

Fotoman 617

The different way of seeing

By: Giorgio Trucco



Introduction:

6x17 film cameras are highly specialized cameras rarely found in the average photographer's bag. In fact, they belong to a market niche that is under the radar of an endangered species: film photographers, and even among them, very few are interested in wide format photography.

There are at least two reasons for the limited diffusion of this type of camera: first, 6x17 cameras will force you to see differently and will deeply challenge your compositional approach. Second, there aren't many cameras of this type on the market, and they are all big, heavy, not particularly easy to use and expensive to buy.

Until recently, Gilde, Fuji, Linhof and Horseman were the only companies manufacturing 6x17 cameras with German, Japan and US build quality adequately matched by high price tags. But lately the market has witnessed the introduction of few Chinese competitors like Fotoman, Widepan and Gaoersi, who managed to make this type of camera available to a larger audience.

This article is an independent, in-depth review of the Fotoman 617, a camera that I've used extensively for about six months.

Fotoman is approximately a 3 years old company, born from the fruitful encounter of Paul Droluk and Len Grenier, two entrepreneurs with a solid experience in the manufacturing of hi-tech mechanical products, and Li Chun, a professional photographer who had been producing early 612 and 617 cameras. Nowadays, Fotoman is an established producer of a full range of US design, China-built special cameras, able to challenge their rivals in both price and functionality.

Let me state very clearly that I am not related to Fotoman and/or its owners in any way, and that the opinions expressed in this article are based solely on my photographic experience, perception of quality and personal taste.

Shape, Function and Build Quality:

The Fotoman 617 is a modular camera, machined from a solid block of Aluminum Alloy 6061 in T2 temper. This type of material is commonly used in heavy-duty structures and has good corrosion resistance. It gives the camera a distinctive solid feel while the matte black finish keeps everything in balance from an aesthetic point of view. The camera is deceptively simple and can be easily dismantled to its bare components using nothing more than a couple of small screwdrivers and a hex-wrench.

The camera body, although big, is filled with... empty space! Wherever possible, hollow chambers and holes have been machined out to reduce the overall weight of the body, while increasing the structural strength.



Figure 1: *Top view of the camera body with the back door open. The unexposed film is loaded into the spool chamber on the right and the take up reel is inserted in the compartment on the left.*

The camera can only work with 120 film rolls and the film is advanced manually by checking the numbers on the film backing paper, through a red glass window. This is the only reason why 220 film can not be used. Should the camera be equipped with a preset winding crank in the future, it could easily use 220 film rolls, allowing more exposures per roll.

The unexposed film is loaded on the spool compartment on the right of the camera and the take up reel is inserted in the left compartment. Some people find this method of loading the film counterintuitive and confusing. Eventually you will adjust to it, but for those with persistent strong feelings against it, there is a workaround. Considering that the spool compartments are identical and perfectly symmetrical and that the winding knobs are easily removed with a small screwdriver, you can exchange their position.

After switching the knobs (the larger one is now mounted on the right), all you need to complete the retrofit is some masking tape and a marker. On the top of the large knob redraw an arrow pointing counterclockwise. On the rear red glass window rename the engraved numbers to 1, 4, 7 and 10. That's all! Now you can load the film left to right.

If you are wondering why the numbers cannot be the same (I did), it's because the red glass opening is not centered on the frame therefore, by using the engraved numbers, you'd waste film before the first shot and you'd run out of film on frame 12.

Depending on the lens being used, an all-metal spacer is placed between the camera body and the lens cone, which connects the camera to the helical focusing mount.

The focusing mount has a nice rubber grip and the movement is precise, smooth and play-free. The focus scale reports both meters (in white) and feet (in red). In my experience the depth of field scale is very useful and quite accurate.

A remarkable feature of the Fotoman 617 is the virtually unlimited number of large format lenses that can be used: any lens covering 168mm of image circle will work, from the Schneider 72/5.6 Super Angulon XL to the Fuji 400/8 T, including all Nikon and Rodenstock lenses. All can be mounted with a matching spacer and cone assembly.

Another nice feature of the camera is the removable viewfinder. By removing the viewfinder, the camera can be conveniently transported in the bag and the viewfinder can be used alone to walk around your subject while testing your composition.

The viewfinder is made of two pieces: the main body and a detachable mask, specific for the focal length of the lens used.

