



**Freedom from headsets, clarity in high-noise and extreme-weather environments, and secure wireless transmission to virtually any radio, cell phone, intercom, or VoIP messaging system—**

the Sonitus Technologies Advanced Two-way Acoustic Communicator (ATAC) system gives users the communications power and versatility required to operate more effectively and safely. With the capability to operate in settings of up to 130 decibels (dB) of ambient noise, the unique ATAC system in-mouth placement effectively shields against unwanted sound to help military, first responders, athletes, and other users communicate more clearly and reliably.

**CHALLENGES**

Traditional headsets present both physical and sound-related obstacles to effective communications. Bulky headsets hamper mobility and impede situational awareness. Most headphones will not fit under helmets or protective gear, and none accommodate covert communications. On- and in-ear devices can be both uncomfortable and unreliable in out-of-doors use. Neither wired nor wireless sets deliver the audio clarity required to communicate over the piercing tone of a firefighter's PASS alarm, the engine noise from a special-forces aircraft, or the roar of the crowd at a major sporting event.

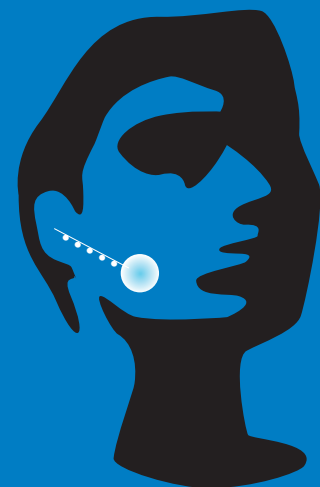
**SOLUTION**

The Sonitus Technologies ATAC system enables wireless, noise-resistant sound transmission via an in-mouth audio device. The mouthpiece, worn like a retainer around two upper molar teeth, integrates a microphone designed and placed to shield external noise and to transmit high-clarity voice communications. The ATAC Mouthpiece device also features a speaker that utilizes bone-conduction vibrations to conduct incoming audio through the jaw to the inner ear. By using the bone that connects the teeth to the ear canal, the ATAC device sends sound along a hearing pathway that enables high audio fidelity. Near-field magnetic induction (NFMI) technology enables encrypted, wireless audio transmissions into and out of the mouth.

The simplicity, quality, seamless operation, and security of the Sonitus ATAC system make it an ideal replacement for traditional headphone/microphone sets in the most demanding environments, including military, intelligence, first-responder, and sports applications.

**BENEFITS**

- **Operate more effectively** in demanding environments, using advanced communications capability for clarity and reliability
- **Transmit/receive clearly**, even in extreme noise, wind, and moisture conditions
- **Communicate seamlessly**, without bulky headsets or boom microphones
- **Interface** with virtually any infrastructure communications system or radio
- **Maintain higher** audio situational awareness than with conventional communication equipment
- **Eliminate** on-and in-ear audio devices to enable covert operations
- **Gain mobility** to operate more effectively
- Use with existing protective gear
- **Maintain security** with optional AES-256 encrypted communications



**mission ready**

### **SIMPLICITY**

The ATAC Mouthpiece device with its wireless connection gives operators maximum mobility, keeping hands free and, with no earpiece to block environmental input, enabling 360-degree situational awareness. The ATAC system does not interfere with helmets, respirators, and other protective or tactical gear.

The ATAC Mouthpiece snaps in place in seconds and provides always-on communications for up to ten hours on a single charge. A push-to-talk (PTT) button on the PTT extension activates audio transmission.

The Sonitus Technologies ATAC system is capable of integrating with virtually any communications infrastructure device, including military communications systems, industrial intercom systems, cell phones, and VoIP messaging systems. The ATAC system can also be configured to provide direct wireless connection to Bluetooth-enabled devices.

### **QUALITY**

With its mouthpiece that puts the microphone close to the voice source, the ATAC system maximizes clarity of speech transmission in backdrops of high noise. The system protects against intrusive sound much more effectively than an external microphone, ensuring clear communications even in the midst of loud engine noise, piercing alarms, crowd noise, and other sound-hostile settings.

While traditional headsets are highly susceptible to environmentally related failures from exposure to wind, sand, moisture, heat, and rough handling, the Sonitus Technologies ATAC Mouthpiece is inherently protected and can help reduce device-replacement costs.

### **SEAMLESS OPERATION**

The ATAC system serves as a seamless extension of existing radio infrastructure, cellular communications, and intercom systems, and also allows operators to utilize existing PC-based voice-to-text, VoIP, conferencing, and other field applications.

Traditional headphone and external-microphone systems cannot effectively shield interference to ensure consistently clear audio transmission in the unpredictable environmental conditions in which military and first responders must routinely work. Firefighters operating in a burning building, for example, must communicate over the sounds of equipment and ambient noise that can exceed 100 decibels. Having to rely on the common lapel microphone in that environment, a firefighter cannot be certain his or her 60-decibel speaking voice will be clearly transmitted to other team members.

In contrast, equipped with an ATAC Mouthpiece in-mouth microphone, the firefighter can communicate clearly, even in the event a PASS alarm sounds or a low-oxygen condition triggers otherwise-disruptive respirator facial vibrations. The Sonitus Technologies ATAC system has been proven to deliver clear voice transmission even with background noise at the level of a running chainsaw or a military aircraft on take-off from a carrier.



