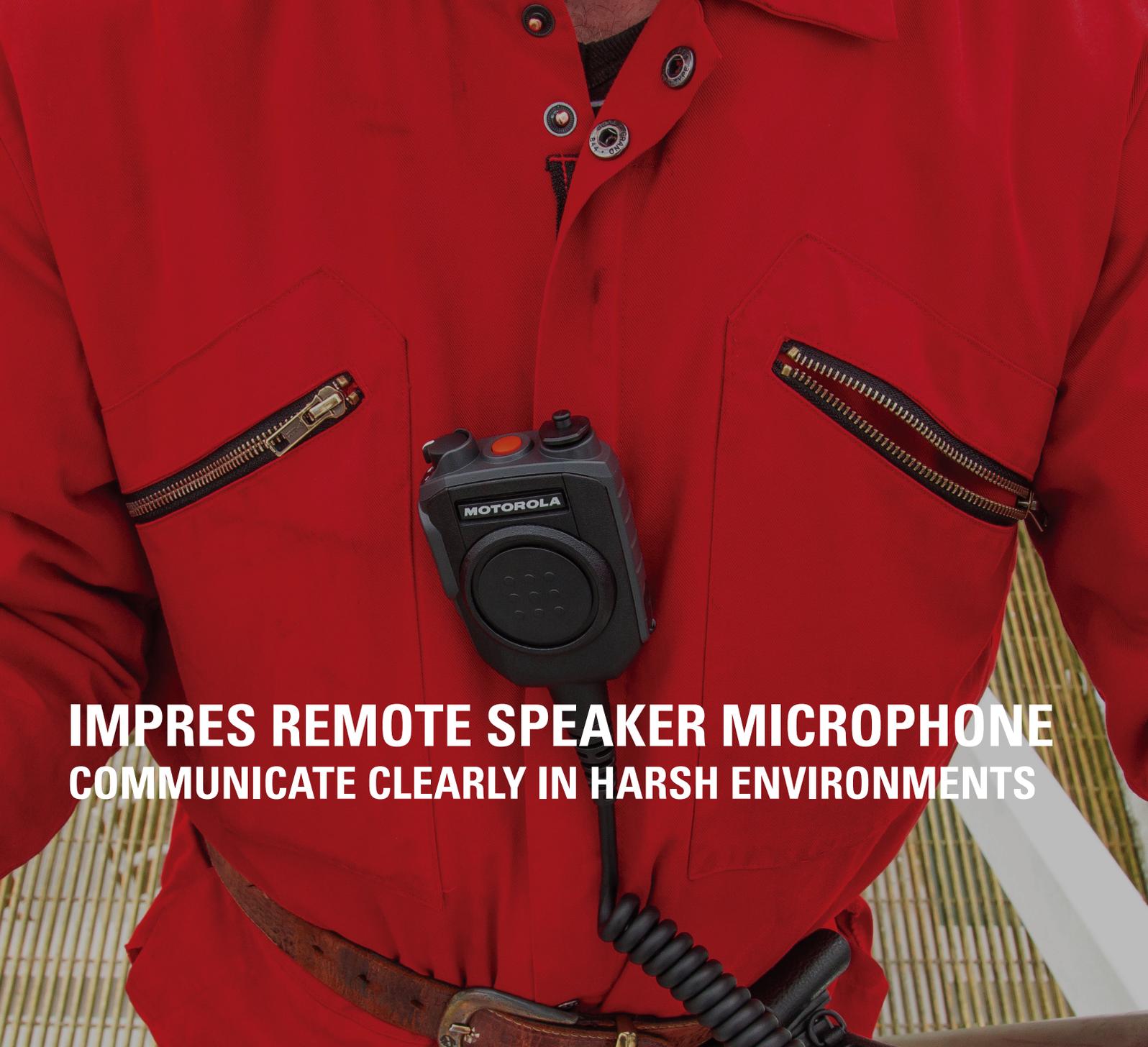




# IMPRES™ REMOTE SPEAKER MICROPHONES

**COMMUNICATE CLEARLY IN HARSH ENVIRONMENTS**





# IMPRES REMOTE SPEAKER MICROPHONE COMMUNICATE CLEARLY IN HARSH ENVIRONMENTS

In harsh environments, you want to talk and hear clearly above the noise. Whether you are in a noisy oil refinery or in the midst of fighting a fire, you can't afford to lose seconds struggling to get your message through. These IMPRES Remote Speaker Microphones (RSM) has been designed to withstand the toughest environments, while providing clear communications. Our IMPRES portfolio includes models with IMPRES Omni-Directional Audio and models with Active Noise Canceling Audio. Select the RSM that's right for you.





