



GRAFLEX Journal

SHARING INFORMATION ABOUT GRAFLEX AND THEIR CAMERAS

ISSUE 2, 2016

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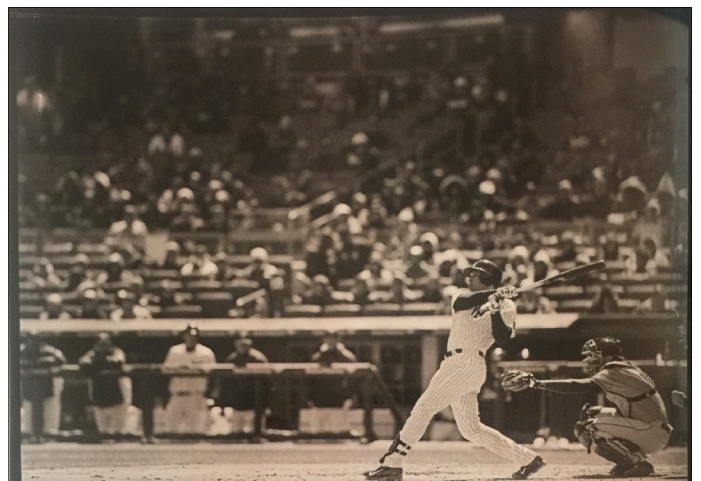
SHOOTING THE BIG BERTHA

By Geoffrey Berliner

Mr. Berliner is the Executive Director of New York City's Penumbra Foundation www.penumbrafoundation.org, antique camera lens collector (with over 1,500 lenses), GHQ contributor and Graflex camera collector. The Penumbra Foundation is a non-profit organization that brings together the art and science of photography through education, research, outreach, public and residency programs. It provides workshops in emulsion based and alternative based photographic processes, private tutoring, and teaching the wet plate collodian tintype process.

This was not a problem, because I had the needed shutter speed to shoot wide open.

This April I had the wonderful experience shooting the Big Bertha on opening day at Yankee Stadium. There was a learning curve using the camera, but my many years of experience using Graflex SLR cameras and my experience shooting large format certainly helped in making the shoot a success. Here are some quotes from the opening day program: "Using mid-20th century cameras, Yankees Magazine captures opening day in a whole new light. On Opening Day this season, we decide to meld the past and the present. Thanks to a loan from the Penumbra Foundation, Yankee Magazine photographers [and I] captured the scene at Yankee Stadium on April 5 using the same type of Graflex cameras that Joe DiMaggio and Mickey Mantle once posed for."



The Big Bertha was acquired as part of a camera collection I purchased recently. I was lucky to get a Big Bertha that was basically working. It did need to have the shutter lubed, but the shutter curtain was in good condition. The lens was clean but the aperture was not working. The link gear that allowed the aperture to be adjusted was missing.

MINE IS BIGGER THAN YOURS

The Big Bertha Camera

By Ken Metcalf

I used cut film magazines (bag mags) as well as slotted holders. Even though the bag mags looked good with intact leather bags, it turned out the leather was old and torn on a couple of the bag mags. This resulted in some light leak streaks on some of the images, but this actually added to the images. If I shoot this camera again, I think I might replace the Graflex back with a modern 5x7 back that takes modern film holders like Fidelity or Lisco. Either that or have fresh leather made for the bag mags.

I tested the shutter for speed accuracy using a 35mm electronic shutter speed tester that I modified to attach to the Big Bertha. I found the maximum speed was 666/sec and shot at f/8 the maximum aperture of the 40"/1000mm lens.

When I shot the Yankees, the gearshift was set to four bases and the pitcher's mound. Fine focus was always necessary, even after using the gear shift. I focused using the hood. The gearshift and hood worked well together. I shot 79 sheets of film; just about every one of them was in focus. To use the gearshift and swing of the tripod, it was critical to first level the tripod and then the camera on the tripod.

On the technical side, I used the full 5x7" image on Ilford HP5 400 ASA. Film was hang processed "dip & dunk" at LTI-Lightside photo lab in NYC. I think they use D-76 developer, with normal developing. Negatives were flat bed scanned. I used the Saltzman Tripod. It looks like it was meant to be used with the Big Bertha.

I enjoyed using this legendary camera. It was exciting having the opportunity to use it as it was meant to be at Yankee Stadium, where the Daily News employed it in the 1940s and 1950s. It was quite amazing how elegant this camera moved and performed once mounted on the Saltzman tripod. It was very gratifying to use this camera in its original milieu. I certainly felt a sense of history during this experience. I hope the images I made show this.

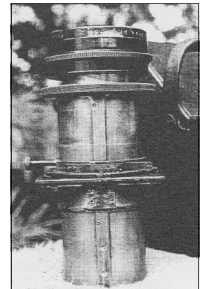
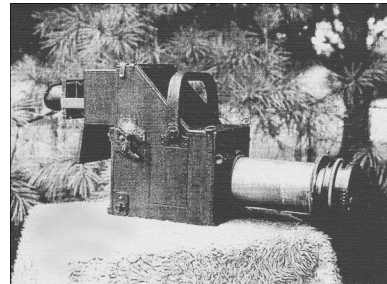


Another long-focus camera in the Berliner collection is this Naturalists'

"Physically the camera may be generally described as one where a long-focus or telephoto lens is mounted upon some form of solid baseboard, with a metal tube or box connecting the lens to the Graflex at the other end of the base in such a way that the tube replaces the bellows. Lenses used for Big Berthas range from 20-inch f/4.5s to 40-inch f/8 telephotos, and the size of the outfit depends upon the lens. Twenty- and 22-inch lenses usually are fitted on 4x5 cameras, while those from 28 to 40 inches are used with 5x7 cameras. The Associated Press own what is so far the last word in Big Berthas – a 60-inch f/8 telephoto on a 5x7 [Home Portrait] Graflex."¹

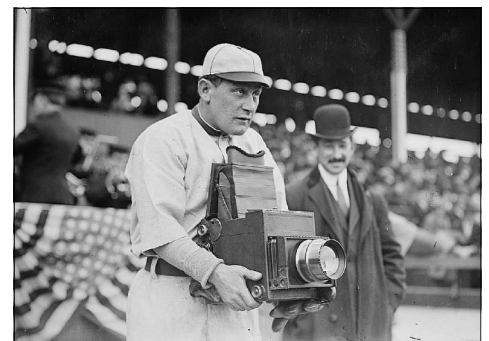
McKeown's Price Guide to Antique and Classic Cameras describes a Big Bertha as a camera with "a long base of 3 to 5 feet that supports a Graflex camera at one end and a telephoto lens from 28" to 40"," and a Little Bertha as "... a 4x5 Graflex with a long lens, typically 17-24"."

