District Seven Auxiliary Aviation

Operations and Safety Newsletter

May – June 2014

Lee Bertman – Editor / ADSO-AVX / lbertman@comcast.net
Ken Plesser – DSO-AV / kenplesser@windstream.net
Doug Armstrong – DFSO / doug@ratio.com

Introduction – DSO-AV

D7 AuxAir Team,

Tempus fugit, as the ancient Romans would say. Or, "time flies" as we would say here and now. We are already through half of the year and into the third edition of the D7 Operations and Safety newsletter.

The last of the Workshops has taken place… a grand finale in Clearwater that was creative, innovative and very educational. It was great to see all of the new faces at Clearwater, responding to Jon Nicholls' recruiting efforts. While in Clearwater, I chanced to spend some time with the outgoing Executive Officer, CDR Randy Hartnett. He was effusive in his praise and appreciation for the contributions of AuxAir in supporting the missions of the Air Station.

The most interesting and intense part of the year is just ahead of us, as the water temperatures rise in the more northern portions of the AOR. Memorial Day, just a couple of weeks back, was the kickoff of National Safe Boating Week, as it marked the traditional time for our fellow citizens take to the water in small craft of all types. With increased boating activity comes more SAR opportunities, more first-light searches, etc. Keep your skills sharp and your aircraft ready to go… you never know when the phone is going to ring with a request for a pop-up mission of some kind.

Lots of good technology information contained in this month's newsletter, so I extend my appreciation to Lee Bertman, our ADSO-AV for Technology. It is Lee who is spearheading all of the research that goes into evaluating the hardware and software that may be of value to us on missions.

Summer is the time for personnel transitions among the active duty, and this summer is no exception. In Savannah, we'll see, a new CO, XO and OPS; in Clearwater, a new XO and OPS; and in Miami, a new CO. In addition, each of the four AUXLOs will change. Over at District Headquarters, CDR Seward will relieve CDR Dunbar as Director of Auxiliary. CWO4 Chris Acklin will continue as OTO, but YN2 Joyce Lambton relieved YN2 Rafael Ramos for administrative duties. "Hail and Farewell," as appropriate, to all of our colleagues on the gold side.

The agenda for D-TRAIN is beginning to take shape. Tentatively, there will be at least 12 hours of training available that focuses specifically on aviation. Plan to be there. Details, as they become available, can be found here: http://www.uscga-district-7.org/whatsnew.html.

Fly well and fly safely.

Ken Plesser
DSO-AV

You never know on which flight your career will be judged - DFSO

D7 AuxAir Team ,

Have you ever heard about an incident or accident in which some shortcut performed by the crew was the cause and wondered, "How did they get there?" Maybe it was something simple like departing on a VFR flight without a working attitude indicator and suddenly finding one's self IMC. Perhaps a long flight where the pilot forgot the visually check the fuel load resulting in a dead stick approach.

None of us starts out a flight thinking this flight is going to end badly but it does happen. All too often I am left wondering "why did they do X or not do Y?" It turns out there is a common thread among many of these types of accidents and it is called "The Normalization of Deviance". Let us imagine a hypothetical crew and say the story begins something like this:

They have a patrol tomorrow and just got a call from the shop that (pick anyone of the common items below, which have happened on one time or another in the program):

- My vacuum pump is dead
- I have a bad mag
- My transponder is inop
- I need a new battery
- My fuel gauges aren't working
- My radar/XM WX is inop
- I only have one radio
- I have a bad oil leak

They begin to think, "Well I just flew the airplane here and it was all good, I would like to get this fixed but, I really need to get this mission done so … I will do it this time." It is human nature to rationalize the short cut and "do what needs doing." Let's say they make the flight and all goes well. This sets up what in the safety business calls, the "false feedback loop".

The False Feedback Loop: The absence of something bad happening when deviance is accepted means it is safe to do so again.

According to astronaut Mike Mullane what happens after "deviance is normalized" is not an accident, but a predictable surprise, usually with injurious or deadly consequences. There are several sentinel examples of this, the Space Shuttle Challenger begin one of the best known.

So back to our hypothetical crew, they begin to accept these items as little glitches, a nuisance, not the safety threat they represent. As such they slowly cease to mitigate these threats. Soon the process becomes "the way it's done here." This crew has set itself up for the day; they get the predictable surprise and we all wonder: "How did they get here?"

When I need to refocus on "doing the right things (even when no one is watching)" I find it helpful to imagine what may be written about a mission should it end poorly. Here is one from the NTSB files that is sobering: "the pilots' unprofessional behavior, deviation from standard operating procedures, and poor airmanship, which resulted in an in-flight emergency from which they were unable to recover…" We can all hope this will not be us.

In the USCG, it is the responsibility of each crewmember to speak up if they are uncomfortable. We are required to follow a standard operating procedure, use checklists and fly as a crew. Making every crewmember part of the safety plan and not accepting deviations is one of the best ways to maintain the standard.

Fly safe.

Doug Armstrong DFSO – District 7 AuxAir doug@ratio.com

Clearwater 2014 Workshop and Subsequent Open House / Bertman

Clearwater closed the last of the Workshop Season with a remarkable two days of activities. The sessions were help at the AirSta with Aux Aircraft parking opposite the C130 hanger. OPS Officer CDR Ferguson presented the opening remarks praising AAC Jon Nichols, and his staff, for their progress in reinvigorating the Aux Air operation in Clearwater. A Meritorious Team Award citation was presented by CDR Ferguson to 19 Clearwater Aux Aviators.

DSO—AV Ken Plesser made an informative presentation concerning the D7 Aviation overview, accomplishments and further objectives. DSFO Doug Armstrong provided a wide range of safety issues and objectives. Both Doug and Ken emphasized that they operated as a team working toward operational effectiveness, meeting Sector needs, while enhancing our safety culture.

Beyond the required curriculum, John Berry made an informative presentation explaining the operation of the EF Johnson radios and providing excellent written materials taking us step-by-step though the mysterious ins and outs of the encrypted radio.

Shon Limor offered a helpful brush-up of the FAR/AIM and conducted the CRM training module. Shon is an IP/FE, a former fighter pilot and currently flies high performance corporate jets. He owns Cessna 182, which is a facility so he brings a remarkable range of experience and knowledge to Clearwater.

Pete Galanos offered an entertaining and enlightening demonstration of the Survival Vest and its contents. AAAC—OPS Roone Arledge provided an informative Operations update emphasizing the support for Sector St. Pete now provided and available in the future as the Aix adds numerous aircraft and Auxiliary Aviators.

Small group SAR training was an innovative addition to the Workshop curriculum. New Aviators were paired with experienced Pilot and Air Crew to practice search patterns in a simulated aircraft environment. This is to assure that Aux crews will be able to effectively respond to SAR and LE call-outs, whether on the ground or while airborne on a mission.AAC Jon Nichols put together the best Clearwater Workshop in many years, to an assembly of long time pilots, observers and Air Crew joined by a room full of aspiring CG Aux Aviators. Under his leadership Auxiliary Aviation in Clearwater has found an energy and capability on par with the best in D7.