### IMPRES AUDIO

IMPRES Audio ensures your voice is heard clearer, crisper, and louder regardless of level or direction you're speaking into the accessory. Whether you need to talk loudly or quietly, into or away from the accessory, IMPRES Audio lowers the loud talker level and raises the soft talker level automatically so listeners do not have to adjust the volume.

### ACTIVE NOISE CANCELLATION

The active noise cancellation technology ensures your voice, not the surrounding noise, goes through clearly. Likewise, the speaker has been designed to let users hear above the noise, which can be difficult in harsh environments. The digital signal processing also reduces audio feedback, allowing users to work in close proximity with each other.

### COMMUNICATE CLEARLY IN WINDY AND WET CONDITIONS

These IMPRES RSMs incorporate the Windporting feature which reduces the adverse effect of wind noise and provides intelligible audio for users working under windy conditions. This is especially beneficial for users working in inclement weather or in oil refineries that are located near windy sea shore conditions.

Firefighters don't need to worry any longer about water-clogged microphones or speaker grills that prevent communication from getting through. Water drains quickly from the IMPRES RSM, ensuring clear audio so that users can focus on critical tasks.

### DESIGNED WITH THE RIGHT FIT AND FEEL

These remote speaker microphones have been designed for ease of use in the toughest conditions. Exaggerated controls, including large glove friendly front and side Push-To-Talk buttons, allow you to transmit with ease even when wearing protective gear and other equipment that can make reaching for a side Push-To-Talk challenging.

The rugged housing includes emergency and volume controls that are large for quick access but protected to avoid accidental activation. Now you can focus on the job at hand without worrying about fumbling with your equipment.

### VERSATILITY MEETS PERFORMANCE

These IMPRES Remote Speaker Microphones are equipped with two audio jacks, allowing you to use your RSM with compatible headsets. For users preferring a simple earpiece, a 3.5mm-plug earpiece is available in addition to the Nexus jack. The RSM has a unique sliding cover that ensures the 3.5mm audio jack is protected when not in use, preventing any debris or liquids from entering the device. Further, the Nexus-jack has an open interface enabling third party headsets such as Savox HC-1 and Savox HC-2 to be used safely.



## COMPATIBLE AUDIO ACCESSORIES



### RMN5123

Savox HC-1 Helmet-Com® with single speaker. Easily mounts into most helmet types providing best in class audio quality and handsfree communication. Use with PMMN4093 or PMLN7257.



### GMMN4584

Savox HC-2 Helmet-Com® with dual speakers. Easily mounts into most helmet types providing best in class audio quality and hands-free communication.



### PMLN7188

3.5 mm earpiece with clear acoustic tube. This extended comfort earpiece, allows users to receive incoming radio communications discretely.

# IMPRES™ ACTIVE NOISE-CANCELLING REMOTE SPEAKER MICROPHONE

## COMPATIBLE RADIOS

Commercial	DP4000e series
Astro P25	APX2000, APX4000, APX6000 series, APX6000XE, APX7000, APX7000XE, SRX2200, APX8000, APX8000XE

## GENERAL

Part Number	PMMN4102B (Black) PMMN4102BGRN (High impact green)
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories 3.5mm Rx-only earpiece with Locking mechanism
Intrinsic Safety	RSM is TIA4950 compliance with the compatible radios

## MICROPHONE

Type	Unidirectional Microphone
Sensitivity	-44 ± 3 dBV/Pa at 1 kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

## SPEAKER

Diameter	36mm
Rated Output Level	97 dB SPL Typical at 1kHz, 2W @ 30 cm
Distortion (THD)	<15%, 450Hz-3kHz, 2W @ 30cm

## CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	490mm (Resting Position), 1700 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery		
Battery Life	Device-Under-Test	*Battery Typical Rated Capacity	5/5/90 Profile (Transmit/Receive/Standby)
	ASTRO P25 radio model+*Battery+RSM	≥2350 mAh	>8 hours
	Commercial radio model+*Battery+RSM	≥1600 mAh	>8 hours

