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HEAVEN AND EARTH

THERE'S A LOT MORE TO AN AR CUSTOM BUILD THAN IS DREAMT OF, BUT MID-SOUTH TACTICAL NETWORK (MSTN) HAS THE RIGHT PHILOSOPHY.

By Cameron Hopkins
Photos By Ichiro Nagata



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PENGUIN





Custom-built guns are beyond the skill sets of average guys like you and me. We could no more hand-checker a 1911 frame than we could inlet a Circassian walnut stock for a blueprinted Mauser 98 receiver. The ministrations of a talented gunsmith are far too finessed and complicated for ham-fisted garage tinkerers like us.

This 12.5-inch Noveske-barreled "custom build" from MSTN features a Vltor upper receiver, Daniel Defense forend, Magpul stock and SureFire flash hider. Accessories include an Insight AN/PEQ16 laser and illuminator and a SureFire Scout Light, both activated by a SureFire dual-input pressure pad.

We haven't mastered the many arcane skills, studied as an apprentice, or painstakingly learned to polish metal so that it shines like dew at sunrise. You and me, the most we can manage is to turn an Allen wrench to attach an Aimpoint to a LaRue mount. Perhaps I shouldn't speak for you, but that's my level of gunsmithing prowess.

For example, I once set about installing a replacement sight on a Smith & Wesson M&P. How hard could that be? Drift out factory sight, push in 10-8 replacement. Simple enough, a punch-and-hammer job. I whaled away and the sight hardly budged, so I resorted to a bigger hammer, a four-pound sledge. (I'm not kidding.) I finally drove that sucker out, only to discover, to my dismay, that I was pounding right-to-left and the dovetail is cut non-concentric. The sight should have been removed left-to-right. Oops.

Another time, I attempted to glass bed a Model 70 action into a fiberglass stock. How hard could that be? Slather some epoxy bedding compound into the stock, press the barreled action into it, and let it set. Seemed simple enough. I didn't realize how easily the bedding compound oozes all over the place. I also paid scant attention to that other tube in the Brownells kit, the one marked "Release Agent." Directions? Real men don't read directions! Turns out the Release Agent should have been slathered on, not the bedding compound. I had a glued-fast rifle that I had to sheepishly take to a real gunsmith to un-stick.

And don't even ask me about the time I tried to file a V-notch rear sight on an express rifle. Suffice it to say, I had to buy a new sight and take it to a proper gunsmith who could file more than, unlike me, his fingernails.

As much of a klutz as I am, I miraculously become an idiot savant with an AR. Unlike any other gun that's had the misfortune to come between me and a sharp tool, the AR is seemingly within my "short bus" range of skills. It can be taken apart with a punch and a hammer. You can remove the barrel with only a spanner. The stock comes off easily. As long as I stay away from the little springs and pins in the mag-release button or bolt hold-open, I can gun-plumb an AR well enough to actually look like I know what I'm doing.

But the ease of "customizing" an AR is deceptive. Yes, it's possible for a tool-retard like me to install a Daniel Defense rail forend, although getting a stubborn barrel nut off one time sent me running to the hardware store for a one-inch length of iron pipe to use as a cheater-bar. Yet I somehow suspected that it couldn't be as simple as it appeared. Surely a qualified gunsmith wouldn't resort to three feet of pipe to loosen a barrel nut. Oh well, that sucker finally came loose!

Customizing an AR, as it turns out, is a great example of unconscious ignorance, not knowing what you don't know. With the AR, I've graduated from a state of blissful stupidity to now being at least quasi-aware that there's a lot more to fine-tuning the black rascal than I ever realized.

The man who revealed my unwitting lack of knowledge is a fulltime commercial pilot who runs a dedi-

cated AR custom gunsmithing business on the side. His name is Wes Grant. He and his partner Paul Ertsgaard construct "custom builds," as they refer to their gunsmithing of an AR, through their company MSTN (Mid-South Tactical Network).

