

Operations Manual



FishSAFE

Marine Plotter



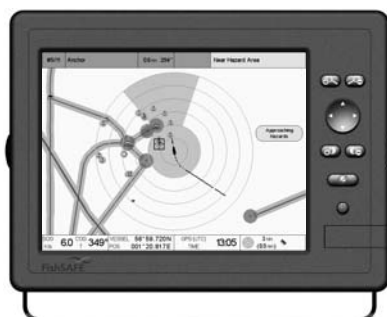
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 **JEPPESEN**
MARINE



FishSAFE

Reducing Risk from Surface and Subsea Obstructions



Operations Manual

code: (FishSAFE-A171109e)

Product Information

FishSAFE is funded by FLTC Services Ltd a not for profit company whose members are The Scottish Fishermen's Federation, The National Federation of Fishermen's Organisations and Oil & Gas UK.

The FishSAFE project is supported by grants from The European Fisheries Fund and the Scottish Ministers.

Table of Contents

Product Information	4
1. Disclaimer	7
2. Introduction	9
3. Parts Checklist	11
4. Installation	13
4.1 FishSAFE MOUNTING	13
4.2 FishSAFE DIMENSIONS	14
4.3 SYSTEM WIRING DIAGRAM	14
4.4 CABLE WIRING DIAGRAM	14
4.5 SPECIAL POWER-UP: SYSTEM TEST MODE	15
4.6 SPECIAL POWER-UP: CUSTOMISING INSTALLATION SETTINGS	16
4.6.1 Maximum/Minimum Activation Speed	16
4.6.2 Alarm Radius	17
4.6.3 GPS Datum	17
4.6.4 Language	17
4.6.5 Cursor Time-out	17
5. Product Overview	19
5.1 KEY FUNCTIONS OVERVIEW	19
5.2 QUICKSTART GUIDE	19
5.3 SCREEN LAYOUT	21
6. FishSAFE Normal Operation	23
6.1 POWER UP	23
6.2 MOVING AROUND THE SCREEN	23
6.3 QUICK INFO WINDOW	23
6.4 ZOOMING	24
6.5 FORWARD SECTOR	24
6.6 THE ALARM KEYHOLE	25
7. Visual and Audible Alarms	27
7.1 HAZARD STATUS BAR	27
7.2 HAZARD STATUS BAR CYCLING	27
7.3 TRAFFIC LIGHTS	29
7.4 AUDIBLE ALARMS	29
7.4.1 GPS Failure Alarm	30
8. Updating the Unit	31
8.1 DATA	31
8.1.1 Internet Download	31
8.2 OPERATING SYSTEM	31
8.2.1 Internet Download	32
9. Repair	33
9.1 IN WARRANTY REPAIR	33
9.1.1 How to benefit from this Warranty	33
9.2 OUT OF WARRANTY REPAIR	33
10. Product Specification	35
Analytical Index	37

1. Disclaimer

The data in the FishSAFE unit is provided free of charge. While it is believed to be accurate it is not verified or approved by FLTC Services Limited or their agents, suppliers or subcontractors.

FishSAFE is designed to provide an audible and visual warning of certain surface and subsea hazards and must not be relied on as a primary source of navigation information.

A user of the unit should use government charts and prudent navigation practices.

To operate a FishSAFE unit you must first accept:

1. the FishSAFE Terms and Conditions of Supply, Maintenance and Use (the FS unit terms and conditions) which are available in full at www.fishsafe.eu and
2. that except to the extent required by law or as otherwise provided in the FS unit terms and conditions FLTC Services Limited and their agents, suppliers and subcontractors shall have no liability to you or to any other person using or benefiting from use of this FishSAFE unit for any damage or loss caused by any error or omission in the data or defect in the unit.

2. Introduction

FishSAFE is a hands free device which warns a fishing vessel skipper of nearby surface and seabed obstructions that may be a hazard and may become caught in fishing gear. FishSAFE uses a combination of visible and audible warnings to indicate the level of risk. FishSAFE provides the skipper with an appreciation of potential hazards, allowing the appropriate action to be taken on-board to minimise risk. There are two types of risk areas (hazards) which are capable of triggering an alarm. These are Safety Zones and Hazard Areas.

1. Safety Zones. In the UK, Under the Petroleum Act 1987 the Secretary of State may, by Order, establish a 500m Safety Zone around a sub-sea installation within designated waters. Under the same Act all oil and gas installations which project above the sea surface at any state of the tide are automatically protected by a Safety Zone. (Merchant Shipping Notice NO. M.1290, Department of Transport, Marine Directorate, London, September 1987). Both of these types are shown on the FishSAFE unit as Safety Zones.
2. Hazard Areas. In the UK, a hazard area is not designated by Order and indicates a hazardous region around an extended sub-sea object such as a sub-sea pipeline.

The alarm behaviour of the unit regarding a Safety Zone and a Hazard Area is similar but there are differences in terms of the Cancel Alarm time-out and the behaviour of the Audible Alarms. See Par. 7.2 and 7.4.

NOTE *The exact behaviour of the unit is determined by the FishSAFE database. This manual describes the operation of the FishSAFE unit when used in conjunction with the database dated September 2009.*

3. Parts Checklist

Your FishSAFE box should contain the following items:

- ◆ FishSAFE unit
- ◆ Mounting Bracket
- ◆ Combined Power and NMEA lead
- ◆ Flush Mount Kit
- ◆ Fuse and Holder
- ◆ Operations Manual

4. Installation

4.1 FISHSAFE MOUNTING

The FishSAFE Unit is supplied with hardware for Bracket and Flush Mounting.

The figures below show examples of Flush Mounting (see Fig. 4.1) and Bracket Mounting (see Fig. 4.1a).

