

# SAILOR 6110 GMDSS System





# **SAILOR 6110 GMDSS System**

## User manual

**Document number:** 98-130753-A

**Release date:** December 23, 2010

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Please write "source for product SAILOR 3027 GMDSS Terminal" or "source for product SAILOR 6006 Message Terminal" in the memo line of your payment.

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## Safety summary

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. Thrane & Thrane assumes no liability for the customer's failure to comply with these requirements.

### Observe marked areas

Under extreme heat conditions do not touch areas of the units that are marked with this symbol, as it may result in injury.



### Microwave radiation hazards

During transmission the antenna in this system radiates Microwave Power. This radiation may be hazardous to humans close to the antenna. When the system is powered, make sure that nobody gets closer than the recommended minimum safety distance of 0.3 meters.

### Keep away from live circuits

Operating personnel must not remove equipment covers. Only qualified maintenance personal must make component replacement and internal adjustment. Under certain conditions, dangerous voltages may exist even with the cable removed. To avoid injuries, always disconnect power and discharge circuits before touching them.

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# About the manual

## Intended readers

This manual is a user manual for the SAILOR 6110 GMDSS System. The manual is intended for anyone who is using or intends to use this system. No specific skills are required to operate the SAILOR 6110. However, it is important that you observe all safety requirements listed in the beginning of this manual, and operate the system according to the guidelines in this manual.

## Manual overview

Note that this manual does not cover installation of the system. For information on installation refer to the SAILOR 6110 installation manual [1]. Part numbers for related manuals are listed in the next section.

This manual has the following chapters:

- **Introduction** contains an overview of the SAILOR 6110 and a brief description of each unit in the system.
- **Getting started** explains how start up the system. It also contains a short guide to the most important functions.
- **Using the system** explains how to use the system.
- **Troubleshooting** contains a short troubleshooting guide and explains how to check the status of the system.
- **Conformity** contains declarations of Conformity with CE directives and other information on conformity.

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## Related documents

The below list shows the documents related to this manual and to the SAILOR 6110.

Ref	Title and description	Document number
[1]	SAILOR 6110 GMDSS System, Installation manual	98-130752
[2]	SAILOR 6006 and SAILOR 6007 Message Terminal, Installation manual	98-130088
[3]	SAILOR 6101 and SAILOR 6103 Alarm Panel, Installation and user manual	98-130981
[4]	SAILOR 6081 PSU and Charger, Installation and user manual	98-130980
[5]	System 6000 GMDSS Console, Installation manual	98-131571
[6]	THRANE 6194 Terminal Control Unit, Installation and user manual	98-131593
[7]	Moxa EtherDevice Switch, EDS-205A/208A Series, Hardware Installation Guide	1802002050023



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## Typography

In this manual, typography is used as indicated below:

**Bold** is used for the following purposes:

- To emphasize words.  
Example: “Do **not** touch the antenna”.
- To indicate what the user should select in the user interface.  
Example: “Select **SETTINGS > LAN**”.

**Italic** is used to emphasize the paragraph title in cross-references.

Example: “For further information, see *Connecting Cables* on page...”.

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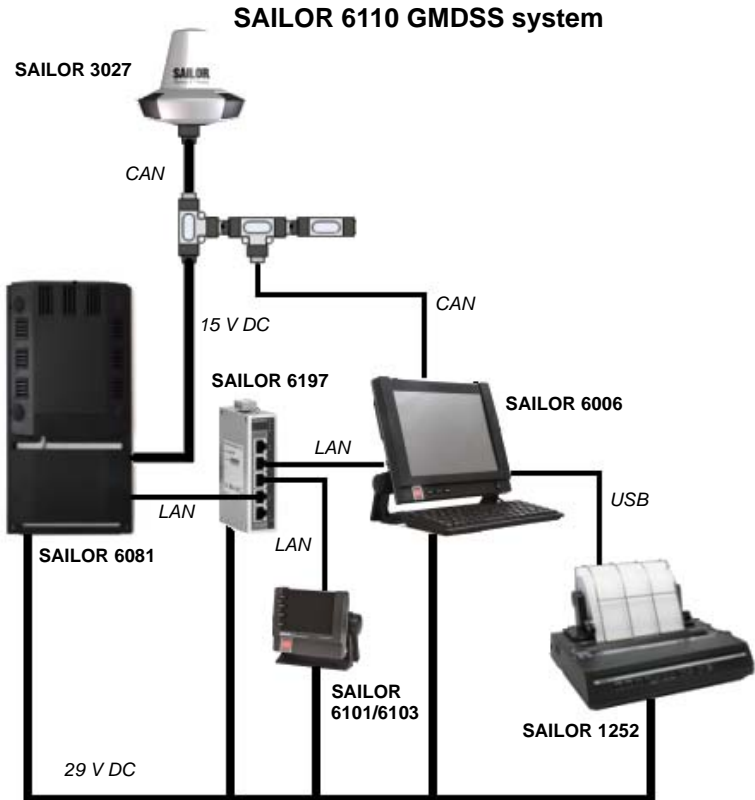
## Introduction

### Welcome

Congratulations on the purchase of your SAILOR 6110!

With the SAILOR 6110 you can send/receive data, including Distress Alerts, via satellite through the Inmarsat C network.

The drawing below shows an example of a SAILOR 6110 system.



This chapter has the following sections:

- *System overview*
- *System units*
- *User interface*
- *The Inmarsat C services*

# System overview

## GMDSS

Global Maritime Distress and Safety System or GMDSS is a communication system to enhance safety at sea. This global system comprises both radio and satellite based technology carriers, and is currently mandatory for all vessels of over 300 GT and vessels otherwise included in SOLAS (the International Convention for the Safety of Life at Sea).

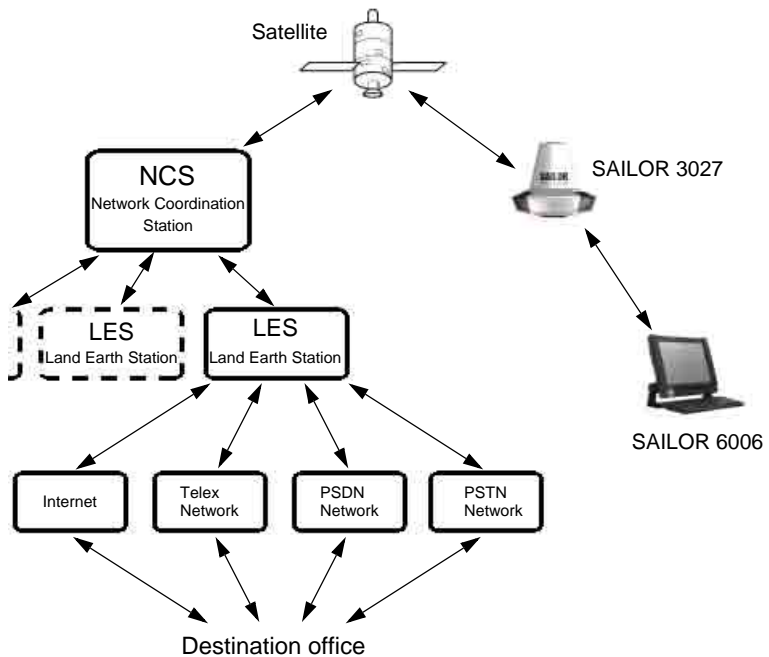
Overall satcom GMDSS service is operated by Inmarsat and overseen by IMSO, the International Mobile Satellite Organization and adheres to the IMO, the International Maritime Organization.

The SAILOR 6110 is a GMDSS approved communication system designed for use with the Inmarsat C satellite network.

## The SAILOR 6110 GMDSS System

The Inmarsat C satellite network is the link between the SAILOR 6110 and the destination office. It uses four geostationary satellites to cover the world. For each satellite there is an NCS, Network Coordination Station, handling registration of the mobile unit (in this case the SAILOR 3027) in the Inmarsat C system.

Each NCS is associated with a number of LESs, Land Earth Stations, which handle the transmission between the mobile units and the destination office.



The SAILOR 3027 is connected to a SAILOR 6006 Message Terminal, where you can read and write messages and send Distress Alerts. This communication is transmitted via the SAILOR 3027 to/from the Inmarsat C satellite network.

## System units

The basic SAILOR 6110 consists of the following units:

- **SAILOR 3027 GMDSS Terminal.**  
Contains both transceiver, GPS receiver and omni-directional antenna for the Inmarsat C system. Connects to other equipment, primarily the SAILOR 6006, through a CAN interface carrying both power and bi-directional communication.
- **SAILOR 6006 Message Terminal.**  
Enables you to send and receive messages, monitor system status and test the system. The SAILOR 6006 has a touch-screen interface and comes with a SAILOR 6001 keyboard.
- **SAILOR 1252 Printer.**  
Prints messages and reports from the SAILOR 6006.
- **SAILOR 6101/6103 Alarm Panel.**  
Enables you to send Distress alerts. SAILOR 6101 connects to Inmarsat C.  
  
SAILOR 6103 connects to Inmarsat C, MF/HF or VHF.



For a more detailed description of the units, refer to the installation manual for the SAILOR 6110 GMDSS System.