The main body has an integrated circular bubble level that is visible inside the finder through a small mirror mounted at 45 degrees. The camera is also equipped with two hot shoes that can be used to mount two additional dual-axis bubble levels, or one bubble level and the new auxiliary Rangefinder. The viewfinder is bright and crisp, the distortion is minimal and, most important, it shows quite accurately what's captured on film, at least with my Schneider 90/8 Super Angulon lens.

Overall, I've been extremely impressed with the mechanical quality of this camera. We have all become accustomed to thinking that "Made in China" means, with no exception: "Ok, it costs less but you get what you pay for, right?" Sometimes there is more to it, there are exceptions and in my opinion the Fotoman 617 is deservedly one of them.

It shouldn't be too far from the truth that the reason for this exception lays in the fact that both Paul Droluk and Len Grenier, co-founders of Fotoman, spent their life "before Fotoman" manufacturing hi-tech hardware. Soon after Fotoman was founded in China, they took over the manufacturing line,



Figure 2: *The rear red glass window. The arrow points in the direction of film winding and the engraved numbers are an invaluable memorandum during field operation.*

ensuring that every piece of photographic equipment marked with the Fotoman logo, would be up to the standards they pursued in their earlier endeavours.



Figure 3: *The camera assembly (left): body, spacer, cone and focusing mount. Right: the helical focusing mount with the distance scale (in meters and feet) and the depth of field scale.*

Using the Fotoman 617 Panoramic Camera:

Using the Fotoman 617 in the field requires some dedication but is an experience full of reward.

As mentioned earlier, the film is loaded from right to left and is advanced manually with the aid of the printed numbers on the film backing paper.

The spool knobs seem to have the right amount of resistance: they are not hard to turn but they do have some stiffness, ensuring that the film will remain tensioned (hence flat) during the exposure.

Fotoman rightfully suggests that you advance the film *not* after the shot, but right *before* taking the next one. I initially found this approach quite confusing and I refused it, but after some mumbling I agreed it was the right thing to do and I adopted the method.



Figure 4: *Film loading sequence: fit the empty take up reel in the left spool compartment by lifting the film winding knob. Put the spool with the unexposed film on the supply side of the camera (right!). Thread the paper leader from the supply spool -all the long way- to the take up spool. Advance the film until the start mark is about one inch out. Close the camera and advance the film until you see the number 3 on the backing paper through the red glass window.*

To help myself remember what to do to take a shot, I wrote down the detailed sequence and I attached it to the camera. After months of field use, I'm still going back to the checklist before each shot. My sequence is this:

- 1-Position the camera and compose
- 2-Calculate exposure
- 3-Mount/Remove filters on/from the lens
- 4-Set F/
- 5-Set focus
- 6-Cock shutter
- 7-Advance Film
- 8-Take picture

With regards to image composition, I feel very important to stress the fact that the 6x17 format is very different from any other format commonly used. It takes some time to get used to it and, above all, to develop a sense for it.

I own and use four different systems: I have a full "bells and whistles" Canon 35mm outfit for wildlife photography. I have a Pentax 645 system which I use for medium format landscape photography when I need the convenience of the integrated TTL light meter. Then I have a full movement, 6x9 Arca Swiss camera, and now I have the Fotoman 6x17.

I initially used to carry with me a mix of at least two systems. The most typical outfit was the Pentax 645 plus the Fotoman 617. With this outfit I thought I could use the TTL meter on the Pentax 645 to calculate the exposure for the 6x17, but I soon discovered that this approach wasn't working for me. I was so distracted by the different aspect ratios of the two cameras that my pre-visualization process was impaired. I couldn't decide which of the two cameras would produce a stronger image and I started taking the same picture with both, only to discover later, on the light table, that none of them had been able to convey the composition I had in mind.



Figure 5: *Sunset on Lake Powell, Alstrom Point, AZ. The view from this overlook point encompasses such a great majesty that you'll feel blessed you brought a 6x17 camera with you.*

I finally decided to carry the Fotoman 617 alone, and it turned out to be the method most conducive to images that I could fully connect to.

Visualizing panoramic images can be very challenging because it is difficult to find and isolate photographic subjects that span properly across the wide film area. With so much space to fill, it is difficult to keep the composition logical and “clean”, and it also becomes exponentially important to carefully balance the image. Avoiding distracting elements on the edges is imperative, as you are not going to have much cropping headroom on the long edges.



