



THE SOUND OF SAFETY

HEADSET FITTING AND OPERATIONS MANUAL

Argonaut® DHPC

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Overview

Gentex Corporation's integrated double hearing protection and communications headset uses a unique digital noise canceling microphone technology to provide maximum hearing protection and maximum speech intelligibility for clear communications in ambient noise fields up to 125 dB(A).

Before Usage

Always evaluate the adequacy of your protective gear before entering hazardous environments.

The wearer should ensure that:

- The earmuffs and earplugs are fitted, adjusted and maintained in accordance with the manufacturer's instructions. Improper fit of this device will reduce its effectiveness in attenuating noise. Consult the included instructions for proper fit.
- The earmuffs and earplugs have been inspected for serviceability.
- The earmuffs and earplugs are worn at all times in noisy surroundings.

The use of any hearing protective device will not guarantee adequate protection for hearing loss for all persons under all circumstances. Consult your physician or audiologist frequently when being exposed to high noise levels. If exposure to high noise levels occurs during employment activities, also consult your employer regularly.

US Federal Law requires the following additional statements:

The level of noise entering a person's ear, when hearing protector is worn as directed, is closely approximated by the difference between the A-weighted environmental noise level and the Noise Reduction Rating (NRR).

Example:

1. The environmental noise level as measured at the ear is 92 dB(A)
2. The NRR is 32 decibels (dB)
3. The level of noise entering the ear is approximately equal to 60 dB(A)

Caution:

For noise environments dominated by frequencies below 500 Hz, the C-weighted environmental noise level should be used.

Although hearing protectors can be recommended for protection against the harmful effects of impulsive noise, the NRR is based on the attenuation of continuous noise and may not be an accurate indicator of the protection attainable against impulsive noise such as gunfire.

Headset Assembly and Fitting

Connecting Argonaut Communication Earplugs (ACE) to Headset

1. Rotate earcup to gain access to the earplug receptacle.

2. Grasp the ACE earplug connector and insert the connector into either earcup by aligning the red dot on the connector with the red dot on the receptacle. Gently press the connector until it snaps in place.



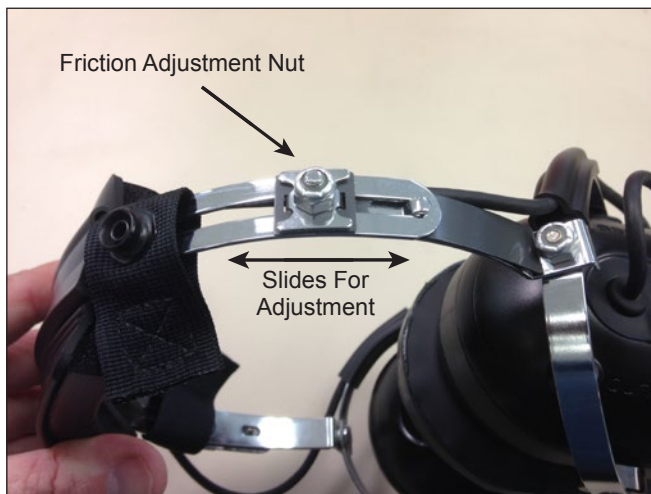
3. To remove the connector, grip connector body's knurled sleeve, and pull it in the direction indicated here.

DO NOT pull on the earplug cable.



Headband Adjustment

The headband is assembled at the factory to be adjustable. The friction required to adjust the headband or to fix the headband in place may be adjusted by tightening or loosening the lock nut on each side of the headband near the headpad with an 11/32 inch or adjustable wrench.



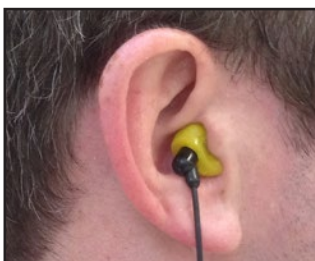
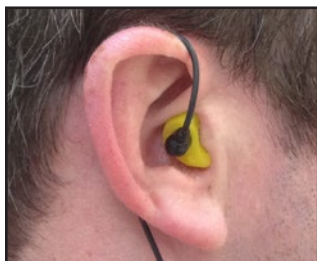
Earplug Insertion

Before use, inspect earplug cable assembly for signs of damage or wear. See the Low Profile Custom Communication Earplug (LPCCE) manual for more detailed instructions regarding Gentex's LPCCEs.

A few critical instructions include:

- Improper fit of earplugs will reduce its effectiveness in attenuating noise. Consult the included instructions for proper fit.
- Inspect the earplugs before each use. The earplugs should be free of debris, tears, and other physical damage.
- Lubricate earplugs with water or Aegisound Ear Gel around the canal tip. DO NOT fill tip opening with ear gel.

