

# LONG RANGE SHOOTING BASICS PART II

BY MICHAEL WARE

IN LAST MONTH'S Iowa Sportsman we were tackling the elusive long range shooting enthusiast's quest for the perfect shot. We covered some basic rifle configurations, chambering choices, and optics. We even hit on some common terms and myths in the distance shooting world. Let's dive right back in where we left off.

Accessories are a huge part of long range shooting. I always use a rucksack if I can. Whether this is a small bag with gear in it or a set of bags dedicated to rest my rifle upon, I use them. Anything you can do to become more stable is more than likely an advantage. Slings, leaning against a solid tree, resting your rifle across a rock, and things of this nature always help keep you more solid, so cheat like crazy in this aspect as rigidity is your friend.

Unless the earth is rock underneath you or you're in draught conditions, I use a bipod a lot. I use a bipod towards the front of my rifle stock, and try to use a bag every chance I get in the rear of the rifle. The elements don't bother me, but I like laying in the muck for four hours about as much as I like the flu, so a shooting mat is something I never leave the shop without. There are tons of them out there on the market and I've seen things like deflated pool floats, sleeping bags, etc., that work just fine.

I combine my soft case and shooting mat together. Again there are several soft cases on the market and many are purposely built to accept a large heavy rifle along with some accessory pockets.

I always have a pair of binoculars of medium magnification with me; 7x or 8x is fine, and I occasionally use 10x, but never higher. I keep a laser range finder with me as well. While I've used units that combine binocs and the rangefinder in one package, they tend to be heavy and I try to cross-use everything in my pack for hunting. If I'm glassing in a deer stand or from a hide for eight hours a day, the extra weight of the heavy units is more than I want to tackle, so I skip them. There are other small items here and there for you to consider, but you'll find the need for them, or the lack of need, early on and add in a few things and subtract others. Accessories are highly personal, and I encourage you to not spend a ton of money until you have a better frame of reference for what you need. Having a shooting partner is great in this regard. Other options include finding a local group to shoot with, as trying on one another's accessories in the field is a great way to generate a test run on equipment before you buy it.

There is a distinct difference between core components and accessories. While some consider a trigger job or aftermarket trigger to be an accessory, I don't. Granted, you can buy them and install them yourself in some cases as aftermarket parts or 'drop in' units, but I'd recommend leaving that to a qualified gunsmith. The trigger that is light and consistent will lead to great results. My version of light in this case would be

somewhere in the 2 lbs to 3 lbs weight. I don't want a 'hair' trigger as I might be shooting with gloves and my sense of feel may diminish with cold temperatures. I also don't want something I have to muscle around much as it will allow me to push off target in many cases. That's why I like a weight in the range stated above. It provides what I need without causing a concern for safety.

While I consider a brass catcher an accessory, I have many shooting buddies who don't leave their man cave without them. Those guys shooting AR platforms love them, as they are detachable from their weapons and when cycled, the weapon throws the brass into a cloth or mesh bag rather than into the grass and dirt. I really wish some of the other guys I shoot with

THERE ARE A LOT OF GREAT CUSTOM WEAPON MAKERS AND THE FACTORY HEAVY BARREL AND VARMINT WEIGHT WEAPONS ARE AS GOOD AS THEY'VE EVER BEEN.

would consider them, as I don't dig hot brass down the back of my neck, but again, I don't consider them something I can't live without. Thus, the definitions of a core component and accessory lend themselves to malleability depending on our use and perspective.

There are also accessories you'll pick up or borrow that are periodical and occasional use tools rather than daily use tools. For example, I used to carry a wind meter with me. I used it all the time to judge wind speed. I'd equate the speed of the meter reading to that of moving big bluestem grass, how much speed it required to move saplings or tree branches of 1" in size, or how much wind was required to make the mirage I was seeing shimmer at a 45 degree angle or parallel with the ground. There is only one problem with a wind meter; it only works where it is located. The wind direction and speed at my hide is one thing, but over the course of several hundred yards, the wind can change in speed and direction several times. Are you going to walk the entire course of potential fire taking readings? If you think that'll work, you're set for disappointment. Having been foolish enough to do it a few times, I can promise you it doesn't work. By the time I'd get all my wind readings recorded and trek back to the hide, they had all changed. Wind has a sense of humor in this regard.

The other thing that you'll become aware of is the path the bullet takes to arrive at the intended target. For example, my shooting partner Andy and I were shooting in the Sangre De Cristo mountain range just below tree line in 2012. We were both

shooting 6.5 Creedmoors to 1600 yards. We wanted to break the magical mile mark, but there was no line of sight to hit a 24" plate other than a tiny spot at 2300 yards and I was certain I couldn't do it. Andy agreed, so we settled for 1600 yards and started calculating. At our altitude my bullet drop from our hide to the target was 940 inches. The thin air at higher altitude provides far less drag, and I was tickled to death considering my drop for the same distance in Iowa was just over 1300 inches.

