SM1P

# MANUAL

ENGLISH

English

## INTRODUCTION

The SM1P is a state of the art hearing protection communication system that allows you to retain situational awareness whilst remaining in full contact with your team via Short Range technology, as well as two-way radio or cellular device via Bluetooth® or wired connection.

Situational awareness is provided by SENS processing technology and environmental microphones mounted within the headset.

Contact through two-way radios is enabled by the SRCK61XX* cable assembly available separately. Cable numbers vary depending on the two-way radio model. Please consult with the website for more information.

*SRCK61XX part numbers vary depending on the radio connector. Consult your supplier for the appropriate cable.

For language translated manuals and further information, please refer to the website.

## HEADSET ANATOMY

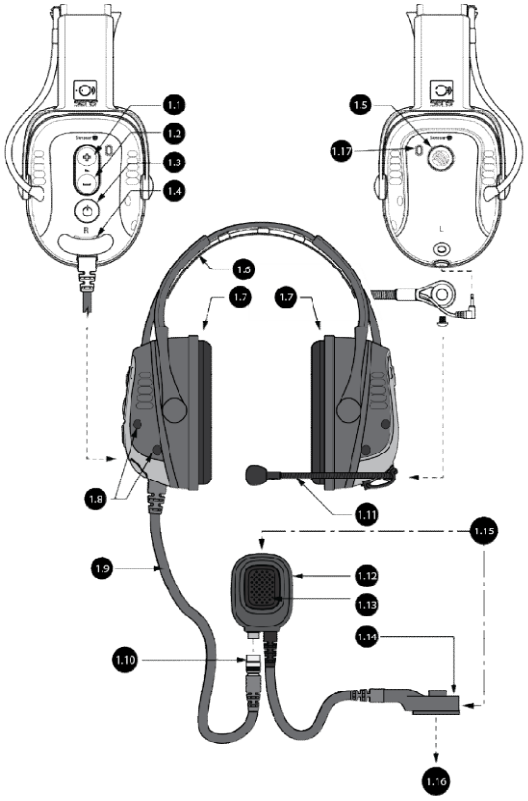



Figure 1

English

## FIGURE 1

| # | Description |
|---|---|
| 1.1 | Volume up button |
| 1.2 | Volume down button |
| 1.3 | Power button |
| 1.4 | Hatch cover, for programming and charging |
| 1.5 | Multi-function button (MFB) |
| 1.6 | Headband* |
| 1.7 | Ear cushions |
| 1.8 | SENS™ Microphones |
| 1.9 | Headset cable |
| 1.10 | Headset connector |
| 1.11 | Boom microphone<br>Mount - M5 Hex screw<br>Connector - 2.5mm Audio jack |
| 1.12 | Inline PTT |
| 1.13 | Inline PTT button |
| 1.14 | Two-way radio connector (note, these will vary depending on your two-way radio) |
| 1.15 | SRCK61XX cable assembly |
| 1.16 | To the two-way radio |
| 1.17 | LED light (one on each side of headset) |

## WEARING THE HEADSET

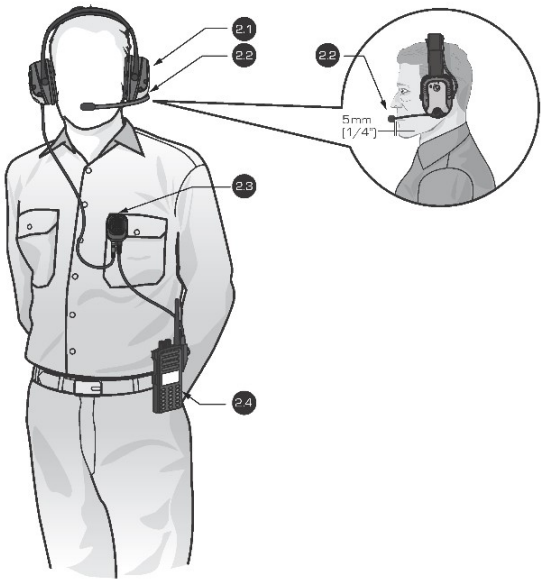



**FIGURE 2**

| # | Description |
|---|---|
| 2.1 | Headset |
| 2.2 | Boom microphone |
| 2.3 | Inline PTT |
| 2.4 | Two-way radio |

