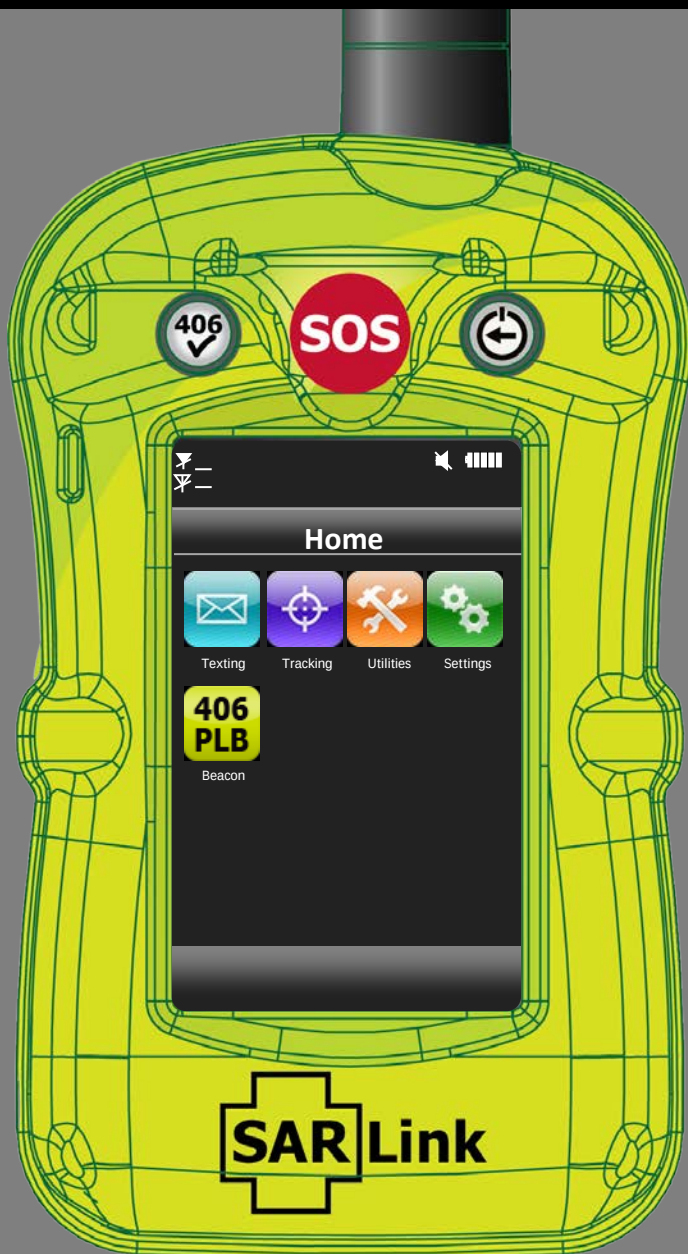


THE SCIENCE OF SURVIVAL

ACR

ACR Electronics, Inc.
5757 Ravenswood Road
Fort Lauderdale, FL 33312

www.acrartex.com



Quick Start Guide
Model: SOS-1000
Product No.: 2890/2891
Y1-06-0288 Rev. T1

NOT FCC Approved.

This device has not been authorized as required by the rules of the FCC. This device is not, and may not be offered for sale or lease, or sold or leased, until authorization is obtained.

CONFIDENTIAL & PROPRIETARY

This document contains commercial proprietary information and is supplied solely for the purposes of evaluating this ACR presentation. It is not to be used for any other purpose or divulged or passed to any third party without prior written approval from ACR Electronics, Inc.

Registration

REGISTERING YOUR BEACON

As the owner of this 406 MHz beacon, it is a requirement that you register it with the National Authority of your country. Please note that in many countries all 406 MHz beacons are required to have their registration updated every two years by the owner. Please check the requirements for your country of registration.

HOW REGISTRATION WORKS:

All 406 MHz beacons transmit a Unique Identifier Number (UIN) when activated. This UIN is programmed into the beacon based on the country in which the beacon is registered, thus authorities are able to determine which country's database will have your registration information. Search and Rescue (SAR) forces will have information as to who you are as the owner of the beacon, the name and type of vessel that you have (if applicable), your address, and who to contact that might know of your current situation - but only if your beacon has been properly registered.

Valuable search and rescue resources are wasted every year responding to false alerts, and registering your beacon helps to resolve this quickly.

The beacon must be registered in the country of the owner's residence. If the beacon is not programmed to that country's code and protocol, and the residence is outside of the USA, the beacon needs to be reprogrammed.

