Motorola Solutions PMMN4051B

Motorola Solutions PMMN4051B Remote Speaker Microphone User Manual

INTRODUCTION

This manual provides detailed instructions for the proper use, setup, maintenance, and troubleshooting of your Motorola Solutions PMMN4051B Remote Speaker Microphone (RSM). The PMMN4051B is designed to enhance communication clarity and convenience for users of compatible Motorola Solutions XTS radio series.

The PMMN4051B RSM features a 3.5mm audio jack, IP54 water resistance, and Windporting technology to reduce background noise. It allows for hands-free communication without needing to remove the radio from its belt or case.

Figure 1: Motorola Solutions PMMN4051B Remote Speaker Microphone with its accompanying instruction sheet (part number 68012000015-A). The microphone features a speaker grille, a Push-To-Talk (PTT) button on the side, and a coiled cable terminating in a multi-pin connector for radio attachment.

KEY FEATURES

- **3.5mm Audio Jack:** Allows connection of an external earpiece for private listening.
- **IP54 Rated:** Provides protection against dust ingress and water spray from any direction, ensuring durability in various environments.
- **Windporting Feature:** Advanced technology that significantly reduces background noise caused by high winds and severe weather, ensuring clear communication.
- **Superior Audio Clarity:** Engineered to deliver clear and sharp audio transmission and reception.

- **Convenient Operation:** Enables users to speak and listen without removing the radio from its carrying position.

Figure 2: Front view of the PMMN4051B Remote Speaker Microphone, highlighting the speaker grille and the Motorola logo. This view emphasizes the compact and ergonomic design of the microphone.

COMPATIBILITY

The Motorola Solutions PMMN4051B Remote Speaker Microphone is fully compatible with the following Motorola Solutions XTS Radio Series:

- XTS1500
- XTS2500
- XTS5000

Figure 3: An illustration showing four different models from the Motorola XTS radio series, which are compatible with the PMMN4051B Remote Speaker Microphone. These radios vary in their display and keypad configurations.

SETUP INSTRUCTIONS

Follow these steps to properly connect your PMMN4051B Remote Speaker Microphone to your compatible Motorola Solutions radio:

1. **Power Off Radio:** Ensure your radio is powered off before connecting any accessories.

2. **Locate Accessory Port:** Identify the accessory port on the side of your Motorola XTS series radio. This port is typically covered by a protective flap.

3. **Connect RSM:** Align the multi-pin connector of the PMMN4051B RSM with the radio's accessory port. Gently push the connector in until it is fully seated. Secure the connection if your radio model features a locking screw.

4. **Position RSM:** Use the integrated swivel clip on the back of the RSM to attach it securely to your uniform, vest, or collar for easy access.

5. **Power On Radio:** Once the RSM is securely connected, power on your radio. The radio should recognize the accessory automatically.

Figure 4: A detailed view of the PMMN4051B Remote Speaker Microphone, showing its coiled cable and the multi-pin connector designed for attachment to compatible Motorola XTS series radios. This image illustrates the components involved in connecting the RSM.

OPERATING INSTRUCTIONS

The PMMN4051B Remote Speaker Microphone simplifies radio communication. Here are the basic operating procedures:

- **Receiving Audio:** Audio from the radio will be routed through the RSM's speaker. Ensure the speaker grille is not obstructed for optimal sound clarity.
- **Transmitting (Push-To-Talk - PTT):** To transmit, press and hold the PTT button located on the side of the RSM. Speak clearly into the microphone grille. Release the PTT button to stop transmitting and return to receive mode.
- **Using the 3.5mm Audio Jack:** For private listening, insert a compatible 3.5mm earpiece into the audio jack on the side of the RSM. When an earpiece is connected, audio will typically be routed to the earpiece, muting the RSM's internal speaker.
- **Windporting Functionality:** The Windporting feature automatically reduces wind noise. Position the microphone to minimize direct wind impact for best performance.

Figure 5: Rear view of the PMMN4051B Remote Speaker Microphone, displaying the robust swivel clip for attachment and the model number label (PMMN4051B). This clip allows for flexible positioning on clothing or gear.

CARE AND MAINTENANCE

Proper care ensures the longevity and optimal performance of your PMMN4051B RSM:

- **Cleaning:** Wipe the exterior of the RSM with a soft, damp cloth. Do not use harsh chemicals, solvents, or abrasive cleaners. Ensure the 3.5mm audio jack and radio connector are free from dirt and debris.
- **Water Resistance:** The RSM is IP54 rated, meaning it is resistant to dust and splashing water. It is not designed for submersion. If the RSM gets wet, dry it thoroughly before use. The Windporting design allows audio transmission even if water blocks the port.
- **Storage:** Store the RSM in a clean, dry environment away from extreme temperatures and direct sunlight. Avoid tightly coiling the cable to prevent damage.
- **Inspection:** Periodically inspect the cable for any signs of wear, cuts, or damage. Check the integrity of the radio connector and the 3.5mm audio jack.

