

BACK FOCUS

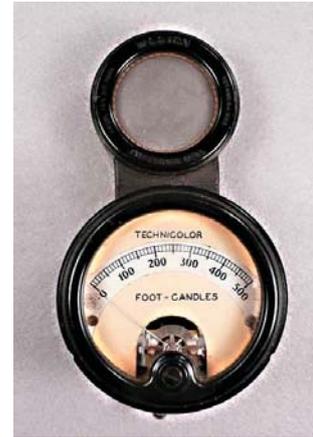
The Journal of the Australian Photographic Collectors Society (Inc)
Incorporation Registration No. A16888V ABN 55 567 464974

Issue No. 80

March, 2011



*Is it possible to collect one of every-
thing a manufacturer made?
One member decided to give it a try!
Read his story inside when he
pursued the Weston range of meters.*



Lyle Curr's Pt 2 of the Brownie 127 story.



March Market report inside



*An interesting bit of history
from Herb Parker*



THE AUSTRALIAN PHOTOGRAPHIC COLLECTORS SOCIETY Inc.

Incorporation Reg. No. A16888V

ABN 55 567 464 974

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Notes from the desk of the Editor:

How you can get caught! Having been sent an email on the passing of John Craig, I Google searched for an image for a report and, in spite of CallingID LinkAdvisor reporting the site safe, downloaded a rogue program that crashed my system big time! My friendly tech was away and it was nigh on 10-days till he returned and I was able to get myself back up and running. Real drama! Needless to say I will not be reprinting that link.

John Craig was quite well known for his web-sites offering over 155,000 instruction booklets for thousands of cameras, accessories and projectors – and nearly 10,000 other photographic items. Beginning in 1994, he published several editions of *Craig's Daguerreian Registry*, a reference tool for dealers and collector's to identify and date the more than 12,000 photographers who worked in the United States prior to 1860. This is just a partial coverage of John Craig's service to the world of collecting. A sad loss to all collectors.

Ian Carron.

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WESTON. The Man, the Company, and the Products.....

The story of the WESTON Meter....

By Brian Howden.

My interest in the WESTON meter dates from my early interest in photography during the 1950 – 1960's when I used several of these meters, mainly because they were easy to use, rugged and accurate, also with the invercone they could be used to take incident as well as reflected light readings.

In Back Focus of March 2005, No 57, Tom Hellwege had a very good article on exposure meters, he concluded his article with the words "But a full collection of WESTON meters would be a major achievement". Now after reading this I thought I would give it a go and just see how many I can find. They say there are around 36 models, this is probably correct for the basic models, but within each model there are some variations with minor differences such as colour and wording etc. The meters depicted in this article are all from my collection unless otherwise stated.

Let's start our story with WESTON the man and the Company.....

Edward Weston was born May 9, 1850 in Oswestry, Shropshire, England. (Pic 1)

Died Aug 20, 1936, Mountclair, N.J. U.S.A. Although born in Oswestry, Edward was brought up in nearby Wales, his father a merchant and mother a writer of novels and magazine articles.

Edward attended the Adam's school where he studied medicine and was apprenticed to a local physician during which time he became very interested in chemistry.

After receiving his medical diploma in 1870 he moved to New York, U.S.A. at age 20, where he soon found a job in the electroplating industry where he made lots of improvements and in fact over an eighteen-month period he actually revolutionized the electroplating industry.

After the company he worked for went out of business, Edward had a short career as a photographer, but returned to the electroplating industry in 1872. He opened a business with George. G. Harris as partner, the Harris & Weston Electroplating Co was founded in 1873. In that year he developed his first dynamo for electroplating, he patented the Nickel-Plating anode in 1875 and also patented the Rational construction of the dynamo which raised the efficiency from just over 45% to better than 90%.

In 1875 he moved to New Jersey into his own business manufacturing dynamos, called the Weston Dynamo Electric Machine Company. Edward was obsessed with power generation, in 1876 he patented a design for a DC generator and after showing his dynamo's powering arc lamps at the Centennial exposition in Philadelphia in 1876, a Frederick Stevens offered Edward the opportunity to set up a dynamo division of his Stevens, Roberts & Havell Company in Newark, New Jersey making dynamo's for arc lamps and improving the lamps themselves. In 1877 the division was organized into a separate company, the Weston Electric Light Company, they won the contract to illuminate the then new Brooklyn bridge.

At this time independent of Edison and others Weston was working on incandescent light, with his knowledge of chemistry, electricity and mechanical engineering he designed a carbon filament of unprecedented uniformity and long service. This was used in all incandescent lights up to the introduction of Tungsten filaments in 1884 and to this point Edward had a total of 139 U.S. patents to his credit, but there was a lot more to come.

In 1882 he patented the Tamidine filament, an improved carbon material giving bulb life of up to 2000 Hours. Other materials being used at the time burned out after several hundred hours, he also improved lamp seals and had other improved lighting inventions and by 1886 he had 186 patents to his name. Since his electroplating days he was very concerned regarding the lack of accurate, practical instruments for measuring electrical parameters and in 1887 he had left the generator and lamp business and established a laboratory.



(1) Edward Weston, 1850-1936.

In 1888 he formed Weston Electrical Instrument Company, that same year the truly permanent magnet was born, he had invented two important alloys for use in electrical measurement, “Constanta” having a negative temperature coefficient and “Manganin” having an extremely low temperature coefficient.

He went on to develop a practical, precision, direct reading, portable instrument to accurately measure electrical current, this device was the basis for the voltmeter, ammeter, and wattmeter.

In 1893 the Weston cell was developed, a saturated cadmium cell, it was adopted as the international standard and was used by the National Bureau of Standards for almost a century to calibrate all other meters.

His company produced world class electrical measurement instruments including volt, amp, watt, ohm, and HF meters, current / potential transformers and transducers, he also invented the magnetic speedometer, even a dashboard ammeter for Harley – Davidson motorcycles, radio test instruments plus many, many others.

For the aircraft industry he developed navigational and engine condition instruments including the first blind landing instrument in 1933, and also those that are of interest to us photographers, photo-electric cells which were initially used in illumination meters, light meters and foot candle meters, Dr Weston was still a keen photographer who saw the exposure meter as being a useful tool.

In 1931, Edward Faraday Weston (1878 – 1971), Dr Weston’s son applied for a U.S. patent on the first WESTON meter, Model 594 Pat No 2016469, early meters included the WESTON film speed ratings as ASA & DIN data did not exist at this time.

Dr Edward Weston died in 1936 aged 86. With 334 patents to his credit he was a prolific inventor.

(Pic 2)

There were two factors which contributed to the success of the WESTON exposure meter, the first of which was the patented method of manufacturing the selenium photovoltaic cells they being coated and sealed to render them relatively immune to moisture, a killer of selenium cells and the usual cause of a dead meter, it having lost it’s seal due to age deterioration.



(2) Dr Edward Weston and his son Edward Faraday Weston.

The second factor was the WESTON method of measuring film speeds.

While this method had shortcomings it still had the advantage of being based on giving practical speeds for actual use and was independent of any film manufacturer.

Previously speed systems such as H&D and Scheiner speeds were threshold speeds and capable of considerable manipulation by the makers. Weston’s method measured the speed well up on the curve which made it closer to what one would encounter in actual use, this meant that he was less optimistic about film sensitivity than the manufacturers of the period who were notorious for pretending their brand of film / plate was more sensitive than what they actually were.

A Mr. W.N. Goodwin of Weston’s is credited with developing this system, the calculator also shows some thought about what the practical photographer was dealing with, from the start these calculators had markings on them for determining the scene contrast, and the instructions that came with the meter described how to accomplish this, a sort of zone system.

Weston’s main U.S. factory was in Newark, N.J. (The factory closing in 1973), in 1921 the British Sangamo Company was founded as a subsidiary of Sangamo Electric Co of Springfield, Illinois, U.S.A. and started out manufacturing electrical meters and time switches. In 1936 British Sangamo acquired the WESTON Electrical Instrument Co of Surbiton, Surrey, who were the U.K. subsidiary of the WESTON Electrical Instrument Corporation of Newark, N.J. and it became Sangamo Weston.

During WWII Sangamo Weston were manufacturing aircraft instruments and continued to do so ever since.

All exposure meter production in the U.K. was at Enfield in outer north London and were distributed by Ilford Ltd, continuing right up to 1980 when Sangamo Weston were involved in takeovers and amalgamations, even being gloriously known as Weston Aerospace at one time.

The manufacture of exposure meters was probably considered unprofitable by the new owners, so in 1980 John Gahagan a former manager set up East Kilbride Instruments in Scotland to continue exposure meter manufacturing but without the WESTON name. This continued till July 1984 when the company went into liquidation, a not unfamiliar story.

Fortunately a savior arrived on the scene, it was Tottenham based Megatron Ltd who bought the liquidated parts stock and tooling and commenced production in Nov 1985. Strangely Tottenham is just a few miles from Enfield the original home, their meter is the Euro – Master II, and the 2000 Euro – Master Millennium (A chrome plated special version.).

Meanwhile in America in about (unsure of exact dates) the mid to late 1950's WESTON Instruments was purchased by a company called Daystrom Inc, they apparently decided having two production facilities producing exposure meters was inefficient so closed the U.S. WESTON meter div and only imported meters from the U.K. they did however retain the U.S. model numbering.

Daystrom Inc were themselves taken over in about 1970 by a company called Schlumberger, apparently under them all exposure meter production was under license by Sekonic of Japan but continuing with the WESTON name and model numbering.

Now let us look at the products.....

