



FUTURF ASSAULT SHFLL TFCHNOLOGY

# HELMET OPERATOR'S MANUAL © OPS-CORE 2016 06-05-170 REV. B



**WITH LUX LINER** 

# **HELMET VERSIONS**

#### **FAST HELMETS**

This manual is specific to the following helmet models: FAST Ballistic High Cut, and FAST Ballistic Maritime, with pre-installed Lux Liner (H-Nape or Worm-Dial Versions).

FAST Ballistic High Cut Helmet with Worm-Dial and Lux Liner is used for reference drawings throughout this Operator's Manual. If there are any procedure discrepancies due to other helmet / Lux Liner / Chinstrap versions they will be specifically noted.

#### FAST BALLISTIC HIGH CUT HELMET







**FAST BALLISTIC MARITIME HELMET** 







H-NAPE CHINSTRAP

#### PRE-INSTALLED LUX LINER KIT:

Pads are shipped in the standard configuration with nine installed pads. Pads can be placed in a variety of alternate positions to achieve optimal comfort.

# **H-NAPE CHINSTRAP**

#### S/M KIT INCLUDES:





- (1) Impact Liner (1) H-Nape Chinstrap (2) Thick x4 Pads
- (2) Thin x2 Pads
- (5) Thick x2 Pads

#### M/L & L/XL KIT INCLUDES:



- (1) Impact Liner (1) H-Nape Chinstrap
- (1) Thick x5 Pad (2) Thin x2 Pads
- (5) Thick x2 Pads
- (1) Thick x4 Pad

#### ADDITIONAL PADS

(Also Included)







(1) Thin x4 Pad

#### S/M KIT INCLUDES:



- (1) Impact Liner (1) Worm-Dial Fitband
- (1) Thick x4 Pad w/ Tabs
- (2) Thin x2 Pads (5) Thick x2 Pads
- (1) Thick x4 Pad

#### M/L & L/XL KIT INCLUDES:



- (1) Worm-Dial Fitband
- (2) Thin x2 Pads
- (5) Thick x2 Pads (1) Thick x4 Pad

#### ADDITIONAL PADS (Also Included)



(1) Thin x2 Pad



(1) Thin x4 Pad

#### ALL HELMET VERSIONS INCLUDE:



(1) WING-LOC ADAPTER



(1) PICATINNY ADAPTER





VAS SHROUD / SKELETON SHROUD (Optional)

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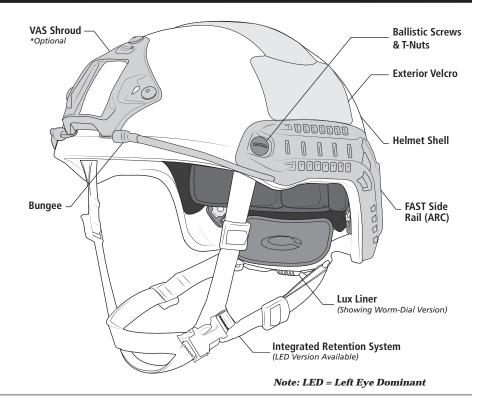
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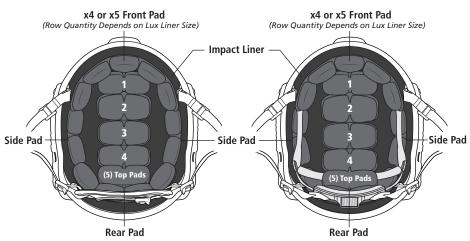
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# **HELMET COMPONENTS**



#### PAD CONFIGURATION:



**H-NAPE CHINSTRAP** 

**WORM-DIAL FITBAND** 

# **SIZING GUIDE**

FAST helmets have been designed from the ground up to fit the largest group of users in helmet sizes that most closely match their heads. However, there is still a small percentage of users that will not fit our standard sizing configurations. Please use the sizing guide below to determine your helmet size and your chinstrap size. If you require a non-standard chinstrap/helmet configuration, custom solutions are available.

