

SAILOR SC4000 IRIDIUM

SAILOR®

KEEP IN TOUCH FROM POLE TO POLE



IRIDIUM

Thrane & Thrane

TRULY GLOBAL, TRULY REASONABLE

Keeping in touch with the shipping company, other ships or with loved ones at home is vital for any vessel crossing the oceans. With the SAILOR SC4000 Iridium system from Thrane & Thrane, ocean-going ships of all kinds get a very cost effective satellite telephone solution for seamen of all stripes.

The SAILOR SC4000 Iridium telephone system is the ideal satellite communication solution and well suited for all types of vessels cruising the high sea – from yachts to fishing vessels, from coasters to large merchant ships, from coast guards to naval vessels. With true global coverage and advantageous airtime rates, the SAILOR SC4000 Iridium is the obvious choice for anyone sailing along foreign coasts with high GSM roaming fees - and onwards to as far as the arctic seas.

The Iridium Satellite Network

Iridium is a reliable and truly global satellite network for telecommunications. Its 66 cross-linked low orbiting satellites form a world-wide grid providing real global coverage. From pole to pole, a satellite is always in sight and ready to handle your call. A convenient assurance, but more importantly, a crucial safety factor keeping peace of mind. Iridium offers very attractive airtime rates and executes trouble free Iridium-to-Iridium and Iridium-to-shore calls and vice versa.

Constructed to Last

The SAILOR SC4000 is extremely sturdy and designed specifically for the harsh maritime environment being able to withstand even the toughest conditions at sea. Based on the original SAILOR reliability, it is made for rough life and usage and is approved according to international maritime standards.

Global Voice for Crew Calling

The sea can be a lonely place of work. Family, friends and loved ones are thousands of miles away. Providing a solid and easily accessible communication solution for your crew will help you keep spirits and morale high on the entire voyage. The SAILOR SC4000 Iridium telephone supports a wide selection of crew calling plans and prepaid scratch cards. In fact, the SAILOR SC4000 can act as the on board telephone box, allowing each crew member to manage and control their own costs directly, so you won't have to worry about individual billing and administration costs. A simple solution. Better for you and better for the crew.

Data Capability

The standard data capability of the SAILOR SC4000 Iridium system is 2.4 kbps and can be turned up to 10 kbps by accessing Iridium's 10 kbps compressed data service. Beside basic e-mail exchange and internet access, it supports the PC based Iridium SMS service for short text message communication with other Iridium phones.



THE SAILOR SC4000 IRIDIUM TELEPHONE FROM THRANE & THRANE

The Antenna

In spite of its very slim and delicate design, the SAILOR SC4000 antenna is very sturdy. It has no moving parts, and the helix construction is coated with glass-enforced epoxy, which is highly weather-resistant and able to withstand the extreme conditions at sea.

The Intelligent Handset

The SAILOR SC4150 is handset and control unit in one. Navigating through a logical menu structure, it is easy to use as it is operated in exactly the same way as a conventional mobile phone. The large LCD display shows all the major functions and includes system surveillance and all the usual mobile phone functions. As it is equipped with a small but efficient loudspeaker, incoming calls are easy to hear – even in wheelhouses and other noisy environments.

The Iridium Transceiver

The robust SAILOR ST4120 transceiver features metal protective housing for professional maritime installations. The easy access to the SIM card reader allows crew members straightforward insertion of their own SIM cards. The transceiver is

easy to install and is the central hub of the entire SAILOR SC4000 Iridium system.

Connectivity, Accessories and other functions

A total of four SC4150 handsets can be applied, providing maximum flexibility as both to users and locations. The SAILOR ST4120 Iridium transceiver also features RS232 serial interface for PC connection and NMEA input, as well as RJ11 for an additional analogue phone or a standard PABX system, allowing any attached phone on board to make or receive calls.

Ship Security Alert System (SSAS)

The SAILOR SC4000 Iridium system is SSAS compatible with the addition of the SAILOR H4122 SSAS kit. The SSAS functionality meets all requirements of SOLAS resolution XI-2/6 and does not require extra subscription or signing fees apart from the standard Iridium subscription.

