

Drive to Succeed

A supplement to the U.K. radiotelephony manual instructs ground vehicle drivers on standardized communication and best practices.

REPORTS

The Phrase That Pays

A Reference Guide to UK Phraseology for Aerodrome Drivers

U.K. Civil Aviation Authority. Supplement to Civil Aviation Publication (CAP) 413, *Radiotelephony Manual*. October 2008. 34 pp. Figures, illustrations. Available via the Internet at <www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3304> or from The Stationery Office.*

In 2007, 26 percent of reported U.K. runway incursion incidents involved ground vehicles, this guide says. That is not surprising, considering that drivers often work in close proximity to aircraft in areas designed for aircraft movement, not earthbound vehicles. In addition, the guide notes, drivers need to use busy radio frequencies shared with pilots, air traffic controllers and others. “In order to do this, drivers need to understand and use the correct radiotelephony (RTF) phraseology and techniques,” the guide says.

The guide is available online in a version that resembles a spiral-bound booklet, with tabs for topical sections and pages that turn when a forward arrow or tab is clicked. Audio files can be activated to provide the sound of correctly formatted voice messages.

Design is clear and clean, with graphic symbols and color coding to identify vehicle driver phraseology, controller or flight information service officer phraseology and

air-ground communication service operator phraseology.

The guide begins with basics that may seem obvious to pilots and controllers but could be new to beginning drivers. “Think about what you are going to say before you transmit,” the guide says. “Use a normal conversation tone. Do not talk too fast, speak clearly and at a steady pace. Keep the rhythm, speed, volume and pitch normal. ... Always read back in full instructions relating to movement on the maneuvering area. Do not replace a readback of instructions with ‘roger’ or ‘copied’ or ‘wilco.’ If you do not understand instructions, ask for clarification and do not guess what it is you are being told to do.”

The guide has chapters on “movement instructions,” “entering and crossing runways,” “towing an aircraft,” “adverse weather,” “vehicle phraseology” and “additional messages.”

The “additional messages” section alerts drivers that they may need to convey unusual messages that are important for safety, such as, “Ops 1, open ventilation panel starboard side of Blue Skies Boeing triple seven passing on Taxiway Delta” or information about wildlife on or near a runway. It also cautions drivers that “it is easy to get disoriented on an aerodrome, particularly at night or in poor visibility,” and that in such a situation, the



driver should immediately ask for directions or instructions.

Although the terminology applies to U.K. vehicle drivers, many of the general principles will be useful to drivers at any large airport.

Upgrading ATC Facilities

FAA's Management and Maintenance of Air Traffic Control Facilities

U.S. Federal Aviation Administration (FAA). Report AV-2009-012. Dec. 15, 2008. 32 pp. Figures. Available via the Internet at <www.oig.dot.gov/item.jsp?id=2405>.

“Many of FAA’s air traffic control facilities have exceeded their useful lives, and their physical condition continues to deteriorate,” says this report by the U.S. Department of Transportation Inspector General’s office. The report presents the results of an audit of FAA air traffic control (ATC) facilities, based on visits to terminal control facilities, en route control centers, an FAA service area and FAA headquarters.

The report appears as the FAA is beginning its transition to the Next Generation Air Transportation System (NextGen), planned for completion in 2025. The objectives of the audit, the report says, were to determine if the agency has “(1) developed and implemented a comprehensive strategy to effectively manage the replacement, repair and modernization of its ATC facilities and (2) allocated sufficient funds to carry out those activities.”

While acknowledging that recent years have brought improvement, the report says that the FAA lacks adequate controls to ensure that its routine facility maintenance needs are sufficiently funded. “More importantly, FAA’s newly developed processes for its capital maintenance needs are only short-term solutions that focus on sustaining the existing ATC infrastructure,” the report says. “This is because FAA has not made key decisions on facility consolidations and infrastructure needs related to NextGen.”

An average ATC facility is expected to have a useful life of 25 to 30 years, but 59 percent of FAA facilities — 249 of 420 — are more than 30 years old. The average age of en route

facilities is 43 years. Fifteen facilities are more than 50 years old.

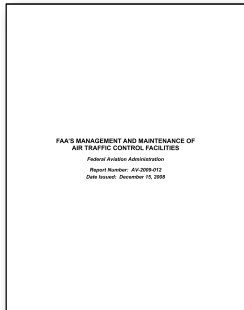
During site visits, the auditors observed structural problems and maintenance issues at several locations, including “water leaks, mold, tower cab window condensation, deterioration due to poor design and general disrepair. While the deficiencies observed posed no immediate risk to the operations of the National Airspace System, they could affect operations in the long term if they are not addressed.”

Inadequate lines of sight were noted at some ATC facilities because the airport had been expanded since the tower was built, so that controllers can no longer see the entire airfield. This was a particular problem at one airport where the control tower dates from 1958 and another where the tower was commissioned in 1960.

“Over the years, facility maintenance has been neglected as FAA took a reactive rather than proactive approach to sustaining its ATC facilities,” the report says. “For example, managers at several FAA facilities stated that FAA was only focusing on emergency repairs and fixing problems as they arose.”

