

### 郑重声明：

Addvalue Communications Pte Ltd 以 Wideye 品牌生产的型号为 SF2500+的话音卫星终端设备内置 GPS，满足以下国际标准及相关标准性文件规定：

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

该产品通过全面、严格的无线电测试，测试结果符合 Directive 1999/5/EC 指令要求

# SF2500+卫星终端 用户使用手册



## 安全须知

为防止任何人身伤害和生命/财产损失，在使用本产品前请仔细阅读使用手册，特别是有关安全的说明。无论是使用、维护和维修

本产品均必须遵守下列安全预防措施，若有违背或违反，Addvalue Communications Pte Ltd（下称“AVI”）将不承担任何责任。

### 天线辐射

天线大功率射频发射信号对人体可能会造成危害，因此，当天线工作时，人员与天线之间至少应保持 30 公分距离。

### 设备维护

除厂家授权资格人员外，用户不得私自拆卸或打开设备，如若违反，可能将导致保修无效。

### 接地和天线电缆

终端设备上的接地端子与船舱或车舱导体之间需用铜线连接，以保持设备良好接地。天线电缆需做屏蔽处理，以避免外界电磁干扰。为保证设备正常工作，天线电缆与交流电源线路最好分开安装。

### 供电电源

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SF2500+设备输入电压为 12V DC，0.8A，或 24V DC，0.4A，建议采用 24V DC 电源。如果没有可用直流电源，可以采用交直流转换电源设备（115/230V AC – 24V DC）

## 设备通风

为保证终端有效通风散热，除设备底部外，安放地周围至少应留有 5 公分空间，终端允许工作温度为-10°C 到+55°C。为保证人身和设备安全，设备安装地点必须远离可燃性气体、烟雾或可爆性物质。

### 1. 产品简介

SF2500 +是一款专为荒芜的海上和陆地设计的话音卫星通信终端，附带 GPS 跟踪功能，性能优越。通过舒拉亚卫星网络，SF2500 +可以实现与外部公共电话交换网（PSTN）、地面移动网和其他卫星网络之间的话音通信。

SF2500 +也支持短信功能，其设备上配置的紧急报警按钮在出现紧急情况时，可用来向三个预先设置的联系人或联系方发出报警信号，信号中包含报警内容和带有时间标签的位置数据。

SF2500 +功能多样、坚固耐用、价格低廉，尤为适用于中小型渔船、游艇、巡逻艇或陆地车辆。

### 1.1 主要应用

- 满足渔船、游艇、巡逻艇或陆地车辆通信需求
- 海岸线监控
- 陆地偏远农村地区通信
- 船队调度和管理

### 1.2 产品特点

#### 座机单元

- 支持电话、来电显示和短信功能
- 通讯录
- 呼叫记录：5 个不同日期、时间未接、接听或拨出电话记录
- 菜单驱动图形用户界面：65K 彩色、220 X 176 分辨率、2 英寸 TFT 液晶显示屏
- 英文、中文、印尼三种文字可选
- 键盘背景灯
- 桌面或墙壁安装

- 报警按键：触发后，以短信方式分别向三个预先设置的联系人发出报警信号
- 外部报警按键输入端口
- 振铃输出端口
- 可配置应用：
  - ◇ 自动位置报告
  - ◇ 轮询位置报告
  - ◇ 地理栏栅：可设置多达 5 个区域（圆形或矩形），当车辆或船只进入或离开设置区域时发出报警信号
  - ◇ 控制中心可通过卫星对终端配置进行调整和变更

### 天线单元

#### 无源天线

- 全向无源舒拉亚卫星天线，内置有源 GPS 天线
  - RF 电缆：LMR400 或同等规格同轴电缆，标准长度 5 米
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有源天线

- 全向有源舒拉亚卫星天线，内置有源 GPS 天线
- RF 电缆规格

电缆型号	损耗【1.6GHz, dB/m】	最大电缆长度【m】
LMR400	0.174	40
LMR240	0.335	20
LMR195	0.493	15

说明：有源天线工作需要配备外部 10-30V DC 供电设备。

工作环境

天线单元	
工作温度	-25℃ ～ +55℃
储藏温度	-40℃ ～ +80℃

座机单元	
工作温度	-10℃ ～ +55℃
储藏温度	-20℃ ～ +70℃
整个系统	
电源	10.8 – 31.2V DC
功耗（最大）	10W
工作湿度	40℃ 条件下，95%（非凝露）

1.3 总体性能指标

通过舒拉亚认证

符合 CE 认证

支持业务

话音：高清晰双向话音通信

短信：双向短信，每条 160 字节

防护等级：座机 IP30

天线 IP66

### GPS 性能

跟踪卫星信道数量：20 个（SiRF Star-III 芯片）

定位精度：<10 米

首次定位时间：热开机 <1 秒

暖开机 <30 秒

冷开机 <35 秒

### 机械性能

#### 尺寸

座机（长 x 宽 x 高）： 205mm x 190mm x 80mm

无源天线： 95mm（直径）x 150mm（高）

有源天线： 210mm（直径）x 180mm（高）

重量

- 座机               :               1.1 公斤
- 无源天线:               0.3 公斤
- 有源天线:               1.7 公斤

