it was really of another era by 1960, but nevertheless looked impressive and the print quality was always perfect. Arthur passed away at home on June 2<sup>nd</sup> 1961, aged 63 years, the cause of death being a coronary occlusion. The Dickinson-Monteath name, established as far back as 1893 by the young Scot, Frederick Hutchison Monteath, was to remain for a while however, as in 1963 Winifred Dickinson decided to sell the extensive negative archive (mostly large glass plates!) and the remaining photographic equipment.<sup>4</sup> Seeing the advertisement, Jack Tuma, who had been a Dickinson assistant in the early 1950's, purchased the lot, including the trundling old studio camera. Jack reasoned the massive wooden artefact would be a novel eye-catching display item in his Hermes Studio Carnegie shop front reception area. The thousands of heavy glass negatives and some triacetate sheet films were housed on sagging shelves in a large purpose built shed in the studio backyard. From time to time back orders and reprints did come in, making virtually pocket money. It was more the prestigious old name Jack had purchased that made the deal worthwhile...and maybe there was a touch of nostalgia too as with the big wooden studio camera there was now displayed a framed print of Prime Minister Robert Menzies taken that day in 1952 in Collins Street by Arthur Dickinson. **Pic. 32.**



*Pic. 31. Professor Matheson 1959. Photo: Arthur Dickinson F.R.P.S.*



*Pic. 32. Jack Tuma with the ex-Dickinson-Monteath studio camera 1998.*



*Pic. 33. Fred Monteath & Arthur Dickinson whole plate glass negatives saved.*

By 1998 Jack Tuma's heart condition made retirement essential, and the studio building in Neerim Road, Carnegie was quickly put on the market. Jack was struggling at this stage, so several other photographers came to his assistance, including the writer, who was asked to examine and catalogue the studio equipment and contents with view to the quickest possible disposal of goods. A collector buyer was found for the wooden ex Dickinson-Monteath camera and most of the more modern equipment was purchased by fellow professionals or sent off to a local auction house. The really sad part of this tale

though is the loss of thousands of Frederick Monteath and Arthur Dickinson negatives, the writer only discovering, on the day of helping to assist the studio clear-out, those tons of glass plates, dating back to about 1908, had been sent off for silver reclamation! This was confirmed when the shed in the backyard was visited....only bare droopy shelves and dust to be seen.

All was not totally lost however. By a strange twist of fate, about 260 whole plate (6x8 inch) glass plates survive, having been discovered neatly wrapped as several packets in brown paper, serving as print drying weights. Idly looking at the parcels, I asked Jack what was inside, thinking lead or heavy wood. 'Glass plate negatives' he said! I don't think he quite understood why I ripped so excitedly into the packets to reveal moth eaten ancient Kodak paper boxes crammed with Fred Monteath and Arthur Dickinson masterpieces. **Pic. 33.** Covering the period 1915 to about 1946, they give a glimpse into the portrait, wedding and commercial output of the two professional photographers, and the life of a top Collins Street 'society' studio from times long gone.

EQUIPMENT...HERMES STUDIOS.

Antique wooden studio camera, circa early 1900's. Impressive early plate camera for 10x8, with reducing backs for half plate (6½x4½) and 5x4. Fitted on wheeled stand (brass plated as "Patented 1902") with following lenses:ALDIS Anastigmat 11½ inch (approx. 282mm) F:4.5. COOKE Anastigmat 13 inch (320mm approx.)F:4.5. HUGO-MEYER GOERLITZ TRIOPLAN 16½ inch (405mm approx.) F:3.8. EIDOSCOPE-HERMAGIS (PARIS) 20 inch (520mm approx.) Also bellows lens hood. Pneumatic shutter with tube and bulb (fully operational) and fitted "X" synch.circa 1950's. In good condition, historic early studio camera from DICKINSON-MONTEATH STUDIOS, KEW.

*Footnote 2: Brian Dickinson, approaching 86, now lives in the Western District of Victoria.*

*Footnote 3: The Savage Club, 12 Bank Place, Melbourne, remains one of the very few 'men only' social clubs in Australia. It caters for businessmen, artists, politicians, writers etc.*

*Footnote 4: (Above) From 1998 Hermes Studio sale catalogue, the Dickinson-Monteath studio camera details.*

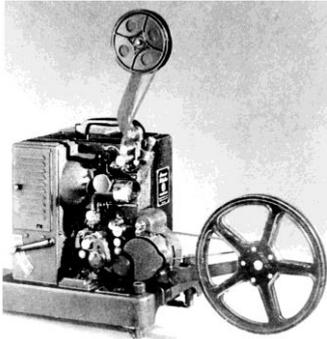


# The BAUER 16mm projectors

Han Fokkelman

In 1933 the management of Bauer decided to begin production of 16 mm projectors. The reason was simple: 16 mm projection was growing into 'BIG' business.

