

INMARSAT FLEET SAFETY

System User Overview

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1. PREFACE

Fleet Safety brings Inmarsat Safety Services to tens of thousands of FleetBroadband (FB) and Fleet One (FO) customers, through the Global Maritime Distress and Safety System (GMDSS) – the emergency service at sea - including Distress Alerting, the reception of Maritime Safety Information, Voice Distress and general communications.

With the addition of a Maritime Safety Terminal (MST), ship owners and operators can combine maritime safety and broadband data services through their FleetBroadband or Fleet One terminal, protecting their fleets and crew in times of danger. Seamless coverage and 99.9% network availability provides complete peace of mind that the service is always available, and with 40+ years of safety experience, be assured that you're covered when you need it the most.

Hardware

Fleet Safety consists of a FleetBroadband antenna and Below Deck Unit (BDU) with an MST connected. The MST includes the interfaces for the ancillaries such as Keyboard, Mouse, Printer, Distress Handset, and the BAM interface.

The MST performs all mariner interactions with the Safety Services, including the processing of vessel generated Distress Alerts that are initiated by the dedicated distress button.

Fleet Safety is operated by Inmarsat as part of their commitment to maritime safety services and their public service obligations. Shore-based users that utilise the Inmarsat Safety Services are Maritime Rescue Coordination Centres (RCCs), Maritime Safety Information Providers (MSIPs), and other addressed users such as providers of medical advice, recipients of weather observations, etc.

Generic MST Software

Fleet Safety utilises the Inmarsat Generic MST Software that can be installed on FB MST hardware, such as a panel PC that is an independent processing and storage unit capable of displaying a windowed GUI with hard disk data storage.

2. HARDWARE SETUP

Information on the physical setup of the Fleet Safety system can be found in the Manufacturers' Installation Manual. For reference, figure 1 shows the basic MST hardware installation setup.

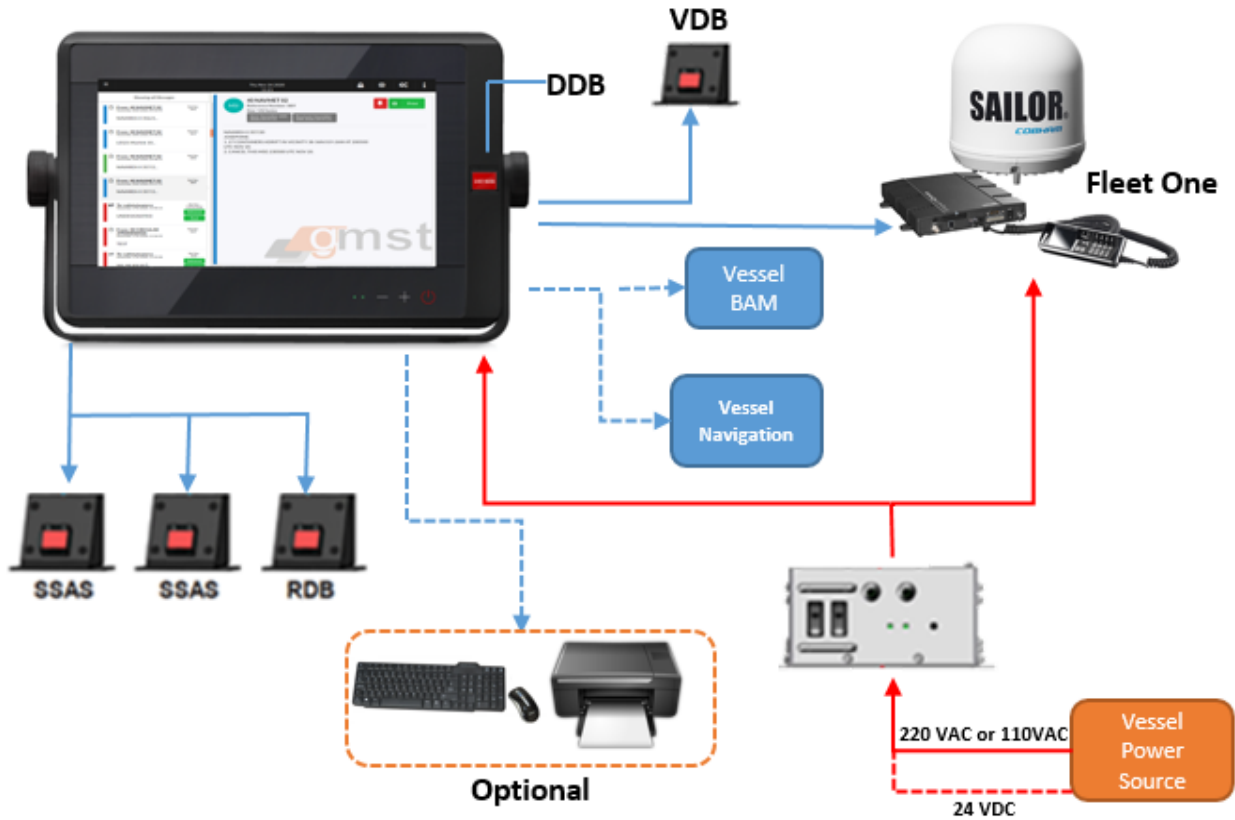


Figure 1 Hardware installation

3. FLEET SAFETY

The Fleet Safety MST consists of the visual display screen, mounting bracket, power button, brightness adjuster, and a Dedicated Distress Button.



Figure 2 MST

4. DISPLAY LAYOUT

By default, the MST display is set to display the received and stored Maritime Safety Information (MSI), this is your Navigational and Meteorological Warnings, Meteorological forecasts and SAR related information.

On the left hand side of the display, you can view the list of Received MSI. This list displays the messages in the order they were received, with the newest at the top. Each message has a coloured bar to represent the priority: Blue = Safety, Green = Urgency and Red = Distress.



Figure 3 MSI list

The main section of the display shows the content of the MSI selected. This shows the MSI reference numbers, data, and time the message was received, the size of the message, and the MSI text. At the top right of each MSI is the Pin and Print options. If you Pin the message, this will ensure it is not automatically deleted when the storage becomes full. It is recommended only highly important messages you wish to retain are Pinned.

