

Sonetics[®]

**APX37x
DECT7, Bluetooth, and Electronic Headsets**

Manual



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Overview

The Sonetics APX37x Electronic Headset protects you from dangerous noise while keeping other audio at a comfortable listening level. It protects your hearing without sacrificing your safety or situational awareness. You can hear alarms, music, or even have a face-to-face conversation while still being protected. Simultaneous integration with two-way radios, cell phones, and MP3 players is available via wired and optional Bluetooth inputs. DECT7 models extend conference-call-like team communication up to 1,600 feet (line of sight). The rugged and comfortable design ensures this headset is ready for tough work environments.

Model Matrix

	APX372	APX373	APX375	APX377	APX379
Boom Microphone	✗	✓	✓	✓	✓
Listen Through	✓	✓	✓	✓	✓
Dosimeter	✓	✓	✓	✓	✓
Wired AUX	✓	✓	✓	✓	✓
Wireless Bluetooth	✗	✗	✓	✗	✓
Wireless DECT7	✗	✗	✗	✓	✓

✓ = Included

✗ = Not Available

Replacement Parts

Silicone Ruggedizers

Earseals

Mic Muffs

Head Bands and Head Straps

Batteries

Speaker Covers

Contents in Box



Headset

1 ea x Apex Headset



Manual and Reference

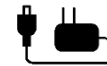
1 ea x Quick Reference Guide

1 ea x Manual (online at: www.soneticscorp.com)

1 ea x FCC / IC / NRR compliance sheet

1 ea x Warranty Card

1 ea x Accessory Sheet



Charging

1 ea x AC Wall Adaptor

1 ea x DC Cigarette Lighter Adaptor



Accessories

1 pair x High Visibility Yellow Ruggedizers (Installed)

1 pair x ComLeather Earseals

1 ea x USB Cable



Tools

1 ea x Headband/Battery Removal Tool
(Sonetics Screw Driver)

Accessories (not included)

Hard Hat Adaptors

Auxiliary PR Radio Interface - Connect to any portable two-way radio and many other devices

Silicone Ruggedizers in a variety of colors to meet your team's needs

Earseals to enhance comfort

Worldwide Power Adaptor

Heavy Duty DC Charging Cable

Features

Common Features, All Models

Adjustable Volume Control

The Headset has a user adjustable volume control. For convenience, the Headset will remember the last setting each time it is turned on.

Automatic Loud Noise Suppression

The Headset will limit high impulse sounds, such as gun shots, from being transmitted to the user when using the Stereo Listen Through.

Convertible Headband

The Headset is user configurable for overhead, behind-head, or hard hat (with hard hat accessory). This gives the user the ability to change the way they use the Headset over time without needing to invest in a new one.

Multi-Color Ruggedizers

The ruggedizers offer additional abrasion and impact protection. They are available in many colors (sold separately) to give the user the ability to define teams, roles, or enhance safety.

Extreme Environmental Design

The Headset has an IP-66 dust and water egress rating. Even when worn in heavy rain, the Headset will still be useable. Operation has been verified to -22F / -30C for extreme cold weather environments.

Flexible Charging

An AC adaptor and DC automotive charging cable are included to allow charging in most environments.

Hearing Protection

The Headset conforms to many hearing protection standards, keeping the user safe from harmful noise.

In Headset Charging

The Headset has charging circuitry built in allowing it to be charged from multiple sources. These include the supplied AC wall adaptor and multiple DC charging options from a variety of sources including most cars, trucks, and aircraft. Refer to specification for charging voltages and power requirements.

Light Weight

Through the use of the latest weight saving technologies, Sonetics is able to deliver a wireless headset that is lighter than many wired headsets.

Listen Through Situational Awareness

The Headset has two listen through microphones to give the user stereo situational awareness. The microphones are placed on the forward edge of the headset to give the user the perception of sounds in the front versus from the rear. The listen through has a programmable volume level and limits all sounds the user hears to 82dB.

Long Battery Life

With over 24 hours of battery life on DECT7 Headsets, and 44 hours of battery life on those without, the Headset works whenever the user needs it.

Multimode Auto Shutdown

To extend the life of the batteries, the Headset will automatically shut down.

Bluetooth and DECT7 Wireless Shutdown: If a DECT wireless connection has been established, the Headset will power down after 5 minutes if the connection is lost.

Non-Activity Shutdown: Headsets shut down after 1 hour if not used.

The headset will announce when it is about to shut down. Shutdown may be cancelled by pressing any button.

Sound Dosimeter

The Headset measures the sound level inside the ear cup cavity over a period of up to 24 hours to ensure noise exposure limits are being followed. The headset will remember the TWA (Time Weighted Average) even when turned off (the memory will reset after being turned off for 6 hours). The average is kept continuously for the previous 24 hour period. Programmable audio alerts notify you of the previous 24 hours of exposure. The system automatically adjusts the various inputs (listen through, AUX, Bluetooth, DECT, and side tone) to ensure compliance to hearing protection standards.

Two Stage Low Battery Alert

The Electronic Headset has a two-stage low battery alert system to notify the user of a depleted battery before communications are lost.

USB Programmable

Using their USB port, Headsets can be configured using a Windows PC. Many of the features may be customized and saved. Refer to the Sonetics Headset Software for details.

User Replaceable Battery

The Electronic Headset uses a replaceable battery. This allows the user to replace the battery at end-of-life and have spares in the field for extended operation times. Only Sonetics batteries should be used.

Voice Prompts

Voice prompts allows the user to make all adjustments without removing the headset. There is no need to look for lights, text, or knob positions. The voice prompts automatically adjust volume to ensure intelligibility in changing environments.

Wired Line-in

The wired line-in is used to interface with cell phones and hand held radios. This gives the user more flexibility in their communication needs. The wired connection features a mono input and mono PTT output. See your Sonetics dealer for accessories to match your equipment.

Common Features, Communication Headsets

Not available on the APX372 headset.

Auto-Leveling Microphone

The Headset automatically detects the voice of the user against noise in the background. This gives the headset an automatic VOX (noise gate or squelch) that needs no adjustment when transitioning from areas of differing noise levels.

Noise Cancelling Microphone

Noise cancelling microphones remove background noise right at the mic element. This lets listeners hear the person talking and not the background noise.

Radio PTT

The Headset interfaces with any two-way portable radio using the wired AUX input or wireless DECT connection. When there is a wireless DECT connection, the PTT signal is passed to the wireless DECT7 Wireless Base Station and onto the Digital Intercom. Otherwise, the PTT signal is passed to the wired AUX input.

Wireless Bluetooth® Technology

Available on the APX379 & APX375 headsets.

Bluetooth enabled Wireless Headsets can connect with other wireless Bluetooth enabled devices. This lets you connect an additional audio or communications device. Cell phones, mp3 players, mobile radios, computers, etc. expand your communications potential.

A2DP Audio Streaming

The Headset features integrated A2DP streaming audio functionality, so you can listen to music or podcasts, and hear turn-by-turn direction information from a GPS application on your phone. You can also use this feature to stream audio from a Bluetooth-enabled computer to the headset.

Wireless DECT7 Communications

Available on the APX379 & APX377 headsets

The Sonetics Wireless DECT7 Headsets enable full duplex, conference-call-like communications to others on the same channel. The Headsets will connect to stand alone Sonetics Wireless Base Stations or Sonetics IP-DECT7 wireless systems. A DECT7 network gives up to 1600ft of range (line of sight) from its wireless base with interference free, digitally encrypted communications.

Backwards Compatibility

Sonetics Wireless Headsets are backwards compatible with Sonetics first generation wireless DECT, and DECT6 Wireless Base Stations with minimal loss in functionality.

