

Buyer's Guide for Communication Headsets

Researching communication headsets that are two-way radio and/or Bluetooth® compatible can be a long and daunting process; with many different brands, levels of hearing protection, and various levels of durability. Business needs and requirements vary, so we've put together this buyer's guide as a resource to identify the questions you should ask and the things you should look for prior to your purchase.

Getting Started

Do you need a communications headset?

Identify how important communication is in your operation with the following questions.

Do you work in a high noise environment (over 70dB)?

To give you an idea of what levels of noise are, take a look at the graph to the right. This will help you determine whether or not you work in a high noise environment that would require hearing protection.

Do noise levels inhibited you from doing your job safely?

If the high-noise at your work place makes employees uncomfortable and threatens their ability to hear an alarm, encroaching vehicle, or an announcement over the PA, then an investment in headsets would lower the risk of accidents and hearing loss claims.

Are you unable to communicate with those around you due to high noise levels?

If you can effectively and safely do your job throughout the day without being in regular communication with anyone (by radio, cell phone, or in-person), then you may want to look into simple earplugs or earmuffs with no communications capabilities. However, if communicating is a challenge and a necessity, then an investment into quality headsets is the way to go.

Levels of Noise in Decibels (dB)

Soft - Comfortable over 30 min

Pin Dropping **10**

Rustling Leaves **20**

Recording Studio, Whisper **30**

Computer, Quiet Library **40**

Moderate - Normal everyday noise

Light Traffic, Refrigerator, Moderate Rainfall **50**

Conversational Speech, Air Conditioner **60**

Loud - Uncomfortable over 30 sec

Shower, Dishwasher, Large Dog Barking **70**

Toilet Flushing, Vacuum Cleaner **75**

Alarm Clock, Garbage Disposal, Moderate Surf **80**

Passing Diesel Truck, Snow Blower, Well Drilling **85**

Not to Exceed - Can cause hearing loss

OSHA recommends noise not exceed for extended periods **85**

Very Loud - Dangerous over 30 min

Belt Sander, Forklift, Power Tools, Lawn Mower **90**

Nail Gun, Food Processor, Concrete Saw, Data Center **95**

Bull Dozer, Electric Grinder, Hand-held Drill, Motorcycle (riding) **100**

Concert, Car Horn, Sporting Event, Chainsaw, Grader, Scraper **110**

Uncomfortable - Dangerous over 30 sec

Thunderclap, Jet Plane Takeoff **120**

Ballon Popping, Snow Mobile **125**

Painful & Dangerous - Instantly dangerous

Loud Stadium Noise, Jackhammer, Ambulance **130**

Air Raid Siren **135**

Fireworks, Gun Shots, Drag Racing **140**

Fighter Jet Launch **150**

Shotgun, Rifle, .357 Magnum Revolver **160**

Safety Airbag, Howitzer Cannon, Rocket Launch **170+**



Factors to Consider

- **Does it have radio/cell phone communications ability?**

Be sure verify that the headset you are discussing has two-way radio, short-range radio, Bluetooth® cell, or in-person communication capability and the integration of these features depending on your needs.

- **What two-way radios is it compatible with?**

You'll want to look for something that can connect to at least 85% of the radio models on the market. The best way to figure this out is to look for a headset that can connect to major radio brands. If you are using one that is not a popular brand you may need to contact them or a local dealer for a compatibility check. Keep in mind that your brand of radio may share the same connector as a more popular brand and you can then base your search off the model of that brand.

- **What other communication options does it offer?**

This depends on your specific needs, some headsets offer a short-range radio option as an alternative to two-way radios. This option only works when there is a direct line of sight, no more than 100ft apart. These radios are usually built-in to the headset, giving you a wireless option, and transmit through an FM radio frequency. Keep in mind that it will NOT transmit through walls or obstacles, which limits the communications. Bluetooth® compatibility via cellular phone is another fantastic feature to have on a communications headset. They will provide hands-free, noise-free cell communication for you on the job.

- **Does the headset allow you to hear your surroundings?**

Safety Professionals are becoming more and more aware of how important it is for their workers to be able to hear their surrounding and anticipate hazards in the workplace. Unfortunately, earplugs and earmuffs typically take away the hearing sense almost completely. With some of the new technologies being developed, there are now products on the market that, while suppressing background noise, will still allow you to maintain the ability to hear your surroundings at a safe volume. This enables your workers to be able to hear trucks pulling up behind them, or items falling off a shelf nearby, or alarms and PA systems. To ensure that a communications headset has this ability, look for words like "situational awareness". Just be sure that any system you are looking at always limits surrounding noise to under 85dB to prevent longterm hearing loss.

- **Does the headset have an electronic volume limiter?**

There are many headsets on the market that offer excellent protection from background noise, but NO protection from the volume of the incoming radio. That means that while your worker is protected from the 105dB machinery noise, he can turn his radio up to 110dB and experience hearing damage. Try to find a product that will limit all communications levels under 85dB with an electronic volume limiter that also allows you to program for the specific level of high noise and length of exposure times your workers will face. This will allow for flexibility with the changing needs of your organization.