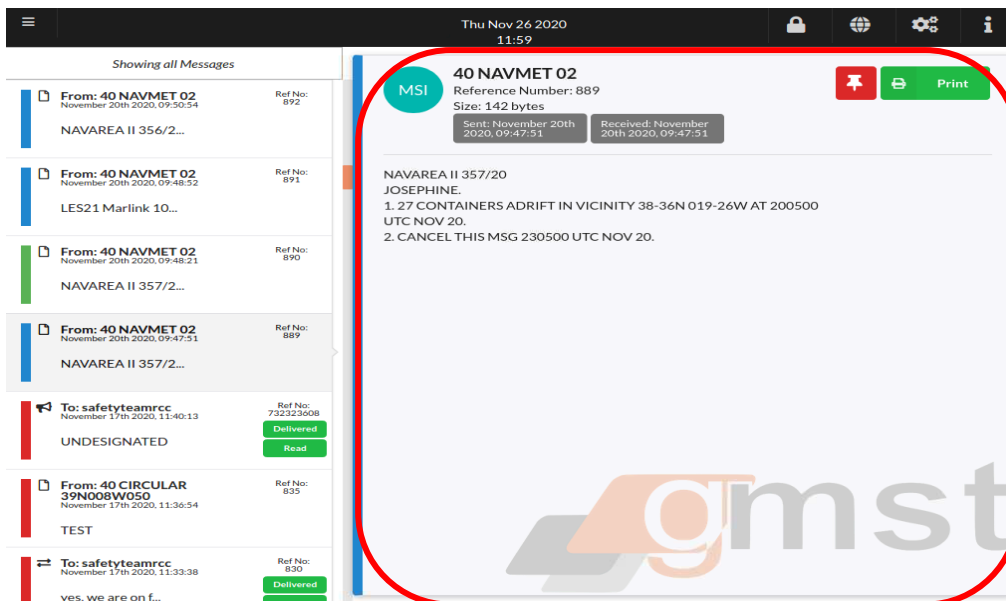


Figure 4 MSI display

5. COMMAND BAR OVERVIEW

The command bar enables the user to access GMDSS and Safety Services, view the Date/Time, access Administer settings, view Terminal Status, access Terminal Settings, and view the Software Status Information.

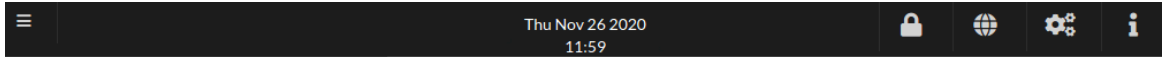


Figure 5 Command Bar

5.1. GMDSS and Safety Services

This option enables the user to access: Create Priority Message, Create Distress Alert, List messages, Search MSIs, Open Chat Interface, and View Vessels Map.



Figure 6 GMDSS and Safety Services

5.2. Administrator

The Administrator function enables the user to login as the Administrator and activate the Setup Wizard, and amend the SSAS contacts.

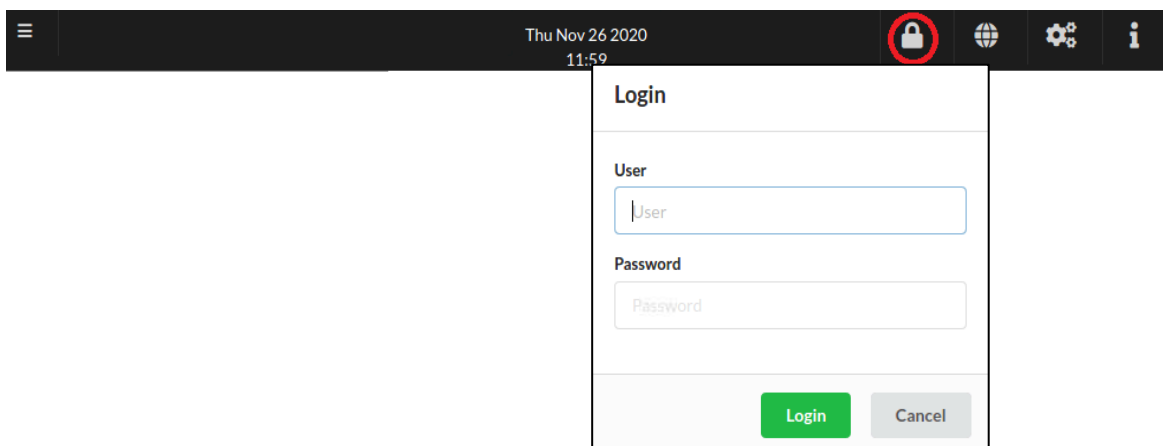


Figure 7 Administrator

5.3. Terminal Status

The Terminal Status function enables the user to view the Signal level of the FB, the Power level, connection status of the MST to the FB and the FB Registration status. If the terminal status detects loss of power, signal, connection, or registration, the Terminal Status symbol will turn red and an audio indication will be initiated.

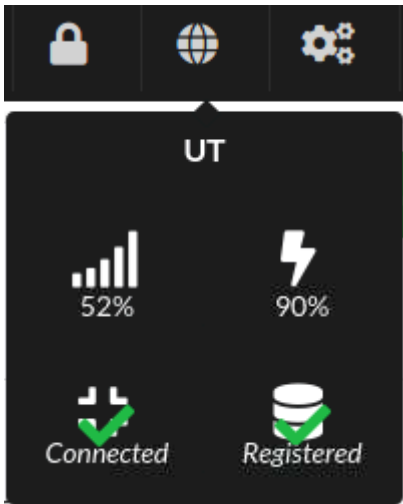


Figure 8 Terminal Status

5.4. Terminal Settings

This option enables you to change the terminal settings including running the Setup Wizard, Screen saver options, RCC selection and MSI reception options.

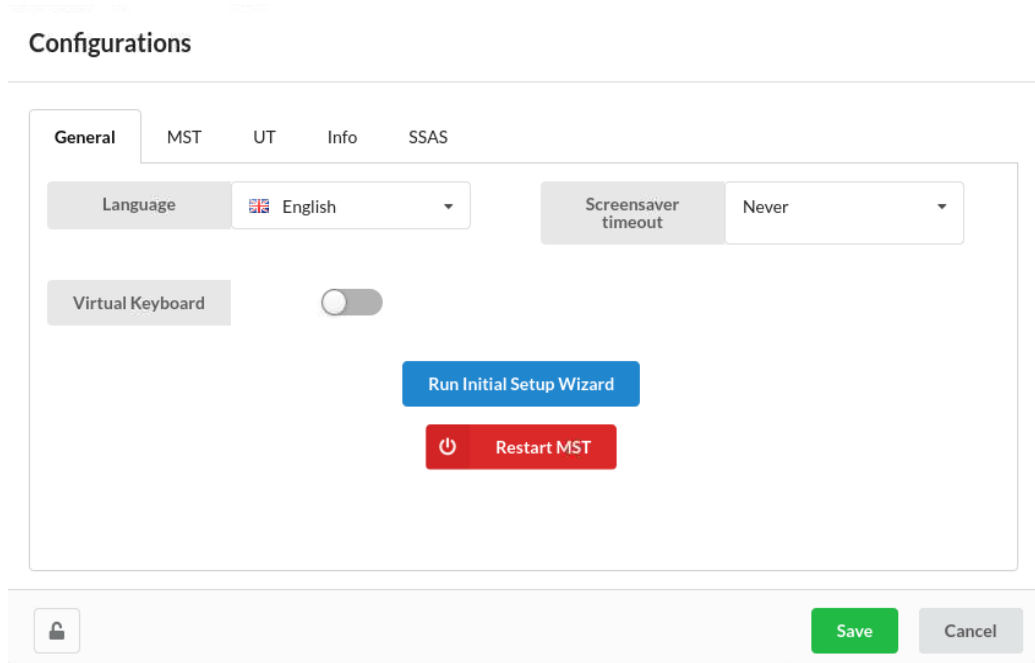


Figure 9 Terminal Settings

5.5. Software Status Information

The Software Status function allows you to see the latest software version installed on the Fleet Safety Terminal and check for updates.