With the Iridium Tracking System (ITS), the SAILOR SC4000 Iridium can deliver GPS positions or be tracked at any time within regular intervals configured on ship or from shore.



The Basis of your SSAS Solution

The SOLAS Resolution XI-2/6 requires vessels of +500 GT to carry a Ship Security Alert System (SSAS) on board. The SAILOR SC4000 Iridium can easily be combined with a SSAS kit complying with all requirements and approved by the major classification societies.

The SSAS add-on solution is simple to install, and consists of a SSAS connection box, 2 alert buttons and one test button. It is thus an obvious choice if you are required to fit an SSAS and need the voice communication as well.

Iridium SSAS Benefits:

- Complies with SOLAS XI-2/6 resolution
- No additional SSAS signing fees - apart from the standard Iridium subscription
- True global coverage
- SSAS alerts transmitted directly to specific recipients
- Easy configuration of SSAS recipients and retransmission interval
- Cost effective solution
- Simple installation
- Up to four alert buttons possible
- Web-based tracking solution available

Main Features

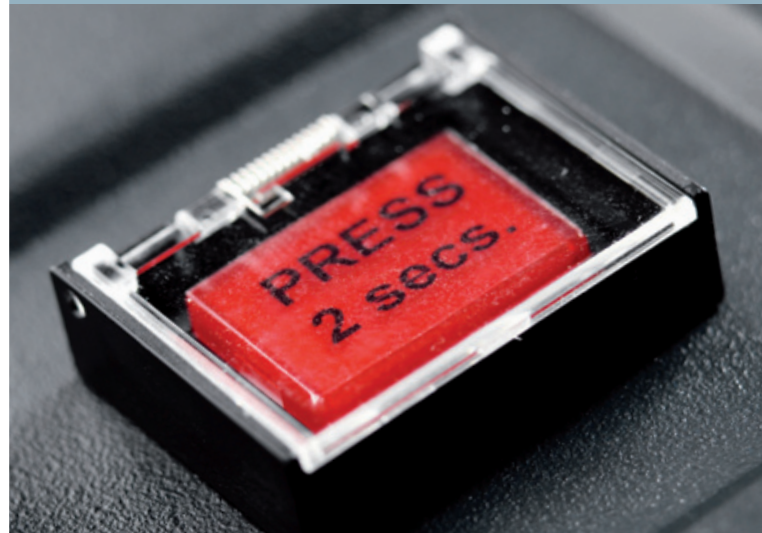
- True global coverage
- Attractive airtime rates – one global rate
- Global voice and crew calling
- Individual user billing
- On board telephone box

Handset

- Easy to use; works like a mobile phone
- Address book with up to 100 telephone numbers
- Repeat call function
- Call log
- Built-in loudspeaker

System

- Up to four SAILOR SC4150 handsets for one system
- Direct connection for PABX or standard telephones
- Conference calls
- 2.4 – 10 kbps data transmission
- Basic e-mail and Internet
- Iridium SMS Service
- SSAS compatible
- Easy to install, requires a minimum of space



SA4110 Iridium Antenna

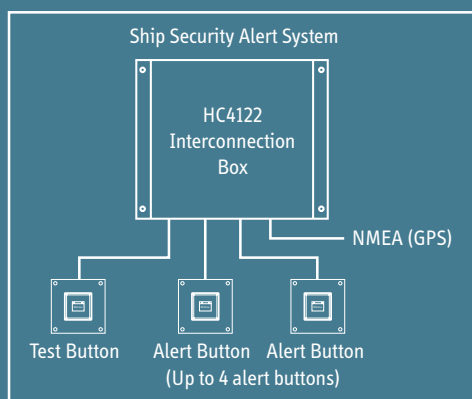


Max cable loss 3dB

SA4120 Iridium Transceiver



SC4150 Control Handset



H4196 Connection Box



Up to 3 SC4150 Control Handsets

-- RS232 (PC, Laptop)

-- RJ11 (additional phones, PABX)

-- Power Input 10-32V DC

TECHNICAL SPECIFICATIONS

GENERAL

Frequency range

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

Modulation

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

POWER SPECIFICATIONS

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|--------------------|--------------|
| Power supply: | 10 – 32 V DC |
| Power consumption: | Tx: 25 W |
| Stand-by: | 8 W |