.

Training and promotional activities didn't end with the Workshop. A new pilots meeting was held in May 8, 2014 covering a number of topics including AOMS. Later the Aux contingent participated in the Air Station open house, even recruiting a former Observer who "thought that the Air program was defunct."

Coast Guard & CBIG authorities seize $37 million of cocaine in the Caribbean Sea

May 6th, 2014 ·

SAN JUAN, Puerto Rico — U.S. Coast Guard, U.S. Customs and Border Protection, the Drug Enforcement Administration and the Puerto Rico Police seized nearly 1,125 kilograms of cocaine, with an estimated whole sale value of $37 million, and apprehended two Dominican Republic nationals during an at sea interdiction in the Caribbean Sea Wednesday.

The interdiction is the result of the Caribbean Border Interagency Group's Operation Caribbean Guard and the Coast Guard's Operation Unified Resolve.

During a routine Caribbean patrol, the crew of a Coast Guard HC-144 Ocean Sentry Maritime Patrol Aircraft from Air Station Miami detected a 35-foot go-fast vessel with two outboard engines and three persons onboard, traveling northbound without any navigation lights, south of Puerto Rico Tuesday night.

Farallon maneuvers to pick bales from the water in 3-5 foot swells. (U.S. Coast Guard Auxiliary Photo).

Coast Guard Sector San Juan watch standers diverted the Coast Guard Cutters Drummond and Farallon and launched an armed Coast Guard helicopter from Coast Guard Air Station Borinquen to interdict the suspect vessel. Customs and Border Protection Caribbean Air and Marine Branch and the Puerto Rico Police Joint Forces of Rapid action were also notified and launched marine units to interdict the suspect vessel.

The Coast Guard HC-144 maintained near-constant surveillance of the go-fast vessel as the armed Coast Guard helicopter arrived on scene and fired warning shots in an attempt to get the suspects to stop. When the vessel did not comply, the helicopter crew fired at and disabled one of the vessel's engines, prompting the suspected smugglers to jettison the contraband overboard. A Customs and Border Protection marine unit along with marine units from Puerto Rico Police then intercepted the vessel, and a law enforcement team from the Coast Guard Cutter Drummond embarked the suspects.

"Our multiagency partnerships in the region along with the continuous augmentation of Coast Guard air and surface assets sent to Puerto Rico to interdict major drug shipments at sea continues to pay off," said Capt. Drew W. Pearson, Commander, Coast Guard Sector San Juan. "The airborne use of force expertly applied by the Coast Guard helicopter crew to stop this vessel should serve as a serious deterrent to smugglers to know they will be caught and brought to justice."

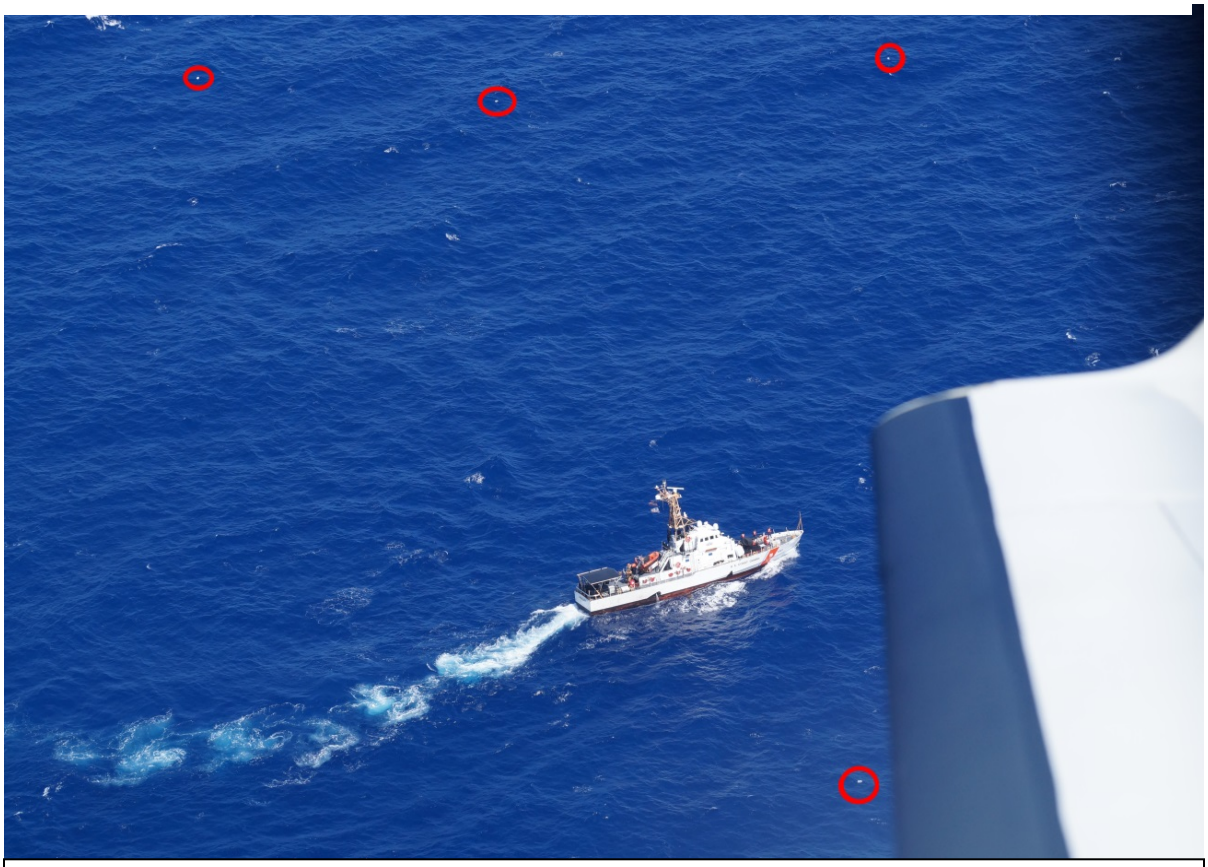
During interviews with the suspects, it was discovered the third person jumped overboard to avoid apprehension as law enforcement units approached the disabled vessel. The Coast Guard conducted a large scale search for the missing person that lasted 34 hours and covered 546 square miles before suspending search efforts Thursday night. While searching for the missing person Coast Guard active duty and Auxiliary crews located and subsequently recovered 45 bales of contraband from the water, which later tested positive for cocaine.

The two apprehended smugglers, the seized cocaine, and the suspect's vessel were transferred in Ponce, Puerto Rico, to Customs and Border Protection officers and Drug Enforcement Agency agents for processing and prosecution.

"These arrests are a clear indication of the continued success of the Caribbean Corridor Strike Force," said Rosa Emilia Rodríguez-Vélez, U.S. Attorney for the District of Puerto Rico. "This is just another example of the fine work our State and Federal law enforcement partners accomplish every day. With the continued collaboration and assistance of our law enforcement partners, we will continue our efforts to bring drug smuggling organizations to justice."

