Ocean Signal Ltd.

Test Results

Message Coding Protocols

Navigation System Test Results

Beacon Coding Software Results

Product:	PLB1 (PLB)
Software Issue:	00:06
Date:	18 December 2012

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Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Message Coding Protocols

Characteristic	**Specification**	
Message Coding Protocols:	(x) Tick the boxes below against the intended protocol options	
User Protocol (tick where appropriate)	☐	Maritime with MMSI
	☐	Maritime with Radio Call Sign
	☐	EPIRB Float Free with Serial Number
	☐	EPIRB Non Float Free with Serial Number
	☐	Radio Call Sign
	☐	Aviation
	☐	ELT with Serial Number
	☐	ELT with Aircraft Operator and Serial Number
	☐	ELT with Aircraft 24-bit Address
	☐	PLB with Serial Number
	☐	National (Short Message Format)
	☐	National (Long Message Format)
Standard Location Protocol (tick where appropriate)	☒	EPIRB with MMSI
	☐	EPIRB with Serial Number
	☐	ELT with 24-bit Address
	☐	ELT with Aircraft Operator Designator
	☐	ELT with Serial Number
	☒	PLB with Serial Number
National Location Protocol (tick where appropriate)	☐	National Location: EPIRB
	☐	National Location: ELT
	☒	National Location: PLB
User Location Protocol (tick where appropriate)	☒	Maritime with MMSI
	☐	Maritime with Radio Call Sign
	☐	EPIRB Float Free with Serial Number
	☐	EPIRB Non Float Free with Serial Number
	☐	Radio Call Sign
	☐	Aviation
	☐	ELT with Serial Number
	☐	ELT with Aircraft Operator and Serial Number
	☐	ELT with Aircraft 24-bit Address
	☐	PLB with Serial Number

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

BEACON CODING SOFTWARE RESULTS

Table F-D.1 of C/S T.007 (Issue 4 – Rev.7)
Examples of User Protocol Beacon Messages

Protocol	Operational Message (in hexadecimal including bit and frame synchronisation bits)	Self-Test Message (in hexadecimal including bit and frame synchronisation bits)
Maritime User Protocol with MMSI	N/A	N/A
Maritime User Protocol with Radio Call Sign	N/A	N/A
Radio Call Sign User Protocol	N/A	N/A
Serial User: Float-Free EPIRB with Serial Number	N/A	N/A
Serial User: Non Float-Free EPIRB with Serial Number	N/A	N/A
Aviation User Protocol	N/A	N/A
Serial User: ELT with Serial Number	N/A	N/A
Serial User: ELT with Aircraft Operator Designator & Serial Number	N/A	N/A
Serial User: ELT with Aircraft 24-bit Address	N/A	N/A
Serial User: PLB with Serial Number	N/A	N/A
National User (Short)	N/A	N/A
National User (Long)	N/A	N/A
User Test	N/A	N/A

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Table F-D.2 of C/S T.007 (Issue 4 – Rev.7)

Examples of Standard and National Location Protocol Beacon Messages

Protocol	Operational Message (in hexadecimal including bit and frame synchronisation bits)		Self-Test Message (in hexadecimal including bit and frame synchronisation bits)	GNSS Self Test Message (if applicable, in hexadecimal including bit and frame synchronisation bits)
	Location 'A'	Location 'B'		Location 'A'
Standard Location: EPIRB with MMSI	FFFE2F8C92F4 23F033403260 39779B469B07	FFFE2F8C92F4 23F03340210C C8F786A4D7C0	FFFED08C92F42 3F07FDFFB2BF0 3783E0F66C	N/A
Standard Location: EPIRB with Serial Number	N/A	N/A	N/A	N/A
Standard Location: ELT with 24-bit Address	N/A	N/A	N/A	N/A
Standard Location: ELT with Aircraft Operator Designator	N/A	N/A	N/A	N/A
Standard Location: PLB with Serial Number	FFFE2F8C97F9 C0633340365A 7B779B469B07	FFFE2F8C97F9 C06333402536 8AF786A4D7C0	FFFED08C97F9 C0637FDFFF11 B23783E0F66C	N/A
Standard Location: Test	FFFE2F8C9EF9 C06333403176 DCF79B469B07	FFFE2F8C9EF9 C0633340221A 2D7786A4D7C0	FFFED08C9EF9 C0637FDFF83D 15B783E0F66C	N/A
National Location: EPIRB	N/A	N/A	N/A	N/A
National Location: ELT	N/A	N/A	N/A	N/A
National Location: PLB	FFFE2F8C9B00 18CCD60161D9 32F704240E3D	FFFE2F8C9B00 18CCD0011208 D53795340DF8	FFFED08C9B00 18DFC0FF042E 9779F3C0010	N/A
National Location: Test	FFFE2F8C9F00 C04CD6016385 A07704240E3D	FFFE2F8C9F00 C04CD0011054 47B795340DF8	FFFED08C9F00 C05FC0FF0672 8BF79F3C0010	N/A
RLS Location: (ELT, EPIRB or PLB)	N/A	N/A	N/A	N/A

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Table F-D.3 of C/S T.007 (Issue 4 – Rev.7)

Examples of User-Location Protocol Beacon Messages

Protocol	Operational Message (in hexadecimal including bit and frame synchronisation bits)		Self-Test Message (in hexadecimal including bit and frame synchronisation bits)	GNSS Self Test Message (if applicable, in hexadecimal including bit and frame synchronisation bits)
	Location 'A'	Location 'B'		Location 'A'
Maritime Protocol with MMSI	FFFE2FCC9418 6186186689DE 52A66A01650C	FFFE2FCC9418 6186186689DE 52A668011965	FFFED0CC9418 6186186689DE 52AFE0FF0146	N/A
Maritime Protocol with Radio Call Sign	N/A	N/A	N/A	N/A
Radio Call Sign	N/A	N/A	N/A	N/A
Serial User-Location: Float-Free EPIRB	N/A	N/A	N/A	N/A
Serial User-Location: Non Float-Free EPIRB	N/A	N/A	N/A	N/A
Aviation	N/A	N/A	N/A	N/A
Serial User-Location: ELT	N/A	N/A	N/A	N/A
Serial User-Location: ELT with Aircraft Operator Designator & Serial Number	N/A	N/A	N/A	N/A
Serial User-Location: ELT with Aircraft 24-bit address	N/A	N/A	N/A	N/A
Serial User-Location: PLB	N/A	N/A	N/A	N/A
User- Location: Test	FFFE2FCC9E0A 000C607CEDF5 BA266A01650C	FFFE2FCC9E0A 000C607CEDF5 BA2668011965	FFFED0CC9E0A 000C607CEDF5 BA2FE0FF0146	N/A

Location 'A' = 51°21' 51" N, 1° 23' 25" E
Location 'B' = 51°16' 38" N, 1° 4' 50" E
Distance between locations = 23.6 Km

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Analysis of Beacon Messages

In all the tests involving a location protocol the following positions where used:

- Location 'A' = **51°21' 51" N, 1°23' 25" E**
- Location 'B' = **51°16' 38" N, 1°4' 50" E**
- Distance between locations = **23.6 Km**

The 'Bit Analysis' tables are taken from the '406 MHz Decode Program Version 3.1' available on the Cospas-Sarsat website, and using the '30 Hexadecimal ID' input format for Location Protocols and '22 Hexadecimal ID' input format for non-location User Protocols.

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

1. Standard Location: EPIRB with MMSI

1.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12382.htm
Location 'B'	Burst-12383.htm
Self Test	Burst-12384.htm

In summary:

15 Hex ID:	1925E847E0FFBFF
Protocol:	EPIRB MMSI SLP Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201
MMSI:	999999
Beacon Number:	0
Position Source:	Internal GPS
Auxiliary Radio:	121.5MHz
Bits 107-110:	Default

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2F8C92F423F03340326039779B469B07	N 51°21'52"	E 1°23'24"
Location 'B'	FFFE2F8C92F423F03340210CC8F786A4D7C0	N 51°16'40"	E 1°4'52"
Self Test	FFFED08C92F423F07FDFFB2BF03783E0F66C	Default	Default

1.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = 8C92F423F03340326039779B469B07

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	01001100000011100101
BCH 1 Calculated:	N/A	01001100000011100101
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 6	114-118	00110
Latitude Offset Seconds: 52	119-122	1101
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 6	124-128	00110
Longitude Offset Seconds: 36	129-132	1001
BCH 2 Encoded:	133-144	101100000111
BCH 2 Calculated:	N/A	101100000111
Composite Latitude: 51.364444444444445 Degrees North	N/A	Composite Longitude: 1.39 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

1.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID 8C92F423F07FDFFB2BF03783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	01100101011111000000
BCH 1 Calculated:	N/A	01100101011111000000
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	1925E847E0FFBFF

2. Standard Location: PLB with Serial Number

2.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12385.htm
Location 'B'	Burst-12386.htm
Self Test	Burst-12387.htm

In summary:

15 Hex ID:	192FF380C6FFBFF
Protocol:	PLB Serial SLP Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201
C/S Approval Number:	999
Serial Number:	99
Position Source:	Internal GPS
Auxiliary Radio:	121.5MHz
Bits 107-110:	Default

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2F8C97F9C0633340365A7B779B469B07	N 51°21'52"	E 1°23'24"
Location 'B'	FFFE2F8C97F9C063334025368AF786A4D7C0	N 51°16'40"	E 1°4'52"
Self Test	FFFED08C97F9C0637FDFFF11B23783E0F66C	Default	Default

2.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = 8C97F9C0633340365A7B779B469B07

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - PLB (Serial)	37-40	0111
Cospas-Sarsat #: 999	41-50	1111100111
Serial Number: 99	51-64	00000001100011
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	11001011010011110 1101
BCH 1 Calculated:	N/A	11001011010011110 1101
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 6	114-118	00110
Latitude Offset Seconds: 52	119-122	1101
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 6	124-128	00110
Longitude Offset Seconds: 36	129-132	1001
BCH 2 Encoded:	133-144	101100000111
BCH 2 Calculated:	N/A	101100000111
Composite Latitude: 51.364444444444445 Degrees North	N/A	Composite Longitude: 1.39 Degrees East
15 Hex ID:	N/A	192FF380C6FFBFF
Message format: long format	25	1

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

2.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = 8C97F9C0637FDFFF11B23783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - PLB (Serial)	37-40	0111
Cospas-Sarsat #: 999	41-50	1111100111
Serial Number: 99	51-64	00000001100011
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	11100010001101100 1000
BCH 1 Calculated:	N/A	11100010001101100 1000
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	192FF380C6FFBFF

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

3. Standard Location: Test

3.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12388.htm
Location 'B'	Burst-12389.htm
Self Test	Burst-12390.htm

In summary:

15 Hex ID:	193DF380C6FFBFF
Protocol:	Standard Test Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201
Bits 41-64:	16367715
Position Source:	Internal GPS
Auxiliary Radio:	121.5MHz
Bits 107-110:	Default

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2F8C9EF9C06333403176DCF79B469B07	N 51°21'52"	E 1°23'24"
Location 'B'	FFFE2F8C9EF9C0633340221A2D7786A4D7C0	N 51°16'40"	E 1°4'52"
Self Test	FFFED08C9EF9C0637FDFF83D15B783E0F66C	Default	Default

3.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = 8C9EF9C06333403176DCF79B469B07

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - Test	37-40	1110
Test Protocol: Test Protocol (No Decode information in bits 41 to 64)	41-64	1111100111000000001100011
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00101110110110110011
BCH 1 Calculated:	N/A	00101110110110110011
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 6	114-118	00110
Latitude Offset Seconds: 52	119-122	1101
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 6	124-128	00110
Longitude Offset Seconds: 36	129-132	1001
BCH 2 Encoded:	133-144	101100000111
BCH 2 Calculated:	N/A	101100000111
Composite Latitude: 51.364444444444445 Degrees North	N/A	Composite Longitude: 1.39 Degrees East
15 Hex ID:	N/A	193DF380C6FFBFF

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

3.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = 8C9EF9C0637FDFF83D15B783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: Standard Location - Test	37-40	1110
Test Protocol: Test Protocol (No Decode information in bits 41 to 64)	41-64	111110011100000001100011
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	00000111101000101010
BCH 1 Calculated:	N/A	00000111101000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	193DF380C6FFBFF

