

2019_April_Newsletter

Off-Road Safety Academy

Wed 6/5/2019 3:59 PM

Inbox

To:bob.wohlers discoveroffroading.com <bob.wohlers@discoveroffroading.com>;



Hello Newsletter Subscribers,

Thank you for signing up to receive my training-centric newsletters. I hope you've found the previous editions informative and helpful for your vehicle-supported adventures. I trust you will enjoy this month's newsletter. If you have comments, please email me:
Bob.Wohlers@discoveroffroading.com.



Upcoming Four Wheel Camper Death Valley Tour - October 31- November 3



There's still time to sign up. A few spots are available! This is a _not to be missed overlanding-style tour. We will visit and camp at some of Death Valley's iconic locations. This tour is ONLY for trucks with Four Wheel Campers on them, trucks with

4WD 4-Low gearing capability, moderate ground clearance, a full-size spare tire, and front and rear frame-mounted recovery points. For more information go DiscoverOffRoading.com. **NOTE:** Prior to paying for this trip online, please call Bob to make sure there are still spots available. Call: 909.844.2583.

Bob is a fully Permitted National Park Service and BLM Outfitter and Tour Guide. You can trust Bob to lead you safely through Death Valley!

Bob Is Training at NW, BC, and Rocky Mountain Overland Rallies



I'm going to set a summer priority for you... ATTEND ONE OF THESE THREE OVERLAND RALLIES! For fun, friends, and



learning stuff.

Join Bob at the NW Overland Rally (June 20-22), BC Overland Rally (June 27-29), and the NEW Rocky Mountain Overland Rally (Aug 1-3) in Colorado as he conducts FOUR training clinics: 1) Basic Winching, 2)

Traction-Aided Recovery, 3) In-Field Tire Repair, and new this year 4) In-Field Welding. All clinics are HANDS-ON - you can actively participate. These clinics are NOT lectures. You get to perform skills if you wish; or you can simply watch.

Go to the Rally's respective websites to sign up.

You have a Satellite Emergency Notification Device (SEND). So, Why Do You ALSO Need a Personal Locator Beacon (PLB)?

The short answer is you don't. However, PLEASE read on...

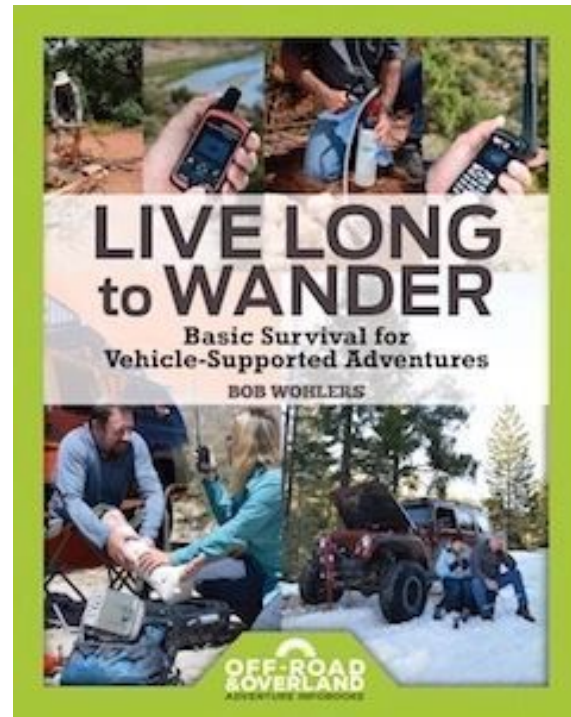
One of the presentations I



ARC ResQLink Personal Locator Beacon (PLB)

typically give each year at Overland Expo is an update on the newest satellite communicators on the market. During this presentation, I try to provide attendees with an unbiased overview of these devices, so they can match their needs with the right device just for them. I also have a secondary objective. I encourage attendees to purchase a PLB regardless of whether they purchase or have a SEND (think: Garmin inReach models, SPOT models, Bivy Stick, etc.). So, if you already have one of these SEND devices, why also purchase a PLB?

