

Hello Newsletter Subscribers

Thank you for signing up to receive my 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. You can access, download, and read previous newsletters on my website here: NEWSLETTERS Look through the Newsletter Reference for a topic that may interest you, or download them all!





2020 Satellite Emergency Notification Device Update Bivystick, ™ SPOT X,® and Garmin inReach® Mini

My InfoBook *Live Long to Wander – Basic Survival for Vehicle-Supported*Adventures is only 2.5 years old, but hey... Tech changes fast in a free market. In Chapter Six, "Signaling for Help," I discuss how Satellite Emergency Notification Devices (SENDs) and Personal Locator Beacons (PLBs) operate and each device's pros and cons for vehicle-supported adventurers. If you don't understand the differences between SENDs and PLBs you should purchase the book so you can be an informed consumer. These devices have great utility as basic communication devices with friends and family and SOS notifiers. *Live Long to Wander* can easily be purchased on Amazon HERE. Also, my Newsletter #14 helps you understand why you should own a Personal Locator Beacon even if you have a Satellite Emergency Notification Device. You can download this newsletter for free HERE. Read Newsletter #14 carefully – I highly encourage you to

purchase a PLB regardless of whether you own a ham radio, SatPhone, or SEND.

My book, *Live Long to Wander* highlights the SENDs available at the time of the book's publishing: 1) Delorme inReach, 2) Garmin inReach, and 3) SPOT Gen 3. Since the book's publishing in 2017, three new SEND's are now available and could be considered as options for vehicle-supported adventurers: 1) Bivystick, 2) SPOT X, and 3) Garmin inReach Mini.

Preliminary Notes

The following are a few universal thoughts I have about emergency communication devices for vehicle-supported adventurers.

 I've been asked why I spend so much time talking to vehicle-supported enthusiasts about emergency communications. I answer this way...

Of all the survival and recovery equipment, vehicle spare parts, tools, and comfort items one can take on an overland or off-road adventure, it's emergency communication equipment that will provide you and your friends and family with real peace of mind when you are in the remote backcountry and especially international. If your vehicle breaks down, you get seriously stuck, or suffer an injury your emergency communication equipment is ultimately more valuable than a winch, wrench, or welder.

- Additionally, the use of any SEND or a PLB is not all about YOU. The back-and-forth messaging and locator-mapping capability of a SEND can put family members at ease when they know you are remote and possibly on your own. This is especially true when overlanding internationally. When I travel off-road by myself, it's a blessing to be able to communicate with my wife and family members from a remote location. I like hearing that they are okay, but they also like hearing that I'm okay. It's also nice that they can see on a map exactly where I am on the planet each time I text. Additionally, during a life and death situation the SOS and combined GPS transmission capability of these devices help rescuers find you in a timely manner without them risking life and limb during the search. Search and rescue personnel have died trying to find lost folks in the remote backcountry.
- I've been using the Bivystick, Garmin inReach Mini, and SPOT X for about seven months. I've been exploring their utility and uncovering (in my opinion) their pros and cons specifically for vehicle-supported adventurers. Unlike the Garmin inReach Explorer+ (my personal favorite for overlanding), the design of the three new SENDs overviewed in this newsletter are more for hikers than vehicle-supported adventurers. Of the three SENDs reviewed in this

newsletter, the Garmin inReach Mini is my favorite with the SPOT X a close second. That said, each one can still be used by an outdoor adventurer regardless of their mode of transport. Better to have any SEND and not need it, than to need one and not have it.