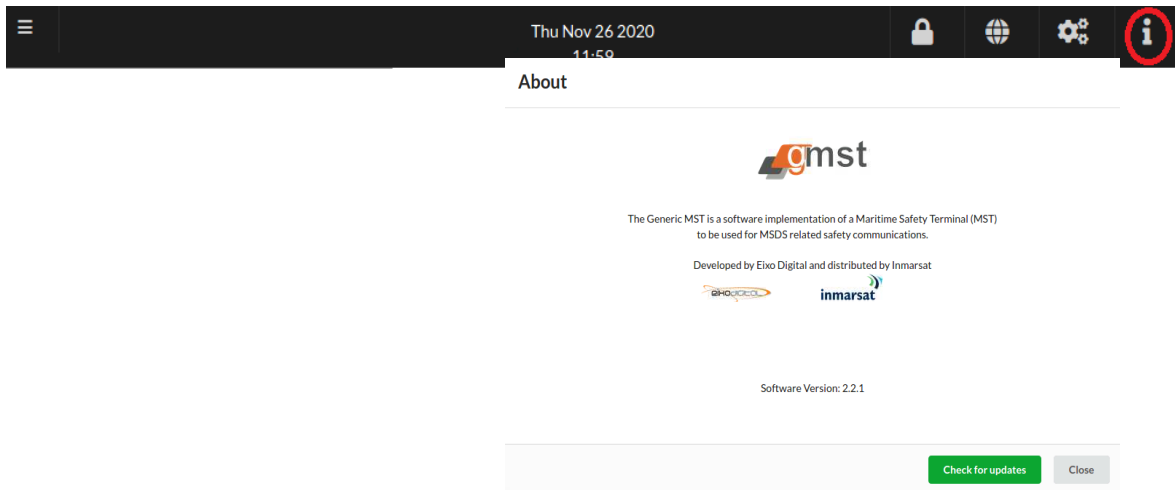


Figure 10 Software Status

6. TERMINAL SETUP

To set-up the MST for the first time, login as Administrator. Go to Terminal Settings and click on the Run Installation Setup Wizard:

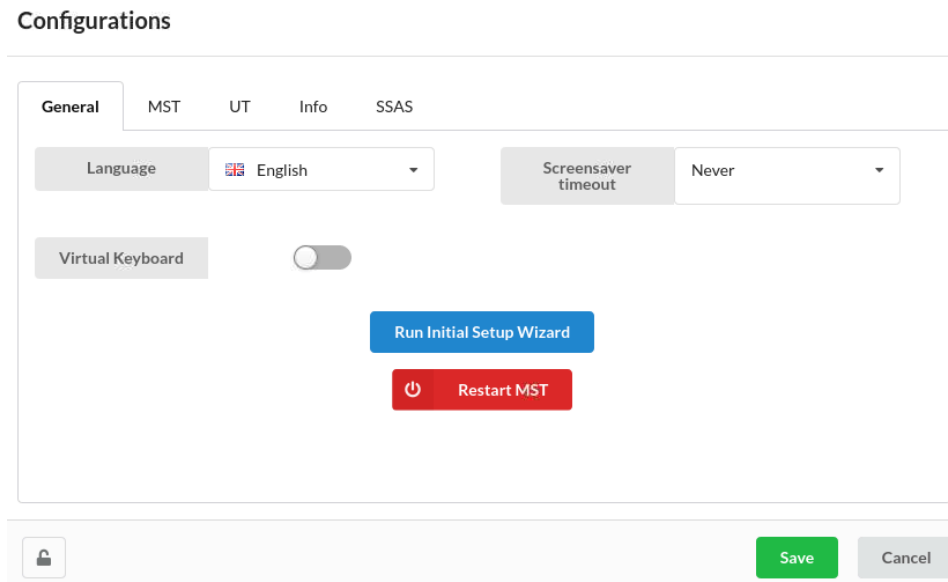


Figure 11 Setup Wizard 1

Choose what language you would like the MST text to display, note this will not translate the received text. Choose if you want to use the virtual keyboard and if you have a printer connected or not.

Welcome to the MST Software

This wizard will set all the parameters required for the MST to fully function

Please select the language to use:

- English
- Portuguese
- Japanese

Virtual Keyboard needed?

Printer Required?

< Previous Next >

Figure 12 Setup Wizard 2

Click on “Test Connection” to confirm your MST is connected to the FB and the network.
Check your Call Sign is correct and amend if needed

Welcome to the MST Software

This wizard will set all the parameters required for the MST to fully function

UT Configuration

UT Address: 172.16.0.200 UT Port: 9092

 Connection Successful

MSDS-X Host: msds.eixodigital.com MSDS-X Port: 5222

Hardware Info

Make: Eixo Digital Model: UT JSON Server

Version: 0.0 CallSign: ED002

< Previous Skip >> Next >

Figure 13 Setup Wizard 3

Click on the Change MSI Parameters

MSI Parameters

Types: NAV MET SAR INMC INMC-NAV INMC-MET INMC-SAR

Areas: *Not receiving MSIs from adjacent areas*

Coastal Areas: *Not restricting MSIs for coastal areas*

Coastal areas messages' subjects: *Not restricting subjects of MSIs for coastal areas*

Service Codes: 00 04 13 14 24 31 34 44 51 52 54 61 62 63

Change MSI Parameters

< Previous Next >

Figure 14 Setup Wizard 4

Setup your EGC parameters as required, if “Receive MSI from adjacent areas” is not selected, you will only receive EGC for the NAV/METAREA you are in.

To receive EGC from adjacent areas, turn this function on and select adjacent areas you require.

Follow the same procedure for setting up coastal area EGC reception.

MSI Parameters

Areas Select adjacent areas

Service Codes Select service codes

Confirm Settings

Receive MSIs from adjacent areas

<input type="checkbox"/> Area I (United Kingdom)	<input type="checkbox"/> Area II (France)	<input type="checkbox"/> Area III (Spain)
<input type="checkbox"/> Area IV (United States (East))	<input type="checkbox"/> Area V (Brazil)	<input type="checkbox"/> Area VI (Argentina)
<input type="checkbox"/> Area VII (South Africa)	<input type="checkbox"/> Area VIII (India)	<input type="checkbox"/> Area IX (Pakistan)
<input type="checkbox"/> Area X (Australia)	<input type="checkbox"/> Area XI (Japan)	<input type="checkbox"/> Area XII (United States (West))
<input type="checkbox"/> Area XIII (Russian Federation)	<input type="checkbox"/> Area XIV (New Zealand)	<input checked="" type="checkbox"/> Area XV (Chile)

< Previous Next > Cancel

Figure 15 Setup Wizard 5

Select a new “Administrator” password:

Welcome to the MST Software

This wizard will set all the parameters required for the MST to fully function

Administration User

Please define the password for the 'admin' user

Password *

Confirm Password *

- ✗ Must be at least 8 characters
- ✓ Must be no longer than 64 characters
- ✗ Must not be empty
- ✗ Must have at least one lowercase character
- ✗ Must have at least one uppercase character
- ✗ Must have at least one digit character
- ✓ Must not contain, even partially, "admin"

< Previous Next >

Figure 16 Setup Wizard 6

The MST will then restart and save your configurations.

Welcome to the MST Software

This wizard will set all the parameters required for the MST to fully function

✓ Thank you!

Everything is setup and the MST is now operational.

