WORLD'S ONLY SURVIVABLE AK-47 PROTECTIVE HELMET MK-1 AK
Science for Soldiers

Our story; for the past 10 years we’ve been developing next generation helmet and armor technology for leading OEMs. That experience has driven X Shell to produce the most advanced helmet technology on the planet.

X Shell offers the strongest, lightest and most effective helmets available, including the world’s only true AK-47 protective helmet, the MK-1 AK.
Mission Ready

X Shell offers a full line of helmets depending on your mission, threat scenario, loadout, and ballistic requirements. All are manufactured in the U.S.A. and all are designed to reduce weight while setting new standards for protection, comfort and versatility.

MK-1 is the lightest helmet available for frag and 9mm specifications.

MK-1 AK is the world’s only true AK-47 protective helmet.

MK-1 LIGHT RIFLE is capable of stopping the AK-47 LCB round at 100m.

MK-1 TRS (Trauma Reducing Shell) is a lightweight non-ballistic shell with advanced dual shell engineering designed to dramatically reduce concussion and mild traumatic brain injury from a fall or heavy impact.

Watch Live Fire Testing videos here: www.youtube.com/user/xshellhelmets

Download Ballistic Reports here: www.xshellhelmets.com

Follow www.facebook.com/xshellhelmets
MK-1

The Mark 1 (MK-1), is the ultimate in lightweight, tactical protection. An alternative to competitive ballistic helmets, and up to 23% lighter, the MK-1 offers higher FRAG performance along with the same advanced ballistic capabilities. The MK-1 excels in managing backface trauma and multi-hit protection from heavy caliber rounds. The cost-effective shell is a result of the manufacturing technology that reduces waste of the extremely expensive Spectra® material for the core, resulting in a lighter, tougher helmet at a lower cost.

FEATURES:

- Unsurpassed ballistic performance
- Superior shell construction with true multi-hit protection
- Ultra lightweight 26.8 oz shell
- Team Wendy® EPIC™ helmet liner system for ultimate fit, comfort and protection
- Wilcox® L4 3-hole shroud and Magpul® compatible rails, standard

COLORS:

- OD GREEN
- COYOTE

PROCEED TO LIVE FIRE TESTS
X SHELL MK-1 HELMET

Round 1 OF 8

Round 2 OF 8

LIVE FIRE TEST
Watch online at: www.youtube.com/user/xshellhelmets

.44 MAG RIFLE

Round 1 OF 8

Round 2 OF 8
**LIVE FIRE TEST**

Watch online at: [www.youtube.com/user/xshellhelmets](http://www.youtube.com/user/xshellhelmets)

**.44 MAG RIFLE**

**Round 5 of 8**

**Round 8 of 8**
STANDARD MILITARY ISSUE (ACH)

Round 1 of 2

LIVE FIRE TEST
Watch online at: www.youtube.com/user/xshelhelmet

Round 2 of 2

.44 MAG RIFLE
STANDARD MILITARY ISSUE (ACH) CONTINUED

Round 2 OF 2
ALTERNATE VIEW

LIVE FIRE TEST
Watch online at: www.youtube.com/user/xshellhelmets

.44 MAG RIFLE

Round 2 OF 2
ALTERNATE VIEW
X Shell: The Superior Choice

MK-1 CORE BENEFITS:

››› Up to 41% Lighter Shell Weight Than Standard Issue ACH  
››› Superior Backface Deformation Performance Greater survivability  
››› True Multi-hit Protection Withstands multiple rounds without penetrating  
››› Available Now Order online at: www.shellhelmets.com

TARGET INFO:
Clay head forms are solid ROMA No. 1 Plastilina, tested in a 75° environment, mounted to wooden bases using a standard j-bolt.

MK-1 BALLISTIC PERFORMANCE

FRAG
17gr. FSP
2450 fps
ACH STANDARD

9mm FMJ
124gr. FMJ
1450 fps
10 - 20mm BFD
ACH STANDARD

.44 Mag
240gr. SJHP
14 - 1450 fps
NIJ STANDARD

BALLISTIC PERFORMANCE

RIFLE  LIGHT RIFLE  NEW THRESHOLD  TOP TECH  MIL-SPEC

X SHELL: The Superior Choice

MILITARY ISSUE (ACH)

TARGET INFO:
Clay head forms are solid ROMA No. 1 Plastilina, tested in a 75° environment, mounted to wooden bases using a standard j-bolt.
Suspension

All MK-1 helmets incorporate the Team Wendy® Cam Fit™ Retention System with Boa® Closure System, and Team Wendy® EPICTM combat helmet liner system. The Boa® Closure System, with its one-handed dial-adjustable fit, ensures the most secure fit in a matter of seconds, and is capable of withstanding the weight of headborne accessories while maintaining balance and stability. The EPIC™ helmet liner system offers superior comfort and a significant increase in protection at high-G impacts, without adversely affecting weight or heat dissipation.

FEATURES:

- Up to a 40% average increase in protection at high-speed impacts
- Customizable for fit and comfort
- One-piece protective liner for easy installation
- Specialized comfort pads absorb and wick away moisture
Rails & Shroud

X Shell rails are an open-source design that is compatible with all Magpul® picatinny accessories.

