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Exploring the World of Infrared Flash Photography

By Dan Wagner

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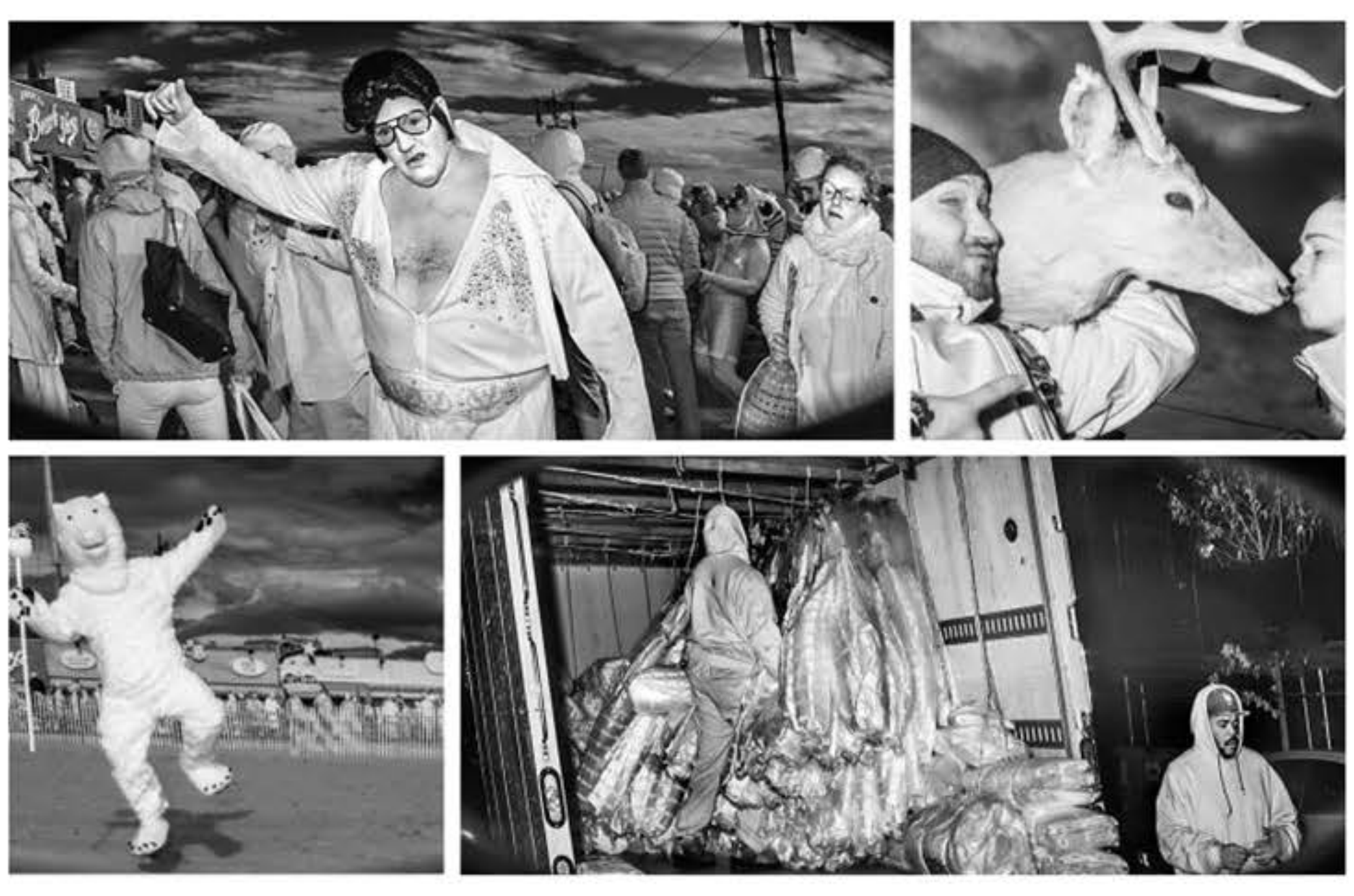
We photographers are always searching for that new camera, lens, accessory, project, or technique that will take our photography someplace special. Most of us have ideas incubating in the backs of our minds just waiting for the right time to spring forth. One of mine was a fascination with shooting candid black-and-white street photography at night with infrared flash that was inspired by the iconic photos Weegee produced with infrared film in the 1940s.