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

4. National Location: PLB

4.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12391.htm
Location 'B'	Burst-12392.htm
Self Test	Burst-12393.htm

In summary:

15 Hex ID:	19360031BF81FE0
Protocol:	PLB NLP Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201 (Albania)
National ID Number:	99
Position Source:	Internal GPS
Auxiliary Radio:	121.5MHz
Bits 107-109:	Default
National Use:	Default

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2F8C9B0018CCD60161D932F704240E3D	N 51°21'52"	E 1°23'24"
Location 'B'	FFFE2F8C9B0018CCD0011208D53795340DF8	N 51°16'40"	E 1°4'52"
Self Test	FFFED08C9B0018DFC0FF042E19779F3C0010	Default	Default

4.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = 8C9B0018CCD60161D932F704240E3D

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 51	60-66	0110011
Latitude (Minutes): 22	67-71	01011
Longitude Flag: East	72	0
Longitude (Degrees): 1	73-80	00000001
Longitude (Minutes): 24	81-85	01100
BCH 1 Encoded:	86-106	00111011001011001011
BCH 1 Calculated:	86-106	00111011001011001011
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 8	116-119	0010
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 36	123-126	1001
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	111000111101
BCH 2 Calculated:	N/A	111000111101
Composite Latitude: 51.364444444444445 Degrees North	N/A	Composite Longitude: 1.39 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

4.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = 8C9B0018DFC0FF042E19779F3C0010

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: default	59	0
Latitude (Degrees): default	60-66	1111111
Latitude (Minutes): default	67-71	00000
Longitude Flag: default	72	0
Longitude (Degrees): default	73-80	11111111
Longitude (Minutes): default	81-85	00000
BCH 1 Encoded:	86-106	10000101110000110010 1
BCH 1 Calculated:	86-106	10000101110000110010 1
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-115	00
Latitude Offset Seconds: default	116-119	1111
Longitude Offset Sign: default	120	1
Longitude Offset Minutes: default	121-122	00
Longitude Offset Seconds: default	123-126	1111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000000010000
BCH 2 Calculated:	N/A	000000010000
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	19360031BF81FE0

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

5. National Location: Test

5.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12394.htm
Location 'B'	Burst-12395.htm
Self Test	Burst-12396.htm

In summary:

15 Hex ID:	193E0180BF81FE0
Protocol:	National Test Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201 (Albania)
National ID Number:	769
Position Source:	Internal GPS
Auxiliary Radio:	121.5MHz
Bits 107-109:	Default
National Use:	Default

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2F8C9F00C04CD6016385A07704240E3D	N 51°21'52"	E 1°23'24"
Location 'B'	FFFE2F8C9F00C04CD001105447B795340DF8	N 51°16'40"	E 1°4'52"
Self Test	FFFED08C9F00C05FC0FF06728BF79F3C0010	Default	Default

5.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = 8C9F00C04CD6016385A07704240E3D

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: National Location - Test	37-40	1111
Serial Number: 769	41-58	000000001100000001
Latitude Flag: North	59	0
Latitude (Degrees): 51	60-66	0110011
Latitude (Minutes): 22	67-71	01011
Longitude Flag: East	72	0
Longitude (Degrees): 1	73-80	00000001
Longitude (Minutes): 24	81-85	01100
BCH 1 Encoded:	86-106	01110000101101000001
BCH 1 Calculated:	86-106	01110000101101000001
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 8	116-119	0010
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 36	123-126	1001
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	111000111101
BCH 2 Calculated:	N/A	111000111101
Composite Latitude: 51.364444444444445 Degrees North	N/A	Composite Longitude: 1.39 Degrees East
15 Hex ID:	N/A	193E0180BF81FE0

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

5.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = 8C9F00C05FC0FF06728BF79F3C0010

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201 - Albania	27-36	0011001001
Type of location protocol: National Location - Test	37-40	1111
Serial Number: 769	41-58	000000001100000001
Latitude Flag: default	59	0
Latitude (Degrees): default	60-66	1111111
Latitude (Minutes): default	67-71	00000
Longitude Flag: default	72	0
Longitude (Degrees): default	73-80	11111111
Longitude (Minutes): default	81-85	00000
BCH 1 Encoded:	86-106	11001110010100010111 1
BCH 1 Calculated:	86-106	11001110010100010111 1
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-115	00
Latitude Offset Seconds: default	116-119	1111
Longitude Offset Sign: default	120	1
Longitude Offset Minutes: default	121-122	00
Longitude Offset Seconds: default	123-126	1111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000000010000
BCH 2 Calculated:	N/A	000000010000
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	193E0180BF81FE0

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

6. User Location: Maritime with MMSI

6.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12397.htm
Location 'B'	Burst-12398.htm
Self Test	Burst-12399.htm

In summary:

15 Hex ID:	992830C30C30CD1
Protocol:	EPIRB Maritime User Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201 (Albania)
MMSI (Call Sign):	999999
Beacon Number:	0
Spare Bits:	00
Auxiliary Radio:	121.5MHz
Position Source:	Internal GPS

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2FCC94186186186689DE52A66A01650C	N 51°20'00"	E 1°24'00"
Location 'B'	FFFE2FCC94186186186689DE52A668011965	N 51°16'00"	E 1°4'00"
Self Test	FFFED0CC94186186186689DE52AFE0FF0146	Default	Default

6.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = CC94186186186689DE52A66A01650C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201 - Albania	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100101 0
Calculated BCH 1:	N/A	00111011110010100101 0
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 51	109-115	0110011
Latitude (minutes): 20	116-119	0101
East	120	0
Longitude (degrees): 1	121-128	00000001
Longitude (minutes): 24	129-132	0110
Encoded BCH 2:	133-144	010100001100
15 Hex ID:	N/A	992830C30C30CD1

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

6.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = CC94186186186689DE52AFE0FF0146

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201 - Albania	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
default	108	0
Latitude (degrees): default	109-115	1111111
Latitude (minutes): default	116-119	0000
default	120	0
Longitude (degrees): default	121-128	11111111
Longitude (minutes): default	129-132	0000
Encoded BCH 2:	133-144	000101000110
Calculated BCH 2:	N/A	000101000110
15 Hex ID:	N/A	992830C30C30CD1

7. User Location: Test

7.1. Beacon Tester Results

The beacon tester results can be seen in the following files:

Location 'A'	Burst-12400.htm
Location 'B'	Burst-12401.htm
Self Test	Burst-12402.htm

In summary:

15 Hex ID:	993C140018C0F9D
Protocol:	Test User Protocol
Burst Mode:	Normal/SelfTest Mode (Long)
Country:	201 (Albania)
National Use:	1374415490973
Position Source:	Internal GPS

Condition	Full Hex Message	Latitude	Longitude
Location 'A'	FFFE2FCC9E0A000C607CEDF5BA266A01650C	N 51°20'00"	E 1°24'00"
Location 'B'	FFFE2FCC9E0A000C607CEDF5BA2668011965	N 51°16'00"	E 1°4'00"
Self Test	FFFED0CC9E0A000C607CEDF5BA2FE0FF0146	Default	Default

7.2. Bit Analysis of Normal Message

'30 Hexadecimal' ID = CC9E0A000C607CEDF5BA266A01650C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201 - Albania	27-36	0011001001
User type: Test User	37-39	111
National Use, Hex value: 050006303E76	40-85	0000010100000000000001100011000000111110011101
15 Hex ID:	N/A	993C140018C0F9D
Encoded BCH 1:	86-106	10111110101011101000
Calculated BCH 1:	N/A	10111110101011101000
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 51	109-115	0110011
Latitude (minutes): 20	116-119	0101
East	120	0
Longitude (degrees): 1	121-128	00000001
Longitude (minutes): 24	129-132	0110
Encoded BCH 2:	133-144	010100001100
Calculated BCH 2:	N/A	010100001100
15 Hex ID:	N/A	993C140018C0F9D

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

7.3. Bit Analysis of Self Test Message

'30 Hexadecimal' ID = CC9E0A000C607CEDF5BA2FE0FF0146

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201 - Albania	27-36	0011001001
User type: Test User	37-39	111
National Use, Hex value: 050006303E76	40-85	000001010000000000000110001100000011111001110 1
15 Hex ID:	N/A	993C140018C0F9D
Encoded BCH 1:	86-106	10111110101101101000
Calculated BCH 1:	N/A	10111110101101101000
Encoded Position Data Source From Internal Navigation Device	107	1
default	108	0
Latitude (degrees): default	109-115	1111111
Latitude (minutes): default	116-119	0000
default	120	0
Longitude (degrees): default	121-128	11111111
Longitude (minutes): default	129-132	0000
Encoded BCH 2:	133-144	000101000110
Calculated BCH 2:	N/A	000101000110
15 Hex ID:	N/A	993C140018C0F9D

Standard Location: EPIRB with MMSI

Decoding Operational Message
Protocol: Standard Location: EPIRB with MMSI
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2F8C92F423F03340210CC8F786A4D7C0

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 0	84-85	00
BCH 1 Encoded:	86-106	001000011001100100011
BCH 1 Calculated:	N/A	001000011001100100011
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-118	00001
Latitude Offset Seconds: 40	119-122	1010
Longitude Offset Sign: +	123	1
Longitude Offset Minutes: 4	124-128	00100
Longitude Offset Seconds: 52	129-132	1101
BCH 2 Encoded:	133-144	011111000000
BCH 2 Calculated:	N/A	011111000000
Composite Latitude: 51.27777777777778 Degrees North	N/A	Composite Longitude: 1.0811111111111111 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Standard Location: PLB with Serial Number

Decoding Operational Message
Protocol: Standard Location: PLB with Serial Number
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2F8C97F9C063334025368AF786A4D7C0

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - PLB (Serial)	37-40	0111
Cospas-Sarsat #: 999	41-50	1111100111
Serial Number: 99	51-64	00000001100011
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 0	84-85	00
BCH 1 Encoded:	86-106	10100110110100010101 1
BCH 1 Calculated:	N/A	10100110110100010101 1
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-118	00001
Latitude Offset Seconds: 40	119-122	1010
Longitude Offset Sign: +	123	1
Longitude Offset Minutes: 4	124-128	00100
Longitude Offset Seconds: 52	129-132	1101
BCH 2 Encoded:	133-144	011111000000
BCH 2 Calculated:	N/A	011111000000
Composite Latitude: 51.27777777777778 Degrees North	N/A	Composite Longitude: 1.0811111111111111 Degrees East
15 Hex ID:	N/A	192FF380C6FFBFF

Standard Location: Test

Decoding Operational Message
Protocol: Standard Location: Test
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2F8C9EF9C0633340221A2D7786A4D7C0

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - Test	37-40	1110
Test Protocol: Test Protocol (No Decode information in bits 41 to 64)	41-64	111110011100000001100011
Latitude Sign: North	65	0
Latitude Degrees: 51	66-72	0110011
Latitude Minutes: 15	73-74	01
Longitude Sign: East	75	0
Longitude Degrees: 1	76-83	00000001
Longitude Minutes: 0	84-85	00
BCH 1 Encoded:	86-106	01000011010001010101
BCH 1 Calculated:	N/A	01000011010001010101
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-118	00001
Latitude Offset Seconds: 40	119-122	1010
Longitude Offset Sign: +	123	1
Longitude Offset Minutes: 4	124-128	00100
Longitude Offset Seconds: 52	129-132	1101
BCH 2 Encoded:	133-144	011111000000
BCH 2 Calculated:	N/A	011111000000
Composite Latitude: 51.27777777777778 Degrees North	N/A	Composite Longitude: 1.0811111111111111 Degrees East
15 Hex ID:	N/A	193DF380C6FFBFF

National Location: PLB

Decoding Operational Message
Protocol: National Location: PLB
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2F8C9B0018CCD0011208D53795340DF8

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 51	60-66	0110011
Latitude (Minutes): 16	67-71	01000
Longitude Flag: East	72	0
Longitude (Degrees): 1	73-80	00000001
Longitude (Minutes): 4	81-85	00010
BCH 1 Encoded:	86-106	01000010001101010100
BCH 1 Calculated:	86-106	01000010001101010100
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 40	116-119	1010
Longitude Offset Sign: +	120	1
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 52	123-126	1101
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	110111111000
BCH 2 Calculated:	N/A	110111111000
Composite Latitude: 51.27777777777778 Degrees North	N/A	Composite Longitude: 1.0811111111111111 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

