

SAILOR Iridium SSAS



Ship Security
Alert System
(SSAS)



PIRATES BEWARE





GLOBAL COVERAGE

Combining SAILOR’s half century of experience in developing communications equipment for demanding maritime conditions with Iridium’s global satellite network provides a unique solution with true global coverage. Wherever you are in the world, the network’s 66 reliable satellites are at your disposal 24 hours a day.

Ship Security Alert System (SSAS)

The SAILOR Iridium SSAS solution is based on a dedicated SAILOR Iridium SSAS Box for the SAILOR SC4000 Iridium System. The solution is designed to be cost-effective, easy to install, user-friendly and reliable - all benefits for which SAILOR is well-known. The SAILOR Iridium SSAS Box is dedicated to the alert system, but the SAILOR SC4000 Iridium Terminal can also be used for standard Iridium features, such as voice and data communications.

The SAILOR Iridium SSAS solution has been developed to meet the requirements for Ship Security Alert Systems as specified in the amendments to SOLAS, chapter XI, Annex 6 (Dec. 2002). The details are described in the International Ship and Port Facility Security Code (ISPS Code)*. The objective of this code is to establish an international framework for detecting and assessing security threats and taking preventive measures against security incidents affecting ships or port facilities used in international trade.

The following vessels are required to have a Ship Security Alert System installed:

Type of vessel	Deadlines for implementation*
Passenger ships, including high-speed passenger crafts	No later than the first survey on or after 1 July 2004
Oil tankers, chemical tankers, gas carriers, bulk carriers and high-speed cargo vessels of 500 gross tonnage and upwards	No later than the first survey on or after 1 July 2004
Other cargo vessels of 500 gross tonnage and upwards	No later than the first survey on or after 1 July 2006

* ISPS CODE, 2003 Edition, International Maritime Organization, ISBN 92-801-5149-5

Approvals

IMO and the International Committee have not specified the required technical details for an SSAS system, but have laid out flexible guidelines for SSAS solutions. This provides manufacturers with an opportunity to develop systems that are not completely unified, thus making it more difficult for an aggressor on board a vessel to identify the equipment. National Authorities or the relevant Classification Society must approve a vessel’s SSAS installation as part of the Ship Security Plan.

