RATIONALE

This document is being revised to update formatting and references.

1. SCOPE

This SAE Aerospace Recommended Practice recommends general criteria for the development and installation of an aircraft emergency signal system to permit any crew member (flight or cabin) to inform all other crew members that an emergency evacuation situation exists and that an evacuation has been or should be immediately started.

1.1 Purpose

The purpose of this document is to assure functionality, usability, and performance of emergency evacuation signal systems installed on transport category aircraft.

NOTE: It is not the purpose of this document to specify the design method, mechanism, or equipment to be used in the accomplishment of the objective set forth herein.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

ARP577   Emergency, Instruction, and Information Placards - Internal and External

ARP583   Cabin Crew Stations

ARP4102/4   Flight Deck Alerting System (FAS)

2.2   Definitions

2.2.1   AIRCRAFT EVACUATION SIGNAL SYSTEM

An integrated system of audible and visible signals used by crew members to initiate transport aircraft emergency evacuations.

2.3   Mandating and Recommending Words

2.3.1   SHALL

Indicates a mandatory criterion.

2.3.2   SHOULD

Indicates a criterion for which an alternative, including non-compliance, may be applied if it is documented and justified.

3.   DETAIL RECOMMENDATIONS

3.1   Evacuation signal system controls shall be located at each cabin crew member's station, near the door operating mechanism, and in the flight deck.

3.2   The system shall contain the following features:

3.2.1   Flashing signal light.

3.2.2   Audible signal.

3.3   If not integral to the door opening mechanism, a guarded actuation switch and an audible signal cancel means should be located at the cabin crew member's station near the door. If the actuation switch is integral to the door opening mechanism, it shall be designed not to activate the system if the door is opened from the outside.

3.4   Actuation of the system at any station shall automatically actuate the signals at all locations.

3.5   The placarding of the control switch functions shall be in accordance with ARP577.

3.6   The system should be designed primarily to alert crew members that an emergency evacuation has been or should be immediately started.

3.7   It should be possible to cancel the audible signal at any individual station by a cancel button at that location. The cancel button may also be designed to serve as a test feature. Locally cancelled audible signals shall automatically rearm after the evacuation signal is cancelled.

3.8   The primary evacuation signal control switch shall be located in the flight deck and it shall be accessible to the flight crewmembers (captain and first officer) in their seated positions. Regardless of where the system is activated, the system shall automatically rearm itself when the evacuation signal is cancelled using the flight deck controls.

3.9   The location of the signal lights should permit the viewing of the lights in the flight deck and at each cabin crew member station.

3.10   The signal lights should have a raised cover and use an LED or dual filament bulb to provide visibility at any angle and to reduce probability of an inoperative signal.

3.11   The visible and audible signals should be in accordance with ARP4102/4. The audible signal should be easily distinguishable from any other flight deck signal, cabin warning, or call signal, and should not be alarming to passengers. The audible signal shall not interfere with a crew member's ability to communicate with passengers and other crew members. This may be accomplished by having an intermittent audible signal, an audible signal with a time-out function or by crew member procedure to cancel the audible signal once the emergency evacuation has been initiated (audible signal cancellation means are addressed in 3.7).