

GRAFLEX HISTORIC QUARTERLY

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Graflex History, Western Style

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The history of the Western Division really begins with Irving Jacobson. Irving was in the radio and electronics field when he saw a friend fumbling with his flash synchronizer and asked to take a look at it. Irving picks up the story,



“It was nothing more than a door buzzer which had tremendous power at the end of the stroke but no power at the beginning, just the opposite of what you need. It also drew too much current away from the bulb after it had done its job. The whole design is just the opposite of what you need to synchronize a shutter and flashbulb.

I made up a solenoid with an open core end that had a lot of power at the beginning but no power or current draw at the end. It worked very well. Soon word got out, Kodak called, then Graflex. I was in the synchronizer business whether I wanted to or not. Graflex ended up being my eastern distributor for the Jacobson Synchronizer, which was coined by Kodak, by the way.

After about a year, I came up with an improved version and went out to Rochester to make sure they wanted it and would have enough stock on hand before I made the announcement. Mr. Whitaker came right out to meet me and asked why I was there. I showed him the new model solenoid, and he was

very impressed. He said, ‘Mr. Jacobson, we’ve had an idea for a long time. As you know, we don’t have a western division to do service work on the coast. How would you like to come to work for us?’

I said, ‘Oh gosh, I don’t know.’ Here I just tooled up for going into production on this new model. ‘I’ve never worked for anybody. I don’t know what it would be like punching time cards.’ He replied, ‘You’ll never punch a time clock. You’ll be your own boss. We need a western division, someone out there to run the mechanical phase of it and design whatever you want. The sky’s the limit.’

I stalled. So he said, ‘What have you got invested in your tools? What are you worried about? We’ll pay you whatever is required. Tell me what you want.’

While I was excited about making battery cases and reflectors and such, the war was already on in Europe, and I was told that aluminum could get scarce, and here is the Cadillac of camera companies offering me a job, so I said, ‘Why not?’ And so Western Division started with my repair equipment.”

N.L. Whitaker tapped Rochesterian, Johnny Butler, to be Controller and Bob Weber as Sales Manager to round out the team. Bob went out to L. A. early and supervised the renovations of the storefront at 3045 Wilshire Blvd. And without the renovations quite finished, Graflex opened its Western Division on March 1, 1941.



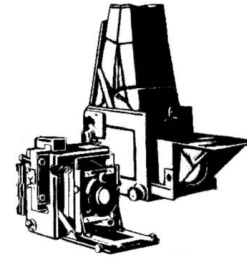
Johnny Butler



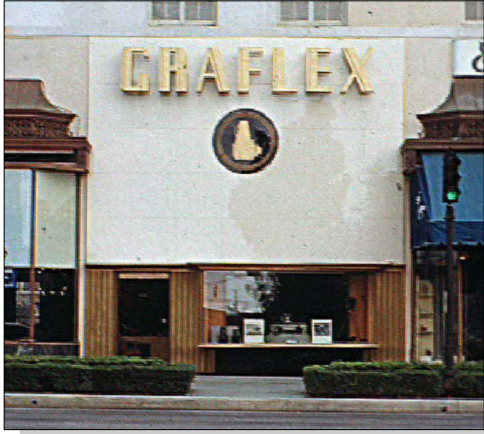
Bob Weber

Graflex’s office was in the Wilshire Center Building, a large two-story Spanish Revival building that took up half a block. The first floor was comprised of storefronts with huge 15-foot tall bay window displays and

PhotoHistory XIV Symposium
Congratulations! Quarterly editor Les Newcomer has been selected to give a presentation at the George Eastman House Saturday, October 17, on “How Folmer & Schwing Changed Photography.” More details will be available in the June issue.



rows of neat canvas awnings. The second floor was laid out for offices. Above the offices was a very tall, steeply pitched roof that, along with the stucco walls and Spanish style dormers, gave the building the traditional look of a 19th century villa. Onto this facade, Graflex built an Art Deco ode to Rockefeller Center.



