



3M™ Scott™ Epic 3 RI Voice Communication System



Question

What is the new EPIC 3 Radio Interface Voice Communication System?

Answer

EPIC 3 Radio Interface (RI) Voice Communication System is a complete communication solution for firefighters and first responders to communicate clearly and effectively on the fireground while easily switching from non-tactical to tactical communications. The system can be employed for both local person-to-person communications and remote communications by using a two-way radio.

Question

Why did 3M Scott Fire & Safety develop the new system?

Answer

The EPIC 3 RI system was developed to address the changing communication needs of firefighters and other emergency equipment users. Working with a wide range of SCBA and emergency equipment users across the globe, customers asked for a communication system that would provide the following capabilities and benefits:

- Easy transition from non-tactical to tactical communication modes
- Seamless communication interoperability with a broad range of two-way field radios
- Simple voice communication equipment set up and operation

- Improved user communications from the incident scene to remote locations
- Operational compatibility with both legacy and new Scott SCBA and Personal Protection Equipment
- Consolidated device functionality to reduce customer technology costs

Question

Do these systems meet the latest NFPA communications requirements?

Answer

Yes. The EPIC 3 RI System is designed to meet all requirements specified in the NFPA 1981 Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services, 2013 Edition certification.

The wireless Lapel Speaker Microphone device is not required to meet the new NFPA 1981 revision because it is not attached to the breathing apparatus, however, this device is also designed to meet the same stringent performance and safety test requirements.

Question

What are the system's key features and benefits?

Answer

The multi-purpose EPIC 3 RI System offers unique capabilities and benefits:

- Easily transition from non-tactical to tactical communication modes while maintaining two-way field radio communications.
- Eliminate cabling between the facepiece and two-way field radio used with local and remote communications.
- Improve close-quarter communications with strong, clear facepiece voice amplification.
- Use the Radio Interface Voice Amplifier and Lapel Speaker Microphone individually or in tandem.
- Operate the communication system with any compatible Scott Safety facepiece, SCBA, or other breathing apparatus.
- Use the communication system with a wide range of new and legacy two-way field radio makes and models to support existing customer radio equipment.
- Integrated device power supplies eliminate the need to modify existing SCBA units and support facepiece use with supplied air, APR, and PAPR breathing apparatus.
- Power the system using readily available AAA disposable batteries

Question

What equipment comprises the EPIC 3 RI Wireless Communication System?

Answer

The EPIC 3 RI Wireless Communication System is a communications system can be used for both local person-to-person communications and remote communications via a two-wayfield radios.

Question

How does the system work?

Answer

The best way to illustrate this is to consider a day-in-the-life of a firefighter. For much of the day, a firefighter wears station clothes around the fire house or when away from the station. At the same time, the firefighter frequently uses a two-way radio with an attached lapel microphone for ease of communication. When an alarm is sounded, the firefighter must transition quickly from this non-tactical communications mode to a tactical mode with full turnout gear and an SCBA.

Until now, the firefighter had to make a special effort to accommodate communication gear by routing and connecting radio cables and couplings attached to their turnout gear and protective facepiece.

The EPIC 3 RI Voice Communication System enables a more seamless transition than possible with a hardwired radio interface system. With this system, the firefighter transitioning to tactical mode simply places the two-way radio in their turnout gear radio pocket and clips the Bluetooth® Lapel Speaker Mic to the turnout gear. Wireless communications between the facepiece/RI Voice Amplifier and field radio is easily established by powering on the RI Voice Amplifier and powering on the Lapel Speaker Mic Bluetooth radio via power cycling the two-way field radio to which it is attached. If the field radio is already powered on and in use, the Lapel Speaker Mic Bluetooth radio can be powered up and connected to the RI Voice Amplifier simply by triple pressing the Lapel Speaker Mic Push-To-Talk button.

By eliminating the firefighter's facepiece cabling to the two-way radio and simplifying the interoperability between the EPIC 3 RI Voice Communication System and the field radio, results in a faster, easier transition.

Question

How does the wireless communications link between the EPIC 3 RI Voice Amplifier and the Bluetooth® Lapel Speaker Microphone work?

Answer

The EPIC 3 system utilizes Bluetooth RF technology to provide voice and data communications between the EPIC 3 RI Voice Amplifier and Bluetooth Lapel Speaker Mic. Bluetooth has proven to be a highly reliable two-way communications technology used in a broad range of consumer and commercial electronic devices for voice, audio, data, and video communications.

The Bluetooth radios integrated inside the RI Voice Amplifier and Bluetooth Lapel Speaker Mic are designed to provide easy and reliable two-way device communication while mitigating Bluetooth cross-pairing and interference when operating multiple devices in close proximity to each other.

Question

How is the wireless link between the RI voice amp and Bluetooth® Lapel Speaker Mic activated?

Answer

An initial Bluetooth pairing procedure is used to establish and maintain the wireless communications link between the two units. The RI Voice Amplifier is powered on by pressing and holding the power key until the LED turns from green to red, indicating the unit is in the initial Bluetooth pairing mode. The Bluetooth Lapel Speaker Mic is connected to the mating field radio.

The initial Bluetooth pairing mode is activated by pressing and holding the Push-To-Talk button on the Bluetooth LSM while powering on the field radio and waiting until the LSM LED turns from green to red. The LEDs on both units will blink red and turn solid green followed by an audio tone indicating the units are Bluetooth paired to each other. During this process, the two units exchange Bluetooth radio information that further simplifies reconnection of the paired units.

Question

Is it necessary to link the RI Voice Amplifier and Bluetooth® Lapel Speaker Mic at the start of each use?

