



## Si500 Video Speaker Microphone (VSM) Quick Reference Guide



Motorola Solutions

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## RF Energy Exposure and Product Safety Guide for Portable Two-Way VSM

The Si500 Series Video Speaker Microphones (VSM) are ONLY compatible and certified with ASTRO APX and XTS radio models. When connecting to an XTS radio, Talkgroup and Volume control on the VSM is not supported. Before using this product, read the RF Energy Exposure Training and Product Safety Information for Mission Critical Devices that shipped with the Radio which contains instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulation. This equipment is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. For body worn operation, this device has been tested and meets the FCC RF exposure guideline for use with a Motorola Solutions, Inc. approved accessories sold with this device.

Use of non-Motorola-approved body worn or battery accessories may exceed the applicable RF exposure guidelines (IEEE, ICNIRP or FCC).

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following three conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. (3) Any changes or modifications not expressly approved by Motorola Solutions may void the user's authority to operate this device. This class B digital apparatus complies with Canadian ICES-003.

Under Industry Canada regulations, this microphone transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This device complies with the Canada portable RF exposure limit set forth for an uncontrolled environment and is safe for intended operation as described in this manual. Further RF exposure reduction can be achieved if the product is kept as far as possible from the user's body or setting the device to a lower output power, if such function is available.

### Frequency of Operation - IC 5 GHz Only

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

This device complies with ISSED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



#### Caution:

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;

(iii) the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and

(iv) the worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2(3) shall be clearly indicated.

(v) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

### Radio Frequency Interference Requirements - FCC



**Notice:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to

radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Handling Precautions

The VSM meets IP67 specifications, allowing the VSM to withstand adverse field conditions such as being exposed to water or dust.

- Keep your device clean and exposure to water should be avoided to help ensure optimal functionality and performance.
- These surfaces should be cleaned whenever a periodic visual inspection reveals the presence of smudges, grease, and/or grime.
- To clean the exterior surfaces of the VSM, use a diluted solution of mild dishwashing detergent and fresh water (for example, one teaspoon of detergent to one gallon of water).

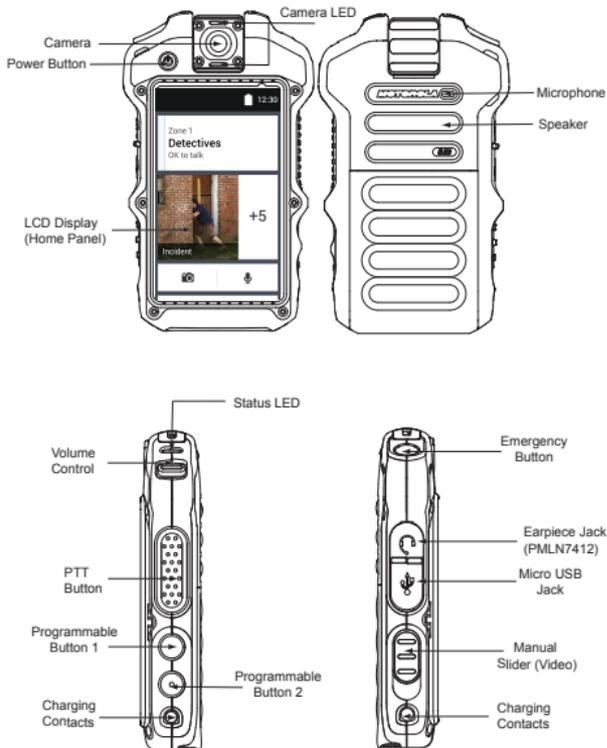


**Caution:** The effects of certain chemicals and their vapors can have harmful results on certain plastics. Avoid using aerosol sprays, tuner cleaners and other chemicals.

## Product Warranty and Support

The VSM is covered by a one year replacement warranty. Contact Motorola Solutions Customer Care at 1-800-323-9949 for any product related questions.

## VSM Overview



## User Interface

### Incidents

← Incident  
10:53

✎

🔑 Burglary

COLLECTED MEDIA



10:53 - 11:03, 2018/10/25

## Radio Control

← Radio Control

Zone 1  
**Detectives**  
OK to talk

Zone 1  
**Dispatch**

Zone 2  
**Hospital**

Zone 1  
**Jail Network**

Zone 2  
**Detectives**

## Removing the Battery

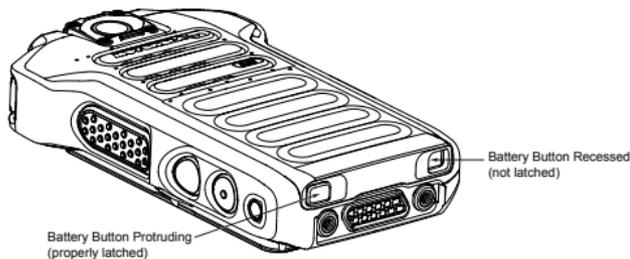


**Caution:** To avoid causing damage to the VSM, the VSM MUST be turned off before removing the battery.

- 1 Turn OFF the VSM by pressing and holding the Power button until the device displays "Power Off".
- 2 Press the two buttons on the bottom of the battery, one at a time, to unlock and release the battery.

## Installing the Battery

- 1 Insert the top of the battery into the VSM.
- 2 Press the bottom of the battery firmly into the VSM until the two buttons on the bottom of the battery pop-out to lock the battery in place.