The original display window was replaced with an all-glass door and a smaller bronze bay-style display window. Flanking the door and display were bright-bronze fluted panels. The large space above the display was covered in Carrara glass, a highly polished opaque marbled-like material. "Graflex" was spelled out in large bronze letters containing fluo-

rescent lighting that silhouetted the letters at night. The effect was high-style Art Deco -- elegant, dramatic and head-turning.

room and on the mezzanine. By 1950 the Western Division had outgrown its offices. In December, C.H. "Tiny" Richards, who replaced Bob Weber in 1946, broke ground for a 6500 sq. ft. building at 800 N. Cole Avenue at Waring Street in the up and coming photo center of L.A. The lack of any real winter made construction quick, and on May 10th, they had the first of two open houses, the first for members, the second for the trade.



Center C.H. (Tiny) Richards, architects and builders, and second from right, J.E. Butler, Graflex, Inc. Controller.



Wilshire Boulevard Service Department.



Wilshire Boulevard showroom.

While the showroom was the height of stylish design, the offices were scattered around the building, above and behind the show-

If you live in Hollywood long enough, you're bound to rub elbows with a TV or movie star, and Western Division was no different. Grafolks, Graflex's house publication, shows Graflex gave cameras to Hollywood legends like Red Skelton, Bob Cummings, and Joel McCrea. When Casey, Crime Photographer moved from radio to TV, Western Division replaced Darren McGavin's Anniversary Speed with a new Pacemaker Speed Graphic. Even December Bride's Spring Byington used a Pacemaker Graphic on the show.

While it was common for a television or movie company to call up and ask for a camera prop, the producers of The Fugitive went one step further and used the front entrance to the new building as a stand-in for a Michigan police station.

After General Precision Equipment (GPE) took over Graflex in 1956, there was a slow but consistent shift away from the "family" oriented business style of N. L. Whitaker to more of a corporate "bottom line" style of management and an emphasis on mass production of amateur cameras.

By the time Singer bought Graflex in 1968, professional photographers had abandoned 4x5 and ignored the Graflex xl. Nothing was in the design pipeline. On the other hand, the baby boom generation was swelling America's public school system, creating a huge demand for audio and visual equipment. From the outset, Singer had no interest in pouring money into the camera side of Graflex, since the profits were in projectors.

Bob Doty had the longest tenure at Western Division and leads us through the transformation from Western Division of Graflex to W.D. Service. Bob hired in as a repairman in 1943 and worked up to Service Manager after Irving Jacobson left in 1953.

“The company changed their policy and moved all of their billing and office work back east, and what was left was the warehouse and service. Eventually they moved the warehousing back east and leased out part of the building, and all that was left was service and a very small warehouse.

Around 1975 they closed up operations and let everybody go. They gave us 6 months’ notice, but we could see the writing on the wall a year before that. They didn’t need us here anymore. Rochester had been doing the paperwork for a couple of years, and shipping that took days by train now took hours by plane, so even regional service was no longer cost effective.

Four of us bought the business and formed a corporation known as W.D. Service, the “W.D.” for Western Division, although we weren’t a western division of anything. Singer sold us the tools, equipment, and some of the parts, but we couldn’t possibly afford everything that was there, so what was left over we shipped back to the factory. They treated W.D. very well.

We operated in the same building for two or three years. In 1977 a company bought the building, and we moved down to San Pedro St. with Burleigh-Brooks for a couple of years, and then I retired. What was left of the company moved out to Santa Monica Boulevard and Highland. By then it was just Bruce Blackburn-Elliot and Bud Walker. They scrounged for spare parts, and I made a few things in my garage to help them out.”

In 1984 Roger Adams, a passionate Graflex fan, heard that W.D. Service was going under. With his life savings and a lot of wishful thinking, he bought the company. With quality repair work, consistent advertising and a constant presence at West Coast photo shows, Roger was the face and voice of Graflex for ten years. In 1994, twenty years after Graflex ceased to exist, against rising costs and falling sales, he closed W.D. Service for good and, like the rest of the Graflex members, slipped quietly into anonymity.

Western Division’s original office building across from Bullocks-Wilshire met the wrecking ball sometime in the mid 1980s. The building at 800 N. Cole still stands, but nearly all of the signage has been removed. Only the black Carrara glass over the Waring St. entrance still reads “Graflex.”

[Ed. The only photograph of the first Western Division building we could find is available for viewing at the Los Angeles Public Library web site at <http://jpg2.lapl.org/pics49/00059200.jpg>. This photo is available for only private use.]



