SECURITY SYSTEMS

“MAN OVERBOARD” LOCATION AND FOLLOW-UP SYSTEM

In security you cannot choose the second best option

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**“MAN OVERBOARD” LOCATION AND FOLLOW-UP SYSTEM**

The “Man Overboard” Location and Follow-Up System facilitates search and rescue missions by means of precise location pinpoint information of crew members in distress.

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| The SSP-LHA system facilitates search and rescue missions of sailors who accidentally fall overboard from a vessel or aircraft by means of the transmission of an alarm signal in the international distress frequency of 121.5 MHz. The system is made up of a personal radio-beacon (RP-GPS-LHA 2.0) integrated in a life jacket and a base receptor located on the Commanding Bridge of different types of vessel or aircraft. It does not only alert of the existence of an emergency situation, but also allows for precise location pinpoint of crew members in distress. | When a crew member accidentally falls overboard, the radio-beacon is switched on automatically during immersion and emits an audio distress signal in the international SOS frequency of 121.5 MHz together with precise geographical positioning, thanks to a GPS micro-integrated receiver. The audio distress signal contains two different types of information:  
• Type of maritime emergency: audio sweep between 400 and 1200 MHz, with 2-4 repetitions per second  
• Exact position of crew member in distress: Radio-beacon position coordinates and other information of interest (ID, MMSI, time the crew member fell into the water, battery level..) |
**System Features**

The system offers benefits that improve on classical equipment with regard to “Man-Overboard” systems:

- **Coverage** range of 1.7 NM data versus traditional 1.2 NM from other manufacturers
- **Allows** to discriminate signal coming from lots of different active radio-beacons simultaneously, thus differentiating identification and geographical position
- **In** less than a minute, receivers get radio-beacon identification, geographical position and distress signal in order to generate information relative to the vessel’s or aircraft’s location (delay and distance)
- **Transmits** the crew member’s distress position with high accuracy thanks to a micro GPS receiver incorporated onto the radio-beacon
- **Incorporates** audiovisual alarm integrated with horns and sirens
- **Secure and reliable activation mode** in order to avoid false alarms
- **Programmable system** which allows to use new features or functionalities relative to the frequency or way of operation of the system.
- **Requires** a minimum level of radio-beacon maintenance (approx. every 6 months); with battery life of 2 years

**Benefits**

### Safety

The automatic activation has been designed by means of two stainless steel contacts which guarantee a secure way of activation in order to avoid false alarms.

### Innovative

Improves and makes easier on existing equipment the search and rescue operation thanks to the GPS and ID information transmission.

### Great coverage

According to the installation of the system, it is achieved a coverage range of at least 1.7 NM in audio alarm and 1.2 NM in data transmission.

### Autocheck function

Radiobeacons and receivers include autocheck functionalities about their most important features of operation.

### Flexibility

Thanks to its programmable capability, the system is able to modify functional features of operation according to final user requirements.

### Easy integration and installation

The radiobeacons have been designed to be integrated to the lifejackets and the receivers to be installed on the vessels or the aircrafts.

### Low Maintenance

The simplicity of the system requires a low level of maintenance by means of a periodical autocheck verification. Moreover, the system can generate certificates about the equipments operation itself.

### Autonomy

The radiobeacons guarantee a minimum autonomy of 12 hours in activation mode and 5 years in armed mode.
Homologations and patents

- Homologated by the Spanish Maritime Administration DGMM (Merchant Marine of Spain) according to PLB and ELT systems
- Authorized by the laboratory AT4WIRELESS, test laboratory accredited by the National Entity of Accreditation
- CE marking according to European Normative
- The Radio beacon RP-GPS-LHA has been certified by the technological centre AITEMIN as ATEX device for being used in environments under 3G category designated as Zone 2
- The innovation of inserting digital information in the radio-signal defined by ETSI EN300152-1 and ITU-R M.690-1 standards, has considerably improved the “Man-Overboard” system in comparison to its predecessors. Indra has registered this innovation through patent PCT/ES2006/070119 with the name “Sistema localizador inmediato, en proximidad, que utiliza radiobalizas personales.”

Who requires this product?

The solution in its different configurations is applicable to different sectors:
- Institutional Fleets
- Offshore operations
- Sport Boats
- Navy Ships
- Aircraft operations
- Fishing Fleets
- Working Ships
- Institutional Fleets
- Offshore operations
- Sport Boats
- Navy Ships
- Aircraft operations
**System Components**

**Radiobeacon RP-GPS-LHA 2.0**
Personal radio-beacon "Man Overboard" type at 121.5 MHz with GPS micro-receiver integrated.

Applicable to all configurations. Mandatory for most commercial vessels and for offshore operations. The audio alarm can be detected.

**Receiver NMEA-LHA**
Alarm receiver at 121.5 MHz with NMEA serial interface. (Sw application available to visualize receiver information)

Applicable when position and identification of active radio beacon is required. Compatible with NMEA 0183 standard. Indra’s PC application available to display information and generate maintenance certificates. Hability to be integrated with a nautical plotter in order to display the activated radiobeacon position.

It offers the possibility of offline displaying the followed route during the rescue operations in Google Maps/Earth.

**Receiver CRx-LHA**
Alarm controller receiver at 121.5 MHz with GPS receiver and graphical and tactile interface.

Applicable when is needed extra information (e.g. delay distance...) and functionalities are required with the identification and position information. Graphical and tactile interface to display receiver and radiobeacon information.

It offers the possibility of offline displaying the followed route during the rescue operations in Google Maps/Earth.

**Receiver PRx-LHA**
Alarm portable controller receiver at 121.5 MHz with integrated GPS receiver, VHF antenna and graphical and tactile interface.

Applicable in special situations when a portable receiver is required.

It offers the possibility of offline displaying the followed route during the rescue operations in Google Maps/Earth.
Indra reserves the right to modify these specifications without prior notice.