SA 4110 ANTENNA UNIT

| | |
|-------------------------|---|
| General specifications: | Helical, omnidirectional antenna 210° (3 dB bandwidth) |
| Antenna dome: | Fiberglass |
| Link margin: | 16 dB |
| Elevation angle: | From any direction 20° from horizontal |
| Yaw: | Satellite elevation > 8° |

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 |
| Dimensions | Ø: 96 mm (3.8") Height: 140 mm (5.5") |

ST4120 TRANSCEIVER UNIT

Interfaces

| | |
|-------------------------------------|---|
| Handset: | RS-485, 8-wire, 600 Ω |
| Telephone/PABX: | RJ-11, 2-wire, 600 Ω |
| Data (for PC): | RS232 (standard serial) |
| Position information: | NMEA 0183 |
| Set-up, SMS and SSAS configuration: | Via PC connection and software. |
| Dimensions | Width: 150 mm (5.9") Height: 309 mm (12.2") Depth: 87 mm (3.4") Weight: 2.7 kg (6 lbs) |

SC4150 CONTROL HANDSET

| | |
|------------|---|
| Dimensions | Width: 68.5 mm (2.7") Height: 209 mm (8.2") Depth: 66.5 mm (2.6") |
|------------|---|

SHIP SECURITY ALERT SPECIFICATIONS

| | |
|---------------------------------------|---|
| Number of SSAS alert and test buttons | 2 x SSAS buttons and 1 x test button (standard package) Up to 4 alert buttons possible |
| SSAS message recipients: | Multiple addressing of SSAS and test messages to the following destinations: e-mail and SMS. Fax possible through third party relay application. |
| SSAS message retransmission interval | From every 5 minutes and up to every 21 hours |

DIMENSIONS AND WEIGHT

| | |
|-----------------------------------|--|
| SAILOR HC4122 Iridium | Width: 258.5 mm (10.2") |
| SSAS box: | Height: 225.4 mm (8.9") Depth: 49 mm (1.9") Weight: 1.7 kg (3.7 lbs) |
| SSAS and SSAS Test buttons (each) | Width: 91 mm (3.6") Height: 91 mm (3.6") Depth: 37 mm (1.5") Weight: 0.3 kg (0.7 lbs) |

Specifications subject to change without prior notice.

WORLD LEADERS

Thrane & Thrane is the world's leading manufacturer of mobile satellite and maritime radio communication. We develop and market innovative and reliable communication equipment for use at sea, on land and in the air.

Innovation without limits

Our focus on new technology and constant innovation has assured us a position as preferred development partner for Inmarsat, the leading satellite service provider. We have developed the ground infrastructure for Inmarsat's new powerful I4 satellite services, and have been fundamental in the development of the new BGAN high-speed mobile communication terminals. The same engineering passion and capability is exercised in developing all maritime communication equipment.

50 years of maritime tradition

In 2004 Thrane & Thrane acquired the SAILOR brand, adding more than 50 years of experience in maritime communication to our range. Thrane & Thrane now offers a complete selection of reliable, innovative and user-friendly maritime solutions that improve safety and daily life at sea.

Our SAILOR products range from VHF and MF/HF to complete GMDSS solutions over Inmarsat-C, mini-C, mini-M, Fleet, Iridium and SSAS solutions.

World class service worldwide

When buying Thrane & Thrane you buy not only state-of-the-art technology but peace of mind. We are renowned for our World Class Service program. Distributors and service centres in harbours all over the world are supported by Thrane & Thrane so they in turn are able to support you in accordance with our World Class Standards.

On Board Service Centers – certified by Thrane & Thrane

A network of On Board Service Centers – supplementary to the distributor and dealer networks – offer on board service and repair. Every measure is taken to provide efficient first-time-fix support. All On Board Service Centers have a close relationship with Thrane & Thrane. Original spare parts are kept in stock and service engineers receive intensive factory training. Heartening to know, when both business and life depend on communication.

ON BOARD SERVICE CENTER

CERTIFIED BY
Thrane & Thrane

On Board Service Centre