In blissful disregard of the title, to make everyone a winner, let's drop the "Big" in the text and focus on lens length and Graflex-made cameras.



The earliest Bertha I could find was an ugly camera shown in John Manser's Journal, above. It was a ca. 1907-08 much modified 4x5 Naturalists' (serial number 12,019) fitted with a 32"(approx. 800mm) Carl Zeiss, Jena (number 82693) telephoto.² Although provenance is lacking, the owner believes the camera was made for former U.S. president Theodore Roosevelt or his son Quentin for use on trips to Africa.³ According to the "never wrong" Wikipedia, Kermit, not Quentin, was on the African trip with his father.

Next is Herman A. Schaefer in 1911 with the Washington Senators, courtesy PHSNE, and the Library of Congress, shown with a Press Graflex.



The next example (on the following page) is another Naturalists', this one ca. 1923 mounted on a stick, as shown in the Graflex Journal issue 1. This camera was fitted with a 24" lens and was referred to as a "Big Bertha" by the article author.



Next (below) is William Kuenzel using his "long-range" Press Graflex "to capture the action in the 1934 World Series." "The camera was built by the News Photo Department and sold to newspapers across the country."⁴



Bill in 1909 with his pleated-hood Auto and bowler.

This assertion seems reasonable; however, by 1937 many press photographers had changed cameras to the 5x7 Home Portrait Graflex. In addition, those that could afford it were using the so-called "gear-shift" feature.⁵

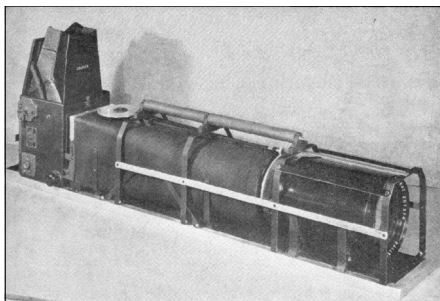
The modest Graflex Corp. technician J. A. Sprague wrote:⁶

The "gear-shift" model of the Big Bertha...was first developed for the New York Daily News with the cooperation of George Schmidt of the Daily News Photo Laboratory. Since that time (1937), it has been constantly improved until today [1940] it is accepted by most of the syndicates and larger newspapers as essential.

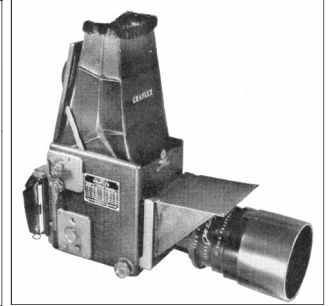
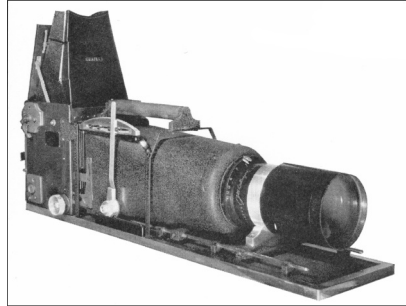
The Little Technical Library had a less modest version:¹

The most popular Big Bertha outfit is one which was originally designed in its present form by Joseph A. Sprague, now an employee of Folmer Graflex Corporation. It was Sprague who brought the Big Bertha to its present perfection in building outfits to special order for the big New York syndicates and newspapers.

"Biggest of all the Big Bertas, of course, is the famous 60" outfit of the AP. This is the largest press camera of its type in the world." A f/8 Dallmeyer lens, with the front element measuring 8¾", with the outfit weighing over 53 pounds.

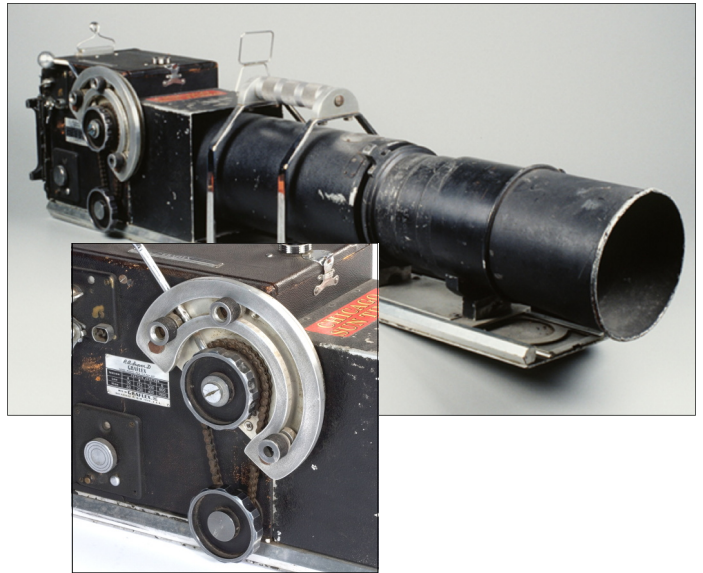


In the 1940 first edition of Graphic Graflex Photography, an article by J.A. Sprague wrote and illustrated several long-focus cameras on both 4x5 and 5x7 cameras, below.



