

# HUNTING

0 2 8 5 4 1 0 3 2 1 5 9

## R E T A I L E R

November/December 2020 | Winter Special

### RANGE ACCESSORIES

The Ear Gear Revolution Is Here

### DOG GEAR

Profit From Our  
Canine Hunting  
Companions

### TRICKS AND TRAPS

Avoid Falling Prey to Credit Card Pitfalls

### COLD FEET?

16 High-End  
Boots & Socks



The Go-To Round in the Industry

### FORT SCOTT<sup>®</sup> MUNITIONS

Why You Need to Shoot Fort Scott Munitions

See more info on page 4



### GOOSE DOWN

Innovations in  
Jacket Technology

### STRAIGHT-CASE SALES

A New Blessing for Deer Hunters

GRAND VIEW  
OUTDOORS



**WEATHERTIGHT™**

# WE GO WHERE YOU GO.

**BUILT TO DEFEAT ALL THE ELEMENTS THAT  
MOTHER NATURE CAN DISH OUT.**



**[WWW.RUGIDGEAR.COM](http://WWW.RUGIDGEAR.COM)**





# EXPANSION GUARANTEED.

## INTRODUCING THE NEW EDITIONS TO THE 2020 SIERRA LINE-UP

The BulletSmiths® at Sierra have been busy with eight new bullet offerings, an expansion of five new calibers to the popular GameChanger™ ammunition line and a new brand of ammunition developed specifically for varmints and predators at an economical price for high volume shooting. Check them all out at [sierrabullets.com](http://sierrabullets.com) and start expanding your sales!



# SIERRA®

The BulletSmiths®

[SIERRABULLETS.COM](http://SIERRABULLETS.COM)

# CONTENTS

## FEATURES

### 16 Selling the Straight Case

The profile predates smokeless powder. How can you profit as these new rounds bless deer hunters?

By Wayne van Zwoll

### 22 Profiting From Hunting Dog Gear

Hunters aren't shy about spending money on their dogs. Are you stocking what they need?

By Mark Chesnut

### 28 Ear Gear Revolution

Listen up. Thanks to technology, it's no longer just about protecting hearing – it's also about making your customer a better hunter.

By John Geiger

### 34 Avoid Tricks and Traps of the Credit Card Industry

Follow these tips to find the best card deal to conveniently cover your monthly business expenses.

By Erik Gunn

### 36 The Lowdown On Goose Down

Geese haven't changed much in the past 50 years, but goose down jackets certainly have.

By Mark Chesnut

### 40 Gear Roundup

Cold Weather Boots  
By Gordy Krahn

### 44 NSSF Launches All-New First Shots Clay Target Program

If your range is looking to engage new shotgunners, take a look at this program created to promote the shooting sports.

By NSSF Staff

### 46 New Products

Here are a few new products to keep your eye on in 2020.



28



36



12



34

### 10 Up Close: Heated Clothing

Heated clothing has come a long way from those old itchy socks with a short-lived battery pack.

By Alan Clemons

### 12 Gear Guru: Cashing in on the Blackpowder Tradition

There are a host of reasons why people hunt with blackpowder rifles that often coincide with how deep they're willing to dig into their cash reserves.

By Gordy Krahn

## DEPARTMENTS

### 6 In the News

A roundup of relevant and noteworthy industry updates

### 8 Informed Associate: Help Your Business Run Smoothly With Written Policies and Procedures

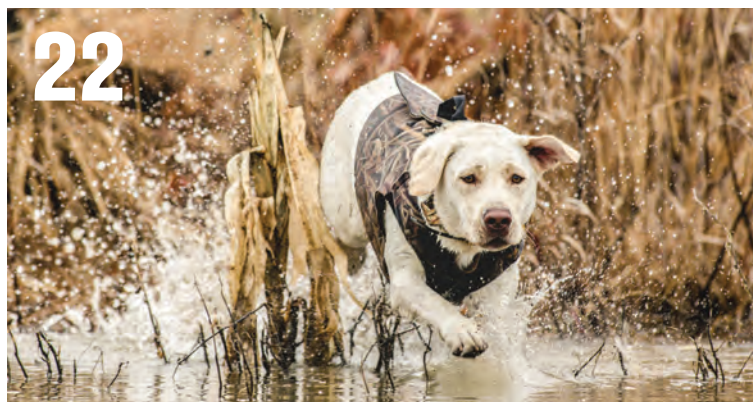
Save yourself time and headaches by documenting how you want your employees to handle service.

By Judy Kneiszel

### 48 Counter Culture: 24 Reasons Customer Service Is King

With the holiday shopping season upon us, it might be easy to focus on short-term profits while overlooking the key to long-term success – customer service.

By Bob Robb



22







## EDITORIAL

Editor in Chief / Hilary Dyer

Copy Editor / Alex Headley

Product Editor / Gordy Krahn

Digital Editor / Dave Maas

## CREATIVE

Art Director / Mark Kingsbury

## ADMINISTRATION

Circulation / Holly Gensler  
holly.gensler@colepublishing.com

## ADVERTISING

President/Publisher GVO / Derrick Nawrocki

derrick.nawrocki@grandviewoutdoors.com

Regional Sales Manager / Don Harris

don.harris@grandviewoutdoors.com

Regional Sales Manager / Mike Kizzire

mike.kizzire@grandviewoutdoors.com

Regional Sales Manager / Patrick Boyle

patrick.boyle@grandviewoutdoors.com

## NATIONAL SALES REPRESENTATIVES

Byers Media / Ken Byers & Toby Shaw

toby@byersmediaonline.com

# HUNTING RETAILER

*HUNTING RETAILER*® is published nine times a year in January/February, March, April, May/June, July, August, September, October, and November/December by COLE Publishing, Inc. Published and owned by COLE Publishing, Inc., 1720 Maple Lake Dam Rd., Three Lakes, WI 54562.

All rights reserved. Contents may not be printed or otherwise reproduced without written permission of COLE Publishing. Periodicals postage paid at Three Lakes, WI 54562 and at additional mailing offices.

COLE Publishing is not responsible for researching or investigating the accuracy of the contents of stories published in this magazine. Readers are advised that the use of the information contained within this magazine is with the understanding that it is at their own risk. COLE Publishing assumes no liability for this information or its use. COLE Publishing assumes no responsibility for unsolicited editorial, photography and art submissions. In addition, no Terms and Conditions agreements are recognized by COLE Publishing unless signed and returned by the Editor.

## SUBSCRIPTIONS

Free to qualifying retailers, wholesalers, manufacturers, and salespeople of shooting sports products within the U.S. and

Canada; \$60 annually for all other U.S., Canada or Mexico subscribers; and \$150 for two years to all other foreign countries. To subscribe, visit [www.huntingretailer.com/order/subscription](http://www.huntingretailer.com/order/subscription) or call 800-257-7222.

## POSTMASTER

Send address changes to:  
**Hunting Retailer P.O. Box 220**  
**Three Lakes, WI 54562**

CALL 800-257-7222 | 715-546-3346 | FAX 715-546-3786

EMAIL [Holly.Gensler@colepublishing.com](mailto:Holly.Gensler@colepublishing.com). Please include both old and new addresses.

## ADVERTISING

Advertising inquiries should be emailed to:  
[info@grandviewoutdoors.com](mailto:info@grandviewoutdoors.com).

*Hunting Retailer*® is a member of the  
National Shooting Sports Foundation

© Registered in the U.S. Patent and Trademark Office.  
Copyright 2020 COLE Publishing, Inc. All rights reserved. No part of this publication may be reproduced without written permission from the General Manager.

COLE publishing

NSSF  
The Firearm Industry  
Trade Association

GRAND VIEW  
OUTDOORS





This month's cover brought to you by:



## Fort Scott Munitions® enters the world stage with TUI® technology

In 1903 the world met Ford Motor Company. In 1969 NASA put the first man on the moon. In 1997 Amazon went public. In 2012 the outdoor, gun, ammo, and tactical industry met Fort Scott Munitions.

Our multiple patented Tumble Upon Impact design has made a considerable impact in the industry. With being able to use the TUI® rounds in hunting, self-defense, long range shooting, and every day carry, an increasing number of people are transitioning from their FMJ or hollow points to our solid copper/brass bullets. It has proven its reliability, performance, and is one of the most accurate and dependable rounds on the market.

Both deadly to game and safe for the environment, the lead-free bullet will allow you to hunt in areas that the competition cannot. Whether it is short-range whitetail hunting in the Midwest or long-range elk in the west, you can depend on our TUI® bullet to reliably tumble and kill game ethically at any distance.

How do you get reliable expansion out of a bullet at a long-distance? The answer is simple. You can't. That's why our founders sat out to

change the industry. TUI® ammo is designed to tumble upon impact in soft tissue, giving it a significant advantage over conventional hunting bullets. It tumbles at any velocity, meaning it remains deadly, yet ethical to game at ranges non-comparable to other bullets. Additionally, our monolithic bullets are match grade accurate bullets that will retain 99.5% of its mass when creating a wound channel.

Consistency is the key to success in hunting. Much like Ford Motor Company perfected the assembly line to mass-produce the Model T consistently, so have we with our Solid Copper Spun (SCS®) bullet. This emphasis on quality means that no matter when or where you buy Fort Scott Munitions TUI® ammo, you will end up with the same result, box after box, year after year. We will be there to help you take home whatever game your crosshairs level upon. Let us give you the confidence to pull the trigger on your next hunt, knowing the game downrange will be laid to rest in an ethical and repeatable way.

Stay safe, stay free, and God bless.

[www.fortscottmunitions.com](http://www.fortscottmunitions.com)





# TUI<sup>®</sup>

TUMBLE UPON IMPACT



**FORT SCOTT**  
**MUNITIONS<sup>™</sup>**



 [FORTSCOTTMUNITIONS](https://www.instagram.com/FORTSCOTTMUNITIONS)  
[WWW.FORTSCOTTMUNITIONS.COM](http://WWW.FORTSCOTTMUNITIONS.COM)



## Derek Paul Joins Blaser Group as North American Director of Sales

Blaser Group announced Derek Paul has joined the company as North American Director of Sales. In this role, Paul will be responsible for all commercial sales activities for Blaser, Mauser, Sauer, and Rigby rifles and Minox optics throughout North America.

"I am extremely excited to be part of the Blaser Group team," said Paul. "I have a deep passion for the hunting and firearms industry and am honored to represent these legacy brands. This really is a dream job for me."

Paul comes to Blaser Group with years of industry experience, most recently from Dunkin Lewis, where he was Southwest Regional Sales Manager. Prior to

that, he was a sales representative for Proactive Sales and Marketing. Paul was also Manager and Senior Buyer for Star Arms, LLC and held positions at Security Sporting Goods and Academy Sports + Outdoors.

"Derek is uniquely qualified to lead the commercial sales efforts, given his extensive experience as Blaser brand manager for Dunkin Lewis," said Jason Evans, CEO of Blaser Group. "His expertise on our industry-leading designs, and his deep knowledge of the commercial sporting goods market will serve the Blaser Group well. We are thrilled to have him as part of Blaser Group where he will continue to lead and educate our sales teams."

## Ayoob New President of Second Amendment Foundation

Internationally-known firearms author and trainer Massad Ayoob has been named president of the Second Amendment Foundation, succeeding the late Joseph Tartaro.

"The election to president of SAF is one of the most cherished honors of my life," Ayoob said. "I have been proud to serve for many years on SAF's Board of Trustees and will do my best to continue my commitment to what I consider a civil right and indeed, a human right."

"I am humbled at the thought of replacing my long-time friend and mentor Joe Tartaro," he continued, "and frankly doubt that anyone, myself included, can truly fill his shoes. I accepted the position only after being assured that it would be an interim appointment, and one of my primary goals is to find a dedicated 2A warrior with a longer life expectancy than my own to eventually serve in this position. In the meantime, I will support the goals of SAF, particularly to further strengthen our ties with the law enforcement community and to enhance the organization's policy of embracing diversity in the community of the gun culture."

Ayoob brings a lifetime of experience to the position. He served 19 years as chair of the Firearms Committee of the American Society of Law Enforcement Trainers, and several years as a member of the Advisory Board of the International Law Enforcement Educators and Trainers Association. In addition to teaching for those groups, he has also taught for the International Association of Law Enforcement Firearms Instructors and the International Homicide Investigators seminars.

The winner of the Outstanding American Handgunner of the Year Award in 1998, Mas has won several state and regional handgun shooting championships. He has been handgun editor of Guns magazine and law enforcement columnist for American Handgunner since the 1970s, and has published thousands of articles in gun magazines, martial arts publications, and law enforcement journals. He is the author of some 20 books on firearms, self-defense, and related topics, including "In the Gravest Extreme" and "Deadly Force," widely considered to be authoritative texts on the topic of the use of lethal force.

He has received judicial recognition as an expert witness for the courts in weapons and shooting cases since 1979, and served as a fully sworn and empowered, part time police officer for 43 years, mostly at supervisor rank. Ayoob founded the Lethal Force Institute in 1981 and served as its director until 2009, and now trains through the Massad Ayoob Group.

"We are proud and delighted that Mas Ayoob has assumed the SAF presidency," said SAF founder and Executive Vice President Alan M. Gottlieb. "I've had the pleasure of working with him over the years as a SAF trustee, and look forward to working with him more closely in his new role. Without a doubt, Mas Ayoob is true defender of the Second Amendment, and his devotion to protecting and advancing the right to keep and bear arms will be critical as we face new challenges."

## GSM Outdoors Acquires GPS Bags

GSM Outdoors is excited to announce its newest company acquisition, GPS Bags, which manufactures specialized range and gear bags for shooters under two distinct product lines.

The GPS Wild About Shooting series includes multiple range backpacks, range bags and totes that are tailored for rifle, handgun and shotgun shooters. The Tactical line of range backpacks are built to meet the needs of military and law enforcement defense professionals.

GPS bags, cases and totes are designed around the concept of intelligently organized storage combined with easy access and identification of needed gear. The latter derives from the patented Visual I.D. Storage System, which makes all content easily identifiable and easily accessible.

In addition to the Visual I.D. Storage System, GPS bags incorporate numerous features that are purpose-driven in their design and construction. This includes rugged, over-sized zippers, metal-reinforced hardware, lift ports for improved leverage and grip, integrated rain covers and durable bar-and-tack stitching to withstand hard use.

## Founder of Gore-Tex Dies

Robert W. "Bob" Gore, chairman emeritus of the board of directors of W.L. Gore & Associates, died Sept. 17. He was 83.

Gore's scientific discoveries spawned Gore-Tex Outerwear and paved the way for advancements in industries as varied as performance fabrics, medical devices, space exploration and filtration. He became chairman emeritus in 2018 after 57 years of service on the Gore board, 30 of those as chairman.

He also was president of Gore from 1976-2000, during which time the company became a billion-dollar enterprise.

In 1996, Gore said: "We plan to leave a legacy to society and to future generations: infants with surgically reconstructed hearts that live because of our medical products; governments of free societies that are better able to protect themselves because of defense products; communities with cleaner and healthier environments because of our filtration and sealant products. And yes, people that just have more fun in the outdoors because of our Gore-Tex Outerwear."





## Sig Sauer Partners With Evike for Sig

Sig Sauer's Sig Air Division has partnered with Evike Manufacturing Group (EMG) for future product development and continued product distribution of Sig Air airgun and airsoft products in the U.S. through Evike.com.

"This exciting collaboration between Sig Air and EMG is a result of the increasing popularity and demand we are seeing in the marketplace for Sig Air airguns and airsoft products," said Tom Taylor, Chief Marketing Officer and Executive Vice President, Commercial Sales, Sig Sauer. "This new partnership with EMG will allow us to increase our product development capabilities allowing us to bring more Sig Air products to consumers worldwide."

The Sig Air product line includes a series of traditional CO2 pellet and BB rifles and pistols that are designed to imitate the look, weight, balance and han-

dling characteristics of their traditional firearms counterparts. Additionally, Sig Air offers a line of training products with the Proforce line of airsoft pistols, rifles, and accessories.

"The team at *Evike.com* and EMG are excited for

the opportunity to join forces with Sig Air to create new products, expand the Sig Air product line, and provide a new dealer experience for Sig Air products," added Evike Chang, CEO of Evike.com and President of EMG, Inc. "We are completely aligned with the Sig Sauer brand to bring the best-in-class airgun and airsoft experience to the Sig Air product line."

## Brownells Donates \$50K to Fight Magazine Ban

Brownells is donating \$50,000 to the California Rifle & Pistol Association to help fund the fight to restore freedom and standard-capacity magazines to California gun owners.

In August, a three-judge panel of the United States Court of Appeals Ninth Circuit upheld a previous decision against California's ban on magazines in the *Duncan v. Becerra* case. The panel determined a ban on magazines with capacity of more than 10 rounds violates the Second Amendment rights of Californians.

In an effort to delay striking down California's magazine ban, the California Attorney General's office petitioned for an en banc review of panel's ruling. Brownells is contributing \$50,000 for CRPA's efforts to the cause.

