

## Buyer's Guide to Communications Headsets



Research a 2-way radio and/or Bluetooth compatible headset can be a long and daunting process. There are many different brands to look into; different levels of hearing protection, and of course, various levels of durability. Doing a web search for "communications headset" provides thousands of results and not always enough information to understand the difference between each product and brand. Everyone has different needs and requirements, so we have put together this buyer's guide as a resource for you to identify the questions you should ask and the things you should look out for when navigating your way through this landscape.



### **Getting Started:**

#### Do you need a communications headset?

If you are reading this Buyer's Guide, then you probably do need a communications headset. However, for further clarification, here are a few questions you can ask yourself to make sure this is the right solution for you:

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

One of the major purposes of a communications headset is to provide hearing protection in conjunction with radio or cell phone communication. If you are not working in high noise (over 70dB) then you can find smaller, lessexpensive solutions that require only a simple plug or microphone in one ear or a speaker microphone.

## Do you find yourself inhibited in doing your job or accomplishing tasks safely because you are unable to communicate with those around you?

Basically, you need to identify how important communication is in your operation. 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, you're in the right place!



## First and Foremost:

### Does it have radio/cell phone communications ability?

I know, it's an obvious question, but you'd be surprised how often a noncommunications headset shows up in a communications-specific request. So when doing a web-search or talking with your local dealer, verify that the headset you are discussing has 2-way radio, short-range radio, Bluetooth cell, or in-person communication capability (depending on your needs).

## What 2-way radios does it connect to?

You'll want to look for something that can connect to at least 85% of the radio models in the market. The best way to figure this out is to look for a headset that can advertises connectivity to the major radio brands: Motorola, Kenwood, ICOM, and Vertex are the most common. If you are using a Tait, MACOM, or other radio brand, you may need to contact the manufacturer or dealer to ensure that they have the right connector. Most radio dealers will have a compatibility list on their website which lists the radio models each radio is connectable with. Keep in mind, though, that these lists are not always comprehensive so only the most popular radio models are typically listed. You might find out if your radio shares the same connector as a more popular model like, for example, the Motorola HT1000, then base you searches off the HT1000.

## What is the configuration of the radio cable?

This is an important distinction to make for cost and ROI purposes. Some headsets build the cable right into the headset while others build it as a separate piece. The benefit to having a cable built into the headset is that it may reduce your initial purchase price. However, should the cable break or malfunction in some way, you'll need to replace the entire headset in order for it to work. The benefit to have the cable sold separately is that you can always replace just the cable when needed which is usually a quarter of the cost of the headset; the downside being that it may increase the total initial purchase price. You should also consider the cost of the cable vs. the headset when making purchase decisions. Some companies build all their technology into the headset and offer a fairly low-cost cable to go with it. Others will build the technology into the cable instead, presenting what looks like a very inexpensive headset, but the cost is made up for in the price of the cable.

## What other communications options does it offer?

This depends on your specific needs, of course, but you can find headsets that offer a short-range radio option as an alternative to 2-way radio. These radios are usually built-in to the headset, giving you a wireless option, and transmit through an FM radio frequency. The communications distance between headsets can be up to around 60 meters, but keep in mind that it will NOT transmit through enclosed buildings. So those you are communicating with need to be in the same room or in an open area (even entering the cab of a truck will cut off the signal). One more cautionary tip: FM radio is not as reliable as 2-way radio frequencies; therefore if you will be performing mission-critical operations, you are probably safer using a 2-way radio system. If you can work around these suggestions this could be a great solution for you!

Of course, Bluetooth cell phone is another fantastic feature to have on a communications headset. These are tough to come by in a communications headset, unfortunately, but they can be found and will provide hands-free, noise-free cell communication for you 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. If it doesn't, move on. 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 are dealing with. Unfortunately, it's very difficult to judge the quality of a noise-canceling boom mic without actually testing it; every brand will claim its boom mic is the best. To aid you in this decision, look for video or audio samples of the product in use. This should help you get an idea of how it works in true high noise circumstances.

