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# REGULATORY INFORMATION

## EC Declaration of Conformity

Addvalue Communications Pte Ltd, 28 Tai Seng Street #06-02, Singapore 534106 declares under our sole responsibility that the Product, brand name as Wideye and model: SF2500 voice Satellite terminal with a build in GPS tracking system, to which this declaration relates, is in conformity with the following standards and/or other normative documents:

**ETSI EN 301 681, ETSI EN 301 489-1, -19, - 20, IEC 60945 / EN 60945, IEC 60950-1 AND EN 60950-1**

We hereby declare that all essential radio test suite have been carried out and that the above named product is in conformity to all the essential requirements of Directive 1999/5/EC.

The Conformity Assessment procedure referred to Article 10 and detailed in Annex [III] or [IV] of Directive 1999/5/EC has been followed with involvement of the following notified bodies:

TIMCO ENGINEERING Inc., P.O Box 370, NEWBERRY, FLORIDA 32669.  
Identification mark: 1177 (Notified Body Number)

The technical documentation relevant to the above equipment is held at:

- Addvalue Communications Pte Ltd, 28 Tai Seng Street #06-02, Singapore 534106
- Signed by Mr. Tan Khai Pang (Chief Technology Officer, 17 April 2012) and
- Mr. Prabakar Kuttaniseeri (Manager-Quality Engineering, 17 April 2012).

### **WARNING**

This equipment may not operate when mains power is lost.

## Safety Summary

For the sake of safety and protection, please read the user guide before you attempt to use the SF2500 system. In particular, read this safety section carefully. Keep this safety information where you can refer to it if necessary.

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 user guide violates safety standards of design, manufacture and intended use of the equipment.

Addvalue Communications Pte Ltd assumes no liability for the customer's failure to comply with these requirements.

## Antenna Radiation Warning

During transmission, the antenna in the system radiates high power levels of radio frequency. This radiation is considered health hazardous to any personnel that come very close to the antenna.

It is important to maintain a separation distance from the transmitting antenna to any personnel of at least 30cm.

## Service

User access to the interior of the terminal is not allowed. Only a qualified personnel authorized by its manufacturer may perform service. Failure to comply with this rule will result in the warranty void.

## Grounding and Antenna Cables

The terminal has a grounding stud to ground the terminal to the hull of the ship by using a ground cable.

The antenna cables are shielded and they should not be affected by any magnetic field. It is recommended to avoid the cables being installed in parallel with any AC wiring as it may possibly cause malfunction of the equipment.

## Ship's Power Supply

The input voltage for SF2500 System is 12V DC, 0.8A or 24V DC, 0.4A. It is recommended to use a 24V DC power line, if available on the ship.

In case of unavailability of a 24V DC power line on the ship, an external AC/DC power supply (115/230V AC to 24V DC) can be used.

## Equipment Ventilation

To ensure adequate cooling of the terminal, 5-centimeter of unobstructed space must be maintained around all sides of the unit except the bottom side. The ambient temperature range of the terminal is: -10°C to +55°C.

The equipment shall not be operated in the presence of flammable gases or fumes as well as any explosive atmosphere. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

## Obtaining Licensing for SF2500 System

Under rights given under ITU Radio Regulations, local telecommunications administrations establish and enforce national rules and regulations governing types of emissions, power levels, and other parameters that affect the purity of signal, which may be radiated in the various frequency bands of the radio spectrum.

To legally operate the SF2500 system, it is necessary to obtain permission from the local telecommunications regulatory authorities of the country you are operating from. Using your equipment in any country without permission causes you to run the risk of confiscation of the equipment by the local authorities. The normal procedure to bring such equipment into another country is to apply for a license before travel. If a license has not been obtained before travel, the equipment may be put in to storage by local authorities until such time license is obtained.

Information in this document is subject to change without notice and does not represent a commitment on the part of Addvalue Communications Pte Ltd.

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**Website: [www.wideye.com.sg](http://www.wideye.com.sg)**

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# 1 INTRODUCTION

The SF2500 is a voice satellite terminal with a built-in GPS tracking system specially designed for reliable performance in the harsh maritime and land environment. This affordable, easy-to-install and user-friendly terminal enables users to make satellite voice calls to normal PSTN phones, mobile phones and other satellite phones through the Thuraya satellite network.

The SF2500 supports SMS services through its easy-to-use menu on the large colour LCD screen on the terminal. An Alert button is available to notify pre-configured contacts during an emergency. When the Alert button is activated, the SF2500 will send a pre-determined SOS message which includes the time-stamped GPS coordinates of the position to a maximum of three preset contacts for emergency response.

The SF2500 is truly a robust, versatile and cost effective solution for medium-size to small fishing vessels, pleasure boats, patrol boats and any other sea vessels or land vehicles.

## Applications

- Supports communication needs of fishing vessels, leisure boats, coastal guard boats, land vehicles, etc.
- Coastal surveillance
- In-land rural area communications
- Fleet management

## Features

### Base Terminal

- Supports basic telephony functions, Calling Line Identification Presentation (CLIP) and Short Message Services (SMS)
- Phone book retrieval from the SIM card
- Call log: last 5 missed, received and dialed calls each with date and time stamps
- Menu-driven graphical user interface with 65K colors, 220 x 176 pixels, 2" TFT LCD screen
- MMI in English, Chinese and Bahasa Indonesia

- Back-lit keypad
- Desk and wall mounting
- Alert button for triggering an emergency alert to pre-configured contacts via SMS
- External Alert button input port
- Ringer output port
- Configuration to support
  - Automatic Position Reports (APR)
  - Polling for an on demand position report
  - Geo-fencing. Up to 5 areas (circular or rectangular) can be configured. Sends an alert when the vessel enters or leaves an area
- Over-the-air updates of system configuration parameters

## Antenna Unit

### Passive Antenna

- Omni-directional passive Thuraya satellite antenna with build in active GPS antenna
- Up to 5 meters of LMR400 (or equivalent) co-axial satellite antenna cable

### Active Antenna

- Omni-directional active Thuraya satellite antenna with build-in active GPS antenna
- Up to 40 meters of LMR400 (or equivalent) co-axial satellite antenna cable
- Refer to **Usage of Active and Passive Antenna Application Note** for further details