In 1928 a patent was granted for a meter to measure light in foot candles and was in production that year, although not strictly an exposure meter it was I believe used to measure light output on some movie sets of that period, it had three settings high, medium, and low controlled by a switch, it was standardized on tungsten light at a colour temperature of 2700 Deg K, it had a hinged cell which could be aimed at the light source, was quite large and had the Model No 614, it was called an illumination meter. **(Pic 3)**



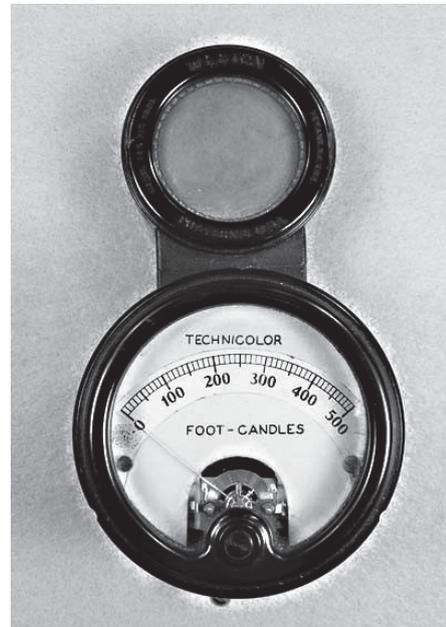
(3) The model 614 illumination meter of 1928, possibly used on movie sets?

Around this time 1930 a Model No 703 was produced called the "Sight Light Meter" which read in foot candles and gave the minimum recommended intensity of light for reading various types of print, it was not a photographic instrument but used the same principals as the emerging photographic meters, there were various types, this one is a Type – 6. **(Pic 4)**



(4) The "Sight-Light Meter" Model 703 Type-6 of the 1930's.

The first photronic cell meter of 1931, Model No 594, Pat No 2016469 was a foot candle meter developed for the Technicolor Motion Picture



(5) Model 594 Technicolor of 1931, this one sold on eBay in March this year for U.S. \$359, I bid on it but missed.

Corporation who were having great difficulties estimating film set lighting intensity, Technicolor film requiring almost twice the light output of that for B&W film and guesswork was not good enough, so the WESTON meter must have made things a whole lot better for directors and technicians. A later model the 756 was used for the making of "Gone with the wind" in 1939 as well as other movies of the period. **(Pic5)**

1932 – 33, The WESTON Model No 617 exposure meter, the first in a long line of photographic exposure meters from WESTON, it was released at the same time as the Photolux, made in Germany by Gossen, it is not clear which one appeared first but they were the first self – powered selenium cell exposure meters to come onto the market and were ground breaking devices.

The WESTON cost 40 U.S. Dollars, a lot of money in those depression years.

It was made of Bakelite and was quite a large instrument measuring 170mm wide by 60mm high by 35mm deep, a groove for sighting is moulded into the top, to increase sensitivity in low light conditions. A button on the top is pressed, it has two selenium cells on the back with the calculator dial on the front, it was a beautiful and imposing piece of equipment.



(6) *The first real photographic exposure meter, the Model 617 of 1932-33 front.....*



.....and rear.

In 1933 it also became available as a “Leicameter”, the first WESTON meter with the special Leica scales, however there was no Leitz product code assigned to it, it was actually larger than the Leica camera itself. **(Pic 6)**

In 1934 the much smaller single cell Model 617 Type 2, a significant departure from the larger Type 1, replaced the twin cell Model 617 and more akin to all the later models it also had a button on the right hand side to increase sensitivity in low light situations.

This model was also made with Leica scales and had “ E. Leitz Inc, New York, U.S.A.” on the calculator disc and had the Leitz code LEDQA, it was quite an attractive meter and also made of Bakelite. **(Pic 7)**

In 1933 there was a completely different type of exposure meter produced, it was the Model 627 Type 1, it resembled a large jewelers loupe, there were two flat metal covers in black crackle finish which pivoted over the body of the instrument for protection, it having a round black Bakelite body with chrome bezels, the dial on one side and the cell behind it on the back.

There is no calculator disc only the needle and scale and on the side a conversion plate, these were made in a cine and a universal version as well as a “Leicameter” model (1934) with the Leica scales, Leitz code LEDZH.



(7) *The smaller Model 617, Type 2 of 1934.*

In 1934 a Type II was released again in all three versions, I am unsure what the difference was apart from a different dial as can be seen in the picture of the cine models. **(Pic 8)**

1935 saw the introduction of the Photronic Model 650 Universal exposure meter, both small and large pointer types, small pointer had film speed to 64, large to 250 Weston, a very pretty little Bakelite bodied art deco styled meter.

There is also a clear-bodied version enabling one to view the internal workings, these are believed to be sales rep’s samples. (Would love to find one.)

In 1936 a Leicameter version was introduced bearing “E.Leitz Inc, New York, U.S.A.” on the calculator disc,



(8) *A completely different approach, the Model 627, Type 2 in the upper photo and the Type 1 in the lower, both are cine versions.*

Leitz code WESTO, a year later in 1937 a cine model became available but had the Model No 819, although a 650 it was given the 8 prefix because of it's direct reading capability. **(Pic 9)** 1938 and the Model 850 was introduced, it was a much smaller meter still made of black Bakelite in art deco styling, it was sometimes referred to as the "Universal Junior", of the direct reading type it had a horizontal moving belt adjusted by a knob on top, the belt had light value numbers and shutter speeds printed on it, the idea being to match the light value to the emulsion speed and read off the aperture opposite the shutter speed as indicated.



(9) *The Model 650 Universal, a very pretty little Art Deco style meter, Clockwise from top left the small pointer, the large pointer, the Leicameter and the Model 819 cine.*

I believe there was also a cine version but to date have not seen one, or accurate reference to it? **(Pic 10)**



(10) *The 1938 Model 850, "Universal Junior", a direct reading type.*



(11) *The first of the Master series the Weston Master Universal Model S74/715 and the cine Model 720 with invercone and filter.*

1939 saw the start of the "Master" series with the WESTON Master Model S74/715, it is often referred to as the WESTON Master 1 but not officially, they were a fairly large and heavy by modern standards but a very rugged instrument.

Again there was a cine version, which had a black instead of white face, it was the Model 720. Additionally in 1940 a model was

produced for and distributed by the American Bolex Company called the "Bolexmeter". I am unsure if it was given a special model number or just used 720? In 1944 a Leicameter version became available having the Leitz code MASTO, apart from the Leica scales it was the same as the 715 Universal.

This meter was produced in both the U.K. and the U.S. and was the first to be offered with an invercone and filter. **(Pic 11)** In 1945 the second meter in the Master series commenced production it was the WESTON Master II with Model No S141/735, the U.K. meters were all black but in the U.S. it was offered in black and later in dark grey, these meters were not made in the U.K. as the Model S141 until 1952.

All meters to this time were still using the WESTON film speed settings, the cine version commenced at the same time and in the U.K. retained the Model No S141 in all black, in the U.S. it was the Model 736 and again in black or dark grey, an invercone was also available.

The WESTON Master II was probably the most esthetically pleasing model made, it had a long production run and hence the most common seen. **(Pic 12)**



(12) *The Weston Master II of 1945 Model S141/735 (Cine 736), clockwise from top left, U.K. Universal, U.K. cine, U.S. cine and U.S. universal.*

1949 Saw the introduction of the Model 852 Cadet, it was a much smaller meter than the Masters, was made of black Bakelite with art deco styling and was of the direct reading type, it used the rotating belt as did the 850, this was the first meter to use ASA ratings. It had a cover of white plastic (Looking like an invercone?), which pivoted to cover or uncover the semi circular selenium cell on the back. (Pic 13)



(13) Direct reading Model 852 Cadet, the first to use ASA ratings in 1949.



Rear of the Model 852 Cadet.

A semi circular disc covers the cell on the back and is marked in Weston film speeds, by setting the film speed to marks A or B you simply uncover a portion of the selenium cell to allow more or less light to fall on the cell the needle directly indicates the aperture, this meter was only made at Newark, N.J. (Pic 14)

In 1956 yet another direct reading meter was released, the Model 854, A strange looking beast with a plastic body, having a green upper half and black lower half, shaped sort of like a T. The back had a semi-circular cell with a pivoted plate, which uncovered the cell according to the film speed and a cine or still camera being used.

Two knobs on either end of the top piece are marked with shutter speeds, they rotated a drum with the apertures marked on it, once set you read directly which aperture the needle was aligned with, it was marked DR on the front. (Pic 15)



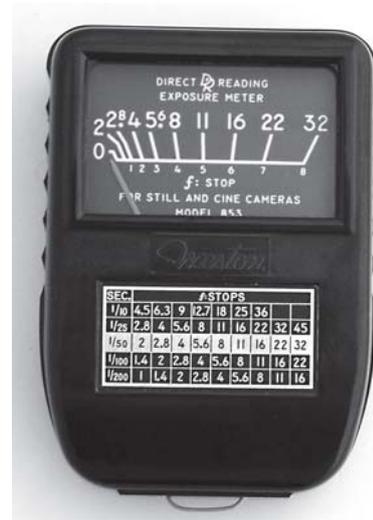
(15) A strange looking beast, the DR Model 854, another direct reading type.



Rear of the Model 854.

In 1953 the Sekonic-Master Model L III was made under license from WESTON and was similar to the WESTON Master II, there was also another Sekonic-Master Model L-V and similar to the WESTON Master III made about 1954.

1954 Saw the release of another direct reading meter; it was simply called the WESTON Direct Reading Exposure Meter Model 853 and was suitable for both cine and still cameras.



(14) The Weston Direct reading Exposure meter Model 853, for cine and still.

1956 Also saw the release of the WESTON Master III, Model 737/S141.3 the cine version came a year later in 1957 and had Model S217.3 this was to be the last WESTON cine meter, made only in the U.K.

The U.K. models were cast aluminium bodied with black finish, some had a grey calculator disc and others the usual black, also of importance with this model was the fact that the WESTON ratings now corresponded to BS and ASA arithmetic.

