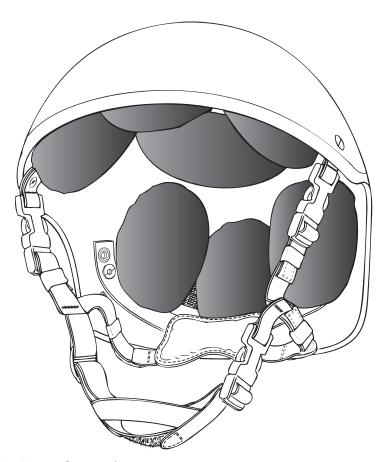
Fitting and Operation Instructions

GT-SC132 Special Operations Headset Adaptable Helmet (SOHAH)





When you replace components or install additional components on Gentex products, always use genuine factory-new Gentex parts. This will ensure a correct fit and maintain the safety of the product. Use of non-Gentex parts (salvage, refurbished, etc.) for replacement or additional installation will void any product warranty and may compromise the safety of the user.

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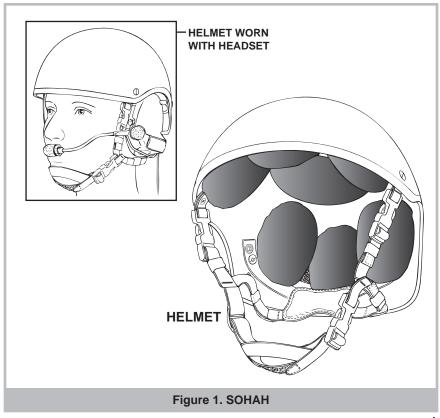
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Special Operations Headset Adaptable Helmet (SOHAH) Fitting and Operation Instructions

Introduction

The Special Operations Headset Adaptable Helmet (SOHAH), shown in **Figure 1**, provides bump protection, superior retention, a close fit, optimum comfort, and optional ballistic protection levels. Some helmets also include an option for the attachment of night vision goggles (NVG). The helmet can be used with the General Communications (GenCOM) Headset, which helps protect the wearer from hearing loss and allows radio or intercom communications. In addition, the helmet is compatible with a variety of other headsets. Refer to PS0434 for specification requirements.

This booklet provides general information and instructions for fitting the helmet, installing optional NVG brackets, and maintaining components.



Helmet Description

The helmet consists of a helmet shell with an adjustable-thickness sizing pad suspension system and a retention assembly. Following is a description of each.

Helmet Shell

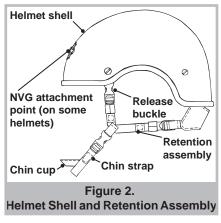
Available in sizes Medium and Large, in non-ballistic and ballistic versions, and in various colors, the helmet shell (**Figure 2**) provides bump protection. Depending on configuration, your helmet shell may also have an NVG attachment point; this consists of an attachment hole with hardware to hold the NVG bracket.

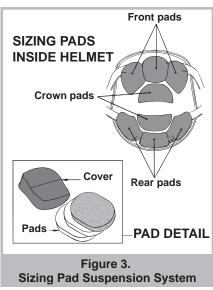
Retention Assembly

Attached to the helmet with four screws, the retention assembly (Figure 2) provides stability and comfort. A release buckle can be fastened between the headset microphone and the wearer's head to ease the positioning of the microphone. The retention assembly also includes an adjustable chin strap. A chin cup helps secure the chin strap to the chin.

Sizing Pad Suspension System

The helmet is equipped with an adjustable sizing pad suspension system (Figure 3) that provides comfort, stability, and a close fit. This system consists of eight sizing pads attached with hook-and-pile fasteners to the inside of the helmet. Three pads are attached to the front, three to the rear, and two to the crown area. A space between the crown pads permits the use of a headset. Each sizing pad consists of three foam filler pads (two white comfort pads and one pink impact-absorbing pad) inside a cover with a hook/pile closure. The white foam pads can be removed or added to allow sizing adjustments for optimum stability and comfort.