#### **HELMET SIZING GUIDE**

HELIVIET SIZING	ווטט נ	)C			
FAST HELMET SIZE	S/M	M/L	L/XL	XXL	
Head Circumference (cm)	53 - 56	56 - 59	59 - 62	62 - 64.5	ζ, /
Head Circumference (in)	20% - 22	22 - 231⁄4	231/4 - 243/8	24% - 25%	
Head Size (US)	up to 7	up to 7¾s	up to 75⁄8	up to 81/8	

#### CHINSTRAP SIZING GUIDE

Since people have different shaped heads, helmet size (the size of the top of your head) is not always proportional to the chinstrap size (the size of your face). H-Nape chinstrap is one size fits all.

#### FAST HELMET SIZE WORM-DIAL FITBAND SIZE (in)

S/M	MEDIUM	24.5-27.5
M/L	LARGE	26-29
L/XL	X-LARGE	27.5-30.5



#### **CUSTOM FIT COMBINATIONS**

Your FAST Helmet can be custom fit with an alternate chinstrap size upon ordering or a replacement chinstrap can be purchased separately.



# **PRO SETUP**

FAST Helmets were designed for professionals who expect the most from their equipment. Just like fine-tuning the suspension on a racecar or sighting in a fire-arm, the helmet must be set up properly before use to function correctly. If you do not follow these instructions, your helmet will not function in accordance with stated performance.

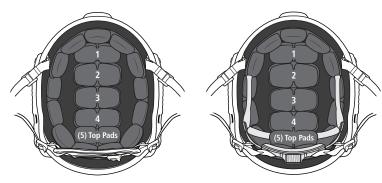
## ADJUST THE TOP PADS

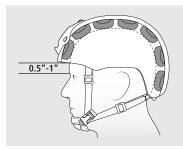
■ Put the helmet on. All Lux Liner Pads come pre-installed in the helmet.

#### **Worm-Dial Fitband Users:**

Turn the Worm-Dial to loosen the Fitband so that all of the helmet weight is resting on top of your head. With the Fitband loose, check how high / low the helmet is sitting.

■ All Users: Forehead pad should be above and not resting on the bony ridge of your eyebrows.





#### **HEIGHT ADJUSTMENT**

- The distance from the top of the eyebrow to the bottom front of the Lux Liner Impact Layer should be approximately 0.5"-1".

  There should also be enough room around your ears for COMMs hearing protection.
- If the helmet sits at an uncomfortable angle, adjust the top pads or try using the Additional Pads provided in different combinations (see step two "Additional Pads" for more detail).

## **2** ADDITIONAL PADS

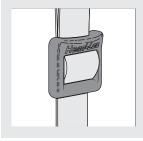
If the helmet feels tight or uncomfortable, adjust the Top Pads, and swap Thick x2 Pads out for Additional Thin x2 or x4 Pad(s) try different combinations until helmet feels comfortable.

# (1) Thin x2 Pad (1) Thin x4 Pad

H-NAPE USERS



# **WORM-DIAL FIBAND OPERATION**



## **1** LOOSEN HEAD-LOC SLIDERS

 With the helmet off, loosen all (4) Head-Loc Sliders by sliding them away from the chincup.



### CONNECT CHINSTRAP BUCKLE

 Place the helmet on your head and connect the low profile chinstrap buckle. This is easiest when placing your index fingers behind each side of the buckle as shown.



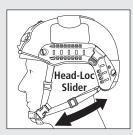
## **3** TIGHTEN FRONT STRAPS

 With both hands, pull the two Front Head-Loc Sliders on the webbing straps that come from the front temples of the helmet toward your chin until snug.



## **4** ADJUST WORM DIAL

 Turn the Worm-Dial Adjustment to tighten the fitband until it is comfortably snug.



### **5** TIGHTEN BACK STRAPS

■ With both hands, pull the two Rear Head-Loc® Sliders on the lower webbing straps toward your chin until snug.

Note: The technique works best if you only hold the plastic sliders and don't touch the webbing.

# H-NAPE CHINSTRAP OPERATION



## 1 LOOSEN HEAD-LOC SLIDERS

■ With the helmet off, loosen all (4) Head-Loc Sliders by sliding them away from the chincup.



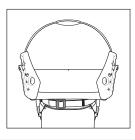
## CONNECT CHINSTRAP BUCKLE

 Place the helmet on your head and connect the low profile chinstrap buckle. This is easiest when placing your index fingers behind each side of the buckle as shown.



## **3** TIGHTEN FRONT STRAPS

Tighten the front straps by pulling the Head-Loc Sliders toward your chin.
 This is easiest when holding either side of the slider with your thumb and middle finger while using your index finger in the top recess.



