



# AIRFRAME™ HELMET

OPERATOR'S MANUAL



## **This manual must be carefully read by all persons who have or will have the responsibility for using or maintaining this product.**

Any warranties made by Crye Precision LLC with respect to this product are voided if the product is not used and maintained in accordance with the instructions in this manual. For any questions relative to the use or repair of this product, please write Crye Precision LLC or call **1-718-246-3838** during regular business hours.

### **WARNING**

**The following are general safety warnings intended to call attention to fundamental performance limitations and areas of the product where proper usage must be followed. Failure to use and maintain the product according to the instructions and warnings contained herein may result in the product failing to perform as designed, and/or the persons relying on this product sustaining serious personal injury and/or death.**

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• This product contains integrated ballistic resistant regions.</li><li>• This product is designed to protect the wearer <u>only</u> against the ballistic threat level stated in the Product manual. It is not intended to protect against rifle fire or sharp edged or pointed instruments <u>unless specified on the armor</u>.</li><li>• Ballistic resistant regions are not intended to protect the wearer from projectiles that hit less than 1 inch from any edge of the ballistic resistant regions.</li><li>• Exposure of the internal ballistic materials to water, chemicals, or sunlight will reduce the effectiveness of the armor.</li><li>• This armor is not flame resistant unless specified elsewhere in this manual.</li><li>• Product that shows no signs of damage must be replaced 5 years from date of purchase.</li></ul> | <ul style="list-style-type: none"><li>• Perform periodic inspections of the ballistic resistant regions of the armor. Discontinue use of damaged product immediately.</li><li>• DO NOT machine wash or dry clean the product. Exposure to detergents, bleach, or solvents may result in degradation and reduce the effectiveness of the product.</li><li>• Inspect the product for discoloration, cuts, tears, abrasions or cracks before and after each use.</li><li>• DO NOT alter the product in any way.</li><li>• DO NOT expose the product to open flame or excessive heat.</li><li>• All replacement parts must be acquired from Crye Precision LLC or a licensed distributor.</li><li>• The most current version of this manual may be found at <a href="http://www.cryeprecision.com">www.cryeprecision.com</a>.</li><li>• DO NOT use this product except in its intended manner.</li></ul> |
|---|--|



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## INTRODUCTION

The AirFrame™ ballistic helmet sets new standards in protection, comfort, and modularity. Complete AirFrame™ helmets weigh less than complete ACH 2002 helmets while providing more coverage area. The AirFrame™ was developed with a mandate to dramatically reduce headborne weight while exceeding common frag threats. A complete medium AirFrame™ helmet weighs only 2.30 lbs., and the large weighs a mere 2.55 lbs. The unique overlapping shell design of the AirFrame™ creates an integrated vent that provides passive cooling and can reduce the damaging effects of explosive blast waves. Each AirFrame™ helmet features an OpsCore® H-Nape Head-Loc™ retention system for unmatched stability, comfort, and ease of adjustment. Up-armoring the AirFrame™ with ballistic ear or face protection is simple and fast. All helmets and components are compatible with common ear pro systems like PELTORS® and SORDINS®. Made in the US from US materials.

## FEATURES

- Revolutionary vented shell design for passive cooling
- Covers more of wearer's nape than traditional designs
- Modular ear and face protection available
- Modular ARC-Rail™ system available (O<sup>2</sup> compatible)
- Contain 3/4" pads
- Can be pre-drilled at factory for 3-hole or 4-hole NVG mounts (configuration compatible with OpsCore® and Wilcox® 3-hole mounts)

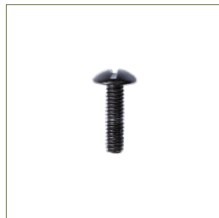
## COMPONENT DESCRIPTIONS (IMAGES NOT TO SCALE)