## WEARING THE HEADSET

The SM1P headset is designed to be worn with the headset sealing around the ears. Specific examples of how to fit the headset around the ears are covered in the next three pages. The fit does alter slightly depending on what style of brace is used - headband, behind the neck or mounted to a helmet directly.

The boom microphone should be placed approximately 5mm (1/4”) in front of the mouth. Check to ensure the white dot or microphone label is facing towards you. The orientation is essential as the microphone is directional. If the microphone faces a different direction, this may lead to a reduction in transmission quality.

The inline PTT has a rotatable clip behind it to allow it to attach to the shirt / upper garment.

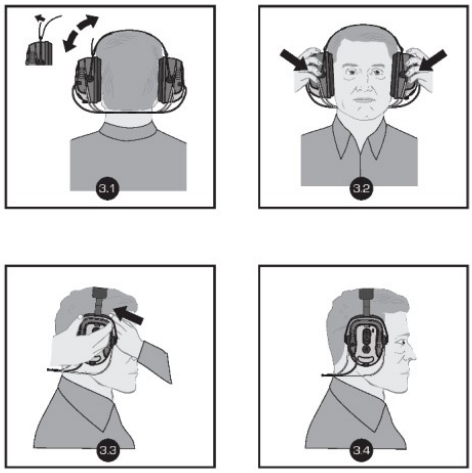
The inline PTT must be connected to the two-way radio using the multi-pin connector.

## FITTING THE HEADSET

It is recommended that the wearer should ensure that;

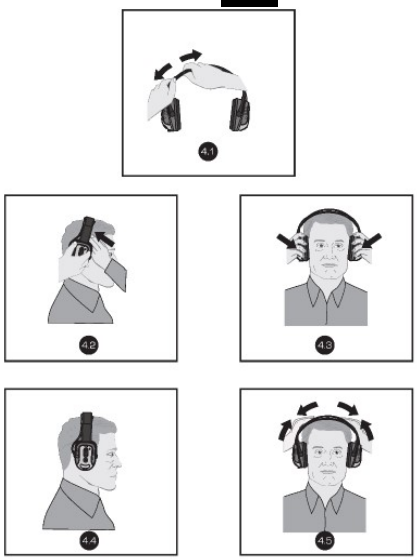
- The ear muffs are fitted, adjusted and maintained in accordance with the manufacturer's instructions
- The ear muffs are worn at all times in high noise conditions

If the above recommendations are not adhered to, the protection afforded by the ear muffs will be severely impaired.




## BEHIND THE NECK MOUNT FITTING INSTRUCTIONS

| # | Description |
|---|---|
| **3.1** | Adjust velcro strap so that the ear muff cups completely enclose the ears. |
| **3.2** | The ear muff cushions should seal firmly against the head. |
| **3.3** | For best results, remove all hair from under the ear cushion. |
| **3.4** | Noise reduction will be adversely affected by anything that breaks the seal of the ear muff ear cushions. |




## HEADBAND MOUNT FITTING INSTRUCTIONS

| # | Description |
|---|---|
| **4.1** | Adjust the headband by pulling the centre band out equally on both sides. |
| **4.2** | Ensure no hair is inside the muff ear cushions. |
| **4.3** | Fit the ear muffs over the ears ensuring a tight fit around the ears. |
| **4.4** | Ensure the muff completely surrounds the ears. |
| **4.5** | Press down on the headband to obtain a snug and comfortable fit. |

