

JANUARY/FEBRUARY 2010

# AMERICAN COP™

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**DOG DROOL  
AND SEAT HAIR**

**PARTNERING  
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**HOT NEW DUTY  
HOLSTERS**

**FAILING TO  
COMMUNICATE**

**NIGHT VISION**

# FOCUS

**G2G**

- SUREFIRE
- AR GOLD TRIGGER
- BREAKOUT TOOL
- SAMSON AR TOOL

**HI TECH**

- DIGITAL DOWNFALL

# COP GIFT GUIDE

Dave Douglas

# OWNING THE NIGHT

## Night Vision For Dummies



*The Zeiss NV5.6X62T\**

**M**any of us believe night vision equipment was initially developed for US military forces during the Vietnam War — part of that's true. The first usable NV devices were developed around 1939 by Allgemeine Elektrizitäts-Gesellschaft (German Electricity Company). Some sources say as many as 50 German Panther Tanks were equipped with night vision by the end of the European campaign in WWII.

WWII Germany equipped some Sturmgewehr 44 assault rifles with their "Vampyr" man-portable system. The soldiers were called Nachtjäger or night-hunters. It wasn't something you'd want to carry on a rapidly evolving SWAT mission. To operate this earliest of "man-portable" Generation 0 devices you'd need to carry a 30-lb battery for the light and a second smaller battery for the image converter. The light was a 35-watt tungsten spotlight with an infrared filter. The battery system was strapped to a pack frame and the light and scope attached

to the rifle. It wasn't something to pull out of your gear bag and head off to kick in a few doors.