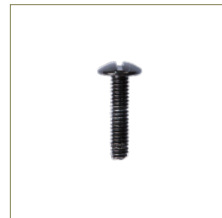
① FRONT SHELL



② REAR SHELL



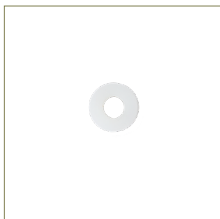
③ SHELL SCREW SHORT (x 2)



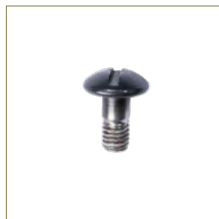
④ SHELL SCREW LONG (x 2)



⑤ SMALL T-NUT (x 4)



⑥ NYLON INSERT (x 2)



⑦ HELMET STRAP BOLTS (x 4)



⑧ LARGE T-NUT (x 4)



⑨ HELMET STRAP



⑩ OBLONG PADS

MD (x 6)  
LG (x 7)  
XL (x 8)



⑪ TRAPEZOIDAL HIT PADS (x 2)

## NVG MOUNTING OPTIONS

AirFrame™ helmets can be ordered with pre-drilled mounting holes for standard 3 or 4 hole night vision mounts. **This must be specified at the time of order.**



Standard 3-hole configuration for night vision mounts



3-hole night vision mount installed



Standard 4-hole configuration for night vision mounts



4-hole night vision mount installed



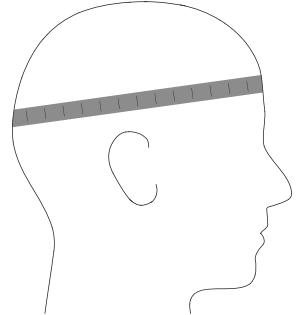
## SHELL SIZING

Follow the instructions below in order to ensure a correct shell size selection. Select helmet size based on head circumference. If a measurement falls directly between two sizes, select the larger size. See note at bottom of page for exceptions. When possible, try on an actual helmet and let pads adjust for five minutes to choose size that fits best.

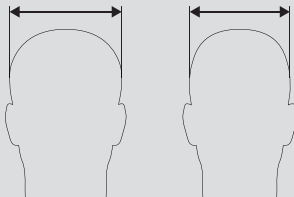
\*Note: Pads affect sizing—if using an alternative pad set, try helmet on to choose best size.

### MEASURING HEAD CIRCUMFERENCE

Sit straight with head level. Wrap a vinyl tape measure around your head. Start just above eyebrow ridges and wrap around widest part of the head as shown in the diagram. Pull the tape measure tight and record the measurement. Use the table below to determine the correct helmet size.



21	22	23	24	25
<b>MEDIUM</b> 20½"–22½"		<b>LARGE</b> 22½"–24½"		<b>X-LARGE</b> >24½"



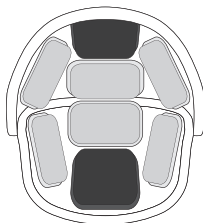
### NOTE: HEAD SHAPES DIFFER

Users on the threshold of two sizes, but with a narrower head (6" width and below), may be able to fit into the smaller sized shell, where users with a wider head (over 6" width) should move to the larger size.

## PAD PLACEMENT

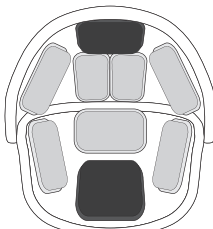
Standard AirFrame™ pad placement is shown below. The number of oblong pads varies with helmet size. **MEDIUM** helmets require 6 oblong pads, **LARGE** helmets require 7 oblong pads, and **EXTRA LARGE** helmets require 8 oblong pads. All helmets require two trapezoidal pads.

### MEDIUM



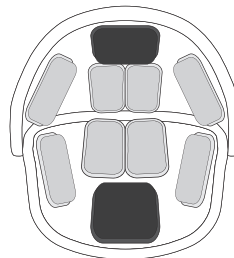
### LARGE

FRONT OF HELMET



BACK OF HELMET

### EXTRA LARGE



Pad placement is designed to offer optimal protection and comfort. It is critical that pads are placed as shown in the below diagrams and that the pads nearest chinstrap hardware mounting points are situated to overlap said hardware—failure to do so may result in injury or death.