First of all the film base used for 16 mm film was essentially fire-free, so the strict safety precautions used for 35 mm projectors were unnecessary, and the apparatus could be lighter and more portable. Add to this the lower cost of material and it becomes an ideal format for schools, businesses, the armed forces and exhibitors like those who travelled around the country to show movies in local pubs.



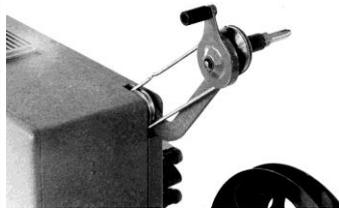
*Pic. 2. Selecton 1, sound version.*

The very first 16 mm projector was the Bauer **Selecton 1**. (Pic 2.) It was a sturdy, low maintenance projector with the run of a theatre machine, due to use of the Maltese cross movement with the bearings in an oil bath. The projector was used for silent movies and it was not until 1935 that it was upgraded with optical sound.

The **Pantalex 16**, also a silent projector, was designed by Robert Bosch GmbH in Stuttgart in 1934. It was intended as a cheap and simple school projector. It has a regular movement, no Maltese cross, and it is possible to project both forward and reverse. For rewinding, however, a rewind handle is used.



*Pic. 3. Pantalex 16.*



*Pic. 4. Its rewind handle.*

trademark.

A significant feature is the system preventing light from reaching the film until it is up to speed, which minimizes the risk of melting the film. Bauer took over the production of the **Pantalex 16** (Pics 3&4) in 1938, which is why this machine may be found with either firm's

Bauer became well known with the **Pantalex 16** and the **Selecton 1**, especially on the German market. The two machines were manufactured until 1951 and by then it was time to change, as the whole 16 mm industry had during the years. By then there were silent and optical sound versions and a magnetic sound version, which became known for their use not only in classrooms but also for projection in larger venues.

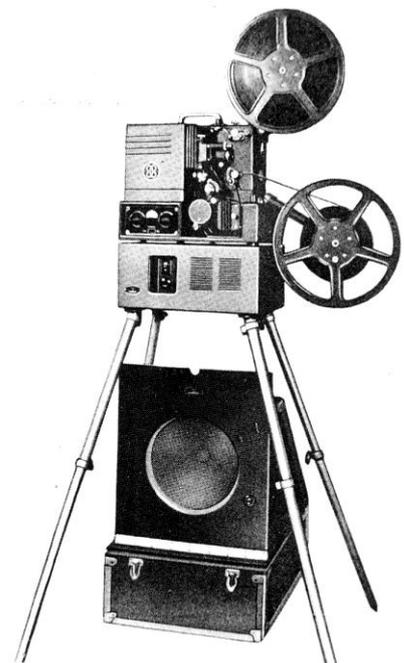
The new projector was the **Selecton 11 W** with a 20 W amplifier underneath. It retained the Maltese cross movement and is suitable for 600 m reels. Thanks to a 100 V 750 W lamp it was possible to show films in venues for up to 400 people. The **Selecton 11 W** came in different versions namely:

**Selecton 11 W S** for silent movies.

**Selecton 11 W L** with an optical sound system.

**Selecton 11 W T** with both optical and magnetic sound systems.

**Selecton 11 W M** with magnetic recording and reproduction.



*Pic. 5. Selecton 11 W.*

A non-portable projector, the **Selecton 11 O**, (pic 6.) was introduced one year later, in 1952. It is based on the **Selecton 11 W**. This projector, on a column, was meant as a permanent projector in small cinemas and large university halls for projection on a screen of approx. 8 m. It had a carbon arc lamp of 40 Amps as a light source and the reel capacity was 600 metres of film, enough for a one-hour show. The capacity was enlarged to 1500 metres in 1954, enough for a complete movie program including news and previews without the task of changing reels.

This permanent projector was used as a base for other developments. The **Selecton 11 O** was the first Bauer projector which could be fitted with two-band projection which meant that a perforated 16 mm magnetic band ran along adjacent to the film and either with or without a soundtrack. That way it was possible to create a better sound and at the same time stereo recording and reproduction was possible.