Left, gearshift 5x7 Home Portrait Graflex with a 40-inch f/8 Dallmeyer lens. Right, 4x5 Graflex R.B Series D with 17" Dallmeyer telephoto lens.

The George Eastman Museum has two exceptional long-focus cameras. The first, below, is a 4x5 Super D with a chain drive!



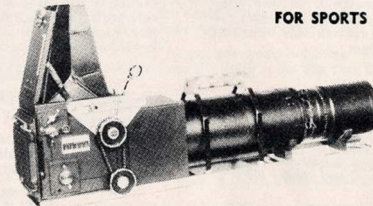
4x5 R.B. Super D Graflex (number 474616 - 1948), with 40-inch f/8 Dallmeyer Anastigmat lens. Chicago Sun Times. As shown this camera could be used with the hood closed.

"BIG BERTHA" Super-Tele Cameras

Used by:

New York
TIMES
Chicago
TRIBUNE
Detroit
FREE PRESS
Chicago
DAILY NEWS
AP SERVICE
UP SERVICE
Many others

FOR SPORTS SHOTS!



FOR PROFESSIONAL COVERAGE OF SPORTS, TRACKING, FOR WILD LIFE, ETC. Available in "off the shelf" units, complete, or custom units can be made from your Graflex or similar camera and our lens.

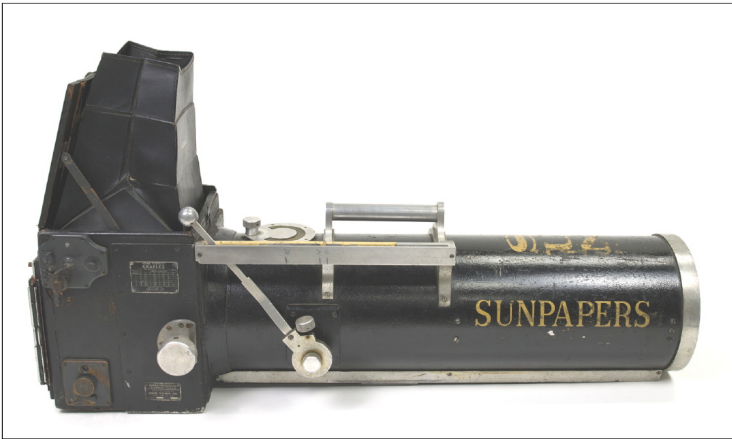
"OFF-THE-SHELF" MODELS available from stock for immediate shipment.

R. B. SERIES D GRAFLEX with 20" F/4.8 CARL ZEISS JENA TRIPLET. — No. 1606S (U) **\$745.00**

R. B. SERIES D GRAFLEX with 24" F/5.4 TELEPHOTO No. 1607S (U) **\$795.00**

"CUSTOM" MODELS are made up according to your needs, and differ from camera to camera. See list of "BIG BERTHA" lenses in this catalog for available lenses. Your present camera is used as the basis for the conversion, or we can furnish a Graflex Super D body. Model illustrated has 40" F/8 Big Bertha lens and is modified by addition of quick-focus lever, sliding stops for prefocusing on 1st and 3rd base, 2nd base and home plate at the ballfield, plus micrometer focusing knob. Heavy duty base and sturdy balanced carrying handle.

WRITE FOR PRICES OF CUSTOM MODELS, SPECIFYING YOUR NEEDS, "BIG BERTHA" LENS DESIRED, AND CAMERA YOU OWN OR WANT TO SUPPLY.



The second GEM camera is a 5x7 Home Portrait Graflex (number 468515 - 1950) with a 36-inch f/6.3 lens. Tag shows it was assembled by James Frezzolini Telophoto Cameras and manufactured by General Research Labs.

Early Bertha cameras were primarily made by newspapers and news services, with Medo of NYC being a distributor for those fitted with Dallmeyer lenses. Samples show James Frezzolini⁷ Telephoto Cameras as assembler of cameras manufactured by General Research Labs, also of NYC.

It is concluded by some that Graflex did not actually make up these cameras, but they camouflaged it well in the following 1940 Graflex Dealer Price List:

Folmer Graflex Corporation	February 1, 1940	Page 17
CUSTOM EQUIPMENT FOR THE PRESS FIELD		
<p>The newspapers and the news photo syndicates of the nation have depended through the years on cameras manufactured by Graflex. Thus, it is but natural that they have turned to GRAFLEX for such custom built equipment as would serve their specialized needs. To meet those needs, GRAFLEX has refined the so-called Big Bertha cameras and the Ringside camera so that they are acknowledged as the finest available. Details follow:</p>		
The 5x7 Big Bertha Cameras		
<p>Basically, most of the so-called Big Bertha cameras consist of an especially altered 5x7 Home Portrait Graflex into which there is installed a long focus lens. In many quarters, though, the 5x7 Home Portrait Graflex regularly equipped with any of the regular lenses offered for it well serves the news field, but without exception it is necessary that such cameras be especially equipped with the standard high-speed Graflex focal plane shutter rather than the special shutter which is standard equipment on the Home Portrait Graflex. The 5x7 Home Portrait Graflex when especially equipped with the standard high-speed Graflex focal plane shutter is normally referred to as the "special press model". Prices for it are as follows:</p>		
Special Press Model 5x7 R.S. Home Portrait Graflex without lens	Net \$163.33	List \$245.00
Specifications and Prices for the 40" Big Bertha		
<p>This unit when supplied complete includes the following: A 5x7 Home Portrait Graflex camera, especially equipped with high speed focal plane shutter; a 40" f/8 Dallmeyer Telephoto lens; and, the necessary conversion which includes required alterations to the camera and the making up of the required base and mounting complete with pre-focus gearshift assembly, visible diaphragm ring and sunshade.</p>		
Prices for the complete job as above described are:	\$47.00	\$42.00
The 4x5 Little Berthas		
<p>A popular special press camera is the 4x5 R.S. Series D Graflex, especially equipped with a rigid, all-metal front and lenses of from 17" to 24" in focal length. Usually the purchaser already has a suitable lens. The prices for making such special fittings will, of course, vary as the problem of fitting various lenses varies. Information and prices for specific mountings will be promptly furnished upon request.</p>		