WHERE THE DEVIL LIVES

As I bumbled my way through re-barreling a Bushmaster with a DPMS multi-tool and trusty cheater-bar, I realized there's a devil living in the details. Many of them are invisible to the naked eye, things like what type of steel the barrel is made of, whether the bolt-carrier has been magnetic-particle inspected, or even if the springs are up to Mil-Spec standards. And barrel headspacing— I thought you just lined up the holes so the gas tube would fit.

My old friend Jeff Cahill from TangoDown suggested I contact Wes and see what's involved with a proper custom build. Several e-mails and phone calls later and I'd ordered a complete MSTN upper for what seemed like a lot of money, around \$1,500— about double what I'd paid for a complete Bushmaster M4. As I was soon to discover, MSTN is not in business to compete for the Walmart shopper— their builds are expensive, and for good reason.

That reason is simply that Paul and Wes use nothing but the very best components and if you, as a customer, try to shave a nickel here or there by asking them to use what they consider sub-standard parts, they'll politely decline your business.

MSTN customers are real-world guys. They include both black- and white-side operators, private contractors, law enforcement professionals, and others with, shall we say, a sharply keen interest in sallying forth with nothing but the very best weapon.

Consequently, MSTN custom builds are somewhat inflexible. You have your choice of a relatively short list of options in terms of components, although the overall configuration of your build is certainly customized for your needs.

I like that. I don't want to fret over whether I should go with Brand X or Brand Y gizmo when, in point of fact, I have virtually no hard-use experience with such parts. Paul and Wes have paid those dues for you, so their recommendations are based on many years of experience and experimentation, not what some ad agency concocted.

Furthermore, MSTN knows exactly where the priori-



SureFire makes both flash suppressors and muzzle brakes that serve a dual purpose as an attachment interface for SureFire suppressors. This is their improved bird cage flash hider.



SureFire and Insight utilize different male plugs on their lasers and tactical lights, so a special pressure switch is needed, with dual inputs. It's known as the SR-D-T switch (\$105 retail) and it comes with male plugs to fit any Insight laser (in this case, a PEQ16) and any SureFire WeaponLight.

ties lie for a custom build that will shoot sub-MOA and hold up to hard use in the real world. Some of their priorities are logical and some are counter-intuitive, but they're all well thought out. The brands they like are the brands that have worked for them—they are what they are.

OVER A BARREL

The foremost component of a custom build is the barrel, and MSTN has an "any color you want as long as it's black" sort of philosophy on barrels.

"Without giving too much away, I truly believe that no one understands the finer nuances of building a short, hard-use, accurate, stainless steel, match-grade barrel better than the folks at Noveske," Wes says with frank candor.

"We've used Krieger, Douglas and Lilja barrels, all excellent products, from different suppliers in the past, and we've had great success with them. I'm still shooting a Douglas and a Lilja in a couple of personal guns that simply refuse to quit shooting sub-MOA; Paul has a few of the same, as well. However, we've found we can get a more consistent final product going straight to Noveske Rifleworks for everything in barrels," Wes adds.

"In addition to Noveske's stainless barrels, they also offer simply wonderful hammer-forged chrome-lined barrels in their own exclusive contour. I can't say who makes them for Noveske, but the initials are __. Everybody knows who it is, but John [Noveske] requested we not openly state who [is the supplier]. While others have sourced similar barrels from this same manufacturer, they do not have as sophisticated of a profile as does the Noveske."

(I swore no such oath of silence and made inquiries independently. The two-letter supplier is FN, the South Carolina-based manufacturer of the M249 SAW.)

"A quick digression on my first testing of two Noveske 14.5" N4 barrels when they first came out a few years back: I built both up and took them to the range with four types of match-grade ammo ranging from 50 to 77 grains. Both uppers shot all four types of ammo into MOA or better groups, with the best coming in around 0.70 MOA.

