

Letter to Operators No. LTO/007

Emergency Locator Transmitters  
Operating on 406 MHz.

## **Introduction**

This Letter to Operators (LTO) is to advise owners and operators of Bermuda registered aircraft of the requirements concerning the identification coding of Emergency Locator Transmitters (ELT) operating on 406 MHz.

## **Background**

ELTs operating on 406 MHz use a constellation of satellites operated by COSPAS/SARSAT to determine the global position of the ELT when activated. ELTs can be divided into two types according to their intended use. ELTs designed for aircraft use and Emergency Position Indicating Radio Beacons (EPIRB) designed for sea going vessels, land vehicles or personal survival beacons. Each ELT or EPIRB is uniquely identified to the aircraft, ship, vehicle or person to which the device is attached.

In order to identify which aircraft or ship etc. is in distress the ELT is coded with a 15 bit Hexadecimal identification code. In order to retain the correct aircraft identification it is essential therefore that the ELT is correctly coded for the aircraft to which it is fitted. Additional information in the coding protocol will identify the country of registration of the ELT. This information is used by the COSPAS/SARSAT monitoring stations to inform the Rescue Coordination Center (RCC) of the State of Registry. The country of registry is identified by the Maritime Identification Digits (MID) which form part of the 15 bit Hexadecimal ELT code. The MID for Bermuda is 310 which must be included in the 15 bit Hex code to identify the aircraft as being registered in Bermuda.

Whenever an ELT is moved from one aircraft to another or is newly installed it must be recoded with the 15 bit hex code. In order to facilitate the exchange of ELTs between fleet aircraft some manufacturers offer an additional data package which not only enhances ELT position determination by using the on board GPS data but also interfaces with the Mode S Transponders to acquire the unique aircraft identification.



Unfortunately, in the case of aircraft registered in Bermuda, this Mode S identification data is unsuitable because the Mode S Codes allocated to Bermuda are selected from the United Kingdom ICAO allocation. Consequently any ELT that derives its MID by reference to the Mode S Code will appear to COSPAS/SARSAT to be registered in the UK. This is contrary to the ICAO requirements for ELT identification. The software in the data package has been programmed with a cross reference between the Mode S code country identifier and the MID codes.

## **Proposal**

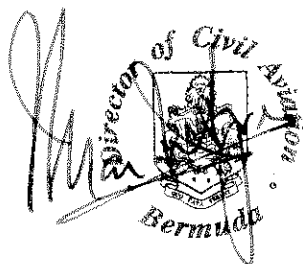
In order to ensure that all 406 MHz ELTs installed in Bermuda registered aircraft are correctly coded with the Bermuda MID of 310 it will be necessary to have all the ELTs in the aircraft, including those fitted in life rafts, manually coded by the manufacturer or another organisation capable of performing the coding.

## **Requirement**

All owners and operators of aircraft registered in Bermuda that have Emergency Locator Transmitters (ELTs) operating on 406 MHz fitted to the aircraft or installed in life rafts on the aircraft are required to have all ELTs coded with the required fifteen bit hexadecimal code to identify the aircraft to which the ELT is fitted and that includes the MID of 310 to identify Bermuda Harbour Radio as the Rescue Coordination Center (RCC). Aircraft identification may be achieved by using the aircraft serial number or the serial number of the ELT unit itself.

The Mode S address code must not be used as a means of aircraft identification.

An ELT Registration form is attached to this LTO and the completed form should be returned by fax to the Bermuda RCC at Harbour Radio, St. George's, Bermuda.



Ian MacIntyre  
Director of Civil Aviation Bermuda

8 November 2004