For the total “poop” on these satellite devices and MORE, get my book *Live Long to Wander – Basic Survival for Vehicle Supported Adventures* on Amazon. [Link here.](#)



Garmin inReach SEND Units

To make my point, you need to know the similarities and differences between a SEND and a PLB.

Here are the basic similarities between SENDs and PLBs. Both SENDs and PLBs:

1. Are fairly small handheld, battery-powered devices. NOTE: Some are smaller than others.
2. Can communicate with satellites.
3. Can call out to Search And Rescue (SAR) groups to come and get when life and death situations loom.
4. Are more or less (depending on model) waterproof and rugged.

Here are some important differences

between PLBs and SENDs. Some examples of PLB units are the ARC ResQLink+ and the Ocean Signal RescueME.

PLBs (also called “radio beacons”):

1. Use a Government-run, Worldwide Array of Satellites. These satellites are put up primarily by the USA and Russia, but are supported financially by about 36 nations. It’s the largest emergency satellite array around Earth and is used by pilots, mariners, and recreationalists. These satellites cover every corner of our planet.

2. Are Dual Frequency Transmitters. PLBs transmit digital distress signals to the satellites at 406 MHz, using a

power of 5 Watts (remember this power number), AND at a lower frequency of 121.5 MHz to SAR homing beacons. This means that SAR personnel can find you accurately by using the GPS location of the PLB once activated, and can “home” in on you with hand-held devices.

3. Government Monitoring and Response. The National Oceanographic and Atmospheric Administration (NOAA) and Air Force Rescue Coordination Center monitor the 405 MHz signal for all devices registered in the USA. That’s a pretty big team to have on your side in a life or death situation, regardless of where you are on Earth.

4. No Subscriptions. Do not require a monthly or annual “subscription” once the device is purchased.

5. Penetrating Signal Strength. Since PLBs transmit at a higher 5-Watts (compared to .4 Watts for SENDs), data suggests that these devices are better able to penetrate objects between the PLB and a satellite – like overhead tree branches, thick clouds, etc. NOTE: Neither a PLB or SEND will transmit to a satellite in a cave!



Ocean Signal RescueMe PLB



The above Illustration outlines the general flow of communications and response of a PLB. (STEP 1) The user activates the PLB. (STEP 2) Once activated, PLBs gather position information from GPS satellites. If GPS information cannot be obtained or transmitted, satellites establish the position using a Doppler Shift location method. (STEP 3) The PLB transmits a distress signal, the identifying 15-hex code, and position information on 406 MHz at five watts. This is the internationally recognized distress frequency that is sent to the COSPAS-SARSAT satellite system. (STEP 4) The signal is then relayed to a local user terminal (LUT); (STEP 5) The signal is then passed on to local Search and Rescue (SAR) groups (in the U.S. it's passed to the Air Force). (STEP 6) Most PLBs are capable of transmitting a second, lower-frequency signal at 121.5 MHz to act as a homing beacon once SAR rescuers get close to the unit.

SENDS:

1. Rely on Commercial Satellite Arrays. SENDs transmit outgoing signals to commercially operated satellite arrays, NOT government run satellite systems. At this time, there are two commercial satellite arrays –

Iridium and GlobalStar. Currently, Iridium is the most robust array at 141 satellites. GlobalStar has 24 satellites, with each company putting up more or replacing satellites from time to time.

2. Require Subscriptions. Iridium and GlobalStar have to pay the costs of launching and maintaining their satellites. Money is made through device activation and subscriptions. There are literally hundreds of plans for those SEND units sold to users. Some are annual plans, monthly, or pay as you go.