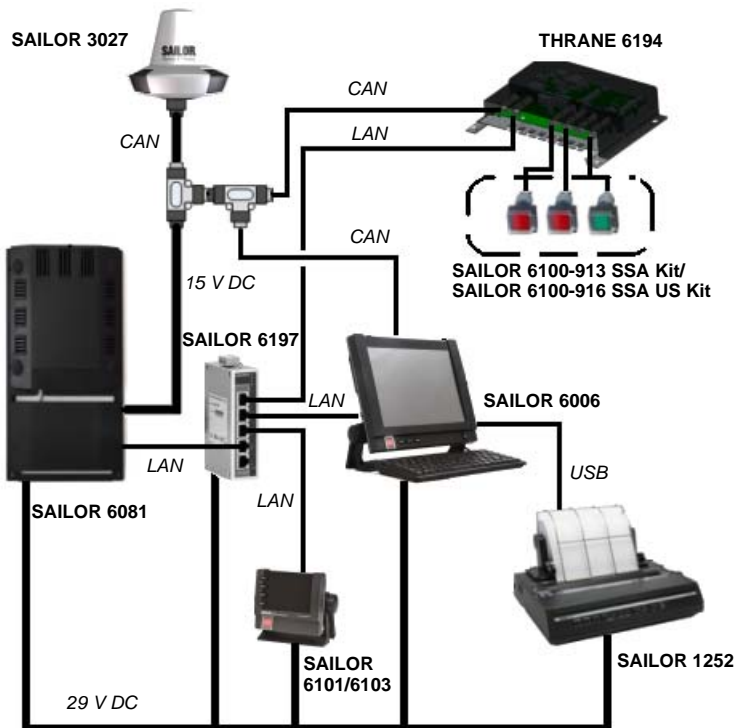


## SSA option

The Ship Security Alert System provides ships with alarm buttons, which can be activated in case of a piracy or terrorist attack. The alarm is a covert signal that has no sound and no flashing lights, so it is not seen nor heard by any intruders on board the ship.

The SSA option consists of the THRANE 6194 Terminal Control Unit and three to six SSA alarm buttons and one test button. It connects to the SAILOR 6110 system through the CAN interface. The CAN interface also provides the power for the SSA option.

### SAILOR 6110 GMDSS system with SSA



For further information on the SSA option, refer to the manual for the THRANE 6194 Terminal Control Unit , [6].

## User interface

The main user interface for the SAILOR 6110 is in the SAILOR 6006 Message Terminal. With the Message Terminal you can send and receive messages, send Distress Alerts, view system status and configure the system.



The Message Terminal has a touch-screen for operating the system. You can also use the keyboard, which is mandatory in GMDSS systems.



You must also have an alarm panel in your system. For information how to use it, see the manual for your alarm panel.

To get started, see *Getting started* on page 11.

For details on how to operate the system, see *Using the system* on page 15.

## The Inmarsat C services

The SAILOR 6110 supports the following services through the Inmarsat C system. For a description of these services, see the next sections.

- Distress Alerting
- Enhanced Group Call (EGC)
- Message transmission
- Position reporting
- Polling

### *Distress Alerting and Distress priority messaging*

If a ship or a crew is in grave and imminent danger, maritime Inmarsat C and some mini-C models are used to send a Distress Alert by pressing a dedicated Distress button.

The alert contains information on the ship's identity (Inmarsat C mobile number), ship's position (latitude and longitude), ship's course and speed, nature of Distress, date / time when the alert was sent and time when the ship's position was last updated.

All Distress Alerts are automatically routed through the addressed LES to an associated Maritime Rescue Coordination Centre (MRCC), which will establish communication with the ship and launch the search and rescue (SAR) operation the ship may need.

After sending the initial Distress Alert, if time permits, it is possible to send a more detailed Distress priority message to give more details about the Distress event and ask for the required assistance.

The Distress priority message should be sent via the same LES as the Distress Alert, to ensure that it is delivered automatically to the same MRCC.

### *Enhanced Group Calling (EGC)*

The Inmarsat C system has a special capability known as Enhanced Group Call (EGC), which enables authorised information providers to broadcast messages

to selected groups of ships. Reception by ships that are fitted with Inmarsat C or mini-C terminals is automatic. A special header is added by the system to the EGC message to indicate the group of mobiles or the geographical area to which the message is to be sent.

Two EGC services are available:

- EGC SafetyNET - the international safety service, which allows authorised maritime safety information (MSI) providers, such as meteorological offices, hydrographic officers and MRCCs to broadcast messages to all ships in certain geographical areas.

MSI includes navigational and meteorological warnings, meteorological forecasts and other urgent safety-related information, which is addressed to all ships in NAVAREA / METAREA, user-defined circular or rectangular area or coastal area.

Reception of SafetyNET messages is a mandatory function of the GMDSS equipment that is required to be carried in certain ships under the provision of the International Maritime Organisation's Safety Of Life At Sea (SOLAS) convention.

- EGC FleetNET - the international commercial service, which allows authorised information providers, such as commercial subscription services, shipping companies or governments to broadcast messages to selected groups of vessels, each of which has registered with the information provider and been added to a FleetNET closed group / network.

For further information on EGC via Inmarsat C read the Inmarsat Maritime Communications Handbook, Chapter 6, or visit the Inmarsat Maritime Safety Services section of the Inmarsat website [www.inmarsat.com](http://www.inmarsat.com).

## *Message transmission*

**Ship to shore:** Text and data from Inmarsat C and mini-C terminals can be sent to:

- An e-mail address
- Any telex or fax (text, one way only) number
- Any computer connected to the public telephone and data networks (PSTN and PSDN), using a telephone modem number
- Another Inmarsat C / mini-C terminal
- A Short (or Special) Access Code (SAC).

The maximum message size is up to 32 Kb for Inmarsat C terminals.

**Shore to ship:** Text and data can be sent via telex, e-mail and the data and telephone (PSDN / PSTN) networks. To be able to send messages to ships, a shore-based message originator needs to be registered (to have a commercial service agreement) with an Inmarsat C service provider of their choice.

**Ship to ship:** Messages can also be sent in a ship-to-ship direction from one Inmarsat C / mini-C terminal to another.

## *Position reporting*

Most of Inmarsat C and mini-C models are integrated with Global Navigational Satellite System (GNSS) receivers, such as GPS, to provide highly reliable, round-the-clock position information of a ship, which can be used for position reporting.

The position reporting service is based on using the data reporting and polling protocol and allows a shore-based subscriber (base station or shipping company) to request position information from a vessel, as a single report or automatic reception at fixed intervals, e.g. every six hours.

A ship's terminal can also be programmed to send regular position reports to any desired destination.

The position report includes ship's identity, latitude, longitude, course, speed, date / time of the position report and time of the last position update.

### ***Data reporting and polling***

Inmarsat C users may need to acquire information (short data reports) from vessels, or to collect data automatically at fixed or variable intervals.

The data reporting service allows for the transmission of information, in packets of up to 32 bytes on request or at prearranged intervals from Inmarsat C or mini-C terminals, to shore-based customers.

Polling allows shore-based customers to interrogate an Inmarsat C or mini-C terminal or group of terminals by sending a special polling command. The polling command instructs a terminal or group of terminals to send a data report immediately, start sending regular reports, change transmission schedule of reports or perform another task of the polled terminal(s).

# Getting started

This chapter explains how to register, start up and log on your SAILOR 6110. It has the following sections:

- *Registration*
- *Starting up the system*

## Registration

Before using the SAILOR 3027 GMDSS Terminal on the Inmarsat-C system you must register the terminal to the system. In most cases the distributor has already filled in the SARF (Service Activation Registration Form) for your SAILOR 3027 when you receive your SAILOR 6110 GMDSS System.

For details on registration, see the Installation manual for the SAILOR 6110 GMDSS System.

After registration you must use the SAILOR 6006 to set up the mobile number in the SAILOR 3027. See *Setting the mobile number in the SAILOR 3027* on page 58.

## Starting up the system

### Powering the system

When all units are connected correctly and you have registered the SAILOR 3027, do as follows to power the system:

1. Make sure the power source is on.
2. Switch on the SAILOR 6006.
  - Use the power switch in the right side of the SAILOR 6006, or
  - if you have installed a remote on/off switch, use that instead.



The SAILOR 6006 starts up and sends a signal to switch on the SAILOR 3027. The SAILOR 6006 shows the current status in the upper right corner of the display.

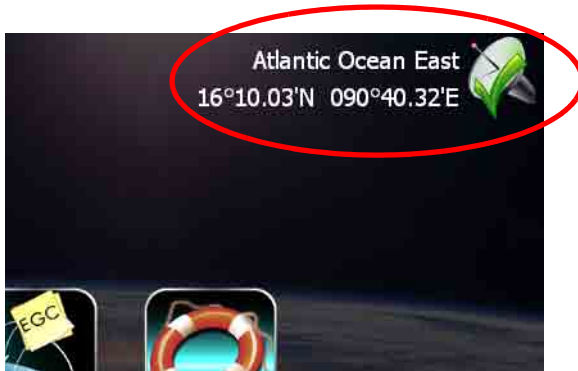


For an overview of the user interface, see *Overview of the screen* on page 20.



## Logging into the satellite network

If the system was not already logged into the Inmarsat C network, it logs in automatically at startup. The upper right corner of the display shows if the system is logged on.



If, however, the selected satellite is no longer available, you must manually select another satellite to log into.

To log into the satellite network manually, do as follows:

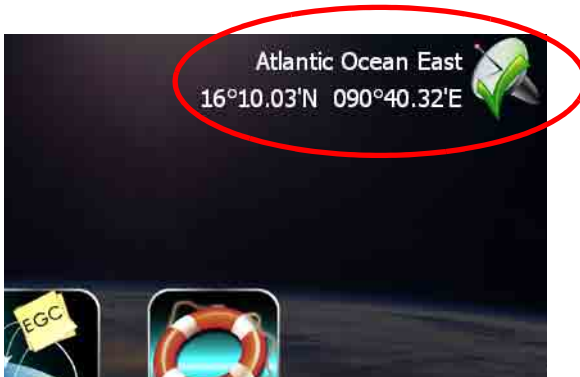
1. When the main menu of the SAILOR 6006 appears, select **Network**.



2. On the **Network Status** page select **Login**.



3. Select the Ocean Region to which you want to log in.  
If the selected satellite is available, the system will now log on.  
When the display shows the Ocean Region and the position, and there is a green check mark at the satellite symbol, the system is ready for use.



**Note** | The Ocean Region is only displayed if the system is idle and there are no errors - otherwise the text will show the current status.