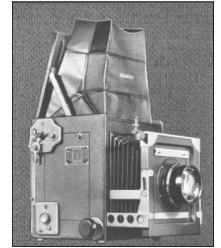
<p>It will be observed that we have not included herein the amount of time required for making delivery of any of the units above described; this for the reason that it will depend on the amount of custom work in our hands at the time an order is placed. An estimate of required delivery time will be made promptly upon request.</p>		
<p>All prices which include lenses are necessarily subject to change without notice at any time and from time to time.</p>		

At least as early as 1939, Graflex could, for an extra charge, fit the Home Portrait with a fast 1/1000 shutter. Also, at some point, Graflex made the HP without



bellows and a focusing mechanism, as set out and illustrated in Doug Frank's article in the GHQ in 2014. Graflex stopped making the HP in 1937, except for two batches in 1950; the first for 52 cameras (468504-468555) and the second for 12 (469206-469217). Although it would seem that 1950 is late for Bertha cameras, at least half of the sample cameras (including the Eastman Museum camera at left) were made up that way.

HOME PORTRAIT GRAFLEX				
TRADE MARK REG. U.S. PAT. OFF.				
TENSION NUMBER	CURTAIN APERTURE			
	1/2	1/2	1/2	T-8
1	250	120	30	
2	850	135	34	
3	850	150	38	
4	900	165	42	
5	950	180	46	
6	1000	200	50	
MANUFACTURED BY GRAFLEX, INC. ROCHESTER 8, NEW YORK, U.S.A.				



From 1941 catalog.

To quote Daniel Fromm¹ "Berthas were replaced for most, if not all, applications by smaller, lighter, faster-working SLRs by the early 1960s. This was, I think, another manifestation of photographers' movement to smaller formats as films improved and editors who'd been conditioned to expect 4x5 negatives dies off."

FOOTNOTES AND NOTES

¹ Ziff-Davis Publishing Company, 1941, Little Technical Library, Press Photography for The Freelance, Chapter 5, "Special Sports Cameras."

Fromm, Daniel W., "Big Bertha/Baby Bertha." <http://www.galerie-photo.com/baby-bertha-6x9-en.html#sec2>
"The term 'Big Bertha' is an English translation of Dicke Bertha, literally 'stout Bertha,' the nickname of a 42cm howitzer made by the Krupp works and used by German forces during WWI. The gun was named after Bertha Krupp."

² *Ibid*, pp. 43-4, "A distinction is made between long-focus lenses and telephoto lenses, the difference being that while both have a similar effect in giving large images of distant objects, the telephoto is a lens of special design in which the effective focal length is longer than the actual distance between the optical center of the lens and the focal plane."

³ Theodore Roosevelt, Charles Scribners' Sons, NY, 1909-1910, African Game Trails, pp.7, 485. According to the text, Teddy's son Kermit had a camera-bearer (later promoted to gun-bearer), "Accompanied by Grogan, and by the gun-bearer carrying his rifle, while he [Kermit] himself carried his 'naturalist's graphlex' camera, he got up to within fifty or sixty yards of



the dull-witted beasts, and spent an hour cautiously maneuvering and taking pictures.” It would seem that the slightly modified camera that was toted around was the one pictured here (a Naturalists' Graflex), but not the camera shown in the article.

⁴ <http://blogs.detroitnews.com/history/1996/02/04/william-a-kuenzel-detroit-news-photographer/>. According to this interesting web site, “Kuenzel captured many of his sports action shots with a special long-range camera called 'Big Bertha' that he developed.”

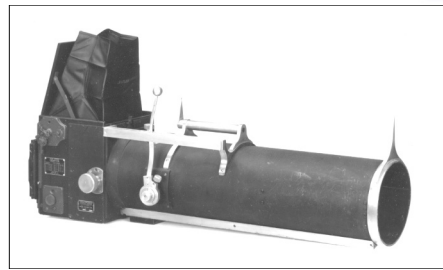
⁵ Ziff-Davis Publishing Company, 1941, Little Technical Library, Press Photography for The Freelance, Chapter 5, “Special Sports Cameras.” This system consists of a gear wheel engaging the focusing rack just ahead of the regular hand focusing knob. Attached to this gear wheel is a lever which extends upward to rest with its inside face against a crescent-shaped metal guide paralleling the side of the camera and equipped with adjustable metal stops moving in a slot along the length of the guide.

⁶ Morgan & Lester Publishers, New York, Graphic Graflex Photography, First Edition January 1940, Photography with the Special Camera, J. A. Sprague, p. 278.

⁷ Eckenberg, William C., “Big Bertha Cameras,” Issue 7, The Complete Photographer, Volume 2, November 1941. Frezzolini was an electrician at the New York Mirror. One of his innovations at the Mirror was the use of lightweight duralumin instead of heavier metals.



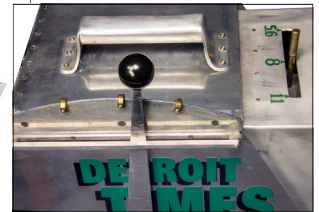
Frezzolini tagged HP.



Jim Chasse's Frezzolini-made HP with 28" Zeiss lens.



Geoff Berliner's Frezzolini-made HP Big Bertha.



Davis Strong's 1950 Detroit Times HP number 468532.



Jim Chasse's 4x5 R.B. Series D, with Zeiss Jena 400mm f/4.5 lens.

1952 4x5 Super D serial number 473943 with 30" f/5.6 Dallan Anastigmat.



