



A sound option for high-noise situations

Date of Publication: 03/08/2011

Topic: News

A new two-way communication headset provides hearing protection for workers who must wear protective helmets or respirators.

For workers in noisy environments, hearing the right sounds can be a problem. Ears need protection from loud noise, like that of heavy machinery or explosives. Yet, to be safe, workers need to hear what's going on around them. They also need to be able to talk over a two-way radio without transmitting lots of distracting background noise.

Until now, no one headset product has provided all three capabilities — earplugs that help protect from loud noise, a voice pickup that makes it possible to communicate in high-noise areas, and microphones that pick up ambient sounds (at a safe decibel level). The 3M™ Peltor™ ORA TAC In-Ear Tactical Communications Headset connects to a two-way radio to provide all three, with additional wearer-friendly features as well.

"This product is unique for its combination of all three features," said Jason Jones, marketing manager, Occupational Health and Environmental Safety Division. "This is a very big deal."

The Peltor ORA TAC headset uses earplugs instead of earmuffs. The earplugs make it possible to wear this protection/communication system under many types of respirators and helmets. And because earplugs are lighter and cooler to wear, they are better suited for workers in warm conditions.

The Peltor ORA TAC headset is designed to allow users to maintain their natural hearing ability while attenuating sudden impulse noises and other hazardous sounds.

Each earplug is fitted with a microphone that picks up "normal" sounds such as conversation and ambient noises. This is especially important in dangerous environments where workers need to be aware of their surroundings — for example, in military, fire and rescue, oil and gas, or mining situations. To help protect the wearer, the output of the electronic communications headset is limited to 82 decibels.

The right-side earplug also has a microphone that picks up the wearer's voice through the auditory canal in the ear. "When you speak," explained Jones, "your voice actually resonates inside your ear and that's where the Peltor ORA TAC headset picks up your voice to transmit it to the two-way radio."

As a result, voice communications with the Peltor ORA TAC headset are not drowned out by sounds picked up from the surrounding area. Placing the voice microphone inside the earplugs also eliminates the need for an external boom microphone in front of the mouth, making it easier for workers wearing helmets or respirators while using the system.

Launched in the U.S. in January, the Peltor ORA TAC headset will be launched in Europe later this year.

Information in each article is from its date of publication and has not been updated. If the information in these articles is re-used, it should be verified again for accuracy. Additionally, articles were created for each publication's specific audience and may not apply to other internal audiences. Sharing this information outside of the company should be based on applicable 3M policies and good judgment. For permission to reprint articles, or any portion thereof, contact Suzanne Lewis (651) 733-9241 or via e-mail.

3M™ Peltor™ ORA TAC
with Ambient Listening

PELTOR™

Sounds Clear Fits in the Ear

Listen, Communicate and Protect

Hearing protection with ambient listening is now more comfortable. The New 3M™ Peltor™ ORA TAC delivers many wearer-friendly advantages including:

Omni-directional reception • No ear cups reduce weight & heat
• Fits with most respirators, eye wear, face masks, helmets and hard hats • Quick radio connect/disconnect • Moisture-resistant PTT • Automatic protection against impact noise

ORA TAC is designed for high noise/high heat work applications such as: Aviation Ground Mechanics • Oil & Gas • Mining • Fire & Rescue • Military

For more information visit 3M.com/ORATAC

Leading the Advancement of Hearing Conservation™

3M

PELTOR™

3M™ Peltor™ ORA TAC

Hearing protection and impulse noises

ORA TAC is a dual sided in-ear headset. It provides clear communication with tactical features (similar to situational awareness) when attached to your 2 way radio. It helps provide protection from high-noise in a variety of environments and helps provide protection from impulse noises when they occur.



