Inside this issue

Republished Articles

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.A.F.E</td>
</tr>
<tr>
<td>College Campus Fire Safety</td>
</tr>
<tr>
<td>Smoke Alarm Safety at Home</td>
</tr>
<tr>
<td>Laser Pointed at Aircraft Training and Safety</td>
</tr>
<tr>
<td>Making the Magic Work</td>
</tr>
<tr>
<td>Safer Skies Through Education</td>
</tr>
<tr>
<td>Annual Safety Survey Focus</td>
</tr>
<tr>
<td>Region Safety Officers</td>
</tr>
<tr>
<td>Col Robert Diduch CAP/SE <a href="mailto:safety@capnhq.gov">safety@capnhq.gov</a></td>
</tr>
<tr>
<td>Col Robert Alex Asst CAP/SE Ground <a href="mailto:safety@capnhq.gov">safety@capnhq.gov</a></td>
</tr>
<tr>
<td>Lt Col Bruce Brown Asst CAP/SE Aircraft <a href="mailto:safety@capnhq.gov">safety@capnhq.gov</a></td>
</tr>
<tr>
<td>Mr. Frank Jirik Safety, NHQ/SE <a href="mailto:safety@capnhq.gov">safety@capnhq.gov</a></td>
</tr>
</tbody>
</table>

October 2011

What is S.A.F.E.?

Life on the streets takes on a whole new meaning when you're a firefighter/paramedic. The streets are where the crashes occur... where the windshields are shattered... where the injuries are violent... where lives are forever changed. It's these kinds of life-changing experiences that create the backdrop for a dramatic, gripping program called Street Smart presented by Stay Alive from Education (S.A.F.E.).

Go to S.A.F.E. | Prevention - Education - Duty | Homepage please read about this program. The Military is bringing this program to their bases and we should try and attend as many as possible. Go to the following link for schedules Street Smart Scheduling (321)438-5321 or joe @ safeprogram.com (Online Web Calendar)

Please get your Cadet Programs and Safety Officers involved in this program. This is a good program and I would like to see our Safety Folks get involved in this also.

Jett Mayhew, Lt Col, CAP DDR Team Leader
College students living away from home should take a few minutes to make sure they are living in a fire-safe environment. Educating students on what they can do to stay safe during the school year is important and often overlooked.

SAFETY TIPS

- Look for fully sprinklered housing when choosing a dorm or off-campus housing.
- If you live in a dormitory, make sure your sleeping room has a smoke alarm, or your dormitory suite has a smoke alarm in each living area as well as the sleeping room. For the best protection, all smoke alarms in the dormitory suite should be interconnected so that when one sounds, they all sound.
- If you live in an apartment or house, make sure smoke alarms are installed in each sleeping room, outside every sleeping area, and on each level of the apartment unit or house. For the best protection, all smoke alarms in the apartment unit or house should be interconnected so that when one sounds, they all sound.
- Test all smoke alarms at least monthly.
- Never remove batteries or disable the alarm.
- Learn your building’s evacuation plan and practice all drills as if they were the real thing.
- If you live off campus, have a fire escape plan with two ways out of every room.
- When the smoke alarm or fire alarm sounds, get out of the building quickly and stay out.
- During a power outage, use a flashlight.
- Stay in the kitchen when cooking.
- Cook only when you are alert, not sleepy or drowsy from medicine or alcohol.
- Check with your local fire department for any restrictions before using a barbeque grill, fire pit, or chimenea.
- Check your school’s rules before using electrical appliances in your room.

Smoking Sense

If you smoke, smoke outside and only where it is permitted. Use sturdy, deep, non-tip ashtrays. Don’t smoke in bed or when you’ve been drinking or are drowsy.

Candle Care

Burn candles only if the school permits their use. A candle is an open flame and should be placed away from anything that can burn. Never leave a candle unattended. Blow it out when you leave the room or go to sleep.

FACTS

- Fires in dormitories, fraternities, sororities, and barracks are more common during the evening hours, between 5–11 pm, as well as on Saturdays and Sundays.
- In 2004–2008 U.S. fire departments responded to an estimated annual average of 3,800 structure fires in dormitories, fraternities, sororities, and barracks.

www.nfpa.org/education

NFPA Public Education Division | 1 Batterymarch Park, Quincy, MA 02169
Smoke alarms are an important part of a home fire escape plan. When there is a fire, smoke spreads fast. Working smoke alarms give you early warning so you can get outside quickly.

