

Disclaimer:

It is the customer's responsibility to check with their service provider (prior to installation) to ensure there is network coverage in the area in which the lantern(s) will be installed. Sealite Pty Ltd will not be held responsible if the network coverage of the service provider should fail.

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Version No.	Description	Date	Approved
1.0	Manual Launch	July 2006	C. Procter
1.1	Addition of active current feature	Nov 2007	J. Procter
1.2	Addition of new G24 features	Jan 2009	A. Burns
1.3	Update warranty listing	May 2009	K. Paton
1.4	Added get & set applications	Aug 2009	A. Dixon
2.0	Addition of new Q2687 features	March 2012	A. Burns
2.1	Web Report Update	April 2012	K. Paton
3.0	Update to GSM Portal	Sept 2012	Y. Chambers



Introduction

Welcome to GSM monitoring and control of your marine lanterns. The Sealite GSM Monitoring and Control System is a complete integrated module designed to allow convenient monitoring of Sealite lanterns using a cellular telephone and web access from remote locations that have GSM network coverage.

The GSM circuit monitors the data from the lantern and will report to designated cell phones a number of pre-programmed alarm conditions if they occur.

The GSM System is internally housed within the Sealite lantern and requires no external aerials – providing convenient installation and retaining the IP68 waterproof rating of the lantern.

The user can also send an SMS text message to the designated Sealite lantern to receive a status report from the lantern by return SMS text message. In addition, the user has complete control over the types of alarms received should a fault occur, as well as an array of remote control options including operational mode, flash code and intensity settings.

The user can also set the lantern up to regularly report to a secure area of the Sealite website (the Sealite web gateway). This will provide details of your lanterns operation and it's GPS position and includes historical graphed statistics of each lantern.

All functions can be programmed into the remote lantern by sending an appropriate SMS text message from a designated cell phone.

Tracking a drifting buoy or alerting to a potential power disruption has never been easier.

The Sealite GSM Monitoring and Control System is secure – unauthorised access to the lanterns data cannot occur as only the designated cell phone numbers programmed into the light will respond to a remote SMS text message.

Data transferred to and maintained on the Sealite website is user password protected.

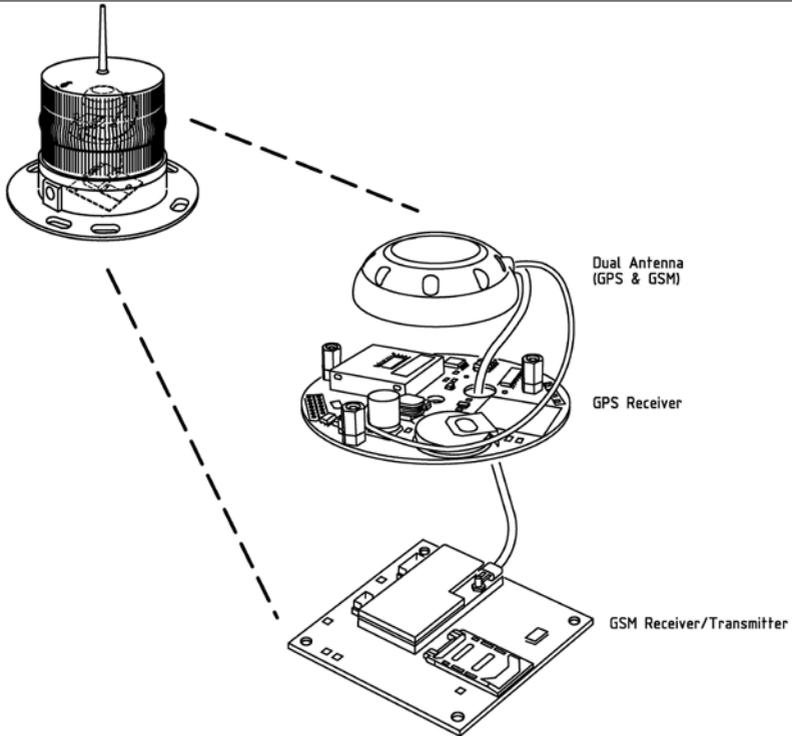
Key Features:

- Access of current lantern status at any time by sending an SMS text message to the lantern from any designated cell phone number. The lantern status is sent by return SMS text message;
- Regular reporting of lantern status to designated cell phone numbers and/or web server;
- Reports any pre-programmed alarm condition to designated cell phone numbers, and/or email addresses;
- Remote control of lantern features by sending an SMS text message to the lantern including flash & intensity setting and operation mode;.
- Versatile configuration allows lanterns with or without GPS modules fitted to be monitored remotely.

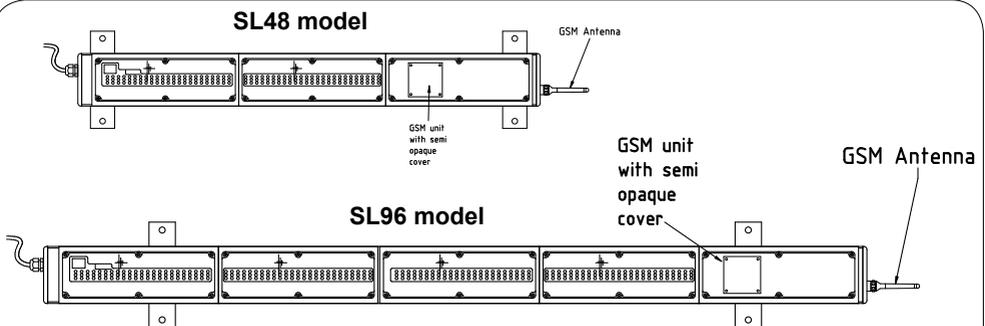
Available Data from Remote Lantern:

- Battery voltage
- Solar module charging current
- Lantern current draw
- Lantern position - Latitude and Longitude (including 'off-station' facility)
- Day/night on status
- Current operation mode
- Current flash code setting
- Current intensity setting

System Components



All components of the GSM Receiver / Transmitter are enclosed within the Sealite lantern body.



The SL48 & SL96 models have the components of the GSM Receiver / Transmitter enclosed within the top module of the light and have an external aerial.

Getting Started: Setting up your GSM Module

Setup of the Sealite GSM Monitoring and Control System is a simple 4-step process, outlined below;

STEP 1:

**Purchase, Record and Insert
SIM Card into GSM Lantern**

- Similar to a cell-phone, a valid SIM card needs to be acquired and inserted into the GSM module prior to use (see “Purchasing a SIM Card” section of this manual). Refer to *Installing the Sim Card* section of this manual for a step-by-step guide to installing your SIM card.

STEP 2:

**Program Cell Phone Access
List, Web Reporting and
Essential Commands**

- The access list is a list of cell phone numbers from which the Sealite GSM Monitoring and Control System will accept configuration commands and report requests. Web reporting and essential commands may also be setup at this step.

STEP 3:

**Program Desired Cell Phone
Reporting List and Alarms**

- The report list is the list of cell phone numbers which the lantern may send any SMS text message alarm report to. Alarm emails may also be activated from Sealite’s secure GSM Web Portal.

STEP 4:

**Accessing the Sealite
GSM Web Portal**

- By sending a report to the Web gateway and providing access via the Sealite website, historical data and graphs may be viewed on each lantern.



**GSM Monitoring & Control
System Ready for Operation**

STEP 1:

Purchase, Record and Insert SIM Card into GSM Lantern

Purchasing a SIM Card and Recording Details



Ensure the SIM card is unlocked prior to installing into the lantern.

One SIM card is required per lantern and can be purchased from your local telecommunications dealer. You may decide to purchase a pre-paid SIM card, or set the SIM card up on a plan (this is similar to purchasing a new cell phone).

Sealite's GSM enabled lanterns require a Mini-SIM or 2FF SIM Card with a 6 pin contact arrangement.



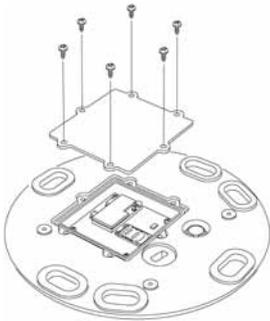
RIGHT:
Mini-SIM or 2FF SIM Card (2nd Form Factor)
- 6 pin contact arrangement



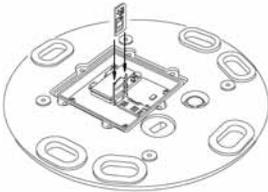
WRONG:
- 8 pin contact arrangement

Each lantern with GSM Monitoring and Control System will have an individual cell phone number. This number is unique to the lantern and should be recorded for reference purposes against the lantern it is installed in. To assist in recognition it is advisable that a description be included as well as the number (For example, Port Beacon #12, +61400123456). A similar recording in user cell phones will assist in identifying lantern installations to which SMS text message commands are sent (the same process as adding a new contact in your cell phone address book).