"The California Rifle & Pistol Association Foundation is proud of the partnership with Brownells to fight for the rights of all Americans to exercise their Second Amendment rights," said CRPA Foundation Director of Development Rick Travis. "Brownells' generous donation will be used 100% in the fight to see the *Duncan v. Becerra* case to a successful conclusion in restoring the Second Amendment in California." **HR**

**Daystate**

**MTC OPTICS**

**MTC Optics**

**BROCK**

**0dB SILENCER**

**THE WORLD'S FINEST AIRGUNS**

**DEALER INQUIRIES, CONTACT:**

**PRECISION AIRGUN DISTRIBUTION**

**(480) 539-4750**





# Help Your Business Run Smoothly With Written Policies and Procedures

Documenting proper ways for your employees to provide consistent quality service will save time and headaches in the long run.

BY JUDY KNEISZEL

**W**hen pointing out a mistake made on the job, has an employee ever thrown it back in your face saying he or she didn't know how you wanted the task done? Did the defensive employee claim they couldn't be held responsible for something they were never told? If you had step-by-step procedures written down and could prove the employee had read them, the argument would stop right there. But without clear documentation, this is a situation you could find yourself in again and again.

Having written policies and procedures is important, especially if a company is growing and adding staff. Maybe in a two-person shop, Mom and Pop don't need everything written down, but once they hire their first employees, it's time to set some standards and write down the rules.

## Definitions

Before you can document policies and procedures, you have to know the difference between the two:

- A policy is a standard or rule.
- A procedure is a plan of action.

For example, it may be your company's policy to keep the glass storefront windows exceptionally clean. How often the windows need to be washed and the steps required to get them clean are procedures. Well-defined policies and procedures can also help a business comply with relevant state and federal guidelines and help with risk management.





Increased mistakes may indicate your employees aren't doing things in the safest, most efficient ways. Maybe you've noticed an increase in questions from staff about things you assume to be normal operating procedures. Increased customer complaints can also indicate some of the people representing your company aren't clear on how things should be done and are taking shortcuts.

If those reasons alone aren't enough to convince you to get your policies and procedures in writing, consider this: A small business with a record free of claims is likely to pay lower liability insurance rates. You can reduce the number of claims you make by minimizing risk. This can be accomplished by creating policies and procedure checklists that reduce hazards on your premises. In other words, write it down.

### Getting Started

Begin by determining some basic company policies. Write out each policy, and then list the procedural steps necessary to achieve that policy in a checklist format. Have at least one employee who is affected by the particular policy read it to make sure the goal of the policy and instructions for achieving the goal are clear. An understandable checklist means employees can simply go down the list to complete a task, reducing the amount of handholding and micromanaging required. If something goes wrong, it's easy to pull out the checklist and see which steps were missed or executed incorrectly.

### Put Policies and Procedures to Work

Time spent developing policies and outlining procedures is wasted time if they are just stored on your PC or tucked away in a file cabinet never to be seen again. Ask employees to read the policies and procedures after they are first written down and have them acknowledge they have read them by initialing and dating a copy you will then keep in their personnel file. This eliminates the "I was never told about this policy" argument because you'll have proof they were shown the policy and were asked to read it. This will save time and frustration down the road.

Another way to make use of your written policies and procedures is to organize a hard copy into a binder or use digital files to create a single document new hires can read. This will either be a supplement to an employee-training manual or, in many cases, become the training manual. Remember to have each new employee sign and date a statement that says they have seen and read the policies and procedures manual.

### Keep Up to Date

The collection of written policies and procedures should be a living thing that grows and changes. Regularly compare written procedures to actual processes and update the

**"Time spent developing policies and outlining procedures is wasted time if they are just stored on your PC or tucked away in a file cabinet never to be seen again."**

documentation as necessary. If someone comes up with a better way of doing something, officially change the written procedure. Strive for continual improvement rather than sticking with procedures that are carved in stone even after a better way is discovered.

If a policy is outdated, eliminate it. If a need for a new policy arises, add it. Again, be sure to have employees read and sign any new policies and policy changes that pertain to them. If you purchase new equipment, policies and procedures will have to be added. And policies and procedures for retired equipment can be eliminated, which will prevent the file from becoming too cumbersome.

↓ You can save a lot of arguments and headaches if you have proof that employees have read and understand your written policies.



### Long-Term Benefits

Having clearly written policies and procedures — read and understood by employees and kept up to date and relevant to day-to-day operations — will result in everyone in the company being on the same page when it comes to performing tasks large and small. It reduces time wasted on trial and error, and it means managers don't have to micromanage. Don't think of having written policies and procedures as being heavy handed, but rather as a way to show you care about employees' success and safety on the job. In addition, well-thought-out policies and procedures provide customers with consistently good service — and that's a win-win. **HR**



# Heated Clothing

Heated clothing has come a long way from those old itchy socks with a short-lived battery pack. Check out these two options for customers seeking warmth without bulk.



BY ALAN CLEMONS

**H**unters, anglers and outdoors enthusiasts of a certain age may well remember the heated gloves and socks available years ago — or perhaps they were given their father's or grandfather's itchy socks tucked away in the cabin's cedar chest to wear when the weather turned colder than expected.

My father had some. My grandfather had some. Older friends of mine still have theirs. It was a rite of passage, it seemed, to wear the gray socks topped with red trim and a canvas battery pack with wires coming out for hunting season. As a kid I was more intrigued by them than excited about wearing them. I couldn't understand how a battery or two, the same things

that powered my toys, would help keep my feet warm. Even in the deer stand or while wearing our old rubber-coated chest waders when duck hunting, I preferred regular socks.

They were made by different companies. Gloves, too, were offered. The Frederic H. Burnham Company, incorporated in 1904 in Michigan City, Indiana, made battery-warmed gloves. Socks and gloves were the two main offerings of all the companies. My research didn't turn up any jackets, parkas or other apparel. And as late as 1976 you could find "Lectra-Sox," powered by batteries. What a cool name.

An issue with battery-powered apparel way back in the day was the power plant. The alka-

line batteries didn't last as long, occasionally leaked and could be fitful in extreme conditions. The wires and connections could be testy, as well. If everything worked as it should, you'd have toasty toes! If not, sad faces and, after the outing, trying to figure out what went wrong.

Today, decades later, we're blessed with improvements. Batteries, including rechargeable packs, have better materials and last longer. Some heated products use Bluetooth or pocket-sized remote controls. Myriad products, including apparel, benefit from technological advances, from fabrics and metals to optics and insulating properties. Here are two items that might help your customers stay warm this winter.





## MILWAUKEE HEATED GEAR

Hunting can be challenging in harsh weather conditions. Milwaukee M12 Heated Gear was developed for sub-zero commercial job sites, which means it should easily handle your customers' hunting situations.

Milwaukee M12 Heated Gear combines patented Carbon Fiber Heating Technology with strong, durable RedLithium batteries to battle extreme temperatures. Materials were selected and developed to maximize durability and flexibility and outperform traditional fabrics against abrasion and tearing. Special attention was given to traditional high-wear zones. That means mud, rocks, climbing trees and other hunting situations your customers encounter shouldn't be an issue.

Milwaukee M12 Heated Gear helps reduce the need for bulky layers by utilizing carbon-fiber heating elements to trap and generate heat across core body areas. Thermoregulation is the body's way of maintaining our body temperature at, typically, 98.6 degrees. As conditions warrant, the Heated Gear's three settings – high, medium and low – allow wearers to adjust the heat level with the touch of a button. It warms in less than three minutes, keeping those critical core body areas warm. The RedLithium CP2.0 battery has an 8-hour run time.

The Heated Gear is available in the Toughshell jacket, AXIS jacket and vest, hoodies and gloves. Each has special pockets and features, such as a zipper on the glove and extended cuffs. New for 2020 is the USB Rechargeable Heated Workskin Midweight base layer. Powered by the RedLithium USB 3.0AH battery, the Workskin's carbon fiber heating elements provide even heat distribution throughout the chest and upper back. A one-touch LED controller offers two heat settings and a quick-heat function. The Workskin has a double-lined polyester body, fleece-lined arms, raglan sleeves and seamless shoulders. Customers should be interested in this system of base and outer layers, which has sizes from S-3X for men and women.

For more information, visit [www.milwaukeeetool.com](http://www.milwaukeeetool.com).

MILWAUKEE WOMEN'S  
HEATED SOFTSHELL



MILWAUKEE M12 HEATED QUIETSHELL



## SCENTLOK BOWHUNTER ELITE:1 REACTOR VEST

New this year to the Bowhunter Elite:1 lineup is the Reactor Vest Plus, joining the Reactor pant and jacket as part of ScentLok's multi-season system. Add ScentLok's odor-taming capabilities and it's a great one-two combo for increasing sales.

The Bowhunter Elite:1 line includes the versatile mid-season Voyage series, the 100% waterproof and insulated late-season Fortress series, and the Reactor series for warmth-on-demand layering. All BE:1 garments employ advanced, bowhunter-friendly designs, ultra-silent fabrics and ScentLok Carbon Alloy technology. The Reactor series eliminates the noise and poof of "puffy" jackets and vests, which arguably are warm but can spook game. The Reactor jacket, vest and pant are layering pieces for additional warmth under other garments, although the jacket – and now vest – can be easily worn as a stand-alone. The hybrid design provides low-bulk insulation in the body's core areas and stretch fabrics in areas of high activity.

ScentLok's proven and trusted odor-taming capabilities are used by thousands of hunters. One selling point for the Reactor series, and other ScentLok products, is how it helps contain odors in the field. Human body odor is created by three things: bacterial, metabolic or ambient factors. Bacterial odors are a byproduct of bacteria on the body reacting with sweat, such as on armpits. Metabolic odors can be caused by ingested foods or other substances, such as medicine or alcohol. Ambient odors can be created by environmental factors such as smoke, gasoline, grease in a gas station deli, cologne or perfume, or even a vehicle's interior.

ScentLok's Carbon Alloy is the primary odor-adsorbing technology that targets the most extreme odor hot spots on your body, such as your underarms and torso. It also employs Fusix, which provides further odor control coverage in high mobility areas such as forearms and shoulders. Fusix is a printed coating of engineered carbon permanently fused onto the fabric. Customers will ask, "What makes it work?" Be ready to tell them.

The Reactor's "on-demand warmth" isn't just a fancy gimmick. The Reactor Vest Plus features three heating elements placed in core areas that can be activated at will to provide you warmth in a flash. A remote with a USB power cable in the right pocket activates the heating elements. With three adjustable settings, wearers can control the amount of heat for whatever comfort level is desired in the stand, on the ground, or while walking. ScentLok's Carbon Alloy technology combines activated carbon, treated carbon and Zeolite between fabrics in a massive layer that adsorbs odors. The Carbon Alloy is reactivated in the clothes dryer. Reactor Plus is quiet, has 150 grams of Thinsulate insulation, and runs in six sizes to 3X and several camo patterns.

For more information, visit [www.scentlok.com](http://www.scentlok.com). HR

SCENTLOK REACTOR VEST





# Cashing In on the Blackpowder Tradition

There are a host of reasons why people hunt with blackpowder rifles that often coincide with how deep they're willing to dig into their cash reserves.

BY GORDY KRAHN

**T**he muzzleloading rifle was a lifeline for early American frontiersmen — called upon to put protein on the dinner table, provide personal and home protection and defend a newly acquired and somewhat fragile state of liberty and independence. Crude by today's standards, these firearms were an impetus for exploration and settlement, providing the firepower needed for western expansion into forbidding and often hostile territory. Flintlock and percussion rifles were the modern firearms of pioneer times, state-of-the-art in every respect.

Then somewhere along the line, things changed in a big way. With the appearance of repeating breech-loaded rifles during the mid-1800s, modern muzzleloaders became, well, not so modern, and they were soon relegated to heirloom status above the fireplace mantel. Only traditionalists hunted with them, or in more modern times, those looking for extra muzzleloader-only tags to fill. It wasn't until 1985 that things changed again. That was the year Tony Knight introduced the MK-85 Knight rifle, a truly modern muzzleloader that used an inline ignition system that was far superior to the flintlock and sidelock rifles on the market. This was the catalyst of things to follow, as muzzleloader manufacturers' R&D teams all set out to best Knight by building a better mouse trap — the result was a veritable renaissance of modern front-stuffing guns that in some respects have pushed the envelope beyond what traditionalists would even recognize as a muzzleloader.

But the truth of the matter is that while so many things have changed in regard to muzzleloaders, especially those topped with modern optics, many of their limitations have remained the same: You still get only one shot followed by a lengthy reloading process, range is somewhat limited, and blackpowder guns are more susceptible to foul weather than modern centerfire rifles. But for many, that's the allure of hunting with these "primitive" arms — a throwback to simpler times by avoiding all of the technical bells and whistles of truly modern firearms — putting hunting skills and determination at the forefront.

It seems that today's blackpowder hunters fall into two camps: those who enjoy the tradition and challenge and those who see it as a means of extending the hunting season where muzzleloader-only tags are abundant. This is a win-win for retailers, but the key is to recognize this diversity. Only by displaying a wide variety of guns and accoutrements with a wide range of price points will you capitalize on the full potential of this market when a potential customer walks through the door. Here are a handful of examples.



**“It seems that today’s blackpowder hunters fall into two camps: those who enjoy the tradition and challenge and those who see it as a means of extending the hunting season where muzzleloader-only tags are abundant.”**







★ **BEST FEATURE:** Ignites up to 200-grain powder charges

★ **BEST FEATURE:** Breech powder load

★ **BEST FEATURE:** Traditional look and feel

### [1] REMINGTON MODEL 700 LSS ULTIMATE MUZZLELOADER

Big Green has a long history of supplying outdoorsmen with every conceivable firearm configuration imaginable to aid them in procuring protein for the dinner table and trophies for the man cave — including what the company refers to as the Ultimate Muzzleloader.

Remington's Model 700 LSS was designed to deliver super-magnum power for a lethal range of 300 yards. With its revolutionary U.M.L. ignition system and .50-caliber Premier Accu Tip bullets, it can reach out and touch big game at ranges never before imagined with a front-stuffing firearm. Pre-primed cases load with the ease of a centerfire rifle, and super-hot magnum primers ignite up to 200-grain loads with near smokeless powder efficiency. The flash channel stays clean and ready for the next load — there's no need to remove the breech plug for cleanup. The system is paired with a trusted Remington Model 700 receiver for precision, power and performance. With a 26-inch stainless-steel barrel and action and laminate wood stock, the Model 700 LSS Ultimate Muzzleloader also provides all-weather durability.

**MSRP: \$967.98 CONTACT: [www.remington.com](http://www.remington.com)**

### [2] TRADITIONS NITROFIRE

With a long tradition of producing accurate, innovative and dependable front-loading rifles, Traditions Firearms has provided blackpowder enthusiasts with quality firearms for more than 30 years. From DIY rifle and pistol kits to classic sidelocks and modern inlines, they've been an innovator in the evolution of the modern-day muzzleloader — culminating with the introduction of the NitroFire in 2020.

Traditions Firearms has partnered with Federal and Hodgdon to make a safer, more reliable and more consistent-shooting muzzleloading rifle in its NitroFire, the only muzzleloader that uses the new Firestick from Federal — an encapsulated polymer powder charge loaded with clean-burning Hodgdon Triple Eight powder. The NitroFire is designed so that the Firestick can be loaded from the breech, while the bullet is still loaded from the muzzle. This makes the powder totally impervious to moisture and the elements and provides fast, effortless loading and unloading. The NitroFire features an ultralight 26-inch chromoly steel fluted and tapered barrel with 1:28-inch twist rifling, Dual Safety System and Traditions new Elite XT trigger system.

**MSRP: \$549 to \$699 CONTACT: [www.traditionsfirearms.com](http://www.traditionsfirearms.com)**

### [3] DIXIE GUN WORKS KODIAK DOUBLE RIFLE

A company with a nostalgic bent, Dixie Gun Works has earned a reputation for providing blackpowder traditionalists with classic guns that possess the look and feel of days gone by. Its Kodiak double rifle by Italian gun maker Pedersoli is a prime example — the nostalgic big-game hunter's dream come true.

This authentically styled side-by-side muzzleloader — available in .50- and .54-caliber — harkens to days of old, extensively field-tested in Africa and North America. Its classic American walnut half-stock sports a satin finish with checkering on its straight-grip wrist and on the forend. Barrels are attached to the stock by a single barrel key, and the front action lock and hammers are engraved. Trigger guards and breech plug tangs are color case hardened. Other features include double triggers, a bead-style front sight on a ramp and two folding adjustable rear sights. The Kodiak comes with a nipple wrench and leather sling — and a history that's as old as blackpowder hunting itself.

**MSRP: \$1,525 CONTACT: [www.dixiegunworks.com](http://www.dixiegunworks.com)**





★BEST FEATURE: Toolless Speed Breech XT

★BEST FEATURE: Long-range capability

**[4] THOMPSON/CENTER TRIUMPH BONE COLLECTOR**

Inspired by the Bone Collector himself, professional hunter Michael Waddell, Thompson/Center's Triumph Bone Collector muzzleloader has all of the bells and whistles an avid blackpowder hunter could want. And that's just what Thompson/Center has been doing since 1967 — building firearms with innovative features that hunters can rely on.