- I'm very partial to those SENDs that use the powerful Iridium satellite array to transmit text and data. Owned and managed by Iridium, this company's sophisticated global constellation of 66 cross-linked Low-Earth Orbit satellites provides high-quality voice and data connections over the planet's entire surface. I personally experienced the power of the Iridium satellite array when I drove to Prudhoe Bay in Alaska (the farthest north you can drive a vehicle in North America). All the devices took a bit longer to make satellite contact near Prudhoe Bay, but those using Iridium satellites seemed to connect faster above the Arctic Circle. Of the three new SENDs the Bivystick and Garmin inReach Mini both use the Iridium satellite array for global coverage. The SPOT X uses its parent company's Globalstar satellite array. The Globalstar satellites pick up signals from over 80 percent of the Earth's surface, using 48 Low-Earth Orbit satellites. At this date, Globalstar satellite coverage is not totally worldwide. Globalstar coverage for the SPOT X can be seen on their website Here. If you primarily overland in North and South America, Europe, Australia the SPOT X will perform well.
- Remember, all SENDs require monthly or annual subscriptions. These subscription plans (of which there are many) allow the device to connect to either of the two private, not government, satellite systems Iridium and Globalstar. Contrast SENDs with PLBs that need no subscriptions to work as they connect to taxpayer funded, government developed and launched satellite arrays. Again, read my Newsletter #14 to help you understand why you should own a Personal Locator Beacon even if you have a Satellite Emergency Notification Device. You can download this newsletter for free HERE.
- Before you purchase SEND hardware, focus carefully on the multiple plans offered by any one company. It's easy to concentrate on the "look and feel" of the hardware, but the subscription plans are just as important from a personal use perspective. Over time, you will eventually spend more money on a monthly or annual subscription than the initial hardware cost. Because of this, find a plan that works for your budget, method of SEND use, and desired SEND utility. Beyond the question of subscription cost, also investigate how easy it is to turn the subscription on and off for occasional use. It's impossible to review the hundreds of subscription plans these SEND hardware equipment companies offer. Choose wisely based on personal needs.



Bivystick®

• Retail Cost: \$349.00

• Pros: 100 Percent Global Coverage Using Iridium Network. Includes A 5200 mAh Backup Battery To Charge Your Smartphone Up To 2 Times. Unique Monthly Subscription Plans With No Commitment Or Contract. Rechargeable Battery Via USB.

• Cons: Device does NOT Have
A Dedicated SOS Button –
MUST Connect Via Bluetooth
To The Bivy App To Press A
Virtual SOS Button. Has No
Information Screen – Must Use
A Smartphone Or Tablet. Bivy
App Is NOT Formatted For
Increased Tablet Screen Size –
Looks Like A Phone App In The
Middle Of A Tablet Screen.
Tablet Screen Image Cannot



Bivystick Connected To A Smartphone Via The Bivy App

Dedicated Vehicle Cab Mount Available – Designed To Be Hung From A Backpack.

• Learn More: Click HERE

Rotate Horizontally. No

Basically, the Bivystick is a satellite communicator for your smartphone or tablet. Unlike all the other SENDs on the market, connection using Bluetooth to a smartphone or tablet is an absolute requirement for the unit to work. Shaped like a small block, the Bivystick has no screen, one button (on/off), a row of LED lights indicating battery strength, one standard USB output plug (to charge phones/tablets), and one mini USB input plug to charge the Bivystick. There is also a small LED light on the Bivystick indicating successful connection to the Iridium satellite array – red LED when trying to connect and green once connection is successful. Without a doubt, the Bivystick was designed and created mainly for hikers. The best feature of a Bivystick is the unit uses the Iridium satellite array.

Of the three new SENDs on the market, the Bivystick is my least favorite as a vehicle-supported adventurer. In my opinion, the largest problem of the Bivystick is its lack of an actual SOS button on the device itself. The Bivystick's life-or-death SOS button can ONLY be found on the Bivy App. This means the Bivystick MUST be connected via Bluetooth to the Bivy App on a device compatible smartphone or tablet to access an SOS button. If I were perhaps younger and felt more "bulletproof," I probably wouldn't care as much about the lack of a dedicated SOS button on the Bivystick. The older I get however, the more a dedicated SOS button on the device becomes important. Literally all the other SENDs on the market have dedicated SOS buttons on the unit – there is NO need to access the device's App. What if your phone's battery is dead? Or your phone is broken? There's no way to send an SOS with Bivystick without App connection. In my opinion this was a real design error on the part of the Bivystick developers.

