

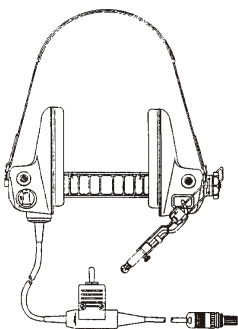
**COMMUNICATIONS/AURAL  
PROTECTIVE SYSTEM (CAPS)  
AND  
ARTILLERY  
COMMUNICATIONS/AURAL  
PROTECTIVE SYSTEM (ACAPS)**



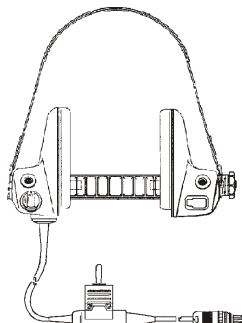


# USER GUIDE FOR VIS COMMUNICATIONS/AURAL PROTECTIVE SYSTEM (CAPS) AND ARTILLERY COMMUNICATIONS/AURAL PROTECTIVE SYSTEM (ACAPS)

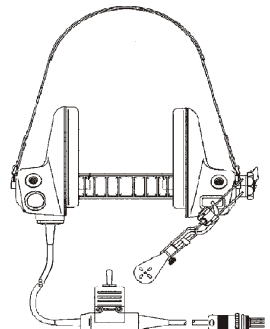
The Communications/Aural Protective System (CAPS) and the Artillery Communications/Aural Protective System (ACAPS) provide a level of hearing protection from ambient noise. Available in six configurations (see Figure 1), these headsets provide passive noise reduction (PNR) and, depending on configuration, active noise reduction (ANR) and/or talk-through circuitry (TTC). The CAPS/ACAPS headsets fit under Personnel Armor System for Ground Troops (PASGT) ballistic helmets and can be donned and doffed without helmet removal.



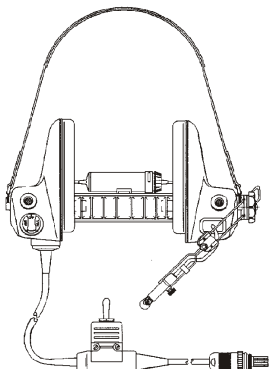
**CAPS (PNR/ANR) Type II**  
CECOM P/N A3206086  
GENTEX P/N 93C8564



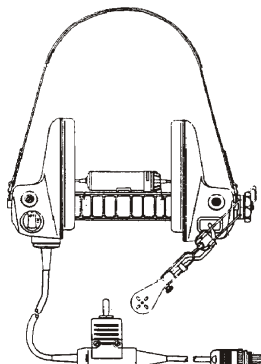
**CAPS (PNR/ANR) Type I**  
CECOM P/N A3206134  
GENTEX P/N 94C8722



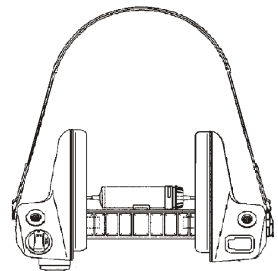
**CAPS (PNR) Type II**  
CECOM P/N A3206097  
GENTEX P/N 93C8563



**ACAPS (PNR/ANR) Type B**  
CECOM P/N A3206087  
GENTEX P/N 93C8567



**ACAPS (PNR) Type B**  
CECOM P/N A3206098  
GENTEX P/N 93C8566



**ACAPS (PNR) Type A**  
CECOM P/N A3206099  
GENTEX P/N 93C8565

**Figure 1. CAPS/ACAPS Headset Configurations**

## DESCRIPTION

Each CAPS/ACAPS headset consists of two earcups attached to an adjustable neckband spring. ANR modules (PNR/ANR models only) and earphones are mounted in the earcups and covered by replaceable foam dampers and damper covers, which are retained by replaceable earseals.

The neckband spring provides the pressure needed to maintain a seal between the headset and the head around the ear. It is cushioned by a soft neckband cover and adjusts to provide equal front and rear compression of the earseal and for a comfortable fit. Overhead straps adjust the headset vertically and secure it to the PASGT helmet.

A combination ANR/TTC, ANR only, or TTC only switch is located on the right earcup, depending upon headset model. This switch activates either the ANR modules or the talk-through circuitry (TTC).