1.4 设备及配件

座机	
无源天线	

天线安装件	
5 米 GPS 信号电 缆	
5 米卫星信号电 缆	
电源线	

座机



**Alert Button:** 紧急报警按钮，当发生紧急情况时，保持按动该键 5 秒钟，将发出预先设置的报警信息



SIM Card Slot: SIM 卡插槽

Mini USB Port: USB 端口，用于设备维护



Serial Port: 3 芯 RS232 串口，用于设备固件升级

Power ON/OFF: 设备电源通/断开关



DC Input: 外部直流电源（10.8 – 31.2 伏）输入端口

I/O Port: 自左边起，1、2 为外部报警输入接口；3、4 为外部振铃输出接口



SAT Port: 座机与天线之间卫星射频电缆接口

说明：使用无源天线时，工作频率为 1.6GHz 条件下的电缆损耗（包括电缆连接头在内）应小于 1.5dB。

GPS Port: 座机与天线之间 GPS 电缆接口

Grounding Stud: 座机接地端子

### 天线单元

天线底座上有两个电缆接口，N 型（阴头）接口用于卫星信号，SMA 型（阴头）接口用于 GPS 信号。



## 2. 设备安装

### 2.1 天线安装

- A. 在甲板或车顶选择合适天线安装位置，并保证天线四周对空方向没有任何遮挡物体
- B. 卫星和 GPS 电缆穿过管状天线支架和天线后盖，一端与天线连接，另一端接至座机

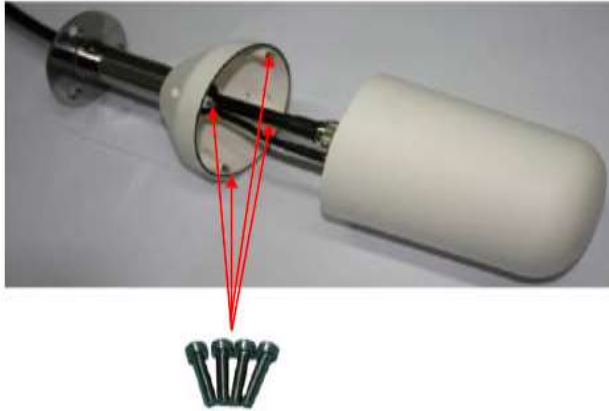
**注意：**GPS 电缆一端 SMA 接头与天线连接，另一端 TNC 接头与座机连接，并确保所有电缆连接紧固

按下图所示，GPS 电缆安装时需有一定弯度，以保证后盖安装顺畅。后盖安装时过于用力，可能造成电缆损坏



- C. 电缆接好后，与室外天线连接处还需要用密封胶或密封胶带做防水处理
- D. 仔细地将随机附带的密封胶圈安装在后盖上的密封槽内

- E. 利用四个螺钉将后盖与天线主体固定



- F. 按图所示,用 U 型螺栓和安装架将组装好的天线固定在船上或车上的支撑柱上
- G. 利用绑线,顺着支撑柱将电缆固定在支撑柱上



天线、安装架和电缆的整体组装示意图



天线抱柱安装示意图

H. 将卫星和 GPS 电缆与座机相连，并确保连接紧固，不松动

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### 2.2 座机安装

- A. 选择驾驶舱或船舱某处合适地点安放座机，并保证座机所在室内温度为 $-10^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- B. 座机可选择安装在墙壁上或桌面上，座机底部固定孔（如图示）用于设备固定



用于墙壁或桌面安装的固定孔

## 2.3 座机配置及连接

### 2.3.1 准备工作

在进行以下工作前，请确保天线、电缆及座机已安装就绪

### 2.3.2 SIM 卡安装

SF2500 +设备必须安装 SIM 卡，方能入网并配置工作参数。SIM 卡安装方式如下：

- A. 轻按 SIM 卡槽保护盖至盖弹出，打开
  - B. SIM 卡芯片冲上，将卡按图示轻轻推进卡槽，卡安装到位会听到轻微的“咔嗒”声音
  - C. 合上卡槽保护盖
-



SIM Card with gold contact facing up

### 2.3.3 天线单元连接

天线与座机通过两根射频电缆（卫星+GPS，各自 5 米长）进行连接，连接方法如下：

1. 按图示位置连接电缆至座机
2. 紧固电缆连接头，确保不松动



### 2.3.4 电源连接

按以下步骤将座机与船上供电系统相连

- A. 检查随机电源线接头与线连接是否牢固，若有松动，用螺丝刀加以紧固
- B. 将电源线插头正确插入座机电源插座，并用螺丝刀使插头固定在插座上



- C. 将电源线另一端与船上供电系统相连接，电源线红色为正极，黑色为负极，供电电压为 10.8VDC – 31.2VDC

### 3. SF2500 +操作

#### 3.1 加电开机

按动座机上电源开关，给设备加电



#### 3.2 设备初始化

设备加电后需经过以下步骤完成初始化过程，方可正常使用：

##### 3.2.1 加载终端工作参数

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3.2.2 捕获并锁定 GPS 信号 （ 屏幕信号指示由闪烁至稳定，并显示日期 ）

3.2.3 捕获并锁定卫星信号 （ 屏幕卫星信号由低到高，达稳定状态 ）

3.2.4 终端设备入网认证，完成注册 （ 屏幕出现“舒拉亚”及所在国家或地区名称 ）

正常情况下，初始化过程在 1 分钟时间内完成，个别情况下会略有延长，需耐心等待

### 3.3 通话操作

使用设备拨打电话前需确认设备处以下状态：

- 座机收发信系统正常工作， 图形出现在座机屏幕上
- 满足话音通信条件， 图样出现在座机屏幕上

### 座机话柄锁住装置:

待机时，话柄在卡座上处于锁住状态，使用时，按住话柄轻向前推动，即可摘下话柄

### 3.3.1 电话使用方式

#### 拨打地面有限电话:

键入 “+（国家代码）+ 地区号码 + 电话号码”，例如：+86 10 6840 0229，或，“00（国家代码）+ 地区号码 + 电话号码”，例如：0086 10 6840 0229

