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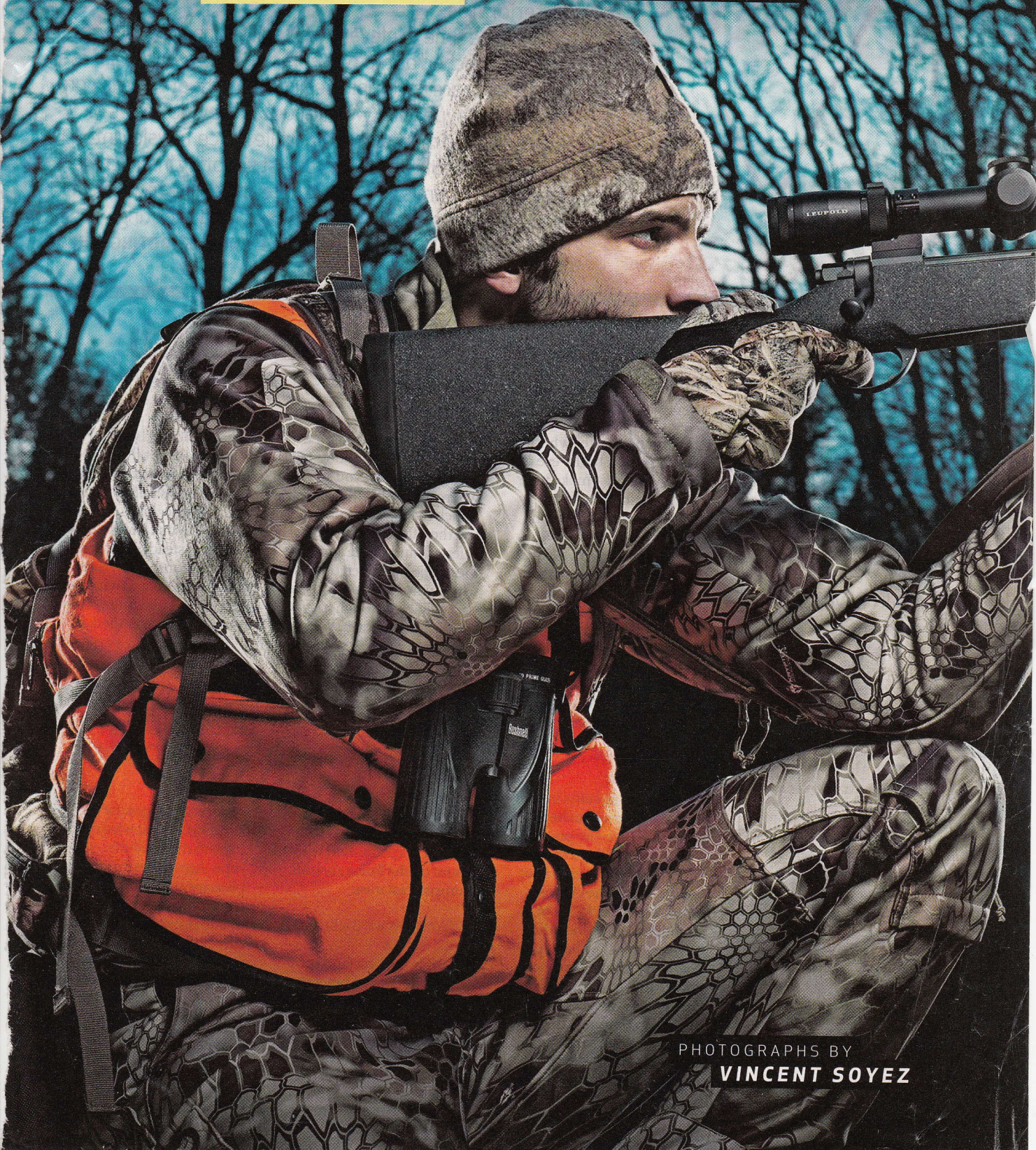
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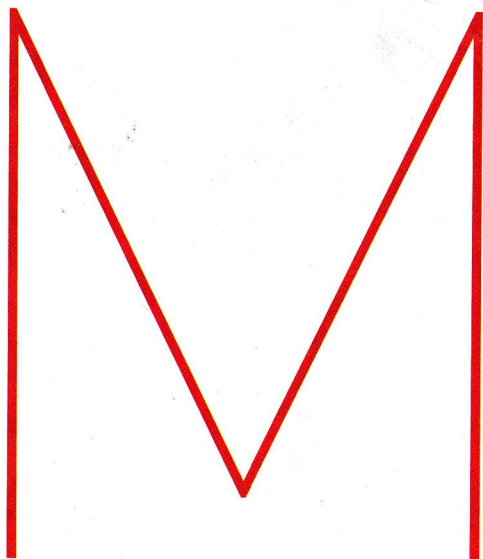
PRO