Another big item you'll need to consider is the use or ownership of a chronograph. The folks printing velocities on the side of factory ammo boxes are apparently some of the most optimistic people on the planet. It isn't uncommon to see much lower velocities. It is absolutely essential you know how fast you're pushing little pills out of the tube; so having access to a chronograph to measure this is paramount. You're going to be looking for high and low speeds in your shot strings, and the

average speeds. Based on that performance you'll build trajectory charts, rate the quality and consistency of the ammo, and begin building something you can refer back to.

Commonly mistaken for what we call a "DOPE" chart, this information will actually lead to that, but isn't comprised of that. Not yet anyways. DOPE is "Data of Previous Engagement" and you'll use that compilation of data and reflections in the single most important part, and ironically the most skipped part, of your shooting which is the Data Book you'll need to buy, build, and/or make.

Any long distance shooter that doesn't have a data book on their weapon is basically starting over a little bit each time

until you know where you've been," right? This is spot on regarding our shooting. First we build a trajectory chart by grabbing data on our bullet, its speed, and we apply it to a ballistics program, which generates a model with data to begin. There are tons of free and fantastic ballistics programs available on the net and even a few simplistic apps for your smart phone, so don't let that get in your way. Sounds confusing right? Well at first it may be but just like anything with a little practice it will become second nature.

Now that we have a place to start, we have to apply our knowledge and more importantly we have to record what actually happened as compared to what we forecasted through our computer modeling. We take note of wind speeds, altitude, how much drop we encountered vs. what our projections were, how many rounds we shot, and whether our weapon had maintenance such as trigger adjustment, when we cleaned the bore last, and how thoroughly. All this data adds up into a shooting log that not only will give you hard data on the performance of your weapon, but your shooting skill, the items you need to work on, etc. by essentially providing a list of variables you'll track against your constants. This log is the way you truly become better. If you don't have it, or don't think it'll work, you'll forever be behind the curve of those who do.

My good friends Rob and Tony win and place highly at sniper competitions all over the USA. Rob is a great example as he practices routinely at his local range in a heavy populated area along the eastern seaboard. His range is only 200 yards long. He's only able to stretch his legs a few times a year, but with his data book and shooting log he watches every detail and can extrapolate what he needs when it comes time to shoot to distance. He combines that log with the fundamentals he practices at shorter distances and performs supremely at competition. That's what a shooting log and



data book do for you.

At this point you have a weapon chosen or already have one that'll work for your needs. Ammo choice comes next and can get as complex or as simple as you please. While I do hand load for various calibers, it all boils down to personal likes and needs. Many people I talk to actually enjoy hand loading. I would like nothing more than to slap these people silly. Personally speaking, I loathe every last minute of reloading. I do it when required, but when I happen across really great and consistent factory loads, I'm quite willing to buy several cases of it at a time and stock up.

For example one of my other favorites is my 6.5 Creedmoor. To be perfectly honest I can routinely hold minute of angle or less performance at most ranges with factory 140gr AMAX Match right out of the Hornady box. Have I worked up a hand load that was better? Yup. Does reloading cost me less? All things considered "slightly"

would be my answer. But my time is precious. Running a custom weapon shop as a small business-person requires lots of hours and to be frank, I'd rather play with my daughter and give my wife smooches than be a slave to the press in the corner of the shop. Thus, I balance my rewards into my costs as well as the time I have invested. This makes it easy for me to buy in this case as opposed to building my ammo.

Now that we have a great weapon all spec'd out and ready to go, it is time to hit the range and the field. I enjoy shooting with a partner. It tends to make things a bit easier overall. A partner can help in many regards. Most aspects of this revolve around the instant feedback and help that you receive. If you're shooting and truly using marksmanship fundamentals it can be tough to actually spot your bullet impact at short and medium ranges. There are many cases where your weapon moves under recoil and you don't see quite where you impacted if

you miss. Did I miss little or big? Did I shoot wide right or left or was I way short? Chasing targets around consumes time, energy, and money, so a spotter calling shots and helping read wind changes among other duties is great. Besides, it is always great to hear encouragement from others and the positive reinforcement goes a long ways some days.

There are cases where being a shooting partner is kind of rough too. When Andy is using his 6.5CM he has this monster muzzle break that pushes noise and hot gas into my face. Couple that with the fact his 6.5CM is built on at AR10 chassis and hot brass peppers my head if I set up on his right side, because the empties are thrown out and back toward me each time he fires. I tend to be a gentleman in this regard and set up where I won't scald him or others with hot cases upon ejection.

I also use a suppressor on every rifle as they have great recoil reducing properties, manage to knock down the sound pressure level greatly, and actually speed up my velocity slightly. While Iowa is competing

for last place in private citizen suppressor ownership by categorizing them as "offensive weapons" that are illegal for most to own, 39 other states allow them for personal use and hunting. Nearly all the states that border Iowa are 'suppressor legal', and I know for certain NRA and IFC are continually working towards this Second Amendment goal for Iowans as well.