Installing the Sim Card

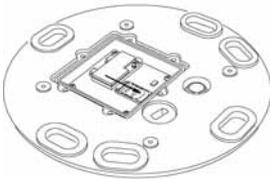


Remove the 6 retaining screws from the cover on the underside of the light, to gain access to the GSM compartment.

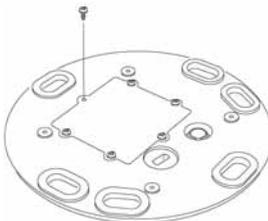


Open the SIM Card holder and insert the SIM into the holder.

- Make sure the SIM Card is positioned correctly.
- Make sure the SIM Card is 'Unlocked' before inserting in the holder (ie. the SIM card password has been disabled).



Fold the SIM Card holder and push it back into the closed position



Replace the 6 retaining screws to close the GSM compartment.

- Make sure the rubber seal is positioned correctly before fitting the cover.

STEP 2:

Program Cell Phone Access List, Web Reporting & Essential Commands

The Access List is a list of cell phone numbers from which the Sealite GSM Monitoring and Control System will accept configuration commands and report requests. Web reporting and essential commands may also be setup at this step.

Follow the process below to program the Access List, Web Reporting and Essential Commands;

Select a cell phone from which the GSM Monitoring and Control System module will be activated.

- The lantern will accept the first cell phone contact for instructions.
- The first instruction must be correct as the lantern will then only respond to the access cell phone number(s) given.

*Two numbers should be provided to the lantern to ensure there is a backup access**.*

Add cell phone numbers to the permitted access list by sending the SMS text message:-

add access +(country code)(phone number)

More than 1 cell phone number can be included in the SMS text message. To do this separate each cell phone number with a 'comma' character.

- “+” and the country code (eg. 61 for Australia, or 44 for U.K) are required to establish the country prefix in which the GSM unit is to operate in. Additional cell phone numbers can then be added by sending commands from those numbers given access.
- For example, to add an Australian cell phone number to the access list the SMS text message command would be:
add access +61400987654

All additional telephone numbers added to the access list must continue to be in international format.

- Once the number has been added to the access list the Sealite GSM Monitoring and Control System will accept commands from these numbers and acknowledge confirmation via reply SMS text message.

Enable web reporting by sending the SMS text message:-

add autoreport

- This command initiates the daily web reporting, which sends a daily diagnostic update to be viewed from your secure login at the Sealite Website.

Only phone numbers listed in the Access List will be able to “Set” and “Get” lantern information.

**In the event that the access cell phone number(s) is lost or no longer in service, Sealite can reset the lantern from the factory if required.

From an authorized Access Cell Phone send a new SMS with text message 'status' or 'report' to the designated SIM card number of your GSM lantern.

Within a few minutes expect a reply in similar format as the following:

Status Report

Volts: 14.1V
Charge: 0.33A
Mode: Dusk to Dawn
FCode: 051
Night
Lat: 38 13.2988 S (Latitude 38° 13.2988')
Long: 145 10.8529 E (Longitude 145° 10.8529')
OnStation

Note: The actual layout of the message is dependent on your cell phone screen.

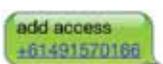
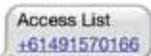
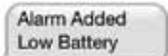
User Case #1: Setting up the lantern to report an alarm to a cell phone

In this example, a cell phone with the phone number +61491570166 is used to enable the alarm function *low battery*. When the alarm condition occurs, the lantern will alert cell phone +61491570156.

Note: it is allowable to assign a different cell phone number to receive the alarm reports.

The following messages will be texted to the lantern:

- add access +61491570166
- add report +61491570156
- add alarm batlo

	SMS text message to Lantern	SMS text message received on cell phone	Comment
Step 1			Configures the lantern to allow commands Note: The cell number must be formatted as: +(country code)(phone number)
Step 2			When an alarm condition occurs, a text message will be sent to phone number. Note it is allowable to assign a different cell phone number to receive the alarm reports.
Step 3			The lantern will send a text message to all phone numbers in the report list when the battery voltage falls below 10V.

User Case #2: Setting up the lantern to report to the Sealite web gateway

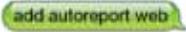
In this example, a cell phone with the phone number +61491570166 will configure the lantern to send daily reports to the Sealite web gateway.

The following messages will be texted to the lantern:

add access +61491570166

add web +61416906478

add autoreport web

	SMS text message to Lantern	SMS text message received on cell phone	Comment
Step 1			Configures the lantern to allow commands Note: The cell number must be formatted as: +(country code)(phone number)
Step 2			When an alarm condition occurs, a text message will be sent to the Sealite web gateway. This the phone number for Sealite's web gateway.
Step 3			Enables a daily web report to be sent to the Sealite web gateway number

Notes:

1. In order to view web reports, please refer to "Accessing the Sealite Web Reports" section of this manual.
2. If the lantern is located outside of Australia, the lantern's SIM card will need permission to be send text internationally. Please consult with your SIM card provider to ensure that this feature is enabled.

STEP 3: Program Desired Cell Phone Report List & Alarms

An alarm is an SMS text message which is sent after a preset alarm condition programmed into the lantern is triggered. Care should be taken when selecting suitable alarms as they can generate large numbers of SMS text messages if not carefully selected.

The report list establishes the cell phone numbers that the alarms will be sent to.

Programming Report List

The following process will create a list of approved cell phone numbers from which desired alarm reports will be sent;

Use a cell phone in the access list to create the report list by sending the SMS text message:-

add report +(country code)(phone number)

More than 1 cell phone number can be included in the SMS text message. To do this separate each cell phone number with a 'comma' character.



A successful update will result in an SMS text message reply:-

**Report List
+(designated cell phone numbers)**

The designated cell phone number has now been added to the 'report' list. The Sealite GMS module will now accept an SMS text message request for status 'report' from this number.

- This creates an authorised list of cell phone numbers belonging to staff, on-call company maintenance officers or contractors.

- For example, to add an Australian cell phone number to the report list the SMS text message command would be:
add report +61400987654

- The SMS text message 'report' sent from on-call company maintenance officers or contractors in this list will now generate the standard report SMS text message reply from the lantern.

A typical response SMS text message report message from a lantern will display as below:

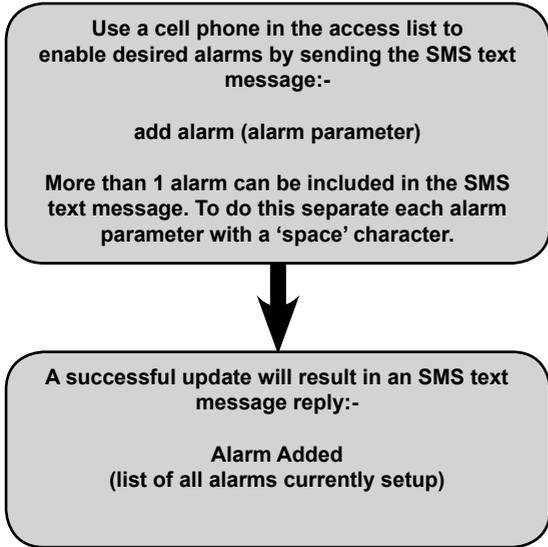
```
-----
Report List
+61400111222
-----
```

Note: The actual layout of the message is dependent on your cell phone screen.

Creating Individual Alarms to be sent to the Cell Phone Report List

Specific alarms can be created and sent as an SMS text message to cell phones listed in the Report List.

The following process will enable desired alarms;



- An example of an actual alarm SMS text message would be:

add alarm batlo

- This sets the low battery alarm. No cell phone number is required following the SMS text message

- A successful update of the above example would result in a reply SMS text message:

Added Alarm
Low Battery

A typical response SMS text message report message from a lantern when alarms are set up will display as below:

Alarm Added
Low Battery
Web Report

Note: The actual layout of the message is dependent on your cell phone screen.