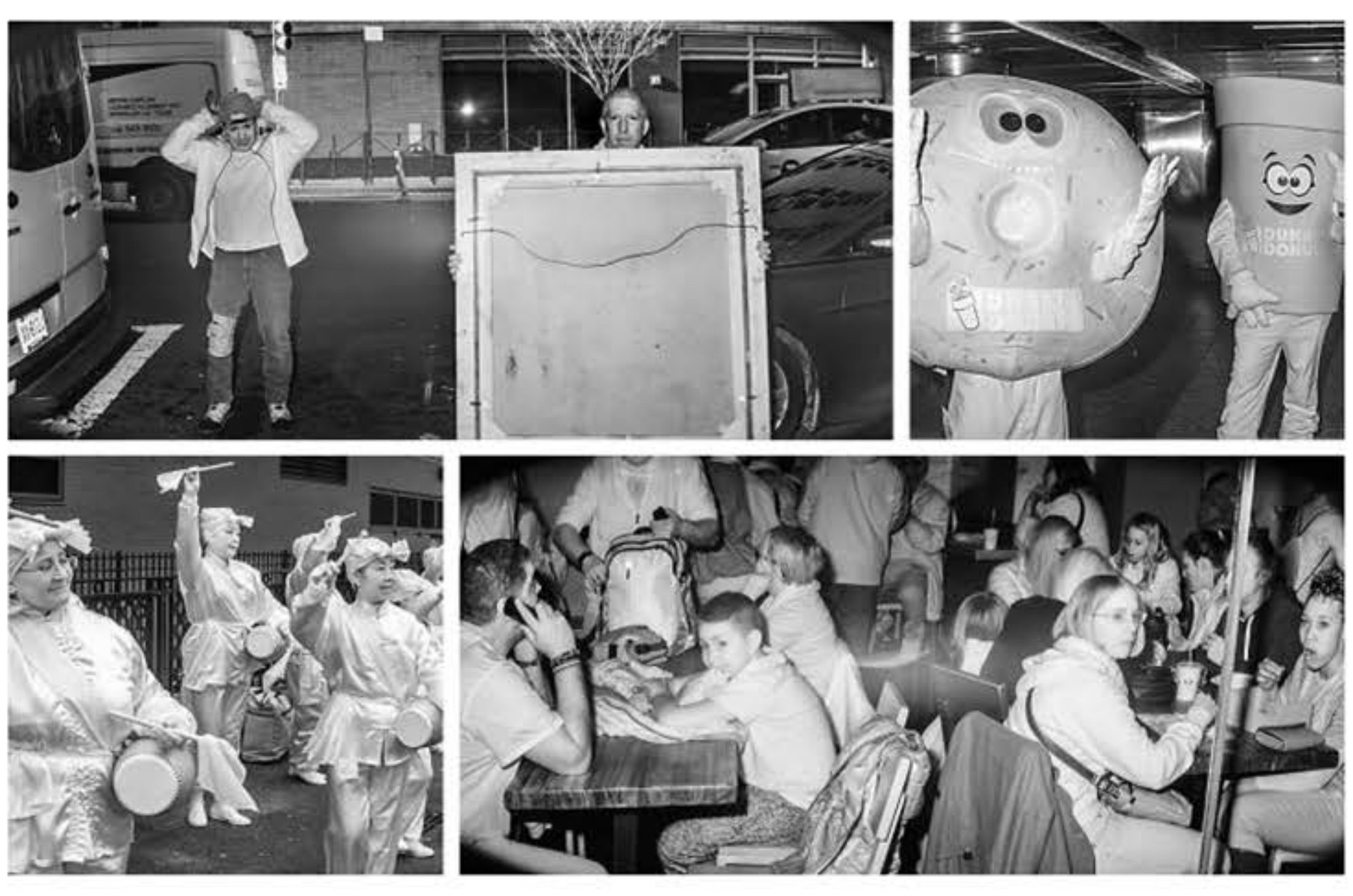
In my quest, I researched, amassed, and tested vintage GE 5R flashbulbs that feature a dark purple coating designed for use with infrared film. Unfortunately, I soon learned that the low output of the flashbulbs, in combination with the low sensitivity of available infrared film, would not yield the results I was after. Eventually, I found what seemed to be the answer to my problems—a Sunpak 622 Super Pro Flash Body, and a modular IR Head. While these items were discontinued more than a dozen years ago, they can still be sourced in select camera stores and on eBay.