D DRILLS FROM SHOOTING
PROS AND NEVER MISS IN THE FIELD AGAIN

BY NE VAN ZWOLL AND BRYCE M. TOWSLEY



PHOTOGRAPHS BY
VINCENT SOYEZ

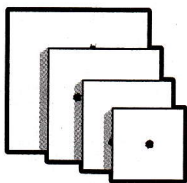


ARKSMANSHIP IS A LEARNED SKILL, not one we're born with. This is good news for anyone who wants to become a better shot. But the downside is that marksmanship is perishable—in the absence of good practice, our shooting doesn't improve and more likely deteriorates.

Now's the time to elevate your skills for next hunting season. We reached out to two authorities to assemble this guide. Both are accomplished hunters, shooters, and competitors. Wayne Van Zwoll discusses the fine points of practical field marksmanship while Bryce Towsley interviewed some of the country's best shooting instructors to create the drills illustrated here, most of which can be done at ranges of 100 yards or less. Good shooting.

—JOHN B. SNOW, SHOOTING EDITOR

RANGE DRILL No 1



PUSH YOUR LIMITS

TONY GIMMELLIE

Secret Service firearms instructor, competitor (impactdatabooks.com)

SETUP: Four targets decreasing in size: 1, ¾, ½, and ¼ inch.

RANGE: Up to 100 yards.

SHOOT: Each target has a point value—from large to small, they are 10, 20, 30, and 40. Fire from the prone position and use a par time of 30 seconds. Fire up to four times, with each hit adding to the tally, for a total possible score of 100. But a miss wipes out everything, giving zero points. The trick is to know when to stop.

SKILLS: Hitting such small targets develops mental focus.

FIELD MARKSMANSHIP 101

END YOUR HUNT WITH A PUNCHED TAG AND NO REGRETS // BY WAYNE VAN ZWOLL

► To hit, no matter whether your target is a bull's-eye or a deer, you must make your body a steady platform, then trigger the rifle without disturbing it. Forget ballistics programs. Avoid high-power scopes with confusing reticles. Instead, mind these fundamentals of marksmanship: position, breathing, trigger squeeze. Practice from prone, sitting, kneeling, and off-hand (standing); you won't have a bench in the field.

► FOCUS WHILE PRACTICING

Good shooting starts in your head. Dry-firing can be as valuable as live-fire practice. But simply pulling a trigger isn't a drill. "Make each shot count," says Lones Wigger, who's won a truckload of shooting medals, including Olympic gold. "When I practice, every shot gets my best effort, down to the smallest detail. Consistency matters. Such focus is exhausting. When I can no longer concentrate, I quit for the day."

As with any discipline, bad

shots in practice amount to practice in bad shooting. Call your shots before you see where they've hit. Not all will punch the middle, but if you feel the rifle hop to 10 o'clock at let-off, and a hole appears there, rejoice! When bullets hit where you don't predict, suspect a flinch or rough trigger squeeze. Slow down. When practicing, a bull's-eye and a

at paper 50 yards away. I tape 2-inch squares of white bond on corrugated cardboard. Prone, you'll easily keep the reticle inside this 4-minute mark. A low sit should prove almost as steady. Try three sitting positions: crossed-leg, crossed-ankle, and with your knees tent-like, comfortably spread, heels grounded.

The crossed-leg sit puts

AS WITH ANY DISCIPLINE, BAD SHOTS IN PRACTICE AMOUNT TO PRACTICE IN BAD SHOOTING.

couple of well-called bloopers beat a target sieved by holes you can't explain. And with a hunt on the line, a slow hit trumps a fast miss.