A noise-canceling M-162 electret microphone is attached to a standard wire boom arm assembly on PNR/ANR models, except CAPS (PNR/ANR) Type I. PNR headset models are equipped with an M-138 noise-canceling microphone mounted to the wire boom arm assembly, except ACAPS (PNR) Type A. These assemblies have a knuckle-ball joint and a swivel that permit the boom with microphone to be adjusted for optimum communications.

A push-to-talk radio/intercom switch assembly on the upper cord facilitates radio and intercom operation on every headset except ACAPS (PNR) Type A.

ACAPS headset models contain TTC. When activated, TTC allows the wearer to conduct a normal conversation with other personnel while wearing the headset. It is powered by a Size AA 1-1/2 volt battery installed in a small tubular battery compartment mounted on the neckband spring.

Headset components are identified in Figure 2.

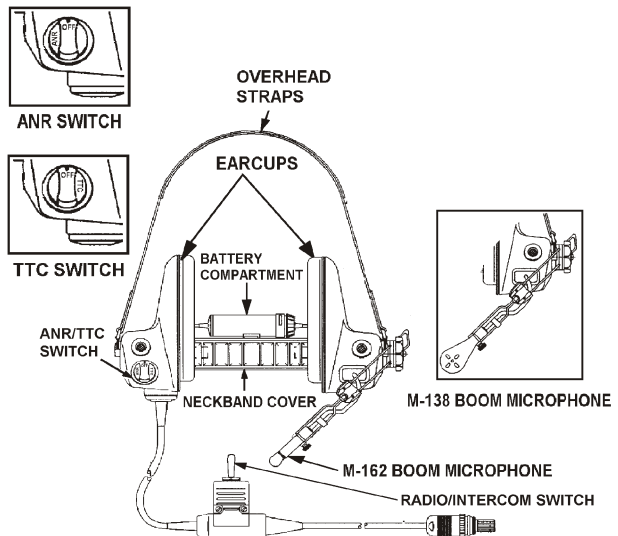


Figure 2. CAPS/ACAPS Headset Components

## CAPS/ACAPS HEADSET FITTING INSTRUCTIONS

Your PASGT helmet compatible CAPS/ACAPS headset has been especially designed for maximum performance and comfort. However, you must fit and use it properly! For optimum noise reduction, the headset must fit the head around the ears as snugly as possible to form a tight seal.

Before donning your CAPS/ACAPS headset, ensure that your PASGT ballistic helmet is properly sized. Refer to the booklet provided with each helmet from U.S. Army Natick Research & Development Laboratories. The following excerpt of the booklet is contained herein for reference.

### NOTE

The X-LARGE size PASGT helmet is not included in the booklet. If ANY dimension is larger than that specified for the LARGE size, then your correct helmet size is X-LARGE.

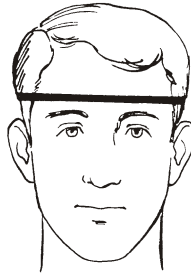
### PASGT Booklet Excerpt

- SOLDIER, THIS HELMET WAS DESIGNED FOR YOUR HEAD
- MAKE SURE YOUR HELMET IS THE PROPER SIZE FOR YOUR HEAD
- THE FOLLOWING CRITERIA ARE THE UMBRELLA DIMENSIONS FOR EACH SIZE:

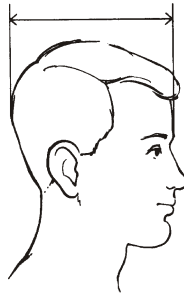
SIZE	CIRCUMFERENCE		LENGTH		WIDTH	
	cm.	in.	cm.	in.	cm.	in.
X-SMALL	53.5	21.1	18.0	7.1	14.2	5.6
SMALL	55.5	21.9	19.3	7.6	15.1	6.0
MEDIUM	57.6	22.7	20.0	7.9	15.9	6.3
LARGE	61.1	24.0	21.0	8.3	16.6	6.5

If your head dimensions are equal to or less than those specified for the X-SMALL, then your correct helmet size is X-SMALL; however, if ANY dimension is larger than that specified for the X-SMALL, and equal to or smaller than the SMALL, then your correct size is SMALL. The same is true for the SMALL and MEDIUM.

