

## Tricks of the Trade – part 1

I get an awful lot of e-mail these days, and the subject of most of it naturally has to do with methods, techniques and the equipment I use. Many ask for recommendations for their own purchases. From time to time I post my thoughts on this at various locations where I have a presence, but thought I should start a series for my website. The original copy of this was posted by some friends from Ghost Studies L.A. on the Face Book page, and I read the file and realized it was not only rife with typos, but somewhat dated. I figured this would be as good a time as any to update.

How many times have we heard “I saw something out of the corner of my eye, but when I looked dead at it, there was nothing there..”

I myself have heard it many, many times, and have had it happen to me on numerous investigations. Why is that? Well, it is due to the same reason why digital cameras are so much better than film cameras (unless you use special film) to capture haunting images. Our peripheral vision is more sensitive to the low end of the UV (Ultraviolet) spectrum and the high end of the IR (Infrared) light spectrum. Scientists speculate that the reason for this is most likely an evolutionary trait brought on by our extraordinarily strong survival instincts. In the same vein, nearly all digital cameras use the same type imaging chip. This chip “sees” well into the infrared and ultraviolet spectrum, the two extreme ends of the light spectrum. This is accentuated by filters in the camera in front of the sensor behind the lens. This is generally why so many investigators use IR light sources to photograph or film activity in total darkness. If you have been shopping lately, the cost of IR illumination can get extremely expensive real quick. But there is a more inexpensive way to “Light up” your investigations.

We have been experimenting at SPIRIT for about six years with Black Light (UV). Specifically, we went to Home Depot, bought some of those aluminum reflector fixtures that take a standard light bulb and clamp onto a surface (such as a Tripod that your camera is mounted on). These fixtures range in price from about \$5.00 to \$10.00 depending on the size of the reflector.

Then we walked over to the light bulb section, and purchased a “Party Bulb” black light incandescent bulb that fits a standard light fixture. By ganging several together we are able to light up a room. One will light up a field of view for a typical CCTV camera, and the best part is that your Hi-8, Digital or CCTV camera will see it as white light. Of course it will print as black and white and not color, but it will be bright. You on the other hand will be stumbling around in near total darkness, so be careful! Oh and that party bulb? The cost is around \$4.00 per bulb. This means for nine dollars you can assemble a light source equal in effectiveness to a single \$65.00 IR fixture. This is certainly a way to make your investigative dollars travel further. And how effective is UV in photographing Paranormal Activity? It is so good that a cottage industry has started up by folks specializing in removing the filters on digital cameras to make them “Full Spectrum” cameras, or to add filters to make them IR or UV cameras. But one must be careful. The rages these cameras see into these spectrums is limited, so keep that in mind. As a side note, the shadow person photo I captured in Perth Amboy was backlit by UV light. UV light is also safe to use around precious works of art, verses a monochromatic flash or light source.

Temperature is another area in which there seems to be a lot of general confusion about. How many of you use those fancy "pistol" IR thermometers on your investigations? Do you know that they are absolutely useless for finding cold spots, unless they are on a surface? The way they work, is the laser bounces off the surface it hits and senses the temperature. If you shoot through a cold spot, unless it has sufficient mass to reflect the laser, you miss the spot. And guess what? Those fancy ten thousand dollar thermal imaging cameras work the same way. In fact both are engineered to specifically IGNORE ambient temperatures. So if they see a ghost, you will too, without the expensive cameras.

What they are good for, is locating drafts, as well as cold air leaks into a room. They are excellent for Crptozoological hunts, and UFO documentation. Pretty ineffective in finding a cold spot in the air.

So how do I take a spooks temperature? There are several ways. One is very inexpensive, and the other is rather costly. The first way is to by an indoor outdoor thermometer. Shop around and get one that has a high refresh rate (rate of change, or quickness in responding to changing temperature. Real cheap ones take up to a minute to refresh). Radio shack makes a unit for under \$30.00 that also has a hygrometer (Humidity) scale on it. (This is handy to measure room humidity which can help you to eliminate dust as a possible cause of orbs. Dust cannot fly around when weighted down with moisture). The expensive way is with a temperature sensor and a hand held scope meter, or multi-meter calibrated to read accurate temperature. The set up I use has a refresh rate of about 30 milliseconds( real fast) and an accuracy of +/- .001 degrees. I use a Extech 381275 Scopemeter with Extech 381277 Temperature Adaptor. Total cost is about \$500.00. As always, you can shop around on E-Bay though and get some better pricing. Extech also makes a hand held Temp/Humidity meter for under \$200.00. Another good source is DAQ or Data Acquistition Device. This is a multiple channel data logger that can run several temperature sensors and keep a real time record of any transient changes that may occur. The device and software can run as little as \$250.00 and all you need is a laptop computer.

The trick in using any of these methods/devices is how you set up the sensor. On the Radio Shack solution I take the outside sensor and attach it to a nonconductive wand (a dowel, hell I have even used a chop stick), tape the wire down with electrical tape (I wrap it around the full length of the wand) and now you have a probe that you can thrust into a cold spot, map its size and area, and follow it until it dissipates. Because it is mounted on a non-conductive wand, your skin temperature will not affect the readings. Calibrating temperature sensors can easily be accomplished by emerging it into a bucket of ice and water. This gives you 32 degrees. If you have offsets, this method can calibrate the temperature to within a tenth of a degree, which is close enough for what we are doing.

The last tip I'll pass out here is derived from my recent discovery of what the nature of an EVP is. I have fairly well proved at this point; that an EVP is not sound at all (voices you can hear are Audible Voice Phenomena), but instead is a modulated electromagnetic field, fluctuating in frequency in the audio spectrum. So, if you want to increase your chances of getting an EVP, use an outboard dynamic microphone. Why?

Dynamic microphones respond directly to electromagnetic fields. The EVP actually moves the coil in and out of the magnetic field of the element, generating the voice that gets recorded. I have a white paper about my research on this at the SPIRIT LAB website on the Research page. Dynamic microphones range in price from el-cheapo deluxe plastic versions for about five bucks, to an inexpensive cardioid pattern one from Radio Shack for about \$39.00, to expensive studio grade dynamic microphones that sell upwards of five hundred clams. In any case, the five dollar model works just as well as the Cadillac version. The only things cost will gain you, is fewer recording artifacts and a clearer recording. We use a lot of CCTV set ups in our investigating, where we use a CCTV low light high resolution camera coupled with a VCR or DVR (I actually get better results with VCRs, but I think that is because the tape is more sensitive than digital formats). For audio, I run several microphones in the room back to a mixer, and then I can boost the level of the audio recording significantly to pick up a sound as low in level as a rat fart. This is a very effective detection/capture setup. Try different pick up patterns in the microphones you use. I have some omni-directional ones as well as cardioid to super or hyper cardioid. Omni is a wide pick up pattern, cardioid is a narrow pattern. Remember too that by adding mics to a set up, as long as they are wired in phase with each other, they have an additive effect, meaning they increase your sensitivity. This is a good trick to know when you are hunting for EVPs that are just above the noise floor. More good stuff is coming in Part 2