For a complete list of all countries with online registration links visit

www.acrartex.com/support/registrations/

Save Time! Register your beacon online at: www.beaconregistration.noaa.gov

Official 406 MHz PLB Registration Form
Mail or Fax to: NOAA-SARSAT, NSOF, E/SP053, 4201 Sulfur Road, Silver Spring, MD 20916, Fax 301-417-4565

PLB Information
Beacon ID (Unique Identifier Number) A B C D 1 1 2 3 4 5 6 F F B I F F
PLB Manufacturer ACR Electronics Model No. RESQLINK PLB-375

PLB Registration
☒ New PLB Registration ☐ Replacement of PLB Decal
☐ Renewal of PLB Registration ☐ Check here if this PLB is a replacement for a previously registered PLB.
☐ Change of PLB Information or Ownership Please enter the old PLB unique ID number _____

Owner/Operator Information
Name Sample, John A. Telephone (954) 981-3333
Mailing Address 5757 Ravenswood Rd (954) 983-5087
City Fort Lauderdale State/Province FL
ZIP (Postal) Code 33312 Country USA
E-mail _____

General Use Data
Usage ☐ Commercial ☐ Non-commercial ☐ Government Military ☐ Government Non-military
Specific Usage ☒ Hunting ☐ Fishing ☐ Other _____
Type ☒ Land Vehicle ☐ Boat ☐ Aircraft ☐ None ☐ Other _____
Additional Data
Land Vehicle: Jeep Wrangle White, License Plate Florida # ABC123
Boat: 21' Center Console, Boat Name: S.S. EPIRB
Next Schedule Fishing Trip is Feb. 3-5, 2011. 4 Persons on board. Leaving
FL Lauderdale Heading to Rimini. 1 Person on board with Heart Problems.

Emergency Contact Information (Please indicate someone other than the owner)
Name of Primary 24-Hour Emergency Contact: Jane Sample Name of Alternate 24-Hour Emergency Contact: Tom Sample
Telephone (954) 123-4567 ☒ Home ☐ Work ☐ Cellular ☐ Fax ☐ Other (954) 234-5678 ☒ Home ☐ Work ☐ Cellular ☐ Fax ☐ Other
(954) 981-3333 ☐ Home ☒ Work ☐ Cellular ☐ Fax ☐ Other (954) 981-3333 ☐ Home ☒ Work ☐ Cellular ☐ Fax ☐ Other
(954) 235-6789 ☐ Home ☐ Work ☒ Cellular ☐ Fax ☐ Other (954) 456-7891 ☐ Home ☐ Work ☒ Cellular ☐ Fax ☐ Other
() ☐ Home ☐ Work ☐ Cellular ☐ Fax ☐ Other (954) 567-8910 ☐ Home ☐ Work ☒ Cellular ☐ Fax ☐ Other

Signature John Sample Date 01/14/2011

If you have any questions about this form or wish PLB registration in person, please call 1-800-275-5646 (TDD) or 301-417-4515.
For information on the U.S. Search & Rescue Satellite-Aided Tracking system, please visit www.noaa.gov.

OMB (0618-0099) (Rev. 11-2008)
At 25-1050 Rev. 9



The fastest and easiest way to register is online at www.beaconregistration.noaa.gov/



Or Mail To:

Department of Commerce
NOAA SARSAT Beacon
Registration
NSOF E/SPO53
1315 East West Hwy
Silver Spring, MD 20910-3282



Or Fax To:

Faxing a registration is also acceptable. Fax the registration form to 301-417-4565

Anatomy Of A Rescue

HOW THE BEACON WORKS

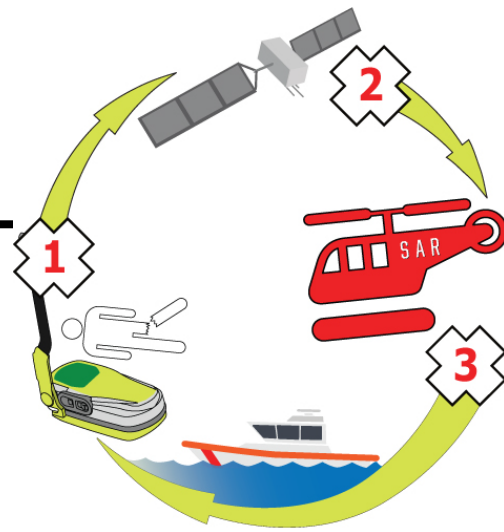
How your beacon summons help

406 MHz beacons are a type of portable emergency equipment that transmits a distress signal to search and rescue (SAR) organizations. The purpose of these beacons is to aid SAR teams in tracking and locating ships or individuals in jeopardy as rapidly as possible.

The 406 MHz frequency is a worldwide dedicated emergency frequency that is detected by a network of satellites called the Cospas-Sarsat system. This satellite system was established by, and continues to be supported by, its primary benefactors - the USA, Russia, Canada and France. The Cospas-Sarsat system has saved over 30,500 lives - and counting - since its inception. To learn more about the system visit www.cospas-sarsat.org.