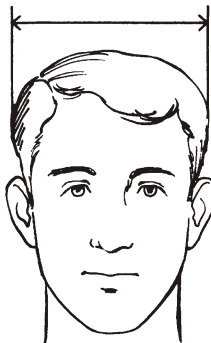
**HEAD  
MEASURING  
INSTRUCTIONS**



**HEAD CIRCUMFERENCE:** Subject sits erect with head level. The maximum circumference of the head is measured. A tape is used, with the tape passing just above the bony brow ridges of the forehead and above both ears.



**HEAD LENGTH:** Subject sits erect with head level. The maximum length of the head is measured from the back of the head (occiput) to the forehead (glabella). Spreading calipers are used.



**HEAD BREADTH:** Subject sits erect with head level. The maximum horizontal breadth of the head is measured above and behind the ears. Spreading calipers are used.

## **PASGT HELMET ADJUSTMENTS**

Adjust the internal headband of the helmet as snugly as possible without causing discomfort. It is important to allow sufficient room between the top of the ears and the helmet headband for the CAPS/ACAPS headset.

Do not adjust the helmet too low on the head. If it is too low, the earseals may not be positioned properly around your ears. At least a ½-inch clearance is needed between the top of your head and the inside of the PASGT helmet.

Readjust the chinstrap, if necessary, to allow the CAPS/ACAPS headset to sit evenly spaced around the ears.

### **WARNING**

Although your helmet may have been correctly sized using the criteria noted above, variations in head shapes may require use of the next size larger helmet when using the CAPS/ACAPS headset under the PASGT helmet. This provides the necessary clearances to obtain a comfortable fit of the headset. In addition, fit of the CAPS/ACAPS headset can be affected with accessories added to your helmet. If this occurs, it may require changing to the next size larger helmet for proper interface and comfortable fit.

The following accessories may affect helmet/headset fit:

- Camouflage Cover
- CBR Cover
- CBR Gas Mask
- Tape added to chinstrap adjustment tabs
- Parachutist modification kit.

Proper helmet fitting is essential. Ensure that there is at least a ½-inch stand-off between the suspension straps and the crown portion of the helmet shell as noted in the U.S. Army's Natick fitting booklet. Otherwise, the helmet will be worn too low on the head. The helmet may then interfere with the earcup base and not allow the earseal to fit around the upper portion of the ears.

## DONNING HEADSET

The CAPS/ACAPS headsets can be donned and doffed without helmet removal. The rear-mounted neckband is adjustable and provides the pressure to help keep the earcups snug.

1. From the back of the helmet, slide the headset up and under the helmet.
2. Adjust the earcup assembly over each ear. Adjust the neckband if necessary.
3. Fasten the overhead straps (Figure 3) on top of the helmet slightly in front of the crown by attaching the hook strips to the pile strips.

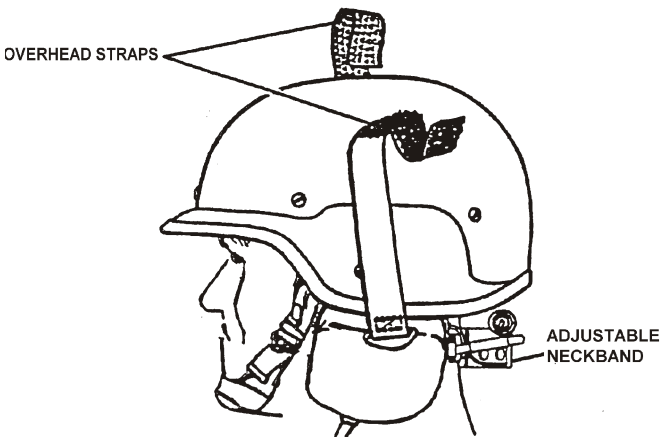
### **NOTE**

The headset performance is controlled by the spring neckband. Therefore, it is **very** important to adjust the neckband correctly.

4. Adjust the breadth of the headset by sliding the two neckband tabs in relation to the earcups to expand or contract the neckband. There should be even compression of the headset earseals front to rear. This adjustment should provide the best fit and comfort on the head.
5. Balance out the tab adjustments evenly between each side using your finger or thumb as a gauge. Once set, the neckband adjustment click stops will maintain your personal settings.

### **NOTE**

Correct use and adjustment of the overhead straps will assist in keeping the CAPS/ACAPS headset in position.