"Once again the combined efforts of DEA, USCG, CPB and PRPD-FURA resulted in the seizure of millions of dollars worth of narcotics," said Vito Salvatore Guarino, Special Agent in Charge of the Drug Enforcement Administration. "Our message continues to be the same: we will detect and interdict drug smugglers attempting to flood our island with their poisonous cargo."

The Coast Guard Cutters Farallon and Drummond are 110-foot patrol boats homeported in San Juan, Puerto Rico.



The crew of the Coast Guard Cutter Farallon scans the Caribbean Sea following an interagency at-sea interdiction April 30, 2014 by Coast Guard, Customs and Border Protection and the Puerto Rico Police south of Puerto Rico, where the interdicted drug smugglers jettisoned their drug shipment overboard. (U.S. Coast Guard Auxiliary Photo).

*The Coast Guard's efforts under Operation Unified Resolve contribute to the interagency results being achieved each and every day locally under Operation Caribbean Guard, which coordinates efforts between the Coast Guard, its DHS, Commonwealth and Territorial law enforcement partners, who are working diligently to deter, detect and disrupt illicit maritime trafficking to Puerto Rico and the U.S. Virgin Islands. Since June 2012, the Coast Guard and its interagency partners supporting Caribbean Gua*rd and Unified Resolve have seized more than $1 billion in illicit narcotics and detained nearly 90 suspected smugglers.

AuxAir BQN Surprises Academy Cadet and Family with USCGC Eagle Visit / Armstrong

Duane Minton has been the second highest hour AirCrew member in District 7 for the past few years. While his contributions to AuxAir are impressive, he is active and makes his influence felt in many other ways around the USCG. Mr. Minton as his students call him has been instrumental in getting three young people into the Coast Guard Academy.

This year Cadet Hoffman a senior at Good Hope Country Day School is the Academy's newest cadet. Normally during graduation, the USCG recognizes a student's hard work and congratulates them on their acceptance. This year no presentation was possible during graduation.

As luck would have it the USCG Barque Eagle was visiting the AOR two weeks before graduation. Duane and Aircraft Commander Doug Armstrong reached out to CAPT Pearson the Sector CO with a proposal; make the presentation aboard the eagle during the formal reception Friday evening. The CO readily agreed and provided six tickets, two for the AuxAir team and four for the family.

It as a night this cadet will not forget, on arrival the cadet crew aboard the Eagle welcomed the incoming swab, provided tours and spent the evening learning about everything academy. Midway through the evening CAPT Wes Pulver the Eagle's CO and CAPT Pearson Sector SJU CO introduced Mr.Hoffman and formally presented him with his acceptance the USCG Academy.

On departure, the following day AuxAir requested permission to overfly the Eagle as it departed PR for a final photo opportunity.

No orders were requested or issued for this event.

Captain Pearson the Sector San Juan CO and AuxAir Supporter. / Armstrong

CAPT Drew Pearson has been much more than the Sector San Juan CO for the past three years. Some AuxAir folks in District Seven already know all about his forward leaning support of AuxAir in the district and nationally. The Capt has been reaching out wherever it is necessary making sure the rest of the USCG understands the importance of AuxAir to the Coast Guard mission.

Chuck Fischer presents Capt Drew Pearson a signed photograph of the Sector's Volunteer Aviation Team.

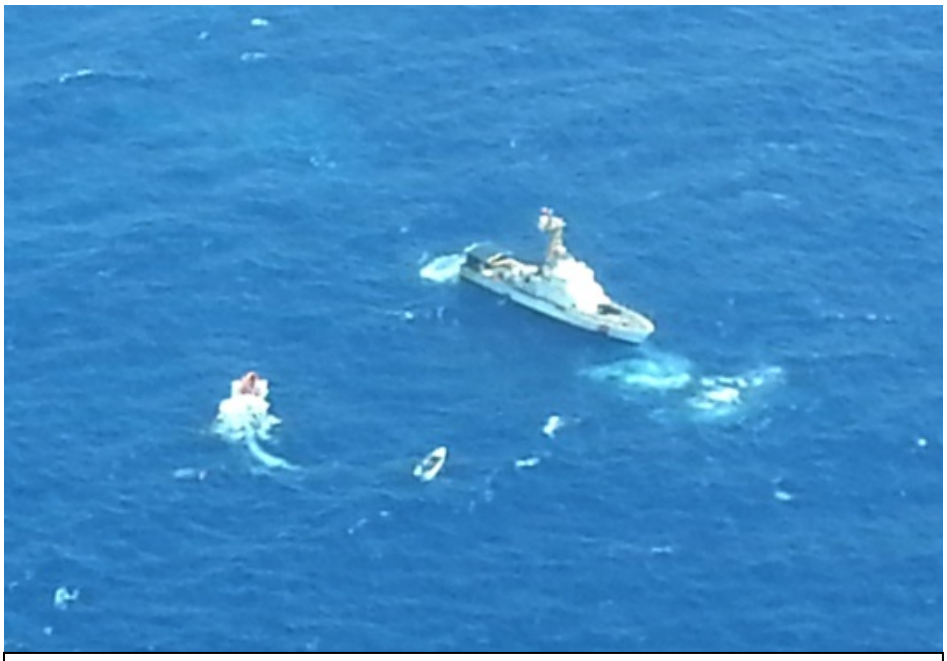
Every quarter AuxAir BQN meets with the Sector command to review progress toward goals and brainstorm ways to be more effective. This weekend's (7 June) all day meeting was to be a little different. The CAPT will be PCS'ing and requested early retirement; as such it would be our last briefing with him. Aboard the Cutter Eagle in May the CAPT mentioned, "… you know we are going to do work but I am going to have you over to my place for the meeting and lunch."

As promised, the meeting was held at base housing in Baymon near San Juan. The AuxAir unit arrived from across the AOR for the meeting at the activity center. We kicked off the program with some recognition. AuxAir BQN presented the CO with a signed picture of the entire unit including members of the DomRep Naval AirAuxiliary.

Doug Armstrong presents Lt. Adam Skordinski of the SSJ LE group a plaque thanking him for three years of hard work and support.

Chuck Fischer, AAC, commented "You have been a great inspiration to for all of us, and are responsible in a significant way for the success that AuxAir has achieved over the last three years".

Lt. Adam Skordinski one of the LEDOs and sector AuxAir coordinator is also PCS'ing and we presented him with a nice Jan Mitchell glass plaque acknowledging his contributions to the program.



AuxAir directs the Drummond to the TOI

Ever forward leaning the CO brought in the senior patrol boat skipper to discuss joint operations. After an hour of enthusiastic exchange, the group developed some new tactics for testing in the field. Most not for disclosure here while others included an AuxAir ship rider program where Air Auxiliary members will crew aboard 110 cutters and cutter crews will fly aboard aircraft in an exchange designed to facilitate more productive patrols and tighter collaboration in the field.

