
UK Interface Requirement (IR) 2084

Cospas-Sarsat locator beacons for use on land

Contents

Section

1. Forward	3
2. Minimum equipment requirements for operation within the UK	4
3. Additional performance parameters	7
4. References	8
5. Contact details	9
6. Document history	10

1. Forward

- 1.1 The Radio Equipment Regulations 2017 (SI 2017/1206) set out the obligations on economic operators for placing radio equipment on the market. This UK Interface Requirement contains the requirements for the authorisation of Cospas-Sarsat Locator Beacons in the specified frequency bands.
- 1.2 It is required by the Wireless Telegraphy Act 2006 that no radio equipment is installed or used in the UK except under the authority of a licence granted by or otherwise exempted by regulations made by Ofcom. It is a condition of such a licence or exemption regulations as appropriate that the equipment must meet the minimum requirements specified in this UK Interface Requirement for the stated equipment types and for the stated frequency bands.
- 1.3 The requirements given in the main body of this UK Radio Interface Requirement will apply to the authorisation of Cospas-Sarsat locator beacons.
- 1.4 This UK Radio Interface Requirement will be revised as necessary, for example to follow:
 - i) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and
 - ii) changes to the available spectrum allocated for public wireless networks.
- 1.5 All UK Radio Interface Requirements will be published and will be made available free of charge from the Ofcom website.
- 1.6 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

2. Minimum equipment requirements for operation within the UK

- 2.1 The minimum requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular, maximising spectrum utilisation.
- 2.2 This UK Radio Interface Requirement gives a high-level description of how the spectrum in the UK is used for Cospas-Sarsat locator beacons. It does not prescribe technical interpretation of the 'essential requirements' of the Radio Equipment Regulations 2017 .
- 2.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing or licence exemption of Cospas-Sarsat locator beacons in the UK. Table 2.1 contains the relevant equipment parameters. These together with the 'essential requirements' detailed in Regulation 6 of Radio Equipment Regulations 2017 constitute the minimum equipment requirements for short range devices within the UK.
- 2.4 The technical parameters specified in the UK radio Interface Requirement are applied to achieve the desired level of compatibility within Cospas-Sarsat locator beacons and with radiocommunications services, whilst promoting enterprise, innovation and competition.
- 2.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to Cospas-Sarsat locator beacons spectrum by making clear the assumptions that are made in planning the use of Cospas-Sarsat locator beacons in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional 'essential requirements' of the Radio Equipment Regulations 2017 on products. Any specified parameters within this document are for the purpose of identifying product options and not as a national de facto product requirement.

Table 2.1

Minimum requirements for the use of Cospas-Sarsat Personal Locator Beacons (PLBs) for use on land, operating in the 406 MHz, 121.5 MHz and 243 MHz bands		
Mandatory (1-10)		
1	Radiocommunication Service	Mobile-satellite (Earth-to-space) service
2	Application	Personal Locator Beacon – (Emergency Position Indicating Radio Beacon)
3	Frequency	406 MHz to 406.1 MHz Homing signal 121.5 MHz or 243 MHz
4	Channelling	See Cospas-Sarsat 406 MHz Frequency Management Plan C/S T.012
5	Occupied bandwidth	-
6	Direction/separation	-
7	Maximum Transmit Power / Power Density	<u>406 MHz</u> 5 W + / - 2 dB (35 to 39 dBm) measured into a 50 ohm load <u>121.5 MHz and 243 MHz</u> Peak equivalent isotropic radiated power should be less than 100 mW
8	Channel access and occupation rules	<u>121.5 MHz Homing signal</u> Class of emission A3X <u>243 MHz Homing signal</u> Class of emission A3X The carrier shall be amplitude modulated at a modulation factor of at least 0.85. The modulation applied to the carrier shall have a minimum duty cycle of 33 per cent. The audio modulation frequency shall sweep downward within a range of not less than 700 Hz between 1 600 Hz and 300 Hz and with a sweep repetition rate of 2 Hz to 4 Hz.

9	Authorisation regime	Licence exempt
10	Additional essential requirements	In addition to the requirements of the present document, the beacon shall also meet the requirements of the Cospas-Sarsat system in accordance with Commission Decision of 29 August 2005 concerning essential requirements as referred to in Directive 1999/5/EC of the European parliament and of the Council ensuring access of Cospas- Sarsat locator beacons to the emergency services (2005/631/EC).
Informative (11-15)		
11	Frequency Planning	-
12	Planned changes	
13	Reference	C/S T.001, C/S T.007, C/S T.012, ETSI EN 302 152-1, Recommendation ITU-R M.690-1.
14	Notification	2011/190/UK
15	Remarks	<p>The Cospas-Sarsat Personal Locator Beacon should be registered by a UK competent authority.</p> <p>It is recommended that the beacon transmits a Global Navigation Satellite System (GNSS) determined integrated location information to enable a more accurate fix for positional information to be determined by Search and Rescue authorities.</p> <p>It is recommended that manufacturers take steps to support and encourage safe storage of the beacon by users, to avoid false alerts</p>

3. Additional performance parameters

3.1 All Personal Locator Beacons (PLBs) for land use should be registered on the UK EPIRB Registry.

3.2 To do this either:

- i) complete and return the registration card supplied with the PLB to the address provided; or
- ii) download the registration form and send it to the Falmouth Maritime Rescue Co-ordination Centre

3.3 Forms and address details can be found at <https://www.gov.uk/maritime-safety-weather-and-navigation/register-406-mhz-beacons>

4. References

Reference	Name
C/S T.001 Issue 3 – Revision 11 October 2010	Specification for Cospas-Sarsat 406 MHz distress beacons
C/S T.007 Issue 4 – Revision 5 October 2010	Cospas-Sarsat 406 MHz distress beacon type approval standard
C/S T.012 Issue 1 – Revision 7 October 2010	Cospas-Sarsat 406 MHz Frequency Management Plan
EN 302 152-1 V1.1.1 (2003-11)	ETSI Standard; Electromagnetic compatibility and Radio spectrum Matters (ERM); Satellite Personal Locator Beacons (PLBs) operating in the 406,0 MHz to 406,1 MHz frequency band; Part 1: Technical characteristics and methods of measurement
Recommendation ITU-R M.690-1	Technical characteristics of emergency indicating radio beacons (EPIRBS) operating on the carrier frequencies of 121.5 MHz and 243 MHz

5. Contact details

Ofcom Spectrum Licensing Team

PO Box 1285,

Warrington,

WA1 9GL

Email: spectrum.licensing@ofcom.org.uk

Tel: 0300 123 1000 or 020 7981 3131

Website: [Ofcom | Spectrum](#)

6. Document history

Version	Date	Changes
1.0	December 2011	Document published
2.1	June 2021	Format update