Broadcast Mode

The Headset may be paired into a listen only mode of operation, reducing power consumption considerably. This also allows many more headsets to be connected to a Wireless Base Station simultaneously. Pressing the Radio PTT button allows the headset to momentarily talk on any available slot. A tone will let the user know when they can talk. After talking, there will be a slight delay when other users cannot be heard. Refer to the Wireless Base Station manual for details.

Dual Dome Antenna Design

Each dome has a separate DECT7 antenna using diversity switching to lock onto the best signal. The user never needs to worry about head position relative to the wireless base. The best possible connection is delivered at all times.

Radio PTT or Intercom Only Selection

The Headset may be configured to send a transmit signal to radios connected via a DECT7 Wireless Base Station or Intercom. The user can transmit over multiple radios depending on the configuration.

Multi-Channel System

Depending on the wireless DECT7 Wireless Base Station or IP-DECT7 system, the user may have access to multiple channels. This allows large teams to have separate channels for different activities and enables users to change channels and become one communication team. Refer to the Wireless Base Station manual for configuration details.

Out of Range Warning

The user is notified when DECT7 signal is weak, or when it goes out of range.

Proximity Pairing

To enhance security, the Wireless Base Station will only pair to wireless DECT7 units in close proximity. This adds another layer of protection for users.

Signal Strength Reporting

The Headset may be placed into a field diagnostic mode to detect signal strength at The Headset. This can be used to optimize placement of Comhubs or Base Stations.

Wide Band Audio

Wireless DECT7 communications are transmitted in a high definition wide band audio format. This gives better sound quality, greater intelligibility, and improves with voice activated control systems. The Headset can also be used in narrow band if necessary.

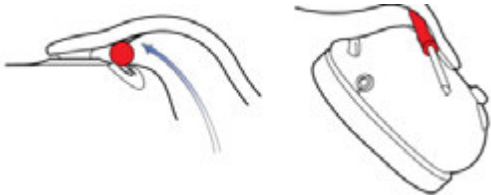
Configuring the Headset

The Sonetics Electronic Headset may be set up for use in overhead, under-helmet, or hard hat (sold separately) configurations. Different headbands are attached through a secure snap joint on the side of the ear domes. It keeps the ear dome correctly oriented while providing full freedom of movement, allowing the dome to seat comfortably against the users head.

Headband Removal

Tools Required: Sonetics Screwdriver

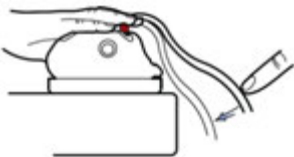
1. Place the handle of your Sonetics Screwdriver between the headband and the dome. Make sure the handle is behind the notch on the inside of the headband.



2. Use one hand to hold the dome on a flat surface



3. Gently push with the headband with the other hand.



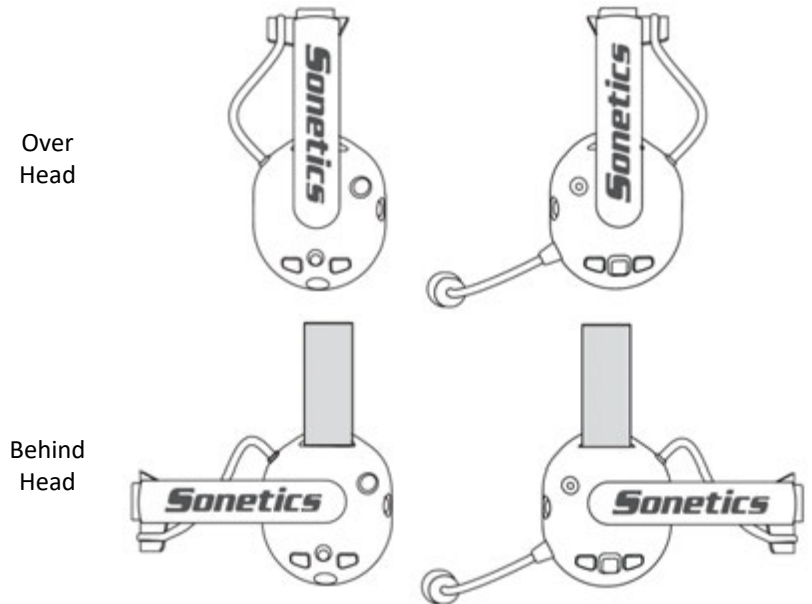
4. Route the headband cable through the headband as shown.



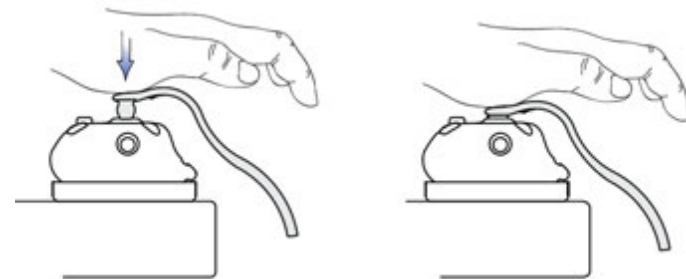
Headband Installation

✘ Tools Required: None

1. Align the headband with the domes as shown.



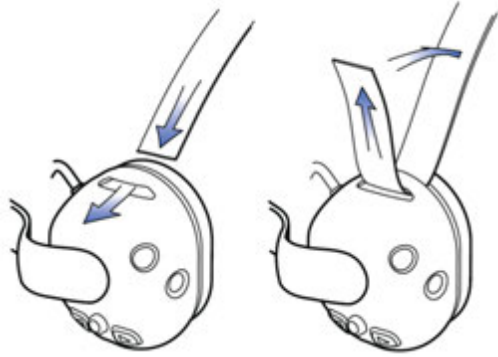
2. Place the Dome onto a flat surface.
3. Press Down on the headband until the ball joint snaps into place.



Behind Head Headstrap Installation

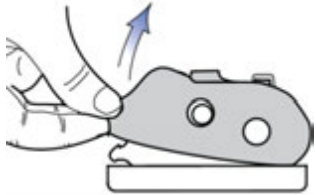
✘ Tools Required: None

1. Insert the strap at dome opening.
2. Affix the strap using the hook and loop.

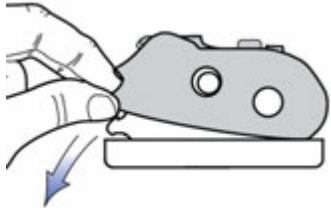


Replacing the Ruggedizer

1. [Remove the headband](#)
2. Peel back the ruggedizer



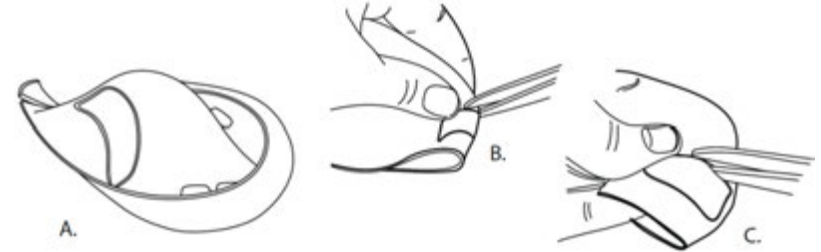
3. Replace the ruggedizer. Note the left and right.



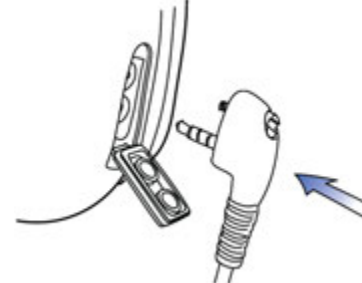
Connecting a Two-Way Radio

✘ Tools Required: Scissors, Sonetics screwdriver

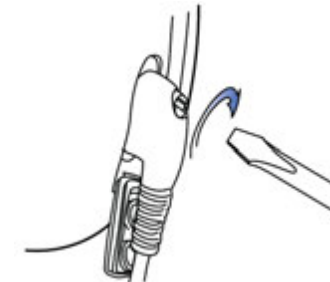
1. [Remove the left dome ruggedizer](#). (with the microphone boom attached)
2. Cut the along the groove on the underside of the ruggedizer.