Acceptable LPCCE Insertion Options

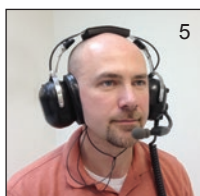
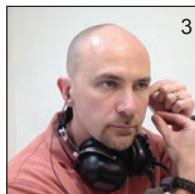
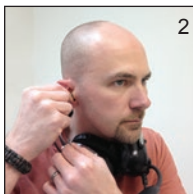


Acceptable Generic Foam Tip Insertion Options



Fitting Argonaut DHPC Headset

1. Position the headset so that the boom microphone is on the left side.
2. Insert right earplug into the right ear (Orientation not critical when using generic foam earplugs)
3. Insert left earplug into the left ear
4. Place the headset on the head
5. Place the headset comfortably over the ears, ensuring that the outer ear is completely seated in the earcups. Cinch up the O-ring on the earplug cables to prevent a snag hazard

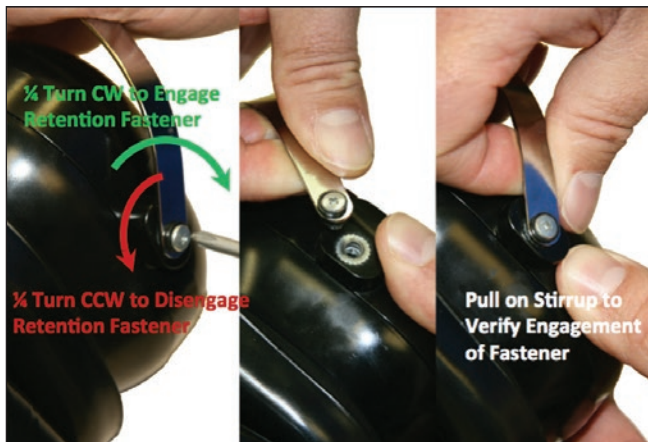


If the headset is installed in a helmet, the helmet should be placed on the head so that the earcups can be rotated away from the ears, allowing you to insert the earplugs to be inserted before donning the headset.

Earcup Removal and Attachment

To install the headset into some head protectors, one or both of the earcups might need to be temporarily removed.

1. Use a #1 Phillips screw driver to disengage the $\frac{1}{4}$ turn fastener holding each side of the earcup to the metal stirrup.
2. The cam will disengage when turned counter clockwise (CCW). Stop turning it when the fastener is disengaged.
3. Pull the stirrup away from the cup. The fastener is captured on the stirrup so it will not fall away.
4. To reinstall the cup, insert the fastener into the insert and gently rotate the fastener $\frac{1}{4}$ turn clockwise (CW) to reengage the fastener. A click should be heard as the fastener cam engages the insert.
5. Gently try to pull the stirrup away from the earcup to verify the fastener is reengaged.
6. Repeat for opposite earcup side.



Operation

Certain variants of the Argonaut platform can derive their power from their host systems. Those units that are configured for external power have a terminal cover plate in lieu of an actual battery unit. These cover plates are designated by a gray sticker on the outside surface of the plate. These units contain no battery and thus need no charging. All users should refrain from placing terminal cover plates on a charger as damage may occur to the charging system.

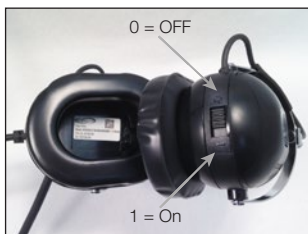
Terminal Cover Plate



Battery



A power switch is located below the battery at the bottom of the right side earcup. The switch slides forward and backward with the 0 indicating the OFF position and 1 indicating the ON position. When configured with a battery, the headset power should be in the OFF position when not in use and anytime the earplugs are not fully inserted in the ears. The position of the switch is not relevant when configured for external power.



Battery Charging & Maintenance

The battery is supplied with a minimal charge. Charge the battery to full charge level prior to its first use per the battery charger instructions. A sequence of three beeps will be delivered through the right earplug to alert when the battery charge is low. See instructions for the particular battery charger used.

Removing the Battery from Headset

The rechargeable battery is attached to the right earcup. A four step action is required to release the battery, as illustrated below. A locking lever prevents the battery from accidentally becoming disengaged from the headset. In the event that the Terminal Cover Plate needs to be replaced, the same procedure would apply.



1. Place thumb on release lever



2. Push release lever towards earseal until it stops



3. With lever in position, press button down



4. With button depressed, pull back on release lever and remove battery

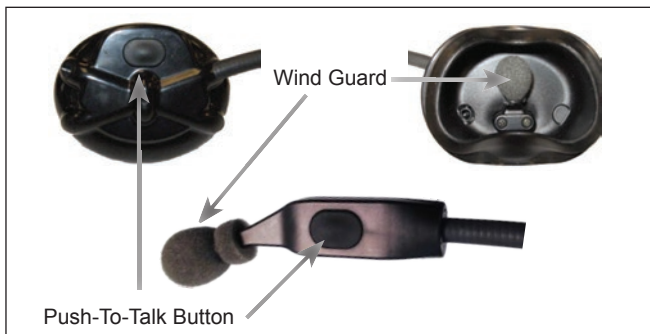
Battery Installation into Headset

The battery is installed by placing the bottom of the battery in the earcup pocket and pushing the top edge of the battery against the earcup until it latches in place.