*Pic. 6. Selecton 11 O.*

Another version of the **Selecton 11 O** provided to the army was meant as a target projector. When aimed at a moving projected image the projector stops at the moment of the shot so the result of the shot can be checked. The screen consists of four paper layers that slide on top of each other, and each moves in a different direction during projection. So when projection is resumed the shot mark becomes invisible.

When the first 3D and Cinemascope movies were introduced in 1954 the **Selecton 11 O** was immediately adapted for them. The projection lamp was later changed into the HI Intensity 45 Amp light source and finally, in 1958, to the new Xenon type light. However, for schools, the **Pantalux 16** was a bestseller. This machine was replaced in 1954 by the **Pantason S** for silent movies, the **Pantason L** for movies with optical sound and the **Pantason T** for optical and magnetic sound reproduction. These machines were provided with built-in 8 W amplifiers.

In 1955 the **Pantason M** appeared with a 14 W amplifier underneath for optical and magnetic sound reproduction and it also had a magnetic recording option. All of these projectors were first fitted with the 75 V 375 W lamp. The **Pantason L** and **M** were later fitted with the 110 V 500 W lamp and the **Pantason T** came with a 110 V 750 W lamp.

In the meantime the market for 16 mm projectors was still growing and the result was more competition. Besides German competitors there were Japanese, French, American and even Italians and Swedes joined in. This competition battle resulted in the introduction of the **P 5** series.

The **P 5** series contains:

**P 5 S** for silent film projection.

**P 5 L 6** for projection of films with optical sound through a 6 W tube amplifier with an 8 W case loudspeaker.

**P 5 T 6** for the projection of films with optical and magnetic sound through a 6 W tube amplifier with an 8 W case loudspeaker.

**P 5 L 15** for projection of films with optical sound through a 15 W tube amplifier with a 20 W case loudspeaker.

**P 5 T 15** for projection of films with optical and magnetic sound through a 15 W tube amplifier with a 20 W case loudspeaker.

**P 5 M 15** for projection of films with optical and magnetic sound as well as for recording magnetic sound. The tube amplifier is 15 W and the case loudspeaker 20 W.

Each model could be upgraded to the next.

In 1962 two more models added to the **P 5** series: (Pic 7.)

**P 5 L 7** for the projection of films with optical sound through an internal 6 W transistor amplifier with a 10 W case loudspeaker.

**P 5 T 7** for the projection of films with optical and magnetic sound through an internal 6 W transistor amplifier with a 10 W case loudspeaker.

A simple change from using a valve amplifier to an internal transistor amplifier meant the total weight was reduced from more than 20 kg to 15 kg.



*Pic. 7. P 5 M 15.*

The choice of lamps to be used in these projectors namely: 75 V 375W, 100 V 500 W, 100 V 750 W and 100 V 1000 W was also significant. (Pic 8.)

The lamps were all supplied with a suitable resistor to drop the voltage, but the heat it produced was a heavy burden on the cooling system. So it was recommended that the lamp, especially the 1000 W, be supplied through a transformer.

Bauer and Siemens used a condenser calculated for the 100 V 500 W lamp in their 16 mm projectors.

There were no condensers designed especially for the 750 W and 1000 W lamps so their light output was restricted. Towards the end of the **P 5** production the 100 V 500 W and the 100 V 750 W lamps were replaced by low voltage lamps: 24 V 250 W and 24 V 400 W, which gave a better light output but there were no halogen lamps. The lamp socket was still the familiar P28.

The choice of projection lenses was wide and included:

Schneider Xenon 1: f/1.4, 25 mm.

Isco Kiptaron 1: f/1.3, 35 mm.

Isco Kiptaron 1:f/1.6, 35 mm.

Isco Kiptaron 1:f/1.3, 50 mm.

Isco Kiptaron 1:f/1.6, 50 mm.

Emo Emostar 1:f/1.5, 65 mm.

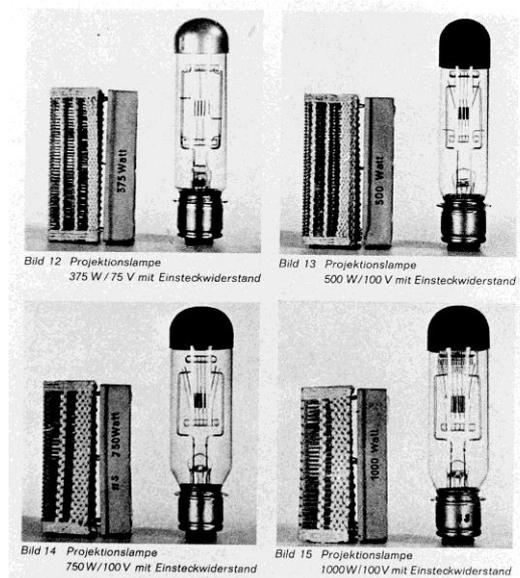
Emo Emostar 1:f/1.6, 75 mm.