#### 拨打地面移动号码:

键入 “+（国家代码）+ 手机号码”，例如：+86 13703012988，或，“00（国家代码）+ 手机号码”，例如：0086 13703012988

完成号码输入后，再按座机上  键，即完成语音呼叫，等待被叫回应

呼叫完毕，将话柄收入卡座即可挂机，结束通话

### 接听来电:

- 当听到电话振铃时，拿起话柄即可以接听来电，同理，话柄收入卡座即可挂断电话
- 来电时，通常屏幕会显示来电号码，如果号码簿中预存来电号码，则显示来电人姓名

### 3.3.2 短信操作方式

按以下步骤编写和发送短信：

A. 在屏幕主页按  或  键进入主菜单页面

B. 利用导航键调整光标至信息菜单



C. 按  键进入短信编辑器

D. 用键盘上的字母、数字键编辑短信

### 短信编写提示:

- 按“0”键加空格
- 快速按“#”号键变换短信输入方式，屏幕显示所选择的输入法

<ABC> 英文大写字母

<123> 数字



<abc> 英文小写字母

<Abc> 英文首字大写，其余小写


<拼音> 汉字拼音

- 中间加数字，可持续按住所需的数字键
-

### 插入符号：

- 按  键，屏幕出现各种符号
- 利用导航键移动光标至所需符号
- 按  键，确认选择所需符号

### 修改短信：

- 按  键，逐字删除短信
- 保持按住  键，可删除全部短信

### 接收和查阅短信：

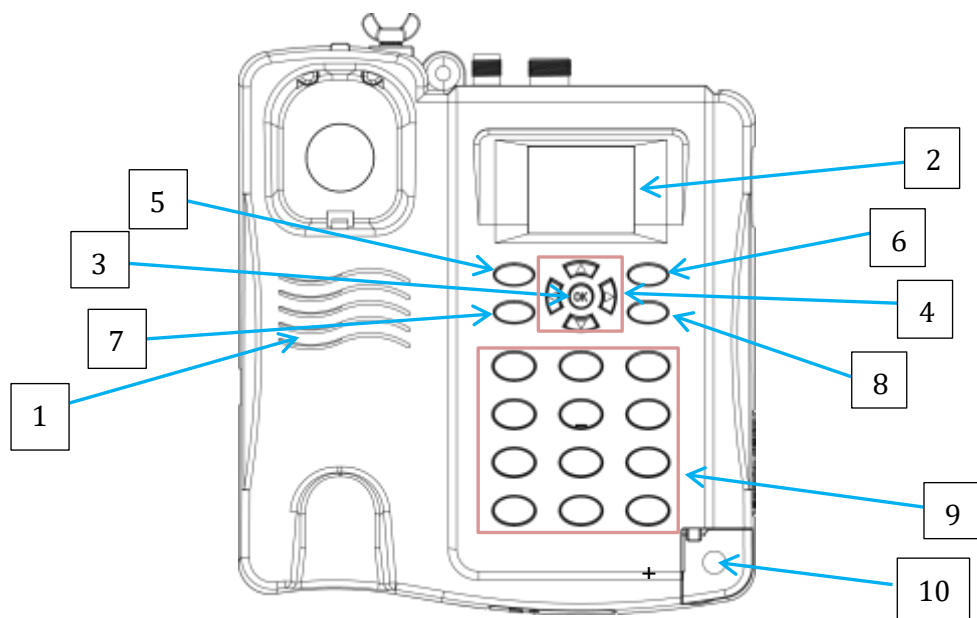
- 当 SF2500 +卫星终端接收到短信时，会同时给出屏幕显示和声音提示

- 点击座机面板



键，即可阅读短信


### 3.4. SF2500 +面板功能介绍



1. 喇叭
2. 液晶显示屏
3. OK 键
4. 4 向导航键
5. 左选择键

- 6. 右选择键
- 7. 主页键
- 8. 清除键
- 9. 字母数字键盘
- 10. 紧急报警键

按键种类	功能描述
	4 向导航键 用作选择显示屏显示项目，例如查阅电话号码或选择参数菜单
	OK 键 选择和确认所选功能或参数
	左选择键 查阅接收短信等
	右选择键 主菜单进入键等



	<p>字母数字键盘</p> <p>用于电话拨号和编辑短信，“0”键在编辑短信时用作空格插入</p>
	<p>主页键</p> <p>选择进入主页页面</p>
	<p>清除键</p> <p>清除不正确的号码输入或修改编辑短信</p>
	<p>紧急报警键</p> <p>紧急情况下按动该键，向预先设定的联系人发出报警信息</p>
	<p>星号键</p> <p>输入电话号码时，按该键添加“*”号；持续按住该键，加入“+”号；</p> <p>编辑短信时，按该键添加选择符号</p>
	<p>“#”号键</p> <p>输入电话号码时，按该键添加“#”号；</p> <p>编辑短信时，用于选择输入文字和输入法；</p> <p>待机时按该键，终端进入静音状态</p>