Helmet Fitting

A WARNING

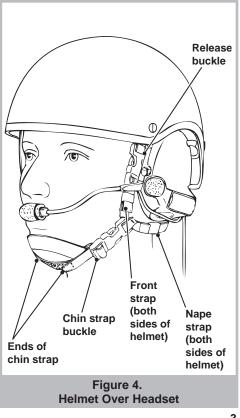
Ensure that all helmet adjustment mechanisms are properly adjusted for a snug, secure fit at all times when the helmet is worn. Failure to do so can result in an unstable helmet that will not protect the wearer.

Check the fit of the helmet as follows:

- 1. Have the wearer don the headset and adjust it for a proper fit.
- 2. Referring to Figure 4, do the following:
 - a. Have the wearer don the helmet over the headset.
 - b. On the side where the headset microphone is located, unfasten the release buckle, position the strap between the helmet and the wearer's head, and fasten the buckle
 - c. Adjust both front straps as needed
 - d. Adjust both nape straps as needed.
 - e. Buckle the chin strap, and adjust it for a snug fit by pulling on the ends. Ensure that the ends of the chin strap are attached to the pile fastener on the chin cup once the chin strap is adjusted.
- 3. Allow the helmet to settle on the head for a few minutes before checking the fit.

NOTE: The foam used in the sizing pads is temperature-sensitive to body heat and will conform to the shape of the wearer's head within a few minutes.

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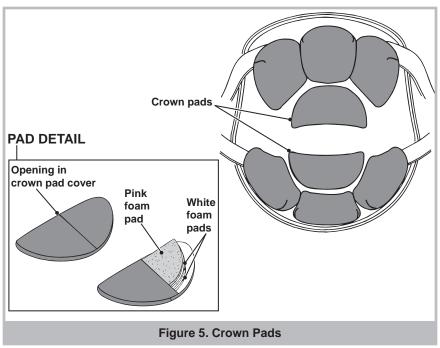




Each sizing pad contains one pink foam pad and two white foam pads inside the cover. For impact protection and helmet stability, you must keep all pink foam pads inside the sizing pads and all sizing pads properly installed in the helmet when the helmet is worn. Remove the white foam pads only where necessary to adjust the fit.

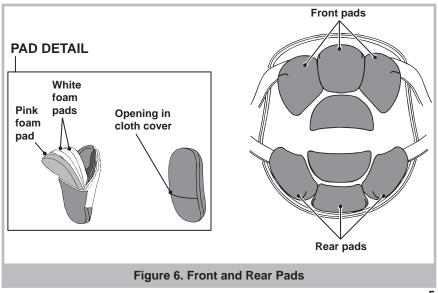
- 4. Examine the helmet on the wearer's head, ensuring that the front sizing pads are just above the wearer's eyebrows. If the helmet is too high, have the wearer remove the helmet. Referring to **Figure 5**, adjust the height as follows:
 - a. Remove the two crown pads, noting their position inside the helmet.
 - b. Remove **one or two white foam pads** from each crown pad cover.
 - c. Reinstall both crown pads (with pink foam pad inside each one) in the helmet in the same positions from which they were removed. Ensure that the opening in each crown pad cover faces the inside of the helmet.
 - d. Have the wearer don the helmet. Recheck the helmet height.

