



# ***Motorola Revolutionary Remote Speaker Microphones***

Built to withstand severe weather conditions that is ideal for private security, construction, transportation, hospitality, as well as public safety professionals.



Designed to dramatically reduce background wind noise and perform in extremely wet conditions

– Finally, microphones as tough as you are



Decreased wind noise even in gusty, stormy conditions.

These new remote speaker microphones for Motorola two-way radios boast a revolutionary Windporting feature that dramatically lessens background noise from high winds and other severe weather conditions. Audio can pass through the speaker grill even when the microphone port is blocked by water. Now public safety professionals can be more confident than ever of clear, understandable communication when Mother Nature is uncooperative.



Hear the audio quality difference at:  
<http://www.motorola.com/governmentandenterprise>



The clarity of these microphones can help public safety professionals communicate more clearly and the higher IP57 rating allows construction workers to get through even on dusty and wet construction sites.

## IP Code

The IP Code is a designation that indicates the level, or amount, of the protection. The IP Code designation consists of the letters **IP** (International Protection) followed by two numerals –



DUST PROTECTED



IMMERSION IN WATER

example:

# IP57

INTERNATIONAL ←

PROTECTION ←

Degree of protection against the ingress of solid foreign objects.  
**5** = DUST PROTECTED

Degree of protection against the ingress of water with harmful effects.  
**7** = AGAINST TEMPORARY IMMERSION IN WATER (1m submersion for 30 minutes)

Choose the convenience of an ear jack unit with compatible earpieces available...or the protection of a higher IP57 rating.

### Two Models Available

These advanced Windporting remote speaker microphones are offered in two compact designs to match user needs:

#### 1 – Ear Jack Units for Discreet Communication

The jack is located on the microphone head to provide private listening without broadcast of message. All ear jack microphones accept Motorola audio earpieces PMLN4620, RLN4941, AARLN4885 and WADN4190.

These compact microphones have a Windporting feature that can help reduce background noise at school rallies, conventions, outdoor events and on the retail floor.

#### Ideal for Transportation, Hospitality and Service Professionals:

- PMMN4013 – Remote Speaker Microphone with Ear Jack
- PMMN4021 – Remote Speaker Microphone with Ear Jack
- PMMN4022 – Remote Speaker Microphone with Ear Jack

#### 2– Higher IP57 Rating Microphones for Extra Protection

IP57 is a higher rating than the standard IP54 that helps provide first responders with high reliability in emergency situations. The number “5” stands for the dust intrusion rating, or the capacity to withstand the effects of fine, abrasive dust particles. The “7” means a higher water intrusion rating. The head of the microphone has been tested for 30 minutes of submersion at 1 metre, but the connector is not similarly rated.

These sturdy microphones are the must-have communication audio accessories for those working at the job site or in the field – where the Windporting feature makes the most sense.

#### Ideal for Public Safety, Mining and Construction Workers:

- PMMN4029 – Remote Speaker Microphone with IP57 Rating
- PMMN4023 – Remote Speaker Microphone with IP57 Rating
- PMMN4027 – Remote Speaker Microphone with IP57 Rating