Tactical Function

In Tactical Function mode, the user needs to maintain their natural hearing ability while being protected from sudden impulse noises and other hazardous sound. ORA TAC will help maximize their tactical function and allowing the user to hear the environment around them. ORA TAC utilizes external microphones built into the ear bud and has a selectable volume control on the push-to-talk (PTT) adapter. The talk-through microphones naturally reproduce local sounds and conversation from outside the headset. Impulse noise hearing protection, whether the talk-through system is on or off, protection is afforded by the passive attenuation of the earplug/earbud combination. The speech intelligibility of the radio signal is maintained throughout ensuring no audio loss.

Comfort

ORA TAC is designed to fit comfortably in the ear. This makes it compatible with a variety of head, face, eyewear, and respiratory products. Fitting of the headset is very simple and quick, just like putting an earplug in your ear. ORA TAC is a small lightweight and robust system designed to meet the needs of the industrial user. Coming soon, we will have a variety of sizes and also disposable earplug tips with higher NRR's.

Communications Intelligibility

ORA TAC is a direct connect product for use with a variety of 2-way radios. The system uses an in-ear communications microphone to enable use without a boom microphone and helps minimize wind and external noise. The adjustable talk-through feature allows for normal conversation and provides for good tactical function.

Components

The ORA TAC system is comprised of an in-ear headset with PTT adapter and a quick disconnect cable. The cable connects to individual radios and can be switched when a new radio is purchased.

Battery Powered

ORA TAC is powered by two AAA batteries located in the adapter.

Features:

- Lightweight and compact
- Clear communications without the need for a boom mic
- Helps protect workers from impulse noise
- Comfortable fit allows long-term use under tough conditions
- Tactical function is more natural sounding

Environmental: Using the appropriate test methods, ORA TAC meets the following environmental conditions.

Environmental Test	Test Method
Altitude	Method 500.4, Procedure I, of MIL-STD-810F
High Temperature	Method 501.4, Procedure I - Storage and Procedure II - Operation, of MIL-STD-810F
Low Temperature	Method 502.4, Procedure I - Storage and Procedure II - Operation, of MIL-STD-810F
Humidity	Method 507.4, Procedure II, of MIL-STD-810F
Salt Fog	Method 509.4, Procedure I, of MIL-STD-810F
Dust and Water	IP65
Vibration	Method 515.5, Procedure I, of MIL-STD-810F

Emissions and Immunity Tests

Electrostatic Discharge	EN 61000-4-2
Radiated Susceptibility	EN 61000-4-3
Magnetic Field Susceptibility	EN 61000-4-8
Radiated Emissions	EN 61000-6-4



ORA TAC	
ORA-HT1000	Includes Quick Disconnect Cable for MOTOROLA HT1000, MT2000, MTS2000, MTX838/2000/8000/9000, JT1000 Astro Digital, XTS1500/2500/3000/3500/5000, Pro860, PR1500
ORA-HT750	Includes Quick Disconnect Cable for MOTOROLA HT750, HT750LS PLUS, HT1250, HT1250LS, HT1550, HT1200LS, HT1550XLS, MTX850, MTX850LS, MTX8250LS, MTX8259LS, MTX950, MTX9250, MTX4500, Pro1510, Pro7150, Pro9150, Pro1150XLS, Pro7350, GP640, GP380, GP338, GP339, GP328, GP329
420-2096-25	3M™ Peltor™ ORA TAC, Replacement Tips, Gray UltraFit™, 25 pr/cs

3M

Occupational Health & Environmental Safety Division
3M Center
St. Paul, MN 55144-1000
www.3M.com/OccSafety

For More Information:
Sales Assistance: 1-800-328-1667
Technical Assistance: 1-800-665-2942
Website: www.3M.com/hearing

Repairs and Warranty Items:
3M Peltor Repairs
5457 West 79th St.
Indianapolis, IN 46268
Attn: Repairs

⚠ Warning!

These hearing protectors help reduce exposure to hazardous noise and other loud sounds. **Misuse or failure to wear hearing protectors at all times that you are exposed to noise may result in hearing loss or injury.** For proper use, see supervisor, User Instructions, or call 3M in U.S.A. at 1-800-665-2942.