3.5 键盘功能介绍

3.6 主页面应用



- 终端状态显示栏：以图形符号方式显示终端工作状态
- 卫星网络显示栏：指示终端注册情况及所在地区和时间
- 提示对应左右选择键当前作用

状态显示符号	表示含义
	接收卫星信号强度指示
	短信来信提示

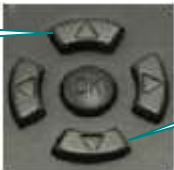
	终端可拨打和接听来电
	键盘处锁定状态
	终端收发信系统未连接，此情况下语音和短信通信均失效
	短信跟踪功能处于激活工作状态
	终端收发信系统工作正常

3.6.1 状态显示符号信息说明

3.6.2 通话时音量调整

通话时可以利用导航键调整受话音量

按上键提高音量



按下键降低音量

### 3.6.3 屏幕主菜单使用方法

屏幕处主页时，按右选择键进入主菜单

主菜单上有八个可选项，每个可选项又分别有对应的子菜单

用导航键选择所需菜单，按  键确认选择

操作中可随时按主页键  退出菜单，返回到主页面

各可选项功能如下：



#### 电话簿

用于建立联系人联系信息



#### 通话记录

查阅历史通话记录



#### 电话设置

配置与话音业务相关的工作参数



### 短信

用于和短信相关的操作



### 设置

用于终端基本工作参数配置



### 信号

提供卫星信号状态信息



### 安全设置

配置设备相关保密参数和信息



### 终端管理

终端参数设置



### 电话簿菜单

电话簿菜单用于存储、提取和修改联系人姓名和电话号码

按“左选择键”进入菜单查阅信息

注：所有联系人信息均存储在 SIM 卡内

- **添加新联系人**

1. 选择新联系人一栏
2. 输入联系人姓名和电话
3. 按“左选择键”或“OK 键”存储输入信息

- **编辑信息**

编辑所选择的联系人信息

- **查找联系人**

输入联系人姓名，从电话簿中查找该人电话号码

- **删除信息**

从电话簿中删除某联系信息

注：按“清除键”也可删除联系信息

- **查阅号码**

查看所选联系信息

- **快速拨号**

将所选联系人加入快速拨号表

- **本机存储**

将所选联系人信息从 SIM 卡内移至终端存储器

- **存储器状态**

查看保存联系人资料的存储器状态

浏览联系人信息时，按“左选择键”可进行以下操作：

1. 打开短信编辑器，向该联系人发送短信
2. 编辑联系人资料
3. 删除该联系人
4. 利用短信转发该联系人资料

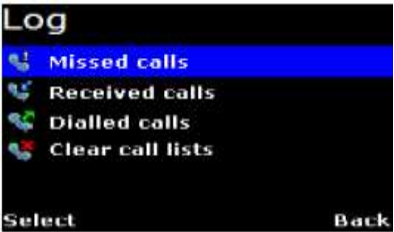
5. 将该联系人加入快速拨号表

6.



通话记录菜单

通话记录菜单按日期顺序记录最近 5 次本机通话情况



未接来电



已接来电



拨出电话

查阅通话记录时，按“左选择键”可进行一下操作：

- 删除通话记录

- 发送短信至所查阅的号码
- 提取号码存入电话簿（若电话簿中已有该号码，则存储无效）



清除通话记录



选择此功能，可以分别清除未接来电、已接来电、拨出电话或全部通话记录



电话设置菜单

该菜单用来设置电话相关参数



快速拨号

- 启用/关闭快速拨号功能

- 快速拨号表

用于配置快速拨号名单分配快速号码。进入快速拨号表

- 选择号码放置位置
- 按“左选择键”进入可选项
- 选择“分配”，按“OK 键”
- 在快速拨号表中存入所需联系信息
- 按“OK 键”确认选择

- 删除名单

用来将联系信息自快速拨号表中删除，“清除键”也可用于此操作

当快速拨号表中存有某人联系信息，且快速拨号处启用状态时，在键盘上键入对应快速拨号号码，再按“OK 键”，即可向该联系人发出呼叫



### 短信菜单

包含与短信应用相关参数设置及操作





### 新短信

用于编写和发送短信

利用短信菜单可以编写短信、查阅草稿和信箱内存储短信及已发出短信息，同时，还可配置与短信相关的参数

1. 选择信息栏，按“OK 键”进入短信编辑器，编辑短信
2. 按“OK 键”，选择发送短信
3. 输入收件人电话号码，按“OK 键”。也可以按“左选择键”进入号码簿搜索所需号码

编写短信时，按“左选择键”可从事以下选择性操作：

- 发送 — 短信编辑完毕，选择此功能即可发出短信
- 保存 — 将编辑好的短信存入草稿箱
- 清除 — 清除已编辑的短信



### 收件箱

存有新接收短信、已读短信，可用导航键选择，逐一阅读



未读短信



已读短信

当浏览短信记录时，按“左选择键”可进行以下操作：

- 打开短信 — 打开所选短信，按“OK 键”也起同样作用
- 回复短信 — 向发送方回复短信
- 删除短信 — 删除所选短信
- 转发短信 — 将短信转发给另一人
- 保存短信 — 保存短信至草稿箱
- 详情查阅 — 查看所选短信
- 添加联系 — 将短信发送人信息存入号码簿



发件箱

该信箱存放有已发送短信，查阅时按“左选择键”可进行如下操作：

- 打开短信 — 打开所选短信，按“OK 键”也起同样作用
- 删除短信 — 删除所选短信
- 保存短信 — 保存短信至草稿箱
- 添加联系 — 将短信收件人信息存入号码簿