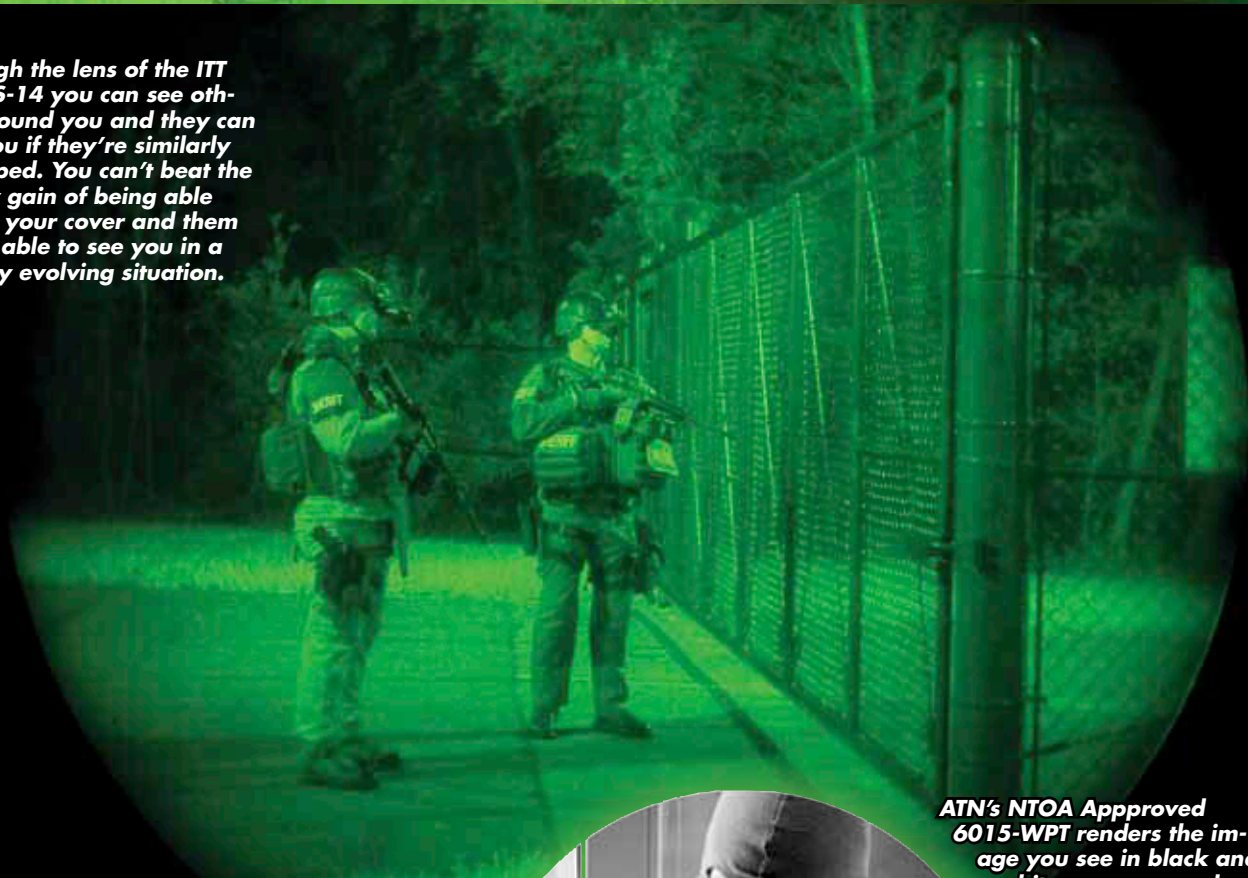
### **Technology Marches On**

The US, British and Russian Armies were in parallel development of Gen 0 devices and actually deployed some units near the end of the war. The Korean War saw increased use of Gen 0 NV, but it wasn't until Vietnam the next great leap into Gen 1, or true starlight equipment occurred. Previous iterations were active devices requiring an infrared light source, but with the starlight systems there was no need for an external light source.

Gen 2 NV equipment incorporated a micro channel plate consisting of a wafer manufactured from thousands of hollow glass tubes. A single wafer boosted light amplification to 30,000 times, but by increasing the wafers they found they could achieve amplification of 1,000,000 times.

Gen 3 was accomplished by adding a micro thin layer of aluminum oxide and a gated power supply. Some manu-

*Through the lens of the ITT NEPVS-14 you can see others around you and they can see you if they're similarly equipped. You can't beat the safety gain of being able to see your cover and them being able to see you in a rapidly evolving situation.*



**ATN's NTOA Approved 6015-WPT renders the image you see in black and white vs. green and white. It provides lots of contrast and the image is crisp.**



facturers lay claim to Gen 4 systems. Mostly they're highly refined Gen 3 tubes. Only one successful Gen 4 tube has been manufactured but the failure time for the device doesn't meet military specs. And, since they (US Army Night Vision and Electronic Sensors Directorate) are the governing body

**The ITT NEPVS-14 is a world-class performer. Its intensifier tube and optics are second to none setting the bar high for all others to aspire to. ITT Night Enforcer NEPVS-14 monoculars are manufactured with commercial Pinnacle image tubes and utilize the same optics, housings, assembly, and testing used in ITT military systems. It's designed for the individual officer in a variety of ground-based night operations, ranging from the extreme tactical to basic surveillance.**



dictating the names of the generations you've got to go with the assumption, there's no Gen 4 — yet — or at least that's what they're telling us.

Frankly, I have a vision of a bunch of scientists in white coats wearing Merlin hats and conjuring up these devices with incantations and spells. Let's just chalk it up to PFM (pure frigging magic).

### **ATN's New Stuff**

ATN (American Technologies Network Corp.) is a major player in the Law Enforcement and Military markets. A number of their products have achieved NTOA (National Tactical Of-

**ATN's NVM14-3P matches up perfectly with EOtech or other one-to-one electronic scopes. As long as the scope has a night vision setting for the red dot or reticle you're good to go. Their weapons mount adapter provides easy on/off capability.**



ficer's Association) approval through a thorough testing regimen.

ATN's NVM14-3P is reasonably priced and LE-grant friendly. It's a device at home in almost any division of your department. It's tough enough to be used by tactical teams for observation or a weapon-mounted configuration with an EOtech or other similar sight. It's great in a surveillance mode allowing investigators to "own the night" while observing in almost total darkness.