The Enlarging, Reducing and Copying Camera

By Thomas Evans

Part 2

In part one, we examined the invention and early development of the Enlarging, Reducing and Copy Camera. In part two, we will look at this camera’s production by Folmer & Schwing and Graflex, during which it became a respected tool among commercial photographers.

The “simple directions” which the E. & H.T. Anthony & Co. gave in their 1891 catalog for the Enlarging, Reducing and Copying Camera are the only specific directions I have found for the use of this camera. The E. & H. T. Anthony 1891 catalog also provided an interesting table for determining enlargements (below) “copied from the British Journal Almanac for 1882.”

TABLE FOR ENLARGEMENTS.								
[Copied from the "British Journal Almanac" for 1882.]								
FOCUS OF LENS.	TIMES OF ENLARGEMENT AND REDUCTION.							
	1	2	3	4	5	6	7	8
In.	In.	In.	In.	In.	In.	In.	In.	In.
2	4	6	8	10	12	14	16	18
4	4	5	2½	2¼	2½	2½	2½	2½
2½	5	7½	10	12½	15	17½	20	22½
3	6	9	12	15	18	21	24	27
6	6	4½	4	3½	3	2½	2¼	2½
3½	7	10½	14	17½	21	24½	28	31½
7	7	5½	4½	4	3½	3	2½	2¼
4	8	12	16	20	24	28	32	36
8	8	6	5½	5	4½	4	3½	3¼
4½	9	13½	18	22½	27	31½	36	40½
9	9	6½	6	5½	5	4½	4	3½
5	10	15	20	25	30	35	40	45
10	10	7½	6½	6	5½	5	4½	4
5½	11	16½	22	27½	33	38½	44	49½
11	11	8½	7½	6½	6	5½	5	4½
6	12	18	24	30	36	42	48	54
12	12	9	8	7½	7	6½	6	5½
7	14	21	28	35	42	49	56	63
14	14	10½	9½	8½	8	7½	7	6½
8	16	24	32	40	48	56	64	72
16	16	12	10½	10	9½	9	8½	8
9	18	27	36	45	54	63	72	81
18	18	13½	12	11	10½	10	9½	9

It is assumed that the photographer knows exactly what the focus of his lens is, and that he is able to measure accurately from its optical center. The use of the table will be seen from the following illustration: A photographer has a *carte* to enlarge to four times its size, and the lens he intends employing is of six inches equivalent focus. He must, therefore, look for 4 on the upper horizontal line, and for 6 in the first vertical column, and carry his eye to where these two join, which will be at 30—7½. The greater of these is the distance the sensitive plate must be from the center of the lens, and the lesser, the distance of the picture to be copied. To reduce a picture any given number of times the same method must be followed, but in this case the greater number will represent the distance between the lens and the picture to be copied; the lesser, that between the lens and the sensitive plate. This explanation will be sufficient for every case of enlargement or reduction. If the focus of the lens be 12 inches, as this number is not in the column of focal lengths, look out for 6 in this column and multiply by 2, and so on with any other numbers.

Directions For Use.

“To copy a negative in the natural size, place it in the kit on the front of the camera and button it in. Attached to the center frame of the camera is a division upon which, on the side toward the camera front, a lens is mounted. Suppose this to be a quarter-plate portrait lens, the focal length of which we suppose to be 4 inches: draw back the center frame and the lens twice the focal length of the lens (8 inches); slide the back frame with ground glass the same distance from the center frame. To enlarge with the same lens to eight times the size of the original, the center of the lens must be 4½ inches from the negative, and the ground glass must be 36 inches from the center of the lens. To reduce in the same

proportion, reverse, and have 36 inches from the center of the lens to the negative, and from the center of the lens to ground glass 4 ½ inches.”

In his 1902 book, The A B C of Photo-Micrography, W. H. Walmsley reiterated his design of this camera: “Some twenty years ago, when no suitable camera for photo-micrography could be found at any dealers, I devised a form which the Scovill Manufacturing Company of New York made for me in the most satisfactory manner, and which is today, after constant use in all these years, as good as when it left their shop... The bellows are in two parts, with a central box serving the double purpose of support to prevent them from sagging in the middle and carrying a lens for making photo-micrographs, lantern slides or enlargements on bromide paper. This central box and the rear portion of the camera, with the focusing screen, slide freely and independently upon V-shaped ways, and may be firmly fixed at any desired point... the front being immovably attached to the camera bed.” The lensboard can be moved from the central box to the front of the camera “when it is desired to use the camera for copying, and the entire front can be shifted several inches vertically or horizontally.” He goes on to say, “This simple and most efficient camera was early placed upon the market by the Scovill & Adams Company, under the somewhat lengthy but expressive title of ‘The Walmsley Enlarging, Reducing and Copying Photo-micrographic Camera,’ ...It is made in two sizes (6½ x 8½ and 4¼ x 5½), each size carrying smaller plates, if desired.”