Restarting

< Previous Finish ✓

Figure 17 Setup Wizard 7

6.1. RCC Selection

The Fleet Safety system makes use of the Inmarsat I4 and I6 satellite constellation and its RescueNET system comprising of more than 50 IMO registered and Inmarsat approved Rescue Coordination Centres (RCC). By default, your Fleet Safety preferred RCC is set to “Do not specify” in this mode, your Distress communications will be automatically routed to the closest RCC within the Inmarsat network.

If you wish to select a preferred RCC you can go to Terminal Settings, MST, click on “Update RCC list” then select your preferred RCC from the drop-down list in “Preferred RCC”

The “Number of people on board” should be updated each time it changes.

Save all changes.

Configurations

General **MST** UT Info

Parameters

Update RCCs List

N° People on board 2 Preferred RCC ukrc

Voice Address 500 Test Voice Address

MSI Parameters

Areas: Not receiving MSIs from adjacent areas Types: NAV MET SAR INMC

ukrc
johndodrrcc1
Eixo RCC
ukrc
ukhydrographic

Save Cancel

Figure 18 RCC Selection

7. UNDESIGNATED DISTRESS ALERT

An undesignated Distress Alert is activated by pressing and holding the Dedicated Distress Button on the Fleet Safety MST. A timer will be displayed on the MST to provide a visual indication; the audio indication will stop once the Undesignated Distress has been sent. The DDB will remain illuminated until the Distress has been acknowledged by the RCC.



Figure 19 Dedicated Distress Button (DDB)

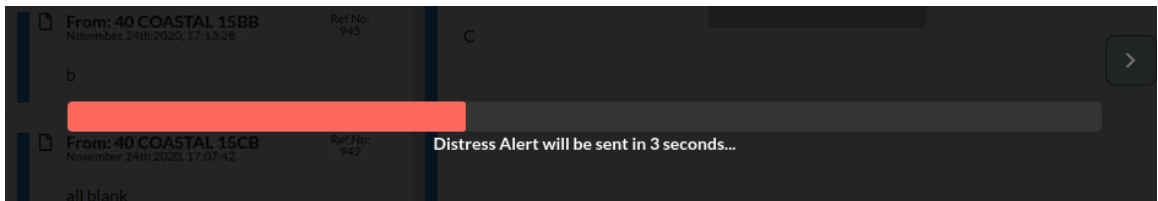


Figure 20 Distress Timer

You will see your message has been sent including the vessel information along with a confirmation it was sent and the date/time it was received at the RCC.

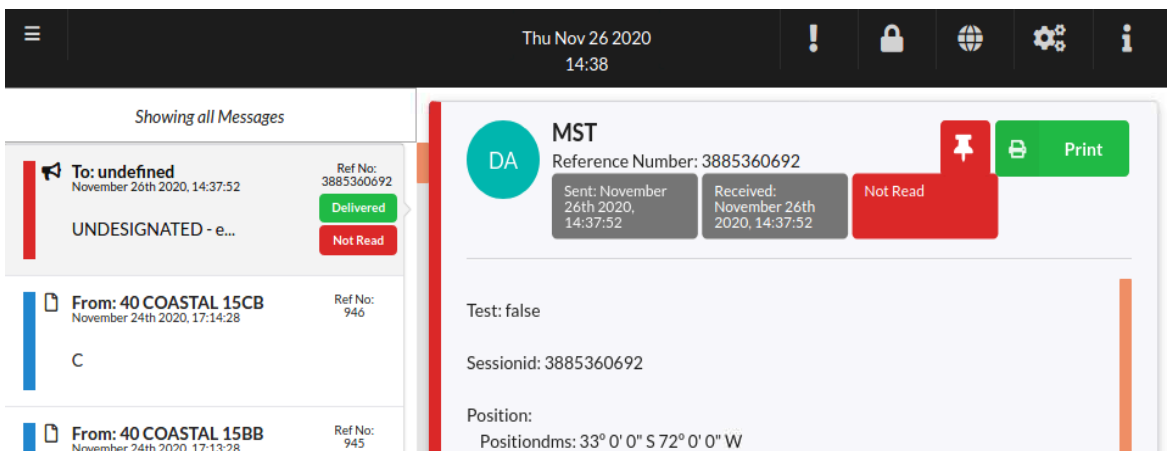


Figure 21 Distress Alert Sent

When the RCC acknowledge the Distress Alert, you will be informed by the “Read” notification turning from red to grey, the date and time of acknowledgement is also displayed.

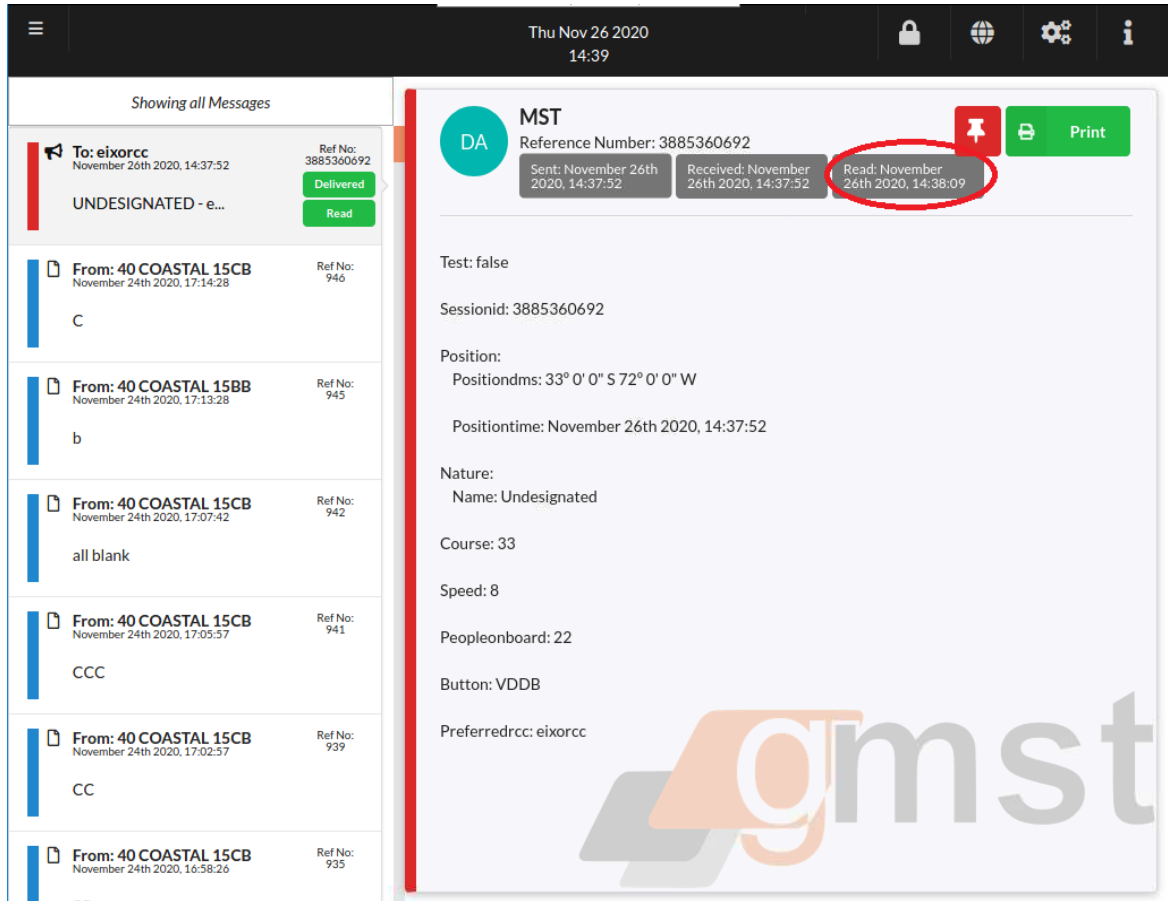


Figure 22 Distress Alert Acknowledged

8. DESIGNATED DISTRESS ALERT

If time permits during a Distress situation, a Designated Distress Alert should be sent that includes the nature of distress. To send a designated Distress Alert, go to the GMDSS and Safety Services and select “Create Distress Alert”