3. [Replace the ruggedizer](#).
4. Open the Radio Cover and plug in the Sonetics PR Radio Adaptor.



5. Screw the adaptor into place.



6. Connect the Sonetics PR Radio Adaptor to the Radio.

Fitting

Proper fitment is required to achieve the rated hearing protection levels.

Overhead Fitment

1. Inspect



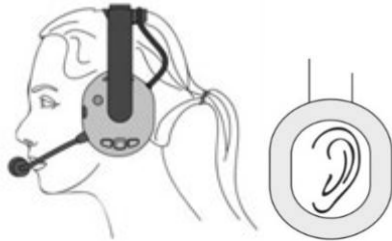
Ensure no damage to the earseals or the Headset

2. Expand



Open headband to full width

3. Place



Place cups over ears, without sitting on any part of the ear

Position microphone no more than 1/8" from lips

4. Adjust



Adjust headband to sit gently on top of your head

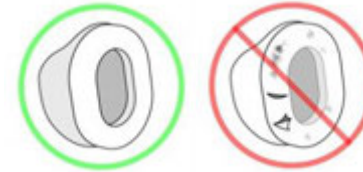
5. Seal



Test seal by pressing against your head and listening for a change in sound level

Behind Head Fitment

1. Inspect



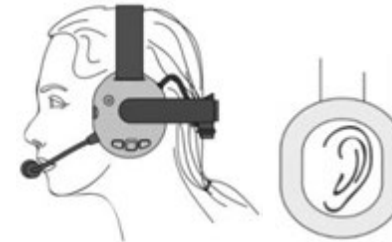
Ensure no damage to the earseals or the Headset

2. Expand



Open headband to full width

3. Place



Place cups over ears, without sitting on any part of the ear

Position microphone no more than 1/8" from lips

4. Adjust



Adjust headband to sit gently behind your head (UHW headsets are fixed)

5. Seal



Test seal by pressing against your head and listening for a change in sound level

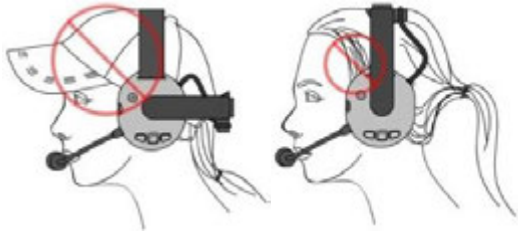
Fitment Warnings

Improper Placement and Adjustment



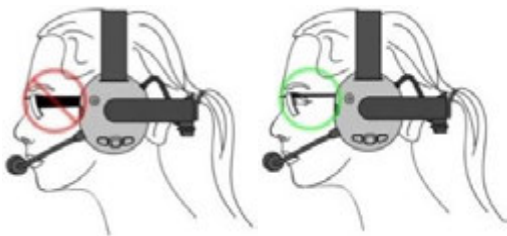
Obstructions

Ensure headwear and hair does not cause gap in the earseal.



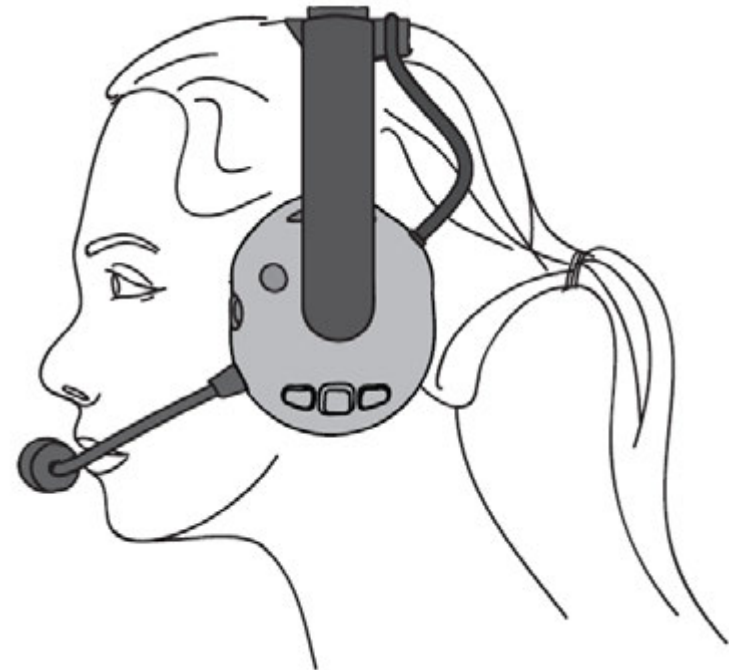
Glasses

Ensure Glasses do not cause a gap in the earseal.



Microphone Placement

To optimize speech, a noise cancelling microphone is used. This type of microphone is designed to enhance sounds from very close, while reducing sounds from afar. Ensure proper placement for best results.



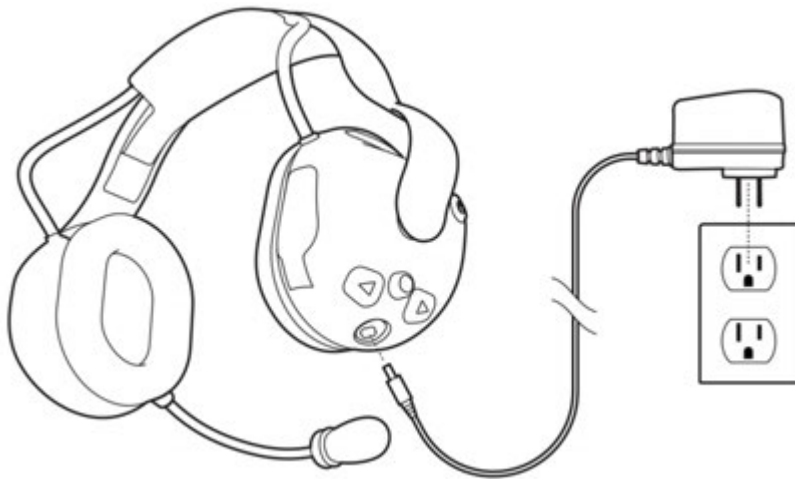
Charging

The Sonetics Electronic Headsets use a barrel charging jack with the connections shown below.



Wall Adapter Charging

Only charge the Headset using the supplied 12VDC regulated wall adapter.



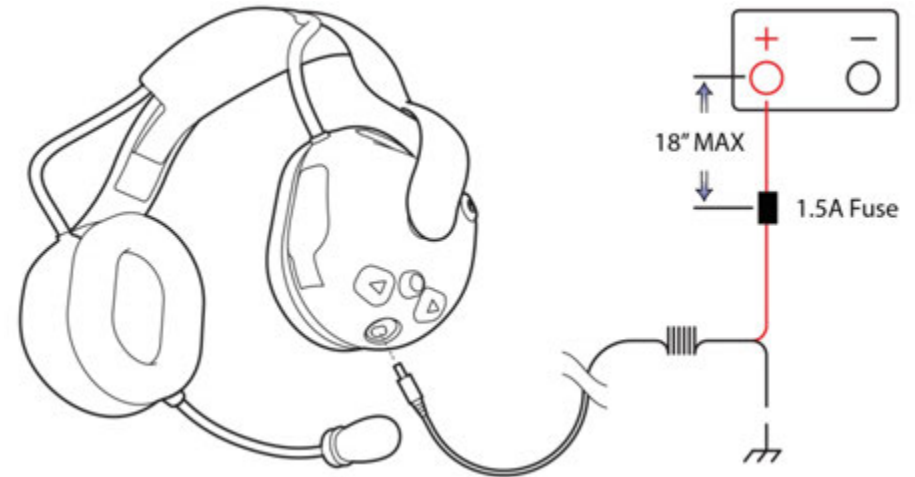
⚠ WARNING: Using unregulated wall adapters will damage the Headset and void the warranty.