Three days after the meeting an AuxAir crew working with the cutter Drummond and testing new tactics was able to locate and guide the cutter in for the interception of an 18 foot human trafficking yola with 25 Haitian migrants and 2 smugglers aboard. – Doug Armstrong

Tech Tips — Photography / Bertman

Photography is our best tool, by far, to evaluate and identify targets of interest (TOI's) and transmit that information to Sector and the AirSta. I would suggest that you aren't MOM mission capable if you don't have a capable camera and operator. But to make real-time use of the photos, a larger screen than that found on the camera is absolutely necessary.

Tablets have come to the rescue. Not only do they have much larger screens, they also have capability to examine (magnify) areas of interest in the photos. The Tablet is also the platform for sending photos while airborne. But first you need to get the photo on to the Tablet. This can be done by a wired connection to the Tablet (you need a proper device) or via a Wi-Fi enabled SD card such as Eye-Fi or ez Share HD. Some of the newer camera have built in Wi-Fi. Both Eye-Fi and ez Share HD have Tablet Apps that work with their SD cards. Eye-Fi also has an Android App. Knowing how to use these Apps in conjunction with the camera is a critical first step. Figuring this out inflight, over a TOI, is too late.

My suggestion is to install the SD card in your camera and the App on your Tablet. Read the PDF manual. Print it out. Then take some photos and work with the App until you have the functionality down pat.

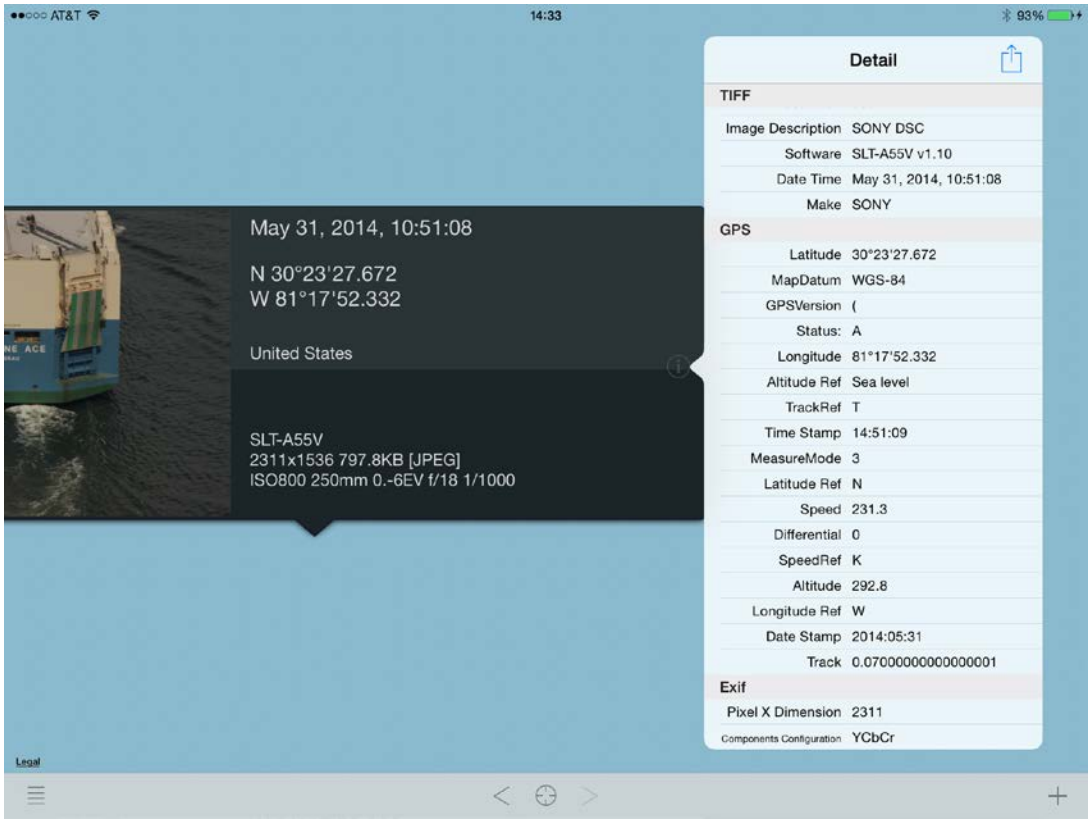
Photo taken off Mayport, FL with Sony Alfa 55 GPS Equipped Camera

Here are some tips:

The photos are transferred using Wi-Fi. If you leave your camera "on" the Wi-Fi should stay connected to your Tablet for the duration of the mission. You will be ready at a moment's notice to take photos and transfer then to your Tablet.
In the "on"position battery life is reduced. You will need at least 2 fully charged batteries per mission.
If you have a GPS equipped camera, leaving it on will make it much more likely that the position stamped (metadata) on the camera will be new, not old information. Starting up the camera and taking photos can produce Lat/Longs that were recorded just before the camera was turned off — old data!
When the camera is "on" communication is between the camera SD card and the Tablet. That means that home internet (if available) or use of the cellular network won't work. You cannot transmit photos from your Tablet to Sector if the camera is "on" and it is communicating with your Tablet.

To transmit the photo you need to either turn your camera off (and wait for the link to drop) or turn off Wi-Fi on your Tablet. I recommend turning Wi-Fi off on your Tablet. Its effect is immediate and it is easy to turn back on.
Also, when the camera is "on" you won't be able to receive emails or weather information via the cellular network. Remember to turn Wi-Fi off to receive this information.

All of this might seem a bit obscure and of limited use. It isn't. We need these capabilities to make our MOM missions effective and earn the respect of our Coast Guard customer.



Above: Analysis of Metadata using Koredoko App
Below: Trip Information from Bad Elf GPS, Opened with GPS HD App.

Search Patterns Demystified / Bertman

Learning to fly search patterns is a basic challenge in obtaining and maintaining your qualifications as a Coast Guard Aux pilot. Observers and Air Crew also are expected to be proficient in assisting the pilot in performing this exercise, which can become critical in lifesaving and LE situations.

Flying any type of search pattern critically depends upon the use of GPS. It is no longer sufficient to fly headings and time legs. Winds aloft will tear apart any pattern using these old pre-GPS techniques.

The ultimate objective of flying a SAR pattern is to locate the TOI or search object. That involves flying an accurate pattern combined with effective observer scanning techniques — *eyes outside the aircraft*.