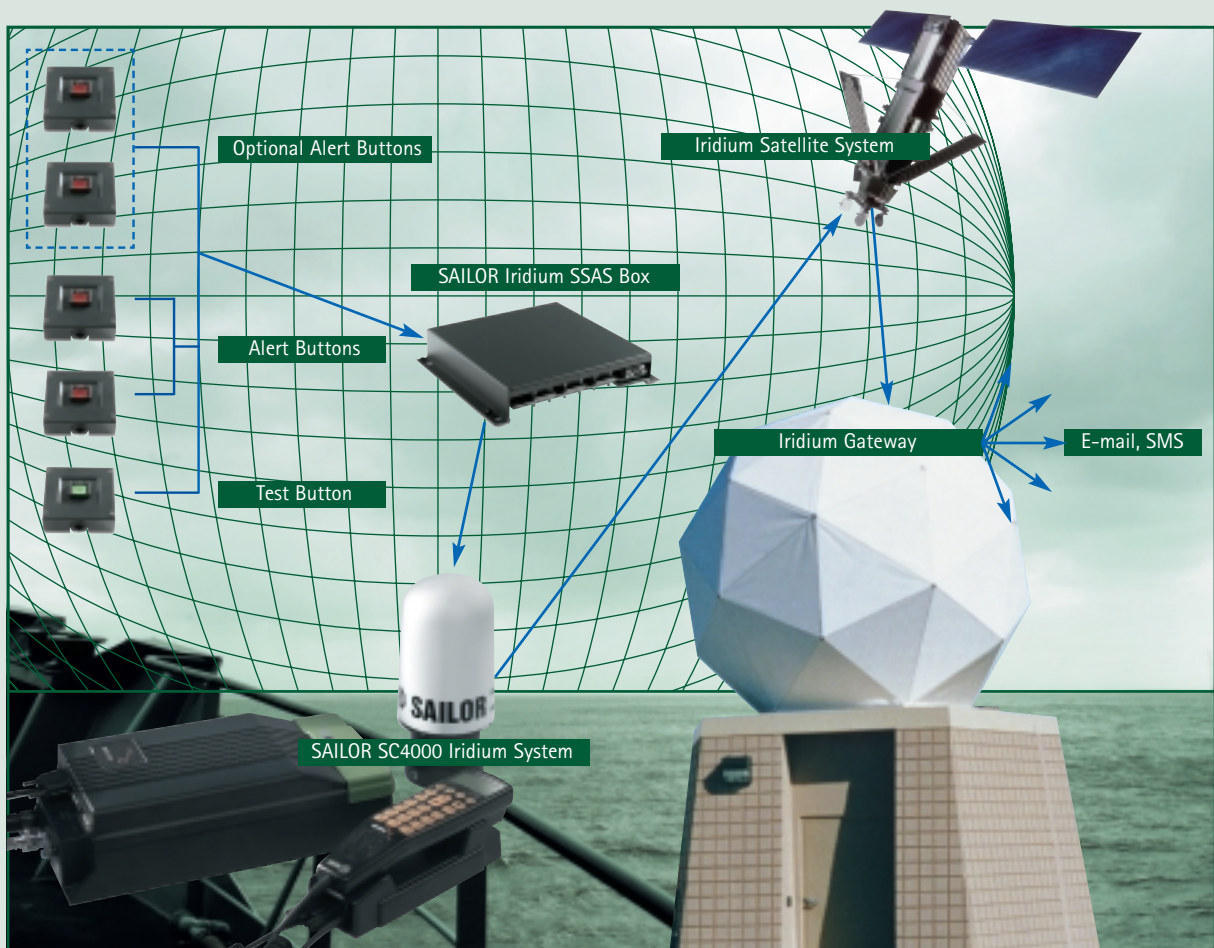


SYSTEM OVERVIEW

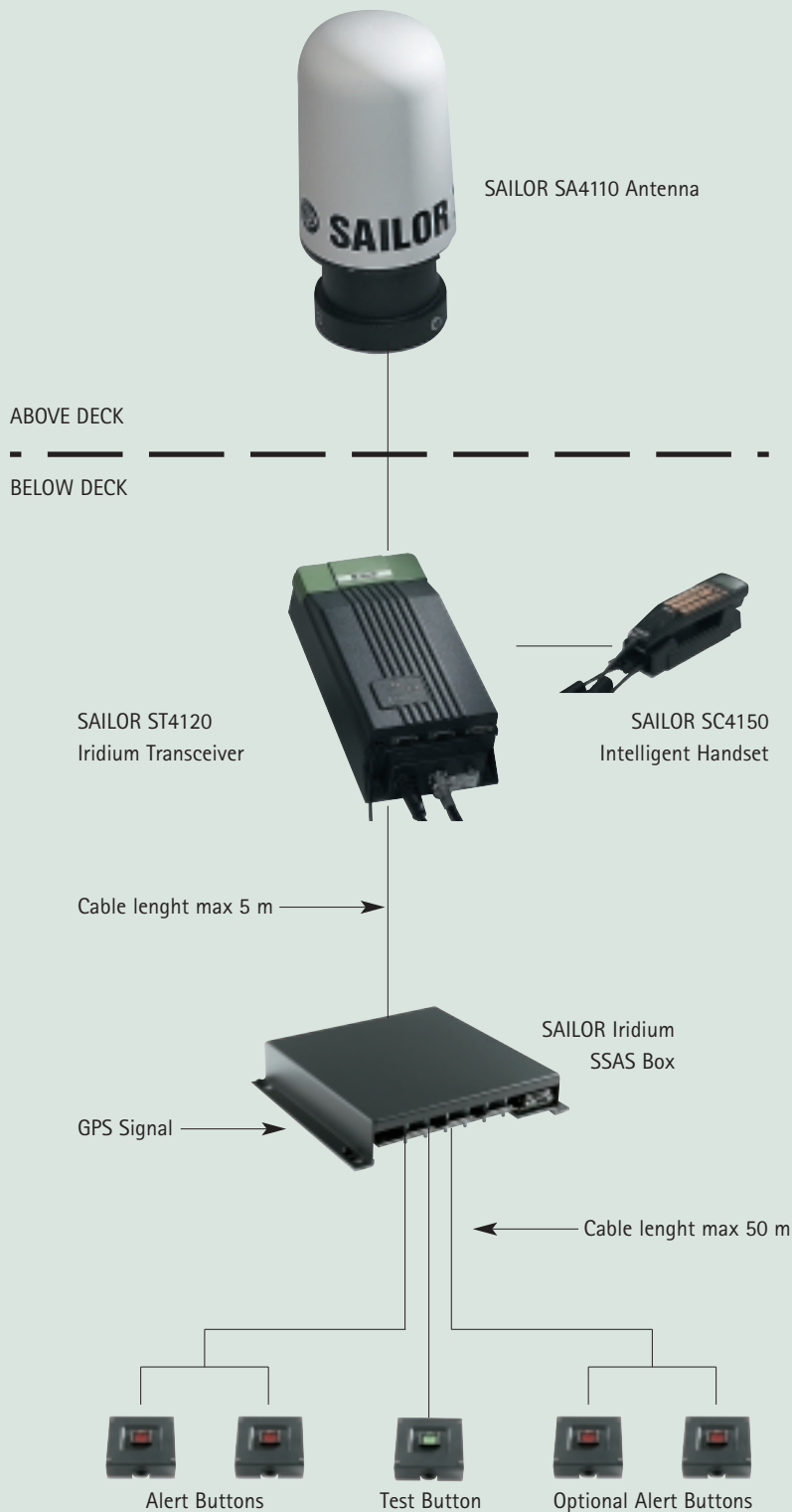
When one of the Alert Buttons is activated, an alert is generated and transmitted through the SAILOR SC4000 Iridium System. The alert

includes the identification of the vessel and its position. The alert is delivered through the Iridium satellite system and directed to the recipient from the Iridium Gateway as an e-mail or ordinary SMS to a pre-defined recipient. This is typically the Research and Rescue

Centre in the vessel's country of registration. The alert is transmitted continuously at a pre-defined interval until deactivated. It can also be directed to additional recipients, e.g. the shipowner's office, who can thus track the position of the vessel.



Configuration



SAILOR reserves the right to alter product specifications without prior notice

Technical Specifications

FREQUENCY RANGE