► IMPROVE YOUR POSITIONS

Probably the best (and most affordable) way to practice different shooting positions is with a rimfire rifle that approximates the weight and feel of your deer rifle, and a brick of .22 LR ammo. Fire

your center of gravity very low. This is great when you're 16, with the flexibility of a rope. Age makes this pose as pleasant as a cramp. You can condition muscles into compliance by supporting your rifle Buddha-like while watching TV. Crossed-ankle is faster and easier—but you must still lean far over, with the flats of your elbows on your knees. Because the "footprints" of crossed positions are smaller than that of the knees-up

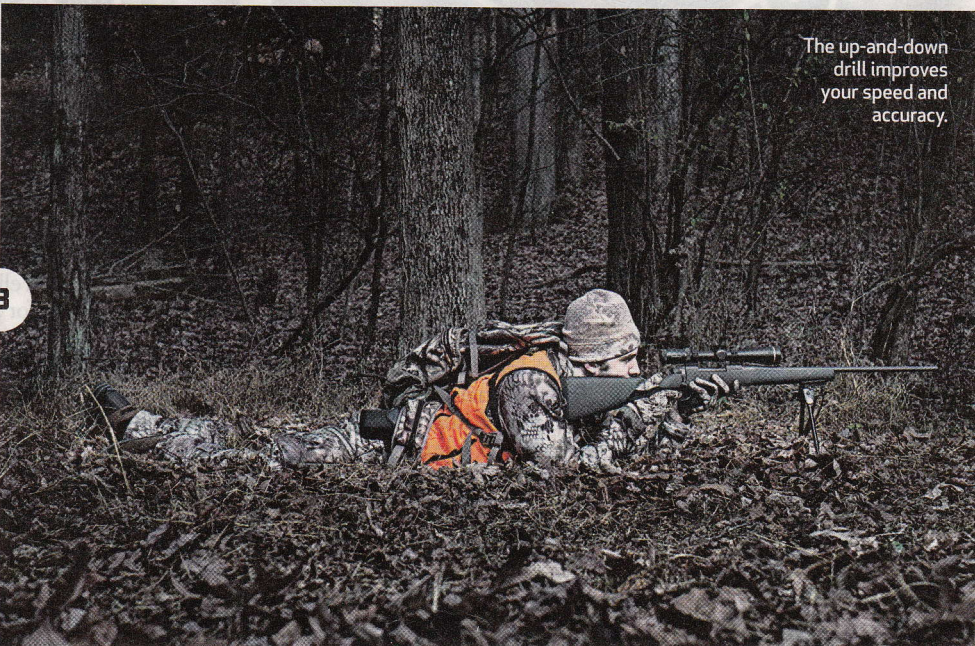
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2



3



The up-and-down drill improves your speed and accuracy.

RANGE DRILL No 2

UP & DOWN

FRANK GALLI

Former USMC sniper, precision rifle instructor, and founder of Sniper's Hide (snipershide.com)

SETUP: Five 1-inch, evenly spaced circles; rifle on a bipod or other rest on the ground, pointed toward the target.

RANGE: 100 yards.

SHOOT: Begin this drill standing behind the gun. On the start command, drop prone behind the gun, locate the correct target, fire one shot, and stand. Repeat until all five targets have been engaged. The goal is to shoot the first circle within 15 seconds, the second circle in 12 seconds, the third in 10 seconds, the fourth in eight seconds, and the fifth and final circle in just six seconds. The concept is to get away from shooting groups and into the mindset of firing one shot at one target. This helps identify problems, because they are not masked in a collection of bullet holes in a group.

SKILLS: The goal of this drill is to improve your ability to get into position quickly. Shots often need to be taken fast, and many shooters take too much time getting ready. This drill trains the shooter to get set, get on the target, and break the shot while maintaining precision. The decreasing par time with each shot adds stress and will help reveal flaws in technique as you rush to make the shot.

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**RANGE
DRILL No. 3**
**RAPID
BOLT-ACTION**
TONY GIMMELLIE
SETUP: Four 1-inch targets.