A



B



## DONNING

\*Straps may need to be retightened after a few minutes of wear as helmet pads can soften.

**1**

Ensure chinstrap is unbuckled and all straps are loosened.

**2**

Don helmet and ensure that nape pad is positioned correctly.

**3**

Buckle chin strap.

**4**

Pull the front and rear strap adjusters until snug.

**5**

The nape pad can be tightened by pulling on nape adjuster. The nape pad adds additional stability to the helmet, which can be useful when wearing NVGs.

## FIT ADJUSTMENT

**A**

### HELMET IS TOO TIGHT OR TOO HIGH

It is extremely important that the helmet not be sized and fitted to sit too high on the head. If crown pads do not hit head (wearer cannot feel pads), then helmet may be too high. When fitting, look upward by moving eyes, but without moving head. If rim of helmet cannot be seen, helmet may be too tight.

- Try rearranging pads
- If rearranging the pads does not alleviate the tightness, a larger helmet shell may be required

**B**

### HELMET IS TOO LOOSE OR TOO LOW

If helmet is too low on brow, helmet is not compatible with eyewear, or has other similar compatibility issues, it may be too loose.

- Increase the number of pads in shell (additional pads can be purchased separately)
- If additional pads do not correct fit, a smaller helmet shell may be required

## CLEANING INSTRUCTIONS

### HELMET SHELL

Remove helmet pads from helmet shell and clean separately. Helmet shell can be washed with a mild soap and water using a soft brush or cloth. Towel dry the helmet shell and allow to air dry completely indoors or in a shaded area.

### HELMET PADS

Helmet pads should be washed by hand using a mild soap and cold water. A soft bristled brush or wash cloth can be used to remove dirt. Allow pads to air dry indoors or in a shaded area. DO NOT WRING.

## PREVENTIVE MAINTENANCE CHECKLIST

In order to ensure optimal performance, the user should routinely inspect the helmet for damage, wear marks, or missing components. Any damaged components should be replaced immediately. Any of the following issues should be immediately reported and remedied:

- Shell cracks
- Bubbles
- Signs of ply separation
- Fraying webbing
- Damaged plastic hardware
- Peeling helmet edging
- Loose fasteners

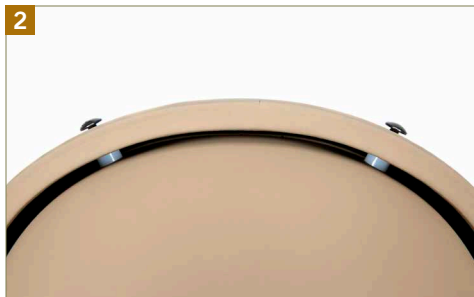
## REASSEMBLY

Instructions for reassembly of helmet shell halves.

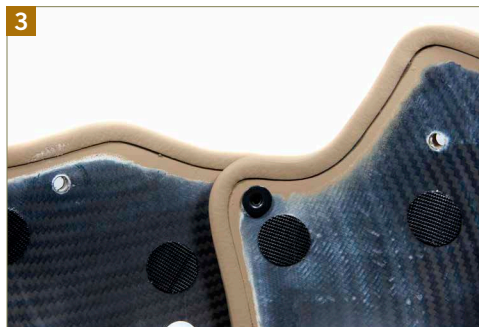
\*If assembling AirFrame™ accessories such as Chops, Ears, or Rails, refer to their instructions for greater detail.



With **FRONT SHELL** held upside down, install the two **LONG SHELL SCREWS** and two **NYLON SPACERS**.



Place the **REAR SHELL** onto the **LONG SHELL SCREWS** and loosely thread on **SMALL T-NUTS**.



Insert two **SHORT SHELL SCREWS** into the side holes and loosely thread on **SMALL T-NUTS**.