## **A** ADJUST NAPE PAD

 Position comfortably (as low as possible) on the back of your head. Pull Head-Loc Slider with your right hand.



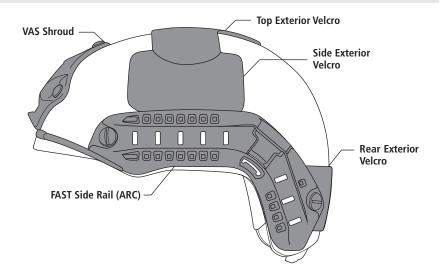
## **5** TIGHTEN BACK STRAPS

 With both hands, pull the two Rear Head-Loc® Sliders on the lower webbing straps toward your chin until snug.

Note: The technique works best if you only hold the plastic sliders and don't touch the webbing.

# **ACCESSORY INTEGRATION**

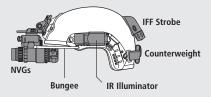
There are three ways of attaching accessories to the FAST Helmet. The Ops-Core VAS Shroud, FAST Side Rails (ARCs), and Exterior Velcro. These three components provide convenient and secure ways to quickly attach and detach various accessories to different positions, and allow for personalized customization.



#### RECOMMENDED CONFIGURATIONS

There are numerous accessories that can be attached to your FAST Helmet to be used in a variety of situations. Below are some recommended configurations.

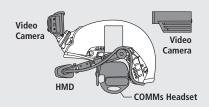
#### **NIGHT OPERATIONS**



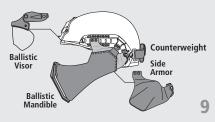
#### **AIRBORNE OPERATIONS**



#### **MISSION DOCUMENTATION**

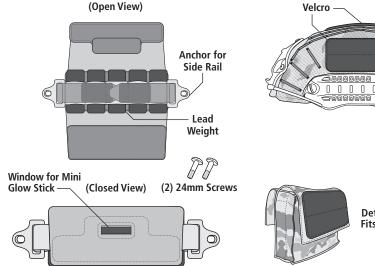


#### **BREACHING / ATV**



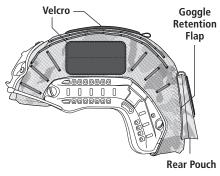
# **COUNTERWEIGHT & HELMET COVER**

The Counterweight Kit reduces neck fatigue on long missions with night vision goggles or other accessories that add weight to the front of the helmet. The Helmet Cover provides a variety of camouflage options for different environments.



#### **COUNTERWEIGHT KIT**

The Counterweight Kit Includes (1) Counterweight Pack with (5) Lead Weights and (2) 24mm Screws.





#### **HELMET COVER**

The Helmet Cover protects the shell outer surface while still providing the functionalities of the FAST platform.

#### **COUNTERWEIGHT ATTACHMENT**

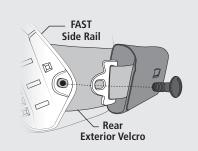


Remove screws and T-nuts at back of FAST Side Rails. Align the anchor of Counterweight to the holes on the rear of the FAST Side Rail. The Rear Exterior Velcro will hold Counterweight in place. Use your fingers to loosely attach a screw to the Counterweight and FAST Helmet. Be sure to place screw through Counterweight Anchor, Side Rail, Helmet Shell, and Chinstrap Anchor. Repeat for the opposite side.



Use a screwdriver to tighten all screws from the outside of the Counterweight, making sure the Counterweight is securely fastened to the rear of the FAST Helmet.

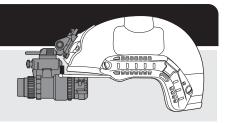
Note: Adding weight to helmet increases risk of neck strain and injury. Only add counterweight when absolutely necessary to balance loads on front of helmet.

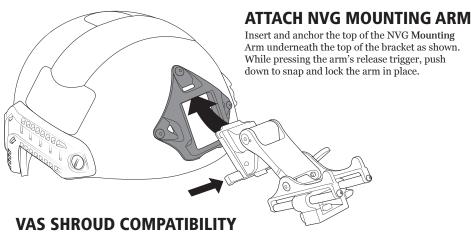




# **VAS SHROUD**

The VAS Shroud provides a front mounting option for video cameras, visors, illuminators, and night vision goggles (NVG's).