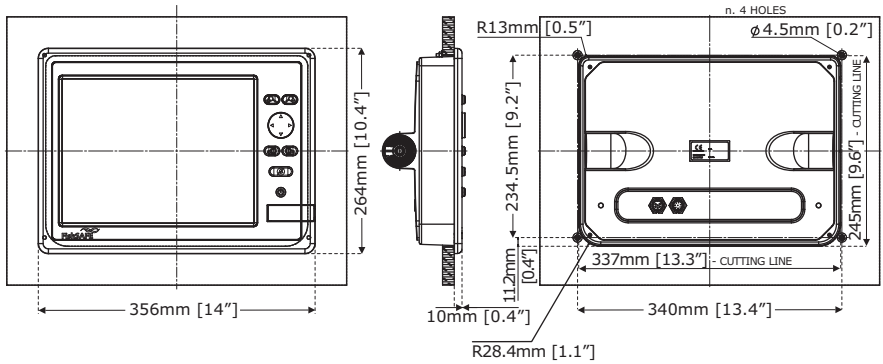


Fig. 4.1 - Flush Mounting

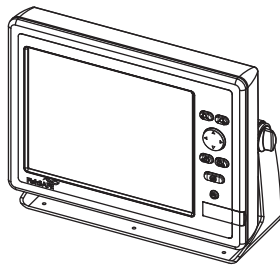


Fig. 4.1a - Bracket Mounting

4.2 FISHSAFE DIMENSIONS

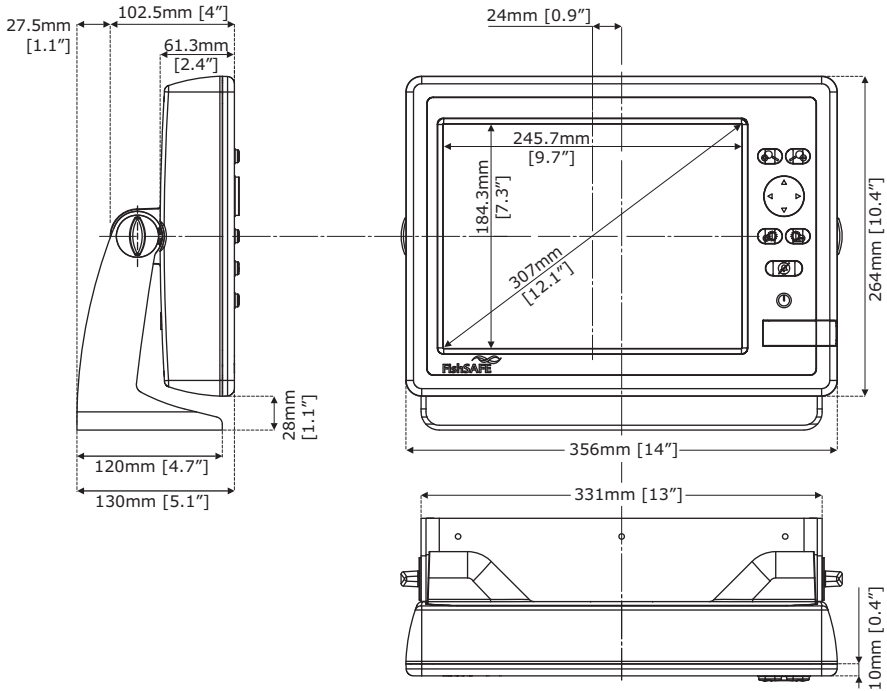


Fig. 4.2 - FishSAFE Dimensions

4.3 SYSTEM WIRING DIAGRAM

The diagram below shows connection options into the FishSAFE unit:

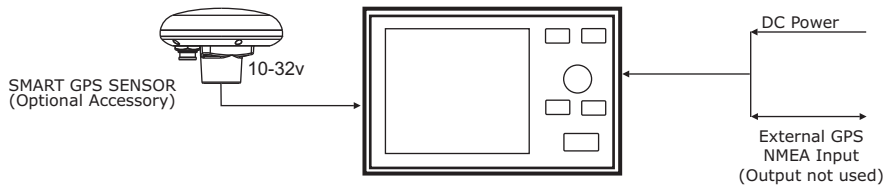


Fig.4.3 - FishSAFE Connections

4.4 CABLE WIRING DIAGRAM

The FishSAFE unit has two connectors on the rear of the case: Combined Power/NMEA and GPS Antenna.

The Combined Power/NMEA cable is included in the supplied kit of parts and it is terminated in bare wires that can be wired to the ship's power supply and existing GPS equipment. A full wiring diagram is shown below (see Fig. 4.4).

The GPS Antenna connector is only used if you wish to purchase and use the optional smart GPS antenna from Jeppesen Marine or similar. The smart GPS antenna is supplied with a pre-assembled “plug and play” cable that provides power and data connections to the antenna.

The FishSAFE unit can operate with:

1. External 3rd Party GPS connected via the Power/NMEA cable to the primary GPS input of the FishSAFE unit. This port takes priority over the other GPS port if valid data is available on both ports.
2. Jeppesen GPS smart antenna connected using the cable supplied with the antenna to the GPS Antenna connector which is the secondary GPS input of the FishSAFE unit. The data being received on this port will only be displayed if there is no valid GPS input on the primary GPS input.
3. Both an external 3rd party GPS and the Jeppesen GPS smart antenna. In this case priority is given to the position received from the 3rd party GPS, but the unit will automatically switch to the Jeppesen GPS antenna if a position is not received from the 3rd party GPS for 30 seconds.

Setting of these two ports will be completely automatic and they support normal NMEA 0183 connections i.e. 4800N,8,1.