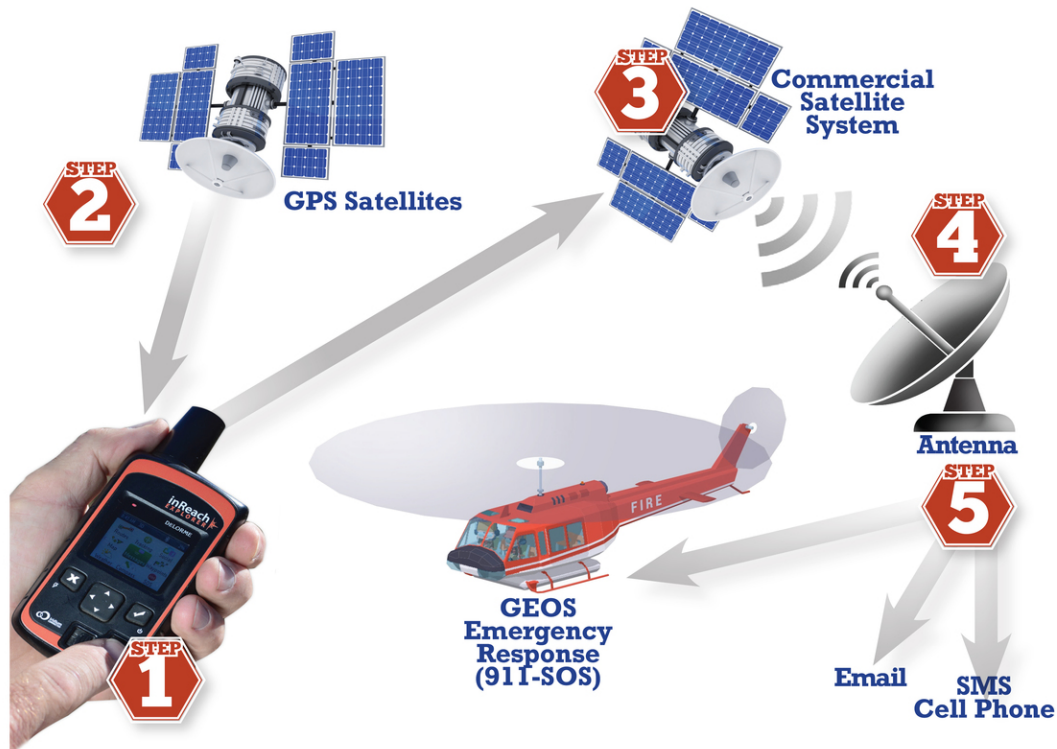
3. Have SOS Capability. Every SEND on the market has a way to send an emergency (think: life or death) SOS signal to a SAR response team. When you push the SOS (or 911) button, your location and emergency notification are sent to the GEOS International Emergency Response Coordination Center (IERCC) Rescue Coordination Center in Houston, Texas. In an actual emergency, GEOS will maintain communication with your family, first responders, SAR, and in some instances your local embassy.

4. Have Functions Beyond SOS Messaging. One of the best features of most SENDs is their capability of messaging (SMS and Email) to friends and family. Each SEND device accomplishes this messaging differently. The SPOT Gen 3 device only has OKAY and HELP Buttons (HELP being different than the SOS button). The Garmin inReach, SPOT-X , and Bivy Stick devices work much like your cell phone texting capability – allowing for true 2-way communication. Some SENDs also have weather, tracking, and GPS mapping features. These features are all important to most off-roaders and overlanders. I always have my SEND with me on overland adventures.

5. Lower Power Satellite Transmissions. SENDs transmit your GPS location and messages or instructions via email and text message at a power of approximately 0.4 watts. This lower power requires a very clear view of the sky – sans any overhead obstructions. Compare this to a PLB that transmits at 5 Watts of power.



SPOT-X SEND Unit



The above illustration outlines the general flow of communications and response of a Satellite Emergency Notification Device - SEND. (STEP 1) You push a button on the SEND or type a text. (STEP 2) The SEND obtains location information from government GPS satellites. (STEP 3) The SEND broadcasts your location and either pre-programmed messages or typed messages to the private, commercial satellite system (Globalstar or Iridium satellite arrays, depending on the manufacturer of the SEND). (STEP 4) The commercial satellites relay your message to specific ground satellite antennas around the world. (STEP 5) Satellite antennas and global networks route your location and messages. Your location and messages are delivered according to your instructions via Email, SMS text message, or emergency notification (SOS/911) to the GEOS International Emergency Response Coordination Center.