AARLN4885



PMLN4620



RLN4941

# Remote Speaker Microphones With Ear Jack and Higher IP57 Rating

## Specifications

	PMMN4013/PMMN4021/PMMN4022	PMMN4023/PMMN4027/PMMN4029
<b>ACOUSTICS</b>		
<b>Microphone Type</b>	Omni directional	Omni directional
<b>Sensitivity:</b>	-44dBV +/-2dBV, at 1kHz, 94dB SPL source, at mouth reference point	-44dBV +/-2dBV, at 1kHz, 94dB SPL source, at mouth reference point
<b>Distortion (THD):</b>	< 5% (TX) at 1kHz at rated audio	< 5% (TX) at 1kHz at rated audio
<b>Speaker Diameter</b>	45mm	45mm
<b>Output Power:</b>	0.5W at rated audio	0.5W at rated audio
<b>Output Level:</b>	90dB SPL typical, 200Hz - 3200Hz, at rated audio, at 30cm from RSM	90dB SPL typical, 200Hz - 3200Hz, at rated audio, at 30cm from RSM
<b>Maximum Output Level:</b>	< 120dB SPL at maximum radio volume	< 120dB SPL at maximum radio volume
<b>Frequency Response:</b>	200Hz - 3200Hz	200Hz - 3200Hz
<b>Distortion (THD):</b>	< 15% (RX) at 1kHz at rated audio	< 15% (RX) at 1kHz at rated audio
<b>Earpiece Type</b>	3.5mm unthreaded jack, Receive	None
<b>Maximum Output Level:</b>	< 118dB SPL at maximum radio volume	None
<b>Acoustic Feedback Distance:</b>	35 feet typical, outdoors	35 feet typical, outdoors
<b>RSM BODY</b>		
<b>Dimensions: W x L x D (without Clothing Clip)</b>	55 x 60 x 27mm	55 x 60 x 27mm
<b>Weight:</b>	146.2 Grams (maximum)	188 Grams (maximum)
<b>Case Material:</b>	Lexan 141R Polycarbonate	Lexan 141R Polycarbonate
<b>POWER</b>		
<b>Power Source:</b>	Radio Battery	Radio Battery
<b>CONTROLS</b>		
<b>Push-to-Talk (PTT):</b>	Side paddle mechanism activated via tact switch	Side paddle mechanism activated via tact switch
<b>CABLE</b>		
<b>Flex Life:</b>	50,000 Cycles (minimum)	50,000 Cycles (minimum)
<b>Pull Strength:</b>	40 Lbs, Minimum Tensile, In-Line	40 Lbs, Minimum Tensile, In-Line
<b>Accessory Connector Case:</b>	Flame Retardant TPE/Black Shore A80	Flame Retardant Polycarbonate Black
<b>ENVIRONMENTAL</b>		
<b>Operating Temperature:</b>	-30°C to +60°C	-30°C to +60°C
<b>Storage Temperature:</b>	-55°C to +85°C	-55°C to +85°C
<b>Thermal Shock:</b>	-57°C to +80°C	-57°C to +80°C
<b>Humidity:</b>	90% - 95% Relative Humidity at +50°C for 8 hours	90% - 95% Relative Humidity at +50°C for 8 hours
<b>Rain:</b>	MIL 810F Method 506.4	MIL 810F Method 506.4
<b>Salt/Fog:</b>	MIL 810F Method 509.4 Procedure 1	MIL 810F Method 509.4 Procedure 1
<b>Dust:</b>	MIL 810F Method 510.4 Procedure 1	MIL 810F Method 510.4 Procedure 1
<b>Vibration:</b>	MIL 810F Method 514.5 Procedure 1, Category 24	MIL 810F Method 514.5 Procedure 1 Category 24
<b>Mechanical Shock:</b>	MIL 810F Method 516.5 Procedure 1	MIL 810F Method 516.5 Procedure 1
<b>Impact (grill):</b>	1 1/4" diameter steel ball drop. Initial drop height is 30cm, then increase drop height by 10cm for at least 8 times @ 100cm.	1 1/4" diameter steel ball drop. Initial drop height is 30cm, then increase drop height by 10cm for at least 8 times @ 100cm.
<b>ESD:</b>	IEC/EN61000-4-2	IEC/EN61000-4-2
<b>IP Rating:</b>	IP54	IP57 (head of Microphone)

## Microphone Compatibility Guide

	With Jack PMMN4013	IP57 PMMN4029
GP300/GP88	•	
GP308/GP88s	•	
GP3188/GP3688	•	•
	PMMN4021	PMMN4027
ATS2500	•	•
GP328/GP338	•	•
GP329/GP339	•	•
GP328LS/GP338LS	•	•
LTR.PRO Series	•	•
MTX900/960	•	•
PTX700/760/780	•	•
	PMMN4022	PMMN4023
GP328Plus/338Plus	•	•
GP3298Plus/339Plus	•	•
GP338XLS	•	•
GL2000	•	•
PTX700Plus/760Plus	•	•

*Note: These RSMs are FM-Approved with the associated Intrinsic Safe Radios.*



Motorola Electronics Pte Ltd  
Motorola Innovation Centre - Level 7  
12 Ang Mo Kio Street 64 Ang Mo Kio Industrial Park 3  
Singapore 569088  
[www.motorola.com/governmentandenterprise](http://www.motorola.com/governmentandenterprise)

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