

First Drive: BMW's Life-Saving System That We Can't Get in the US

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BMW Dynamic Light Spot | BMW

We recently drove a 2016 BMW X5 in mid-coastal California, as perfect a spot to drive one as there is anywhere on earth. Well into its third-generation, the X5 is a versatile, American-made, all-wheel drive five-seater with an available third row. Equal parts aggressive and restrained, it's arguably the best looking of Bimmer's SU — er, sorry, SAV lineup, and it's proven popular enough over its 16 year history to have become a fixture in every chichi suburb across the country.

A range of powertrains are available in the X5. There's the 308 horsepower and 332 pound-feet of torque from the hybrid xDrive 40e, with its 2.0 liter four and electric motor. At the other end of the spectrum, you'll find the 4.4 liter twin turbo V8 in the 50i, with 450 horsepower and 480 pound-feet of torque. At the top of it all is the X5M, with its 567 horse V8 making it as close to a track toy SU — right, SAV, as you'll find anywhere on the planet. For the rest of the lineup, there's the trusty 3.0 liter twin turbo V6, which pumps out 300 horsepower. That's what our X5 had. Along with a surprisingly engaging suspension (for a big luxury people mover at least), nicely weighted steering, and quiet, comfortable cabin, it all seemed to suit our test truck just fine.



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And that's all we have to say about the X5 for today. Because while it deserves (and will get) a full write-up from us sooner rather than later, we're more interested in talking about what it doesn't have in America — and what our tester did. Because we took our X5 to the bustling campus of UC Santa Barbara to test out BMW's night vision package with Dynamic Light Spot technology. Developed by automotive supplier Autoliv, it's a system that's proven to save lives and avoid accidents. But because of outdated U.S. safety laws, not only is it unavailable in America, but for now, it's illegal.



BMW ConnectedDrive.
BMW Night Vision with Animal
Detection and Dynamic Spot Light.

Drivers view and view of the
Control Display in the car.

Remember the small, rectangular headlights on your grandfather's Buick? Those were sealed-beam headlights. Until 1983, they were the only units that could be legally sold in America. Before 1974, sealed beams had to be round, and it had been *that* way since 1940. So despite the massive technological leaps made between 1940 and 1983, American cars were using relatively ancient technology for some of the most important safety features on a car. Today, our HIDs, LEDs, and projector units seem like a far cry from the old square units. But the sad truth is, U.S.-spec cars are falling behind again, and adhering to a 33-year-old law when the rest of the automotive world is evolving is having dangerous consequences.

In March 2016, the IIHS published the results of its first-ever headlight tests, and the results were frightening. Of 82 new models tested, only one car, the Toyota Prius, earned a "Good" rating for its lights. The vast majority, whether pickups, family cars, or luxury models, earned a Marginal or Poor rating. Nighttime accidents will amount to over 70% of all collisions, despite having far fewer drivers on the road. There are roughly 2 million accidents alone involving deer or other large animals in the U.S. annually, amounting to several thousand injuries, hundreds of deaths, and nearly \$3.5 billion in property damage. Cars may be getting safer, but as long as drivers can't see what's in front of them, then those safety features will unfortunately be called into action a lot more often than they should.



1967 BMW 2000 C/CS, free from restrictive U.S. lighting standards | BMW

In the rest of the world, it's a slightly different story. European automakers have been using larger, brighter halogen lighting since as early as the 1960s, and also pioneered lights that swivel with the wheels to give the driver unbroken visibility. That kind of innovation has never stopped, and today, manufacturers like BMW and Audi have partnered with Autoliv to develop cutting-edge lighting systems, with the results being nothing short of astonishing.



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The Autoliv-developed Dynamic Light Spot system in our X5 used a number of features that interacted in real time to let us know what lurked around every blind corner, bend, and rural road. Despite the rest-of-world specs, our BMW was a U.S.-spec truck with European lights and modified ECUs. Working with Autoliv's grille-mounted far-infrared camera (a unit found in a number of BMWs, Audis, Mercedes, and Cadillacs, among others), the ECU works out in a split second what type of object the camera detects (human or animal), determines its trajectory, and classifies it based on threat to the driver. If it's in the periphery, it will show up with a green or yellow box around it on the display screen (located in the center console on BMWs). Objects in the car's path will show up with a red box. Animals will show up with an eerie orange glow.

While you get the camera feed in the screen, BMW's system takes it one step further. As you approach an object, the car uses a projector lamp foglight to shoot a beam of light across the road that lands just at the feet of a potential obstacle. If it's a running animal, jogger, or cyclist, the beam will follow it until it's safely out of the car's path. And since the beam is projected downward, it doesn't risk blinding them, avoiding a deer-in-the-headlights situation. In fact, if they weren't looking incredibly closely, they probably wouldn't even notice it. In Europe, the system actually has a mode for deer where the projectors flash when they detect them, as Autoliv found that deer are actually repelled by strobing lights. Since only emergency vehicles can have strobes in the U.S., don't expect that feature to ever make it to our shores.



BMW Adaptive Headlight | BMW

In the crowded neighborhoods and around UC Santa Barbara, the BMW/Autoliv system is a revelation. As pedestrians and cyclists dart in and out of parking lots and cross streets, the system works overtime to shine a light on them, and show where they're going, giving you plenty of time to react accordingly. The infrared camera is clear, and cuts through any obstacle like fog, condensation, or glare from oncoming cars, and as generations of Europeans already know, BMW's swiveling headlights are a vast improvement over the fixed units we've been living with more or less since before World War II. Put them all together, and you have a cutting-edge safety system that works to make nighttime collisions a thing of the past.

So unfortunately, the BMW X5 isn't the story here; its headlights are. We're living in an increasingly globalized world, where most cars are being developed with an eye on the European and Asian markets just as much as the American ones. If we're getting the same cars, why shouldn't we get the same safety features? BMW and Autoliv's lighting and night vision systems can save lives and drastically reduce accidents. We're hoping that the U.S. government's lighting standards can change to include them on our roads. It wouldn't cost us taxpayers anything, and besides, there are lives hanging in the balance.