This statement explains how Scovill came to make the ERC line of cameras, and since Scovill and Anthony, both based in New York, appear to have been on good terms (the two companies merged in 1901), one can imagine that they worked out a deal to both sell what was essentially the same line of cameras, but it is a mystery to me how Folmer & Schwing came to be a major manufacturer of the ERC Camera, which they were at least by 1899, that is, even before being absorbed by Eastman Kodak Co. Because the president of the Century Camera Company was John Milnor Walmsley (W.H. Walmsley’s nephew), this may be the avenue by which the manufacturing of the ERC was transferred from Scovill & Adams to Century, and subsequently from Century to Kodak and F&S.



W. H. Walmsley, 1830-1905, was well-known to microscopists as a skilled photo-micrographer. He was a member of the Royal Society of Microscopists, a charter member of

the American Microscopical Society, and, by 1885 at least, he was the Secretary of Microscopy and Histology of the American Association for the Advancement of Science (AAAS). In 1884 he became the sole American agent for R & J Beck & Co. of London, selling microscopes and other optical equipment in Philadelphia, PA. Apparently he was in a good position to work with various camera manufacturers to engage them in giving form to his ideas.

Mr. Walmsley finished the description of his camera with this assessment of its capability: “It is perfectly adapted to each of several different requirements. For simple negative-making in connection with a microscope or for copying engravings, etc., with a photographic lens, its long bellows extension, simplicity and smoothness of working leave little or nothing to be desired. In making enlargements on bromide paper or lantern slides by reduction, it is equally useful...in still another direction its adaptability to a purpose will be found equally satisfactory. I refer to the photographing under very low amplifications (less than ten diameters), of *macroscopic* objects too large for the field of an ordinary microscope objective, -- to which I have ventured to give the name of *photo-macrography*...”

So capable was this camera that it continued to be used long after manufacture ceased. In 1978 I was working for a commercial photofinishing lab that sent me to the Kodak facility in San Francisco for a class. Set up on a table there was an 8x10-inch Enlarging, Reducing and Copying Camera, still in commercial use about 100 years after Mr. Walmsley first thought it up.

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Press Photography The Early Days and the First Cameras

By Reg Holloway

Press photography, epitomized in North America from the early 1900s by the Graflex and Graphic cameras, had its beginnings three decades before the Folmer & Schwing Manufacturing Company of New York launched its first single lens reflex in 1902.

True press photography – that is the taking of photographs specifically for publication in a tonal form – became possible by 1869. In that year, a Canadian publisher showed how a print could be converted into a “granulated photograph” and reproduced by the use of a halftone block.

Photographers had submitted photographs for publication before that time, and their work had been published, but only as line drawings. It has been estimated that in the 1860s in the United States alone, there were 2,000 artists producing the necessary engravings by hand. They and many more artists in other countries worked on innumerable photographs (and drawings), including those produced by the first photographers to cover conflict: Roger Fenton, who covered the Crimean War in 1855, and Mathew Brady and his colleagues, who documented the American Civil War from 1861. Fenton and Brady, and most of the other photographers of their day, used cumbersome, mainly 8x10" cameras on tripods, and their plates had to be coated before each exposure.

The halftone block changed the way photographs could be published. The basic idea, that the tones of a photographic image could be mechanically reproduced through a screen, had been hinted at by Fox Talbot in 1852, but it was the Canadian engraver, William Augustus Leggo, who proved what could be done with a “granulated photograph.” The first photograph he published in this form appeared on the front page of the first edition of the Canadian Illustrated News, a photograph of Queen Victoria’s son, Prince Arthur, who was visiting Canada at the time.