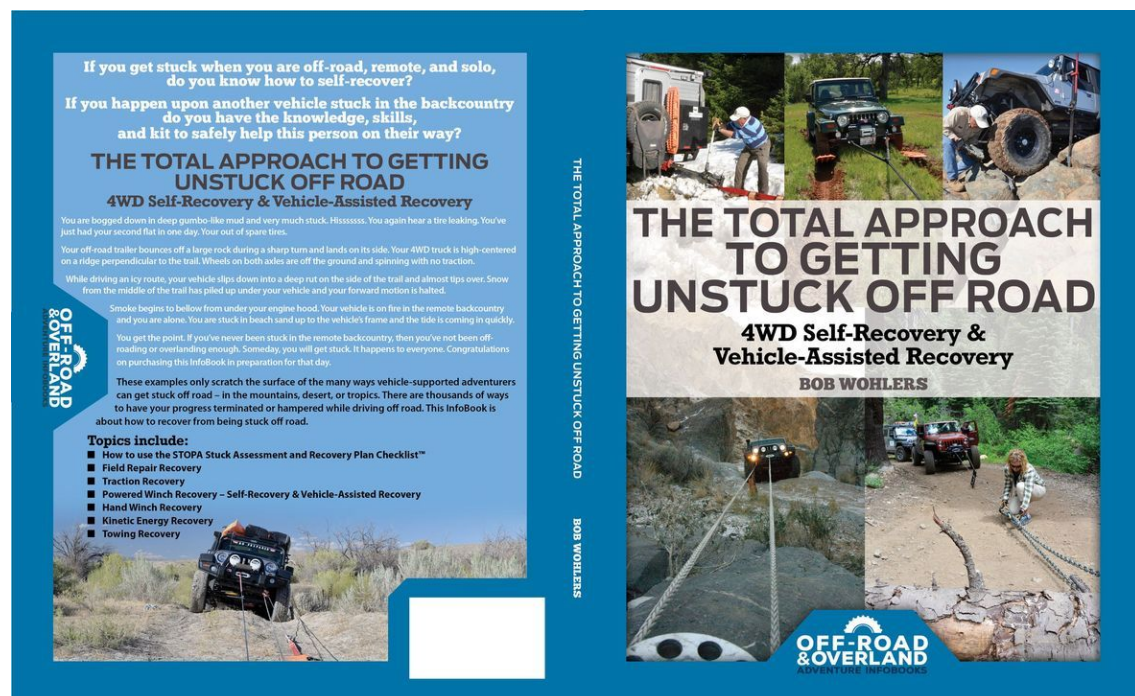
The Bottom Line

When I travel Remote, Solo (no other vehicles are with me), and especially International, I always take my PLB and my SEND unit of choice. When I overland totally alone – no other vehicles **or** passengers – I never get out of my vehicle without my PLB in my pants pocket. This is a promise I've made my wife

and our kids. When I fly on an airplane, I have my PLB in my carry on baggage. When I boat or kayak, I have my PLB with me.

Personally, if I had a life or death situation in the backcountry, I'd push the PLB SOS button before I'd push my SEND's SOS button. I want NOAA and the Air Force to be looking for me - nationally or internationally. Heck, I'd probably push the SOS button on both my PLB and SEND. If I'm really in a life or death situation, I want all the "calvary" I can muster to come over the hill to help me. Luckily, I've never been in that situation – yet.

My Third Book Is For Sale On AMAZON (And It's A Monster Book! 352 Pages!)



My third book in the series is here! There is NO other book like this on the market, anywhere on the planet. _The Total Approach to Getting Unstuck Off Road_ is the MOST complete treatise on the subject ever.

Topics will include:

- * How to use the STOPA Stuck Assessment and Recovery Plan Checklist
- * Field Repair Recovery
- * Traction Recovery
- * Powered Winch Recovery - Self-Recovery & Vehicle-Assisted Recovery
- * Hand Winch Recovery
- * Kinetic Energy Recovery
- * Towing Recovery

You NEED this book!



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