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Photos Courtesy of Author

ACCURATE HUNTER

DIAL OR HOLD?

*Only practice makes
the system perfect!*

I am not convinced that the extreme-range folks are a large segment of the overall hunting/shooting market. However, they are stridently outspoken—and highly visible. A good analogy might be with the serious benchrest competitors. They have never been a large group, but benchresters pioneered many improvements we take for granted today: synthetic and laminate stocks; efficient case designs; faster lock times; more accurate projectiles. Similarly, by both demanding and developing extreme-range performance, the long-range precision crowd has expanded our capabilities.

Perhaps their greatest contribution has been in improved optics. It's axiomatic that if you can't see it, you can't hit it! Today's optics are clearer and brighter than ever, thanks to better glass and improved lens coatings. However, there's more to it than that. It wasn't so long ago that riflescopes with consistent adjustments were as rare as unicorns. It's not enough to just zero the rifle and obtain some good groups; shoot enough so that you *know* your adjustments move the strike consistently—and then can move the strike right back. Even today not all scopes will do this; it isn't unusual to find one click moves the strike more or less than it's supposed to, and the next click does something else.

This Custom Dial System (CDS) turret on a Leupold VX6 3-18X is calibrated for Boddington's 6.5/.300 Weatherby load. The "zero stop" is positive and effective, but this is the turret that inadvertently spun on Josh Mayo. Stuff happens, so it's important to check constantly.



Josh Mayo (left) and his dad, Pete Mayo, with an awesome barren ground caribou taken with Boddington's 6.5/300 Weatherby. Despite an effective "zero-stop" on the scope, the elevation turret spun while negotiating brush, a good example of Murphy's Law in action!

This common malady does not render a scope useless. However, if you are going to use the elevation turret to "dial" your holdover adjustment at longer range, then the adjustments must be precise and repeatable. Don't take this for granted; verify the consistency and accuracy of your scope's adjustments *first* to save yourself a lot of frustration!

No matter how high you sight-in at short range, or at what distance your rifle is zeroed, beyond that zero range you must start to compensate for the dropping trajectory of your projectile. The two primary ways to adjust for bullet drop are to hold higher or to dial the correction with the elevation turret. With either method, there's more than one way to skin the cat. If you're holding, you can estimate the required holdover (based on the size of your target and your trajectory) and aim accordingly. This is sort of the old-fashioned way; better and more precise is to have additional aiming points within your scope reticle. However, you must know at what distance those marks are valid with your load.

With dialing you must have precise knowledge of your trajectory and understanding of and confidence in the adjustments of your scope. It really doesn't matter whether the adjustments are quarter-inch (quarter MOA), centimeter (about one-third inch), or whatever. It only matters that you understand them and have proven their consistency. At practical hunting ranges, the trajectory and click adjustments can probably be captured on a fairly simple range card. At extreme ranges this may not be enough; you may need pages of printouts or a laptop or smartphone with a ballistics program.

I am absolutely convinced that dialing the range is the most precise method. It is also the most time-consuming and, quite honestly, the most fraught with operator error! Today, with long-range shooting so popular, every hunting guide the world over has stories about hunters mis-dialing their scopes or forgetting to dial back down. This past fall, Aussie Josh Mayo came into my caribou camp just in time to help pack my bull! When we got back to camp and dropped our loads,

Josh and his dad, Pete Mayo, headed back out. Left-handed Josh had our left-handed outfitter's .375, but I offered him my "dialed-in" 6.5/300.

They hadn't been gone a half-hour when I heard the first shot. And then more, the reports shifting direction. Obviously, they were in a running gun battle of some kind, and I was trying to remember how many shells I'd handed over. Skirmish long over, we found them at sunset standing over the most perfect caribou I've ever seen. The bull didn't drop to the first bullet, and in order to get another shot they needed to go through some thick willows. While fighting their way through, the scope's elevation turret had spun, so most of the shots I heard went into outer space. That particular rifle wears a Leupold VX6 with CDS (Custom Dial System). That turret has a very positive zero stop. Even then, combining excitement with thick brush, the turret got turned haywire. I am leery of hunting with any scope lacking a zero stop; I've seen turrets spin against a jacket or daypack while carried slung. It's sort of Murphy's Law in

action: Whatever can go wrong, surely will!

That said, dialing is the most precise. So, I practice dialing the range a lot—but I don't often dial in the field. Mostly, this is because I rarely shoot game far enough for dialing to offer significant advantage. But I surely have—and will again. I dialed the range on the caribou that Josh helped pack, and just last week I dialed 16 clicks up to take a *mexicana* whitetail down in Zacatecas. More frequently, however, I hold—because holding is faster, the vital zone of big game animals is not a small target, and there is less risk of human error!