When a 406 MHz beacon is activated, the digital distress message is sent to Cospas-Sarsat satellites and, in turn, the distress message is relayed to SAR forces. The distress message contains the beacon UIN and on some models the GPS location of the beacon. Additional information about the beacon is accessed by SAR forces from the beacon registration database. At the same time the 406 MHz signal is activated, a 121.5 MHz signal is turned on. The 121.5 MHz signal is used by SAR forces to home in on the beacon as they approach it.

The 406 MHz signal is detected by multiple satellites and from that information the location of the beacon can be calculated. This data alone is sufficient for SAR to find persons or ships in distress in a reasonable timeframe. However, as a further enhancement, some beacons have a GPS engine onboard. This feature allows the beacon to acquire current location coordinates from an internal GPS receiver. The purpose of this feature is to send an even more precise location of the beacon to the satellites, i.e., latitude and longitude data. This helps SAR to reach the location even faster.



**Learn more about the
Cospas-Sarsat
satellite system:**
www.cospas-sarsat.org

Getting to know SARLink



Accessories



USB Power Connector



Lanyard



USB Wall Charger

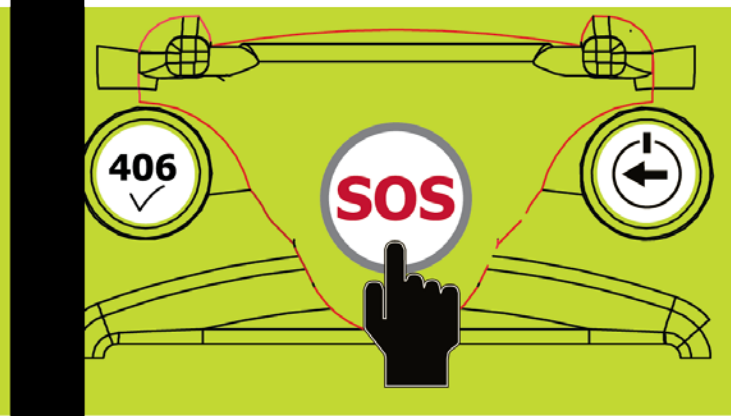
Status Bar Symbols

Symbol	Symbol Meaning
	denotes the Iridium transceiver is off. To preserve battery life the Iridium transceiver will only turn on when transmitting a message or report.
	denotes: (1) the Iridium transceiver is on with real-time signal strength represented by the number of vertical bars and (2) SBD message transmission is in progress. The signal strength can range from the lowest of zero to the highest of five bars. During transmission, the antenna must have a clear view of the sky. The SARLink cannot send messages or reports from inside a building. The signal strength indicator turns green upon successful transmission (Acknowledgement) of a message to the Iridium gateway. The indicator will return to white after 10 seconds.
	denotes the GPS receiver is off. The GPS receiver is always kept off to preserve battery life until time, date or position information is needed.
	denotes the GPS receiver is on with real-time satellite acquisition status represented by the number of vertical bars. One bar represents valid time and date fix, two bars represent dead reckoning, three bars represent 2-D fix, and four bars represent 3-D fix. Although the SARLink GPS receiver can often obtain a location fix when the antenna is partially blocked (near buildings, in a room next to a window, etc.), it is recommended that the antenna must have a clear view of the sky to minimize acquisition time and better position accuracy. The indicator turns green as long as the last acquired 3-D fix is not more than one hour old.
	denotes tracking mode is on when the tracking symbol is bright white. Next to the tracking symbol is the countdown timer to the next report.
	denotes tracking mode is off when the tracking symbol is dimmed gray.
	denotes all audio alerts are off.
	denotes audio alert is on.
	denotes unread message(s) is in the Inbox.
	denotes message(s) is in the Outbox ready to be sent or message(s) in queue failed to send.
	battery indicator with five bars being fully charged.
	denotes the battery is being charged by an external power source.