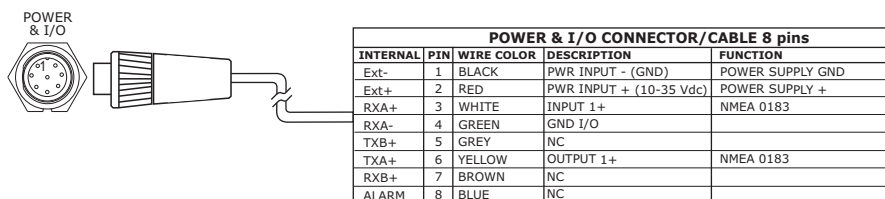


Fig. 4.4 - The combined Power/NMEA connector

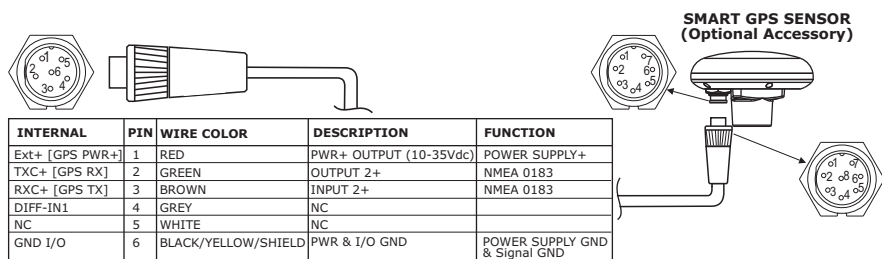







Fig. 4.4a - The GPS Antenna connector

4.5 SPECIAL POWER-UP: SYSTEM TEST MODE

If the unit is powered up with any key held down then the unit will go into a System Test mode.


The System Test menu provides access to simple tests for all major system components including: RAM, LCD, Backlighting, Keyboard, Alarm and NMEA input.

Use the arrow , , ,  keys to select each test from the menu provided. To exit this mode it is necessary to power the unit down by pressing and holding the **POWER**  key.

The System Test menu allows testing of the following elements:

- RAM
 - RAM Clear
- Dim menu
 - Contrast - Backlight
- Cartridges
 - SD Card test
- Serial Ports
 - Change parameters - Input Data Display
- Siren test
- Video test

4.6 SPECIAL POWER-UP: CUSTOMISING INSTALLATION SETTINGS

Press the **POWER**  key to turn On the unit. The FishSAFE splash screen is shown, followed by a System Setting screen:

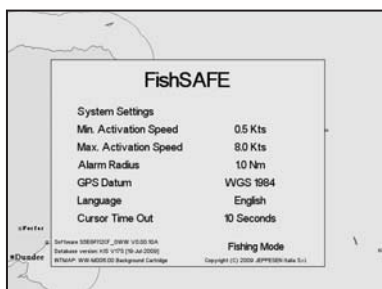









Fig. 4.6 - The startup screen

When the above screen is displayed, the **ZOOM IN**  and the **ZOOM OUT**  keys can be held down for 5 seconds, to give access to the System Settings.

NOTE Pressing  takes you to the main Settings Menu without saving the new value.

When the Settings Menu is open, move the selection bar down using the  cursor controls and select the desired option; press the  cursor control and edit the option using  and  cursor controls. Once the value is set, press  cursor control to store it and return to the Main Settings menu.

4.6.1 Maximum/Minimum Activation Speed

The Maximum and Minimum Activation Speeds should be set to appropriate values for the fishing vessel upon which the unit is being installed. The Minimum Activation Speed should be set to a value between 0.0 to 4.0 Knots to correspond to the

minimum fishing speed of the vessel. The Maximum Activation Speed should be set to correspond to the maximum fishing speed of the vessel.

4.6.2 Alarm Radius

The Alarm Radius is the radius of the circular safety sector within the safety keyhole. It should be set to correspond to the maximum length of the fishing trawl. Its value can be between 0.5 and 3.0 nautical miles with a default value of 1 nautical mile.

4.6.3 GPS Datum

It is possible to set the Datum reference used by the GPS receiver connected to the unit so that the unit converts the position received from the GPS to the Map Datum currently selected in the menu in order to match the position from the GPS with the position on the charts. WGS 1984 is the default GPS Datum.

4.6.4 Language








To facilitate operation the unit can be set to display the menus, error messages and short descriptions in a variety of languages. The default setting is English.

4.6.5 Cursor Time-out

This is the time in which the unit reverts to normal operation following a cursor activated function. It may be set anywhere between 3 and 60 seconds with a default value of 10 seconds.

5. Product Overview

5.1 KEY FUNCTIONS OVERVIEW


-  **POWER** : Power Up/Down the unit
-  **ZOOM+** : Zoom In (reduces the range)
-  **ZOOM-** : Zoom Out (increases the range)
-  **DIM+** : Increases the LCD and keyboard back lighting
-  **DIM-** : Reduces the LCD and keyboard back lighting
-  **CANCEL ALARM**: Cancels the Audible Alarm
-  : Cursor control keys to move the cursor on the display screen quickly and accurately. Also scrolls to the desired option in the menu pages.

5.2 QUICKSTART GUIDE

To Power Up the Unit

Press the **POWER**  key.

To Confirm Acceptance of Disclaimer

After reading the Disclaimer press the **ZOOM IN**  key to confirm.



To Power Down the Unit

Press and hold the **POWER**  key for 5 seconds.

To Show/Hide the Cursor

Move the cursor pad and the cursor will appear, wait for the cursor time-out number of seconds for the cursor to disappear.

To Display Information about the Objects

Place the cursor above an object - the "Quick Info" window will automatically pop up - press the **ZOOM IN**  key to display the Long Text Description. If there are many objects found under the cursor, keep pressing the **ZOOM IN**  key to display the Long Text Description for each of them.

To Close the Quick Info window

Wait for the cursor to disappear or move the cursor away from the object.



