SIMPSON®

Hybrid

PRO

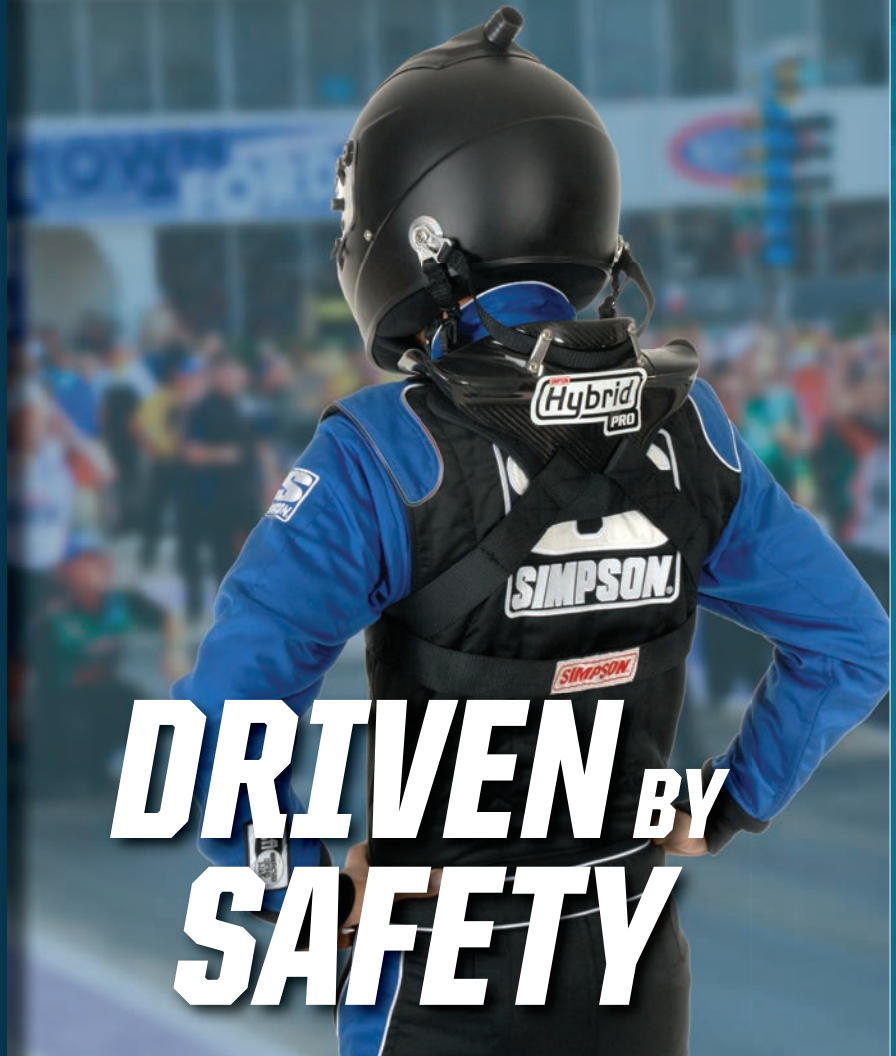
PRO RAGE

Sport

SFI-38.1 CERTIFIED

NASCAR APPROVED

FIA APPROVED



DRIVEN BY SAFETY

INSTALLATION MANUAL

SIMPSON

You're ready to use the technology that protects the world's top drivers. Here are the steps to get started.

OF COURSE, IT'S THE SAFEST. IT'S A SIMPSON.

Simpson Hybrid Head Restraints are the best choice for racing protection.

HYBRID, HYBRID PRO and HYBRID SPORT Head Restraints are SFI 38.1 Certified and FIA 8858-2010 Certified. Designed for easily exiting the car without the danger of getting hung up on other gear, our Head Restraints also offer the lowest profile and highest level of multiple angle impact protection of any competing device. Plus, they provide you with maximum comfort and maneuverability. Expertly engineered by Trevor Ashline with Safety Solutions technology, Simpson Head Restraints give you every advantage on the track.