#### **Helmet Compatability**

Fits the standard MARSOC / WARCOM 3-hole NVG mount pattern

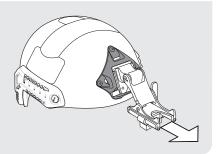
#### **NVG & Mount Arm Compatability**

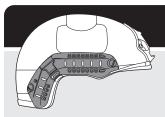
The Ops-Core VAS Shroud is compatible with the following combinations of night vision goggle and mount arm styles:

MOUNT ARM	US ARMY STANDARD	WILCOX <sup>®</sup> L4 G21M	WILCOX® L4 G24	WILCOX® L4 G25	WILCOX® L4 G29M	WILCOX® L4 G01	WILCOX® L4 G02	NOROTOS® INVG	NOROTOS® AKA2
NVG STYLE	#A3256368	#28300G21M	#28300G24	#28300G25	#28300G29M	#56500G01	#56500G02	#1820010	#1840010
PVS-7B/7D	_			_					_
PVS-14	_		_	_					_
PVS-15			_					_	_
PVS-18			_	_				_	_
PVS-21		_							_
PVS-23						_			
PVS-7A/7C				_					_
LUCIE NVG					_				
F5050						_			
F4949							_		
ANVS-6/9							_		

#### **PULL TEST**

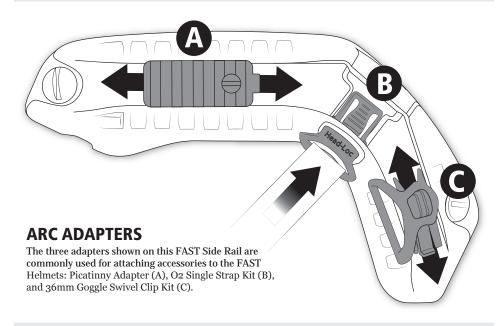
Before attaching any NVG's to the mount, give it a sturdy tug in all directions to ensure it is properly secured.

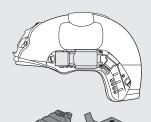




# **FAST SIDE RAILS (ARCs)**

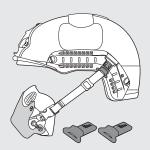
4-Position FAST Side Rails (ARCs) are mounted to the sides of the helmet to allow for quick yet secure donning or doffing of various headborne accessories.











02 Strap Kit



36mm Goggle Swivel Clips

# Adapter A TOP RAIL

Top Rail can accommodate Picatinny Adapters, which connect devices compatible with 1911 Picatinny Rail, and Wing-Loc Adapters, which provide a base to mount a variety of headborne accessories.

#### **B** RAIL CORNER

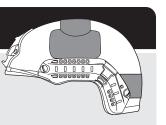
Rail corner allows for instant and secure snap-in attachment of Para-Flite and Carleton O2 masks with O2 Single Strap Kit.

#### **G** BACK RAIL

Goggle Swivel Clips, attached to your choice of goggles, can quickly clip into the back rail while allowing freedom of rotation.

# **EXTERIOR VELCRO®**

Exterior loop Velcro is attached at the top, sides, and rear of the FAST Helmet. The loop Velcro allows for easy mounting of accessories.

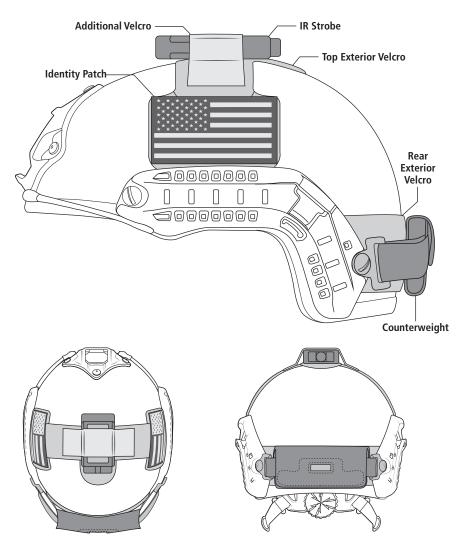


#### **VELCRO ATTACHMENT**

Apply hooked Velcro to the bottom of a device. Place device on top of the looped Velcro that is already attached to the FAST Helmet. Cover top of device with additional hook Velcro to secure it into place. Simply remove the device by pulling it away from the looped Velcro.

