

Route 4, Box 33  
Santa Fe, N. M.

1 March 1961

Mr. Crawford H. Greenewalt  
9042 Du Pont Building  
Wilmington 98, Delaware

Dear Mr. Greenewalt:

Your photoelectric equipment is very elegant. Mine in comparison is heavy, bulky and crude. I have enjoyed using yours both in my studio and out of doors at a feeder. In the studio, using the special flashlight, I was delighted by the way it worked. It would trigger when I waved a thin screw driver fairly rapidly across the beam. This makes it ideal for photographing flying insects, at least that aren't too small.

Out doors I had some trouble. I set it up with the photocell pointed towards the sky as you described. At first it seemed to work very well and would trigger when I passed my hand above the tube at about the level of a bird alighting on the feeder. I took quite a few pictures on successive days. However, on the third day it wouldn't work at all. Passing my hand or arm over the photocell did nothing and even a bird perched on top of it didn't trigger it, although it would trigger at times when a black object was used instead of my hand. This latter effect suggested that the photocell might be kept active by very weak reflected light from the triggering object, but it was not a consistent effect. I tried all kinds of remedies without avail; I changed the batteries, bought new batteries of measured correct voltage, extended the photocell tube with black paper, turned off and disconnected the strob, grounded and insulated one piece of equipment after another. All was in vain. Then I tried using your flashlight pointing the cell towards the ground from above with the flashlight below. For a while this seemed to be the solution and I tentatively concluded that the trouble had been with stray light but my hopes were soon dashed when it reverted to its earlier behavior. After that I gave up for the day. The next day I tried it again and at first it seemed to be working but this time it worked, in a sense, too well. In fact it triggered spontaneously when nothing passed over the top of the tube, as well as when it did. It had been behaving this way, I discovered when the film was processed, on the first two days as well. This kind of behavior is not new to me. My equipment has given me all kinds of trouble which I could not correct or discover the cause of, but it has always corrected itself after a day or two. Right now my device is working very well. I can imagine all kinds of possible causes for this erratic behavior but not being competent in electronics I don't know whether they make sense. Does temperature effect these devices? How sensitive are they to humidity? It is very dry out here. My equipment does not work well under very moist conditions. Do static charges effect it? I am sure there is some simple explanation and that the difficulty can be corrected by shielding, insulation or some such measure.



However I may sound I am not discouraged in the least. In fact I think the device would suit my use very well for many purposes and I would like to have it duplicated, including the flashlight if possible. Of course I would like to know if there is an explanation and remedy for its unpredictable behavior. If it is possible to have it duplicated could the following minor modifications to adapt it to my particular way of working be included: a 12 foot solenoid cable and a 10 foot photocell extension cord?

I will return everything to you in a day or so. Thank you very much for so generously sending it to me. I greatly appreciate the trouble you have taken to help me.

My plans are now settled to go East about the middle of April. I expect to stay until the middle of May or a little later. Perhaps during the latter part of this time it would be convenient for you to have me come to Wilmington to see you. I don't want to impose on your kindness so if it is not convenient for any reason I will try to make it another time later in the year.

Yours sincerely,

Eliot Porter