Terminal - Satellite	1616 - 1626.5 MHz (L-Band)
Intersatellite	23.18 - 23.38 GHz (Ka-Band)

MODULATION (INFORMATION RATE)

Voice/data	2.4 kbit/s O-QPSK
Compressed data	10 kbit/s O-QPSK

ABOVE DECK EQUIPMENT

Antenna	Helical, omnidirectional 210° (3 dB bandwidth) Fiberglass ϕ 100 mm
Link margin	16 dB

INTERFACE

Handset	600 Ω /8-wire, CAN-control 76 kbit/sec
Telephone/PABX	RJ-11, 2-wire, 600 Ω
Data	RS232, standard serial
Position information	NMEA 0183
SSAS programming	LAN, ethernet, TCP/IP 10/100 Mbps

POWER SUPPLY

DC	10-32 V DC
AC - optional (ext. power supply)	100-230 V

POWER CONSUMPTION

Transmission, SC4000	25 Watt
Stand-by, SC4000	8 Watt
SSAS Box	10 Watt

ENVIRONMENTAL CONDITIONS

Temperature	ADE -35°C to +55°C
Relative humidity	Up to 95% at 40°C
Icing (survival only)	Up to 25 mm of ice
Precipitation	Up to 100 mm/hour
Wind (velocity)	Up to 100 knots
Vibration	IME: 2 - 50 Hz +/- 1 g EME: 4 - 33 Hz +/- 1 g