From the accuracy and innovation to the touch and feel, the American-made T/C Triumph Bone Collector muzzleloading rifle meets and exceeds industry standards. Built on an ultra-light frame made from aircraft-grade aluminum, it features T/C's toolless Speed Breech XT — just twist it 90 degrees to remove for easy cleaning and access to the bore. Its fluted barrel enhances accuracy by increasing the stiffness of the barrel and expanding the barrel's cooling rate, and a Weather Shield coating provides corrosion resistance. The Triumph Bone Collector comes dressed in Realtree AP camo and includes a FlexTech stock with a SIMS Limb-Saver recoil pad with dual compression chambers that reduces felt recoil by 43%, reversible hammer extension for left- and right-handed shooters, and a lifetime warranty.

MSRP: \$638 CONTACT: [www.tcarms.com](http://www.tcarms.com)

**Hornady .50-Caliber MonoFlex ML Sabot Bullet:** At the heart of the high speed/low drag 250-grain MonoFlex ML is the .452-inch diameter MonoFlex bullet — a monolithic solid projectile made from a copper alloy and topped with the Hornady exclusive Flex Tip design that works as a catalyst for uniform expansion, even at the low velocities of longer-range impacts. The MonoFlex won't separate and retains 95% of its original weight. Specifically engineered to provide phenomenal accuracy, penetration and high weight retention, the MonoFlex ML is a nontraditional/alternative metal construction bullet option for big-game hunters MSRP: \$24.99/Box of 20; [www.hornady.com](http://www.hornady.com)

**[5] CVA PARAMOUNT PRO MUZZLELOADER**

Founded in 1971, Connecticut Valley Arms has become a household name in all things blackpowder, early on specializing in traditional side-lock rifles and build-it-yourself rifle kits and evolving to technically advanced inline muzzleloaders — the Paramount Pro being the latest addition to its Paramount line of modern muzzle-loading rifles.

The Paramount Pro was designed for hunters who want to squeeze every bit of energy out of their front-loading rifle. It's equipped to handle "super-magnum" propellant charges — providing the higher velocities necessary for killing shots at 300 yards and beyond, and for 2020 comes upgraded with a custom quality Grayboe fiberglass stock, TriggerTech trigger and Cerakote finish. The Paramount Pro also features a custom quality, free-floating Bergara barrel in nitride-treated stainless steel. Paired with PowerBelt's ELR bullets, which were specially designed for the Paramount, this barrel can produce tight groups at extended ranges. Also offered for 2020 is a .50-caliber Paramount Pro Colorado version, which includes a Williams peep sight.

MSRP: \$1,667.95 CONTACT: [www.cva.com](http://www.cva.com)**UPSELLING A MUZZLELOADER PURCHASE**

A muzzleloading rifle is only as good as the components that go into building a load that assures the best combination of accuracy, consistency and terminal performance — and that means creating a bullet/powder/primer recipe that best achieves this goal. The good news is that there's a wide selection of these goodies out there designed specifically for muzzleloaders that deliver precision, deep penetration and massive controlled expansion at the relatively slow velocities these rifles generate.

Retailers who are serious about catering to devoted blackpowder enthusiasts need to provide all of those accouterments that go into making the muzzleloader the best it can be. This is one effective bullet/powder/primer combo to get the creative juices flowing.



**CCI 209 Inline Muzzleloading Primer** — Optimized for blackpowder firearms, CCI's 209 Inline Muzzleloading Primers are built to provide reliable, consistent ignition and remove all uncertainty each and every time the shooter squeezes the trigger. They utilize modern, non-corrosive and non-mercuric initiator mixes to ensure a clean burn and absolute ignition even in humid conditions. MSRP: \$9.99/100 primers; [www.cci-ammunition.com](http://www.cci-ammunition.com)

**Federal FireStick Powder Charge:** The Federal Premium FireStick is the critical component of a revolutionary new muzzle-loader ignition system that uses an encapsulated polymer propellant charge that loads from the breech, while the bullet is loaded from the muzzle. This makes the powder impervious to moisture and provides for fast, effortless loading. The FireStick is fueled with clean-burning 100- or 120-grain Hodgdon Triple Eight powder charges and is compatible with Tradition's new NitroFire muzzleloader. The FireStick unloads quickly, simply and safely by slipping the polymer charge out of the action — there's no need to fire the rifle. MSRP: \$26.95; [www.federalpremium.com](http://www.federalpremium.com)







# SUBSCRIBE TODAY

THE ARCHERY INDUSTRY'S PREMIERE B2B MAGAZINE



The first publication of its kind that launched in 1975, *Archery Business* serves as the primary source of news and information compiled specifically for businesses that cater to the archery and bow hunting consumer. Each and every issue is packed with content on all the products and accessories that any independent archery retailer needs to stock, as well as critical advice on building a better operation to stay ahead of the competition, *Archery Business* delivers information the archery business needs to succeed.

- Want to sell more bows and accessories?
- Need tips for improving your marketing and advertising?
- Interested in how you can bring more customers to your store?
- Want to learn simple bow techniques and services you can offer?
- Seeking honest reviews of the latest gear to hit the market?

## VISIT

[WWW.ARCHERYBUSINESS.COM/SUBSCRIBE](http://WWW.ARCHERYBUSINESS.COM/SUBSCRIBE)

FOR YOUR FREE SUBSCRIPTION

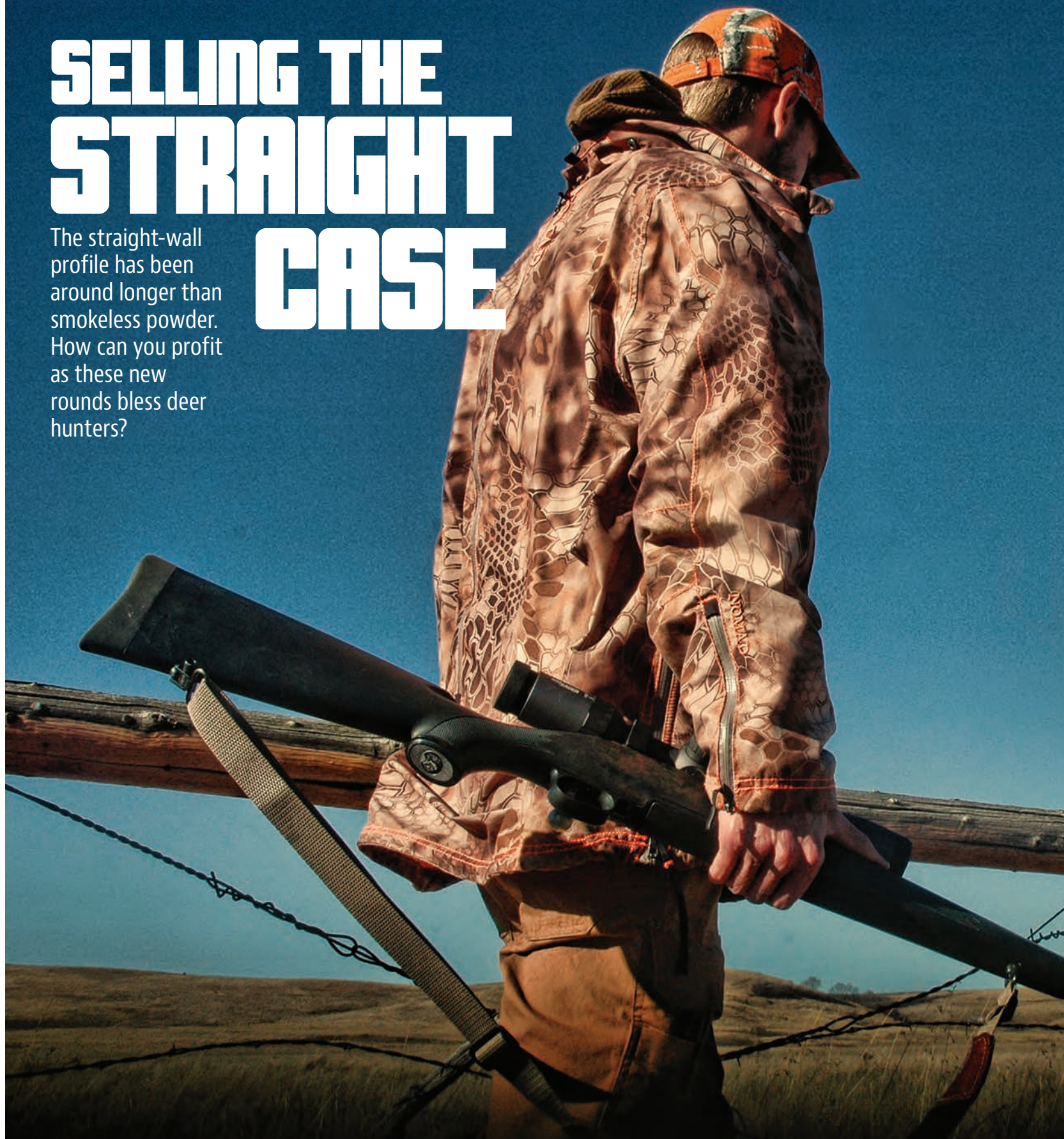
# archery

BUSINESS



# SELLING THE STRAIGHT CASE

The straight-wall profile has been around longer than smokeless powder. How can you profit as these new rounds bless deer hunters?







BY WAYNE VAN ZWOLL

**H**arvey was squinting over the bead of a smoothbore barrel with a modified choke when the last slug in the magazine of his Remington 11-48 dropped the buck at 147 yards. This was an anomaly; shotguns are for deer up close. In southern Michigan, where Harvey shot deer and I first tried to, centerfire rifles were forbidden. The rationale was that bullets flew too far and were a hazard where farms were small and roads and people were tightly packed.

Other Midwest states had similar restrictions. While buckshot was permitted, hunters rejected its short but effective reach. Shotguns with unchoked barrels wearing open sights – Ithaca's 37 Deerslayer pump, Browning's Auto 5 Buck Special, for example – resulted. Foster slugs were accurate enough to hit deer in the chest at 100 yards. They shot surprisingly well from choked barrels.

Now, half a century later, some states permit straight-wall rifle rounds where shotguns were once the rule. Iowa, Indiana and Ohio are among them. New cartridges are tapping this fresh market. But in today's world, shotgun hunters have the benefit of sabot loads and rifled barrels. Do stove-pipe metallic cartridges still have an edge? Will hunters buy new rifles? How can you best tell customers about their options? What's in it for you?







### The Enduring Foster

American Karl Foster developed his shotgun slug in the 1930s, three decades after German ammo guru Wilhelm Brenneke had a finned slug with a sandwich of two card wads and a felt wad screwed to its base. The Foster has a round nose, a hollow base, and a shank with slanted fins that do not impart significant spin. Those fins do, however, enable chokes to easily swage the slug down. Unlike Minie's rifle bullet, its base cavity can't expand to seal the bore, as wads block the driving gas. But that cavity makes the Foster slug front heavy. It flies remarkably straight, as nose-heavy things do. Think of a shuttlecock.

In my youth, 12-bore Foster slugs weighed 1 ounce, or 438 grains. They clocked 1,600 fps, as did 350-grain Fosters from my 16-gauge and 325s from 20-bore guns. In 2¾-inch magnum 12s, heavier 1¼-ounce (547-grain) slugs left at 1,520 fps; they got back to 1,600 in 3-inch hulls. Three-inch, 325-grain 20-bore loads registered 1,680 fps. A 109-grain .410 Foster exited at 1,775, but with just 770 ft./lbs. of energy, about what a 16 carried to 100 yards. On the charts, a 2¾-inch magnum 12 slug load matches the punch of a .30-30 to 125 yards. Arguably, it hits harder, as weight bows to velocity in energy calculations.

← Straight-wall cartridges were killing game long before this heavy 19th-century Ballard went afield.

↓ Full-bore, hollow-base Foster slugs (center, right) suit smooth bores, while sabot slugs (upright, left) suit rifling.



Drag has its way with Fosters, which are aerodynamic duds. Velocity loss of up to 35% in the first 100 yards drains half of a slug's energy. A .410 slug yields 60% of its thrust getting that far!

Foster slugs are ill-matched to the rifled barrels developed for sabot loads.

"Sabot" (SAY-bow) is French for a projectile inside a projectile. Sabot slugs snuggle inside bore-diameter capsules that impart spin in rifled bores and fall away in flight. With higher sectional densities and ballistic coefficients than Foster slugs, sabot slugs fly flatter and better retain energy. They're lighter, so they can be sent faster. As there's no bore contact, sabot slugs can be of hard material, for deep penetration.

### Sabot Tsunami

The shift to sabots began when California-based Ballistics Research Institute (BRI) designed an hour-glass-shaped slug in a plastic sleeve split lengthwise. Prototype ammo in a rifled Benelli autoloader tore one-hole knots for me at 50 yards. Winchester bought BRI.

In 1993, a New Jersey shop announced its Lightfield Hybrid, an almost-bore-diameter sabot slug. Remington followed with a 50-caliber Copper Solid sabot. Federal put the Barnes Expander MZ muzzleloading bullet in a sabot

jacket in 1997, as Hornady introduced a sabot load. PMC's came on its heels. At Winchester, a 385-grain Partition Gold clocked 1,900 fps from 12-gauge guns. It reached 200 yards with 1,500 ft./lbs. — more energy than delivered by a .243!

**"The shift to sabots began when California-based Ballistics Research Institute (BRI) designed an hour-glass-shaped slug in a plastic sleeve split lengthwise."**

Sabot slugs have since proliferated. Most are jacketed rifle and pistol bullets in plastic cocoons. Winchester Dual Bond, Partition Gold and XP3 Tin Core slugs, 260 to 385 grains, clock 1,725 to 2,000 fps. Federal matches those speeds with 275- and 300-grain poly-tipped Trophy Copper slugs. Hornady's loads feature FTX and MonoFlex bullets and a 325-grain Interlock that brings half a ton of 12-bore thump past 200 yards.

Given SAAMI's low pressure ceiling for shotguns, sabot slugs fly remarkably flat. Zeroed at 100 yards, the sleekest stay within 2 inches of sightline to 125 yards. Sabot loads in rifled





## STRAIGHT-CASE RIFLE BALLISTICS AT A GLANCE

### .350 LEGEND (WINCHESTER 150 DEER SEASON XP)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	2,325	1,968	1,647	1,373
Energy, ft./lbs.....	1,800	1,289	903	628
Arc, inches.....	-1.5	0	-7.6	-28.1

### .38-55 (WINCHESTER 255-GRAIN POWER-POINT)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	1,320	1,190	1,091	1,018
Energy, ft./lbs.....	987	802	674	587
Arc, inches.....	-1.5	0	-23.7	-76.5

### .375 WINCHESTER (WINCHESTER 200-GRAIN POWER-POINT)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	2,200	1,841	1,526	1,268
Energy, ft./lbs.....	2,150	1,506	1,034	714
Arc, inches.....	-1.5	0	-9.5	-34.1

### .44-40 (WINCHESTER 200-GRAIN POWER-POINT)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	1,190	1,006	900	822
Energy, ft./lbs.....	629	449	360	300
Arc, inches.....	-1.5	0	-33.2	-118.0

### .44 MAGNUM (FEDERAL 240-GRAIN JHP)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	1,760	1,387	1,123	978
Energy, ft./lbs.....	1,651	1,025	672	509
Arc, inches.....	-1.5	0	-16.8	-60.9

### .444 MARLIN (HORNADY 265-GRAIN FTX)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	2,325	1,971	1,654	1,381
Energy, ft./lbs.....	3,181	2,286	1,609	1,123
Arc, inches.....	-1.5	0	-9.3	-32.2

### .45-70 GOV'T. (REMINGTON 405-GRAIN CORE-LOKT SOFTPOINT)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	1,330	1,169	1,056	978
Energy, ft./lbs.....	1,590	1,228	1,002	860
Arc, inches.....	-1.5	0	24.5	-80.2

### .45-70 GOV'T. (HORNADY 325-GRAIN FTX)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	2,000	1,685	1,413	1,197
Energy, ft./lbs.....	2,886	2,049	1,441	1,035
Arc, inches.....	-1.5	0	-11.1	-41.2

### .450 BUSHMASTER (FEDERAL 300-GRAIN SOFTPOINT)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	1,900	1,602	1,346	1,153
Energy, ft./lbs.....	2,405	1,708	1,208	885
Arc, inches.....	-1.5	0	-12.2	-43.7

### .450 MARLIN (HORNADY 325-GRAIN FTX)

	MUZZLE	100 YARDS	200 YARDS	300 YARDS
Velocity, fps.....	2,225	1,887	1,587	1,332
Energy, ft./lbs.....	3,572	2,570	1,816	1,280
Arc, inches.....	-1.5	0	-9.7	-33.9

bores (1-in-28 to 1-in-35 twist) routinely shoot into 3 MOA. Incidentally, while the weight of sabot and Foster slugs hints at “brush-busting” travel, they still deflect. My trials on targets screened by branches also show deformation and tipping — much like bullets from popular deer rifles.