Once an alarm condition has occurred/been triggered an SMS text message will be sent reporting the alarm to all cell phone numbers listed in the "Report List" and/or to the email addresses listed in the enabled "Alarm Emailing List" from the Sealite GSM Web Portal. Alarm conditions will continue to be reported once every 24 hours. This is to prevent constant reporting of the same alarm or multiple alarms. The lantern can still be accessed by requesting a report via SMS text message.

Alarm Sources Summary

All of the following alarm conditions can be programmed via SMS text message to be either ENABLED or DISABLED.

If an alarm condition that has been enabled occurs, an SMS text message will be automatically sent to all the cell phone numbers listed in the Report List.

Command	Parameter	Function	Enable Command Format	Disable Command Format
add alarm	batlo	Alarm SMS "batlo" is asserted when the battery voltage falls to a low level (flat battery). An alarm condition will be set if the system battery voltage falls below 10.0v indicating a flat battery. The lantern will be turned OFF if the battery voltage falls below 10.0v.	add alarm batlo	delete alarm batlo
	nodata	Alarm SMS "nodata" is asserted when the GSM module loses communication with the lantern circuitry.	add alarm nodata	delete alarm nodata
Daily Reporting Alarms				
add alarm / add autoreport	daily	Enables a daily status report from the lantern to be sent to all cell phone numbers in the report list. This report occurs 4 hours after daybreak each day.	add alarm daily or/ add autoreport status	delete alarm daily or/ delete autoreport daily
	power	Enables a daily battery status report to be sent to all cell phone numbers in the report list. This report occurs 4 hours after daybreak each day.	add alarm power or/ add autoreport battery	delete alarm power or/ delete autoreport battery
	web	Enables a daily web report to be sent to Sealite's GSM Web Portal, web gateway numbers in the web list. This report occurs 4 hours after daybreak each day.	add alarm web or/ add autoreport web	delete alarm web or/ delete autoreport web
ALARMS AVAILABLE FOR GPS ENABLED LANTERNS ONLY				
add alarm	nogps	Alarm SMS "nogps" is asserted when the GPS data is not available - usually due to GPS signal loss.	add alarm nogps	delete alarm nogps
	offstation	Alarm SMS "offstation" is asserted when the GPS position differs from the recorded station position by more than 200 meters.	add alarm offstation	delete alarm offstation

Offstation Alarm SMS Text Message

When the buoy moves outside the designated boundary an automatic SMS text message will be sent to all the cell phone numbers in the report list. The designated boundary radius is factory set to 200m, and the GPS station position is automatically set by the lantern. The SMS text message report message from a lantern will display as below:

ALARM Offstation

Lat: 38 13.2175S,
Long: 145 10.8375E,

Note: The actual layout of the message is dependent on your cell phone screen.



Accessing Your Lantern's Data

A) Via Cell Phone

General data about the lantern is accessed via simply sending the SMS text message; 'status' or 'report' from an authorized cell phone number (must be listed in the 'access' list or 'report list') to the designated lantern's SIM card number.

An automatically generated reply SMS text message will then be sent to your cell phone which includes information about the lantern status.

1. A typical requested SMS text message report from a lantern will display as below; 'status' or 'report'

Status Report

Volts: 14.1V
Charge: 0.33A
Mode: Dusk to Dawn
FCode: 051
Night
Lat: 38 13.2988 S (Latitude 38° 13.2988')
Long: 145 10.8529 E (Longitude 145° 10.8529')
OnStation

Note: The actual layout of the message is dependent on your cell phone screen.

If the lantern is not fitted with GPS the message "No GPS Data" will be given in place of the GPS data

2. Specific battery data from your lantern is accessed via the SMS text message; 'power' or 'battery'

Power Report:

Battery: 14.2V
Charge: 0.24A
Load: 0.02A

Yesterday

Min: 14.1V
Max: 14.3V
Max Solar: 0.36A
Charge: 1.76Ah
Load: 0.56Ah

Note: The actual layout of the message is dependent on your cell phone screen.

Ah = Ampere Hours = current x time (24 hour running).

Yesterday's power data is only available if the GSM has been running for more than 24 hours



B) Via Sealite GSM Web Portal

To configure your GSM lantern to send daily reports or alarms to Sealite's secure online GSM Web Portal the following messages **MUST** be sent via SMS text message to your lantern:

"add web +61416906478"

Then send the SMS text message:

"add autoreport web"

The add Command

The "add" command allows;

- Cell phone numbers to be added to the 'access' and 'report' lists and;
- Required alarms and autoreports to be enabled.

Only users listed in the Access List are able to use the "add" commands

Full cell phone numbers including '+' and country code must be used when adding cell phone numbers to the 'access', 'report' & 'web' lists.

To add the cell phone number 0402123456 to the 'report' list the following command would be sent in an SMS text message from any cell phone number listed in the access list:

"add report +61402123456"

A successful update would result in an SMS text message reply:

**"Report List
+61402123456"**

To add a low battery alarm trigger the following command would be sent in an SMS text message from an authorised cell phone:

"add alarm batlo"

A successful update would result in an SMS text message reply:

**"Alarm Added
Low Battery
No Lantern Data
No GPS Data"**

Command	Parameter	Function	Example Command Format
add	access	Adds additional cell phone number(s) to the permitted access list. More than one cell phone number can be included in the SMS by separating each number with a "comma" character. The same cell phone number may also be programmed into the "report" list. The access list can contain a maximum of 16 cell phone numbers.	add access +61402123456 or/ add access +61402123456, +61402654321
	report	Adds additional cell phone number(s) to the permitted report list. More than one cell phone number can be included in the SMS by separating each number with a "comma" character. The same cell phone number may also be programmed into the "access" list. The report list can contain a maximum of 16 cell phone numbers.	add report +61402123456 or/ add report +61402123456, +61402654321
	alarm / autoreport	Adds the required alarm or autoreport functions that will report to the cell phones in the report list. More than one alarm can be included in the SMS. Separate each alarm condition with a "space" character. Possible alarms are: batlo, nodata, daily, nogps, offstation, web, power Possible autoreports are: status, daily, battery, power, web	add alarm batlo or/ add alarm batlo, nogps or/ add autoreport status

All cell phone numbers must be presented in international format – ie/ In Australia '0402123456' becomes '+61402123456'. In the United Kingdom, '07791234567' becomes '+447791234567'. The maximum phone number can be 15 digits long, if you require more than 15 digits please contact Sealite.

The list Command

The “list” command allows the operator to view:

- Cell phone numbers listed in the ‘access’, ‘report’ and ‘web’ lists and;
- List enabled alarms and autoreports programmed into the lantern.

Only users listed in the Access List are able to use the “list” commands

To determine the cell phone number entries in the ‘report’ list the following SMS text message command would be sent:

“list report”

The GSM Monitoring and Control System would SMS text message a response containing the contents of this list:

**“Report List:
+61402123456,
+61402654321”**

To determine the ‘alarm’ list the following SMS text message command would be sent:

“list alarm”

The GSM Monitoring and Control System would SMS text message a response containing the contents of this list:

“current alarm list: nodata, temphi, nogps, nopps, batlo”

Command	Parameter	Function	Example Command Format
list	access	Requests a list of the current cell phone numbers in the access list. An SMS is returned showing the current access list.	list access
	report	Requests a list of the current cell phone numbers in the report list. An SMS is returned showing the current report list.	list report
	web	Requests a list of the current Sealite web gateway phone number. An SMS is returned showing the current report list.	list web
	alarm / autoreport	Requests a list of the current alarms and autoreports programmed into the alarm list. An SMS is returned showing the current alarm list.	list alarm or/ list autoreport

All telephone numbers must be presented in international format – ie/ In Australia ‘0402123456’ becomes ‘+61402123456’. In the United Kingdom, ‘07791234567’ becomes ‘+447791234567’.

The delete Command

The “delete” command operates in the same way as the “add” command. The difference is the “delete” command will also accept the keyword “all”. This allows the list to be cleared in a single SMS text message.

Only users listed in the Access List are able to use the “delete” commands

To remove the cell phone number 0402123456 from the report list the following command would be sent:

“delete report +61402123456”

A successful deletion would result in an SMS text message reply:

**“Report List
Empty”**

When the report list is “empty”, this means that there are no cell phone numbers in the ‘report’ list, therefore disabling the automatic alarm function.