Wide screen anamorphic for the 35 and 50 mm lenses, for which a quick-change mount was supplied, were also included. (Pic 9.)

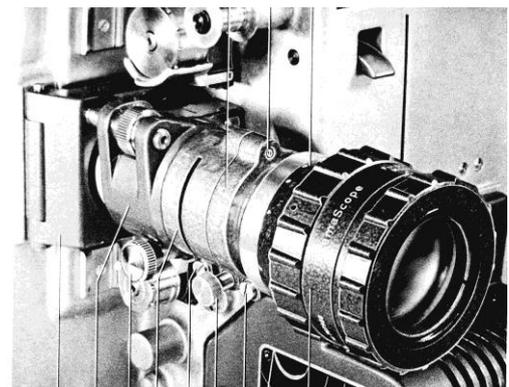
There was also a corner mirror for the 25 mm-50 mm lenses so that the projectionist could conveniently view the image without it being laterally reversed and without having to look at the screen. This **P 5** led to the development of Bauer's 'showstopper' the **P 6**, which first appeared in 1966. The main external improvement was the automatic film intake, yet the most technical developments were inside the machine. The **P 6** was fitted with a three-point claw that made it possible to show films that were slightly damaged. This **P 6** was improved repeatedly, so Bauer decided to name the projector with capability indications. The projector series consisted of: **S** for silent films, **L** for projectors with optical sound, **TS** for projectors with optical and magnetic sound and **MS** for magnetic recording and optical and magnetic reproduction. The first generation projectors were supplied with the 6 W amplifier and the glass lamp also used in the **P 5** projector. As early as 1967 the second generation **P 6** came to light. Supplied with halogen lamps, namely a 24 V 250 W for the S and L, and a 24 V 250 W with a cold-light mirror lamp for the **TM** and **MS**. The amplifier could also be supplied as a 15 W unit.

At the same time a **P 6** was introduced that could use the Marc 300, a gas-discharge lamp, to meet requirements for projection in large venues. The **P 6** projector got a lot of attention from suppliers who sold projectors but did not produce them. Hence this Bauer projector, with its different appearance, was manufactured under various names: Rank (England), Philips (Netherlands), Pathé (France), Bosch for education purposes and Siemens for only the Austrian market. This resulted in production problems for Siemens, so the Austrian market also had to be subcontracted.

The **P 6** enabled Bauer to gain a market share in the USA from the giants Kodak and Bell & Howell. In Europe they maintained a 60-70% market share despite competition from simpler and cheaper projectors from Eiki, Elmo, Hokusin and the Bell & Howell manufactured in Japan.



Pic. 8. Lamp with its resistor.



Pic. 9. Anamorphot with quick-change mount.

## Siemens

The Siemens Director in charge of projector production died in 1967 and the company then decided, suddenly, to cease manufacturing them. This was bad news for Bauer as they were afraid that the production of these quality machines would end up in Japan. They decided to take over the Siemens production line completely, with the result that the Siemens Super 8 projector was named **Bauer T 30** and **Zeiss Ikon T 31**. Bauer kept the Siemens factory in Berlin in operation for a year while production was wound down as its customers accepted Bauer projectors. In 1970 the World Exhibition took place in Osaka, Japan, and for this occasion 50 Bauer projectors were ordered which, in combination with 2 **Bauer U 3** machines, made it possible to perform an impressive multivision show. The Siemens **Rototonsystem** took care of the synchronisation between the projectors.

The third generation **P 6** projectors were released in 1971. They were now supplied with a 20 W, later 25 W, amplifier and a four-claw movement, which no other 16 mm projector had. This **P6** projector could handle virtually any film, no matter what its condition. Also in 1972 some sound projectors were supplied with a stop button that made still projection possible.