## VSM and Radio Connection

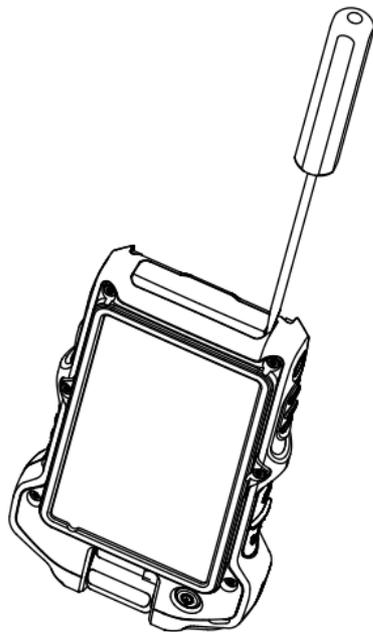
When initially connecting the VSM and a portable radio with the cable, securely connect the cable before powering on both devices.

### Connecting the Cable



**Notice:** The VSM dust cover must be on when not cabled to a radio.

- 1 Use a 2.5 mm (3/32 in.) wide-tip flathead screwdriver to remove the dust cover.



- 2 Turn off the radio and VSM before connecting to cable.
- 3 Connect the cable by attaching it to the bottom of the VSM, and secure it with the two thumbscrews within the cable connector.
- 4 Connect the other end of the cable to the side of the radio by removing the dust cover if attached, and secure it with the thumbscrew on the bottom of the connector.
- 5 Turn on both devices.

## Low Battery

The VSM indicates when the battery needs replacing or when the battery is fully depleted with an audible tone, vibration, and a blinking LED before the VSM powers off. For Wired connections when the battery is fully depleted, PTT, Audio and Emergency remain operational on the VSM (similar to a standard RSM), however video functionality is disabled. Audio performance in this mode is equivalent to a standard RSM (non-IMPRES). This mode is designed to be used as a backup. It is recommended that the battery be replaced or charged as soon as possible to restore the enhanced audio performance available with the VSM.

## Powering on the VSM

Turn ON the VSM by pressing and holding the Power button until the device displays the Motorola Solutions logo.

The Status LED shows solid Green briefly upon power up and then turns off to indicate successful power up.

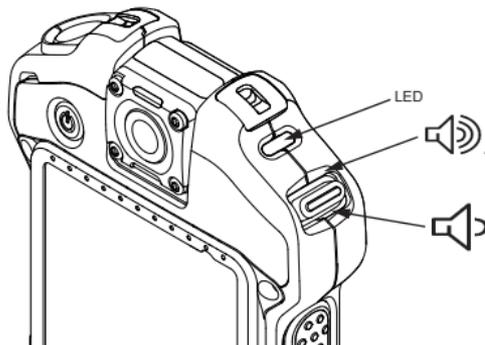
If the status LED remains Green for more than one minute contact Motorola Solutions. Contact Motorola Solutions Customer Care at 1-800-323-9949 for any product related questions.

## Changing the Volume

Press the volume switch to increase or decrease the volume by one increment.



**Notice:** If using an XTS radio, the volume switch is used to adjust the volume for media playback on the VSM. Speaker mic audio volume is adjusted using the volume knob on the portable radio.



## Limited Connection

When connected to an XTS radio, the VSM volume control only controls the media playback volume; it does not control the radio volume.

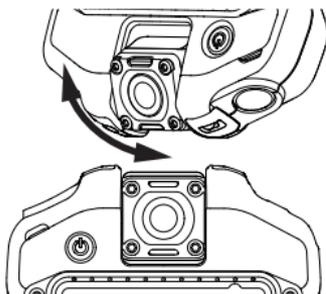
## Charging the VSM

There are three methods of charging the VSM:

- Direct connection of the charger into the Micro USB port.
- Drop-in charging through a Multi-unit charger.
- Battery charging through a Multi-unit charger or a battery charging tray.

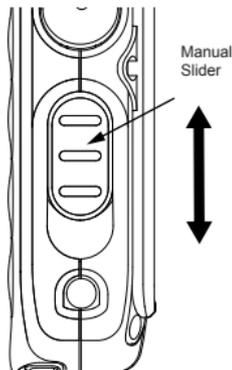
## Camera

The VSM offers a 210 degree articulating camera. Rotate the camera based on preferred device wearing position and user height.



## Recording Video

- 1 Slide the Manual Slider on the side of the VSM up to start recording.
- 2 Slide the Manual Slider down to stop recording.



## Default Button Settings

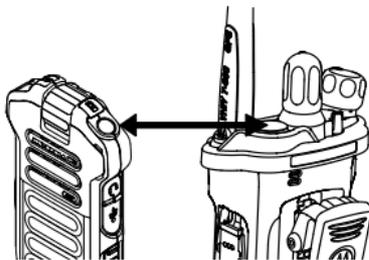
Depending on device configurations, buttons may be programmed differently.

Button	Short Press	Long Press
Prog Button 1	Video Preview	Audio Recording
Prog Button 2	Photo Capture/ Media Mark	Covert Mode*
Emergency button	Emergency	

\* When operating in Covert Mode, the LEDs and display indicators are not active.

## Programmable Buttons

The top orange button initiates an emergency signal and automatically starts video recording, if configured by your administrator.



## Ways to Wear the VSM

The carry holder allows the device to be flexibly worn with the display facing in or facing out in different positions on the body and for different types of uniforms. Adaptive Audio technology reduces wind and ambient noise, and enables optimum audio quality in all wearing positions. For a complete list of wearable accessories visit: <http://motorolasolutions.com>.

**Best Positions to Wear the VSM**

Worn on either shoulder with head angled such that the mouth is towards the microphone arrays.



Worn at the center of the chest with the head angled such that the mouth is towards the microphone arrays.