Leggo and his collaborator, the publisher of the Canadian Illustrated News, Georges-Edward Desbarats, took the process to the United States, where in 1873 they founded the New York Daily Graphic. In 1880 the Graphic became the first daily paper to reproduce a photograph from a halftone block alongside type. Shortly afterwards, newspapers in Britain began to use halftones.

By the 1890s, the process had been improved (principally in the U.S., thanks to the work of Frederick E. Ives and the brothers Louis E. and Max Levy), and a profusion of illustrated magazines appeared in North America and Europe. Editors demanded more and better photographs, which photographers were eager to supply. Fortunately, at about the same time or a little later, they were liberated from the restrictions of tripods, field cameras, wet plates and long exposures. With the arrival of dry plates and faster emulsion, a new era had begun!

Various designs of cameras that could be hand-held were tried in Europe and North America. There were different formats, in inches and centimeters, ranging up to 5x7". Over time, the favored size for press work in the United States became 4 x 5" and in Europe, 9x12cm.

The box-like single lens reflex was an early favorite in both places (for instance the German Mentor from 1898 and the Graflex from 1902) and lasted, with refinements, for 60 years. The reflexes were particu-

larly useful, with longer lenses, for sporting events. In a way, it was not surprising that the reflex should have attracted the attention of camera manufacturers, because the basic design had been around for a couple of hundred years, predating photography. It was derived from the *camera obscura* (Latin for “darkened chamber”) that had developed from the pinhole and had long been a novelty. In its most sophisticated and smallest form, it had consisted of a box with a lens that projected a scene onto an internal mirror which in turn reflected the picture onto a ground glass screen and was used by artists as a drawing aid. It did not take much to convert this derivation of the *camera obscura* into a photographic camera.

The next most popular form of camera for the press photographer was a simple rigid box with a focal-plane shutter and a lens in a helical focusing mount. This developed into a folding form with struts to extend the bellows and lock the lensboard in a rigid position. The most famous of these was the German Goerz Anschutz, which was made from 1892 and continued in production, with improvements, for more than a quarter of a century.



I recall being given a Goerz Anschutz to use when I began an apprenticeship on a provincial newspaper in England in 1947. The camera was already quite ancient. It had a broken iris and had been set aside (nothing was thrown away during the Second World War). My instructor removed the remains of the iris and fashioned a piece of black paper to fit between the lens components. He tore a hole in the paper and told me it would provide an aperture of about f8. He said I must rely on the focal-plane shutter to regulate exposure and showed me how to make the necessary adjustments by wiggling a piece of string on the blind. It worked quite well, and all the plates I exposed in the next six years were at f8 or thereabouts.

Incidentally, the probable cause of the damage to the original iris was the practice of removing the front lens component of early cameras to insert a piece of gelatin filter. Generally, there was no front shutter to get in the way, but the iris could stand only so much interference. The only filter I ever used was a light yellow which was mildly effective in cutting through tobacco smoke at indoor functions.

Tampering with the lens in this way was an example of the adaptability of the early cameras and the enterprise of individual photographers. Most of the cameras, especially in Europe, were wooden and lent themselves to do-it-yourself changes. These could include an improvement to the grip or the hand-strap or the attaching with screws of a better viewfinder or (when they became available) a rangefinder or later still, a battery box for flash equipment.

Most early press cameras were single shot: one glass plate in a single holder. Double slides were available but frowned on because of the chance of double exposures.

However, a French company, L. Joux, produced a rigid box type from 1895 that boasted a magazine of a dozen plate holders inside the body of the camera. This was the Steno-Jumelle. The plate holders were open-faced and loaded in the darkroom. The change mechanism was initiated by pointing the lens upward and pulling the hinged top of the camera outward, which was a contorted maneuver and effectively doubled the size of the camera. It was ingenious, but there was a chance

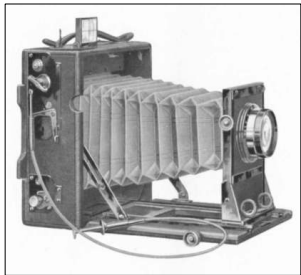
that a holder could jam or that more than one could tumble through the mechanism. It was too clumsy for professionals in a hurry, and the drop-plate magazine design was abandoned by press photographers.