SIMPSON HEAD RESTRAINT

Figure 1

The Simpson Hybrid head restraints series carries SFI 38.1 certification; the Hybrid and Hybrid Pro are NASCAR certified, the Hybrid, Hybrid Pro, and Hybrid Sport are FIA Approved. Our head restraints are recognized by most major sanctioning bodies across the world. If you are unsure, check with your local sanctioning.

Hybrid Pro pictured with optional M6 upgrade

ANCHOR INSTALLATION INSTRUCTIONS

Initial Steps for Helmets without holes for tether anchors.

1. Apply masking tape around the bottom of your helmet approximately 1” (26mm) up from the top edge of the rubber molding. See Figure 2
2. On the masking tape at the back of the helmet, mark three points 1.5” (43mm) above the rubber molding and spaced about a half inch apart. Connect the dots to create a horizontal line. See Figure 3
3. Using a flexible ruler, measure the same distance from a fixed point (for example - the visor mounting hole) on each side of the helmet back to the horizontal line. The center line of the helmet is midway between where the two lines intersect the horizontal line at the back of the helmet. See Figure 4
4. Measure 6” (150mm) forward from the rear center line on each side of the helmet to a point 1.5” (43mm) above the rubber molding. See Figure 5
   Make sure you have two marks, each 6” forward from the rear center line a 1.5” above the top edge of the rubber edge molding.
5. Slowly drill a 1/4” (6mm) hole at the two hole centers marked above. Drill through the helmet shell but not through the soft padding. A thin piece of sheet metal can be slipped between the shell and padding to help this. See Figure 6
6. De-burr and clean holes.

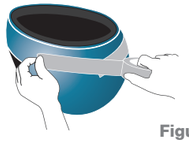


Figure 2

Figure 3

Figure 4

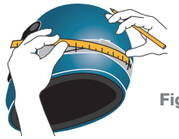


Figure 5

M6 AND POST ANCHORS

Final Steps - Helmets without holes and pre-drilled helmets.

1. Gently pry helmet liner away from shell using a blunt instrument. See Figure 7
   Insert the nutwasher inside the helmet against the shell using a wrench. Align with hole. Insert post through the cap, spring and base and screw into nutwasher. Tighten until the point of the post faces rearward.
2. Use a 7/16” (11mm) wrench to hold the post anchor outside of the helmet in position and tighten from inside. See Figure 8
   Tighten 1/4 turn beyond snug. The flats and slot of the post anchor should be parallel with the ground and the point of the post should face the rear of the helmet.

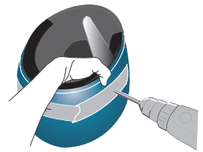


Figure 6

Figure 7

QUICK RELEASE ANCHORS

Gently pry helmet away from shell using blunt instrument. See Figure 7
Insert the nutwasher inside the helmet against the shell using a wrench.
Align the hole. Screw anchor into nutwasher. Hand tighten until the tether or hasp faces rearward. Use a 7/16” (11mm) wrench to hold the nutwasher inside the helmet and tighten exterior screw 1/4 turn beyond snug.

Figure 8

SAFETY NOTE Simpson recommends using thread locking fluid when assembling the M6 and helmet post anchors.
*REFER TO YOUR SANCTIONING RULES FOR HELMET INSTALLATION.

ANCHOR INSTALLATION

ANCHOR INSTALLATION INSTRUCTIONS

SAH2010 Helmets with Bonded-in Threaded Anchor Terminals

You may have purchased one of the newest helmets marked Snell SAH2010. These helmets are certified for head restraint system use.

Snell SAH2010 decal located inside the helmet

Helmets marked Snell SAH2010 have a bonded-in and threaded terminal (nutwasher) making Simpson anchor installation easy. Screw the anchor into the nutwasher. Hand tighten until the point on the collar (if post anchor) or bail (if quick release) faces rearward. Tighten the mounting screw 1/4 turn beyond snug.