Fundamental Features



**360°
Situational
Awareness**



**Electronic
Volume Limiter**



**Protects
Hearing**



**Intrinsically
Safe**



**Cellular
Bluetooth**



**Face to Face
Communication**



**Two-way
Radios**



**Short Range
Communication**

Key Benefits

- ✓ **Remain Aware of Surroundings**
- ✓ **Protects Against Hearing Loss**
- ✓ **Reduces Dangerous Noise Levels**
- ✓ **Reduce Work Place Hazards**
- ✓ **Better Working Conditions**
- ✓ **Increase Safety**
- ✓ **Multi Functional**
- ✓ **Clear Communications**
- ✓ **Increases Productivity**





• **Will you be using other accessories with your headset?**

While there are some very standard accessories usually offered with a particular communications headset (like a two-way radio cable, for example), there may be other accessories that could prove useful in your work environment. For example, you can now purchase a Bluetooth® dongle for your radio which eliminates the need for a two-way radio cable allowing you to go wireless; just be sure to purchase a Bluetooth® capable headset with the dongle. You might also be interested in speaker mics so you can switch seamlessly between the headset and speaker mic when entering back into a quiet office area in between tasks. You can also find in-line PTT buttons (particularly useful for those wearing large gloves), throat mics (for those needing to communicate while wearing a respirator), and mp3 cables for listening to music on the job.

• **Does it offer a noise-canceling boom mic?**

A noise canceling boom mic can make or break a headset's abilities. Ensure that the headset specifies a "noise-canceling" boom mic in the description. Any other type of boom mic is probably manufactured for average day-to-day noise (like a car engine or restaurant noise) and will likely not hold up to the type of industrial noise you encounter.

• **Is the cable built-in to or detachable from the headset?**

Some headsets have a cable built right into the headset while others build it as a separate piece. The benefit to having a cable built-in is that it may reduce the initial cost. However, should the cable break or malfunction in any way, you'll need to replace the entire headset. The benefit of having a detachable cable is that you can always replace it when needed, this is usually a quarter of the cost of the headset.

• **Does the headset deliver digital sound quality?**

Digital sound in an electronic headset is hard to come-by, but can greatly enhance the communications experience. Communication is such an important component of a communications headset, go with one that has digital sound quality.



Helmet



Behind the Neck

• **Will a hard hat be worn with the headset?**

Most headsets will offer a behind-the-neck version which simply places the over-the-head part of the band in the crook of the neck with a thin strap across the top. This allows a hard hat to be placed overtop without interfering with the headset. There are also brands that offer a headset style that clips directly into a hard hat. Just be sure you have the correct type of hard hat for this – in other words, a hard hat with slots in the side – and that you supply the brand of your hard hat to the dealer when making your purchase (different adapters work for different types of hard hats).

• **Is there an earplug option?**

If an in-ear solution like an ear plug is preferred, find a brand that provides the same features in the form of an earplug. Just make sure you're answering the other questions listed above and getting adequate hearing protection.



Headband



Ear Plugs

Options for Extreme Environments

- **Are Intrinsically Safe options available?**

Intrinsically Safe equipment is becoming more and more important these days with increased safety regulations on oil & gas, manufacturing, and mining environments that have hazardous gases present. If you work in one of these areas, be sure to look closely at the specific certifications the headset has. In the U.S. and Canada you'll need to have ATEX, UL913, or CSA certifications. If these are not present then the product is not qualified to be used in your environment.



Intrinsically Safe



IS Double Protection

- **Can it be used hands-free/VOX?**

Think about how your workers will be using their hands throughout the day. If they need the use of both hands throughout their work day, then this would be a beneficial option. More importantly, is it a requirement for them to be hands-free? VOX typically has a 1-2 second delay.

- **How high are the noise levels (NRR rating)?**

You will need to know how high the noise level is in the area you work in. Use a sound level meter or have your local two-way dealer analyze the sound levels. The majority of the communications headsets on the market are going to max out at a 25dB NRR rating. This will effectively protect you in areas that top out at 105dB. If you are getting readings above that level, you will need to search for a double-protection (earplugs inside a headset) solution that also offers two-way radio communication.



Summary

There are many things to consider when selecting a communication headset to fit your specific needs. We hope this resource has helped guide you through this process, and educated you about the many communication headset options available today. The answers to these questions, are key to finding the headset that is the right fit. Communication needs vary from industry to industry, be sure to look for a supplier that is willing to listen to your communication needs and work with you to find the right communication headset for your particular work environment. At Sensear we have specialists who will perform a comprehensive needs evaluation. We then work with you to discover the Sensear communication headset solution that will solve the communication, safety and risk issues in your work environment. Our mission is to provide you with the most natural hearing experience, no matter how noisy your work environment.

Your Local Dealer

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