



**Clear Speech**

Sensear's new SP1 and SP1x (Bluetooth®) range of earplugs feature Sensear's world-first patented SENS® technology (Speech Enhancing Noise Suppression) for high quality clear speech communication and optimum hearing protection in high noise environments and across all classes of noise.

**Communication Innovation**

Introducing the latest advance in communication and optimum hearing protection for high noise environments.

The Sensear SP1 and SP1x (Bluetooth®) earplugs have been designed for comfort, quality and endurance in the field, enabling clear communication above 85dB(A) without the need to remove hearing protection.

Sensear's SP1 and SP1x earplugs feature SENS® technology, a radical new innovation unique to Sensear products and the latest and most effective advance in the fight to eliminate Noise Induced Hearing Loss (NIHL) recognised by the World Health Organisation as the most common occupational illness globally.

**Attenuation Data**

**SP1x with Foam Ear-tips:** Hearing protector CLASS 5 tested to AS/NZS 1270:2002. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise up to 111dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protector class.

| Attenuation Data                   |      | SP1x with Foam ear-tips |      |      |      |      |      |                   |  |
|------------------------------------|------|-------------------------|------|------|------|------|------|-------------------|--|
| F (Hz)                             | 125  | 250                     | 500  | 1000 | 2000 | 4000 | 8000 | SLC <sub>90</sub> |  |
| Mean Attenuation (dB)              | 29.2 | 29.3                    | 30.7 | 28.7 | 32.9 | 40.1 | 42.1 | 26dB              |  |
| Standard Deviation (dB)            | 5.1  | 5.3                     | 9.1  | 7.6  | 4.6  | 3.8  | 5.0  |                   |  |
| Mean minus Standard Deviation (dB) | 24.1 | 24.0                    | 21.6 | 21.1 | 28.3 | 36.3 | 37.1 |                   |  |

**SP1x with TPE (Silicon) Ear-tips:** Hearing protector CLASS 4 tested to AS/NZS 1270:2002. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise up to 108dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protector class.

| Attenuation Data                   |      | SP1x with TPE (Silicon) ear-tips |      |      |      |      |      |                   |  |
|------------------------------------|------|----------------------------------|------|------|------|------|------|-------------------|--|
| F (Hz)                             | 125  | 250                              | 500  | 1000 | 2000 | 4000 | 8000 | SLC <sub>90</sub> |  |
| Mean Attenuation (dB)              | 29.2 | 29.2                             | 29.2 | 26.4 | 29.7 | 31.1 | 39.4 | 23dB              |  |
| Standard Deviation (dB)            | 6.3  | 7.1                              | 7.6  | 7.7  | 4.4  | 7.6  | 7.0  |                   |  |
| Mean minus Standard Deviation (dB) | 22.9 | 22.1                             | 21.6 | 18.7 | 25.3 | 23.5 | 32.4 |                   |  |

Tested according to ANSI S3.19-1974

| Attenuation Data         |      | SP1x with Foam ear-tips |      |      |      |      |      |      |      |      |  |
|--------------------------|------|-------------------------|------|------|------|------|------|------|------|------|--|
| F (Hz)                   | 125  | 250                     | 500  | 1000 | 2000 | 3150 | 4000 | 6300 | 8000 | NRR  |  |
| Mean Attenuation (dB)    | 40.0 | 42.6                    | 43.2 | 40.0 | 39.0 | 43.9 | 46.3 | 47.6 | 47.9 | 31dB |  |
| Standard Deviation (dB)  | 3.6  | 4.8                     | 5.0  | 4.9  | 3.7  | 4.2  | 4.1  | 2.6  | 3.0  |      |  |
| Real-Ear Protection (dB) | 32.8 | 33                      | 33.2 | 30.2 | 31.6 | 35.5 | 38.1 | 42.4 | 41.9 |      |  |