National Location: Test

Decoding Operational Message
Protocol: National Location: Test
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2F8C9F00C04CD001105447B795340DF8

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - Test	37-40	1111
Serial Number: 769	41-58	000000001100000001
Latitude Flag: North	59	0
Latitude (Degrees): 51	60-66	0110011
Latitude (Minutes): 16	67-71	01000
Longitude Flag: East	72	0
Longitude (Degrees): 1	73-80	00000001
Longitude (Minutes): 4	81-85	00010
BCH 1 Encoded:	86-106	00001010100010011110
BCH 1 Calculated:	86-106	00001010100010011110
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 40	116-119	1010
Longitude Offset Sign: +	120	1
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 52	123-126	1101
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	110111111000
BCH 2 Calculated:	N/A	110111111000
Composite Latitude: 51.27777777777778 Degrees North	N/A	Composite Longitude: 1.0811111111111111 Degrees East
15 Hex ID:	N/A	193E0180BF81FE0

User Location: Maritime Protocol with MMSI

Decoding Operational Message
Protocol: User Location: Maritime Protocol with MMSI
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2FCC94186186186689DE52A668011965

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010101001010
Calculated BCH 1:	N/A	00111011110010101001010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 51	109-115	0110011
Latitude (minutes): 16	116-119	0100
East	120	0
Longitude (degrees): 1	121-128	00000001
Longitude (minutes): 4	129-132	0001
Encoded BCH 2:	133-144	100101100101
Calculated BCH 2:	N/A	100101100101
15 Hex ID:	N/A	992830C30C30CD1

User Location: Test

Decoding Operational Message
Protocol: User Location: Test
Location “B” – 51°16’ 38” N, 1° 4’ 50” E

Full message: FFFE2FCC9E0A000C607CEDF5BA2668011965

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Test User	37-39	111
National Use, Hex value: 050006303E76	40-85	000001010000000000000110001100000011111001110 1
15 Hex ID:	N/A	993C140018C0F9D
Encoded BCH 1:	86-106	10111110101101110100 0
Calculated BCH 1:	N/A	10111110101101110100 0
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 51	109-115	0110011
Latitude (minutes): 16	116-119	0100
East	120	0
Longitude (degrees): 1	121-128	00000001
Longitude (minutes): 4	129-132	0001
Encoded BCH 2:	133-144	100101100101
Calculated BCH 2:	N/A	100101100101
15 Hex ID:	N/A	993C140018C0F9D

ANNEX 7.

NAVIGATION SYSTEM TEST RESULTS

(According to C/S T.007 – section A3.8)

Position Data Default Values (A.3.8.1)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 25.12.2012-26.12.2012

The time stamp of tests.

Event	Time, UTC+2	Message	Comment
Standart Location Protocol, point No 1, 25.12.2012-26.12.2012			
Start of test	22:00:00 25.12.2012		PLB is in a shielded room, GNSS signal was not available
Activation EUT	09:08:30 26.12.2012		
Received first message	09:09:20 26.12.2012	FFFE2F8C92F423F07FDFFB2BF03783E0F66C	All operation messages have default coordinates
Deactivation	09:40:00 26.12.2012		

Date 26.12.2012 Conditions Normal temperature
Beacon Model PLB1 Beacon N TA1

Test duration 0 h 30 m	Bursts received 38	BCH error 0	Self-Test 0
Message			
Contents (full)	: FFFE2F8C92F423F07FDFFB2BF03783E0F66C		

Decoding Beacon Message

Full message: FFFE2F8C92F423F07FDFFB2BF03783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	01100101011111000000
BCH 1 Calculated:	N/A	01100101011111000000
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	1925E847E0FFBFF

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 26.12.2012

The time stamp of tests.

Event	Time, UTC+2	Message	Comment
National Location Protocol, point No 1, 26.12.2012			
Start of test	09:50:00 26.12.2012		PLB is in a shielded room, GNSS signal was not available
Activation EUT	14:00:00 26.12.2012		
Received first message	14:00:51 26.12.2012	FFFE2F8C9B0018DFC0FF042E19779F3C0010	All operation messages have default coordinates
Deactivation	14:32:00 26.12.2012		

Date 26.12.2012 Conditions Normal temperature
Beacon Model PLB1 Beacon N TA1

Test duration 0 h 30 m	Bursts received 38	BCH error 0	Self-Test 0
Message			
Contents (full)	: FFFE2F8C9B0018DFC0FF042E19779F3C0010		

Decoding Beacon Message

Full message: FFFE2F8C9B0018DFC0FF042E19779F3C0010

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: default	59	0
Latitude (Degrees): default	60-66	1111111
Latitude (Minutes): default	67-71	00000
Longitude Flag: default	72	0
Longitude (Degrees): default	73-80	11111111
Longitude (Minutes): default	81-85	00000
BCH 1 Encoded:	86-106	10000101110000l100101
BCH 1 Calculated:	86-106	10000101110000l100101
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-115	00
Latitude Offset Seconds: default	116-119	1111
Longitude Offset Sign: default	120	1
Longitude Offset Minutes: default	121-122	00
Longitude Offset Seconds: default	123-126	1111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000000010000
BCH 2 Calculated:	N/A	000000010000
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	19360031BF81FE0

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 26.12.2012

The time stamp of tests.

Event	Time, UTC+2	Message	Comment
User Location Protocol, point No 1, 26.16.2012			
Start of test	14:45:00 26.12.2012		PLB is in a shielded room, GNSS signal was not available
Activation EUT	19:00:00 26.12.2012		
Received first message	19:00:50 26.12.2012	FFFE2FCC94186186186689DE52AFE0FF0146	All operation messages have default coordinates
Deactivation	19:31:00 26.12.2012		

Date 26.16.2012 Conditions Normal temperature
Beacon Model PLB1 Beacon N TA1

Test duration 0 h 30 m	Bursts received 38	BCH error 0	Self-Test 0
Message			
Contents (full)	: FFFE2FCC94186186186689DE52AFE0FF0146		

Decoding Beacon Message

Full message: FFFE2FCC94186186186689DE52AFE0FF0146

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
default	108	0
Latitude (degrees): default	109-115	1111111
Latitude (minutes): default	116-119	0000
default	120	0
Longitude (degrees): default	121-128	11111111
Longitude (minutes): default	129-132	0000
Encoded BCH 2:	133-144	000101000110
Calculated BCH 2:	N/A	000101000110
15 Hex ID:	N/A	992830C30C30CD1

Position Acquisition Time and Position Accuracy (A.3.8.2)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 27.12.2012

Beacon is fitted with the internal GPS receiver.
Check beacon to compliance of requirements of A.3.8.2 C/S T.007 was carried out in the points, having known locations:
- point 1 - N 44°34'54.94", E 33°29'43.67"
- point 2 - N 44°31'58.76", E 33°37'24.89"

Test conditions:
- Ambient temperature at open area test site: 12..14 °C.
- Relative air humidity: 56..59 %.
- Atmospheric pressure: 754 mm/Hg.
- Tests were conducted with the beacon in the next configurations accordance section 4.5 T.007:
  1. Configuration 7 – Beacon on ground plane.
     - The beacon was placed in the centre of a thin 27 cm diameter aluminum disc which was placed directly on level dry ground (dirt) in an area with a good all round view of the sky, in the vertical orientation.
  2. Configuration 8 – Beacon above ground plane.
     - The beacon was placed on an electrically insulating support so that its base is 0.45 m above level dry ground (dirt) in an area with a good all round view of the sky, in the vertical orientation.

The test time stamp.

Event	Time, UTC+2	Message	Comment
User Location Protocol, point No 1, 27.12.2012			
Activation	10:09:17		configuration 7
Get message with location date	10:10:08	FFFE2FCC94186186186689DE52A59221788C	Page No. 144
Deactivation	10:10:15		
Activation	10:11:38		configuration 8
Get message with location date	10:12:28	FFFE2FCC94186186186689DE52A59221788C	Page No. 145
Deactivation	10:12:35		
Change location			
User Location Protocol, point No 2, 27.12.2012			
Activation	12:50:46		configuration 7
Get message with location date	12:51:37	FFFE2FCC94186186186689DE52A590219266	Page No. 146
Deactivation	12:51:40		
Activation	12:52:11		configuration 8
Get message with location date	12:53:02	FFFE2FCC94186186186689DE52A590219266	Page No. 147
Deactivation	12:53:10		

Position Acquisition Time and Position Accuracy (Internal Navigation Devices)
(Table F-C.4 T.007)

Protocol	Operational Configuration	C/S T.007 Section A.3.8.2.1		C/S T.007 Section A.3.8.2.2	
		Time to Acquire Position (sec)	Location Error in meters	Time to Acquire Position (sec)	Location Error in meters
User Location Protocol	Resting on aluminum disk - configuration 7	51	3037	51	1868
		Page No. 144		Page No. 146	
User Location Protocol	Resting on above ground plane - configuration 8	50	3037	51	1868
		Page No. 145		Page No. 147	

Performance measurements on accordance requirements item A.3.8.2 T.007 – Position Acquisition Time and Position Accuracy

No	Test Name	C/S T.007 Standard Section	Test procedure description	Obtained results	Comments
1.	Beacon is coded at User Location Protocol				
2.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed on the aluminum disk (configuration 7). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 51 sec Encoded location data: - N 44°36'00" - E 33°28'00" Position accuracy 3.037 kilometers	Page No 144
3.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data : - N 44°36'00" - E 33°28'00" Position accuracy 3.037 kilometers	Page No 145
4.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. Change location to Point 2. The distance between Point 1 and Point 2 is 11,51 km. b. PLB placed on the aluminum disk (configuration 7). c. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" d. Deactivate the beacon.	Time to Acquire Position: 0 min 51 sec Encoded location data: - N 44°32'00" - E 33°36'00" Position accuracy 1.868 kilometers	Page No 146
5.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. PLB placed above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" c. Deactivate the beacon.	Time to Acquire Position: 0 min 51 sec Encoded location data: - N 44°32'00" - E 33°36'00" Position accuracy 1.868 kilometers	Page No 147

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2FCC94186186186689DE52A59221788C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 36	116-119	1001
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 28	129-132	0111
Encoded BCH 2:	133-144	100010001100
Calculated BCH 2:	N/A	100010001100
15 Hex ID:	N/A	992830C30C30CD1

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2FCC94186186186689DE52A59221788C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 36	116-119	1001
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 28	129-132	0111
Encoded BCH 2:	133-144	100010001100
Calculated BCH 2:	N/A	100010001100
15 Hex ID:	N/A	992830C30C30CD1

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2FCC94186186186689DE52A590219266

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 32	116-119	1000
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 36	129-132	1001
Encoded BCH 2:	133-144	001001100110
Calculated BCH 2:	N/A	001001100110
15 Hex ID:	N/A	992830C30C30CD1

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2FCC94186186186689DE52A590219266

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 32	116-119	1000
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 36	129-132	1001
Encoded BCH 2:	133-144	001001100110
Calculated BCH 2:	N/A	001001100110
15 Hex ID:	N/A	992830C30C30CD1

The test time stamp.