To Close the Long Text Description

Press the **ZOOM OUT**  key.

To Zoom In and Out

Press the **ZOOM IN**  and the **ZOOM OUT**  keys.

To Adjust LCD and Keyboard Backlight

Press the **DIM+**  key to increase and the **DIM-**  key to decrease the LCD and keyboard backlight.


To Save the Vessel Track

The vessel track is automatically saved in internal memory every 60 seconds and the last 60 minutes of track is displayed on the screen.



To Cancel the Audible Alarm

Press the **CANCEL ALARM**  key when the Audible Alarm is sounding.


To Cancel the GPS Failure Alarm

When the GPS Failure Alarm window pops up, press the **CANCEL ALARM**  key to close the pop up and stop the Audible Alarm.






To Access the Settings Menu window


Power up the unit, wait for the Settings Menu window and while it is displayed press and hold the **ZOOM IN**  and **ZOOM OUT**  keys at the same time for 4 seconds. The selector bar will appear. Now the desired settings can be set.

To Exit the Settings Menu window

When the Settings Menu window is open press the **ZOOM OUT**  key to exit.

To Change Minimum and Maximum Activation Speed

When the Settings Menu window is open, move the selection bar down using the  cursor controls and select Min/Max Activation Speed option; press the  cursor control and edit the value using  and  cursor controls. Once the value is set, press  cursor control to store it and return to the Main Settings menu.

NOTE Pressing  takes you to the main Settings Menu without saving the new value.

To Change GPS Datum



Follow the steps as for changing the Activation Speed.

To Change Language



Follow the steps as for changing the Activation Speed.

To Activate GPS Simulation Mode


NOTE The GPS Simulation Mode works only when no valid GPS signal is being received.

Press and hold the two **DIM**  and  keys for 2 seconds. The Simulator Menu will be displayed. Use the cursor controls to move the selector and set the desired values in the same way as for the Settings Menu.



To Deactivate GPS Simulation Mode

Press and hold the two **DIM**  and  keys for 2 seconds. When the menu pops up, turn the simulation off. You can also power the unit down.





To Exit the GPS Simulation Menu

When the GPS Simulation Menu window is open press the **ZOOM OUT**  key to exit.

To Save Screen Shots on the SD Card

Insert the SD Card; press the **CANCEL ALARM**  key and the **DIM+**  key for 1 second at the same time. The screen shot is captured and saved to SD Card in ".bmp" format.

To Save the Vessel Track on the SD Card

Insert the SD Card; press the **CANCEL ALARM**  key and the **DIM-**  key for 1 second at the same time; choose **SAVE TRACK HISTORY TO SD** option from the menu using  and  cursor controls and accept it with  cursor control. The entire vessel Track is saved to the SD Card.

5.3 SCREEN LAYOUT

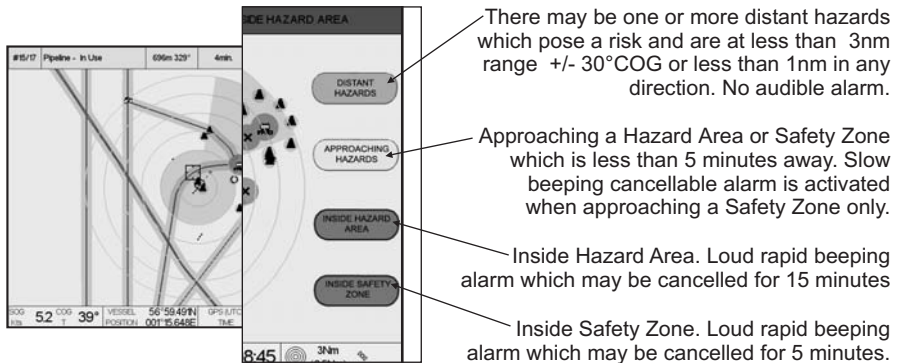


Fig. 5.3 - Screen Layout 1

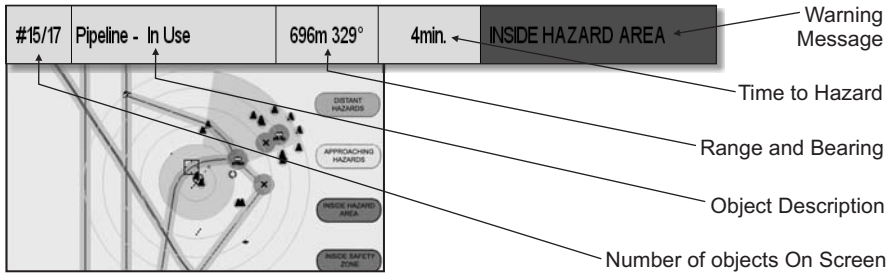
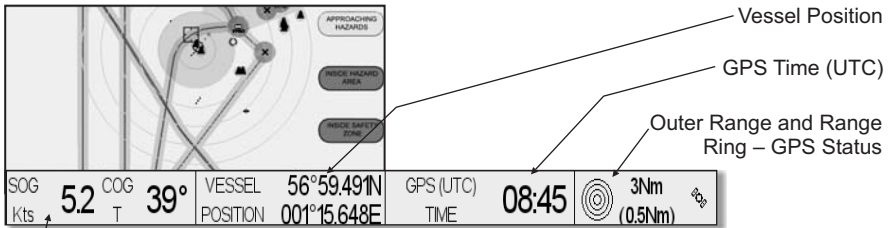


Fig. 5.3a - Screen Layout II




Speed Over Ground / Course Over Ground

Fig. 5.3b - Screen Layout III

6. FishSAFE Normal Operation

6.1 POWER UP

Press the **POWER**  key. The machine will display the FishSAFE splash screen, followed by a System Setting screen and finally the Disclaimer screen, as detailed on Chapter 1 of this manual.

