OPS-CORE®

# RAC® HEADSET

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## Streamlined Design & True 3D Hearing Technology (3DHT)

Designed to seamlessly integrate, Ops-Core's comprehensive suite of modular, scalable, open-architecture helmet systems provide today's warfighter with true system level performance. Ops-Core helmet shells' shape and edge trim are specifically designed to maintain natural hearing and sound localization during normal use. The addition of hearing and communications components further enhance hearing protection and communications.

The Ops-Core Rail Attached Communications (RAC) Headset revolutionizes soldier communications, seamlessly integrating into the Ops-Core Accessory Rail Connector (ARC) System. Compatible with the Ops-Core FAST® Helmet System, the RAC Headset incorporates a streamlined design for optimal comfort and true 3D hearing technology to preserve the user's ability to discern what direction sounds are coming from, while providing advanced hearing protection in high noise environments.

**3D HEARING** TECHNOLOGY

## KEY FEATURES

### True 3D Hearing Technology (3DHT)

True 3DHT provides natural hearing restoration with our advanced ear-simulator design. This unique capability reproduces ambient sounds with a high degree of directional accuracy to preserve and improve situational awareness.

## Optimal Comfort

Through its ergonomic design, the RAC Headset provides superior comfort with features such as high performance ear cushions and mounting arms located on the helmet exterior. ARC Rail mounting relieves pressure points typically associated with inferior third party headband mounting methods and does not require modifying the helmet liner or retention system.

## Streamlined Design

The advanced streamlined design provides freedom of movement and unobstructed head range of motion.

## Auto Shut-Down

Shuts device off after two hours of use to preserve batteries. An audible tone alerts the user that shut down is imminent. Pressing either button control resets the timer. AAA batteries provide 100 hours of 3DHT use.

## Fail-Safe Communications

In the event of the loss of the battery charge, the headset will continue to operate for communications with only the 3DHT hear-through system not functioning.

# FEATURED COMPONENTS

The components featured below are essential to the streamlined design and True 3D Hearing Technology of the RAC Headset.

*Engaged and On-Ear*

## 1. 3D Hearing Technology (3DHT)

Coupling our advanced ear simulator design with binaural audio and advanced audio processing, the RAC Headset provides hear-through audio that accurately preserves azimuth and elevation cues for improved situational awareness. Smooth compression algorithms eliminate "clipping".

## 2. FAST ARC Attachment

Attaches to the rear of the FAST ARCs, leaving the top portion of the ARCs free for mounting lights, cameras, and other helmet components for optimal system level performance.

## 3. Removable Noise-Cancelling Microphone

Incorporates a noise-cancelling immersion rated microphone that mounts to the left or right ear cup, depending on user preference.

## 4. Integrated Mic Mount & Connection Point

Features an integrated microphone mount that accepts mask microphones with U-173/U standard plug.

## 5. Arm Articulation Adjustment

Arm adjustment allows the ear cups to be set in several different positions, including an engaged, on ear position while in use, and a ready position which is over the ear, but not pressing on the user's head.

## 6. Single Point Gimbal Attachment

Features a 360 adjustment instead of conventional adjustment systems which allows for auto-positioning to each individual's ear/head shape, creating a strong yet comfortable seal.

NFMI Ear Plugs
*(optional)*

*Ready State
Over the Ears*

*Fully
Vented*

*Stowed
Position*

**7. On/Off Volume/Balance Control**

Provides operator full control to personalize the listening experience to suit user's needs through on/off volume/balance control. If the NFMI ear plugs option is selected an additional speaker/ear plug control is available to switch the audio between the speaker and ear plugs.

**8. Ear Cushions**

Offers an ergonomical fit to the user's head geometry for a better seal and increased noise attenuation.

**9. Streamlined Stowage**

Ear cups rotate to the rear of the helmet when not in use, creating a very low profile, positioning the entire headset behind the head.

**10. Quick-Release Downlead Connection**

Helmet/headset assembly can be quickly disconnected from the downlead, allowing for easy doffing of the helmet as there are no excess cables to consider.

**11. Near Field Magnetic Induction (NFMI)
Ear Plug System** (optional)

Optional version features additional ear plugs that can be worn under the ear cups. The untethered double-layer hearing protection provides noise attenuation that is greater than those found in typical Active Noise Reduction (ANR) equipped headsets. The magnetic, battery-free, wireless ear plug system uses an audio signal to stimulate a coil which initiates signal transmission. Optional NMFI Ear plug system must be specified at time of order and cannot be retrofitted if not factory installed.

# CONNECTIVITY OPTIONS

Ops-Core offers a variety of connectivity solutions for the RAC Headset, depending on the devices you are using. Our standard line of connectivity options is detailed below. For more information about alternate connectivity options, please contact us via email at sales@ops-core.com, or via phone at +1.603.657.1200.

## Push to Talk (PTT) Cables for Portable Radio Communications (PRC) Systems

These PTT Cables are used to connect the RAC Headset to the PRC family of radios (AN/PRC-117F, AN/PRC-148, AN/PRC-152 and equivalent radios). Rugged over-molded construction and immersion rated connection to RAC Headset.