A variation of the folding camera (like the Anschutz) that had struts holding the lensboard in a rigid position and the lens in a helical mount was a version pioneered by Nettel from 1904 that had the lensboard connected to the body of the camera via lazy tongs. These were controlled from the body and moved the lensboard forward and backward for focusing.

This was to assume importance later when it became expedient to fit a front shutter (which was almost impossible with a helical mount). A front shutter was much easier to synchronize for flash than the focal plane shutter.

In the United States in 1912, The Folmer & Schwing Division of Eastman Kodak introduced "The Speed Graphic...designed to meet the requirements of those desiring Focal Plane Shutter efficiency in a compact folding camera." This was the folding baseboard (bed) design that would develop and dominate the press scene in North America for more than 60 years. This first Speed Graphic was based on an even earlier camera sold by Folmer & Schwing, the company that Eastman Kodak had acquired (Appropriately, as Folmer & Schwing manufactured or marketed bicycles, it was called the Cycle Graphic). The baseboard press camera was extremely versatile with a choice of a focal-plane or (later) a front shutter. It had an impressive focusing range and interchangeable lenses. It lent itself in due course to the coupling of a rangefinder and the synchronizing of flash.



In 1921 a new camera design was introduced in England: a folding reflex by Newman and Guardia (at right). It offered the facility of a reflex plus a full drop-down baseboard (bed) with a track for the lensboard. It had a bayonet fitting for interchangeable lenses (one of them an f2.9) and a focal-plane shutter. There was a direct focusing screen at the back of the camera.



A particularly elegant baseboard type camera (after the style of the early Speed Graphic) came from Germany in 1930: the Linhof Technica, which was and continued to be a superbly engineered unit that met the requirements of most branches of professional photography. Press photographers regarded the Linhof fondly, but it was heavy and had some features that were not strictly necessary in the hurly-burly of press work. It was also expensive.



Probably the most popular press camera made in England was the VN (Van Neck). It was a favorite from 1933 and for more than 20 years. It was a collapsible strut-type, the same basic pattern introduced by Goerz. It

was not over-burdened with shutter speed or lens power, but it was a strong and reliable camera, nicely balanced. It also brought a technical advance in its quick-change back. This hinged down at the touch of a wide release bar and allowed a single plate holder to be placed in position (no grooves). The back snapped shut, firmly securing the holder. It was a quick procedure, easily accomplished without looking.

As with most European cameras, the focal-plane shutter fitted to the VN was technically very advanced. The same slit could be adjusted from narrow to wide open, and it was controlled and wound from a single wheel. It had an admirably short wind. The tension was set by a second wheel.

The Pacemaker Graphics introduced in 1947, and so understandably popular in the United States, were much admired in Europe (and often seen in Hollywood films), but importation was difficult in the aftermath of the war, and they did not achieve the same level of usage there.



As British manufacturers geared up after the war, they produced in 1951 their own baseboard press camera, the MicroPress; it was relatively inexpensive and rather less sophisticated than the Linhof or the Speed Graphic.

By the 1960s, the days of the larger format were coming to an end (at least for street work). By then the 35mm (available since the 1920s) and the medium format twin lens reflexes (1937 onward) had established themselves and gained many converts among press photographers. There was also the sophisticated Hasselblad single lens reflex (from 1948) to which some aspired. As something of a last fling, a number of modular cameras were introduced and offered as ideal for use by press photographers. These were mostly 2 1/4" square or 2 1/4 x 3 1/4", and each had a selection of bodies without bellows, several backs and various lenses set in a helical mount. Linhof, Mamiya and Graflex all tried this design, but it was out of production within a decade or so. The era of the larger format camera that provided a link back to the beginnings of press photography was drawing to a close.

[Author's footnote: Well, perhaps not quite a close. It is very satisfying to note today that many serious students of photography will seek out an old 4 x 5" Graphic or similar large-format camera with which to explore the essentials of their chosen field.]

[Ed. Reg Holloway is the author of *The Evolution and Demise of the Larger Format Press Camera*. Mr. Holloway, who is a member of the *Photographic Historical Society of Canada*, collected early press cameras in many countries during two international careers, the first in journalism and the second with the British foreign service (He was the British Consul General in Toronto and later in Los Angeles.). His book is illustrated and contains material on illumination (from powder to the strobe) and communications (from carrier pigeons onward). Further details can be found at www.regholloway.com. The book (80 pages, soft cover) is available for \$23 plus postage from essencebookstore.com. Mr. Holloway has offered to respond to emails from readers of the *Graflex Historic Quarterly* (regandannaholloway@sympatico.ca.)]

