



SENDS

SAR Controllers Training 2012
15 February 2012

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Coast Guard Liaison to SARSAT





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- Radio Technical Commission for Maritime Services (RTCM)
 - At the request of the U.S. Coast Guard, RTCM formed Special Committee 128 to create a technical standard for devices that incorporate emergency notification functions utilizing commercial satellite systems.
 - First SC-128 meeting was held on 24 Feb 2009.
 - Name for devices:
 - SEND (Satellite Emergency Notification Device)
 - National Search and Rescue Committee (NSARC)
 - Established a work group to discuss incorporating SEND alerts into SAR System.
 - First meeting Dec 2009.



Its Now 2012... why so long?

- Privacy
- International Borders
- Many Companies, Many Government agencies, Many Consumer Advocacy Groups, Many Individual Users.



-
- Examples of Devices that are Classified as a SEND's Devices



Solara Field Tracker

Operating Conditions

- Iridium satellites (Field Tracker 2100 & 2000)
- Tracking
- Two-way text messaging (on-screen interactive and pre-defined messages)
- Emergency Alert Switch (2000) or activation tab (2100) for SOS/distress signaling to a region-specific agency or organization of choice
- Waterproof to a depth of 1 meter for up to one hour
- Operating Temperatures: -20C (-4F) to 60c (140F)
- Optional 24/7 Alert notification monitoring (July 2009)

Cost

- FT 2000: \$1425 + accessories (Suggested Retail)
- FT 2100: \$1500 + accessories
- Subscription \$30+/month for 1200 transmissions

Battery Life & Use

- Internal rechargeable nickel metal hydride batteries w/ integrated battery charger



Field Tracker 2000



Field Tracker 2100-July 2009

Solara Client User Web Page



Solara RDDI Tracker Positions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Real.com

Address <http://www.solaradata.com/cgi-bin/mainProgram.cgi> Go

Logout

Map Text Message History Alter Unit's Transmit Interval ALERTS Set Up Alert Contact Info Solara

Map Trail of ST2 from date 6/19/2008 00:00:00 to 6/26/2008 24:00:00 (GMT) with latest position at 2008-6-26 17:54:6 local time.

Map Satellite Hybrid Terrain

Canada

Manitoba

Saskatchewan

Ontario

Hudson Bay

North Battleford Prince Albert Saskatoon Yorkton Regina Winnipeg Brandon

200mi 200 km

Map data ©2008 Tele Atlas - Terms of Use

Alter Display Interval
List Table Positions
Subscription Status

Choose Unit(s):
ST2
Start Date 6/20/2008
End Date 6/25/2008
CLICK TO SET FOCUS ON A UNIT

Current Incoming / Outgoing Messages

Send a Message to a Unit:
Unit: ST2
Msg:
Submit

Data Retrieved From 'List Table Positions' link or 'Subscription Status' will be displayed here

Done Internet



PIEPS Global Finder

Operating Conditions

- Navigation, message handling and companion rescue
- 800 MHz-ISM radio band
- Integrated satellite modem
- Secured two-way communication of emergency calls via the PIEPS/OrbComm low orbit satellite network





Spidertracks

Operating Conditions

- Global Asset Tracking Solution using GPS and Iridium Satellite Networks
- Portable: no external antenna or installation certification required
- Keypad allows two-way communication
- Operating Temperature: -25°C to +70°C
- Activating the Alert will send a message to the server to increase the number of transmissions and trigger the system to send TXT and email messages to selected personal or organizational contacts

Power Supply

- 10-32V DC power supply to operate. Supplied with a cigarette/accessory plug or it can be hard wired into a vehicle.





SPOT Personal Tracker

Operating Conditions

- Globalstar satellites
- Floats, but transmitter needs to be facing the sky for the unit to work
- Waterproof to a depth of 1 meter for up to 30 minutes
- Operating Temperatures: -45C to 85C (-40F to 185F)
- Service Provider: GEOS International Emergency Rescue Coordination Center

Cost

- \$169.99 Suggested Retail Price
- \$99.99/yr Basic Service Plan (911, HELP, CHECK-IN)
- Extras: Unlimited Tracking, SPOT Assist Roadside Assistance, Emergency Evacuation/Private SAR Insurance (provides up to \$100K)

Battery Life & Use

- 2 AA Lithium batteries
- Under normal usage a full battery charge should meet the following:
 - Power ON, unused: Approx. 1 year
 - Tracking mode: Approx. 14 days
 - SOS/9-1-1 mode: Up to 7 consecutive days
 - SPOTcheck OK: 1900 messages



