Announcement from Chamonix view camera regarding Fresnel lens problem of 45N-1

After repeated testing, it has been confirmed that the Fresnel lens of our 45n-1 cameras will cause focus shift of various degrees when used with certain lenses. The main cause of this problem is that the Fresnel lens is a convex lens with rounded bands; it has its own unique focusing and other characteristics. When you place a Fresnel lens between a ground glass and a lens, it may cause some kind of distortion of the light coming from the lens.

This is a very old problem. Past and current manufacturers of view cameras all have to deal with this problem. Different manufacturers have chosen different solutions to this problem:

1. Some manufacturers like Sinar use Fresnel lenses that can be taken off. This is due to the fact that a very large part of Sinar view cameras are used for commercial photography where large apertures are frequently used.
2. Some manufacturers put the Fresnel lens behind the ground glass. This solution avoids the problem of focus shift, but causes another problem: damages and scratches of the Fresnel lens as it is made of soft materials prone to scratches.
3. Some manufacturers use a Fresnel lens that has a small area in the middle that is transparent and non-magnifying to avoid the problem.
4. Majority manufacturers will tolerate this focus drift by putting the Fresnel lens in front of the ground glass.
5. Some manufacturers like Ebony use a special piece of glass which combines the Fresnel lens and ground glass into one.

In the design stage of 45N-1 camera, we did not plan to put a Fresnel lens on it. When the prototype of 45n-1 camera came to light, so many potential users asked that we put a Fresnel lens on the camera as a standard feature. So we decided to add a Fresnel lens to the 45N-1 camera. Before the production, I made a trip to Japan just to purchase the special ground glass with build-in Fresnel lens like the one Ebony uses. But manufacturers of these special screens in Japan refused to supply us for reasons unknown, maybe for fear of competition. So we had no other options but to choose to tolerate the problem of possible focus shift with certain lenses.

In my experience and from what I have learned from test results, it seems that lenses of different structure and lenses of different focal lengths will have different focus shift when used with Fresnel lenses. Certain lenses, for example, will produce slight focus shift when stopping down due to their unique structure of the lens. Based on this, I do not recommend that users of 45N-1 camera to change the position of the Fresnel lens as all cameras are tested for the accuracy of the Fresnel position before leaving our factory. By changing the position of Fresnel lens, one can't solve the focus shift problem for all the lenses, only some of the lenses.

My recommendation for those of you who have this focus shift problem is the following:

1. Take off the Fresnel lens and use your camera as usual.
2. Return your focus screen to your dealer and our factory will modify it by drilling a hole of 16mm diameter in the middle of the Fresnel lens. This small hole can prevent or fix focus shift that may or has occurred. We have done repeated tests with this method and the result is very satisfactory. The small hole will not interfere with your composition on the ground glass and will easily prevent possible focus shift.

For all 45N-1 camera users, I sincerely apologize for this design error caused by my improper judgment. This warns us to be more careful in future and we will fix this error. For future 45n models, this 16mm hole on the Fresnel lens will be standard.

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