### Patriarchs of Straight

The year 1873 became the model designation for the U.S. “trap-door” Springfield service rifle, also a Winchester lever-action and a Colt revolver. The Springfield fired the .45-70 cartridge; Winchester bored its 1873 to the new .44 W.C.F. (.44-40), its first centerfire round. It proved so popular in rifles that in 1878 Colt offered the .44-40 in its Single Action Army revolver. Ammo could be hard to find on the frontier, and the idea of packing one type for both rifle and handgun made sense. From a rifle, the .44-40 had the power to kill most game at iron-sight ranges. A 40-grain charge of black powder sent 200-grain bullets at almost 1,200 fps, handily out-muscling its .44 rimfire predecessor. Well into the 20th Century, the .44-40 remained a favorite carbine round. Cowboy Action events have revived it. A more potent cartridge than many hunters think, it can with drive 200-grain bullets at 1,850 fps with smokeless loads.

The .45-70 followed a similar track, enduring long after its 19-year stint in Army-issue rifles. Its original blackpowder load, a 405-grain bullet at 1,320 fps, pales in the shadow of smokeless ammo for modern rifles. Federal lists a 300-grain Trophy Bonded Bear Claw at 1,850 fps; Winchester a 300-grain JHP at 1,880; and Hornady a 325-grain FTX at 2,000.

The .44-40 and .45-70 are the patriarchs of a straight-wall cartridge clan that yielded few progeny between the world wars. The .38-55, circa 1884, endured in lever-action “deer rifles.” It fired a 255-grain bullet at 1,320 fps (modern smokeless loads boost that figure to about 1,650). Winchester’s mighty .405, introduced in 1904, endeared itself to Teddy Roosevelt. Hurling 300-grain bullets at 2,200 fps, it was big medicine in its day.

Stateside, post-Depression hunters served increasingly by optical sights coveted the flatter flight and greater lethal reach of bottleneck rifle rounds. Handgunners craved nothing more potent than the .44-40 (or .44 Special, .45 ACP or .45 Colt).



↑ In 1955, the .44 Magnum brought deer-killing power to handguns.

## Legends Old and New

Remington's adoption of the .44 Magnum in 1955 gave revolvers the muscle of rifles in .44-40. In Ruger's .44 Deer-stalker carbine (1959) it was a formidable deer cartridge. Handloads in the .45 Colt, and, in 1957, Dick Casull's .454 gave stout revolvers punch for bigger North American game. Ruger put its .480 in the queue in 2005. The .475 and .500 Linebaugh made revolvers buck even harder. In 2003 and 2006, Smith & Wesson unveiled its X-Frame revolver in .500 and .460 S&W — rounds that unleashed over 2,350 ft.-lbs. of muzzle energy with bullets clocking up to 2,300 fps.

Meanwhile, save Winchester's safari-class .458 Magnum in 1956 and stiffer loads for the .45-70, straight-wall rifle hulls got little attention. In 1964, Marlin announced its .444, developed with Remington. Original ammo pushed a 240-grain .44 Magnum bullet at 2,400 fps; ballistically superior 265-grain loads followed. The .375 Winchester for that firm's Model 94 rifle came in 1978. A necked-up .30-30, it killed no better and failed at market. In 2000, Marlin and Hornady served up the .450 Marlin, more potent than the .444 but also suited to stout lever rifles. The rimless .450 Bushmaster, for AR-style rifles, appeared in 2008, driving 250-grain bullets at 2,200 fps. You can wring 1,900 from 300-grain flat-points. The .458 SOCOM I've used in Bill Wilson's incomparable AR is similar, sending a 300-grain TTSX at 1,800 fps.

→ Marlin has revived its short-action Model 1894 in .44 Magnum and .45 Colt. It's a trim, 10-shot carbine.

Most recent of straight-wall rifle cartridges is Winchester's .350 Legend, introduced a couple of years ago. Five loads hurl bullets of 145 to 265 grains at different speeds. A 180-grain Power-Point leaves the muzzle at 2,100 fps with 1,760 ft.-lbs. of energy. At 100 yards it still packs 1,240 ft./lbs., same as a 260-grain Partition Gold bullet from a 2¾-inch 20-bore sabot load. An appropriate 100-yard zero for the .350 Legend puts 150-, 160- and 180-grain bullets 8 to 10 inches low at 200.

According to Winchester's Nathan Robinson, diameter of the .350 bullet is .357, with allowable variance of -.003, same as for the .357 Magnum. Groove diameter in Legend rifles is .355, so bullet exit diameter is .355. He adds that Winchester doesn't load pistol bullets in the Legend, "The .350's higher velocity would make handgun bullets perform poorly in game."

## What's to Know

Before switching from shotgun to rifle, hunters are smart to double-check state regulations, which can include figures regarding case/cartridge length, bullet diameter and muzzle energy, or might exclude specific loads.

Stocking rifles, shotguns or ammunition not legal for hunting whitetails won't plump your profits. While the .350 Legend and other straight-wall rounds are available with full-jacketed bullets, these don't kill as surely as expanding bullets and are illegal for hunting big game in most places. Customers may not buy FMJ ammo for practice shooting unless they save a lot of money.





One benefit of straight-wall “deer cartridges” is mild recoil. A frothy shotgun-slug load will rattle your molars. Next shot, you may flinch. A rifle in .350 Legend slaps you no harder than a same-weight .243. Recoil increases with bullet weight. Heavy bullets pushed hard from a .45-70 leave an impression. One of the meanest rifles I’ve fired is Winchester’s sharp-combed 1895 with stiff .405 loads.



↑ Bighorn rifles fire the powerful .500 S&W, a straight-wall cartridge with the moxy for any big game.

A 12-bore sabot slug also punishes — the price of fearsome power downrange. A 3-inch 12-gauge load heaving a 385-grain Partition delivers a ton of smash at 100 yards and shoots about as flat as the .350 Legend to 200. Incidentally, though it exits the muzzle with 150 ft./lbs. less energy than a Foster slug from a 3-inch shell, the sabot registers twice as much at 150 yards thanks to higher sectional density.

Shotguns best suited for slugs are autoloaders and pumps. You won’t hike rate of fire with lever-action rifles. And these days, shotguns accepting rifled barrels for sabot slugs are blessed with good iron sights, a cantilever scope mount or a scope-friendly receiver.

Accuracy? Contemporary wisdom has it that rifles win. But the other

day a fellow collared me to whine that his new rifle shot 3-inch groups at 100 yards. I reminded him that in my youth, 3 MOA was all anyone expected of a lever-action .30-30 — precision aplenty for lung shots beyond the 150-yard practical reach of iron-sighted carbines and blunt bullets. Sub-minute groups, once the measure of fine accuracy, have become commonplace with bolt rifles. But straight-walled factory ammo in other mechanisms must shoot above its pay grade to clear that bar.

### Loads and Loading

Straight-wall cartridges include several developed in blackpowder days, when steels and actions were comparatively weak. Factory ammo that chambers in early guns hews to modest pressure

limits. The .45-70 is still loaded with lead bullets at 1,150 fps — safe in sound 1873 Springfields. In its Handbook of Cartridge Reloading, Hornady divides .45-70 data into sections. Loads for the trap-door Springfield and similar rifles are held to 25,000 CUP (copper units of pressure). The next section, for the likes of the 1895 Marlin, shows loads 10% friskier. The most aggressive data shovels coal to the .45-70, for owners of Ruger’s vault-strong Number One. Ashley Emerson labels his Garrett-branded hard-cast .45-70 loads with pressure levels and rifle recommendations.

Handloading straight-wall ammo? Here are some notes from Robin Sharpless, of Redding Reloading:

“The sizing die of a two-die set squeezes a fired bottleneck case to original dimensions after the expander button has slipped through the case neck. On the return stroke, that button opens the neck to proper inside diameter, whatever the brass thickness. A straight-walled hull will not accept in its powder cavity a mouth-size expander. The middle die in a three-die set opens the case mouth from the front.”

Robin says Redding expanders perform several operations in one press cycle. “First, the die puts a radius on the case mouth. Then the die’s parallel

section expands the brass. At the end of its travel, an adjustable ring set for seating depth leaves a taper where you want the bullet’s heel to stop. Some dies of other brands have only a ball expander, which does nothing but bell the mouth so you can start the bullet. No I.D. sizing. No adjustment for seating depth. No uniformity. Poor accuracy.”

The slight mouth flare left by Redding’s expander enables Sharpless to thumb-seat each bullet as he checks powder levels. “Cases enter the seater with bullets in perfect alignment.”

Crimping case mouths into cannelures secures bullets



against the jar of recoil and the push of tube magazine springs. Heavy bullets and shallow seating in straight cases argue for crimping. A taper crimp, applied in the seating or separate crimping die, can be used on non-cannelure bullets. **HR**





Photos: Howard Communications





# Profiting From Hunting Dog Gear

Hunters aren't shy about spending money on their dogs. Are you stocking what they need?

BY MARK CHESNUT

**A**long with being wonderful family companions, dogs of many breeds are used for hunting a wide variety of game species. Pointing dogs hunt everything from quail to pheasant to various grouse species, while retrieving dogs are often used for hunting those same species plus waterfowl. Flushing breeds are used to hunt upland birds also, and a wide variety of hunting hounds pursue everything from rabbits to mountain lions.

In addition to hunting, many owners of all these different types of hunting dogs participate in field tests, field trials, hunt tests and various other organized dog-focused sports. Not surprisingly, these dog fanciers spend a lot of money pursuing their activities. Your establishment might as well be reaping some of that profitable reward.

It's likely that retailers who aren't very familiar with hunting with dogs might consider this to be a small niche, but that's far from the truth. Let's take a look at some product categories you can carry in your establishment to start making money from hunting dog owners.

## Basics

Collars are about as basic as hunting dog equipment gets. But the fact is, most dog owners prefer their dogs to have a collar, so the sales potential is high.

While many hunters prefer strong leather collars, others like nylon collars because they can be made in bright colors and will last nearly forever. Regardless, a collar with a nameplate is always better for hunting dog owners



## Training Accessories

Next, let's look at training necessities. Most hunting dog owners, especially for pointing dogs, are going to need a good check cord among their training equipment. A check cord is just a fairly stiff braided rope, usually about

than one without, just in case they lose the dog and someone finds it.

Leashes are a must-have for dog owners, as they are necessary for taking dogs on walks or controlling dogs anytime they are out in public. From nylon to leather, there are lots of different kinds, and what dog owners like is mainly a matter of personal preference.

While many hunting dogs live outdoors in kennels, a growing number of hunting dog owners keep their dogs inside as home companions and hunting companions. Consequently, the market for dog beds for either lounging around in the living room or for putting in their crate if they are crate trained is a robust one. From simple carpets to extravagant gel-foam models, dog beds are also a matter of the dog owner's personal choice.

Food and water bowls are also basic necessities that hunting dog owners have to buy somewhere. Most hunting dog owners don't feed their dogs with self-feeders that allow dogs to eat as much as they want since keeping them in top physical condition is a priority. Stainless bowls are popular because they last a long time and are hard to destroy, even for dogs that like to chew things. Hard plastic bowls are another good option that many hunting dog owners prefer.



15 to 25 feet long, with a metal snap on one end. It is used to control the dog when teaching it a number of commands, as well as to restrain dogs from chasing when working on steadiness to wing or steadiness to wing and shot.

Since check cords take a lot of abuse, you'll want to stock very strong, durable cords that won't begin to fray with a little mistreatment. Many times, these long leads are dragged by dogs very fast through rough brush, so they will take a beating.

For many dog owners and trainers, e-collars are among the most popular training tools these days. They're also among the most expensive, but many hunters and field trainers are willing to pay a high price to ensure they have the proper tools for training their dogs to be the best they can be.

While there are some who believe the use of e-collars for training is cruel, that couldn't be further from the truth. Most who say that have never used one or don't know how to use one properly and humanely. Top manufacturers of e-collars include Garmin, SportDOG and Dogtra. Carrying a few models

in the lower-end price range, a few in the middle and one or two top-tier collars is probably a good sales strategy, as it will give dog owners on all budgets an opportunity to make a purchase.

Tracking collars are also very popular. These employ GPS technology and allow a dog owner to always know exactly where his or her dog is located at any given time. These make the likelihood of losing a dog much lower, which is an important factor with the high price of a purebred hunting dog. Some companies make combination collars that can be used for training and tracking, giving hunters and trainers the best of both worlds in one collar system.

For dogs that bark a lot, as many hunting dogs tend to do, a bark collar can sometimes mean the difference between peace in the neighborhood and all-out war. Bark collars administer a mild electric shock to a dog when it barks. While it might be a little painful, dogs quickly learn that not barking solves the problem — at least when they're wearing the collar.

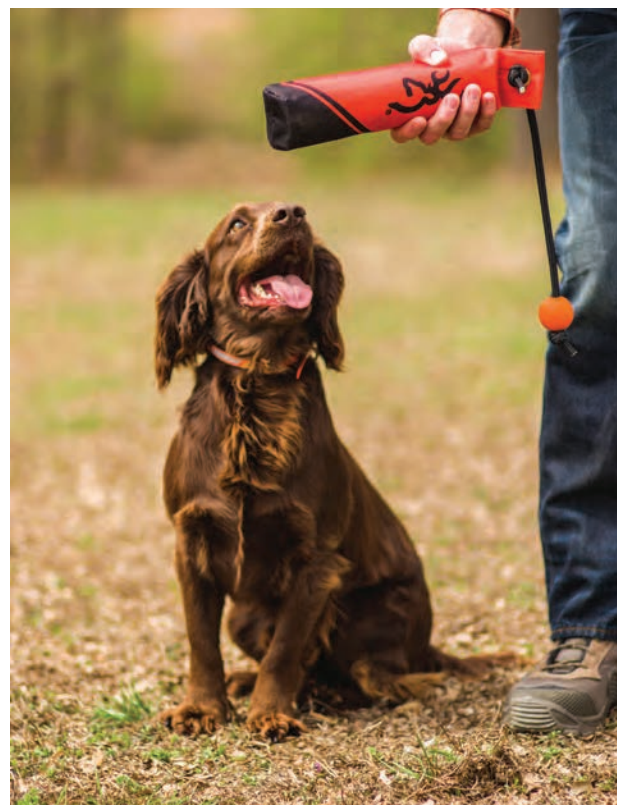
Launchers are another important training tool. For pointing and flushing dogs, we're talking mainly about bird launchers, which are designed to hold a pigeon, quail or chukar securely and safe from your dog until you are ready to release it. Most launchers are electronic and have a remote control that allows the user to launch the bird when he or she is ready. Compared to using loose live birds, launchers give the trainer a great deal more control over the situation — always a good thing.

Retrieving dog owners and trainers are more likely to need a dummy launcher, although many also utilize bird launchers when training retrievers to hunt upland game. Dummy launchers range from handheld units to extravagant contraptions that can throw retrieving dummies a very long distance, so models are available in a wide range of prices.

Retrieving dummies are also good sellers for both upland bird hunters and waterfowl hunters, as retrieving all downed game is crucial to ethical hunting. Most retrieving dummies are plastic with a rope attached to one end and can be thrown a great distance when training dogs to retrieve upland birds or waterfowl. Some are hard plastic and shaped like ducks for use in training water retrieving breeds.



↑ Leashes, collars and check cords are basic equipment that anyone training a dog will need. Consider carrying robust models that are suited to large dogs that spend a lot of time outdoors.



Since most hunting involves shooting guns, it is important that dogs are trained from an early age to not be "gun shy," a term to describe oversensitivity to loud noises. This training is usually accomplished through the use of a blank gun. Blank guns are also frequently used during typical training scenarios and are also employed during field trials in which birds are not actually shot.