Photographs © Dan Wagner



With a powerful guide number of around 200' at ISO 100, I had high hopes that the Sunpak 622 would do the trick. To optimize my chances, and to make testing easier, I decided to have LifePixel convert my Sony a7 to deep black-and-white infrared. After conversion, the camera sensor was receptive to 830nm light, which was a perfect match to the 840nm produced by the Sunpak IR Head. All that's required is for the sensor to be sensitive to light below 840nm. During initial testing, I was amazed at how sensitive the camera was to infrared flash. At ISO 400, f/16, focus set to 10', and with the flash set to its lowest power, I could shoot in complete darkness.

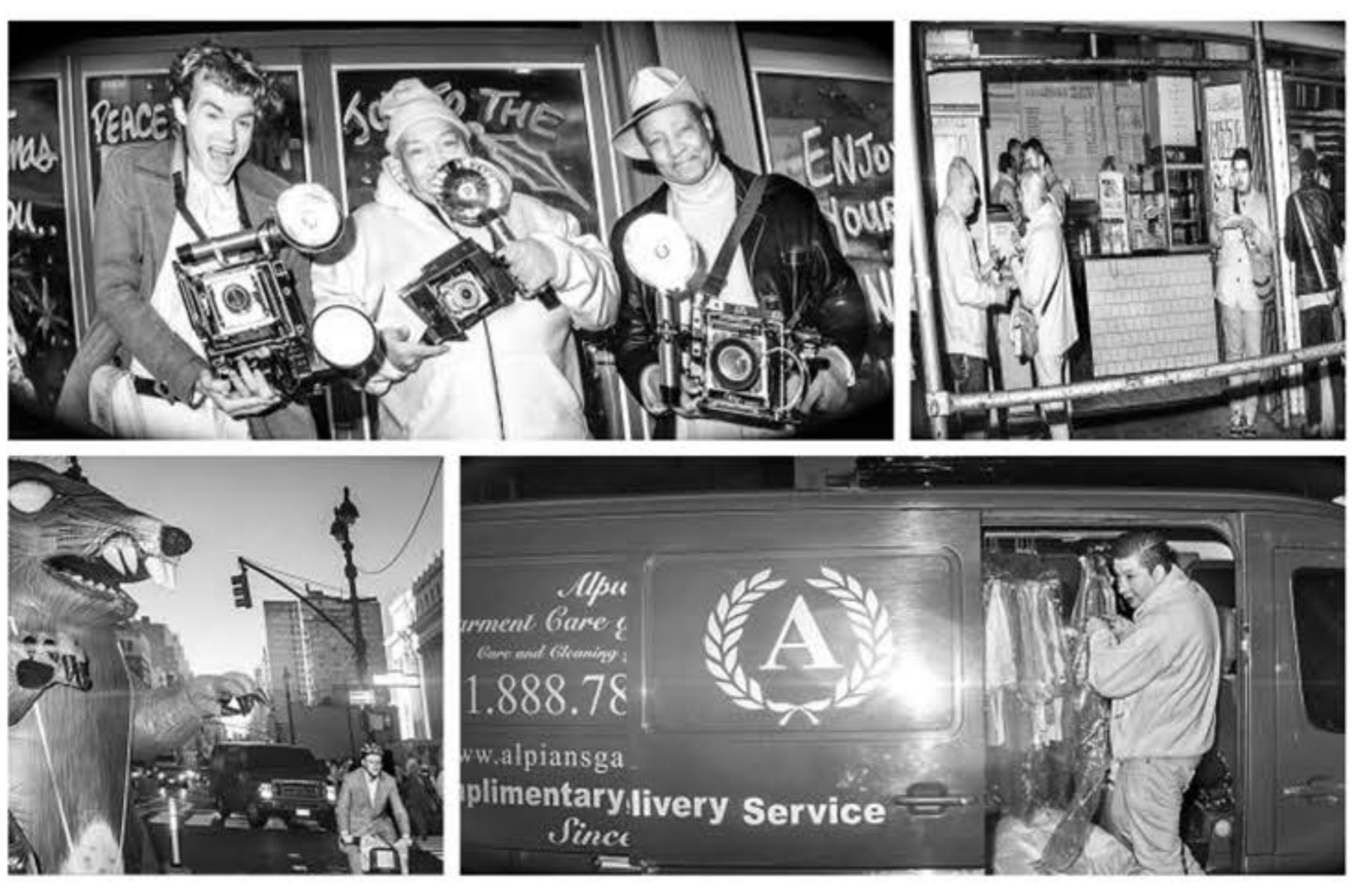
One of the drawbacks of the deep black-and-white conversion was slower autofocus. So, if I had it to do over again, I probably would have gone with the Standard IR conversion, because the 720nm infrared filter placed over the sensor isn't as dark and, therefore, makes it easier for the camera to focus in low light. I also could have converted a DSLR instead of using a mirrorless camera. With a DSLR, focusing would be easier in terms of the amount of light required, but it would also be limiting due to the need to calibrate the camera/lens combination for infrared. Mirrorless cameras don't have this issue because focusing occurs at the image sensor.