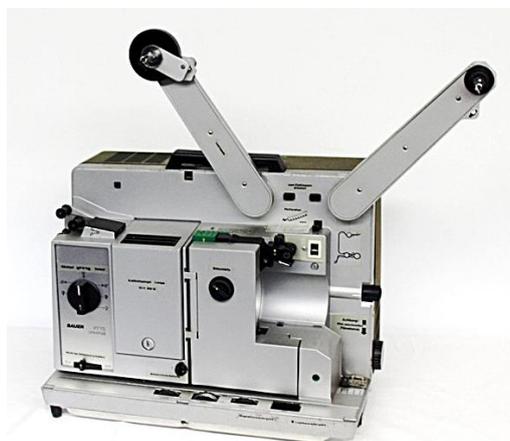
At the same time a two-tone P 6 Studio system was released. (Pic 10.) On this there were two sets of reel arms so that the perforated 16 m sound tape on one was synchronised with the movie film on the other. A little known machine is the **P 6 H**. It was designed to cater to a demand from universities who needed the option of changing quickly from one film to another for teaching purposes. A projector that could be manually fed was necessary in this case, which is why the **P 6 H** has no automatic film load. The **P 6 H** series consisted of the models **L**, **TS** and **MS**, but commercially it was a disaster. During this period the factory underwent major renovations made necessary because production was running up to a thousand projectors per month, while 16 mm projectors accounted for around 20% of Bauer annual sales.



*Pic. 10. P 6 Studio, two-tone projector.*

The **P 6** series had been on the market for over ten years and so many technical changes had been made that the sixth generation of projectors then in production looked nothing like the early ones. It was a major problem for the service technicians and it became time the projector was given a new name: the **P 7**. The main difference between the **P 6** and the **P7** is the colour. Except for the Marc-lamp machine all models were supplied with the still projection option and of course each machine has a four-tooth claw. There are seven models:

**P 7** for silent films. **P 7 L** for films with optical sound. **P7 TS** for films with optical and magnetic sound. **P 7 MS** like the **TS** but can also record magnetic sound. **P 7 M Synchron**. This projector is a special model for use in sound studios.



*Pic. 11. P 7 Universal.*

The essential constant speed was created thanks to a condenser-synchromotor, which allowed the choice of 24 or 25 images per second. To be able to record on a magnetic border track the projector was supplied with a smart switch, a modulation meter and an interlock to prevent erasing by accident. An advantage for working in a studio, where a small screen was mainly used, was the reducible light output. Also, this machine was suitable for TV studios because it could be connected to a video camera as well as a multiplexer to mix with other image sources.

**P 7 T Universal 300**. (Pic 11.) This machine was supplied with the Marc high-pressure gas-discharge lamp, which has a four times higher output than a halogen lamp. This is THE machine for larger venues. It was still simple in use, due to the 'open Automatic' in which film could be put in automatically as well as by hand.

**P 7 Studio.** This two tone studio projector had on the side of the perforated magnetic tape a sound-head unit that consisted of an erase head and a combined head for recording and reproduction plus an extra head for checking on the recorded sound intended as an after check. At the same time it was possible to change from the border to middle track. This unit could be replaced by a unit for four tracks. So now four different kinds of accompanying sound could be recorded, but only one at a time be reproduced. A prototype, the **P 7 Analysis**, was built for single image projection with a search system, but it remained a prototype.

In the meanwhile the Americans and the Japanese were covering the market with projectors that made it possible to change the film at any given moment without the hassle of forward and rewind. Schools, in particular, wanted this feature. Bauer solved this problem with the Bauer **P 8 Selecton**. (Pic 12.)



Pic. 12. P 8 Selecton.

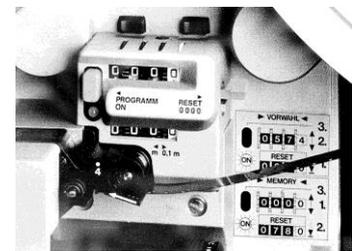
This projector has electronically arranged reels, a friction drive and a moveable catcher to be able to go forward or rewind at high speed, seven times faster than normal. So the film need not be removed from the projector to show a different scene. For films with a special sequence a scene programming unit could be built in. So it became possible to start the film automatically on the right scene and, after showing, direct it back to an earlier part of the film. Bauer was the only manufacturer in the world to offer this feature and it was

applied to the following models:

**P 8 L Selecton** for optical sound reproduction.

**P 8 T Selecton** for optical and magnetic sound reproduction.

**P 8 M Selecton** for magnetic sound recording and optical and magnetic sound reproduction. Naturally it was possible to project still images and there was also a slow projection of 12 images per second. (Pic 13.)



Pic. 13. P 8 Selecton program panel.

This series, introduced in 1980, was expanded with the replacements of the **P 7**, namely the **P 8 Universal** series consisting of the **P 8 S**, **P 8 L** and the **P 8 T**. Model **M** was cancelled for the **P 8 Universal** series. The amateur way of synchronising of 16 mm films was not a success.