### 草稿箱

该信箱含有保存的短信，查阅时按“左选择键”可进行如下操作：

- 打开短信 — 打开所选短信，按“OK 键”也起同样作用
- 删除短信 — 删除所选短信
- 发送短信 — 将短信发某一收件人
- 添加联系 — 将短信联系人信息存入号码簿



### 选择项

该项子菜单含有短信业务相关参数设置

- 短信中心 — 设置短信中心号码（设备出厂时已设好，不可随意更改）
- 保存短信 — 选择保存或不保存已发送短信。已发送短信保存在发件信箱内
- 短信转存 — 选择将短信从 SIM 卡内存入本机存储器
- 存储状态 — 查看信息存储状态



### 删除短信

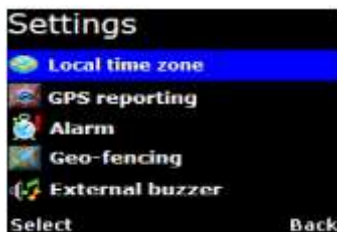
删除某一特定信箱内信息或所有信箱内信息，信箱类型包括：

- 收件箱
  - 草稿箱
  - 发件箱
- 
-



### 设置菜单

该菜单伴随一系列子菜单，用来对终端进行参数配置



### 时区设置菜单



### GPS 位置报告菜单

查看和改变与 GPS 相关参数，其子菜单作用如下：

- 终端识别号码

此号码用于跟踪业务，不能随意改动

- 间隔时间

设置基于时间的 GPS 位置跟踪报告参数，其下一级子菜单包括：

- ◇ 状态开关

定时跟踪启动/关闭控制

◇ 定时间隔

以秒为单位设置定时跟踪时间间隔，“0”为关闭跟踪

● 间隔距离

设置基于距离的 GPS 位置跟踪报告参数，其下级子菜单包括：

◇ 状态开关

距离跟踪启动/关闭控制

◇ 间隔距离设置

以米为单位设置跟踪间隔距离，“0”为关闭跟踪

● 短信服务器号码

接收跟踪信息的短信服务器号码

● 授权号码

允许 3 个授权电话号码远程访问终端，提取 GPS 位置信息或更改跟踪参数

**如果采用鉴权认证，该子菜单将受追踪密码保护，除非输入正确的密码，否则任何参数修改均将被禁止**

利用“左选择键”可对一些功能进行选择：



### 报警设置

为不同告警信息设置工作参数，下面是子菜单内参数含义和配置

- **超速报警**

以公里为单位，设置终端行驶速度上限(公里/小时)，遇超速情况时，终端自动向指定短信服务器发出报警信号

- **紧急报警按钮**

配置报警按钮应用参数。遇紧急情况发生，按住该键5秒钟，可同时向三个预置的联系人或联系单位发出报警信息，信息含报警内容及带有时间标签的地理位置数据

点击“左选择键”可进行以下参数设置：

- ◇ **紧急号码**

最多可设置3个电话号码，用于接收报警信息

- ◇ **报警信息**

选择编辑报警信息内容

- ◇ **内部报警**

### 内部报警按钮通/断控制

#### ◇ 外部报警

#### 外部报警通/断控制

如果采用鉴权认证，该子菜单将受追踪密码保护，除非输入正确的密码，否则任何参数修改均将被禁止



### 电子栅栏

用于查阅和设置电子栅栏数据与参数。利用此菜单可以预置最多 5 个地理区域，当终端进出规定区域时，均可发出报警信号至指定接收服务器。点击“左选择键”设置电子栅栏的操作如下：

