

## Motorola Solutions Technical Notification (MTN)

**TITLE:** Recommended best practices - installation Guide for MOTOTRBO™ mobile radios

**TECHNOLOGY:** MOTOTRBO™ mobile radios

**SYMPTOMS:**

Motorola recommends the use of these vehicle installation best practices to address and/or prevent many installation related issues, including:

- Radio sending false emergency alerts at vehicle cranking or during battery maintenance
- Radio/Accessories "lock up" issues
- Radio/Accessories turn themselves on/off
- Radio/Accessories change state/lock-up when radio PTT is depressed
- Radio intermittent reset

Additional details on recommended vehicle installation can also be found in **MOTOTRBO™ MOBILE INSTALLATION GUIDE**.

**MODELS / SYSTEM RELEASES / KITS / DATE CODES AFFECTED:**

**MOTOTRBO™** mobile radios

**SEVERITY RECOMMENDATION:**

**Low / Maintenance** - Perform at new radio installations or if the radios exhibit above symptoms.

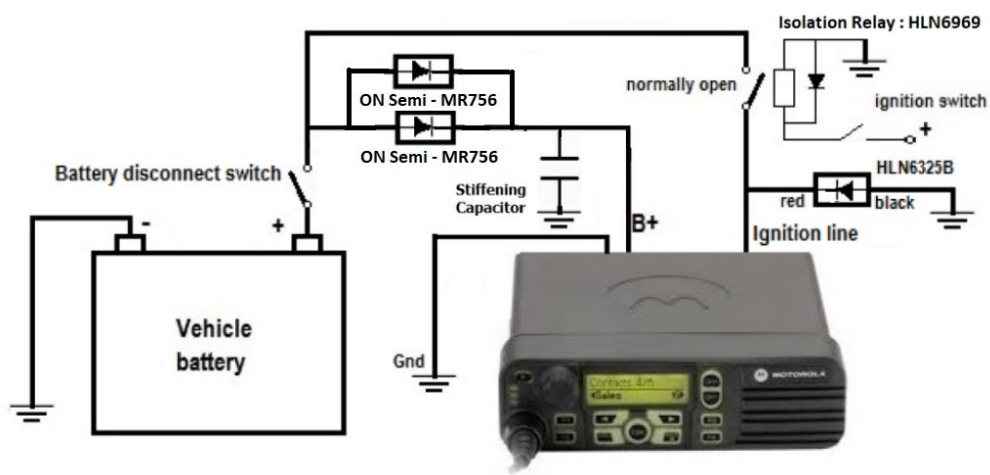
**ROOT CAUSE / DEFINITIVE TEST:**

Excessive Power supply noise, interruptions, and/or acute power fluctuations beyond radio's rated power supply voltage **10.88Vdc** ~ **16.3Vdc** causing radio operation anomalies.

**WORKAROUNDS AND CORRECTIVE ACTIONS:**

Possible workarounds and corrective actions may include:

- CPS programming change to disable Emergency feature in radio personality if the Emergency feature is **not** used
- Inspect emergency Footswitch for faulty switch and/or corroded connections
- Clean/replace any corroded connections
- Solder wire connections and use Antioxidant Compound to protect connections from corrosion as needed
- Use of a Stiffening Capacitor with a diode to minimize acute power fluctuations. Please see **Diagram-1** for wiring illustration. A recommended value for a Stiffening Capacitor may be **1000** to **10,000 uFd**, **50V** surge or higher.
- Prior to battery maintenance being performed, it is recommended to properly power down the radio followed by removing the Fuse on the radio power supply cable. Location of the Fuse is shown in **Diagram-2**. Please remember to reinsert the Fuse after battery maintenance is completed.



**Wiring Diagram-1**



**Diagram-2**

**RESOLUTIONS AND REPAIR PROCEDURES:**

None.

**REFERENCE THE FOLLOWING DOCUMENTS/PROCESSES FOR INSTALLATION PROCEDURES:**

N/A

**WHEN TO APPLY RESOLUTION:**

- After reboot \_\_\_
- After (re)installation \_\_\_
- After upgrade \_\_\_
- After power cycle \_\_\_
- After database restoration \_\_\_
- After failure \_\_\_
- On FRU replacement \_\_\_
- During maintenance \_\_\_
- Immediately \_\_\_
- As instructed \_\_\_ **X**
- Information only \_\_\_

**LABOR ALLOWANCE:**

This is an informational bulletin. No labor warranty is implied, intended or authorized for U.S. Domestic Partners/Customers. Other regions should follow their own standard procedures.

For assistance with this bulletin please contact your MSI Technical support center  
[https://www.motorolasolutions.com/en\\_us/support.html](https://www.motorolasolutions.com/en_us/support.html)