## Using the system

This chapter describes how to operate the SAILOR 6110, primarily using the SAILOR 6006. It has the following sections:

- *Sending a Distress Alert*
- *Overview of SAILOR 6006 Message Terminal*
- *Menu overview*
- *Working with messages*
- *Receiving EGCs (Enhanced Group Call)*
- *Printing, saving or deleting EGCs or messages*
- *Network status*
- *Power status*
- *Viewing system details*
- *Position*
- *Changing the Distress Alert settings*
- *Changing the EGC settings*
- *Changing the Message settings*
- *Changing the Network settings*
- *Testing Distress buttons in the system*
- *Using the SAILOR 1252 Printer*

For details on the Inmarsat C services, see *The Inmarsat C services* on page 7.

## Sending a Distress Alert

**Important**

Only send a Distress Alert if you are in immediate danger!  
The Distress Alert can be compared to a MAYDAY call.

The procedure below is the same on the SAILOR 6006 Message Terminal as on the SAILOR 6101/6103 Alarm Panel.

**To send a Distress Alert**, do as follows:

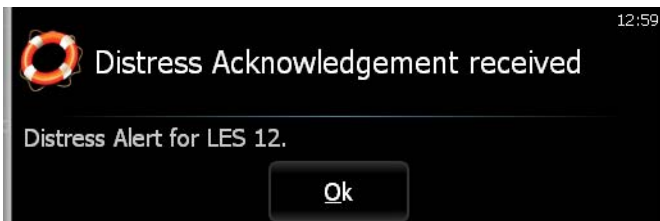
1. Open the cover for the Distress button.
2. Press and hold the button until the light is steady and the buzzer stops (more than 3 seconds).



During this time the button light flashes and the buzzer sounds. After 3 seconds the red light goes steady on and the buzzer is silent. The display shows that the message is being sent.



The display also shows when the Distress Alert is acknowledged from the LES. **Write down the LES number** - you must use the same number when you send a Distress message with more information for the MRCC.



The below table shows the behavior of the Distress button on the SAILOR 6006.

Behavior	Meaning
Button light flashes, buzzer sounds	The Distress button is pressed. Hold until light and sound changes (more than 3 seconds).
Button light constant, buzzer is silent	The Distress Alert is being sent (normally within 10 to 30 seconds)
Button light shortly off every 15 seconds	The Distress Alert is confirmed

**Important**

The MRCC normally sends a message to the alerting unit to gather more information about the situation.

If at all possible, respond to such messages with a Distress message sent to the same LES that was used for the Distress Alert.

The LES used for the Distress Alert is shown in the Distress popup windows. An example is shown in the previous page.

For information on how to send a Distress message, see *Writing a Distress priority message* on page 23.

The MRCC may also send Distress EGCs to other ships in the area to request assistance (typically as Distress Relay or SAR Coordination request).

See also *Changing the Distress Alert settings* on page 50.

### *Clearing distress indications*

If you want to turn off all distress indications while a Distress Alert is still active, do as follows:

**Note**






This function will only turn off the visual and audible indications on board. It will not cancel the transmission of the Distress Alert.

1. On the SAILOR 6006, select **Distress**.
2. Select **Status**.
3. Select **Clear distress indications**.

# Overview of SAILOR 6006 Message Terminal

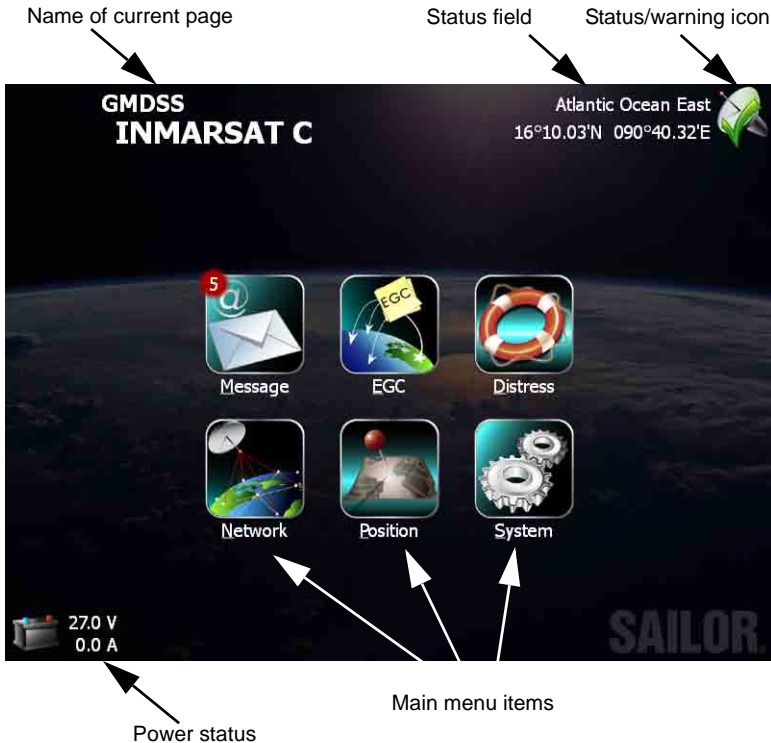
## Buttons in the front panel

The buttons in the front panel have the following functions:

Control	Function
	The Distress button is used to send a Distress Alert through the connected SAILOR 3027 terminal. See <i>Sending a Distress Alert</i> on page 16.
	The Test button is used to test the lights and sound in the buttons on the SAILOR 6006.
	The Dim button is used to dim the light in the SAILOR 6006. Push and hold to dim more/less. Each new push changes direction between more and less.
	The mute button is used to mute the SAILOR 6006 and connected equipment, such as alarm panels.
	<p><b>Without remote on/off:</b>            To switch on: Push the button            To switch off: Push and hold for 2 seconds</p> <p><b>With remote on/off:</b>            To switch on and off: The Power button cannot be used normally; use the remote on/off switch to switch the SAILOR 6006 on and off.            To restart the terminal: Push and hold for 2 seconds</p>

## Overview of the screen

Below is an overview of the main screen in the SAILOR 6006.



- **Name of current page:** In each submenu this field shows the name of the page.
- **Status field:** This field shows a short status message next to the Status/warning icon.
- **Status/warning icon:** This icon can show:



Status OK





Warnings pending



Critical error pending

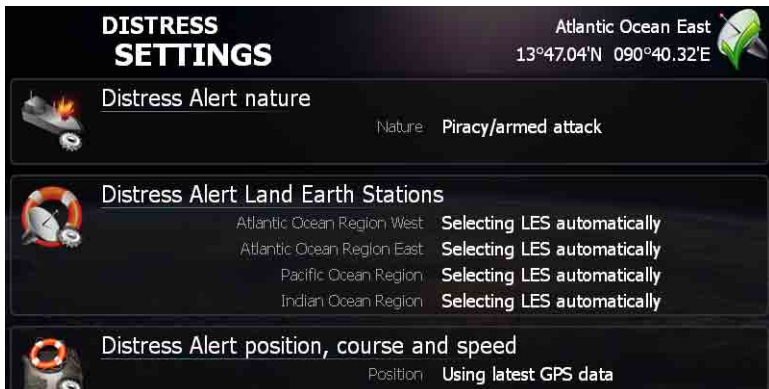
For details of warnings and errors, see *Information of events* on page 71.

- **Main menu items:** Select these items to access the submenus. For an overview of the menu system, see *Menu overview* in the next page.
- **Power status:** Shows a short status of the backup battery.

## Navigating the user interface of the SAILOR 6006

To navigate and select items in the user interface you can do one of the following:

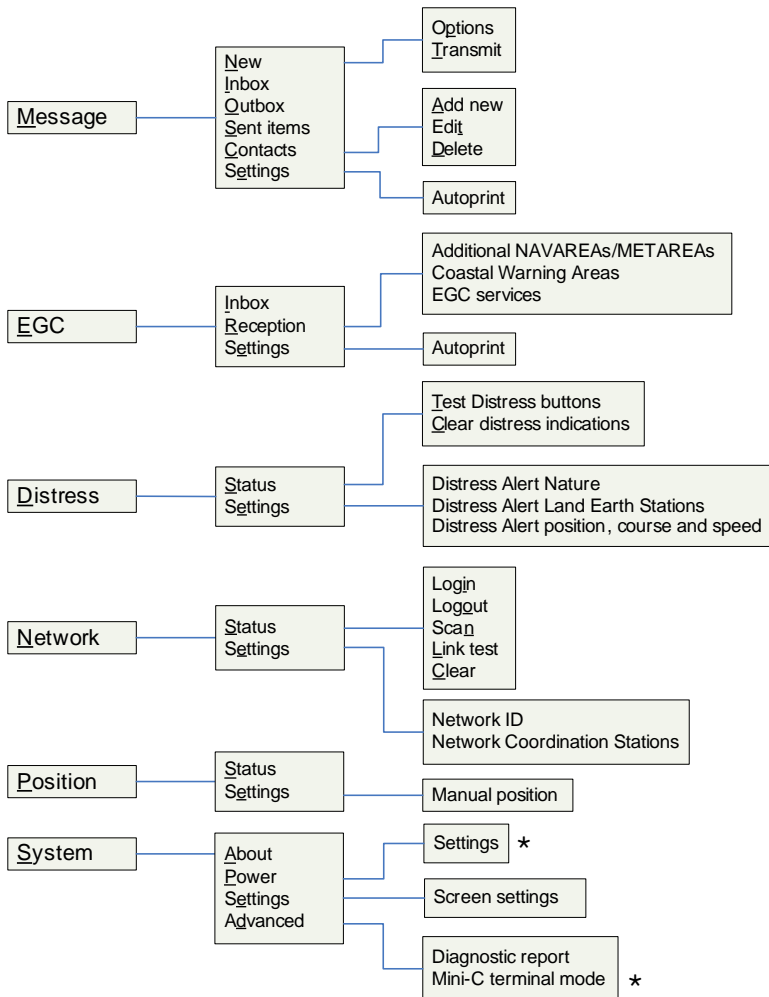
**Touch screen:** Select items by touching them with your finger on the screen of the SAILOR 6006. Items in a grey frame such as in the example below can be selected by touching anywhere within the frame.



