



IBAC Bulletin 04-3

Subject: The technical characteristics of Emergency Locator Transmitters (ELTs) provisioned in life rafts.

Background

This 'opinion paper' has been prepared to document information, interpretations and views developed or obtained by the author in response to an enquiry from the operator of a small fleet of business aircraft all capable of conducting long range international, over-ocean operations and which have been certificated for ditching.

The operator concerned is in the process of evaluating and reviewing the provisioning of ELTs in the life rafts carried onboard this fleet of aircraft. Thus, the nature of the enquiry was a request to identify, and as necessary clarify, ICAO provisions, their applicability and otherwise to provide advice and guidance pertaining to ELTs provisioned in life rafts.

The underlying issue relates to the need or otherwise for the ELT to operate simultaneously on 406 MHz and 121.5 MHz.

According to the enquirer, his recent contacts with a major supplier of ELTs as well as a major supplier of life rafts revealed that neither were informed about or aware of what technical 'requirements' were applicable.

ICAO Provisions

The technical characteristics and specifications for ELTs are contained in Annex 10 Volume III Chapter 5. These include the ELT operating frequencies and the date (1 January 2005) by which ELTs shall operate simultaneously on 406 MHz and 121.5 MHz .

Provisions contained in Annex 6 Parts I (Chapter 6 section 6.17) & II (Chapter 6 section 6.12), which relate respectively to International Commercial Air Transport – Aeroplanes and International General Aviation – Aeroplanes address the carriage of an ELT(s) installed in the aeroplane. In both of the above references there is a provision with the status of a Standard (respectively 6.17.8 and 6.12.5) that requires that the ELT comply with the relevant Annex 10 Volume III provisions.

Provisions also exist in Annex 6 Part III* International Operations- Helicopter Section II and Section III, respectively International Commercial Air Transport and

International General Aviation. These provisions address both the carriage on an ELT in the helicopter as well as the provision of an ELT(S) in a life raft.

* Ed Note; The reason for including herein mention of Annex 6 Part III will become evident subsequently in this paper'.

All three parts of Annex 6 under their respective Chapter 1 "Definitions" include under the heading ELT the following:

'Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency manually activated by survivors."

There are no provisions in Annex6 Parts I and II, which prescribe that an ELT shall be included in the survival or signaling equipment carried in a life raft.

Applicability of ICAO Provisions

According to the nature of the enquiry, the first question to be asked is: "Are the provisions of Annex 10 Volume III Chapter 5 exclusively related to the ELTs installed in the aircraft or do they apply also to ELTs provisioned in life rafts carried on board the aircraft?"

The practical answer from a technical, SAR operational, safety and survival/rescue point of view is that they apply to both.

Careful study of the drafting of the following Annex 10 provision "5.1.4 From 1 January 2005, emergency locator transmitters shall operate simultaneously on 406 MHz and 121.5 MHz." leads the author to conclude that it is a generic provision i.e. that it relates to both ELTs installed in the aircraft as well as ELTs provisioned in life rafts.

The ICAO definition of an ELT is explicitly generic in nature and is inclusive of a Survival ELT. (Annex 6 Part 1 Chapter 1, page 1-2)

Other evidence supporting the above logic is to be found in Note 2 to Annex 10 Volume III paragraph 5.1.9, which makes reference, by way of an example, to the placement of an ELT in the aircraft viz. "life-raft No.1 ELT".

The soundness of the above logic can be finally validated by reference to the provisions of Annex 6 Part III. These Standards, which prescribe the provisioning of an ELT (s) in life-rafts carried by helicopters, also refer to compliance with the relevant provisions of Annex 10 Volume III. These latter provisions (paragraph 5.1.9) include the requirement for operation simultaneously on 406MHZ and 121.5 MHz effective 1 January 2005, as quoted per 5.1.4 above.

Conclusion

Annex 10 Volume III Chapter 5 is applicable to all ELTs i.e including Survival ELTs. Accordingly, and with effect from 1 January 2005,

ELTs provisioned in life rafts are required to operate simultaneously on 406MHz and 121.5 MHz.

Ed Note: The author gratefully acknowledges the informal advice and guidance provided by the ICAO Secretariat during the preparation of this paper. The author understands that, as a result, consideration will be given by the Secretariat to the posting of appropriate information on the ICAO website under Frequently Asked Questions (FAQ).

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