Note: Additional hook Velcro not included.

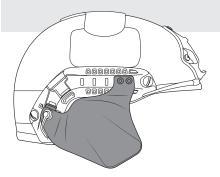
**TOP VIEW** 



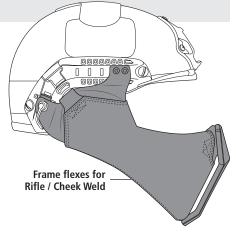
REAR VIEW 13

# **SIDE COVERS & GUNSIGHT MANDIBLE**

The Up-Armor Side Covers and Gunsight Mandible are accessories that provide additional head coverage that allows a user to quickly adjust the degree of protection to match different threat levels.



Edge Profile Clears Rifle / Cheek Weld



#### **UP-ARMOR SIDE COVERS**

Up-Armor Side Covers are available in Ballistic and Non-Ballistic versions. Both versions feature a durable carbon fiber exterior. The Non-Ballistic version provides environmental protection, while the Ballistic version is made from the same type of materials as the FAST Ballistic helmet. \*

#### **GUNSIGHT MANDIBLE**

The mandible uses a combination of soft armor and support frame technology to provide lower face protection. It is designed to fold in half to conveniently fit into a rucksack. The flexibility allows a close cheek weld and causes minimum interference with sighting shoulder weapons.

\* Note: Detailed threat performance specifications are available at www.ops-core.com

#### **ATTACHMENT**

The Up-Armor Side Covers, and Mandible attach to the FAST Side Rails. Attachment is tool-less and takes less than a minute. Follow the Up-Armor Side Cover instructions below for attaching Mandible.

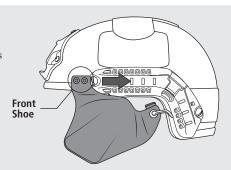


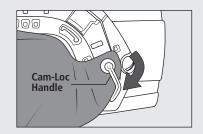
of the top FAST Side Rail (ARC) as shown.

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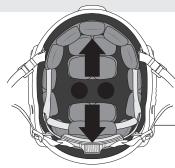
Side Rail (ARC) and turn the Cam-Loc Handle downward to lock into place.





## **COMMs HEADSET**

The Lux Liner system is compatible with a variety of COMMs headsets and hearing protection devices. Instructions for use with headband style COMMs is below.



## **1** RELOCATE TOP PADS

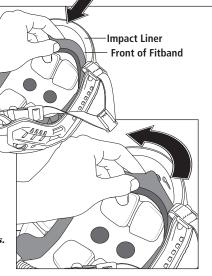
Remove the center top pad, and position the top pads in the helmet so there is enough space for the headband of the headset to sit in between them.

Note: H-Nape users can disregard the remaining instructions.

## **2** DETACH FITBAND

Remove the 4 or 5 Row Front Pad from the Fitband (the front row pad is held onto the Fitband with small Velcro Tabs). Place your index finger behind the front center of the Fitband and carefully bend away from the Impact Liner as shown. Pinch the Fitband and use your thumb to slide the pad sideways ½" towards the center of the helmet along the Impact Liner. Repeat on both sides until the pad is released from the key slots. Detach back of Fitband by simply peeling it away from the Velcro Circles it is attached to.

Note: Do not pull the Front Fitband away from the Impact Liner or you may break the Key Slots.



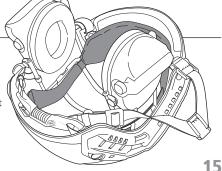
# 3 INSERT HEADSET HEADBAND

Flip the Fitband away from the front of the Impact Liner and slide the headset headband around it as shown. This will position the headset's headband on the outside of the helmet Fitband so that it does not create a pressure point when you tighten the Worm-Dial.



## **4** REATTACH FITBAND

Reattach the Fitband to the key-slots in the front Impact Liner by bending the pad in the center and pushing on the rivets (one at a time) with your thumb while at the same time sliding them toward the sides of the helmet. Reattach the Front 4 or 5 Row Pad.



