

Canham KBC 4x5/5x7 camera: a review

by [Q.-Tuan Luong](#) for [the Large Format Page](#)



Overview

These cameras are made by Keith Canham, a craftsman and engineer based in Arizona who assembles himself all the cameras, in various formats up to 20x24. The camera that I own is the 4x5/5x7. At the time of writing of this version, I have shot over two thousand transparencies with the camera.

Keith Canham has all the metal parts made by someone else with very high precision standards. They are aircraft-quality anodised aluminium, and have been designed with weight saving in mind. The wood is black walnut. The camera is very well put together with impeccable finition. It has a slick and contemporary look quite different from traditional wooden cameras, and this difference reflects an innovative design.

The size of the camera is really intermediate between a traditional 4x5 and a traditional 5x7. This makes it a very good performing 4x5 (with the longest bellows of all and plenty of movements) at the expense of some extra bulk. On the other hand it makes a light and compact 5x7, at the expense of a few limitations which are detailed later.

It can be transformed from 5x7 into a 4x5 just by changing the back. However, for some weird reason, the 4x5 back is thicker than the 5x7 back, and therefore the camera has to be refocused. By changing the rear standard and the bellows (which can be done in 30s), it can be transformed into a 4x10. Keith is designing a custom modification to allow it to be transformed into a 8x10 as well (but it will not fold this way). The real 8x10 camera weights only 9 lbs.

The cost, \$2500 is a bit expensive, compared to the Zone VI, Wisner and Wista cameras, but you get a high quality camera which has few equivalents among the woodfield. Since there are not many around (and the owners seem satisfied) it is extremely difficult to find them on the used market. The camera can be ordered (for a \$60 charge) with a front standard which will take the Technika lensboards, which are easy to find new and used, quite small, and a de factor standard for field cameras. The standard lensboards are compatible with Toyo and are slightly larger.

The ground glass is not very bright, and has a fairly coarse grain, but on the other hand, it does not suffer from a very pronounced hot-spot. I found it too difficult to focus with the original ground glass, and tried adding a fresnel, replaced it with a toyo glass, and eventually settled on a boss screen.

There is a dedicated compendium shade which screws on top of the front standard and is well-designed.

Specifications

Materials: walnut / 6061 t6 aluminum hard black anodized
 Weight: 6lbs.
 Dimensions: 9.5" x 10.375" x 4.25
 Lens Board: Canham 4.3" or Toyo field (Technika add \$60)

Min. Bellows - Standard: 3"
 Min Bellows - Wide Angle: 0"
 Max Bellows - Standard: 28"
 Max Bellows - Wide Angle: 9"

Rear Shift: 7"
 Rear Swing: 22 degrees
 Rear Tilt: 20 degrees back / limited by bellows forward

Front Swing: 42 deg.
 Front Tilt - Axis: limited by bellows
 Front Tilt - Base: 45 deg. forward / 90 deg. back
 Front Rise: 1.125"
 Front Fall: 2"

Likes and Dislikes

What I like:

- Lightweight (6lbs) and quite small (weight comparable to the Zone VI or Wisner 4x5, only slightly bigger folded), which is one the main reasons why I got this camera.
- Adequate rigidity through clever design (all the weight bearing parts are actually metal). Note however that John Sparks has complained about the rigidity of the 8x10 at long extensions.
- Excellent choices of bellows: the standard bellows is 26' and can accomodate a 600mm regular lens. The wide-angle bellows will allow the use of any wide angle lens. It is quite fast to change them. Moreover, for \$265, Keith can glue a "universal" MQC bellows on the same frames. the MQC bellows is the same as the one used on the metal camera. it is slightly shorter, and more flexible. as a result, you can still apply movements even when it is compressed, so you don't need to switch to the wide-angle bellows. The drawback is that some care has to be taken for bellows sag (a velcro is provided to tension it). If you are buying a new camera, you might want ask Keith to provide you with this bellows instead of the standard one. I strongly recommend that option.
- Good movements for a field camera. Front has tilt (axis/base), swing, rise/fall, rear has base tilt, swing, and a large shift. There is a triple extension (geared front and rear focusing, these are the only geared movements) and the front standard can also be moved forward or backwards using a combination of tilts.
- Adequate controls and locks. The zero-clik stops are adequate (in particular for the front axis tilt). the tilt and rise locks are T-knobs which are better than circular knobs (in my opinion. John Sparks find them worse) and seem to be tight enough. the swing and shift locks are levers which can be set real tight. The focus locks are flips which have also a more positive action than knobs (some people find them finger-pinching. no problem for me). The controls are quite well-placed, and easy to distinguish with some practice. All the locks are absolutely independant.
- The sliding rear standard is better for wide-angle use than the traditional triple extension design since the only thing which is in front of the lens is the locking lever for front swings. No bed to

drop. Moreover, it can be moved up closer to the front standard with both standards vertical than any other camera. This was another reason I favored this camera since I am using wide-angle lenses a lot. Of all the woodfield cameras, this one is the most adapted for wide-angle use. As far as wide-angle use is concerned, 90mm is the shortest focal length for which the standards can be kept parallel. At 90mm, the amount of rise/fall with the standard belows is less than one centimeter. However, if large amounts of base tilt are used it is necessary to use the combination of base tilts and axis tilts on the front standard to reseed the lens, otherwise infinity focus cannot be established. At 75mm, you cannot shift at all, but the bellows seem to compress enough so that you can focus at infinity. With a 120, long bellows allow only 1.5cm of rise/fall. The problem is solved with the MQC bellows.