| Attenuation Data         |      | SP1x with TPE (Silicon) ear-tips |      |      |      |      |      |      |      |      |  |
|--------------------------|------|----------------------------------|------|------|------|------|------|------|------|------|--|
| F (Hz)                   | 125  | 250                              | 500  | 1000 | 2000 | 3150 | 4000 | 6300 | 8000 | NRR  |  |
| Mean Attenuation (dB)    | 33.9 | 34.9                             | 31.2 | 29.9 | 33.2 | 38.8 | 40.0 | 41.6 | 42.9 | 25dB |  |
| Standard Deviation (dB)  | 4.9  | 5.5                              | 3.5  | 2.5  | 3.5  | 4.3  | 5.1  | 3.8  | 3.7  |      |  |
| Real-Ear Protection (dB) | 24.1 | 23.9                             | 24.2 | 24.9 | 26.2 | 30.2 | 29.8 | 34   | 35.5 |      |  |

Tested according to EN 352

| European PPE Certification       |      | SNR    | H     | M     | L |
|----------------------------------|------|--------|-------|-------|---|
| Ear-tip type                     |      |        |       |       |   |
| SP1x with Foam ear-tips          | 32dB | >120dB | 119dB | 106dB |   |
| SP1x with TPE (Silicon) ear-tips | 30dB | >120dB | 119dB | 106dB |   |

**Replacement Parts & Accessories**

- Radio Connection Kits**  
 SRCK0000 Radio Connection Kit - Waris Motorola  
 SRCK0001 Radio Connection Kit - Aoba/Plus Motorola  
 SRCK0002 Radio Connection Kit - MTS/XTS Motorola

- Accessories**  
 SPPA0000 Power Pack Adaptor - Multi Zone  
 SCAJ0000 Cable Spiral Audio 2.5mm to 3.5mm Jack 150mm  
 SLPBW000 Leather Pouch with Belt Clip to suit SP1x

- Replacement Ear Tips**  
 SFT00100 Soft Foam Ear Tips - 10 Pairs (Grey)  
 SST00100 Silicon Ear Tips - 10 Pairs (Multi Salmon)  
 SFT00500 Soft Foam Ear Tips - 50 Pairs (Grey)  
 SST00500 Silicon Ear Tips - 50 Pairs (Multi Salmon)  
 SFT10000 Soft Foam Ear Tips - 1000 Pairs (Grey)  
 SST10000 Silicon Ear Tips - 1000 Pairs (Multi Salmon)

“Clear communication in high noise environments”  
 Sensear's new range of hearing protection earplugs feature world-first SENS® technology

Speaker output  
**Limited to 82dB(A) in the ear\***

\*When tested according to EN 352-7 below H, M and L criterion levels



**SENS® technology**  
 SENS® technology is a revolutionary technology invented by Sensear. It perfects the combination of speech enhancement and noise suppression technologies with a complex set of patented algorithms enabling what has previously been impossible, the ability to produce high quality speech audibility and optimum hearing protection in environments with noise levels above 85dB(A).



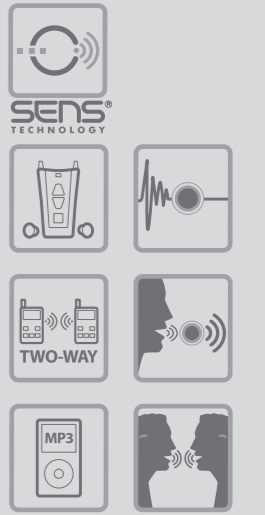
**Noise Suppression**  
 Sensear's SENS® technology recognises the different properties of speech and background noise thereby allowing noise to be suppressed without distorting the speech. The technology reduces background noise to comfortable levels while retaining the original sound characteristics of noise. This allows users to retain awareness of their surroundings for optimum safety.



**Speech Enhancement**  
 Sensear's revolutionary speech enhancement technology isolates and enhances speech in real-time, enabling users to hear speech clearly and safely in environments that until now has been impossible. Sensear's speech enhancement technology is effective for mobile phone calls and two-way radio communication as it enhances the wearer's speech and lowers background noise for the call receiver.



**Bluetooth®**  
 Sensear's x models incorporate Bluetooth® technology, enabling pairing and subsequent connection with mobile phones so that users can take and make mobile phone calls without removing hearing protection. SENS® technology + Bluetooth® means lower background noise for the call receiver, enabling natural and comfortable communication with the wearer.