## HELMET MOUNT FITTING INSTRUCTIONS

| # | Description |
|---|---|
| **5.1** | Attach the adaptors to each side of the helmet by sliding them into the slots. |
| **5.2** | Attach the earmuffs by sliding into the adaptors. |
| **5.3** | Ensure the earmuff is firmly attached by lifting the arm up and down. |
| **5.4** | Place the helmet on the head and adjust by sliding the ear muffs up and down. |
| **5.5** | Earmuffs should seal firmly against the head. For best results, remove hair from under the ear muffs. |
| **5.6** | Three adhesive mounts and ties are included to secure the ear muff cable to the helmet. The mounts should be evenly spaced around the rear outside of the helmet. Fit the tie through the mount. The cable should feed through each tie and secured in place. |

English

## OPERATING THE HEADSET

**POWER ON:**

1. Press and release the “Power” button shown in Figure 1.
2. All the LEDs will turn on briefly, & an audible sound will be heard through the headset.
3. The Green LED will flash at a normal rate as described below.

**POWER OFF:**

1. Press and hold the “Power” button for 2 seconds.
2. All the LEDs will turn on briefly and an audible sound will be heard through the headset as the headset powers off.

**SENS™ MODE:**

When the headset is powered up, the unit is set into ‘SENS™ mode’**. By pressing the power button, this toggles ‘SENS™ mode’. ‘SENS™ mode’ allows full situational awareness of your surroundings in addition to two-way radio communications.

- The power button toggles between Quiet mode and SENS™ mode
- The volume control buttons can be used to raise or lower the audio level of the SENS™ mode.
- **The default mode on power up can be programmed using the Sensear app.

**QUIET MODE:**

By pressing the power button, this toggles ‘Quiet mode’. Quiet mode only allows two-way radio communications to pass through the headset.

| | |
|---|---|
| SENS™ mode | Green LED, blink twice every 4 seconds |

| | |
|---|---|
| Quiet mode | Green LED, blink once every 4 seconds |

**SETUP MODE:**

Setup mode enables a limited number of settings to be changed directly via the headset. This mode is separate from the normal headset operating mode. Some options will not be available if the product model does not support a feature or headset programming has removed the setup mode option. For further setup, a programming tablet will be required,

The options (with fully available feature set) are:

1. Short Range – region
2. Short Range – channel frequencies
3. FM Radio – enable/disable
4. VOX – feature assignment
5. VOX – trigger level

A short press and release of the power button will cycle through these options when in setup mode.

**Enter/exit setup mode:**

1. Headset is powered off
2. Hold Volume Up button
3. While holding Volume Up, Press & release Power button
4. Will hear “system setup”
5. Release Volume Up button

| | |
|---|---|
|  (short) | Cycle down through system setup options |

| | |
|---|---|
|  (long) | Power off the headset. |

The headset needs to be powered down before it can be powered up into its normal operating mode. Changes will be saved upon powering off the headset from setup mode.

**Changing Short Range region:** Ensure you hear “short range FM region”.

| | |
|---|---|
|  (short) | Increment/decrement through regions 1, 2 or 3. |

| Region | EIRP (uW) | Standards | FM frequency range (MHz) |
|---|---|---|---|
| 1 | 8.02 | AS/NZS 4268 | 88.1 – 107.9 |
| 2 | 0.048 | EN301357-1 | 88.1 – 107.9 |
| 3 | 0.012 | FCC-15.239 / IC RSS-210 | 88.1 – 97.0 |

**Changing Short Range frequencies:** Ensure you hear “short range FM frequency”.

| | |
|---|---|
|  (short) | **Change frequency:**<br>up = increment 0.1MHz,<br>down = decrement 0.1MHz |

| | |
|---|---|
|  (long) | **Change bank:**<br>up = increment bank,<br>down = decrement bank |

Note, frequency range is 88.1MHz to 107.9MHz (97.0 MHz for region 3).