#### ● 栅栏形状

有两种栅栏形状供选择

#### ◇ 圆形

#### ◇ 矩形

#### ● 报警触发类型

根据需要，规定何种情况下应发出报警信号

#### ◇ 入境报警

选择此项后，当终端进入预置区域时发出报警信号

◇ 出境报警

选择此项后，当终端离开预置区域时发出报警信号

◇ 出/入报警

选择此项后，无论终端进入或驶离预设区域均发出报警信号

● 状态

启用或关闭所选区域

● 半径

以米为单位设置圆形电子栅栏区域半径  $r$

● 纬度

以“度，分，秒”格式确定电子栅栏一个基准点的纬度坐标

● 经度

以“度，分，秒”格式确定电子栅栏一个基准点的  
经度坐标

电子栅栏基准点划定栅栏所在区域，而栅栏形状取决于基准点的  
数量，详细说明见下表：

栅栏形状	基准点数量	说明
圆形	1	以基准点为中心，半径为 r 确定栅栏区域
矩形	2	2 个基准点占据矩形栅栏对角线两端

如果采用鉴权认证，该子菜单将受追踪密码保护，除非输入正确的  
密码，否则任何参数修改均将被禁止

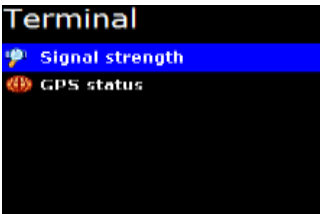


外部报警器

外部报警器通/断控制



信号菜单



信号菜单用来监测接收卫星信号强度，查阅 GPS 状态



信号强度

图形显示当前接收卫星信号强度



GPS 状态

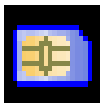
查看 GPS 工作状态



安全设置菜单



利用各种个人识别号（PIN）为终端提供保密措施



### SIM PIN

通过此菜单，控制启用、禁用或修改 SIM PIN 码。如果启用，更改前需输入当前 PIN 码或缺省 PIN 码

- 启用

缺省 PIN 码可从设备供应商处获取

提示：如果 PIN 码连续 3 次输入错误，需要用 PUK 码解除 PIN 码。在 PUK

码输入正确情况下，可以输入新 PIN 码。但是，如果 PUK 码连续 10 次输入错误，此 SIM 卡将永久失效。

- 禁止

SIM PIN 禁止使用。禁止使用操作前要求先输入当前或缺省 PIN 码

- 修改

更改使用新 PIN 码前要求先输入当前或缺省 PIN 码

提示：修改前，PIN 必须处“启用”状态



### 认证

用于设置与追踪相关认证参数。当认证机制生效时，需要对密码进行核实、认证后，才能修改参数。

点击“左选择键”选择以下操作：

- 状态

认证启用或禁用控制。选择时需要先输入当前或缺省密码，缺省密码为：

0000

- 修改密码

建立新密码前，需要输入当前或缺省密码及新密码



终端管理菜单



终端管理菜单用于配置与终端工作相关的一系列参数



显示

选择和屏幕显示有关设置

- **壁纸设计**

为主屏幕选择喜爱壁纸

- **背景灯**

屏幕背景灯工作时间设置，分 15 秒、1 分钟和持续工作三种，可供选择

提示：当一定时间内无任何键盘操作时，背景灯就会逐渐减弱，直至熄灭。

如果背景灯设置为持续工作，则无论是否有键盘操作，背景灯均保持长亮

状态。



### 语言

选择屏幕显示语言种类



### 铃声

根据需要和喜好选择提示音和铃声

- **标准提示音**

- ◇ **键盘音**

控制开启/关闭键盘音

◇ 短信提示音

控制开启/关闭来件提示音

◇ 音量

高低音量控制

● 振铃音

◇ 铃声

选择喜好铃声

◇ 音量

高低铃声音量控制



### 参数重置

恢复设备出厂参数配置



### 终端重启

设备软启动控制



### 关于

#### 终端设备资料查阅

- ✧ 设备型号
- ✧ 软件版本
- ✧ 硬件版本
- ✧ 舒拉亚通信模块版本
- ✧ GPS 模块版本
- ✧ SIM 卡 IMSI 号
- ✧ 设备 IMEI 号
- ✧ 版权资料

# 故障判断与排除

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## 1. 警告

### 维修

除授权专业维修人员外，用户不得擅自对本设备进行维修，如遇问题，请与最近的授权维修中心进行联系

### 天线和射频电缆

只可使用本设备指定的天线和射频电缆。使用未经批准的天线、射频电缆，私自改造电缆或添加任何附件均可能造成设备损坏，违反相关规定，从而导致设备失效或性能及射频功率降低。如遇天线故障，请与授权维修服务商联系维修。

### 常规注意事项

设备不能放置在潮湿地方

设备需保证在摄氏-10 度 — +55 度条件下工作

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设备不能暴露在潮湿、多尘的环境下  
设备需远离明火及过热地区  
避免阳光直晒  
不允许私自拆装终端设备，否则将视为自动放弃保修权益

保养与维护

SF2500 属精密卫星通信设备，需善加爱护和使用，遵循以下建议将会有效延长设备使用寿命：

- ◇ 不要在高温地点存放设备，否则可能会造成设备塑料部件溶解、变形
- ◇ 不要尝试私自拆卸设备外壳，操作不当将损坏设备
- ◇ 不要剧烈摔打、挤压和震动设备，否则会导致内部电路损坏
- ◇ 不要用化学洗涤剂或强去污剂擦洗设备外壳，要使用干净的棉布清洁外表灰尘和污垢
- ◇ 不要使用非 SF2500 配套天线、电缆及配件
- ◇ 如果终端、话机或配套设备工作失常，请与最近的授权维修中心联系，协助排除故障

2. 常见问题解答表

问题	原因	解决方法
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屏幕无接收信号显示，或显示过弱	<ol style="list-style-type: none"><li>1. 天线未对准卫星或对星方向有遮挡物</li><li>2. 卫星射频电缆头松动，接触不良</li><li>3. SIM 卡安装不正确</li><li>4. SIM 过期</li></ol>	<ol style="list-style-type: none"><li>1. 正确安放天线，避开遮挡物</li><li>2. 检查电缆连接部位，确保电缆头安装到位，并连接牢固</li><li>3. 按手册正确插入 SIM 卡</li><li>4. 联系经销商，确认 SIM 卡是否有效</li></ol>
开机后屏幕无显示	<ol style="list-style-type: none"><li>1. 电源线正负极连接不正确</li><li>2. 或外部电源不工作</li></ol>	<ol style="list-style-type: none"><li>1. 重新安装电源线，电源线红色是正极，黑色是负极</li><li>2. 检查外部输入电源</li></ol>
设备显示正常，但只能接听，不能拨打电话	<ol style="list-style-type: none"><li>1. SIM 卡处宽限期状态</li><li>2. 卡内余额不足</li></ol>	对 SIM 卡进行充值
通话记录显示时间不正确	未根据需要选择正确的时间区域	进入“电话管理员”菜单，设置所需时间
接收信号正常，但无法拨打和接听来电，或通话噪声过大	<ol style="list-style-type: none"><li>1. 终端受船上其他无线电设备干扰</li><li>2. 来自外界无线电干扰</li></ol>	<ol style="list-style-type: none"><li>1. 调整天线位置，避开直接干扰源</li><li>2. 驶离干扰地区</li></ol>

信号强度持续闪动，设备不能入网	<div><div>1. 电缆接触不良，导致无法正常接收GPS 信号</div><div>2. 终端开机初始化运行失常</div></div>	<div><div>1. 检查 GPS 电缆与天线和座机之间连接是否牢固，紧固两端电缆头</div><div>2. 重新开关机</div></div>
开机后，无法锁定卫星网络，且反复自动重启	电压过低或不稳定	检查设备输入电压，建议输入电压为+24 伏，且必须使用稳压电源

## 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.

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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

Base Terminal	
Passive Antenna	
Antenna Mounting Kit	

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.



