The Plastic Camera

OVERVIEW AND EXPECTATIONS

This chapter covers a little history of the plastic camera, beginning with The Great Wall Plastic Factory in Kowloon in the 1950s, and describes the attributes and varieties associated with this great toy. A good deal of the chapter examines why you might want to use a cheap toy camera and how it has become an integral element of my teaching and work as an artist. Some instructions are also given on how to modify the toy camera so that you can get the most from the experience with the minimum amount of frustration.

A LITTLE HISTORY

Once upon a time there was a novelty manufacturer in Kowloon, Hong Kong, that called itself The Great Wall Plastic Factory. Their contribution to the history of photography was molding several pieces of plastic into a Diana camera that made nifty looking images. The Diana, with mandatory taping of all the seams and a few other modifications, became the camera of choice for photographers seeking options for making images that expressed themselves rather than the optical perfection of modern photographic equipment. For many photographers, this camera represented a perfect tool in which to address that “mirrors and windows” conflict that has been raging for the last century; the “mirror,” where the image is an expression of the artist, and the “window,” where the image defined the information within the photograph.

Beginning with its development in the late 50s and early 60s, The Great Wall Plastic Factory made and sold the Diana, and the Diana F (with a built-in flash), and sold them for $2.25 apiece. Shutter speeds were tenaciously capricious, but if you were really curious you could calibrate and test your camera’s shutter speeds and find that they ranged between $\frac{1}{30}$ and $\frac{1}{250}$ of a second. Apertures were equally unpredictable, but most cameras adhered to a range between $f.16$, $f.6$, and $f.4.5$. Focus was another whimsical trait, and it was essential that you knew just how out of line your camera’s viewfinder was in order to capture what you wanted on film. Many plastic camera shooters carry a bag full of cameras, each with the specific camera’s idiosyncrasies scratched into the body for identification. Eventually, wanting the plastic lens but tired of the bag of cameras, I had one of my Dianas fitted with a Graflex shutter.
Drivers, Giza was made with a Diana plastic camera that I had adapted with a Graflex shutter (the single element plastic lens was glued onto the shutter) in order to allow me to shoot at slower speeds in low light level situations. The weather was very unusual for Giza—freezing cold and sleet.

(Courtesy of the author)
In the years since The Great Wall Plastic Factory created the Diana, the plastic camera has reemerged with nearly the same shape and parts but with a different name attached to its body. Some, like the unpredictable Diana, are considered treasures and sell for premium collector dollars. Other plastic camera types held together for a very short time and were shunned due to chronic failures or, ironically, too much perfection in the plastic lens. Among the cameras that have fit the prerequisites of the plastic toy camera are Anny, Arrow, Arrow Flash, Asiana, Banner, Debonair, Diana, Diana Deluxe, Diana F, Dionne F2, Dories, Flocon RF, Hi-Flash, Holga, Lina, Lina S, Megasmatic, Panax, Photon 120, Raliegh, Rover, Shakey, Stellar, Sun Pet 120, TraceFlex, Tru-View, Valiant, and

![Image of The Holga Camera](Image)

**Figure 4–2**
*The Holga Camera*
*(Courtesy of the artist, Tom Kerr)*

![Image of Holga Camera](Image)

**Figure 4–3**

Sara Jansson, a former student of mine at the Art Institute of Boston, used her Holga plastic cameras to produce a year-long independent study project of people visiting the Eiffel Tower from the same viewing location.
*(Courtesy of the artist)*
Windsor. Of these, the most commonly found these days is the Holga. This particular camera is occasionally too well made and predictable to feel emotionally connected to it. Basically, in order to be considered a true and worthy toy camera the following qualities had to be present: a mysterious shutter speed, minimal aperture control, no focusing control, a soft and romantic interpretation of subject and light, light leaks, and infinite charismatic charm. There is a certain Zen-like peace attached to the act of making pictures and not knowing if they will come out. (Read Eugene Herigel’s *Zen and the Art of Archery* for an explanation of this point.)

**Toy Camera Philosophy**

Throughout the thirteen years I taught at the Carpenter Center for Visual Arts at Harvard University, and for the last ten at the Art Institute of Boston (at Lesley University), I’ve focused on eliminating the myth of “great equipment equals great photography.” My intent was to create a class attitude about image making that had at its core the love of craft, image, and print, married to the phenomenon of play; the one truly universal learning process that all living things with faces enjoy and share in common. I wanted to instill in my students several salient and critical ideas regarding learning:
You’ve got to love doing something before you will invest your time and resources learning to do it well.

Almost everything you do really well in your life, outside of such natural gifts like breathing and digesting, you will teach yourself.