The frequency/bank last selected in the setup mode will be the frequency/bank used when Short Range is turned on in normal operating mode.

**Changing FM radio enable:** Ensure you hear “FM radio”.

| | |
|---|---|
|  (short) | Toggle between “enable” and “disable”. |

**Changing VOX assignment:** Ensure you hear “VOX setup”.

| | |
|---|---|
|  (short) | Toggle between “disable” and “Short Range” |

**Changing VOX trigger level:** Ensure you hear “VOX level”.

| | |
|---|---|
|  (short) | cycle through “low”, “medium” and “high” trigger levels |

“low” is the most sensitive/easiest to trigger VOX and “high” is the least sensitive/hardest to trigger VOX.

# COMMUNICATING

## COMMUNICATING OVER TWO-WAY RADIO:

To transmit over the two-way radio:

- Press and hold the button located on the inline PTT.
- Release the inline PTT button to cease transmission.
- To change the volume of the two-way radio communications, use the two-way radio's volume controls

Notes:

- When the headset is powered off (and disconnected from the inline PTT), the inline PTT button may not activate the two-way radio. The PTT located on the two-way radio should be used.
- When the headset is powered on, the two-way radio PTT may not activate the two-way radio

## COMMUNICATING OVER SHORT-RANGE:

 (short press) together to toggle Short Range on / off.

When on:

| | |
|---|---|
|  | Short Range PTT |
|  (long) | Increment/decrement preset frequency bank |

When the headset is powered off it remembers the last selected frequency bank and the Short Range on/off state.

**Short Range VOX:** [See Operating the Headset - Setup Mode section for VOX setup information]

If VOX is assigned to Short Range, when Short Range turns on, you will hear the Short Range frequency announcement and then "VOX on". VOX can be toggled on and off:

| | |
|---|---|
|  [short] | Toggle VOX on and off (while Short Range is turned on) |

VOX does not trigger while there is an active signal on the Short Range frequency. A VOX transmission can be interrupted by pressing and releasing the Short Range PTT (i.e. MFB).
VOX will also not trigger when two-way is transmitting, Bluetooth® is in a phone call or when connected to a Bluetooth® radio.

**LISTENING TO FM RADIO:**

 (short press) together to toggle FM radio on /off.
Note, FM radio cannot be turned on while Short Range is turned on and vice versa.

When on:

| | |
|---|---|
|  (long) | Scan up/down to the next FM radio. |

When a Bluetooth phone call is entered, FM radio audio is muted. It will return when the call ends.

When the headset is powered off it remembers the last tuned FM radio frequency and the FM radio on/off state.

**COMMUNICATING OVER BLUETOOTH®:**

**First time pairing:** Press and hold the multi-function button (MFB) to put the headset into pairing mode. "Bluetooth® discoverable" when pairing mode is entered. Will hear a connection tone if connection successful. Pairing mode times out after 2 minutes.

Note, if Short Range is turned on, you must first turn it off to use the MFB for Bluetooth® pairing (see Short Range section). After the headset is in Bluetooth® pairing mode, Short Range can be turned back on.

**Reconnect:** When powered on the headset will try to reconnect to the last paired device. Alternatively, if the headset is not currently paired to another device, prompt the reconnection from a device (e.g. mobile phone that has the headset stored in its device list).

| | |
|---|---|
| Incoming call | Answer call:<br>a. From handset<br>b. Press and release MFB<br>Reject call:<br>a. From handset<br>b. Press and hold Multi-function button |
| During call | End call:<br>a. From handset<br>b. Press and hold Multi-function button<br>c. Call hung up on the far end |

**Two-way radio Bluetooth®:** To transmit, use the radio's PTT. For some select device, MFB will perform as a Bluetooth® PTT (if short range off).

Contact Sensear representative for compatible devices.