"I called John Noveske on the way home and told him I had good and bad news. John asked for the good news first. I told him his N4 barrels shot almost as well as his stainless barrels. He then asked for the bad news. I told him his N4 barrels shot almost as well as his stainless barrels. The only negative about John's N4 barrels is he does not offer a 12.5" length—yet."

Wes has mailed me test targets from various Noveske barrels that are all the proverbial one-ragged-hole. Like most of the components MSTN uses, Noveske barrels are spendy—but they're good.

MSTN also uses Daniel Defense and Centurion hammer-forged chrome-moly barrels if a customer so specifies, but their brand of choice is unquestionably Noveske Rifleworks.

BOLT AND CARRIER

A senior executive at one of the major manufacturers of ARs

SureFire's newest version of the Scout Light (M300A) runs on a single 123 battery to power a 110-lumen LED for 1.3 hours of runtime. This MSTN build features a Troy front sight.



has been on record as saying that proof testing of bolts is not economically viable. Wes snorts at such thinking. "I get it, but we don't really care about economics. Neither do most of our customers, because our work is not by any means inexpensive in the first place.

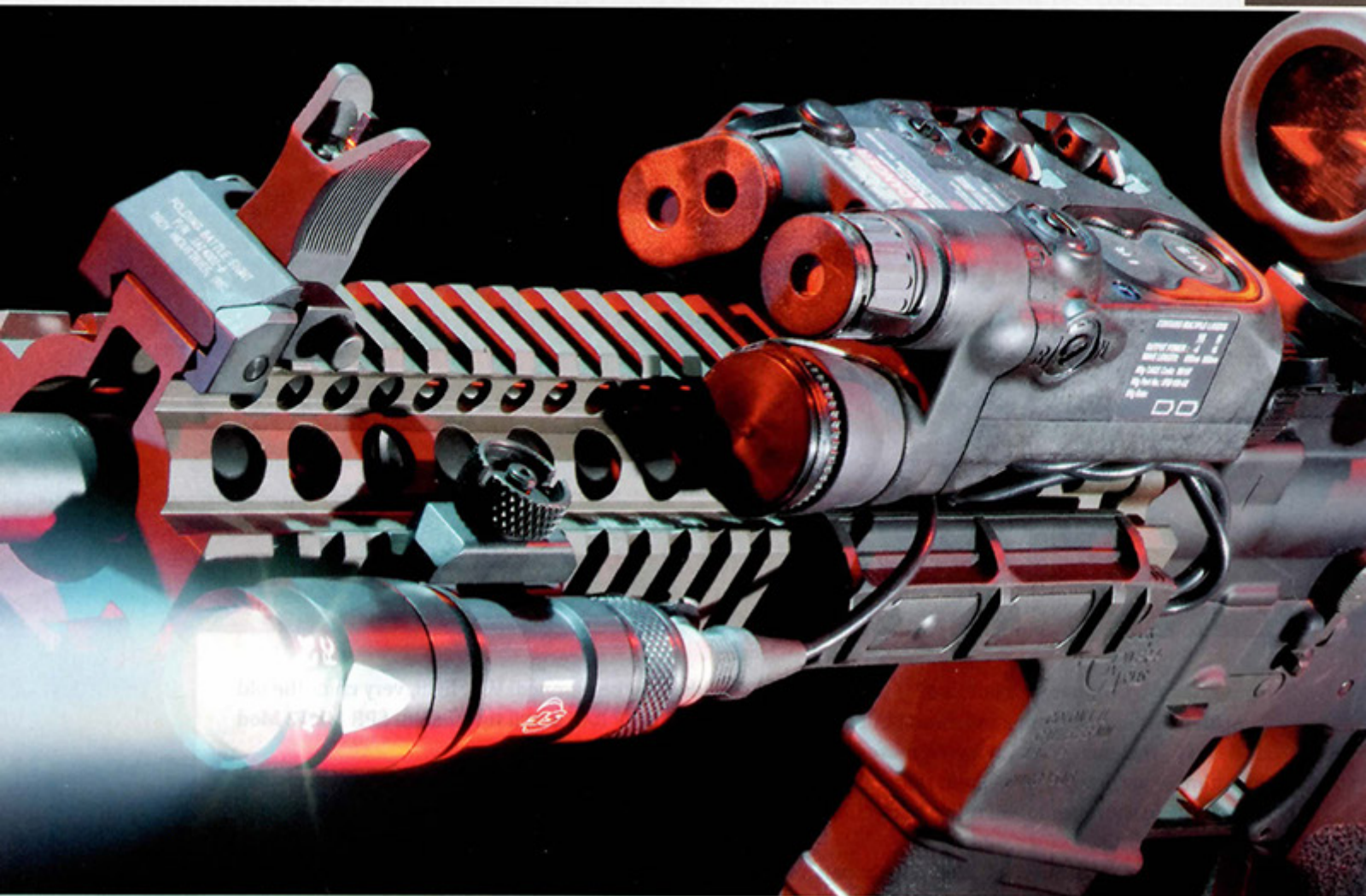
"We insist on using the best bolts we can lay our hands on. Other than for a brief dry spell in the post-2008 election cycle, we have only used LMT shot-peened, proof-round-tested, MP-inspected bolts for several years," Wes notes unequivocally.