Table 1: Torque Values

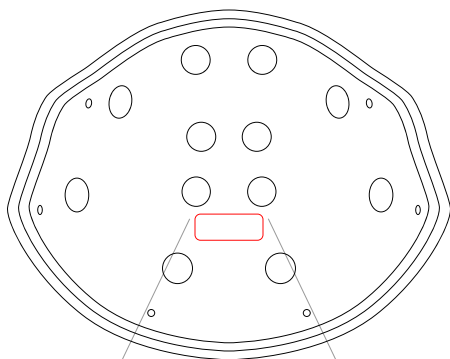
Helmet Shell Screws	6 in. Lb. (.7 Nm)
Strap Bolts	20 in. Lb. (2.3 Nm)



- 4 Once all helmet **SHELL SCREWS** are installed, tighten by hand to torque values specified in **Table 1**.
- 5 Insert **LARGE T-NUTS** through plastic strap anchors and loosely thread **STRAP BOLTS** through shell.
- 6 Once all **STRAP BOLTS** are installed, tighten one at a time to the torque value specified in **Table 1**. Ensure strap anchors are positioned as shown in the images to the left.
- 7 Reinstall helmet **PADS**, referring to pad placement instructions (PG 5).


## SERIAL NUMBERS

Front and rear helmet shells each have a unique serial number located on the inner shell surface. Write your helmet serial numbers below for future reference. Serial numbers should be included when contacting Crye Precision about issues with your helmet or for replacement parts.



**FRONT SHELL**

**AIRFRAME™ HELMET**

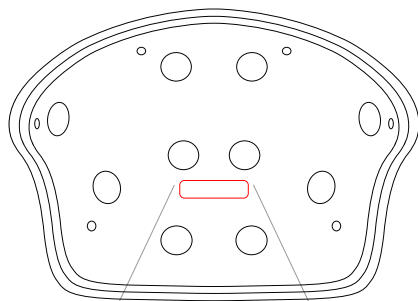


**CRYE PRECISION**

**S/N:**

**P/N:** HLM-M01

PAT. WWW.LWPATENTS.COM    MADE IN THE USA



**REAR SHELL**



**CRYE PRECISION**

**S/N:**

**P/N:** HLM-M01

PAT. WWW.LWPATENTS.COM    MADE IN THE USA



## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

## ABOUT US

Crye Precision designs and manufactures truly innovative equipment for America's fighting forces. We are proud and honored to serve our customers' needs. We spend as much time as we can with users, continuously incorporating their experience and feedback into the gear. We give them our full support and are indebted to them for their service and their sacrifice. We make uncompromising gear for uncompromising individuals. We work hard to provide smart, high-performance, long-wearing gear for people who demand the best. We make all of our gear in America from American materials. Every item is designed to help you perform better.

## WARRANTY

If a defect in materials or workmanship is found in any of our products, we will repair or replace it, free of charge, for the lifetime of the product. This excludes normal wear and tear. Be aware that the customer is responsible for any and all return shipping charges. This applies to the original purchaser and is nontransferable.

## BODY ARMOR

It is against Federal Law for a person convicted of a violent felony to purchase or possess body armor. In addition, various states also have laws restricting the purchase or possession of body armor by persons convicted of certain felonies, other crimes of violence, or drug crimes. By purchasing body armor, you acknowledge and certify that (i) you have no felony convictions, (ii) you have not been convicted of any other crime that would restrict your ability to purchase or possess body armor under any Federal or State law, (iii) you do not intend to use the body armor for any criminal purpose and (iv) you are over 18 years old. Crye Precision reserves the right, in its sole discretion, to refuse to sell body armor to any person. Additionally, the sale of body armor to residents of Connecticut is restricted to in-person sales, unless the sale is made to certain law enforcement or military personnel. We require that all orders of body armor be accompanied by a government issued photo identification.

## CONTACT INFO

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FREEDOM™**



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