Thomas Evan's 4x5 extended body R.B. Auto Graflex from early 1920s, from the Los Angeles Examiner.



As a prequel to Thomas Evans' fine article in the last issue of the *Graflex Journal*, here is Michael Parker's well researched and detailed article, which was originally published in the prestigious *Back Focus* by The Australian Photographic Collectors Society (www.apcsociety.com.au).

FROM CHICAGO TO ROCHESTER VIA DELAWARE

THE CEE-AY 35

By Michael Parker

The Cee-ay 35 camera was designed by Leonard W. Gacki and produced in Chicago early in 1949 by the Camera Corporation of America, makers of the Perfex range of cameras, in a response to post-war demand for a quality low cost 35 mm camera. The camera sold for \$49.50 with an f/4.5 lens and for \$59.50 with an f/3.5 lens. Nothing special here, except that this camera was the cheapest US-made rangefinder 35mm camera of its day and must hold some kind of record for the shortest production run combined with the most frequent change of ownership. The reasons for the unusual name seem to have been lost.

In the context of the late 1940s, the specifications are quite good: a wide-aperture lens, coupled rangefinder, five speed flash-synchronized shutter and hot shoe, all in a neat and compact body. Focusing between three feet and infinity is smooth and precise; a lever falling easily to the left hand moves a pin engaged with a curved slot in the lens barrel until the top and bottom halves of the split-image rangefinder match. A connected pointer on the right hand side indicates the distance. On the "need for improvement" side, the separate sighting windows for the viewfinder and the range finder are tiny and there are no lines in the viewfinder for precise framing or for close-up compensation.



My camera (above) has serial number E00585, and one other example I have seen has a number in the low 200s. Given the short manufacturing time, it's likely that production numbers overall were quite low. The lens is the f/3.5 50mm triplet anastigmat made by Wollensak. The five-speed, three-blade, Alphax Synchro-Matic shutter (1/10 to 1/200 sec.), also made by Wollensak, is self-cocking, so

double exposures, intentional or otherwise are easy. The cheaper version with an f/4.5 lens is the same camera, except that the shutter has only four speeds (1/25 to 1/150 sec).

Overall, the Cee-ay 35 represented a well-specified miniature camera of the day.

But dark clouds loomed for the Camera Corporation of America. Their Perfex range, not much changed from the late 1930s, was now outdated, and the new camera came too late to save the company. After only eight months of production of the Cee-ay 35, the company, together with patents, tools, dies and parts, was put up for sale. Ciro Cameras Inc. purchased the Cee-ay 35 technology, and Joseph Price, one of the partners of the Camera Corporation, purchased much of the Perfex stock and equipment.



COURTESY DONALD JETER

From Cee-ay 35 to Ciro 35 - the second manufacturer

Ciro Cameras Inc. established in 1941 in Detroit, Michigan, initially manufactured the Marvel-flex, a twin-lens reflex for Sears Roebuck, and this became the basis for their line of reflexes called Ciro-Flex selling at a considerably lower price than the imported Rolleicord. In 1947 Ciro moved production to 425 South Sandusky St, Delaware, Ohio, and by the late 1940s was seeking a 35mm rangefinder camera to expand their range. The Cee-ay 35 fitted the bill, and in 1949 it was rebadged as the Ciro 35.

Ciro stamped the company name and address on the back of the top plate of the camera, and changed the wording inside the back plate casting to reflect the changed ownership, but, over time, made only a few small and mainly cosmetic changes to the Cee-ay 35. These included reducing the height of the rangefinder window, making two sets of grooves on the winding knobs, and replacing the "E" in Cee-ay 35 serial numbers with "5." In some models, probably to reduce production costs, a paint finish, including an all-black version, replaced the satin-brushed metal finish of the Cee-ay 35. Model designations R and S with an f/4.5 or f/3.5 lens respectively were introduced almost immediately in September 1949. The R model cost \$44.95, and the S model \$49.95. In August 1951, just before the demise of Ciro Cameras Inc., the now rather rare model T was introduced with a four-element f/2.8 lens and lever-set Rapax shutter. The model T cost an eye-watering \$98.50.



From **Ciro 35** to **Graphic 35** - the third manufacturer

Enter the Graflex Corporation with a superb range of Graflex and Graphic cameras aimed squarely at an expensive but limited press and professional market. To expand the corporation's market, it made commercial sense to buy a range of amateur cameras. Graflex and **Ciro** already had a connection in that the **Ciro 35** was distributed by Graflex, and in 1951 Graflex purchased the tools, dies, inventory and rights to manufacture the **Ciro 35** and **Ciro-flex** cameras.

The **Ciro-flex** cameras were initially sold as **Graflex** **Ciro-flex** but soon became the **Graflex 22**. The **Ciro 35**, formerly the **Cee-ay 35** was now the **Graflex** **Ciro 35**. The **Alphax** **Synchro-Matic** shutter was rebadged as a "**Century**" with the words "(M-F) **Synchromatic** made by **Wollensak** for **Graflex Inc.**" around the lens, which itself was now labelled as a **Graflex** **Graftar**. Other changes from the **Cee-ay 35** were minimal, and models continued to be designated as **R**, **S** and **T** depending on the lens, shutter and colour. The **Graflex** name and address were now displayed on the back of the top plate and on the inside of the back plate casting. The **Graflex** **Ciro 35** was advertised as "The only rangefinder 35 under \$50."

The **f/2.8** **Model T** **Ciro 35** remained in the **Graflex** catalog virtually unchanged through 1954, and was priced at \$89.35 with a **Rapax** shutter.

The 1949 **Ciro 35** design was becoming tired, and in 1955 the camera went through a substantial alteration to become the stylish **Graphic 35** made in five different models. The new camera was still recognizable as a **Cee-ay** derivative and was still made in the USA, but it now boasted a **Prontor SVS** shutter and a 50mm lens of **f/3.5** or **f/2.8** aperture labelled **Graflar** and sourced variously from **Rodenstock** and **Enna-Werk**.