The U.S. models now having WESTON Instruments Division of Daystrom Inc on the rear plate, they had brushed stainless steel top and bottom a black center body and black calculator disc in which was now a small window indicating Polaroid values scale, these meters were rugged, reliable and accurate instruments and many are still in use today. **(Pic 16)**

In 1960 the WESTON Master IV was released with Model S461.4, it was only manufactured at Enfield, U.K. and Imported into the U.S. under the brand "Daystrom Inc, Weston Instruments



(16) The Weston Master III of 1956, Model 737/S141.3, top shows a U.K. model with a grey calculator disc, left and one with the normal black on the right, below is the stainless steel U.S. version.

Division" and designated Model 745, the design was not quite as rounded as the previous model II & III's, had a black plastic lower body and stainless steel top also the dial was much larger, it was the first model to incorporate a pointer lock being a slide on the RH side.

This model was also produced in Japan by Sekonic under license from WESTON and was known as the Sekonic-Master L104, apparently this Sekonic made version was sold in some European countries actually branded WESTON Master IV. **(Pic 17)**

In 1963 came the WESTON Master V, Model S461.5, this to was only made in the U.K. but unlike the IV it was not readily available in the U.S. Those that did come in bore the Model No 748, they had a grey plastic lower half and a satin finish stainless steel top. Some had red markings on

the needle face others black, the needle lock, now a small button could be turned 90 Deg with a fingernail to leave it unlocked.



(17) Weston Master IV Model S461.4, known in the U.S. as the Model 745.



(18) The Weston Master V Model S461.5 (748 in the U.S.), the first with the light value scale, shown with invercone.

This meter was designed to be used in the upright position (All Masters before this were held in the horizontal position.), also the foot-candle scale was dropped and the log "Light Value" scale introduced.

(Pic 18)

1966 Saw a complete departure from WESTON practice by introducing a Cds cell and battery,

developed to give a meter with greater sensitivity, this meter was the WESTON Ranger 9, Model 348, it was large and heavy, gave a very narrow measurement angle only 18 Deg, it was fitted with a

Brite-Line viewfinder (much like a camera) which you used to determine the area being read. Apparently it was a favorite of Ansel Adams as it was perfectly suited to his Zone System of exposure-developing-printing. In fact WESTON made available a little crescent shaped scale developed with Ansel which you could stick over the U.A.C.O. section of the existing scale to enable the user to utilize the Zone System.

Battery voltage was critical in these meters, nothing but 2.70 Volts (Single or stacked).

Some of its impressive specifications are :-

Million to one brightness range, 0.002 to 2000 Candles per sq Ft.

Two light scales.

Pointer lock was also the on/off button.

Converter for incident or reflected light readings.

ASA film speed lock, 1.5 to 25,000 ASA.

Shutter speeds from 1/4000th Sec to 2 Hours.

Lens aperture settings f 0.5 to f64.

Battery check slider.

The Ranger 9 was made in the U.S. only and not sold in the U.K.; it was a very impressive piece of equipment. **(Pic 19)**



(19) First Cds meter, the Weston Ranger 9 shown with the stick on Ansel Adams zone focus scale.



Rear view of the Ranger 9.

1968 and yet another different concept in the form of the WESTON Pixie, known as the Model 548, probably trendy in it's day but it was cheap and looked like it.

Made in the U.S. only by Weston Instruments division of Weston Instruments Inc, Newark, N.J. (Now a div of the Schlumberger Co Inc.)

A very simple direct reading type with a round format, extremely easy to use with settings for popular Kodak films, discs for other popular film brands could be purchased if

required, you simply removed the existing disc and snapped in the new one. **(Pic 20)**

1972 and next came more Sekonic made offerings cheap and nasty, but probably worked well enough? The first was the WESTON XM-1, plastic bodied with no feel (Weight) to it, its model number was 540, it was a selenium cell meter.

The next was an almost identical meter to look at, the WESTON XM-2, Model 550; only this one



(20) The Weston Pixie Model 548 with its box, instructions and neck cord.



(21) Made by Sekonic for Weston the XM-1 Model 540 (Top) and the XM-2 Model 550



Rear view of the meters made for Weston by Sekonic, the XM-1 540 and XM-2 550.

had a Cds cell and battery. **(Pic 21)**

Also in 1972 and again made by Sekonic in Japan was an attempt to revive the Master series with the WESTON Master 6, Model 560, but the WESTON quality of past Masters

was sadly lacking, there is probably no doubt that it was a very accurate meter, but it lacked the feel of old, it was a selenium cell meter made of black plastic. **(Pic 22)**

In 1973 Sangamo Weston Ltd replaced the Master V with the WESTON Euro-Master (Europa in



(22) The Weston Master 6 Model 560, made in Japan by Sekonic.

the U.S., although I have not yet seen one with this name on it!) The model number was S461.6 and was made in the U.K. only (until 1980), this meter retained the quality and accuracy of the previous Master meters and was very similar to the one it replaced with the grey plastic lower half and the polished metal upper, a very fine meter it was to be the last WESTON meter. **(Pic 23)**

Also in 1973 production ceased in the U.S., the following year 1974 saw the final production of the Master 6 in Japan.

1980 Sangamo Weston (U.K.) stop production, manufacture restarted by East Kilbride Instruments in Scotland.

1984 East Kilbride Instruments go into liquidation and

manufacture restarts from liquidated parts by Megatron Ltd back in London.

1985 Strictly not a WESTON (Name Weston not used) the Euro-Master II was born, it was identical to the Euro-Master, a high quality item indeed and still used and sought after by discerning photographers around the world today, a special model was released in year 2000 called the Millennium, same meter but chrome plated. (Pic 24)



(24) The Megatron made Euro-Master II, No, not a Weston but the heritage is there!



(23) Sangamo Weston's Euro-Master of 1973, Model S461.6.

2010 Megatron Ltd closed its exposure meter division in Feb ceasing production, but another firm OTC (Optical, Test and Calibration U.K.) have taken over the servicing of Euro-Masters but will not be manufacturing any meters.

So there you have it. Nearly fifty years of WESTON meters. It's been a lot of fun collecting the various models and researching the history, and I still have a few to go. If anybody has any corrections or further information please let me know via the editor, I would be most grateful.

So go on, give it a go and see how many you can collect, generally they are quite inexpensive and look good scattered throughout your cameras or displayed as a collection.

34 POPULAR PHOTOGRAPHY April 1941

Outdoors ...
you'll need the **MASTERS'**
"sharply directional"
viewing Angle!

... for consistently perfect pictures
you'll need WESTON'S proved dependability, too!

Other features which make it the "MASTER"

1. The MASTER measures not only "light" but also "color" and "direction" of light. It is the only exposure meter which measures color and direction of light.
2. The MASTER makes photographs in the shadows as sharp and clear as those taken in the sunlight. It is the only exposure meter which measures the "direction" of light and corrects the exposure accordingly.
3. The MASTER is made and constructed of the finest materials and is built to last for years and years.
4. WESTON Exposure Meters have proved their dependability over an exposure period of 20 years. In 1920 they were introduced and have since been continuously improved.

WESTON
Exposure Meters

You can't capture the detail you want in those distant outdoors, especially if heavy foliage or brilliant highlights surround them... if you measure "all outdoors" the viewing angle of the exposure meter must be unlimited, and of the proper shape, to measure the reflected light from the subject area only... excluding those surrounding strong highlights or shadows which might adversely affect the exposure.

This is but one of the many reasons which explain the outstanding popularity of the MASTER. Its cone shaped, "sharply-directional" viewing angle (only 30°) with the high-light scale enables you to "open" and "close" the subject area only, assuring the correct settings for the detail you want. (Note the difference this makes, too, in your color work.)

Be sure to get all details on the MASTER, and other Weston models from your dealer today; or write for literature, Weston Electrical Instrument Corporation, 544 Frelinghuysen Avenue, Newark, N. J.

Your Next Step to BETTER PICTURES

a WESTON Exposure Meter
assures correctly exposed pictures
with still and movie cameras!

The step which will make photography easy for you ... enable you to get correctly exposed pictures every time ... is to use a WESTON Exposure Meter. By simply pointing this compact meter at any scene or subject it instantly measures the light and gives the correct camera settings to use for excellent picture results. Thus, all your stills or movies will be clear and rich in detail ... exactly as you want them to be. No more picture disappointments... no wasted film ... because of incorrect exposure. A free booklet containing helpful information, is available. Write to ... Weston Electrical Instrument Corporation, 584 Frelinghuysen Avenue, Newark, N. J.

Auction Day. February 20th 2011.

Ian Carron

After a panic-laden start requiring volunteers getting all the items from Margaret's to the hall when Alan's van threw a wobbly, we were finally under way with setup and although confusion reigned supreme for a while, the old rule of *'when in doubt, don't muck about, run in circles, scream and shout'* pulled us through and all was ready by viewing time!

Over 50 members attended and, although a number of items were passed in (might be an idea to give more careful



Kevin Saunders and Ken Anderson having a pre-shop!

consideration to reserves in future?) bidding, including absentee, was good and, at end of day, over \$11,000 worth of items were sold.



With items laid out, viewing begins.

One lot, a Kiev-88 outfit, brought back nostalgic memories of my trade days. Built like a Russian tank, (and probably from parts left over from their gear boxes) their roll-film magazines fitted the Hasselblad! The Kiev itself didn't set the world on fire but at around half the price, did we sell heaps of those magazines to 'blad owners, to the disgust of the Hasselblad import agent!



"Let me assure you, you will not find a centre-fold in Grossbild Technik!"



Max Amos and Terry Boland perusing. "Nick off Terry, I saw this one first!"



Max presents Margaret Mason with a bouquet in appreciation for her work on the catalogue.



Make sure the shutter runs smoothly.



Concentration needed as bidding moved along quickly.

March Market

Text, (mainly) Alan King & Ian Carron, Photos Ian Carron

With 56 tables laden with everything photographic and 600 customers, vendors and members poring (or should I say pawing?) over the variety of new, nearly new and well-used items, there were many, many bargains to be found.