\* Please refer to battery catalog for proper battery selection.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188B	3.5 mm receive-only earpiece with translucent tube
GMMN4585A	SAVOX HC-1 Helmet-Communication
GMMN4584A	SAVOX HC-2 Helmet-Communication

## IMPRES™ OMNIDIRECTIONAL REMOTE SPEAKER MICROPHONE

### COMPATIBLE RADIOS

Commercial	DP4000e series
Astro P25	APX2000,APX4000, APX6000 series, APX6000XE, APX7000, APX7000XE, SRX2200, APX8000, APX8000XE
TETRA	MTP6000 series, MTP6650, MTP850 FuG

### GENERAL

Part Number	PMMN4113 PMMN4119 (short cable)
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Color	Black
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories 3.5mm Rx-only earpiece with Locking mechanism
Intrinsic Safety	RSM is TIA4950 compliance with the compatible radios

### MICROPHONE

Type	Omni Directional Microphone
Sensitivity	-35 ± 3 dBV/Pa at 1kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

### SPEAKERS

Diameter	36mm
Rated Output Level	97 dB SPL Typical at 1kHz, 2W @ 30 cm
Distortion (THD)	<15%, 450Hz-3kHz, 2W @ 30cm

### CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	PMMN4113A: 490mm (Resting Position), 1700 mm (Fully Stretch) PMMN4119A: 250mm (resting position), 480 mm (fully stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery		
Battery Life	Device-Under-Test	*Battery Typical Rated Capacity	5/5/90 Profile (Transmit/Receive/Standby)
	ASTRO P25 radio model+*Battery+RSM	≥2350 mAh	>8 hours
	Commercial radio model+*Battery+RSM	≥1600 mAh	>8 hours
	Tetra radio model+*Battery+RSM	≥1700 mAh	>8 hours

\* Please refer to battery catalog for proper battery selection.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188B	3.5 mm receive-only earpiece with translucent tube
GMMN4585A	SAVOX HC-1 Helmet-Communication
GMMN4584A	SAVOX HC-2 Helmet-Communication
RMN4052B*	Peltor tactical medium weight headset with boom mic, headband

\*Compatible with MTP6000 series only

## IMPRES™ ACTIVE NOISE-CANCELLING REMOTE SPEAKER MICROPHONE (ATEX/IECEX)

### COMPATIBLE RADIOS

Commercial	DP4000Ex series (Requires radio firmware R02.40.01 or later)
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### GENERAL

Part Number	PMMN4094
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Color	Black
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories 3.5mm Rx-only earpiece with Locking mechanism

## MICROPHONE

Type	Unidirectional Microphone
Sensitivity	-44 ± 3 dBV/Pa at 1kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

## SPEAKER

Diameter	36mm
Rated Output Level	90 dB SPL Typical at 1kHz, 0.5W @ 30 cm
Distortion (THD)	<15%, 300Hz-3kHz, 0.5W @ 30cm
Maximum Output Level (at max radio volume)	94 dB SPL Typical at 30 cm 97 dB phon Typical at 30 cm

## CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	390mm (Resting Position), 1200 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery
Battery Life (tested with battery NNTN8359)	5/5/90 Profile (Transmit/Receive/Standby) >8 hours

\* Please refer to battery catalog for proper battery selection.

## ATEX/IECEX<sup>12</sup>

Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEx: Ex ib IIC T4 Gb
Dust Rating	ATEX: Class II 2D Ex ib IIIC T90°C Db IECEx: Ex ib IIIC T90°C Db
Mining Rating	ATEX: Class I M1 Ex ia I Ma IECEx: Ex ia I Ma
Ambient Temperature	Ta: -20°C to +55°C
ATEX/IECEX IP Rating	IP64, IP67
Secondary Accessory Interfaces <sup>1</sup>	The Tx/Rx 4-pole Nexus-jack has the following certified ATEX/IECEX interface parameters: IECEX: Ex ia I Ma U <sub>o</sub> = 7 V, I <sub>o</sub> = 0.160 A, P <sub>o</sub> = 0.275 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH  The Rx-only 3.5mm jack with locking mechanism has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 8.4 V, I <sub>o</sub> = 0.142 A, P <sub>o</sub> = 0.243 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH

<sup>1</sup> When combining accessories and radios, the resulting ATEX/IECEX classification for the system is always the lowest classification of the system elements.