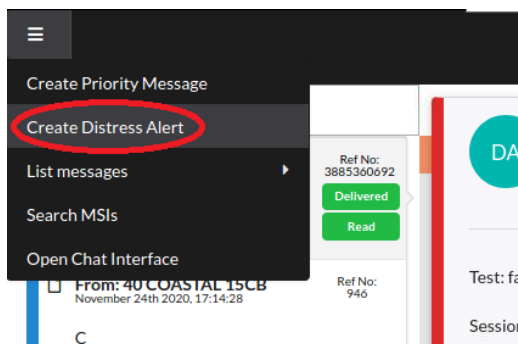


Figure 23 Designated Distress Alert 1

You should select the nature of distress from the drop-down list in “nature”, you can also change the preferred RCC if you wish. The course, speed, position are all taken from the FB antenna.

Once selected press and hold the DDB, the same process will happen as for an undesignated Distress Alert, you will see notifications when the Distress is sent, received and read.

Distress Alert Test Mode

Alert Info

Nature: Fire Explosion (dropdown menu open: Undesignated, Fire Explosion, Flooding, Collision, Grounding, Listing)

N° People on board

Preferred RCC: Eixo RCC (dropdown menu)

Navigation Info

Course

Speed


Position

Latitude: 33° 0' S

Longitude: 72° 0' W

Fix Date: Nov 26, 2020 15:04

Cancel

 **The distress alert has not yet been sent. You can modify any of the above attributes to better explain the distress.**

The distress alert will be sent if the dedicated distress button is pressed for at least 5 seconds...

Figure 24 Designated Distress Alert 2

9. DISTRESS MESSAGE

Where possible, a Distress Alert should be followed up by a Distress Message to the same RCC you sent the Distress Alert, providing additional information.

To do this go to “Create Priority Message” then select “Distress”

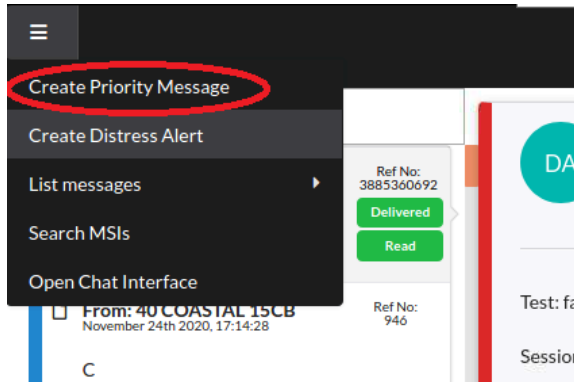


Figure 25 Distress Message 1

Select Distress; confirm the RCC is the same as you sent the Distress Alert. Type your message and click on Send.

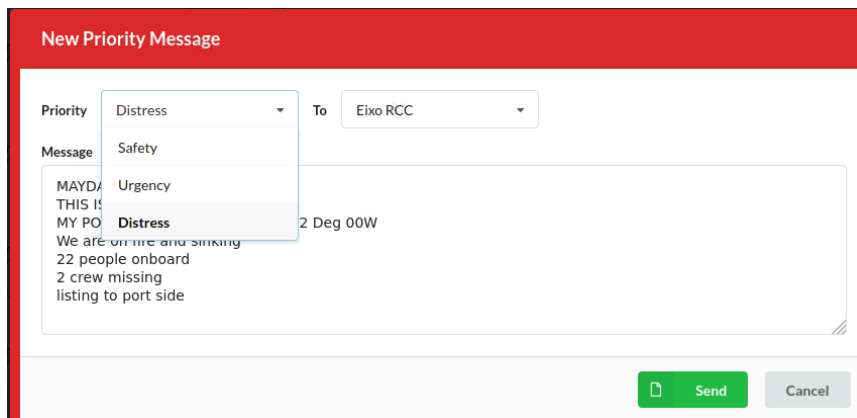


Figure 26 Distress Message 2

You will see your Distress Message on the main MST display; you will also see confirmation of the message status of Sent, Received and Read by the RCC

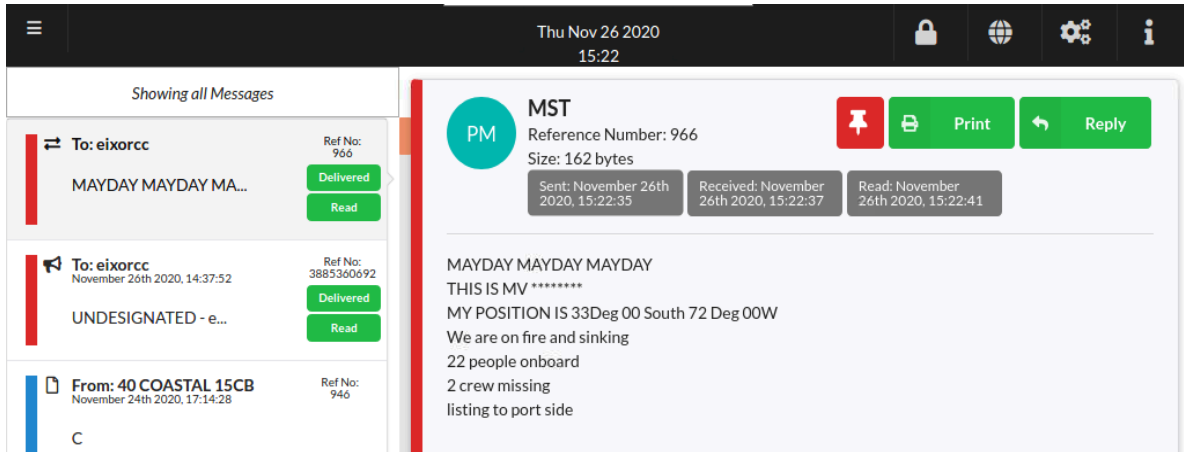


Figure 27 Distress Message 3

10. REPLY TO A DISTRESS MESSAGE FROM AN RCC

The RCC can contact you directly by Distress Message. On receiving a Distress Message from the RCC, your MST will alarm and display the Distress Message. If a printer is connected, this message will also print automatically.

On receiving the Distress Message, you can click on read, which will store the message or reply, which allows you to reply directly back to the RCC and then store the message.

