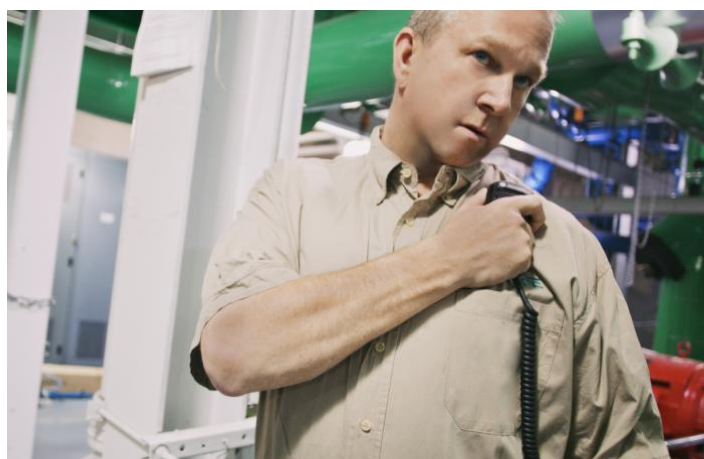




AN INTRODUCTION TO THE BENEFITS OF MOTOROLA IMPRES™ AUDIO



INTRODUCTION

Radio fleet managers know their operational environment and understand the need for clear, instantaneous communication to support their business. Using two way radio communications can significantly enhance safety, efficiency and profitability. From a user's perspective this is easy – with a simple press of a button, they can immediately talk to their colleagues. But that's not where it ends - those listening also need to receive and understand the message clearly.

Working environments vary considerably from quiet, air-conditioned offices to bustling airport terminals, crowded buses, packed trains, noisy factory floors or the sidelines of a football stadium. From hushed control rooms to the extreme noise created at a steel foundry, paper mill, drilling platform or the ear splitting shriek of emergency service sirens. Whatever the situation, Motorola's radio and accessory portfolio provides user-orientated solutions to ensure loud, clear communication.

Motorola audio accessories offer good all-round operation, but when optimal performance is required, our unique IMPRES audio technology takes things to the next level. IMPRES remote speaker microphones (RSMs), surveillance kits, temple transducer headsets, specialist ear microphone solutions and visor, fist or handset-style microphones for in-vehicle installation all offer improved function compared to the standard versions.



IMPRES AUDIO EXPLAINED

IMPRES audio accessories have been designed to give optimal performance when used with Motorola's MOTOTRBO radios. The IMPRES circuitry embedded within the accessory communicates with the radio which then automatically adjusts its transmitter and receiver audio circuits. This results in the most consistent audio levels over the widest range of conditions.

TALK LOUD OR WHISPER

Users don't always speak at the same volume. If they speak loudly into the IMPRES accessory microphone, it will automatically reduce the amount of amplification applied. If they speak quietly or whisper, it will increase the amplification. This is known as Automatic Gain Control (AGC) and results in a consistent level at the receiving radio. So the person listening experiences consistent audio levels without the need to adjust their radio volume.