# GEAR THE WAY YOU'D DESIGN IT®

**IN GOD WE TRUST.  
FOLLOWED CLOSELY BY ANY BIG GOIN' BIRD DOG**



**"LU LU" & LANCE TRACY**

**SPORTDOG® BRAND - CHIEF COMMERCIAL OFFICER (CCO)**



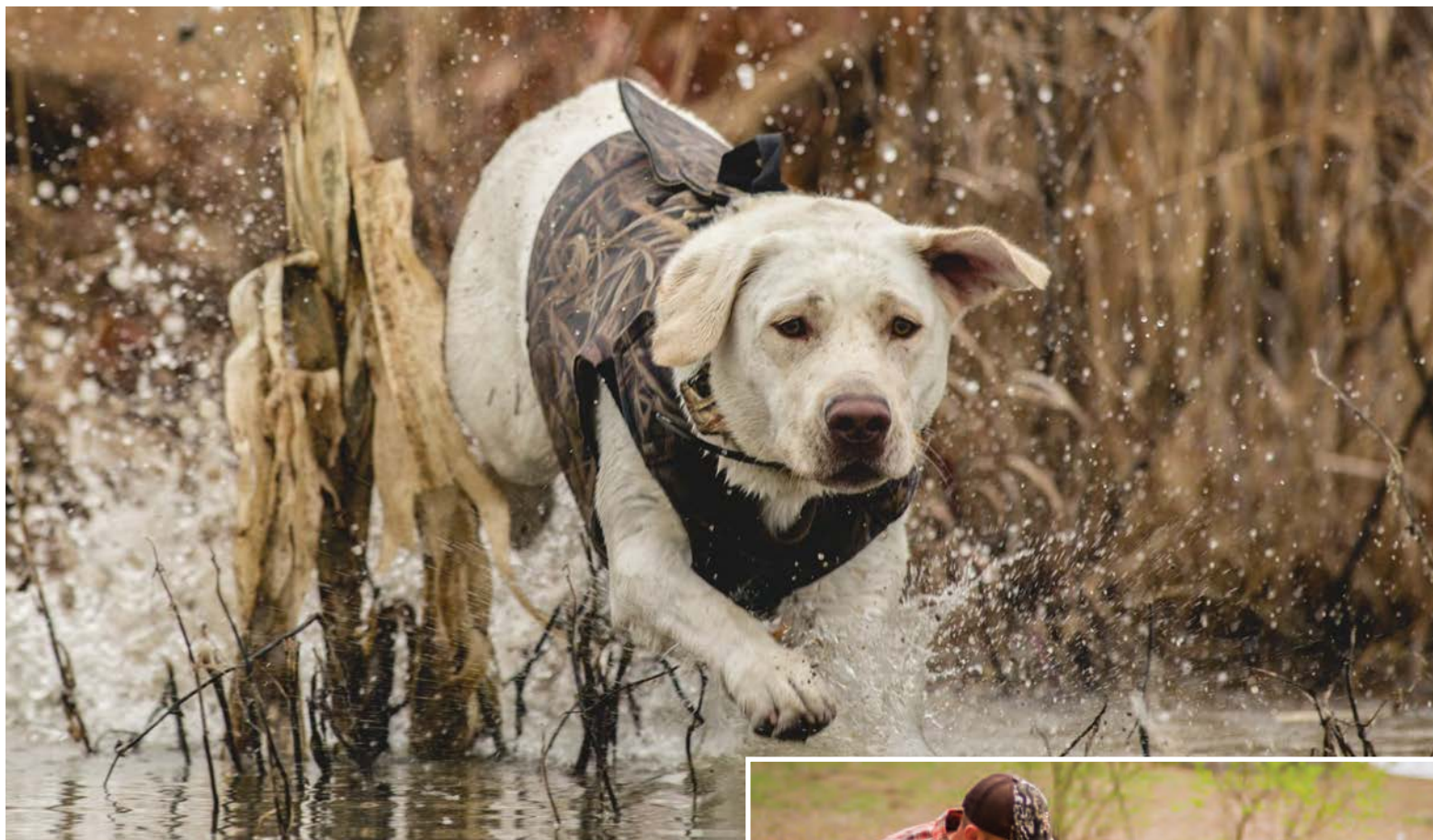
**SD-1275E**

**Ultra-Bright OLED Display | 10 LEVELS | 3/4 MILE  
DRYTEK® WATERPROOF | EXPANDABLE TO 6 DOGS**



To inquire about selling SportDOG® product, e-mail [huntingretailer@sportdog.com](mailto:huntingretailer@sportdog.com) or call 865.824.0859





While cheap blank guns are available, most hunters and trainers have seen how short a time it takes before they fall apart. In fact, “Buy once, cry once,” is a common mantra among dog trainers concerning blank guns, so carrying a top-of-the-line blank pistol or two in your inventory might pay off. Be sure to carry blanks for all the different calibers of guns you choose to have in your inventory. These typically include .22 and .32 blanks, as well as 209 shotgun primers.

Lastly, since most dog owners are constantly seeking new knowledge about how to better train their dogs, various training books, videos and DVDs are available to help instill that knowledge. Keeping a few on hand could result in an additional sale or two to hunters shopping for training equipment.

### Hunting Gear

Believe it or not, dog vests are quite popular and represent a potential profit center for retailers hoping to cater to hunting dog owners. For retriever breeds, most vests are neoprene and are helpful in keeping dogs warm when swimming in frigid waters. These come in many camouflage patterns to blend in while hunting in duck blinds.

Many upland bird hunters also use vests for their dogs, but these are a completely different type of vest. Vests made for upland hunting dogs are typically designed to protect a dog's chest and other important body parts when hunting in very thick brush, especially in areas where vegetation tends to poke, gouge or cut a hard-running canine.

Also, don't overlook dog boots. While that might sound like a luxury, a



good set of boots is an absolute necessity for gun dogs in areas with lots of sand burrs, cactus, sharp rocks and other things that cause foot problems. A hunting dog that can't run won't find many birds, so keeping their feet in shape is a critical component of hunting dog care.

Dog boots are made by a variety of manufacturers from different materials, ranging from rubber to nylon and other types of fabric. The best ones come in a variety of sizes and are easy to put on and take off. Many owners of non-hunting dogs in warmer areas of the country also utilize these same types of dog boots when walking their dogs on hot pavement or allowing them to run in areas with lots of sand burrs or rocks, so carrying a variety of sizes is a good idea.

Another popular item among many gun dog owners is a good gun dog first aid kit. Different types of hunting present different dangers, including cuts,





→ Many owners of upland hunting dogs will want protective vests in safety orange, as well as GPS tracking collars that help them locate far-ranging dogs.

scrapes, broken bones, hypothermia (low body temperature), hyperthermia (overheating), ripped pads, foreign bodies in their eyes and a variety of other emergencies.

A few different companies make gun dog first aid kits, and they range from simple to quite extravagant. It doesn't hurt to keep a few top-of-the-line kits in stock, as this is another accessory that many hunters refuse to cut corners on.

### Wrapup

As you can see, there's a wide world of hunting dog-related products out there, and many potential new customers you likely haven't reached yet. A good starting point is to find out what kinds of hunting, trialing and field tests are popular in your area, then determine what equipment is most often used by participants in those activities. That'll give you a head start on determining the best products to carry in your inventory. **HR**





Prices ranging from \$45 - \$400 MAP.

**SABRE**

5 YEAR WARRANTY

**280 SOUNDS**  
PROGRAM UP TO 500

**NIGHTSTALKER**

5 YEAR WARRANTY

**PLAY 2 SOUNDS SIMULTANEOUSLY**

**240 SOUNDS**  
PROGRAM UP TO 500

**Hellion**

**200 SOUNDS**  
PROGRAMMABLE

**PD250**

**AD450**

*"We Also Offer Accessories"*

**THE OUTLAW**

5 YEAR WARRANTY

**PLAY 2 SOUNDS SIMULTANEOUSLY**

**240 SOUNDS**  
PROGRAM UP TO 500

**GEN2 GC500**

**200 SOUNDS**  
PROGRAMMABLE

**GEN2 GC350**

**24 SOUNDS**  
PROGRAMMABLE

**GEN2 GC320**

**24 SOUNDS**

**GEN2 GC300**

**12 SOUNDS**

**PD200**

**AD400**

ADJUSTABLE SPEED DECOYS

6415 Angola Rd. | Holland, OH 43528 | [www.icotec.com/retailer-sign-up/](http://www.icotec.com/retailer-sign-up/)

## DEAD SERIOUS

### Game Calls & Decoys

ICOTec offers dealers a wide variety of products, price points, great margins, fast moving inventory, low return rates and happy customers.

Find out what many of your customers already know. ICOTec is the clear leader in the design and manufacturing of high quality affordable products that get *Dead Serious* results.

© 2020 ICOTec, All rights reserved.











# EAR GEAR REVOLUTION

Listen up. Thanks to technology, it's no longer just about protecting hearing — it's also about making your customer a better hunter.

BY JOHN GEIGER

**H**earing protection is often an afterthought. When was the last time a customer picked out a pair of muffs before a gun? They're not the sexiest products in your store, but you're not really serving the needs of your people and your business if you're not talking about hearing protection at the gun counter. Listen up.

More than 80% of your customers who hunt do not use any kind of ear protection when they shoot in the field, according to a report by the National Hearing Conservation Association. And that includes dove hunters and other high-volume shooting. Sure, it can be awkward to mention another accessory, especially after they've laid down money for the gun, ammo, eyes, optics, gun case, gun-cleaning kit and on. But it's important. Hunter and former military serviceman Ken Perrotte lives it.

"Take care of your ears as much as your eyes. I wish I had," said Perrotte, who suffers from tinnitus. "Each slight trauma inside your head builds on the next. Hearing loss can be slow and almost imperceptible, or it can be quick and catastrophic."

But how do you bring up this additional expense without hounding or having your customer's eyes glaze over? Here are three simple steps to explain why hearing protection needs to be addressed before anyone pulls a trigger.

**1.)** Hearing loss is permanent. When the inner ear is damaged, you won't be able to hear soft sounds or treble-range words. "Once it's gone, it's gone for good," said Bob Ghent, research audiologist for Honeywell Auditory Lab.

**2.)** You're a better hunter with it. We all know when you go into the woods, from squirrel hunting to elk hunting, often your most important sense is your hearing. How else can you detect a tiny hickory nut shav-ing hit the forest floor, or notice a bugle a drainage away? You're a more effective hunter with all of your senses. It wouldn't make sense to blindfold yourself. Well, it doesn't make sense to handicap your hearing, either. Likewise, if you are shooting at an indoor or outdoor range, you'll flinch less. Hearing protection makes you a better hunter and shooter. And now, there are options that actually pick out the sounds — like a turkey gobble — that you really want to hear. That leads us to...







↑ Modern hearing pro that amplifies ambient sound – like far-off turkey gobbles – are more affordable than ever and popular with hunters of all ages.

3.) Technology's on our side. Advances in research and digital sound-blocking ear gear are making all of this much easier, and maybe even more fun. I remember using a pair of muffs that Bluetooth-connected to my iPhone playlist during a tower shoot. For me, listening to Johnny Cash, Switchfoot and Alan Jackson while popping roosters at a station by myself was a shooting experience all my own — as Mr. Jackson says, it was a good time. Technology has also given us many options. There's one for each shooter's comfort level and budget. Your customer might not care about pumping Spotify into his ears, but he might be all about a low-profile, custom-fit option that amplifies only the most important sounds while hunting. Or, she might be interested in a muff that shaves off the loudest sound but amplifies all others, like talking, which is perfect for firearm training. Now we're looking to see some exciting benefits from the tired old words, "hearing protection."

Today's options run from foam plugs that most shops get from manufacturers and give away free, to customized in-ear units that are comfortable and make you feel like Superman. Between those options — foam plugs and advanced protection — is a \$2,000 spectrum.

Hopefully, you've still got your customers' attention and he's not flipping through the latest *Whitetail Journal* at your counter. If so, he'll probably inquire about the advantages and disadvantages of each kind. Glad you asked.

There are six main types of hearing protection, from least to most expensive: Foam plugs, impulse plugs, passive muffs, digital muffs, bone conductive and in-ear hearing enhancement.



## "Foam plugs are only effective when they're deep and tight in the ear canal."

### Foam Plugs

They've been around forever. Many new guns come with a pair. They're a little more than a dime a dozen, and they're effective if you use them properly. Have you ever seen someone at a range with the plug halfway hanging out of his ear? Foam plugs are only effective when they're deep and tight in the ear canal. At the very least, make sure your customer knows a little trick to getting them in right. First, use your fingertips to roll the end of the plugs to make a dull

point. Then, when you are putting one into your right ear, put your left arm around the back of your head and pull the back part of your ear back. If you really want to sound like you know what you are talking about, tell him to grab between the helix, that is, the upper part of the back of your outer ear, and the antihelix, the bottom part of the outer ear. This straightens the ear canal and lets you slide that pointed plug deeper into the canal. When you release the helix/antihelix, the plug sits right and then swells up to fill the canal and take the edge off loud noises.

**Advantages:** Extremely effective and cheap. For \$15, a customer can get a box of 100 pairs. Often, manufacturers brand them and send them to retailers

for free. They don't get in the way of cheek weld or push against shooting glasses.

**Disadvantages:** Rarely installed correctly. Most people need to constantly reinstall. When worn properly, they are so effective that you won't hear people talking or game in the field.

### Impulse Plugs

These are the fancier-looking soft plugs that have rings or ribs along the side. They, too, are effective and slice about 20-plus-dB off of loud sounds yet let a lot of lighter environmental sounds, like talk or birds in the woods, come through. They may not be right for extremely loud bursts; in which case a 30-plus-dB option would be better. Still, they do a good job if you are hunting or on a budget. Customers can get a pair for about \$10. Safariland makes one of the most popular. Their In-Ear Impulse are rated for an impressive 33dB.

**Advantages:** Inexpensive, effective and often reusable.

**Disadvantages:** Limited protection. Correct installation is crucial. No amplification of environmental sounds.



### Relative Sounds

Sound is measured in decibels. For comparison purposes, near total silence is 0dB. Average conversation is approximately 60dB. A lawn mower produces about 90dB. A jet engine at takeoff is about 150dB. The report of a .22LR is about 140dB. A large-caliber rifle can be as high as 160dB. A .357 Magnum can top 172dB.





## Passive Muffs

These are the traditional earphones-style that go over the head and are easy to put on and take off. They are inexpensive, sometimes free when manufacturers brand them and offer them as premiums to sell guns or other merch. They do a good job at reducing noise levels. The amount of protection varies among products. Many are rated using the ANSI system, which is a standard developed by the EPA. A rating of ANSI S3.19 means that product has literally been tested by the EPA to ensure it meets the standard and will reduce high noise levels to acceptable levels. Only with EPA testing can a product claim to have a Noise Reduction Rating, which might say NRR of 20dB or 32db, for example. Figuring out decibels and noise reduction numbers is not voodoo, but it sure looks like it. For example, to figure out how much you're actually reducing decibel levels, take the Noise Reduction Rating (say, 35dB), subtract seven and divide by two. Then subtract that sum from 100 to get the decibel level of the loud noise. Whew. I am not making this up. The formula is  $(35-7)/2=14$ .  $100-14=86\text{dB}$ . And one more shocker: Often, you'll see shooters at ranges using both plugs and passive muffs. This is a good system, but be aware that you can't add the two ratings together to double your protection. To find the true protection, add five to the rating of the higher device, and then do the calculation above. As in, if the plugs claim a noise reduction of 20db and the muffs are 30dB, the 140dB noise is not 50dB

less, but 35 less, or 105dB. The plug-muff combo helps take the edge off, but maybe not as much as you'd think.

Champion Earmuffs are a classic pair of muffs that reduce sounds by 27dB and cost \$18. Walker's flexes with its new Razor Slim Passive Muffs by putting the "Molon labe" (come and take it) logo on the side and offer 27dB reduction for \$28.

**Advantages:** Inexpensive. Easy to take on and off, and effective at cutting sharp noise to a safe level especially when used with foam plugs.

**Disadvantages:** Clumsy. They get in the way of a good cheek weld, and you can't hear what others are saying at the range or detect game in the field. Plus, it's tough to find the right type of shooting glasses that fit with head straps.

## Digital Muffs

Bob Walker pioneered this segment of the market 25 years ago. Walker's Game Ears were the standard and have come a long way. Walker's originals were disruptive to the market. They passively reduced loud noises for hunters, amplified environmental sounds and shut off in a split second whenever sound louder than 82dB came into the external microphone. Shooters could talk with their buddies at the range while someone shot a .338 a few feet away. The downside to the originals was that they were single-channel, and it was tough to figure out where sounds were coming from if



you brought them into the woods on your turkey hunt or heard a deer step on a twig. Still, they were the answer to many

gunners' dreams. Now, many companies, such as Caldwell, Champion, Pyramex's VentureGear, Howard

Leight's SportImpact and 3M's Peltor brand, have challenged the hegemony. Newer iterations of the muffs include Bluetooth connectivity to allow shooters to listen to Johnny Cash during a tower shoot, for example. You can take phone calls over Bluetooth-enabled muffs as well. They also often have controls — like a car radio gives options for optimal sounds depending on whether you are listening to "rock" or "jazz" — that change listening modes from "speech" to "crowds" or certain types of game calls.

**Advantages:** Block the sounds you shouldn't hear; amplifies those you want and often gives you interactivity with your phone via Bluetooth.

**Disadvantages:** Many of the downsides of muffs, plus they are often bulkier than regular low-profile non-electronic muffs. The digitals burn through batteries and are in the range of \$100 and up.



## Fun Fact

Some animal species, such as birds and fish, can regenerate the parts of the ear damaged by noise exposure. Sadly, we mammals cannot. Researchers are looking into why this is, said Dr. Robert Ghent, research audiologist for Honeywell's Acoustical Testing Lab in San Diego. "Scientists may one day be able to manipulate a common gene to enable this ability in humans. It's not science fiction, but it's not yet science fact, so we won't have an answer on this for quite some time."





## Bone Conductive

One recent innovation lets the user have the advantages of foam plugs or impulse plugs but also gives her ambient noise amplification and Bluetooth. Bone-conductive hearing enhancement sends signals not through the ear canal, but directly to the skull, and they are picked up by the inner-ear cochlear, which sends signals to the brain.

Jacob Eaton, who represents Walker's Game

Ears, said that you can't use muffs with this type, but glasses sit better as compared to muffs, and you get the good cheek weld of plug-style hearing protection.

"This would be a good option for those who like the comfort of plugs but want the ability to hear range commands and answer phone calls with Bluetooth," said Eaton, a shooter and hunter himself.

This model wraps around the back of the head, is light and stays out of the way of most any kind of hunting or shooting. There are not a lot of options in the market for this product, at least marketed to hunters. There are many for



**"Bone-conductive hearing enhancement sends signals not through the ear canal, but directly to the skull, and they are picked up by the inner-ear cochlear, which sends signals to the brain."**

people who listen as they workout. Walker's model, called, simply enough, Bone Conduction Hearing Enhancer, has four optimal listening modes and runs about \$299. You'll have to get the plugs on your own.