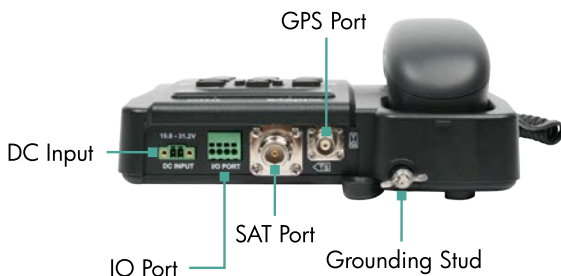
**SIM Card Slot:** To insert Thuraya SIM card.

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



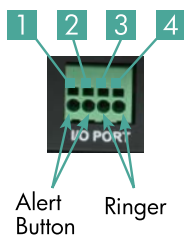
**Serial Port:** This is a 3 wires (TX, RX and ground) RS232 port. It is for Terminal Firmware upgrade.

**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 silicone 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.



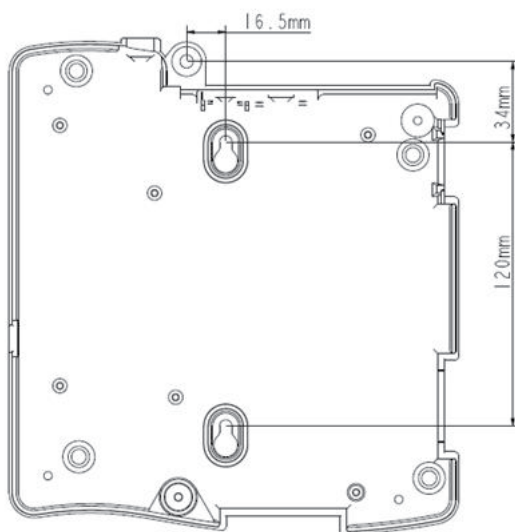
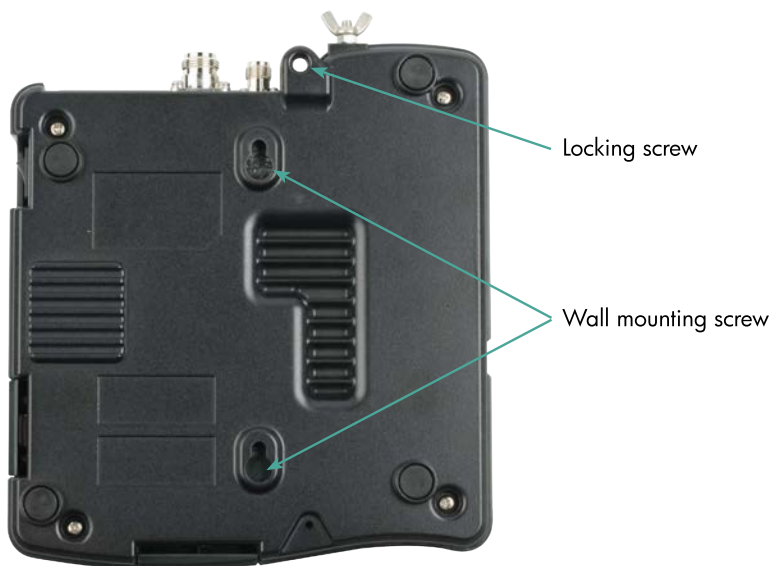
A typical pole mounted Antenna unit.



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:

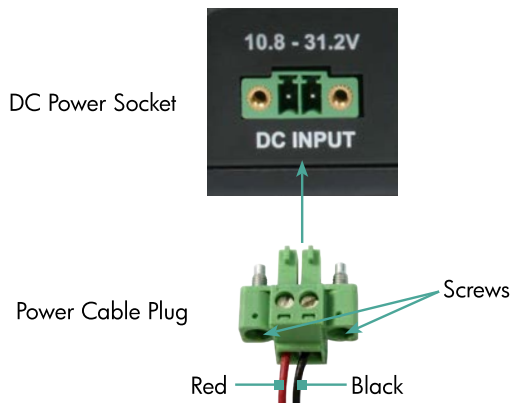
1. Plug the 2 RF cables to the RF cable connectors on the Base Terminal.
2. Lock the connector till it is properly secured to the Base Terminal.



## 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.



Power ON/OFF

### 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.

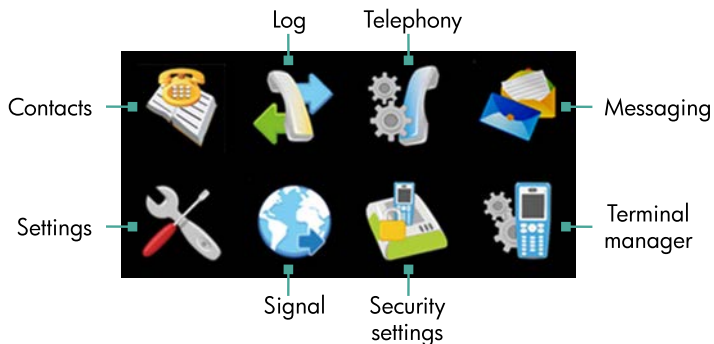
**Sending the first SMS (Message)**



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.