Patrol is usually the last to enjoy these technological advances as normally they go first to the tactical guys and then the special investigative units. That's a tragedy. Patrol is where the NVM14-3P would really shine. Canyon searches, searching abandoned buildings, dark alleys or mines would all be made easier, safer and more effective. The NVM14-3P is equipped with an infrared illuminator to make extreme low-light or no-light work in those mines and abandoned structures a piece of cake.

NTOA recently approved ATN's 6015-WPT. The WPT designates

White Phosphor Technology. Instead of the green and black display of most every other starlight system you see in black and white. Officers testing units using WPT reported significantly more detail and overall better contrast. The ranges of shades were similar to viewing under a full moon. ATN says that WPT better discriminates shades of intensity between white and black than between green and black. This results in better contrast and depth perception than the green phosphor NVGs.

### **ITT Night Enforcer**

ITT is definitely the big dog on the street. They're one of the few actual manufacturers of intensifier tubes. ITT's tube production is aimed mostly at military markets, but some of the MIL-SPEC tubes trickle-down to law enforcement.

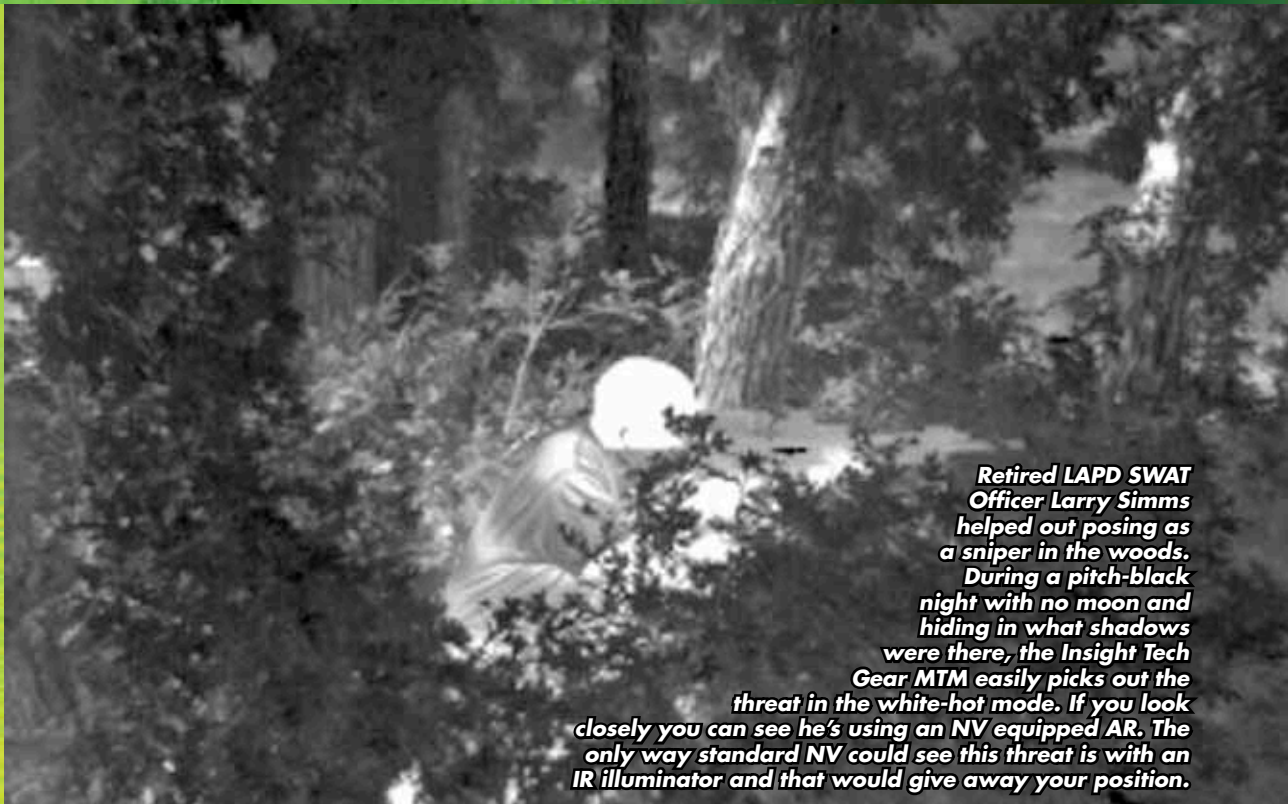
Les Hodges at ITT told me intensifier tubes meeting the highest level of military specification go to aviation units. The next level down goes to the ground troops and just below that are