Emergency Activation



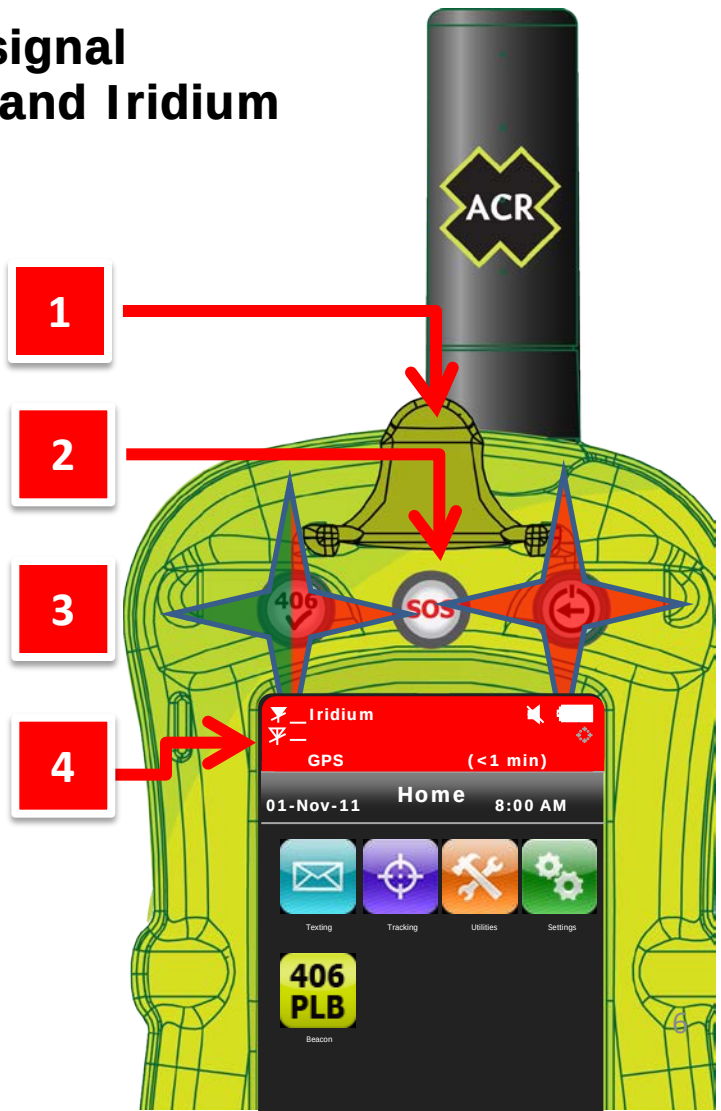
1: Lift Cover



2: Press For 2 Second

To activate the distress signal (Simultaneous 406 MHz and Iridium distress alert)

1. Lift SOS cover that protects the SOS button
2. Press the **SOS** Button for **2** Seconds
3. The left LED will **flash red** once per second until a valid GPS fix is attained, then it will start to **flash green**. The right LED will turn **solid red** when the display is on, when unit is in sleep mode it will **flash red** every 5 seconds.
4. The top section of the display will turn red during an emergency. It turns back to black when the device is taken out of Emergency mode.



Emergency Mode

Once the emergency activation button is pressed the screen will initiate an emergency confirmation screen. If Yes or No are not pressed, the emergency message by default will commence sending after **30** seconds.

If No is selected, a screen will appear alerting you to press the SOS button for 3 – 4 seconds to cancel the emergency; emergency 911 can only be canceled by pressing the SOS button.

If Yes is selected, a screen will appear with a drop down list of canned messages to describe the nature of your emergency situation.



Personal Locator Beacon Menus

406
PLB

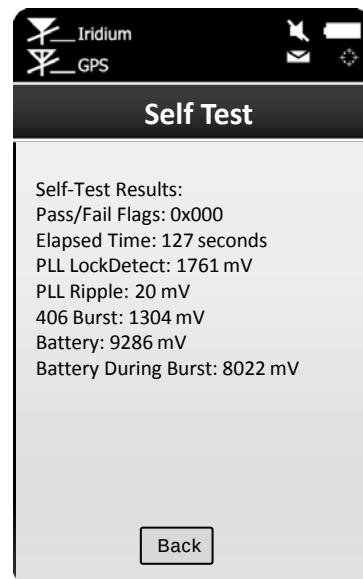
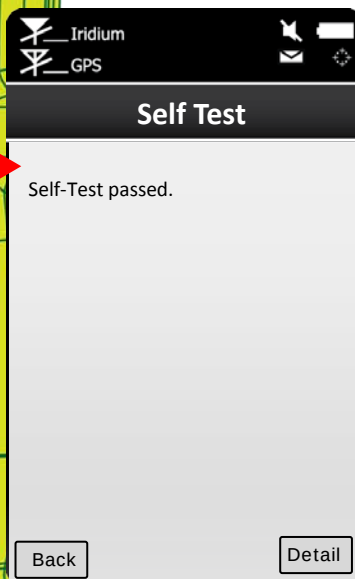
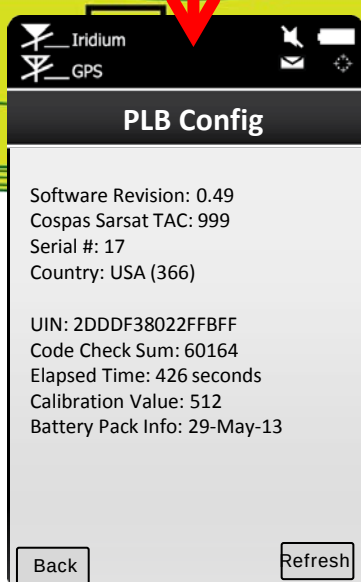
There are two menu items when the 406 PLB icon is pressed.

PLB Self Test

The Self Test Detail screen provides the results of the monthly diagnostic test.