## Recommended Cable lengths for Active antenna

### SAT & GPS Cables

Cable Type	Loss @ 1.6GHz [dB/m]	Maximum Cable Length [m]
LMR400	0.174	40
LMR240	0.335	20
LMR195	0.493	15

#### Note:

The DC feeder, which is supplied with the active antenna must be connected to an external power source (10 ~ 30VDC)

### Operating Environment

Antenna Unit	
Operating Temperature	- 25°C ~ + 55°C
Storage Temperature	- 40°C ~ + 80°C

Base Terminal	
Operating Temperature	- 10°C ~ + 55°C
Storage Temperature	- 20°C ~ + 70°C

System	
Power Supply	10.8 – 31.2VDC
Power consumption (max)	10W
Operating Humidity	Up to 95% (non-condensing) at 40°C

### General specifications

Thuraya Approved  
Compliant to CE

#### Service

Voice

SMS: Up to 160 Characters

Ingress Protection Rating: Base Terminal IP30  
Antenna IP66

## GPS specifications

Number of Tracking Channels:	20 (SiRF Star-III)	
Position Accuracy:	<10m 95%	
Time to First Fix:	Hot start	<1 second
	Warm start	<30 seconds
	Cold start	<35 seconds

## Mechanical specifications

### Size

Base Terminal [LxWxH]:	205mm x 190mm x 80mm
Passive Antenna:	95mm (Dia.) x 150mm (H)
Active Antenna:	210mm (Dia.) x 180mm (H)

### Weight

Base Terminal:	1.1kg
Passive Antenna:	300g
Active Antenna:	1.7kg

# Packing list

<p>Base Terminal</p>	
<p>Passive Antenna</p>	
<p>Antenna Mounting Kit</p>	

RF Cable (5 meters) for GPS Signal	
RF Cable (5 meters) for Satellite Signal	
Power Cable	

# Base Terminal



## Base Terminal



**Alert Button:** For emergency usage. To notify pre-configured contacts during an emergency. Press and hold for 5 seconds to trigger the alert.



**SIM Card Slot:** To insert Thuraya SIM card.

**Mini USB Port:** This is ONLY for maintenance purpose. For more information, please contact your distributor.



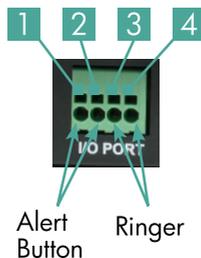
**Serial Port:** This is a 3 wires (TX, RX and ground) RS232 port. It is for Terminal Firmware upgrade.

**Power ON/OFF:** This is the system power On/Off switch.



**DC Input:** Power input connector is used for connecting the external power source (10.8 ~ 31.2 volts) to the Base Terminal

**I/O Port:** This is the interface for the external alert button input (1st and 2nd port on the left) and the external ringer port (3rd and 4th port).



Connect a normally open momentary push button switch across the input port for the external alert button feature. The ringer port is a relay contact (max. 10A). Pin 3 is Contact (C). Pin 4 is Normally Open (NO). When there is an incoming call, Pin 3 and Pin 4 will be shorted together.

**SAT Port:** SAT ANT port is used for the physical connection - via an RF cable between the satellite Antenna unit and the Base Terminal.

**Note: The RF cable loss, including the losses in the connectors shall be less than 1.5dB for the passive antenna setup.**

**GPS Port:** GPS ANT port is used for the physical connection between the GPS antenna and the Base Terminal.

**Grounding Stud:** To ground the terminal with a grounding cable.

## Antenna Unit



The Antenna unit has two RF (female) connectors at its base. One connector is the SAT signal port (N-type connector), and the other is the GPS signal port (SMA connector).

**RF Cables:** Two RF cables are included in the standard package. One is satellite RF cable and the other is GPS RF cable.

**SAT RF Cable:** The SAT RF cable is 5 meters in length and is terminated with an N-type (male) connector at each end.

**GPS RF Cable:** The GPS RF cable is 5 meters in length and is terminated with one SMA (male) connector and one TNC (male) connector.

## 2 INSTALLATION

### Overview of Installation of Antenna Unit and Base Terminal

#### Installation of Antenna unit

1. Select an ideal location above the deck where you desire to place your Antenna unit. It is recommended to install it at a point where no surrounding obstacles should obstruct the open sky view to the antenna. The Antenna unit is designed to operate within a temperature range from  $-25^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ .
2. Pass the RF cables (SAT and GPS) through the antenna's bottom cover and the mounting pipe. Connect the SAT cable between the SAT ports of the Antenna unit and the Base Terminal. The SMA connector must be connected to the Antenna unit, and the TNC connector must be connected to the GPS port of the Base Terminal. Make sure the connections are securely fastened.

**Note: Bend the GPS cable (as shown in the figure) such that the bottom cover can be easily closed.**

**\* Do not forcefully close the bottom cover. It may damage the cable.**



3. After tightening the connectors, wrap the connectors with self-bonding vinyl tape or apply silicon sealant to make them waterproof.
4. Fix the O-ring securely in to the groove on the bottom cover.
5. Fasten the bottom cover onto the antenna unit using the 4 screws.



6. Use the U-bolts and the mounting bracket to fix the assembled Antenna unit on to the vessel's mounting pole. Tighten the nuts and make sure they will not become loose.
7. Fix the cables to the mounting pole with cable tie.
8. Connect and tighten the RF connectors of SAT and GPS RF cables to the Base Terminal.



A complete Antenna unit with pole-mount mounting plate and cables.