There was a Horseman roll film back that went out the door with the new owner grinning from ear to ear (how much did he pay?); an original Canon F-1 Sales manual in pristine condition (not the usual brochure, this was the original binder for Canon worldwide staff and dealers); a number of Calumet, Cambo, Toyo and Linhof 4x5 cameras with lenses; solid tripods (old and heavy, but could prop up a house) and countless 35mm bodies, lenses and accessories. Digital cameras of all types, some only months old, were on shopping lists. There is definitely an emphasis on usable equipment and with many people now experimenting with



Vintage projector/enlarger and more!



A wide choice for the image collector.



Max Amos & Gerold Koblischke working as a selling team.

medium and large format there is still a steady demand for darkroom items, especially large trays, chemicals and paper. Warwick Reeder was there again with his specialty of old images, such as daguerreotypes and ambrotypes, carte de visite and stereo cards. Dean Jones from Croydon Camera House showed off his camera and flash poles and they are just the thing you need in a crowded space to get above the action (\$60 I seem to recall). A number of photographers took the opportunity to dispose of good condition professional digital bodies and lenses (fully boxed) at reasonable prices so they can invest in the latest.

Collectors were not forgotten with a Graflex IIIA for \$150, a Makina 67 at \$1790, a vintage projector/enlarger based on a Thornton Pickard Ruby for \$500, a table of Russian cameras and lenses at various prices plus plenty more. It was great to see a number of vendors and members from interstate at our market; one, a sub-miniature specialist from New South Wales found some items for his collection.

Another of the great opportunities these gatherings provide is the chance to catch up with both interstate members and old contacts from my trade days. On this occasion it was member

Willie Fienberg from Bowral and to meet Hank (retired) from Tempo Photography, hadn't seen him since "cocky was an egg!"

The Ballarat International Foto Biennale organisers were there to promote the event from August to September this year and we will have our next market in Ballarat at St. Patrick's Hall on September 11th. as part of the Biennale. With free admission and the whole of Ballarat dedicated to photography, it is an event not to be missed. Tables for vendors are definitely limited; we cannot expand, so be quick! Book through our web site:

www.apcsociety.com.au or (03) 9808 8692.



Ian Bock & Geoff Harrison take a nostalgic look at Geoff's first digital camera, a Sony Mavica which used a 3.5" floppy disc!

The ESTAFETA

Stefan Sztromajer



Fig. 1. The Estafeta. Like an oversized 35mm!

The Estafeta, (the *Relay* in Russian) has been one of the strangest cameras designed for 120 roll film in the GOMZ factory in Leningrad. The date of its origin is not certain, probably in 1956 or 1957. As the camera was produced in small quantity, it was not mentioned in all the Russian sources, however it was described in the Russian journal *Sovetskoe Foto* in 1957.

After the small number of the cameras, produced in Leningrad, the production has been continued by the MMZ factory at Minsk until 1960. The both models are identical; the only difference lies in

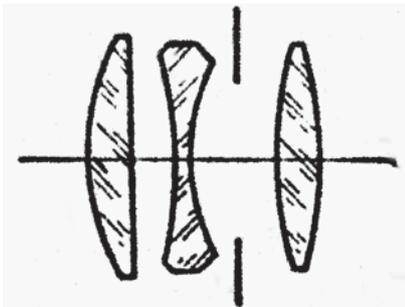


Fig. 2. The three element lens.

GOMZ and MMZ logos on the front plate. The illustrated camera is of the Minsk origin. According to its serial number (there is only the lens number as the lens is fixed) this camera has been produced in the year 1959.

The camera, designed for the 6x6 cm frames on the 120 size film, is a bit similar to the oversized miniature one, **Fig.1**. The lens is a T-35 of the triplet three elements design, f4 75mm. focal length, **Fig. 2**. The lens is fitted with a leaf shutter and is mounted in the front of the barrel.

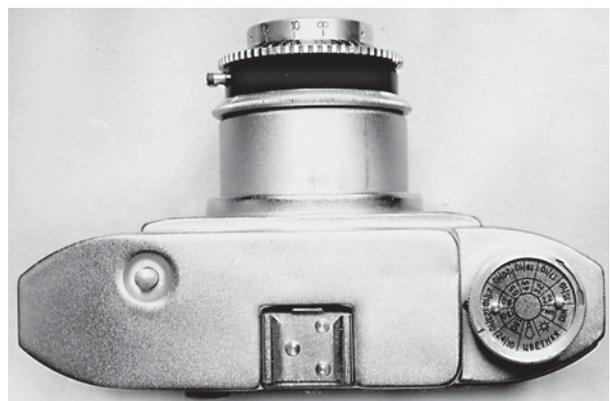
The shutter has a speed range from 1/8 to 1/250 plus B. **Fig. 3**. Cocking and firing levers are situated on the left side of the shutter. On the right there is a delayed action setting. The aperture is set by means of the pointer below the lens in the range F/4 to f/22. The shutter is also provided with a socket for the flash synchronisation. When the camera is not in the working



Fig. 3. Frontal layout with shutter ring.



Fig's. 4 & 5, showing the lens barrel collapsed and opened for use.



position the barrel is collapsed **Fig.4**, while in use is extended after pressing the button at the top plate of the camera, for which the action of the spring is much too strong. **Fig. 5**. For the film loading the camera back is completely removable. **Fig 6**.

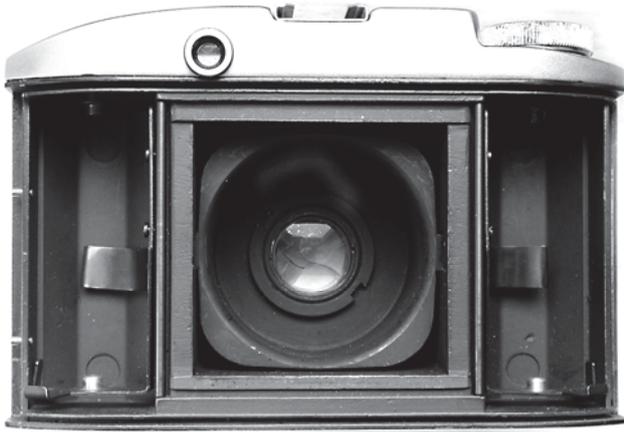


Fig. 6. Interior of camera with back removed.



Fig. 7. Simple red window for frame winding.

As there is no interlock or frame counting mechanism, a red window is provided in the centre for the film transport control. **Fig.7.** The camera back is provided with the pressure plate. **Fig. 8.** After taking three rolls of film (36 frames), for testing, I believe the Estafeta is the dependable working tool, probably owing to its large frame and one of the best three element lenses I ever used. The resolving ability in the centre wide opened is equal to 29 lines/mm, while at the edge 14 lines/mm. When the aperture is closed to f8 the results are improved: 38 lines/mm. centre and 21 lines/mm. edge. If any of my Australian friends saw such an animal for the reasonable price, I recommend you try and get it!



Fig. 8. Pressure plate in removable back.

Most Expensive Leica ever Sold at Auction

On December 4th 2010 at the Westlicht gallery in Vienna, one piece attracted huge attention.

A frenzied bidding war broke out over its highlight piece, a Leica MP2 from 1958.

The starting price of €80,000 for this very rare camera proved to be most conservative. It is only one of six ever built, making it one of the most sought after and collectable Leica's to date.

It was finally knocked down for €402,000, bought by an Asian collector, and he is now the owner of the most expensive Leica ever sold at auction.

At time of writing, (December, 2010) sale price in Australian dollars equates to \$539,276.00



Millions of Brownie 127 's ... Part 2. Lyle Curr

As the title suggests, this is going to be a little piece on one of Kodak Limited UK's most popular cameras. The Brownie 127 has a special place in both my collecting and photographic hearts as it was one of these that was the first camera I ever bought by choice, and with my own money.

But we must start at Kodak Park in pre war Rochester NY in the USA.

If you read part one of this article, you will have learnt a little already about the early US version of the Brownie 127, but as with all good serials, we will play catch up on the hero just a little and look at this little beast again at the start of this second part.

Most of us know of the common 50's Kodak Brownie 127. I have seen it described as "portly", which is probably as good an adjective as any. I would describe it as bulbous shaped, ovaltine, squat, and in other not too flattering terms. You would be amazed at the variations within models, but don't worry, I am not going to go into the "rivet counting" convolutions that a lot of Brownie collectors exhibit when cataloguing their hoards.

The Brownie 127 story started somewhat strangely in about 1937.

At that stage, Kodak in the US began exporting that cute little almost cubic, but thanks to the talents of Walter Dorwin Teague, possessive of art deco curves and lines, Baby Brownie to Europe. There was some concern amongst the Kodak powers that be that the word "Baby" may not translate well in some European languages, so the camera became simply **Brownie 127** for a short period of time. **(Pic 1)**

But the real story of the Brownie 127 starts in the UK in the very early 50's.

Production methods with plastic were improving, and Bakelite had given way to more sturdy and less brittle plastic materials. It was time to modernize the box Brownie.

Two things need to be said here. 1/ This was in no way the end of the traditional Box Brownie, which continued merrily on its way in various forms till 1962 and 2/ The plastics in use in the early 1950's were still hard and brittle, and many plastic cameras of that period, including the Brownie 127, are still referred to as "Bakelite". But Bakelite had become a generic term, and is used in that sense, rather than an accurate reference to the construction of said cameras.



Pic 1. The first Brownie 127 was actually a renamed Baby Brownie. It was hard to tell the difference. This is an ad from a French magazine.



Pic 2. The first English brownie 127.

1952 saw the introduction of the first **Brownie 127** made by Kodak Limited in London. It was the first of the oval shaped; bulbous eye level viewfinder cameras that fast became as popular as the Box Brownie.

That first model had a plain face plate, with broad, horizontal running "steps" on its body. **(Pic 2)** The step pattern continued across the top of the camera parallel to the optical direct vision viewfinder tube. The body and top of the camera were of brittle black plastic,

which chipped easily. The film carrier and the viewfinder, as well as winding knob and shutter release were part of the top of the camera. The controls were of a slightly softer, cream coloured plastic.