# **MAINTENANCE SCHEDULE**

#### **RECOMMENDED MAINTENANCE: ALL USERS**

- 1 Clean the helmet with a mild detergent and water.\*
- **2** Check that the chinstrap screws are tight using a flathead screwdriver.
- 3 Clean the Velcro for dust and dirt by using air pressure.
- 4 Visually check the Shroud and FAST Side Rails for signs of breakage.
- **5** Visually check the Lux Liner's Impact Liner for signs of breakage.
- **6** Check that the Worm-Dial or H-Nape Chinstrap works properly.
- Otheck that the chinstrap does not have any damage and that the buckle latches and releases properly.

\*The whole helmet can be rinsed in fresh water.

Note: If any defects are found, the damaged components should be replaced before use.

#### RECOMMENDED MAINTENANCE: ACTIVE DUTY

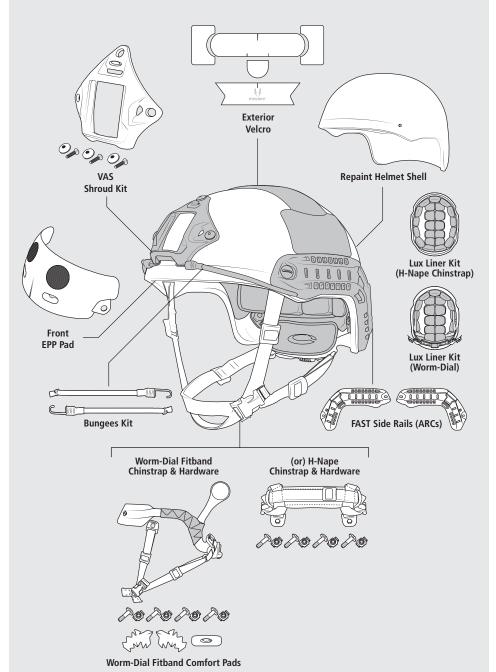
(Defined as soldiers who use their helmet 1440 hours/year or more)

- 1 Replace Worm-Dial Fitband Comfort Pads every 100 days or once/year.
- 2 Replace Worm-Dial Fitband, or H-Nape Chinstrap, Hardware, and Lux Liner after 2 years.
- **3** Replace Exterior Velcro and repaint shell after 4 years.
- 4 Replace other components if damaged / worn out as needed.

#### RECOMMENDED MAINTENANCE: NATIONAL GUARD

- 1 Replace all items on as-needed basis and based on inspection.
- 2 Replace Exterior Velcro and repaint the shell after 4 years.

# **REPLACEMENT KITS**

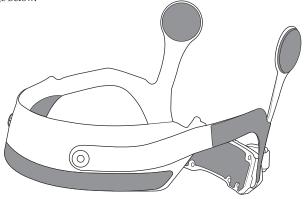


# REPLACEMENT FITBAND COMFORT PADS

Note: H-Nape Chinstrap users can disregard this page.

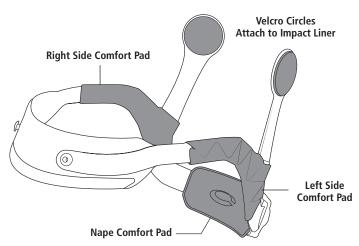
## **1** REMOVE OLD COMFORT PADS

Simply peel off all old comfort pads from the fitband. A fitband with all comfort pads removed should look like the image below.



## **2** COMFORT PAD INSTALLATION

Attach the new comfort pads based on the instructions that came with the "Replacement Fitband Comfort Pads Installation Instructions" manual.



#### KIT INCLUDES THE FOLLOWING COMFORT PADS:



Left Side Comfort Pad



Right Side Comfort Pad



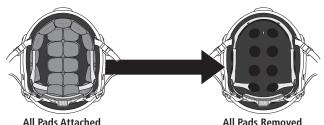
Nape Comfort Pad

# REPLACEMENT CHINSTRAP & LUX LINER

## 1 REMOVE LUX LINER PADS

Remove all Lux Liner Pads from the Lux Liner's Impact Liner. Pads are attached to the Lux Liner by Velcro Circles. Front row 4x or 5x pad for Worm-Dial version is held onto the Fitband by Velcro Circles and Tabs. It can be easily removed by peeling away from the Impact Liner.

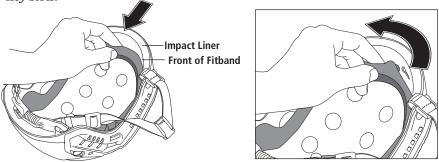
H-Nape Chinstrap version can be easily replaced by unscrewing hardware, removing old H-Nape Chinstrap and installing new Chinstrap.