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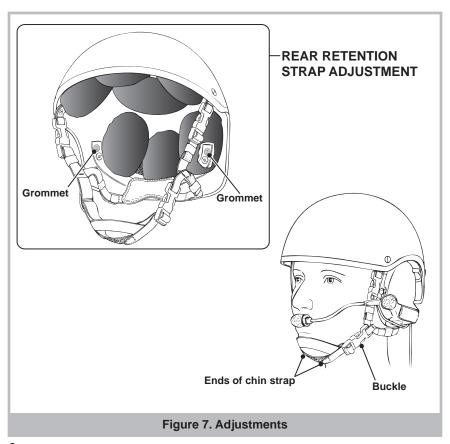
- 5. Ensure that there is an approximate ½-inch standoff between the wearer's head and the helmet shell all the way around, and that the helmet fit is snug and secure, yet comfortable. As needed, have the wearer remove the helmet, refer to Figure 6, and adjust the rear pads as follows:
 - a. Remove the two rear pads from the helmet.
 - b. Remove one or two white foam pads from each rear pad cover.
 - c. Reinstall both rear pads (with the pink foam pad inside each one) in the helmet in the same positions from which they were removed. Ensure that the opening in each crown pad cover faces the rear of the helmet.
 - d. Have the wearer don the helmet again. Recheck the fit.
- 6. If the sizing pads at the front of the headband cause discomfort on the wearer's forehead, have the wearer remove the helmet. Refer to **Figure 6**, and adjust the front fitting pads as follows:
 - a. Remove the two front pads from the helmet.
 - b. Remove **one or two white foam pads** from each front pad cover.
 - c. Reinstall both front pads (with the pink foam pad inside each one) in the helmet in the same positions from which they were removed. Ensure that the opening in each crown pad cover faces the front of the helmet.
 - d. Have the wearer don the headset and the helmet again. Recheck the fit.

(Continued on next page)



7. Referring to **Figure 7**, do the following:

- a. Buckle the chin strap.
- b. Tighten the chin strap by pulling on the ends until the fit is snug, secure, and comfortable. Reattach the ends to the pile fastener when the desired fit is attained.
- c. The rear retention straps have upper and lower grommets. If necessary, remove the retention hardware, adjust the grommets upward or downward, and reinstall the hardware. (Remove the pads as necessary to gain access to the interior hardware.)
- d. Check the helmet stability by attempting to rock the helmet back and forth on the head. If the helmet rocks back and forth, it is not stable. Adjust the chin strap and pads further until the helmet is stable.
- Repeat Steps 7a through 7d as necessary. Recheck helmet stability; no straps should be loose.



Installation Of Optional NVG Mounting Brackets (Not Supplied With Helmet)

NVG Mounting Bracket, Part Number 03B11760-1

To install the NVG mounting bracket assembly (Figure 8), do the following:

- Check to make sure that you have all mounting bracket components. You should have an NVG mounting bracket assembly, a screw, and a threaded post.
- 2. Place the NVG mounting bracket assembly over the center front edge of the helmet. Line up the hole in the plate and the hole in the helmet shell. Ensure that the bracket cleat is tightly aligned over the edge of the helmet.
- From outside the helmet, insert the screw through the NVG mounting bracket assembly and through the hole in the helmet shell. From inside the helmet, align the threaded post over the end of the screw. Partially tighten the screw and post.
- 4. Before completely tightening the screw, push the bracket up so that the cleat is tight against the edge of the helmet while tightening the screw and post. It may be helpful to have another person assist with this step.

CAUTION

Do not over-tighten the screw, or the mounting bracket assembly may break.

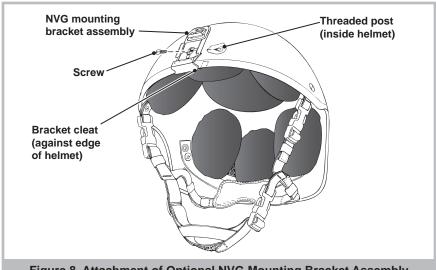


Figure 8. Attachment of Optional NVG Mounting Bracket Assembly

Quick-Disconnect NVG Mounting Kit, Part Number 05C12036-2, 05C12036-3, or 05C12036-4

To install the quick-disconnect NVG mounting kit (Figure 9), you must:

- · Attach the mounting bracket to the helmet.
- Attach the NVG mounting base to the mounting bracket.
- Affix pile fasteners to the back of the helmet (for the ANVIS battery pack).
- Modify the ANVIS mount (components not included with kit).

Refer to TP0279 (included with the kit) for more information.

NOTE: Kit part number 05C12036-2 is used with V_{50} 2150 helmets; 05C12036-3, with V_{50} 1400 helmets; and 05C12036-4, with non-ballistic helmets.

