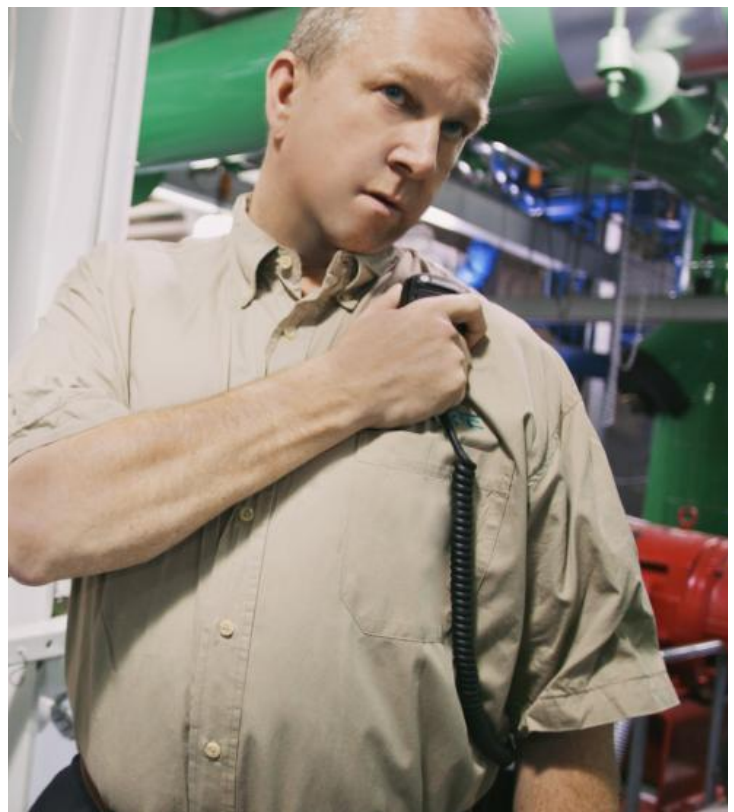




# AN INTRODUCTION TO MOTOROLA ORIGINAL™ REMOTE SPEAKER MICROPHONES



## INTRODUCTION

Two-way radio offers users reliable, instantaneous communications and the addition of a Remote Speaker Microphone (RSM) can make a portable radio even easier, safer and more effective to use. Motorola radios are built to withstand knocks and bumps, but keeping the radio on the belt helps protect it from the drops and misuse that can occur when users hold the radio in their hand. Using an RSM allows the user to make and receive calls without the need to remove the radio from their belt, leaving their hands free to hold guard rails, climb ladders, carry equipment or operate machinery. The RSM clips to a collar or epaulette making it easy to access when needed and since the speaker is then closer to the user's ear, it's easier to hear calls so helps prevent missed messages.

## REMOTE SPEAKER MICROPHONES EXPLAINED

A basic RSM combines a loudspeaker, microphone and Push-To-Talk button (PTT) in a compact device with a clip to hold it in place and a cable to connect to the radio accessory connector. Some RSMs also offer enhanced functionality: dedicated emergency and programmable buttons to allow quick access to frequently used functions, volume controls to adjust received audio levels, or an audio jack that allows an earpiece to be connected, ensuring discreet communication that can't be overheard and won't disturb others.

In addition to standard RSM features, Motorola Solutions has also developed exclusive capabilities for our RSMs – we offer a range of models so users can select the best fit and feel for their specific needs. Windporting, Noise Cancelling, IMPRES™ and Industrial Noise Cancellation (INC) help ensure optimal performance even in noisy or windy environments.



## WINDPORTING (MOTOROLA EXCLUSIVE)

When users are operating outdoors, wind blowing across the microphone can distort or mask messages making it difficult to understand what is being said. Windporting reduces the effect of wind and other outdoor noises on your microphone performance and prevents water from clogging the microphone and distorting your transmissions.