Vehicle Charging

Connect the **RED** wire to +12VDC and the **BLACK** wire to battery chassis ground.

Install the fuse no further than 18" from the battery.



⚠ WARNING: Only replace fuse with the same type, 1.5A AGU.
⚠ WARNING: Voltages exceeding the Headset charging specification will damage the Headset. Verify the Headset voltage specification to the vehicle battery and charging system specifications.

Battery Replacement

Sonetics Electronic Headsets use a Lithium Ion battery. Sonetics batteries are the only batteries that have been tested and verified to operate correctly with the Headset. Use only Sonetics approved batteries (Sonetics part #320-0015-00). Use of batteries from other sources will void your warranty.

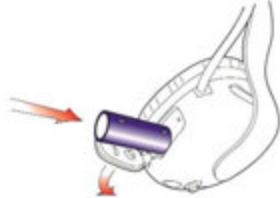
⚠ WARNING: Use only Sonetics approved batteries.

✂ Tools Required: Sonetics Screwdriver (Flat Head Screwdriver)

1. Pull back the right ruggedizer if the Headset has one installed.
2. Open the battery door on the right dome using the screwdriver.



3. Remove the battery, and recycle or discard per local laws. Refer to [Rechargeable Battery Information](#).
4. Insert the replacement battery, positive end first.



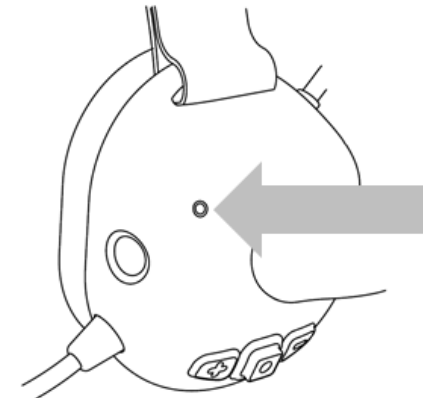
5. Close the battery door and tighten the screw.



6. Replace the ruggedizer if installed.

LED Indications

The Sonetics Electronic Headset uses a multicolor LED indicator to give additional information on the exterior of the Headset. The table below describes the behavior while charging or in use.

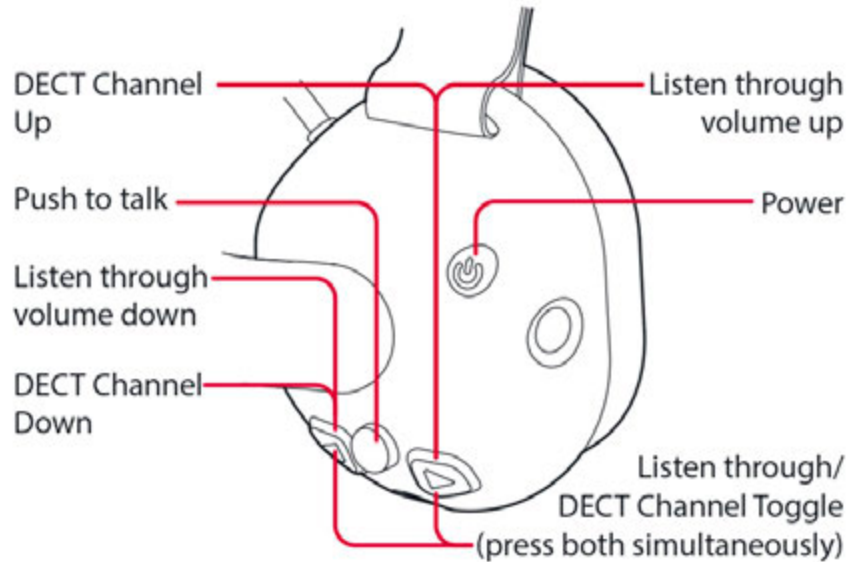


Charging	Non-Charging	Function
	Red Flash ● ● ● ●	Headset On
	Blue Flash ● ● ● ●	Bluetooth® Connection Established and in progress
	Red/Green ● ● ● ●	Headset in DECT pairing mode
	Green Flash ● ● ● ●	DECT Connection Established and in progress
	Blue/Green ● ● ● ● ● ● ● ●	Both Bluetooth and DECT connections Established and in progress
	Flash ● ● ● ● Led color will vary Depending on connection type	Battery Level ● ● ● ● = Battery >75% ● ● ● = Battery 50-75% ● ● = Battery 25-50% ● = Battery <25%
Red Solid		Charging
Green Solid		Fully Charged

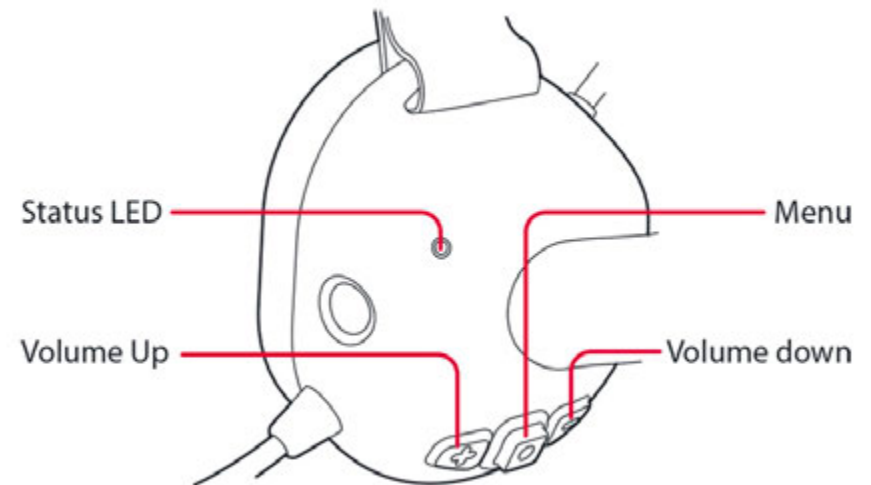
Settings & Operation

Buttons


Right Side




Left Side





Turn On

Press and briefly hold the power  button. You will hear the welcome message and the LED on the right hand side of the unit will begin to flash periodically.



Turn Off



Press and briefly hold the power  button. You will hear the Headset powering down message and the LED will turn off.

Adjusting the Main Volume

Press the plus  or minus  buttons on the left-hand side of the Headset.

Adjusting the Listen Through Volume / DECT7 Channel Select

Press the forward  or back  button on the right-hand side of the Headset.

Pressing the forward  and back  buttons will toggle between listen through and DECT7 Channel (if the Headset has a DECT7 connection).

Advanced Menu

The Advanced Menu is to set-up and configure the Headset for use. Caution must be taken with these adjustments, as they change the operational characteristics of the Headset. When in the menu system, all functions except PTT and Power are locked out.

To Enter the Advanced Menu

1. Turn the headset off.
2. Simultaneously press and hold the forward ►, back ◀, and Power 🔌 buttons until you hear “Advanced Menu”.

To Adjust Advanced Menu settings

1. Enter the Advanced Menu.
2. Repeatedly press the menu □ button until you hear your setting.
3. Press either the plus + or minus – to cycle through the options.

To Exit the Advanced Menu

1. Press the forward ►, PTT ○, or back ◀ button or wait 30 seconds to automatically exit.

Radio & Intercom Function

Sets the function of the PTT and Intercom.

Radio Transmit: For Radio PTT, when the Headset has a DECT connection, the PTT will activate only the DECT Radio wireless connection. When the Headset does not have a DECT connection, the PTT will activate the AUX Radio wired connection.

Intercom: This configures how the PTT and Noise Gate interact with each other while a person is talking with their local wireless team. If you can hear yourself through the side tone, others can hear you.