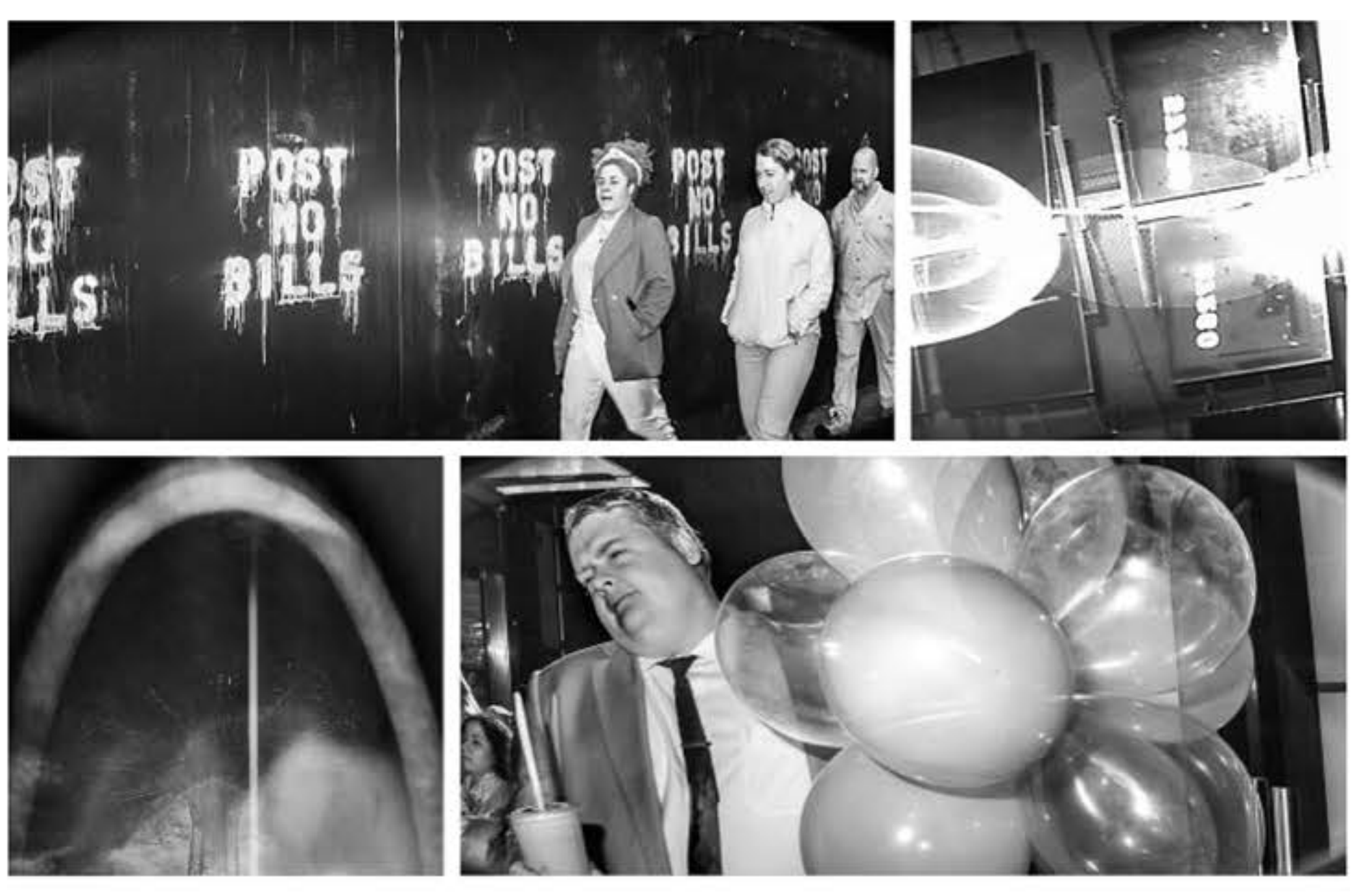
By the way, before using any non-OEM flash unit, make sure the trigger voltage is safe for the camera with which you're shooting. To avoid frying the electronics in my camera, I attached the sync cord from my Sunpak to a Wein Safe-Sync Hot Shoe to Hot Shoe with PC mounted on my camera.