Event	Time, UTC+2	Message	Comment
Standard Location Protocol, point No 1, 27.12.2012			
Activation	10:20:36		configuration 7
Get message with location date	10:21:26	FFFE2F8C92F423F02C8431CF8AB7938043E3	Page No. 150
Deactivation	10:21:30		
Activation	10:22:07		configuration 8
Get message with location date	10:22:58	FFFE2F8C92F423F02C8431CF8AB793803D75	Page No. 151
Deactivation	10:23:00		
Change location			
Standard Location Protocol, point No 2, 27.12.2012			
Activation	13:05:24		configuration 7
Get message with location date	13:06:14	FFFE2F8C92F423F02C8431CF8AB787A77C77	Page No. 152
Deactivation	13:06:15		
Activation	13:06:45		configuration 8
Get message with location date	13:07:35	FFFE2F8C92F423F02C8431CF8AB787A77C77	Page No. 153
Deactivation	13:07:40		

Position Acquisition Time and Position Accuracy (Internal Navigation Devices)
(Table F-C.4 T.007)

Protocol	**Operational Configuration**	**C/S T.007 Section A.3.8.2.1**		**C/S T.007 Section A.3.8.2.2**	
		Time to Acquire Position (sec)	**Location Error in meters**	**Time to Acquire Position (sec)**	**Location Error in meters**
Standard Location Protocol	Resting on aluminum disk - configuration 7	50	34	50	109
		Page No 150		Page No 152	
Standard Location Protocol	Resting on above ground plane - configuration 8	51	101	50	109
		Page No 151		Page No 153	

Performance measurements on accordance requirements item A.3.8.2 T.007 – Position Acquisition Time and Position Accuracy

No	Test Name	C/S T.007 Standard Section	Test procedure description	Obtained results	Comments
1.	Beacon is coded at Standard Location Protocol				
2.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed on the aluminum disk (configuration 7). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data: - N 44°34'56" - E 33°29'44" Position accuracy 0.034 kilometers	Page No 150
3.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 51 sec Encoded location data : - N 44°34'56" - E 33°29'48" Position accuracy 0.101 kilometers	Page No 151
4.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. Change location to Point 2. The distance between Point 1 and Point 2 is 11,51 km. a. PLB placed on the aluminum disk (configuration 7). b. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data: - N 44°31'56" - E 33°37'28" Position accuracy 0.109 kilometers	Page No 152
5.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. PLB placed above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data: - N 44°31'56" - E 33°37'28" Position accuracy 0.109 kilometers	Page No 153

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2F8C92F423F02C8431CF8AB7938043E3

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 4	114-118	00100
Latitude Offset Seconds: 56	119-122	1110
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 0	124-128	00000
Longitude Offset Seconds: 16	129-132	0100
BCH 2 Encoded:	133-144	001111100011
BCH 2 Calculated:	N/A	001111100011
Composite Latitude: 44.58222222222223 Degrees North	N/A	Composite Longitude: 33.495555555555555 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2F8C92F423F02C8431CF8AB793803D75

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 4	114-118	00100
Latitude Offset Seconds: 56	119-122	1110
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 0	124-128	00000
Longitude Offset Seconds: 12	129-132	0011
BCH 2 Encoded:	133-144	110101110101
BCH 2 Calculated:	N/A	110101110101
Composite Latitude: 44.58222222222223 Degrees North	N/A	Composite Longitude: 33.49666666666667 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2F8C92F423F02C8431CF8AB787A77C77

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-118	00001
Latitude Offset Seconds: 56	119-122	1110
Longitude Offset Sign: +	123	1
Longitude Offset Minutes: 7	124-128	00111
Longitude Offset Seconds: 28	129-132	0111
BCH 2 Encoded:	133-144	110001110111
BCH 2 Calculated:	N/A	110001110111
Composite Latitude: 44.532222222222224 Degrees North	N/A	Composite Longitude: 33.62444444444444 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2F8C92F423F02C8431CF8AB787A77C77

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-118	00001
Latitude Offset Seconds: 56	119-122	1110
Longitude Offset Sign: +	123	1
Longitude Offset Minutes: 7	124-128	00111
Longitude Offset Seconds: 28	129-132	0111
BCH 2 Encoded:	133-144	110001110111
BCH 2 Calculated:	N/A	110001110111
Composite Latitude: 44.532222222222224 Degrees North	N/A	Composite Longitude: 33.62444444444444 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

The test time stamp.

Event	Time, UTC+2	Message	Comment
National Location Protocol, point No 1, 27.12.2012			
Activation	10:25:25		configuration 7
Get message with location date	10:26:15	FFFE2F8C9B0018CB22217D42F0B79C0C064F	Page No 156
Deactivation	10:26:20		
Activation	10:26:52		configuration 8
Get message with location date	10:27:42	FFFE2F8C9B0018CB22217D42F0B79C0C064F	Page No 157
Deactivation	10:27:45		
Change location			
National Location Protocol, point No 2, 27.12.2012			
Activation	13:11:53		configuration 7
Get message with location date	13:12:44	FFFE2F8C9B0018CB2021989146F7022001D5	Page No 158
Deactivation	13:12:50		
Activation	13:13:09		configuration 8
Get message with location date	13:13:59	FFFE2F8C9B0018CB2021989146F7022001D5	Page No 159
Deactivation	13:14:05		

Position Acquisition Time and Position Accuracy (Internal Navigation Devices)
(Table F-C.4 T.007)

Protocol	**Operational Configuration**	**C/S T.007 Section A.3.8.2.1**		**C/S T.007 Section A.3.8.2.2**	
		Time to Acquire Position (sec)	**Location Error in meters**	**Time to Acquire Position (sec)**	**Location Error in meters**
National Location Protocol	Resting on aluminum disk - configuration 7	50	101	51	109
		Page No 156		Page No 158	
National Location Protocol	Resting on above ground plane - configuration 8	50	101	50	109
		Page No 157		Page No 159	

Performance measurements on accordance requirements item A.3.8.2 T.007 – Position Acquisition Time and Position Accuracy

No	Test Name	C/S T.007 Standard Section	Test procedure description	Obtained results	Comments
1.	Beacon is coded at National Location Protocol				
2.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed on the aluminum disk (configuration 7). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data: - N 44°34'56" - E 33°29'48" Position accuracy 0.101 kilometers	Page No 156
3.	Position Acquisition Time and Position Accuracy at point No 1	A.3.8.2.1	a. PLB placed on above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°34'54.94" - E 33°29'43.67" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data : - N 44°34'56" - E 33°29'48" Position accuracy 0.101 kilometers	Page No 157
4.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. Change location to Point 2. The distance between Point 1 and Point 2 is 11,51 km. b. PLB placed on the aluminum disk (configuration 7). c. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" d. Deactivate the beacon.	Time to Acquire Position: 0 min 51 sec Encoded location data: - N 44°31'56" - E 33°37'28" Position accuracy 0.109 kilometers	Page No 158
5.	Position Acquisition Time and Position Accuracy at point No 2	A.3.8.2.2	a. PLB placed on above ground plane (configuration 8). b. Activate the beacon at the location with coordinate: - N 44°31'58.76" - E 33°37'24.89" c. Deactivate the beacon.	Time to Acquire Position: 0 min 50 sec Encoded location data: - N 44°31'56" - E 33°37'28" Position accuracy 0.109 kilometers	Page No 159

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2F8C9B0018CB22217D42F0B79C0C064F

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 34	67-71	10001
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 30	81-85	01111
BCH 1 Encoded:	86-106	10101000101111000010
BCH 1 Calculated:	86-106	10101000101111000010
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 56	116-119	1110
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 12	123-126	0011
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	011001001111
BCH 2 Calculated:	N/A	011001001111
Composite Latitude: 44.58222222222223 Degrees North	N/A	Composite Longitude: 33.49666666666667 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 1 - N 44°34'54.94", E 33°29'43.67"

Full message: FFFE2F8C9B0018CB22217D42F0B79C0C064F

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 34	67-71	10001
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 30	81-85	01111
BCH 1 Encoded:	86-106	10101000101111000010
BCH 1 Calculated:	86-106	10101000101111000010
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 56	116-119	1110
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 12	123-126	0011
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	011001001111
BCH 2 Calculated:	N/A	011001001111
Composite Latitude: 44.58222222222223 Degrees North	N/A	Composite Longitude: 33.49666666666667 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Decoding Beacon Message
Test site: Configuration 7 – Resting on aluminum disk
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2F8C9B0018CB2021989146F7022001D5

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 32	67-71	10000
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 38	81-85	10011
BCH 1 Encoded:	86-106	000100100010100011011
BCH 1 Calculated:	86-106	00010010001010011011
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 4	116-119	0001
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 32	123-126	1000
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000111010101
BCH 2 Calculated:	N/A	000111010101
Composite Latitude: 44.532222222222224 Degrees North	N/A	Composite Longitude: 33.62444444444444 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Decoding Beacon Message
Test site: Configuration 8– Resting on above ground plane
Location: point 2 - N 44°31'58.76", E 33°37'24.89"

Full message: FFFE2F8C9B0018CB2021989146F7022001D5

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 32	67-71	10000
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 38	81-85	10011
BCH 1 Encoded:	86-106	000100100010100011011
BCH 1 Calculated:	86-106	00010010001010011011
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 4	116-119	0001
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 32	123-126	1000
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000111010101
BCH 2 Calculated:	N/A	000111010101
Composite Latitude: 44.532222222222224 Degrees North	N/A	Composite Longitude: 33.62444444444444 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Encoded Position Data Update Interval (A.3.8.3)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Protocol: National Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
National Location Protocol				
Start of test	10:31:00			PLB was placed in Location 1
Activation EUT	10:31:35			time of beacon activation in Location 1
Received message	10:32:26	N 44°35'00" E 33°29'32"	FFFE2F8C9B0018CB22217D 42F0B7A01C06D8 Page No. 161	time of the first message with position encoded
Change Location	10:36:30			time of location 1 change to Location 2
Received message	11:02:12	N 44°35'28" E 33°29'32"	FFFE2F8C9B0018CB24217F2 3BB37101C02AA Page No. 162	time of update message with position encoded in Location 2
Deactivation	11:02:15			time of beacon deactivation in Location 2

Decoding Beacon Message
Location: Point “1” – N 44°34'57.69"; E 33°29'31.10"

Full message: FFFE2F8C9B0018CB22217D42F0B7A01C06D8

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 34	67-71	10001
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 30	81-85	01111
BCH 1 Encoded:	86-106	10101000101111000010
BCH 1 Calculated:	86-106	10101000101111000010
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 1	114-115	01
Latitude Offset Seconds: 0	116-119	0000
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 28	123-126	0111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	011011011000
BCH 2 Calculated:	N/A	011011011000
Composite Latitude: 44.583333333333336 Degrees North	N/A	Composite Longitude: 33.492222222222225 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Decoding Beacon Message
Location: Point “2” – N 44°35'26.19"; E 33°29'30.07"

Full message: FFFE2F8C9B0018CB24217F23BB37101C02AA

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 36	67-71	10010
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 30	81-85	01111
BCH 1 Encoded:	86-106	11100100011101110 1100
BCH 1 Calculated:	86-106	11100100011101110 1100
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 32	116-119	1000
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 28	123-126	0111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	001010101010
BCH 2 Calculated:	N/A	001010101010
Composite Latitude: 44.59111111111111 Degrees North	N/A	Composite Longitude: 33.492222222222225 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Mode: N/A
Protocol: Standard Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
Standard Location Protocol				
Start of test	11:10:00			PLB was placed in Location 1
Activation EUT	11:10:22			time of beacon activation in Location 1
Received message	11:11:12	N 44°35'28" E 33°29'32"	FFFE2F8C92F423F02C8431C F8AB795C07683 Page No. 164	time of the first message with position encoded
Change Location	11:15:00			time of location 1 change to Location 2
Received message	11:40:58	N 44°35'00" E 33°29'32"	FFFE2F8C92F423F02C8431C F8AB794007F27 Page No. 165	time of update message with position encoded in Location 2
Deactivation	11:41:00			time of beacon deactivation in Location 2

Decoding Beacon Message
Location: Point “1” – N 44°35'26.19"; E 33°29'30.07"

Full message: FFFE2F8C92F423F02C8431CF8AB795C07683

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 5	114-118	00101
Latitude Offset Seconds: 28	119-122	0111
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 0	124-128	00000
Longitude Offset Seconds: 28	129-132	0111
BCH 2 Encoded:	133-144	011010000011
BCH 2 Calculated:	N/A	011010000011
Composite Latitude: 44.59111111111111 Degrees North	N/A	Composite Longitude: 33.492222222222225 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Decoding Beacon Message
Location: Point “2” – N 44°34'57.69"; E 33°29'31.10"

Full message: FFFE2F8C92F423F02C8431CF8AB794007F27

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 5	114-118	00101
Latitude Offset Seconds: 0	119-122	0000
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 0	124-128	00000
Longitude Offset Seconds: 28	129-132	0111
BCH 2 Encoded:	133-144	111100100111
BCH 2 Calculated:	N/A	111100100111
Composite Latitude: 44.583333333333336 Degrees North	N/A	Composite Longitude: 33.492222222222225 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Protocol: User Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
User Location Protocol				
Start of test	12:12:00			PLB was placed in Location 1
Activation EUT	12:12:29			time of beacon activation in Location 1
Received message	12:13:19	N 44°32'00" E 33°32'00"	FFFE2FCC94186186186689D E52A59021875F Page No. 167	time of the first message with position encoded
Change Location	12:25:00			time of location 1 change to Location 2
Received message	12:43:05	N 44°32'00" E 33°40'00"	FFFE2FCC94186186186689D E52A59021AD2D Page No. 168	time of update message with position encoded in Location 2
Deactivation	12:43:10			time of beacon deactivation in Location 2