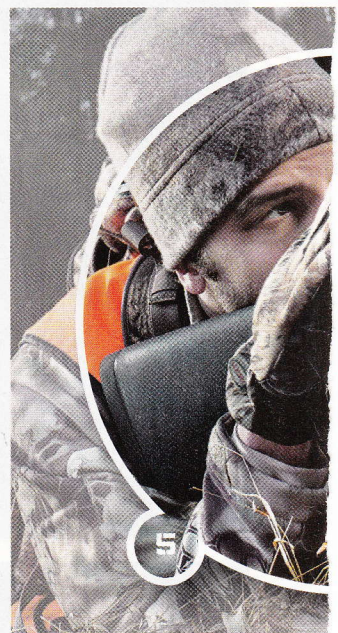
RANGE: 100 yards.

SHOOT: Using a bolt-action rifle, start with three rounds in the magazine and one in the chamber. At the start signal, attempt to place one shot on each target.

Begin with a par time of 30 seconds and work down to 15. Only a 100 percent score, with one hit on each target, is acceptable. The goal is to increase the speed with which this is accomplished.

SKILLS: This drill improves gun handling, and the ability to smoothly work the bolt and acquire the next target. It requires solid fundamentals in the prone position to prevent recoil from disrupting your natural point of aim.

This drill will build a hunter's confidence. If you can hit four 1-MOA targets in 20 seconds, a deer's chest will look as big as a blimp. This also teaches you to manipulate the rifle and successfully make multiple shots under stress.



option, the latter works better when shooting from hills and on uneven ground.

Kneeling, you'll find the rifle swings from 3 to 9 o'clock and back. Counter that by twisting your left (front) foot to parallel your right leg, which should be at about a 45-degree angle to the target. Your weight, and the rifle's, will hold the foot in place. That shin should be vertical and bear about a third of your weight. Half of

your heft is properly on your tailbone atop your right heel, and the remainder is on your rear knee.

Whether sitting or kneeling, bone-on-bone support is key.

► **MASTER THE SLING**

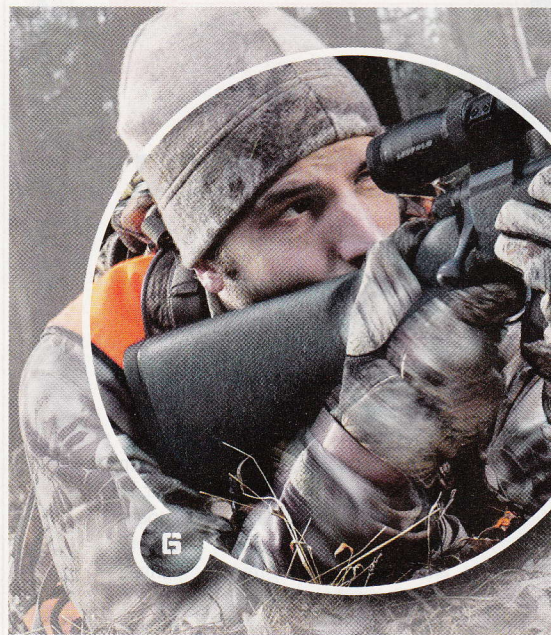
Shooting prone, sitting, or kneeling, you're smart to use a sling. Unlike a carrying strap, a sling has an adjustable loop. It tugs fiddle-string-tight from the front swivel to above your

triceps, pulling the rifle into your shoulder, where bigger muscles can better support it. The sling hangs loose from your arm to the rear swivel.

You'll want a leather sling like the Brownell's Latigo I use. Nylon is cheaper but will slip—not what you want when a \$6,000 elk hunt hangs on your shot. While the Harris bipod is popular, and a fine aid in low positions, it adds weight and can chafe when

the rifle is slung for hiking. Besides, you need a strap or sling for carry anyway. So trade that canoe-paddle cowhide with the colored elk head on the clavicle pad for a Latigo sling.

A sling is of little or no value when you're shooting off-hand, because your left elbow isn't anchored. The "hasty sling" is a technique that is used off-hand with a strap or sling wrapped around your



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arm. It can help deaden tremors, but you'll likely shoot as well without it.