ANTENNA TRACKING CAPABILITY

Turn	Omnidirectional antenna
Roll/Pitch	Tilt to any direction upto 20° from horizontal.
Yaw	Satellite elevation > 8°

SSAS PROGRAMMING

Via PC software



SAILOR Iridium SSAS Solution

The SAILOR Iridium SSAS Box and SAILOR SC4000 Iridium system are specially designed for use in harsh maritime environments. They are able to withstand the wear and tear of daily operation under the toughest of conditions.

The SAILOR Iridium SSAS solution consists of

- One SAILOR Iridium SSAS Box
- Installation software
- Connection cable to the SAILOR SC4000 Iridium Terminal
- Two Alert Buttons
- One Test Button

The SAILOR SC4000 Iridium system consists of

- The SAILOR SA4110 Antenna
- The SAILOR ST4120 Transceiver
- The SAILOR SC4150 Intelligent Handset

Standard Features for the SAILOR SC4000 Iridium System

Call facilities

- System easy to use - works like a mobile phone
- Crew calling facilities
- Conference calls

Accessory

- Cable for buttons

Optional

- Extra Alert Buttons
- SAILOR N1635 Power Supply

The SAILOR Iridium SSAS solution is not a stand-alone system, but an add-on feature of the SAILOR SC4000 Iridium system. Users can thus benefit from a traditional Iridium subscription service.

The SAILOR SC4000 Iridium system is easy to use - it works like a mobile phone, and only one telephone number is needed no matter where the system is located.

In order to make use of the SSAS solution, a SAILOR SC4000 Iridium system must be installed at the same time.

- Repeat call function
- Phonebook with up to 100 entries
- Call log
- 2.4 kbps data transmission and Iridium's 10 kbps compressed data service

Installation

- Up to 3 intelligent handsets in any one system
- Direct connection for PABX or standard telephones
- Easily accessed SIM-card reader
- Easy to install

Features

- Access to all other Iridium services in the complete installation
- No extra subscription or signing fees apart from the standard Iridium subscription
- Cost-effective
- Easy installation
- True global coverage
- Reliable and well-known system
- Option of having four Alert Buttons (two are mandatory)
- Alert messages can be sent to several recipients
- The alert messages can be resent at a pre-defined interval

Design

- Built-in loudspeaker
- Intelligent Man Machine Interface (MMI)
- Low power consumption
- Small, light-weight antenna with no moving parts
- Compact design



A FRIEND IN NEED IS A FRIEND INDEED, the saying goes; and truly, SAILOR is committed to being there for you should a problem arise. What is more, we want to make sure that you are always on safe ground, even when you are on the open sea. That is why we operate under the maxim: "SAILOR – When safety counts".

With more than 50 years of experience in the market, SAILOR is a true

professional. We know that we have to earn the loyalty of our customers. That is why nearly 15% of our annual turnover is reinvested in research and development and more than one employee in ten is engaged in finding solutions to the challenges of tomorrow.

Today, SAILOR provides a well-known range of communications products that includes everything from radios for

the leisure market to equipment for fishing vessels and complete communications solutions for the deep sea sector. The SAILOR brand has become synonymous with reliable and technologically superior radio equipment – and covers everything from basic VHF units to state-of-the-art satellite systems, AIS (Automatic Identification System), SSAS (Ship Security Alert Systems) and complete compact GMDSS solutions.



 **SAILOR**
When safety counts

SAILOR® · Porsvej 2 · PO Box 7071 · 9200 Aalborg SV · Denmark
Tel: +45 9634 6100 · Fax: +45 9634 6101 · sailor@sailor.dk · www.sailor.dk