**Keyboard:** Use the tab and arrow keys to navigate through items and press **Space** to select them. When an item has an underlined letter, you may type **Alt + <the underlined letter>** to select the item, e.g. type **Alt+S** to select the System menu.

## Menu overview

The below drawing shows an overview the menu system of the SAILOR 6110 system.



The items in the menu overview are described in the following sections. Items marked \* are described in the installation manual for the SAILOR 6110 system.

## Working with messages

### Writing a Distress priority message

**Note** Distress priority messages are sent to the MRCC only.  
Distress priority messages must be written in English.

To write a Distress priority message, do as follows:

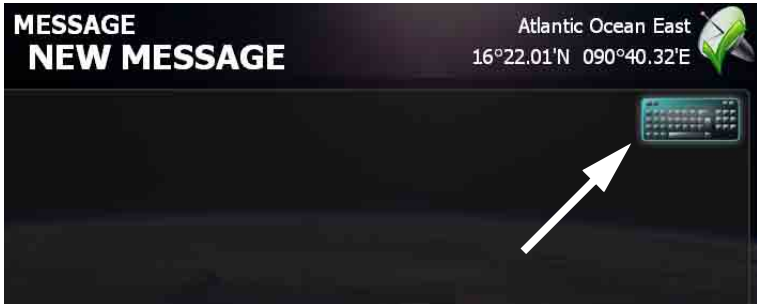
1. From the main menu, select **Message**.



2. At the bottom of the page, select **New** (may already be selected).

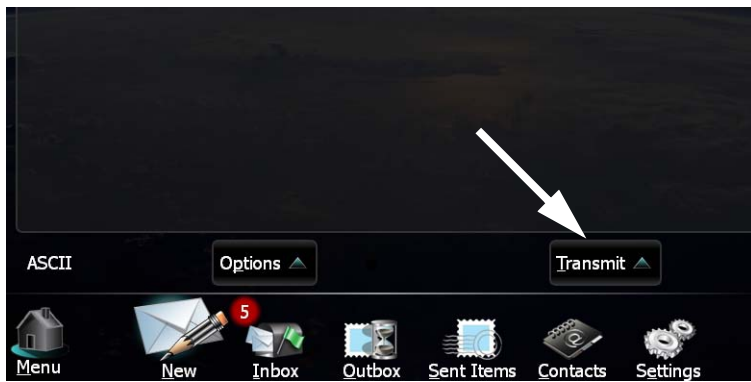


3. Use a keyboard to type your message text, or select the soft keyboard in the top right corner of the display, and use the touch-screen to type the message text.

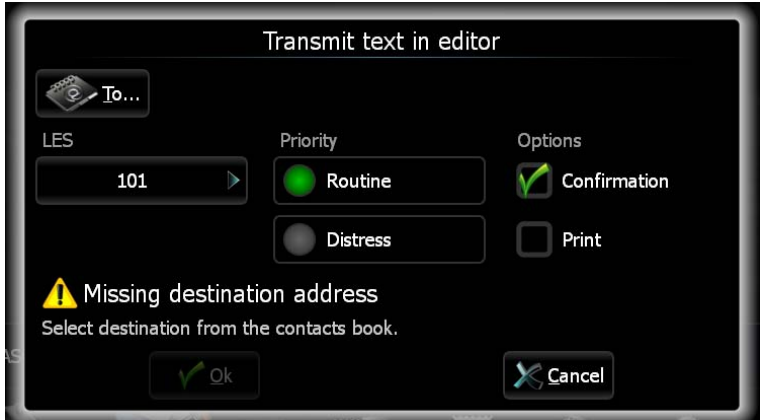


**Note** If you want to save your message without sending it, you can save it as a file. See the section *Options for writing and sending messages* on page 29.

4. When the message is ready to be sent, select **Transmit**.



5. Select **Text in editor**.



6. Select the LES to be used for sending the message, or use the already selected LES.

**Important**

The LES for the Distress priority message must be the same as the LES used from the start of the ongoing communication session.

7. Under **Priority**, select **Distress**.

You get the following popup window. Make sure your message is written in English and click **Yes** to continue.



8. If you want to print your message, select **Print**.
9. Select **OK**.

You get a message saying “Message scheduled for transmission”. Select **OK** again. The message is sent as soon as the network allows it.

**Note**

Distress priority messages are sent to the MRCC only.

You automatically get a confirmation when the message is received.

## Writing a routine priority message

To write a routine priority message, do as follows:

1. From the main menu, select **Message**.



2. At the bottom of the page, select **New** (may already be selected).

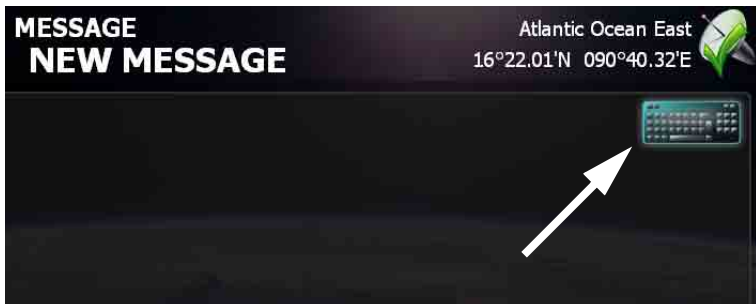


3. If you want to send a data file in stead of typing text in the text editor, skip the next steps and go directly to step 6.

- The bottom left corner shows the text format for the message. To change the text format, select **Options > New** and select **Telex (5-bit)** or **ASCII (7-bit)**. For details see the next section *Options for writing and sending messages* on page 29.

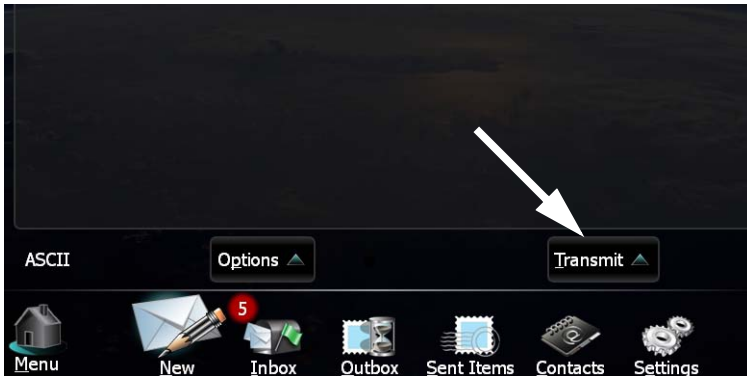


- Use a keyboard to type your message text, or select the soft keyboard in the top right corner of the display, and use the touch-screen to type the message text.

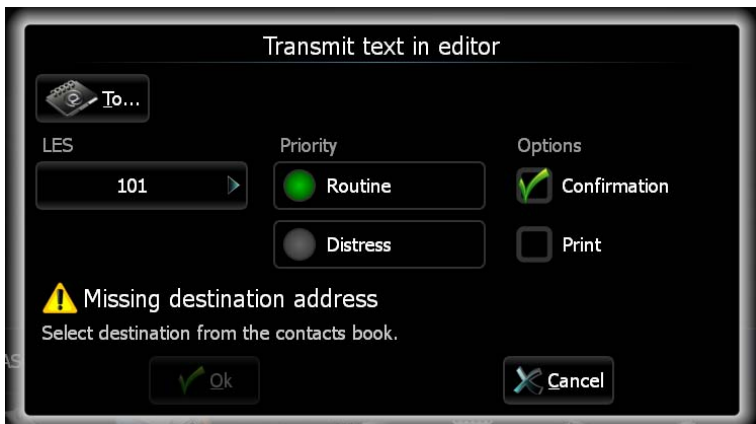

**Note**

If you want to save your message without sending it, you can save it as a file. See the next section *Options for writing and sending messages* on page 29

6. When the message is ready to be sent, select **Transmit**.



- If you want to send a data file, select **Data file**, browse to the file you want to send and select it. Note that data files are always transmitted in 8-bit format.
- If you want to send the text in the editor, select **Text in editor**.



7. Select the LES to be used for sending the message, or use the already selected LES. For a list of the LESs currently supported, see *List of currently supported LESs* on page 31.
8. Under **Priority**, select **Routine**.



9. Select **To...** in the top left corner and select the recipient(s) of the message. Then select **OK**.

**Note**

If you select more than one recipient, the address type must be the same for all recipients. The system does not support different address types for one message.

10. If you want confirmation when your message is received, select **Confirmation**.
11. If you want to print your message, select **Print**.
12. Select **OK**.  
You get a message saying “Message scheduled for transmission”. Select **OK** again. The message is sent as soon as the network allows it.

### Options for writing and sending messages



The **Options** menu in the left side of the **New message** page offers the following options when writing a message:

- **New**
  - **Telex 5-bit.** Select this option if you want the message to be as small (and fast) as possible. Note that no special characters can be used, and all letters are converted to capital letters.
  - **ASCII 7-bit.** Select this option if size and speed are not very important and/or you want to be able to use more characters and small letters.
- **Load**  
Allows you to browse for a text file to load into the message editor.

- **Save**

Allows you to browse to or type in a location where you can save your message to a file. If, for example, you have written a draft message that you want to send later, you can save the message and then load it back into the editor when you want to send it.

- **Print**

Prints the text in the message editor on the connected printer.

**List of currently supported LESs**

The table below shows the LESs supported by the service providers at the time of writing. Note that the list is dynamic, so it may not be completely up to date.

<b>Service Provider</b>	<b>LES no. AOR-W</b>	<b>LES no. AOR-E</b>	<b>LES no. POR</b>	<b>LES no. IOR</b>
Bezeq Israel	-	127	-	327
CTTC Beijing Marine	-	-	211	311
KDDI SatMail-C Japan	003	103	203	303
Morsviazputnik Russia	-	117	-	317
OTE Greece	-	120	-	305
SingTel Mail65 (SAC65)	002	102	210	328
SingTel Mail65 (SAC6500)	002	102	210	328
SingTel Mail65 (SAC6599)	002	102	210	328
Stratos Global C-email 02	002	102	202	302
Stratos Global C-email 12	012	112	212	312
Telekomunikacja Polska	-	116	-	316
Telemar X.25	004	104	204	304
Vizada SkyFile C France	021	121	221	321
Vizada SkyFile C Norway	004	104	204	304
Vizada SkyFile C USA	001	101	201	301

## Viewing messages in the Inbox

The Message icon in the main menu shows how many unread messages are in the Inbox.