To advance after reading the Disclaimer, press the **ZOOM IN**  key.

6.2 MOVING AROUND THE SCREEN

With a GPS connected, the vessel is always displayed in the centre of the screen and it is not possible to pan around the chart.

It is possible to move the cursor around the screen using the cursor control pad but when the cursor reaches the edge of the screen no panning of the chart takes place. If the cursor control keys are not operated for a certain period the cursor will disappear.

When the cursor is visible, a window is displayed which provides the cursor position, distance and bearing from the vessel. As soon as the cursor time-out occurs and the cursor disappears, this window will disappear.

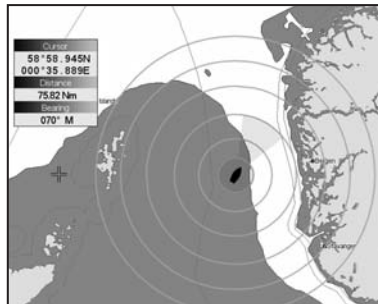





Fig. 6.2 - Displaying vessel

6.3 QUICK INFO WINDOW

If the cursor is placed on one or more FishSAFE Data Objects, a “Quick Info” window is displayed (see Fig. 6.3). If more than one object is detected at the cursor position, then each object is listed in the “Quick Info” window and a Short Text Description (STD) is displayed i.e. “Suspended Well”. The exact text displayed is based on the language setting of the unit. If language is set to French and the French language description is available then this will be displayed. If the French language description is not available then the English equivalent will be displayed.

When the “Quick Info” window is displayed, pressing the **ZOOM IN**  key displays the Long Text Description (LTD) for the first Object in the list, a second press of the **ZOOM IN**  key displays the LTD for the second object in the list,

a third press displays the LTD of the third object, etc. Pressing the **ZOOM OUT**  key at any time returns to the normal operation mode closing the “Quick Info” window.

As soon as the cursor is moved or the cursor time out occurs, the “Quick Info” window will disappear.

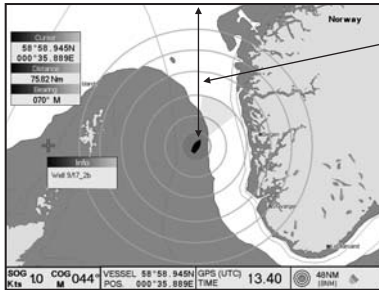


Fig. 6.3 - Quick Info Window

6.4 ZOOMING

When Zooming in or out, the screen is scaled to match a set of ranges from 0.5NM to 48NM. This range indicates the vertical screen distance from the vessel to the top (or the bottom) of the LCD display (excluding the status bar). See also the previous Fig. 6.3.

A series of range rings is always displayed. In all ranges there will be six equally spaced range rings, except at the 0.5NM range, where there will only be four. As the user Zooms In or Out, the chart scale changes and the displayed range value changes in the lower right hand corner.

There are seven ranges in all. The figures on the screen show the range followed, in brackets, by the range interval (distance between rings). These are 48NM (8NM), 24NM (4NM), 12NM (2NM), 6NM (1NM), 3NM (0.5NM), 1.5NM (500m) and 0.5NM (250m).

The following points should be noted:

- On all ranges the range figure is shown in nautical miles.
- On the largest five ranges the range interval is shown in nautical miles.
- On the lower two ranges the range interval is approximate and is shown in metres.

The range rings are always visible and are located just inside the Top and Bottom status bars.

6.5 FORWARD SECTOR

The Forward Sector is a course vector line, displayed protruding from the front of the vessel symbol.

It is CMG +/- 30° and has a length of 5 minutes at current speed of the vessel.

6.6 THE ALARM KEYHOLE

The Keyhole guardian zone is used to decide when and what is displayed on the Hazard Status Bar. It is a circle of trawl length 1 nm (adjustable to length of tow if required) superimposed upon an arc at CMG +/- 30° of length 3 nm - both being based upon the vessel position.

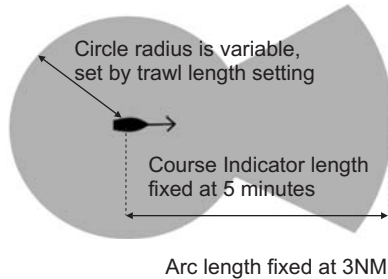


Fig. 6.6 - The Keyhole

When the Forward Sector zone overlaps a Hazard or Safety Area, the Yellow warning indicator is displayed and the associated Audible Alarm is sounded. When the vessel enters a Hazard or Safety Area, the relevant Red warning indicator is displayed and the associated Audible Alarm is sounded.

7. Visual and Audible Alarms

There are three types of alarm indicators: two visual (Hazard Status Bar and Traffic Lights) and one audible (100dB alarm).

7.1 HAZARD STATUS BAR

In normal operation, with no hazard detected, a display similar to the one below (see Fig. 7.1) is shown:

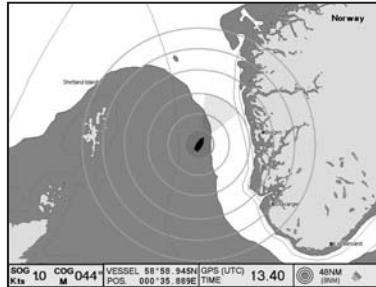


Fig. 7.1 - The display screen with no hazard detected

The FishSAFE unit constantly monitors the “Keyhole” and as soon as one or more hazards is detected inside the “Keyhole” a coloured Hazard Status Bar is displayed along the top of the screen as shown below (see Fig. 7.1a):



Fig. 7.1a - The display screen with the Hazard Status Bar

Whenever the Hazard Status Bar is displayed, there will always be one or more Traffic Lights also displayed. The exact operation of these “Traffic Lights” is detailed in Par. 7.3.