**Advantages:** You get the benefit of ear-canal-filling plugs with environmental noise enhancement.

**Disadvantages:** Limited options. You can't add muffs to the plugs for added protection. Expensive.

## EPS GREEN

ESP's in-ear electronic plugs are custom-fit to the customer (either through a dealer or through an online/at-home process). They offer Bluetooth, amplification and high-decibel sound cutoff.

↑ Digital muffs that muffle loud sounds and amplify other noises are popular for the range and hunting, but some shooters find they interfere with a good cheek weld.







↑ Tetra's AlphaShield in-ear electronic plugs are customized to certain soundscapes based on species – waterfowl, elk, etc.

### In-Ear Electronic Plugs

With this option, you get amplification, high-decibel sound cutoff, and Bluetooth in a neat little package that fits discreetly and comfortably in your ear. But you'll pay for it. ESP has been making these kinds of plugs since 1994, and they are popular among the upland bird and waterfowl fraternities. Every ESP product is custom fit to each customer, either through a dealer or online. You take a hearing test, send results, and take a mold of your ear at home. Pay \$900 for the basic model or up to \$2,400 for all the bells and whistles.



A new startup company, in more ways than one, is TETRA, which goes the extra mile for hunters. This company also produces in-ear products, but they've created an algorithm that takes listening modes to the next level. The company tweaks algo-

rithms and isolates exact frequencies to improve hearing of gobbles, grunts or bugles. Their AmpPod products are even named for the species: Turkey AmpPod, Elk AmpPod and DeerAmpPods, for \$699. It looks like upland bird Ampods are next.

"Pheasant cackles, quail flushes, Garmin e-collar beeps, talking to your friends in the field, we can enhance these sounds and suppress loud noises or other sounds you don't want to hear," said Bill Dickinson, the company's CEO and a research audiologist. "We can carve out a sound-scape for the upland hunter or any hunter. That's what the customer is wanting, and that's where we're going."

**Advantages:** They can be custom fit. They shave off the peaks of damaging sounds, amplify good sounds, and can be optimized to isolate game calling.

**Disadvantages:** Expensive, up to \$2,000 plus.

## Terms to Know

**Attack Time.** The amount of time between when the sound goes above a safe level (normally 82dB) and the moment the electronic or analog muff reacts to suppress sound to a safe level in the ear. A very good loud-sound-suppressing muff will have an attack time of 1.5 milliseconds or less.

**Decibel.** Abbreviated as dB, it's the measure of the intensity of a sound by comparing it with a given level on a logarithmic scale. Yes, a decibel is one-tenth of a bel. But you knew that.

**Impulse Noise.** An intense sound, short in duration, like the sound of a gun's report. Impulse sounds affect the inner ear differently than continuous sounds. Unprotected exposure to impulse sounds in the 137dB range can cause instant hearing damage.

**NIHL.** Noise Induced Hearing Loss, the technical term for accelerating deafness.

**NRR.** Noise Reduction Rating. The higher the number, the better the product protects. There is a huge difference between an NRR of 23 and an NRR of 29. Sound doubles every 3dB, so a product with a 29 NRR is actually 200% better than a product with a NRR of 23, when used properly.

## Heard Enough?

We all take gun-safety rules seriously. But we don't always do the same with hearing protection, which can also end in injury in the woods or at the range. You need to see to aim, and you also need to hear to find your game in the first place. Hearing protection comes in many shapes and sizes for every budget. There's no excuse to avoid it and to not preach it.

"Don't take for granted being able to hear birds without hearing aids, or understanding your grandkids or others when they speak," said hunter Perrotte. "Tell people about hearing protection. They're not losing capability, they're gaining, or I should say, saving, one of their most important senses." **HR**





# Avoid Tricks and Traps of the Credit Card Industry

Follow these tips to find the best card deal to conveniently cover your monthly business expenses.

BY ERIK GUNN

**L**ike any other tool for your business, effective credit card use means careful analysis and firm control. A credit card is a loan. Evaluate it as you would any loan — and don't get swayed by those tempting promises of low introductory fees, cash rebates and airline miles.

## Why Use a Credit Card?

Even if you run your business primarily on cash, you may have monthly or annual payments that you don't want to forget or delay — things like your photocopier lease, landline, cellphone bill, office lease payment, insurance premiums and so forth.

By setting up an automatic credit card payment for the item, you make sure those bills are paid on time. The other step is to make sure you pay off the resulting credit card debt. Set up your business bank account to pay the full amount of those fixed costs back to your credit card each month a few days before the card's bill is due.

Your phone stays on, the credit card bill gets paid off each month, maybe you get some airline miles in the bargain, and you're happy. Plus, you get an itemized statement at the end of the year that will make your accountant happy.

Why not just write a check or use a debit card for those expenses? Because you want them to be paid even if you're so busy you don't have time to eat lunch, let alone pay the phone bill. But there's another reason, too: You don't want automatic payments drawn from a debit account. A hacker can drain your bank account in a heartbeat, and the more entrances into your account



(like automatic payments), the more vulnerable you are.

Of course, your bank will get you the money back if your debit card is hacked, but it can be a massive inconvenience and you may have no cash at all for several days. But with a credit card, your liability in fraudulent transactions is limited to \$50 if you report a problem immediately.

If your card offers additional warranty protections worth using, buy equipment this way — but only

if you can pay off the balance immediately. But first, read the fine print and ask your lawyer or accountant when it's a big piece of equipment; your dealer or manufacturer's warranty might be just as good. Still, a card-based guarantee is worth asking about.

## Business or Personal?

Of course, you're going to pay the business credit card bill from your business checking account; you already know that you need to separate business and personal expenses — which means keeping your business credit card for business only. That brings us to a more complicated wrinkle, though.

Some credit cards are specifically marketed as "business" credit cards — *NerdWallet.com*, *Bankrate.com*, *CreditCards.com* and *CreditKarma.com* all list various offers from credit card companies, with guides to finding cards with lower interest rates, good points-for-purchase structures or lower an-





---

## “With a credit card, your liability in fraudulent transactions is limited to \$50 if you report a problem immediately.”

---

nual fees. Be aware that the sites have partner relationships with some of the card issuers and will highlight the offers of their partners — whether those are the best offers for Joe Business Owner or not.

### And It Gets Trickier

Your personal credit card comes with certain protections under the Credit Card Accountability Responsibility and Disclosure Act of 2009, or CARD. You can't be billed twice in the same cycle; payments have to be applied to the high-interest portion of your debt if you have more than one interest rate; interest rate changes have to be announced in writing 45 days before they go into effect; and the company has to give you at least 21 days to pay the bill.

Business cards, however, do not come with these protections. The card company can raise your rate without notice. Your payments can be applied to the balance with the lowest interest rate first, which costs you more money over time. And rate increases can be applied retroactively, so what you thought you financed at 12% is suddenly being financed at 15%.

So, can you skip using a “business” card and earmark a specific card to take advantage of CARD protections? Consult with your accountant and attorney first. You qualified for that card — even if all you use it for is business — based on your personal credit history.

It's imperative that if you've incorporated your business to shield your personal assets, you must keep that distinction in use of credit cards as well. At the very least, don't use the same card for business purchases that you use for personal purchases, not even once, or you risk exposing your personal assets to judgments against your business.

### Getting the Best Card

**Interest rates.** Look for the lowest rate possible, right? Yes — unless, and only if, your cash flow allows you to pay off the entire balance each month. Then you can focus instead on lowering other items, like the annual fee.

**Penalty fees, over-the-limit fees, interest rate hikes.** Read that boring fine print in the cardholder agreement, not just the hype in the card offer. Penalties for missing a payment and fees for exceeding your spending limit alone might not be so bad, but the real consequence is that your interest rate may go up. Look for the “default rate” — that can be as much as 10% more than the standard rate.

**Rewards.** Will you really use them, and do they justify the annual fee? If there are so many exclusions and qualifications that you only get \$10 worth of rewards over three months, that \$75 annual fee doesn't look like such a bargain.

**Keep checking.** Frequently review the terms of the cardholder agreement you have and compare it to what's currently available elsewhere.

lent, then this can work well. But credit scores are calculated partially on the basis of total utilization — meaning if you have \$100,000 total credit available now and your balance is at \$80,000, a new company may grant you only \$20,000 additional credit.

You then transfer \$20,000 to the new card — but you've still got \$60,000 at the higher interest rate.

Also, that wonderful lower rate isn't forever. Check for the difference between the card's introductory rate and the standard rate, and how long the new rate lasts. If you can realistically pay off the transferred balance while the introductory rate is in place, it might be a workable solu-



### Balance Transfers

It looks great, open a new account at a lower interest rate, transfer a big chunk of your outstanding balance to the new card, and you're paying less interest. Win-win, right?

Well, maybe. If you haven't opened a new account in a year or two, and if your credit is excel-

tion. If not, don't borrow trouble.

The bottom line: Credit cards can help streamline payments you need to make no matter what, but you need to manage debt carefully and keep a careful eye on card agreements to make sure you're not paying more in fees and interest than you're getting back in rewards. **HR**



# The Lowdown On Goose Down

Geese haven't changed much in the past 50 years, but goose down jackets certainly have.

BY MARK CHESNUT

**G**oose down jackets are a staple for hardcore outdoorsmen and women who enjoy warm, lightweight, packable outerwear. But the down jacket you see hikers and backpackers wearing today is a far cry from the jacket your grandfather wore back in the 1940s.

Sure, a goose is still a goose. And down is still down. But innovators being what they are, many companies are now producing the best goose down jackets ever made using a variety of new technologies. If you're not cashing in on the newly-revived love of goose down jackets, you should do some research of your own to see how down can bolster your bottom line.

## All About Down

As a little background, down is the under plumage that geese, ducks and other waterfowl have to keep them warm and dry. Down isn't to be confused with feathers, which are the colored, outermost layer of a goose or duck. Feathers have quills, while down does not.

Goose down is the finest lightweight insulator known, natural or synthetic, with the exception of eider-down, which comes from eider ducks and isn't widely available. Down clusters create thousands of tiny air pockets, which provide the superior insulating ability for which down is famous.

Along with its insulative qualities, down is also breathable compared to many other materials used to make jackets and other

outdoor gear. Down's natural design wicks water away through filaments while retaining the warmth in the air pockets.

Most of the goose down produced today comes from China, with a small percentage coming from Europe. However, the part of the world where the goose lived has no relation to the quality of the down or the jacket made from the down.

Eddie Bauer, an early outdoor retailer, produced the first down jacket after nearly freezing to death on a hike in 1935. While fishing in Alaska, Bauer was carrying a heavy load of steelhead and began to fall behind his fishing partner on the trail. He became hypothermic, but fortunately had a revolver with him and was able to fire it to alert his



partner that he was in trouble. Had he been by himself, it's quite possible he would have perished on that frigid January day.

Later Bauer realized that what he needed was a breathable, warm jacket that he wouldn't have to remove when working strenuously in cold conditions. He later made a pattern for a goose down jacket that he thought would fit him, acquired the down and had a seamstress sew it for him.



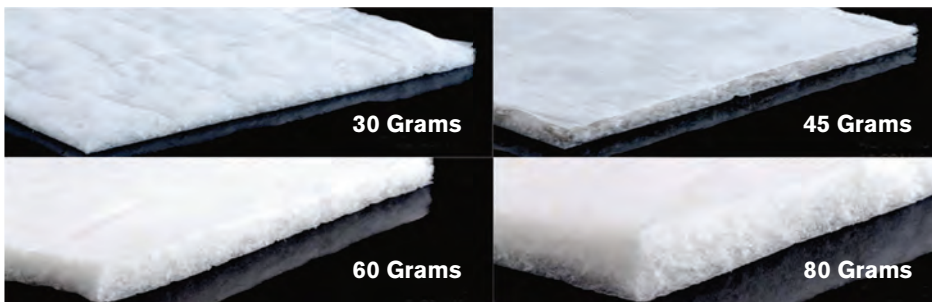




The resulting jacket became a huge hit, as did the subsequent renditions over the next nearly 80 years. In fact, Bauer's goose down jacket, patented in 1940, would become his most successful product, taking his business from a local storefront to a nationally recognized brand.

been the best material for insulation at the time, it certainly wasn't perfect. When down jackets got wet, they tended to stay really wet for a long time. And that greatly reduced the thermal quality. Down would also clump when wet, leaving cold spots with no down in that section.

**“Since the thermal quality of down is so incredibly high, down jackets became a staple for many serious outdoors lovers.”**



← Thindown is sheets of down bound together and pressed into a light layer, wrapped in a scrim liner. This lets manufacturers create seamless down jackets without baffles or quilting.

### Jacket Ups & Downs

Since the 1940s when Bauer introduced his jacket, many companies have jumped into the goose down outerwear business with varying levels of success. Since the thermal quality of down is so incredibly high, down jackets became a staple for many serious outdoors lovers.

Of course, down jackets came in different levels of quality, so jackets began to be rated by “fill-power” in order for customers to determine how warm a particular jacket would be. Down plumes have millions of filaments that provide pockets for warm air — a concept called “loft.” Fill power measures that loft by taking an ounce of down and seeing how many cubic inches it takes up. If it takes up 600 inches, it has 600-fill power. At the top end, 1,000-fill power is as high as the scale goes, representing the warmest jacket — and typically the most expensive.

While down might have

Combine that with the fact that many down jackets look “poofy” because of their baffles (pockets sewn throughout the jacket that keep the down from all migrating to one place). In the 1970s and '80s, the baffles were considered cool by many outdoors enthusiasts, even something of a status symbol. But the new, thin look favored by many pushed “poofy” aside in favor of slimmer designs.

As a result, many seemed to turn their back on down products, opting for new, breathable man-made fabrics for their outerwear — mostly mixes of polyester and spandex, and fill made of polyester or other manmade fibers. But goose down was far from dead. And recent down products utilizing new technologies and materials have made it popular once again.



↑ A classic puffy jacket from the 70s.





## New Innovations

New innovations in goose down and goose down materials have once again thrust down into the forefront of cold-weather outdoor wear. That's despite all of the fantastic nylon/spandex mix products currently on the market. Let's take a look at a few of these innovations in goose down.

While hydrophobic down sounds like it comes from a goose with rabies, in reality it mostly solves the water problems associated with down jackets — namely the loss of insulative quality when wet. Nearly everyone who has ever owned a down jacket has seen the down clump up within the baffles when wet, then take hours to finally dry out. With hydrophobic down, that's largely a problem of the past.

While still goose down, hydrophobic down has been treated with a durable water repellent that enables the down to resist water longer, dry more quickly and retain loft when damp. Consequently, jackets made from it perform better in damp conditions than their regular down ancestors.

Jackets using hydrophobic down are generally more expensive than conventional down jackets. But with the additional selling point of keeping outdoor adventurers dry when other down jackets won't, adding some jackets using this material to your sales inventory is probably a very good idea.

Down proof jackets address another problem that down jackets have historically had — the fact that feathers and other materials always seem to escape and get on clothing, furniture and other places you don't want it. "Down proof" is actually kind of a misleading term, since

a down cluster won't leak through fabric. But tiny pieces of broken-down clusters, known as "fiber," and small feathers with pointy ends will work their way through your outer and inner jacket fabric.

Down proof fabrics don't let such materials work their way through, mostly eliminating the mess that inevitably begins to occur when a down jacket gets older. I say "mostly" because all fabrics labeled "down proof," even the most expensive ones, will leak some amount of material over time. The best jackets in this category use down proof fabrics that leak the least while still offering breathability and/or water resistance.

Note that down experts recommend that you never pull a feather out of a down jacket when you see its tip protruding through. Doing so widens the hole that the feather came through, which makes it easier for more to exit there in the future.

Many manufacturers now make down jackets with down proof outer fabric in the design. Having this option available for your customers gives you another avenue for profiting from down.



↑ Hydrophobic down jacket from Criterion.



iStock / scentXmedia







## “Recent down products utilizing new technologies and materials have made this material popular once again.”

Seamless down jackets are the current top-of-the-line innovation in goose down outerwear. These jackets are made with a relatively new insulation called Thindown, which Eddie Bauer had exclusive rights for through 2018. Now other companies are using the material and making some great-looking, warm jackets from it.

In a nutshell, Thindown is big sheets of down that are bound together and pressed into a soft, light layer and wrapped in a scrim liner. Rather than being used to fill individual baffled sections as is done in old-style down jackets, the solid sheet is designed to stick in place without baffles or quilting.

The result is a goose down jacket that doesn't look like a down jacket. It's also a warmer jacket, as wearers don't get the empty pockets that occur when the down bunches up in old-style down jackets.

Note that seamless down jackets are quite pricey. But customers — especially younger, fitter ones — are often willing to pay the extra price for the modern, trim look these jackets offer.

If you're thinking that surely goose down technology has come as far as it possibly can, you'll need to think again. In January 2019, DuPont Industrial Biosciences and Natural Insulation Products Inc. announced a collaboration to create a new category of insulation uti-

lizing time-proven goose down.

“We are pleased to partner with DuPont, the creator of some of the world's most outstanding fibers, to bring together ‘the best of science and the best of nature’ to create the next evolution of down fabrics,” Ronie Reuben, the inventor of Thindown, said in the press release announcing the partnership.