If the unit passes self test the text remains **black**. If the text in this screen appears **red**, the unit has failed self test.

The second row (once decoded) provides the individual tests that passed or failed. The test provides the actual values of key transmitter performance measurements.

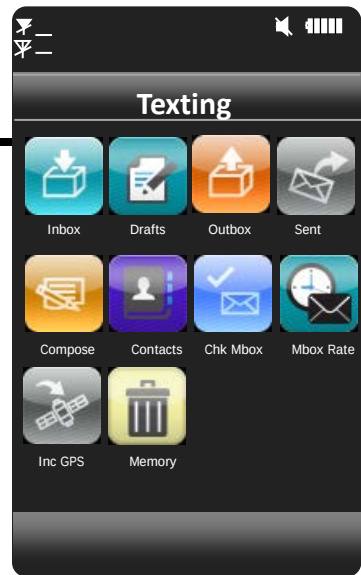


PLB Configuration

- This screen provides the end-user useful information about the device:
- The Software revision level, serial number and country of registration
- Battery date code information and the amount of elapsed time the battery used for monthly self tests.

Texting

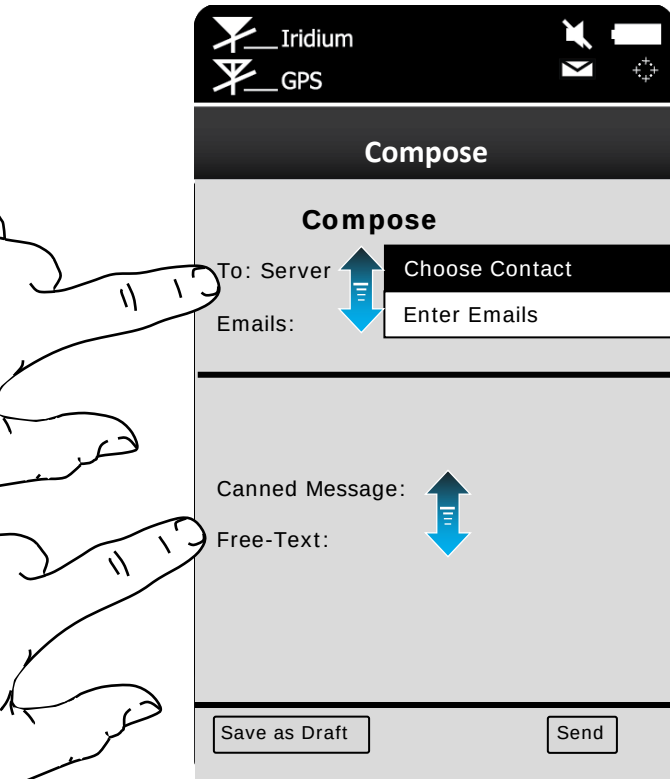
The SARLink provides the ability to send and receive SMS/Text messages to cell phones, email addresses and other SARLink devices. By accessing the texting menu, you can easily compose, save and manage all of your incoming and out-going mail.



Icons	Texting menu allows user to compose, save, view, and send canned or free-text messages.
	Inbox folder contains all incoming read and unread messages with the newest on top of the list.
	Sent folder contains messages successfully sent to a NOC server. A message can be resent, forwarded or deleted.
	Compose menu allows user to enter, edit and send canned messages, free-text messages or a combination of canned and free-text messages to: (1) a NOC server, (2) to a pre-defined list of email addresses or/and (3) to any email addresses entered via the keyboards.
	Drafts folder contains draft messages saved under the Compose menu.
	Outbox folder contains either messages in queue ready to be sent or messages failed to send.
	The Check Mailbox menu can either be in Idle or Checking the Iridium gateway for any pending messages to be downloaded.
	Contacts is an address book with a list of contacts created and saved into the SARLink' memory.
	Memory is used to clear messages in all mail boxes or clear messages in each individual mail box—Drafts, Inbox, Outbox and Sent.
	Inc GPS – Choose whether to include GPS in Cancel 911, Check-In, canned or text messages.
	Mbox Rate – Mailbox Check allows you to select the rate at which the SARLink looks for incoming mail. You can also use this feature to turn On/Off the mailbox rate to save battery power.

