

DESERT BREEZES



Two-way radio to be required near Luke AFB

*By Sarah Brown,
AOPA online, January 7, 2010*

The FAA has issued a [final airspace rule](#) requiring two-way radio communication in the vicinity of Luke Air Force Base near Phoenix.

All VFR aircraft operating in the vicinity will have to establish communication with the Luke Radar Approach Control prior to entering a Special Air Traffic Rule (SATR) area and maintain communication while operating in the area, effective May 6. The SATR will be active during

official daylight hours Monday through Friday while Luke pilot flight training is underway, as broadcast on the local automatic terminal information service (ATIS). When it is active at other times, pilots will be notified by notam and through the ATIS broadcast. The SATR will be charted and will make use of a number of prominent visual landmarks.

According to the FAA and Luke officials, the rule is necessary to address reported near midair collisions in the area and will help reduce the potential for midair

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Board Meeting

***Pinnacle Community Church, 1330 E. Union Hills
Tuesday, February 16th, 5:45 PM***

General Meeting

***Pinnacle Community Church, 1330 E. Union Hills
Tuesday, February 16th, 7:00 PM***

Speaker: Volunteer or FSDO employee will speak about WINGS program.

collisions in the vicinity. [AOPA raised concerns](#) when the Air Force initially proposed special rules for the area in 2006, saying that more data was needed to support a change. The association recommended non-rulemaking alternatives to the SATR that would not unnecessarily complicate the already busy airspace in the region, including an education effort and a note on the ATIS. AOPA, local airports, and the Air Force have initiated voluntary efforts to reduce the risk, but ultimately the FAA determined that additional communication efforts would help mitigate the safety concerns.

“Based on the complexity of the Phoenix Class B airspace and the number of general aviation operations, it will be extremely important that pilots are not denied access to the Luke SATR,” said Heidi Williams, AOPA senior director of airspace and modernization. “We have been assured that Luke has the staffing resources to ensure this requirement will not burden local and transiting GA pilots, and we will continue to monitor to ensure that is the case.”

The initial proposal would have required a clearance to enter the airspace, but based on input from local pilots and AOPA, pilots are not required to obtain clearance under the final rule.

Pilots with no radio can call Luke by telephone to request transition. AOPA is still concerned,

The Tucson club's February rally is the 21st at 7:00 am. The theme is "When Pigs Fly", the food theme is Makin Bacon and the drink theme is pig colored. You are welcome to go fly and tailgate with them. Contact Margret J. Aros for information, 520-203-6078.

however, that because VFR pilots tend to avoid controlled airspace, the SATR could push more VFR pilots closer to sailplane operations from Pleasant Valley and make that area more congested.

The BFA Board is pleased to announce the selection of Des Moines, Iowa as host city for the BFA's 2011 National Convention. The decision was made during a Board teleconference meeting on November 30th. Des Moines was one of four cities that had bid to host the convention. The others were Denver, CO; Phoenix, AZ and Milwaukee, WI. The decision was not an easy one as each bid was backed by a commitment of strong support from balloonists in each of the local areas. Local support was a key element in the success of the 2008 convention in Louisville, KY and an element the Board felt had to be present in the winning bid. History was also on the side of Des Moines as 2011 will mark the 50th anniversary of the BFA. Many of the organization's roots can be traced to Iowa and specifically Indianola, just a few minutes drive south of Des Moines. While the convention program will be developed in the next coming months, there is little doubt that history - both of ballooning and of the BFA - will play a large role thanks in part to the National Balloon Museum located in Indianola. The BFA corporate offices are also located in Indianola, within the National Balloon Museum. The projected dates for the convention are April 7-10, 2011. Confirmation of the dates will be announced in the near future. Any BFA member interested in assisting with convention planning should contact their regional director. See BFA website for more details: <http://www.bfa.net>.

STATE ALLOCATION BOOSTS ECONOMY, ADVOCATES SAY

*Melanie Kiser, Cronkite News Service,
January 21, 2010 12:00 am*

On Ariz. Aviation Day, industry lobbies against new cuts to fund.

PHOENIX - Arizona's aviation industry is bracing for impact as state leaders look to close the gaping budget deficit.