TALK CLOSE OR FURTHER AWAY

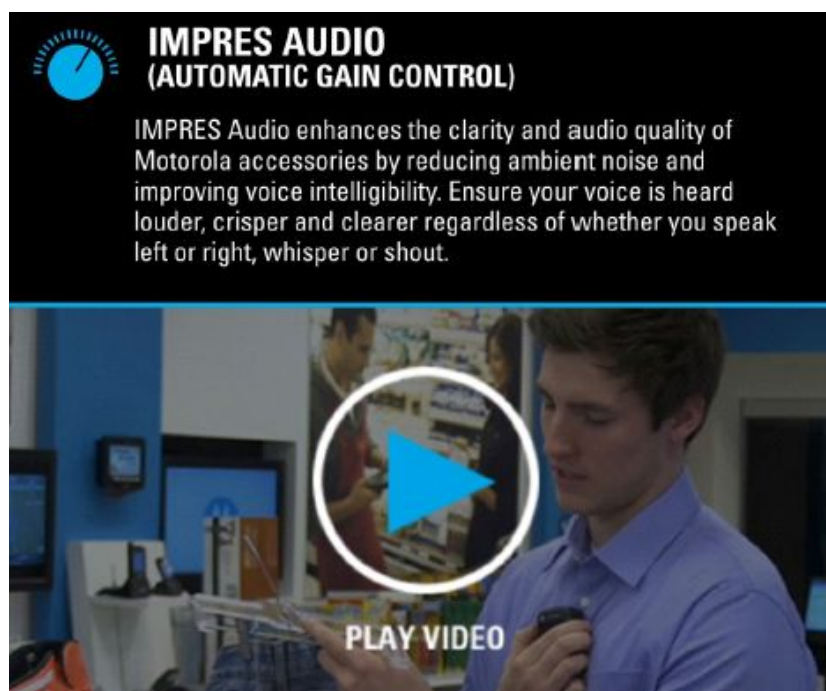
AGC also helps compensate for varying distance between the speaker's mouth and the microphone. If the user turns their head as they speak, or if different users wear or use the microphone at different distances, IMPRES audio accessories will adjust amplification resulting in improved performance.

SUPPRESSION OF NOISE

Standard microphones will transmit both voice and background noise equally because their gain is fixed, but IMPRES audio accessories help suppress background noise. In a noisy environment, AGC modifies the microphone gain when the user speaks, lowering the sensitivity and so focusing on the spoken word. Because the level of the background noise is lower than that of the user's voice, it is suppressed, resulting in clearer transmissions.

WATCH THE VIDEO: IMPRES AUTOMATIC GAIN CONTROL (AGC) IN ACTION

Click on the image below to watch this impressive demonstration.



IMPRES AUDIO ACCESSORIES

There are several IMPRES audio accessories available to customize user experience to their operating environment – Remote Speaker Microphones, Surveillance Kits, Temple Transducer Headsets, Visor Microphones and Fist Microphones/Handsets for mobile radios.

IMPRES REMOTE SPEAKER MICROPHONES (RSMS)

RSMs contain a microphone, loudspeaker and Push-To-Talk (PTT) button. In addition, some models also have volume controls, orange emergency button and programmable buttons for quick access to most often used functions or a 3.5mm socket that allows a secondary earpiece to be connected providing discrete listening. The RSM is worn on the upper chest area, providing convenient access and reducing the need to hold the radio.



IMPRES INDUSTRIAL NOISE CANCELLING RSM (INC RSM)

In very demanding situations such as a noisy street with emergency service sirens, a building plant-room or a heavy machinery factory floor, noise levels can overwhelm normal microphones. Even more challenging is cancelling background noise which has similar frequencies to the voice. The high performance IMPRES INC RSM can cope with these challenges, cancelling out the background noise while retaining the user's speech.

To achieve this, the IMPRES INC RSM uses two microphones coupled with a powerful Digital Signalling Processor (DSP) running a smart software algorithm. It samples the background noise and voice, strips away the unwanted background noise and routes the voice to the radio. All this is invisible to the user – they just speak directly into or across the INC RSM and their voice message will get through.

IMPRES SURVEILLANCE KITS

When conducting discreet or surveillance operations, RSMs may not always be suitable. For those users, Motorola offers IMPRES surveillance kits. These allow the wires to be hidden under clothing and are available in two main types.

The 3-wire version features one wire for receiving communications through an earpiece, one wire for the microphone, and one wire for the Push To Talk (PTT) button. The microphone is clipped to the clothing and can be hidden under a tie or lapel and the PTT is conveniently positioned at the end of a shirt or jacket sleeve for easy access.

In 2-wire types, there is one wire for receiving transmissions and one wire with a combined microphone / PTT.

In both types, received audio is channelled to the ear via a separate earpiece – either an over-the-ear type, or a quick-disconnect, durable and comfortable translucent tube that enables easy sharing of the kit between shifts.

