AS/NZS 4869.1:2006

Australian/New Zealand Standard™

Maritime Survivor Locating Systems (MSLS)

Part 1: Operating on 121.5 MHz

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee RC-004, Radiocommunications Equipment—Maritime and Safety of Life. It was approved on behalf of the Council of Standards Australia on 23 June 2006 and on behalf of the Council of Standards New Zealand on 7 July 2006.
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The following are represented on Committee RC-004:

Australian Communications Authority
Australian Electrical and Electronic Manufacturers Association
Australian Federal Police
Australian Maritime Safety Authority
Civil Aviation Safety Authority
Electromagnetic Technical Evaluation Committee
Maritime Safety Authority (New Zealand)
Ministry of Economic Development (New Zealand)
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PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee RC-004, Radiocommunications Equipment—Maritime and Safety of Life to supersede AS/NZS 4869.1:2005.

The Standard has been generally based on test methods used in AS/NZS 4330:2000, *121.5 and 243.0 MHz emergency position indicating radio beacons (EPIRBs) including personal EPIRBs* and for receiver sensitivity testing in AS/NZS 4768.2:2003, *Digital radio equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz*, Part 2: *Methods of test* (IEC 60489-6:1999, MOD).

The objective of this Standard is to provide the essential standards and minimum requirements for the design and construction of 121.5 MHz Maritime Survivor Locating Systems. The purpose of this revision is to advise users of AS/NZS 4330 that, from 1st January 2009, 121.5 MHz will cease to be monitored. This Standard includes both environmental and operational requirements and radio-frequency requirements. These specifications are required by both the appropriate national spectrum management authority and maritime safety authority in each country.

MSLS systems may be developed and employed on other frequencies including those covered by the Australian Communications and Media Authority's *Radiocommunications (Low Interference Potential Devices) Class Licence 2000* or the New Zealand Ministry of Economic Development's General user radio licence. Those systems are not within the scope of this part of the Standard. The technical requirements for short-range devices are contained in AS/NZS 4268:2003, *Radio equipment and systems—Short range devices—Limits and methods of measurement.*

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides the minimum requirements for Maritime Survivor Locating Systems (MSLSs) intended for very short-range crew retrieval applications operating on 121.5 MHz commonly referred to as man-overboard systems. The MSLS is designed to allow for self-help from the vessel or organization where there is a risk of crew falling overboard by sounding an alert from the onboard receiver. MSLS transmitters are not meant to rely on alerting through the COSPAS-SARSAT satellite system. From 1 February 2009 the frequency 121.5 MHz will cease to be monitored by Cospas-Sarsat as a primary distress beacon frequency and the Standard AS/NZS 4330, will then be withdrawn, as equipment covered by that Standard will no longer function as a distress beacon.

These devices are not stand alone personal EPIRBs but are part of an integrated system that also includes a receiver and warning device on the vessel, and may include some form of localizing device such as, but not limited to, direction finding equipment. While this Standard does not cover the requirements for personal beacons given in AS/NZS 4330, personal beacons may be used in conjunction with an MSLS. MSLS receivers and locators should be designed to also operate in conjunction with EPIRBs or other distress beacons covered by AS/NZS 4280 using the frequency 121.5 MHz as a homing frequency.

These minimum requirements encompass the physical characteristics of the devices, as they pertain to maritime use. For MSLS transmitters, both the radiated power and the length of time for operation are reduced to enable the equipment to be sufficiently small and light to be worn comfortably at all times when a person is operating in an open maritime environment. Some characteristics have been specified in order that MSLS beacons do not interfere with the COSPAS-SARSAT satellite system.

MSLS may also be developed and employed on other frequencies including those covered by the Australian Communications Authority's Class licence for low interference impact devices or the New Zealand Ministry of Economic Development's General user radio license. Those systems are not within the scope of this part of the Standard. The technical requirements for short-range devices are contained in AS/NZS 4268.

1.2 APPLICATION

This Standard is intended for use by equipment designers, manufacturers and suppliers to ensure correct operation of 121.5 MHz Maritime Survivor Locating Systems and their compatibility with space satellite systems and other devices and systems utilizing the frequency 121.5 MHz.