► ZERO RIGHT

Before you hunt, check your zero from all hunting positions. A solid rest directs your rifle—and bullet impact—skyward as the bullet sets up vibrations during its passage down the bore. Off-hand, and even in bone-supported positions, the barrel can dip as you

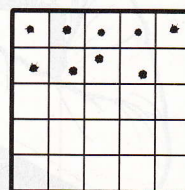
pressure the trigger, and as the rifle recoils. A taut sling routinely pulls my point of impact to 7 o'clock. I often zero from slinged-up prone with this impact shift in mind, where on good days I can hold a minute of angle. When one rifle in .300 Winchester printed 5 inches higher at 200 yards from a bench, I stuck with the "sling zero." If you use an improvised rest afield, be sure to pad the forend with your

hand, and never rely on anything, because the rifle to the right of the bullet will

Be sure that you set your zero to range. Most can hold a 200-yard zero will strike 2 to 3 inches low at 100 yards, and low from 250 to 300 yards. While some flat loads permit a 2



RANGE DRILL No. 4



THE GRID

SCOTT BALLARD

Instructor at the SIG Sauer Academy (sig.saueracademy.com)

SETUP: Draw a grid of 1-inch squares, six rows by six or five by five.

RANGE: 100 yards.

SHOOT: This drill is best shot with a high-capacity magazine-fed rifle to minimize the need to reload.

At the start signal, fire one shot at the top-left box. Then fire a second shot at the box to the right of it, and continue across the top row. When the top row is completed, move to row two. Continue until all boxes have been engaged.

At some point, you'll find you can't focus on the reticle clearly and the shots will go astray. When this starts to happen, "reset" your vision by turning away from the scope, focusing on something in the distance, and blinking a few times.

Keep track of the time it takes to complete the grid with clean hits and how many shots you can make before needing to clear your vision.

SKILLS: The grid drill builds focus, concentration, and marksmanship. It demonstrates that there is a limited amount of time any shooter or hunter can stare through a rifle optic and shoot effectively.

arm. It can help deaden tremors, but you'll likely shoot as well without it.

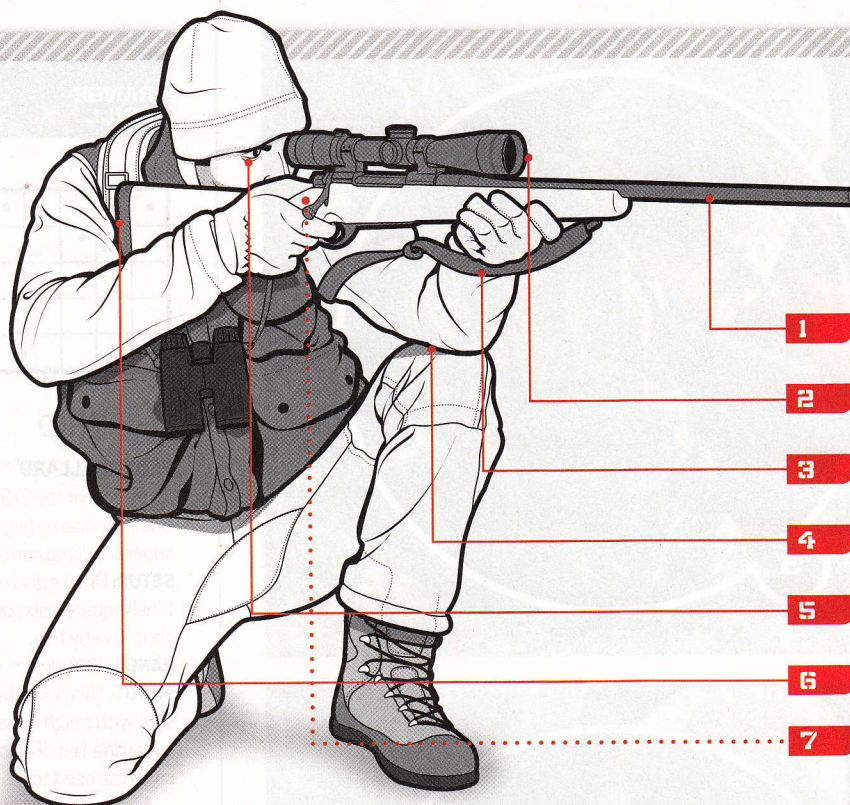
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hand, and never rest the barrel on anything. Hard surfaces cause the rifle to bounce, tossing the bullet wild.