All the messages show delivery and read receipts to both the MST and within the RCC

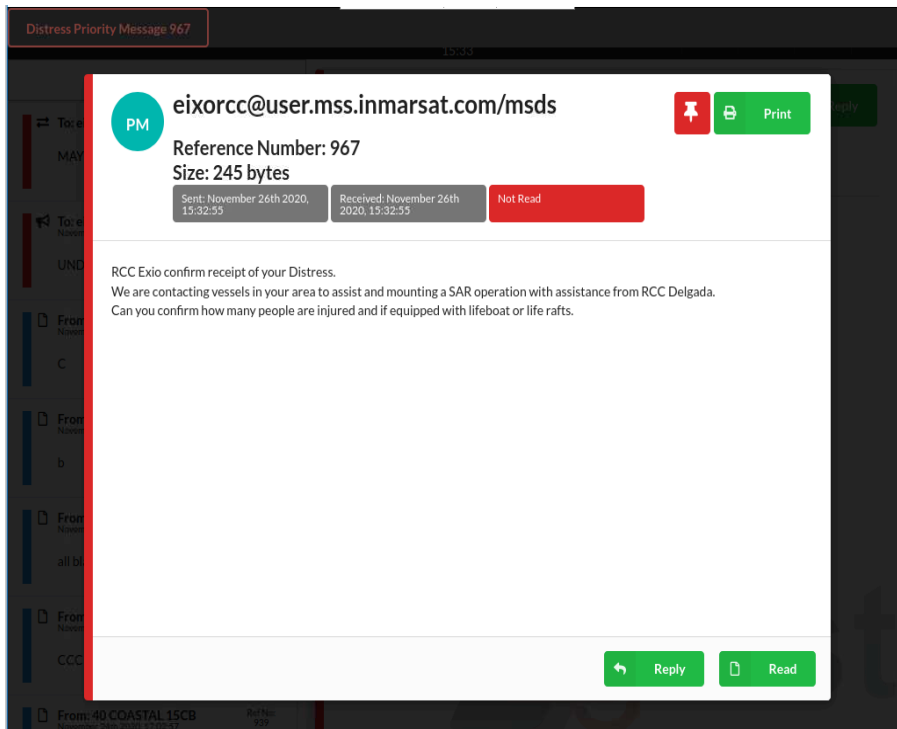


Figure 28 Received Distress Message

11. URGENCY MESSAGE (MEDICAL & MARITIME ASSISTANCE)

To send an Urgency priority message requesting Medical Advice, Medical Assistance or Maritime Assistance, go to “Create Priority Message” and select “Urgency”.

Select your required assistance/advice from the drop-down list..

Type your message, including as much information as possible and click “Send”

Your message will be delivered to the appropriate authorities who will be able to assist.

Your message will be displayed on your main display along with any replies.

New Priority Message

Priority: Urgency To: 32 - Medical Advice

Message: Medical advice required. We have one crew member who is very dazed and confused temperature of 38 unsteady on her feet no viable bumps on head

Buttons: Send, Cancel

Figure 2 Urgency Message 1

Showing all Messages

To: eixorcc Ref No: 968
Medical advice r...
Delivered
Read

From: eixorcc Ref No: 967
November 26th 2020, 15:32:55
RCC Exio confirm...

To: eixorcc Ref No: 966
November 26th 2020, 15:22:37
Delivered

PM MST
Reference Number: 968
Size: 150 bytes
Sent: November 26th 2020, 15:42:15
Received: November 26th 2020, 15:42:17
Read: November 26th 2020, 15:42:21

Medical advice required.
We have one crew member who is very sick.
dazed and confused
temperature of 38
unsteady on her feet
no viable bumps on head

Buttons: Print, Reply

Figure 30 Urgency Message 2

12. SAFETY MESSAGES (NAV/MET REPORTS)

To send a Navigational Warning or Meteorological Warning, go to “Create Priority Message” and select “Safety”.

From the drop-down list, select your required report type to send

Type your message, including as much information as possible and click “Send”

Your message will be delivered to the appropriate authorities who will be able to consider and advise other seafarers.

Note: Safety messages are to advise the shore side authorities and provide aids to navigation and weather updates, you will not receive a reply.

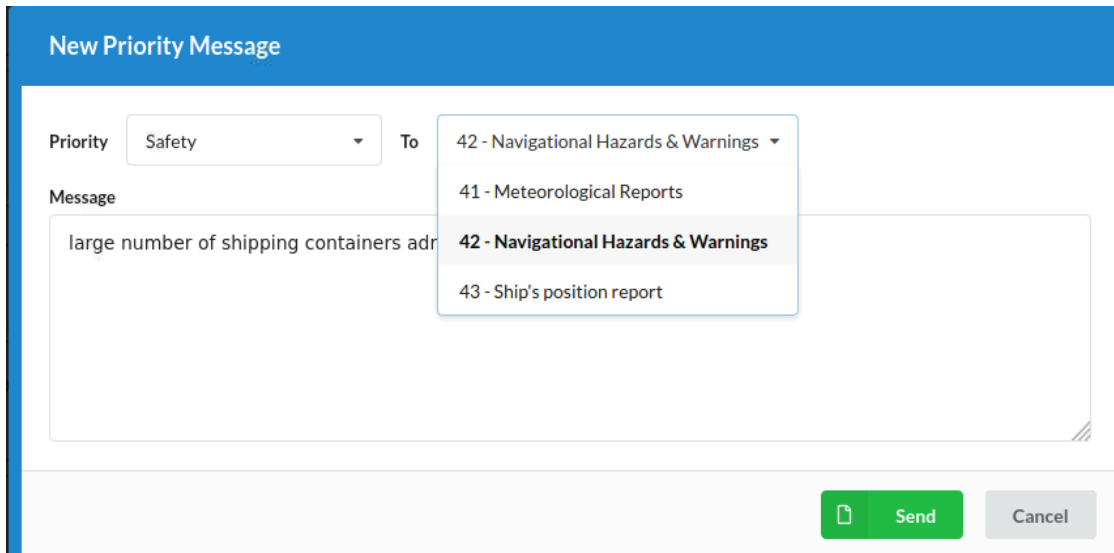


Figure 31 Safety Message

13. LIST MESSAGES

This function enables you to select the view of your MSI and messages. The ALL setting will show all your MSI, Distress, Urgency and Safety messages. Use this function to filter what messages are on view.

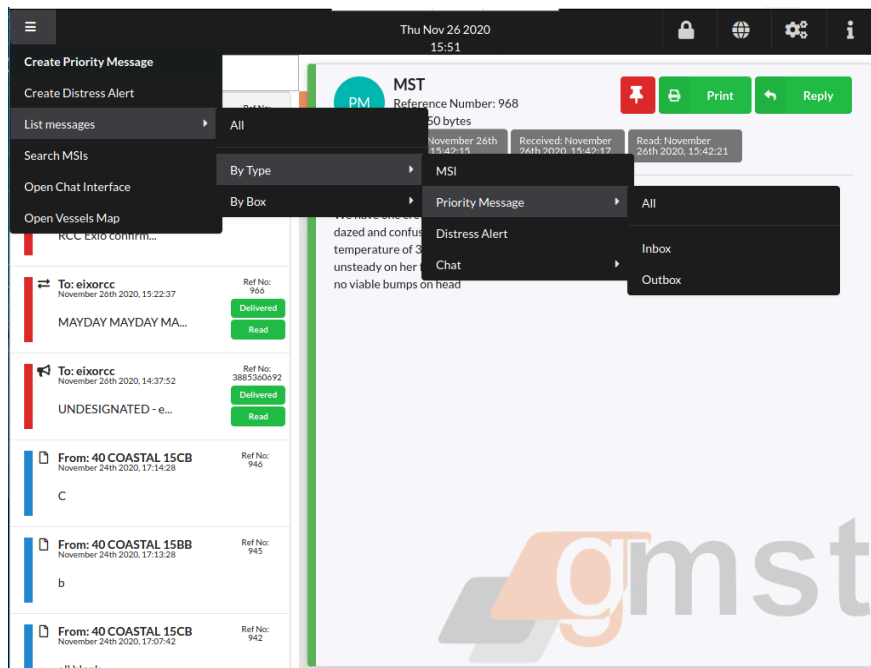


Figure 32 List messages

14. TEST DISTRESS ALERT

To test the Distress Alert function, without sending a notification to a live RCC, go to Create Distress Alert and select “Test Mode” you can now press and hold the DDB. The DDB lights should illuminate whilst the distress countdown is running.