A big selling point was push-button focusing using buttons on either side of the lens mount to move the lens assembly back and forth (this system also appeared on the later **Graphic Jet** camera). The **Graphic 35** had an unusual front mounted shutter release, apparently designed to minimise camera shake and a '**Spectromatic**' system of colour-

coded bands and codes on the distance scale and around the aperture ring respectively to assist in making correct flash settings. Initially the bands related only to No. 5b or Press No.25 bulbs coupled with **Kodachrome** or **Ektachrome**, but later a more universal system of three bands allowed the use of guide numbers.

Many advertisements for the **Graphic 35** featured women extolling the simplicity of push-button focusing. But the **Graphic 35** could not compete successfully with imports from Japan and Germany and was discontinued in 1957 (or 1958; sources vary) just after **Graflex Inc.** became a division of the **General Precision Equipment Corporation**. It's likely that remaining stocks of the **Graphic 35** continued to be sold for some time, and the December 1960 edition of the US **Modern Photography** includes it, along with the **Century 35** (see below) in the list headed "244 new cameras."



References:

Lahue, Kalton C. & Bailey, Joe A. Glass Brass & Chrome The American 35mm Miniature Camera, University of Oklahoma Press, 1972 ISBN: 978-0-8061-3434-5 (paper).

McKeown, J.M. and J.C. (eds): Price Guide to Antique and Classic Cameras, 12th edition, 2005-2006, ISBN 0-931838-40-1

Wolfman, Augustus (ed): Modern Photography, December 1960, Vol. 24, No. 12, Photography Publishing Corp., N.Y.

Holden, Tim, 1997, Graflex Historic Quarterly, Volume 2, Issue 2.

Graflex Trade Notes, March 1955, Graflex Inc., Rochester, NY.



Serial number 591428, 1955. **f/2.8** **Graflar** lens.

GRAFLEX R.B. SERIES D User-Friendly Modifications

By Randy Sweatt

I have never considered myself a collector of any particular camera - I just love all things photographic. I am quite fond of old film cameras, especially the ones that don't take batteries.

My first encounter with a Graflex 4x5 was in 1978 during the first couple weeks of my USAF photography training. I believe the school felt that we would get a better grasp of the basics if we had to move very slowly and think before we tripped the shutter. The Graflex Crown Graphic forced us to do that, since we had never been exposed to this type of camera before.



My classmate Cheryl holding a Crown Graphic - Spring 1978 - Lowry AFB, CO

I have owned numerous Graflex cameras over the years, Crown Graphics, both 4x5 and 2¼ X 3¼, 4x5 Speed Graphic, Folmer & Schwing 8x10 Commercial, and most recently a 4x5 Graflex Series D.

I did not know 4x5 SLRs existed until just before I bought mine in 2013. I have had lots of experience with 35mm and medium format SLR cameras, and since I had plenty of experience with 4x5 Graflex cameras, I really don't know why I had never heard of the 4x5 SLRs. Once I discovered that they existed, I had to own one. Fortunately, when mine arrived from the eBay seller, it was in almost unused condition. It looked like it had been in a box for the past 70 years, and it functioned perfectly. After shooting a few pictures, it didn't take me long to come to the conclusion that if I was going to enjoy using this camera, I would have to make a few "minor" modifications.

I generally avoid doing any repairs or unnecessary modifications to my cameras, because past experience has taught me that I am more of a camera user than a camera fixer. I screw things up when I try to fix them. I felt that the modifications I was considering were minor enough, and I suspected without them, I would not feel confident using this camera...and I really wanted to use it, not anchored to a tripod, but held at waist level.



"The Graflex ready for action. The position shown is the most effective way of holding and operating this camera."

Disclaimer - **I do not recommend anyone attempt these modifications on their camera.** Also - bear in mind as you see my "problems" and "solutions" that I am rather impatient. I want to use the camera NOW, not a couple months from now. I do not want to wait until after I have solicited the opinions of numerous experts and then painstakingly weighed every single option, then drawn out the best solution (to scale) before beginning to search for materials. No, I just tend to dive in and get it done so I can take pictures.

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In the Hitchcock movie "Rear Window," the star, Jimmy Stewart, has his left leg in a cast due to an accident while photographing a car race.



In the early scenes of the movie, we see him in his cast, and we also see the picture he shot just before he was injured by an out of control race car. Appearing next, sitting on a small table, is the remains of the camera he was using when he took that fateful shot.

I'm no expert, but it sure looks like the remains of a Graflex R.B. Series D.

My guess is (and this is just a guess) if Jimmy Stewart had used a camera strap to support his Series D, he would have been more nimble on his feet and would have been able to get out of the way, saving himself and his camera from injury...but that's just a guess.

**Problem #1** - My Series D weighs right at 8½ lbs and measures about 8x8x6½" when closed - a very heavy and bulky camera by most standards. I bet if we went back in time and gathered as many Graflex R.B. users as we could find and asked for a show of hands for those who had dropped their cameras, a lot of hands would go up. I knew I would drop mine sooner than later...and I have never dropped a camera.

**Solution** - Knowing I should probably utilize a heavy duty strap, I decided on a guitar strap with its associated mounting lugs, available at most any music store. Of course, my method involved drilling holes through the body of the camera in order to mount the lugs. I had considered fabricating a bracket out of some sturdy material that mounted via the tripod socket and came up both sides of the camera, and the strap could attach to that bracket, but I tired of wrestling with options for materials and feared the bracket might end up rubbing on the camera sides, causing abrasions in the leatherette. So, I gritted my teeth and drilled into both sides of the body, 2" from the camera top





and 4¾" from the camera front. This seems to be a good balance point for the camera and places the nuts that secure the strap lugs at about 1" below the ground glass inside the body of the camera. My strap has clips on both ends, just above the lugs, so the strap can be removed. I always unclip the strap and fold into a separate camera bag pocket when putting the camera away.