Decoding Beacon Message
Location: Point “1” – N 44°32'8.62", E 33°32'46.12"

Full message: FFFE2FCC94186186186689DE52A59021875F

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010101001010
Calculated BCH 1:	N/A	00111011110010101001010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 32	116-119	1000
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 32	129-132	1000
Encoded BCH 2:	133-144	011101011111
Calculated BCH 2:	N/A	011101011111
15 Hex ID:	N/A	992830C30C30CD1

Decoding Beacon Message
Location: Point “2” – N 44°31'5.05", E 33°41'1.14"

Full message: FFFE2FCC94186186186689DE52A59021AD2D

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010101001010
Calculated BCH 1:	N/A	00111011110010101001010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 32	116-119	1000
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 40	129-132	1010
Encoded BCH 2:	133-144	110100101101
Calculated BCH 2:	N/A	110100101101
15 Hex ID:	N/A	992830C30C30CD1

Position Clearance after Deactivation (A.3.8.4)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Protocol: National Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
National Location Protocol				
Start of test	11:04:30			PLB was placed in Location 2
Reactivation EUT	11:05:33			PLB was reactivated after test A.3.8.3, with no navigation signal or navigation data input to the PLB
Received message	11:06:24	Default value	FFFE2F8C9B0018DFC0FF042E19779F3C0010 Page No. 170	Time of the first operation message
Deactivation	11:06:30			Time of beacon deactivation

Decoding Beacon Message

Full message: FFFE2F8C9B0018DFC0FF042E19779F3C0010

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: default	59	0
Latitude (Degrees): default	60-66	1111111
Latitude (Minutes): default	67-71	00000
Longitude Flag: default	72	0
Longitude (Degrees): default	73-80	11111111
Longitude (Minutes): default	81-85	00000
BCH 1 Encoded:	86-106	10000101110000l100101
BCH 1 Calculated:	86-106	10000101110000l100101
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-115	00
Latitude Offset Seconds: default	116-119	1111
Longitude Offset Sign: default	120	1
Longitude Offset Minutes: default	121-122	00
Longitude Offset Seconds: default	123-126	1111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000000010000
BCH 2 Calculated:	N/A	000000010000
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	19360031BF81FE0

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Mode: N/A
Protocol: Standard Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
Standard Location Protocol				
Start of test	11:43:40			PLB was placed in Location 2
Reactivation EUT	11:44:47			PLB was reactivated after test A.3.8.3, with no navigation signal or navigation data input to the PLB
Received self test message	11:45:37	Default value	FFFE2F8C92F423F07FDFFB 2BF03783E0F66C Page No. 172	Time of the first operation message
Deactivation	11:45:40			Time of beacon deactivation

Decoding Beacon Self-test Message

Full message: FFFE2F8C92F423F07FDFFB2BF03783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	01100101011111000000
BCH 1 Calculated:	N/A	01100101011111000000
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	1925E847E0FFBFF

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Mode: N/A
Protocol: User Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
User Location Protocol				
Start of test	12:43:30			PLB was placed in Location 2
Reactivation EUT	12:44:44			PLB was reactivated after test A.3.8.3, with no navigation signal or navigation data input to the PLB
Received self test message	12:45:35	Default value	FFFE2FCC94186186186689DE52AFE0FF0146 Page No. 174	Time of the first operation message
Deactivation	12:45:40			Time of beacon deactivation

Decoding Beacon Message

Full message: FFFE2FCC94186186186689DE52AFE0FF0146

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
default	108	0
Latitude (degrees): default	109-115	1111111
Latitude (minutes): default	116-119	0000
default	120	0
Longitude (degrees): default	121-128	11111111
Longitude (minutes): default	129-132	0000
Encoded BCH 2:	133-144	000101000110
Calculated BCH 2:	N/A	000101000110
15 Hex ID:	N/A	992830C30C30CD1

Last Valid Position (A.3.8.6)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Mode: N/A
Protocol: National Location Protocol
Test Date: 27.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
National Location Protocol				
Start of test	13:41:30			PLB was placed in Location 1
Activation EUT	13:41:36			time of beacon activation in location 1
Received message	13:42:26	N 44°35'16" E 33°29'20"	FFFE2F8C9B0018CB24217F23BB3716280201 Page No. 176	time of the first message after beacon activation, message encoded with position (location 1)
Navigation input removal	13:44:30			time of navigation input removal
First message after navigation input removal	13:44:57	N 44°35'16" E 33°29'20"	FFFE2F8C9B0018CB24217F23BB3716280201	time of first message after navigation input removal
Received last message with encoded position	17:41:24	N 44°35'16" E 33°29'20"	FFFE2F8C9B0018CB24217F23BB3716280201	time of the last message encoded with encoded position (location 1), before reverting to default
Received first message with default position	17:42:14	Default value	FFFE2F8C9B0018DFC0FF042E19779F3C0010 Page No. 177	time of the first default message

Time of change coordinates on coordinates by default was 3 hours 59 minutes 48 seconds equal 239 minutes 48 seconds.

Decoding Beacon Message

Full message: FFFE2F8C9B0018CB24217F23BB3716280201

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: North	59	0
Latitude (Degrees): 44	60-66	0101100
Latitude (Minutes): 36	67-71	10010
Longitude Flag: East	72	0
Longitude (Degrees): 33	73-80	00100001
Longitude (Minutes): 30	81-85	01111
BCH 1 Encoded:	86-106	11100100011101101100
BCH 1 Calculated:	86-106	11100100011101101100
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: -	113	0
Latitude Offset Minutes: 0	114-115	00
Latitude Offset Seconds: 44	116-119	1011
Longitude Offset Sign: -	120	0
Longitude Offset Minutes: 0	121-122	00
Longitude Offset Seconds: 40	123-126	1010
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	001000000001
BCH 2 Calculated:	N/A	001000000001
Composite Latitude: 44.58777777777778 Degrees North	N/A	Composite Longitude: 33.48888888888889 Degrees East
15 Hex ID:	N/A	19360031BF81FE0

Decoding Beacon Message

Full message: FFFE2F8C9B0018DFC0FF042E19779F3C0010

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: National Location - PLB	37-40	1011
Serial Number: 99	41-58	000000000001100011
Latitude Flag: default	59	0
Latitude (Degrees): default	60-66	1111111
Latitude (Minutes): default	67-71	00000
Longitude Flag: default	72	0
Longitude (Degrees): default	73-80	11111111
Longitude (Minutes): default	81-85	00000
BCH 1 Encoded:	86-106	10000101110000l100101
BCH 1 Calculated:	86-106	10000101110000l100101
Fixed bits (110): Pass	107-109	110
Bits 113 - 132 provides offset data location	110	1
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Loc. Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-115	00
Latitude Offset Seconds: default	116-119	1111
Longitude Offset Sign: default	120	1
Longitude Offset Minutes: default	121-122	00
Longitude Offset Seconds: default	123-126	1111
Additional Id (Nat Use)	127-132	000000
BCH 2 Encoded:	133-144	000000010000
BCH 2 Calculated:	N/A	000000010000
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	19360031BF81FE0

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Protocol: User Location Protocol
Test Date: 28.12.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
User Location Protocol				
Start of test	7:59:00			PLB was placed in Location 1
Activation EUT	08:00:00			time of beacon activation in location 1
Received message	08:00:50	N 44°36'00" E 33°28'00"	FFFE2FCC94186186186689D E52A59221788C Page No. 179	time of the first message after beacon activation, message encoded with position (location 1)
Navigation input removal	08:04:35			time of navigation input removal
First message after navigation input removal	08:05:02	N 44°36'00" E 33°28'00"	FFFE2FCC94186186186689DE 52A59221788C	time of first message after navigation input removal
Received last message with encoded position	12:00:22	N 44°36'00" E 33°28'00"	FFFE2FCC94186186186689D E52A59221788C	time of the last message encoded with encoded position (location 1), before reverting to default
Received first message with default position	12:01:12	Default value	FFFE2FCC94186186186689D E52AFE0FF0146 Page No. 180	time of the first default message

Time of change coordinates on coordinates by default was 4 hours 00 minutes 22 seconds equal 240 minutes 22 seconds.

Decoding Beacon Message

Full message: FFFE2FCC94186186186689DE52A59221788C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	0000110000110000110000110000110000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
North	108	0
Latitude (degrees): 44	109-115	0101100
Latitude (minutes): 36	116-119	1001
East	120	0
Longitude (degrees): 33	121-128	00100001
Longitude (minutes): 28	129-132	0111
Encoded BCH 2:	133-144	100010001100
Calculated BCH 2:	N/A	100010001100
15 Hex ID:	N/A	992830C30C30CD1

Decoding Beacon Message

Full message: FFFE2FCC94186186186689DE52AFE0FF0146

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: User	26	1
Country code: 201	27-36	0011001001
User type: Maritime User	37-39	010
Maritime MMSI (6 digits): 999999	40-75	000011000011000011000011000011000011
Specific bcn: 0	76-81	001101
Spare	82-83	00
Aux radio device: 121.5 MHz	84-85	01
Encoded BCH 1:	86-106	00111011110010100 1010
Calculated BCH 1:	N/A	00111011110010100 1010
Encoded Position Data Source From Internal Navigation Device	107	1
default	108	0
Latitude (degrees): default	109-115	1111111
Latitude (minutes): default	116-119	0000
default	120	0
Longitude (degrees): default	121-128	11111111
Longitude (minutes): default	129-132	0000
Encoded BCH 2:	133-144	000101000110
Calculated BCH 2:	N/A	000101000110
15 Hex ID:	N/A	992830C30C30CD1

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Protocol: National Location Protocol
Test Date: 14.11.2012

The test time stamp.

Event	Time, UTC+2	Coordinates	Message	Comment
National Location Protocol				
Start of test	12:25:00			PLB was placed in Location 1
Activation EUT	12:25:32			time of beacon activation in location 1
Received message	12:26:22	N 44°35'16" E 33°29'20"	FFFE2F8C92F423F02C8431C F8AB79500A39A Page No. 182	time of the first message after beacon activation, message encoded with position (location 1)
Navigation input removal	12:28:30			time of navigation input removal
First message after navigation input removal	12:28:50	N 44°35'16" E 33°29'20"	FFFE2F8C92F423F02C8431C F8AB79500A39A	time of first message after navigation input removal
Received last message with encoded position	16:25:20	N 44°35'16" E 33°29'20"	FFFE2F8C92F423F02C8431C F8AB79500A39A	time of the last message encoded with encoded position (location 1), before reverting to default
Received first message with default position	16:26:11	Default value	FFFE2F8C92F423F07FDFFB 2BF03783E0F66C Page No. 183	time of the first default message

Time of change coordinates on coordinates by default was 3 hours 59 minutes 49 seconds equal 239 minutes 49 seconds.