## IMPRES AUDIO (MOTOROLA EXCLUSIVE)

IMPRES smart audio accessories communicate with the radio to optimize performance, suppress background noise and improve voice intelligibility even in noisy situations. They detect changes in voice level so whether you speak loudly or softly, turn your head or increase the distance between mouth and microphone, the gain automatically increases or decreases so the receiver experiences consistent audio level and doesn't have to adjust volume levels.

## NOISE CANCELLATION


Noise cancellation uses a simple but effective directional microphone purposely designed to help eliminate low frequency background noise such as the rumbling of machinery. The microphone samples ambient noise received at the back of the RSM and combines it with the voice plus noise signal from the front of the RSM, reducing background noise and making it easier to hear messages clearly.

## INDUSTRIAL NOISE CANCELLATION (MOTOROLA EXCLUSIVE)


Some areas, like plant rooms, sports stadiums, rail yards or factory floors can experience extreme noise where standard noise cancelling RSMs may struggle to eliminate the high levels of background noise. Motorola's unique Industrial Noise Cancellation (INC) provides superior performance in the most difficult of situations. The INC RSM uses microphones designed to operate at levels that would saturate standard microphones and includes two mics to help steer your voice (like a beam of light from a torch) to eliminate ambient noise. Additionally, the INC RSM uses Digital Signalling Processing to extract noise in the speech band leaving just the speech for transmission. So, unlike standard noise cancelling, low frequency generator noise, angle grinders or even sirens from emergency services are all cancelled out.




**THE RIGHT  
"FIT AND  
FEEL" FOR  
YOUR NEEDS**




Windporting RSM



Windporting IMPRES RSM



Noise Cancelling IMPRES



INC Industrial Noise Cancelling

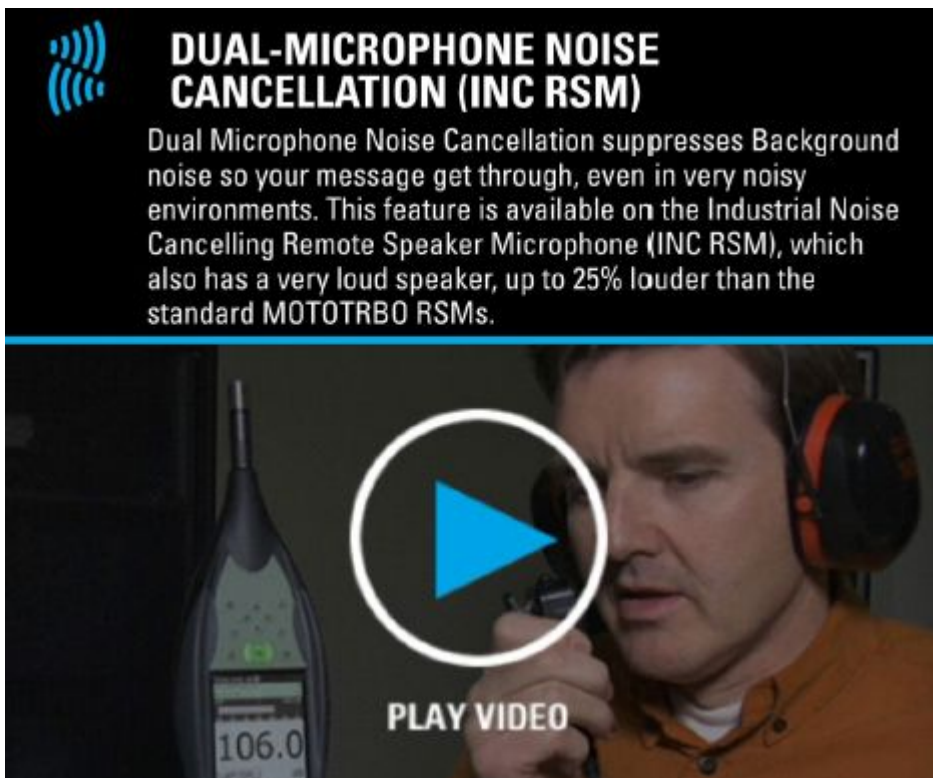
## THE BENEFITS OF RSMs

RSMs are an essential addition to portable two-way radios, providing an extended interface within easy reach for the user. Not only that, they help keep users hands free, enhance safety and can prevent the radio from damage. Motorola offers a range of RSMs with exclusive features, allowing the user to select the best solution for their needs.