Play is the most effective and persuasive method to teach anyone anything. To paraphrase Aristotle, “…play and introspection are the only two human pursuits that are engaged in just for the hell of it.”

With that premise in mind, at the beginning of each semester or workshop, I would purchase several dozen plastic toy cameras and make a gift of them to each student. Initially, there was the classic Diana, then Banners and Dories. Lately, the best toy camera available has been the Holga. I would also provide a roll of black gaffer’s tape to ensure a light-tight toy, although Holga has almost eliminated this need, and a couple of rolls of 400 ASA 120 mm film per student. Ilford now has a 3,200 ASA speed film, which is terrific for the low light, plastic camera experience.

I would ask my students, as I have every other foundation class since, to put away their sophisticated gear and their perception that good equipment could mask and make up for any shortcomings in technique and creativity. I offered them the opportunity to experience, with their new “toys,” several significant things that I call the Six Plastic Virtues.

The Six Plastic Virtues

- The true memory: The plastic camera is an image-making tool that records life the way it is remembered in the memory rather than the way a lens, far more perfect than the human eye, renders it.
- The element of “gesture”: This is a creative device and a key element of expression in all of the arts. Unfortunately, due to the technically dependent nature of the medium, photographers have traditionally been unable to share this experience. Unless something goes wrong and the artist is lucky, or has the know-how and expe-
The Nubians, populating a region from the Nile Valley to the Sudan, have had a long and amazing history. Once the Nile/Aswan Dam project was completed, many of their villages were flooded and now they move about on boats. I used a modified Diana camera with a Graflex shutter (same plastic lens) to make this shot of two boats passing on the Nile. (Courtesy of the author)

The pleasure of being anonymous: The nice thing about using a “toy” to make your art is that only those with similar experiences will take you seriously. Like Lartigue, who was able to produce images of great energy and beauty because he was a child (and not considered a threat to anyone’s ego), a beginning student can move about freely, encountering curiosity rather than suspicion.

In my own experience, shooting in many different cultures and countries with nothing but my trusty and indestructible Dianas (the crème de la crème of cheap photographic equipment), I have been able to photograph in places where “real grown-up” cameras are forbidden or unwelcome. People assume that I am not quite “all there” pointing a child’s toy wrapped in black tape at the subject of my intentions. As an aside, the confessionals in the Vatican (where you are not allowed to photograph) make exceptional “changing bags” for switching film or salvaging the occasional “fat roll.”

The pleasure of simplicity and play: A plastic camera has few qualifying controls and therefore eliminates the problem of doing something wrong; a great relief to a beginner. The cameras are inexpensive (Holgas sell for around $15) and incredibly simple. There are two aperture settings, sun and sun, cloud and lightning bolt, which double as a hot shoe setting. There are also four focus options: a contemporary lonely single person, a 1950s Disney-definition of the perfect nuclear family, an academic committee, and a mountain range of your choice. The camera can be dismantled, modified in an infinite number of ways, and rebuilt to achieve specific image-making goals.

The working process: Due to the simplicity of these cameras they can be thought of as tools rather than machines, and their output as “gifts” rather than life
and death negatives. The great thing about the play/learning process is that everyone, from beginning student to experienced photographer, learns to love the process of image making while exploring the techniques that are traditional and essential to the medium. Once a student is in love with the process, like falling for a cuisine or a culture, they are often eager to digest the nuances and beauty of that process’s language.

As for the argument that the plastic camera is a gimmick, and that it does not teach a person how to be a photographer, I ask critics to remember that photography is simply making marks with light. I would also pose a question. Where is the greater value to a young artist; in learning through positive play, mistakes, and failures or learning through technically predictable mediocrity? To me, the indelible benefit of process is in the play and the love of making images that are unexpected and personal—the philosophical difference; the gift of a lifetime versus the information of the moment.

**Plastic economics and inspiration:** The plastic camera is one of the best solutions to the problem of creative lethargy. The expense and replacement costs are minimal, and it addresses concerns of equal quality equipment among students by putting the same camera and technology in each student’s hands. It also generates a willingness to play, within a technology-based learning process. Virtually every level of student from grade school to graduate school begins to think of the camera as a toy to create images that express perceptions that are as diverse as the individuals who make them.
Best of all, this “toy” will mold a person’s affection for seeing and photography for life—rare achievements for any learning process.