Be sure that you don't set your zero too far down-range. Most cartridges merit a 200-yard zero. Your bullet will strike 2 to 3 inches high at 100 yards, and about that low from 250 to 280. You can aim point-blank to 250 yards. While some flat-shooting loads permit a 250- or even ►



LAST-SECOND CHECKLIST

WHILE YOU'RE SCRAMBLING INTO POSITION FOR A POKE AT A BRUISER, KEEP YOUR BRAIN ENGAGED. JUST BEFORE YOU FIRE, ANSWER THESE QUESTIONS

1

Is the muzzle **clear of obstructions**

I cannot see through the scope?

2

Does that quivering reticle **stay inside the vitals?**

If not, do I have time to improve my position?

3

Is my **sling secure** (or my bipod locked) so it doesn't slip (or collapse) just as the trigger breaks?

4

Does my position put **bone on bone**, letting my skeleton support the rifle so my muscles can relax?

5

Can I **see the full scope field**, to avoid parallax problems and ensure enough eye relief during recoil?

6

Can I **absorb recoil and reload quickly** without losing my position?

7

Is my **safety off?** (Don't snicker. This happens to every hunter sooner or later.)

a 300-yard zero, it's a mistake to put bullets more than 3 inches high at mid-range, where many shots will likely come. More game is missed high than low. Increasing the gap between sight-line and arc at mid-range is particularly unwise in light of the tendency to shade shots high when animals look small.

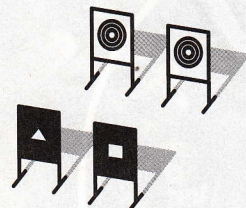
► KNOW YOUR LIMITS

Flat-shooting cartridges have been around since Charles Newton's .250 Savage cracked 3,000 fps in 1913. Scopes got markedly better after WWII. Now top gear can drill softball groups at half a mile. But on a hunt, you're not nipping paper from sandbags. You must make one cold-barrel

hit with a bullet built to kill game. Maximum effective range depends more on conditions—wind, distance, animal presentation—than on hardware. Most of all, it depends on your marksmanship.

My personal rule for hunting: I shoot only if under current conditions I can make a lethal hit 90 percent of the

RANGE DRILL No. 5



KEYHOLE DRILL

SCOTT BALLARD

SETUP: Place several targets a few yards behind cardboard barriers with small, randomly shaped holes to shoot through.

RANGE: 100 yards.

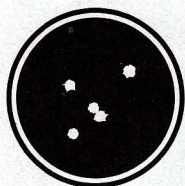
SHOOT: You can shoot from any position, but prone is most common.

At the buzzer, place one shot on each target without hitting the barrier. If the bullet strikes the barrier instead of going cleanly through the hole, it counts as a miss. One shooter can drill with a par time, or two shooters can go head-to-head for the fastest time.

The degree of difficulty increases as you move out. What is easy at 100 yards will be difficult at 200 and extremely challenging at 300 yards.

SKILLS: This develops focus and concentration. The drill also teaches you to trust your equipment. If you know the rifle and have all your dope right, all that matters is your reticle and what it is covering. But the mind can get distracted by the fact that you are shooting through holes that are forward of the target, and that lack of focus will cause misses.

This drill is good training for hunters, as they often have only a little patch of deer to shoot at through a hole in brush.

RANGE
DRILL No 6

FIRST SHOT

TRIP McINGVALE

*Army Special Forces
Sniper, precision rifle and
3-Gun competitor*

SETUP: Any target small enough to be a challenge to hit, about 3 MOA.

RANGE: 300 yards or more.

SHOOT: Start in a standing position with the rifle in your hands. At the start signal, move into position and fire one shot at the target. The target can be at any distance and any size but should present a challenge with respect to hold for elevation and wind. A 3-MOA target (9 inches) at 300 yards is a good place to start.

You need to read the wind and distance and have a clear mental picture in your mind of the holds before the start signal. Only hits count.

Position can be prone, but since that is not often an option in the field, vary the drill to use available rifle rests like a rock or tree. Also practice sitting or kneeling.