SPOT Satellite GPS Messenger



Operating Conditions

- Globalstar satellites
- Floats, but transmitter needs to be facing the sky for the unit to work
- Waterproof to a depth of 1 meter for up to 30 minutes
- Operating Temperatures: -22°F to +140°F (-30°C to +60°C)
- Service Provider: GEOS International Emergency Rescue Coordination Center

Cost

- \$169.95 Suggested Retail Price
- \$99.99/yr Basic Service Plan (SOS, Help, Check-in, Custom Message)
- Extras: Unlimited Tracking, SPOT Assist Roadside Assistance, Emergency Evacuation/Private SAR Insurance (provides up to \$100K)

Battery Life & Use

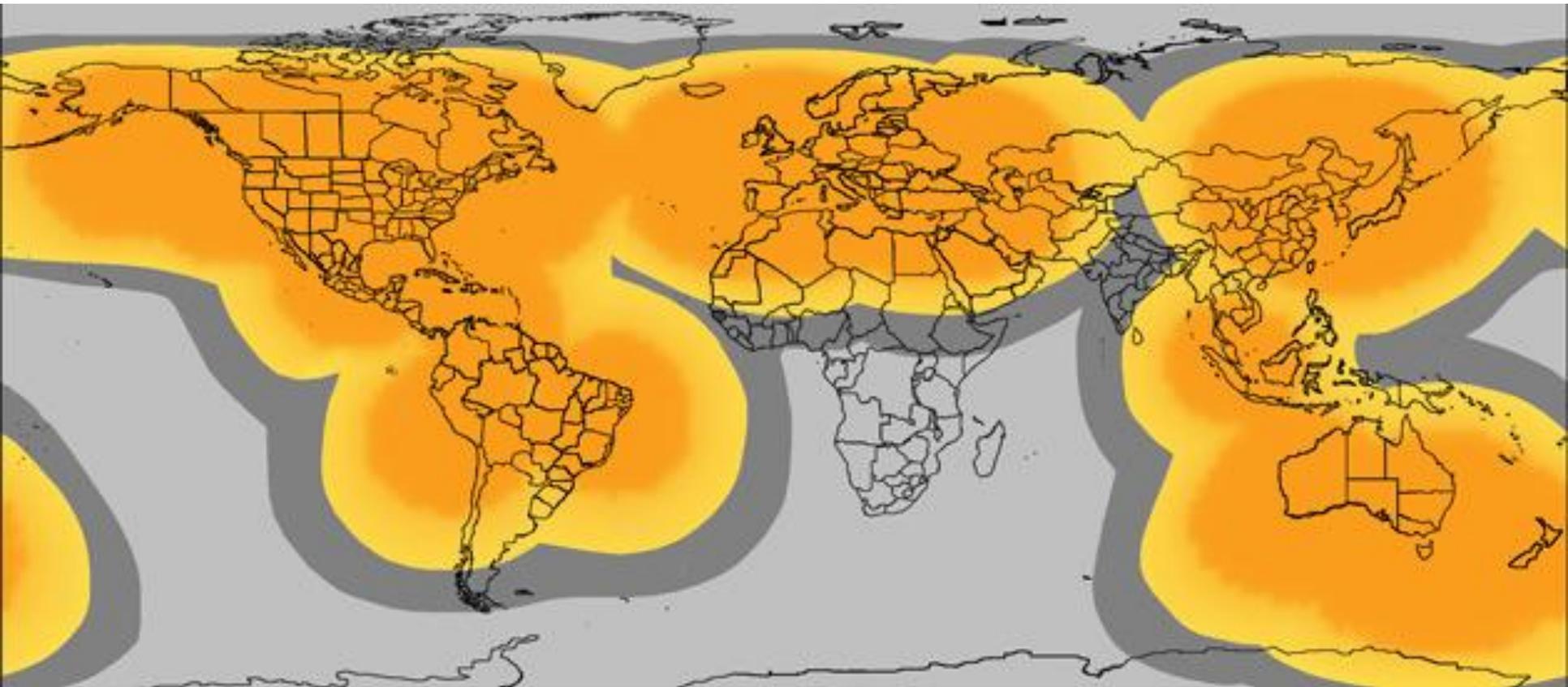
- 3 AAA Lithium batteries
- Under normal usage a full battery charge should meet the following:
 - Standby mode: 110 days



SPOT Coverage



SPOT works around the world, including virtually all of the continental United States, Canada, Mexico, Europe and Australia, portions of South America, Northern Africa, and North-Eastern Asia and hundreds or thousands of miles offshore of these areas.