Figure 9

Bonded-in terminal on sides of helmet

SAFETY NOTE Simpson recommends using thread locking fluid when assembling the M6 and helmet post anchors.

FITTING THE RESTRAINT

The Hybrid Head Restraint has an adjustable chest strap to fi t a variety of body types. Custom made re-straints are also available.

To adjust the chest strap: loosen the chest strap at the buckle and slide the buckle to fit the occupant's chest size. Chest strap should fit snug, but comfortable.

SEAT POSITIONS

0°-10°

Figure 10

10°- 30°

Figure 11

30°+

Figure 12

STRAIGHT
A completely smooth or flat back to the seat.

Typical applications are:
Sprint Cars, Pro Mods, Pro Stock, Top Sportsman, Monster Truck

CONTOURED
A 10-30 degree of change in the seat at the shoulder blade area.

Typical applications are:
Late Models, GT-1, Pro Trucks, Hydroplanes

LAYBACK
A 30 degree of more change in the seat at the shoulder blade area.

Typical applications are:
Indy Cars, Nostalgia Dragsters

NOTE: Changing seat configurations may require tether adjustments.

IN CAR HELMET TETHER ADJUSTMENT

Helmet Tethers MUST be adjusted for proper fit before use.

Helmet tether adjustment needs to be made with the driver seated and buckled into the vehicle with full gear including, suit, helmet, and seatbelt harnesses.

RESTRAINT TETHERS

1. Get into car and buckle fully into the seat with seat belts. The head restraint should fit comfortably under the shoulder harnesses.

2. Seat the restraint against the shoulder belts by pulling up on the helmet tethers, before they are hooked to the helmet. The device will rest against the shoulder belts on the top, the seat in back and the driver's shoulders.

3. The helmet tethers should be adjusted or changed to allow for no more than 2.25" of straight forward head movement. Measure from a resting position **(See Figure 13 dotted line)** moving your entire head forward (not your chin to your chest). You should still be able to rotate your chin to your chest.

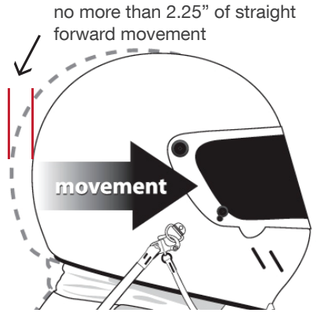


Figure 13

ADJUSTABLE (SFI) TETHRS

4. Adjust the rear helmet tether first; they are the PRIMARY RESTRAINT The tethers are easily adjusted by unlacing the tether webbing through the 3-bar adjuster and lengthening or shortening the tethers through the 3-bar adjustments.

5. The forward helmet movement can be checked by measuring the amount of forward movement as the driver moves their head straight forward, with the chin up.

6. The tether adjustment is the measurement when the tethers first have tension.

7. When the rear tether adjustments are complete make sure to lock down the tether by weaving the webbing back through the adjuster one last time. Use the rubber O-ring to hold the excess webbing in place.

IN CAR ADJUSTMENTS

SIDE STABILIZING GUSSET (SSG) ADJUSTMENT

9. Unhook the tether from the helmet.

10. Hold the SSG up to the Helmet Anchor.

11. Adjust the length of the tether to the bottom of the Helmet Anchor with the driver in their normal position looking straight forward.