### Single PTT Cable

Connects the RAC Headset to a single PRC radio. Presents radio audio in monaural format; radio audio in both ears.

**N254449-00** (Black)   **N254449-01** (Tan)

### Dual PTT Cable

Connects the RAC Headset to two PRC radios. Presents radio audio in binaural format, one radio to left ear, other radio to right ear.

**N254450-00** (Black)   **N254450-01** (Tan)

## Modular PTT Cables

These PTT Cables allow flexibility to connect the RAC Headset to various types of radios. Radio Adapter Cords are required to match to your radios. Rugged over-molded construction and immersion rated connection to RAC Headset.

### Single Modular PTT Cable

Connects the RAC Headset to a single radio. Presents radio audio in monaural format; radio audio in both ears.

**N254057-00** (Black)   **N254057-01** (Tan)

### Dual Modular PTT Cable

Connects the RAC Headset to two radios. Presents radio audio in binaural format, one radio to left ear, other radio to right ear.

**N254062-00** (Black)   **N254062-01** (Tan)

## Radio Adapter Cords

These Radio Adapter Cords are used with the Modular PTT cables above to complete the connectivity to your radio.

### PRC Radio Adapter Cord

For PRC Radios: AN/PRC-117F, AN/PRC-148, AN/PRC-152 and equivalent radios.

**N254514-00** (Black)   **N254514-01** (Tan)

### Motorola XTS-3000 Series Radio Adapter Cord

For Motorola XTS-3000 Series Radios.

**N254525-00** (Black)   **N254525-01** (Tan)

### Motorola HT750 Series Radio Adapter Cord

For Motorola HT750 Series Radios.

**N254526-00** (Black)   **N254526-01** (Tan)

### Motorola AXP Series Radio Adapter Cord

For Motorola AXP Series Radios.

**N254527-00** (Black)   **N254527-01** (Tan)

## PTT Cables for 3rd Party PTT Systems

These adapter cables are used to connect the RAC Headset to 3rd party PTT systems. Immersion rated connection to RAC Headset.

### Headset Adapter Cable for TEA & 3M™ Peltor™

Connects the RAC Headset to TEA Tactical U94 PTT Systems and 3M Peltor PTT systems wired to US/NATO standard.

**N254461-00** (Black)
**N254461-01** (Tan)

### Headset Adapter Cable for Silynx® and Olympus

Connects the RAC Headset to Silynx Clarus™ and Olympus PTT systems.

**N254462-00** (Black)
**N254462-01** (Tan)

### Headset Adapter Cable for Silynx®

Connects the RAC Headset to Silynx C4OPS and Silynx H2OPS PTT systems.

**N254466-00** (Black)
**N254466-01** (Tan)

### Headset Adapter Cable for 3M™ Peltor™

Connects the RAC Headset to 3M Peltor PTT systems wired to their EU standard.

**N254501-00** (Black)
**N254501-01** (Tan)

### Headset Adapter Cable for INVISIO®

Connects the RAC Headset to INVISIO V60 PTT systems.

Available directly from INVISIO:
**INV13509** (US +1. 972.540.1969/ EU +45 7240 5500)

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### Mask Microphone Connection Cable

Connects a mask microphone to the RAC Headset in place of Boom microphone.

**C2080** (Black only)

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# PRODUCT SPECIFICATIONS

## RAC Headset Noise Protection Ratings

### Base Version
(Does not include NFMI ear plugs, not upgradable for NFMI ear plugs):

NRR 20 dB
SNR 23 dB
H 27 dB
M 20 dB
L 16 dB

### NFMI Ear Plug Version
(Includes ear plugs and 3 sets of foam tips for ear plugs):

NRR 32 dB
SNR 39 dB
H 41 dB
M 36 dB
L 32 dB

## Decibel Exposure Time Guidelines

| Continuous dB | Permissible Exposure Tme |
|---|---|
| 85 dB | 8 hours |
| 88 dB | 4 hours |
| 91 dB | 2 hours |
| 94 dB | 1 hour |
| 97 dB | 30 mins |
| 100 dB | 15 mins |
| 103 dB | 7.5 mins |
| 106 dB | 3.75 mins (< 4 mins) |
| 109 dB | 1.875 mins (< 2 mins) |
| 112 dB | .9375 mins (~1 min) |
| 115 dB | .46875 mins (~30 sec) |

Accepted standards for recommended permissible exposure time for continuous time weighted average noise, to NIOSH and CDC:

For every 3 dB over 85dBA, the permissible exposure time before possible damage can occur is cut in half.

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## RAC Headset Available Colors

■ Urban Tan

■ Foliage Green

■ Black

## Environmental Testing Standards

Tested to MIL-STD-810G

## EMI Testing Standards

Tested to MIL-STD-461F

## System Weights

| | |
|---|---|
| Base Version: | 1.1 lbs (500 g) |
| NFMI Ear Plug Version: | 1.2 lbs (545 g) |

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www.ops-core.com