Here I should point out that I would not for a moment consider walking around for hours with this camera hanging around my neck or off my shoulder. My reason for adding the strap was to prevent the accidental dropping of my camera while focusing, changing film holders, or adjusting shutter speeds or lens aperture. This is not a carry-around camera. 8½ lbs is just too much weight to have hanging off your neck for very long. But the strap takes away that fear of dropping the camera and even frees up both hands, rather than one hand having the sole job of camera support when you are trying to get out of the way of a careening race car.

**Problem #2** - In my old age, like so many of us, my eyes don't focus as closely as they did in my youth - no where nearly as close. My first attempt at focusing with the Series D without the aid of my reading glasses taught me that if any of my negatives were going to be in focus, it would be pure luck. The 9½" distance to my eyes from the ground glass was not enough for my eyes to focus. I would need a hood about 4' high and would have to lay the camera on the ground and focus with my toes.

I tried focusing through the viewing hood with my reading glasses on, but that resulted in two problems:

- 1- If I rested my glasses on the top of the hood, the extraneous light from the surroundings illuminated the sides of my face, which I could then see reflected off the ground glass, pretty much making it impossible to compose and focus.
- 2- If I tried to get my glasses inside the hood so that my face was pressed against the velvet, blocking out any extraneous light from falling onto the ground glass...well...there was just not enough room to get my glasses comfortably into the hood and keep them close enough to my eyeballs to make them useful.

Note: Every 35mm and medium format camera I have owned was designed so that the user focuses and composes using only one eye. For the past 45 years, I have been using my left eye for composing and focusing. So I needed to come up with an eye piece for the Graflex that would enable me to focus with one eye only, and enable me to do it without wearing my reading glasses (I hate trying to focus and compose through a viewfinder while wearing my glasses).

**Solution** - I purchased an inexpensive three-piece set of 52mm close-up filters (the kind one would screw onto the front of a lens for close-up photography). These are usually numbered 1, 2, and 3. I also purchased a 52mm rubber collapsible lens hood. Using a piece of matboard about 3 x 5" as a temporary mount, I cut a hole in it large enough to insert the threaded part of the rubber lens hood. I then set my Series D on a low tripod and screwed the #1 filter onto the rubber lens hood and laid it on top of the viewing hood. The rubber lens hood serves as an eye cup. I pressed my eye to the rubber lens hood and tried focusing. Once I determined which combination of close-up filters suited my eyesight (for me it was the 1 & 3 filters together), I then constructed a permanent mount out of thin black plastic. I epoxied the lens hood to the plastic so it wouldn't fall off. I also cut short wooden dowels and mounted them to the underside corners to serve as guides, keeping the entire mechanism in place when I place it on top of the focusing hood. I cut a piece of black T-shirt, 11" x 9" to serve as a shield to insure no extraneous light leaks past the new eye-piece.



**Problem #3** - I am not quite 5' 7" tall, which means my Series D will perpetually be limited to the height of my waist for composing and focusing. I wanted to have the option of performing those tasks, as well as actually take a picture from a higher perspective, higher than my waist.

**Solution** - Before I became aware that there was an actual Graflex ground glass back that would fit my Series D, I modified a standard Graflex slotted 4x5 film holder, cutting out the septum and gluing in a ground glass using spacer strips to adjust the distance of the glass to match the distance of the emulsion side of a sheet of film in a film holder. Now I can mount the camera on a tripod at eye level and focus through the camera back





rather than through the focusing hood. Also, the ground glass back I made acts as a cover for the camera back, protecting the focal plane shutter when camera is not in use.

**Problem #4** - The focal plane shutter tension / aperture chart is mounted on the side of the camera body. It is small, dim, in a bad location for reference, and hard for me to read.

**Solution** - Rather than try to memorize the focal plane shutter tension / aperture chart, I took a picture of it and did some adjusting in Photoshop. I inverted, resized, and printed out a larger copy. I then glued the copy to a piece of matboard. Now when I am ready to do some shooting, I place the focal plane shutter tension / aperture chart on the camera lens door and secure it in place with a rubber band.



**Problem #5** - Using an SLR camera is very handy for shooting close-ups. The bellows range on the Series D is from 7 1/2" to 12". My method of calculating the bellows factor is to view the lens focal length and bellows extension (in inches) as f/stops. So the standard lens for the Series D is the NO. 33 Kodak Anastigmat 7 1/2" f-4.5 (190mm) - a fine performer in my opinion. The focal length, 7 1/2, is very close to 8, so I mentally file away f/8. If I extend the bellows to 9" for a closer shot I would have to compensate as if I was shooting at f/9, or 1/3rd stop. A 10" bellows extension would be another 1/3rd stop and finally 11" is a full stop - I would have to compensate by opening up 1 f/stop or shoot at a slower (1 stop) shutter speed.

**Solution** - Rather than measuring the bellows extension with a tape measure when I shoot extreme close-ups I painted white hash-marks at 1 inch intervals on the focus rail. I can just look down after focusing, count the marks and adjust my f/stop or shutter speed accordingly.



**Problem #6** - This was only a problem because of a particular lens that I wanted to be able to use on this camera - a 190mm Wollaston Meniscus lens re-invented by Reinhold Schable. The lens came with waterhouse stops and a slot on the side of the lens barrel for the insertion of those stops. The triangular fabric sections that attach to the front standard and lens cover door would prevent me from using this lens because I would not be able to insert the stops.

**Solution** - I removed both of the triangles and attached a nylon cord to the lens cover and to the front standard so that the lens cover would still act as a lens shade



rather than flipping straight up.