Technically the **P 8** series was also different: the projectors were supplied with electronically controlled even-power motors and a toothed belt was introduced. In 1982 the Marc 300 lamp, was replaced with the HTI halogen metal vapour lamp, which made the **P 8 T 400** capable of better projection in larger venues. (Pic 14.)

For all these projectors a broad range of projection lenses were available:

Isco 1: f/1.8, 10mm for the corner mirror

Isco 1: f/1.4, 25 mm. Isco Kiptaron 1: f/1.2, 50 mm

Astro Kino color 1:f/1.6, 75 mm

Astro Kino color 1:f/1.6, 85 mm

Astro Kino color 1:f/1.8, /100 mm Isco Vario 1:f/1.3, 35-65 mm

IscoVario 1:f/1.8, 20-60 mm Anamorphot 35 mm and 50 mm lenses. Anamorphot 50 mm and 100 mm lenses

And, as the times change, so does the market. Although video reduced the demand for projectors, Bauer maintained its share of the world market and actually increased market share in some countries. But reduced output meant that production capacity was under-utilized, causing an increase in unit costs. Production, along with all of the test equipment and the machinery for manufacturing small parts, was transferred to the sewing machine factory of Pfaff in Karlsruhe. This was also a Bosch enterprise and in this way the machinery could be used for different purposes and the price of the **P 8** projectors kept to a minimum. In the end the **P 8** projectors were the only ones left that were made with this great trademark.

*With thanks to Robert Bosch GmbH and Produktbereich Photokino.*



Pic. 14. P 8 T400 with a high pressure gas lamp.

# FERRANIA ATTEMPTS RE-BIRTH

John Fleming

The Italian town of Ferrania, 433 km (about 269 miles) NW of Rome lent its name to the film-manufacturing factory that began there in 1923. Well known to older photographers, Ferrania re-appeared on the early post WWII Australian market. Around the same time, they produced some interesting cameras under their name, many of which also sold well in Australia. In 1965 the firm was acquired by 3M, but by 1999 was independent again. The evolution of digital capture finally saw Ferrania close in 2010, the factory lying disused, full of specialised, rusting, machinery (**Pic. 1**).



*Pic. 1. New Film Ferrania factory (LRF).*

Around 2011, filmmaker & producer Nicola Baldini had teamed with Mario Pagni, a motion picture processing lab owner, to do a deal with Fuji to buy bulk, unperforated, colour stock. Their intention was to perforate this for 16mm and 8mm users. Seeking a cine film perforator (a rare, specialised machine) without success, they saw one in a Florence photography museum. It had the name 'Ferrania' and 'Number 86' on it. For several days, phone calls to the Ferrania factory went unanswered, so the pair drove to the town only to discover the manufacturing complex abandoned. Finding a local resident who once worked there, they in turn contacted the agent entrusted with disposing of the machinery and purchased all the existing cine perforators! Soon after, the idea grew to try and re-establish Ferrania to produce film again (**Pic. 2**).



*Pic. 2. The Film Ferrania directors.*



*Pic. 3. Cleaning coating machine.*



*Pic. 4. The 'big' emulsion chiller arrives.*



*Pic. 5. External unit, new emulsion chiller.*

The past five years have seen many tribulations, gains and setbacks. The eight directors and volunteers have had to deal with severe unseasonable weather, tonnes of asbestos removal and



*Pic. 6. New land subdivision cuts services.*

even flooding, all the while restoring and cleaning specialised machinery (**Pic. 3**) whilst adding new, modern equipment (**Pics 4 and 5**). The most recent disaster involves the severing of electricity, water and high-pressure gas mains. These were carried on old fashioned above ground towers (**Pic. 6**). A new roadway and land subdivision means all services have to be placed underground. There



*Pic. 7. New steam generator & control panel.*



*Pic. 8. New stainless steel exhaust stack.*

is a considerable distance to cover, and the extra expense is great. For the time being, large Diesel generators supply electricity and fresh water is trucked in. A new steam boiler and generator has been installed, and this will require the reconnection of high-pressure gas before emulsion making can begin (**Pics 7 and 8**). Meanwhile, the neighbouring new (non-photographic) company of 'Ferrania Technologies' has graciously helped by supplying gas on a temporary basis from their large adjacent complex.

Despite the inconveniences, plans continue to produce films, one of the first products being a 100 ASA colour reversal based on the modern 3M 'Scotchchrome' of the early 1990s with black and white films, including 'Pancro 30' to follow. As the photos show, this is an ongoing, heroic effort and one really hopes the dedicated team will succeed.