TROUBLESHOOTING

If you encounter issues with your PMMN4051B Remote Speaker Microphone, refer to the table below for common problems and solutions:

Problem	Possible Cause	Solution
No audio from RSM speaker.	RSM not fully connected; radio volume too low; external earpiece connected.	Ensure RSM connector is fully seated. Increase radio volume. Disconnect external earpiece if not intended for use.
Cannot transmit (PTT button unresponsive).	RSM not fully connected; radio not powered on; PTT button malfunction.	Verify RSM connection. Power on radio. If issue persists, contact support.

Problem	Possible Cause	Solution
Distorted or unclear audio.	Microphone/speaker obstructed; cable damage; radio settings.	Clear any obstructions from microphone/speaker. Inspect cable for damage. Check radio audio settings.
Excessive wind noise.	Microphone directly exposed to strong wind.	Reposition RSM to shield it from direct wind. The Windporting feature will mitigate most wind noise.

TECHNICAL SPECIFICATIONS

The following table outlines the key technical specifications for the Motorola Solutions PMMN4051B Remote Speaker Microphone:

Specification	Detail
Model Number	PMMN4051B
Manufacturer	Motorola Solutions
Microphone Form Factor	Lavalier
Power Source	Radio (powered by connected radio)
Signal-to-Noise Ratio	78 dB
Number of Channels	1
Item Weight	8.2 ounces (approximately 232 grams)
Package Dimensions	8.27 x 3.66 x 2.44 inches
Color	Black
Connectivity Technology	Radio interface adapter cable
Connector Type	Multi-pin Motorola Radio cable, 3.5mm audio jack
Special Features	IP54 Water Resistance, Windporting
Compatible Devices	Motorola XTS1500, XTS2500, XTS5000 series radios
Included Components	Remote Speaker Microphone
Polar Pattern	Unidirectional
UPC	00748091005336

Figure 6: The product packaging box for the Motorola Solutions PMMN4051B, displaying the kit number, a description of 'BASIC RSM THREADED AJACK', and the UPC (00748091005336). The box also indicates 'MADE IN MALAYSIA'.
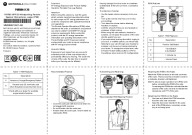
WARRANTY AND SUPPORT

The Motorola Solutions PMMN4051B Remote Speaker Microphone is covered by a manufacturer's warranty. For specific warranty terms, duration, and conditions, please refer to the documentation included with your purchase or visit the official Motorola Solutions website. For technical support, service, or to inquire about replacement parts, please contact Motorola Solutions customer service directly.

You can find more information and support resources on the Motorola Solutions Store.
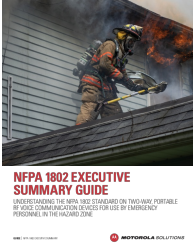
Related Documents - PMMN4051B

	[PMMN4131 RM730 IMPRES Windporting Remote Speaker Microphone User Guide](#) User guide for the Motorola Solutions PMMN4131 RM730 IMPRES Windporting Remote Speaker Microphone, Small (IP68). This guide provides operating instructions, safety information, and details on features and maintenance.
	[Motorola Solutions PMMN4128 RM780 IMPRES Windporting Remote Speaker Microphone User Guide](#) User guide and safety information for the Motorola Solutions PMMN4128 RM780 IMPRES Windporting Remote Speaker Microphone. Covers RF energy exposure, acoustic safety, features, operation, and maintenance.

	[Motorola PMMN4094/PMMN4100 ATEX/IECEx Active Noise-Cancelling Remote Speaker Microphone User Guide](#) User and safety guide for the Motorola PMMN4094 and PMMN4100 IMPRES™ ATEX/IECEx Active Noise-Cancelling Remote Speaker Microphone, detailing features, operation, accessories, and maintenance.
	[NFPA 1802 Executive Summary Guide: Understanding RF Devices for Emergency Personnel](#) This executive summary guide explains the NFPA 1802 standard, which sets requirements for portable two-way RF voice communication devices and remote speaker microphones (RSMs) used by emergency personnel in hazardous environments. It covers device specifications, testing, certification, and frequently asked questions.
	[Motorola WM800 Remote Speaker Microphone and Dual-Unit Charger User Guide](#) Comprehensive user guide for the Motorola WM800 Remote Speaker Microphone (RSM) and its Dual-Unit Charger, covering setup, operation, status indications, pairing, and troubleshooting.
	[Motorola APX XE500 Remote Speaker Microphone: Extreme Performance for Mission Critical Communications](#) Discover the Motorola APX XE500 Remote Speaker Microphone (RSM), designed for extreme environments. Features adaptive audio, rugged durability, IP68 rating, and seamless integration with APX 8000XE radios for ultimate usability and extreme performance.