<sup>2</sup> ATEX Specifications: EN60079-0:2012, EN60079-11:2012. IECEx Specifications: IEC 60079-0:2011, IEC60079-11:2011.

Note: Specifications subject to change without notice.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188A/B	3.5 mm receive-only earpiece with translucent tube
RMN5123A	SAVOX HC-1 Ex Helmet-Communication
GMMN4580A	SAVOX HC-2 Ex Helmet-Communication
PMLN6087A	Peltor high attenuation headset with boom mic, headband
PMLN6089A	Peltor tactical XP headset with boom mic, helmet attachment
PMLN6090A	Peltor tactical XP headset with boom mic, headband
PMLN6092A	Peltor high attenuation headset with boom mic, helmet attachment
PMLN6333A	Peltor twin cup headset with boom mic, helmet attachment
PMLN7531A	Peltor high attenuation headset with boom mic, neckband
PMLN7535A	Peltor tactical XP headset with boom mic, neckband

## IMPRES™ ACTIVE NOISE-CANCELLING REMOTE SPEAKER MICROPHONE (ATEX/IECEX)

### COMPATIBLE RADIOS

Tetra	MTP8000Ex series
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### GENERAL

Part Number	PMMN4093
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Color	Black
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories 3.5mm Rx-only earpiece with Locking mechanism

### MICROPHONE

Type	Unidirectional Microphone
Sensitivity	-44 ± 3 dBV/Pa at 1kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

## SPEAKER

Diameter	36mm
Rated Output Level	90 dB SPL Typical at 1kHz, 0.5W @ 30 cm
Distortion (THD)	<15%, 300Hz-3kHz, 0.5W @ 30cm
Maximum Output Level (at max radio volume)	94 dB SPL Typical at 30 cm 97 dB phon Typical at 30 cm

## CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	390mm (Resting Position), 1200 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery
Battery Life (tested with battery NNTN8570_)	5/5/90 Profile (Transmit/Receive/Standby) >8 hours

\* Please refer to battery catalog for proper battery selection.

## ATEX/IECEX<sup>12</sup>

Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEX: Ex ib IIC T4 Gb
Dust Rating	ATEX: Class II 2D Ex ib IIIC T90°C Db IECEX: Ex ib IIIC T90°C Db
Mining Rating	ATEX: Class I M1 Ex ia I Ma IECEX: Ex ia I Ma
Ambient Temperature	Ta: -20°C to +55°C
ATEX/IECEX IP Rating	IP64, IP67
Secondary Accessory Interfaces <sup>1</sup>	The Tx/Rx 4-pole Nexus-jack has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 7 V, I <sub>o</sub> = 0.160 A, P <sub>o</sub> = 0.275 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH The Rx-only 3.5mm jack with locking mechanism has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 8.4 V, I <sub>o</sub> = 0.142 A, P <sub>o</sub> = 0.243 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH"

<sup>1</sup> When combining accessories and radios, the resulting ATEX/IECEX classification for the system is always the lowest classification of the system elements.

<sup>2</sup> ATEX Specifications: EN60079-0:2012, EN60079-11:2012. IECEX Specifications: IEC 60079-0:2011, IEC60079-11:2011.

Note: Specifications subject to change without notice.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188A/B	3.5 mm receive-only earpiece with translucent tube
RMN5123A	SAVOX HC-1 Ex Helmet-Communication
GMMN4580A	SAVOX HC-2 Ex Helmet-Communication
PMLN6087A	Peltor high attenuation headset with boom mic, headband
PMLN6089A	Peltor tactical XP headset with boom mic, helmet attachment
PMLN6090A	Peltor tactical XP headset with boom mic, headband
PMLN6092A	Peltor high attenuation headset with boom mic, helmet attachment
PMLN6333A	Peltor twin cup headset with boom mic, helmet attachment
PMLN7531A	Peltor high attenuation headset with boom mic, neckband
PMLN7535A	Peltor tactical XP headset with boom mic, neckband

## IMPRES™ OMNIDIRECTIONAL REMOTE SPEAKER MICROPHONE (ATEX/IECEX)

### COMPATIBLE RADIOS

Commercial	DP4000Ex series (Requires radio firmware R02.40.01 or later)
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### GENERAL

Part Number	PMMN4110
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Color	Black
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories

### MICROPHONE

Type	Omni Directional Microphone
Sensitivity	-35 ± 3 dBV/Pa at 1kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

### SPEAKER

Diameter	36mm
Rated Output Level	90 dB SPL Typical at 1kHz, 0.5W @ 30 cm
Distortion (THD)	<15%, 300Hz-3kHz, 0.5W @ 30cm
Maximum Output Level (at max radio volume)	94 dB SPL Typical at 30 cm 97 dB phon Typical at 30 cm

### CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

### CABLE

Length	390mm (Resting Position), 1200 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery
Battery Life (tested with battery NNTN8359)	5/5/90 Profile (Transmit/Receive/Standby) >8 hours

\* Please refer to battery catalog for proper battery selection.