You will receive a notification at the bottom of the test page confirming the test results with a tick or cross.

Distress Alert Test Test Mode

Alert Info

Nature: Fire Explosion Preferred RCC: Eixo RCC

N° People on board: 22

Navigation Info

Course: 33 Speed: 8

Position

Latitude: 33° 0' S Longitude: 72° 0' W Fix Date: Nov 26, 2020 15:04

Cancel

1 *MST in Distress TEST mode. The distress alert test has not yet been sent. You can modify any of the above attributes to better explain the distress test.*

The distress alert test will be sent if the dedicated distress button is pressed for at least 5 seconds...

Figure 33 Distress Test Alert

15. RECEIVING MSI

Your Fleet Safety MST will automatically receive and display MSI messages broadcast within your area. It will also automatically receive MSI messages for adjacent areas and Coastal Areas you selected in your MSI setup parameters.

All messages will be displayed on the main screen as a pop-up message. If you receive a Distress or Urgency priority message, the audio indication will also sound and the message will automatically print if a printer is connected.

16. SEARCH MSI

This function enables you to search the global database of MSI and retrieve any you may have missed. If for some reason your Fleet Safety is turned off i.e. you are in port, you still need to be aware of dangers to navigation within your area. This allows you to search by area, date / time range, priority and type of message.

Select “Search MSIs”

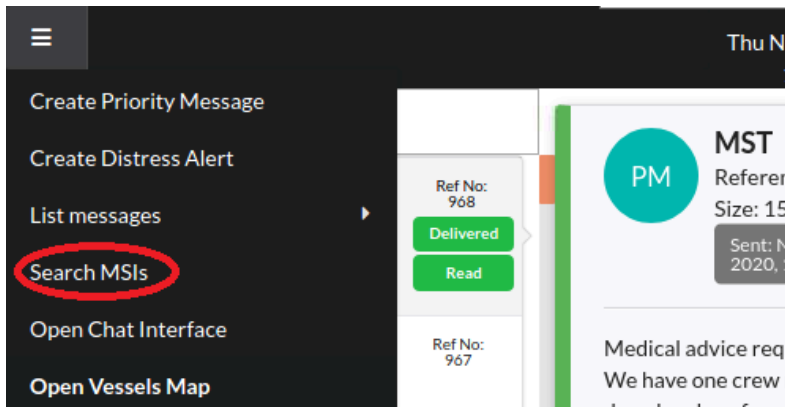


Figure 34 Search MSIs 1

Select the NAV/METAREA you want to search within, select Service Code type, or leave it blank to search for both NAV and MET. Select a start date and time as well as an end date and time. If you leave the Priority blank, it will search for Safety, Urgency and Distress. Click on “Next” the system will now search for any messages you have missed.

Request MSI

Search Select search parameters

Select MSIs Select MSIs to pull

Confirm request

Address Type	NAVMET	Start Date*	November 23, 2020 0:00
Address*	VI - Argentina	End Date*	November 26, 2020 4:16 PM
Service Code	Select a Service Code...	Priority	Select a Priority Level...

< Previous


Next >


Cancel


Figure 35 Search MSIs 2

The returned results show message 970 has already been received, however message ref 969 an Urgency messages was not received. You can click the check box and click Next to download this message

Request MSI

 **Search**
Select search parameters

 **Select MSIs**
Select MSIs to pull

 **Confirm request**

	Reference Number	Service Code	Priority Level	Start date and time	Address Type	Address
<input type="checkbox"/>	969	51	urgency	2020-11-26 16:14:01	NAVMET	Argentina
<input type="checkbox"/>	970 (MSI already received)	61	safety	2020-11-26 16:15:06	NAVMET	Argentina

< Previous

Next >

Cancel

Figure 36 Search MSIs 3

Message 969 is downloaded displayed and stored on your MST.



Urgency MSI 969

MSI

40 NAVMET 06

Reference Number: 969
Size: 176 bytes

Sent: November 26th 2020, 16:22:03
Received: November 26th 2020, 16:22:04

NAVAREA XI WARNING
 NAVAREA XI 0448/20
 SOUTH CHINA SEA, NORTHERN PART.
 TANKER, HYUN JIN, 65 METRE LONG, ADRIFT
 IN 18-53.6N 115-02.1E AT 240920Z NOV.
 CANCEL THIS MSG 270920Z NOV.

Close

Figure 37 Search MSIs 4

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17. DISTRESS CHAT

In response to a Distress Alert, Message, or to request assistance in a SAR operation, an MRCC can invite you to a Distress Chat. This is a text-based Distress priority chat room. Each Chat room can hold up to 10 other vessels and 10 RCCs who can all assist in coordinating a SAR operation.

Although an RCC can have multiple chat rooms open at any one time, the Fleet Safety SES can only have one active Distress Chat at any one time.

If an RCC requests a Distress Chat with you, you will receive the below alert

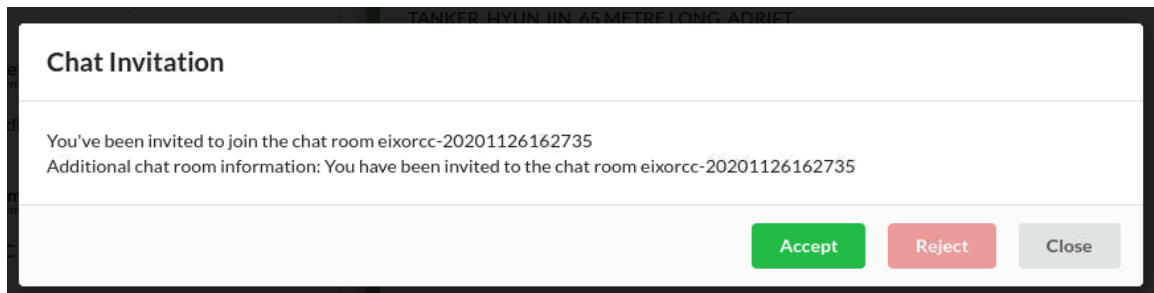


Figure 38 Distress Chat invite

Once the Distress Chat is accepted, you will see the chat participants on the right-hand side split into RCCs and Vessels. You will also see the full chat history and type messages that will be seen by everyone in the Distress Chat room.

