TYPE APPROVAL CERTIFICATE

For a 406 Megahertz Distress Beacon for use with the Cospas-Sarsat Satellite System

Certificate Number: 189

Manufacturer: ACR Electronics Inc., Fort Lauderdale, USA

Beacon Type(s): Float-Free EPIRB

Beacon Model(s): RLB-36

Test Laboratory: TUV Product Service, UK

Date of Test: March – June 2008

Details of the beacon features and battery type are provided overleaf.

The Cospas-Sarsat Council hereby certifies that the 406 MHz Distress Beacon Model identified above is compatible with the Cospas-Sarsat System as defined in documents:

C/S T.001 Specification for Cospas-Sarsat 406 MHz Distress Beacon
Issue 3 – Revision 8, November 2007

C/S T.007 Cospas-Sarsat 406 MHz Distress Beacon Type Approval Standard
Issue 4 – Revision 2, November 2007

Original TAC issued 17 July 2008

D. Levesque
Head of Cospas-Sarsat Secretariat

NOTE, HOWEVER:

1. This certificate does not authorize the operation or sale of any 406 MHz distress beacon. Such authorization may require type acceptance by national administrations in countries where the beacon will be distributed, and may also be subject to national licensing requirements.

2. This certificate is intended only as a formal notification to the above identified manufacturer that the Cospas-Sarsat Council has determined, on the basis of test data of a beacon submitted by the manufacturer, that 406 MHz distress beacons of the type identified herein meet the standards for use with the Cospas-Sarsat System.

3. Although the manufacturer has formally stated that all beacons identified with the above model name(s) will meet the Cospas-Sarsat specification referenced above, this certificate is not a warranty and Cospas-Sarsat hereby expressly disclaims any and all liability arising out of or in connection with the issuance, use or misuse of the certificate.

4. This certificate is subject to revocation by the Cospas-Sarsat Council should the beacon type for which it is issued cease to meet the Cospas-Sarsat specification. A new certificate may be issued after satisfactory corrective action has been taken and correct performance demonstrated in accordance with the Cospas-Sarsat Type Approval Standard.

5. Cospas-Sarsat type approval testing requirements only address the electrical performance of the beacon at 406 MHz. Conformance of the beacon to operational and environmental requirements is the responsibility of national administrations.

Certificate Number: 189 **Dated: 17 July 2008**

Beacon Model: RLB-36

Manufacturer: ACR Electronics Inc., Fort Lauderdale, USA

Operating temperature range: -20°C to +55°C

Battery Details: Sanyo CR123A
Lithium Manganese Dioxide (Li-MnO_2, 3x3 cells, 2/3 A-size)

Operating Lifetime: 48 hours

Transmit Frequency: 406.037 MHz

Beacon Model Features:

- 121.5 MHz auxiliary radio locating device (50 mW, duty cycle – 98%);
- Strobe light (brightness > 0.75 cd, duty cycle - 21 flashes/minute)
- Internal GPS, model 'Wonde Proud A1-11-0688';
- Optical interface with external navigation device via NMEA0183 protocol;
- Self-test mode, one burst of 440 ms;
- Integrated antenna;
- Automatic activation combined with hydrostatic release mechanism;
- OLED secondary display; and
- Beacon was tested in EPIRB configuration ("floating in water" and "above ground") only.

Approved Beacon Message Protocols: Beacon is approved for encoding with the message protocols indicated with "Yes" and black text below:

USER PROTOCOLS		USER-LOCATION PROTOCOLS		LOCATION PROTOCOLS	
No	Maritime with MMSI	No	Maritime with MMSI	**Yes**	**Standard Location: EPIRB with MMSI**
No	Maritime with Radio Call Sign	No	Maritime with Radio Call Sign	**Yes**	**Standard Location: EPIRB with Serial Number**
No	EPIRB Float Free with Serial Number	No	EPIRB Float Free with Serial Number	No	Standard Location: ELT with 24-bit Address
No	EPIRB Non Float Free with Serial Number	No	EPIRB Non Float Free with Serial Number	No	Standard Location: ELT with Aircraft Operator Designator
No	Radio Call Sign	No	Radio Call Sign	No	Standard Location: ELT with Serial Number
No	Aviation	No	Aviation	No	Standard Location: PLB with Serial Number
No	ELT with Serial Number	No	ELT with Serial Number	**Yes**	**National Location: EPIRB**
No	ELT with Aircraft Operator and Serial Number	No	ELT with Aircraft Operator and Serial Number	No	National Location: ELT
No	ELT with Aircraft 24-bit Address	No	ELT with Aircraft 24-bit Address	No	National Location: PLB
No	PLB with Serial Number	No	PLB with Serial Number		
No	National (Short Format Message)				
No	National (Long Format Message)				