**Figure 3. Overhead Strap and Neckband**



## **SPECIAL NOTE**

### **HELMET/HEADSET INTERFACE CHECK**

If you are attempting to determine the proper helmet size with a CAPS or ACAPS headset, it is suggested that you don the headset without the helmet and adjust the neckband spring rather than attempt to don the headset with the helmet on. The earseals should have uniform pressure on the head and should surround the ears. The headset should be comfortable and parallel with the shoulders.

Don the helmet with the headset in place. Ensure that there is sufficient clearance between the earcups and inside of the helmet shell. Also check for sufficient chinstrap length. Fasten the overhead straps and make adjustments as necessary.

### **CLEANING THE HEADSET**

It is recommended that you regularly inspect the headset and clean it with a water-dampened cloth. Special attention should be given to the earseals, neckband cover, and neckband spring. Do not allow any excess moisture to leak into the earcups.

### **OPERATION**

Operation of the CAPS/ACAPS headset consists of operating the ANR/TTC switch and the radio/intercom switch.

### **WARNING**

Ensure that the headset is properly adjusted. An improper seal between the earseal and the head may result in a low-frequency tone in the headset when the ANR circuits are switched on. If this occurs, adjust the headset accordingly.

## ANR/TTC SWITCH (Figure 4)

The ANR/TTC switch is located on the front of the right earcup.

### NOTE

Depending on headset model, ANR only and TTC only switches operate identically to the combined ANR/TTC switches.

1. To activate the ANR while wearing the headset, rotate the top of the switch's knob to the left (counterclockwise as viewed from the rear of the headset). To deactivate the ANR, rotate the knob back to the OFF (center) position.
2. To activate the TTC while wearing the headset, rotate the top of the switch's knob to the right (clockwise as viewed from the rear of the headset). To deactivate the TTC, rotate the knob back to the OFF (center) position.

### NOTE

The TTC is powered by a Size AA 1-1/2 volt battery installed in a small tubular compartment mounted on the neckband spring. To open this compartment, twist the end cap. Ensure the battery polarity is correct when inserting a new one. To conserve battery power, turn off the TTC when it is not needed.

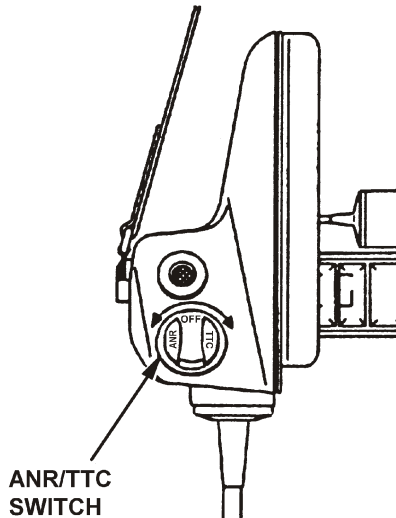


Figure 4. Operating ANR/TTC Switch

## RADIO/INTERCOM SWITCH (Figure 5)

### NOTE

The CAPS (PNR/ANR) Type I headset uses the CENTER position only if not field-equipped with a microphone.

1. To talk through the intercom, flip the switch to the UP (locked) position.
2. To only listen to the radio and intercom, flip the switch to the CENTER (locked) position.
3. To transmit over the radio, hold the switch in the DOWN (spring-loaded) position.

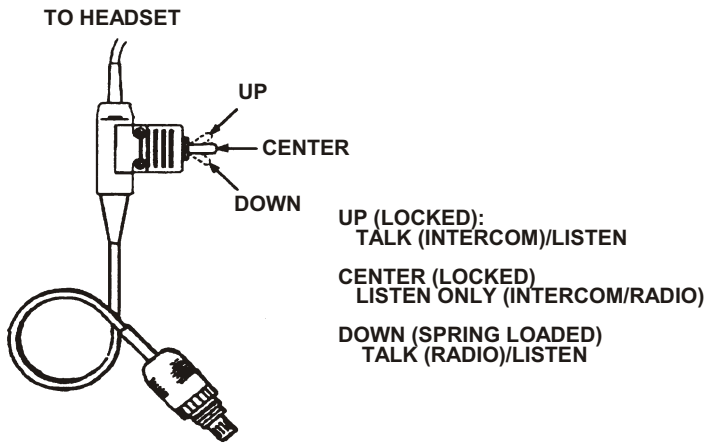


Figure 5. Operating Radio/Intercom Switch

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