Photographic equipment was not always easily available or affordable, in days gone by. In the early 1930s, Christopher Alger, an engineer and keen amateur photographer, decided to construct a versatile, multi-format enlarger. He operated a specialised gear-cutting workshop situated in the small central Melbourne city street of Market Lane.

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*Pic. 1. Melbourne Directory 1960.  
The building is now 'The Pancake Parlour'!*

Ground'. His darkroom was in the attic and, from a small opening window, he and his son Ralph sometimes used to photograph steam trains below, Ralph eventually obtaining an early folding Retina 35 mm for this work. Christopher's main camera was a Sanderson 4x5 'hand and stand'. (Pic. 2.)

The need to cater for a large format would have narrowed the choice of affordable, commercially-made enlargers at the time, whilst it is also possible he reasoned that, by building his own, various improvements could be incorporated. The final design is impressive—a large, solidly fabricated apparatus for wall mounting with a fixed head unit with a well counterweighted, moveable baseboard. Construction is almost entirely from second-hand or recycled materials and components. It is an impressive beast, measuring just on 7ft 3in (2.2 Metres) in height. (Pic. 3.)



*Pic. 4. Beautifully crafted head assembly.*



*Pic. 5. Slide-in negative carrier, cooling vents.*

The main component, the enlarger 'head', with lamp house, is a work of both ingenuity and art! Elaborately fashioned from various pieces of timber, brass, steel and even cardboard and three cut-down food tins, it incorporated elegant light-trapped cooling vents, the negative carrier stage, and the focussing lens-mount below. (Pic. 4.)

The stylishly shaped upper assembly accepts slide-in negative carriers, all of which are fully handcrafted from timber and brass to accommodate sizes from 5x4 down to 35 mm. (Pic. 5.) There are six negative carriers: 5x4, 1/4 plate, 120 film both 6x9 and 6x6, 127 and 35 mm, all painstakingly constructed from scratch. Some are even glassless—very advanced for 1934! (Pic. 6.)

The means of focussing the lens is unconventional, especially for a home constructed enlarger. Normally a bellows would be employed, or in simpler designs, a coarsely threaded large tube. Christopher opted for closely fitting inner and outer boxes driven by rack and pinion. Being a gear cutter and lathe expert, that was no problem. Even so, various reclaimed parts can be seen, but the focus action is silky smooth and free of any loose movement. (Pic. 7.) There is a felt light-trap seal for these telescoping boxes. The enlarger head also incorporates double, glass, plano-convex condensers in a



*Pic. 2. Christopher Alger's Sanderson 5x4.*



*Pic. 3. Tall, and very heavy, enlarger!*

home-made sheet metal mounting band and there is provision internally for a light diffusing glass if required. (Pic. 8.)



Pic. 6. Custom made negative carriers.



Pic. 7. Lens focus inner & outer boxes.



Pic. 8. Plano-convex condensers viewed from top.

The baseboard is a minor masterpiece of engineering. It slides up and down on tubular steel rails that custom-moulded, white metal carriers with friction locks connect to the solid baseboard via cast angle brackets. (Pic. 9.) Further, there is an accurately calibrated enlarging-ratio indicator at the centre of the vertical main body. Also just visible in the photo is one of the four clever Bromide paper clamps, which were perhaps employed when large borderless prints were required. (Pic. 10.)



Pic. 9. Cast baseboard carriers & screw lock.



Pic. 10. Calibrated scale, R.H. bearing, and paper clamp.



Pic. 11. Massive sash weight counter-balances.

The solid-timber baseboard is beautifully counter-weighted via cables, pulleys and two large old window sash weights behind the main upright body of the enlarger. (Pic. 11.) Here again Christopher's resourcefulness is evident—the two pulleys at top of the machine for the counterweight cables are machined-down 'Power's' cinema projector gears! (Pic. 12.) The business in Market Lane specialised in service and rebuilding of early 35 mm theatre projection equipment and Power's machines were everywhere—even early hand-cranked types converted to electric motor drive and optical sound. The older Power's was quite a dangerous machine and the exposed gear train claimed more than a few unwary fingers! (Pic. 13.) In the late 1930s and 40s Christopher Alger actually manufactured a small number of his own 35mm cinema sound projectors and they were highly acclaimed. Kev Franzi, now in Queensland, had one (subsequently lost in storage) and another is reputed to exist with collector Jim Osborne. (The writer would appreciate hearing of any other 'Alger' projectors.)