7.2 HAZARD STATUS BAR CYCLING

The Hazard Status Bar can only show one hazard at a time and if more than one hazard is detected, then it cycles around each hazard in turn displaying the information on the hazard for 3 seconds before cycling to the next.

As well as the Hazard Status Bar changing, a special “square target” cursor highlights the hazard on the screen.

In the case of point objects, the cursor is directly on top of the object (see Fig. 7.2). For line objects the cursor is placed on the line at the nearest intersect to the vessel, within the keyhole.

The Hazard Status Bar consists of five sections (from left to right):

1. Hazard number and number of hazards, i.e. in the left screen of the Fig. 7.2, #1/4 means hazard one of four displayed.
2. Hazard Description Field is a Short Text Description of the hazard(s).
3. Range and Bearing of the hazard from the vessel - This is displayed when the object lies within the keyhole guardian zone and corresponds to a Green Alarm or worse. The object is highlighted by the on-screen cursor.

In the case of line objects the values of range and bearing correspond to the closest point of the object within the keyhole.

4. The time displayed is the expected time for the vessel to enter the hazard boundary or safety zone boundary. It is only displayed when the hazard boundary or safety zone boundary is within the forward sector. It corresponds to a Yellow alarm. The time displayed is normally an initial value of 5 minutes decreasing uniformly down to zero as the vessel crosses the boundary at which point the alarm turns Red.

The time is calculated by the formula Distance divided by Speed where:

- ♦ *distance* is measured from the vessel to the closest edge of the safety zone or hazard boundary which is within the Forward Sector. The time is only displayed when edge of the safety zone or hazard boundary is within the Forward Sector.
- ♦ *speed* is the speed of the vessel over the ground i.e. SOG as displayed on the FishSAFE unit itself.

5. Group Warning based on the following table:

Screen message	Displayed condition when vessel is
Multiple Hazards!	: within one or more than one Safety Zone and within one or more than one Hazard Area.
Inside Safety Zones!	: within more than one Safety Zone.
Inside Safety Zone	: within only one Safety Zone.
Near Safety Zone	: approaching one or more than one Safety Zone and none of the above apply.
Inside Hazard Area	: within a Hazard Area and none of the above apply.
Near Hazard Area	: approaching a Hazard Area and none of the above apply.
Caution	: when none of the above apply.

This warning field shows the worst warning for the group of all detected hazards at any time. In the example shown in Fig. 7.2, there are four hazards all of the same severity. If however, one of the hazards comes within the variable alarm zone, then the Yellow "Approaching Hazards" Traffic Light is displayed and the Group warning goes to Yellow status, as shown below. The Highest Priority message (i.e. that nearest the top of this list) is continuously displayed in this fifth field but the other fields are coloured based on the hazard that they are currently displaying.



Fig. 7.2 - Examples of Hazards


7.3 TRAFFIC LIGHTS

There can be more than one indicator on at any one time, but not all four together. The Green “Distant Hazards” indicator is turned off when there are Hazards Approaching (Yellow Indicator) or when the vessel is inside a Hazard Area or Safety Zone (Red Indicators). The Traffic Lights remain displayed until the Alarm condition that triggered them is no longer true.

7.4 AUDIBLE ALARMS

As well as the Traffic Lights, there are also a series of Audible Alarms that are related to the Traffic Lights. The table below gives the relationship between the Traffic Lights and the Audible Alarms plus the type of Audible Alarm that should sound.

Color	Text Label	Audible Alarm
Green	Distant Hazards	No audible alarm
Yellow	Approaching Hazards	Slow Beeping Cancellable Alarm - activated when approaching a Safety Zone only
Red	Inside Hazard Area	Rapid Beeping - 1 sec ON, 1 sec OFF
Red	Inside Safety Zone	Rapid Beeping - 1 sec ON, 1 sec OFF

All Audible Alarms can be cancelled by pressing the **CANCEL ALARM**  key, which silences the Alarm for the time-out period. However, if another Alarm condition occurs during the time-out period the Alarm will sound again.

Situation	Pressing Cancel Alarm	Alarm Time-out
Approaching Hazard Area	Audible Alarm is not triggered	N/A
Approaching Safety Zone	Cancels Audible Alarm The Alarm is re-triggered when a Safety Zone or Hazard Area is entered	5 mins
Inside Hazard Area	Cancels Audible Alarm until 1. a Safety Zone is entered or 2. a Safety Zone is approached	15 mins
Inside Safety Zone	Cancels Audible Alarm Unless the vessel departs from the Safety Zone the Audible Alarm does not re-trigger if another Safety Zone or Hazard Area is approached or entered	5 mins

A flashing Alarm Icon is displayed in the lower right corner of the screen whenever the Alarm sounds - it is displayed with a red cross through it when the Alarm has been cancelled and is within the time-out period.

Alarm Sounding



During Alarm Timeout Period



Fig. 7.4 - Alarm Icons

7.4.1 GPS Failure Alarm

If the GPS NMEA message is not received for more than 30 seconds, then the FishSAFE will display the following Alarm window and sound a Slow Double Beep Audible Alarm.

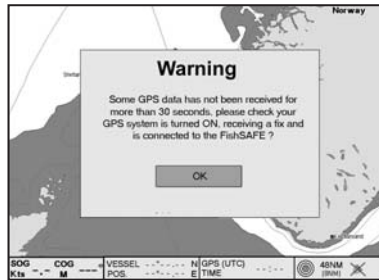



Fig. 7.4.1 - GPS Failure Alarm window

Pressing the **CANCEL ALARM**  key cancels the GPS Failure Alarm and the Time-out on this alarm is 5mins if the "NO GPS" condition continues. If the GPS position or COG/SOG starts to be received again, the Alarm is reset and will sound again if a subsequent GPS failure occurs.