Worried about further cuts to the state aviation fund, which provides grants for design, construction and maintenance of airports, proponents descended on the state house Wednesday to highlight the industry's economic impact.

"Aviation in Arizona is a powerful economic engine," said Joe Husband, city of Phoenix aviation superintendent and a past president of the Arizona Airports Association. "It translates into jobs and tax revenue, and we want to make sure the state legislators understand that aviation can be there to help with the recovery."

Advocates said aviation-related activities directly generate \$18.2 billion in economic activity and 230,000 jobs statewide each year. Taking spending multipliers into account, the economic impact of the industry is \$38.5 billion annually, they said.

Husband and others used the fifth annual Arizona Aviation Day, which featured a helicopter and a hot-air balloon, to highlight aviation's role in bringing more than 8 million visitors to Arizona annually and in mail delivery, emergency response, business and military operations.

Members of the Airports Association also recommended minimizing further cuts to the state aviation fund, which draws its revenue

A hot-air balloon, tethered outside the Arizona Capitol in Phoenix, makes a bold visual statement as representatives of the state's aviation sector ask that further cuts to the state aviation fund be minimized.



from aviation-related taxes and registration fees. While cuts for this fiscal year and next haven't been finalized, leaders cut more than \$36.4 million from the fund in fiscal years 2008 and 2009.

The immediate effects of decreased funding can and will be seen on the runways and terminals of Arizona's 84 airports, said Jeffrey Tripp, airport projects supervisor at Mesa's Falcon Field Airport.

"What the highway fund does for the roads, the aviation fund does for airports," he said. Grand Canyon National Park Airport, Arizona's third-busiest and only state-owned airport, is among many whose expansions have been postponed due to lack of funding, said Mike Halpin, the airport's manager.

Heavy vehicle traffic within the park has officials aiming to bring more tourists in by plane and shuttle them around, Halpin said. This won't happen for at least another year, as

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the cuts have necessitated the elimination of any state-funded aviation project, he said.

Husband said that in the long run, continued cuts "could potentially affect the ability to maintain and expand the aviation infrastructure in Arizona." However, he doesn't foresee any impact on public safety. "Safety is always the No. 1 priority in aviation," Husband said. "No one will allow a situation to occur if it's not completely safe."

Balloon Etiquette

from the Balloon Reflector, submitted there by Mary Ann Fournier, Hillsboro, NH It was produced by the BFA, I want to say somewhere around 1982, it doesn't have who wrote it, so I can't give any credit here. Fournier's Note: A lot of times these etiquettes are no longer followed.

It's very plain and simple.

REASONS:

- Protect Fellow Balloonist's Equipment
- Protect One's own Equipment
- Project Image of Safety to the Public

INFLATION:

- Placement of equipment with Relations to all other
- Equipment in the Area
- Tether Balloon

TAKE-OFF:

- Downwind Balloon has Right of Way
- Clear Path for Take-Off

IN-FLIGHT:

- Lower Altitude Balloon has Right of Way
- Maintain Communications with Other Balloon

LANDING:

- Remove Equipment Quickly
- Offer Your Crew for Assistance
- Avoid Landed Balloon

CREWING FOR ANOTHER BALLOON:

- Follow Instructions of Pilot and/or Crew Chief
- Do not Impose Your Techniques on Another Balloonist

GENERAL CONSIDERATIONS:

- Avoid Public Arguments

UPCOMING CLUB EVENTS:

**Powder Puff Breakfast
Deer Valley Airport
8:00 AM, February 14th**

**February 16th Meeting
Pinnacle Community Church
1330 E. Union Hills
7:00 PM**

The Scottsdale FSDO has committed to provide a speaker (possibly a volunteer) who will explain the WINGS program and provide more details, such as on-line safety seminar for credit and how to record flights on line.

MARK YOUR CALENDAR!