Factory Setting	Options:
“Radio VOX”: Radio Transmit on PTT ○, Hands Free Intercom	<ul style="list-style-type: none"> • “Radio VOX”: Radio Transmit on PTT ○, Hands Free Intercom • “Radio PTT”: Radio Transmit on PTT ○, Push to Talk Intercom • “Intercom VOX”: Hands Free Intercom only • “Intercom PTT”: ○ Push to Talk Intercom only • “Intercom Toggle”: ○Toggle to Talk Intercom only

Version Number (“Version 1”)

Indicates what firmware version your headset is running.

DECT Bandwidth (“DECT Wide”)

Factory Setting	Options:
“DECT Wide”	<ul style="list-style-type: none"> • “DECT Wide” – Better sound quality. • “DECT Narrow” – Better resistance to interference.

“Radio On” or “Radio Off”

Enabling this setting makes the headset read out RSSI (Received Signal Strength Indicator) numbers that tell you how strong the connection to The Base Station or Comhub is. This can be used to improve system installations.

Mic Sensitivity

The Mic sensitivity may be configured into multiple modes of operation to tailor to the user’s application. To access Mic settings, use the Advanced Menu, or press the Forward Arrow and the Plus Arrow simultaneously.

- To turn on the microphone, use “Mic ON”. This disables the Mic noise gate completely. A whisper will be heard by all.
- “Mic Auto” settings are automatic noise gates with increasing sensitivities.
- “Mic XX” settings are for stable SPL environments of increasing volume.
- Firecom 30XXR and 10 series intercoms require specific Mic Sensitivity settings for correct operation. “Firecom 4”, “Firecom 5”, and “Firecom 6”, are tailored specifically to work with these Legacy Intercoms. Use with other mic sensitivity settings will result in poor audio quality and clipped communications.
- When the user presses the Radio PTT, any noise gate will be removed.

Factory Setting	Options:
“Mic Auto 1”	<ul style="list-style-type: none"> • “Mic On” (No Noise Gate) • “Mic Auto 1” (Highest Sensitivity Automatic Noise Gate) • “Mic Auto 2” • “Mic Auto 3” (Lowest Sensitivity Automatic Noise Gate) • “Mic 80” (Noise Gate set to 80dB Environment) • “Mic 90” (Noise Gate set to 90dB Environment) • “Mic 100” (Noise Gate set to 100dB Environment) • “Mic 110” (Noise Gate set to 110dB Environment)

Dosimeter Settings

When on


The Headset will measure the A-Weighted sound pressure level (SPL) in each ear cup. The SPL is calculated and remembered to create a table of sound exposure over a 24 hour period. A Headset will not record values if turned off for more than 6 hours. When the SPL exceeds 85dB over an 8 hour period or exceeds the sound dose allowed by OSHA, the Headset will alert the user.

During the time of use, the Headset will dynamically control the various input volumes to ensure compliance with OSHA sound dosage standards.

Factory Setting	Options:
"Dosimeter On"	<ul style="list-style-type: none">"Dosimeter On" – OSHA (85dB dose, 8hrs, 115dB max)"Dosimeter Off" – Dosimeter disabled (Reset)

To Reset:

Method 1

1. Enter the Advanced Menu.
2. Repeatedly press the menu button  until you hear "Dosimeter <status>".
3. Cycle the Dosimeter on and off using the **+** or minus **-** buttons to clear the memory.
4. Exit the Advanced Menu

Method 2


1. Turn off the headset for 6 hours.

Wireless Bluetooth®

To create a new Bluetooth pairing

1. Turn off the Headset, then turn it back on.
2. The Headset will enter Bluetooth pairing mode for 10 minutes.
3. Enter connectivity options on your Bluetooth device and search for new devices. Once the search is complete select Sonetics-HS##. If prompted for a password, enter four zeros (0000).

To answer or hang up a call

Quickly press and release the menu  button.








Wireless DECT7

DECT7 headsets have the ability to use the Sonetics DECT, DECT6, DECT7 and IP-DECT7 wireless bases for communication. Protected regional frequencies in each region ensure interference free operation.

Pairing a DECT7 Headset

DECT7 Wireless Headsets use a semi-permanent link to a DECT7 Base Station or IP-DECT7 system. No additional steps are required once a Headset has been paired. Each time thereafter, the Headset will remember the Wireless Base Station and automatically reconnect.

To Create a New DECT Pairing

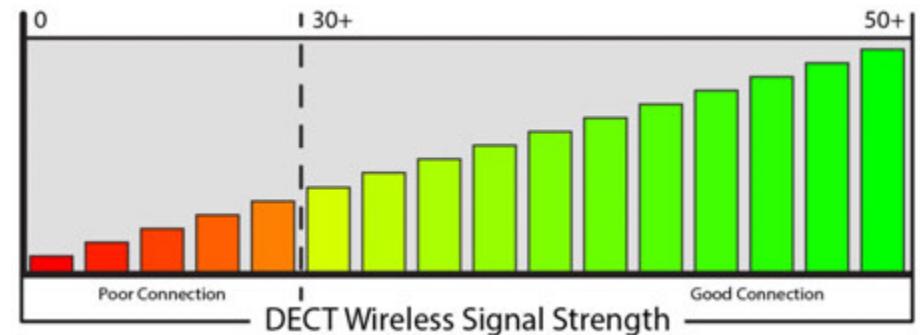
1. Turn off the Headset.
2. Put the Wireless Base Station into Pairing Mode.
3. Hold down the PTT  and power  buttons to turn on the Headset.
4. Keep holding the PTT  and Power  buttons until the LED begins to flash Red/Green .
5. Release the PTT  button.
6. If successful, the LED will begin to flash Green .
7. If not, repeat all steps.

To erase a DECT pairing, follow the pairing sequence above without putting the Wireless Base Station into pairing mode.

DECT Signal Strength

To use signal strength reporting

1. Make sure your headset has a DECT wireless connection.
2. Enter the Advanced Menu
3. Use the menu button to scroll through settings until you hear "Radio Off".
4. Use the **+** or minus **-** buttons to change the setting to "Radio On".
5. If the headset has a DECT connection, it will announce the signal strength every 10 seconds. If no DECT connection is present, there will be no announcement.



To exit, turn off the Headset.

Quick Launch

Most menu items are available directly via a series of buttons. Two buttons in the same row requires both buttons to be pressed.

Action	Button						
	⏻	-	□	+	◀	○	▶
Power On/Off	●						
Volume Up				●			
Volume Down		●					
Radio PTT						●	
Listen Through / DECT7 Channel Select Toggle					●		●
Listen Through Up							●
Listen Through Down					●		
DECT7 Channel Up							●
DECT7 Channel Down					●		
Bluetooth Answer			Short				
Bluetooth Hang-up			Short				
Advanced Menu (available at startup only)	Long				Long		Long
DECT Pairing	Long					Long	
Mic level				●			●

● = Press & Release

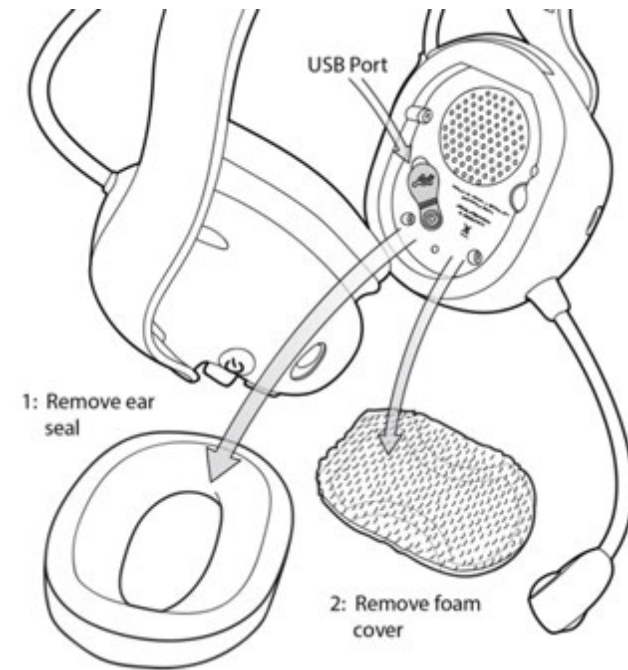
Short = Short Press & Release, <3 seconds

Long = Long Press, >3 seconds

PC Programming

All Headsets have a USB port located inside the left dome. A Windows PC with the Sonetics Configurator software installed is required to adjust headset features. Refer to the software for additional information.