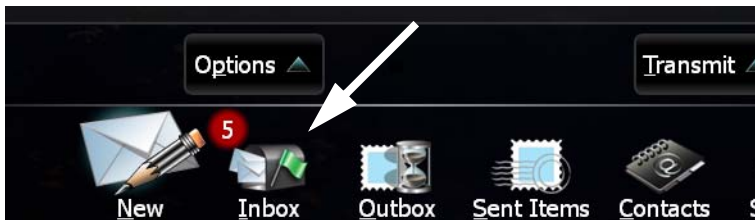
**Note**

The Inbox can hold 1000 messages. The oldest messages are automatically deleted when this limit is exceeded.



To view the messages in the Inbox, do as follows:

1. At the bottom of the **MESSAGE** page, select **Inbox**.



Apart from the time and date of the message, the list of incoming messages can show the following icons:



The message is unread



The message has been read



Distress priority message (unread)



Distress priority message (read)

2. Select the message you want to read.

For information on how to delete, print or save messages, see *Printing, saving or deleting EGCs or messages* on page 41.

## Viewing messages in the Outbox

To view messages in the Outbox, click Outbox at the bottom of the **MESSAGE** page.



The Outbox holds messages that are scheduled for transmission, but have not yet been sent.

## Viewing Sent items

**Note**

Sent items can hold 1000 messages. The oldest messages are automatically deleted when this limit is exceeded.

To view your sent messages, click **Sent items** at the bottom of the **MESSAGE** page.



The Sent items page shows messages that have been transmitted from the SAILOR 3027.

## Managing the list of Contacts

To manage your list of contacts, select **Contacts** at the bottom of the **MESSAGE** page.



To see details for a contact, select it in the left side and see the details in the window to the right.

### To add a new contact

Do as follows:

1. In the **MESSAGE CONTACTS** window, select **Add new** in the top right corner.
2. Type in the name of your contact.
3. Select the **Address type** from the drop-down list.
4. Type in the details for your contact. The format of the address/number depends on the selected address type. See the table on the next page.
5. Select **OK**.

Message formats and presentation:

Type	Format of number	Example	Presentation
E-mail	Standard e-mail address	info@thrane.com	5, 7 or 8 bit
Telex	Country code + subscriber no.	0045 99999999	5 or 7 bit
Fax	Country code + subscriber no.	0045 99999999	5, 7 or 8 bit
Inmarsat-C mobile	Mobile number	492388999	5, 7 or 8 bit
PSTN modem	Country code + subscriber no.	0045 99999999	5, 7 or 8 bit
Special access code	Pre-defined codes: <ul style="list-style-type: none"> <li>• 32 - Medical Advice</li> <li>• 33 - Technical Assistance</li> <li>• 38 - Medical Assistance</li> <li>• 39 - Maritime Assistance</li> <li>• 41 - Meteorological Reports</li> <li>• 42 - Navigational Hazards and Warnings</li> <li>• 43 - Ship Position and Sail Plan Reports</li> </ul>	32	5, 7 or 8 bit
X.25	DNIC (country code) + subscriber no.	2380 99999999	5, 7 or 8 bit



### *To edit a contact*


Do as follows:

1. In the **Contacts** window, select the contact.
2. Select **Edit**.
3. Edit the details.  
See the previous section for information on the contact details.
4. Select **OK**.

### *To delete a contact*

Do as follows:

1. In the **Contacts** window, select the contact.
2. Select **Delete**.
3. Select **Yes** to confirm.

If you want to delete more contacts, you can use the  button in the left side of the display. Then you can select the contacts you want to delete.

## Receiving EGCs (Enhanced Group Call)

### Viewing incoming EGCs

**Note** You can receive various types of EGCs in the SAILOR 6006. For details about how to set up which EGCs to receive and which EGCs to print, see *Changing the EGC settings* on page 54.

The SAILOR 6006 shows incoming EGCs.

**Note** The EGC Inbox can hold 1000 EGCs. The oldest EGCs are automatically deleted when this limit is exceeded.

To view EGCs, do as follows:

1. Select **EGC** from the main menu.



2. Select **Inbox** (may already be selected).



Apart from the time and date of the EGC, the list of incoming EGCs can show the following icons:



SafetyNET EGC. Meteorological warning, navigational warning, coastal warning and meteorological forecast.



SafetyNET EGC. Shore to ship Distress alert and search and rescue coordination



FleetNET EGC



System EGC



Default EGC. Only used if the EGC type is unknown.

The status of each EGC is shown with one of the below icons:



The EGC is unread



The EGC has been read



Distress or Urgent priority EGC (unread)




Distress or Urgent priority EGC (read)

3. Select an EGC to see the contents.


For information on how to delete, print or save EGCs, see *Printing, saving or deleting EGCs or messages* on page 41.

## Printing, saving or deleting EGCs or messages

Use the tools symbol  to print, delete or save EGCs or messages. You can use the tools symbol from within an EGC or message or from the list of EGCs or messages (Inbox, Outbox or Sent items).


### *From within a message or an EGC*

To delete, print or save a message or EGC, do as follows:

1. Select the message or EGC you want to delete, save or print.
2. Select  in the top right corner of the display.
3. Select **Delete**, **Print** or **save**.

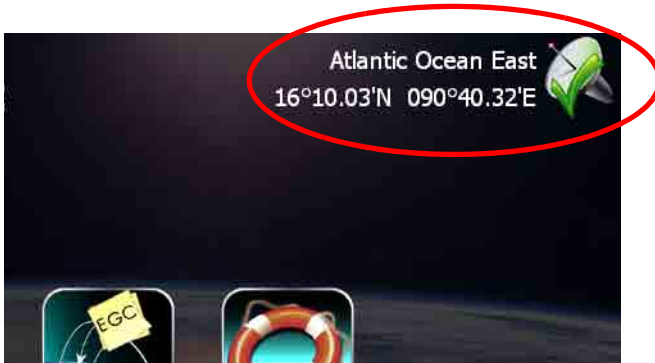
### *From the Inbox, Outbox or Sent items*

To delete or save messages or EGCs from the Inbox, Outbox or Sent items, do as follows:

1. Click  in the lower left corner of the display.
2. Select the messages or EGCs you want to delete or save.  
You may use **Select all** to select all messages or EGCs in the Inbox or Sent items, or **Clear all** to clear all selections.
3. Select **Delete** to delete the selected messages or EGCs or **save** to save the selected messages.

## Network status

The top right corner of the display shows a short text about the current status.



To view a more detailed network status, do as follows:

1. Select **Network** from the main menu.
2. Select **Status** at the bottom of the page.



## Logging into and out of the network

To log into the Inmarsat C network, select **Login** from the lower left side of the **NETWORK STATUS** page and select the region you want to log into. If you just want to use the region with the best signal, use Scan instead (see the next section).

To log out of the network, select **Logout** from the lower left side of the **NETWORK STATUS** page and select **OK**.

## Scanning the network

If you want the system to select the ocean region with the best signal, select **Scan** in the **NETWORK STATUS** page. The system will then scan for the best signal and log onto that ocean region.

## Clearing the current protocol

If you want the system to immediately stop transmitting, select **Clear** in the **NETWORK STATUS** window.

The current protocol is then cleared, and any ongoing transmission is stopped.

## Link test

**Note**

To test basic system connectivity, we recommend that you send a short message to yourself instead of using the link test. For details on how to send a message, see *Writing a routine priority message* on page 26.

It takes a long time for the system to complete the link test, and during this time the Message Terminal has limited functionality.

## Power status

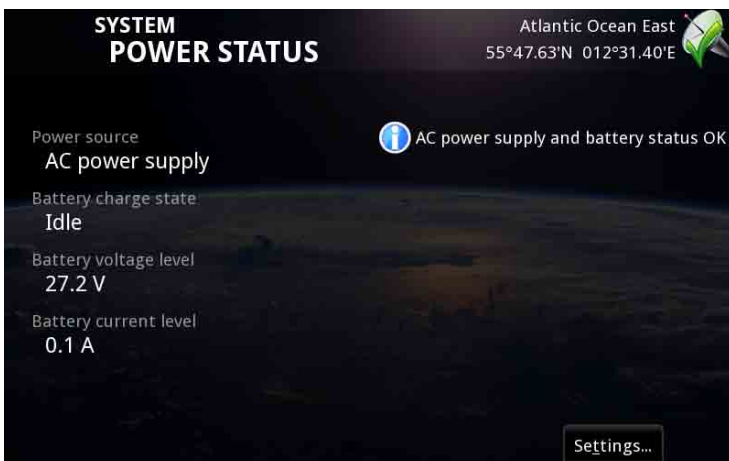
The bottom left corner of the display shows a short status of the backup battery.



- Negative current means the battery is supplying power.
- Red numbers mean that the values are outside normal operating range.