Figure 6: *Swirls of time and water, Coyote Buttes, AZ. This picture is a good example of a strong composition using an extra wide format.*

Sometimes you will find that a strong composition can be achieved only for a portion of the format and you’ll struggle to keep alien and uninspiring elements out of your image.

If it’s true that horizontal images look more natural and consequently that most images are shot horizontally, imagine how unusual a 6x17 vertical composition can look given the right subject.

Don’t be afraid of experimenting; a vertical composition with this format represents a visual challenge in itself and you can take great advantage of it. Think out of the box and try to see differently: with the right subject you can obtain vertical images of unmatched appeal that cannot be reproduced by any other format.

For critical compositions, a magnetized groundglass is available. It’s wonderfully made and fits very snugly in place, although the limited swing of the body back door can at times be annoying. A welcome design improvement would be a totally removable door.

Unfortunately the groundglass can only be used when the camera is not loaded with film. Considering that you can only take four shots per roll, you can live with this limitation provided that you devote one roll to a single image by distributing about two stops worth of bracketing across the four shots and then moving to the next shot with a fresh roll. It should be mentioned, though, that you don’t really need to use the groundglass for every exposure, as the viewfinder is very accurate and you can use it with confidence until the next roll change.

If you absolutely want to use the groundglass mid-roll, the only solution is to unload the film, compose the image through the groundglass and reload the film, knowing that the film will sustain this treatment with no damage at all.

In any case I would certainly add to my wish list for this camera a removable magazine with a sliding light-tight blade, and for such a luxury, I would be ready to carry the additional weight and to pay the additional cost.

Once the camera is locked in its final position it's time to calculate the exposure.

Don't expect any help from the camera as it will sit as dumb as a rock on your tripod.

Is this a bad thing? Absolutely not! You are the only one in charge and all the intelligence required to cast the right amount of light on the film has to come from you. In fact, this camera is an intriguing travel in time that will bring your photographic clock back to the days of traditional photography, testing your skills at every single shot.

To finally expose one frame you will need some time and concentration, a separate light meter and you will also need to factor in the use of filters.

I use a Sekonic Dual Master L-558 in spot mode because, through the use of the Zone System, I want to be sure that each portion of the image receives the right amount of light. Mastering the exposure theory and applying it diligently is very important because the "large format quality" of the lens and the large film area conjure to make the 6x17 format quite "exposure-unforgiving".

After calculating the exposure (factoring the filters in, remember?) you need to screw in the filter(s), if any, you intend to use.

If you are using a polarizer and the camera is loaded with film (which means no groundglass), there isn't any way of controlling its effect other than rotating it to the desired effect with your hands in front of your eyes, taking a mental note of the position of some mark on the barrel, and screwing it back on the lens in the exact same position.

