

# Mining Solutions



## Delivering High Noise Communication Solutions for the World's Leading Mining Companies



### HAUL TRUCK CABIN COMMUNICATION SOLUTION

**Problem:** Haul Truck Cabins are notoriously noisy environments where drivers must have full control of their senses. Currently drivers need to communicate on their dash mount radios (sometimes also bluetooth phones), some like to listen to music (if company policy allows) all while protecting their hearing with existing solutions that reduce their ability to hear. Drivers are looking for a way to communicate and protect their hearing while driving these large trucks. To solve this problem, some companies have investigated engineering noise out of this environment that has resulted in expensive capital expenditure estimates. Other mining companies have found a cheaper, more effective solution with Sensear.

**Solution:** With Sensear, drivers are now able to communicate on their dash mount radios either using a specially designed cable connected to the Sensear headsets or via the unique face-to-face speech separation technology embedded in all Sensear headsets. Because Sensear's patented technology elevates speech while protecting users' hearing, drivers can communicate seamlessly inside the cabin while remaining protected. Sensear's technology delivers another layer of safety by allowing drivers to be aware of their surroundings while wearing the headsets. This unique solution for truck drivers delivers a highly effective and cost efficient solution to a massive problem for many of the worlds' leading mining companies.

### UNDER GROUND SERVICES OPERATIONS SOLUTION

**Problem:** Clear communication is critical during the operation of a Front End Loader (IT) when using a cage. The service team member in the cage needs to provide instructions to the operator of the Front End Loader and missed communication can result in serious injury or critical damage to the mine services (air, water, electricity and comms). This poses a real challenge as high noise is created from the front end loader and other machinery.

**Solution:** When wearing Sensear's SM1X5R (short range) Smart Muff both the service team member and the operator enjoy clear communication while remaining protected at all times. Added benefits include productivity improvements, reduced incidents regarding damage to mining services and a reduction in LTI's as a result of improved communication.

### SMELTHER COMMUNICATION SOLUTION

**Problem:** Smelters are not only noisy but they can also be very harsh environments. Workers are not only required to wear hearing protection but also respiratory protection that makes communication near impossible. Removing a respirator in these environments can result in serious illness and lost productivity due to "leaded out" time off. But at times workers are forced to remove their respirators because of their limited means of communication.

**Solution:** With Sensear's Smart Plug, communication in Smelters has been revolutionized. Now workers in smelters do not have to remove a respiratory device to communicate. The end-user remains protected at all times as speech is picked up by sound waves in the ear and transmitted without needing a boom mic or throat mic. Sensear's new SP2 range provides a total solution for Smelter applications which allows workers to work and communicate seamlessly.



### WASH PLANT SOLUTION

**Problem:** Remaining protected and achieving clear and precise communication is near impossible in a wash plant and continues to be a challenge for the mining industry. Communication between the control room and workers within the plant is critical as missed or incorrect communication impacts production and safety.

**Solution:** With Sensear's solution, communication to and from the control room to the noisy wash room floor is clear and seamless while workers are protecting their hearing and remaining aware of their surroundings for maximum safety.



### ORE GRINDER SOLUTION

**Problem:** Throughout the day, tons of rocks containing the precious ore are loaded into a circular grinding mill, similar to a huge washing machine. These grinders contain large steel balls that continually pound the rocks into smaller pieces, revealing the ore inside. These smaller pieces are sent from the grinder via conveyor belt to the next step in the process to ultimately derive the ore.

Workers next to the grinder cannot communicate in noise levels of 105db-110db. They use hand signals or relocate to a quiet area within a sound-proof office to discuss issues pertaining to their work. They are responsible for monitoring the grinders and for shutting them down in case of emergency or maintenance.

**Solution:** The Sensear solution allows workers to communicate at all times verbally rather than with hand signals, all while maintaining awareness of their surroundings. If one of the grinders malfunctions or needs adjustments, the worker can “hear” the grinder rather than wait for an alarm or light indicator to signal a failure. The worker is always protected and communicating via two-way radio, minimizing the need to enter a sound-proof room to discuss vital information.

### PIT CABLE CREW COMMUNICATION SOLUTION

**Problem:** When shovels and drills are to be moved in the pit, the cable crew is called in. This crew needs to communicate clearly and effectively amongst themselves, ideally without taking up a 2 way hand-held radio channel. In the high noise environment of the operating pit, it is also vital to be aware of their surroundings.

**Solution:** Sensear’s proven high noise communication solution enables the team to communicate using our Short Range feature on the Sensear headset while remaining connected to their two-way radios. The cable crew can now communicate without taking up valuable 2-way radio time. The added benefit of Sensear’s patented technology provides 360 degree situational awareness of workers’ surroundings while in the pit – a key safety benefit.



### MILL RELINING COMMUNICATION SOLUTION

**Problem:** Primary grinding mills used in the milling process are 26 feet / 9 meters in diameter or bigger. On the inside are many 1500lb shell liners, which must be replaced. The liners are bolted through the shell from the inside. Workers relining from the inside of the Mill need to effectively communicate to peers on the outside of the mill in extreme noise situations.

**Solution:** With Sensear, workers are able to communicate clearly and effectively between the inside team and the outside team using the Short Range option, while still having situational awareness in the high noise mill environment. Because Sensear’s patented technology elevates speech while protecting users hearing, mill workers can now communicate seamlessly both inside and outside the grinding mill while remaining protected.

### BLAST SITE COMMUNICATION SOLUTION

**Problem:** Due to high noise, the offsider currently communicates with the MPU operator by hand signals. The Shot Firer, Ground Crew and MPU operator need to communicate and typically do this via 2-way radio or Mobile phone. The offsider is working in a dirty environment and needs to remain “hands free” at all times. All team members need to wear hearing protection as nearby drilling machines and the MPU create a high noise environment.

**Solution:** When wearing Sensear’s Smart Muff & Smart Plug range of products the offsider & MPU Operator enjoy direct and localized communication. The MPU Operator can communicate through 2-way radio, Bluetooth and directly to the offsider through the Sensear Short Range product. The Ground Crew and the Shot Firer use the SM1x model which allows clear and safe communication through 2-way and Mobile phone (Bluetooth) with certified hearing protection.



### UNDERGROUND SCOOP OPERATION SOLUTION

**Problem:** In the underground mines, the drivers of large tractors called “scoops” operate in complete darkness in caverns slightly larger than the tractor itself. Workers in the immediate area wear reflective clothing and use hand signals to communicate with the driver. The danger to the workers is high due to the high noise and lack of visibility while working in the immediate area of the scoop.

**Solution:** The Sensear high noise communication solution enables the driver to communicate directly with the workers near the scoop, even when they are not visible in these high noise environments. The driver is more productive because he is confident knowing where co-workers are located; can be more easily directed and the workers have the ability to work with the assurance that they can be heard even if not seen.