**Bluetooth® phone call:** During a Bluetooth® phone call, if two-way radio or short range are transmitting, outgoing Bluetooth® is muted while incoming audio is still heard. Once two-way and Short Range stop transmitting, outgoing Bluetooth® is restored.

**Bluetooth® Audio streaming:** For Intrinsically safe headsets, audio streaming can **only** be used in **Quiet mode**. Streamed audio will be mute in SENS mode. This is often used for streaming music but industrial use cases include Bluetooth® machine health analyzers.

**Blue LED Indicator:**

| | |
|---|---|
| Solid | Paring mode |
| Blinking slowly | Paired |
| Blinking fast | Incoming phone call |

## MAINTENANCE AND STORAGE

This product may be adversely affected by certain chemical substances. Further information should be sought from the manufacturer.

The headset contains replaceable cushions (Part #: SMHK0000). Cushions are recommended to be replaced every 3-6 months to maintain the appropriate hearing protection that the product is certified to. Cushions should be inspected regularly for signs of damage or wear. Cushions can be removed simply by gripping the cushion and pulling firmly to unclip from the baseplate. Replacement cushions may be pushed into the clips around the baseplate.

The headset should be stored at room temperature (between 15°C/59°F and 25°C/77°F).

## ACCESSORIES AND SPARE PARTS

The following accessories and spare parts may be ordered separately:

| | |
|---|---|
| SRCK61xx | Various models, two-way radio interface cables for most popular two way radios. |
| SMHK0000 | Ear muff hygiene kits |
| SMBE0000 | Behind-the-neck replacement band |
| SMBB0000 | Headband replacement band |
| SMHA0001 | SM1 Helmet Adaptor – MSA Vguard |
| SMHA0002 | SM1 Helmet Adaptor – Protector Allsafe |
| SMHA0003 | SM1 Helmet Adaptor – Protector Tuffmaster |
| SMHA0004 | SM1 Helmet Adaptor – Unisafe Unilite |
| SMBM0001 | Replacement boom microphone |
| SMAP0001 | Cooling Pads |

Further information may be obtained from your Sensear representative, via the Sensear web site, or by emailing or writing to the address on this User Manual.

## CHARGING

The Sensear SM1P headset is supplied with an AC adapter that operates globally when fitted with the appropriate electrical regional adapter.

To charge the headset, follow the steps below:

1. Plug the Sensear AC adapter into an appropriate power outlet.

2. Insert the cable end of the Sensear AC adapter into the DC power socket on the SM1P headset.

3. The LEDs will flash as indicated below:

| | |
|---|---|
| Red LED blink twice every 5 seconds | Battery low (< 1 hour left) |
| Red LED solid | Charging |
| Green LED solid | Charge complete |

**Notes on Battery and Charging**:

- Over 24 hours of battery life when fully charged.
- Up to 7 hours for complete recharge.

English

## DECLARATION OF CONFORMITY

We, the undersigned,

| | |
|---|---|
| Company | Sensear Pty Ltd |
| Address | 199 Great Eastern Highway, Belmont, WA, 6104 |
| Country | Australia |
| Telephone Number | +61 8 9277 7332 |
| Fax Number | +61 8 9277 7338 |
| Web | http://www.sensear.com |
| Email | info@sensear.com |

Declare that:

Model SM1P in accordance with the following directives:

- 2011/65/EU
- 1989/686/EEC
- 2014/53/EC
- 2014/35/EU
- 2014/30/EU

Has been designed and manufactured to the following specifications:

- ETSI EN 352-1, EN352-3, EN352-4 and EN 352-6
- EN 301 489-1: V2.1.1 (2017-02)
- EN 301 489-17: V3.1.1 (2017-02)
- EN 300 328: V2.1.1 (2016-11)
- EN 61000-6-2 Ed 3.0
- EN 61000-6-3 Ed 2.1

- EN 301 357-1: V1.4.1
- EN 60950-1:2006 inc amendments A1, A2, A11, A12