Answer

No. Once initially linked, the two units only need to be powered on to automatically reconnect to each other. Should the user wish to link either unit to a different RI Voice Amplifier or Bluetooth Lapel Speaker Mic, the initial device Bluetooth pairing process is required.

Question

Once linked, how is Bluetooth® Lapel Speaker Mic disconnected from the RI Voice Amplifier for use as a standard lapel speaker mic?

Answer

The Bluetooth communication link between the RI Voice Amplifier and Bluetooth Lapel Speaker Mic can be easily disconnected by either powering down the voice amplifier or triple pressing the PTT button on the Lapel Speaker Mic. The link can be easily reconnected by powering on the RI Voice Amplifier (if it is powered off) which will then search for and reconnect with the Bluetooth Lapel Speaker Mic. If the RI Voice Amplifier is still powered on, the units can be reconnected simply by triple pressing the PTT button again on the Bluetooth Lapel Speaker Mic.

Question

How is the system powered?

Answer

The RI Voice Amplifier and Bluetooth Lapel Speaker Mic are both powered by three disposable AAA alkaline batteries. Rechargeable AAA Nickel Metal Hydride batteries can also be used, but will deliver shorter battery life.

Question

What is the average run time for each device?

Answer

The average run time for the RI Voice Amplifier is designed to deliver up to 40 hours at 25% duty cycle of the voice amplifier and wireless Push-To-Talk communications. The average run time for the Bluetooth Lapel Speaker Mic is designed to deliver up to 50 hours at 25% duty cycle of the wireless Push-To-Talk communications feature. Both run times are based on the use of new AAA alkaline batteries.

Question

How is the user notified of device low battery status?

Answer

The RI Voice Amplifier and Bluetooth Lapel Speaker Mic LEDs will begin flashing green once per second accompanied by an audio tone to alert the user of low battery life condition.

Question

Do the Bluetooth® radios in both devices continue to run and use power if the units are not linked or turned off?

Answer

No. The Bluetooth radios in both devices are programmed to conserve power when the Bluetooth link is suspended and turn off if no communications are detected after 20 minutes. This feature helps conserve battery life and extends device runtime. Both devices will also turn off the Bluetooth radio if either device is powered down or are physically separated by more than 25 feet.

Question

Can the new EPIC 3 RI Voice Amplifier and Bluetooth® Lapel Speaker Mic be used with existing Scott facepieces?

Answer

Yes. The EPIC 3 Voice Communication System can be used with all AV-2000, AV-3000, Vision, and Promask facepieces. EPIC 3 facepiece communication mounting brackets are available to adapt the EPIC 3 RI Voice Amplifier for use on any of the mentioned 3M Scott facepieces. The voice amplifiers can also be ordered with pre-configured programming to optimize the audio performance with each different facepiece and bracket type. Customers with existing EPIC 3 RI Voice Amplifiers can easily change the programming in the field when switching between facepiece and bracket types using the EPIC 3 Programmer software utility.

Question

Which Scott SCBA can the EPIC 3 RI Voice Communication System be used with?

Answer

The EPIC 3 RI Voice Communication System can be used with any new or legacy Scott SCBA that supports Scott AV-2000, AV-3000, Vision, and Promask facepieces.

Question

Can the new EPIC 3 RI Voice Communication System also be used with Scott facepieces when using APR and PAPR breathing apparatus?

Answer

Yes. The EPIC 3 RI system supports facepiece use with 3M Scott APR, PAPR, supplied air, and SCBA breathing apparatus. This unique facepiece Top-Down Convertibility capability allows customers to use a single Scott facepiece model for all emergency first responder tasks requiring facepiece breathing apparatus, simplifying emergency protection equipment logistics while reducing costs.

Question

How does the EPIC 3 RI Voice Communication System interoperate with two-way field radios?

Answer

The EPIC 3 Bluetooth Lapel Speaker Microphone cable connects to the Universal Device Connector (UDC) on two-way field radios to provide interoperability between the EPIC 3 RI system and the field radio.

Question

How are the RI Voice Amplifier and Lapel Speaker Microphone devices built and tested to withstand the rigors of firefighting environments?

Answer

The RI Voice Amplifier and Lapel Speaker Mic are purpose designed and built using specialized materials and manufacturing processes to meet and exceed rigorous firefighting use and environmental conditions. All devices are tested and certified to meet or exceed NFPA 2002, 2007, and 2013 standards for communications intelligibility, heat and flame resistance, intrinsic safety, water and dust ingress protection, impact resistance, and vibration resistance.

Question

How does the Lapel Speaker Mic emergency button work?

Answer

The emergency button will mimic the emergency alert function already contained in the two-way radio selected by the user. This function is designed to inform the radio dispatcher of a critical or life-threatening situation. Typically, the alarm overrides other signaling and an alert tone is emitted. Users need to familiarize themselves with the specific functionality of the emergency alert mechanism offered by their two-way radio.

Question

How are the Lapel Speaker Microphone devices attached to clothing or gear?

Answer

The Lapel Speaker Microphone units are equipped with two types of attachment clips: a spring loaded clothes-pin-style clip and an alligator-type clip. Both clips are designed to securely fasten the units to clothing, turnout gear or a shoulder strap. Both clip types include an integrated D-ring to further facilitate easy attachment to material loops found on turnout gear and shoulder straps.

Question

How are the devices serviced?

Answer

Devices exhibiting electronics related performance issues must be returned to the 3M Scott Fire & Safety Service Center for proper servicing and repair of intrinsically safe electronics. Other non-electronic parts, such as mechanical housing parts and fasteners, are field serviceable by end-users. Service is obtained by contacting a Scott Authorized Service Center or the 3M Scott Fire & Safety Service Center.

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