> **NOTE:** *Some drivers may want this tether shortened for more side to side restriction. The tether may be adjusted shorter by as much as 1" depending on driver comfort. With this adjustment too short, the helmet will be pulled downward on the driver's head and may be uncomfortable.*

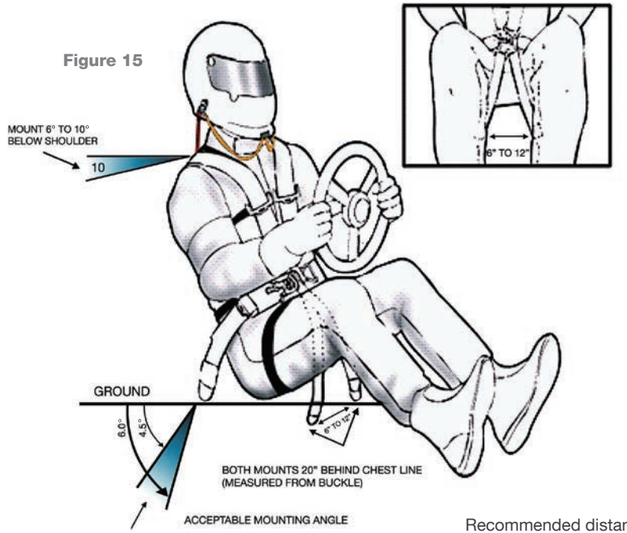
12. Tethers adjusted properly should create a "Triangle" in the tether adjustment. **See Figure 14**

Figure 14

RESTRAINT SYSTEM MOUNTING ZONES

The shoulder belts should be mounted as close to the occupant as possible, separated by 2-3 inches between the inside edges of the belts.

Figure 15



CRISSCROSS
BELT POSITION

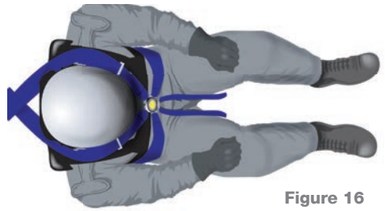


Figure 16

SEPARATED
BELT POSITION

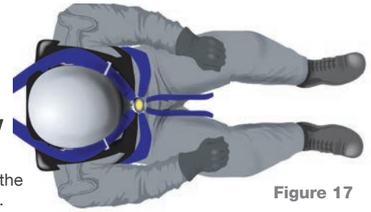


Figure 17

Recommended distance between the **inside edges** of the belts is 2" - 3".

OPTIONAL SEAT BELT ANCHOR SYSTEM (SAS)

The SAS straps need to attach to the seat belt buckle; the SAS is an additional load path for the restraint allowing for stabilization of the driver.

Camlock Attachment Slide each SAS O-ring onto two of the camlock buckle tongues. **See Figure 18**

Latch-in-Link Attachment Pair the SAS O-rings and slide them into the latch link shoulder belts or the five point depending on your set-up. **See Figure 19**

The SAS straps should be adjusted to be snug when the buckle is latched with no more than 2 fingers of room. Adjustment is made by sliding the 1" webbing attached to the loops through the 3-bar adjuster.

Figure 18

Figure 19

OPTIONAL SAS LOOPS AVAILABLE

Figure 20

Figure 21

OPTIONAL HYBRID MOLDED PAD

The Hybrid Optional Molded Pad is placed behind the driver between the seat and the driver's back and shoulders.

The U-Shaped Molded Pad can be cut, and/or trimmed to fi t driver's seat. Tape, glue the molded pad in place depending on type of seat. If the seat has a cover, the pad can be installed under the cover.

The Pad is inserted into the seat back. When the driver sits back, the device nests into the voided area creating one smooth surface behind the driver's back. The wings of the restraint should extend under the shoulder belts between the seat back and the driver.

Figure 22

OPTIONAL HELMET TETHERS

QUICK RELEASE TETHERS
USED WITH D-RING (STANDARD)

HYBRID QUICK CLICK TETHERS

EZ SLIDE LOOPS
USED WITH SIMPSON QUICK CLICKS

M61 DUAL END FITTING TETHER
USED WITH M6 ANCHOR SYSTEM

EZ SLIDE DUAL END FITTING TETHER
AVAILABLE WITH QUICK RELEASE OPTION

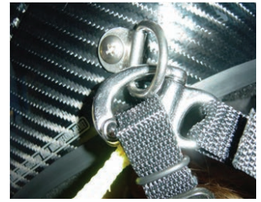
HYBRID POST CLIPS
USED WITH SIMPSON POST ANCHORS

OPTIONAL HELMET ANCHORS

M6 ANCHOR FIA APPROVED
WITH DUAL END FITTING

SIMPSON POST ANCHORS FIA APPROVED

SIMPSON QUICK CLICK SYSTEM



QUICK RELEASE ANCHORS

OPTIONAL TETHERS, ANCHORS & CLIPS

FAQs

Q: My Helmet came pre-drilled, can I use the pre-drilled hole?
A: Simpson helmets will be the correct location. If your helmet is not a Simpson check with your helmet manufacturer to confirm the location.