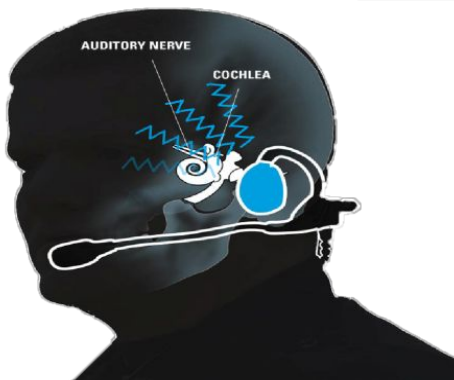


IMPRES TEMPLE TRANSDUCER HEADSET

Motorola's IMPRES Temple Transducer Headset offers a unique solution for situations when the user needs to be able to hear radio messages, but also maintain peripheral hearing. It is also ideal for places like construction sites where the radio user has to wear a helmet or safety glasses.

The lightweight design is worn behind the head and has two transducers which are placed on the temples. These convert the received audio into minute vibrations which transfer to the auditory nerve within the inner ear, resulting in very clear voice quality, even in noisy environments, while leaving the ears unobstructed so the user can be fully aware of sounds around them. If hearing protection is required, the user can use ear plugs or defenders, but will still hear transmissions through the headset.

The Temple Transducer Headset also has a robust but flexible boom microphone that can be positioned close to the mouth helping to ensure good voice quality.



IMPRES VISOR MICROPHONE

For vehicle installations such as buses, cars, trucks or even cranes, Motorola offers an IMPRES Visor Microphone to solve the issue of differing driver positions. With the Visor Microphone secured directly in front of the driver on the sun visor, the AGC feature of IMPRES audio will cater for the wide variation in drivers from those who sit close to the steering wheel to those who move their seat further away. This provides more consistent performance than goose-neck models where different drivers will position and use the microphone differently resulting in varying audio performance.

When combined with a footswitch, Velcro band PTT or VOX operation, the IMPRES Visor Microphone also helps improve safety as the driver can keep both hands on the steering wheel while using their radio.



IMPRES TELEPHONE-STYLE HANDSET

When situations arise where more discreet communications are required, the IMPRES Telephone-style Handset is the perfect solution. Users can accept calls simply by lifting the handset out of the hang-up cup and can initiate calls with the PTT button on the side of the handset.



IMPRES AUDIO (MOTOROLA EXCLUSIVE)

Ensure you're heard clearer, crisper, and louder regardless of voice level or the direction you're speaking into the accessory.

HOW DOES IMPRES IMPROVE AUDIO PERFORMANCE?

IMPRES enhances the clarity and audio quality of Motorola accessories by reducing ambient noise and improving voice intelligibility.

If you speak quietly or normally, but not directly into a microphone, IMPRES Audio detects changes in your voice and automatically adjusts the transmitted volume so your listener won't have to adjust volume up and down.

IMPRES FIST MICROPHONES

An alternative to the Visor Microphone is the Fist Microphone. These are ideal for security control room environments, where the fixed mobile is positioned away from the user and the microphone is within easy reach of the operator.

Motorola offers two IMPRES Fist Microphones – a heavy duty fist mic and a keypad microphone. The heavy duty fist mic includes a PTT switch and two programmable buttons for easy access to commonly used features.

If users need more flexibility or control over the radio and call set up, the keypad fist microphone is ideal. This allows users to navigate the radio menus or select features without the inconvenience of stretching to reach the control head of the radio. The keypad of this microphone includes an adjustable back-light making it easier to use in low-light situations.



THE BENEFITS OF MOTOROLA IMPRES AUDIO ACCESSORIES

Motorola Original audio accessories offer good performance for users, but when better audio quality is needed, or when the operating conditions are more extreme, IMPRES audio technology is the best solution. By automatically matching the performance characteristics of the radio, by applying Automatic Gain Control and by reducing background noise, Motorola's IMPRES audio accessories help ensure the message gets through clearly and reliably.

For more information on Motorola Solutions' accessories, visit http://www.motorolasolutions.com/en_us/products/two-way-radio-accessories.html or find your closest Motorola authorized reseller at http://www.motorolasolutions.com/en_us/partners/search.html.

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