"We then strip and inspect them visually. Next, the bolt, extractor, and even gas rings go to IonBond for their Diamond-Black coating. We've had one of these bolts go 24,000 documented rounds with the original gas rings.

"But, we don't stop there. We headspace each bolt to its barrel to the 0.001". For this we have two sets of 10 Pacific Tool & Gauge headspace gauges in 0.001" increments, plus no less than 50 bolts at any one time from which to choose. I seriously doubt most builders even have a set of go and no-go headspace gauges, or more bolts than they have barrels."

The bolt rides in a bolt carrier, and that's number three on the MSTN order of priorities in a custom build.

"Our top-of-the-line bolt carriers are from Young Manufacturing. Centerless ground after heat treating, they're as close to



perfect as we can find. We prefer to use the standard full-auto model in all but those uppers dedicated to competition or extreme accuracy," Wes explains.

"For those, we go with their hard-chromed National Match carrier or a lightened National Match carrier, as appropriate. We have these bolt carriers IonBond Diamond-Black coated, along with the LMT firing pins and cam pins we use with them.

"After coating, we install the gas keys on the bolt carriers ourselves. We use 40 inch-pounds with red LocTite and then stake the key with a MOAKS tool. The DiamondBlack coating on our bolt carrier groups allows for surprisingly easy clean up.

"In a more basic build, we offer the LMT bolt carrier. This is a solid offering from a company intent on good quality control and a good value for the money."