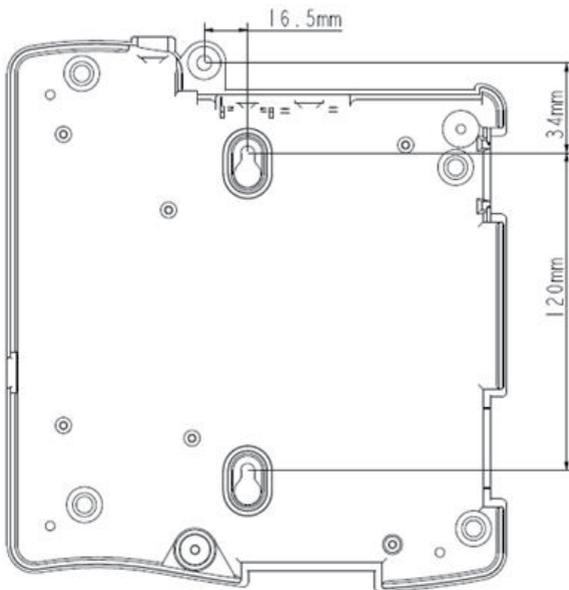
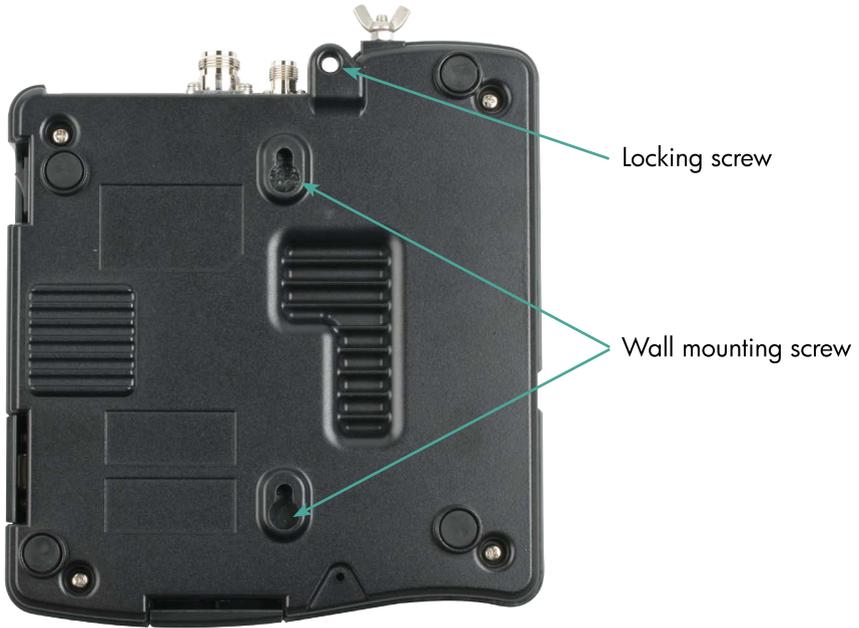
A typical pole mounted Antenna unit.



The Antenna unit can be installed on a rooftop with 3 screws and nuts.

### Installation of Base Terminal

1. Select an ideal location inside the wheelhouse or the cabin room where you desire to place your Base Terminal. The Base Terminal is designed to operate in rooms with a temperature range from  $-10^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ .
2. Mount your Base Terminal onto a wall or place it on a desk or a tabletop.



After the Base Terminal is mounted on a wall, fix a locking screw to secure the Terminal in place.

## Getting Started

Before proceeding, please refer to chapter 2 and install the SF2500 system and connect all the cables accordingly.

### Installing the SIM card

The SF2500 system requires a SIM card to access the satellite network and configure the settings of the Base Terminal. Please refer to your Airtime Service Provider for more information.

Follow these steps to install the SIM card:

1. Flip down the SIM card cover.
2. With the SIM card's gold contact facing up, position the card as indicated and slide it into the slot.



SIM Card with gold contact facing up

3. You may use a screwdriver or any pointed object to push the SIM card if required.
4. Close the SIM card cover.

## Connecting Antenna Unit

Two RF cables (5 meters each) are provided for connecting Antenna unit and Base Terminal.

Follow these steps to connect the antenna cables to the Base Terminal:

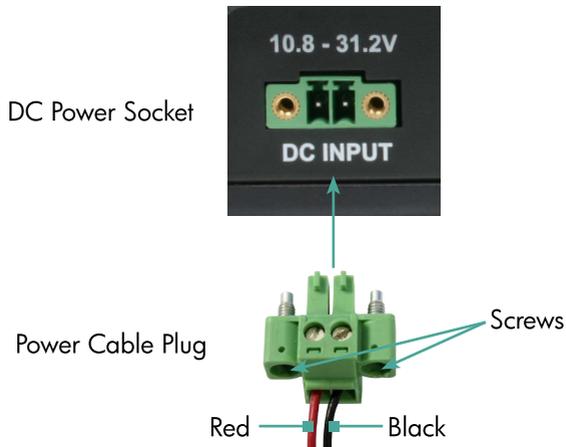
1. Plug the 2 RF cables to the RF cable connectors on the Base Terminal.
2. Lock the connector till it is properly secured to the Base Terminal.



## Connecting to DC Power Source

Follow these steps to connect the SF2500 Base Terminal to the ship's power source:

1. Insert the power cable plug to the Base Terminal DC power socket.



2. Tighten the two screws indicated in the above figure to securely fasten the cable to Base Terminal.
3. Connect the power cable to a DC power source (10.8V - 31.2V).

**RED wire** : Positive DC Supply  
**BLACK wire** : Negative DC Supply

## Powering Up the SF2500

### Follow these steps to power up the SF2500

1. Tip the Power On/Off Switch to the right.



### Making the first voice call

#### Note:

Before making a voice call, please make sure that:

- The Modem is initialized (  status indicator should be on)
- The terminal is registered for CS (Voice) service (  status indicator should be on)

#### Handset locking mechanism:

When placed onhook, the handset is locked onto the cradle. When going off-hook (picking up the handset from the cradle), please make sure to push the handset forward before lifting it off the cradle.

When you are replacing the handset, make sure it is locked onto the cradle.

To make a call from the Base Terminal, dial

**+<country code><phone number> and press  key**

or

**00 <country code> <phone number> and press  key**

**Note:**

For voice calls and SMS, you may also use '+' by pressing and holding the \* + key instead of "00" at the beginning of dialled number string as an alternative ('+ <country code> <phone number>').

To end the call, re-place the handset on the cradle.

To accept an incoming call, lift up the handset from the cradle.