Decoding Beacon Message

Full message: FFFE2F8C92F423F02C8431CF8AB79500A39A

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: North	65	0
Latitude Degrees: 44	66-72	0101100
Latitude Minutes: 30	73-74	10
Longitude Sign: East	75	0
Longitude Degrees: 33	76-83	00100001
Longitude Minutes: 30	84-85	10
BCH 1 Encoded:	86-106	00111001111000101010
BCH 1 Calculated:	N/A	00111001111000101010
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: +	113	1
Latitude Offset Minutes: 5	114-118	00101
Latitude Offset Seconds: 16	119-122	0100
Longitude Offset Sign: -	123	0
Longitude Offset Minutes: 0	124-128	00000
Longitude Offset Seconds: 40	129-132	1010
BCH 2 Encoded:	133-144	001110011010
BCH 2 Calculated:	N/A	001110011010
Composite Latitude: 44.58777777777778 Degrees North	N/A	Composite Longitude: 33.48888888888889 Degrees East
15 Hex ID:	N/A	1925E847E0FFBFF

Decoding Beacon Message

Full message: FFFE2F8C92F423F07FDFFB2BF03783E0F66C

ITEM	BITS	VALUE
Message format: long format	25	1
Protocol: Location Protocol	26	0
Country code: 201	27-36	0011001001
Type of location protocol: Standard Location - EPIRB (MMSI)	37-40	0010
MID: 999999	41-60	11110100001000111111
Specific Beacon: 0	61-64	0000
Latitude Sign: default	65	0
Latitude Degrees: default	66-72	1111111
Latitude Minutes: default	73-74	11
Longitude Sign: default	75	0
Longitude Degrees: default	76-83	11111111
Longitude Minutes: default	84-85	11
BCH 1 Encoded:	86-106	01100101011111000000
BCH 1 Calculated:	N/A	01100101011111000000
Fixed bits (1101): Pass	107-110	1101
Position Data: Encoded Position Data Source From Internal Navigation Device	111	1
Aux Device: 121.5 MHz homer	112	1
Latitude Offset Sign: default	113	1
Latitude Offset Minutes: default	114-118	00000
Latitude Offset Seconds: default	119-122	1111
Longitude Offset Sign: default	123	1
Longitude Offset Minutes: default	124-128	00000
Longitude Offset Seconds: default	129-132	1111
BCH 2 Encoded:	133-144	011001101100
BCH 2 Calculated:	N/A	011001101100
Composite Latitude: default	N/A	Composite Longitude: default
15 Hex ID:	N/A	1925E847E0FFBFF

Position Data Encoding (A.3.8.7)

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Data was provided by manufacturer

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

NAVIGATION SYSTEM TEST RESULTS

Table F-C.1 of C/S T.007 (Issue 4 Rev. 6 October 2011 and Rev.7 October 2012)

Position Data encoding Results User Location Protocol

Script Reference (See Table D.2)	Value of Encoded Location Bits Transmitted by Beacon (Hexadecimal)	Confirmation that BCH Correct (✓)
1	Bits 108 – 132 = **0FE0FF0**	✓
2	Bits 108 – 132 = **1001000** Number of seconds after providing navigation data that beacon transmitted the above encoded location information: **41.37**	✓
3	Bits 108 – 132 = **0000000**	✓
4	Bits 108 – 132 = **0006B3C**	✓
5	Bits 108 – 132 = **1007B3C**	✓
6	Bits 108 – 132 = **1B28590**	✓
7	Bits 108 – 132 = **1B29590**	✓
8	Bits 108 – 132 = **0B41B40**	✓
9	Bits 108 – 132 = **0B3CB40**	✓
10	Bits 108 – 132 = **14918A7**	✓
Self-Test Navigation Test Scripts (C/S T.007 Issue 4 Rev. 7 October 2012)		
11	Bits 108 – 132 = **0FE0FF0**	✓
12	Bits 108 – 132 = **0FE0FF0**	✓

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Table F-C.2 of C/S T.007 (Issue 4 Rev. 6 October 2011 and Rev.7 October 2012)

Position Data encoding Results Standard Location Protocol

Script Reference (See Table D.2)	Value of Encoded Location Bits Transmitted by Beacon (Hexadecimal)	Confirmation that BCH Correct (✓)
1	Bits 65 – 85 = **0FFBFF** Bits 113 – 132 = **83E0F**	✓
2	Bits 65 – 85 = **100400** Bits 113 – 132 = **8420E** Number of seconds after providing navigation data that beacon transmitted the above encoded location information: **39.24**	✓
3	Bits 65 – 85 = **000000** Bits 113 – 132 = **8360D**	✓
4	Bits 65 – 85 = **000ACF** Bits 113 – 132 = **0F222**	✓
5	Bits 65 – 85 = **0012CE** Bits 113 – 132 = **93A60**	✓
6	Bits 65 – 85 = **100ECF** Bits 113 – 132 = **0FA10**	✓
7	Bits 65 – 85 = **1B2964** Bits 113 – 132 = **80A00**	✓
8	Bits 65 – 85 = **1B2D64** Bits 113 – 132 = **84E00**	✓
9	Bits 65 – 85 = **0B46D0** Bits 113 – 132 = **03801**	✓
10	Bits 65 – 85 = **0B42D0** Bits 113 – 132 = **08009**	✓
11	Bits 65 – 85 = **14962A** Bits 113 – 132 = **80200**	✓
Self-Test Navigation Test Scripts (C/S T.007 Issue 4 Rev. 7 October 2012)		
12	Bits 65 – 85 = **0FFBFF** Bits 113 – 132 = **83E0F**	✓
13	Bits 65 – 85 = **0FFBFF** Bits 113 – 132 = **83E0F**	✓

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Table F-C.3 of C/S T.007 (Issue 4 Rev. 6 October 2011 and Rev.7 October 2012)

Position Data encoding Results National Location Protocol

Script Reference (See Table D.3)	Value of Encoded Location Bits Transmitted by Beacon (Hexadecimal)	Confirmation that BCH Correct (✓)
1	Bits 59 – 85 = **3F81FE0** Bits 113 – 126 = **27CF**	✓
2	Bits 59 – 85 = **4002000** Bits 113 – 126 = **284E** Number of seconds after providing navigation data that beacon transmitted the above encoded location information: **37.62**	✓
3	Bits 59 – 85 = **0000000** Bits 113 – 126 = **26CD**	✓
4	Bits 59 – 85 = **0019678** Bits 113 – 126 = **060D**	✓
5	Bits 59 – 85 = **001567A** Bits 113 – 126 = **2710**	✓
6	Bits 59 – 85 = **401B677** Bits 113 – 126 = **0740**	✓
7	Bits 59 – 85 = **6CA0B20** Bits 113 – 126 = **06C0**	✓
8	Bits 59 – 85 = **6CA2B20** Bits 113 – 126 = **21C0**	✓
9	Bits 59 – 85 = **2D03680** Bits 113 – 126 = **0701**	✓
10	Bits 59 – 85 = **2CF5680** Bits 113 – 126 = **2009**	✓
11	Bits 59 – 85 = **523F14F** Bits 113 – 126 = **2040**	✓
Self-Test Navigation Test Scripts (C/S T.007 Issue 4 Rev. 7 October 2012)		
12	Bits 59 – 85 = **3F81FE0** Bits 113 – 126 = **27CF**	✓
13	Bits 59 – 85 = **3F81FE0** Bits 113 – 126 = **27CF**	✓

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Beacon Tester Results

The results from the beacon tester while performing the preceding tests are stored in the following files:

1. User Location Protocol (User Location: Maritime with MMSI)

Script 1	Burst-12344
Script 2	Burst-12345
Script 3	Burst-12346
Script 4	Burst-12347
Script 5	Burst-12348
Script 6	Burst-12349
Script 7	Burst-12350
Script 8	Burst-12351
Script 9	Burst-12352
Script 10	Burst-12353
Script 11	Burst-12354
Script 12	Burst-12355

2. Standard Location Protocol (Standard Location Protocol: PLB with Serial Number)

Script 1	Burst-12356
Script 2	Burst-12357
Script 3	Burst-12358
Script 4	Burst-12359
Script 5	Burst-12360
Script 6	Burst-12361
Script 7	Burst-12362
Script 8	Burst-12363
Script 9	Burst-12364
Script 10	Burst-12365
Script 11	Burst-12366
Script 12	Burst-12367
Script 13	Burst-12368

3. National Location Protocol

Script 1	Burst-12369
Script 2	Burst-12370
Script 3	Burst-12371
Script 4	Burst-12372
Script 5	Burst-12373
Script 6	Burst-12374
Script 7	Burst-12375
Script 8	Burst-12376
Script 9	Burst-12377
Script 10	Burst-12378
Script 11	Burst-12379
Script 12	Burst-12380
Script 13	Burst-12381

Company Name: *Ocean Signal Ltd* Beacon Model: *PLB1*

Test Equipment Used

1. Personal Computer running CSConfig.exe proprietary GPS NMEA0183 simulation program and beacon interface adaptor. Calibration Date: N/A
2. WS Technologies Inc. 406 Beacon Tester Card (BT100S, Rev 2.3) fitted into iPAQ PDA and running WS Technologies Inc. Beacon Tester Program Rev 2.8. Calibration Date: Dec 13 2013.

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ANNEX 8.

SATELLITE QUALITATIVE TEST

(According to C/S T.007 – section A.2.5)

ANNEX 8.1.

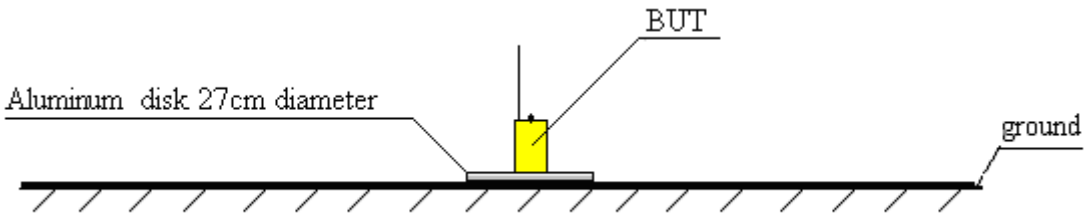
TEST CONFIGURATION 7
BEACON ON GROUND PLANE

Satellite Qualitative Test
(According to C/S T.007 – section 4.5)

Model: rescueME PLB1
Serial number: TA5
Beacon SW: 00.06
Antenna: Integral antenna
Date of the Test: December 26, 2012
Time of the Test: 6:10 UTC – 16:45UTC

Test conditions:

- Ambient temperature at open testing area: 10..12 ^{O}C
- Relative air humidity: 64..67 %
- Atmosphere pressure: 751..753 mm/Hg
- The duration of the satellite test: 10 hours 35 minutes.
- The homing transmitter not operated.
- Actual Location: N 44º31'48"; E 33º28'23".
- Data provided by CMC
- Beacon was placed in the orientation described in the manufacturer's instruction.
- Beacon was placed in the area with a good all round view of the sky.
- Beacon was placed in the centre of a thin 27 cm diameter aluminum disc which was placed directly on level dry ground (dirt). Configuration 7 Section 4.5 C/S T.007.



Beacon coding

- Beacon is coded with Standard Location – Test protocol
- Country code is Albania, 201
- Message content 1 – 144 bits: FFFE2F8C9E7CE0317FDFFA48B57783E0F66C
- Beacon identification number (15-digit ID): 193CF9C062FFBFF.

APPENDIX A TO ANNEX F

SATELLITE QUALITATIVE TEST SUMMARY REPORT

Date of the Test: December 26, 2012

Time of the Test: 6:10 UTC – 16:45 UTC

Beacon Model: rescueME PLB1

Beacon 15 Hex ID: 193CF9C062FFBFF

Actual location of the test beacon: Latitude N 44º31'44"; Longitude: E 33º28'23".

Beacon test configuration: beacon operated on ground plane (configuration 7 section 4.5 C/S T.007)

Satellite ID	Satellite Pass Number	Time of Closest Approach (TCA)	Cross Track Angle	15 Hex ID Provided by LUT	Doppler location	Location Error (km)
S8	63215	6:33	5,66	193CF9C062FFBFF	N 44 31.6 E 33 28.3	0,393
S9	54610	7:07	18,93	193CF9C062FFBFF	N 44 31.8 E 33 28.3	0,132
S11	32101	7:30	3,35	193CF9C062FFBFF	N 44 31.7 E 33 28.4	3,519
S8	63216	8:14	11,50	193CF9C062FFBFF	N 44 31.6 E 33 28.6	0.455
S11	32102	9:10	13,53	193CF9C062FFBFF	N 44 31.7 E 33 28.6	0.322
S12	20012	9:52	8,99	193CF9C062FFBFF	N 44 31.9 E 33 28.2	0.322
S10	39168	10:22	18,25	193CF9C062FFBFF	N 44 31.8 E 33 28.1	0.396
S12	20013	11:33	8,47	193CF9C062FFBFF	N 44 32.0 E 33 28.9	0.757
S10	39169	12:02	2,06	193CF9C062FFBFF	N 44 32.0 E 33 27.5	1.244
S7	76024	12:14	16,91	193CF9C062FFBFF	N 44 31.7 E 33 28.2	0.322
S10	39170	13:43	15,89	193CF9C062FFBFF	N 44 32.2 E 33 28.6	0.786
S9	54615	15:11	9,44	193CF9C062FFBFF	N 44 31.9 E 33 28.0	0.560
S7	76026	15:34	17,28	193CF9C062FFBFF	N 44 32.1 E 33 28.5	0.571
S8	63221	16:21	15,34	193CF9C062FFBFF	N 44 31.7 E 33 28.0	0.560

$$\text{Ratio of successful solutions} = \frac{\text{number of Doppler solutions within 5 km with } 1^{o} < CTA < 21^{o}}{\text{number of satellite passes over test duration with } 1^{o} < CTA < 21^{o}} \times 100\ \%$$

$$\text{Ratio of successful solutions} = \frac{14}{14} \times 100\% = 100\ \%$$

ANNEX 8.2.