FEBRUARY

6 BFA/FAA ON LINE SAFETY SEMINAR Don Edwards
sedonagypsy@yahoo.com
www.bfa.net

MARCH

13th Safety Seminar Colorado Balloon club <http://ltasafetyseminar.org/>

APRIL

17 Safety Seminar Flabob Airport (CA) Southern California
Balloon Association,
www.socalballoons.org

MAY

1-2 23rd Annual OldTimers Balloon Rally This is an invitational Bill Glen
event limited to 50 Balloons bns Glen@cableone.net
Roswell, New Mexico

JUNE

4-6 Temecula Valley Balloon and Wine Festival Lake Skinner Park, California Contact Festival Office:
951-676-6713

19-20 Sevier County Eyes to the Sky Salina, Utah Limited to 20 Kent J Barnes
KJBarnes@att.net
801-557-5300

SEPTEMBER

17-19 Cedar City Sky Fest Cedar City, Utah Mary Payne
skyfest10@infowest.com

OCTOBER

2-10 Albuquerque International Balloon Fiesta Albuquerque,
New Mexico

New Mexico's 2009 entry in the New Years Day Rose Parade featured Hot air balloons!

The Human Element in Aviation

Notice Number: NOTC2081
-A GA Guide to Human Factors

Human factors: It's a topic discussed at most aviation safety seminars, as well as a fundamental subject during pilot and mechanic training. Yet, despite widespread awareness of the importance of human factors in safety, it continues to play a key role in a majority of today's aircraft incidents and accidents.

Encompassing everything from fatigue and workload management, to integrating the

Information request...

Sally, Hi there,

I was at a function and met some people from Valley Life. They said there was a balloonist that use to come do a tether in their parking lot for their people, many who are disadvantaged.

Do you know who use to do this?

They are at 1143 W. Hatcher Road in Phoenix.

Margie Long
480.502.6999
Hot Air Expeditions

Does anyone know who used to do this? Please let Margie know if you remember.

latest advances in technology, the topic of human factors covers a wide spectrum. The *FAA Aviation News* team, along with staff members of the FAA's Civil Aerospace Medical Institute (CAMI) teamed up to produce an issue dedicated to this important subject.

Headlining the issue is the article, "The Importance of the Human Element," written by Dr. Thomas R. Chidester and Dr. Carla A. Hackworth. The article provides readers with a solid foundation on human factors and addresses the question several might ask: Why should I care? The article also discusses how CAMI research helps explain and pinpoint human factors that may lead to an error.

"When errors do occur, FAA experts try to understand the factors that led to those errors," the article states. "One important goal is to determine whether a given error is a one-time error or a potential pitfall for other people."

For more information on how FAA human factors research helps improve your safety, go to: www.faa.gov/news/aviation_news.

We have all experienced moments where we are left scratching our heads trying to figure out "what just happened?" Have you ever been distracted while taxiing? Have you ever planned your flight, checked weather, and yet inadvertently encountered IMC? Have you ever read back a clearance incorrectly? If so, you have likely thought about what happened and how you can prevent it from happening in the future. That means, whether you realized it or not, you were thinking about human factors and aviation, the very theme of this issue.

What Does "Human Factors" Mean?

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The events described above may or may not have human limitation as a root cause, but most require addressing human factors to prevent similar occurrences.

The discipline of human factors addresses how people interact with technology, co-workers, machines, and the work environment to safely accomplish tasks. FAA focuses its human factors research on how pilots, controllers, dispatchers, AMTs, flight attendants, and ground personnel safely and effectively do their jobs. For example, FAA works with designers when new systems are planned and implemented to help do three things:

1. Facilitate appropriate use
2. Prevent mistakes
3. Watch for unintended consequences.

When errors do occur, FAA human factors experts try to understand the factors that led to those errors. One important goal is to determine whether a given error is a one-time problem or a potential pitfall for other people.

The Importance of the Human Element

*Thomas R. Chidester and Carla A. Hackworth
FAA Aviation News January/February 2010*

Here are some topics and examples of how FAA human factors researchers work to help you avoid many of the common human errors made by pilots.

It Could Have Been Me...

Researchers designed a flight simulator exercise that asks the pilot to plan a trip from Amarillo to Albuquerque. The pilot prepares by reviewing aviation weather online, and then calls Flight Service for a briefing. There are

Member Updates:



visual meteorological conditions (VMC) at both airports.