Pic 3. The top, holding the film carrier, lifted out of the body for loading. The curved film plane is plainly visible. (Pardon the pun!)



Pic 3a. Showing the bottom clasp of the camera. It remained the same throughout all models.

The manufacturers mark was around this clasp in the early models, but was moved to the front of the base in the Model 2.

The whole top of the camera lifted out of the body to load the film. (Pic 3)

The body carried the actual shutter, the lens and the clasp to hold the two together. (Pic 3a)

The bulbous shape was needed to allow a curved film plane to correct the spherical aberration typical of the single element f14 65mm meniscus lens.

Using 127 film to make 8 negatives $1\frac{5}{8}'' \times 2\frac{1}{2}''$, it was hoped the light and (relatively) compact body would make up for the loss of negative size against the Box Brownies of the day producing $2\frac{1}{4} \times 3\frac{1}{4}''$ negatives. This became a non-issue with the introduction of Kodak "Super Size" prints at commercial film developers and the Brownie 127 took off.

There were over a million made in the first 2 years of production.

In fact the camera was so popular, it was actually exported to the US between May 1953 and Sept 1954. Another 263,00 of these cameras went to the States. A real switch in the camera trade between the two nations. In May 1956, the US export model's name was changed to "Starlet". (Pic 4)

They were exactly the same as the original English Brownie 127, except they had a different name.

Did this name change have anything to do with the fact that Kodak Rochester was to launch its own Starlet camera a few months later? (Pic 5)



Pic 4. The Starlet faceplate.



Pic 5 The US Starlet.

export model outlined above!

But it meant the UK made Starlet 127 type was only manufactured for 3 months, so it is today a very scarce camera.

The US made Starlet was also to be a roaring success and led to the whole phenomenon of the "Star" series of 127 film using Brownies. Interestingly though while it was eventually manufactured in Kodak factories all over the world, including here in Australia, the "new" Starlet was never made in the UK. As strange as the story of the Baby Brownie



Pic 6. The Brownie 127 of 1956.

The Brownie 127 was updated in 1956, but it was only a facelift, quite literally, as the only thing that changed **was the faceplate**. (Pic 6) It was now covered with a gold cross hatching, coincidentally just like the export model “Starlet”!

The camera continued on its popular and merry way, till 1959 when the **Brownie 127, Model 2** was introduced. As you looked at the new camera, again the changes appeared cosmetic, and actually most of them were. The faceplate now bore the green horizontal lines of most other UK made



Pic 7. The Brownie 127 Model 2 of 1959, with grey winding knob and shutter release.



Pic 8. The Model 2 still used the curved film plane. Seen here being loaded with a contemporary 127 Verichrome Pan roll film.

Brownies, including the Box cameras. The body now had vertical ribbing, and the steps had disappeared from the now smooth top. The cream coloured knob and shutter release were still available, but now you could now have grey knobs if you chose!!!. The main shape remained the (Pic 7) same, but there were a couple of more meaningful changes.



Pic 9. Taken by me with a Brownie 127 Model 2. 1960.

The new body was now constructed of a lighter, slightly less brittle and shinier black plastic. The other major change was the fitting of an f11 Dakon II (that's 2 not eleven) plastic lens. It was still a meniscus single element that required the continued use of the curved film plane, (Pic 8) but the plastic lens and new body construction made for a lighter but more robust camera, and its popularity never waned.

In fact, it was so good, I bought one! I had to save my pocket money for over a year to come up with the 35 shillings and 9 pence (35/9) price. I was almost 10 at the time! Here is a pic

I took in January of 1960 with my little Brownie 127. (Pic 9) Mine was one of “probably several million” of this model camera made!

But it was not all just common old garden camera.... oh no. Kodak limited wanted to try and jazz up the little round camera a bit. Around the same time as the introduction of the Model 2, there were 5000 special units produced. They were a market test, and were only sold on the Channel Islands of all places. Today, these very scarce cameras are known as the Brownie 127 **Albino**.



Pic 10. The rare Albino model.

They were the Model 2s but painted silver grey on top, and white on the body. They were fitted with a grey neck strap instead of the usual black one. The Albino was a

handsome camera, (Pic 10) but the experiment was not a success. The vertical ribbing on the white body got **very dirty very** quickly, and on the corners the silver top wore back to the black plastic even more quickly.

Then there was the **third model**, and that's what it was called, "third Model!" introduced in 1965. It was almost as different from the bulbous typical Brownie 127 as was the 1930s version of the camera to bear the name.

The Brownie 127, third model, was made of a softer bluey grey plastic, which scratched and marked much more easily. But to balance that it did not chip as much as the old brittle black plastic of earlier models. The body was completely reshaped with harsh, angled corners. All ribbing or stepping patterns were gone from the now smooth body. The lens was still plastic, but back to an f14 aperture. Films were getting faster so this was not really an issue. The lens was now a shorter 50.6mm focal length and the negative size reduced to 4x4cm. The camera was therefore smaller overall, with a much thinner body and less curve on the film plane. The shutter now had double-exposure prevention and flash synch, and a shoe for a special Kodak flashholder was added to the top. The winding knob was now black, but the shutter release, a large square button flush fitted to the front, beside the viewfinder was still white. (Pic 11)



Pic 11. The completely new Brownie 127, third Model.

Despite the fact that claims are made that well over a million of this last model was made, it is quite a scarce camera today, and as it is a little more durable than the earlier models, and was only made for a

couple of years it is hard to imagine it was made in great numbers. It was also competing with the 126 cartridge Instamatics, which were so simple to use that most snapshotters of the time were switching to the new system. In fact, the flashholder that was used by this model Brownie 127 was in fact designed for the early UK made Instamatics!



Pic 12. The red Brownie 127, photographed in Prague museum, presumably at the Museum of Technology. Taken with a featureless modern compact, it is not a very good pic, sorry.

The last Brownie 127 rolled off the assembly line in the UK in 1967. Well, rolled is not the right word as the angular shape of the last model would not let it "roll" anywhere, but production did cease in November 1967.

That's not quite the whole story though. Within the bulbous oval shaped models, there are a number of differences in lettering types, colours of faceplates and control knobs. Enough variation to make collecting just these little relatively common cameras quite an interesting pastime.

There is a red version of one of the earlier models in a museum in Prague; nothing else is known about it. (Pic 12)

Perhaps there are other versions out

there that have yet to be discovered. Keep your eyes open at markets and in antique and op shops. You may discover a real bargain!

Happy Hunting. Lyle Curr.

Underground with a Camera

Ian Carron

Some forty-odd years back I combined photography with another interest I had back then, that of caving, potholing, spelunking, call it what you may. Being younger and fitter back then, it was a great adventure sport and to combine photography with it was somewhat of a challenge as it was quite an adverse environment. 'Wild' caves, as none show caves are referred to, do not have the benefit of paved walkways or lighting and are graded on difficulty, access to 'higher levels' being allowed as your experience progresses. Safety is of a high priority and three lighting sources are always carried: your main helmet lamp, a torch and a candle with matches in waterproof wrapping.

Initially, for its compactness and easy use, I bought a Minolta Weathermatic but quickly became disappointed in the results from the 110-film format. The camera itself was great. Slid into a breast pocket, it stood up to the odd knocks and could be cleaned easily if it got muddy. But... that 110 film format!



The little Minolta 110 worked well, it was just let down by that 110 film format's lack of quality!



The ST801, coupled with Fuji film, gave much better results but certainly needed TLC in an unfriendly environment.

I decided then to 'bite the bullet' and risk my Fujica ST 801 and built a flush-lidded box for it, foam rubber lined and with a strong webbing carry strap.

Caves and caverns in themselves are



A larger cavern. From memory, on tripod, frontal flash then, with shutter on 'T' and lens covered by friend to avoid 'tracking' from helmet lamp, moved to rear to flash fill or 'paint' with light.



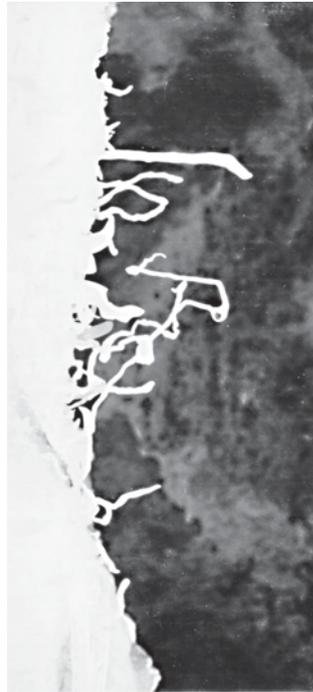
Underground rest. Flash on extension cable, placed at their feet facing upwards.

quite a challenge photographically speaking. Apart from helmet lamps, one is working in total darkness for starters. But, below ground, there is a world of great beauty and, away from the guided show caves, these can be discovered and admired in their own right. I abhor being told that if I stand on one leg and squint like an owl, this formation will resemble an Indian head! Damn it, this took nature tens of thousands of years to complete, I'll appreciate it for its own beauty, thank you very much!

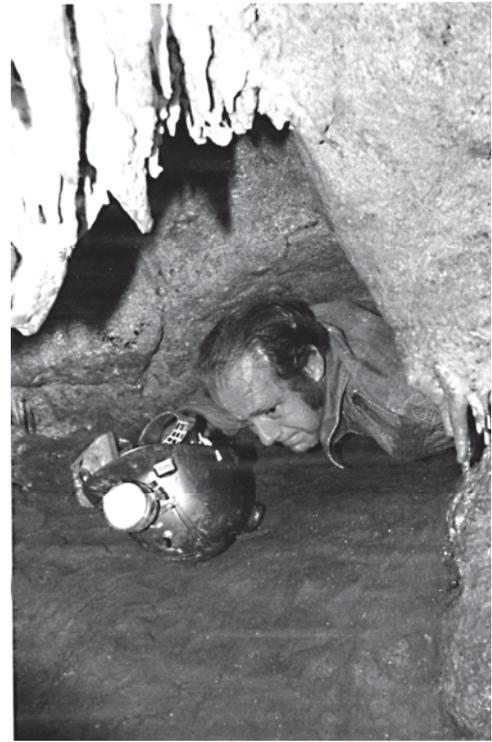
Adding to this appreciation, in a *wild* cave, is that you not only work for the right to see these beauty's of nature, you are often in a position where there is just one slip between yourself and very serious injury, or worse.