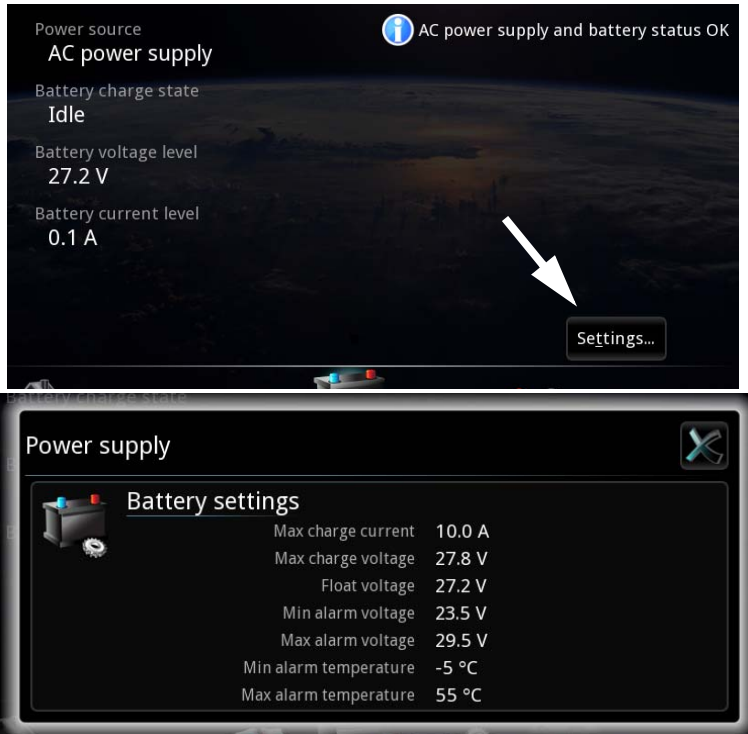
For a more detailed power status, do as follows:

1. Select **System** from the main menu.
2. Select **Power** at the bottom of the page.





3. To view the battery settings, select **Settings**.



### Important

The default battery settings are suitable for most installations. Do not change these settings unless you have a special battery type or installation that requires different settings. Only skilled personnel should change the power settings, which are password protected. Refer to the installation manual for the SAILOR 6110 system for details.

## Viewing system details

To see the type and software version of the units in the system, do as follows:

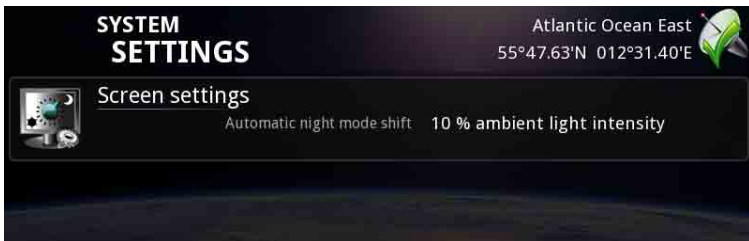
1. Select **System** from the main menu.
2. Select **About** at the bottom of the page.

This page shows name, serial number and software version of each system unit. It also shows whether the system is a primary or duplicated system.

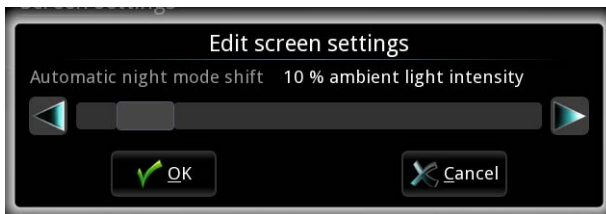
## Changing the screen settings

To change the light level at which the screen should enter night mode, do as follows:

1. Select **System** from the main menu.
2. Select **Settings**.



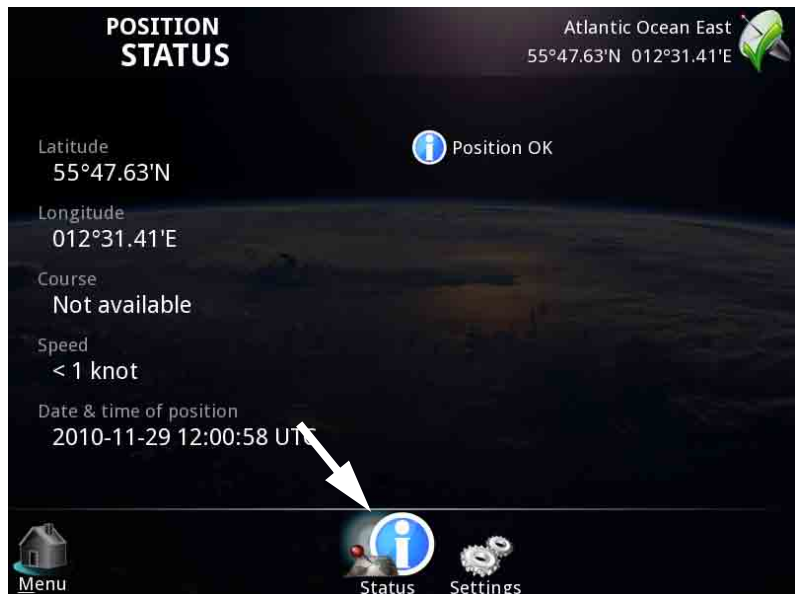
3. Select **Screen settings**.



4. Use the arrows or select and drag the pointer until the right light intensity for switching to night mode is achieved.
5. Select **OK**.

## Position

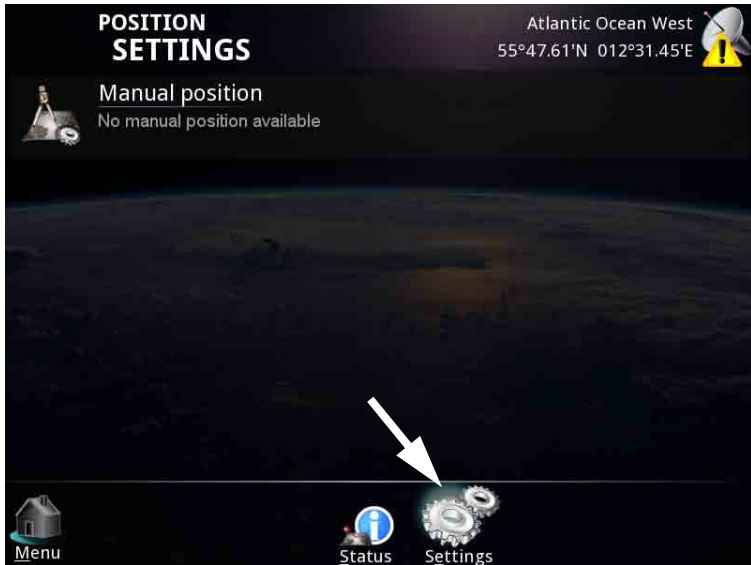
To view your current position, course and speed, select **Position** from the main menu, and then **Status** at the bottom of the page.



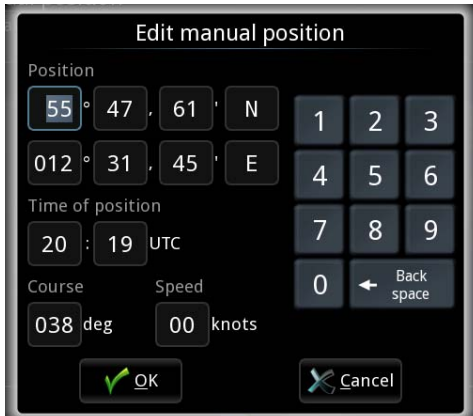
## Entering a manual position

If there is no synchronization with the positioning system, you can enter a manual position. To enter a manual position, do as follows:

1. Under **Position** select **Settings** at the bottom of the page.



2. Select **Manual position**.



3. Enter the current position data, course, speed and UTC time.
4. Select **OK**.

The manually entered position data will be used by the system until the automatic position data is available again.

## Changing the Distress Alert settings

You can temporarily change the settings for your Distress function.

**Note**

The Distress Alert Nature and the Distress Alert Position, Course and Speed settings are only valid for the current Distress Alert or maximum one hour. Then these settings are returned to the default settings.

The entered Distress LESs remain in the system.

Default settings:

- Distress Alert Nature: Unspecified
- Distress Alert Land Earth Stations: 0, 0, 0, 0  
("0" means the LES is automatically selected by the SAILOR 3027).
- Distress Alert Position, Course and Speed: Using latest GPS data

### Distress Alert nature

To change the announced nature of the Distress Alert, do as follows:

1. From the main menu of the SAILOR 6006, select **Distress**.

2. Select **Settings**.3. Select **Distress Alert nature**.4. Select the nature of the Distress Alert and select **OK**.

## Distress Alert Land Earth Stations

Default setting: 0, 0, 0, 0

To change the LESs to be used for the Distress Alert, do as follows:

1. From the **Distress Settings** menu, select **Distress Alert Land Earth Stations**.
2. Type the LES number for each Ocean Region.



3. Select **OK**.



## Distress Alert position, course and speed

Default setting: **Use GPS position.**

### Note

Do not change this setting unless you have good reasons to do so. It is normally best to show your current GPS position when sending a Distress Alert.

You may need to change the position, e.g. if the person(s) that need help are no longer onboard the ship (man overboard).

To change the position, course and/or speed to manually entered values, do as follows:

1. From the **Distress Settings** menu, select **Distress Alert position, course and speed.**
2. Select **Use manual position.**



3. Type or select the new values and select **OK.**

## Changing the EGC settings

### Reception of EGCs

To change the settings for reception of EGCs, do as follows:

1. From the main menu, select **EGC**.
2. Select **Reception**.



3. To change the additional areas from which you want to receive meteorological or navigational EGCs, select **Additional NAVAREAs /METAREAs**.

Then select or type in the numbers of the areas from which you want to receive EGCs, and select **OK**.

**Note** You always receive EGCs from the area in which you are located. The areas selected here are additional areas.

- To change the Coastal Warning Areas, select **Coastal Warning Areas** and type in the new area. Then select **OK**.
- To change the types of EGC service you want to receive, select **EGC services**. Then select the EGC services you want to receive and select **OK**.

**Note** Some SafetyNET EGCs cannot be disabled due to IMO SOLAS regulations.

## Automatic print of EGCs

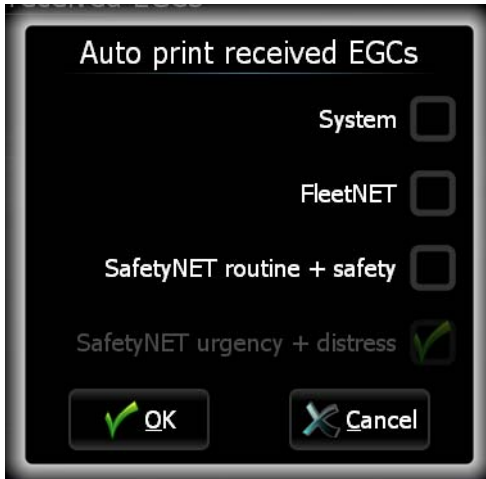
You can set up the SAILOR 6006 to automatically print certain types of EGC. Do as follows:

- From the bottom of the **EGC** page, select **Settings**.