## ATEX/IECEX<sup>12</sup>

Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEx: Ex ib IIC T4 Gb
Dust Rating	ATEX: Class II 2D Ex ib IIIC T90°C Db IECEx: Ex ib IIIC T90°C Db
Mining Rating	ATEX: Class I M1 Ex ia I Ma IECEx: Ex ia I Ma
Ambient Temperature	Ta: -20°C to +55°C
ATEX/IECEX IP Rating	IP64, IP67
Secondary Accessory Interfaces <sup>1</sup>	The Tx/Rx 4-pole Nexus-jack has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 7 V, I <sub>o</sub> = 0.160 A, P <sub>o</sub> = 0.275 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH The Rx-only 3.5mm jack with locking mechanism has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 8.4 V, I <sub>o</sub> = 0.142 A, P <sub>o</sub> = 0.243 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH

<sup>1</sup> When combining accessories and radios, the resulting ATEX/IECEX classification for the system is always the lowest classification of the system elements.

<sup>2</sup> ATEX Specifications: EN60079-0:2012, EN60079-11:2012. IECEx Specifications: IEC 60079-0:2011, IEC60079-11:2011.

Note: Specifications subject to change without notice.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188A/B	3.5 mm receive-only earpiece with translucent tube
RMN5123A	SAVOX HC-1 Ex Helmet-Communication
GMMN4580A	SAVOX HC-2 Ex Helmet-Communication
PMLN6087A	Peltor high attenuation headset with boom mic, headband
PMLN6089A	Peltor tactical XP headset with boom mic, helmet attachment
PMLN6090A	Peltor tactical XP headset with boom mic, headband
PMLN6092A	Peltor high attenuation headset with boom mic, helmet attachment
PMLN6333A	Peltor twin cup headset with boom mic, helmet attachment
PMLN7531A	Peltor high attenuation headset with boom mic, neckband
PMLN7535A	Peltor tactical XP headset with boom mic, neckband

# IMPRES™ OMNIDIRECTIONAL REMOTE SPEAKER MICROPHONE (ATEX/IECEX)

## COMPATIBLE RADIOS

Commercial	MTP8500Ex series
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## GENERAL

Part Number	PMMN4109
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Color	Black
Power Source	Radio Battery
Secondary Accessory Interfaces	4-pole Nexus TX/RX audio accessories 3.5mm Rx-only earpiece with Locking mechanism

## MICROPHONE

Type	Omni Directional Microphone
Sensitivity	-35 ± 3 dBV/Pa at 1 kHz
Distortion (THD)	<3% at 1 kHz
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Noise Cancellation	Motorola Enhanced Active Noise Cancelling
Windporting	Yes

## SPEAKER

Diameter	36mm
Rated Output Level	90 dB SPL Typical at 1kHz, 0.5W @ 30 cm
Distortion (THD)	<15%, 300Hz-3kHz, 0.5W @ 30cm
Maximum Output Level (at max radio volume)	94 dB SPL Typical at 30 cm 97 dB phon Typical at 30 cm

## CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	390mm (Resting Position), 1200 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height
Work-When-Wet	Water drains quickly enabling Tx and Rx at inverted and upright wearing position

## POWER

Power Source	Radio battery
Battery Life (tested with battery NNTN8570)	5/5/90 Profile (Transmit/Receive/Standby) >8 hours

\* Please refer to battery catalog for proper battery selection.