To remove an alarm from the alarm list the following command would be sent:

“delete alarm batlo”

A successful deletion would result in an SMS text message reply:

**“Alarm Deleted
No Lantern Data
No GPS Data”**

Command	Parameter	Function	Example Command Format
delete	access	Deletes the requested cell phone number from the permitted access list.	delete access +61402123456
	report	Deletes the requested cell phone number from the permitted report list.	delete report +61402123456
	web	Deletes the requested cell phone number from the permitted web list.	delete web +61416906478
	alarm / autoreport	Deletes the requested alarm or autoreport from the current alarm list.	delete alarm batlo

All telephone numbers must be presented in international format – ie/ In Australia ‘0402123456’ becomes ‘+61402123456’. In the United Kingdom, ‘07791234567’ becomes ‘+447791234567’.

The get Command

The “get” command is used to retrieve or “get” information from the lantern.

Information that can be retrieved includes

- Lantern Type
- Software Version
- Flash Code
- Intensity
- Operation Mode

Only users listed in the Access List are able to use the “get” commands

To retrieve the current flash code setting in the lantern, the following command would be sent
“Get fc” or “Get Flashcode” or “Get Flash code”

A successful reply would result in an SMS text message reply:

Lantern Config

Mode: Dusk to Dawn
Flash Code: 051
Intensity: Low

Note: The 51 indicates the flash code as it relates to the sequence found in the Sealite Flash Code Tables

To retrieve the current intensity setting in the lantern, the following command would be sent
“Get intensity”

A successful reply would result in an SMS text message reply:

Lantern Config

Mode: Dusk to Dawn
Flash Code: 051
Intensity: Low

Note: The lantern was set to Low intensity

Command	Parameter	Function	Example Command Format
get	Type	Gets the lantern hardware type	Get type
	Version	Gets the lantern’s software version	Get version
	Operation Mode	Gets the lantern’s operational mode	Get Mode Get Op
	Fc Flashcode Flash code	Gets the lantern’s flash code <i>Note: the lantern will respond to any of the options shown to the left.</i>	Get fc Get flashcode Get flash code
	Intensity	Gets the Lantern’s current intensity setting	Get intensity

All telephone numbers must be presented in international format – ie/ In Australia ‘0402123456’ becomes ‘+61402123456’. In the United Kingdom, ‘07791234567’ becomes ‘+447791234567’.

The set Command

The “set” command is used to enter or “set” information on the lantern.

Information that can be set by the user includes

- Operation Mode
- Flash Code
- Intensity

Only users listed in the Access List are able to use the “set” commands

To set a new flash code, the following command would be sent

“Set fc 83” or “Set Flashcode 83” or “Set Flash Code 83” (the flash code used was 7,3 (0.3On, 0.7Off)

A successful reply would result in an SMS text message reply:

Lantern Config

Mode: Dusk to Dawn
Flash Code: 083
Intensity: Low

Note: The 0x indicates the number is in Hexadecimal Format

Note: The 51 indicates the flash code as it relates to the sequence found in the Sealite Flash Code Tables

To set a new intensity, the following command would be sent

“Set intensity High”

A successful reply would result in an SMS text message reply:

Lantern Config

Mode: Dusk to Dawn
Flash Code: 051
Intensity: High

The default values for the lantern are:

- Operation Mode – Dusk to Dawn.
- Flash Code – is factory set to 51 via the Rotary Switches.
- Intensity – is factory set to 100% via the DIP Switches.

Command	Parameter	Function	Example Command Format
set	Mode	Sets the lantern’s operation mode. <ul style="list-style-type: none"> • Dusk to Dawn, on • Standby, off 	Set mode Dusk to Dawn Set mode Standby
	Fc Flashcode Flash code	Sets the lantern’s flash code Note: the lantern will respond to any of the options shown to the left. The flash code set by this command will remain active until either a new command is received or the Rotary Switches are changed.	Set fc 51 Set flashcode 51 Set flash code 51
	Intensity	Sets the Lantern’s current intensity setting Intensities that can be set are <ul style="list-style-type: none"> • Low • Medium • High The intensity set by this command will remain active until either a new command is received or the DIP Switches are changed.	Set intensity low

All telephone numbers must be presented in international format – ie/ In Australia ‘0402123456’ becomes ‘+61402123456’. In the United Kingdom, ‘07791234567’ becomes ‘+447791234567’.

STEP 4: Accessing the Sealite GSM Web Portal

CREATE A GSM ACCOUNT

After daily web reporting has been enabled via SMS text message command and your GSM lantern, access to historical data and graphs about individual lantern installations is available via the Sealite website.

Follow the steps below to access your lantern operational data;

1. Go to www.sealite.com on the internet, select the Sales and Inquiries tab, then select **Create a GSM Account**.



For lantern data to be updated daily in the Sealite GSM Web Reports, users must first send the SMS text message command "add alarm web" to the designated lantern(s).

2. Complete the details on the **GSM System Account Creation** screen including your contact details and valid Sealite GSM Product Serial Number, and click **Submit**

**Successful submissions
will display the
message below.**

Confirmation of Success

Your request for an online GSM account has been sent successfully.
Please check your email for your account details and further instructions.
If your account details do not arrive within 1 hour, please check your email junk folder.
If still no success, please do not re-submit the form. You will need to contact Sealite for assistance.
Regards from the sealite Team

3. Check your email account for confirmed secure login details.

From: info@sealite.com.au
To:
Cc:
Subject: Details of your new account login for Sealite Web site [Scanned]

This email contains login details for your new account at Sealite Web site This email is automatically generated - PLEASE DO NOT REPLY TO THIS EMAIL.

Your account details are as follows:
User Name:
Password:

To use your account, go to <http://www.sealite.com.au/> and login via the link "Registered Users" at the top of the home page.
You will be able to change your password at this time or any time in the future if you wish

LOG INTO YOUR GSM ACCOUNT

4. Go to **www.sealite.com** on the internet, click on **Login** at the top right of the home page, and complete your login details.



The screenshot shows the Sealite website's login interface. At the top left is the Sealite logo with the tagline 'AIDS TO MARINE NAVIGATION'. To the right is a navigation menu with buttons for 'Home', 'About', 'Products', 'Sales and Inquiries', 'Technical', 'Contact', and 'Login'. Below the navigation is a 'Registered User Login' section. This section contains a 'Username' input field, a 'Password' input field, and a 'Login' button. Below the input fields is a link that says 'Forgotten your login? Click here to get a new password.' Two black arrows originate from the right side of the page: one points to the 'Login' button, and the other points to the 'Username' input field.

GSM Dashboard

Once logged in, you will come to the **GSM Dashboard** page.



This page has menus you can use to navigate your way around Sealite's GSM Web Portal where you can perform a variety of tasks such as adding or removing GSM lanterns, viewing your lantern installations on a map, view critical lantern data or request help.

You can easily return to this page at any time by selecting **Dashboard** in the menu on the left of the page.

CONFIGURATION

The **Configuration** menu of the **GSM Dashboard** enables you to do the following:

- See critical lantern data in summary table view
- Drill down on each lantern to view all data
- Add or remove GSM lanterns
- Enable & configure alarm email messaging
- Enable & configure daily email reports

Sealite
AIDS TO MARINE NAVIGATION

Home About Products Sales and Inquiries Technical Contact Log Out

WELCOME , you are logged in as SL-Engineering

GSM Dashboard

Dashboard
Configuration Table
Deployment Map
Change Password
HELP!

Configuration

- See critical lantern data in summary table view
- Drill down on each lantern to view all data
- Add or remove GSM lanterns
- Enable & configure alarm messaging
- Enable & configure daily reports

Deployment Map

- See entire GSM lantern network in map view
- Click on icons to see summary data
- Drill down on each lantern to view all data

Change Password

- Change your Password

Request Help

- Access a help request form
- Get personal assistance with GSM

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Add GSM Lanterns

To register your lantern with Sealite’s secure online web reporting system you need to add it to your account:

1. Select **Configuration** from the **GSM Dashboard** or select **Configuration Table** in the menu on the left of the page.
2. Click on **ADD+**
This can be found at the bottom right of the table.



For lantern data to be updated daily in the Sealite GSM Web Reports, users must first send the SMS text message command “add alarm web” to the designated lantern(s).