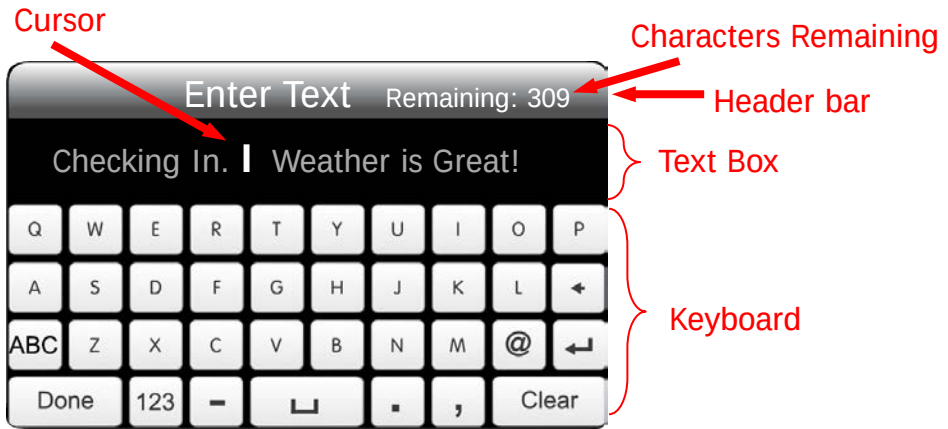
Texting – Compose a message

When Compose is selected, a screen will appear with two distinct regions—"To: Server" and "Canned Message:". User can hold a finger down with moderate pressure and slide between "To: Server" and "Canned Message:" regions.



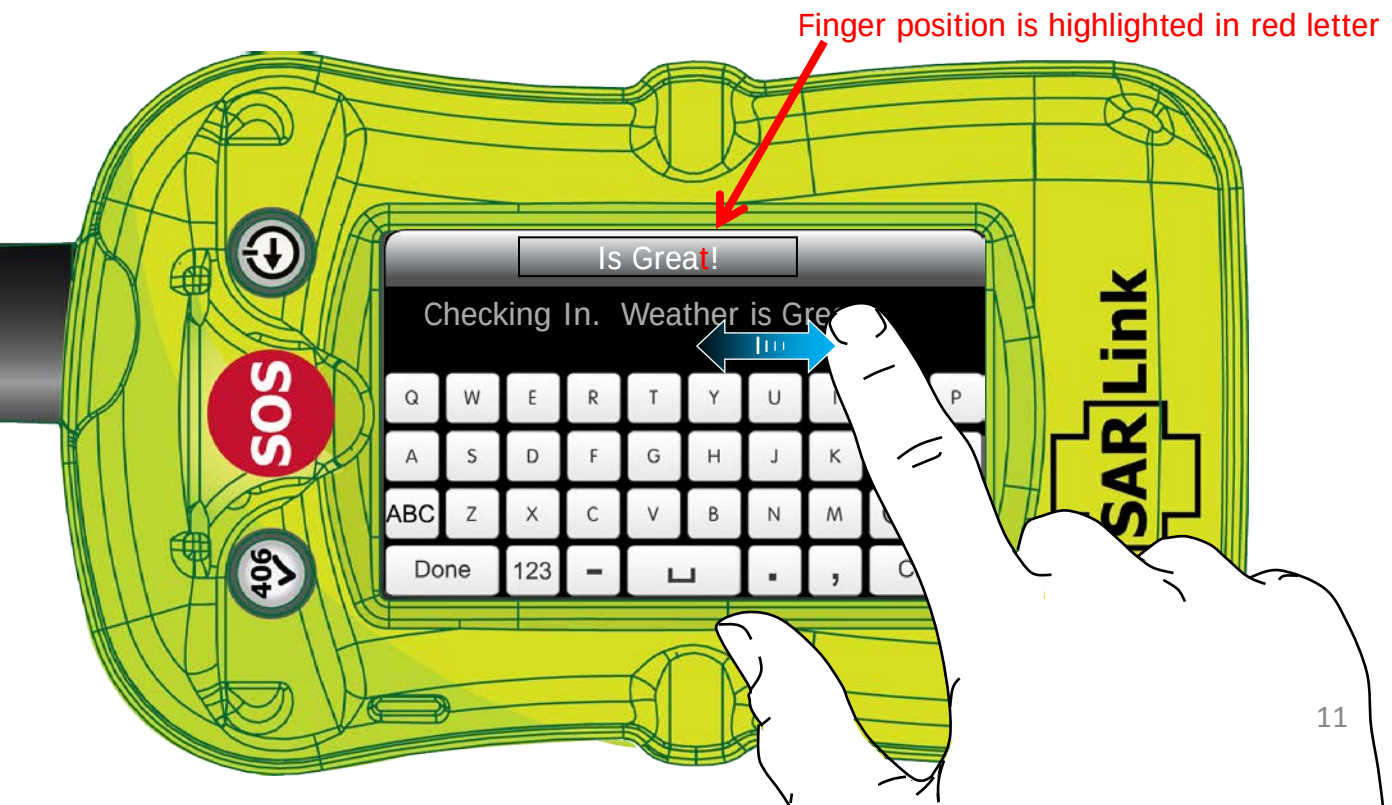
Texting – Compose a message

The keyboards are used to enter text inside the text box. The location of the cursor in the text box is displayed as a flashing block.



The block turns red when the maximum limit is reached (Remaining: 0). The entire text box can be erased with the Clear button. Unclear reverses the process. Tap the Done button to accept entered text and return to the previous screen. Pressing the back key to return to the previous screen without all the changes—all the changes will be lost.