Ascending a wire ladder on the way out, camera case over shoulder, 160-feet to go. Knack is to grip ladder on the opposite side and, where possible, always place heels on rungs or you'll end up upside down!



There are basically four types of formations: Stalactites, stalagmites, columns and helictites (above). As far as I know, it's still unexplained why these defy gravity and twist and turn as they form.



Exiting a horizontal 'squeeze'. So tight, helmet must be removed and one arm must precede the other to narrow the bodyline. About 12-feet long, once in, you're on your own! A rope tied to my ankle was used to drag the camera box through after me.

Carting along a box with the camera, flash, sometimes a 100-foot or more coil or ½" rope and/or a wire ladder (depending upon the cave you were visiting) made this quite a production, particularly on the return of a 4-5 hour trip when a bladder could be bursting! (Twinkling in caves was a strict no-no!) The group of friends at that time I was with would spend the weekend at the area we caved at and had a lot of fun on the Saturday nights at the clubhouse, sharing tales of the day over a few (or more) drinks. One soon learned which port drinkers were *not* to be followed through tight crawl ways next day, unless nose pegs were part of your kit!



Taking a break on a ledge before starting the next part of a descent.



Negotiating a vertical squeeze. Safety line can be seen in lower foreground. This opened to the roof of a chamber, 180-feet above the floor to abseil to the bottom.

This area, also popular with picnickers, is honeycombed with potholes, the entrance to some no larger than a kitchen tidy opening. I recall one chap saying how he exited a pothole after a couple of hours exploration, grunting, groaning, covered in dirt as he squeezed up out of the opening in the ground and there, just a few feet away, was Mum, Dad and two kids, rug spread out and sandwiches and chicken wings half way to mouths hanging open in stunned amazement!

Them were fun days for sure but, while I sometimes abseiled up to 180-feet down vertical drops I'll dip my lid to Geoff Schirmer who did it in daylight!

Letters to the Editor.

Ian,

The three issues of "Back Focus" arrived safely today. I skimmed all three issues, read some of the articles in more detail and look forward to reading each issue in its entirety. Thank you for your persistence and efforts in getting them to me. I add my congratulations to you and the authors for an excellent journal.

Having seen the current high quality of "Back Focus," I want to join APCS as an overseas member starting in 2011. I am happy to send \$30 US in cash to you or to Brian Hatfield if that is acceptable. **Ralph & Bobbi London. Portland, Oregon. USA.**

Hi Ian,

Back Focus arrived... Thanks for promoting the NEX-5 article. It looks good....

If anyone contacts you about the article feel free to forward comments to me for information or whatever. There is an update... Fotodiox (US) who is probably the best of the adaptor suppliers, has just issued a series of specific E-Mount adaptors (last week or so). There are now a dozen direct Fotodiox adaptors some of which are at a lower cost than previous units from other suppliers, including some really good-looking ones for Nikon (with aperture control), Contax-G (with focusing helix), and a low cost C-Mount that would be ideal for modification to other non-common lenses. Most of them are fitted with solid tripod mounts – the idea being that it takes the strain off the camera body and camera mount.

Cheers – and Christmas greetings...

Rod Reynolds. #245

Hi Ian,

1. Congratulations to Rod Reynolds for his very interesting article in issue No. 79 about his research into adapting our old but highly useable lenses to modern technology. He has explained in detail how they can be successfully joined to modern digital cameras with excellent results, thus bringing the old and the new together in very ingenious ways - far better than Victor Frankenstein did with his monster!

2. The "unknown little 127 camera from lot 209" on page 24 of issue No. 79 is a Klein Edinex, also known as 'Gewirette'. It is illustrated in the Abring II Museum Catalogue, page 89, item No. 1534. The caption, translated, says: "Klein-Edinex 3x4 cm. rollfilm camera made by Wirgin Brothers in Weisbaden (Germany), ca. 1939." (Klein means small in German).

The Klein Edinex, also marketed as the 'Gewirette' by Wirgin, had lens / shutter variations, this one is with the Gewironar f4.5 front focussing lens and the Gauthier's cheaper shutter called 'Vario', as against its 35mm Edinex brother which was generally fitted with a Gauthier Prontor. The 35mm Edinex also had the two finger pull-out grips on either side of the shutter housing, as with the 3x4 Klein Edinex..

In the auction example, someone has put the top plate back to front, with the eyepiece facing you and the knobs reversed left to right, which may add to the 'unknown' aspect!

Despite this, I would think the buyer got a bargain, as it is much rarer than the 35mm Edinex. I had one once, but must have sold or swapped it.

John Hoehn. #360

Switzerland.

Dear Ian,

Congratulations on another great issue (#79). Tom Hellwege's interesting article concerning the Kodak Developing Tank was nostalgic. My mother had a Kodak 2A Box Brownie and a Kodak Tank for the 116-size film. I still have the camera but not the tank or the instruction leaflet. Amongst my earliest memories going back to the 1920s is that of mum developing a film. The design of the daylight-loading tank was quite ingenious, but a bit fiddly to load. My memory is a little dim but I am sure that mum did not take the film out of the apron in the darkroom to fix it. After all, the whole idea of the tank was to obviate the need for a darkroom. I think the procedure was this. After the development the developer was poured out and the stop bath poured in. The lid of the tank was left off. The metal hook (shown at the front of the picture on page 10) was used to agitate the reel gently for a minute or two. The stop bath was then poured out and replaced with the fixer. The reel was agitated as before. After fixing, the film was removed from the apron and washed in a basin

Best regards, **Alan Elliott. #192**



Korelle 18×24 mm, Franz Kochmann & Co. Dresden, Kleinbildkamera für 100 Aufnahmen, Objektiv Leitz-Elmar 3,5/3,5 cm, Compur-Verschluß 1/300 Sek. ca. 1932



Gelto-III, 3×4 cm Rollfilmkamera, Gelto USA hergestellt in Japan, Objektiv Anastigmat Gimmel 4,5/50 mm, Verschluß 5/250 Sek. ca. 1948



ELJY 24×36 mm, Kamera für Rollfilm, Lumiere Frankreich, Objektiv Lypar 3,5/40 mm, Verschluß 25/100 Sek. ca. 1937

B A D L U C K!

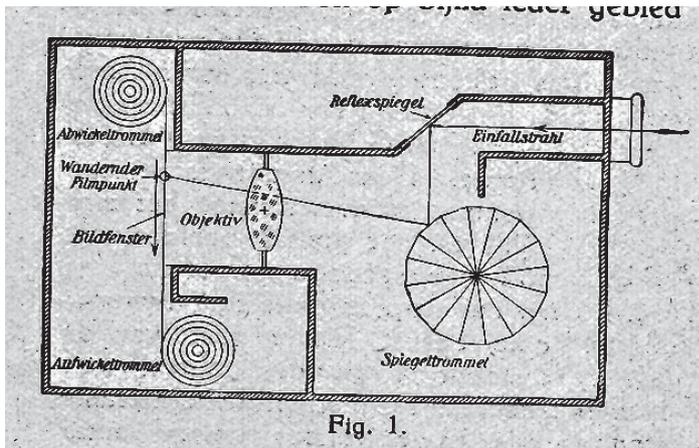
Han Fokkelman

(But, it seemed a good idea at the time!)

The idea started with Ernemann.

For as long as we have been making movies we have used the same system. The sensitive film is placed behind the film gate, the shutter rotates till the film is exposed, the shutter rotates on and closes and the film is transported.

If we look at the row of pictures we get the impression that they are shaking as each frame is slightly different, but if we see them with a speed of 16 frames in a second we think we see a moving picture.



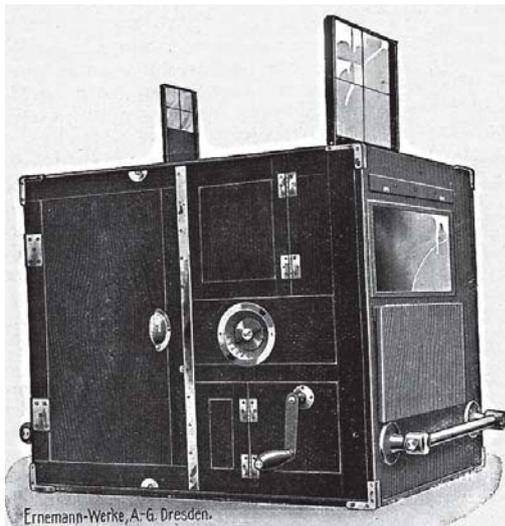
The Lehmann system.

If we take a film with more than 16 fr/s. and we project it with 16 fr/s. we get the impression that all is going slower.

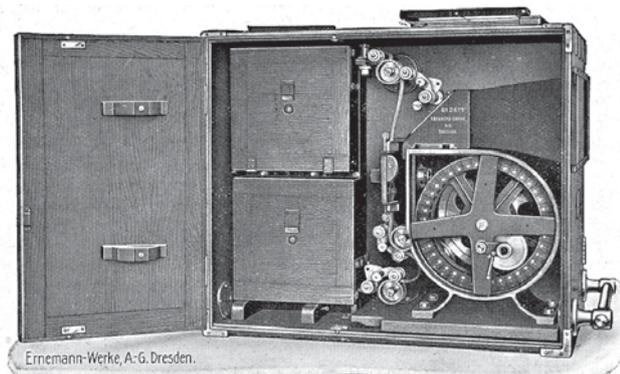
Dr Hans Lehmann, a technical employee of Ernemann, thought that there had to be a better way. He considered an interesting construction where you did not need a shutter anymore. He placed in the camera a large drum covered with mirrors. As soon as a mirror sent its light to the film, these were exposed. After that the mirror turned away and the next mirror exposed the next image. The

movements of the film and the mirrors were synchronised.