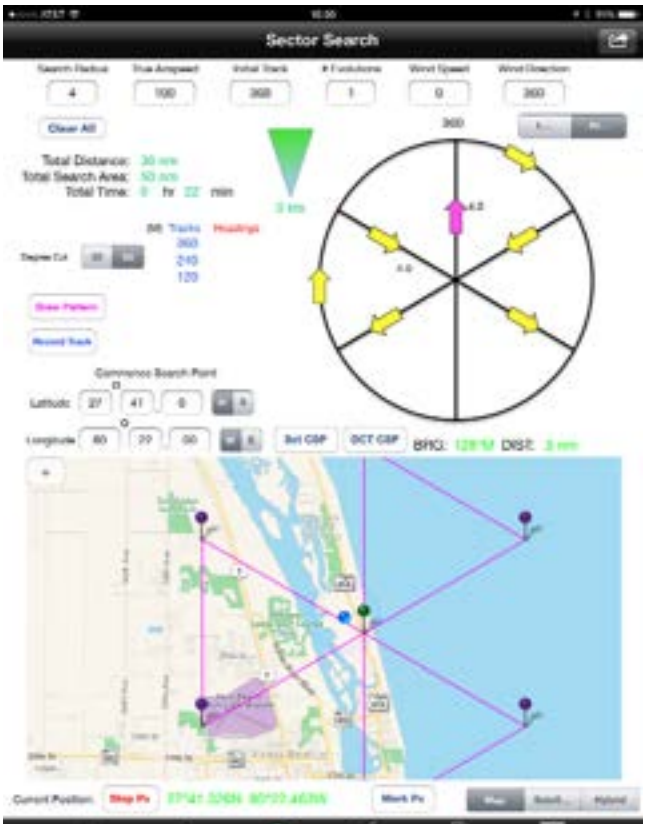
The pilot needs to fly an accurate pattern without undue reliance on his observers. Their primary job is to observe, not to help the pilot figure out the search pattern.

For most pilots the most challenging search is the Sector pattern. Fortunately various Apps such as ForeFlight and SAR Pro Air are relatively easy to use and provide a pathway for the pilot to follow. Nevertheless, practice with the App on the ground to master how it works.

Parallel and Creeping Line searches (we shall call “box” searches) are a larger challenge. These “box” searches take quite a bit of practice to master using Apps. Take a Search Action Plan (SAR Plan) and load it into the App. Then compare the lat/long of the turn points with those shown in the SAR Plan. They need to coincide. If you have honed this skill you are ready to use the App, *if given the SAR Plan on the ground.*

However, if you are given a pop-up SAR while airborne, you are likely to get the four lat/longs which define the box, the CSP and track spacing. None of the Apps allow you to enter the lat/longs directly into the App so the Apps are NOT helpful in this situation.

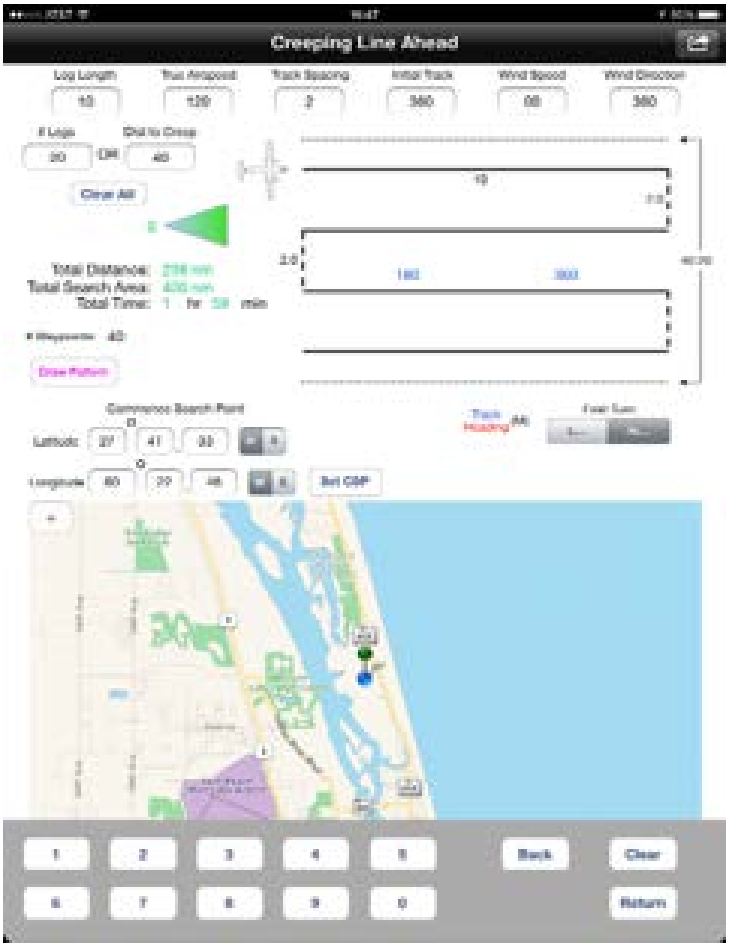
There is a straightforward technique that uses the aircraft or handheld GPS. Enter the four Lat/Longs (A, B, C and D) creating a flight plan ending back at A. Activate the flight plan thereby drawing the search box. Activate the leg D to C so the legs won’t sequence. Then use “cross track error.” For a 10 by 40 nm search, with a 2 mile tack spacing, you would expect to see a cross track error of 40, 38, 36, 34……flying 10 nm then turning toward the D to C leg. Feel free to contact me with questions since this brief explanation, if you are new to this technique,

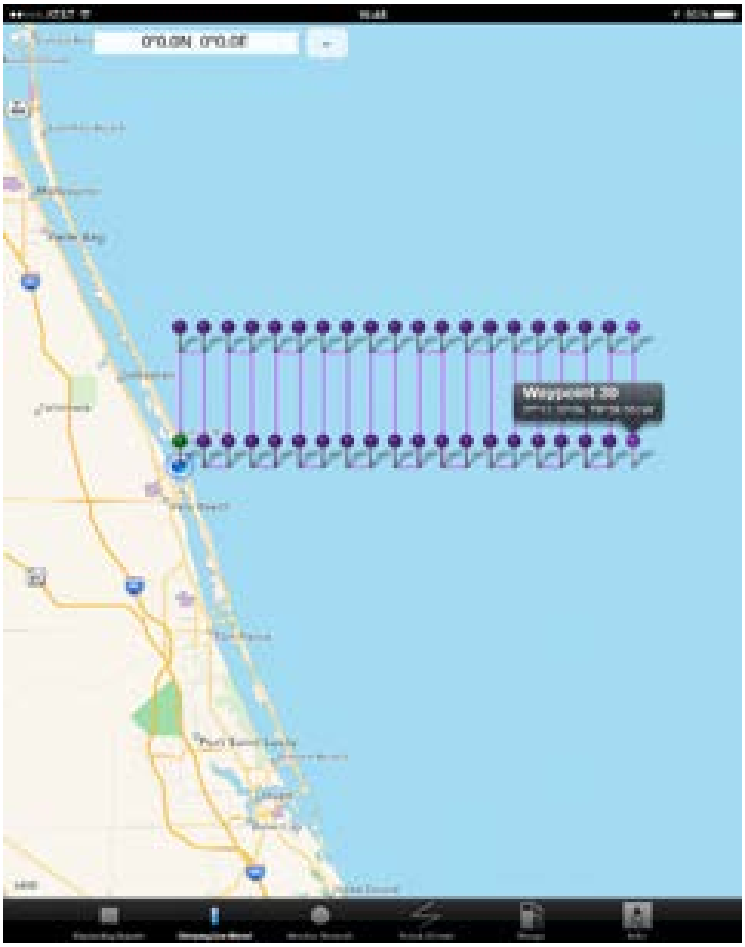


is probably not adequate.