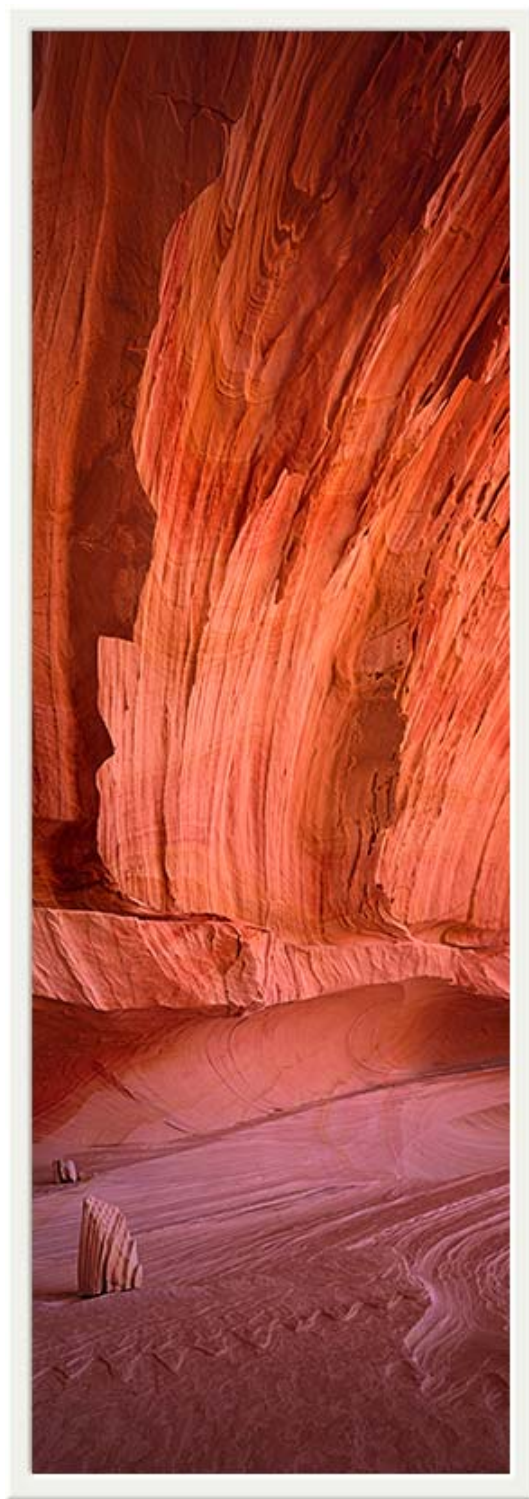


Figure 7: *Cave of fire, Coyote Buttes, AZ. With the right subject, a vertical composition in the 6x17 format can create a very powerful sense of space.*



Figure 8: *Using the groundglass in the field. Unfortunately the back door swings only about 90 degrees, creating some problems especially when working under the dark cloth.*

With some practice, all of this will become very easy to do.

We now have the camera in the right position, the exposure is calculated and the filter(s) mounted. It's time to set the aperture and exposure on the shutter and to focus the lens.

Although the camera can be handheld, I always shoot with a tripod, using the smallest aperture I practically can.

With my lens set at F/45, and with the Fuji Velvia, exposed at 40ASA, I always get very long exposures, past the 1sec Copal shutter preset. A cable release and a wrist watch are essential tools of the trade that I always carry along with the camera.

To bring everything in focus I simply use the depth of field scale engraved on the lens mount and I focus at the hyperfocal distance by placing the infinity symbol on the distance scale under the index of the F/stop being used in the depth of field scale.

I verified its accuracy once and I've used it with confidence ever since, without missing a shot.

The last steps before taking the picture are: cocking the shutter and advancing the film.

Keeping the film rolled around the spool until the photograph is to be taken helps a great deal to ensure film flatness. After advancing the film to the next frame, it's good practice to tension the film a bit by gently rotating the spool knobs in opposite directions. The knobs stiffness will tension the film without unwinding back and the full-size, all-metal pressure plate will do rest, covering evenly the back of the film. As a result, film flatness is not a concern with this camera.

Taking pictures with a 6x17 camera is a thrilling experience in itself, but to be also rewarding in practical terms, you need to ask yourself in advance: what will I do once I get the film back from the lab?

Film needs to be scanned, but scanning chromes of these dimensions opens up a totally new challenge. How to scan images of such richness of details and tonalities without compromising the inherent image quality of the 6x17 format?

There is no easy answer to this question, and I recommend you have a clear plan before you go out shooting with a 6x17 camera.

I personally scan all my chromes using an Imacon 949 CCD scanner (you can read an in-depth review of this scanner at:

<http://gt-photography.com/articles>).

At the maximum optical resolution for this format, 3500dpi, a 16bit RGB TIFF file will have a dimension in excess of 1GB (roughly 24000x8000 pixels), and this is just the raw file, straight out of the scanner!

Downstream, you will need a powerful computer, capable of handling the gigantic master files you will produce from the raw scan.

The most and fastest RAM your Motherboard can take, Photoshop CS/CS2, a multi core processor and huge SATA disks are all highly recommended requirements. You will also need to have all your disks formatted as NTFS, because the FAT32 file system won't save files bigger than 4GB.

I recommend you dedicate an entire partition to your Scratch Disk in Photoshop. I have a dedicated 40GB SATA partition and I've seen it used up to 20GB of swapping file. Believe me, it's a lot of hourglass watching, even on a super fast machine!

Depending on the number of layers, I've saved master files (in Photoshop Large Document Format *.PSB) as big as 11GB. Yes... eleven gigabytes, one file!