NEXT PRIORITIES

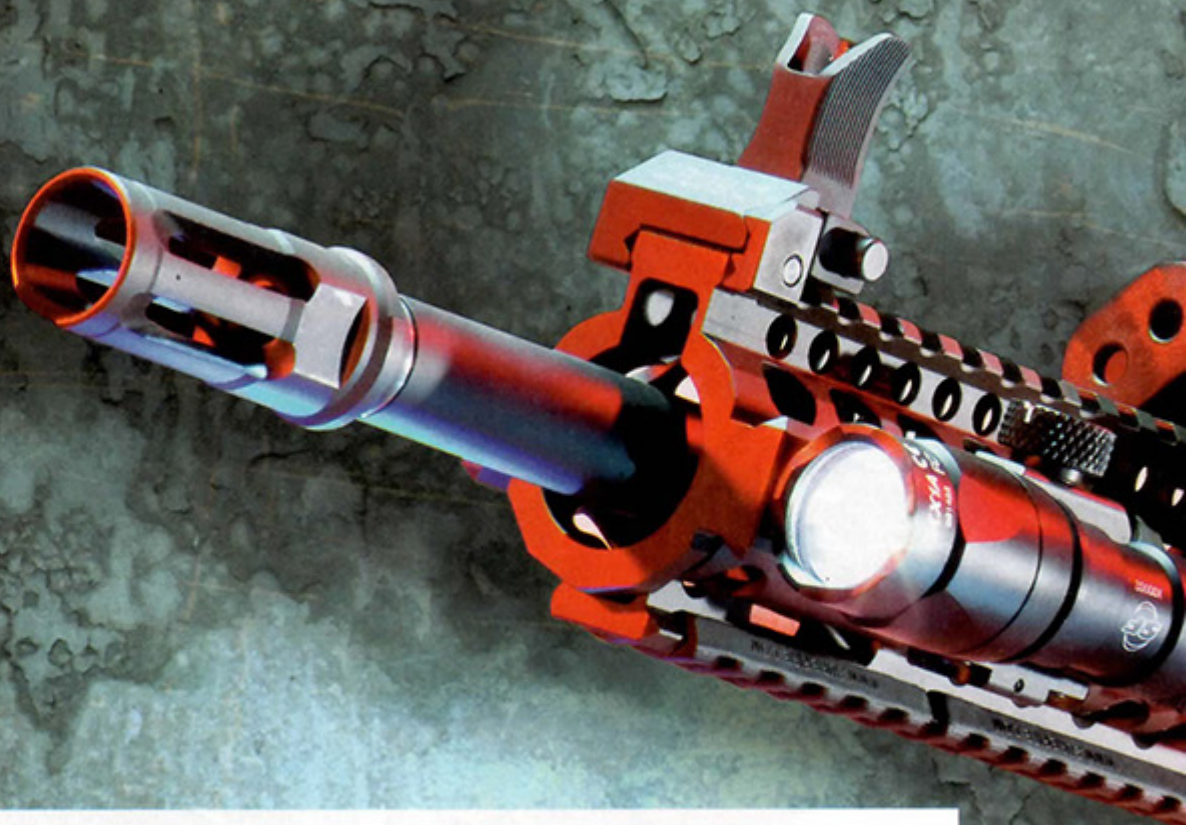
Fourth on the list of priorities is the upper receiver. MSTN employs three brands: Daniel Defense, Vltor, and LaRue. "The upper receiver needs to be straight, true, and dimensionally accurate," Wes states. "This is apparently harder to do than one might think.

"While we will do on occasion use other brands for one-off builds for folks, we prefer to use what we feel are the straightest receivers we can find. We've found that Daniel Defense makes a superior quality, conventional upper receiver at a reasonable price, and we get excellent support from Marty Daniels and his folks at Daniel Defense.

"Stepping up to what some will argue is complete overkill, the 'Upper Receiver as an Art Form' category, we have the LaRue Stealth billet and Vltor forged (both MUR and VIS series) receivers."

Fifth on the list of importance is not a rail forend, as you might think, but the humble charging handle: "We use the PRI Gas Buster charging handle— IonBond DiamondBlack coated for smooth operation plus easy cleanup— as standard on our builds. It's really more than a charging handle with a big latch on it; it's a safety device, and a patented one at that," Wes notes.

"A close friend recently experienced a case-head separation, shooting top quality, name-brand ammo. It blew out the bottom of the magazine, but the PRI Gas Buster kept the gas out of his eyes. We also offer the LMT standard format with their 'tactical' latch and are looking hard at adding the oft-requested Vltor design, offered exclusively



through Bravo Company, to our line."

Sixth in order is still not a rail forend but the muzzle device. "The muzzle device has far more to do with the ultimate accuracy of a weapon than most would appreciate. In short, some will ruin a barrel's inherent accuracy," Wes says.

"We prefer to use SureFire flash suppressors and muzzle brakes, the oft-copied, never duplicated Vortex, Knight's M4 QD Comp, the PWS, and our own MSTN 'QCB' muzzle brake in competition builds."