Entered text can be edited by tapping anywhere inside the text box. It is much easier to use a fingernail or a stylus to accurately position the cursor over the letter to be edited. Holding and sliding a finger inside the text box will prompt the device to display a segment of the text in the header bar as shown in the figure below. The position of the cursor is displayed in red letter.

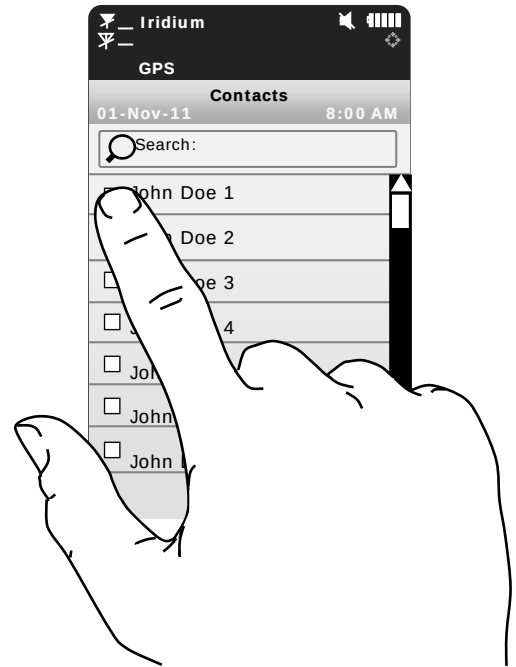


Texting – Compose a message

Selecting Contacts

After Choose Contact is selected and if email addresses were entered online, a list of contacts will appear in alphabetical order. Select a single contact or multiple contacts on the list and tap “Add” to accept. A contact(s) can be removed by going back to Choose Contact, unselect a contact(s) and tap “Add” to remove. Hitting the back key instead of Add after select or unselect a contact will cancel the choice(s).

After Enter Emails is selected a keyboard will appear. Multiple email addresses of up to 255 characters can be entered separated by a coma. The SARLink keeps track of the limit and will prevent user from entering email addresses longer than allowed. Email addresses and free-text message share the same memory space with a maximum allowable length of 309 characters. Long e-mail addresses or multiple e-mail addresses will reduce the number of characters available for free-text message. User is reminded that the SARLink sends a short code representing the email address listed under To; however, the SARLink sends the actual email addresses listed under Emails. Any email addresses selected under Choose Contact can be removed by going back to Choose Contact option or by using the keyboard under the Enter Emails popup menu.



Texting – Compose a message

Sending Message

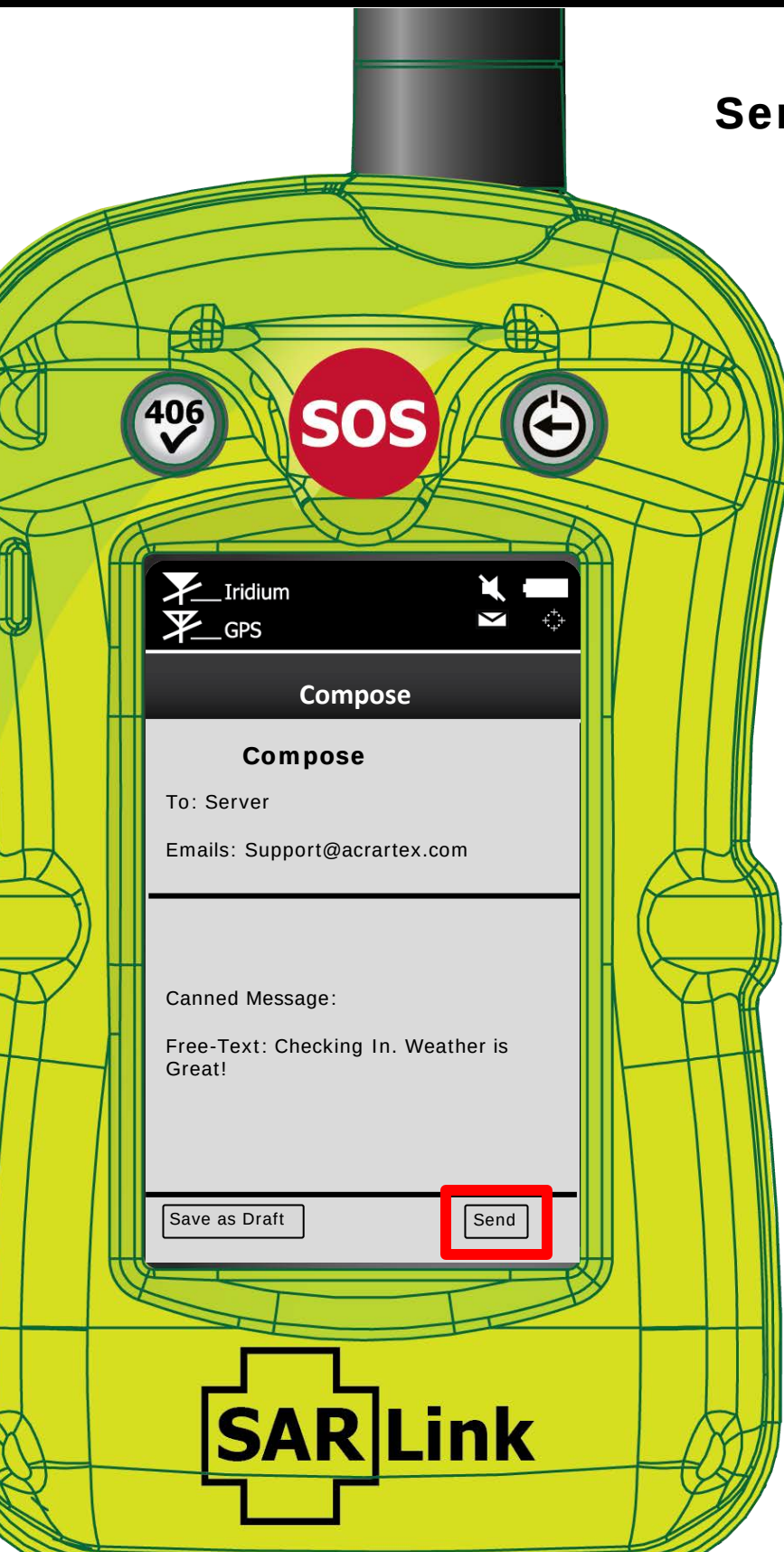
After finish selecting a canned message and/or composing a free-text message, user can either Send the message or Save as Draft.