- Select **Auto print received EGCs**.

3. Select the types of EGC you want to print automatically and select **OK**.



**Note**

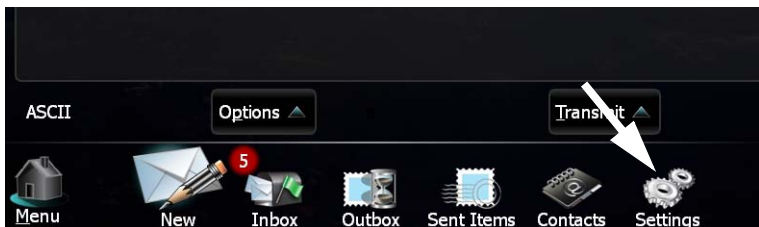
**SafetyNET urgency + distress** EGCs cannot be disabled - they are automatically sent to the printer.

## Changing the Message settings

### Automatic print of messages

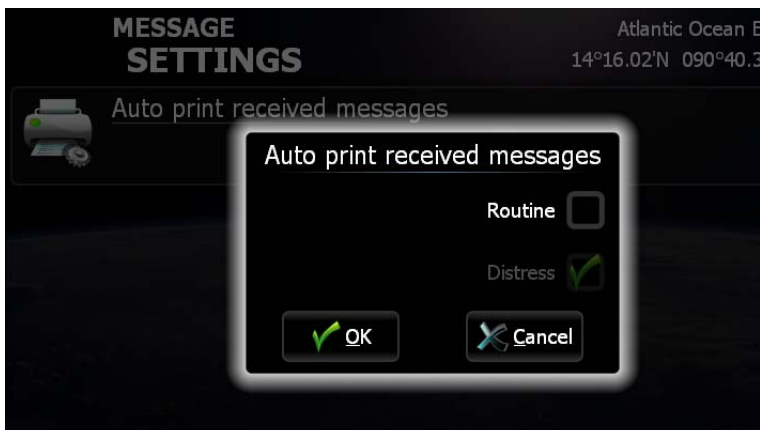
You can set up the SAILOR 6006 to automatically print certain types of messages. Do as follows:

1. From the main menu select **Message**.
2. Select **Settings**.



3. Under **Auto print received messages**, select **Routine** if you want to print Routine messages automatically when they arrive.

**Note** | Automatic print cannot be disabled for Distress messages.



4. Select **OK**.

## Changing the Network settings

### Setting the mobile number in the SAILOR 3027

After registration, the Inmarsat mobile number must be set up in the SAILOR 3027. Do as follows:

1. From the main menu of the SAILOR 6006 select **Network**.
2. Select **Settings**.



3. Check if the listed mobile number matches the mobile number in the documentation from your airtime provider.
4. If the mobile number is not correct, select **Network ID** and change the number.

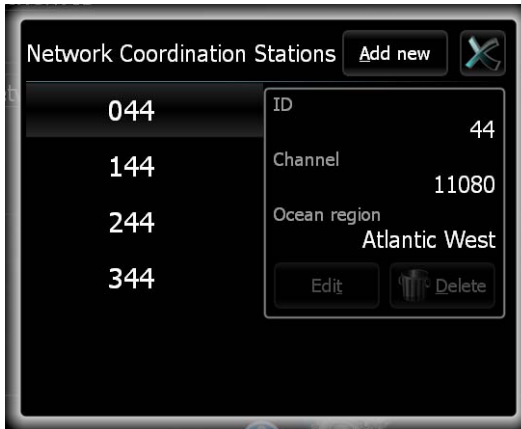


5. When the number is correct select **OK**.

## Adding Network Coordination Stations

If you need to add a Network Coordination Station (NCS), do as follows:

1. In the **NETWORK SETTINGS** page, select **Network Coordination Stations**.



2. In the top right corner, select **Add new**.

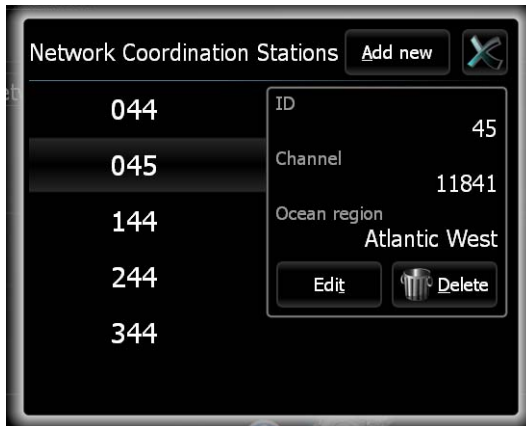


3. Type in the ID and channel number of the new NCS.
4. Select **OK**.

### Editing Network Coordination Stations

If you need to edit the information for a Network Coordination Station (NCS), do as follows:

1. In the **NETWORK SETTINGS** page, select **Network Coordination Stations**.



2. In the left column, select the NCS you want to edit.

**Note** | 044, 144, 244 and 344 cannot be edited nor deleted.

3. Select **Edit** in the right side of the page.



4. Change the ID and channel number as needed.
5. Select **OK**.



## Testing Distress buttons in the system

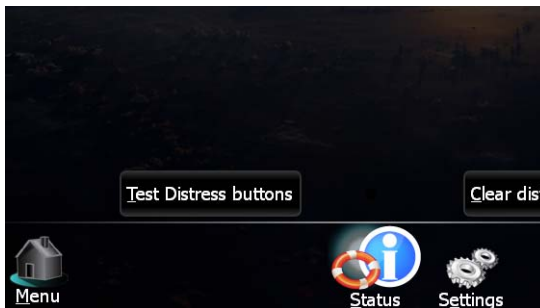
With the SAILOR 6006 you can test all **Inmarsat C** Distress buttons connected in your SAILOR 6110.

To test the Inmarsat C Distress buttons in the system, do as follows:

1. In the Message Terminal display, select **Distress**.

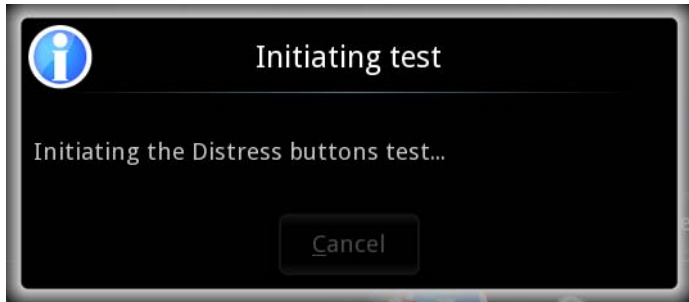


2. Select **Status** at the bottom of the page.



3. Select **Test Distress buttons**.

The test is initiated.



Wait until the following window appears.

**Important**

Before pressing any Distress buttons, make sure the display of the SAILOR 6006 shows Test in progress. Otherwise you may accidentally send a real Distress alert!



As long as the **Test in progress** window is showing, you can use Distress buttons connected to the system under test, without sending a real Distress Alert.

**Note**

Before pressing any Distress buttons, check the units as follows:

- On the alarm panel, make sure the display shows “Test” next to the Inm C unit that is active (marked with a bullet), before pressing the **Inm-C Distress** button.
- On the Message Terminal, make sure the display shows “Test in progress” before pressing the **Distress** button on the Message Terminal.

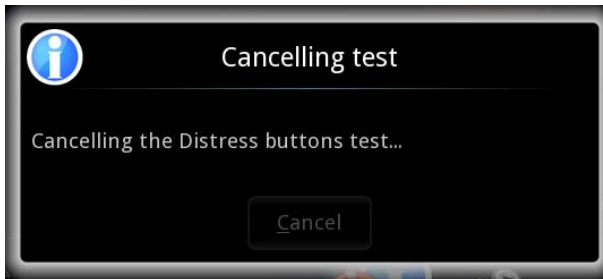
4. Test the **Inmarsat C** Distress buttons on the connected units and on the Message Terminal by pressing them as you would in a real Distress situation.

**Important**

Only **Inmarsat C** Distress buttons are included in this test. **Do not** press any other Distress buttons, unless it is a distress situation!

The light and buzzer in the Distress buttons should work the same way as in a real Distress situation. For details on the Distress buttons, see the user manual for the SAILOR 6110 GMDSS System [1].

5. When you have finished testing, or you need to send a real Distress alert, press **Cancel** in the **Test in progress** window.



## Using the SAILOR 1252 Printer

In the SAILOR 6110, the printer is primarily used to print EGCs and Safety messages from the SAILOR 6006.

For information on how to print EGCs and messages, see *Printing, saving or deleting EGCs or messages* on page 41 and *Automatic print of EGCs* on page 55.

### Printer indications in SAILOR 6006

The SAILOR 6006 Message Terminal shows a warning if:

- the printer is not connected,
- the printer is out of paper,
- there is an error in the printer, or
- the printer is off-line

### Front panel

The below drawing shows the front panel of the SAILOR 1252 Printer.



The next pages describe the functions of indicators and buttons on the printer front panel.

## Indicators

The below table shows the function of each indicator.

Indicator	Behavior	Function
SELECT	Constant light Off Flashing, and ALARM is off Flashing, and ALARM is on	Printer is on-line Printer is off-line Printer is in sleep mode Fault
ALARM	Constant light, and SELECT is off  Constant light, and SELECT is flashing  Flashing, and SELECT is on	Out of paper or paper jam (Cut sheet feeder only)  Fault  Printhead temperature protection circuit, firmware protection of line feed or space motor is operating. Normal print operation will resume after a cooling period.
POWER	Constant light	The printer is connected to the supply and is switched on.
PITCH		Shows the current character pitch selected.
MODE		Shows the current print mode selected - NLQ, Utility, HSD (HSD is SSD if 12cpi is selected).

