

# NIGHT-OPS

REMOVING ANY SHADOW OF DOUBT



## **BlackHawk + Strategos = Night-Ops!**

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Every now and then life presents us with an opportunity to learn from our mistakes. That applies to people, organizations, families – well, nearly every group of people you'd care to lump together. I think there might be some folks learning a hard lesson in the near future. That said, I have to tell you about this new collaborative effort that has resulted in a truly revolutionary hand-held illumination tool: the Night Ops Gladius.

To get into the Gladius a little background is necessary. A couple years ago – February of 2000 to be exact – I attended the Low Light Instructors Course being delivered by the training staff of SureFire Institute. That meant I had Vaughn Baker (veteran SWAT cop), Drew Bowman (Army Ranger) and others teaching me about the dynamics of low light engagements. It was an OUTSTANDING program and I wrote a review about it for the ASLET Trainer the day after I finished the class.

A couple months later, due to some reorganization at SureFire, the SureFire Institute became a virtual entity which contracted out all of its training. Ken Good, Vaughn Baker and Mark Warren who were the hub of the SureFire Institute went their own way and formed Strategos International. Now, bear in mind that Ken Good is a former Navy SpecWar operator with close to twenty years of experience training close-quarters-combat in low-light environments. Vaughn Baker is a veteran SWAT officer who had been training CQB in low-light for quite some time – as had Mark Warren. These are guys who know what an operator needs from an illumination tool and they were happy to put that expertise to use supporting the research and development of new illumination tools. However, once SureFire reorganized, that resource was no longer available for them from this particular group of experienced operators/instructors. Fast forward...

Strategos International is formed, goes operational and begins to grow. Ken, Vaughn and Mark begin to design their own line of illumination tools – flashlights better suited to the needs of the combat soldier / police officer. The challenge that they faced was this: Strategos International was a fledgling company and they had to finance all R&D on their own. Enter SHOT Show '04 and a meeting between Ken Good (former Navy SpecWar, remember?) and Mike Noell, President of BlackHawk Products Group (another Navy SpecWar guy). The result was a very well kept secret business relationship that developed between BlackHawk and Strategos: a relationship that produced Night-Ops Illumination tools... and introduced a whole new breed of hand-held light devices. The most important thing to note here is this: the light wasn't designed by engineers telling operators what they could have - it was designed by operators telling engineers what they needed and then the engineers had to figure out how to do it. The results are AWESOME – and not something any other company can produce if they're going about it the wrong way. Lesson learned. Now that we know the players, let's move on to this flashlight.

I received an invitation to travel down to BlackHawk Products Group in Virginia Beach, Virginia for a "Writer's Conference". Never having been invited to one before, I really didn't know what to expect. When I got there and found out whom else was there I was blown away. Folks like Wiley Clapp, Leroy Thompson, Charlie Cutshaw and Walt Rausch brought more years of writing experience into the room than I can count years I've been alive. For me, just being there was a great experience but the highlight was the announcement of the Night-Ops line of illumination tools. The first product is a high intensity LED, 2-cell flashlight powered by CR123 3-volt lithium batteries. That's not uncommon. There are plenty of illumination tools available that work off those batteries, different designs taking anywhere from one to six cells. Nothing amazing there. Stand by.

First I guess we should get the physical characteristic information out of the way. The Night-Ops prototype light (multiple patents pending) that I have is 6.2" long with a 1" in diameter main body and a bezel that is 1.25" across. For the sake of comparison with something you know, it's just a shade longer than the SureFire 6P. That's a good size for a personal hand-held combat light. What really determines the usefulness of a combat light though are light output, durability and functionality. Let's take a look at those.



The Night-Ops light has some truly unique functionality built into it. The key to this functionality is the smart electronics that the design incorporates which allows the tailcap to do a lot more than just activate the light or effect an electrical disconnect. The tailcap has three positions in addition to the "lockout" position (patents pending). Since the lockout selection performs no light function, I've learned to generally dismiss it as a function control position. After all, it effectively makes the light do nothing. That's VERY important when you're trying to avoid accidental discharges, but it does not change how the flashlight produces or controls the light.

The lockout position is reached by depressing the tailcap button  $\frac{1}{2}$  way and then turning the function selector counter-clockwise (left) until it stops. The function selector is a polycarbonate rotating collar that is independent of the main body of the flashlight. That is very important and I'll tell you why in just a bit.