The few (minor) problems I had in field:

- The camera is a little complicated to fold and open (it takes me 45s, vs 15s for the Toyo metal field). All the numerous controls have to be lose, and the front standard has to be racked underneath the rear standard. When setting up the camera, it is easy to forget to zero/relock one of the controls, in particular the swing. At the beginning these controls can be a bit confusing, since they are quite different from the traditional field camera design: In particular, it has a separate lock for each movement, which means three identical T-knobs for the front rise, axis/base tilt, two identical levers for the rear shift, and swing, and three identical flips to lock the front focus, back focus, and translation of the rear standard on the focussing rails.
- The spring-back assembly is a bit sticky, and the focussing is not always smooth (this seems to be partly due to the fact that focusing rails of the Canham are aluminum instead of brass). This actually depends on the combination of temperature and humidity (a general drawback of wooden cameras I presume). In cold and/or wet weather it can be quite sticky.
- The latch used to lock the camera closed is not very positive and can easily self-open. The levers used to lock the tilts and rise/fall could be lost
- Interchangeable bellows: reinserting the bellows on the front standard is awkward to do with gloves, and care has to be taken at sitting it properly to avoid light leaks. also, the wide-angle bellows is somewhat fragile. On mine the fabric has detached from the metal frame two times, resulting in massive light leaks, and the corners have worn out so much that I had to patch pinholes with black tape. Getting the "universal" bellows should take care of that.
- The spirit levels, on the top of the rear standard, are not easy to see when the camera is at eye level. It would also be nice to have levels on the front standard, esp. since indirects movements have to be used to obtain large rises.
- After an impact, things began to get out of alignment and less smooth. The camera was still well usable, but I had to send it back to Keith for repair. I believe a metal camera would have stood this kind of abuse better.

Limitations due to the compact design (which show up mostly in 5x7):

- With the 5x7 back, it is not possible to insert the holder in vertical if the maximum backwards tilt of the back is used because then one of the levers gets in the way.
- The amount of direct rise is quite limited.
- With a long lens (450) and the 5x7 format, one has to watch for bellows sag.

On my camera, it looks like the front and the rear standard are not perfectly aligned in the neutral position (probably a general drawback of wooden cameras). Keith measured them and said that actually the image plane and focal plane are well-aligned, but that when you set up the camera you have to be careful in sitting properly the rods in the zero-mark notches.

It would be nice to have marked calibrated scales, in particular on the focus track (for depth of field calculations) or on the rising/falling front (to center the lens). However, Keith can send you a mylar

piece of tape you stick on the rail.

My camera developed a light leak after a few years of use. In some particular conditions (sun at a low angle striking the lower back of the camera), my transparencies suffer from the same light leak pattern. Keith was responsive and tried hard to eliminate the problem, but so far without success. This seems to be an isolated problem.

Conclusion

One of the best things about buying a camera from Keith is the service. Unlike other manufacturers, KB Canham does not advertise heavily a life-time warranty, but I have found that he really stands behind his product, providing truly outstanding service and attention. He was extremely nice to deal with, once fixed the camera and replaced a defective bellows at no charge, and within a few days.

When I bought the KBC, there was no real alternative as a lightweight 5x7. Since then, amazingly, the number of offerings has become quite significant for such an orphaned format. However, I think that the KBC, although not perfect, is still among the best 5x7 field cameras. It is well-made, capable, and quite light and compact. In 4x5, I would look at the DLC 4x5 from Canham, if weight and size are critical, otherwise the MQC 5x7 metal based on the successful DLC design is also certainly worth checking out. Those cameras, although made of metal, share a lot of design features with the KBC. The weight, size, and capabilities of the KBC and the MQC are quite similar. Besides the wood vs metal issue, which will cause many to prefer the MQC, there are some differences, some favoring the KBC:

- DLC and MQC 4x5 back is graflock, and MQC can use the new 6x17 Canham back.
- MQC has more direct rise, and can get the standards closer (good for wide-angle).
- KBC has front axis tilt locked independently from front rise.
- KBC has more positive zero detents for tilts.
- KBC has independant bubble levels on two axis, MQC's are bull's eyes.
- KBC has a handle and doesn't need a protective case as much as MQC, since it folds as a box.

More info

As of 7/2000, Keith Canham doesn't maintain a web site. He will answer questions at:

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See also the [distributors page](#). Some stores including have specs, pricing, and pictures on-line.

Michael Mutmansky's [review of the DLC](#) adresses some points which are also valid about the KBC.

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