



# **Motorola GPS Remote Speaker Microphones**

For XTS<sup>®</sup> 2500 and XTS<sup>®</sup> 5000 Portable Two-way Radios

**ASTRO 25<sup>®</sup>  
PERSONNEL LOCATION TRACKING  
FOR ENHANCED  
PERSONNEL  
SAFETY**



# *Now dispatchers can locate public safety professionals outdoors, virtually anywhere in the field.*

Safety and efficiency are right on the mark when dispatchers know where everyone is located. With the new Global Positioning System (GPS) Remote Speaker Microphones (RSM), XTS® 2500/5000 portable two-way radio users can be automatically tracked by satellite throughout North America. The audio jack model allows use of discreet audio communication accessories.

Now dispatchers can send whomever is closest to each occurrence, reducing response time and improving staff management. In dangerous situations, dispatchers can keep close watch on everyone's position for greater security — including on-foot patrols and out-of-vehicle officers.

Requires clear view of sky with no obstructions for optimal GPS coverage. Coverage may be limited in buildings, parking garages and areas with heavy tree coverage.

## **GPS Remote Speaker Microphones (RSMs)**

Designed for ASTRO® Digital XTS 5000<sup>1</sup> (Models I, II, III, and Ruggedized) and XTS 2500<sup>2</sup> (Models I, 1.5, II, III and Ruggedized) Portable Radios.

**HMN4080A**  
**GPS Remote Speaker Microphone**  
Fully Submersible<sup>3</sup>

**HMN4084A**  
**GPS Remote Speaker Microphone with Audio Jack**  
Compatible with Motorola Earpieces

<sup>1</sup> XTS 5000 radios must have a radio host code of R06.01.00 or later.

<sup>2</sup> XTS 2500 radios must have Tanapa version B hardware and a radio host code of R10.00.00.

<sup>3</sup> GPS RSM and radio are fully submersible when used with the following ruggedized radio models:

XTS 5000R Ruggedized Models I and III  
XTS 2500i Ruggedized Models I, 1.5, II and III



GPS Remote Speaker Microphone – HMN4080A

*Spend more time on mission-critical communications —  
and less time having to ask “what’s your location?”*

## Features:

- 16-position Channel Selector Knob
- Emergency Button <sup>1</sup>
- 2 Programmable Buttons
- Full-range Volume Control
- Fully Submersible (HMN4080A Only) <sup>2</sup>
- Audio Jack on Microphone Head (HMN4084A Only)



AARLN4885B



RLN4941A



WADN4190B

### Supports the following GPS position update triggers to the Radio User:

- Local Position Update
- Location information can be shown to the user on the radio display. Requires the XTS 2500 (Models 1.5, II or III) or XTS 5000 (Model II or III).

### Supports the following GPS position update triggers to the Dispatcher:

#### Radio User Initiated <sup>3</sup>

- Location Request Upon Radio Power-On
- Emergency Alarm Location Request
- Emergency Push-to-Talk Location Request

#### Dispatcher Initiated <sup>3</sup>

- Location Polling
- Periodic Location Request
- Distance-Based Location Request

<sup>1</sup> The Emergency function is recognized only if the radio’s emergency button is also programmed for emergency.

<sup>2</sup> GPS RSM and radio are fully submersible when used with the following ruggedized radio models:  
XTS 5000R Ruggedized Models I and III  
XTS 2500i Ruggedized Model I, 1.5, II and III

<sup>3</sup> Requires an ASTRO® 25 Integrated Voice and Data System with components including:

- ASTRO Presence Notifier Application (RVN4198)
- ASTRO Location Application Developers Kit (RVN5030)
- A Location Application that supports Motorola’s Location Request / Response Protocol (LRRP) and interfaces to Motorola’s Presence Notifier Application in order to obtain location data from the radio.

### Discreet Communication Accessories for GPS Remote Speaker Microphone with Audio Jack – HMN4084A

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

AARLN4885B	Receive-Only Covered Earbud
RLN4941A	Receive-Only Earpiece with Translucent Tube and Rubber Eartip
WADN4190B	Receive-Only Flexible Earpiece

**Specifications for GPS Microphones**

GPS Remote Speaker Microphone - HMN4080A  
 GPS Remote Speaker Microphone with Audio Jack - HMN4084A



**Remote Speaker Microphone**

Microphone Type:	Omni-directional
Sensitivity:	- 42dBV typical

**Speaker**

Diameter:	45 mm
Output Power:	.5W at rated audio
Output Level:	90dB SPL typical
Maximum Output Level:	120dB SPL typical @ MAX volume

Audio Jack:	
HMN4080A	N/A
HMN4084A	3.5 mm unthreaded jack
Frequency Response:	300Hz - 3500Hz
Distortion (THD):	< 5% at 1kHz

**RSM Body**

Dimensions (W x L x D):	62 mm x 87.5 mm x 43 mm with Clothing Clip
Weight:	229 Grams

**Controls**

Channel Change Knob:	16 Position
Volume Control:	Volume Up/Down Buttons on face of RSM
Volume Control Levels:	Ten levels, maximum to minimum volume; feedback tone when receive audio not present
Orange Emergency Button:	Located on top surface, activates radio Emergency Button
Side Programmable Buttons:	2, activate side buttons of radio

**Power**

RSM Power Source:	Radio Battery
Radio Current Drain:	25mA: radio battery life impact 10-16% @ 5/5/90 duty cycle

**Cable Assembly**

Flex Life:	50,000 Cycles
Pull Strength:	40 Lbs, Minimum Tensile, In-Line

**GPS – Global Positioning System**

Simultaneous Satellites:	12
Mode of Operation:	Autonomous (Non-Assisted) GPS
GPS Antenna:	PIFA style antenna integrated into GPS RSM
Sensitivity:	-138dBm
Accuracy:	15m (40%), 25m (95%)
Cold Start:	< 90 seconds, Typical
Warm Start:	< 40 seconds
Hot Start:	2-4 seconds
Periodic Update:	Information Age Typical 20-45 Seconds

**Environmental**

Operating Temperature:	-30 degrees to +60 degrees C	
Storage Temperature:	-57 degrees to +85 degrees C	
Humidity:	90% - 95% RH @ +50 degrees C for 8 hours	
ESD:	IEC 801-2	
IP Rating:		
HMN4080	IP57	
HMN4084	IP54	

	MIL-STD 810E		MIL-STD 810F	
	Method	Procedure/Category	Method	Procedure/Category
Rain:			506.4	I/III without audio jack
Salt / Fog:	509.3	I		
Dust:	510.3	I		
Immersion (HMN4080 only):	512.3	I		
Vibration:	514.4	I/X, II/III		
Mechanical Shock:	516.4	I/IV		

**Repair Service**

All repairs on GPS Remote Speaker Microphones HMN4080A and HMN4084A must be made at the Motorola Authorized Service Depot. Repairs made at dealerships will void the warranty as is stated in the User Guide.

Dealer Logo  
 This area reserved for customization if sent to Print on Demand. If printing traditionally, these blue lines will be removed.

Channel Identifiers

Dealer Address, Phone Numbers and Website



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ACCY-RSM-GPS  
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