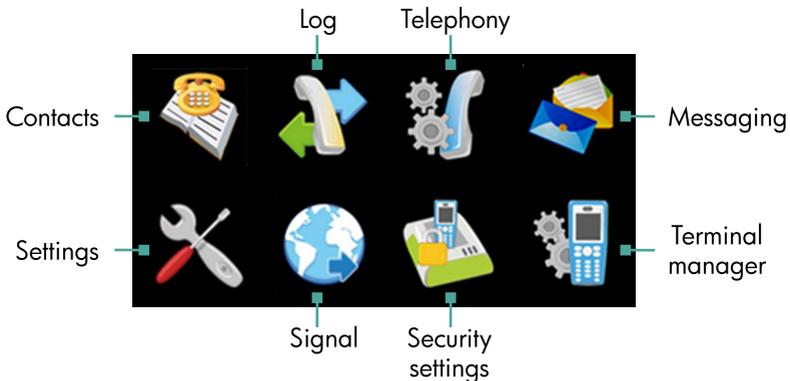
**Sending the first SMS (Message)**

Follow these steps to send the first SMS:

1. While in the Home screen, press the  key or Menu  key to enter the Main Menu.



The Main Menu will be displayed on the screen.



2. Using the 4-way navigation ring, navigate to the Messaging  icon.
3. Press  to confirm selection. The SMS editor will be displayed on the screen.
4. Type in your SMS message using the alpha-numeric keypad.

### Tips for writing text:

- To add a space, press the 0 key.
- To quickly change the text input method when writing text, press **#↑** repeatedly and check the indicator at the top of the display:
  - **<ABC>**: Capital letters
  - **<123>**: Numbers
  - **<abc>**: Small letters
  - **<Abc>**: Initial Capital letter followed by small letters
- To add a number, press and hold the desired number key.

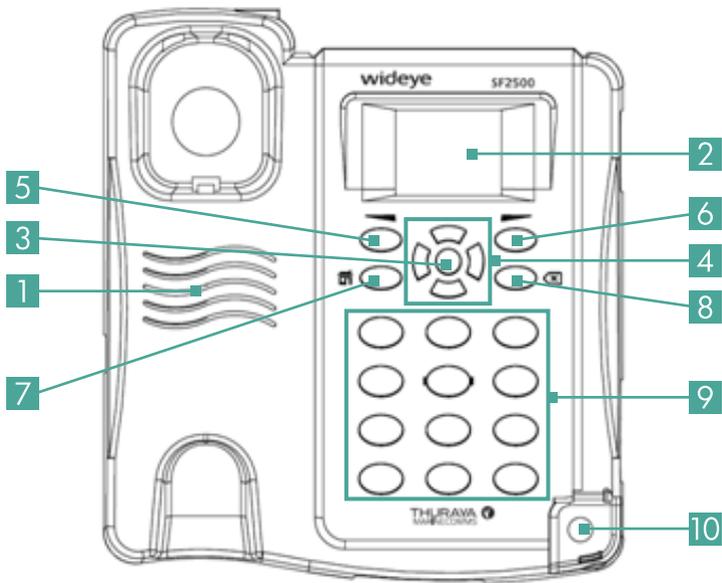
### Insert symbols to your message:

- To get a list of special symbols, press **\*+**.
- Using the 4-way navigational ring, navigate to the desired symbol.
- Press **OK** to confirm selection.

### Clearing text:

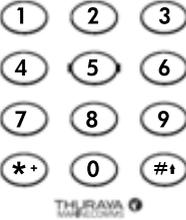
- To clear text, press Clear key **X** once to clear one character at a time.
- To clear the whole text entry, press and hold the Clear key **X** to clear the whole text entry.

## 3 USING THE SF2500



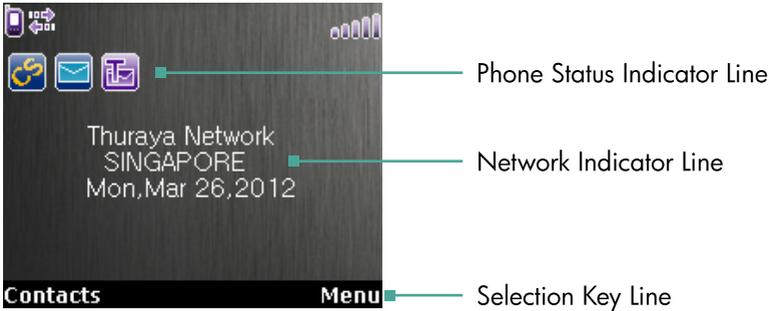
1. Speaker
2. LCD Display
3. OK Key
4. 4-way Navigation Ring
5. Select Key (Left)
6. Select Key (Right)
7. Home Key
8. Clear Key
9. Keypad (Alpha-numeric)
10. Alert Button

## Keypad - Description and Functions

Keys	Description/Functions
	<p><b>4-way navigation ring</b></p> <p>Press the 4-way navigation ring to scroll left, right, up, and down on the display. Enables scrolling through names, phone numbers, menus or settings.</p>
	<p><b>OK key</b></p> <p>Pressing this key selects/confirms the function highlighted on the display.</p> <p>When making a call, press this key after entering the number to start dialling.</p>
	<p><b>Left selection key</b></p> <p>The function of this key depends on the guiding text shown on the display above the key.</p>
	<p><b>Right selection key</b></p> <p>The function of this key depends on the guiding text shown on the display above the key.</p>
	<p><b>Keypad</b></p> <p>Used to enter numbers and characters. Press <b>0</b> to add a space when writing text.</p> <p>The functions available depend on whether you are typing a phone number (number mode) or text (text mode).</p>
	<p><b>Home</b></p> <p>This function is to access to the Home screen of the terminal.</p>
	<p><b>Clear Key</b></p> <p>Press key once to clear one character at a time or press and hold this key to clear the whole text entry.</p>
	<p><b>Alert Button</b></p> <p>The function of this Alert Button is to notify pre-configured contacts during an emergency.</p>

Keys	Description/Functions
<b>* +</b>	<p><b>Star * key</b></p> <p>When entering a phone number, press this key to insert a *. Press and hold this key to insert a +.</p> <p>When writing text, press this key to access a list of special symbols.</p>
<b># ↕</b>	<p><b>Hash # key</b></p> <p>When entering a phone number, press this key to insert a #.</p> <p>To quickly change the text input method when writing text, press this key repeatedly and check the indicator at the top of the display</p> <p>In idle mode, press and hold this key to set the Terminal into silent mode.</p>

## The Home Screen



- Phone Status Indicator line**  
 This indicator line shows status symbols of the operating conditions of SF2500 terminal.
- Network Indicator line**  
 This indicator line shows the registration status and region information of the SF2500 terminal.
- Selection Key line**  
 The Selection key line operates using the Left  or Right  selection keys with the  to access menus and controls.