## Buttons

### Normal functions

Indicator	Normal function
LINE FEED	Advances the paper one line for each press.
FORM FEED	Advances the paper to the next top of form (TOF) or ejects any single sheet paper from the printer.
TOF SET	Sets new top of form position.
SELECT	Sets printer on-line or off-line
PITCH	Changes the character pitch setting (cpi)
MODE	Changes the print style setting.

### Additional functions if pressed at power on

Indicator	Function if pressed at power on
SELECT	Enters the printer's Menu Mode.
TOF SET	Selects the print pitch as 17cpi.
LINE FEED	Initiates the printer self test.
SELECT and LINE FEED	Initiates the printer's continuous rolling ASCII test.
SELECT and FORM FEED	Prints all data and control commands received as HEX codes for fault finding.

# Troubleshooting

This chapter gives guidelines for troubleshooting and provides an overview of the different means of status signaling. It has the following sections:

- *Getting support*
- *Troubleshooting guide*
- *Status signaling*

## Getting support

If this manual does not provide the remedies to solve your problem, you may want to contact your Airtime Provider or your local distributor.

To help with the troubleshooting, please generate a diagnostic report as described in the next page, and enclose the diagnostic report file when asking for support.

## Airtime support

If you need assistance from your Airtime Provider, check your Airtime subscription documents for a contact number to call.

## System support

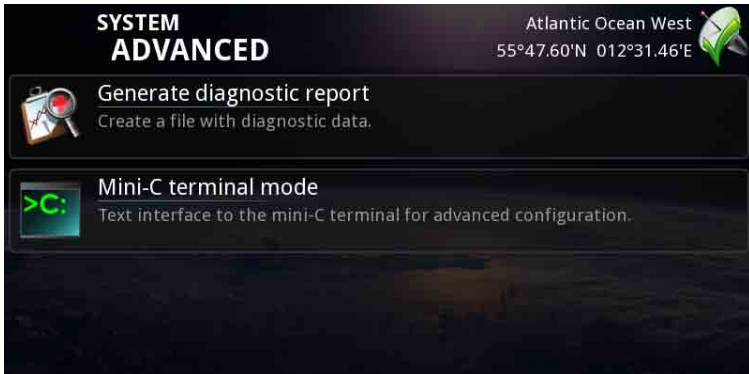
If you need assistance with problems caused by one of your system units, please call a distributor in your area.

A list of certified partners and distributors is available on Thrane & Thrane's web site: [www.thrane.com](http://www.thrane.com). Select **Maritime** and select **Where to buy** from the top menu bar.

## Generating a diagnostic report

To generate a diagnostic report, do as follows:

1. Select **System**.
2. Select **Advanced** at the bottom of the page.



3. Select **Generate diagnostic report**.
4. Choose the location where you want to save the file. You can save the file to a USB memory stick connected to the Message Terminal.



## Troubleshooting guide

The below table provides information on some of the problems that might occur, including possible causes and remedies to solve the problems.

Problem	Possible cause	Remedy
The system cannot be switched on.	The SAILOR 6006 has a remote on/off switch, so the power button is disabled.	If the SAILOR 6006 is using a remote on/off switch, use that instead of the power button.
	There is no power on the input to the SAILOR 6006.	Check that all power cables between the ship power source and the SAILOR 6006 are connected correctly, and that the power source is on.
The Message Terminal cannot switch off.	Software error	Push and hold the Power button for 10 seconds.
There is no signal or weak signal from the satellite.	The view to the satellite is blocked.	Make sure the SAILOR 3027 has a clear view in all directions. See the installation manual for details.
	The system is set up to use one specific satellite, but the system is outside coverage from that satellite.	Log into a satellite that covers your area.

<b>Problem</b>	<b>Possible cause</b>	<b>Remedy</b>
No connection between SAILOR 6006 and SAILOR 3027	The CAN cables between the SAILOR 3027 and the SAILOR 6006 are damaged or are not properly connected.	Make sure the CAN cables are properly connected and that the cables and connectors are not damaged.
No battery information in the SAILOR 6006	The Ethernet connection from the power supply is not working.	Check the Link activity indicator at the connection points in the Ethernet switch.  Check that the Ethernet cables are connected correctly and are not damaged.
No connection between SAILOR 6006 and printer	The USB cable is damaged or is not connected properly.	Check that the USB cable is connected correctly and is not damaged.
The Message Terminal shows “out of paper” although there is paper in the printer.	The paper is not placed correctly in the printer.	Adjust the paper to the left side of the printer.

## Status signaling

The SAILOR 6006 can show basic status and error messages. When an error occurs in the system, check the SAILOR 6006 for information first.

The SAILOR 1252 Printer also has some status LEDs. For further information see *Using the SAILOR 1252 Printer* on page 64.

## Status information

The upper right corner of the display shows the most important status information. You can also enter the individual pages from the main menu to see more detailed status information.

## Information of events

### *Popup windows*

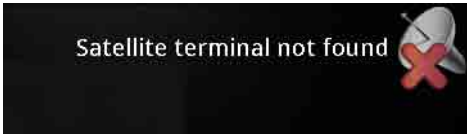
When an event requires your attention, a popup window appears.

Example:



When you have read the text, select **OK** to close the window.

If the window indicates an error that requires your action, the warning or error icon will stay in the top right corner of the display as long as the problem persists.



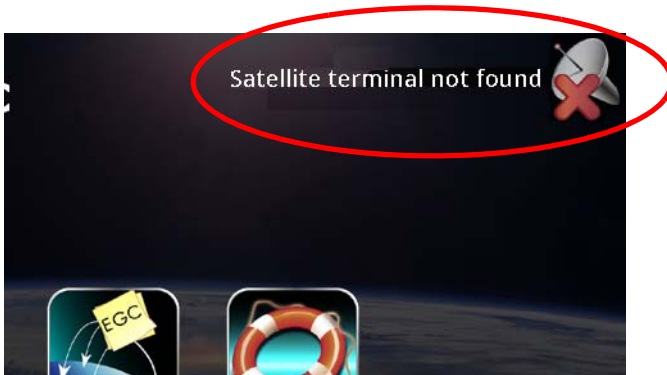
### *List of active warnings and errors*

The top right corner of the display shows a short text about the current status. The icon in the corner can change depending on the situation.

**Green check mark:** The system is logged in and there are no errors or warnings.

**Warning triangle:** A warning is pending. Select the icon or press F1 to see a list of active warnings and errors.

**Red cross:** A critical error is present. Select the icon or press F1 to see a list of active warnings and errors.



From the list of active warnings and errors you can access the event log.

## *Event log*

From the list of active errors or warnings, you can select **Event log** to see a complete list of events. The list holds 100 events, including

- Errors
- Warnings
- Informational events
- Cleared warnings and errors.



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Version 2, June 1991

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## C

**CAN** Controller-Area Network. A message based protocol designed to allow microcontrollers and devices to communicate with each other within a vehicle without a host computer.

## D

**DNIC** Data Network Identification Code

## E

**EGC** Enhanced Group Call. A type of broadcast data for ships.

## G

**GMDSS** Global Maritime Distress Safety System. The GMDSS system is intended to perform the following functions: alerting (including position determination of the unit in distress), search and rescue coordination, locating (homing), maritime safety information broadcasts, general communications, and bridge-to-bridge communications.

**GNSS** Global Navigational Satellite System

**GNU** GNU's Not Unix. A Unix-like computer operating system developed by the GNU project, ultimately aiming to be a "complete Unix-compatible software system" composed wholly of free software

**GPL** General Public License

**GPS** Global Positioning System. A system of satellites, computers, and receivers that is able to determine the latitude and longitude of a receiver on Earth by calculating the time difference for signals from different satellites to reach the receiver.

GT                      Gross Ton

**I**

IMO                    International Maritime Organization. A UN organization developing and maintaining regulatory framework for shipping. This framework includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.

IMSO                  International Maritime Satellite Organisation. An intergovernmental body established to ensure that Inmarsat continues to meet its public service obligations.

**L**

LAN                    Local Area Network. A computer network covering a small physical area, like a home, office, school or airport. The defining characteristics of LANs, in contrast to wide-area networks (WANs), include their usually higher data-transfer rates, smaller geographic area, and lack of a need for leased telecommunication lines.

LES                    Land Earth Station

LGPL                  Lesser General Public License

**M**

MRCC                  Maritime Rescue Co-ordination Centre

MSI                    Maritime Safety Information. Maritime Safety Information. An internationally coordinated network of broadcasts of Maritime Safety Information from official information providers, such as National Hydrographic Offices, National Meteorological Offices, Rescue Co-ordination Centres (RCCs), and The International Ice Patrol, for Oceanic ice hazards.

**N**

**NAVAREA** The geographic areas in which various governments are responsible for navigation and weather warnings.

**NCS** Network Coordination Station

**P**

**PSDN** Public Switched Data Network

**PSTN** Public Switched Telephone Network

**S**

**SAC** Short Access Code

**SAR** Search And Rescue

**SARF** Service Activation Registration Form. A form used to register your mobile equipment for activation of the services you are going to use.

**SOLAS** (International Convention for the) Safety Of Life At Sea. Generally regarded as the most important of all international treaties concerning the safety of merchant ships.

**SSA** Ship Security Alert. The ship security alert system is provided to a vessel for the purpose of transmitting a security alert to the shore (not to other vessel!) to indicate to a competent authority that the security of the ship is under threat or has been compromised.

**U**

**USB** Universal Serial Bus. A specification to establish communication between devices and a host controller (usually personal computers). USB is intended to replace many varieties of serial

and parallel ports. USB can connect computer peripherals such as mice, keyboards, digital cameras, printers, personal media players, flash drives, and external hard drives.

UTC

Universal Time, Coordinated. The International Atomic Time (TAI) with leap seconds added at irregular intervals to compensate for the Earth's slowing rotation. Leap seconds are used to allow UTC to closely track UT1, which is mean solar time at the Royal Observatory, Greenwich.

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98-130753-A