Clouds are moving across the planned route of flight at various altitudes, but ceilings and visibility are acceptable for flight under visual flight rules (VFR). The pilot departs for Albuquerque as planned. Flight Watch reports that en route conditions are mostly as forecast. Still, it becomes clear that rising terrain and a decreasing ceiling while approaching the mountains east of Albuquerque will squeeze the flight from below and above. Descending to stay below clouds puts the pilot uncomfortably close to terrain, so he decides to divert to another airport. Executing a turn while tuning and identifying a navaid, he inadvertently enters instrument meteorological conditions (IMC). The aircraft impacts terrain as he exits the cloud.

What was the point of the exercise? The researchers were checking the effectiveness of weather training products. They exposed pilots to different types of training and then put them into challenging situations like the one described above to examine how they prepared and then how they performed when weather deteriorated. Everyone walked away with lessons learned. Unfortunately, many GA accidents have followed a similar path, but without a second chance for pilots to learn from their mistakes. How would you improve your preparedness or performance in this scenario?

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The Benefits of Experience

We have all read accident reports where serious risk that is clearly apparent in retrospect went unnoticed by the pilot.

Research provides one possible explanation for this behavior: We are more likely to accept multiple risks if we encounter them in a series, instead of all at once. Consider this example. Of course, you would not plan to take a VFR-only airplane into a high-altitude airport when visibility is deteriorating. But would you recognize yourself in that scenario if you had just lost a navigation radio en route to that airport and found yourself in marginal visibility?

In another example, human factors researchers developed a simulator study involving pilots of varying experience levels, with an equal number of instrument-rated and VFR-only pilots.

The results are surprising. Although you might predict that experienced pilots would be more willing to forge ahead, the study actually found that more experienced pilots were more skeptical, less willing to fly the planned route under VFR, and more likely to divert and to maintain weather and terrain separation during flight. As stated in the General Aviation Pilot’s Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making (available online at www.faa.gov), “the more doubtful the weather, the more information you need to obtain.”

Threat and Error Management

Training for today’s airline pilots includes many lessons learned from human factors research. One topic that gets considerable attention is the concept of “threat and error management,” or TEM.

TEM recognizes that even when flights are planned and operated by trained and

professional pilots in collaboration with dispatchers, mechanics, flight attendants, and others, human beings still make mistakes, especially when the environment presents challenges. The idea behind TEM is to accept this reality and train pilots to recognize errors as quickly as possible and manage, or mitigate, their negative impact.

Seeing Is (Not Always!) Believing

Many human factors specialists focus on the limits of perception. Guidance from research in perception is part of today’s pilot training materials.

Remember those lessons on visual and vestibular

Research suggests that we are more likely to accept multiple risks if we encounter them in a series, instead of all at once. Human factors research has contributed to what we know about the impact of workload on pilots.

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SUNRISE / SUNSET

February 2010 for Phoenix - W 112° 05 ‘ N33° 30’

| | |
|-------------------|-------------------|
| Sat., February 6 | 7:21 AM / 6:03 PM |
| Sat., February 13 | 7:14 AM / 6:10 PM |
| Sat., February 20 | 7:07 AM / 6:16 PM |
| Sat., February 27 | 6:59 AM / 6:22 PM |

Mountain Standard Time

Source: http://www.sunrisesunset.com/calendar.asp?comb_city_info=Phoenix,%20Arizona;

[112.1;33.5;-7;0&month=2&year=2009&time_type=0&use_dst=0](http://www.sunrisesunset.com/calendar.asp?comb_city_info=Phoenix,%20Arizona;112.1;33.5;-7;0&month=2&year=2009&time_type=0&use_dst=0)

January/February 2010 FAA Aviation News 7 (motion-sensing) illusions, differences in apparent glidepath as a function of runway dimensions, concerns about differences in color vision and visual acuity, and likely mistakes when flying in night or low visibility? Visual illusions still present great risks, so you may want to review some of the information available in FAA's brochure on this topic: www.faa.gov/pilots/safety/pilotsafetybrochures/media/SpatialD_Seeing.pdf.

Decision Making

Most theories of human decision-making assume a deliberative process: We gather information, consider alternatives, and select options that maximize benefit and minimize risk. Yet, researchers have observed that experienced pilots don't appear to do much deliberation. Instead, they use what one researcher calls "recognition-primed decisions." This means that pilots who think they understand a situation may believe the solution is obvious. The problem is things can go wrong if "recognition-primed decisions" lead to incorrect or inappropriate responses.

