

## Aerodrome Emergency Hand Signals

Recently, a serious incident occurred due to a delay in reporting a fire in an aircraft's engine on a movement area. This incident resulted in the publication of a safety report, and an investigation into the emergency procedures at similar aerodromes, conducted by the Air Accidents Investigation Branch (AAIB). Based on the results of this investigation, the AAIB has determined that there is greater potential for delays in activating emergency responses, and therefore the CAA concluded that a Safety Notice should be issued.

Civil Aviation Authority Safety Notice SN-2012/006 CAP 168 Chapter 9, Section 6 specifies the lines of communication, liaison with responders, and instructions to consider when establishing Emergency Orders. A detailed guide to creating the Aerodrome Emergency Plan exists in Section 5 of the same document. Additionally, paragraph 23.5 of Chapter 8 defines requirements for monitoring the movement area with the aim of alerting and deploying Rescue and Fire Fighting Services as quickly as possible when needed.

For pilots, emergency hand signals were first outlined in the 2009 edition of the ICAO annex. In the past, these hand signals, paired with discrete emergency frequency communication, were recommended by the responding fire crew after fatal aircraft accidents. The fire officers stated that fatalities could have been avoided through effective communication. Shortly after, an FAA advisory circular was issued on this subject (15-5210 7d).

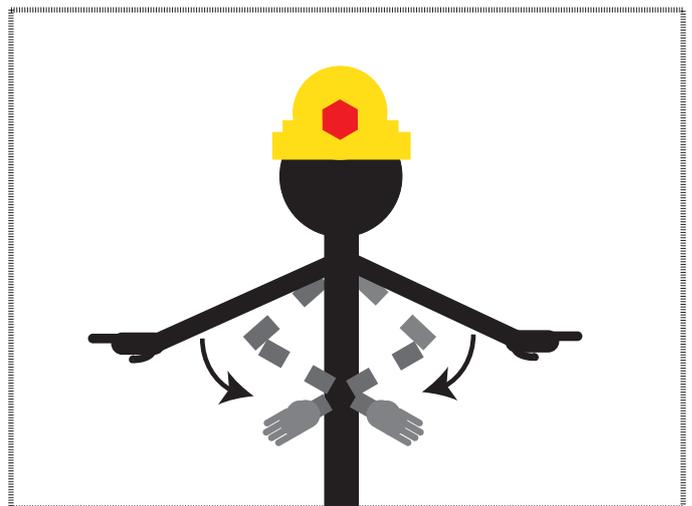
In case of emergency in an aerodrome, set procedures must be put in place to ensure the appropriate response to an emergency event within a short period of time. In this case, knowledge and familiarity with emergency hand signals are of utmost importance to pilots, crew, and ground crew to ensure that all parties involved are able to communicate and respond effectively in case of an emergency event.

The following images depict emergency hand signals that all pilots, crew, and ground crew should know, along with detailed instructions on how to communicate each message.

### Emergency Contained (No evidence of dangerous condition)

Arms extended outward and down at a 45 degree angle. Arms moved inward below waistline simultaneously until wrists are crossed, then extended outward to starting position. At night, same movement with wands.

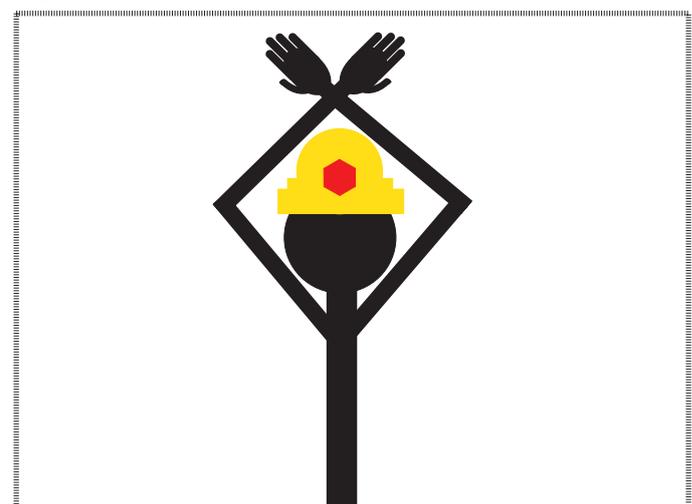
Image 1: Emergency Contained



### Recommend Stop (Halt evacuation or measure in progress)

Arms in front of head, crossed at wrists. At night, same movement with wands.

Image 2: Recommend Stop



**Recommend Evacuation**

Arms extended from body, and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Non beckoning arm held against body. At night, same movement with wands.

Image 3: Recommend Evacuation



**Fire in Engine or APU**

According to the US Airforce manual on aircraft operation and movement on the ground, the fire in engine or APU signal is communicated as follows:

Make rapid horizontal figure-eight motion at waist level with either arm, while pointing at the source of fire with the other hand. At night, same movement with wands.

Image 4: Fire in Engine or APU



**Fire**

According the UK Civil Aviation Authority Visual Aids Handbook, the fire signal is communicated as follows:

Move right-hand in a “fanning” motion from shoulder to knee, while at the same time pointing with left hand to the area of the fire.

Image 5: Fire