Bivystick Side Note: Last year at Overland Expo I gave an update talk on SENDs and PLBs. I openly voiced the same concern about the Bivystick not having a dedicated SOS button on the unit. A Bivystick representative was at my talk (I try to invite factory reps to my talks), and he assured the audience and me that the company would release a redesigned unit that would have a dedicated SOS button. To date, nothing; no new updated unit. This does not mean they don't plan on releasing a re-designed unit. It simply means the market hasn't seen one as yet. Until they add an SOS button on the unit and offer a way to mount the unit in a vehicle while charging and connecting to a satellite through the windshield, the Bivystick isn't for me.

If the Bivystick sold for a lot less money than a Garmin inReach Mini or Explorer+ (say \$150), I'd consider it. But, at what I consider a really high price for the features on the existing device, the cons are a real deal breaker for me. This is true, even with the inexpensive and cleaver pay as you go subscription plan and the Bivystick's internal 5200 mAh battery used to recharge smartphones or tablets. You can purchase a wide variety of inexpensive small solar recharge options for smartphones or tablets.



Fairly Inexpensive Solar Batteries Used To Recharge Smartphones and Tablets



SPOT X®



SPOT X Next To The Gen 3 SPOT Device

- **Retail Cost:** \$249.99 (devices with Bluetooth) or \$199.99 (devices without Bluetooth)
- Pros: Lowest Initial Device Cost With Connectivity To Smartphones/Tablets. Longest Battery Life Of All SENDs In 10 Minute Tracking Mode (240 Hours - 10 Days). Has A Physical QWERTY Keyboard On Device. IP67 Rated Waterproof. Has FLEX Plans – Pay By Month For Occasional Use. Rechargeable Battery Via USB. All Plans Include Unlimited Check-In and Pre-Defined Message Sending.
- Cons: Global Connectivity Has Limits.

NO Confirmation On Sent Messages. SPOT App Is NOT Formatted For Increased Tablet Screen Size – Looks Like A Phone App In The Middle Of A Tablet Screen. Tablet Screen Image Cannot Rotate Horizontally. Mapping Capability With SPOT App Is An Afterthought; Not As Robust As With Other SENDs. Antenna MUST Be Pointed Straight Up – I Constantly Received Error Messages When Device Is In Vehicle Cab Behind Windshield, In RAM Mount. Connecting To Satellites Was Always The Longest Of All SEND Units I Use.

• Learn More: Click HERE

In the early 2000's, Globalstar basically invented the recreational SEND market with their SPOT Gen-1 unit. I bought one immediately and the device essentially changed the way I ventured into the remote backcountry. For the first time, not only did I have peace of mind when traveling off-road, but my family was at ease when they would hear each evening that I was okay and "see" exactly where I am on Google Maps. Brilliant.

The SPOT Gen-1 and Gen-3 devices have two huge downsides: 1) The devices can't receive text messages from friends and family, and 2) You can only send OKAY, HELP, and SOS messages; no custom messages. Between my wife and I, we agreed that the HELP button meant that I was medically okay, but my vehicle was disabled or stuck. In other words, send a tow truck to my location.

Once the first DeLorme inReach came to market (a device now owned by Garmin), allowing back-and-forth text messaging and mapping abilities, the initial SPOT devices became "old-school." Globalstar badly needed a SEND that could both transmit AND receive custom text messages to compete in the marketplace. Enter Globalstar's SPOT X.

The SPOT X is a robust device that actually has a great feel and utility. If I only had \$200 to spend on a SEND, stayed mostly in North America, and only wanted a two-way emergency communicator beyond cell phone coverage, I'd probably get a SPOT X without Bluetooth connectivity.

After device activation, one of the nice features of the SPOT X subscription plans is the fact that you can set up "no-charge" Predefined Messages on your online account. You can craft short Predefined Messages such as "I arrived okay," "We are still driving," or "I love you." These Predefined Messages and Check In messages can be sent an unlimited number of times at no extra charge to your plan. Based on the plan you select you are limited to a certain number of Custom Messages you can type on the SPOT X keyboard while in the field. After you exceed the included number of free Custom Messages included in your plan, you'll have to pay extra – \$.25 per message. The SPOT X subscriptions can be Annual or Flex Plans. With Flex Plans you can pay by the month making it easy to start and stop your subscriptions.



