



How to Shoot Hummingbirds by David DeBar (debar@fairpoint.net)



The above photo was taken out my window using a 300mm f/2.8 lens, an extension tube and some wireless flashes. This shot may look easy, but in fact it took me a full year to slowly develop my technique. In this article I will share with you my experiments from that year, what worked and what didn't, so you, too, can get shots like these.

Below is a photo of my first set up. I started out with all my equipment in the house, shooting out an open window at the bird feeder. I experimented with several lenses but quickly discovered that my 300mm f/2.8 worked best. The shaving mirror was to reflect the light from my HVL-F20AM master flash into the sensors on my model 58 (HVL-F58AM) slaves. (Any model of wireless flash will do – it doesn't have to be the large and expensive model 58.)







The above photos were taken using my 300mm f/2.8 lens and a 2X teleconverter. Using 1/8000 shutter speed and HSS (High-Speed Sync), I was able to take photos like the above. It was not bad, but I was not satisfied with the detail in the feathers. Even at 1/8000th of a second, the motion of the bird and sunlight caused a blur that hid the feather details.

The thought occurred to me that if I had an old Maxxum 9 film camera then I could use its 1/12000 and HSS. Maybe that 50% improvement in shutter speed would help but there is no way am I going back to film, especially with the hit-and-miss nature of this type of photography. I estimate that I only capture the complete bird in flight in about one out of eight tries. Of those

only about one in five is a keeper. (Editor's note: Hey, with nature photography even 1 in 40 is an outstanding yield! -GF)

Then one day I found this link on the Internet that got me started down the right path:

<http://www.naturescapes.net/022004/jb0204.htm>

I was impressed by **Juan Bahamon's** teachings in the above link. I experimented with his methods and quickly found out why he used a back drop with a blurry image (hint: it's explained in the article linked to above.).

I then stopped using HSS and went manual on the flashes at 1/32 power. Now I'm starting to see detail in the feather structure, but that black background is ugly and hard to work with in PhotoShop.



The first question I get when photographers see my hummer photos is, "What shutter speed did you use to freeze her in time?" The second most asked question is, "What kind of camera did you use?" The answer to both these questions is, "It really does not matter." It is the short pulse of the flashes that act as the fast shutter speed. The shutter speed I used was 1/250 of a second. I use this speed because it's the fastest shutter speed I can use with my camera (Sony Alpha 900) and still use my flashes in the manual mode. I set my ISO = 100, F/stop = f/9. I also used a polarizing filter in the lens to cut the light down a bit more. The idea is to reduce the ambient light so it will

not become a significant part of the exposure. Let the flashes do all the work – if you need more light, use more flashes.

It's tempting to make the f/stop as small as possible, in hopes of increasing depth of field. I discovered that this really did not make much difference --. to maintain detail in my images I had to use f/9 so I did not introduce diffraction problems inherent with high f-stops.

My flashes were set to manual 1/32 power. The way a flash limits its power is to simply stay on for a shorter period of time. Cut the power to one-half, and the flash is only on for half the time it is at full power. I have not been able to find the manufacture's flash duration specifications for my Sony flashes. I have been told that at 1/32 power the flash only stays on for 1/80,000 of a second. Whatever it is, it's fast enough to stop the wings on the hummingbird. Remember we need to provide more light intensity for this brief period of time than the sun does. This is done by using multiple flashes placed within a couple of feet from the bird. Exposure is all done manually by controlling the distance the flashes are from the bird. You must experiment and find what works for your flashes.

My Sony/Minolta flash system uses one "master" flash mounted on the camera to control all the other "slave" flashes. I use five slave flashes. I knew I wanted to use the images I captured in PhotoShop and needed to isolate them from any background. I found a way to drive the background to almost pure white: I used an old broken florescent bulb cover that I happened to have. I placed the translucent white lamp cover directly behind the bird feeder. On the other side of the lamp cover I placed two slave flashes aimed at the camera. The remaining three slave flashes are used to light the front side of the bird. When all five slave flashes fire in the same instant, the bird is hit by light from all sides!

Next I added the translucent white background with one flash. I also placed a 2X TC on the 300mm lens.