8. Updating the Unit

8.1 DATA

Data will be periodically made available to FishSAFE users. This Data will be made available on SD Card.

To update a unit with new Data take the following steps:

1. Switch Off the unit.
2. Open the magnetic flap at the lower front edge of the FishSAFE unit to reveal a single SD slot.
3. Insert the appropriate SD Card into the slot.
4. Switch the unit On.
5. When the system boots up the following window is displayed. Note that the data version and the software version are displayed here.

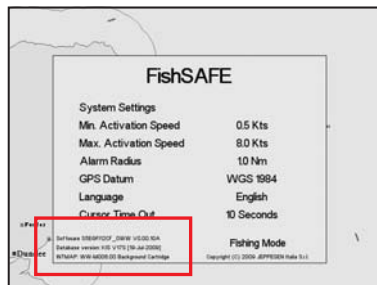



Fig. 8.1 - Startup screen

6. Hit the **ZOOM IN**  key to close the window.
7. When the system has rebooted you should remove the SD Card.

8.1.1 Internet Download

The SD Card can be updated via Internet Download using an SD Card writer. The FishSAFE data must be in a file named FSDATA.DAT and must be placed in the root directory of the SD Card.

8.2 OPERATING SYSTEM

The manufacturers of the unit may if necessary provide updates to the Operating Software which can be installed by the user. This process is similar to installing a data upload.

To update a unit with a new Operating System take the following steps:

1. Switch Off the unit.
2. Open the magnetic flap at the lower front edge of the FishSAFE unit to reveal a single SD slot.

3. Insert the appropriate SD Card into the slot.
4. Switch the unit On.
5. When the system boots up the following window is displayed.

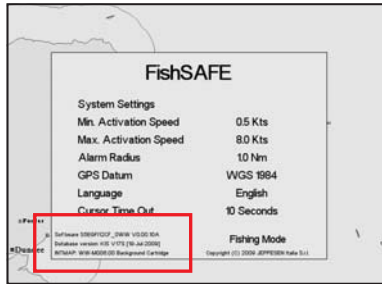



Fig. 8.2 - Startup screen

6. Hit the **ZOOM IN**  key to close the window.
7. When the system has rebooted you should remove the SD Card.

NOTE *It is most important that the update of Operating System is not interrupted. Do not switch the unit Off or interrupt the units power supply during the process.*

8.2.1 Internet Download

The SD Card can be updated via Internet Download using an SD Card writer. The FishSAFE Operating System must be within a folder within the SD Card named "UPLOAD".

9. Repair

9.1 IN WARRANTY REPAIR

For a period of 3 years from the date of delivery of your FishSAFE unit, a free repair service is offered in connection with faults or errors that may arise through ordinary use of the FishSAFE unit. Faults covered by this warranty include:

- ◆ software defects
- ◆ failed parts
- ◆ manufacturing defects

For the avoidance of doubt, any faults that arise through abnormal use of the unit shall not be covered by this free warranty.

9.1.1 How to benefit from this Warranty

In the first instance, please visit the dedicated FishSAFE unit maintenance website accessible from **www.fishsafe.eu** for full and comprehensive instructions on how to benefit from this warranty. This website is an up to date reference tool for any problems that may arise in connection with the unit.

In the event that you are unable to access this site, please contact:

Jeppesen Marine, Light Marine Division
Customer Services, OEM Solutions

ph : +39-0585-794739 | fax : +39-0585-794755 | EU-customersupport@jeppesen.com
Jeppesen Italia s.r.l. | Centro Direzionale Olidor - Via Dorsale 9 Scala B | 54100 Massa (MS) | ITALY

Please note that you will be responsible for the disconnection, packing and delivery of the unit if repairs are necessary.

9.2 OUT OF WARRANTY REPAIR

You will be responsible for the costs in connection with any fault that arises:

- ◆ outside the 3 year warranty period
- ◆ through abnormal use of the FishSAFE unit

Please access in the first instance, the dedicated FishSAFE unit maintenance website, accessible from **www.fishsafe.eu**, for comprehensive advice. This website provides up to date information in connection with spare parts and maintenance. If you are unable to access this site, please contact:

Jeppesen Marine, Light Marine Division
Customer Services, OEM Solutions

ph : +39-0585-794739 | fax : +39-0585-794755 | EU-customersupport@jeppesen.com
Jeppesen Italia s.r.l. | Centro Direzionale Olidor - Via Dorsale 9 Scala B | 54100 Massa (MS) | ITALY

10. Product Specification

- ◆ Screen size and Resolution: Colour SVGA TFT LCD 12.1" diagonal (800x600)
- ◆ LCD Brightness : Sunlight Viewable with Dimmable Backlight (400 cd/m²)
- ◆ Operating Temperature : -10°C to +50°C
- ◆ Unit Dimensions : 356mm x 264mm x 102.5mm (WxHxD) *see previous Par. 4.2.*
- ◆ Panel Mount Hole Size : 337mm x 245mm
- ◆ Weight : 3Kg
- ◆ Cartridge Slot : Front access single SD Card slot (for Hazard Data updates)
- ◆ Voltage : 10-32v DC
- ◆ Power Consumption : 1.5A max @ 12V DC
- ◆ NMEA 0183 (Version 2) : \$xxGGA, \$xxGLL, \$xxRMC sentences at 4800 baud
- ◆ Mounting : Flush Panel or Bracket Mounting *see previous Par. 4.1.*
- ◆ Warning Indicators : 4 On-Screen Indicators: Green, Yellow, Red, Red
- ◆ Alarm : Internally mounted 102 dB
- ◆ Operations : Zoom In, Zoom Out, Scroll NS, Scroll EW, recentre.
Optional Diagonal Scroll NNE, NNW, SSE, SSW
- ◆ Chart : World Coastline at 1,000,000 scale or better
- ◆ IP Rating : IP67
- ◆ Connectors : 8 way Con-X-All Power and NMEA In 6 way Con-X-All GPS Antenna Connector
- ◆ Language Support : English, Norwegian, Dutch, French, German, Danish, Spanish, Icelandic