**SAFETY TIPS**

1. INSTALL smoke alarms inside every bedroom, outside each sleeping area and on every level of the home, including the basement.
2. Larger homes may need ADDITIONAL smoke alarms to provide enough protection.
3. For the best protection, INTERCONNECT all smoke alarms so when one sounds they all sound.
4. An IONIZATION smoke alarm is generally more responsive to flaming fires and a PHOTOELECTRIC smoke alarm is generally more responsive to smoldering fires. For the best protection, both types of alarms or a combination alarm (photoelectric and ionization) are recommended.
5. INSTALL smoke alarms following manufacturer’s instructions high on a wall or on a ceiling.
6. REPLACE batteries in all smoke alarms at least once a year. If an alarm “chirps,” warning the battery is low, replace the battery right away.
7. REPLACE all smoke alarms when they are 10 years old or sooner if they do not respond properly when tested.
8. FIRE WARNING EQUIPMENT is available to awaken people who are deaf or hard of hearing. This equipment uses strobe lights and vibration equipment (pillow or bed shakers) for people who are deaf and mixed-low-frequency signals for people who are hard of hearing. Some of this equipment is activated by the sound of the smoke alarm.

**FACTS**

- Roughly **two thirds** of home fire deaths happen in homes with no smoke alarms or no working smoke alarms.
- Working smoke alarms cut the risk of dying in reported home fires in **half**.

**AND DON’T FORGET...**

All smoke alarms should be tested at least once a month using the test button.
FBI Says Lasers Pointed at Aircraft Nearly Doubled in 2010

What appears as a dot of light on the ground can illuminate an entire cockpit, disorienting a pilot or causing temporary blindness/fbi photo

People pointing hand-held lasers at aircraft - an act that can temporarily blind or disorient a pilot - nearly doubled in 2010 compared to the year before, the FBI says.

The FBI reported that in 2009 there were 1,489 laser incidents recorded by the Federal Aviation Administration compared to 2,836 in 2010, or an average of more than seven incidents daily.

In releasing the stats, the FBI cited Justin Stouder as an example.

The 24-year-old pointed a laser from his Suburban St. Louis yard at a helicopter last year and was arrested.

"It's equivalent to a flash of a camera if you were in a pitch black car at night," said St. Louis Metropolitan Police Officer Doug Reinholz, the pilot on patrol that night when Stouder's green hand-held laser "painted" his cockpit, according to an FBI press release.
"It's a temporary blinding to the pilot," he said during a recent news conference highlighting the danger of lasers directed at airplanes and helicopters.

The penalties are stiff.

Interfering with the operation of an aircraft carries a maximum sentence of 20 years in prison and a $250,000 fine.

Since the FBI and Federal Aviation Administration began keeping records of laser events in 2004, "there has been an exponential increase every year," said Tim Childs from the Federal Air Marshal Service, who serves as a liaison officer with the Bureau on laser issues.

The overwhelming number of the incidents involve green lasers-especially dangerous because the human eye is most susceptible to damage from the yellow-green light spectrum, the FBI said.

In the St. Louis case, Justin Stouder said at a news conference, according to the FBI: "I had no idea it illuminated the whole cockpit and blinded everybody inside...It was really a selfish mistake."

Training and Safety

Training deals a steal in GA auction

By AOPA ePublishing staff

From private or commercial to recurrent training or special ratings, pilots could get a deal on training packages in the AOPA Foundation’s A Night for Flight online auction.

All of the leading bids so far are below the training packages values, which means you could save on training while still supporting efforts to protect and promote general aviation.

The online auction features eight training packages: table-mounted Redbird simulator, PD dual-screen flight simulator, SimCom recurrent training in a Beech Baron or Cessna 300/400 series aircraft, commercial certificate course, seaplane rating, a Saitek Pro Flight Cessna bundle, Saab column yoke, and a King Schools private pilot kit. The private pilot kit also could make a great gift for the prospective pilot in your life.

All of the proceeds in the A Night for Flight Auction help the AOPA Foundation preserve and improve community airports, improve general aviation’s safety record through increased pilot education, grow the pilot population to ensure GA’s future, and educate the public on the benefits of GA. Register to begin bidding and sign up for email notifications when a new product is added to the auction. You’ll want to stay up to date on the latest items. Aircraft and other aviation memorabilia are being added regularly!
I proudly admit to being a technophile. I've been using computers since I can remember, and possibly longer according to photographic evidence. I have at least six computers in my home, along with smart phones, media consoles, set top boxes, GPSs, iPods, etc. But despite my technical expertise, I'm still routinely flummoxed by automation. I know I'm not alone in thinking: “Why did that just do that?!” With more advanced systems and high levels of automation rapidly moving into general aviation (GA) aircraft, now is the time to figure out your automation management strategies. So here are a few pointers I’ve found useful.

