

AERONAUTICAL INFORMATION CIRCULAR P 101/2022

UNITED KINGDOM



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01293-573947 (Content - SARG/ISP Fit Ops Policy)

Date Of Publication

20 Oct 2022

Subject

Safety

Cancellation

P 053/2018



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

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.

2 Registration

- 2.1 All 406 MHz ELTs/PLBs must be registered with the UK Distress and Security Beacon Registry (UKDASBR), even if not fitted to an aircraft, ideally through the online registration process at <https://www.gov.uk/register-406-beacons>.

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

Phone: + 44 (0)2038-172006

Fax: + 44 (0)1326-319264

E-mail: ukbeacons@mcga.gov.uk

Web: <https://www.gov.uk/register-406-beacons>

- 2.2 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.
- 2.3 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 Mission Control Centres (MCC) and Rescue Co-ordination Centre (RCC) personnel may be able to assist you in a time of distress.

3 Coding

- 3.1 The permitted UK ELT/Aviation-use PLB coding options are available from the Cospas-Sarsat Handbook of Beacon Regulations, UK Section:
<https://www.cospas-sarsat.int/images/stories/SystemDocs/Current/S.007-United%20Kingdom.pdf>.
- 3.2 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:
- G.003 - Introduction to the Cospas-Sarsat System;
 - G.005 - Guidelines on 406 MHz Beacon Coding, Registration and Type Approval;
 - T.001 - Specification for Cospas-Sarsat 406 MHz Distress Beacons; and
 - T.012 - Cospas-Sarsat 406 MHz Frequency Management Plan.
- 3.3 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.

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 guidance provided on the Cospas-Sarsat website at <https://cospas-sarsat.int/en/beacon-ownership/testing-your-406-mhz-beacon>, 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 MCCs.
- 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 UKMRCC, 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 UKMRCC at the National Maritime Operations Centre (NMOC) immediately as this may well prevent the wasteful initiation of SAR action. UKMRCC contacts are:

National Maritime Operations Centre
Croft Business Park
Unit 12 Kites
Fareham
Hampshire
PO14 4LW

Phone 1: Incident: +44 (0)34-4382 0903
Phone 2: Administration: +44 (0)34-4382 0902
Email: ukmcc@hmcg.gov.uk

5 Further Information

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

Flight Operations Policy
Safety and Airspace Regulation Group
Civil Aviation Authority
1W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR

E-mail: safetypublicationsteam@caa.co.uk