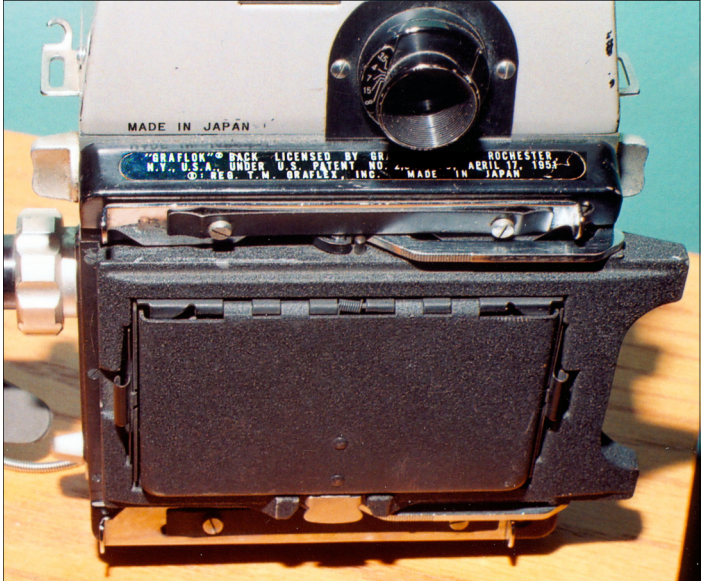
I have greatly enjoyed using my Graflex Series D these past three years. No doubt the modifications I made have contributed to my enjoyment. Have these modifications improved the resulting images I have captured - I doubt it, but I am confident that I have used the camera more as a direct result of these modifications...and we all know...a camera can only capture good images if it is being used.

Here is my on-line pbase gallery showing some images I have shot with my Series D since doing the modifications.

<http://www.pbase.com/rsweatt/rbpics>



**MAMIYA'S GRAFLOK BACK**



"GRAFLOK"® BACK LICENSED BY GRAFLEX INC., ROCHESTER N.Y., U.S.A. UNDER U. S. PATENT NO. 2,549,670 APRIL 17, 1951 ©: reg. T.M. GRAFLEX, INC. MADE IN JAPAN



G ADAPTER

**LE-2(2)**  
By Jim Chasse

I have had, for many years, a boxed f/4.5 10-inch Raptar barrel mount telephoto lens made by Wollensak for the U.S. Signal Corps. As the lens was fitted to a Pacemaker lensboard, and a Graphic View camera (also used by the Signal Corps) adapter was included, it was obviously made for the Graflex camera. According to the identification plate, the lens was manufactured in April 1954.

As purchased, the red velvet lined fitted case also holds red (A) and yellow (K2) series 8 Kodak filters, lens caps, number 11 viewfinder mask and series 7 sunshade with a step-up adapter to series 8. The highly finished box and condition of the components suggest very little use for this whopping 4.5-pound set.

The lens mounts perfectly on my 1954 olive drab KE-12 (1) Signal Corps Pacemaker (serial number 894,035). The camera came with a 135mm Graflex Optar in a Graphex shutter.



Graflex licensed their Graflok back to a number of camera companies. Shown here is a Mamiya Press camera owned by retired photographer Robert Darwin. With this and the Universal Press, a G-adaptor was sold that accepted all 2 1/4x 3 1/4 Graflex accessories, along with six accessories sold by Mamiya.

"Only the very best for the U.S. Signal Corps!"

## Graflex Journal

*The Graflex Journal is dedicated to enriching the study of the Graflex company, its history, and products. It is published by and for hobbyists/users, and is not a for-profit publication. Other photographic groups may reprint uncopyrighted material provided credit is given the Journal and the author. We would appreciate a copy of the reprint.*

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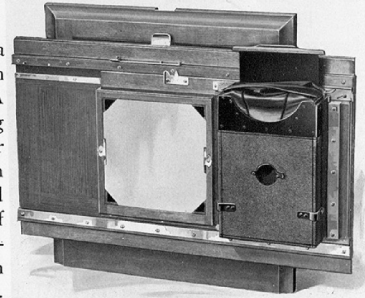
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### No. 10 Attachment.

This Attachment consists of a sliding ground glass carriage to which is fitted a Folmer & Schwing Model A Magazine Plate Holder carrying twelve 5 x 7 glass plates. The Holder is fitted with a dark slide and can be instantly removed for loading and unloading. It takes the place of twelve cabinet holders, and two exposures may be made on a plate, when the holder is in a horizontal position.

Made to fit Century Studio Cameras No. 1, 2, 7 and 8.



Sliding Ground Glass Carriage with Magazine Plate Holder.

Ca. 1912 "Eastman Professional Photographic Apparatus and Materials" catalog.

Les Newcomer comments that, "A sliding back was a fairly common sight on portrait cameras, but a sliding back with a bag mag is rare. I suspect that it added more problems than it solved. Doing full frame portraits wouldn't be too difficult, but how many poses are you going to take of Miss Crabtree when she wants her college graduation portrait done? Twelve would be awfully high back then. If you shoot a partial magazine, do you leave it or pull the exposed plates and reload? Can you be certain exactly which was the last exposed plate in the dark?"

Adding a 2-up vignetter and things can fall to pieces quickly. Trying to remember what side of which plate you shot last causes you to think more about the plates than the subject. Add the stress of a subject like Spanky or Alfalfa, and I'd be ditching the bag mag for plate holders very quickly."

So why make it? "Why not? Look at an F&S Catalog, and you'll see a small attachment to a camera garnered a new model name. I think the mindset of the day was that if you didn't have lots and lots of stuff to offer the public, you weren't a "real" camera manufacturer. They probably made up 2 or 3 and waited until they sold to make more. If they didn't, no real harm was done. If they sold well, they found a market and made more. No computer modeling, no focus group, no expensive media campaign."



"Meanwhile Kermit [Roosevelt] was busily taking photos of it [a hippo] as it charged, and, as he mentioned afterward, until it was dead he never saw it except in the 'finder' of his camera."