Monitor the Magic

At some point in your aviation career, whether you fly for a living or for pleasure, you’ve probably heard about Eastern Airlines flight 401. Late on the night of December 29, 1972, the flight missed an approach at Miami International Airport following a failure of the nose gear position indicator light. While attempting to trouble shoot the problem, the crew failed to notice the aircraft was slowly descending into the Everglades. The National Transportation Safety Board (NTSB) concluded that the flight crew failed to monitor the flight instruments and detect the unexpected descent in time to prevent the accident. Despite having a full crew of three properly qualified pilots (captain, first officer, and second officer) and a maintenance specialist in the jumpseat, no one was monitoring the airplane’s flight path. Instead, everyone on the flight deck became completely consumed with what turned out to be a burnt-out bulb. They all assumed that the autopilot would hold the assigned altitude of 2,000 MSL, and no one noticed the autopilot disconnect or the radar altimeter warnings until it was too late.
This is a classic case of failure to monitor the automation. Even the best systems have their faults, and it's never a good idea to trust them completely. Your life may be at stake, so keep your scan going even when the autopilot is engaged. Be vigilant about what automation modes are in use (e.g., NAV/Heading/VNAV, etc.). To keep your brain engaged, use verbal callouts anytime you make a change to airspeed, altitude, heading, frequency, or automation mode. You might also consider making callouts when you cross each waypoint along your route.

**Know the Systems**

The NTSB report observes that there were many factors at play in the fatal Colgan 3407 accident in 2009. One such factor was the crew apparently forgetting about activating a system and how that system worked with other aircraft systems. Early in the flight they turned on the anti-icing systems which included selecting a switch which increased reference speeds. This increases the margin over a stall to give the crew some compensation for any potential aerodynamic losses caused by the potential icing. The crew discussed their experience with icing and noted observing icing on the airframe but did not indicate any real concern (the NTSB agreed, concluding that icing did not adversely affect the handling characteristics of the accident flight). But when the first officer set performance data for landing, she did not include that the Vref increase system was active. This error created a conflict between how the aircraft was operating and the information the systems had provided regarding the reference speed to be flown on approach: The system recommended a speed of 118 KIAS when, with the Vref increase system on, it should have been 138 KIAS. The other solution would have been to turn the system off, which would have removed the conflict between the aircraft's systems and the crew's expectations.

As the captain slowed the aircraft for approach at 118 KIAS, the aircraft's stick shaker activated at 131 KIAS. The surprised captain pulled back on the yoke while adding power. This action increased the g-load, which in turn increased the stall speed. As the airspeed decreased through 125 KIAS, the aircraft exceeded its critical angle of attack (AOA) and stalled. Even after the stick pusher twice activated in an attempt to break the stall, the captain continued to pull back in response. Multiple crew misunderstandings about the information and system interaction played a role in the outcome.

While most GA aircraft systems are less sophisticated, we still have interdependent systems. Moreover, interdependent avionics will become more common. Radios are tied to displays, which are tied to course deviation indicators (CDIs) and moving maps. The point is that you need to know how each of those systems interacts with the others, and where there might be potential pitfalls.

**Be Ready for Malfunctions**

While automation can help reduce workload, pilots must be prepared in case it suddenly disappears. In 2005, a Cirrus SR-22 crashed following apparent pilot disorientation. According to the NTSB, the pilot was instrument rated and had more than 400 hours in type. However, he had only 15 hours of actual instrument experience. He became disoriented after his Primary Flight Display (PFD) failed.

An instructor who previously flew with the pilot stated that they had practiced partial panel flying less than a month before the accident, in addition to a number of previous partial panel practice sessions. Clearly, therefore, the accident pilot had considered...
the chance that his PFD could fail; in fact it had malfunctioned in the past. But, as you might imagine, there is a world of difference between practicing in a situation where you are prepared for the failure and seeing your workload dramatically and unexpectedly increase in actual instrument conditions. That alone is a good reason to make training as realistic as reasonably possible. And, as always, have a reliable and workable contingency plan.

These are three good starting points for how to manage not only the magic (aka automation) in the cockpit, but also your overall flying in a safe and professional manner.

What tips do you have?

James Williams is FAA Safety Briefing’s assistant editor and photo editor. He is also a pilot and ground instructor.

Better than Real

Harlan Gray Sparrow III

You may have heard it is possible for a pilot to earn a type rating without ever having been in the real airplane. This is possible – and safe – because simulation technology these days is as real as it gets. In fact, simulators make it possible to conduct even more extensive training, because it is possible for the pilot in a simulator to experience realistic failures and malfunctions that would not be safe to simulate (much less perform) in the real airplane.