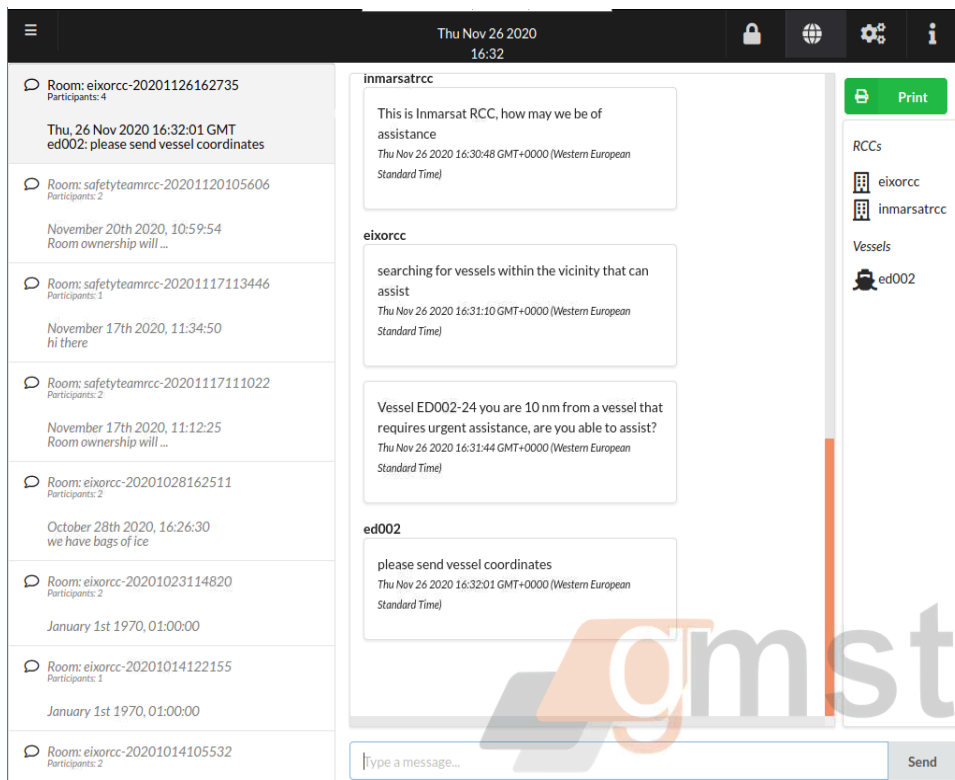


Figure 39 Distress Chat

To return to your list of MSI, go to List messages and select “All”

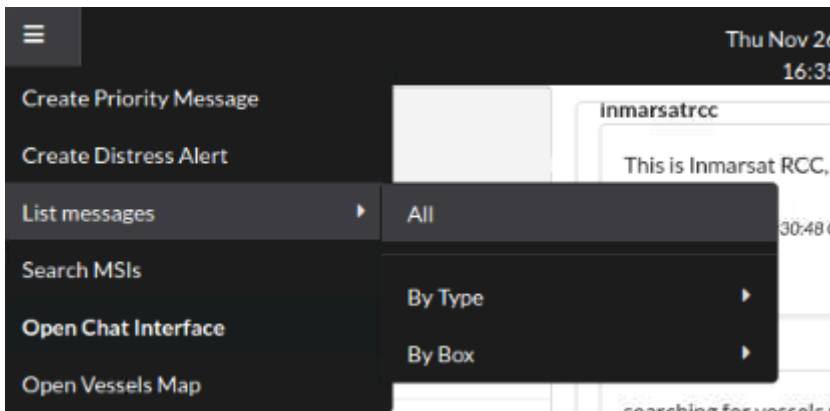


Figure 40 List MSI

18. SHIP SECURITY ALERT SYSTEM (SSAS)

SSAS is a covert warnings system intended to be used in the event of armed robbery or piracy attack. The SSAS buttons should be located in a covert position and activated if the vessel is subjected to an armed robbery or piracy attack. On activating the SSAS buttons, there will be no alarms or notifications on board the vessel. Email notifications will be sent to the e-mail addresses on the SSAS setup page.

To set-up the SSAS contacts, login to your MST Admin and go to SSAS.

Add e-mail recipients you wish to receive your SSAS alert and any additional information.

Vessel information and position is automatically added to the SSAS notification.

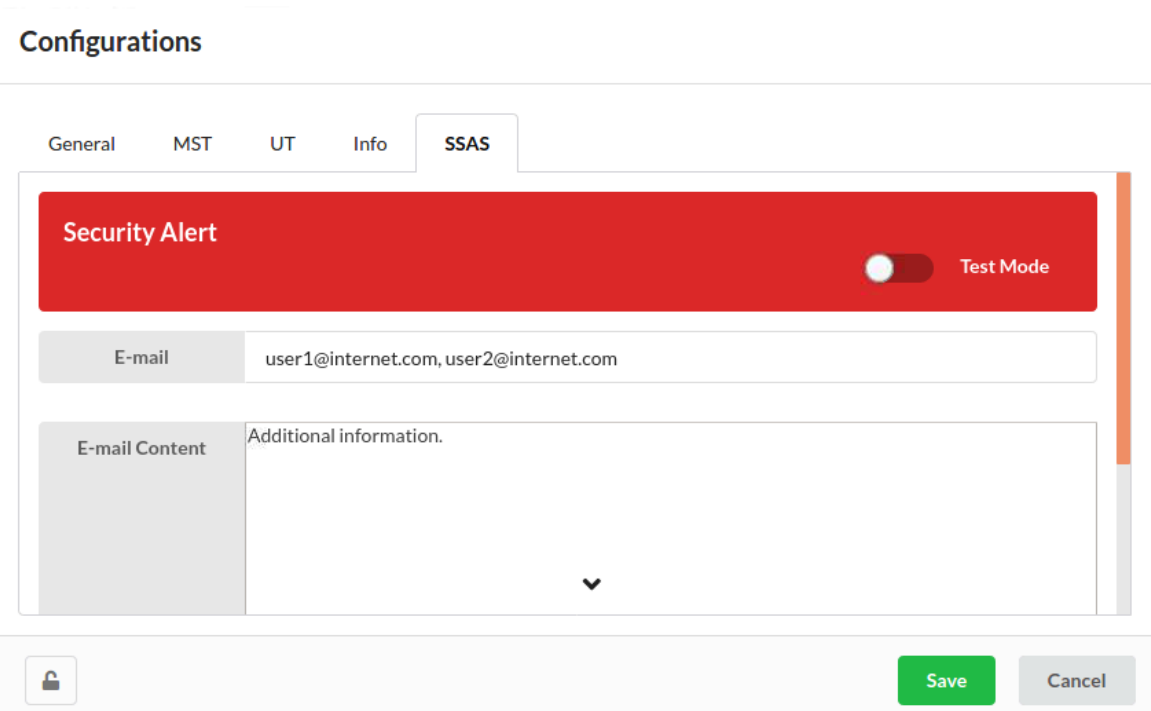


Figure 41 SSAS

19. SUPPORT & TRAINING

Inmarsat has created a free to access Maritime Safety Training Hub. This training platform includes interactive training on the Fleet Safety System. This can be accessed through the link below:

<https://safetytraininghub.inmarsat.com/>

For additional support, please contact:

Maritime.safety@inmarsat.com