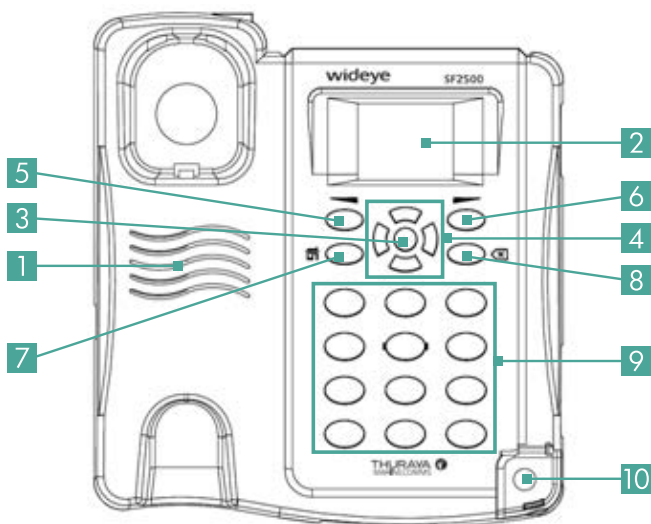
### Insert symbols to your message:

- 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:





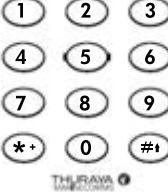



- To clear text, press Clear key **X** once to clear one character at a time.
- To clear the whole text entry, press and hold the Clear key **X** to clear the whole text entry.

## 3 USING THE SF2500



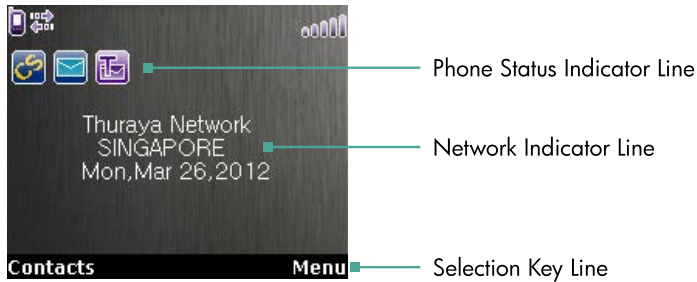
1. Speaker
2. LCD Display
3. OK Key
4. 4-way Navigation Ring
5. Select Key (Left)
6. Select Key (Right)
7. Home Key
8. Clear Key
9. Keypad (Alpha-numeric)
10. Alert Button




## Keypad - Description and Functions

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

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.











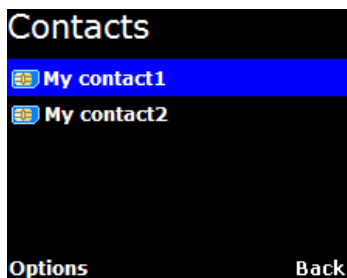
You can use the 4-way navigation ring to navigate to the desired menu option and press  to confirm your selection. You can also end the menu or sub menus and return to the Home screen at any time by pressing the Home  key.

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:





**Missed calls**

**Received calls**

**Dialled calls**

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

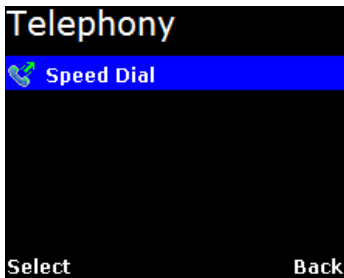
Select this to clear the call log entries. Available log options are:

- **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  from the option.
    5. Select the desired contact to assign to the speed dial list.
    6. Press  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.

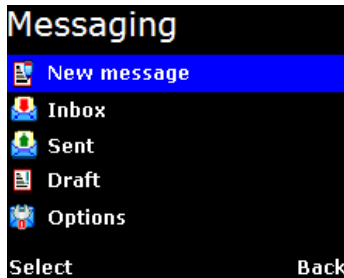
You can make a voice call directly from the Main Menu screen by pressing the corresponding speed dial entry number +  key once the speed dial feature is enabled with a valid contact entry.

## 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 menus:

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 **OK** to confirm the selection.

### Clearing text:

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



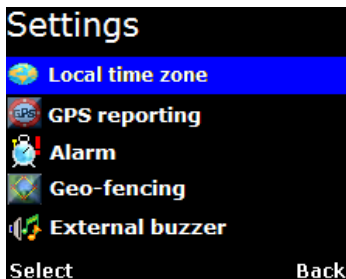
### Delete all

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.**

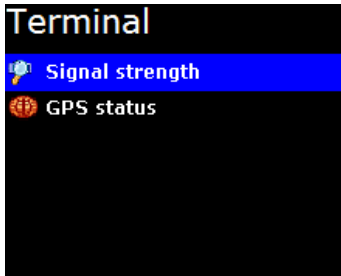


**External Buzzer**

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.

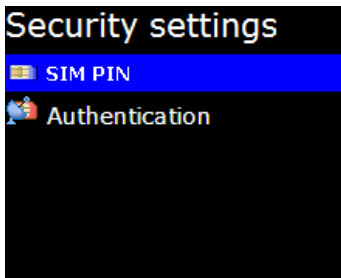


### GPS status

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

## TROUBLESHOOTING

### 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.

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**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.

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**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.