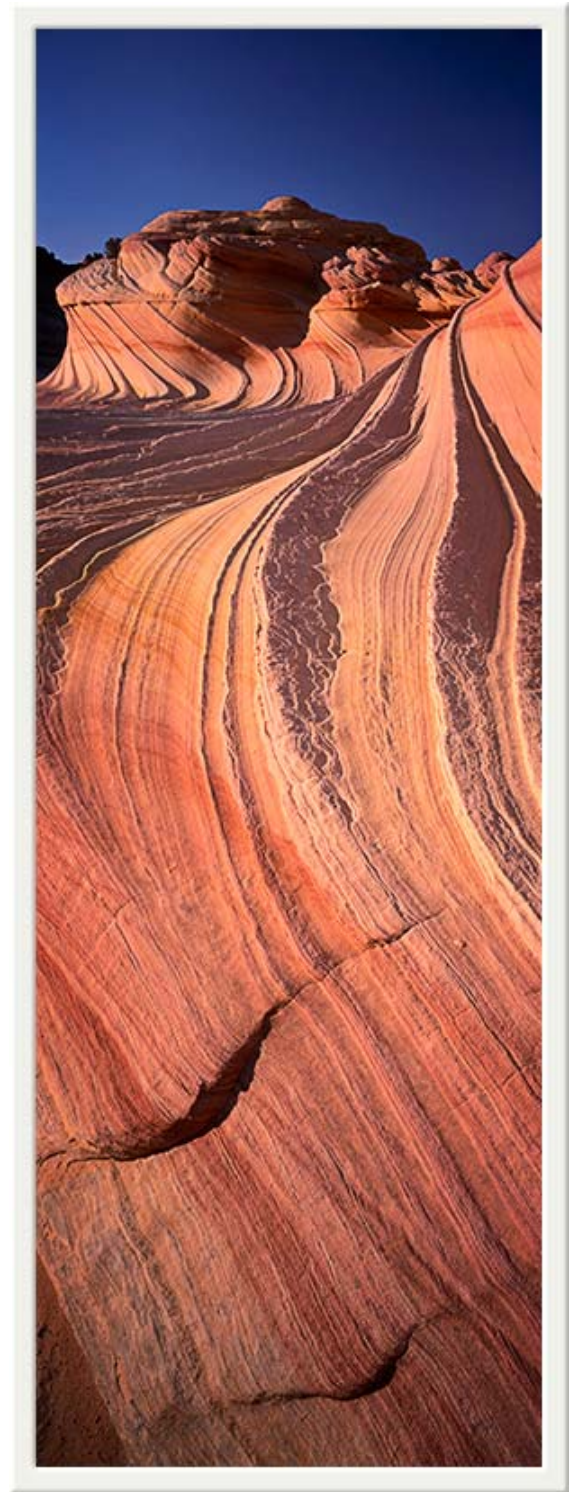


Figure 9: *The “Second Wave”, Coyote Buttes, AZ. I’ve never seen a panoramic image of this wonderful feature. This might well be the only one ever shot!*

These notes are not meant to turn anybody away and it's also true that you can still produce images of outstanding quality using a high-quality flatbed scanner or merging two half scans of the frame from a desktop slide scanner using the Photo Merge command in Photoshop.

With the Fotoman 617 I've produced some magnificent slides that gave me nothing less than sheer joy when I first saw them on the light table. I wish you can experience the same joy; just be aware of what you are dealing with, plan in advance and have your pre-press system ready.

Market Niche-A Competitive Analysis

Although 6x17 cameras occupy a small market niche, the Fotoman 617 is not the only camera of this type available. In this section I'll try to compare the most diffused models.

To keep the comparison as simple and meaningful as possible, other than price and country of origin, I identified a few key factors (listed below) which, in my opinion, differentiate the various models with regards to their practical use.

Designed/made in: the country where the camera was designed and where it is currently manufactured (to the best of my knowledge).

Number of lenses: is the number of large format lenses that can be used with the camera. Some cameras have proprietary lens mounts and cone assemblies and offer an adequate but limited choice. Other models can accommodate virtually any large format lens currently present on the market.

Groundglass (GG) on demand: refers to the possibility of conveniently using the groundglass to compose the image at every shot. Some models offer this option through the use of a removable magazine.

Multiformat: is the ability to change the format of the picture on the fly, mid-roll. Some models can shoot 6x17, 6x12 and 6x9 without changing film, by simply engaging a preset selector.

Movements: to better control perspective, some models offer Rise and Fall movements. The Tilt movement adds the possibility to greatly increase the depth of field through the Scheimpflug principle.

Price: this is the baseline price for the camera body, as currently published (November 2006) by either: www.badgergraphic.com, www.bhphotovideo.com or www.robertewhite.co.uk/.