In this way it was possible to get a speed of 500 frames in a second, a speed that was impossible to do with a claw in those days. For using a claw the film had to stop and to start and with that speed the film base broke.



The Ernemann Camera.



Interior of the Ernemann camera.

With the speed of more than 300 fr/s. they had to use an electric motor, movement by hand was too heavy. We must not forget that we are speaking of 35 mm cinema film, for the 16 mm size came later. They

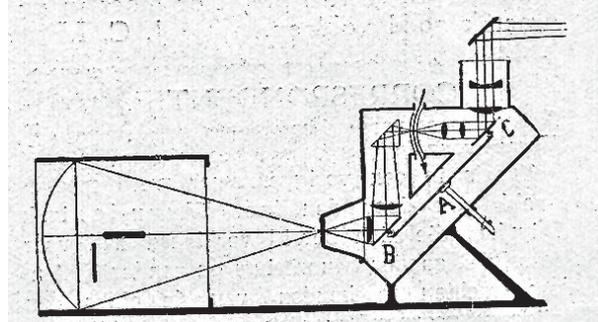
discovered that this camera was a perfect machine for movement analyses. Ernemann decided in 1923 to take this machine into production. As it was to be made for use in every part in the world, including the tropics, all the moving parts were made from silver steel and bronze.

MECHAU.

This time E. Mechau used this idea to design a film projector. The problems to be overcome were that the shutter, that stopped the projection in order to transport the film, caused the loss of much light and there was the problem of the vibration and the transport system was too slow.

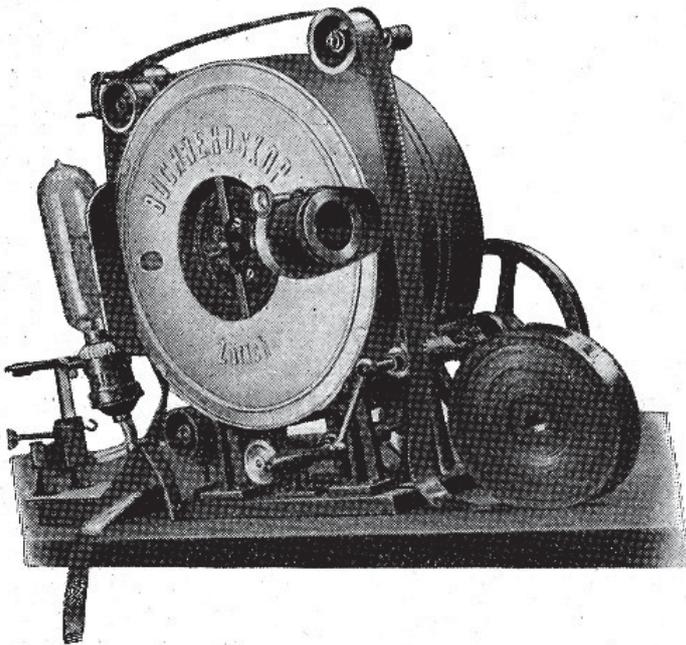
He used a revolving plate and mounted eight mirrors on it. The film was moved regularly when each new frame found the next mirror without a dark pause. Independently of the turning movement of the plate, each mirror that was in the light path, revolved around its own axis. Therefore was a special mechanism built-in to achieve this. This resulted in a very quiet projection.

This Mechau projector was produced by Leitz. But the cinema owners discovered soon that this expensive machine gave a very nice picture but the audience was only interested in the movie and not in the quality of projection. They bought the cheaper machines of the competitors.



The Mechau system.

BÜCHNER.



Büchneroskop.

In the Swiss Zürich/Höng lived Oswald Büchner who experimented with another system to achieve vibrationless projecting. He used a round drum, but instead of using mirrors he made holes in the rotating part wherein he placed lenses. These lenses caught the pictures on the still mirror, which sent them at angle of 12° to the projection lens.

The advantage of this construction was that you could project from 3 ft/ s. without vibrations.

It was pity that no projector manufacturer would produce this version for they saw the commercial problems with the Leitz Mechau machines.

KATOPTAR.

Helmut Makowsky was an amateur astronomer who found that the mirror lenses were not good enough. They were too expensive, too heavy and not free of distortions and colour shifting. After ten years of designing and experimenting he appeared on the Photokina, in 1974, with the KATOPTAR on TS 500 E. This fair is for the industry only, so he started the: META-Gerätetechnik. He got into trouble with Agfa, which found the name Katoptar too close to the Agfa Apotar. With the result that this lens was announced on the Photokina in 1976 as: "Nur-Spiegelobjectiv TS 500 E". (Only-Mirror lens TS 500 E)

In opposite of the normal mirror lenses, this apparatus had no lens, all was done by mirrors.

Mirror lenses had no lens openings, here they were. The iris lens openings went from f8 till f32 and made using focussing possible. Thanks to a wheel the distance could be set from 5 meter. The angle was 5°.

The results of the tests were perfect. The optic failures were less then with the mirror lenses, while there was no colour shifting. The price of 1000.- German Marks was low, the competitors were around four times that price. Even the weight of 1100 gram was low in comparison to the other lenses this made it possible to take hand held pictures.



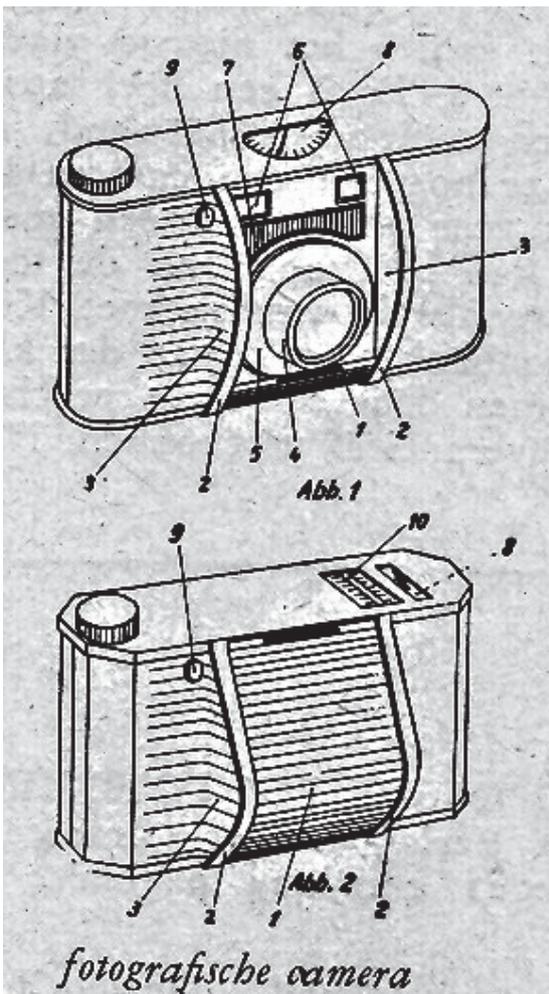
TS 500 E Mirror Lens.

The aluminium box was longer, 20.3 cm, and had a typical look. If you wanted to make a picture the lens had to be down. If you took some persons was that a nice item, the subjects did see a camera in their direction. The accessories shoe was slanting mounted, so you could place a normal viewfinder. If you used a single lens reflex you did not have this problem.

The TS 800 M was the 800 mm version and had as lens openings f11-f45. Here the same distance from 5 m and an angle of 3°. The weight was 2000 gram.

He decided to make this lens as cheap as possible on the market, which meant that he could market it on his own with the result that one person only was interested in marketing these lenses.

Makowsky had to advertise and advertising is expensive bit after many very good test results in the German Photo magazines supported them.



The Gossen system.

GOSSEN.

The firm Gossen & Co from Erlangen, Germany, is famous for its exposure meters. Well known were the Sixtus and the Sixtomat. Both had a blind that made it possible, thanks to diffusion, to measure the contra light, and to protect the apparatus against sand and dust.

On 19 April 1956 the German patent nr 941762 was published. It was a camera that no ready case needed for the blind covered the front of the camera. The picture showed that on the front of the camera two rails were situated between where the blind was mounted.

All was coupled with the shutter. If you pressed the shutter release, knob nr 9, the blind went down, and if you pressed it again the picture was taken.

This construction could be refined if there was a built-in exposure meter. In that case a part of the blind could be used as it was constructed for the Sixtomat In that case you had to turn the camera 180°, which also must be done by using the Sixtomat.

No camera manufacturer used this patent.

AN INTERESTING BIT OF HISTORY

Herb Parker.

One recent Saturday my wife Rosetta and I were invited to lunch by a very nice lady I used to work with. After lunch that same lady, knowing that I collect cameras, presented me with what she said had been her father's camera. It was in what looked like a fairly ordinary Kodak folder case, and we all know about those Box Brownies and Kodak folders we are given by well meaning friends from time to time. (Joke: A man parked his car in his local shopping centre, with a Box Brownie on the back seat. When he got back the rear window had been smashed, and there were TWO Box Brownies on the back seat). But one has to be polite, so I opened the rather battered looking case, and lo and behold, the camera inside was a Zeiss Ikon with Novar f4.5/11cm lens and Compur shutter. Hmmm, that was interesting, so I thanked the lady, enjoyed another glass of Rosé and eventually arrived home with the camera.