Analytical Index

A

Activation Speed	16, 20
Adjust LCD	20
Alarm	9, 35
Alarm Icon	30
alarm indicators	27
Alarm Radius	17
Audible Alarm	19, 20, 25, 27, 29

B

Backlight	16
Bracket Mounting	13, 35

C

CABLE WIRING	14
Cancel Alarm	9
Cancel Audible Alarm	20
Cancel GPS Failure Alarm	20
Cartridge Slot	35
Cartridges	16
Caution	28
Change GPS Datum	20
Change Language	20
Change parameters	16
Chart	35
chart scale change	24
Close the Quick Info	19
Combined Power and NMEA lead	11
Combined Power/NMEA	14, 15
Connectors	14, 35
Contrast	16
course vector line	24
Cursor	19, 23
Cursor control keys	19
cursor position	23
Cursor Time-out	17

D

Data	31
Dim menu	16
Dimensions	14, 35
Disclaimer	7, 19, 23

E

Exit Settings Menu	20
--------------------------	----

F

FishSAFE	9
FishSAFE box	11
FishSAFE Connections	13, 14
FishSAFE Dimensions	14
FishSAFE Normal Operation	23
FishSAFE unit	11, 33
Flush Mount Kit	11
Flush Mounting	13
Flush Panel	35
Forward Sector	24
Fuse and Holder	11

G

GGA	35
GLL	35
GPS	23

GPS Antenna	14, 15
GPS Antenna connector	15
GPS Datum	17, 20
GPS Failure Alarm	20, 30
GPS Simulation Menu	21
GPS Simulation Mode	21

H

Hazard Area	9, 28
Hazard Status Bar	25, 27, 28
Hazards	29

I

Information	19
Input Data Display	16
Inside Hazard Area	28
Inside Safety Zones	28
Internet Download	31, 32
IP Rating	35

K

KEY FUNCTIONS	19
Keyboard Backlight	19, 20
Keyhole	25, 27

L

Language	17, 20, 35
Language Support	35
LCD backlighting	19
LCD Brightness	35
Long Text Description	20, 23
LTD	23

M

Mounting	35
Mounting Bracket	11
Multiple Hazards	28

N

Near Hazard Area	28
Near Safety Zone	28
NMEA 0183	15, 35

O

OPERATING SYSTEM	31
Operations	35
Operations Manual	11

P

Panel Mount	35
Parts Checklist	9, 11, 13
Power Consumption	35
Power Down	19
POWER UP	19, 23
Product Overview	19

Q

Quick Info	19, 23, 24
QUICKSTART	19, 33

R

RAM	16
RAM Clear	16

range rings	24
Red warning	25
Resolution	35
RMC	35
S	
Safety Zone	9, 28
Save Screen Shots	21
Save Track	21
SCREEN LAYOUT	21
Screen Shots	21
Screen size	35
SD Card	16, 21, 31, 35
SD Card test	16
Serial Ports	16
Settings Menu	20
Short Text Description	23
show/hide cursor	19
Simulation Mode	21
Simulator Menu	21
Siren test	16
Special Startup	35
splash screen	16, 23
Startup screen	31
STD	23
System Setting	16
System Test menu	16
SYSTEM WIRING	14

T	
Temperature	35
Track	20, 21
Traffic Lights	27, 29

U	
Updating the Unit	31

V	
vessel	23
Vessel Track	20
Video test	16
Voltage	35

W	
Warning	9, 35
Warning Indicators	35
Weight	35

Y	
Yellow warning	25

Z	
Zoom In	19, 20
Zoom Out	19, 20
ZOOMING	24

No. of object / No. of triggering objects.

Object Description

Range and Bearing

Time to Hazard

Warning Message

#1/4

Well-37/1

2.7hr 123°

INSIDE HAZARD AREA

Warning Message

Green Warning

There may be one or more distant hazards which pose a risk and are at less than 3nm range +/- 30°COG or less than 1nm in any direction. No audible alarm.

Yellow Warning

Approaching a Hazard Area or Safety Zone which is less than 5 minutes away. Slow beeping cancellable alarm for Safety Zone only.

Red Warning - Inside Hazard Area

Loud rapid beeping alarm which user may cancel for 15 minutes.

Red Warning - Inside Safety Zone.

Loud rapid beeping alarm which user may cancel for 5 minutes.

DISTANT HAZARDS

APPROACHING HAZARDS

INSIDE HAZARD AREA

INSIDE SAFETY ZONE

DISTANT HAZARDS

APPROACHING HAZARDS

INSIDE HAZARD AREA

INSIDE SAFETY ZONE

SOG

10

Kts

COG

044

M

POS.

58° 58' .945N

GPS (UTC)

000° 35' .889E

TIME

13.40

24NM (GN)

Speed Over Ground
Course Over Ground

Vessel Position

GPS TIME (UTC)

Outer Range and Range Ring interval

GPS Status

Zoom In
Accept Changes
Extra Information

Zoom Out
Close Window

Cursor for selecting object for information

Screen Dim

Screen Lighten

Cancel Alarm

Power Switch

Cartridge Slot

Zoom In
Accept Changes
Extra Information

Zoom Out
Close Window

Cursor for selecting object for information

Screen Dim

Screen Lighten

Cancel Alarm

Power Switch

Cartridge Slot

