

# FIRE SERVICE RADIO NEWS

March/April 2016



## More Range, Battery Life, and Durability from New XPR 7000e and XPR 3000e Portable Radios

Motorola Solutions has introduced a new generation of XPR 7000 and 3000 series portable radios. Although they look almost exactly like their predecessors, they are packed with advanced features and improvements that will prove useful in fire and rescue operations. Most importantly, the new XPR 3000e has the features and durability needed in the harsh environments first responders work in, making it a portable radio worthy of our recommendation.

Here is a summary of the key improvements that are specifically relevant to first responders.

### IMPROVED RANGE

Motorola has increased the sensitivity of the receiver in both radios. The more sensitive receiver provides up to 8% greater reception range.

### BIGGER BATTERY OPTIONS

The biggest battery yet, a 3000mAh low voltage battery, is available for both the XPR 7000e and the XPR 3000e. Choose this upgrade option when you order your radios to get more talk time than ever before.

### BEST PROTECTION AGAINST DUST & WATER

XPR 7000e radios are rated IP68 for Ingress Protection. This is the highest level of water and dust protection available. It means that the radios are completely "Dust Tight" and submersible in water up to 2 meters deep for up to 2 hours.

The XPR 3000e radios have an IP67 Ingress Protection Rating. These radios also have complete protection against dust and are submersible up to 1 meter in water for up to 30 minutes. This is the same level of water protection as the XPR 6000 series and 7000 series radios many Manitoba fire departments are using today.

Protection against damage from water exposure is critical for radios in the fire service. Both the XPR 7000e and XPR 3000e portable radios offer that protection. Reliability in harsh, wet conditions is a key advantage of these radios.



### MORE INTRINSIC SAFETY

First responders regularly work in Hazardous Locations where your safety is compromised if your equipment is not protected against the risk of igniting dust and fumes in the environment.

The available HazLoc-certification for XPR 7000e radios has been upgraded to include a wider range of hazardous locations. The HazLoc radios are certified by United Laboratories under TIA-4950 for use in the following Hazardous Locations:

Div 1, Class I, Groups C,D; Class II, Groups E, F, G, Class III  
Div 2, Class I Groups A, B, C, D

Now, for the first time ever, the XPR 3000e portable radios can be ordered with this same UL-approved HazLoc-certification available on the higher tier radios. This makes them a great, affordable option for first responders.

When you order your XPR 7000e and XPR 3000e portable radios, make sure to specify that you want the HazLoc certified upgrade.

### ADVANCED BLUETOOTH

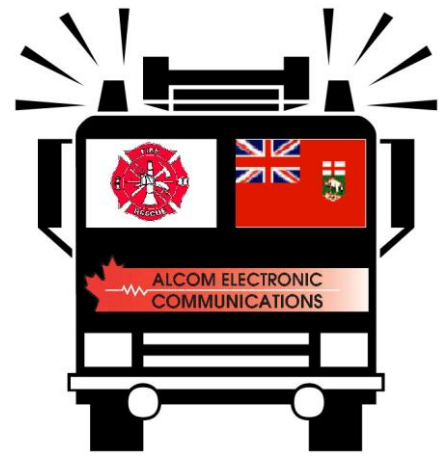
Bluetooth 4.0 comes standard in both the XPR 7000e and XPR 3000e portable radios. This is low energy Bluetooth that uses less of your batteries capacity, which translates into longer battery life compared to using older Bluetooth technology. Bluetooth 4.0 is backward compatible to the classic Bluetooth so you can still use older Bluetooth headsets.

### WI-FI CONNECTIVITY

The XPR 7000e and the XPR 3000e can be configured for Wi-Fi to allow for remote software and programming upgrades. In the future Wi-Fi, together with Bluetooth connections, may be used for advanced software solutions such as indoor position tracking systems, and vital data communications.

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## IP What?? The Facts on Ingress Protection

Vague marketing claims about durability can lead to confusion and misunderstanding about what to expect from a product. Ingress Protection (IP) ratings provide consumers certainty about the level of durability a product offers. IP Ratings are international standards established by The International Electrotechnical Commission (IEC) and published in their basic safety publication IEC 60529.

IP ratings consist of the letters IP followed by two digits. The first digit specifies the level of protection against solids and the second specifies the level of protection against water intrusion. The charts below provide the specific standard for each of the digits. Motorola tests their portable radios to the IEC standards so that you can be assured that your radios will handle the messy environments you put them into.



### First Digit: SOLIDS

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.

| Level | Object size protected against | Effective against   |
|-------|-------------------------------|---|
| 0     | Not protected                 | No protection against contact and ingress of objects  |
| 1     | >50mm                         | Any large surface of the body, such as the back of the hand, but no protection against deliberate contact with a body part.   |
| 2     | >12.5mm                       | Fingers or similar objects.   |
| 3     | >2.5mm                        | Tools, thick wires, etc.  |
| 4     | >1mm                          | Most wires, screws, etc.  |
| 5     | Dust Protected                | Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact. |
| 6     | Dust Tight                    | No ingress of dust; complete protection against contact.  |



### Second Digit: LIQUIDS

Protection of the equipment inside the enclosure against harmful ingress of water.

| Level | Protected against                    | Effective against   |
|-------|--------------------------------------|---|
| 0     | Not protected                        | —   |
| 1     | Dripping water                       | Dripping water (vertically falling drops) shall have no harmful effect.   |
| 2     | Dripping water when tilted up to 15° | Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.   |
| 3     | Spraying water                       | Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.   |
| 4     | Splashing water                      | Water splashing against the enclosure from any direction shall have no harmful effect.  |
| 5     | Water jets                           | Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects.   |
| 6     | Powerful water jets                  | Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.  |
| 7     | Immersion up to 1m                   | Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).   |
| 8     | Immersion beyond 1m                  | The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. With some equipment, it can mean that water can enter only in such a manner that it produces no harmful effects. |

**Do you work in a nice clean, dry environment?**

**If you are a first responder, you likely spend a lot of time in places that are...**

**Dusty, Dirty & Wet**

**Make sure to use radios with an IP rating appropriate to the environment you will be using them in.**



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