Locating the USB Port



Installation of Sonetics Configurator Software for Windows

1. Go to www.SoneticsCorp.com/software.
2. Download and install the software for the Headset.
3. Plug in the USB cable from the Headset to the computer.
4. Open the software.
5. Follow the directions of the configurator software.

Care and Maintenance

- Inspect your ear seals and mic muff frequently for wear. If you see any defect such as holes or cracks in the ear domes, ear seals, or headband, the Headset should be immediately repaired or replaced.
- Wipe Headset and ear seals with a mild soap and water mixture only. The foam mic muff may be removed and cleaned using a mild detergent, or replaced by ordering from Sonetics.

⚠ WARNING: Do not store the Headset in high temperature environments or direct sunlight.

Mic Muff Replacement

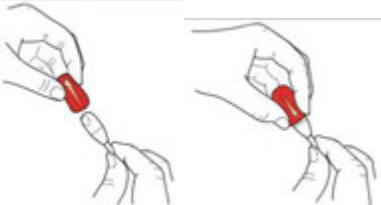
Replace the microphone windscreen every 3 months for optimal performance.

To replace the Mic Muff:

1. Remove the old mic muff and o-ring holding the mic muff in place.



2. Place the new mic muff over the microphone.



3. Slide the o-ring over the mic muff to hold it in place on the microphone as shown.



Ear Seal Replacement

Replace the ear seals every 6 months for optimal performance and to maintain the headset NRR.

⚠ WARNING: Worn ear seals will degrade the Headset's ability to reduce noise and protect the user's hearing.

To replace the ear seals:

1. Remove the old ear seal by pulling on the edge and peeling it over the lip of the ear dome.



2. Starting at the bottom, place the new ear seal on the dome. Pull over the lip of the ear dome using your finger. Do not use any sharp tool as it may damage the ear seal and reduce hearing protection.



Troubleshooting

If you are experiencing symptoms not covered here, or are having difficulty troubleshooting, call us or visit our website. We're here to help.

Service Contact:

800-833-4558

service@soneticscorp.com

General Connection Issues

1. Verify the Headset is turned on.
2. Verify the battery is charged and within its useable life.

Wired Auxiliary

1. Verify the connection to the 2-way radio.
2. Verify the programming in the radio.
3. Verify the PR adaptor to the make and model of the radio.
4. Verify the headset radio settings.

Wireless Bluetooth

Disconnects, intermittent connectivity, or difficulty finding, pairing, or connecting.

1. Verify your device and Headset model are Bluetooth compatible.
2. Check that you are in range of the Bluetooth accessory with which you are trying to pair your device.
3. Turn on Bluetooth on your device.
4. Turn on discoverable mode on your device.
5. Make sure no previously paired devices are turned on.
6. Cycle the power on the Headset and/or the device being connected to.
7. On your device, find the Headset in the list. If your device says Not Connected, tap the name of your Headset to attempt to connect it.
8. Fully charge both Headset and the device.
9. Delete the Headset from your device and create a new pairing.
10. Update your device to the latest Bluetooth firmware.

Wireless DECT

Disconnects, intermittent connectivity, or difficulty finding, pairing, or connecting.

1. Verify the Headset is a Wireless DECT model.
2. Check that you are in range of the DECT Wireless Base Station.
3. Verify the Wireless Base Station and the Headset are in pairing mode.

4. The Sonetics DECT7 Wireless Headset will only pair with other Sonetics DECT7 Wireless Base Stations.
5. Cycle the power on the Headset and/or the Wireless Base Station.
6. Fully charge both the Headset and the Wireless Base Station (if applicable).
7. Check location of the Wireless Base Station and external antenna location. The Wireless Base Station should not be installed inside metal enclosures or any other location closer than 4 inches to a metal object or surface.

No audio communication and/or PTT from or to the base.

1. Ensure that power is turned on to the Wireless Headset and it is connected.
2. Ensure that the modular communication cable is connected between the Wireless Base Station and Intercom.
3. Check the modular communication cable between the Wireless Base Station and Intercom for continuity.
4. Ensure correct polarity of the modular plug on both ends of the modular cable.
5. Verify the Headset radio settings.

Poor quality audio, low or distorted received or transmitted audio.

1. Verify the 'talk' text is facing the user's mouth on the microphone and located within ¼" of the user's mouth.
2. Make sure that the volume level is properly adjusted on the Intercom. For Digital Intercoms, set the volume level as high as possible on the Intercom without causing distorted audio on the Headset, and then adjust the volume control on the Headset for comfortable listening.
3. Ensure that the proper Wireless Base Station model for your Intercom is used.
4. Poor quality audio can be caused by a defective Headset. Confirm operation with a Headset known to be functioning properly.

Audible interference from portable and mobile radios.

The wireless system is tested and proven to be immune to interferences from portable and mobile communication equipment operated anywhere in the frequency spectrum from 30MHz to 18GHz. However, care should be taken with installation of communication cables between the Intercom and the Wireless Base Station. These cables should be routed away from portable and mobile radios and antenna cabling in order to prevent RF interference from such devices.

If a problem persists contact Sonetics Service for additional help.

Glossary

Wireless Base Station

Wireless DECT7 base unit through which Wireless DECT7 Headsets pair and link for voice communications.

Bluetooth

Wireless standard in the 2.4GHz wireless range.

dBA

A-Weighted SPL (Sound Pressure Level) unit of measure.

DECT

Digital Enhanced Cordless Telecommunications. A wireless standard in the 1.9GHz wireless range.

DECT7

DECT7 has all of the benefits of DECT with wider audio bandwidth and added features such as multiple channels and broadcast mode.

Dosimeter

Measures an individual's sound exposure over time. In this case the SPL.

Link(ing)

When a paired device re-connects to a paired device.

Pair(ing)

To create a semi-permanent wireless connection to a Base Station

PTT

Push to Talk. Typically used to describe radio transmitting.

SPL

Sound Pressure Level. Measurement of sound loudness. Measured in dBA.

Specifications

Headset

Weights

Over Head: 15.8oz / 448g | 17.8oz / 504g with Ruggedizers
Behind Head: 16.2oz / 458g | 18.1oz / 514g with Ruggedizers

Power

Battery: 3.7V rechargeable lithium ion
Battery Life: >24 hours @ 25C
Protection: Over voltage, under voltage, over current and over temperature protection
AC Charge source: Supplied 12VDC, 500mA wall charger
DC Charge source: 5VDC to 16VDC, 1.5A minimum
Charge Time: <4 hours for fully discharged battery

Environmental

Operating temperature: -22°F to 140°F / -30°C to 60°C
Storage temperature: -4°F to 122°F / -20°C to 50°C
Charging Temperature: 32°F to 113°F / 0°C to 45°C
IP-Rating: IP-66 (Dust tight, Protected from high pressure spray)

Regulatory

FCC

FCC ID APX379: V9N950325200V1
FCC ID APX377: V9N950325300V1
FCC ID APX375: V9N950325400V1
FCC Part 15: All Models

Industry Canada

IC UPN APX379: 7895A-950325200
IC UPN APX377: 7895A-950325300
IC UPN APX375: 7895A-950325400

ISO

Conducted Transients: 7637-2
Quality Management System Control: ISO 9001:2008

MIL SPEC

Chemical Exposure: Intermittent Exposure MIL-STD 810 Method 504: Isopropyl alcohol, [Formula 409®](#), [WD-40®](#), [Windex®](#), Bleach/Water (1:1), Mineral oil, Synthetic Sweat, Jet A Fuel, Kerosene, Gasoline, Deicing (Ethylene or Propylene Glycol mixtures), Potassium-Acetate based solution, Ansolite.

