



RA315 IHS ANR High-Noise Headset

Versatile RA315 Integrated Helmet System delivers effective noise attenuation, reliable voice comms, and appropriate head protection

The RA315 IHS is a three-part set of solutions adaptable to requirements of vehicle crews, aircraft ground crews, and other operators in high-noise environments with a need for varying levels of head protection. The headset – based on the earshell design of our RA180 Crewgard unit developed for the British Army – is suspended in a ventilated soft liner that provides bump protection when a vehicle is moving over rough terrain. Liners come in several configurations and sizes and allow headsets to be worn with or without a neckband. In addition, the liner supports a range of hard shells – in “bump only” and ballistic grades – that may be easily added and removed as needed.

Tracked armored vehicles present particular communication and hearing-protection challenges due to their high-intensity and low-frequency drive-train noise, with levels sometimes approaching 120 dB(A).

The mass and volume of the RA315 headset provides passive noise reduction (PNR), particularly effective at higher frequencies, while ANR modules in each earshell give supplementary attenuation at lower frequencies, with overall attenuation of around 35 dB. This combination performs within the requirements of recent noise and safety legislation; for example, the Physical Agents Directive being implemented across Europe.

Features and Benefits

- **Active Noise Reduction (ANR)**

Independent ANR modules in each earshell for improved noise reduction at lower frequencies. ANR cancels an unwanted signal by superimposing an identical signal in antiphase. Low-frequency noise within the earshell is detected, phase inverted, and driven back via the ear phone, for an effective cancellation rate of 97 percent.

Speech signals detected by the sensor microphone are electronically processed and unaffected by cancellation. Each ANR module includes a noise-detection microphone, noise-cancelling electronics, and two earphones, one for acoustic cancellation, the other for communications.

The two earphones also offer failsafe capability, so the unit can operate as a conventional headset in non-ANR situations or during a power or electronic failure. Retrofittable digital ANR modules are also available.

- **Fit and Comfort**

Contoured earshells, foam earcushions, and soft liners for comfortable fit, bump protection, and ventilation, with optional neckband and spring to optimize fit.



- **Optional Hard Shell**

Removable outer protective shell in “bump only” or ballistic grade, with a V50 rating of 400-650 m/s. Protective shells are available in a choice of sizes and colours, and may be removed and stowed when the vehicle is operated in closed-down mode.

- **Talk-Through**

Improved situational awareness through electronic-valve or talk-through circuit (TTC).

Localised sounds or speech are detected by micro phones, mounted on the outside of each earshell, and are then regenerated, binaurally, to retain directionality. The output is electronically compressed so its level does not exceed the health and safety limit of 85 dB(A).

- **EMC Protection**

Features electromagnetic filters and shielding to help protect against high radiated field strengths, important for crews in a head-out situation close to a propagating antenna.

- **Intercom Compatibility**

Compatible with a variety of intercom systems supporting ANR.

Ordering Information

The RA315 IHS is a flexible three-part system comprising the headset, an optional soft liner, and an optional outer shell. In some configurations, the outer shell is an add-on item and depending on the soft liner specified, there may be an optional spring-fitted neckband.



Optional Soft Liners and Chin Straps (ordered separately)

- 559870: unisize, black (A neckband must be fitted.)
- 565724/S-M (51-56 cm) or 565724/M-L (56-64 cm): black (The neckband may be removed but note that the chin strap must be secured to gain maximum noise attenuation performance.)
- 553435 chin strap and 553436 buckle (both items required)
- 559865 one piece chin cup and strap



Optional Outer Shell (soft liner required)

- 25801 series: non-ballistic, unisize, olive drab or desert sand
- 29115 series: low, medium, or high ballistic (V50) rating ranging from 400 to 650 m/s, with wider choice of colors and sizes



For more information about the RA315 headset
please email sales@racalacoustics.com or
call our sales office +44 (0)20 8515 6200