If Send is selected, a Success screen will appear to indicate that the message has been added to the Outbox. The SARLink must then be held with the antennas having full view of the sky. If the Settings/Include GPS option is turned on then GPS location will be added to the message. Messages with GPS location takes longer to complete since the SARLink has to acquire a GPS fix.

Give Clear View To Sky



If you would like to save the message so that you can send it at a later time, simply select “Save As Draft.” To retrieve the message later, select the Texting Icon and select “Drafts”



Tracking



The tracking menu allows user to:

- enable the SARLink tracking
- disable tracking
- set the reporting rate
- set the position report format
- view the unit reporting data.



Tracking



Icons	Texting menu allows user to compose, save, view, and send canned or free-text messages.
	On/Off is used to set the SARLink tracking mode. The SARLink immediately turns the GPS receiver on to acquire a GPS fix and then attempts to transmit a position report. The next position report is sent automatically based on the reporting rate set using Tracking/Rpt Rate. Reporting Rate - Used to set the report frequency (time between reports) when tracking is enabled. Once a reporting rate is selected either by a predefined rate or by a user-entered rate, a new menu will appear requesting for the mailbox check rate
	Format - The SARLink can transmit position reports in either 30-byte format or 10-byte format. Both of these formats are backward compatible. The 30-byte format includes UTC date, UTC time, latitude, longitude, altitude, speed, course, vertical velocity, number of satellites used to obtain 3-D fix, HDOP and VDOP. The latitude and longitude are recorded with ~0.18 meters resolution. The 10-byte format includes UTC time, latitude, longitude and PDOP. With UTC date omitted, the SARLink relies on the NOC server to record the date. Encryption cannot be used with the 10-byte format. Latitude and longitude are recorded with ~1.1 meters resolution. The 10-byte format is selected for the purpose of airtime cost-saving.
	Block Reporting is used to control the sending of tracking messages that contain an invalid GPS position; choosing "Do Not Block Any Reports" will allow all tracking messages to be sent even if the GPS position is invalid; choosing "Block Invalid GPS Reports" means that a tracking message with an invalid GPS position will not be sent.
	Data Log is used to enable and disable the logging of tracking reports; choosing "Enable Data Logging" means that all tracking reports will be logged regardless of whether the tracking report was successfully sent or not; choosing "Disable Data Logging" means that tracking reports are no longer logged.
	Statistics – Records and keeps track of date/time, your GPS position, altitude, speed, course, vertical velocity and the number of satellites. Displayed data can be manually reset at any time using the Clear Stats. A countdown timer to the next report is shown beside Time to Next and is replaced with Off when Track On/Off is disabled. The number of Successes represents the total number of position reports successfully transmitted to the Iridium network both with valid and invalid position fix. The number inside the parentheses next to Successes represents the number of position reports successfully transmitted but with invalid GPS fix. The number of Failures represents the total number of valid position reports failed to send to the Iridium network.

Battery Charging

- Connect the supplied USB cable to your PC.
- Attach the custom cable end to the SARLink from the back case to the front in the location indicated by the USB Symbol.