THE FOREND, AT LAST

They look cool, especially when bedecked with IR lasers, SureFire WeaponLights, and various optics, but the truth is that an M1913 Picatinny forend is largely irrelevant to the performance of a rifle. That said, there is such a plethora of forends on the market today that it's hard to make a list, let alone sort it. Wes and Paul have taken care of the culling, however.

"This seems to be everyone's favorite component," Wes says with a smile. "I have strong preferences regarding what I like to work with. There is just an amazing array of good ones out there today. This is quite a shift from 10 years ago, when there were just a very few. We use forends from the following manufacturers, in order of their entry into the field:

"Knight's Armament: They started it all. Their URX is the current fave from Knight's in our custom

builds. Cost be damned! Very light, very chic. The old KAC Long FF RAS is still the heat on SPR Mk 12 Mod 1 builds, too.

"Daniel Defense: The RIS II series are exquisitely designed and built, and they are my favorite in DD's extensive line of forends.

"Precision Reflex: You want light and fast? We'll show you light and fast!

"LaRue: The LaRue forends are beautifully made, light in weight, always straight, and simply hard to beat.

"Vltor: Their VIS is flawless in design and construction. As close as you can get to a quick-change barrel without going to the LMT MRP. But with the VIS, you get to pick the barrel."

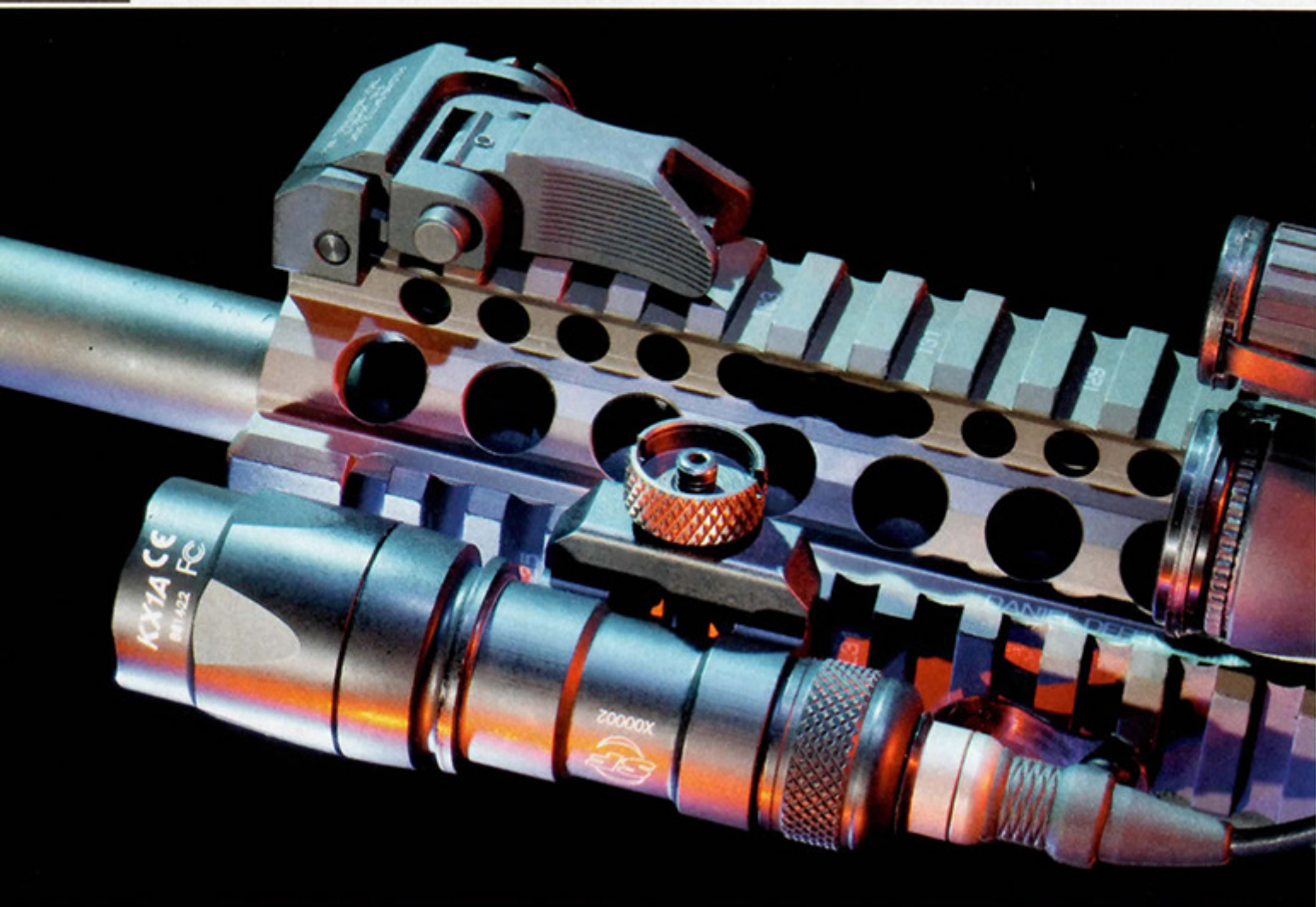
MY CUSTOM BUILD

And so now I realize that I don't know what I don't know about parting-together an AR, so I order an upper from MSTN. Wes doesn't waiver on the barrel; it must be a Noveske if it's going to be in a magazine story, because that's the only brand he totally trusts. Okay, I go with a stainless 12.5-inch "PFM" barrel. Wes has found that the 12.5-inch length is "pure f---ing magic" when it comes to accuracy, for some mysterious reason related to barrel harmonics and possibly Jupiter aligning with Mars.

MSTN fits the Noveske barrel that comes with



We installed the MSTN upper on a Rock River lower (NFA registered as an SBR) and topped it off with an Aimpoint CCO in a Wilcox mount.