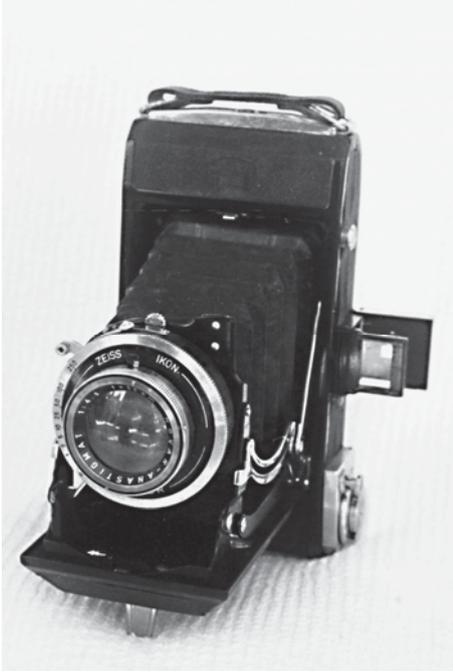
When I got home I had a good look at the camera. It was clearly marked Zeiss Ikon, both on the leather and on the front of the shutter, and it appeared very well made, as one would expect from Zeiss Ikon. The shutter worked at all speeds, but the lens has fungus, which really doesn't matter, as I don't plan to use it anyway. Next step of course was to identify it, so I looked for the model identification, which is usually embossed in the leather of Zeiss Ikon cameras, but there wasn't one. I did find a serial number embossed in the leather (17429), which I thought was a little unusual, and there was another serial number (A264239) under the shutter, probably referring to the shutter, and this I had seen before. But where I would have expected to find the model designation in the leather something was embossed, and with some difficulty I made out the word *Ercona*. Next step was to look for Ercona in the Zeiss listings of my McKeowns, but there was nothing there. So I looked for Ercona in the index, and an Ercona was indeed made by Pentacon in East Germany from 1949 to 1956. Thus the mystery deepened, and I started to look and see what I could find on the Internet.

Piecing together all the information I could thus find here is what happened. During the war the Zeiss factories in Dresden and Jena were extensively damaged. Both cities of course were in the Russian controlled zone, and the Russians took with them much of the Zeiss plant, drawings etc. Most of us know that they then used these to produce the Kiev cameras, which were copies of the pre war Contax. Many former Zeiss employees of course stayed behind, some were moved east by the Russians to help set up the Kiev factory, and some escaped westwards with the US occupation forces, eventually re-establishing Zeiss in the old Contessa Nettel factory in Stuttgart. From there Zeiss Ikon again grew to become a major camera maker, and some of their cameras became justly famous, such as the Contax, Contaflex, Contarex and Super Ikonta to name a few.

And so, for a time, Zeiss Ikon products were being made on both sides of the Iron Curtain. Eventually the western Zeiss Ikon Company went to the International Court over what they saw as illegal use of their trademarks (not only Zeiss Ikon but also Contax and others) in the East, and eventually won their case. The court ruled that the Eastern Zeiss concern could market products with Zeiss trademarks only in certain East Bloc countries, but could not export them. That meant they had to use their own brand (Pentacon) everywhere else. That of course they did, and again we all know of cameras like the early Contax SLR's, which were marketed under both Zeiss and Pentacon brands.

All of this makes my Ercona quite interesting and somewhat uncommon, because the Ercona was only sold with the Zeiss Ikon brand for a short time. That, plus the fairly low Serial Number, suggests that this one must have been made in 1949 or perhaps 1950.

So now, having established its history, let us take a look at the camera itself. As I said above it is nicely made and well finished. It is a fairly conventional 6 x 9 cm bellows camera, except that the release button for the front is on top of the camera, where you would expect to find the shutter release. The latter is next to the winding knob on the left side, and so has to be operated with the left



My Zeiss Ercona, C1949-50.

index finger, which is a little unusual. The black leather bellows are in good condition. The f4.5/11cm Novar lens has “modern” f-stops 4.5, 5.6, 8, 11, 16 and 22, but no click stops, with conventional front element focusing. The shutter is a Compur with speeds B, 1/2, 1/5, 1/10, 1/25, 1/50, 1/100 and 1/250, i.e. although the lens has “modern” F stops the shutter still has “old” speeds. There is no flash synchronization, all of which confirms in my mind that it was made early in the 1949 to 1956 time frame. There is double exposure prevention in that the shutter can’t be cocked until the film has been wound on, and the viewfinder is a simple but quite effective fold out affair. The shutter release is threaded for cable release. The fold down front of the camera is threaded for a tripod, and film winding relies on the usual red window at the back.

All in all there is nothing particularly remarkable about this camera, but it is well made, it has an interesting history, and there are not many of them around. To me that makes it collectible, and I am going to treasure it!

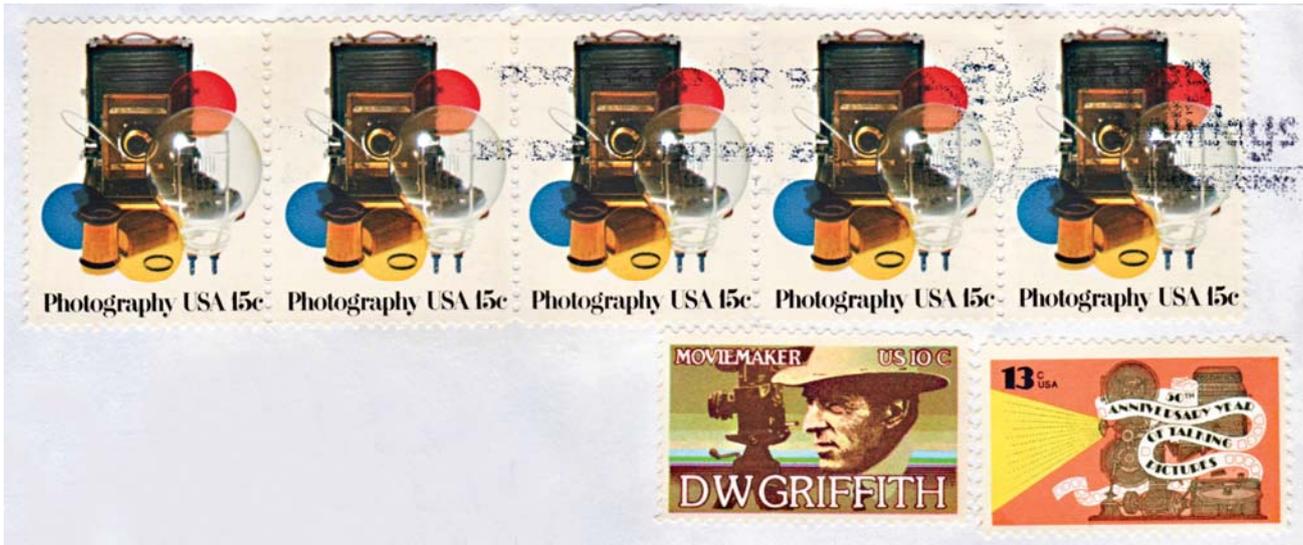
Exciting KODAK News

Marcel Safier

Perhaps the world's leading Kodak collector has been working on a monumental project to share his extensive collection with the world. Charlie Kamerman has an excellent website at <http://www.kodakcollector.com> and his collection is breathtaking. He loves acquiring cameras with their original boxes and his collection has been augmented with many items from our own Lyle Curr.

Charlie has assembled a near complete collection of Kodak catalogues and he has now made them available in digital form on the Internet. Kodak catalogues from 1887-1942 are available by following the “Kodak Literature” tab on the website. These are viewable and downloadable as low-resolution pdf files with the intention to offer high-resolution versions on DVD in the future. The “Kodak Around the World” subsection contains the covers of many “foreign” catalogues including Australian examples. There are also scans of Graflex and Century catalogues (covers only) and copies of early advertisements. Following the “Camera List” tab reveals a database of Charlie’s extensive collection of over 3,500 different models with the intention that this will link to pictures of each camera eventually.

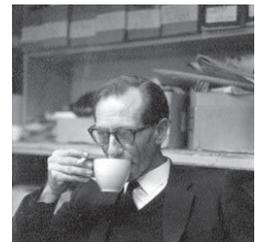
George Layne aka Kaptain Kodak has been helping Charlie with the project and he runs another web site <http://www.kodakhistoricalsociety.org> George is himself preparing a book on string set Kodak cameras which he hopes to launch at the “Photohistory XV” conference in Rochester next October 2011 (<http://people.rit.edu/andpph/tphs.html>) where he will also be giving a presentation on the catalogue project. He has already received valuable assistance from Australia and would like to hear from anyone with Kodak dealer information about Kodak items from 1885-1895 and details from any round Kodak pictures with details on the back identifying Australian dealers doing the processing (email: georgelayne@aol.com). This overlaps with my own research project into the history of Baker and Rouse, who marketed Austral plates and Star paper and they were early agents for Kodak in Australia, They went on to manage Australian Kodak Ltd. in 1908 that became Kodak (Australasia) Pty Ltd in 1920. The firm Baker and Rouse was established in 1887 and liquidated by 1912 and although they imported most of their cameras they did initiate the production of wooden view cameras in Melbourne. I would be happy to discuss all this further with anyone and exchange information (email: msafier@ozemail.com.au).



US photographic postage stamps on membership payment letter from Ralph and Bobbi London. (See 'Letters to the Editor.')

"A Deardorff 4 x 5 Special, equipped with a Synchro Compur shutter and a C P Goerz Dagor lens, adorns the United States photography stamp ([issued] June 26, 1978). The large format camera was made by L F Deardorff & Sons of Chicago starting in 1949. The company's words and graphics are visible on the two lensboard holders, but both instances of Deardorff have been eliminated." Source: Ralph London, "Identifiable Cameras on Stamps," *Photographica World*, Number 95, 2001/1, pp. 28-30.

So sad to hear of the loss of yet another of our truly great photographers. I had the pleasure of working with John for some years back in the days of Collins Street and the knowledge he (and Athol) so freely imparted to me stood me in great stead when I became the first to two professional sales rep's dealing exclusively with the professional photographic trade. Just like his father John, and many others I could name, was one of the great ones of an era now gone. I'll always remember our days together.
Ian Carron.



From our February Auction:-