## Status Indicators

Tables below explain the meaning of each status indicator displayed in the Home screen.

Status Indicator	Description
	Signal strength indicator
	Phone in silent mode
	New short message (SMS) in inbox.
	Available CS (voice) domain services.
	Initializing the Modem
	The Modem is initialized.
	SMS tracking is active

## Making a Voice Call

### Note:

Before making a voice call, please make sure that:

- The Modem is initialized ( status indicator should be on)
- The terminal is registered for CS (Voice) service ( status indicator should be on)

Handset locking mechanism:

When placed onhook, the handset is locked onto the cradle. When going off-hook (picking up the handset from the cradle), please make sure to push the handset forward before lifting it off the cradle.

When you are replacing the handset, make sure it is locked onto the cradle.

To make a call, dial

**+<country code><phone number> and press  key**

or

**00 <country code> <phone number> and press  key**

### Note:

For voice calls and SMS, you may also use '+' by pressing and holding the \* + key instead of "00" at the beginning of dialled number string as an alternative ('+<country code> <phone number>').

## To End a Voice Call

Re-place the handset on the cradle to end the call.

## Receiving a call

When there is an incoming call, the SF2500 terminal will,

- Ring.
- The calling party's number will be displayed on the screen.  
The corresponding name of contact will be displayed if the number is stored in the contacts.

To answer an incoming call,

Pick up the handset from the cradle.

**Note:**

For voice calls and SMS, you may also use '+' by pressing and holding the \* + key instead of "00" at the beginning of dialled number string as an alternative ('+ <country code> <phone number>').

**Adjusting volume during a call**

Use the 4-way navigation ring to adjust the volume.



You may also use the volume switch located on the handset to change the volume. However, it is recommended to leave this switch at 'H' position and use 'UP' and 'DOWN' keys as described above to adjust the volume.

## Using the Main Menu

You can access the Main Menu by pressing the Right  selection key in the Home screen.

The Main Menu includes eight menu options with each menu option having their respective sub-menus.

You can use the 4-way navigation ring to navigate to the desired menu option and press  to confirm your selection. You can also end the menu or sub menus and return to the Home screen at any time by pressing the Home  key.

Table below summarizes the functionalities within each menu option:

	<b>Contacts</b> This menu manages your user contacts
	<b>Log</b> This menu allows you to view call histories
	<b>Telephony</b> This menu configures settings related to voice telephony services.
	<b>Messaging</b> This menu is for SMS related services.
	<b>Settings</b> This menu configures general terminal settings.
	<b>Signal</b> This menu displays signal status information.
	<b>Security settings</b> This menu configures security settings related to the terminal.
	<b>Terminal manager</b> This menu configures Terminal settings.



## Contacts Menu



The **Contacts** menu allows you to store, retrieve and update names and phone numbers of your contacts.

You can also access this menu by pressing Left  selection key in Main Menu.

**Note:**  
All the contacts are saved in the SIM card memory.

The following options are available when pressing the Left  selection key while browsing through the contacts:

- **New contact**  
Add new contact to the memory. To add contact:

1. Select **New contact**.
2. Enter the name for the contact.

**Note:**  
Press **\* +** key to browse for symbols.

3. Enter the number for the contact.

**Note:**  
Stored numbers can be in any one of the following formats:

- '+ ' <country code> <phone number>
- 00 <country code> <phone number>

Press **\* +** key to insert '+' sign.  
Saving of contact without number is not allowed.

4. Select **Save** (Left  selection key) or pressing the  key to save the contact to the selected memory.

**Note:**  
Refer to "Tips for writing text" section under New message for more information on text writing.

- **Edit contact**  
Edit selected contact.
  - **Search**  
Select this to enter a specific name to search within the contact list.
  - **Delete**  
Delete selected contact.
- Note:**  
You can also delete the selected contact by pressing the Clear  key.
- **View number**  
Display the number of the selected contact.
  - **Assign Speed Dial**  
Add the selected contact to the speed dial list.
  - **Reload Contacts**  
Select this to reload contacts from the SIM card into the local memory of the Terminal.
  - **Memory Status**  
Select this to view the memory status of the contacts storage.

While browsing through the contact list, press the  key to view the phone name and number or the selected contact. The following options are available when pressing the Left  selection key while viewing the selected contact:

- **Send message**  
Open the SMS editor to send a text message to this contact.
- **Edit contact**  
Edit information of this contact.
- **Delete**  
Delete this contact.
- **Forward contact**  
Forward information of this contact using SMS
- **Assign Speed Dial**  
Add this contact to the speed dial list.



## Log Menu



The **Log** menu allows you to view historical information about phone calls in chronological order with the following sub menus:



Call history of a particular category is displayed in chronological order when selected. Up to 5 latest entries of each category can be saved.

The following options are available when pressing the Left  selection key while browsing through or viewing the call log:

- **Delete**  
Delete the selected log entry from the list.
- **Note:**  
**You can also delete the entry by pressing the Clear  key.**
- **Send**  
Send an SMS to the number in the selected log entry
- **Save**  
Save the number from the selected log entry to the contact list.