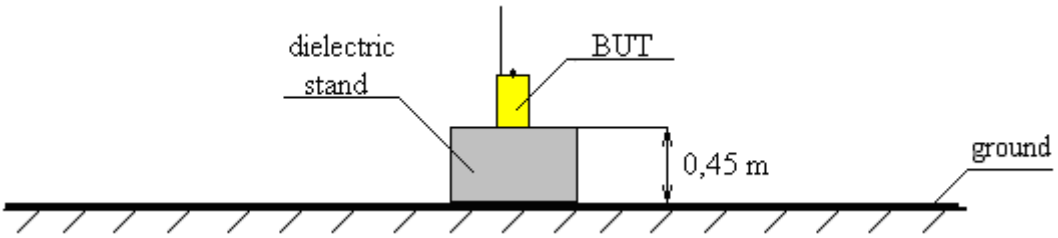
TEST CONFIGURATION 8
BEACON ABOVE GROUND PLANE

Satellite Qualitative Test
(According to C/S T.007 – section 4.5)

Model: rescueME PLB1
Serial number: TA5
Beacon SW: 00.06
Antenna: Integral antenna
Date of the Test: December 25, 2012
Time of the Test: 6:20 UTC – 16:45 UTC

Test conditions:

- Ambient temperature at open testing area: 8..11 ^{O}C
- Relative air humidity: 64..67 %
- Atmosphere pressure: 752..754 mm/Hg
- The duration of the satellite test: 10 hours 25 minutes.
- The homing transmitter not operated.
- Actual Location: N 44º31'48"; E 33º28'23".
- Data provided by CMC.
- Beacon was placed in the orientation described in the manufacturer's instructions.
- Beacon was placed in an area with a good all round view of the sky.
- Beacon was placed on a wooden electrically insulating support so that its base is 0.45m above level dry ground. Configuration 8 Section 4.5 C/S T.007



Beacon coding

- Beacon is coded with Standard Location – Test protocol
- Country code is Albania, 201
- Message content 1 – 144 bits: FFFE2F8C9E7CE0317FDFFA48B57783E0F66C
- Beacon identification number (15-digit ID): 193CF9C062FFBFF.

APPENDIX A TO ANNEX F

SATELLITE QUALITATIVE TEST SUMMARY REPORT

Date of the Test: December 25, 2012

Time of the Test: 06:20 UTC – 16:45 UTC

Beacon Model: rescueME PLB1

Beacon 15 Hex ID: 193CF9C062FFBFF

Actual location of the test beacon: Latitude N 44º31'44"; Longitude: E 33º28'23".

Beacon test configuration: beacon operated above ground plane (configuration 8 section 4.5 C/S T.007)

Satellite ID	Satellite Pass Number	Time of Closest Approach (TCA)	Cross Track Angle	15 Hex ID Provided by LUT	Doppler location	Location Error (km)
S8	63201	6:45	3,50	193CF9C062FFBFF	N 44 31.6 E 33 28.4	0.370
S8	63202	8:26	13,44	193CF9C062FFBFF	N 44 31.7 E 33 28.5	0.227
S11	32088	9:30	16,73	193CF9C062FFBFF	N 44 31.8 E 33 28.7	0.396
S12	19998	10:03	7,22	193CF9C062FFBFF	N 44 32.0 E 33 27.9	0.757
S10	39154	10:33	16,60	193CF9C062FFBFF	N 44 31.8 E 33 28.3	0.132
S12	19999	11:44	10,39	193CF9C062FFBFF	N 44 32.1 E 33 28.6	0.615
S7	76010	12:38	13,16	193CF9C062FFBFF	N 44 31.9 E 33 28.2	0.322
S10	39156	13:55	17,90	193CF9C062FFBFF	N 44 32.0 E 33 28.7	0.542
S7	76011	14:18	3,71	193CF9C062FFBFF	N 44 32.2 E 33 28.7	0.840
S9	54601	15:34	5,49	193CF9C062FFBFF	N 44 31.9 E 33 28.1	0.437
S8	63207	16:33	13,45	193CF9C062FFBFF	N 44 31.9 E 33 28.0	0.560

$$\text{Ratio of successful solutions} = \frac{\text{number of Doppler solutions within 5 km with } 1^{o} < \text{CTA} < 21^{o}}{\text{number of satellite passes over test duration with } 1^{o} < \text{CTA} < 21^{o}} \times 100\ \%$$

$$\text{Ratio of successful solutions} = \frac{11}{11} \times 100\% = 100\ \%$$

ANNEX 9.

TEST FOR POSITION FIELD IN SELF-TEST MESSAGE

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 27.12.2012

Test conditions:

- ambient temperature +11 °C;
- location N 44°34'54.94", E 33°29'43.67"

Test was performed on special request of C/S Secretariat to making sure that the self-test message contains only default position.

Required procedure

- Switch on the beacon with navigation signal present.

- Wait for a position to be acquired, monitor position fields changing from default to actual position values.

- Switch off the beacon and immediately activate a self-test.

- Check that the position in the self-test message is defaulted.

Test description

EUT was switched on and transmitted messages were monitored. When real location was indicated in the message EUT was switched off and then immediately self-test was activated. Messages with appropriate time stamp are presented in the table below.

Time	Message	Decoded position	Comments
10:21:26	FFFE2F8C92F423F02C8431CF8AB7938043E3	N 44°34'56" E 33°29'44"	Operational message with real position.
10:21:35	FFFED08C92F423F07FDFFB2BF03783E0F66C	default	Self-test message after beacon switched off.

Test result

Self-test message contains defaulted position.

ANNEX 10.

THE DETERMINATION OF COMPLIANCE OF 406 MHZ BEACONS EQUIPPED WITH A TCXO WITH COSPAS-SARSAT TYPE APPROVAL REQUIREMENTS

Model: rescueME PLB1
Serial number: TA1
Beacon SW: 00.06
Test Date: 24.12.2012

Test description

Fast track approach (FTA) method according to Interim Procedure (Rev.4 Oct. 2012) was used for the purpose of determining the compliance of beacons equipped with a TCXO with the Cospas-Sarsat requirements concerning the beacon medium-term frequency stability.

TCXO E5344LF(T) s/n LS1679 is installed in EUT s/n TA1 according to beacon manufacturer's statement (see Test Report 12/1087 vol.2 iss.1 p.48). Technical data for TCXO E5344LF(T) s/n LS1679 and details of calculation are presented in file " OSL_PLB1_TCXO v1.xls".
Summary result of FTA analysis is shown in the table A-1.

Table A-1: Fast Track Analysis

MTS Characteristic	TOT	OSC	beacon_wc	osc_max	beacon_ max/min	ageing	bcn_5 year_max	C/S spec	Pass/ Fail
Residual, ppb	0.61	0	0.61	2.00	2.09	**0.2**	2.29	**3.0**	Pass
Static Positive Mean Slope, ppb/min	0.11	-0.08	0.14	0.7	0.71	**0**	-	**1.0**	Pass
Static Negative Mean Slope, ppb/min	-0.12	0.11	-0.16	-0.7	-0.72	**0**	-	**-1.0**	Pass
Gradient Positive Mean Slope, ppb/min	0.30	-0.27	0.41	1.70	1.75	**0**	-	**2.0**	Pass
Gradient Negative Mean Slope, ppb/min	-0.38	0.28	-0.47	-1.7	-1.76	**0**	-	**-2.0**	Pass

Results of calculation are shown in the tables below.

Residual

Value	Calculation	Result, ppb	Comment
Rtot max		0.61	-13,2°C up-ramp
Rosc max		2.00	
Rbcn_max	SQRT((Rtot max)^2+(Rosc max)^2)	2.09	
R age		0.2	
Rbcn_5_year_max	Rbcn_max+Rage	**2.29**	**Pass with criteria <3.0**

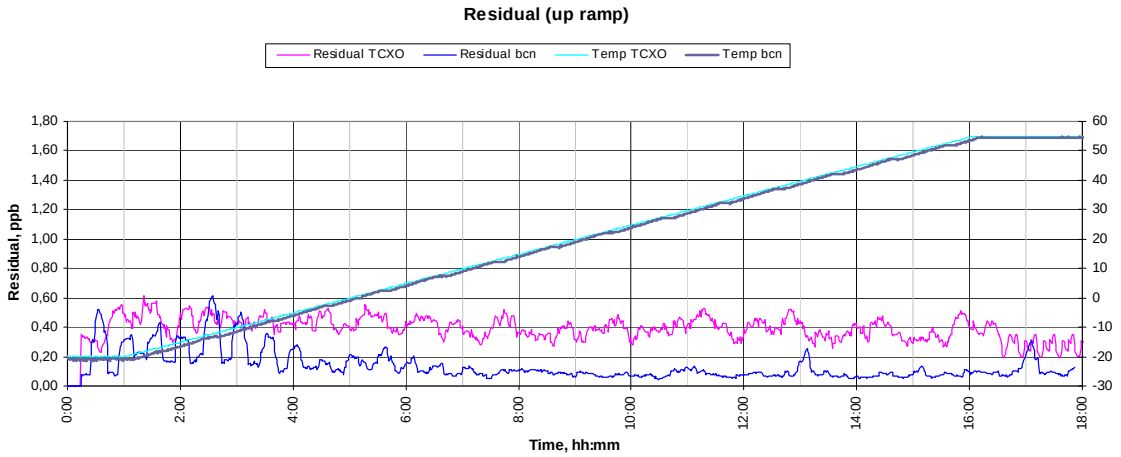


Fig. 10. 1 Residual (up rump) during Temperature Gradient Test

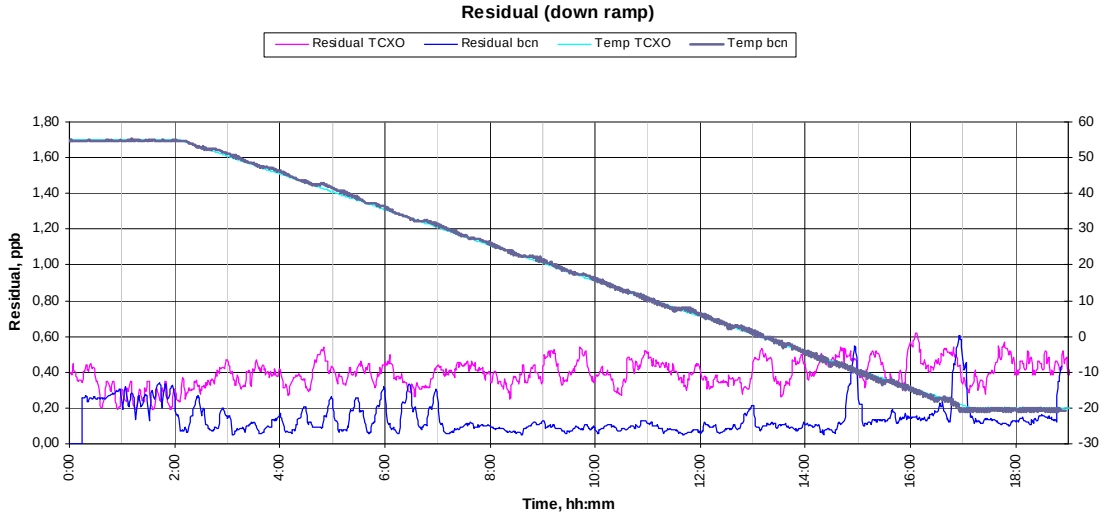


Fig. 10. 2 Residual (down rump) during Temperature Gradient Test

Positive static slope

Value	Calculation	Result, ppb/min	Comment
Sl (+)tot max		0,11	54,6°C (C1+15 to D1)
Sl (-)osc min		-0,08	-19,9°C (A to B)
Sl (+)bcn wc	$SQRT(Sl_{(+)tot\ max}^2+Sl_{(-)osc\ min}^2)$	0,14	
Sl osc_max		0,7	
Sl (+)bcn max	$SQRT(Sl_{(+)bcn\ wc}^2+Sl_{osc\ max}^2)$	**0,71**	**Pass with criteria <1.0**