The results are presented in the table below:

BRAND/MODEL	DESIGNED/MADE IN	# OF LENSES	GG ON DEMAND	MULTIFORMAT	MOVEMENTS	PRICE USD
GILDE 66-17 MST	GERMANY	UNLIMITED	YES	YES	YES (RISE-FALL-TILT)	5950
WIDEPAN 617	USA/CHINA	1 (90mm)	NO	NO	NO	4159 (WITH LENS)
LINHOF Technorama	GERMANY	4	NO	NO	NO	2995
HORSEMAN SW-617 PRO	USA/JAPAN	6	YES	YES	YES (RISE-FALL)	2400
FOTOMAN 617 MARK-II	USA/CHINA	UNLIMITED	NO	NO	YES (RISE-FALL *)	1600
GAOERSI 6x17	CHINA	UNLIMITED	NO	YES	NO	898
FUJI GX-617	JAPAN	4	NO	NO	NO	DISCONTINUED

*ANNOUNCED-AVAILABLE SOON

This is a comparative analysis where numbers and facts are presented and the reader can form his/her own opinion. As you can see, build quality is not included in this analysis, as this element is somewhat subjective and we perceive quality in different ways. Also I didn't try first hand all listed models therefore I will limit my comments to just a few remarks.

The Gilde model offers the most flexibility: multiformat, GG on demand plus Rise, Fall and Tilt movements. Its price is very high, but this camera is seen by many as the best camera on the market.

Widepan is a traditional US design, China build camera with a fixed lens - Schneider 90mm Super Angulon. Its looks like a quality camera, it can use both 120 and 220 film (using a preset winding system) and nothing seems wrong this camera, other than its price. The way I see it, is that you can have a German build camera at a "German" price, and that's ok, or you can have a Chinese build camera with a Chinese price tag, and that's ok too, but a Chinese build camera with a German price tag simply doesn't seem right to me.

The Linhof Technorama is a camera that nothing can be said about which hasn't been said already. It's a wonderful camera with uncompromised built-in German quality, period.

The Horseman is also a very attractive model, with great flexibility (it only lacks the Tilt movement).

The Fotoman 617 is the object of this review and good news about it is that it will soon be added the Rise and Fall movements using an optional, removable, shift adapter.

Gaoersi is an interesting model priced quite competitively. The multiformat option can be appealing for some. I've never tried this camera, therefore I won't comment on it at this time.

The Fuji GX-617 is regarded by many as a wonderful camera and has been used extensively in the past. Unfortunately it has been discontinued and nowadays it can only be found on the used market.

Results

After a couple of rolls I got used to the camera and I started using it with confidence (always with an eye to the written procedure), ease and pleasure. I've created new and beautiful images of locations I visited several times in the past using my other cameras and I've also been able to see compositions I couldn't capture before.

The 3:1 aspect ratio is a crude force that will bend your imagination. If you learn the art of yieldingness, not resisting that force, but using it to your advantage, you can create intense compositions that cannot be matched by any other format.

A lot of debate surrounds the argument over the use of center filters with this type of camera.

In my opinion, there is no better answer than: it depends... on the lens and, ultimately, on you.

Some lenses are more prone than others to light falloff in the corners, but it also depends on the personal taste of the photographer.

When I was still printing my own B&W prints under the enlarger, in a traditional wet darkroom, I used to burn the edges of my prints according to the recommendation that Ansel Adams expressed in his book "The Print". It was a long time ago, but nothing has changed since then that made me change my mind regarding this recommendation. I truly like to have some falloff in the corners/edges of my prints. It helps the observer to stay focused on the image and adds life to the print.

My Schneider 90/8 Super Angulon doesn't show excessive falloff and when I used it with the center filter, I later found myself burning the short edges of the image in Photoshop. Therefore I chose not to use the center filter and I never regretted my decision.

Conclusions

The **Things that I truly liked** about this camera are:

- its build quality, in terms of materials, attention to the details and finish
- the low weight for a camera of these dimensions
- the quality of the viewfinder
- the unlimited number of lenses
- the precise and smooth focusing.

Under the category of **Things that I didn't like**, I can honestly only point out:

- the limited swing of the back door.

Among the **Things that I'd like to be added** I would mention:

- a preset film advance system and
- a removable film magazine, to allow the use of the groundglass mid-roll.

In conclusions, if you are interested in panoramic format photography, the Fotoman 6x17 is arguably your best option if you are trying to combine mechanical quality, affordability, features and number of lenses available. The announced introduction of the shift adapter is also very welcomed news that will add to the camera's appeal.