As you might imagine, someone in the FAA has to decide whether a simulator is sufficiently realistic to substitute for the actual airplane and meet training requirements. That “someone” is a group of people comprising the National Simulator Program (NSP), which is organizationally part of the Flight Standards Service’s Air Transportation Division. Established at FAA Headquarters in 1980, the NSP began with a staff of 12 and had regulatory oversight responsibility over 92 simulators, both visual and non-visual. Since 1982, the NSP has been physically located in Atlanta, Georgia. The NSP is charged with evaluating and qualifying over 760 flight simulators, numerous flight training devices (FTDs), and recommending them for approval for use in FAA-approved flight training curricula. It is through the efforts of the NSP that qualified flight simulators are available for approval and subsequent use in the training of airline crewmembers, commercial and private operators, and FAA inspectors.

The policies and procedures established by the NSP focus on evaluating the performance of the simulator in comparison to the performance of the aircraft, both objectively and subjectively. Any comparison other than simulator-to-aircraft introduces the possibility of comparison errors and requires detailed evaluation by the NSP’s technical staff in accordance with the applicable regulations.

The NSP is also responsible for setting criteria and standards (as defined in Title 14 Code of Federal Regulations [14 CFR] part 60) for initial qualification and recurrent evaluations for aircraft and rotorcraft simulators, as well as for level six and seven FTDs. The NSP provides initial evaluation of reference data for level four and five FTDs, if required, and provides technical assistance to the Flight Standards District Office (FSDO) with responsibility for approval of the FTDs.

In addition, the NSP designates pilot simulator evaluation specialists to serve as operations members and active participants on the Flight Standardization Boards (FSB) and the Flight Operations Evaluation Boards (FOEB) of new aircraft.

NSP inspectors and engineers travel throughout the world evaluating FAA-approved simulators and assisting foreign countries that have requested technical assistance through the U.S. State Department. Moreover, the NSP works with international organizations to improve simulation standardization worldwide. We are truly here to help.

Harlan Gray Sparrow III is the manager of the FAA’s National Simulator Program. For more information, please see www.faa.gov/about/initiatives/nsp.

From apple carts to modern full fidelity simulators, we’ve come a long way in flight simulation.
FAA Safety Team | Safer Skies Through Education

Approach and Landing Safety Tip
Notice Number: NOTC3264
The general aviation accident rate is much higher than it needs to be and most accidents are preventable. Some procedures used by the airlines, who have an enviable accident rate, can be adapted for use in general aviation. The procedures are useable for either VFR or IFR operations.
More thorough preflight planning, use of an approach briefing checklist, and making sure that each approach is stabilized will increase the chance of making those spectacular landings we all strive for.
An excellent discussion of approaches and landings can be found at Gene Benson's web site at http://www.genebenson.com/app_ldg/app_ldg.htm and a very nice online course is available at http://www.genebenson.com/psych_app_ldg/Psychology%20of%20Approach%20and%20Landing%20Course/player.html. This course also qualifies for WINGS credit.
We invite you to review your knowledge of the principles that lead to great landings!

This notice is being sent to you because you selected “General Information” in your preferences on FAASafety.gov. If you wish to adjust your selections, log into https://www.faasafety.gov/Users/pub/preferences.aspx where you can update your preferences.
Annual Safety Survey Focus!

CAP’s leaders are asked to review their action plans and to close those FY11 questions that are still open. For units that have complete surveys and closed all the items from last year’s safety survey, please stand by; new questions for the FY12 survey will be available for ALL units on November 1.

The annual safety survey is an opportunity to learn about areas CAP needs to focus on this year. For the questions that your unit answers NO to, you can set goals, but you must manage those goals to closure.

When the new bank of questions comes out, please forward your response to safety@capnhq.gov. The results of last year’s surveys will be available soon. IT is working on a commander’s report, so NO items can be easily identified by all echelons.

Thanks for your support.

National Safety Team
SUMMARY

CAP’s safety awareness and program management has significantly improved with the addition of NHQ safety staff working in conjunction with the National Safety Team (NST). The NST is comprised of the National Safety Officer and volunteer assistants assigned as subject matter experts for flight and ground safety. Region and Wing Commanders are moving away from a punitive safety program towards a behavior-based safety program that has shown significant improvement in using safety mishaps as an educational opportunity to raise awareness and prevent risk exposure.

Got a great safety article that you would like to see in a future Beacon newsletter? Please send it to Lt Col Sharon Williams at safetybeacon@capnhq.gov.

Region Safety Officers

Col Charles Greenwood  
GLR/SE  
cgreenwo@bsu.edu

Col Charles Glass  
MER/SE  
csglass@juno.com

Col Harold D. Brown  
NCR/SE  
hbrown9425@aol.com

Col Robert Castle  
SWR/SE  
castle@cox.net

Lt Col Paul Mondoux  
NER/SE  
paul@nhplm.org

Lt Col Donald Johanson  
RMR/SE  
johansndon@msn.com

Lt Col Bill Woody  
SER/SE  
wwoody@att.net

Maj Alex Kay  
PCR/SE  
bcat417@aol.com