

Esterline

Control &
Communication Systems

Racal Acoustics RA7000 *ELITE* Hearing Protection System

Multi-channel communications and hearing-protection system with quick-connect headset and cabling for efficient operation

Introducing the new Racal Acoustics digital communications and hearing protection system

Plug, Protect, Communicate

The RA7000 *ELITE* Hearing Protection System is a new, plug-and-play in-ear headset and switch-box combination that delivers world-class noise attenuation, local sound awareness at safe levels, and top-quality natural-sounding audio. The RA7000 *ELITE* system is ergonomically designed for comfort and intuitive use.

The *ELITE* system protects your hearing in high-noise environments through innovative acoustically tuned passive attenuation and advanced feed-forward active noise reduction (ANR) to provide protection against continuous noise and sudden acoustic shock, while maintaining high-fidelity local sound awareness and clear intelligible communications.

The *ELITE* headset takes only seconds to fit and is comfortable to use for long periods, thanks to a unique patented vented-earpiece design, three headset wearing options, and the widest choice of shallow insertion earbuds.

The RA7000 switch box is an advanced communication control that lets you manage multiple communications devices. It quickly connects to radios, intercoms, and smart phones, allowing you to continuously monitor up to four communication channels and immediately access any of them through four PTT buttons for clear speech transmission.



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ELITE Headset

- Earbud options to suit noise hazard, user role, and personal comfort
- Earbud agnostic for the widest possible choice from the commercial and industrial world
- User comfort through compact, lightweight construction and ventilated earpiece
- Versatility with three headset wearing options
- Secure earpiece retention during extreme physical activity

RA7000 Switch Box

- Ergonomic design optimized for ease of use and comfort
- Four PTT buttons for easy access to four voice channels
- Two binaural full-duplex audio ports
- Adjustable communications-volume control
- Adjustable volume control for local sound awareness
- Up to 70 hours of operation from standard AA battery
- Connection to draw power from attached radio or intercom
- Vest or belt-mounted carry pouch with color options



Superior Hearing Protection

- Continuous noise protection above 30 dB through acoustically tuned passive attenuation
- Advanced feed-forward active noise reduction (ANR) for additional attenuation
- Impulse-noise protection against sudden acoustic shock in excess of 170 dB(A)
- Dynamic compression of loud sounds to safe levels

Exceptional Audio Intelligibility

- Natural-sounding full-spectrum audio for clearest intelligibility
- High-fidelity sound from highest-quality audio components
- Voice microphone located in ear canal to minimize wind and environmental noise in outgoing communications
- Active noise limiter for compression of loud noises without loss of intelligibility



Command Connectivity

- Connectivity to multiple devices including radios, intercoms, and smart phones
- Continuous control and monitoring of up to four communication channels
- Adaptability to future communication devices via a modular cable system



Enhanced Local Sound Awareness

- Optimized sound localization through 360-degree spatial awareness
- Active noise limiter to compress impulse noise without compromising sound quality
- Compression to improve local sound awareness and intelligibility at all noise levels
- Reduced wind noise through unique microphone position
- Adjustable talk-through volume control

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Specifications

Protection

Personal protection Directive 89/686/EEC

Hearing protection	Foam	Flange
NRS _A (ANSI S12.6-2008)		
Possible for most individually trained users to achieve/exceed	31	31
Possible for a few motivated proficient users to achieve/exceed	36	35
NRR (ANSI S3.19-1974)	27	24
SNR (EN352-2)	28	27
HML (EN352-2)	H=29 M=25 L=23	H=26 M=25 L=25
SLC ₈₀ (AS/NZS1270)	27 (Class 5)	26 (Class 5)
IPIL dB (ANSI S12.42-2010) 132dB, 150dB, 168dB	33.9, 47.4, 45.9	35.4, 47.1, 45.7

Interfaces / Controls

Audio interfaces	2 x binaural full duplex ports
Volume controls	18 dB adjustment range
Earbud interface	Quick-fit push-on
Earbud options	Foam earbuds (slim, standard, large) Flange earbuds (small, medium, large)

Operating Characteristics

Operating temperature	-46° to +63° C (-50° to +145° F)
Storage temperature	-46° to +71° C (-50° to +160° F)
Ingress protection	IP68 - Sand, Dust, Driving Rain, Submersible 3 m (10 feet) for 30 minutes
Environmental	EN60068, EN60529, MIL-STD-810G
EMC	Directive 2004/108/EC, MIL-STD-461F

Size, Weight, and Power

Dimensions H x W x D	117.4 x 72.1 x 28.0 mm (4.61 x 2.83 x 1.10 inches)
Switch box weight	145 g (5.1 oz), with battery 170 g (6.0 oz)
Headset weight	60 g (2.1 oz) including cable and connector
On-the-head weight	10 g (0.35 oz) nominal
Headset cable	900 mm (35.4 inches) reinforced for 18 kg (40 lb) strength
Internal battery	Replaceable AA battery
Battery life	Up to 70 hours operation
External power supply	Nominal 5 to 28 VDC from attached radio or intercom

For more information about the Racal Acoustics ELITE Hearing Protection System, please visit www.esterline.com/ELITE.

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