Microphones

Communications modules are available for pairing with many manufacturer's radios and intercom systems. Please check with Gentex Corporation for available compatible device configurations. The muzzle and boom communications modules provide 2-way communication capability to the Argonaut DHPC. The muzzle contains a digital noise canceling microphone surrounded by a plastic housing lined with a compliant seal, called the "muzzle". The boom contains a similar microphone without the housing and seal. There is a replaceable wind guard over the microphone that is held in place with a small O-ring.



After connecting the Argonaut DHPC headset to the radio, use the oval shaped button on the back of the muzzle or boom (shown above) to transmit. In most cases, the radio PTT button can be used. When talking in high noise environments, the muzzle should be centered and tightly sealed around the mouth to transmit the best speech quality. When using the boom microphone, the user should have the windguard as close to their mouth as possible for maximum sound clarity.

Earseal Replacement

Remove earseal by grasping and pulling rear flap of the earseal over the retention lip of the earcup on each side



Replace earseal by stretching the rear flap of the earseal over the retention lip of the earcup on each side



Cleaning and Storage

LPCCs should be cleaned periodically with warm, soapy water and/or wiped with alcohol to prevent buildup of dirt and to disinfect. Be sure to remove the speakers from the LPCCs before cleaning. Earseals, earcups, and headband may be wiped down with a cloth dampened with water or wipes with alcohol or disinfecting solution. The earplugs, headset and associated equipment should be stored in the protective cases provided.

Maintenance

See Troubleshooting and Maintenance guide for details on maintenance of headset.
See LPCCE Earplug Manual for required service and maintenance of LPCCE earplugs.

Part Number	Description	
05-005054	Argonaut DHP Base Assembly	Headset
05-999001	Replacement Earseal Kit	
05-005090	Terminal Cover Plate	
05-005023	Battery Pack	
05-012001	Two Gang Desktop Battery Charger	
05-016017	Argonaut CEP Earplugs (ACE)	Earplugs
05-016020	Low Profile Custom Communication Earplugs	
05-016019	Replacement Foam Eartips, Standard & Slim, 1 Pair Each	
05-016023	Replacement Foam Eartips, Slim, Box of 100 Pair	
05-016024	Replacement Foam Eartips, Standard, Box of 100 Pair	
Boom and Muzzle Communication Modules	Communications modules for connection to a variety of military and commercial radios are available. Please contact Gentex Corporation for information on currently available configurations and replacement parts	

Warning



Custom earplugs are custom made to fit your ear. They will not work for anyone else's ear. Attempting to use custom earplugs that are not your own, may result in damage to the ear canal.



Never remove earplugs or headset while in high noise environments.



Failure to comply with general safety precautions violates the safety intent of this product and may result in bodily harm or damage to the product. Gentex Corporation claims no liability for damage or injury resulting from a failure to comply with the safety precautions outlined in this manual.



Always wear both the headset and earplugs when in high noise environments.

Caution



Inserting or removing earplugs too quickly may result in air pressure or suction against the eardrum causing temporary pain. Earplugs should be inserted or removed slowly with a twisting motion to prevent excess pressure buildup. Gently moving the earplug while opening the jaw fully may remove excess pressure buildup.



Prolonged use of earplugs (exceeding several hours) may result in temporary soreness near the ear canal. Use of custom earplugs may reduce the risk of this irritation when compared to expandable foam type plugs. The use of earplugs may require a “break-in” period to accustom the ear canal to the presence of the earplug.



In order to ensure maximum performance, your ear canal should be clean and free of excess ear wax and debris before inserting earplugs. Long term usage of earplugs could result in the buildup of ear wax within the ear. In the event that ear wax or debris becomes impacted in your ear canal, seek medical consultation.



Custom earplugs should be cleaned periodically with warm, soapy water to prevent buildup of dirt and bacteria. Ear inflammation, otitis externa, or other infection could result from the use of dirty ear plugs. In the event of pain or discharge from the ear canal, seek medical consultation.



Aegisound custom fit earplugs are made from an immunologically inert material and allergic reactions would be rare. In the event an allergic reaction is suspected, discontinue use and seek medical consultation.




DO NOT hang or swing headset by earplugs or cables.

Argonaut DHPC with CEP-15 Earplugs and Custom Communication Eartips

Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
Mean Attenuation in dB	38.4	39.0	42.9	42.0	42.7	49.7	49.6	48.3	48.9
Standard Deviation in dB	6.7	5.5	5.8	4.0	4.7	4.5	4.1	4.7	3.4

Test data collected per ANSI S3.19- 1974

NRR Rating Information and Test Data per ANSI Standards

Noise Reduction Rating		32 DECIBELS <small>(WHEN USED AS DIRECTED)</small>
<small>THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30 (HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS).</small>		
<small>Gentex Manchester, New Hampshire</small>	Argonaut DHPC	
<small>Federal law prohibits removal of this label prior to purchase</small>		<small>Label Required by U.S. EPA regulation 40 CFR part 211, subpart B</small>



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