Here's an example. During the past two years, scientists have interviewed and analyzed the details of adverse weather encounters within a group of 25 pilots. They learned that the majority of these pilots did not understand or recognize the danger that the adverse weather would cause. The situations they encountered simply did not appear very different from other marginal situations they had successfully flown through before.

The human factors lesson is this: Be wary. Always question your assumptions and strive for the key elements of good decision making. These include good information, knowledge to understand that information, and experience.

Workload

Human factors research has contributed to what we know about the impact of workload on pilots. As any pilot knows, many things can happen during very brief periods of each flight that can increase the likelihood of error. In too many accidents and incidents, the pilots get "behind" the aircraft, become controlled by changing circumstances, or rush to comply with conflicting duties.

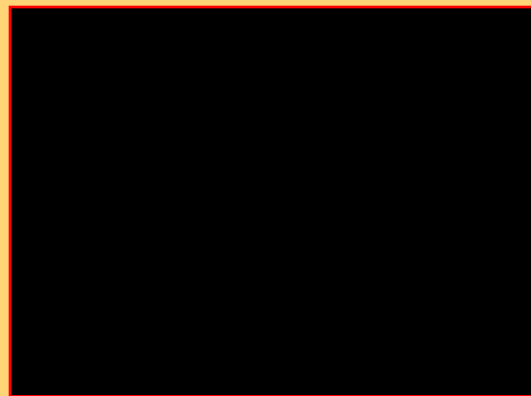
Research has taught us that human beings are limited as information processors. When overloaded, we tend to shed duties and accept a less planned or controlled approach to what we do. These "normal" reactions can create unacceptable, but unrecognized, risk in flight. Human factors research in this area has therefore stimulated development of workload-reducing tools and systems for the cockpit to help keep pilots planning and thinking "ahead" of the aircraft.

Pros and Cons of Technology

Advances in technology can bring unintended consequences. In 2004, researchers found that pilots with access to higher-resolution NEXRAD weather images were more likely to try navigating between areas of heavy precipitation in a simulation study. This

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FEBRUARY BIRTHDAYS



response was not the intended use of the system, which was designed to help pilots give significant weather a wide berth. In 2008, another researcher demonstrated that a very brief training program could prevent most pilots from making this mistake.

One study found that more experienced pilots were more skeptical and more likely to divert and to maintain weather and terrain separation during flight.

FAA Aviation News January/February 2010
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By contacting GPO toll free at: 1-866-512-1800

By using the order form in the center of this magazine. These are just a few of many examples of how human factors—how you—can have a very real impact on safety. As human factors researchers, our goal is to improve the aircraft you operate, the training you receive, the equipment and support you are provided, and the environment in which you operate. To learn more about research at CAMI, visit: www.faa.gov/library/reports/medical/oamtechreports/.

Thomas R. Chidester, Ph.D., is Manager, Human Factors Research Division at FAA's Civil Aerospace Medical Institute. Prior to joining FAA in 2007, Dr. Chidester was with NASA as Director, Aviation Performance Measuring System and previously was Manager, Human Factors and Safety Training, American Airlines. Carla A. Hackworth, Ph.D., is Manager, Flight Deck Human Factors Research Branch at FAA's Civil Aerospace Medical Institute. She has led assessments of organizational effectiveness, GA testing issues,

weather-related GA incidents, and human factors in aviation maintenance. For More Information FAA Aerospace Medical and Human Factors Research Web Site www.faa.gov/data_research/research/med_humanfacs/

The Effects of NEXRAD Graphical Data Resolution and Direct Weather Viewing on Pilots' Judgments of Weather Severity and Their Willingness to Continue a Flight www.faa.gov/library/reports/medical/oamtechreports/2000s/media/0405.pdf
General Aviation Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making www.faa.gov/pilots/safety/media/ga_weather_decision_making.pdf
January/February 2010 FAA Aviation News

Wally Moran: **47 Years a CFI. His #1 Tip?**

"..that's probably the most important thing a good airman does -- is they really analyze their flights and they're self-critical.

If you found that you were surprised during a flight by something, go back and analyze why you were surprised. Did you miss an item on your checklist? Did you fail to get a good weather briefing? What was it that surprised you?

