

SPOT Beacon Vs InReach SE _ Use in Private Aviation Our Experiences * **UPDATED August 2021**

As a matter of safety some type of emergency beacon is a good idea for pilots. Especially here in the remote North where there is no Cell Phone coverage and very few other people. There are some expensive aviation dedicated options, but for private aviators there are some reasonable cost options. Here is my summary of my experience with two;

I used a SPOT beacon for 4 or 5 years. It was not without a few glitches but I never had a real emergency test of it. The original SPOT beacon never let me down, it worked when I wanted it to, and was economical. The batteries were AA and lasted for ever. The only down-side was that trying to write a message was cumbersome. Then I found a good deal on an InReach.

I acquired an **InReach SE** which I decided to use about 5 years.

The InReach was a bit of a disappointment. It failed to track when I thought it was. It is also not intuitive and so my contacts sometimes got confused in the normal operation. That makes the attraction of a 'dialogue' with my contacts irrelevant. It became very expensive and now that Garmin owns it I know it won't get cheaper or more user friendly. InReach, which has become "RoadPost" which is in fact Garmin.

My InReach SE EXPERIENCE:

The InReach was at least double the cost of the SPOT transmitter and the annual subscription increased every year. When the cheapest subscription became \$41.95 a month I started looking at options. You can deactivate for about \$10 if you are not going to use it for a long time. But then they billed my credit card without my authorization and that was the final straw!

As is standard with Garmin customer service you cannot get anyone to help or explain, the system is automated.

In use it worked OK for messages and tracking, but was a little confusing to others getting the messages. My InReach device was 'PAINFUL' to type on. Linking it to a cell phone does not work in reality, two devices burning battery time just creates a more fragile link.

The real bear was getting GPS data on or off the device. Garmin is likely the worst company in North America (after Apple) in trying to make you use their products and their products ONLY. Their 'Base Map' software that was useful, is gone. Now you need to download a series of software that only act to prevent management or manipulation or storage of your tracks and waypoints. Effectively Garmin is stand alone now, and they have taken InReach (aka RoadPost) with them. Too bad, but typical for the times.

After several years of use I sold it and went back to the new SPOT X. The SPOT X is still in use, but it is not without glitches. I'll describe them below;

My Latest SPOT X EXPERIENCE;

The device purchased new from SPOT Canada was \$250. A monthly subscription was under \$25. It includes 5 minute "bread-crumbs" tracks, and 15 Pre-defined messages. There are no fees for these messages. You have a limit on the number of custom messages otherwise.

I used the device for three months, and found I had not purchased the annual subscription as I thought. I noticed because they began billing my credit card without my authority! (They told me on the phone that MasterCard gave them my card expiry date and verification number to allow this.....I have to sort that out with MasterCard.)

In the bright light of the cockpit the mono-tone screen is barely legible. That is a nuisance. I also find that the device is quick to lose the GPS signal (IE in a turn) and slow to recover it. Once this happens it stops sending messages. Maybe they could change their internal device coding to buffer that? The keyboard is good. Before sending a message a lot of manipulations and selections are required

My other complaint is navigating the website for my locations or tracks. I find it difficult and my contacts more so. When my wife loses interest she doesn't pursue the issue so it is hard to guess how a real emergency would be dealt with locally? Make the web-site intuitive, please!

When I contacted SPOT about the billing issues they continued to research the situation for days until it was resolved. They contacted me at home at least three times. That's pretty darned good.....except they are in Louisiana!

I will continue to use the SPOT X for the year and then look at where the technology advances. Maybe Elon Musk will have his new system up by then?

Important Update;

July 17, 2021 I left Haines Junction YT was flying in the mountains in Kluane for three to four hours. I sent four or five messages and landed at least once. When I opened the files online later the SPOT had lost track of me for approximately 30 minutes. It averaged the remaining locations to show me South of the Alaska Highway when in fact I was about 40 miles North for that whole 30 minutes. I have no explanation except that the signal was possibly occasionally blocked (but I was at 6000' elevation so I should have had a satellite signal most of the time.) The device is in the upper corner of the windshield, the antennae could be

blocked below the device by the aircraft and possibly 30 degrees to one side by the wing. But it is wide open above and the rest of the arc is horizontal.

July 22, 2021 (Batteries are good and latest software update is installed) I left Whitehorse at 1030. I turned the SPOTX on for about 15 minutes. I sent a "Taking Off Now" message to my contact list, turned on tracking, and then I took off and flew west about 100 miles. I sent a "Landing Here" message around Rose Lake and landed. Two hours later I noticed the SPOTX was still turned on when I sent another "Taking Off Now" message, then I took off and flew back to Whitehorse.

Checking my track and messages online at the SPOT website tonight I see only two messages; the "Landing Here" message before landing at Rose, and an automatic "moving" message a minute later? There were no track points for the whole day. I am sitting here second-guessing that I turned tracking on at all? I feel sure I did. Both of the "Taking Off" messages and the "Landing Here" message are showing on the device itself, (3 in total).

This is sort of a deal breaker. A search and rescue effort for either of these flights July 17 or July 22 would have been extended for several days at least and possibly could have failed completely.

Conclusions;

The **SPOT X** beacon is NOT suited to aircraft tracking. In Northern latitudes it works only in a stationary or very slowly moving scenario and only then if it has clear view of the southern sky from horizontal up to about 30 degrees (estimated by experience).

Next Steps:

The **InReach** was marginally better at these latitudes for its ability to find and keep a signal. The Web site was also slightly more intuitive for newcomers to search and monitor for client locations and movements. But, it is very expensive and a subscription is twice the cost of the SPOT. But it still is not completely suitable for aircraft use.

I will sell the SPOTX and put that money into updating the ELT in the airplane. I will research other live-tracking (perhaps Spider-Trax). Any system needs to be robust and 'stand-alone' (IE not dependant on a cell phone for access). For messages it looks like a Satellite phone may be the only option. Come on Elon?

Oct 24, 2021 - Update

I have replaced the ELT in the Cub, but continued to use the SPOT pending a good deal on an InReach device again.

Yesterday, about 50 miles into the Mountains NE of Whitehorse Yukon the device suddenly came up displaying a "Keyboard Error". It also showed no GPS position (although there had been one up to then). The entire Southern quadrant was visible without restriction and I was above the mountain tops. I cycled the unit off and on and it came up with a GPS warning which it held.

When I got home I turned it back on while sitting in my living room. I accidentally triggered a "Check In" message, which promptly appeared on my cell phone and each contacts phone in the family. This house has a metal roof and siding and is shielded in dense trees. I left it turned on. Although the GPS location never was displayed, it had no problem connecting to send this message, even heavily shielded from the satellite?

I logged into my SPOT account and it shows no tracks or messages in the last 24 hours. In attempting to navigate the website I now find I cannot manipulate or delete any old messages. This is a new change which I find pointless and confusing to my contacts.

Today I connected the device to the SPOT website and re-synced it. For all appearances it looks functional, but, **THIS DEVICE IS NOT TO BE TRUSTED!**