#### What is the NRR rating?

If you answered "yes" to the two qualifying questions at the beginning of this guide, then you will need to make sure you have adequate hearing protection built-in to your communications headset. To ensure this, you will need to know how high the noise level is in the area you work in. You might consider investing in a decometer to accomplish this reading. The majority of the communications headsets on the market are going to max out at a 25 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 2-way radio communication; your options will be much more limited in this case.



# Will you be wearing a hard hat with the communications headset?

Most workers are going to answer "yes" to this question. If the answer is no, you can go with any standard headband headset. But if the answer is "yes", you may have a couple of options. 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 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 adaptors work for different types of hard hats).

#### What accessories are you in need of?

Keep in mind that while there are some very standard accessories usually offered with a particular communications headset (like a 2-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 2-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.





#### Is there an Intrinsically Safe option 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 the areas, you will have no choice but to purchase an item with an Intrinsically Safe certification. Just be sure to look closely at the specific certifications the headset has. In the U.S. and Canada you'll need to have ATEX and CSA certifications. If these are not present then the product is not qualified to be used in your environment.

#### Does the headset have an electronic volume limiter?

This is VERY important from a hearing protection perspective. 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 even with his hearing protection on. Be aware of the limiting result this can have on your hearing conservation program, and try to find a product that will limit all communications levels to 85dB or below.

# 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 use all 5 senses to 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" or "awareness of surroundings" or "ambient noise hearing ability". These are "buzz" words for this new type of technology. Just be sure that any system you are looking at always limits surrounding noise to under 85dB so you can be in compliance with your hearing protection requirements



#### Is there an earplug option?

Most high noise communications products are going to come in the form of a headset. However, there are a few brands out there that are able to provide 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.

#### 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. With communications being such an important component of a communications headset, go with one that has digital sound quality.



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

You may or may not have a need for this feature, but think about how your workers will be using their hands throughout the day to make the determination – would it be beneficial for them to have 100% use of both hands throughout their work day? More importantly, is it a requirement for them to be hands-free? Just keep in mind that VOX typically has a 2-3 second delay; usually your transmission will need to start with a couple of "dead" words (da-da-da or something) to activate the transmission, otherwise the receiver will lose the first part of your sentence. This can be a bit of a pain, so if you are in a position to use the PTT instead, this may be preferable.

#### What kind of warranty is offered?

Look at both the manufacturer's warranty and the dealer warranty (if one is offered). Sometimes between the two you can get longer coverage without investing in any additional warranties. Most products should offer at least a 1-year warranty, sometimes up to 5 years. Many products also have additional extended warranties that can be purchased. Be sure to look at the details of the coverage to determine is an extended warranty is a worthwhile investment.

#### How durable is the headset?

This is probably easier to define by reading customer reviews, if they can be found. There are very few "official" certifications or documentation to define how durable a headset is. In rare cases, you may find an IP rating which rates how well the product holds up to water and dust, but this will not tell you how it will hold up to general abuse, wear, and tear. Find some online reviews or speak with others who have used the product to determine durability. You can also ask the dealer or manufacturer questions about how the headset is housed. Are the electronics fully encased within the headset, or are there exposure points? What has their failure rate been in rugged environments?

#### Are there replaceable parts?

Especially when used in rugged environments, there are likely to be pieces and parts that we break or become damaged throughout the life of a headset – no matter how rugged the design. It's helpful to identify which parts on a particular headset are replaceable by you. This will help you be prepared for these situations while also giving you an idea how much you upkeep costs are going to be. A couple of parts that you'll want to be able to replace on your own are the boom mic, ear pads, and headband.

#### Conclusion

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 communication 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.

Sensear 🏶

Sensear Inc. 20 Trafalgar Sq. Suite 472 Nashua, NH 03063

Toll Free: 1-888-9SENSEAR (1-888-97367327) Tel: 603-589-4072 Fax: 866-269-0129

Visit www.sensear.com for more assistance.