You are permitted to use any of these Apps and other aids in your SAR check-ride. But you must demonstrate your knowledge of the App or technique you have chosen. And you must fly to standard.

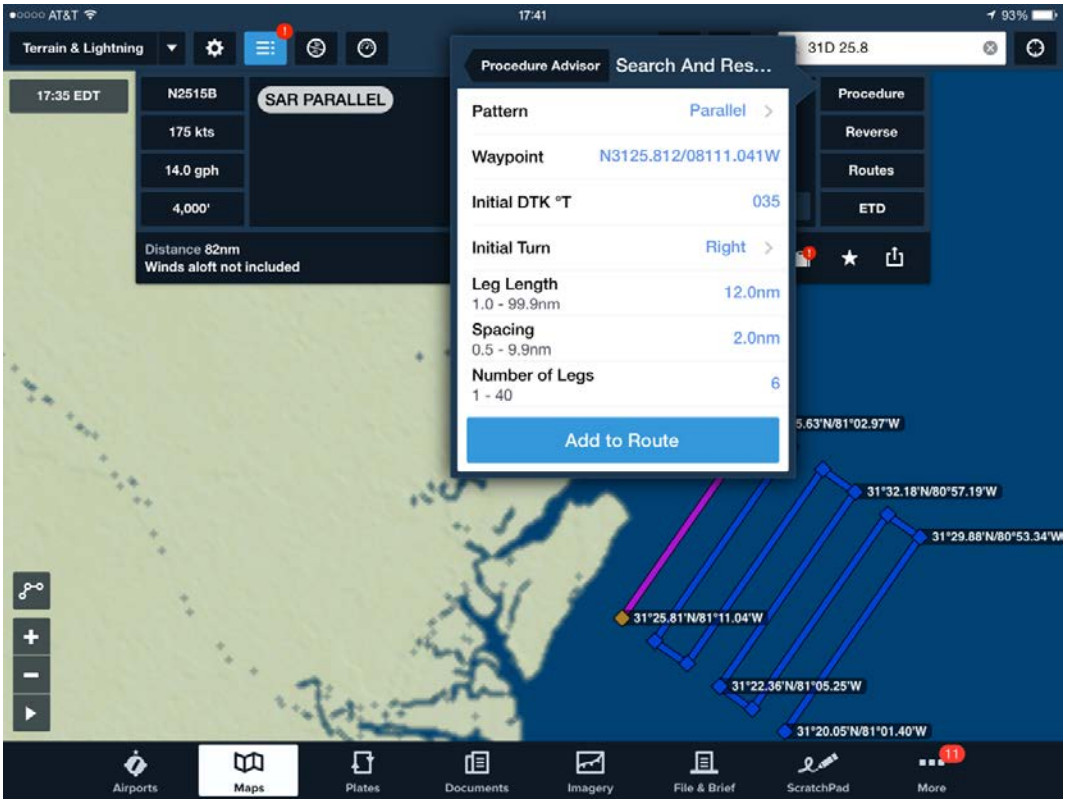
We will be teaching these techniques at upcoming training sessions, including DTRAIN. We recognize the need to equip our Aviators with tools to be mission effective and safe.





Generating and Confirming a Parallel Search Using ForeFlight / Bertman

Using FlightFlight to generate a valid search pattern from a SAR Pattern provided by the Coast Guard takes practice with your iPad and a sample CG SAR Plan.



Attached please find a SAR Plan off of Brunswick. The screenshot below shows the settings that correspond to the SAR pattern and the pattern generated by ForeFlight. ForeFlight is shown to generate a pattern whose last point (Lat/Long) is very close to the last point in the CG SAR Plan, thus confirming the validity of the ForeFlight pattern. You are now ready to fly — good to go.

Learning how to do a Parallel Search using ForeFlight is a non-trivial exercise. It takes lots of practice to get it right. You must compare the results of the ForeFlight generated pattern with the last point (Lat/Long) in the SAR Plan to confirm that the pattern is correct. Unless you are very practiced and skilled, this is not something that you want to try when you get a pop-up SAR while airborne. In that instance, use the four Lat/Long techniques (Cross-Track Error) described elsewhere in this Newsletter.

```
PARALLEL SEARCH
---------------
NAME                 : UNTITLED SEARCH PATTERN
CENTER               : 31-27.929N 081-02.147W
SEARCH AREA LENGTH   : 14.17 NM
SEARCH AREA WIDTH    : 12.00 NM
MAJOR AXIS           : 035 T / 041 M
MINOR AXIS           : 125 T / 131 M
CORNER PT #1         : 31-37.174N 081-03.145W
CORNER PT #2         : 31-30.291N 080-51.620W
CORNER PT #3         : 31-18.684N 081-01.149W
CORNER PT #4         : 31-25.567N 081-12.674W
CSP                  : 31-25.812N 081-11.041W
LEG DIRECTION        : 035 T / 041 M
LEG LENGTH           : 12.17 NM
FIRST TURN           : RIGHT
CREEP DIRECTION      : 125 T / 131 M
TRACK SPACING        : 2.00 NM
MAG VARIATION        : 06 W
MAGVAR CALCED        : YES
```

There are some “gotchas.” First, you need the proper format for entering Lat/Longs. You will need this for all patterns. Below you will find an explanation that I found helpful. Clearly, it works. Then you need to have a firm understanding of the meaning of Initial DKT T, Initial Turn,

Leg Length, (Track) Spacing and Number of Legs.

I recommend working with this example. Thank goodness, the Sector search is much simpler. The only "gotcha" is knowing how to enter Lat/Longs.

iPad Lat/Long Tips from iPadPilotNews.com

For example, ForeFlight Mobile can accept lat / long coordinates in either the route editor or the search box on the Maps tab. All three formats are supported, with either the N/S/E/W or the +/- symbols. Also note that ForeFlight uses / to separate the coordinates, not a comma as you'll find online:

- Degrees, minutes and seconds with N/S/E/W (enter N324455/W0804557 for the coordinate 32°44'55"N, 80°45'57"W).
- Degrees, minutes and seconds with +/- sign (324455/-0804557 for 32°44'55"N, 80°45'57"W)
- Degrees, minutes and seconds with extra decimal point, using +/- sign (3244556/-08045576 for 32°44'55.6"N, 80°45'57.6"W). Note that in all three of these examples where we use degrees, minutes and seconds, a 0 is required before the 804557; entering -804557 will not work. For the examples below, you may omit the 0.
- Degrees and decimal minutes with N/S/E/W (3244.92N/8045.95W for 32°44'55"N, 80°45'57"W)
- Degrees and decimal minutes with +/- sign (3244.92/-8045.95 for 32°44'55"N, 80°45'57"W)
- Degree decimal with N/S/E/W (32.7N/80.8W for 32°44'55"N, 80°45'57"W)
- Degree decimal with +/- sign (32.7/-80.8 for 32°44'55"N, 80°45'57"W)

Bad Elf GPS Tracking Device / Bertman

There are a plethora of GPS devices which feed GPS coordinates, via Bluetooth, to the iPad and Android tablets. Several of the more expensive units, such as the Garmin 39 also provide ADS-B weather and traffic. In contrast the Garmin GLO receives both the US and Russian satellites and works in amazing locations.

