

APXNext XN Remote Speaker Microphone (RSM): Motorola will be replacing the defective XN RSMs. The Mics were received the week of April 17. During Fire Standardization Focus Group, Chief Tanner asked about the root cause of the failure and the repair. The following is information in italics was supplied by Motorola.

*Motorola response on April 9 which created additional questions.*

**Symptom:** *XN RSM mic volume control:*

- *may spontaneously ramp volume up or down - without the lever being touched by the RSM wearer/user*
- *may not result in an RSM speaker acoustic level change upon the lever actuation up or down ("does not work")*
- *may result in inconsistent (occurs/does not occur) volume level changes upon successive volume lever actuations*

**Symptom Causes:**

- *water getting into the XVN RSM volume control lever area is the manner in which the symptoms were caused*

**Action/Resolution:**

- *RSMs that demonstrated the symptom were analyzed in the engineering test lab (Penang) for root cause.*
- *The source of the leak around the volume control lever was identified and a new corrective seal was designed and tested in the engineering test lab. Replacement XVN500 RSMs are being built in the factory with this new corrected volume control seal.*

*Expected Shipment: May 1st*

Received from Motorola on April 26.

*Below are some additional details on the XN RSM mic resolution.*

1.) *What exactly was changed to correct the issue and what are the additional details surrounding the Motorola lab testing to ensure the problem was corrected.*

*The root cause was the adhesive used to seal the volume lever electrical switch from water penetration. Over large quantities of units, the adhesive did not perform consistently. Motorola was able to replicate the condition through a series of tests different than and in addition to the tests against which the original product was certified. The condition has been resolved by a change of volume switch adhesive that is also used elsewhere in the RSM to prevent water penetration. Motorola used the new series of tests plus the standard immersion tests to prove the adhesive change was successful. In addition, Motorola sampled and tested without failure the 1300+ units built in the factory with the volume switch adhesive change to ensure consistent performance.*

2.) *Are the microphones going to go back through the NFPA testing lab now that they have a new design to mitigate the water issue to be recertified. If not, why is that?*

*The adhesive change was reviewed by the NFPA regulatory certification body and their decision was that the XN RSM mic with the adhesive change did not require resubmission/recertification. For NFPA certified products, this is the standard procedure to determine what if any recertification is required for a product change.*

The above information was also provided to the ETS Board Fire Rep, Erik Kramer and The DuPage Fire Chiefs Association leadership for distribution. The above information was also provided to the FSA Focus Group