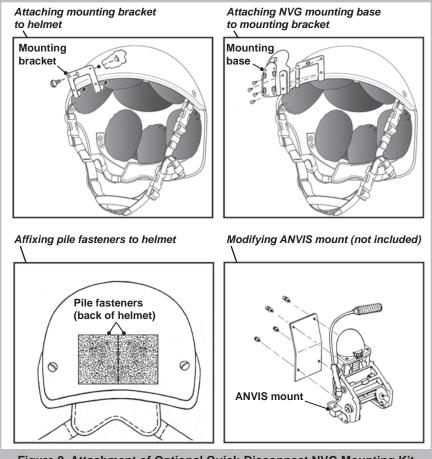


Figure 9. Attachment of Optional Quick-Disconnect NVG Mounting Kit

Maintenance

Preventive Maintenance Checks

Table 1 lists the preventive maintenance tasks for each component and refers you to the appropriate procedure.

Table 1. Preventive Maintenance Checks

COMPONENT EXAMINE FOR:		HELMET IS NOT READY IF:		
Retention Assembly	Broken buckles; torn or frayed webbing, worn hook/ pile fasteners	Buckles are broken; webbing is torn or frayed; hook/pile fasteners do not secure		
Sizing Pads	Worn hook/pile fasteners or foam; torn fabric or seams	Hook/pile fasteners or foam are worn, fabric or seams are torn		
Helmet Shell Holes, cracks, or delaminations greater 2 inches		Helmet shell has holes, cracks, or delaminations greater than 2 inches		

Cleaning

To maximize the operating life of the helmet, it is recommended that you clean helmet components every thirty (30) days. **Table 2** lists the cleaning procedure for each of the helmet components.

Table 2. Cleaning

COMPONENT	PROCEDURE		
Helmet Shell	Wipe clean with damp cloth.		
Retention Assembly	Wipe clean with damp cloth.		
Sizing Pads	Machine wash with mild detergent in cold water. Allow to air-dry; do not machine-dry.		

Troubleshooting

Listed below are the troubleshooting tasks for each component, along with the appropriate repair procedure.

1. Malfunction: Unable to fasten or adjust chin strap

Test/Inspection: Inspect the chin strap for torn or frayed webbing,

damaged or defective buckles, or worn hook/pile

fasteners.

Action: Replace the chin strap as on Page 11.

2. Malfunction: Unable to attain/maintain helmet stability

Test/Inspection: Inspect the retention assembly for damaged or

defective buckles, torn/frayed webbing, or worn nape

pad.

Action: Replace the retention assembly as on Page 11.

3. Malfunction: Helmet shell appears damaged

Test/Inspection: Inspect the helmet shell for holes or cracks.

Action: Obtain a new helmet.

Removal and Replacement of Helmet Components

Chin Strap

Removal

Referring to **Figure 10**, unlace the ends of the chin strap from the buckle and the ladder lock, noting the position and orientation of the chin strap.

Installation

- Lace the replacement chin strap through the buckle and the ladder lock. Ensure that the chin strap is positioned and oriented correctly.
- Don the helmet. Fasten the chin strap to the buckle on the left side (as worn) of the retention assembly.
- Check the fit in accordance with Page 3 through Page 6.
 Make any necessary adjustments.

Ladder lock Ends of chin strap Figure 10. Chin Strap

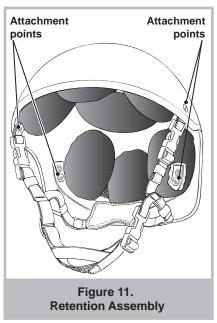
Retention Assembly

Removal

Referring to **Figure 11**, remove the screws, washers, and posts attaching the retention assembly to the four attachment points on the helmet (two on each side), noting the position and orientation of the hardware.

Installation

- Attach the replacement retention assembly to the four attachment points with the hardware positioned and oriented as before.
- Check the fit in accordance with Page 3 through Page 6.
 Make any necessary adjustments.