The Wilcox® L4 3-hole shroud creates a solid mounting platform for your Wilcox® NVG mount.
MK-1 AK

The only truly survivable AK-47 protective helmet available to law enforcement, Special Operations and ground combat troops.

In testing the MK-1 AK repeatedly stopped AK-47 rounds (7.62mm) with minimal backface deformation and zero penetration. All other available helmets fail to compare to the level of ballistic performance of the MK-1 AK. The differentiator is trauma. Though another helmet may stop the AK-47 LCB round, the soldier’s head trauma will still be lethal. With the MK-1 AK, the trauma is comparable to a 9mm round hitting a high-end ballistic helmet.

FEATURES:
- Stops multiple hits from an AK-47 (7.62mm)
- Unsurpassed backface performance
- Superior shell construction with true multi-hit protection
- Team Wendy® EPIC™ helmet liner system for ultimate fit, comfort and protection
- Wilcox® L4 3-hole shroud and Magpul® compatible rails, standard

COLORS:

PROCEED TO LIVE FIRE TEST
MK-1 AK HELMET

4 Rounds on Target

» No Penetration
» Minimal Backface

LIVE FIRE TEST
Watch online at: www.youtube.com/user/xshellhelmets

X Shell MK-1 AK (Test Shell)
MK-1 Light Rifle

Engineered for Special Operations forces and ground combat troops, the MK-1 Light Rifle ballistic helmet stops AK-47 LCB rifle rounds at 100m standoff. This helmet offers superior strength-to-weight performance and is built to exceed the rigorous challenges of ground combat while remaining lighter than an ACH.

FEATURES:
- Unsurpassed ballistic performance
- Excellent strength-to-weight ratio
- Superior shell construction with true multi-hit protection
- Team Wendy® EPIC™ helmet liner system for ultimate fit, comfort and protection
- Wilcox® L4 3-hole shroud and Magpul® compatible rails, standard

COLORS:
- OD GREEN
- COYOTE

MK-1 TRS

The MK-1 TRS (Trauma Reducing Shell) marks a major advancement in helmet science. Designed by a composite technology firm responsible for cutting-edge helmet innovations, this shell offers the first true answer to MTBI from impact. The MK-1 TRS protects against both blunt trauma and the more dangerous rotary trauma.

The MK-1 TRS utilizes the same shell design as the MK-1, but in a non-ballistic carbon fiber composite for extreme weight reduction. The MK-1 TRS is an ideal choice for search and rescue, snowboarding, skiing, equestrian, skateboarding or other high-risk activities because it offers unmatched protection from blunt force impacts.

FEATURES:
- Extremely light carbon shell
- Team Wendy® EPIC™ helmet liner system for ultimate fit, comfort and protection
- Wilcox® L4 3-hole shroud and Magpul® compatible rails, standard

COLORS:
- OD GREEN
- COYOTE
Chin Straps and Trauma

Soldiers and Marines have long debated the value of chin straps, most likely in extreme conditions. After rigorously testing thousands of helmets, X Shell is 100% positive that a tight chin strap actually INCREASES MTBI risk from ballistic events on X Shell helmets. X Shell’s tests measured backface deformation in ROMA Plastilina clay to quantify the trauma transferred to a soldier’s head during a ballistic loading event only.

X Shell has concluded that a strapped-down helmet hurts the soldier in two ways. First, more energy is transferred to the clay than if the same helmet is allowed room to move, and the second is rotary injury. If a helmet can rotate without rotating the head with it, energy can bleed off and protect the soldier from injury to the brain and neck.

The proper way to wear a helmet is to use a ratchet dial to get a snug fit on the head and then loosely allow the chin strap to hang below your chin; this is simply to keep the helmet on your head. Only during the use of night vision is a tight chin strap required.

This is internal data and is completely based on ballistic transfer of energy to X Shell Helmets only. In the event of blunt force impacts, chinstraps are recommended and they do save lives.
Ballistic Test Patterns

5-Shot Pattern
Both the Army and NIJ have traditionally used a simple, 5-shot pattern when testing helmets: front, back, left, right and crown, with a single shot at each point. The problem with this method is that manufacturers design helmets to perform better in those areas. On a seamless helmet (or any shell made by Ceridian or X Shell) there are no weak points, eliminating that issue and allowing for a much tougher ballistic test pattern.

3-Shot Pattern
A 3-shot triangle is standard for testing vehicle armor, and X Shell believes that a randomly placed 3-shot triangle is also the best test of a helmet’s battlefield performance.

X Shell Multi-hit
Setting a New Standard
In combat, multiple hits are likely to come from the same shooter and be closely grouped. To be truly effective, a helmet must be able to survive a tight grouping. The random placement of the three shots ensures that no part of the helmet can be manipulated to pass mil-spec, but possibly fail elsewhere in the helmet.

This is especially true of AK-47 helmets, as the AK is an automatic weapon. Not only must a helmet stop all three rounds, the trauma must be survivable on all three. This is an exceedingly high standard, and a standard that our shells achieve at a level that is unmatched today.
We designed a helmet to bring you home from war. Choose as you see fit.

There are helmets built to meet minimum military specs. There are helmets built to mount fashion accessories.

We designed a helmet to bring you home from war. Choose as you see fit.