Q: Do I need special seat belts to work with your devices?
A: No, our devices work with 2 or 3 inch seat belts, Latch and Link or Cam Lock.

Q: Do I need to replace my head restraint if I am involved in a wreck?
A: Your Simpson Head Restraint device is built to sustain the most violent of wrecks. However, in the event of a hard wreck, you should send your restraint to us for proper inspection by a Simpson Safety Specialist. We may recommend replacing the helmet tethers. While the chances of the device being unharmed are great, it is not worth taking a chance.

Q: Can two people of different sizes share the same device?
A: Yes, we have a chest extender that will plug into the chest strap to give more length in the chest.

Q: Is my device adjusted wrong if I can touch my chin to my chest?
A: No, with your device adjusted correctly you should be able to rotate you head enough for your chin to touch your chest.

Q: I am having trouble turning my head even after adjustments, what should I do?
A: Call you Simpson Safety Specialist; your setup may require an EZ Slide System.

Q: When I measure my helmet for the anchors hard foam in the way on the inside, what should I do?
A: Very gently use a large flat screw driver or small pry bar to wedge between the liner and the shell. This liner is not glued into the helmet, but use caution not to compromise the shell or the liner. Then simply slide the nut washer into place. DO NOT DRILL THROUGH OR COMPROMISE THIS FOAM LINER.

Q: I have a Hybrid and it feels like it pushes me forward out of the seat. What can I do?
A: You can order the optional molded seat pad that can be cut, trimmed, shaved or ground to be whatever shape you need to be comfortable.

Q: My child is just getting started racing, will I have to purchase another device as they grow?
A: Probably not. This will depend on how big they are and how fast they grow. Once the child is at a 28 inch chest, the device that they wear will be able to be re-sized to whatever size they need.

Q: How often should I replace my head restraint?
A: Each Sanctioning body is different. As of 2012 SFI required all SFI 38.1 certifi ed devices to be inspected every 5 years.

FREQUENTLY ASKED QUESTIONS

DISCLAIMER

DISCLAIMER

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MODEL # _____ SERIAL # _____

CERTIFICATIONS

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SINCE 1959, SIMPSON PERFORMANCE PRODUCTS has been the leading manufacturer of safety equipment for the Motorsports Industry. We believe in putting safety first and are dedicated to elevating the standards of racing safety through continuous development, refinement and testing as well as a strong partnership with racing sanctioning bodies worldwide. The Hybrid Head Restraints are certified by SFI and FIA.

SFI: THE SFI FOUNDATION, INC is a non-profit organization established to issue and administrate safety standards for specialty and performance of automotive and racing equipment. SFI Oversees testing and standards for fire suits, restraints and many other high performance safety products in the United States. NASCAR and NHRA are among the sanctioning bodies who abide by SFO standards.

FIA: THE FEDERATION INTERNATIONALE DE L'AUTOMOBILE is a non-profit organization that brings together 227 national motoring and sporting organizations from 132 countries on five continents. FIA Formula One World Championship, FIA World Rally Championship and FIA World Touring Car Championship are among the sanctioning bodies who abide by FIA standards.

The products and parts shown herein are to be installed and used adjusted in accordance with these instructions. Any deviation by the buyer, installer, or user from these instructions constitutes willful negligence. Products and parts are not to be used if defective, damaged or worn. Products and parts are not to be used after a severe use, in any event.

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