**Note:**  
**This option is not available when the log entry already has an entry in the contact list.**



## Clear call lists

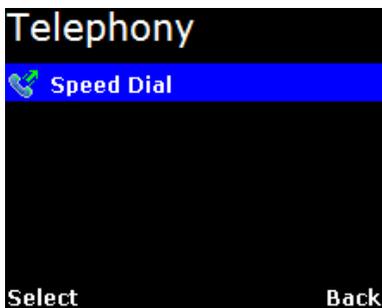
Select this to clear the call log entries. Available log options are:

- **Missed calls**
- **Received calls**
- **Dialled calls**
- **All calls**

Delete all logs including **Missed**, **Received** and **Dialled** logs.



## Telephony Menu



The **Telephony** menu allows you to configure telephony related settings with the following sub menus:



### Speed dial

- **Setting**  
Contain options to enable/disable the speed dial feature
- **Speed Dial List**  
Select this to configure the speed dial list. The following options are available when pressing the Left  selection key while browsing through the list:
  - **Assign**  
Assign a contact to the selected entry. To assign a contact:
    1. Select **Speed Dial** List.
    2. Browse through the list to locate an empty entry.
    3. Select **Options** by pressing Left  selection key.
    4. Select **Assign** and press **OK** from the option.
    5. Select the desired contact to assign to the speed dial list.
    6. Press **OK** to confirm your selection.
  - **Delete**  
Remove a contact from the selected entry. This option is not available for an empty entry.

#### Note:

You can also delete the entry by pressing the Clear  key.

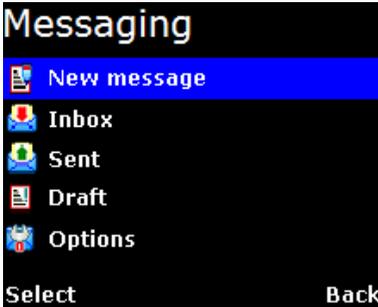
You can make a voice call directly from the Main Menu screen by pressing the corresponding speed dial entry number + **OK** key once the speed dial feature is enabled with a valid contact entry.

## Messaging Menu



### New Message

Select this to create and send a new message.



To create a new message: The **Messaging** menu allows the user to write new messages, view stored messages from **Inbox**, **Drafts** and/or **Sent** folders and configure settings related to SMS with the following sub menu:

1. Select **New Message** by pressing the **OK** key. The SMS editor will be displayed for writing new message.
2. Type in your SMS message using the alpha-numeric keypad.
3. To send the message, press the **OK** key and select **Send**.
4. Enter the recipient's phone number, and press the **OK** key. Alternatively you can select **Search** by pressing the Left selection key to select the phone number from the contacts.

### Options:

You can press the Left selection key to select options available when writing the message.

- **Send**  
Select this when you are ready to send your message.
- **Save**  
Select this to save the message into the draft folder.
- **Clear screen**  
Select this to clear all the written text.

### Tips for writing text:

- Press the 0 key to add a space.
- To quickly change the text input mode when writing text, press **#↑** key repeatedly and check the indicator at the top of the display:
  - **<ABC>**: Capital letters
  - **<123>**: Numbers
  - **<abc>**: Small letters
  - **<Abc>**: Initial Capital letter followed by small letters

- To add a number in alphabet mode, press and hold the desired number key.

### Inserting symbols to your message:

- To get a list of special symbols, press the \* + key.
- Using the 4-way navigation ring, navigate to the desired symbol.
- Press  to confirm the selection.

### Clearing text:

- To clear text, press  once to clear one character at a time.
- To clear the whole text entry, press and hold  to clear the whole text entry.



### Inbox

Contain new/opened text messages that you have received. When browsing through the messages list using the 4-way navigation ring,



Indicates unread (new) messages and



Indicates read (opened) text messages.

Following are the available options when pressing the Left  selection key while browsing through or viewing the messages in this folder:

- **Open**  
Open selected message. You can also press  while browsing through the message list to open the selected message (This option is not available when viewing the message).

- **Reply**  
Select this to reply to the selected message sender.

- **Delete**  
Delete the selected message.

### Note:

You can also delete the selected message by pressing the Clear  key.

- **Forward**  
Forward this message to another recipient.
- **Save**  
Save the selected message into the Draft folder.
- **Details**  
Display the details of the selected message.
- **Add to contact**  
Select this to add the phone number of the selected message into the contact list.



## Sent

Contains the text messages you have sent. Following are the available options when pressing the Left  selection key while browsing through or viewing the messages in this folder:

- **Open**  
Open the selected message. You can also press  while browsing through the message list to open the selected message (This option is not available when viewing the message).
- **Delete**  
Delete the selected message.

### Note:

You can also delete the selected message by pressing the Clear  key.

- **Send**  
Send the selected message to another recipient.
- **Save**  
Save the selected message into the Draft folder
- **Add to contact**  
Select this to add the phone number of the selected message into the contact list.



## Draft

Contain text messages that you have saved. Following are the available options when pressing the Left  selection key while browsing through or viewing the messages in this folder:

- **Open**  
Open the selected message. You can also press  while browsing through the message list to open the selected message (This option is not available when viewing the message).
- **Delete**  
Delete the selected message.

### Note:

You can also delete the selected message by pressing the Clear  key.

- **Send**  
Send this message to another recipient.
- **Save**  
Save the selected message into the Draft folder
- **Add to contact**  
Select this to add the phone number of the selected message into the contact list.



## Options

The following settings are available in this sub menu:

- **Message Centre**  
Select this to set the number of the SMS service center.
- **Save sent msg**  
Select this to enable or disable the saving of sent messages. When this option is enabled, all successfully sent messages are saved in the **Sent** folder.
- **Reload Messages**  
Select this to reload messages from the SIM card into the local memory of the Terminal.
- **Memory status**  
Select this to view the memory status of the messages.



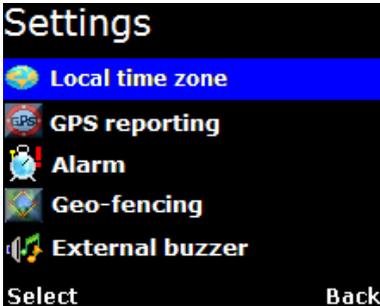
## Delete all

Select this to clear the messages in a particular folder. Available folder options are:

- **All messages**  
Delete messages in all folders including **Inbox**, **Sent** and **Draft**.
- **Inbox**
- **Sent**
- **Draft**



## Settings Menu



The **Settings** menu provides the following sub menus to configure the terminal:



### Local time zone

Allow you to change the local time zone of the Terminal.