Plastic Camera Hints and Tips

- Throw away the lens cap immediately. You are using a single element plastic lens and it doesn't need protection. Also, if you are accustomed to a through-the-lens viewing system you are likely to believe that if you can see the subject in your viewfinder then everything is okay—it isn’t. The viewfinder and the lens are two separate parts that are only remotely working together.
- On the other hand, if you want a very low-tech solution to the shutter speed issue you may opt to remove the entire shutter mechanism from the camera. Once the shutter is gone, put the lens housing back on the camera and simply use the lens cap as a shutter. Take it off and you expose the film; put it back on the lens and you stop the exposure. I recommend this technique for very low light situations where you might want to illuminate your subject with multiple test “pops” from a handheld strobe.
- To eliminate one of the only light leak problems that the Holga seems to offer, remove the camera back, look inside the main camera compartment, and turn the camera upside down. You will see two small holes on the inside, on the geometric shape lens housing that serves as a support for the viewer and hot-shoe set-up.
Take two small pieces of black gaffer’s tape and put it over these two holes.

- To keep the film from fogging on a sunny day: place a piece of black gaffer’s tape over the red acetate frame counter window during normal use. When you want to advance frames, turn away from the sun, peel back the tape, and quickly advance to the next number.

- To keep the camera from opening accidentally: tape up the silver, camera back, sliding bar releases during use. If the slides are loose and you are running somewhere, the bars are more than likely to slide upward and cause the back of your camera to fall to the ground.

- A “fat roll” situation is when your plastic “take up” spool on the right inside of your camera doesn’t roll the exposed film tightly enough. This means that it is increasingly difficult for you to turn the advance winder. As a result, because the film can’t wind itself into its opaque paper backing, opening up your camera to correct the problem will expose and ruin your film. Your only solution is to find a totally dark environment and load what you have onto a reel and process. Or, you can unload the camera in a changing bag and place the “fat roll” in a few layers of tinfoil until you can get to a loading room. Always carry a few pieces of tinfoil to wrap the unexpected fat roll until it’s processed.

To avoid the fat roll problem, take the end flap from your film box and fold it over itself about two to three
times (about 2 mm) and slip it under the spools before closing the camera back on a new roll. This will create tension on the spools and should eliminate the “fat roll” predicament. Be sure that you put a little finger tension on the unexposed roll when advancing the first few turns into the camera (up to the first manufacturer’s type on the backing paper)—this gives the film the right idea.

- To prevent thin exposures: shoot in the brightest light you can find because this camera gives traditional HP-5 or T-Max an infrared look. Avoid low light unless you have modified the shutter for long “bulb”-like exposures, are using a strobe attachment, or shooting the excellent Ilford 120 mm, 3,200 ASA film.

- On that note, processing plastic camera film is a great opportunity to experience the graphic potential of “pushing” your film in development. You will likely get blown-out highlights and a lot of grain and contrast, but if you’re not sure that you had enough light to work with it is more prudent to extend the development time rather than having nothing on the negative.

- Finally, lighten up a little—this is a toy you’re working with. If you approach the plastic camera with the proper attitude, it will reward you with all of those great feelings you had when you first decided that being a photographer was a perfect way to spend your life.
**Shutter Modification (Holga)**

One of the limitations of the Holga plastic camera is a shutter speed that is fixed, depending on the camera, between a 30th and 125th of a second. This prevents you from adapting to low light with an alternate shutter speed (adapting for very bright light is not a problem because the lens enjoys recording it in an almost infra-red-like way). A solution to this limitation is to modify the camera so that it works with a “bulb” setting. As long as you keep the shutter release pressed in the down position, the shutter stays open. To do this is relatively simple.

- Open up the camera and observe that there are two small Philips head screws holding the lens housing to the camera’s body. Take a small Philips screwdriver and take out the screws.
- The housing will then drop away from the camera revealing the shutter mechanism. You will see that the lens housing is attached to two wires that are connected to the camera and that they lead to the hot-shoe. Notice that the shutter parts are constructed with a spring, a shutter arm, and a black disk with a hole in it (for exposure) and a small lollipop-like flange sticking out. The trick here is to stop the disk by means of a set pin, which will cause the flange to hit it and keep the shutter open.
- If you look at the shutter mechanism in the resting position, you will notice a spot right at the point where the shutter arm and the disk make a “V.” This is where you will set your pin.
- My advice: go to the drugstore and buy an eyeglass repair kit that is equipped with an assortment of small eyeglass frame screws. Then take the screws and your camera to a small machine shop and request that they drill a shallow hole at the “V” to accommodate the screw.
- When that is done, screw the eyeglass pin into the new hole, making sure that the pin is low enough to allow the arm to swing over it but high enough for the lollipop flange to stop when it hits it.
- Put the lens housing and camera back together and you now have a “bulb” setting camera that is perfect for out-of-sync strobe and nighttime shooting.
Figure 4–11
Christopher James, Secret Inflater Hose for the Great Pyramid/Giza, Egypt, 1993 (Selenium and gold-toned silver print)
(Courtesy of the author)