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Starting at the lockout position, you turn the function selector one click to the right / clockwise. That first position allows you to touch the tailcap button to turn on the light. You don't have to hold it – just give it a soft push and release it. The light is on. Give it that light push again and it's off. Now, this light, in the prototype configuration that I have produces about 85 lumens of light at full power. For CQB search and target identification work, that's plenty of light. However, 85 lumens is a lot more light than any pilot usually wants in his cockpit under light-disciplined circumstances, or in any setting where he's trying to protect his night vision. That's why some manufacturers make special flashlights just for aviators. On the Night-Ops light, in that same first position, if you push the tailcap button and hold it in, after a three second filter the light will begin dimming and across the span of five to seven seconds it will drop down as far as to a 10% power level producing as little as 6 lumens of light. For aviators that is a wondrous capability (can you say, "patent pending" again?). For soldiers and cops moving through low-light environments without night vision gear, that amount of light is sufficient to navigate by but is not going to advertise their position as readily as 85 lumens of light would. Upon learning about this feature my first thought was that we would be saving aviators from having to carry two lights: one for cockpit use and one for combat use if they get shot down / disabled behind enemy lines. Now they can carry just one light that performs multiple functions – and it just gets better.

What if you hold the button too long though and the light gets dimmer than you'd like? You release, push it again and hold it, and after that three-second-filter time the light will begin to brighten up to where you let off. In the process of performing my duties as a law enforcement officer, I can't tell you how many times I've pulled out a flashlight to write a ticket or field observation report only to have to play with my flashlight so that I wasn't self-blinding myself with the reflected light off the white paper. This dimming feature is the ideal answer to situations just like that.



**The Night-Ops “Gladius” patent pending tailcap is the key to the functionality. Three positions allow for pressure activation, touch ON/OFF, dimming/brightening, and RapidFire Strobe Mode**

Turning the function selector collar one more click to the right / clockwise, you put the illumination tool into “strobe” mode. The strobe/flash feature, called “RapidFire Strobe” (and you guessed it, patent pending soon to be trade marked) pulses the light at the optimal rate to interrupt linear thought processes and create an imbalance in your opponent. “Mind numbing” is NOT a turn of phrase here: the human mind actually has a hard time processing images that come in at a certain rate and Night-Ops has designed this light specifically to be the most efficient NON-lethal NON-contact tool an officer can carry to impact his/her opponent’s thought process and ability to perform directed behavior. Preliminary research shows that confronting an aggressor with this pattern of light directly into his eyes can cause reactions that are greatly to the advantage of us, the good guys. Those reactions can include: imbalance, involuntary closing of the eyes, turning the

head, a loss of depth perception, a feeling of pending physical impact, and sometimes even an increase in heart and respiration rate due to the psychological stress caused by the mental overload. It is important to note that in the strobe position the light only flashes while the tailcap button is depressed. Release the button and the light turns off. Perhaps in the future Night-Ops will find a way to leave the strobe activated under certain circumstances so that it could be used as a personnel marker with or without an infrared filter. It is important to note here that this tool is not meant to replace other force sector options: it is meant to give the officer / soldier a window of opportunity that he then has to leverage to his benefit by selecting the appropriate force option.

Turning the function selector collar one more turn to the right / clockwise puts the light into touch activation mode. If you push the tailcap button the light comes on, but only stays on for as long as you hold the button down. This is a functionality that is familiar to a lot of warriors who use anodized aircraft aluminum flashlights in the course of their duties.

Now I mentioned that at full power the light produces about 85 lumens of light – that’s with the prototype that I have. This prototype uses an optical focusing design. The production lights will incorporate a reflector focusing design that is expected to increase actual light output as much as 30%, with the final light output measurements to be conducted prior to production – and that’s without having to upgrade your bulb. In the production model, the reflector will be set behind a UCL lens (something like Pyrex: hard and heat resistant). The thing you need to know about UCL as a lens is that it permits 99% throughput of the light being generated by the LED bulb and focused by the reflector. Compare that to most contemporary combat lights which have a throughput that equals about 93% at best. Now Night-Ops has a bulb/reflector/lens design that FIRST generates more light (up to 30% more, remember?) AND allows more of that produced light to pass through the lens.

Okay, next question: What’s the projected run time at the various power levels? At full power, the batteries should last sixty to seventy minutes. When you dial the power down to that 10% / 6 lumen level the batteries should last 200 hours. As yet there is no projection or measurement for just how long the light can stay on in strobe mode. Why? Because the way the power is fed to the LED bulb and then the way that power is manipulated to cause it to strobe makes it difficult to predict actual total run times. How long the light will last in strobe mode before you notice a difference is, to me, academic anyway. The Night-Ops light tells you when the batteries are draining. Once the power provided by the batteries drops

to less than 90% the production illumination tool will flash three one-tenth-of-a-second flashes every ten seconds. That flashing is what we call in police work a clue. It's the Night-Ops light telling you that your batteries aren't at full power anymore and that you have been warned. The prototype I have flashes that one-tenth second flash only once every ten seconds. That's being upgraded to three flashes in the production model because the single flash proved hard to see sometimes in conditions of high ambient light – like the light produced from lightbars, pyrotechnics, etc. Further, once the voltage levels of the batteries has run down to the point of no longer supporting full power, the electronics automatically drop the power to 25%, where the tool continues to produce a useable level of light for another three to four hours.