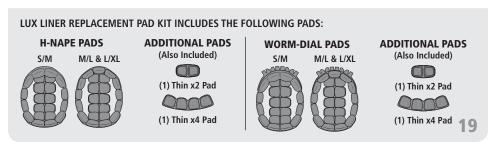
## 2 REMOVE OLD WORM-DIAL FITBAND FROM LUX LINER

Place your index finger behind the front center of the Worm-Dial Fitband and carefully bend away from the Impact Liner as shown. Pinch the Fitband and use your thumb to slide the pad sideways ½" towards the center of the helmet along the Impact Liner. Repeat on both sides until the pad is released from the key slots. Detach back of Fitband by simply peeling it away from the Velcro Circles it is attached to.

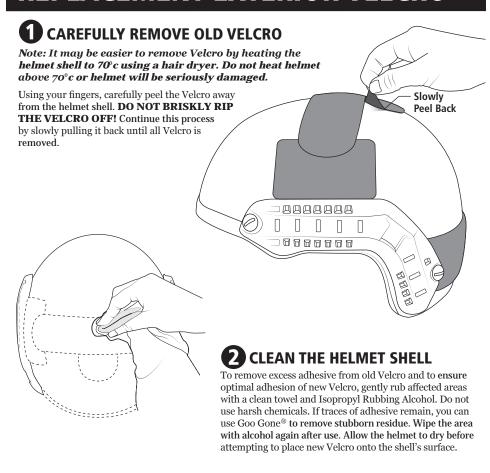
Note: Do not pull the Front Fitband away from the Impact Liner or you may break the Key Slots.



Insert the new Worm-Dial Fitband into the Key-Slots of the front Impact Liner by bending the Fitband in the center and pushing on the rivets (one at a time) with your thumb while at the same time sliding them toward the sides of the helmet. Then attach Lux Liner Pads.



# REPLACEMENT EXTERIOR VELCRO





Using the diagram to the right, carefully align Velcro pieces to their proper positions. Test fit all pieces before removing backing. Adhesive on this Velcro is pressure sensitive. Once in place it needs to be pressed down firmly. Please allow up to 24 hours for adhesive to reach maximum bonding strength.

#### KITS INCLUDE THE FOLLOWING REPLACEMENT PARTS:

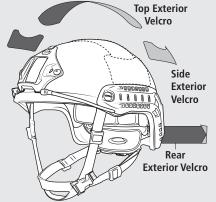






FAST High Cut Kit A

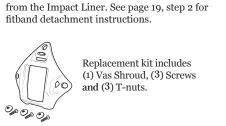
Cit A Kit B
FAST Maritime

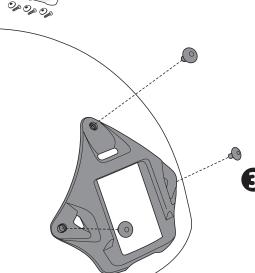


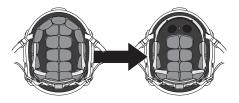
## **REPLACEMENT VAS SHROUD**

## 1 PAD REMOVAL

Before replacing the VAS Shroud, the Lux Liner's Front Row Pad must be removed along with the first top pad as shown. If your helmet has a Worm-Dial Fitband, the fitband must first be detached from the Impact Liner. See page 19, step 2 for fitband detachment instructions.







Remove the old Shroud. Align the Shroud with the existing 3-hole pattern on the front of your helmet. Insert a T-nut through the Shroud's top hole from the front (outside) of the helmet shell and use your fingers to loosely attach a screw from the inside of helmet shell (access holes in the Lux Liner's Impact Liner). Repeat for remaining two holes.

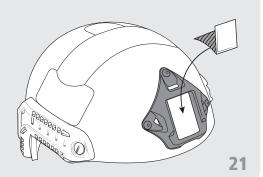


Finish by using a screwdriver to tighten all 3 screws from the inside of the Impact Liner, making sure the Shroud is securely fastened to the helmet. Reattach Worm-Dial Fitband and Front Row Pad.

Note: Tighten screws by hand until secured. Do not over tighten, this will cause deformation to helmet shell and compromise helmet's ballistic capabilities.