Over a period of several months, I experimented with my new infrared rig. I found that the flash was powerful enough to shoot infrared flash-fill, and even overpower the sun in bright daylight if I stayed within 15 feet of my subject. Not content to stop there, I combined the infrared flash with a Sony Sonnar T* FE 55mm f/1.8 ZA lens and an SLR Magic Anamorphot-50 2.0x Anamorphic Adapter. I shot in raw and did my processing and adjustments with Adobe Camera Raw and Photoshop. When shooting with a 2.0x anamorphic, the image is compressed horizontally by a factor of 2, and requires multiplying the length by 2 during resizing.

The 55mm lens and 2.0x anamorphic lens produced corner vignetting with my full-frame Sony a7. If I had wanted to eliminate the vignettes, I could have shot with a longer lens, cropped the image, used a small sensor, or shot in a cropped mode. The thing was, I really liked the images with the vignetting—both compressed and uncompressed. To further explore the photographic possibilities, I shot around New York City and put the results of my efforts into a Blurb book titled, *NYC SQUEEZED*.



I never know where my photographic adventures will lead me. I do know there is plenty of unexplored territory in the world of infrared flash photography. One application that I hope to see others explore is shooting music concerts where flash photography is prohibited because it distracts the performers. With infrared flash, this would no longer be an issue. Other subject matter that could put this technique to great use would be urban landscapes, fashion, and even still life. Please feel free to share your thoughts, questions, and experiences with infrared in the Comment box, below. More examples of my photographic wanderings may be viewed on my website.