**The Night-Ops “Gladius” was specifically designed to be functional with multiple shooting techniques that incorporate light usage**

The body of the illumination tool was specifically designed to insure a couple things: 1) you can put it down and not have it roll, and 2) you can hold it in a variety of “flashlight technique” positions. Crafted into the body is a knurled section that effectively has four prongs. Those prongs prevent the light from rolling on slanted surfaces and allow the light to be held in that plunger position we sometimes see on the range. Me? I've had just enough low-light operations force-on-force training to keep my illumination tool away from my body until after I've identified my target and am ready to engage. Flashlights of any kind are bullet magnets in a dark environment. The bad guy shoots at what he can see. I see no reason to line my light up directly in front of my chin to help him shoot me.

Since we know about the light, let's look at batteries, shelf life, accessories, etc. Almost everyone who uses decent combat lights knows that the CR123A lithium batteries have a shelf life of about ten years. If you put the batteries into a flashlight and don't turn it on, you get that same “about ten year” shelf life. That isn't true with the Night-Ops and it isn't a bad thing. If you put the batteries into you Night-Ops light and leave it sit, the batteries have a new shelf life of about three years. Why? Because of the smart electronics that make the Night-Ops light so unique and viable as a multifunction combat illumination tool. Those electronics have to be kept “warmed up” and therefore draw miniscule amounts of power from the batteries 24/7. To me the reduction of “shelf life” is not a concern. I can't envision a set of circumstances, short of nuclear holocaust or coma, wherein I would put my flashlight down and leave it sit for three years. The soldiers and cops best served by the Night-Ops light are the kind of people who will have the light in their hands several times each week if not several times each night.

I should mention that since the body of the Night-Ops light is 1” in diameter, it fits perfectly into any 1” mounting ring system to put it on a weapon. At that point, without having to change any amount of switches etc. you can just change your illumination tool and upgrade your operational capabilities. Not bad, eh?

Now for the biggest surprise I received: the Night-Ops light is waterPROOF to fifty meters = 166 feet. That is SIX atmospheres of pressure. This can only be accomplished because of the patent-pending

tailcap design that automatically equalizes pressure during descent. Remember at the beginning of the article when I said it was important that the function selection collar was an independent unit? Here's why: The waterproof integrity of the flashlight is dependent on the tailcap being separated from the electronics and the electronics being insulated from the body of the flashlight. The metal body of the Night-Ops light is not part of any circuit or power delivery system. THAT is what happens when engineers and design techs listen to operators instead of the opposite situation.

We know that Night-Ops is the child of the BlackHawk and Strategos parents. What about accessories? As of right now, there aren't any available, but they are forthcoming. I've spoken with the good folks at BlackHawk and specific support accessories are in the works. Another of their recent acquisitions, Delta Design Group, is working on a variety of carry options, weapons mounting options, filters, holsters, etc. Neither BlackHawk nor Strategos is a company that makes a habit of accomplishing one mission and then sitting back to take a breather. I'm sure our contemporary warrior society will find a way to adapt, improvise and overcome.

Now for the questions I've not yet answered:

How much? I don't know. What I do know is that other manufacturer's lights that have a comparable light output from LED bulbs are priced as high as \$240. I expect that the Night-Ops light (this first production model) will be less than that – probably substantially so.

When can I get one? I know that BlackHawk and Strategos are working diligently to make this happen as fast as possible. You can see prototypes at the IACP Conference, probably SWAT Round Up (I'll be there with mine if nothing else), probably at the ASLET Conference (again, I'll be there) and, of course, at SHOT Show. My belief is that they will have the first production models ready for sale by SHOT Show, and if not by then, certainly no later than the end of the first quarter / March '05.

I have to put this in here: when I was showing the prototype around at Blackwater this past week, a SWAT team operator from Tennessee asked me one more question. I'll clean it up just slightly. The question was this: "Can I trade my [brand X] light in on one?" I've shared that question with Strategos and BlackHawk and I think they are actually considering a way of providing the service of accepting other combat flashlights for credit toward the purchase of a Night-Ops light. We'll have to wait and see if it happens, but I like the idea. I've got plenty I could trade.

Look for more great happenings from the Night-Ops line of illumination tools!