Garmin inReach Mini®

• **Retail Cost:** \$349.99

• Pros: 100 Percent
Global Coverage
Using Iridium
Network. Lightest
Weight/Smallest Of All
SENDs. Connects Via
Bluetooth To
Smartphones/Tablets.
Has Dedicated SOS
Button On Actual
Device. Provides GPS
Information To
Earthmate Mapping
App. Send/Receive

Text Messages Through Garmin Compatible Devices (Smartphones, Tablets, Other Garmin



Garmin inReach Mini Next To inReach Explorer+

Smartphones And

Handhelds). Best App (Earthmate) Of All

Wearable And

SENDs For

Tablets. Rechargeable Battery Via USB.

 Cons: Few Vehicle Cab Mount Options – Designed Largely For Hikers. Must Connect to Earthmate App For Mapping And Messaging – Small Device Screen And No Keyboard Option On Device.

• Learn More: Click HERE

If I was primarily a long-distance hiker, adventure motorcyclist, or bicycle rider this would be the SEND I would buy. Currently, the Mini is the smallest and lightest of all SENDs on the market. Out of the box, the Mini is easily attached to the shoulder pad of a backpack for constant tracking purposes. Regardless of size, I don't think any of my street legal 4WD vehicles will care whether I mount a

standard-size Garmin inReach (7.5 ounces/213 grams) or a Garmin inReach Mini (3.5 ounces/100 grams). Unlike heavy recovery gear for example, any size or weight SEND unit is not going to tax my vehicle.

For \$100 more you can purchase the larger inReach Explorer+. The larger Explorer + has a larger screen, includes North America preloaded maps (US, Canada, and Mexico), allows for uploading additional maps, includes a virtual keyboard, plus its battery will last 10 more hours than the inReach Mini (Explorer+ Battery Life = 100 hours at 10 minute tracking mode; Mini Battery Life = 90 hours at 10 minute tracking mode). The Explorer+ is covered in my book Live Long to Wander.

Because the Mini is designed to be hung from a backpack, the device has few vehicle mounting options. If you purchase the inReach Mini Marine Bundle you can get a screw down mount for your dashboard. I looked at the RAM Mount website and could not find an inReach Mini-specific option. Not to fear, I took a standard RAM ball mount and screwed it to the back of the Mini, replacing the Mini's out-of-the-box lanyard (see photos below). I used the Mini's lanyard screw to simply attach the RAM ball mount. Once the ball mount was firmly on the back of the Mini, I attached it to one of my vehicle-specific RAM suction mounts. Front windshield vehicle mounts allow the Mini to intercept satellite signals in most of North America. I did find that the further north I traveled into Canada's Yukon and Alaska, all of my windshield mounted satellite devices (and my Sirius Satellite Radio) had connection problems when the vehicle drove and faced north. Signals were better as the vehicle drove and faced south. This is probably due to the fact that the satellites were behind me while I drove north.







Final Thoughts

As technology advances, SENDs and PLBs will get better and better. I believe the next step will be for a company to produce a combo GPS and SEND capability unit. This single device would be one that not only has excellent pre-loaded global maps (periodically updated), great screen (high resolution and large for visibility), a keyboard like the SPOT X, and all the SEND capabilities of the Garmin inReach Explorer+.

In other words, if I were to take a Garmin Overlander™ GPS unit (learn more about the Overlander HERE), the SPOT X, and the Garmin inReach throw them in a bag, shake it up and out pops the single unit I would love to have in my vehicle. Would this unit be perfect for hiking, adventure motorcycle riders, or bicyclers? NO − it would be too heavy. Perfect for my vehicle? YES. By the way, I love Garmin's new Overlander GPS unit. In my opinion, it's just too much money for a solo GPS unit. Why would I buy the Overlander GPS when I already have my inReach Explorer+ connected to my iPad in my vehicle? Garmin's Earthmate App (and my subscribed Gaia account) is fine for mapping, tracking, and waypoint. I can also use my iPad for writing, work, listening to music, connecting to the internet for email, etc. But, the Garmin Overlander GPS would just about be perfect if it included the features of the inReach at the same price point. I think this type of device will be the next step − I'd bet on it.