Thanks to the laser rangefinder, these days we usually have near-perfect knowledge of range, and we must also have knowledge of our trajectory. With a 200-yard zero, let's say my bullet drops 10 inches at 300 yards. This is not rocket science! Even with all the modern tools, for such a shot I'm probably going to use the main reticle and hold a bit below the backline. However, I like reticles that have additional aiming points, also called stadia lines or "hashmarks," varying from quite simple to very complex. I prefer simple! Leupold's Boone and Crockett reticle is about as simple as it gets, with two longer stadia lines and a short hashmark below the main reticle. More complicated are the "Christmas tree" type of reticles. It depends on what kind of shooting you want to do and how much you're willing and able to practice.

No matter what, you cannot take the scope out of its box and the trajectory off a ballistics program and expect you will have a workable system! Whether you intend to dial or hold—or keep both options in your toolbox (which is what I recommend)—you must verify your data and the values of your adjustments or aiming points by shooting at actual distance. Typically, you’ll wind up with oddball data. For instance, for mountain hunting, I set up my Blaser with .300 Weatherby Magnum barrel and Zeiss scope with ZBR-2 reticle, a reticle with multiple stadia lines below the main crosshair. With a 250-yard zero, the first line was “on” at 350 yards. That’s a nice, even number, which is lucky, but after that it was more random: The second aiming point was on at 440, the third at 515, the fourth at 590, and so on.

The exact distance at which the aiming points are valid doesn’t matter. On a set-piece range, it’s nice if they line up at even distances (300, 400, 500 yards, etc.), but in the field, it’s not important because animals stubbornly refuse to stand at even distances. You have to extrapolate, holding the correct aiming point slightly high or slightly low. The buck I want to shoot is standing at 420 yards. If I want to hold, I can use my 440-yard aiming point and hold it low on the chest.

Or I can dial, at this

distance definitely more precise—but it takes more time to count clicks, and I’d better get it right! My range card for that rifle, scope, and load from the SAAM shooting school captures reticle values and clicks. With the same 250-yard zero, I need to come up 20 clicks at 400 yards; and 25 clicks at 450 yards. My buck is still standing patiently at 420 yards. I need to extrapolate, but I’m guessing coming up 22 clicks will be fine for a center-of-chest hold.

It takes a lot of shooting to validate all the data and to gain confidence, skill, and speed. And guess what: all that hard-earned data is valid for only one load, and realistically, one set of atmospheric conditions! Change the load and you need to start over! But the tools we have today are amazing: a good chronograph yields your bullet speed. Add your bullet’s ballistic coefficient (BC) and atmospheric data, and any ballistic program will yield your approximate trajectory. These are starting points, but you still need to verify at actual distances. Make a substantive change in elevation, temperature, or barometric pressure, and data must be adjusted. As range increases, so does required precision and effect of all variables. There’s a lot of work to do before going afield or on the range until you are ready to make that “dial or hold” decision! ■

TOP TO BOTTOM: 1. “Dialing the range” is almost certainly the most precise method, but it takes more time than “holding” with a reticle, and takes a lot of practice to gain speed and reduce operator error. 2. This copyrighted range card from the SAAM shooting school captures most data needed for practical field shooting. This card, for a Blaser .300 Weatherby Magnum with Zeiss scope and ZBR-2 reticle allows both dialing and holding depending on range and circumstance. 3. I’m set up on a *mexicana* whitetail in Zacatecas, range a bit over 300 yards. With plenty of time, I elected to dial the range using a Blaser in 6.5mm Creedmoor with Zeiss scope. Provided good data, relatively slow cartridges like the Creedmoor are conducive to dialing because the bullets start to drop quickly as range increases. 4. This Swarovski Z8i 3.5-28x50mm scope is a good example of state-of-the-art riflescopes inspired by today’s interest in long-range shooting: Eight times zoom, illuminated reticle, turret calibrated to the load. It is shown on a Remington 700X Custom in 7mm Remington Magnum.



1.

2.

Yds	Moa	Clks	Inch Drop	Wind@10 MOA-Inch	MOA	250 HZD	Yards
100	Zero	Zero	-2.00	0.50 1			
150	0.50	2	-2.50	0.75 1	2.0		350
200	1.00	4	-2.00	1.00 3	4.0		440
250	2.00	8	0	1.50 5	6.0		515
300	3.00	12	3	1.75 6	8.0		590
350	4.00	16	7	2.00 8	10.0		655
400	5.00	20	13	2.25 10	12.0		720
450	6.25	25	20	2.75 14	14.0		775
500	7.50	30	29	3.00 17	16.0		830
550	8.75	35	39	3.50 21	18.0		885
600	10.25	41	52	3.75 23	20.0		930
650	11.75	47	66	4.00 26			
675	12.50	50	74	4.25 29			
700	13.25	53	82	4.50 32			

Craig Boddington WBV
2 Moa on Full 18 X

3.



4.