Not Approved for exposure to [Skydrol®](#).

Humidity: MIL-STD 810F and 810G
Temperature Shock: MIL-STD 810F and 810G

NFPA

NFPA1500: This device meets requirements

NRR

Behind Head NRR Rating: 24dB
Over Head NRR Rating: 24dB

SAE

Conducted Immunity: J1113-11
Electrostatic Discharge: J1113-13
Radiated Emissions: CISPR 25
Radiated Immunity: ISO 11452-2
Salt Spray: J1455, Sec. 4.3
Vibration: J1455 Sec. 4.9

UL

UL1642 Standard for Lithium Batteries

UN

UN38.3 UN Transportation Testing for Lithium Batteries

Bluetooth® Specifications

Class:	Class 3 Device
Frequency Bandwidth:	2400 MHz to 2485 MHz
Maximum Output Power:	0.0 dBi (peak)
Range:	Up to Bluetooth standard 33 feet (10 meters)
Version:	Bluetooth 3.0 with secure simple pairing

DECT Specifications

Common DECT Specifications

Carrier Spacing:	1.724 MHz
Time Slots:	2 x 12 (up and down stream)
Channel Allocation:	Dynamic
Encryption:	DECT Standard Cipher with 35-bit initialization vector
Audio Bandwidth:	300 Hz to 3.4 kHz, Narrow Band, G.726 compression 50 Hz to 7 kHz, Wide Band, G.722 compression

Region 1 Specific Specifications

Authorized for use in:	Canada, USA
Frequency Bandwidth:	1919.808 MHz to 1930.176 MHz
Number of Carriers:	5
Total Time Slots:	60 in G.726(narrow band) / 30 in G.722(wide band)
Average Output Power:	4 mW
Maximum Output Power:	100 mW
Range (line of sight):	1600 feet maximum

Important Safety Information

⚠ CAUTION! Follow all warnings and instructions marked on the product or contained in the owner's manual.

When using this product, always follow basic safety precautions to reduce the risk of fire, electric shock and injury to persons, including the following:

- ⚠ The Headset water and dust egress IP rating does not apply when the battery door or Auxiliary input door is open. DO NOT expose this unit to rain or moisture with either door open.
- ⚠ The Headset is not certified for explosive environments. Do not use the Headset to report a gas leak in the vicinity of the leak.
- ⚠ There are no user serviceable parts inside the Headset. Disassembly will void the warranty and will degrade the water sealing and hearing protection.
- ⚠ Use only the power adapters, power cords and batteries indicated in the manual. If more than one type of power adapter is included in the product, the manual specifies which adapter should be used for each component. Be sure to use the proper adapter for each product component.
- ⚠ Do not place the power cord where it creates a trip hazard or where it could become chafed and create a fire or electrical hazard.
- ⚠ Do not subject the unit to high temperatures or leave it in direct sunlight for an extended period of time.
- ⚠ Retention of dangerous objects: The Headset may hold small objects in the area of the earpiece. Before use, check that the earpiece area is free of staples, pins, clips or any other small metallic objects or foreign matter.

SAVE THESE INSTRUCTIONS

General Warning for Sensitive Electronic Devices

This equipment and any radio-based electronics can potentially cause electromagnetic interference with other equipment and can be interfered with other equipment. This also applies with DECT Equipment. Due to the very low transmission power associated with DECT, the chance for interference is small. However some specific precautions must be taken into account for sensitive electronic equipment, e.g. sensitive laboratory equipment, medical instruments or medical implants to avoid incidental influence of equipment operated in straight nearness to sensitive electronic equipment. You are therefore advised not to place the DECT equipment or its antenna in close proximity to sensitive equipment by maintaining a 20cm minimum distance between the sensitive equipment even in standby mode. Please also consider referencing the documentation provided by us and the manufacturer of sensitive electronic items guiding its proper usage.

General Communication Privacy Notice

Although this equipment may contain specific protocols that enhance security and privacy of communication, privacy of communication may not be ensured when using this equipment.



Industry Canada (I.C.) Notice (APX375, APX377 and APX379)

This section applies to radio frequency equipment bearing an I.C. Equipment ID Number (UPN).

This device if labeled with an IC UPN, complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:

- (1) le dispositif ne doit pas produire de brouillage préjudiciable, et
- (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Canada SAR Information:

This device contains a radio transmitter. This device has been shown to be capable of compliance for localized specific absorption rate for uncontrolled environmental / general public exposure limits specified in RSS-102, ANSI/IEEC95.1-2002 and have been tested in accordance with the measurement procedures specified in IEE 1528-2003.

Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Any Base Station or approved Base Station antenna meant to be used in conjunction with this equipment must not be used in close proximity to the body. Keep a minimum distance of greater than 20 CM to the human body. This device and antenna must not be co-located in conjunction with any other equipment antenna or transmitter.

IC Compliance Statement (for APX372 and APX373 only)

This Class A digital apparatus complies with Canada ICES-003 requirements for unintentional radiator for Class A Digital Devices.

CET appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.



FCC Part 15 Information (APX375, APX377 and APX379)

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Modifications not expressly approved by Sonetics Corporation could void the user's authority to operate the equipment.

FCC/IC RF Exposure Warning

- This product complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- The Headset is designed for body-worn operation and meets FCC RF exposure guidelines when used with accessories supplied with this product. (All necessary accessories are included in the package; any additional or optional accessories are not required for compliance with the guidelines.) Use of other accessories might not comply with FCC or IC RF exposure guidelines.
- This product may not be co-located or operated in conjunction with any other antenna or transmitter.
- Any Base Station or approved Base Station antenna meant to be used in conjunction with this equipment must not be used in close proximity to the body. Keep a minimum distance between human body and Base Station and base antenna of at least 20 CM (8.0 inches) at all times.
- This Headset device and antenna must not be co-located in conjunction with any other equipment, antenna or transmitter.
- This Headset has been tested and meets the FCC RF exposure guidelines.

FCC Part 15 Information (for APX372 and APX373 only)

FCC PART 15.105(a): Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.



Rechargeable Battery Information

⚠ CAUTION!

***Risk of explosion if battery is replaced by an incorrect type!
Dispose of used batteries according to the instructions.
Do not open or mutilate the battery.
Disconnect the battery before shipping this product.***

- ⚠ This equipment contains a rechargeable Lithium-Ion (Li-Ion) battery (with protection circuit). This battery is not user-serviceable.
 - ⚠ Do not modify or attempt to open the battery cell. In case of exposure to the cell contents, wash the affected area thoroughly and seek medical attention.
 - ⚠ Do not expose the battery to temperatures in excess of 140° F (60° C).
 - ⚠ Do not short-circuit the battery or expose battery to moisture
 - ⚠ Exercise care when handling a battery near conductive materials such as jewelry or buttons: conductive materials can short the battery, and the battery or conductor can overheat and cause burns.
 - ⚠ When charging this equipment, only use the charger designed to charge the battery as specified in the owner's manual: using any other charger may damage the product or cause the battery to explode.
 - ⚠ Before placing the Headset in the charger, make sure the battery is installed and the battery cover is securely in place.
 - ⚠ Do not place the batteries in your regular trash. All batteries must be recycled or disposed of in an environmentally sound manner. Contact your local waste management officials for information and regulations on the proper collection, recycling, and disposal of batteries.
 - ⚠ Use only the replacement batteries approved by Sonetics Corporation which have internal protection circuit, use of non-approved battery replacements may cause fire, injury or damage product.
 - ⚠ Always observe correct battery polarity during use and charging.
-
- ⚠ ***Do not place batteries in your regular trash.***
 - ⚠ ***All batteries must be recycled or disposed of properly.***