The two brands are exploring new ways to seamlessly combine Sorona fiber — a high-performance fiber made from renewable plant-based ingredients — and goose down using the proprietary process from Thindown to create a whole new category of a blended down insulated fabric.

Researchers hope the combina-

↑ Hydrophobic down Cerium jacket by Arc'teryx.

tion will deliver greater warmth and breathability, while adding drape and stretch for more ease of movement. Additionally, with the use of bio-based Sonora fibers, the collaboration will hopefully yield a more sustainable insulating material option versus traditional down.

Look for big announcements coming from those companies soon. It's likely they'll come up with a material that leads to even more goose down-based jackets your customers will love — and that you'll love selling to them. **HR**





# HUNTING RETAILER

## GEAR ROUNDUP

### COLD-WEATHER BOOTS

BY GORDY KRAHN



#### BAFFIN MEN'S INSULATED HUDSON

Hard-core hunters and outdoorsmen have relied on Baffin boots for decades. And the introduction of the 8-inch Hudson adds to that legacy – an all-season hunting boot that provides waterproof, breathable comfort from 15 C/59 degrees to -15 C/5 degrees in a wide range of tough terrains. Its anti-microbial next-to-foot lining keeps odors at bay and insulating technology provides top-shelf performance in a broad range of temperatures. An anti-fatigue dual-density midsole with all-terrain outsole construction provides all-day comfort. Other features include a padded collar, corrosion resistant hardware, speed-lacing system, shock-absorbing, dual-density insole and slip-resistant deep lug sole.

**MSRP: \$254.99**  
[www.baffin.com](http://www.baffin.com)



#### BOGS BLAZE II

The Bogs Blaze II redefines warmth and comfort in a rubber hunting boot, with 1,000 grams of Thinsulate to keep feet toasty while providing maximum breathability in cold weather. Durable hand-lasted rubber finished in Mossy Oak camo and a four-way stretch outer shell offer a snug fit and 7mm Neo-Tech four-way stretch bootie construction provides waterproof insulation and warmth. The Blaze II boot is constructed with a firm-gripping, self-cleaning lug outsole designed to release mud and crud, ensuring a sure step, while its Max-Wick moisture-wicking lining helps keep feet drier. The interior is treated with DuraFresh anti-odor protection and has a cushioned footbed for added underfoot comfort.

**MSRP: \$190**  
[www.bogsfootwear.com](http://www.bogsfootwear.com)



#### DANNER RECURVE

Inspired by traditional-style hunting boots while drawing design and technology cues from Danner's best-selling hiking boots, the all-new Recurve delivers the next generation of performance in any type of hunting terrain and weather conditions. The Recurve features a Vibram SPE midsole and TPU heel clip to ensure long hours of comfort, with 7 inches of height for ankle support and optional Danner Dry waterproofing. It has a full-grain leather and nylon upper and breathable mesh lining with Thinsulate Ultra insulation. Other features include a cushioning open-cell OrthoLite footbed, nylon shanks and Vibram Recurve outsole with Megagrip technology with adaptive lugs and flex lines for superior grip.

**MSRP: \$190 to \$220**  
[www.danner.com](http://www.danner.com)



#### DRYSHOD VEIL CAMO SOUTHLAND

The 100% waterproof Dryshod Southland boot is now available in Veil Camo's Whitetail pattern and provides exceptional comfort, support and stability. Designed for hunting in warm conditions, the Southland features Dryshod's WIXIT Cool-Clad wicking air-mesh lining with added micro-dot perforations that wicks away moisture and allows more air flow than with traditional air mesh – keeping feet cooler in warmer temperatures. It has a double Achilles heel and instep reinforcement for comfort and protection, a removable molded EVA sock liner and a nylon shank. Veil Whitetail camo uses a combination of micro and macro elements to challenge the depth perception of animals, helping to obscure the human form and movement.

**MSRP: \$169.95**  
[www.dryshodwest.com](http://www.dryshodwest.com)







### GATOR WADERS CAMP BOOT

Gator Waders continues to expand its footwear collection with its all-purpose Camp boot. Hanging out by the campfire, headed to or from the woods or running errands around town – the Camp boot is designed to be comfortable, dependable, tough and stylish. It features an interior neoprene lining for warmth and comfort, with a waterproof rubber outer layer to keep feet dry. Its scuff- and slip-resistant outsole and durable rubber reinforced heel and toe offer ultra-durability, while the grosgrain pull tab makes it easy to put on and take off. Gator Camp boots are available in men's sizes 8 through 14 and women's sizes 6 through 10 in Mossy Oak Bottomland and solid brown.

**MSRP: \$99/Men's and Women's**  
[www.gatorwaders.com](http://www.gatorwaders.com)



### HAIX SCOUT

The Scout boot from Haix provides exceptional shock absorption, ankle support and stability when tackling any landscape, even when packing a heavy load. Its two-zone lacing system allows users to adjust the boot to match the terrain – cinching up the laces quickly, locking them in place and then tucking the lace ends into a side pocket. The Haix Scout features a waterproof Gore-Tex inner liner to keep feet comfortable and dry, and its unique climate system keeps feet cooler in warmer temperatures and warmer in cooler temperatures by circulating air with every step. Its rugged Vibram sole provides exceptional grip and stability while protecting feet from feeling every loose stone. The sole is heat-resistant, antistatic and self-cleaning.

**MSRP: \$249**  
[www.haixusa.com](http://www.haixusa.com)



### IRISH SETTER MUDTREK

Irish Setter's MudTrek is the lightest rubber boot in the brand's history. Hunters can choose options with a snug, athletic fit or a traditional, roomier full fit, and men, women and young adults can select from unisex whole sizes from 4 to 15. TempSense technology regulates the temperature within the boot to maintain constant foot comfort, and ScentBan antimicrobial scent control eliminates odors. A polyurethane footbed and lightweight RPM midsole provide long-lasting, all-day underfoot comfort, and a convenient heel kick aids boot removal. The MudTrek's self-cleaning lugs help remove mud and dirt with every step, and the neoprene/rubber upper design makes them waterproof and durable.

**MSRP: \$179.99 to \$209.99**  
[www.irishsetterboots.com](http://www.irishsetterboots.com)



### KENETREK MOUNTAIN EXTREME

The Kenetrek Mountain Extreme boot gives hard-core hunters the wherewithal to pursue their favorite high-altitude big-game species no matter what Ma Nature throws at them. They feature a 10-inch-tall, 2.8mm-thick premium full-grain leather upper with no seams down the tongue for abrasion resistance and waterproofing. Reinforced double and triple stitching make it durable, and it has a 7mm nylon midsole for extra support when packing heavy loads. Other features include a reinforced rubber sole guard for abrasion resistance, Windtex waterproof breathable flexible membrane and a lightweight K-Talon outsole for positive traction. The Mountain Extreme is available in non-insulated and 400- and 1,000-gram insulated versions.

**MSRP: \$465 to \$505**  
[www.kenetrek.com](http://www.kenetrek.com)







### LACROSSE LODESTAR

The newest addition to LaCrosse's Navigator series boots, the Lodestar is packed with premium components, including a Gore-Tex 100% waterproof breathable lining for protection from the elements and an exclusive Vibram outsole with omnidirectional lugs for superior traction. Serious stability and comfort are provided through a new lightweight, full-length shank system, dispersing weight evenly underfoot and offering torsional rigidity for support on untamed terrain. A DuraFit rubber heel cup and HexGuard rubber toe ensure durability no matter what the conditions are. A nubuck leather with lightweight abrasion-resistant material upper provides comfort and long life. Feature-rich and ready to hunt, Lodestar boots are a solid choice for navigating the backcountry.

**MSRP: \$220**

[www.lacrossefootwear.com](http://www.lacrossefootwear.com)



### ZAMBERLAN 3031 POLAR

Made in Italy, the 3031 Polar Hunter is Zamberlan's extreme cold weather hunting boot, made for non-compromising performance in the most dangerous conditions. While the Polar Hunter looks like an alpine-style boot, it is anything but. Integrated Kevlar gaiters, BOA Fit technology and Vibram Arctic Grip technology are combined in an extremely warm, yet lightweight and comfortable boot that is very hikeable due to its soft midsole and comfortable fit. This boot is a great fit for hunting in northern or mountainous cold weather zones. Gore-Tex Insulated Comfort membranes provide guaranteed waterproof protection and breathability for the life of the boot while adding to the thermal performance of the Polar Hunter.

**MSRP: \$600**

[www.zamberlanusa.com](http://www.zamberlanusa.com)



### LOWA PATROL

Designed for cold weather conditions, the 8-inch Lowa Patrol boot provides rigid ankle support and protection from the elements, with PrimaLoft 200-gram insulation that keeps frigid temperatures at bay. Its outsole features 5mm lugs for excellent traction in dirt and mud and a PU Monowrap frame delivers superb lateral stability and long-lasting underfoot support. The Patrol's closed lace-loop system has a locking lace loop to allow the user to customize different tensions between the ankle and foot for walking comfort. The Patrol boot is waterproof and breathable and features a full-grain leather upper, climate control insole, DuraPU midsole and Lowa Patrol outsole.

**MSRP: \$275**

[www.lowaboos.com](http://www.lowaboos.com)



### UNDER ARMOUR HOVR DAWN

The HOVR Dawn from Under Armour is a great footwear solution for on-the-go hunters who need flexibility, cushioning and versatility in a cross-country boot. Available in uninsulated and PrimaLoft 400-gram versions, the HOVR Dawn boot features a lightweight and breathable synthetic and textile upper with welded forefoot overlay for protection and a molded ortholite anti-microbial sock liner to prevent the growth of odor-causing microbes. This 6-inch boot has a high-traction rubber lug outsole for enhanced grip on a variety of surfaces and comes in UA Ridge Reaper and black in the uninsulated version and Ridge Reaper, Realtree Edge and Maverick brown in the insulated model.

**MSRP: \$180 to \$200**

[www.underarmour.com](http://www.underarmour.com)







### MUCK APEX

The high-performance Apex hunting boot from the Original Muck Boot Company is built on an innovative platform for high endurance outdoor pursuits requiring athletic and agile footwear. It's 100% waterproof and coupled with a breathable mesh lining to provide elite protection and moisture management. Its upper features a lock-down zipper closure system, natural scree collar, dual density insole and EVA midsole for shock absorption and all-day comfort. A lugged rubber outsole provides durability and traction and an antimicrobial footbed insert eliminates unwanted odors. The Apex is equally at home on loose rocky terrain, cold/wet ground and, of course, the muck.

**MSRP: \$140**  
[www.muckbootcompany.com](http://www.muckbootcompany.com)



### THOROGOOD INFINITY FD

The Infinity FD rubber boot from Thorogood is a fusion of simplicity and complexity. Underneath and inside of this classic rubber boot silhouette is cutting-edge technology that will bolster performance and enhance comfort in the most challenging conditions. The Infinity anti-fatigue midsole/outsole features a lightweight, high-rebound EVA shock-absorbing layer that improves flexibility. Inside of the 100% waterproof rubber body of the boot is an innovative liner that allows for lightweight Solarcore cold-crushing insulation, a commercial application of NASA space suit insulation that – in recent testing – retained 50% more heat than an identical boot with traditional insulation, according to Thorogood. The seamless body of the Infinity FD is constructed from scent-free rubber.

**MSRP: \$198**  
[www.thorogoodusa.com](http://www.thorogoodusa.com)

### ROCKY GRIZZLY

With 1,000 grams of insulation and a vapor permeable breathable waterproof membrane, Rocky's Grizzly boot in Realtree Edge camo provides comfort in even the toughest environments. Its aggressive rubber outsole offers the sure-of-foot traction and stability hunters need and a lower midsole provides a cushion rebound effect as it absorbs shock from contact with ground surfaces. The upper midsole features an extra bed of comfort-absorbing foot contact, designed to promote energy preservation and lasting comfort throughout the day. Other features include EVA memory foam footbed, aggressive multi-directional rubber outsole and molded rubber heel guard.

**MSRP: \$96.93**  
[www.rockyboots.com](http://www.rockyboots.com)



## serious airgun hunting starts here

# AirForce Texan®...America's Preferred Big Bore Air Rifle

TEXAN 50-CF

Texan 50 now sits as the head of America's First Family of Big Bore Air Rifles, delivering over 800+ foot pounds of energy.

Every Texan air rifle features a Lothar Walther precision barrel as well as other unique features that make AirForce air rifles the hunter's preferred airgun.

Caliber .....0.510  
 Energy.....800+ foot pounds\*  
 Air Tank/Capacity-Carbon Fiber/3625 psi

TEXAN 55 50-CF

Caliber .....0.510  
 Energy.....800+ foot pounds\*  
 Air Tank/Capacity- ... Carbon Fiber/3625 psi

## The World's Most Powerful Production Air Rifles

For more information on all of our big bore air rifles, please visit us at

[www.airforceairguns.com](http://www.airforceairguns.com)



\*Depending on caliber, pellet weight and power setting. Shown with optional scope, Tri-Rail, & rings.

Contact us today at 877-247-4867  
**AIRFORCE**  
 airguns





# NSSF Launches All-New First Shots Clay Target Program

If your range is looking to engage new shotgunners, take a look at this program created to promote the shooting sports.

BY NSSF STAFF

**N**SSF, the firearm industry trade association, recently announced the launch of its all-new First Shots Clay Targets program. Based on the highly successful First Shots introduction to handgun events, the new First Shots Clay Targets program allows outdoor ranges to capitalize on the growing interest in the clay target sports and engage those new to shotgun handling by delivering a safe, entertaining and personalized experience.

"We are thrilled that outdoor ranges now have an avenue that makes it easy for those interested in the clay target sports to get started," said Zach Snow, NSSF Director, Retail & Range Business Development. "Best of all, First Shots works to turn those first-time customers into repeat, loyal clients."

"We specifically designed First Shots Clay Targets to reduce barriers to entry," Snow explained. "Class cost is low, host ranges provide the rental firearms, ammunition and clay targets and NSSF provides eye and ear protection, classroom materials and other means of support. All someone interested in learning how to break clays has to do is sign up and show up. More important, though, First Shots Clay Targets works to turn those first shots into next shots. These events are intended to be tremendously engaging experiences that, backed by NSSF incentives, have students returning to their home range for more."

First Shots events, generally 90 to 120 minutes long, consist of a combination of classroom time and range time. The classroom covers firearm safety rules and the basics of handling shotguns and how their actions work. This important segment can also be done out in the field for ranges without classroom or clubhouse space. Participants and instructors then head to the range for hands-on, one-on-one training that has students quickly breaking clays before instructors hold a Q&A session. Once their event is over, students are asked to take part in a survey, earning them a \$25 rewards coupon for use on a return visit to the range upon survey completion.

NSSF provides support to its First Shots host



ranges in a number of ways. In addition to the classroom materials and eye and ear protection, NSSF will award \$100 to a host range for every 15 participants in First Shots Clay Targets events, up to \$500 annually, to help offset the cost of ammunition, targets or other materials the range wishes to provide.

NSSF also serves as a marketing partner for host ranges. All ranges committed to hosting First Shots Clay Targets events will have those classes posted to the nationally promoted event calendars on [LetsGoShooting.org](http://LetsGoShooting.org) and [StepOutside.org](http://StepOutside.org). Host ranges also have an online resource center of email templates, press releases and other pre-formatted communications and digital branding assets to help promote their events through their mailing lists, website, social media channels and other traditional avenues such as print adver-

tisements. NSSF also provides hosts with up to \$3,000 in co-op advertising annually to help market their events.

Complete details about NSSF's First Shots Clay Targets program are available at [www.nssf.org/ranges/first-shots-home/first-shots-clay-targets](http://www.nssf.org/ranges/first-shots-home/first-shots-clay-targets). For questions, please contact Zach Snow at [zsnow@nssf.org](mailto:zsnow@nssf.org) or (203) 426-1320 ext. 224, or Ann Gamauf, NSSF Manager, Retail & Range Services, at (203) 426-1320 ext. 247 or [agamauf@nss.org](mailto:agamauf@nss.org).

**NSSF**  
The Firearm Industry  
Trade Association





## A GAME-CHANGING B2B MAGAZINE LIKE NO OTHER

brought to you by  **GRAND VIEW  
OUTDOORS**

### FREE SUBSCRIPTIONS TO QUALIFIED APPLICANTS

Revolutionizing the B2B market, *Hunting Retailer* is the leading source of critical hunting information with a primary focus of providing hunting-industry retailers an authentic, competitive edge. Notably gear-centric, *Hunting Retailer* covers every gear niche within the hunting market comprehensively and without boundaries.