Formerly, requests for maintenance funding came from the agency’s nine regional offices, which would submit a list of priorities to FAA headquarters, and the agency would allocate funds to the regions based on the priority lists. “This decentralized process resulted in several problems,” the report says. “First, there was a lack of consistent information flow to headquarters, making it difficult for FAA to accurately gauge its agency-wide requirements. Second, resources were not always utilized efficiently; because the regions used their own prioritization methods, there was no way for headquarters to validate that the work that was most needed nationally was actually the work being completed.

“Finally, the regions were granted flexibility to reprogram funds to projects, which may not have been the projects that were initially submitted to headquarters. As a result, FAA



headquarters was not always aware of which projects had been funded and completed and which projects still remained incomplete. This uncertainty made it difficult for FAA headquarters managers to plan for future projects and accurately estimate their needs.”

The agency has since developed a process to better manage maintenance needs, the report says. The Air Traffic Organization’s Terminal Services unit now uses an agency-wide tool called the Needs Assessment Program. Terminal maintenance projects are entered into a central system, and headquarters is able to prioritize them based on urgency. In addition, to aid in preventive maintenance, Terminal Services has begun conducting life-cycle assessments at terminals and has instituted a Structured Facility Planning Process that helps the unit determine which facilities most need to be replaced.

Over fiscal years 2008 through 2015, the agency plans to replace 29 of its 397 terminal facilities. The auditors recommend that a similar process be followed for en route facilities. The report says that the FAA should “determine what type of facilities (i.e., terminal versus en route or a hybrid of the two) will be needed, how many of these facilities will be needed, and where they should be located to effectively support NextGen.”

On the Deck

Offshore Helicopter Landing Areas — Guidance on Standards

U.K. Civil Aviation Authority (CAA). Civil Aviation Publication (CAP) 437. Sixth edition. December 2008. 138 pp. Figures, tables, references, glossary, appendices. Available via the Internet at <www.caa.co.uk/default.aspx?catid=241&pagetype=90> or from The Stationery Office.*

This supersedes the fifth edition of 2005. The document says that it has been “revised to incorporate further results of valuable experience gained from CAA-funded research projects conducted with the support of the U.K. offshore industry into improved helideck lighting and the conclusion of projects ... relating to offshore helideck environmental issues.”

Other changes include:

- A detailed specification is provided for lighting the “H” heliport identification marking and the touchdown and positioning marking circle;
- A new reference is provided to the final specification for helideck status light systems;
- As a result of completed helideck environmental projects, a new turbulence criterion is published and the longstanding vertical flow criterion is removed;
- New International Civil Aviation Organization standards and recommended practices relating to offshore helidecks and shipboard heliports, which are to become applicable in November 2009, are included;
- Material is added from the fourth edition of the International Chamber of Shipping Guide to Helicopter/Ship Operations, published in December 2008; and,
- For the first time, guidance is included for the design of winching area arrangements on wind turbine platforms.



WEB SITES

Knowing Your Avionics

Aircraft Electronics Association, <www.aea.net/default.asp>

Aircraft Electronics Association (AEA) is a member-supported organization representing aviation electronics and avionics businesses and educational institutions.

Portions of AEA’s Web site are available to nonmembers. Materials may be read online or printed at no charge.

- Avionics News, AEA’s publication: Selected articles from 2003 through 2008 in full text are featured in the News Archive section of the Web site.



- **Technical Training Exam:** A copy of the exam designed to help member companies meet technician-training requirements is accompanied by links to Avionics News full-text articles that provide background research to aid in successfully completing the exam. The 2007 exam with relevant background articles is also available.
- **Avionics INTEL Sheets:** Each two-page briefing paper gives an overview of an avionics system such as terrain awareness and warning system (TAWS), traffic alert and collision avoidance system (TCAS) and emergency locator transmitter (ELT) with product specifications, descriptions of the technology and references to applicable U.S. Federal Aviation Regulations.

The Human Touch

Royal Aeronautical Society, Human Factors Group, <www.raes-hfg.com>

Its mission statement says, “The Human Factors Group [HFG] of the Royal Aeronautical Society [RAeS] exists to improve standards of safety in aviation by promoting better industry understanding of human factors hazards and techniques for dealing with them.”

The standing groups and focus teams address issues related to topics such as air traffic control, crew resource management (CRM), maintenance engineering, ramp safety and human interface design. Proceedings from their conferences, from 1998 through 2007, contain PowerPoint presentations by RAeS members, academia and industry. Conference titles include “Risks in Aviation Maintenance,” 2007; “Management of Human Factors Risk in Safety-Critical Industries,” 2006; and “Human Factors: Making a Difference,” 2008, which focused on human factors in safety management systems.

HFG similarly provides free access to related CRM and human factors papers and reports; regulatory, standards and guidance materials; and journal articles, including some from the U.K. Civil Aviation Authority and the U.S. Federal Aviation Administration.



To access most materials, select and click on the *conferences* icon. Passwords are not required for this portion of the Web site. Documents and individual presentations are full text and may be downloaded or read online at no cost.

Source

* The Stationery Office <www.tso.co.uk>

— Rick Darby and Patricia Setze