AERONAUTICAL INFORMATION CIRCULAR P 004/2015

UNITED KINGDOM

NATS Services
UK Aeronautical Information Services
Heathrow House
Bath Road, Cranford
Middlesex, TW5 9AT
ais.supervisor@nats.co.uk
http://www.ais.org.uk
01293-573412 (Content - SARG/ISP Operations)
0191-203 2329 (Distribution - Communisis UK)

Date Of Publication
19 February 2015

Subject
Safety

Cancellation
AIC P 134/2012

CODING AND REGISTRATION OF UK 406 MHZ EMERGENCY LOCATOR TRANSMITTERS (ELTS) AND AVIATION-USE PERSONAL LOCATOR BEACONS (PLBS)

1 General

1.1 This Circular has been produced to provide guidance for coding and registering 406 MHz ELTs and PLBs when installed or used in UK-registered aircraft.

1.2 Registration of ELTs and aviation-use PLBs should be made to the UK Distress and Security Beacon Registry (UKDASBR) at the following address and in accordance with paragraph 3:

The UK Distress and Security Beacon Registry
Falmouth MRCC
Castle Drive
Pendennis Point
Falmouth
Cornwall
TR11 4WZ

Phone: + 44 (0)1326-211569
Fax: + 44 (0)1326-319264
E-mail: ukbeacons@mcga.gov.uk
Web: www.gov.uk/406beacon

1.3 The UKDASBR and the UK Mission Control Centre (UKMCC), who receive, process and distribute ELT/PLB Distress-Alerts, have issued guidance on the coding, registration and testing of 406 MHz ELTs and aviation-use PLBs and this is detailed below.

1.4 Further technical information, if required, may be obtained from the Cospas-Sarsat system documents which are available to be downloaded from their website at https://www.cospas-sarsat.int/en. The documents felt to be of prime interest are:

(a) G.003 - Introduction to the Cospas-Sarsat System;

(b) G.005 - Guidelines on 406 MHz Beacon Coding, Registration and Type Approval;

(c) T.001 - Specification for Cospas-Sarsat 406 MHz Distress Beacons; and

(d) T.012 - Cospas-Sarsat 406 MHz Frequency Management Plan.

1.5 All beacons should transmit on the internationally authorised Cospas-Sarsat channels, as prescribed in T.012, Annex H, referring to the Channel Assignment Plan. Furthermore, beacons are required to transmit a continuous swept-tone homing signal on 121.5 MHz and optionally on 243 MHz.

2 Coding

2.1 Each 406 MHz data-burst transmitted by an ELT or PLB must include the beacon's unique identification (15-character hexadecimal ID default code). The complete identification code includes protocol flag, protocol code, country code, identification data and, if GNSS is fitted, positional information.

2.2 The permitted UK ELT/Aviation-use PLB coding options are:

Country Code	USER PROTOCOLS			
	Serial User			Aviation User
	ELT Serial Number *	Aircraft Operator Designator and Serial Number *	Aircraft 24-bit Address **	Aircraft Nationality and Registration Marking
232	Yes	Yes	Yes	Yes

Country Code	LOCATION PROTOCOLS							
	User Location				Standard Location			National Location
	ELT Serial Number *	Aircraft Operator Designator and Serial Number *	Aircraft 24-bit Address **	Aircraft Nationality and Registration Marking	ELT Serial Number *	Aircraft Operator Designator and Serial Number *	Aircraft 24-bit Address **	Serial Number assigned by UKDASBR (Allocation Restricted)
232	No	No	No	No	Yes	Yes	Yes	Yes

(The tabled definitions are simplified. A full explanation of the coding options may be obtained from the document T.001 Specification for Cospas-Sarsat 406 MHz Distress Beacons.)

Note 1: *(*) Serial number means a unique number assigned by an administration or a beacon manufacturer.* ***Assigned serial numbers must provide a unique beacon identification when used with the country code.*** *Serial numbers assigned by a manufacturer must provide a unique beacon identification when used with the Cospas-Sarsat type approval certificate number assigned to that beacon model.*

Note 2: *(**) 24-bit Address Codes are issued automatically to all aircraft on registration in the UK and the details are listed on the CAA G-INFO website. These codes are assigned for Mode S and ELT use and further information can be obtained from the CAA web pages at www.caa.co.uk/aircraftregister.*

3 Registration

3.1 All 406 MHz ELTs/PLBs must be registered with the UKDASBR, even if not fitted to an aircraft, through the online registration process at www.gov.uk/406beacon.

3.2 Too many beacons are inadvertently activated when in storage or transit, and these false alerts invariably result in Search and Rescue (SAR) action if the owner cannot be identified and questioned. It is of extreme importance that robust 24-hour telephone contact numbers are provided when registering ELTs/PLBs and that the UKDASBR should be informed subsequently if the owner and/or contact numbers are changed.

3.3 Information provided within the registration process is critical to your safety and to a successful SAR response. The more complete the details, the more quickly MCC and Rescue Co-ordination Centre (RCC) personnel may be able to assist you in a time of distress.

Note: *For GNSS-integrated, location-protocol ELTs/PLBs, the default 15-character code should be used. This normally ends with* ***FFBFF*** *or* ***81FE0****.*

4 Testing and Inadvertent Activation

4.1 A 406 MHz ELT should be designed to perform a short self-test, preferably with a separate and specific self-test button or switch. The self-test transmission may consist of a short-duration emission of a single burst. If the beacon transmits in the self-test mode, the signal must have a frame synchronisation pattern of 011010000 to ensure that the satellite or ground equipment will not process this test transmission. This eliminates the risk of a false alert being generated by the self-test burst. Unless prior permission has been granted or co-ordination has been accomplished in accordance with Cospas-Sarsat document C/S A.004 'Cospas-Sarsat System Exercising', no other test transmissions are permitted when using a beacon coded with an 'operational' protocol, as any such test could generate a false distress-alert. Such false distress-alerts are seen globally by all 31 MCCs and two Doppler positions will be produced by each that are often thousands of kilometres apart (one of which will be correct and the other is the 'mirror' position).

4.2 Self-test transmissions must be kept to a minimum as they interfere with 'real' 406 MHz distress alerts. Unauthorised homing transmissions on 121.5 and 243 MHz are not permitted. If the beacon does not have a specific 'self-test' button, extreme caution must be exercised during installation and maintenance so as to prevent false alerts. Beacons must not be activated for more than 30 seconds and manufacturer instructions are to be strictly observed. Basic procedural advice and guidance on ELT/PLB testing and installation may be obtained from the UKMCC, contactable as detailed in paragraph 4.3.

4.3 If an owner becomes aware of an inadvertent or accidental activation, it is essential that he/she telephones the UKMCC immediately as this may well prevent the wasteful initiation of SAR action. UKMCC numbers are:

+44 (0)1309-678304 or +44 (0)1309-690469.

5 Further Information

5.1 For further information on ELT/Aviation-use PLB matters contact:

Policy Lead Flight Operations
Intelligence, Strategy and Policy
Safety and Airspace Regulation Group
Civil Aviation Authority
2W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR

Phone: +44 (0) 1293-573412
E-mail: ISPOperationsManagementTeam@caa.co.uk

INTENTIONALLY BLANK