### FOR MORE INFORMATION PLEASE CALL OR EMAIL

LISA ADAMS  
833.306.5062 | 205.407.4550  
lisa.adams@grandviewoutdoors.com



Check us out at

**WWW.HUNTINGRETAILER.COM**



# HUNTING RETAILER NEW PRODUCTS

BY GORDY KRAHN



## LEUPOLD BX-4 PRO GUIDE BINO

Considered the glassing optics Jack of all Trades, 10-power binoculars are uber-popular with hunters east and west. Leupold's compact and lightweight 10x42mm BX-4 Pro Guide HD is a great example. With enough magnification for long-range identification, it will also get the job done in tight situations. Built around Leupold's Twilight Max HD light management system, the BX-4 Pro Guide HD features brightness, edge-to-edge clarity and advanced glare management – providing detailed images in low-light situations. Its ergonomic open-bridge design provides comfort for extended glassing sessions and delivers key weight savings for those long outback treks. Other key features include a fully multicoated lens system, high-definition glass, open-bridge roof-prism design, twist-up eyecups and more. Waterproof and fogproof. MSRP: \$649.99. [www.leupold.com](http://www.leupold.com)



## HATSAN HARPOON ARROW GUN

Hatsan's latest pre-charged bullpup pneumatic arrow gun, the Harpoon – made specifically for use with commercial crossbow bolts – can send a 20-inch arrow downrange at 600 fps and produce 325 ft./lbs. of energy. Each 250 BAR (3,625 psi) fill of the onboard 500cc air tank provides 10 high-powered shots. The Harpoon's synthetic pistol-grip stock features textured surfaces for all-weather use, and its adjustable cheek rest and butt pad allow for a custom fit. A long optics rail has plenty of space for mounting the included flip-up TruGlo fiber-optic sights or a crossbow scope and accommodates both 11mm dovetail and Picatinny/Weaver mounts. The barrel cover comes with two mounted arrow holders. MSRP: \$829.99. [www.hatsanairgunsusa.com](http://www.hatsanairgunsusa.com)

## BELL AND CARLSON RUGER M77 MKII SPORTER STOCK

Bell and Carlson's Ruger Sporter stock is designed as a "drop-in" fit for Ruger M77 MKII and Hawkeye long-action right-hand rifles. Spot bedding at the recoil lug to align the barrel in the channel might be required, due to the nature of the Ruger M77 MKII having a broad range of tolerances in the recoil lug area. Its computer designed and CNC-machined full-length 6061-T6 aluminum bedding system extends through the forearm for strength and stiffness and an additional aluminum "tail piece" extends from the bedding block through the pistol grip area for even more rigidity. Other features include a 1-inch Pachmayr recoil pad and front and rear sling studs. Stock length is 31 inches and it weighs approximately 2 pounds. MSRP: \$285. [www.bellandcarlson.com](http://www.bellandcarlson.com)



## GUTCHECK SHOT INDICATORS

GutCheck shot indicators give bow-hunters immediate feedback regarding arrow placement by applying a formula that reacts to digestive fluids – allowing hunters to instantly know if their arrow made a clean pass through the vitals or through the digestive tract of the animal and determine what their next action should be. Should the arrow pass through the acid-containing digestive tract of the animal, the indicator will immediately change color. With that important information, hunters can decide whether it's safe to pursue the animal or if it's best to back out and wait for it to expire before taking up the blood trail. Species specific shot indicators are available for whitetails, black bears, elk, mule deer, moose, wild hogs and turkeys. MSRP: \$14.97. [www.gutcheckindicators.com](http://www.gutcheckindicators.com)

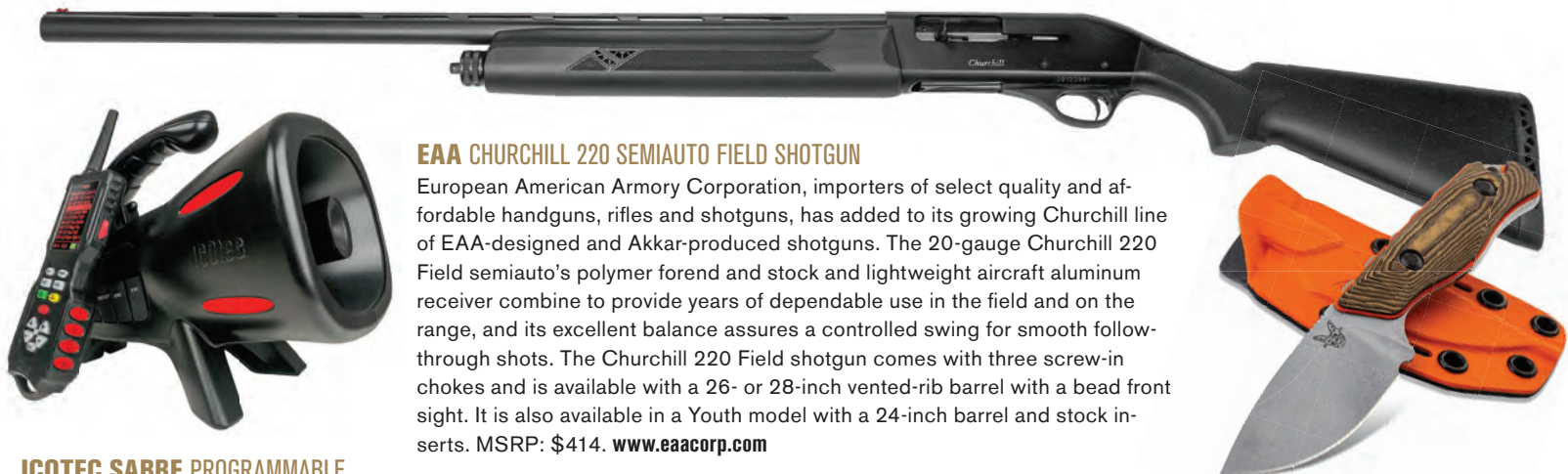


## HEYBO SPORTSMAN FIELD PANTS

Heybo Sportsman field pants are a great fit for a wide variety of hunting applications, with water-repelling technology that doesn't sacrifice maximum breathability and temperature control for in-the-field comfort. Flexible ripstop fabric allows greater mobility and full range of motion in the toughest terrains without worry of wear and tear. They feature a stretch waistband for added comfort and anti-microbial fabric that will keep the wearer comfortable and fresh all day long. Heybo Sportsman field pants are available in four colors: olive, gray, saddle and khaki. MSRP: \$69.99. [www.heybooutdoors.com](http://www.heybooutdoors.com)







### EAA CHURCHILL 220 SEMIAUTO FIELD SHOTGUN

European American Armory Corporation, importers of select quality and affordable handguns, rifles and shotguns, has added to its growing Churchill line of EAA-designed and Akkar-produced shotguns. The 20-gauge Churchill 220 Field semiauto's polymer forend and stock and lightweight aircraft aluminum receiver combine to provide years of dependable use in the field and on the range, and its excellent balance assures a controlled swing for smooth follow-through shots. The Churchill 220 Field shotgun comes with three screw-in chokes and is available with a 26- or 28-inch vented-rib barrel with a bead front sight. It is also available in a Youth model with a 24-inch barrel and stock inserts. MSRP: \$414. [www.eaacorp.com](http://www.eaacorp.com)

### ICOTEC SABRE PROGRAMMABLE GAME CALLER

ICOTec's new-for-2020 Sabre programmable electronic game caller delivers professional grade sound quality, durability, high volume, long-range remote activation and other key features at a practical price. With 280 sounds in its library, it's a great tool for hunters who are targeting predators, deer, elk, turkeys and wild hogs. And with the touch of a button, the user can easily recall up to 20 favorites sounds and one coxer call. The Sabre also features separate play and pause buttons, an easy-to-read remote display and day or night remote screen display options. It has a remote range of 300 yards and the capacity of save up to 500 sound files internally. MSRP \$279.99. [www.icotec.com](http://www.icotec.com)



### PULSAR THERMION XG50 THERMAL RIFLESCOPE

The Thermion XG50 thermal rifle scope from Pulsar boasts 640x480 microbolometer strength and 12-micron pixel detail to detect heat signatures up to 2,400 yards away – and features a BAE sensor, onboard recording and multiple color palettes. Its 1024x768 AMOLED display gives users stunningly clear images and its continuous, digital zoom ensures varmints, wild hogs and big game are easily detected. The Thermion XG50 has a stadiametric rangefinder and rock, forest and identification viewing modes, and a defective pixel repair feature guarantees long-lasting quality. Some of its other attributes include a rechargeable battery pack, onboard video and audio recording, Stream Vision app compatibility, external power supply adaptability, 13 variable electronic reticles, five rifle profiles and one-shot zeroing freeze function. MSRP: \$6,500. [www.pulsar-nv.com](http://www.pulsar-nv.com)

### BENCHMADE HIDDEN CANYON HUNTER KNIFE

Benchmade's 15017-1 Hidden Canyon Hunter is a premium fixed-blade knife designed for outback hunters around the globe. Despite its compact profile, this knife provides ample real estate throughout the handle and cutting edge to make it effective on big game as well as small game. Its newly redesigned sheath creates a slim and reliable housing for convenient storage and improvements to the knife's overall geometry, ergonomics and materials make the last cut feel just as effortless as the first, thanks to Benchmade's new Select-Edge 14-degree blade angle. Overall length is 6.42 inches and blade length is 2.79 inches. MSRP: \$230. [www.benchmade.com](http://www.benchmade.com)

### BUSHNELL PRIME TRAIL CAMERA

The Prime trail camera from Bushnell is made for the demanding hunter who wants a basic, reliable, value-priced camera with straightforward setup and an easy-to-navigate menu. Thirty-six low-glow LEDs provide consistent illumination, with 24 mega pixel resolution for crystal-clear images no matter the time of day. Adjustable settings allow the camera to capture one to three images per trigger fire, or five to 60 seconds of video at a time. The user can adjust the trigger interval anywhere from 1 second to 60 minutes. The Prime is powered by six AA batteries, has a flash range of 80 feet, .3-second trigger speed and one second recovery rate. An optional combo pack is available that includes an 8GB SD card the six AA batteries. MSRP: \$119.99 to \$129.99. [www.bushnell.com](http://www.bushnell.com)

### ROCKY MOUNTAIN RM-415 CROSSBOW KIT

Rocky Mountain's new-for-2020 RM-415 crossbow is powered by 215-pound limbs that send arrows downrange at a searing 415 fps while producing 146 foot-pounds of kinetic energy. Weighing just 7.5 pounds and measuring a compact 14.5 by 35 inches when fully cocked, the RM-415 is lightweight and maneuverable. Sitting atop the one-piece molded camouflage stock is an ultra-bright fogproof, shockproof and water resistant red/blue illuminated 4x32mm scope with a precision-etched multi-position reticle. The RM-415's Trail Ready to Hunt kit includes a rope cocking device, quick-detach side quiver, three Carbon Express PileDriver crossbolts with practice points and rail lubricant. An integrated rail lube storage area, sling studs and adjustable foregrip add to the bow's price-to-performance ratio. MSRP: \$349.99. [www.feradyne.com/rocky-mountain](http://www.feradyne.com/rocky-mountain)





# 24 Reasons Customer Service Is King

With the craziest holiday shopping season in memory upon us, it might be easy to focus on short-term profits while overlooking the key to long-term success — customer service.

BY BOB ROBB

One size does not fit all. Even though people look for excellent customer service, the way they want to receive it is changing. As we all know, a happy customer is likely a repeat customer and also the best advertising your business can have. And that advertising is free, save for the cost of doing business the right way. But if you're not convinced, here are 24 customer service statistics that prove the theory.

## Good Customer Service = Success

**1.)** Various sources estimate that it is anywhere from three to 30 times as expensive to attract a new customer as it is to retain an existing one.

**2.)** According to Bain & Company, increasing customer retention rates by 5% increases profits anywhere from 25 to 95%.

**3.)** According to Walker, customer experience will overtake price and product as the key brand differentiator in 2020.

## Bad Customer Service = Failure

**4.)** According to the Customer Experience Impact Report by Harris Interactive/RightNow, 2010, 82% of consumers in the U.S. said they've stopped doing business with a company due to a poor customer service experience. Of these, 73% cited rude staff as the primary pain point, and 55% said a company's failure to resolve their problems in a timely manner drove them away.

**5.)** 50% of Gen Xers and 52% of baby boomers stopped doing business because of poor customer service, according to an eMarketer article.

**6.)** Americans tell an average of nine people about good experiences and tell 16 (nearly two times more) people about poor experiences, according to American Express.

**7.)** American Express also says that 33% of Americans say they'll consider switching companies after just a single instance of poor service.

**8.)** In *Understanding Customers* by Ruby Newell-Legner, the author asserts that it takes 12 positive experiences to make up for one unresolved negative experience.

**9.)** Newell-Legner also asserts that a typical business hears from 4% of its dissatisfied customers, that 96% of customers don't voice complaints, and that 91% of unhappy customers never come back.

## Why Customer Opinions Matter

**10.)** 58% of Americans perform online research about the products and services that they are considering purchasing, according to Pew Research.

**11.)** When it comes to making a purchase, 64% of people find customer experience more important than price.

**12.)** 40% of customers switch brands or services because a competitor offers better customer support.

**13.)** According to *convinceandconvert.com*, answering a social media complaint increases customer advocacy by as much as 25%.

## Customer Relationships Are Powerful

**14.)** Research from NewVoiceMedia reveals that an estimated \$62 billion is lost by U.S. businesses each year following bad customer experiences.

**15.)** According to Forrester, 69% of U.S. adults shop more with retailers that offer consistent customer service both online and offline.

**16.)** More and more, consumers make purchasing decisions based on buying into an idea and an experience, according to an article on *McKinsey.com*.

**17.)** The Maritz study reported 83% of complainants who received a reply liked or loved the fact that the company responded. Also, Oracle found that 22% of consumers who received a response to their complaint ended up posting a positive comment about the company.

**18.)** A high customer retention rate can increase profits by anywhere from 5 to 95% (Bain & Company). In addition, it costs as much as six or seven times more to acquire a new customer than to retain an existing one.

## 5-Star Customer Service

**19.)** Many consumers prefer traditional channels, like a phone, to communicate with a company. But according to November 2015 research, the phone can also be the most frustrating customer service channel, according to U.S. internet users. That

survey showed that the most frustrating channels were the phone/voice (32%); company website (15%); live chat (13%); and email (12%).

**20.)** The same survey showed that the least frustrating customer service channels were Instagram (2%); Yelp (3%); Facebook (5%); Twitter (6%); text/SMS (6%); a messaging app (6%); and in-person communication (7%).

**21.)** Today's shoppers don't view online and in-store as discrete channels and expect the same level of "perceived convenience" no matter where they shop. In fact, 51% of consumers associate convenience with a great shopping journey, regardless of channel. In North America, convenience has been raised to new levels, with 57% of respondents in the region valuing convenience above all else, compared to 50% in Europe.

**22.)** According to *Comm100.com*, millennials prefer chat support channels over others. This survey showed that 71% of those aged 16 to 24 and 65% of those aged 24-35 expect a quick response to their inquiries, and that live chat can provide that service. Also, 58% of millennials feel that they should have access to brands anywhere, anytime, and that 52% would rather converse via text than any other format.

**23.)** 27% of Americans report "lack of effectiveness" as their number one frustration with customer service; 12% of Americans rate their number one frustration with customer service as "lack of speed," and 10% site "lack of accuracy" as their biggest frustration.

**24.)** In the above survey, Esteban Kolsky, CEO of thinkJar, reports that 91% of unhappy customers who are non-complainers simply leave without complaining, and that 44% of customers confirm that they have received the wrong answer from a customer service representative in the past.

Have any tips for us on your own customer service successes, or failures? Drop me a note at [editor@grandviewoutdoors.com](mailto:editor@grandviewoutdoors.com). **HR**

## PRO STAFF

Bob Robb has been a full-time outdoor writer since 1978. He's a former staff editor for *Peterson's Hunting magazine*, as well as the former editor of *Western Outdoor News*, *Peterson's Bowhunting*, *Inside Archery*, *Whitetail Journal*, *Predator Xtreme* and *Waterfowl & Retriever* magazines. He's hunted on five continents with both rifles and archery equipment and lived in Alaska for 15 years, where for a time he held an assistant hunting guide's license.







**INVESTING IN  
GROWTH BECAUSE  
WE GROW  
TOGETHER**

# Sports South

UNDER CONSTRUCTION UNDER CONSTRUCTION UNDER CONSTRUCTION



**Completing a multi-million dollar  
warehouse expansion project to better  
meet your growing needs!**

**Increasing capacity to fuel our joint success!**

**Distributing more  
than 40,000 unique  
SKUs & 550 brands!**

Firearms | Ammunition & Reloading  
Optics | Accessories | Bulk Orders  
Range Programs

**Innovative Technology**

Web Services  
Fulfillment  
Drop Ship  
Auto Replenishment Capability

**Industry Trained Staff**

**Live Inventory 24/7**

# One Focus • Distribution

1.800.388.3845 | [www.TheShootingWarehouse.com](http://www.TheShootingWarehouse.com) | Shreveport, Louisiana





# PULSAR

IMAGE. QUALITY

PREMIUM  
**THERMAL**  
TECHNOLOGY



**AXION**

THERMAL IMAGING MONOCULAR



**HELION 2**

THERMAL IMAGING MONOCULAR



**ACCOLADE 2 LRF**

THERMAL IMAGING BINOCULAR



**THERMION**

THERMAL IMAGING RIFESCOPE



**TRAIL 2 LRF**

THERMAL IMAGING RIFESCOPE

[PULSARNV.COM/HR](http://PULSARNV.COM/HR) | 817-225-0310 | [SALES@PULSARNV.COM](mailto:SALES@PULSARNV.COM)