the tubes allocated to law enforcement. But, because the standards are so high, the LE tubes are hardly distinguishable from the military stuff. Everything is the same, they're made at the same time and on the same machines as the MIL-SPEC tubes, it's just the grading that makes them LE tubes. Below that the tubes are sourced to commercial vendors for their NV devices.

ITT's Night Enforcer NEPVS-14 is essentially the same product as the military's AN/PVS-14. It weighs only 12.4 oz including the battery. The system can be used hand held, helmet-mounted or weapon-mounted. This is a true GEN 3 device. It uses ITT's thin film system and the power supply is auto-gated. It incorporates almost all the technology developed for the GEN 4 project.

### **Insight Technology**

Thermal imaging takes NV to a new level. There is no need for light — none at all. Thermal imaging reads the differences in temperature. This is where those guys in the Merlin hats come in



**Retired LAPD SWAT Officer Larry Simms helped out posing as a sniper in the woods. During a pitch-black night with no moon and hiding in what shadows were there, the Insight Tech Gear MTM easily picks out the threat in the white-hot mode. If you look closely you can see he's using an NV equipped AR. The only way standard NV could see this threat is with an IR illuminator and that would give away your position.**

— the device develops an image from those differences. Insight Technology's Insight Tech Gear division offers the MTM (Mini-Thermal Monocular). It's the smallest handheld

thermal imaging device available on the commercial market, but don't let the diminutive size fool you. It's a powerhouse of features and performance.

A truly remarkable feature of the MTM is its ability to provide the user with resolution so fine you can recognize faces at up to 25 meters. That feature alone makes this device a must have for every tactical team planning on working during darkness and I do believe that covers just about every one of them. Investigative units also have a similar need for facial recognition, but patrol has the greatest need. Searches in dark places are a function patrol officers perform with regularity. The MTM is so sensitive it even picks up footprints in the grass or dirt and when weather — light rain or snow — renders other NV systems useless, the MTM's thermal imager punches right through it. It will even take photos in real time and store up to 160 of them.

### **Zeiss Victory NV 5.6X62T\***

The folks at Zeiss gave us an exclu-

sive look at their brand new night vision scope. It's a high-performance NV device featuring a GEN 2+ amplifier tube with 20,000X light amplification. It's easy to use and delivers an exceptionally high image quality. It also features a reticle usable for range estimation.

The NV 5.6X62T\* performs well during moonless nights, but the image quality increases significantly during a full moon. Whether you're hunting two or four legged predators, scouting, working to spot poachers or simply observing the "nocturnal" denizens of street life, its state-of-the-art optoelectronics far surpass the low light performance of even the best traditional binoculars.

The simple to use range-estimation reticle is designed for metric units of measurement. If you know the size of a target, you simply bracket it

between the lines in the reticle to determine distance to the target. It's an old but very easily used method that will surprise you with its accuracy.

The NV 5.6X62T\* is also equipped with an integrated IR light source that helps you make the shadow areas disappear.



For more info: [www.atncorp.com](http://www.atncorp.com)  
[www.nightvision.com](http://www.nightvision.com)  
[www.insighttechnology.com](http://www.insighttechnology.com)  
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**ATN's NVM14-3P stuffs a great deal of power in a compact package.**