3. The following page will appear on your screen.

4. Fill in the details of your lantern:

Identify: Enter the lantern's individual cell-phone number and identifying name.
It is suggested that the name of the lantern be descriptive for easy identification.

Configure: ENABLE ALARM EMAILS

Check this box if you wish to receive an email if this lantern triggers an alarm.
Enter the email addresses of the personnel that you wish to receive alarm messages.
You can enter the email addresses of up to 2 additional recipients.
If an alarm is triggered an email will be sent to these addresses.



For lantern alarm data to be sent to the Sealite GSM Web Portal when triggered, users must first send the SMS text message command to the lantern to set up the particular alarm required.

Configure: ENABLE REPORT EMAILS

Check this box if you wish to receive an email report from this lantern daily.
Enter the email addresses of the personnel that you wish to receive daily reports.
You can enter the email addresses of up to 2 additional recipients.

2. Configure

Enabling alarms will cause you to receive an email if this unit triggers an alarm.
Alarms can be sent to up to 3 email addresses.

ENABLE ALARM EMAILS

Enabling reports will cause you to receive an email report from this unit daily.
Reports can be sent to up to 3 email addresses.

ENABLE REPORT EMAILS REPORT EMAIL 1 (default email for this account, see "My Details")
sealite0@gmail.com

REPORT EMAIL 2

REPORT EMAIL 3

Process: Click the **Submit** button to register your lantern.
Data for your lantern will be available approximately 24 hours from the time the lantern is put into actual service or powered up.

Edit GSM Lantern Information

To modify the lanterns information:

1. Select **Configure** from the **GSM Dashboard** or select **Configuration Table** in the menu on the left of the page.
2. Locate the lantern you wish to modify and click on **EDIT** (this appears to the right of the lantern).
3. Modify the lantern details and click the **Submit** button at the bottom of the page.

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AIDS TO MARINE NAVIGATION

Home About Products Sales and Inquiries Technical Contact Log Out

WELCOME, you are logged in as SL-Engineering

Add/Edit GSM Unit

1. Identify
Phone numbers and a meaningful name are required.

IDENTIFY UNIT Country Number
#1 88803210

IDENTIFYING NAME
Channel Entrance (Starboard)

2. Configure
Enabling alarms will cause you to receive an email if this unit triggers an alarm. Alarms can be sent to up to 3 email addresses.

ENABLE ALARM EMAILS ALARM EMAIL 1 (default email for this account, see "My Details")
slengineering@gmail.com

ALARM EMAIL 2

ALARM EMAIL 3

Enabling reports will cause you to receive an email report from this unit daily. Reports can be sent to up to 3 email addresses.

ENABLE REPORT EMAILS REPORT EMAIL 1 (default email for this account, see "My Details")
slengineering@gmail.com

REPORT EMAIL 2

REPORT EMAIL 3

3. Process

Submit Cancel

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4. The following screen will appear to inform you that your update was processed successfully.

The screenshot shows the Sealite web application interface. At the top left is the Sealite logo with the tagline "AIDS TO MARINE NAVIGATION". A navigation menu includes Home, About, Products, Sales and Inquiries, Technical, Contact, and Log Out. A green banner displays the message "Success: update processed". Below this is a "Configuration" section with a sub-header "You currently have 1 GSM products registered". A table lists the registered product with columns for Phone, Name, Type, Flash Code, Hiv Volt, Alarm, and Reports. The table contains one entry: Phone 81355903210, Name Channel Entrance (Starboard), Type No data, Flash Code No data, Hiv Volt No data, Alarm Off, and Reports Off. There are EDIT and ADD+ buttons for this entry. A large black arrow points from the bottom right towards the success message banner.

Sealite
AIDS TO MARINE NAVIGATION

Home About Products Sales and Inquiries Technical Contact Log Out

WELCOME, you are logged in as SL-Engineering

Success: update processed

Configuration

Dashboard
Configuration Table
Deployment Map
Change Password
HELP!!

You currently have 1 GSM products registered

Phone	Name	Type	Flash Code	Hiv Volt	Alarm	Reports	
81355903210	Channel Entrance (Starboard)	No data	No data	No data	Off	Off	EDIT
add smt...							ADD+

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Remove GSM Lanterns

To remove a lantern:

1. Select **Configuration** from the **GSM Dashboard** or select **Configuration Table** in the menu on the left of the page.
2. Locate the lantern you wish to remove and click on **EDIT** (this appears to the right of the lantern).
3. Click the **Delete** button at the bottom of the page to remove the selected lantern.

The screenshot shows the Sealite web interface. At the top left is the Sealite logo with the tagline 'AIDS TO MARINE NAVIGATION'. A navigation menu includes Home, About, Products, Sales and Inquiries, Technical, Contact, and Log Out. A welcome message reads: 'WELCOME Yaron Chambers, you are logged in as SL-Engineering'. The main content area is titled 'Add/Edit GSM Unit' and is divided into three sections:

- 1. Identify**: Includes a red warning message: 'Phone numbers and a meaningful name are required.' Below this is a table for 'IDENTIFY UNIT' with columns 'Country' (81) and 'Number' (355903211). There is a text input field for 'IDENTIFYING NAME' containing 'Channel Entrance (Port)'.
- 2. Configure**: Includes a red warning message: 'Enabling alarms will cause you to receive an email if this unit triggers an alarm. Alarms can be sent to up to 3 email addresses.' Below this is a checkbox for 'ENABLE ALARM EMAILS' which is unchecked. Another red warning message says: 'Enabling reports will cause you to receive an email report from this unit daily. Reports can be sent to up to 3 email addresses.' Below this is a checkbox for 'ENABLE REPORT EMAILS' which is checked. There are three text input fields for 'REPORT EMAIL 1', 'REPORT EMAIL 2', and 'REPORT EMAIL 3'. The first field contains 'slengineering01@gmail.com'.
- 3. Process**: Contains three buttons: 'Submit', 'Delete', and 'Cancel'. A large black arrow points from the right side of the page towards the 'Delete' button.

See Critical Lantern Data in Summary View Table

This will take you to a new page with a summary listing of all your GSM lanterns registered in the system.

1. Select **Configuration** from the **GSM Dashboard** or select **Configuration Table** in the menu on the left of the page.
2. The following table summary will appear:

The screenshot shows the Sealite web interface. At the top, there is a navigation bar with links: Home, About, Products, Sales and Inquiries, Technical, Contact, and Log Out. Below this, a welcome message reads "WELCOME, you are logged in as SL-Engineering". The main content area is titled "Configuration" and states "You currently have 4 GSM products registered".

Phone	Name	Type	Flash Code	Hlx Volts	Alarms	Reports	
61355503208	Channel Entrance (Starboard)	SLGSM	006	12.3	ON	ON	EDIT
61355503211	Channel Entrance (Port)	SLBGM	006	12.1	OFF	ON	EDIT
61355503221	Channel marker 2	SLGSM	006	12.2	ON	OFF	EDIT
61355503223	Channel marker 3	SLGSM	006	12.3	ON	OFF	EDIT
add unit...							ADD+

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3. The background colour of a particular lantern will change to a red colour if an alarm condition is present.

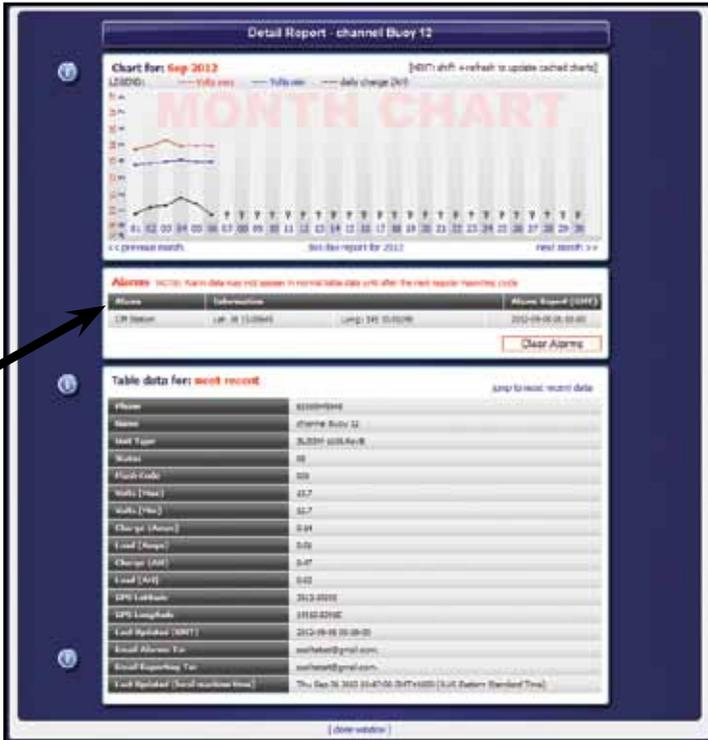
Drill Down on Each Lantern to View All Data

This will take you to a new page showing detailed information for the GSM lantern selected.