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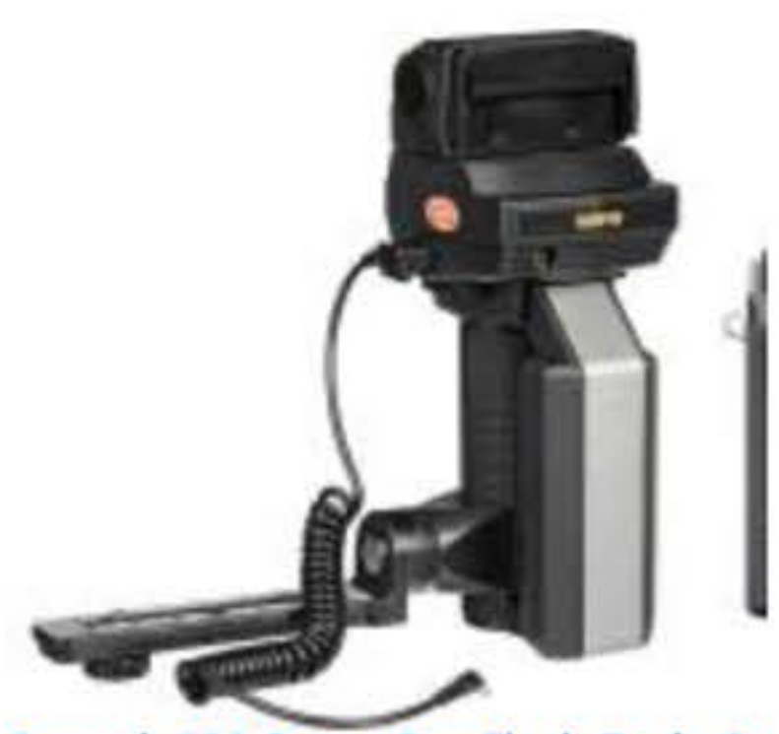
Kenneth L.

I'm kind of late to this party, but thank you so much for posting this! I recently purchased a SunPak 622 with IR head, and also recently had an old Olympus E-M1 converted to full spectrum by LifePixel, and am looking forward to trying out this setup. Just waiting for the SafeSync to show up so I can use the two together.

I also have a collection of IR flashbulbs that I've been intending to use with my film cameras with IR film. Can you tell me a little more about your experience with that arrangement? It sounds like it wasn't too successful...was this because you were trying to take pictures of subjects that were too far away for the IR flashbulb to reach?

One other idea I had for a less conspicuous setup (the 622 is rather large!) would be to cut a panel of IR acrylic to use in the filter holder of my old Vivitar 283 flash. The flash is already set up to use filters so all I would have to do is cut the IR acrylic in the same shape as one of the original Vivitar color filters. Since this would mimic the filters made for the flash I think there wouldn't be a heat problem. I guess then the only question would be how much IR light would actually be available from the flash...

Items discussed



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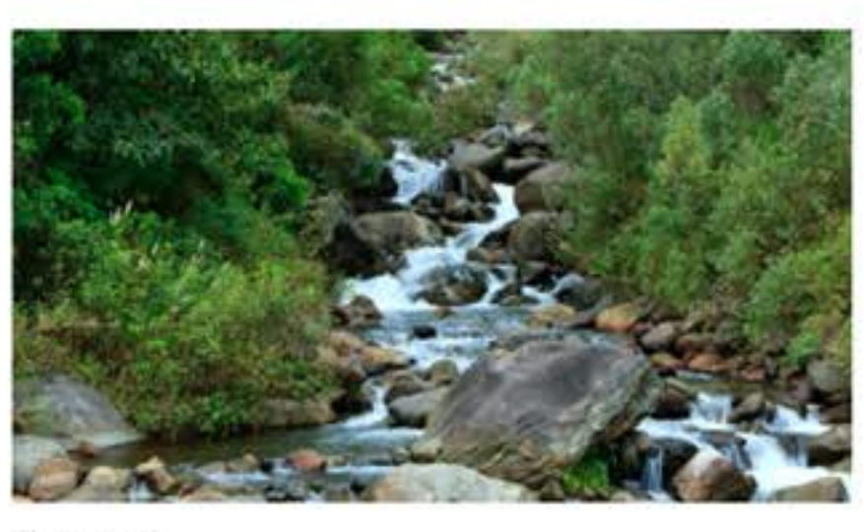

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