Important NRR Information

The EPA requires Sonetics Corporation to provide the following information to the user:

Model: NRR User Information (EPA Noise Reduction Rating)

Model (Behind Head) Attenuation Characteristics

		Frequency in Hz							
Subject	125	250	500	1000	2000	3150	4000	6300	8000
Mean	18.2	19.8	25.9	33.1	35.5	37.2	39.5	40.6	41.2
Std. Dev.	2.9	2.1	2.2	2.7	2.7	1.8	2.5	3.1	3.8

Overall device NRR when properly fitted is: = 24dB

Model (Under Helmet) Attenuation Characteristics

		Frequency in Hz							
Subject	125	250	500	1000	2000	3150	4000	6300	8000
Mean	18.2	19.8	25.9	33.1	35.5	37.2	39.5	40.6	41.2
Std. Dev.	2.9	2.1	2.2	2.7	2.7	1.8	2.5	3.1	3.8

Overall device NRR when properly fitted is: = 24dB

Model (Over-the-Head) Attenuation Characteristics

		Frequency in Hz							
Subject	125	250	500	1000	2000	3150	4000	6300	8000
Mean	18.2	19.8	25.9	33.1	35.5	37.2	39.5	40.6	41.2
Std. Dev.	2.9	2.1	2.2	2.7	2.7	1.8	2.5	3.1	3.8

Overall device NRR when properly fitted is: = 24dB

Notice: Improper fit of this device will reduce its effectiveness in attenuating noise (See fitting instructions).

Important Ear Muff Fitting Instructions:

- Inspect hearing protectors for dirt damage and foreign objects each time before you place the hearing protector / Headset on your head.
- Earmuffs offer excellent protection if the cups are fitted and adjusted properly. Your ears should be completely enclosed by the ear cups.
- Adjust the cups up or down to fit the headband securely at the crown of your head. Best performance is obtained when the cushions form a tight seal against your head.

(See Fitment Section for your specific Headset type located in this User Manual)

- Never attempt to physically modify/bend/overstress the headband which may compromise NRR rating, proper fit and void product warranty.
- Test the fit as follows:
 - 1) In a noisy environment, place the palms of your hands on both cups and push the cushions towards your head and release.
 - 2) You should not notice a significant difference in the noise level.
 - 3) If the noise seems to lessen when you press the cups, your earmuff is probably not fitted properly (If necessary reposition Headset and ensure hat, hair or jewelry are not interfering with proper fit/seal of the muff pad to head.
- Regularly check cushions for wear and clean them occasionally as necessary with a damp cloth or disinfect ear seal surface with non-alcohol PPE wipes. (Do not use harsh detergents or any solvents which may damage the ear seal over time). Check ear seal cushions for wear. If the cushions become hard, damaged or otherwise deteriorate, they should be replaced promptly (Contact Sonetics or your authorized dealer for exact replacement parts.
- **Warning:** Hats, balaclavas, glasses or other items worn on the head may potentially prevent proper sealing and reduce the level of hearing protection significantly which can possibly cause hearing damage.

Although hearing protectors can be recommended for protection against the harmful effects of impulsive noise, the Noise Reduction Rating (NRR) is based on the attenuation of continuous noise and may not be an accurate indicator of the protection attainable against *impulsive* noise such as gunfire.

Cautionary Note: The level of noise entering a person's ear, when a hearing protector is worn as directed, is closely approximated by the difference between the A-weighted environmental noise level and the NRR.

NRR Example:

1. The environmental noise level as measured at the ear is 92 dBA.
2. The NRR is (value on label) decibels (dB).
3. The level of noise entering the ear is approximately equal to [92 dB(A) -NRR] dB(A)].

CAUTION: For noise environments dominated by frequencies below 500 Hz "the C weighted environmental noise level should be used."

Warning: This communication Headset has been sealed by the factory to assure noise protection rating and lock out dust and moisture and has no internal user serviceable parts other than the batteries. Do not attempt to open or service the unit as this will potentially reduce NRR and the ability for the device to protect your hearing. Unauthorized disassembly, modification or servicing nullifies the warranty and may cause hearing loss or reduction in NRR rating if the factory seals or calibration are compromised.

Sonetics Standard Limited Warranty

Sonetics Corporation (“Sonetics”) warrants to the original purchaser of its products that products will be free from defects in materials and workmanship under normal and proper use for the period of **one (1) year** from date of purchase.

Sonetics Corporation will repair or replace, at its option, any products showing factory defects during this warranty period, subject to the following provisions and obligations:

1. This warranty applies only to a new product sold through authorized channels of distribution.
2. All work under warranty must be performed by Sonetics Corporation or Sonetics Authorized Service Center.
3. All returned products must be shipped to our address, freight prepaid, and Sonetics will return products to customer via ground freight. Any expedite fees or additional freight charges will be charged to customer.
4. Any attempt to repair, service, or alter the product in any way voids this warranty.
5. This warranty does not apply in the event of accident, abuse, misuse, liquid contact, improper installation, unauthorized repair, tampering, modification, fire, earthquake, or damage from other external sources – including damage caused by user-replaceable parts.
6. This warranty does not apply: (a) to consumable parts such as batteries, ear seals, intercom bags, cables, external power supplies, parts listed as accessories to a system, or other parts designed to diminish in function over time unless a failure is due to a defect in materials or workmanship; (b) to cosmetic damage or to defects caused by normal wear and tear or aging of the product; (c) to damage caused by use with non-Sonetics products; (d) to damage caused by operating the product outside the permitted or intended uses or environments described by Sonetics; (e) to damage caused by service performed by anyone who is not a

representative of Sonetics or an Sonetics Authorized Service Provider; (f) to a product or part that has been modified without the written permission of Sonetics; (g) if any Sonetics serial number has been removed or defaced.

7. This warranty does not extend to any other equipment, apparatus, vehicle, aircraft, or watercraft to which this product may be attached or connected.

THE FOREGOING IS YOUR SOLE REMEDY FOR FAILURE IN SERVICE OR DEFECTS. SONETICS CORPORATION SHALL NOT BE LIABLE UNDER THIS OR ANY IMPLIED WARRANTY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, NOR FOR ANY INSTALLATION OR REMOVAL COSTS OR OTHER SERVICE FEES. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS OF USE, WHICH ARE HEREBY EXCLUDED. TO THE EXTENT THAT THIS EXCLUSION IS NOT LEGALLY ENFORCEABLE, THE DURATION OF SUCH IMPLIED WARRANTIES SHALL BE LIMITED TO ONE (1) YEAR FROM DATE OF PURCHASE. NO SUIT FOR BREACH OF EXPRESS OR IMPLIED WARRANTY MAY BE BROUGHT AFTER ONE (1) YEAR FROM DATE OF PURCHASE.

Subject to the terms and limitations of this Sonetics Standard Limited Warranty, this warranty covers any new covered product found to be defective within the applicable warranty period. Sonetics reserves the right to examine the alleged defective covered product to determine whether this Sonetics Standard Limited Warranty is applicable, and final determination of warranty coverage lies solely with Sonetics. If Sonetics determines that warranty coverage applies, Sonetics reserves the right to either repair or replace a covered product or any part thereof, as determined by Sonetics in its sole discretion. If the product has been subjected to conditions which exclude coverage under the warranty, customer will be so advised. Customer may then authorize paid repair service or other disposition of the product. Notwithstanding any other provision of this warranty, if you sell or otherwise transfer ownership of your covered product, this Sonetics Standard Limited Warranty shall automatically terminate.

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