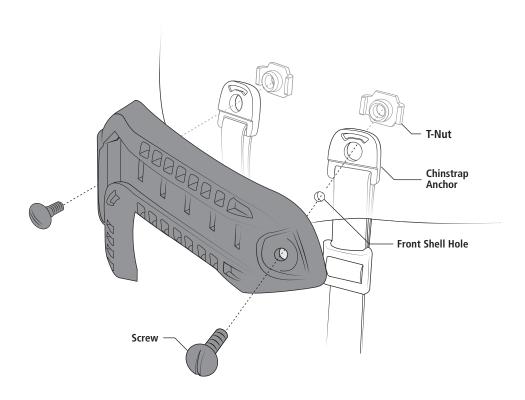
#### **BUMPER INSTALLATION**

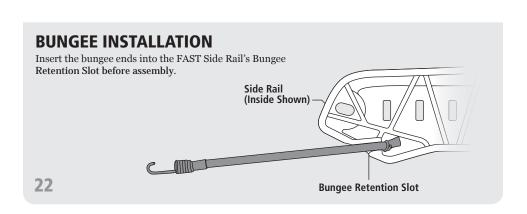
The optional foam backer is included to stick on the back of the mount arm plate. This backer can reduce wiggle or vibration between the shroud, mount arm, and helmet.



# REPLACEMENT FAST SIDE RAILS

Align the new FAST Side Rails with the existing Chinstrap Holes on your FAST helmet. Loosely assemble the FAST Side Rails, Helmet Chinstrap Anchors, and new hardware by following the diagram below. Repeat for opposite side of helmet. Once all components are loosely assembled, finish by using a screwdriver to tighten the two front screws. Leave rear screws loose before executing instructions on pages 6-7.





## **AWARNING**



DOES NOT PROTECT against 7.62 and 5.56 rounds



NOT INTENDED for motor vehicle use



DOES NOT PROTECT from extreme hazards

This helmet provides LIMITED protection for the head and does not offer any protection against neck, spinal, or certain types of brain injuries including those caused by rotational forces. Some hazards can exceed this helmet's ability to provide protection and could cause severe head, brain, or spinal injuries including paralysis or death.

Remember: the higher the impact velocity, the greater the chance of injury / death. Common sense is the best defense.

#### **SAFETY CHECKLIST:**

Inspect the helmet before each use. Make sure the shell, liner pads, plastic hardware, stitching, chinstrap, and fit system components are not damaged, cracked, deformed, loose or showing signs of excessive wear. Do not remove or alter the front, top, or back impact pads. Do not apply paint, solvents, or like products as they could degrade helmet integrity and resulting performance. Replace your helmet if it is subjected to a significant impact since the shell and/or liner pads could be damaged without showing any obvious signs of a problem.

These instructions must be followed by all persons using or maintaining this helmet in order for it to perform as designed. Failure to do so could result in equipment malfunction, serious injury or death.

#### WARRANTY

The FAST helmet shell is warranted for (5) years from date of purchase against material defects and/or faulty workmanship.

All other liner components including the Worm-Dial, head-band, pads, and chinstrap retention system are warranted for (1) year from date of purchase against material defects and/or faulty workmanship.

This warranty is in lieu of all other warranties, expressed, implied, or statutory, and is strictly limited to the terms hereof: Ops-Core specifically disclaims any warranty of merchantability or of usefulness for a particular purpose.

The defective product must be returned to Ops-Core with proof of purchase and information describing the nature of the problem.

It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of Ops-Core, or for any other cause of action, shall be the repair, replacement, or credit, at Ops-Core's discretion, of any components or parts thereof, that after examination by Ops-Core are proven to be defective.

If it is determined by Ops-Core that the product's failure was due to accident, abuse, misuse, neglect, improper maintenance, or normal wear and tear, the product is not covered in this warranty.

Ops-Core shall be released from all obligations under this warranty in the event repairs or modifications are made to any of the parts by persons other than its own service personnel.

No agent, employee or representative of Ops-Core may bind Ops-Core to any affirmation, representation or modification of the warranty concerning the goods sold under this contract.

Exclusion of Consequential Damages – Purchaser specifically understands and agrees that under no circumstances will Ops-Core be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against Ops-Core.

# **OPERATOR NOTES**