### GPS reporting

Select this to view or change settings related to GPS reporting. The following settings are available in this sub menu:

- **Unit ID**  
The unit ID of the Base Terminal is used for tracking and cannot be changed.
- **Timing interval**  
Time based triggering for GPS reporting in minutes. The terminal sends GPS reporting message to the target server whenever the specified time has elapsed since last reporting. The following settings are available in this sub menu:
  - **Status**  
Enable or disable the time based tracking.
  - **Timing Freq. (min)**  
Set the reporting interval in minutes. Set to 0 to disable.
- **Distance Interval**  
Distance based triggering for GPS reporting in meter (m). The terminal sends GPS reporting message to the target server whenever the terminal has travelled more than the specified distance since the last reporting. The following settings are available in this sub menu:
  - **Status**  
Enable or disable the distance based tracking.

- **Distance Interval**  
Set the distance interval in meters. Set to 0 to disable.
- **SMS Server Number**  
Phone number of the target server to receive the reporting message.
- **Authorized num**  
Up to three authorized phone numbers can be added for accessing the terminal remotely to retrieve the GPS coordinates or change the tracking settings.
- **GPS Recording**  
Allow you to enable or disable the recording of the GPS coordinates. The terminal will start recording the received GPS every 10 minutes when:
  - GPS recording (this option) is enabled and
  - SMS tracking  is active and
  - SMS server number is not empty.

**When authentication is enabled, this sub menu is tracking password protected and no change of setting is allowed unless the correct password is entered.**

You can edit the selected reporting option by pressing the Left  selection key.



### **Alarm reporting**

Select this to configure settings related to different types of alarm messages. The following settings are available in this sub menu:

- **Speed limit**  
Select this to view or change the speed limit of the terminal in kilometer per hour (km/h). The terminal sends a speed alarm message to the target server once the speed limit is breached.
- **Alert button**  
Select this to configure settings related to Alert buttons. The terminal sends a predefined emergency text message with GPS coordinates to the target server when either internal or external Alert button is pressed and held for more than 5 seconds.

The following settings are available by pressing the Left  selection key:

- **Emergency num**  
Allow you to configure up to three SMS phone numbers to receive the emergency text message when Alert button is pressed.
- **Emergency text**  
Allow you to configure the text of the emergency message.

- **Internal**  
Allow you to enable or disable the internal Alert button.
- **External**  
Allow you to enable or disable the external Alert button.

**Note:**

**When authentication is enabled, this sub menu is tracking password protected and no change of setting is allowed unless the correct password is entered.**



**Geo-fencing**

Select this to view or change settings related to Geo-fencing. The terminal sends an alarm message to the target server whenever the fence boundary is crossed. You are allowed to setup up to five entries of areas. You can configure the selected fencing area by pressing the Left  selection key while browsing through the entries. The following settings are available when a fencing area is selected:

- **Fence Type**  
Allow you to set the type of fencing. The following options are available:
  - **Circle**
  - **Rectangle**
- **Trigger Type**  
Allow you to set the type of triggering. The following options are available:
  - **In**  
Alarm message received whenever the SF2500 enters the selected area.
  - **Out**  
Alarm message received whenever the SF2500 exits the selected area.
  - **In/Out**  
Alarm message received whenever the SF2500 enters or exits the selected area.
- **Status**  
Select this to enable or disable the selected area.
- **Radius**  
Allow you to set the radius in meter (m). Only shown when fencing type is Circle.
- **Latitude [x]**  
Allow you to set the latitude of point [x] in [ddmm.mmmm] format.
- **Longitude [x]**  
Allow you to set the longitude of point [x] in [dddmm.mmmm] format.

**Note:**

**[x] Denotes the running point number setting that is shown depending on the selected fencing type.**

Each point of the fencing area is defined using latitude and longitude of the GPS coordinates. Number of point for setting up the fencing area varies depending on the selected fencing type. Table below summarizes number of points required for each fencing type:

Fencing Type	Number of points required	Remarks
Circle	1	Together with the <b>Radius</b> , this point mark as the center point of the circle fencing area.
Rectangle	2	These two points mark as the diagonal points of a rectangle fencing area

**Note:**

**When authentication is enabled, this sub menu is tracking password protected and no change of setting is allowed unless the correct password is entered.**

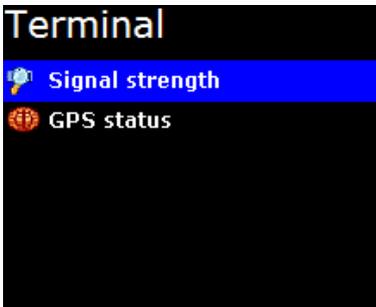


**External Buzzer**

Select this to enable or disable the external buzzer.



## Signal Menu



The **Signal** menu provides the following sub menus to check the receiving signal strength and GPS signal status of the terminal:



### Signal strength

Show graphical representation of current and average RSSI value.



### GPS status

Show the status of the GPS.



## Security Settings Menu



The **Security Settings** menu provides the following sub menus to configure the security settings of the terminal using different PIN:



### SIM PIN

Select this to configure security settings related to SIM PIN. You can enable, disable and change the SIM PIN in this sub menu.

Enable the SIM PIN. You will be asked to key in the existing PIN (or default PIN if it has not been changed) before the PIN can be enabled.

- **Enable**  
The default PIN depends on your SIM card. Consult your equipment distributor if necessary.

#### Note:

**You have to enter the PUK (PIN Unblocking Key) to access the SIM card if a wrong PIN for SIM PIN has been entered for three times. You will be asked to enter the new PIN code once you have entered the correct PUK. However, the SIM card is no longer usable if you have entered wrong PUK for 10 times.**

- **Disable**  
Disable the SIM PIN. You will be asked to key in the existing PIN (or default PIN if it has not been changed) before the PIN can be disabled.
- **Change**  
Change the PIN to a new one. You will be asked to key in the existing PIN (or default PIN if it has not been changed) before the PIN can be changed.