**ANY LONG DISTANCE SHOOTER THAT DOESN'T HAVE A DATA BOOK ON THEIR WEAPON IS BASICALLY STARTING OVER A LITTLE BIT EACH TIME THEY GO SHOOTING.**

Short version you ask? Andy's rig breathes fire, sounds like dynamite, throws dust in my face, and scalds me with hot metal. My weapon does none of those things and I can easily hear bullet impact on steel in most cases. I like shooting both, but I prefer spotting for weapons like mine to Andy's favorite.

Finding support for this kind of shooting is on a serious incline recently in and around Iowa. There are a lot of great custom weapon makers and the factory heavy barrel and varmint weight weapons are as good as they've ever been. The same goes for ammo. Factory match ammo is abundant and there are custom

ammo makers out there who will stun you with performance. More and more people are taking up this hobby as shooters, and we see increased interest in this every month. Precision rifle workshops and training exist in and around Iowa now where they didn't in years past, so access to guidance is local these days.

Some folks prefer to go at it alone, and that can work, but joining some sort of network is really beneficial. There are multiple online forums to be part of, many places for reference materials, and the occasional shooting club oriented towards this type of marksmanship. If all else fails, seek out a local gun shop and visit with the folks behind the counter. Chances are they know who might be interested in shooting with you and could get you and others together. Like-minded conversation and learning together are the staples of outdoorsmen like ourselves, so why not?

I think you should do some research, get involved with some others already doing this kind of shooting, and join in. In all my time shooting precision rifles I've found that particular group of people to be as welcoming and accommodating as any within Iowa shooting circles. 

## RANCHMASTER MINI TRUCKS

### BUSINESS IS BOOMING FOR JAPANESE MINI TRUCKS



There seems to be more demand than ever for Japanese mini trucks, says Travis Colin, sales manager for Ranchmaster Mini Trucks in Preston, Mo. He says demand has grown because people have seen them around for a while now and feel more assured that parts and service are available.

While they're called mini trucks and approved to drive on some roads in some states, Colin says they're more comparable to side-by-side UTVs sold in the U.S. But, he adds, the Japanese trucks have much more to offer for less cost (\$5,000, used - to \$18,000 new at the top end). Most new mini trucks sell for between \$10,000 and \$15,000.

"The advantages of owning a mini truck is the amount of work it can do as far as loading capacity (4 by 6-ft. bed, holds up to 1 ton), and you are protected from the elements," he says. "That's really important for older folks. I've sold a lot to 80 and 90-year-old farmers who are still out there working but don't want to deal with the heat and cold."

The enclosed cabs have AC and heat, and tall drivers appreciate the extended cab model. With 4-WD, dump bed and accessory options, the trucks can be set up for any job. Cattle ranchers mount brush guards and slide cube feeders in the bed. Drivers in northern states add snowplows for the winter.

Small enough (55 to 58-in. wide) to drive down the aisles of poultry and horse barns, the trucks can be used to transport feed or take out manure.

"In the off-season it's a good hunting rig because they're quiet," Colin notes. He adds that the mini trucks are popular on college campuses and often used for utility trucks in cities.

They come equipped with catalytic converters to make them highway legal. With 3-cylinder gas engines, they travel up to 55 mph at an impressive 40 to 50 mpg.

"Typically I sell them to farmers and ranchers for use around the farm," Colin says. "But some states like Oklahoma and Nebraska allow them on roads at speeds up to 55 mph. In our county (in Missouri), we can sticker them for county road use. They are not legal on any interstate highways."

Other than new accessories and the extended cab, the models haven't changed a lot over the years, he notes. But they have proven to be dependable.

"I get calls from people who have trucks that are 20 years old, and they need an air filter or a tune-up," Colin says.

Ranchmaster Mini Trucks services trucks and sells parts, used trucks and new Mitsubishi and Daihatsu trucks. Sitting in the cab of the new vehicles is like sitting in a pickup cab with two notable differences - the size and the location of the steering wheel.

For mini truck owners, learning to drive on the right side of the vehicle only adds to the adventure.

**Demand for Japanese mini trucks has grown now that customers know that parts and service are available, says a Missouri dealer.**

Ranchmaster Mini Trucks, Rt. 1, Box 18H, Preston, Mo. 65732  
Ph: 417 830-2519  
[www.ranchmasterminitrucks.com](http://www.ranchmasterminitrucks.com)




# 2-DAY "GUN AUCTION"

## APPROXIMATELY 600 GUNS & ACCESSORIES

### JANUARY 25 & 26 @ 9:00 A.M.

IZAAK WALTON LEAGUE • 4343 George Flagg Pkwy • Des Moines, IA 50321

Auction sanctioned by the Des Moines Chapter of the Izaak Walton League.

Inventory of the former Freddie's Gun Shop, of Greenfield, Iowa.

"GET SOME GUNS", Des Moines Gun Dealer, will handle all FFL transfers on site.

Mark your 2014 calendar now for this one-of-a-kind auction.

**Rick Pitt Auctions @ 515-201-8652**

[WWW.AUCTIONZIP.COM/LISTINGS/1968185.HTML](http://WWW.AUCTIONZIP.COM/LISTINGS/1968185.HTML)

