

CHALLENGE

To migrate from ageing analogue radios and GSM phones to TETRA with a system that staff would readily accept and which could work in tandem with other communication technologies. The Department of Health had set a challenging target to all Ambulances in the UK: **to reach the scene of an incident within 8 minutes!**

SOLUTION

The supply of easy-to-use hand-held and vehicle radios to provide reliable coverage and allow communication with other emergency services. These radios incorporate the technology to ensure coverage is maintained in the vast majority of locations.

“Sepura’s gateway has the highest output power of any TETRA gateway on the market today”

sepura

CASE STUDY

Communication solutions for Ambulances in the UK

The Sepura Ambulance Solution

RESULTS

Swift and reliable communication. It makes for faster response times and a more efficient service. The Sepura Ambulance Solution combines two-way radio communications, messaging, mobile telephony and mobile data. These are delivered through hand-held and gateway radios, which are fitted in ambulances, rapid response vehicles, motorcycles and the Passenger Transport (PTS) fleet of each Ambulance Trust. A large number of ambulances are fitted with dual consoles - one console at the front of the vehicle and one at the rear. This allows crew that are caring for a patient at the back of the vehicle to communicate directly with the control room, rather than relaying messages between the front and back of the ambulance. The Sepura Ambulance Solution can be easily deployed in other vehicles, including motorcycles.

Faster response times for ambulance crews

Sepura TETRA digital radios have transformed communications for ambulances in the UK. Their reliable and uninterrupted reception, clear audio and use of data messaging are assisting Ambulance Trusts as they look to achieve increased efficiency and faster response times in answering emergency calls.

Voice and data messages are relayed reliably and immediately, to save precious seconds in answering calls - and this can mean saving lives.



Audio reception is crystal clear in contrast to the previous analogue service, which offered in some cases a poor quality of service where voice calls were often indistinct or needed repeating. Mobile phones also had to be used to supplement the variable coverage.

As well as reducing time and costs and increasing efficiency, the new radios have replaced three pieces of equipment – the old analogue radios, mobile phones and pagers.

Seamless communications with the Sepura Gateway Radio

With paramedics on average operating for 80 per cent of their time within buildings, Ambulance Trusts needed a system that could overcome the risk of poor reception, such as may occur in homes, shopping centres, factories and multi-storey car parks. With this challenge in mind, Sepura developed the gateway functionality specifically for ambulances.

Fitted in most ambulances, the Sepura mobile gateway radio acts as a link-station, through which hand-held radios can maintain communications, both beyond the normal reach of the network, and in areas of poor reception. The gateway functionality minimises deficiencies in coverage:

where network coverage is fragile hand-held radios switch to gateway to avoid any break in reception.

Sepura's gateway has the highest output power of any TETRA gateway on the market today, thereby giving all users a much wider communications range and ensuring that crews can be contacted on their radios when away from their vehicle.

When a crew is away from the ambulance, possibly inside a building dealing with an incident, the gateway automatically relays calls from the vehicle to the hand-held radios. Messages and actions are date-stamped, recording response times and the time of arrival at the patient - the radio's GPS ensures absolute time accuracy. This helps in auditing and monitoring the overall performance: the Department of Health has set the target for all Ambulance Trusts in the UK to reach incident scenes within 8 minutes!

Keeping crews connected with their headquarters improves their effectiveness, their safety and the safety of those they are treating.



GPS adds to crew safety

The safety of ambulance crews is increasingly at risk from violence and aggression and patient-handling injuries. With more single-man crews in operation there is an additional need for rapid support when problems occur. Ambulance crews also suffer a high number of injuries from lifting patients who may have fallen awkwardly and need to be manoeuvred into a safe position.

Thanks to GPS functionality, any paramedic can request immediate assistance by pressing the radio's emergency button. Almost immediately the control room can precisely locate them and send help.

Value of short data messaging (SDS)

Much of ambulances' communications is executed by SDS - with a library of messages set up on each radio. This library of messages saves valuable time and assists the operational efficiency of the ambulance service: at a glance the crew can view the dispatching instructions and follow them instantly.

System made easier to use

Ambulance crews can work away from their vehicles, knowing that they can be contacted by the control room using the Sepura's Gateway. In general, radio operation is easier for users: switching between modes is automatically controlled and user interfaces on both hand-held and mobile radios are identical. The radios' common User Interface provides substantial benefits in operational use.

Recognised benefits

The advantages offered to ambulance crews and control rooms by Sepura's special ambulance solution has enabled crews to improve further their service to the public. The Sepura solution can provide ambulance services world-wide with a single source of supply for equipment, training, accessories and support.

Sepura's policy is to continually improve its products and services. The features and facilities described in this document were correct at publication, but are subject to change without notice.

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