WINDPORTING AUDIO	NOISE CANCELING AUDIO	IMPRES AUDIO	INDUSTRIAL NOISE CANCELLING AUDIO
Reduce the effect of wind and other outdoor noises so your messages are always heard clearly	Reduce the effect of background crowd and machinery noise so your messages are always heard clearly	Ensure your voice is heard clearer, crisper, and louder regardless of whether you speak left or right, whisper or shout	Communicate clearly in demanding and extreme noise environments
I HEAR YOU, NOT THE WIND	I HEAR YOU, NOT THE NOISE	I HEAR YOU, HOWEVER YOU SPEAK	I HEAR YOU, EVEN WHEN YOU CAN'T HEAR YOURSELF

### WATCH THE VIDEO: INDUSTRIAL NOISE CANCELLING (INC) RSM DEMO

Click on the image below to watch this impressive video.



## MOTOROLA TWO-WAY ACCESSORIES

Motorola Solutions offers a vast range of two-way radio accessories: MagOne™ value line, Motorola Standard and IMPRES™ high performance accessories allow us to offer different tiers of solutions to best meet the needs of a given user. And as you would expect from Motorola Solutions, we apply the same high quality and performance standards to all our accessories that we have for our radios. They are tested together as a complete system, so users can rely on them to perform when needed.

### BATTERIES AND CHARGERS

Different sizes, capacities and types of batteries and chargers are available to meet a wide variety of user requirements. Understanding the benefits of these technologies will enable you to select the best Motorola Original® energy system to help ensure your customer's radio is always ready to use when they need it.



### WIRELESS ACCESSORIES

Wireless audio accessories can give more freedom in communications, allowing users to converse discreetly and even take the radio off their belt whenever the job requires it. All without the inconvenience of wires that can get caught or tangled.

### REMOTE SPEAKER MICROPHONES

Remote Speaker Microphones (RSMs) can provide improved audio performance and convenient access to key radio controls, without the need to remove the radio from the belt or case. We have a broad selection of RSMs available to meet different needs and conditions.





## HEADSETS

Headsets provide the discretion of earpieces, plus additional comfort or ear defence. And specialist audio accessories like temple transducers allow clear communication even in high activity or extremely noisy environments.

## IMPRES™ AUDIO ACCESSORIES

Motorola's unique IMPRES technology matches the characteristics of the radio and audio accessory to give users the best performance possible. Optimising loudness, clarity and intelligibility, the IMPRES audio portfolio boosts workforce productivity and departmental efficiency.



## IMPRES ENERGY ACCESSORIES

Selecting the right battery is vital to help ensure your portable radio will operate for a full shift. Only Motorola offers IMPRES energy solutions that automatically condition and charge batteries, enhancing performance and extending lifetime by up to 43%.



## EARPIECES

1-wire, 2-wire, 3-wire, in-ear, over-the-ear... Motorola has a huge range of earpieces designed to allow the user to communicate discreetly without messages disturbing - or being listened to - by others.



## IMPRES FLEET MANAGEMENT



You've got the best battery and charger. You've got IMPRES to extend lifetime. Use IMPRES Fleet Management to manage all your batteries and get the most from every battery and charger in your system.

## CARRY ACCESSORIES

From basic belt clips to carry cases or chest packs, Motorola's carrying solutions can help protect the radio whilst keeping the user's hands free for the everyday tasks that need to be carried out.



## MOBILE ACCESSORIES



There's a vast variety of accessories that are available for mobile radios. From mounting brackets to microphones, antennas to speakers, Motorola offers a wide range of solutions to make installations safe, secure and easy to use.

For more information on Motorola Solutions' accessories, visit [http://www.motorolasolutions.com/en\\_us/products/two-way-radio-accessories.html](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](http://www.motorolasolutions.com/en_us/partners/search.html).

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