1. Select **Configuration** from the **GSM Dashboard** or select **Configuration Table** in the menu on the left of the page.
2. The following table summary will appear:



3. Click the cell-phone number of the lantern you wish to view in more detail.
4. The following detailed report for the lantern will appear in a new window.
Breaks in the data represent periodic absence of data transmission or removal of lantern for servicing.



Lantern with an alarm

5. For help viewing detailed information about Charts, Data and Email Reporting click on the 'i' button to the left of the screen:

Detail Report - Lewis channel Buoy 17

Chart for: 5
LEGEND: C: []

Alarms NOT
Alarm: []
Off Station: []
Off Station: []

Table data

Phone	
Name	
Dist Type	
Status	OK
Flash Code	005
Volts (HMax)	13.6
Volts (Min)	13.6
Charge (Amps)	0.00
Load (Amps)	0.00
Charge (Ah)	2.26
Load (Ah)	0.32
GPS Latitude	3813.19535
GPS Longitude	14510.6433E
Last Updated (GMT)	2012-09-04 23:05:00
Email Alarm To	sealite@sealite.com
Email Reporting To	sealite@sealite.com
Last Updated (local machine time)	Wed Sep 5 09:13:00 UTC+0000 2012

Help Overlay:

Navigating historical data via the chart

Month-by-month data
You can move backwards and forwards through historical data by clicking the "previous month" and "next month" links. This will change the chart display to the previous or next month (also see "Jump to most recent data" to return to current display).

Drill down into data
You can drill-down to view tabular data for any day of the chart month by clicking on the date displayed along the bottom axis of the chart. The chart will continue to display the selected month's data, and the table will update to display detailed data for the chosen day of the month.

Long-term historical data
Likewise, you can navigate through more extensive historical data (when available) by clicking on the "365 day report" link which will update the chart to show an entire year's data. From the year-view mode, you can drill down by month, then by day. You can also navigate backwards and forwards by entire years by clicking the "previous year" and "next year" links (Visible only in year-view mode).

Chart help

Data help

Email reporting help

DEPLOYMENT MAP

The **Deployment Map** section of the **GSM Dashboard** enables you to do the following:

- See entire GSM lantern network in map view
- Click on items to see summary data
- Drill down on each lantern to view all data

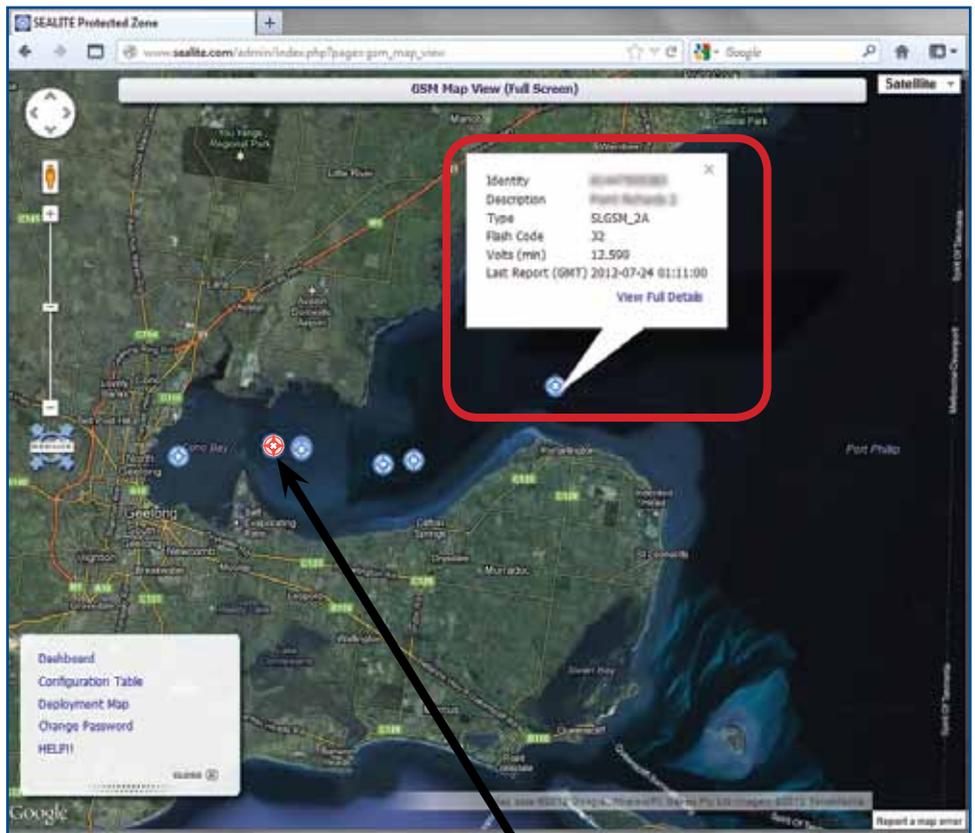
The screenshot shows the Sealite GSM Dashboard interface. At the top left is the Sealite logo with the tagline 'AIDS TO MARINE NAVIGATION'. A navigation menu includes Home, About, Products, Sales and Inquiries, Technical, Contact, and Log Out. A welcome message states 'WELCOME, you are logged in as EL-Engineering'. The main content area is titled 'GSM Dashboard' and is divided into several sections:

- Dashboard:** Contains links for Configuration Table, Deployment Map, Change Password, and HELP!
- Configuration:** Lists actions such as 'See critical lantern data in summary table view', 'Drill down on each lantern to view all data', 'Add or remove GSM lanterns', 'Enable & configure alarm messaging', and 'Enable & configure daily reports'. It features an icon of a red lantern.
- Change Password:** Includes the option 'Change your Password' with a padlock icon.
- Request Help:** Includes 'Access a help request form' and 'Get personal assistance with GSM' with a lifebuoy icon.
- Deployment Map:** This section is highlighted with a red border and contains the following instructions:
 - See entire GSM lantern network in map view
 - Click on icons to see summary data
 - Drill down on each lantern to view all data
 It includes a globe icon with a red location pin.

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This allows you to view the location of your GSM Lantern installations via map.

1. Select **Deployment Map** from the **GSM Dashboard** or select **Deployment Map** in the menu on the left of the page.
2. A map of your GSM lanterns will appear with the Sealite Logo indicating the location of your installation(s). Use the zoom in/out tool bar at the top left of the page to navigate around the map.
3. To see summary data for a specific lantern, click on the Sealite icon on the map. A call-out box appears on the map with the summary data of the lantern.
4. The Sealite Logo will be highlighted in red if an alarm condition occurs.
4. To drill down on the lantern to view all data, click on **View Full Details** in the call-out box and a new window will open displaying detailed information about the lantern.



**Lantern with an
alarm condition**

REQUEST HELP

The **Request Help** menu of the **GSM Dashboard** enables you to submit a form to Sealite to request assistance from a Sealite GSM expert.

The screenshot shows the Sealite GSM Dashboard interface. At the top left is the Sealite logo with the tagline "AIDS TO MARINE NAVIGATION". A navigation menu includes Home, About, Products, Sales and Inquiries, Technical, Contact, and Log Out. A welcome message states "WELCOME, you are logged in as SL-Engineering". The main content area is titled "GSM Dashboard" and is divided into four sections: Dashboard (with links to Configuration Table, Deployment Map, Change Password, and HELP!), Configuration (with a list of actions and a red buoy icon), Deployment Map (with a list of actions and a globe icon), and Change Password (with a list of actions and a padlock icon). The "Request Help" section is highlighted with a red rounded rectangle and contains a list of actions and a lifebuoy icon. The footer includes contact information and copyright details.

Sealite
AIDS TO MARINE NAVIGATION

Home About Products Sales and Inquiries Technical Contact Log Out

WELCOME, you are logged in as SL-Engineering

GSM Dashboard

Dashboard
Configuration Table
Deployment Map
Change Password
HELP!

