

Radiocomms

Efficient and Safe De-icing: How Aero Mag Connects Its Teams

The Challenge

Managing winter operations at an airport is a big task that involves a huge joint effort between airport teams and their service partners. One of the UK's leading service partners, Aero Mag, provides de-icing facilities at Heathrow and Manchester Airport, both of which are listed in the top twenty of Europe's busiest airports, handling over 400,000 aircraft movements collectively throughout the year.

In winter, de-icing planes is essential for airline safety, and clear communication between airside teams and pilots is crucial. The pilot is consulted by ground-to-air communication, confirming the decision on the required treatment. Following that, de-icing trucks, most of which are single-operator vehicles, move around the aircraft, applying the product that allows an aircraft to operate safely during harsh winter conditions. The removal of frost from an aircraft takes on average three to six minutes. Safety and speed are key to the success of this operation.

“We support a fail-safe service, and we can only do this if the teams and pilots can talk to each other,” said James Webb, Aero Mag Operations Manager, Heathrow Airport. *“Good coverage of all areas of the airfield, having the service support and general reliability throughout is imperative to our procedures.”*

Being connected is crucial for their business, Mick Field, Aero Mag General Manager added. *“If information cannot be shared in real time it can affect many elements such as security issues and possibly dangerous scenarios, whilst siloes can build and create*

inefficiencies.” He continued, *“We were experiencing long outages with our aging radio communication system, and poor coverage. It was time to look for a new provider that could offer the support we needed. Radiocomms came highly recommended and was the best fit for Aero Mag.”*

The Solution

After an introductory meeting, Aero Mag was recommended DMR and airband radio communication solutions by Radiocomms for its critical communication requirements to support its airside operations at both Heathrow and later Manchester Airport.

Dependant on whether they are operating an open de-icing basket or a closed cabin, both vehicles needed to house a rugged, dependable device that offered full encryption for secure radio communication broadcasts. The demonstrations held on site highlighted the benefits the new two-way radio technology would deliver and how it could meet the requirements outlined by Aero Mag.

“We were looking for an easy-to-deploy, scalable system which could provide a proven site-wide coverage footprint. Further requirements included a high level of resilience and security, and the need for ongoing onsite engineering support and maintenance.”

Mick Field, Aero Mag General Manager



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The team at Heathrow selected a mixture of Hytera full keypad PD785 hand portables and **MD785 mobiles** whilst the Manchester team now operates with **Motorola DP4601e half keypad hand portables** and **DM4601e mobiles**. In addition, ICOM airband radios provide a ground-to-air connection to the aircraft pilot for instantaneous communication and improvements on turnaround times. This also allows for constant communication between de-ice crews, the operations centre and the flight crew, ensuring zero time wastage and enhanced safety on every de-ice.

Dedicated talk groups and priority-level channels enable more efficient communications, both day-to-day and for faster detection and remediation of threats.

At the same time, text messaging and telephone interconnect provide additional functionality for the users. Heavy-duty headsets with PTT mics are also utilised; they are mounted to a safety harness for ease of operation whilst in an open basket.

Furthermore, by utilising the airport's existing radio system managed by Radiocom, there was no costly infrastructure to install, and the day-to-day voice and data system management issues were taken care of thanks to the remote infrastructure diagnostics system already in place.

The Benefits

As a new start-up, Manchester did not have anything to benchmark the system to; however, Heathrow has shared its satisfaction with the improved audio quality and coverage. As a result of their new two-way radio systems, both sites can share critical information around the clock so they can keep track of operations 24/7, giving them more time to do their jobs.

Finally, the company also has peace of mind, benefiting from Radiocom's onsite engineering Premier Service Level Agreements and the layers of back-up provided through the high-resiliency architecture of Manchester and Heathrow Airports' centralised radio communications network. The many layers of redundancy ensure that no single failure can bring the system down.

The value for Aero Mag by simplifying the supply chain and consolidating support with a single provider has proven to be a success. *“With Radiocom it’s much more proactive. Acting fast to a technical issue is a necessity for us. They are fixing problems before we even realise they are there, and that’s really impressive. We didn’t have a back-up before, but now we know there’s always capacity to keep us operational.”* Mick Field concluded.



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