SKILLS: This drill works on the shooter's ability to read wind and calculate drop. The faster you can get into position, the faster you can get the shot off. It builds skills needed to make a first-round hit rather than depending on multiple hits to "walk" the impacts onto the target, since you only get one shot.

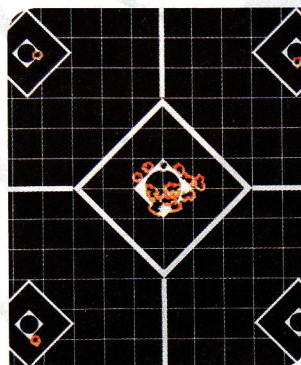
time. Think of a deer's vitals as a 9-inch sphere—a soccer ball between shoulders. Big bucks (and game like elk and moose) offer a bigger target. But as in politics, modest expectations afford a useful margin. In fact, one reason hunters miss (or, worse, make fringe hits) is that they don't pick a small mark. An entire animal is too large a target. Narrow your focus to a spot on the ribs or shoulder. Aim small; miss small. The longest poke I've taken at game put the bullet a hand's width from my aiming point—still well into the vitals. Prone, on a windless evening, I didn't commit to that shot until the reticle settled into a very small orbit on a forward rib.

Shots at running animals are difficult at best, and a bad bet at a distance. A pal who took a running elk at 300 yards told me when pressed that the bullet had struck high in the neck, not through the lungs where intended. He could just as easily have missed or wounded.

► **GO LOW-MAG**

Some hunters think a powerful scope will stretch their reach. While you can hit better what you see clearly, you shouldn't need more than 6X

even when conditions justify a long shot. Some years back, when I got a 300-yard chance at an elk, I left my 3-9X scope at 3X. I shot from prone with a taut sling, and the bullet struck right where expected. Remember that high magnification reduces field of view



and light transmission, while emphasizing pulse bumps and muscle twitches. You may find shots easier and faster with your scope dial at a modest setting, and you'll give up little if any precision. Consider that with iron sights, competitive shooters don't see the bull's-eye yet achieve great results. It's okay if your reticle covers the spot you want to hit.

► **FIRE (ONLY)
WHEN READY**

A scope field crammed with antlers can make you do goofy things, so think before you fire. Is this as close as you can get to the beast? Closer is better. Big targets are more forgiving. Should you wait for a better presentation? Can you reach a nearby rock or log, or shed your pack to rest your rifle on? Most hunters have more time than they use. While unnecessary delay can cost you, getting your rifle to settle is crucial. Ditto a controlled trigger pull. Take your time as you drop into the position you practiced, arranging your body so the rifle points naturally at the target, and breathing deeply as you switch off the safety. If you must fire off-hand, aim only when the shot is imminent. Holding the gun tires your muscles, which will then shake, bouncing the reticle all over the landscape.

After the shot, cycle the action. You should be closing the bolt on a fresh cartridge as the rifle comes out of recoil. If you were properly positioned for the first shot, you won't have to shift your body for a follow-up unless the animal has dashed some distance. ▲▲▲

LONG-RANGE FUNDAMENTALS

// BY BRYCE M. TOWSLEY

For ultra-long-range shooting, you don't just need accurate equipment, you also need the ability and skill to trigger each shot with surgical precision while paying attention to the following:

► **POSITION**

You must be in a rock-solid, comfortable position. You should be held in place by

gravity, not muscle tension. If you are straining to hold your position, you will be straining to shoot well.

► **BREATHING**

To engage multiple targets, you must learn to shoot between breaths. Scott Ballard teaches tactical breathing: Take in a breath, hold for a count of four,

exhale slowly, hold for a count of four, and repeat as necessary.

► **HEARTBEAT**

It is important to lower your heartbeat quickly after physical activity when trying to shoot. Good cardio fitness helps. But deep breathing to force more oxygen into your bloodstream will slow your heart too. Couple intense

exercise with dry-fire practice to learn to time your shots between heartbeats.

► **TRIGGER CONTROL**

Shooting coaches teach newbies that the shot should be a surprise. That's fine for a beginner. But an advanced shooter should know exactly when the shot will break.