American Medical Response
AMR Future-Proofs Radio System with IDAS™ Solution

A case study prepared by Icom America Inc.
Manufacturers of high-performance, award-winning radios for over 55 years.
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American Medical Response (AMR) needed to update its South Florida metro area radio system to meet the looming FCC narrowband deadline and improve communications reliability. AMR implemented a new IDAS narrowband system that exceeds FCC narrowband guidelines and provides a future-proof solution that allows the EMS provider to offer optimal patient care while maximizing its return on investment.

Reliable Communications Enhances Patient Care

A leading emergency medical services (EMS) provider, AMR supports more than 200 community-based operations nationwide. It provides a variety of services, including emergency 9-1-1 call response, non-emergency transport, and specialized medical response teams that serve remote wilderness areas. AMR operates on the community level, allowing local operations to tailor services to meet their community’s needs and acquire equipment on a market by market basis.

In the South Florida metro area, AMR supports three separate county-based operations in Miami-Dade, Broward, and West Palm Beach counties. Approximately 5.5 million residents live in this highly populated urban area that stretches about 110 miles north to south, and ranges from 5 to 20 miles wide. Together, the AMR Miami-Dade County, Broward County, and Palm Beach County operations employ approximately 430 paramedics and emergency medical technicians and handle more than 110,000 calls annually.

For EMS providers, a reliable land mobile radio system is critical for providing patients the highest quality medical care. AMR’s South Florida operations depend on two-way radio for communicating with local 9-1-1 centers, dispatching AMR personnel and equipment, contacting destination hospital emergency departments, and communicating with other EMS units. Two-way communication also forms the backbone of its interagency communication during routine activities and emergency events that involve multiple departments and agencies. If any part of this communication relay breaks down, patient care suffers.

Featured Products:
- Icom F4161 IS Portable Radio
- Icom F6061 Mobile Radio
“IDAS offers both analog and digital and is supported by a single source, unlike other manufacturers that rely on a third-party analog board to operate a digital radio in an analog mode. Icom’s product offerings seamlessly took care of AMR’s needs.”  
Doug Sinclair, Rapid Communications & GPS Tracking

AMR’s South Florida operations required a cost-effective land mobile system that would satisfy the FCC’s mandate to migrate to narrowband 12.5 kHz technology by Jan. 1, 2013. It also wanted a reliable system capable of digital/analog mixed mode operation to increase emergency response times and enhance patient care. The system needed to provide seamless coverage across South Florida’s highly populated urban area and outlying regions including the Florida Keys to the south. The operations faced the added challenge of being located in a hurricane-prone area. In the case of a hurricane or other natural disaster, AMR needed to be ready to coordinate evacuations of special needs patients from local health care facilities. Finally, AMR required intrinsically safe (IS) radios that could be used safely while working in and around life-saving equipment, oxygen, medications and other potentially flammable substances.

“We needed a highly reliable and durable communications system that would support interoperable communications among our three operations as well as fire rescue,” says AMR Project Manager Kathi Annese, who oversees technology and communications acquisitions for the South Florida metro area AMR operations. “The more reliable our communications are, and the more efficiencies we can implement in the field, the better we can serve our patients,” Annese explains.

IDAS™ – When Every Second Counts

With the FCC narrowband deadline looming and the five-year lease expiring on AMR’s current system, Annese contacted Doug Sinclair, sales manager with Rapid Communications & GPS Tracking. After carefully evaluating the options, the South Florida AMR operations decided to decline the purchase option on its current system and implement a new Icom IDAS solution.

“I analyzed all the available systems out there and felt Icom’s IDAS system was the best solution for them,” Sinclair says. “IDAS offers both analog and digital and is supported by a single source, unlike other manufacturers that rely on a third-party analog board to operate a digital radio in an analog mode. Icom’s product offerings seamlessly took care of AMR’s needs.”
The South Florida operations had never used Icom land mobile products before, but after live demonstrations of the IDAS system and a competing manufacturer’s product, AMR selected IDAS with confidence. The IDAS system was far more cost-effective than comparable solutions and allows the operations to gradually migrate to a narrowband digital system, plus IDAS portables came in an intrinsically safe version. AMR planned to purchase analog only radios to start and purchase the digital board, once other systems converted to digital repeaters. The system also proved to be highly reliable with great coverage and unbeatable audio quality over a wide area. “Communications clarity is significantly better with our new system,” Annese says. “We have reliable coverage throughout our operational area with 95% portable radio coverage.”

The multisite system provides seamless coverage across the South Florida metro area and outlying areas including the Upper Florida Keys. The system includes three tiers of back-up communications and back-up sites in case of a hurricane or other disaster. AMR currently operates F6061 mobiles and intrinsically safe F4161 portables and will add additional radios, as the need arises.

“ICOM radios give us the flexibility to plan for the future without being limited by technology,” Kathi Annese, American Medical Response

AMR initially operated in analog mode, but plans to migrate to digital communications as the budget allows. Because the South Florida operations anticipate transitioning to digital in the future, it was important that the new radios be backward-compatible with their current analog equipment, including analog LTR®. IDAS offers digital/analog mixed mode operation allowing users to gradually migrate from analog to digital enabling interoperable communications with other agencies and facilities still using analog conventional and LTR equipment. This capability allows AMR to maintain communications with other agencies and facilities still using analog communications, and ensures interoperable communications in the case of an emergency situation or natural disaster.

Flexibility for the Future

A major reason the South Florida AMR operations chose IDAS is because it allows for a gradual migration to digital technology, a significantly more cost-effective approach than a massive system overhaul. Because IDAS radios can receive both analog and digital mode signals on a single channel and are updated regularly through software revisions, AMR can gradually introduce new digital radios to the system and maximize its return on investment. “Digital communications are the future of communications,” Annese says. “ICOM radios
give us the flexibility to plan for the future without being limited by technology,” Annese says.

“It is a future-proof purchase,” Mance says. “People are sick of buying new radios every year. IDAS equipment is software-enabled so the system can be kept factory-fresh through software revisions. IDAS radios are durable and made to last, and allow the customer to get the full value from their radio purchase.”

FCC Mandates Move to Narrowband

The FCC narrowband mandate requires that all private land mobile radio users transition to 12.5 kHz systems by Jan. 1, 2013. LMR licensees have several options for complying with this deadline, including 12.5 kHz analog or digital radios, as well as 6.25 kHz-capable digital radios, which can provide twice the capacity and spectral efficiency of 12.5 kHz narrowband.

The IDAS system supports 6.25 kHz communications, the next step in the FCC’s narrowbanding progression. The FCC Report and Order released June 30, 2010, states that all equipment certified after Jan. 1, 2013, must be capable of operating in 6.25 kHz mode. “IDAS is the only equipment on the market currently that allows customers to use 25 kHz, 12.5 kHz, and 6.25 kHz, allowing you to continue to use legacy equipment,” says Bob Mance, owner and president of manufacturer representative Frontier Communications, who worked with Rapid Communications & GPS Tracking on the sale.