Aux input with protector cover    Ruggedised for tough treatment    Bluetooth® LED indicator    Multi-directional microphone for clear communication    Lightweight and unobtrusive    Battery charge LED indicator    Flexible strain-relief protects cable    High-Visibility safety colours    Easy to use large buttons    Replaceable multi-fit soft earplug

**Product Details**

The world's first communication enabled electronic earplug effective in high noise environments makes the SP1 and SP1x earplug system from Sensear a winning choice for people requiring an unobtrusive design, combined with unparalleled communication functionality. The cost-effective SP1 and SP1x (Bluetooth®) earplugs and controller unit have all the features of premium hearing protectors, with the added benefit of making communication compact and easy in high noise environments.

Featuring simple, discreet styling, Sensear's SP1 and SP1x earplugs provide easy to use, maximum comfort hearing protection that allows clear communication beyond 85dB(A) via face to face, two-way and mobile phone (SP1x only). The easy to operate control unit can be worn discreetly around the neck, or in a pocket resembling an MP3 player. It can be used by workers in traditional settings as well as new markets including the domestic, entertainment, hospitality and security industries.

Bluetooth® technology combined with advanced SENS® technology in the SP1x earplugs offers optimised hearing and speech clarity when used with mobile phones. Offering all the features of the SP1x (without Bluetooth®), the SP1 is a premium product at a competitive price for those who still want to take advantage of face to face and two-way communication with earplug simplicity and optimum hearing protection.

Sensear's SP1/x earplugs ensure that hearing protection continues for workers when they need to communicate in high noise, featuring unparalleled effectiveness above 85dB(A), the point at which traditional hearing protectors struggle to perform.

Incorporating Sensear's groundbreaking SENS® technology, the SP1/x earplugs include Impact Noise Suppression and Binaural capability. The latter ensures that background noise is lowered to a safe level while retaining the natural qualities of the sound. The wearer retains awareness of their surroundings while being able to clearly hear the direction of all sound, including speech and alarms.

By addressing the need for hearing protection and clear communication in a diverse range of settings, Sensear's technology can prevent new cases of Noise Induced Hearing Loss. The SP1 and SP1x earplug range offer new comfort and safety for people already suffering hearing loss, who can now enjoy assisted listening via Sensear's unique Speech Enhancing Noise Suppression (SENS®) Technology. The discreet styling of SP1/x earplugs also opens a range of opportunities in cases of mild to moderate hearing loss among sufferers for whom hearing aids prove ineffective in background noise.

As well as the numerous safety benefits, users of Sensear products also benefit from the newfound ability to have normal interaction with work mates on the job. As described by one user in industry field tests, "the ability to hear the customers speak, talk on the two way and mobile, and not go home with my ears ringing, is unbelievable". Effective across the three classes of noise hazards: continuous, intermittent and impact, Sensear's SP1/x earplugs now mean one flexible product can be adopted by hospitality, entertainment and similar industries where the need to communicate is essential.

**Technical Details**

|  | SP1x | SP1  |
|--|------|------|
| Allows communication in environments above 85dB(A)                     | Yes  | Yes  |
| Protects against all forms of noise – Impact, Intermittent, Continuous | Yes  | Yes  |
| Safely hear your surroundings whilst also hearing speech               | Yes  | Yes  |
| Binaural Capability – Hear the direction of speech and other sounds    | Yes  | Yes  |
| Speaker limited to 82dB(A) in ear                                      | Yes  | Yes  |
| Face to Face communication   | Yes  | Yes  |
| Bluetooth® pairing to Mobile/Cell phone                                | Yes  | No   |
| Two-Way Radio Interface  | Yes  | No   |
| Boom Microphone not required   | Yes  | Yes  |
| MP3 Interface  | Yes  | No   |
| Replaceable Ear Tips   | Yes  | Yes  |
| High-Visibility Colour   | Yes  | No   |
| 12+ hours continuous talk time   | Yes  | Yes  |
| Industrial ruggedised  | Yes  | Yes  |
| 12mth Warranty   | Yes  | Yes  |
| Weight:  | 120g | 120g |