Sizing Pad Suspension Assembly

Removal

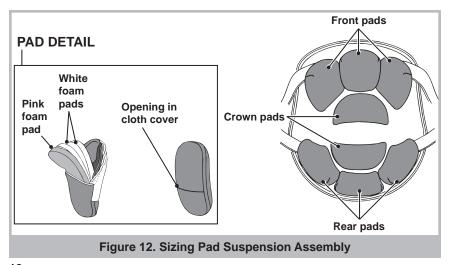
- Referring to Figure 12, remove the sizing pads from the helmet, noting their position and orientation in the helmet.
- Look inside each of the removed pads, noting whether one or both of the white foam pads are installed inside the cover.

Installation



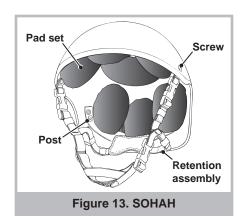
Each sizing pad contains one pink foam pad and two white foam pads inside the cover. For impact protection and helmet stability, you must keep all pink foam pads inside the sizing pads and all sizing pads properly installed in the helmet when the helmet is worn. Remove the white foam pads only where necessary to adjust the fit.

- 1. Obtain the replacement pads. Ensure that the pink foam pads are inside. Maintain the same number of white foam pads as before.
- Install the replacement pads in the helmet in the same manner in which the previous pad were installed.
- 3. Don the helmet, and check the fit in accordance with Page 3 through Page 6. Make any necessary adjustments.



Parts List

Below is a parts list for the SOHAH (**Figure 13**). Part numbers appear under three ballistic types: non-ballistic, ballistic V_{50} 1400 feet per second (FPS) and ballistic V_{50} 2150 FPS. The SOHAH is available from Gentex Corporation, Carbondale, PA, 18407, phone (570) 282-3550, fax (570) 282-8555. Visit our website at **www.gentexcorp.com**.



Helmet NVG Style and Size	Non-ballistic (Fiberglass)	Ballistic V ₅₀ 1400 FPS	Ballistic V ₅₀ 2150 FPS
Helmet, no NVG Hole:	Helmet Part Number *		
Small	D11865-13	D11865-5	D11865-6
Medium/Large	D11865-12	D11865-2	D11865-3
Small w/Goggle Strap	D11865-4	TBD	TBD
Medium/Large w/Goggle Strap	D11865-1	TBD	TBD
Helmet, one NVG Hole:	Helmet Part Number *		er *
Small	D11865-10	D11865-11	TBD
Medium/Large	D11865-7	D11865-8	TBD
Helmet Components			
Component:	Component Part Number		nber
Retention Assembly	A13005-1	A13005-1	A13005-1
Pad Set	D11860-1	D11860-1	D11860-1
Screws (4 ea.)	A3093-1	A3093-17	B11816-4
Posts (4 ea.)	A21043	A21044	B11815-1
Washers (4 ea.)	A3443	A3443	None

^{*} Each helmet part number is followed by a suffix (A through M) as follows:

A Black
B Green 383
C Olive Drab
D CHP Blue
E UN Blue
D Gray
F Desert Tan
G Foliage Green
H Coyote Brown
J Met Blue
K International Orange
E Gray
M Black, non-textured surface

Example: D11865-2J (No NVG hole, Medium/Large, V₅₀ 1400 FPS, Met Blue)

Options

The following options are available for use with the SOHAH:

- Various headsets, including a GDH headset for maximum situational awareness and a modified GenCOM III headset for high-noise environments, Gentex part number D12658-X* and D11829-X*
- NVG Mounting Bracket, Lever (NVG Front Bracket Assembly), Gentex part number B11760-1; NSN 5430-01-509-1467
- NVG Quick-Release Mounting Bracket, Gentex part number C12036-2 through 05C12036-4 (requires hardware kit A7946-6)
- ANVIS hardware kit (pins, backing plate, clamp, and hook fastener for modifying ANVIS mount), Gentex part number A7946-6
- Helmet cover, Gentex part number A12841-X**
- Ballistic neck protectors, Gentex part number A12778-X**

For more information, contact Gentex Corporation at (570) 282-3550, or visit our web site at www.gentexcorp.com.

^{*} X - Required for specific radio interface configuration (headsets)

^{**} X - Required for cloth color or pattern type (helmet covers and neck protectors)



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