



**MONITOR THEIR LOCATION ON THE MOVE**

# MOTOROLA GPS II REMOTE SPEAKER MICROPHONES



Officers on a high-speed car chase. Foot patrols in a high-crime district. Border patrol agents on high alert. During times of danger, dispatchers need to know the exact location of personnel to keep a close watch on their safety. And during emergencies, they need to find the closest responder to send quickly to the incident.

Our GPS II Remote Speaker Microphones (RSMs) are engineered to significantly improve safety and response time. With increased accuracy to within 15 meters – 95% of the time – recommended system polling rates as low as 30 seconds<sup>1</sup>, they automatically track your people by satellite, anywhere outdoors.

## GREATER ACCURACY ON THE GO

Designed for ASTRO 25® XTS® 2500/5000 portable radios, our GPS II RSMs provide better location accuracy, even in urban and forested environments. Programmable polling lets you determine how often to track your responders to optimize accuracy, battery life and channel traffic.<sup>2</sup> And responders can check their own coordinates on the radio display if needed.<sup>3</sup>

## NO BATTERIES TO RECHARGE

Our GPS II RSMs utilize power directly from the radio so they never have to be charged separately. You save time and reduce costs because there's no separate charging device or spare battery replacement needed. Now when the radio is powered, the microphone is powered.

## TWO MICS MADE FOR THE OUTDOORS

Choose from two microphones: the ultra-rugged, water-submersible HMN4113 and the durable, water-resistant HMN4112 with an audio jack for discreet communications.

CALCULATED BATTERY LIFE (HR)			POLLING RATE (MIN)			
Battery	Type	mAH	0.5	1.0	1.5	2.0
RNN4006/7	NiMH	3000	12.1	12.6	12.8	12.9
NNTN4435	NiMH	1800	7.3	7.6	7.7	7.8
NNTN4436/7	NiMH	1700	6.9	7.2	7.3	7.3
NNTN6034	Li-ion	4150	16.8	17.5	17.8	17.9
NNTN9862	Li-ion	2750	11.1	11.6	11.8	11.9
HNN9031/2	NiCd	1525	6.2	6.4	6.5	6.6
NNTN9858	NiMH	2100	9.3	9.7	9.8	9.9
NNTN9857/6263	NiMH	2000	8.8	9.2	9.4	9.4
NNTN7335	Li-ion	2700	11.9	12.4	12.6	12.7
NNTN9816	NiCd	1525	6.7	7.0	7.1	7.2

**Duty Cycle 5/5/90. Calculations based on VHF / UHF R1 Band. Impact is less on UHF R2 and 7/800 Bands.**

(1) Polling rates are system dependent. Consult your Motorola Solutions Field System Engineer to optimal polling rates based on your system loading as well as any other data applications running (e.g. OTAP /OTAR)

(2) See XTS battery chart for specific battery life impact

(3) Coordinates available on XTS models with a display - XTS 2500 (Models 1.5, II or III) or XTS 5000 (Model II or III)

**PRODUCT SPEC SHEET**  
GPS II REMOTE SPEAKER MICROPHONE

**GPS II MICROPHONES SPECIFICATIONS**

GPS II Remote Speaker Microphone, Submersible	HMN4113
GPS II Remote Speaker Microphone with Audio Jack	HMN4112
Compatible Radios	XTS 5000, XTS 2500

**REMOTE SPEAKER MICROPHONE (RSM)**

Microphone Type	Omni-directional
Sensitivity	- 42dBV typical
Distortion	<3% from 300 to 3200 Hz

**SPEAKER**

Nominal Output Level	(@ 1kHz, 0.5W) 90dB SPL
Frequency Response	300-3200Hz
Distortion (THD)	< 5% at 1kHz
Audio Jack	HMN4113 - N/A HMN4112 - 3.5 mm unthreaded jack

**RSM BODY**

Dimensions (W x L x D)	62 mm x 87.5 mm x 43 mm with clothing clip
Weight	242 grams

**CONTROLS**

Channel Change Knob	16 position
Volume Control	Volume Up/Down Buttons on face of RSM
Orange Emergency Button	Located on top surface, activates radio's Orange Emergency Button if programmed
Side Programmable	2, activates side buttons of radio.

**POWER**

RSM Power Source	Radio Battery
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**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	-30° to +60°C
Storage Temperature	-57° to +85°C
Thermal Shock	-57° to +85°C
Humidity	90% - 95% RH @ +50°C for 8 hours
ESD	IEC 801-2
IP Rating	HMN4113 IP67 Rugged <sup>1</sup> HMN4112 IP54

**GPS – GLOBAL POSITIONING SYSTEM**

Simultaneous Satellites	48 Capable (WAAS Enabled)
Mode of Operation	Autonomous (non-assisted) GPS
Sensitivity	-148 dBm (acquisition) -160dBm (tracking)
Accuracy	5m(50%), 15m(95%)
Cold Start	< 35 seconds, typical with fully charged radio battery
Warm Start	< 35 seconds, typical with fully charged radio battery
Hot Start	3-5 seconds, typical with fully charged radio battery
Periodic Update	Information Age, typical 1-10 seconds

For optimal GPS coverage, you need a clear view of sky with no obstructions. Coverage may be limited in buildings, parking garages and areas with dense tree coverage.

**MILITARY STANDARDS 810E AND G**

Method Procedure/Category	Method Procedure/Category
Rain (HMN4113 only)	MIL-STD-810E Method 506.3, Procedure 1
Salt/Fog	MIL-STD-810G Method 509.5, Procedure 1
Dust	MIL-STD-810E Method 510.3, Procedure 1
Immersion (HMN4113 only)	MIL-STD-810G Method 512.5, Procedure 1
Vibration	MIL-STD-810G Method 514.6, Procedure 1, Category 24
Mechanical Shock	MIL-STD-810G Method 516.6, Procedure 4
ESD	IEC 801-2, Level 4
Intrinsic Safety Rating	FM
IP Rating	HMN4112 IP54 HMN4113 IP67 Rugged

**DISCREET COMMUNICATION ACCESSORIES FOR GPS II**

**REMOTE SPEAKER MICROPHONE WITH AUDIO JACK – HMN4112**

**An earphone jack located on the microphone head allows the user to receive discreet audio when used with these earpieces.**

AARLN4885	Receive-Only Covered Earbud
RLN4941	Receive-Only Earpiece with Translucent Tube and Rubber Eartip
WADN4190	Receive-Only Flexible Earpiece

For more information on how to monitor their location on the move, visit [www.motorolasolutions.com](http://www.motorolasolutions.com)

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<sup>1</sup> Rugged accessories exceed industry standards (IP57) for submergibility and provide a higher level of water protection – MIL-STD-810E, Method 512.3 (Immersion). These accessories meet the incremental requirement of submersion in 1 meter of fresh water that is 27C colder than the product for 2 hours.

All specifications are subject to change without notice. All specifications shown are typical.