Positive gradient slope

Value	Calculation	Result, ppb/min	Comment
Sl (+)tot max		0,30	-10,3°C (D2 to E+15)
Sl (-)osc min		-0,27	-7°C (B to C1+15)
Sl (+)bcn wc	$SQRT(Sl_{(+)tot\ max}^2+Sl_{(-)osc\ min}^2)$	0,41	
Sl osc_max		1,70	
Sl (+)bcn max	$SQRT(Sl_{(+)bcn\ wc}^2+Sl_{osc\ max}^2)$	**1,75**	**Pass with criteria <2.0**

Negative static slope

Value	Calculation	Result, ppb/min	Comment
Sl (-)tot min		-0,12	-21°C (A to B)
Sl (+)osc max		0,11	55°C (C1+15 to D1)
Sl (-)bcn wc	$-SQRT(Sl_{(-)tot\ min}^2+Sl_{(+)osc\ max}^2)$	-0,16	
Sl osc_max		-0,7	
Sl (-)bcn min	$-SQRT(Sl_{(-)bcn\ wc}^2+Sl_{osc\ max}^2)$	**-0,72**	**Pass with criteria > -1.0**

Negative gradient slope

Value	Calculation	Result, ppb/min	Comment
Sl (-)tot min		-0,38	-11,8°C (B to C1+15)
Sl (+)osc max		0,28	-12,2°C (D2 to E+15)
Sl (-)bcn wc	$-SQRT(Sl_{(-)tot\ min}^2+Sl_{(+)osc\ max}^2)$	-0,47	
Sl osc_max		-1,7	
Sl (-)bcn min	$-SQRT(Sl_{(-)bcn\ wc}^2+Sl_{osc\ max}^2)$	**-1,76**	**Pass with criteria > -2.0**

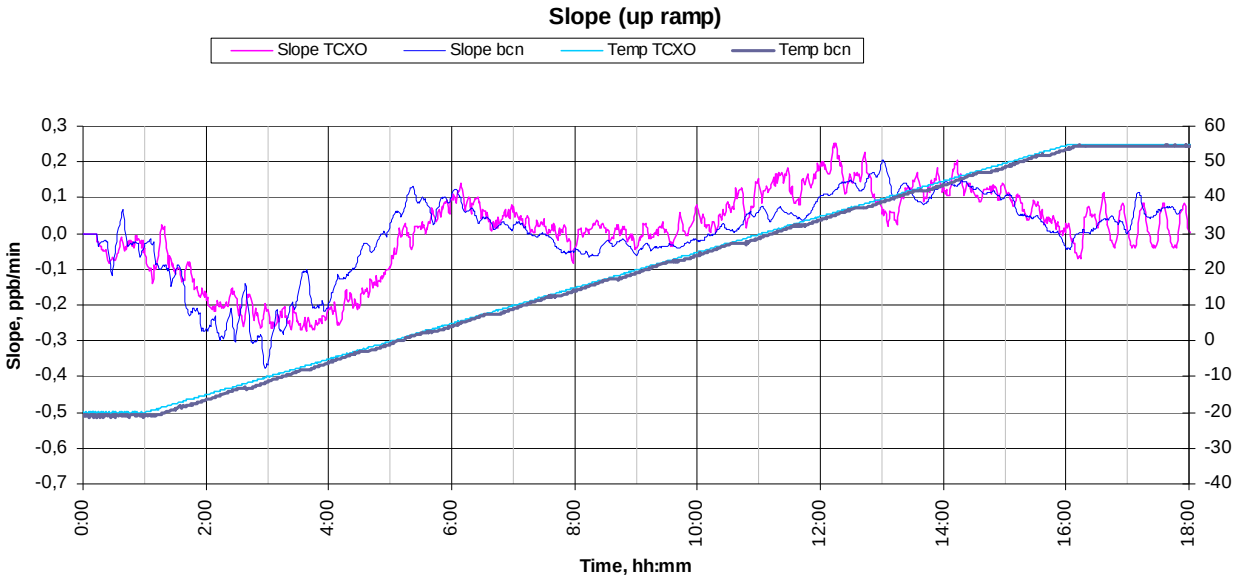


Fig. 10. 3 Slope (up ramp) during temperature gradient test

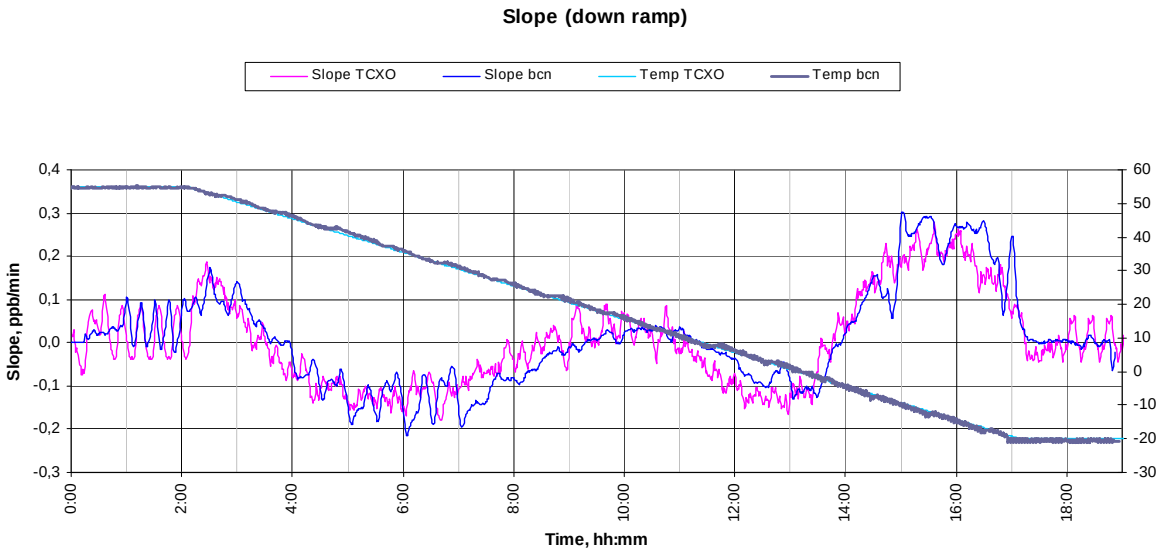


Fig. 10. 4 Slope (down ramp) during temperature gradient test

ANNEX 11.

PHOTOS OF BEACON

Fig. 11.1 — General view of rescueME PLB1 “TA5”

Fig. 11.2 — Photo of marking 1 (TA5)

Fig. 11.3 — General view of rescueME PLB1 “TA1”

Fig. 11.4 — Photo of marking 2 (TA1)

Fig. 11.5 — Photo of marking 3 (TA1)

Fig. 11.6 — Photo of marking 4 (TA1)

Fig. 11.7 — General view of test site for navigation test, point 2 (Configuration 7 – Beacon on ground plan).

Fig. 11.8 — General view of test site for navigation test, point 2 (Configuration 8 - Beacon above ground plane).

Fig. 11.9 — General view of antenna test place at configuration 3
(section 4.5 standard T.007).i.e. beacon sitting on ground plane.

Fig. 11.10 — General view of antenna test place at configuration 4
(section 4.5 standard T.007), i.e. beacon operating above ground plane

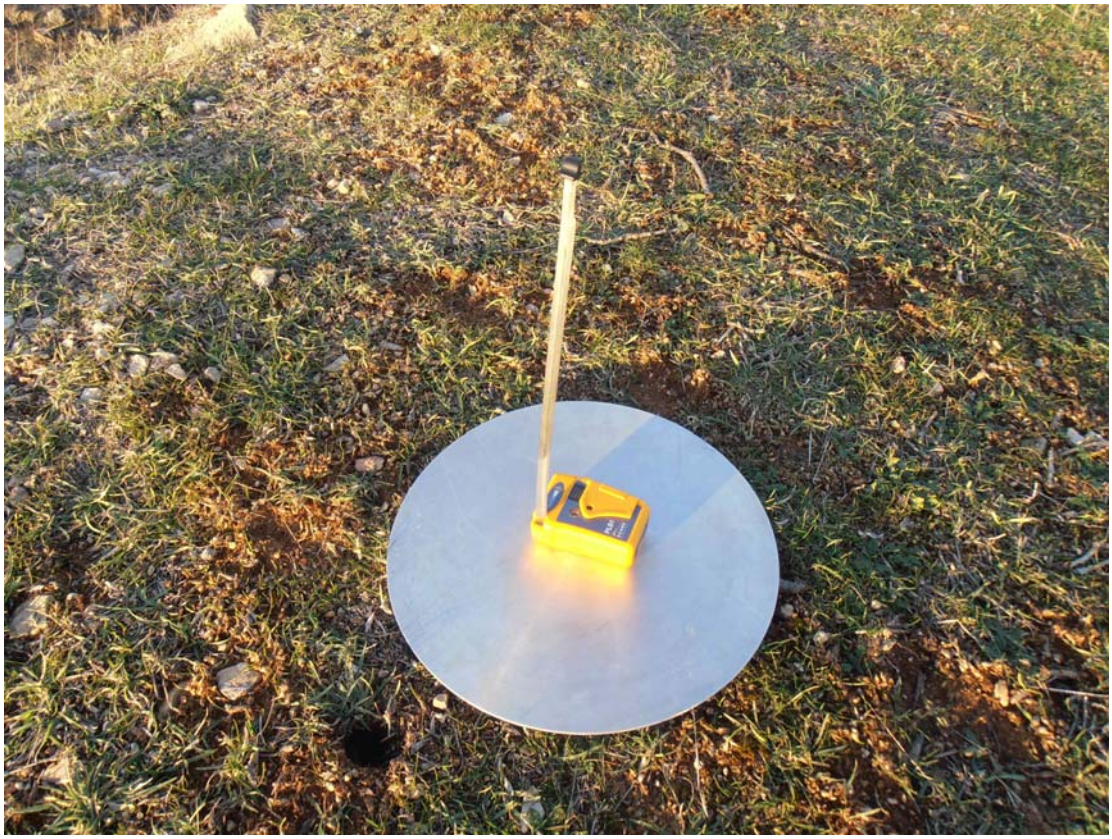


Fig. 11.11 — Satellite qualitative test (Configuration 7 – Beacon on ground plan).

Fig. 11.12 — Satellite qualitative test (Configuration 8 - Beacon above ground plane).

ANNEX 12.

TEST EQUIPMENT USED AND TEST FACILITY ACCURACY

TEST EQUIPMENT USED

No.	Name of test equipment	Type, model	ser. No	Calibration due
1.	Beacon tester	BT-611	1005	06.2013
2.	Spectrum analyzer	HP8593E	3831U02306	09.2013
3.	Battery charger and analyser	UBA5	10225	02.2014
4.	Climatic chamber	KPK-400V	15	08.2014
5.	Climatic chamber	KPK-2000	186	10.2013
6.	Climatic chamber	KTK-800	308286	10.2014
7.	Antenna	FCC-4	2314	09.2016
8.	Antenna mast	ATR 2	101208	n/a
9.	Ground plane	Ug	102282	n/a
10.	Stop-watch	SOSpr	2388	02.2013
11.	RFAM	Ternovnik MO	No.1	n/a

TEST FACILITY ACCURACY AND OPTIONAL EQUIPMENT

No.	Parameter	Test facility accuracy
1.	Repetition Time	± 0.01 sec
2.	Total (Transmission Time)	± 1.0 ms
3.	CW Preamble	± 1.0 ms
4.	Bit Rate	± 0.6 bit/sec
5.	Nominal Frequency	± 100 Hz
6.	Frequency Stability	$< 1 \times 10^{-10}$
7.	Transmitted Power	± 0.5 dB
8.	Spurious Power Level	± 2 dB
9.	Carrier Rise Time	± 0.5 ms
10.	Modulation Rise	± 25 μs
11.	Modulation Symmetry	< 0.01
12.	Phase Modulation	± 0.04 rad
13.	Voltage	0.1%
14.	Current value	2%
15.	Ambient temperature (near beacon) various	± 2°C
16.	Antenna Measurement	± 3 dB

ADDITIONAL OFFICE EQUIPMENT

No.	Name of the office equipment	Type, model	ser. No
1.	Computer	Pentium 4	No. 102476
2.	Programming software	OSL EPIRB/PLB config software	
3.	Cable for Beacon programming	-	-