If you have questions on this newsletter's content, email me: bob.wohlers@DiscoverOffRoading.com. Safe travels to all my newsletter subscribers.

2020 4WD Training Classes Now Scheduled

I've just posted several 4WD training courses on my website calendar. CLICK HERE for more information.

I plan on scheduling

and posting more courses in the coming months.

Each course is \$450 per driver (no unpaid passengers allowed). Two different two-day courses are offered at this time – Intro to 4WD Discovery

Course and my very

popular Recovery Course.



The **Intro to 4WD Discovery Course** begins to prepare you to venture off-road in comfort – helping you protect people, your vehicle, and the environment. Upon completion of this course you begin to understand the limitations of your vehicle and your driving skills. Learning this will allow you to intelligently choose excursions and trails that match your capabilities and your vehicle's. Off-Road Safety Academy™ will safely teach you in one weekend what it takes most people years to learn on their own.

Prerequisite: None (Except a desire to learn and have FUN!). Length of Course: Two days. Vehicle Requirements: Any reliable 4-Wheel Drive SUV, SUT or truck with: 1) 2-speed 4WD transfer case (must be able to shift into a 4-Low gearing), 2) Street legal, 3) Full-size spare tire, 4) Full tank of gas, 5) Seat belts for all passengers, 6) Vehicle in excellent working condition, no fluid leaks, etc.

The **Recovery Course** covers skills from Bob's popular book – *The Total Approach to Getting Unstuck Off Road – 4WD Self-Recovery & Vehicle-Assisted Recovery.*Learn important recovery skills directly from "The Man Who Wrote the Book."

Day One is totally dedicated to winching and Bob's Stuck Assessment & Recovery Plan Checklist.TM

Day Two is dedicated to all other non-winching forms of recovery – Traction Recovery, Hand Winching, Kinetic Energy Recovery, and Disabled Vehicle Towing Recovery. Day Two also includes a two-hour infield tire repair clinic. Nowhere on the planet will you get a more thorough overview of all the necessary skills needed to get unstuck off-road in two days. Guaranteed or your

money back.

Prerequisite: None, but consider completing the Intro to 4WD Discovery Course first. Length of Course: Two days. Vehicle Requirements: Any reliable 4-Wheel Drive SUV, SUT or truck with: 1) 2-speed 4WD transfer case (must be able to shift into a 4-Low gearing), 2) Street legal, 3) Full-size spare tire, 4) Full tank of gas, 5) Seat belts for all passengers, 6) Vehicle in excellent working condition, no fluid leaks, etc. 7) Consider owning a winch for this course (but not required).



Click Here To Go To Course Schedule

Four Wheel Camper Owner? Sign Up for 2020 Tours NOW!

Four Wheel Campers and Off-Road Safety Academy have again partnered in 2020 to offer owners of their campers several

overland adventure tours. If you are a Four Wheel Camper Owner and have a 4WD truck, you can still sign up for Tours.

I will be re-scheduling Death Valley and Mojave Road Tours for April, 2020.



2019 Mojave Road Tour

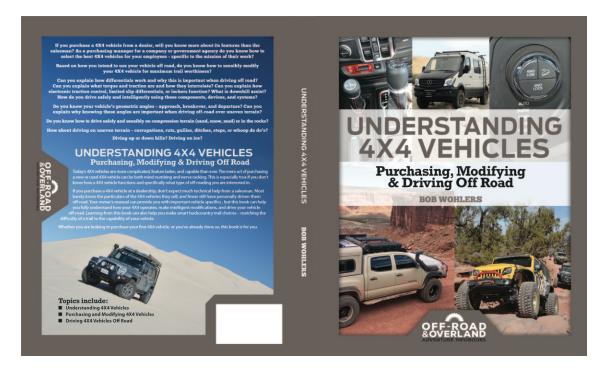
The Parashant National Monument and Baja Tours are SOLD OUT. Waiting Lists are now forming. call or email Bob to be put on the list. Bob.wohlers@discoveroffroading.com; Phone: 909.844.2583.