## SECURITY

The Sonitus Technologies ATAC system can enhance both communications and personal security. The system employs an NFMI communications link to provide a robust, low-RF signature, wireless audio and data link to and from the mouthpiece device. An encryption-enabled system is available for applications requiring highly secure communications.

The PTT capability allows operators to communicate without removing support gear or weaponry, and the mouthpiece facilitates stealth operations not possible with external headphone systems. With the ability to wirelessly link to a cell phone, the ATAC system can also facilitate covert operations that would be impractical to undertake using walkie-talkies and other bulky radio systems. The ATAC system enables greater mobility, allowing operators to move from stationary to full-kinetic operations without repositioning headsets or cables. The mouthpiece can also remain in place during light eating and drinking activities.

## FREEDOM TO FOCUS ON THE MISSION, NOT THE HEADPHONE

The Sonitus Technologies ATAC system completely replaces existing earphones, headsets, and throat and boom microphones with an audio mouthpiece that wirelessly links the operator to communications devices and networks, providing a unique advantage for less-than-overt operations, direct-action operations, and other operations in high-noise environments. The ATAC system eliminates the need for cables, microphones, and other bulky sound-transmitting devices and is easy to use with protective apparatus, providing a communications solution well-suited for tactical special missions, intelligence operations, sporting events, first-responder teams, and other venues where operators require clear, unencumbered communications to work productively and safely.



## THE SONITUS TECHNOLOGIES ATAC SYSTEM ENABLES FAST, SIMPLE SETUP.

### COMPONENTS INCLUDE:

- **The ATAC Mouthpiece.** Fitted by a dentist and built by Sonitus Technologies, the mouthpiece is incorporated into a metal/acrylic dental appliance that snaps securely behind two upper molars at the back of the mouth.
- **The Neck Loop Antenna.** The Neck Loop Antenna enables wireless signal transmission between the fully concealed ATAC Mouthpiece and the Antenna Peripherals Interface (API) described below.
- **The Antenna Peripherals Interface (API).** This device provides the interface to the infrastructure radio system, and features a push-to-talk (PTT) button and volume control. (Volume can also be adjusted from the radio or other communications device.) The API automatically activates the mouthpiece speaker upon receipt of incoming audio and the mouthpiece microphone when the PTT button is depressed to transmit voice audio.
- **An optional Remote PTT Extension.** The extension can be worn inside the clothing and features a finger-loop-mounted button that enables remote and/or surreptitious push-to-talk operation.
- **The ATAC Mouthpiece Charger.** This charger can be connected to a standard outlet via an included USB cable or derive power from three AA batteries.

## SONITUS TECHNOLOGIES ATAC SYSTEM SPECIFICATIONS

<b>Supported communications infrastructure</b>	<ul style="list-style-type: none"> <li>• Two-way radios, including military-grade tactical radios and walkie-talkies</li> <li>• Industrial intercom systems</li> <li>• VoIP messaging systems</li> <li>• Cell phones</li> </ul>
<b>ATAC System contents</b>	<ul style="list-style-type: none"> <li>• ATAC Mouthpiece</li> <li>• Neck Loop Antenna</li> <li>• Antenna Peripherals Interface (API)</li> <li>• Radio Down Lead</li> <li>• ATAC Mouthpiece Charger</li> </ul> <p><b>Optional Components:</b></p> <ul style="list-style-type: none"> <li>• Remote Push-To-Talk (PTT) Extension</li> <li>• AES-256 Encrypted Communications</li> </ul>
<b>Maximum ambient-noise level</b>	130 dB
<b>Certification</b>	FDA-approved platform
<b>ATAC Mouthpiece</b>	Custom fitted in a process similar to the creation of a dental retainer. Working from a 3D scan or an alginate-mold impression provided by the operator's dentist, Sonitus Technologies partners with a dental laboratory to produce the personalized dental appliance that secures the ATAC Mouthpiece module.
<b>Maximum distance from ATAC Mouthpiece device to the Neck Loop/API</b>	3 feet
<b>ATAC Mouthpiece Specifications</b>	
Battery life	10 hours per charge, default volume
Battery type	Lithium ion
External noise attenuation	30 dB
NFMI radio frequency	10.56 MHz
<b>ATAC Mouthpiece Charger Specifications</b>	
Charging standard	Qi, customized for small size and power
Time to full charge	2.25 hours
Power	Three AA battery cells (lithium ion or alkaline) or Mini USB Wall Charger (5V)
Case size	4.5-inch x 3.0-inch x 2.0-inch (L x W x H)
Case weight (including batteries)	15 oz
<b>Antenna Peripherals Interface (API) Specifications</b>	
Power	Infrastructure radio aux power
Box size	3.5-inch x 2.5-inch x 2.0-inch (L x W x H)
Box weight	14 oz
<b>System Environmental Specifications</b>	
Waterproof rating	IP67 (Mouthpiece, API, Charger when closed)
Operating temperature	-5 to 55 degrees Celsius

For more information [sonitustechnologies.com](http://sonitustechnologies.com)  
or contact Sonitus Technologies at  
1720 South Amphlett Boulevard, Suite 210, San Mateo, CA 94402, USA  
(650) 562.6211 | [info@sonitustechnologies.com](mailto:info@sonitustechnologies.com)