Configuration

- See critical lantern data in summary table view
- Drill down on each lantern to view all data
- Add or remove GSM lanterns
- Enable & configure alarm messaging
- Enable & configure daily reports

Deployment Map

- See entire GSM lantern network in map view
- Click on icons to see summary data
- Drill down on each lantern to view all data

Change Password

- Change your Password

Request Help

- Access a help request form
- Get personal assistance with GSM

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1. Select **Request Help** from the **GSM Dashboard** or select **HELP!!** in the menu on the left of the page.
2. The following form will appear.
3. Complete the details.
4. Click **Submit**

Sealite
AIDS TO MARINE NAVIGATION

Home About Products Sales and Inquiries Technical Contact Log Out

WELCOME, you are logged in as YO-GopendraPanda

Request Assistance with GSM

If you are experiencing problems setting up your GSM account, simply complete and submit this form to receive prompt personal assistance from a Sealite GSM expert.

Please provide as much information about the problem as possible to enable our consultant to check your account status before responding.

(* indicates required fields)

Company or Business Name (if applicable):

Last Name *

First Name *

Job Title (if applicable)

Country *

Address line 1 *

Address line 2 (if required)

City/Town or Suburb *

State or Province

Zip/Postal Code

Phone *

Mobile

Fax

Email *

Please tell us how we can assist *

Country Area Number *

Subscribe to email updates?

Are you already a Sealite customer?
 NO YES

Submit

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CHANGE PASSWORD

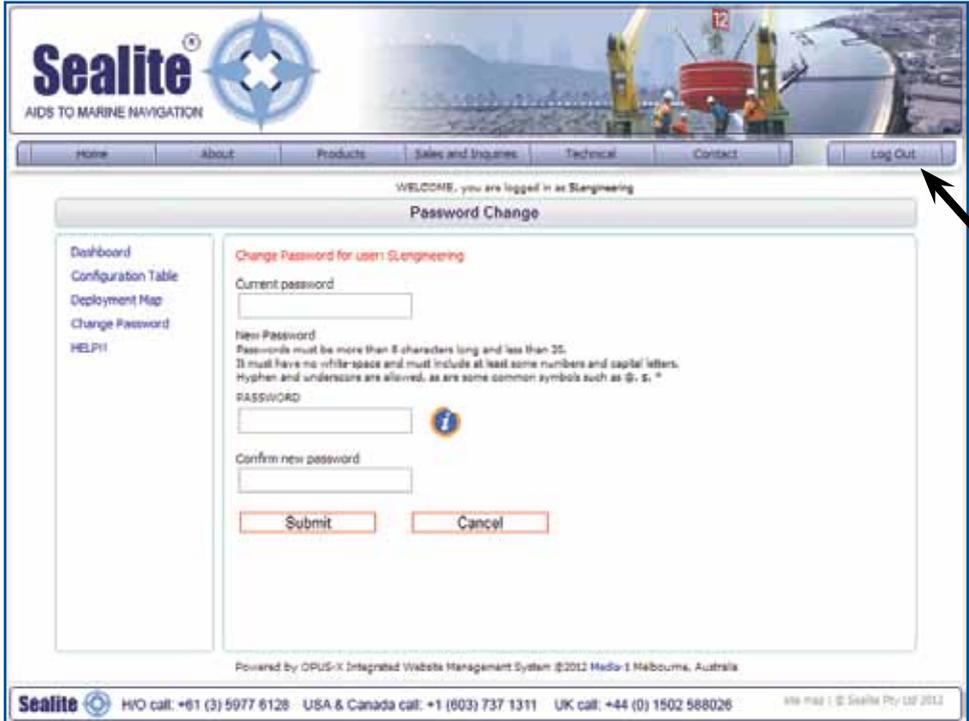
The **Change Password** menu of the **GSM Dashboard** enables you to change your password:

The screenshot displays the Sealite GSM Dashboard interface. At the top left is the Sealite logo with the tagline "AIDS TO MARINE NAVIGATION". A navigation menu includes "Home", "About", "Products", "Sales and Inquiries", "Technical", "Contact", and "Log Out". A welcome message states "WELCOME, you are logged in as EL-Engineering". The main dashboard area is titled "GSM Dashboard" and contains several sections:

- Dashboard** (left sidebar):
 - Configuration Table
 - Deployment Map
 - Change Password
 - HELP!!
- Configuration** (top left):
 - See critical lantern data in summary table view
 - Drill down on each lantern to view all data
 - Add or remove GSM lanterns
 - Enable & configure alarm messaging
 - Enable & configure daily reports
- Deployment Map** (top right):
 - See entire GSM lantern network in map view
 - Click on icons to see summary data
 - Drill down on each lantern to view all data
- Change Password** (bottom left, highlighted with a red box):
 - Change your Password
- Request Help** (bottom right):
 - Access a help request form
 - Get personal assistance with GSM

At the bottom of the dashboard, it states "Powered by OPUS-X Integrated Website Management System ©2012 Media 1 Melbourne, Australia". The footer contains contact information: "H/O call: +61 (3) 5977 6128 USA & Canada call: +1 (603) 737 1311 UK call: +44 (0) 1502 588026" and "Site map | © Sealite Pty Ltd 2012".

1. Select **Change Password** from the **GSM Dashboard** or select **Change Password** in the menu on the left of the page.
2. Complete the details.
3. Click **Submit**



REMEMBER TO LOG OUT WHEN YOU HAVE FINISHED VIEWING YOUR GSM LANTERN DATA

(click "Log Out" at the top right of the page)



Trouble Shooting

Initial Setup

The most important step in the process of setting up your GSM monitoring and control module is to ensure desired cell phone numbers are programmed into the access list.

Use the list access command (see “Sending Commands” on page 20) to confirm cell phone numbers are correctly entered. Re-enter from a correctly listed cell phone the numbers required.

If the initial access list number(s) are incorrectly entered, lost, or if the lantern’s cell phone number will not respond, power up the lantern and email Sealite technicians (info@sealite.com) the following details:

- Designated Lantern SIM Card Number
- Country Code
- Lantern Serial Number **

*** Please Note: A charge may be levied for this service*

Web Reporting

If no data is available from your secure web login after following the outlined procedure:

- Send the SMS text message “list alarm” to check that the alarm to the web has is enabled
- If the alarm has been enabled, then re-send the SMS text message “add web +61416906478” to ensure the gateway is open.

Trouble Shooting Table

Problem	Remedy
Lantern will not activate.	<ul style="list-style-type: none"> • Ensure lantern is in darkness. • Wait at least 60 seconds for the program to initialise in darkness. • Ensure switch setting is on a valid code (not unused flash code). • Ensure battery terminals are properly connected. • Ensure battery voltage is above 12volts.
Timing codes will not change.	<ul style="list-style-type: none"> • Turn rotary switches several times to ensure contacts are clear.
Lantern will not operate for the entire night.	<ul style="list-style-type: none"> • Expose lantern to direct sunlight and monitor operation for several days. Sealite products typically require 1.5 hours of direct sunlight per day to retain full autonomy. From a discharged state, the lantern may require several days of operational conditions to 'cycle' up to full autonomy. • Reducing the light output intensity or duty cycle (flash code) will reduce current draw on the battery. • Ensure solar module is clean and not covered by shading during the day.
My lantern won't respond to the 1st message I send on setup.	<ul style="list-style-type: none"> • Ensure SIM card is active, has credit, and is fitted correctly. • Ensure there is no PASSWORD on the SIM card account and the SIM Card is unlocked.
My SMS reports are sometimes showing N/A or reports that "no data" has been received.	<ul style="list-style-type: none"> • This indicates that the GPS or battery charge at night is not available. Otherwise the lantern may have failed therefore responding with a reading of "N/A" (not available). Contact Sealite for further help.
When I send an SMS there is no SMS response from the lantern within 5-20 minutes.	<ul style="list-style-type: none"> • The cell phone monitoring system is reliant on cell phone coverage and gateway traffic, and may suffer from occasional drop outs, or the lantern may be located in a marginal GSM coverage area (check with your local network provider for coverage details). One or all of these parameters affect the performance of your monitoring system. • The GSM implements a sleep cycle to save power. Under normal conditions the GSM will be put to sleep for 15 minutes at a time.
When I send an SMS there is no response.	<ul style="list-style-type: none"> • Check the number you are ringing from is listed in the access list or the report list. • Try sending the SMS from a different phone using a different network.

