



GLOCK 41: A SWAT OFFICER'S FIRST IMPRESSION

COMBAT ARMS

2014

FIRST LOOK

BRAVO KMR

**A NEW BARREL AND
LIGHTWEIGHT KEYMOD
HANDGUARD CHANGE
EVERYTHING**

EXCLUSIVE

KYLE LAMB

RED DOTS ON PISTOLS
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TRAIN AS YOU FIGHT
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FULL REPORT

FOUR-WHEELED FIREFIGHT

**SKILLS LEARNED
FROM CHRIS COSTA'S
VEHICLE ELEMENTS
THEORY COURSE**

GUNS&AMMO
FROM THE PUBLISHERS OF
GUNS & AMMO

FIELD TESTED:

SIDEARMS

- > CZ P-09 9mm/.40
- > SIG SAUER SCORPION .45

GEAR

- > EOTECH X320 THERMAL
- > LAND NAV ESSENTIALS

CARBINES

- > DANIEL DEFENSE MK18/M4A1
- > FN FS2000



GEAR BAG

BY TOM BECKSTRAND // PHOTOS BY BRAXTON LEE PETTY

THERMALS FOR THE MASSES

EOTECH'S NEW X320 MAKES PRIVATE THERMAL OWNERSHIP A REAL POSSIBILITY.

Thermal devices have been prohibitively expensive until recently. For years, police departments and soldiers have been using thermals to do everything from locate lost individuals to pull perimeter watch.

The advantages of thermal imagery as opposed to traditional night vision systems are many. Traditional NVGs require some passive illumination to work effectively. If you've ever walked into a totally blacked-out building with NVGs, you've seen how ineffective they can be when there is no ambient light.

NVGs also fail to detect objects hidden in deep shadows. Patrolling with traditional goggles works, but as long as our quarry stays in shadow and remains

motionless, they can be very hard to detect. An entire industry of IR illuminators now exists to remedy this problem.

Last, fog, smoke and thick vegetation all render NVGs worthless. The inability to see through anything the naked eye cannot also see through means that NVGs work well for the price but have limited utility. A much better option is to have and use both night vision and thermal imaging to reap the full benefits of the combined package.



THERMALS FOR THE MASSES

NEW THERMAL, NEW MARKET

EOtech recently released their new X320 handheld thermal device. It measures 4 inches wide, 5 inches long and 2 inches deep. It weighs 13 ounces with batteries and can easily be carried for extended periods of time. It is waterproof to 1 meter and floats if dropped overboard. Two AA batteries power the thermal for 2 to 6 hours, depending on the use of alkaline or lithium batteries.

The device offers 320x240 resolution, making human detection a possibility out to 800 yards. There is a focus ring on the objective lens that needs to be adjusted for objects inside of 15 feet. If we're looking out past 15 feet, we can just adjust the focus so that everything is in focus simultaneously.

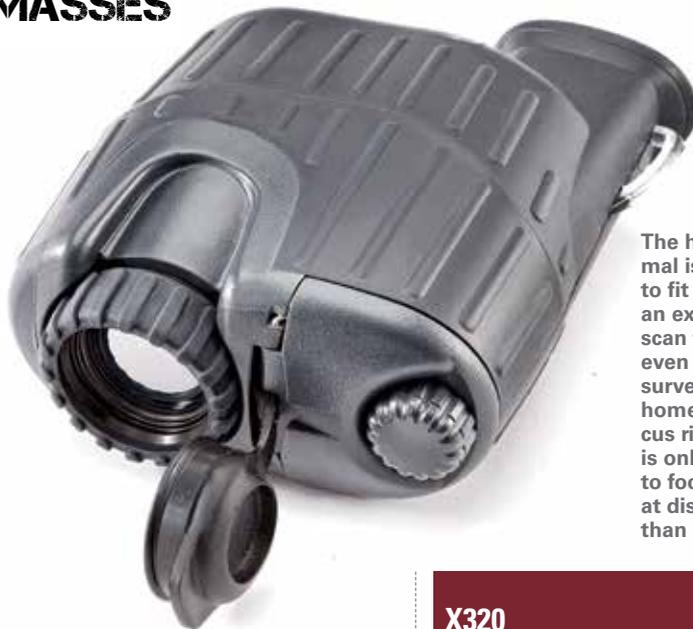
The unit is simple to operate and only takes 3 seconds to boot up. The power knob turns on the X320 and also controls the gain. A quick push of the power knob adjusts the electronic zoom up to 3X or 4X (2X is the default setting). When we push and hold the power knob, we can toggle through the heat settings, choosing between white hot, black hot and two custom color combinations.

The custom color settings are made available by plugging the X320 into your laptop and navigating the control screen. We can set custom colors and the temperatures at which they read. If we work in hot environments, we can adjust the

X320 to see only the items we want. We can do the same in cold environments as well. The ability to set colors and temperatures the device reads gives the X320 an unprecedented level of customization.

WANTS AND NEEDS

I evaluated the X320 for a few days in preparation for this article. I've used it for everything from performing an energy audit on my home (my windows don't insulate very well) to finding the studs on the exterior of my house. I even took it out to prowl through the nearby woods, spying on critters. I have a hog hunt in Texas at the end of the month



The handheld thermal is small enough to fit in a pocket and an excellent way to scan for targets or even do an energy survey on your home. A manual focus ring on the front is only necessary to focus the image at distances closer than 15 feet.

X320

Type	Thermal imager
Weight	13 oz.
Dimensions	5x4x2 in.
Color	Black
Resolution	320x240
Effective Range	800 yds.
Runtime	6 hours on two AA lithium batteries
MSRP	\$3,799
Manufacturer	EOtech 734-741-8221 eotech-inc.com

and am really looking forward to using this X320 because it will make finding hogs so much easier.

Hunting is where the X320 will shine. It is small and light, so it'll be easy to carry on even the longest jaunts. Scanning for animals will be much more effective than with normal NVGs because the X320 can see into shadows, even if our quarry is completely motionless. Once summer rolls around, it's possible to adjust the X320 to the warmer temperatures. This feature allows us to tailor the device to the seasons as they change. With the X320's retail of \$3,799, EOtech has finally made thermal imagers attainable for many. **CA**



This image of feeding hogs shows how capable the X320 is. The small USB port on the unit is used to connect to a laptop and adjust the factory settings, if desired.