GRAFACTS

The New Graflex Strob 250 and 350 Electronic Flash System

Copyright William E. Inman, Sr.

GPE/Graflex wanted to replace the aging Strobflash I, II and IV electronic flash system (then 12 years old) with a more modern and more versatile professional system. This began in 1968 with the introduction of the 200 watt-second Strobomatic 500 Electric Flash Outfit, which was covered in the GHQ Volume 13, Issue 4.

In 1970-1971 Singer/Graflex introduced the 75 watt-second **Strob 250 HV** (high voltage) and **RG** (rechargeable) light-weight professional outfits.

The Strob 250 had the following features:



1. The **Lamphead** had the same features found on the Strobomatic 500 Lamphead, which included a Flash Calculator on the back of the Lamphead and an Open Flash button on the top of the Lamphead. A Lamphead Ready Light glowed when capacitor reached 84% (down ½ stop) of full charge. The built-in photocell for slave operation was not included in the Strob 250 Lamphead. To slave the Strob 250, it was necessary to add the Graflex Slave/Sync to the shutter cord outlet. A solid-state photocell was used.

2. The **Lamphead Metal Mounting Tube** contained the capacitor for the lamphead. The handle tube served as a mounting unit, accepting a pair of Graflite battery case clamps. Weight 1.5 pounds.
3. The **HV Battery Pack** housed a 510-volt battery, such as the Eveready Dry Battery No. 497, which produced up to 1,500 flashes. Recycle time was 3 seconds. The Battery Pack came with a 5-foot coiled power cord, and its size was 3½" W x 7½" L x 2" D. Weight 2.5 pounds.
4. The **RG Battery Pack** had a special rechargeable nickel cadmium battery for rapid recharging. Recycle time was 7 seconds, with a full recharge time of 3 hours, which provided 75 flashes. An RG Battery

Charger was supplied with the unit. Weight 1.9 pounds.

The **Strob 350 RG** (rechargeable) was introduced in 1971. It was a 130 watt-second lightweight unit, with variable power, in a high impact case.

The Strob 350 RG had the following features:



1. The **Lamphead** had all the features of the Strobomatic 500 Lamphead with exception of the built-in slave cell. The Flash Calculator on the back, the Open Flash Button on the top and the ready light remained the same. To slave the 350 RG, you just plugged the Graflex Slave/Sync into the shutter cord outlet.
2. The **Battery Pack** was water and high impact resistant and contained a rechargeable nickel cadmium battery. Recharging took only 3 hours to fully charge and could hold up to 75% of its charge after one month in storage. The battery pack had a two-level power switch. Full power (130 watt-seconds) recycle time was 8 seconds. Half power (65 watt-seconds) recycle time was 4 seconds. As a safety feature, the capacitors were automatically discharged when the unit was turned off. The size was only 7¼" W x 7" H x 3-5/8" D, and it weighed 4½ pounds.

The Strobomatic 500 Lamphead, Globe Strob 500 and Power Cord Extensions were compatible with the Strob 350 RG. Even the Strob 250 Lamphead with the capacitor in the handle was compatible with both the Strob 350 RG and the Strobomatic 500. I will cover the accessories in the next issue of GHQ.

The Graflex new electronic flash system had durability, power, versatility, portability and was light-weight, all the things a professional photographer could want. The new flash system was designed to replace the Strobflash system, even though the Strobflash IV remained in their catalog through 1973, along with the Strob 250 and 350.

Singer dissolved Graflex, Inc. in 1973, and in 1974 Lenzar Optics Corporation acquired the Strob line. They marketed it under the Graflite name until 1982.

References:
Graflex /GPE catalogs 1956-1967
Graflex/Singer catalogs 1968-1973
Graflex Strob instruction manuals
Graflite catalogs 1974-1982

Graflex Historic Quarterly

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SINCE 1890



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C.H. (Tiny) Richards, photograph courtesy his daughter Beth Soltero.

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Photograph of the Cole Avenue building.



Taken at Cole Avenue building July 1974. Bob Doty on right and Bruce Blackburn-Elliott second from left.