What most of these devices lack is a memory/tracking capability and on-screen information display (that is the information is displayed on the tablet or smart phone).

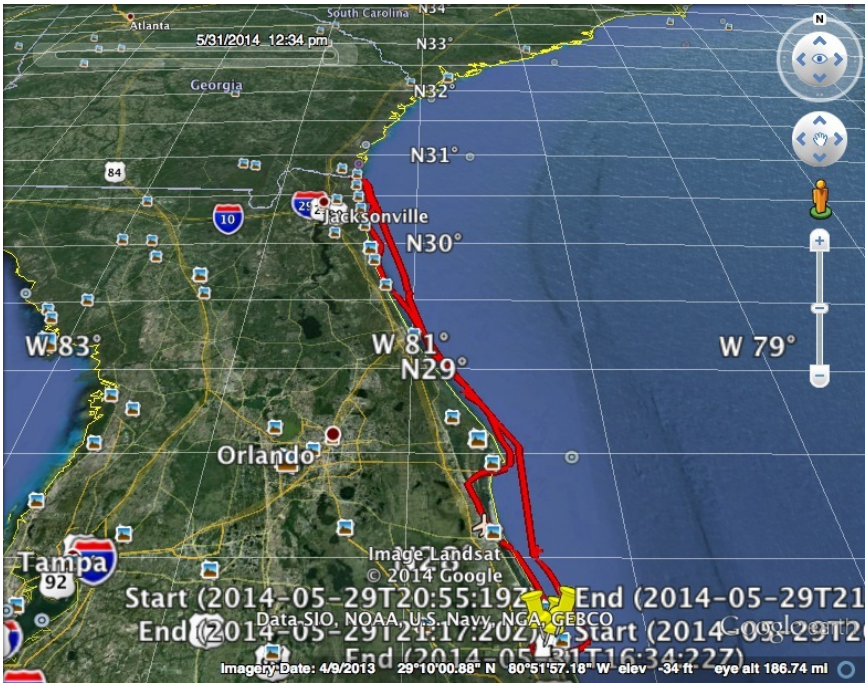
The new Bad Elf GPS Pro incorporates both tracking and on-screen display, as well as having a great iPad App. In recent testing is has proved to be easy to operate and a fine GPS receiver. The cost is about $150 on Amazon and numerous other sources.

Once the unit is turned on, and tracking activated, the unit records the entire mission profile, which can be downloaded to the App. This frees up the tablet or smart phone for other applications.

The export from the App is shown as follows:

Duration: **3:13:52**	**Maximum Speed: 172.1 knots**
Distance: **505.1 miles**	Average Altitude: **986.2 ft**
Minimum Latitude: **27°37.1340' N**	Minimum Altitude: **20.3 ft**
Maximum Latitude: **30°42.8985' N**	Maximum Altitude: **1,455 ft**
Minimum Longitude: **81°28.8382' W**	Minimum Speed: **0 knots**
Maximum Longitude: **80°15.0677' W**	
Average Speed: **135.3 knots**	

The kml button opens a plot in Google Maps The GPX bottom opens a plot in the GPS Tracks HD iPad App, as seen above.



Both Apps permit manipulation of the data. But the GPS Tracks HD App allows the exploration of the entire mission by moving the dotted line (you need the App to do this). Time, GPS speed, altitude and distance are available for the entire mission duration!

What that means is that we can document the entire mission and send that information to Sector and the AirSta for their use. The location of photographs can be established by noting the time stamp of the photo, moving the dotted line to that time, and reading off the Lat/Long.

Some cameras have GPS built in. The problem is the update rate. At least for the Sony Alfa 55, if the camera is left on, the update seems to be current. But if the camera if turned off to save battery, and then turned on, the photo might he stamped at the earlier Lat/Long. So matching the time with the position in the App is a reliable way to assure that the position is accurate.

Combining these technologies, with in-flight transmission photos and sending all photos to Sector on mission completion, provides a whole new level of support that we, in AuxAir, can provide to our “customers.”

(The KML and GPX buttons could not be attached to this Newsletter for technical reasons. I can email them to interested parties on request. Contact me at lbertman@comcast.net).

Be a Tech Rep!

It's time to mine the knowledge, safety and operational experience of our D7 Auxiliary Aviators, serving our four Air Stations. The Tech Rep initiative is intended to encourage the exchange of technical and operational knowledge regarding Tablet Apps, external GPS-based devices, cameras, radios (including the EF Johnson coded radio) and the like.

To be a Tech Rep you need to (1) have an interest in reporting on devices and Apps and (2) have experience in using devices and Apps operationally. You don't need to be some sort of technical expert (though that is welcome!) but you do need to takes a serious interest in your *Evaluations.*

Here is how its works:

- Tech Reps will submit *Evaluations* whenever they have the time to present their findings.
- These *Evaluations* will be reviewed by a Tech Rep team including Ken Plesser, Doug Armstrong, Lee Bertman and others to be selected.
- Once reviewed *Evaluations* will be shared with the Tech Rep members for their comments.
- Reviewed *Evaluations* will then be shared with our Aviators via the Newsletter and posted on the Website. You will receive the credit of authorship for your contributions.

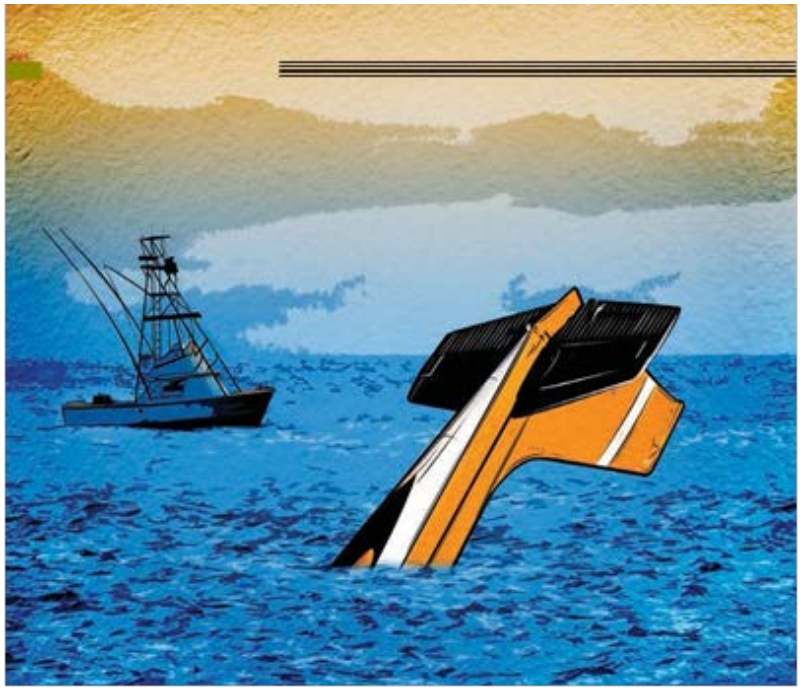
Examples of Possible *Evaluations*:

- Comparative navigation Apps such as ForeFlight, WingX, Jeppesen, FltPlan.com, etc.
- Strengths and weakness of various camera models — full 35mm and Super-zoom.
- Wi-Fi SD devices such as Eye-Fi and ez Share HD.
- External GPS devices and Apps for traffic and weather.
- Weather Apps including NWS
- Tracking Apps such as GPS Tracks HD.
- Marine navigation Apps such as Navionics.
- Search Apps such as found in ForeFlight, WingX and SAR Pro Air.
- Pitfalls and techniques using the EF Johnson radios.