I discovered I could now use PhotoShop to isolate the bird and drop it onto a background of my choice. I thought that if I had two flashes behind the white background I would be able to drive the background closer to pure white.



Over this past winter I thought about how I would do things differently as I shopped e-Bay for one more flash. I bought another model 56 flash. These things are expensive even when they are used.

This year I took off the teleconverter and placed a 20mm extension tube in its place. I performed the "AF Mirco-Adjust" on my A900 that Gary teaches in his A850-A900 book. I did this with the lens and extension tube mounted on my camera. I moved my camera closer to the window so that the lens almost extends outside the house. I moved all my flashes outside, closer to the bird. I used masking tape to attach a clear plastic painter's drop cloth over the open window, to keep the bugs and hot air out of my house. I cut a small, circular hole in the painter's clear plastic sheet, into which I insert my lens. In short, I was getting serious.

My PhotoShop skills have also improved a lot. I can now grind out photos like this at will. Notice the tiny amount of white on the edges of the bird's wings. This is residue from the white background. I can remove this but its tedious work. To me it looks like the glow from back-lighting; in fact it is just that. Were this line black, it would be disastrous!



One can postulate thousands of other ways to do the same thing. Maybe they would all work?! I simply found a way that works for me.

When you add an extension tube to a lens, it really messes up the ability of the lens to focus. The focus can only be done over a very narrow range once the ring is added and the depth of field is very narrow -- so narrow that if the bird extends its wings while at a right angle to the lens, it's impossible to keep both wing tips in focus. To assure the merged photo is believable, I use the same lens, extension tube and f-stop to photograph the flower and background that I intend to combine with the bird. This way both the depth of field and size scale is consistent. The bird will automatically be the correct size relative to the flower if the same lens and distances are maintained. The shutter time must be changed so that the background can be properly exposed. I used half a second exposure for this example. I also used mirror lockup while photographing the flower. Mirror lockup is not needed while photographing the bird. Focusing is achieved by adjusting the distance of the lens from the flower. The focus ring has very limited effect.

I found that auto-focus worked better than manual focus for the birds. It's nearly impossible to predict the exact distance the bird will be when the flashes fire. A human cannot react that fast. On the other hand, the camera does not get it right every time -- it's a bit like fishing. You never know when you will capture the image or have just a portion of the bird in frame, or if the bird will be in focus.

You can experiment with various lenses that you have. I found that none of my lenses came close to my SAL G Series 300mm f/2.8. This lens has a built in feature that lets you select the range that the lens will focus within. You set the far distance, (in this case the plastic sheet used as the background) and the near distance (just before the bird feeder). This way the lens can focus quickly because it does not waste time trying to focus where there is nothing on which to focus.

This photo shows how the bird is blasted by intense light from all sides as it approaches the feeder. The black object in the lower left corner is one of the flashes used to illuminate the front of the bird. Yes, they are that close!



The photographer's view of his work.



My outdoor hummingbird studio:



In the above you can see the feeder. Notice that the perch is removed. The birds must hover in flight while drinking. I covered all but one of the functional feeding stations with aluminum foil, forcing them to feed from one feeder station, on which my camera and flashes are trained. The three flashes used to illuminate the front of the bird can clearly be seen. Notice how the background tilts back, this is deliberate. It diverts reflections caused by the front flashes from being sent directly back at the camera and causing hot spots. One of the two flashes aimed into the backside of the lamp cover can also be seen. The clear plastic sheet that keeps bugs and hot weather from entering my house can be seen covering the open window.

The view from within my house:



In the above photo you can see my camera mounted on a tripod pointing at the bird feeder, the plastic covering my window. The little model 20 flash mounted on my A900 controls the five flashes outside my house. The light from the model 20 passes through the plastic sheet to control the slave flashes outside. The little dangling remote control receiver can be seen dangling down from the camera body. I use a handheld, battery powered transmitter to fire the camera when I see a bird in position.

A close up of the camera settings:



The individual photos used to make the composite at the top of this article.

The bird:



The flower:



Everything I know I learned from Gary.

To see more examples of hummers I have captured please visit my new Website:

<http://daviddebar.zenfolio.com/>

Good luck.

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