OFFICE OF COMMUNICATIONS

UK Interface Requirement 2042

Maritime Personal Locator Beacons intended for use with the COSPAS-SARSAT Distress Alert System in the frequency band 406 MHz To 406.1 MHz, with an auxiliary 121.5 MHz transmitter for homing purposes only, and optional Navigational Interface (either internal or external)

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Section 1

References

1.1 COSPAS-SARSAT Documents:-

a) C/S T.001 Specification for COSPAS-SARSAT 406 MHz Distress Beacons.
b) C/S T.007 COSPAS-SARSAT 406 MHz Distress Beacon Type Approval Standard.
c) C/S G.005 COSPAS-SARSAT Guidelines on 406 MHz Coding, Registration and Type Approval.

1.2 ITU-R M.690-1echnical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz.

1.3 ETSI EN 300 152-1 Electro Magnetic Compatibility and Radio Spectrum Matters (ERM);Maritime Emergency Position Indicating Radio Beacons (EPIRBs) intended for use on the frequency 121,5 MHz or the frequencies 121,5 MHz and 243 MHz for homing purposes only; Part 1: Technical characteristics and methods of measurement.

Section 2

Foreword

2.1 The Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC (R&TTE Directive) was implemented in the United Kingdom (UK) on the 8 April 2000 by The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000, Statutory Instrument 2000 No. 730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Interface Requirement contains the requirements for the licensing and use of maritime Personal Locator Beacons (PLBs) intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system and the frequency of 121.5 MHz for homing purposes only in the specified frequency bands.

2.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 1999/5/EC.

2.3 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.

2.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to the licensing of maritime PLBs intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system and the frequency of 121.5 MHz for homing purposes only, for distress use on non SOLAS vessels voluntarily participating in the Global Maritime Distress and Safety System (GMDSS).

2.5 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 PLBs intended for use with the COSPAS-SARSAT system in the frequency band 406.000 MHz to 406.100 MHz, and the frequency of 121.5 MHz for homing purposes only.

2.6 All UK Radio Interface Requirements notified under Directive 1998/34/EC will be published and will be made available free of charge from the Ofcom web-site at http://www.ofcom.org.uk

2.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

Section 3

Minimum equipment requirements for operation within the UK

3.1 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.

3.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for maritime PLBs intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system, and the frequency of 121.5 MHz for homing purposes only. It does not prescribe technical interpretation of the 'essential requirements' of Directive 1999/5/EC.

3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing of maritime PLBs intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system, and the frequency of 121.5 MHz for homing purposes only in the UK. Table 3.1 contains the relevant equipment parameters. These together with the 'essential requirements' detailed in Article 3.2 and 3.3e of Directive 1999/5/EC constitute the minimum equipment requirements for maritime PLBs intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system, and the frequency of 121.5 MHz for homing purposes only within the UK.

3.4 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the maritime mobile and with other radiocommunications services, whilst promoting enterprise, innovation and competition.

3.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the maritime mobile spectrum by making clear the assumptions that are made in planning the use of the maritime mobile spectrum in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional 'essential requirements' of the Directive 1999/5/EC 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.

3.6 In addition the PLBs may optionally include either an Internal or External Navigation Interface to provide encoded position data for transmission in the COSPAS-SARSAT message.

Table 3.1: Minimum equipment requirements for maritime PLBs intended for use in the frequency band 406.000 MHz to 406.100 MHz with the COSPAS-SARSAT distress alert system, and the frequency of 121.5 MHz for homing purposes only		
1	Frequency band (or bands)	406.000 MHz to 406.100 MHz and 121.5 MHz
2	Radio service	Maritime Mobile/Maritime Mobile Satellite
3	Application	Ship Radio Licence
4	Channelling modulation	Requirements as per COSPAS-SARSAT documents C/ST.001 for 406.000 MHz to 406.100 MHz and ITU-R M.690-1 for 121.5 MHz
5	Maximum transmit power limit	Between 406.000 MHz and 406.100 MHz, the transmitter output power shall be within the limits of 5W ± 2dB (35 - 39 dBm) measured into a 50-Ohm load, with a standing-wave ratio (VSWR) not greater than 1.25:1. At 121.5 MHz, between 25 and 100 mW Effective Radiated Peak Envelope power (ERPEP)
6	Channel occupation rules	N/A
7	Duplex type/separation	N/A
8	Licensing Regime	Ship Radio and Ship Portable Radio Licence
9	Additional essential requirements	The PLB shall be legibly and indelibly labelled with the 15 digit hexadecimal identity code programmed into the unit and in addition with adequate information to enable manual activation, deactivation and self test. The PLB shall be capable of being manually activated only and shall require two simple but independent mechanical actions to initiate transmission. Equipment with an integral or external navigation receiver for determining geographical position shall use the National Location Protocol format in the transmitted message. Equipment without an integral or external navigation receiver for determining geographical position shall use the Serial User Protocol format in the transmitted message. The equipment shall be in accordance with the relevant sections of C/S G.005 and C/S T.001. The equipment and operation shall be in accordance with the relevant sections of the ITU Radio Regulations Articles 5, 30, 32, and Appendixes 13 and 15 and C/S T.007

10	Frequency planning assumptions	It is assumed that the relevant equipment parameters are in accordance with ETSI EN 300 152-1.
11	Reference	N/A
12	Remarks	N/A
13	Notification Number	2001/326/UK

Section 4

Additional performance parameters

(informative)

ETSI EN 300 066 ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM);Float-free maritime satellite Emergency Position Indicating Radio Beacons (EPIRBs) operating in the 406,0 MHz to 406,1 MHz frequency band;Technical characteristics and methods of measurement.

ETSI EN 300 152-2 Electromagnetic compatibility and Radio spectrum Matters (ERM);Maritime Emergency Position Indicating Radio Beacons (EPIRBs) intended for use on the frequency 121,5 MHz or the frequencies 121,5 MHz and 243 MHz for homing purposes only;Part 2: Harmonized EN under article 3.2 of the R&TTE Directive.

ETSI EN 300 152-3 Electromagnetic compatibility and Radio spectrum Matters (ERM);Maritime Emergency Position Indicating Radio Beacons (EPIRBs) intended for use on the frequency 121,5 MHz or the frequencies 121,5 MHz and 243 MHz for homing purposes only;Part 3: Harmonized EN covering essential requirements of article 3.3 (e) of the R&TTE Directive.

Section 5

Contact details

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Section 6

Document history

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1.0	13 Jul 2001	Published
2.0	01 Dec 2002	Republished
3.0	21 Apr 2005	Rebranded to Ofcom format