As part of an ongoing product-improvement process, SureFire engineers shrank the Scout Light from two batteries to one while upping the lumen output. How'd they do that? (With even better light emitting diodes, which are improving as fast as computer chips used to.)

a pinned gas block and finishes the whole thing with an IonBond DiamondBlack coating. Even though the barrel is stainless, it typically gives velocities comparable to 14.5-inch chrome-lined barrels. Wes reports that he had it shooting half-MOA within 20 break-in rounds.

For a bolt, Wes selects a Lewis Machine & Tool fitted at 1.4666" for the exact correct headspace with my Noveske barrel. The carrier is a Young Mfg. full-auto carrier (meaning it's relieved on the bottom) with all LMT internals. The bolt and bolt-carrier group are IonBond DiamondBlack coated.

The upper receiver is a Daniel Defense with MSTN's logo laser etched behind the forward assist plunger. The charging handle is a PRI Gas Buster, again IonBond DiamondBlack coated. This will prove essential, as I shoot the gun suppressed with a SureFire K-can and, later, the newest Mini and a Micro.

The muzzle device is a SureFire FH556-212A bird cage flash hider that has won national three-gun champion-

ships and served outstandingly well in the "sandbox." If you haven't tried a SureFire brake, you need to. The muzzle simply "vibrates" on the target—no rise or whip at all. Zero.

The forend is a Daniel Defense Mk 18 RIS II, an ideal choice for this build. "The workmanship is simply beautiful," Wes says.

So how does it shoot? The targets Wes sent with the upper are all half-MOA for all five shots, but he used Black Hills match ammo. When I shoot Federal 55 gr. JSP, I can get three shots into less than a half-MOA at 100 yards, but not five.

I'm delighted with the build. Not only did it show me what a real craftsman can do—the M4 feedramps are polished like a sterling silver chalice—but it also taught me that, as Hamlet said, "There are more things in heaven and earth than are dreamt of in your philosophy." Goodbye cheater bar; hello MSTN. **CT**

Wes Grant and Paul Ertsgaard of Mid-South Tactical Network can be reached through their website, www.mstn.biz.