As a permitted National Park and BLM Guide, I can only take 12 total vehicles on any one tour. Once you've paid for a tour, you are officially enrolled.

Don't wait to sign up. Tour spots go fast.

Click Here For More Tour Information

My Fourth Book is Coming in 2020



This fourth book will tie my entire Off-Road & Overland Adventure Infobook series together. While my previous three books were for both beginners and advanced drivers, this is THE book for all beginning off-roaders and overlanders.

Understanding 4X4 Vehicles – Purchasing, Modifying & Driving Off Road has key content for anyone interested in understanding the different types of 4X4 vehicles and how different 4X4 drivelines function. Today's 4X4 vehicles are more complicated, feature laden, and capable than ever. The mere act of purchasing a new or used 4X4 vehicle can be both mind numbing and nerve racking. This is especially true if you don't know how a 4X4 vehicle functions and specifically what type of off-roading you are interested in.

If you purchase a 4X4 vehicle at a dealership, don't expect much technical help from a salesman. Most barely know the particulars of the 4X4 vehicles they sell, and fewer still have personally driven them off road. Your owner's manual can provide you with important vehicle specifics, but this book can help you fully understand how your 4X4 operates.

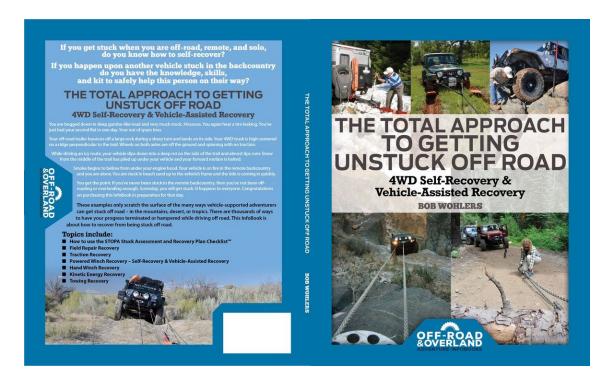
Once a vehicle is purchased, many modify their 4WD for increased trail worthiness. But what intelligent modifications should you make based on how you intend to primarily use your vehicle off-road? This book helps you make priority modifications to match the types of terrain you will drive most often.

Understanding 4X4 Vehicles – Purchasing, Modifying & Driving Off Road also

helps you drive different off-road terrain. This section of the book includes:

- Map and GPS Use Basics
- Memorizing Your Vehicle's Interior Buttons and Levers
- Two Foot Driving Off-Road with an Automatic Transmission
- Properly Driving Off-Road with a Manual Transmission
- Hill Climbs
- Hill Descents
- Driving Over Compression Terrain Sand, Snow, and Mud
- Driving Over Ice
- Rock Crawling
- Driving Over Uneven Terrain
- Driving Side Slopes
- Water Crossings
- Trailer Supported Adventures Driving with Off-Road Trailers

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



My third book in the series is here! There is NO other step-by-step 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 include:

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

You NEED this book!

Purchase the Book Here



2020 Teaching at NorthWest, BC, and Rocky Mountain Overland Rallies

I am again honored to be teaching at these 2020 Overland Rallies. If you have never attended one of these fabulous family and pet friendly overland gatherings, YOU NEED

TO! Have Fun, Learn Stuff, and Meet New Friends.

Rally organizers have just opened registration for 2020. EARLY BIRD TICKETS are now available.

This year, organizers will be allowing pre-registered guests onto the field at 1pm Thursday but folks who buy tickets at the gate can only enter after 3pm.

Organizers have a fixed number of spaces available so book yours today.

Click Here For NorthWest Overland Rally Tickets

June 25-28, 2020

Registration will open soon. Check back HERE.





July 30-August 2, 2020

Click Here for Rocky Mountain Overland Rally Tickets



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