The crowning glory of this amazing home-constructed enlarger is the lamp holder and upper lamp



Pic. 12. Pulleys are machined-down gears.



Pic. 13. Power's 1920s 35mm theatre projector.

house assembly, again, all made from scrounged, self-crafted items. Two large round tins, cut down, telescope inside each other, having an asbestos-wick light seal. The enlarger bulb reflector is from a late 1920s auto headlight with a smaller cut-down jam tin soldered on. The brass bulb socket fits into what appears to be a cut-down gearwheel centre. Here there is one obvious design flaw, and one Christopher realised later. (Pic. 14.) Intended as cooling

ducts, originally the brass ‘spider’ around the bulb holder would allow light spill to the ceiling...more than enough to fog paper. A scrap of blue material was cut to fit around the mains cord above the lamp house to obviate this. The entire lamp holder and reflector can be slid up and down to focus the bulb and obtain even lighting without ‘hot-spots’. Handcrafted screw locks control these movements. **(Pic. 15.)**



*Pic. 14. Artistry in sheet metal—the lamp assembly.*



*Pic. 15. Detail, hand-crafted screw locks.*

Before this giant piece of Australian vintage craftsmanship could be used again, certain electrical repairs were required. Something to be always careful about with old equipment is perished original rubber covered wiring: lethal! **(Pic. 16.)** A new length of cotton-covered modern PVC power cord was selected (popular now with vintage radio restorations and for irons, etc.) and the original brass socket was carefully checked for insulation, then safely re-wired. Reassembled and adjusted with a new

opal bulb, the illumination on a white sheet of cardboard on the easel was impressively even. **(Pic. 17.)**



*Pic. 17. Rewired lamp. Note use of jam tins.*



*Pic. 16. Dangerous, perished rubber wiring!*

Beverley Williams (née Alger), Christopher’s daughter, actually used this enlarger in the 1960s after starting work in a professional studio and finding darkroom processes fascinating. After a short while though, the more up-to-date studio enlargers (Astron 5×4 and LPL 6×7 cm) with their modern lenses were used. The period from the 1930s to the 1950s saw the most use for this home-constructed enlarger. Apart from scenic photos and panoramas taken

with Christopher’s 5×4 Sanderson, his son Ralph used the enlarger, many images being made for his railway hobby, a number of which have been published in books. Two excellent historic photos show the old Walhalla line in Victoria’s remote mountain country in the 1930s, both prints being produced on the enlarger installed in the Avenue Athol, Canterbury, attic darkroom. **(Pics 18 and 19.)**



*Pic. 18. Walhalla train on Thomson River Bridge.*

It is unclear what type of lens was used on this enlarger, as there was none when I rescued it from an Alger relative’s garage about 14 years ago. The remaining brass-threaded flange measures 2 inches diameter (about 50mm) and we will probably never know. One other item found with all the negative carriers shows how folk handcrafted items out of need years ago: this is a focus magnifier neatly fashioned from scraps of wood and a cardboard tube, with a lathe-turned wooden ring. **(Pic. 20.)**



*Pic. 20. Exquisitely fashioned focus magnifier.*



*Pic. 21. Christopher Alger circa 1961.*



*Pic. 19. Stringers Creek, Walhalla line.*

This amazing custom-built enlarger is another example of inventive spirit—still a fully functional instrument of museum quality. **(Pic. 21.)**



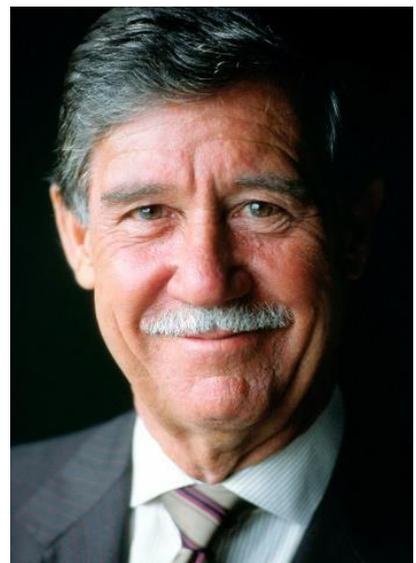
*From Ralph London: The Watergate Break-In Cameras.*



*John Fleming reports on a gallant attempt to revive Ferrania, and a rather extraordinary enlarger, (right).*



*Ferrania takes shape....the new factory.*



*In this issue we pay tribute to a true Aussie trio. All played unique parts in our industry.*

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