#### Note:

**PIN has to be enabled before it can be changed.**



## Authentication

Select this to configure authentication settings related to tracking. All settings related to tracking need to be authenticated with the correct password before they can be changed once authentication is enabled.

Following options are available when pressing the Left  selection key:

- **Status**  
Enable or disable the authentication. You will be asked to key in the existing password (or default password if it has not been changed) before the authentication status can be changed. The default password is 0000.
- **Change password**  
Change the password to a new one. You will be asked to key in the existing password (or default password if it has not been changed) and the new password before the password can be changed.



## Terminal Manager Menu



The **Terminal manager** menu provides the following sub menus to configure settings that are local to the terminal:



### Display

Configure settings that are related to the display.

- **Wallpaper**  
Set the display wallpaper of the Base Terminal in the Main Display screen.
- **Backlight**  
Set the duration of the display backlight to remain on. Settings range from Always On (Backlight permanently on), 15 seconds to 1 minute.

#### Note:

**The backlight will be slightly dimmer and finally off when there is no keypad activity after sometime. However, this feature is not available when the setting is set to Always On).**



### Language

Allow you to change the menu display language.



### Tone

Configure tone setting for the standard and ring tones.

- **Standard tone**
  - **Key tone**  
Contain options to enable/disable the key tone.
  - **Message tone**  
Contain options to enable/disable the message tone.

- **Volume**  
Contain options to set low or high volume
- **Ring tone**
  - **Tone**  
Select desired ring tone pattern.
  - **Volume**  
Contain options to set low or high volume



### **Factory reset**

Perform factory reset on the terminal.



### **Terminal restart**

Soft restarting the terminal



### **About**

Display a list of information of the terminal.

- **Model**  
Model name of the terminal
- **Software version**  
Software version of the terminal
- **Hardware version**  
Hardware version of the terminal
- **Thuraya module**  
Version of the Thuraya module
- **GPS module version**  
Version of the GPS module
- **IMSI number**  
IMSI number of the SIM card
- **IMEI number**  
IMEI number of the terminal
- **Copyright**  
Contain Copyright message

## Warnings

### Servicing

SF2500 does not contain consumer serviceable components. You are advised not to carry out any kind of troubleshooting. In case you face any problems, contact the nearest service center. Only authorized service personnel can repair the equipment.

### Antenna and RF cables

Use only SF2500 antenna and RF cables that have been specifically designed for your terminal.

Unauthorized antennas, cables and cable length modifications, or attachments could damage SF2500 and may violate the relevant regulations, causing loss or degradation of performance and radio frequency (RF) energy above the recommended limits. If your SF2500 antenna gets damaged, please take it to an authorized Service Provider.

### General

- Do not place SF2500 in a wet area.
- Do not expose SF2500 to temperatures greater than +55 degree Celsius or less than -10 degree Celsius.
- Do not expose SF2500 to moisture, dust etc.
- Avoid placing SF2500 close to open flames or any source of heat.
- Do not expose SF2500 to direct sunlight.
- Do not disassemble SF2500; this will void your warranty.

### Care and Maintenance

- SF2500 is a product of superior design and craftsmanship and should be treated with care.
- The following suggestions will help you to fulfil any warranty obligations and allow you to enjoy this product for many years.
- Do not store it in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.

- Do not attempt to open it. Mishandling of the device may damage it.
- Do not drop, apply pressure or shake it. Rough handling can break internal circuit boards.
- Do not use chemicals, cleaning solvents, or strong detergents to clean it. Wipe it smoothly with a soft cloth.
- Use only the supplied or approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the SF2500 and may violate regulations regarding radio devices.
- If the SF2500, handset or any accessory does not function properly, take it to your nearest authorized service center. The personnel there will assist you, and if necessary, arrange for service.

## Common Problems

- Satellite signal strength is inadequate (indicated in SF2500 display).
- The cable connections are not proper and firm.
- The SIM card may have been not installed properly or it may have been expired.

## FAQ

### Question:

How can I upgrade the Base Terminal firmware?

### Answer:

The Base Terminal firmware can be upgraded via the RS232 port. Please download the latest firmware from the manufacturer website and refer to the Base Terminal Firmware Upgrade Procedure document for more information.

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### Question:

Inside the call log, why am I getting time offset for all the call history?

### Answer:

You need to manually configure your time zone in order to get an accurate call log. You can go to **Settings >> Local time zone** to adjust your time zone. The default time zone is UTC+8.

---

**Question:**

How can I protect the confidential configurations (e.g. GPS reporting, alarm, geo-fencing settings, etc)?

**Answer:**

You can enable the password protection for these confidential configurations. It is under **Security settings >> Authentication** in the menu. Once it is enabled, user needs password to access the following menus, **Settings >> GPS reporting, Settings >> Alarm, Settings >> Geo-fencing**. The default password is **0000**.

## TRACKING RELATED

**Question:**

Does SF2500 support Global Maritime Distress Safety System (GMDSS)?

**Answer:**

It is not GMDSS compliant. However, it does support a distress alert functionality.

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**Question:**

What is the distress alert functionality that SF2500 supports?

**Answer:**

There is a yellow distress alert button on the terminal. When it is pressed and held for 5 seconds, a pre-defined distress messages to pre-configured contacts will be sent via SMS.

---

**Question:**

How can I configure the distress alert functionality of SF2500?

**Answer:**

SF2500 supports distress alert via SMS.

Enable the distress alert function under **Settings >> Alert reporting >> Panic button >> Internal**. Fill in up to 3 Emergency contacts under **Settings >> Alarm reporting >> Panic button >> Emergency num**.

Configure the emergency text under **Settings >> Alarm reporting >> Panic button >> Emergency text**, which will be sent out together with the GPS information to the emergency contacts.

---

**Question:**

What will happen if the distressed button is pressed multiple times?

**Answer:**

Multiple distress alerts will be sent.

---

**Question:**

How can I know my GPS tracking ID? Is it unique?

**Answer:**

You can find your tracking ID under **Settings >> GPS reporting >> Unit ID**. All the SF2500 units should have unique tracking IDs.