- 99% or better probability of successfully sending a single message within 20 minutes.
- 96% to 99% probability of successfully sending a single message within 20 minutes.
- Reduced or no coverage available within a 20 minute period.

Last Updated 10/08/2008. **Estimated coverage area. Actual coverage may vary.** Success rates are forecasts for a SPOT messenger to successfully deliver a single message during a 20-minute period, based on network availability.



Map Display of Coordinates

2.1775, -79.8295 - Google Maps - Windows Internet Explorer

http://maps.google.com/maps?q=-2.1775,-79.8295&um=1&hl=en

File Edit View Favorites Tools Help

Search Web MyStuff Zoom News shopping

Google -2.1775,-79.8295 Go

2.1775,-79.8295 - Google Maps

Web Images Maps News Shopping Gmail more

Sign in | Help

Google Maps e.g. "10 market st, san francisco" or "hotels near me"

-2.1775,-79.8295 Search Maps Show search options

Search the map Find businesses Get directions

Search Results My Maps

Print Send Link to this page

-2° 10' 39.00", -79° 49' 46.20"
Make this my default location

-2.177500, -79.829500
2° 10' 39.00", -79° 49' 46.20"
Get directions: [To here](#) - [From here](#)
[Save to My Maps](#)

More... Map Satellite Terrain Show labels

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Done

start Internet 100% 8:52 AM

SPOT User's Shared Page



SPOT Shared Page

http://share.findmespot.com/viewguestlink/faces/viewguestlink.jsp?&gclid=0n9Ms8hx0LEkuSQfN0FYIUvUj

CALL + 1 866 651 7768 BUY NOW

SPOT
LIVE TO TELL ABOUT IT™

Messages

Map Legend

Type	Time	Messenger
Messenger: Jon's Spot (14 Messages)		
Track	7 Days ago (April 14)	Jon's Spot
Track	7 Days ago (April 14)	Jon's Spot
Track	7 Days ago (April 14)	Jon's Spot
Track	7 Days ago (April 14)	Jon's Spot
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Map

Map Satellite Hybrid Terrain

Info Help

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The New DeLorme inReach

Stay reliably connected wherever you go

Send, receive text messages from beyond cell phone range

Get message delivery confirmation

Enable remote tracking

Send 2-way interactive SOS

Pair with Android phone or Earthmate PN-60w

GPS, or use inReach by itself





GEOS Guidry Response Center



- ◆ **GEOS is the commercial service provider for SPOT and is called the International Emergency Rescue Coordination Center (I-ERCC).**
 - **Receives SPOT 911/SOS Emergency Notifications**
 - **Notifies SAR agency (International SAR Database, PSAP, CG, local SAR authorities, etc.)**
 - **Coordinates SAR response**
 - **Open Line with SAR Agency**
 - **Open Line with family**
 - **Located in Montgomery, TX**





NOT SENDs Devices

- On-Starr (or equivalent)
- Satellite Phones
- Cell Phones
- DSC radios
- GPS Units
- EPIRB's, PLB's or ELT's



How will the CG receive an Alert

- Depends on the device:
 - SEND's Company Call Center
 - Private Monitoring Company
 - Family or Friends
 - Other federal agencies the have three letters



What happens when you get a SEND's alert?

- ALCOAST 131216Z MAY 08
- These alerts must be carefully evaluated and responded to in accordance with normal SAR case evaluation procedures (Uncertainty, Alert, Distress)
- Will be updated in near future with SAR Addendum update



Some things to remember

- SEND's alert may have tracking
- SEND's company may have two way data communications
- SEND's company should have basic information
- SEND's information may be sent to family/friends
- Always get a phone number and POC from the SEND's company



406 VS SEND's

406 Beacons

- Receives full attention of the Federal SAR system
- Cost
- Global system
- Specs defined internationally
- Limited features
- Only One Way Comms

SEND's Device

- Receives full attention of that SEND's device for SAR
- Cost
- May not be Global
- Specs determined by Manufacture
- Additional features
- One or Two way Comms/data



Future

- Combined SEND's Devices and 406 Emergency Distress Beacons
- Smaller devices
- IRIDIUM new chip set
- SEND's Devices routed through the USMCC



Questions/Discussion?