## ATEX/IECEX<sup>12</sup>

Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEx: Ex ib IIC T4 Gb
Dust Rating	ATEX: Class II 2D Ex ib IIIC T90°C Db IECEx: Ex ib IIIC T90°C Db
Mining Rating	ATEX: Class I M1 Ex ia I Ma IECEx: Ex ia I Ma
Ambient Temperature	Ta: -20°C to +55°C
ATEX/IECEX IP Rating	IP64, IP67
Secondary Accessory Interfaces <sup>1</sup>	The Tx/Rx 4-pole Nexus-jack has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 7 V, I <sub>o</sub> = 0.160 A, P <sub>o</sub> = 0.275 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH The Rx-only 3.5mm jack with locking mechanism has the following certified ATEX/IECEX interface parameters: U <sub>o</sub> = 8.4 V, I <sub>o</sub> = 0.142 A, P <sub>o</sub> = 0.243 W, C <sub>o</sub> = 1 µF, L <sub>o</sub> = 1 mH"

<sup>1</sup> When combining accessories and radios, the resulting ATEX/IECEX classification for the system is always the lowest classification of the system elements.

<sup>2</sup> ATEX Specifications: EN60079-0:2012, EN60079-11:2012. IECEx Specifications: IEC 60079-0:2011, IEC60079-11:2011.

Note: Specifications subject to change without notice.

## SECONDARY AUDIO ACCESSORY

Kit Number	Description
PMLN7188A/B	3.5 mm receive-only earpiece with translucent tube
RMN5123A	SAVOX HC-1 Ex Helmet-Communication
GMMN4580A	SAVOX HC-2 Ex Helmet-Communication
PMLN6087A	Peltor high attenuation headset with boom mic, headband
PMLN6089A	Peltor tactical XP headset with boom mic, helmet attachment
PMLN6090A	Peltor tactical XP headset with boom mic, headband
PMLN6092A	Peltor high attenuation headset with boom mic, helmet attachment
PMLN6333A	Peltor twin cup headset with boom mic, helmet attachment
PMLN7531A	Peltor high attenuation headset with boom mic, neckband
PMLN7535A	Peltor tactical XP headset with boom mic, neckband

# IMPRES™ REMOTE SPEAKER MICROPHONE SPECIFICATIONS

## COMPATIBLE RADIOS

DP4000e

## GENERAL

Part Number	PMMN4119
Dimensions (RSM head only)	68mm (W) x 94mm (H) x 29mm (D) (without clip)
Weight (complete kit)	~290 grams
Clip	Swivel Clip with D-ring
Power Source	Radio Battery
Secondary Accessory Interfaces <sup>1</sup>	The Tx/Rx 4-pole Nexus-jack

## MICROPHONE

Type	Electret Condenser Microphone
Sensitivity	-44 ± 3 dBV/Pa at 1 kHz
Distortion (THD)	<3% at 1
Intelligent Audio	Supported by RSM
IMPRES™	Yes
Mode of Operation	Omni Directional Operation
Windporting	Yes

## SPEAKER

Diameter	36mm
Impedance	16 ohm
Rated Output Level	90 dB SPL Typical at 0.5W, 30 cm
Maximum Output Level (at max radio volume)	94 dB SPL Typical, at 30 cm 97 dB phon Typical, at 30 cm
Distortion (THD)	<10% typical at 1 kHz, 0.5W, at 30cm

## CONTROLS

Top	Orange Programmable Button
Side	Side Push-To-Talk (PTT) (525 000 Cycles) and One Black Programmable Button
Front	Front Push-To-Talk (PTT) (525 000 Cycles)
Volume	Hi-Lo

## CABLE

Length	390mm (Resting Position), 1200 mm (Fully Stretch)
Flex Life	100,000 Cycles (Minimum), Bend 90° Left-Right and Front-Back with 2lbs Load
Pull Strength	40 lbs (Minimum)
Cable Jacket	UL94 V-0 Compliant

## ENVIRONMENTAL

Operating Temperature	-30°C to +60°C
Storage Temperature	-55°C to +85°C
Thermal Shock	-57°C to +80°C
Humidity	90% - 95% Relative Humidity at +50°C for 8 hours
Rain	MIL STD 810G Method 506.4
Salt Fog	MIL STD 810G Method 509.4 Procedure 1
Dust	MIL STD 810G Method 510.4 Procedure 1
Vibration	MIL STD 810G Method 514.5 Procedure 1 Category 24
Mechanical Shock	MIL STD 810G Method 516.5 Procedure 1
ESD	IEC / EN 61000-4-2
IP Rating	IP67
Impact Grill	1.25" diameter steel ball drop, 30cm to 100cm at 10cm intervals, 8 times at each height

Note: Specifications subject to change without notice.

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