Lantern Board Indicator / Status LED's

All Sealite lantern boards are fitted with two Indicator LED's. These are positioned on the edge of the board, near the Flash Code Rotary Switches. Use the table below to help determine operational status.

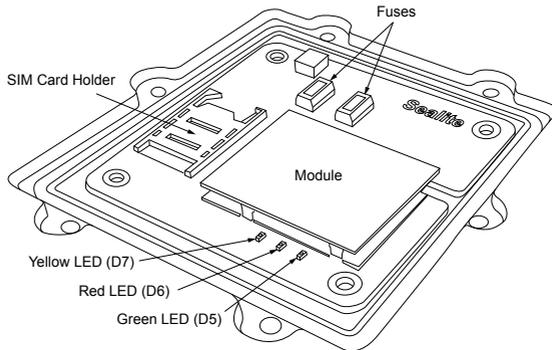
Yellow Status LED	Condition
Off	Daylight, Standby
Quick Flashing	Day to Night transition
2 Quick Flashes	Night Operation, Not Synchronized
1 Quick Flash	Night Operation, Sync in Progress
Slow Flashing	Night Operation, Synchronized

Red Status LED	Condition
Steady	Flat Battery cutoff is in effect (Below 10.0V)
Slow	High Voltage (Above 13.5V)
Off	Optimal Voltage (12.5V to 13.5V)
1 Quick	Ok Voltage (12.0V to 12.5V)
2 Quick	Low Voltage (11.5V to 12.0V)
3 Quick	Poor Voltage (10.0V to 11.5V)
4 Quick	Flat Voltage (Below 10.0V)

Phone Module Indicator / Status LED's

The GSM board is fitted with a number of Indicator LED's. Use the diagram below to help determine operational status.

To view Indicator LED's follow the steps shown on in the "Installing a SIM Card" section of this manual



LED Combinations			Condition
Green LED	Red LED	Yellow LED	
Steady	Off	Off	The setup of the GSM module has failed. Check that the module is present. Reset the unit and try again. <i>Note: The unit will automatically reset within 1 hour and try again.</i>
Slow	Steady	Steady	The GSM module is in the process of being setup. The SIM card has failed. Check that the SIM card is present and inserted correctly.
Slow	Slow	Steady	The GSM module is in the process of being setup. The SIM card is locked, please insert the SIM card into a handset and unlock the PIN.
1 Quick	1 Quick	Steady	The GSM module setup is complete. The SIM card is ready for operation. The signal is not detectable. Check that the antenna is present and connected to the GSM module.
1 Quick	1 Quick	Slow	The GSM module setup is complete. The SIM card is ready for operation. The network is NOT ready.
1 Quick	1 Quick	1 Quick (Low) 2 Quick (OK) 3 Quick (Good) 4 Quick (Max)	The GSM module setup is complete. The SIM card is ready for operation. The network is ready. The yellow status LED indicates signal strength.
2 Quick	Off	Off	GSM Module setup is complete and the GSM module is asleep.



Sealite LED Light Warranty V2.1

Activating the Warranty

Upon purchase, the Sealite Pty Ltd warranty must be activated for recognition of future claims. To do this you have two (2) options:

1. **Postal Registration** - please complete the Sealite Warranty Registration Card and return to Sealite within 30 days of your purchase.
2. **Online Registration** - please complete the Online Registration Form at; www.sealite.com

Sealite Pty Ltd will repair or replace your LED light in the event of electronic failure for a period of up to three years from the date of purchase.

The unit must be returned to Sealite freight prepaid.

Warranty Terms

1. Sealite Pty Ltd warrants that any Sealite marine products fitted with telemetry equipment including but not limited to AIS, GSM, GPS or RF ("Telemetry Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
2. Sealite Pty Ltd warrants that any BargeSafe™ Series of LED barge light products ("BargeSafe™ Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
3. Sealite Pty Ltd warrants that any LED area lighting products ("Area Lighting Products") but not including sign lighting products will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
4. Sealite Pty Ltd warrants that any LED sign lighting products ("Sign Lighting Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser.
5. Sealite Pty Ltd warrants that any Sealite marine lighting products other than the Telemetry Products, BargeSafe™ Products, and Area Lighting Products ("Sealite Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser.
6. Sealite Pty Ltd will repair or replace, at Sealite's sole discretion, any Telemetry Products, BargeSafe™ Products, Area Lighting Products or Sealite Products found to be defective in material and workmanship in the relevant warranty period so long as the Warranty Conditions (set out below) are satisfied.
7. If any Telemetry Products, BargeSafe™ Products, Area Lighting Products or Sealite Products are fitted with a rechargeable battery, Sealite Pty Ltd warrants the battery will be free from defect for a period of one (1) year when used within original manufacturer's specifications and instructions.

Warranty Conditions

This Warranty is subject to the following conditions and limitations;

1. The warranty is applicable to lanterns manufactured from 1/1/2009.
2. The warranty is void and inapplicable if:
 - a. the product has been used or handled other than in accordance with the instructions in the owner's manual and any other information or instructions provided to the customer by Sealite;
 - b. the product has been deliberately abused, or misused, damaged by accident or neglect or in being transported; or
 - c. the defect is due to the product being repaired or tampered with by anyone other than Sealite or authorised Sealite repair personnel.

3. The customer must give Sealite Pty Ltd notice of any defect with the product within 30 days of the customer becoming aware of the defect.
4. Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Typical battery replacement period is 3-4 years. Long term exposure to high temperatures will shorten the battery life. Batteries used or stored in a manner inconsistent with the manufacturer's specifications and instructions shall not be covered by this warranty.
5. No modifications to the original specifications determined by Sealite shall be made without written approval of Sealite Pty Ltd.
6. Sealite lights can be fitted with 3rd party power supplies and accessories but are covered by the 3rd party warranty terms and conditions.
7. The product must be packed and returned to Sealite Pty Ltd by the customer at his or her sole expense. Sealite Pty Ltd will pay return freight of its choice. A returned product must be accompanied by a written description of the defect and a photocopy of the original purchase receipt. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorised dealer and the price paid by the purchaser. On receipt of the product, Sealite Pty Ltd will assess the product and advise the customer as to whether the claimed defect is covered by this warranty.
8. Sealite Pty Ltd reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.
9. Input voltage shall not exceed those recommended for the product.
10. Warranty does not cover damage caused by the incorrect replacement of battery in solar lantern models.
11. This warranty does not cover any damage or defect caused to any product as a result of water flooding or any other acts of nature.
12. There are no representations or warranties of any kind by Sealite or any other person who is an agent, employee, or other representative or affiliate of Sealite, express or implied, with respect to condition of performance of any product, their merchantability, or fitness for a particular purpose, or with respect to any other matter relating to any products.

Limitation of Liability

To the extent permitted by section 68A of the Trade Practices Act 1974 (Cth), the liability of Sealite Pty Ltd under this Warranty will be, at the option of Sealite Pty Ltd, limited to either the replacement or repair of any defective product covered by this Warranty. Sealite will not be liable to Buyer for consequential damages resulting from any defect or deficiencies.

Limited to Original Purchaser

This Warranty is for the sole benefit of the original purchaser of the covered product and shall not extend to any subsequent purchaser of the product.

Miscellaneous

Apart from the specific warranties provided under this warranty, all other express or implied warranties relating to the above product is hereby excluded to the fullest extent allowable under law. The warranty does not extend to any lost profits, loss of good will or any indirect, incidental or consequential costs or damages or losses incurred by the purchaser as a result of any defect with the covered product.

Warrantor

Sealite Pty Ltd has authorised distribution in many countries of the world. In each country, the authorised importing distributor has accepted the responsibility for warranty of products sold by distributor. Warranty service should normally be obtained from the importing distributor from whom you purchased your product. In the event of service required beyond the capability of the importer, Sealite Pty Ltd will fulfil the conditions of the warranty. Such product must be returned at the owner's expense to the Sealite Pty Ltd factory, together with a photocopy of the bill of sale for that product, a detailed description of the problem, and any information necessary for return shipment.

Other Sealite Products Available



**Marine Lanterns
(1-12nm+)**



**Monitoring
& Control Systems**



Bridge & Barge Lights



**Marine Buoys
(up to 3mt in diameter)**



Area Lighting



**Mooring Systems
& Accessories**



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