How can you participate? It's easy. Send an email to Lee Bertman at lbertman@comcast.net. Be sure to copy your AAC and AAAC Operations. We'll put you on the Tech Rep list and wait for your *Evaluations.*

First Ditching – Courtesy of our friends at EAA / Sport Aviation

One of the great things about my job is working with so many talented people. Last week when Nachson Limor called me from Clearwater with a suggestion on a new article in EAA's Sport Aviation I knew it was going to be something good. A few emails later the editors at Sport Aviation were more than happy to allow us to reprint this most interesting write up. http://www.sportaviationonline.org/



THE DAY STARTED OUT with excitement. The thought of performing my first cross-country solo flight kept me tossing and turning the night before, and I could hardly wait for daylight so I could get to the airport and be on my way. The flight to Molokai from Honolulu was exhilarating—crossing the deep blue ocean for the first time all by myself. The touch-and-go landings at Molokai Airport went as practiced, and by the time I left for the flight to Lanai I felt like an experienced pilot. The short hop to Lanai brought me to a rain-engulfed airport with only one large cloud obscuring the airport. After a few attempts to break through, the rain proved impractical; I decided to head back to Honolulu for the return flight home.

The Inter-Island Reporting Service allows pilots to check in with Honolulu tower when leaving an island and at the midpoint between the islands, which I dutifully completed. But my heart skipped a beat as I saw my oil pressure gauge read zero. Can't be, I thought. All the other gauges read in the normal range. I called Honolulu tower and told them of my oil pressure reading and requested the shortest route to the airport.

"Ka-nock, ka-nock" was the sound that first alerted me to the critical state of my engine. I quickly radioed an emergency to the tower, but in a matter of seconds, the engine started to vibrate—so much I was concerned that it was going to break apart and I would lose control. "Mayday, mayday, mayday," I shouted into the microphone while trying to control the pitch and yaw of the aircraft. I had my hand on the ignition switch about to turn it off when the engine completely seized up and the propeller quit turning.

The terrible vibrations now quit. The lessons my instructor, Joe Dailey, drummed into me for emergency landings came flooding back. Fly the airplane to the ground. But what had he said about over water? I set up a standard landing pattern trying to determine the wind and the wave direction. I didn't want to hit the front of a wave but to land on the back side. Things happened fast as the 2,300 feet turned into a few feet off the water. The tower was still asking questions as I lifted the raft out from its rear seat storage compartment, placed it in front of my chest, and gingerly kicked open the side door so it wouldn't jam on impact (a couple of those hangar flying lessons I had learned).

I flew a perfect approach to final as the little plane descended those last few feet into the white-capped ocean. The stall warning was blaring as the wheels touched the waves slightly, dropping the nose and causing the dead propeller to dig into the water and the whole craft to flip completely over at about 60 mph. I could not see my fingers in front of my face as the sea churned its foamy froth through the cabin.

Being a scuba diver, I was normally at home in the water, but this was a different set of circumstances. I was strapped into an upside-down sinking airplane with no air supply and no sense of direction. My scuba diving lessons kicked in—control yourself, do not panic—they had instructed me. I groped to disconnect the cross-chest strap. Pushing off the rudder pedals and putting all my strength against the door and the water behind it, I exited the still sinking craft and swam out and up to the surface. About one-third of the tail of the airplane was still visible as I swam around the stricken craft. I found the raft and anxiously tugged at the handle to inflate the little boat.

I heard the CO2 cartridge release its gas, but for reasons unknown, the raft did not inflate and only sloshed lazily around the wreckage. Suddenly from nowhere, as the plane settled lower in the water, I felt a tugging on my legs and realized I was being pulled down into the deep blue water. With just a moment to twist my head I grabbed a short breath of air as the water swirled over my head. It was hard to fight the anxiety that was pulsing through my head and chest. Looking through the blurred vision of being under- water with no mask I could make out the long nylon rope that was attached to the raft.

The rope was floating around in the water and managed to get tangled in the landing gear of the sinking plane and hitched around my legs a few times. Fear surged through my body. Swimming down with my arms and pulling on the ropes I managed to get deep enough to work through the knots and return to the surface gasping for air.

About 20 yards away I turned to see only the very end of the tail section above the water. Instinctively I swam back to the only thing I knew as a vessel only to reach it in time to feel the last of it sink totally from my grasp down toward its resting place of more than 100 fathoms. Nothing was out there with me. I could barely see the land when I was on top of a wave and inwardly I knew I could not outswim the ocean currents. I inflated the life vest I had been wearing since before takeoff, located the smoke flares and signal mirror, and lacking any other course of action started to swim in the direction I thought would bring me to land.

I was in the water about 10 minutes when I looked up to see a boat rapidly approaching my direction. The boat was owned by George Allergis who was out fishing that beautiful Sunday afternoon. He did not know that the biggest catch he would make that day would be a pilot who fell from the sky! As he sped up his boat to come to my aid, I was startled to see something flying up out of the water behind the boat and mistakenly thought of sharks following it for any scraps being thrown overboard. The blood from my face and knee cuts were a concern to me in that open ocean.

The “things” flying out of the water behind his boat turned out to be fishing lures, but he did not bother to retrieve them. As George pulled the boat up alongside me he shouted, “Are you all right?” He reached his arm over the gunwale to help me into the boat. Panting rapidly I tried to answer George’s questions about the crash and apologized for the green dye that had broken from my pilot’s safety vest at impact and was now turning the deck a bright green! Shortly after, the Coast Guard’s rescue helicopter flew overhead looking for the downed plane, and I advised them by hand signals that I was okay.

A florist shop was the first open establishment I entered, and I requested to use the phone to call in to the Honolulu tower and cancel my flight. The astonished, wide-eyed attendant backed away and pointed to the phone. While I was on the phone a police car arrived, and the officers had me sit down on a tall stool to finish my call, and shortly the local TV station showed up with a cameraman and a reporter to ask about what happened.

My rapid talking was stopped short when an ambulance arrived, and I tried to refuse a ride to the hospital for the still bleeding cuts and abrasions. A person from the now assembling crowd stepped up and declared he was from the FAA and announced that I had to go to the hospital. The ambulance crew that finally took me to the hospital to get the many cuts and abrasions taken care of were entertained with the story I told them and impressed at my survival. “Lessons well learned were what saved my life,” I told them as I was wheeled into the emergency ward.

If you would like to share a close call with EAA so they can all learn from the experience—send your story to editorial@eaa.org for consideration.