Some pilots I know keep a diary and they talk about the good things and the bad things of their flight. And that gives them a focus for their next training event or their next study event."

The winds and waves are always on the side of the ablest navigators.
-Edward Gibbon

Finding and Fighting Fatigue

*Produced by the editors, FAA Aviation News,
http://www.faa.gov/news/aviation_news/*

“A good laugh and a long sleep are the best cures in the doctor's book.” This simple Irish proverb offers some profound advice, especially to those involved in the aviation industry. Each year, fatigue is all too often a factor in aircraft-related accidents and incidents. Although airline operator mishaps garner the lion's share of media attention, GA pilots and mechanics are subject to the same fatigue-related risks as are air carrier personnel.

According to “Finding and Fighting Fatigue” in the January/February 2010 *FAA Aviation News*, the solution is amazingly simple, yet often difficult to implement: Get more sleep. In addition to providing tips to help airmen develop better sleep habits, the article also provides a sleep log which helps readers gauge how much sleep they get during a two-week period. The authors offer some sobering facts about fatigue. For instance, did you know that your performance level after being awake for 20 hours is equivalent to that of a legally drunk driver? Be sure to check out the entire article for more tips on how to combat fatigue.

Time is the quality of nature that keeps events from happening all at once. Lately it doesn't seem to be working.
-Anonymous

2nd Quarter Pilot Deviation Airborne-Awareness

Notice Number: NOTC2078

What is an airborne pilot deviation? The actions of a pilot that result in the violation of a Federal Aviation Regulation while in flight. Such

deviations could result in a loss of separation between one airplane and another, or with the next mountain peak!

Why do pilot deviations happen? Pilots don't start off the day by saying, “Today I'm going to go out and commit a pilot deviation.” They don't say, “I'm going to fly through some airspace that I'm not supposed to.” No, pilot deviations occur because of poor technique, inattention, loss of situational awareness, or failure to plan properly.

The FAA Safety Team wants airmen to be aware of this problem, and encourages pilots to increase their awareness and skills so that aviation safety is enhanced.

Types of IFR Deviations (Listed in order of frequency)

- Altitude violations-
Failure to maintain the assigned altitude
- Course clearance violations
- Airspeed violations-
Exceeding max allowable speed below 10,000 feet, in holding pattern, in traffic pattern, on published flight segment, etc
- Missing a compulsory reporting point

What can be done about it?

- Have a method to remember and record directions and/or clearances from ATC.
For example:
 - Write it down,
 - Input it into an altitude alerter or other avionics system,
 - Index the heading bug
- Use current directories, charts, approach plates, and data bases
- If ever in doubt, call ATC and confirm

Types of VFR Deviations (Listed in order of frequency)

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- Altitude violations-
Failure to maintain safe (minimum) altitude
- Airspace violations-
Flying into airspace such as Class B, C, D, Prohibited, Restricted or TFR's without communication and/or clearance
- Airspeed violations-
Exceeding max allowable speed below 10,000 feet, in traffic pattern, etc
- Flying VFR into IMC conditions
- Low level flight

What can be done about it?

- Improve flight planning-Know the route and requirements
- Have only current directories, charts and data bases onboard
- Obtain better/complete weather briefings
- Obtain the NOTAM's and TFR's for your route of flight
- Use Flight Following

Plan ahead and be precise in your preparation for flight and in your actions while operating the aircraft. Don't become complacent or make assumptions. Always be alert and aware and continually processing the situation. Ask yourself, "Do I really have everything correct?"

There are currently 145 hot air balloons registered in Arizona, 62 of which are registered in Maricopa County. (Source, Norman Tapaha, Aeronautics Division, AZDOT

Deadline approaches for plastic pilot certificate

Paper pilot certificates will no longer be valid after March 31, 2010, so make sure you've upgraded to a plastic certificate. The FAA mandated the change because it says the plastic certificates are more counterfeit resistant. Pilots can request the plastic certificate through the [FAA's Web site](#) or by mail. The cost is \$2, but if you change your pilot certificate number from your Social Security number, the switch is free. Temporary, student, and flight instructor certificates are not impacted by the rule.

Airport Surface Deviation Safety Tip

Notice Number: NOTC2064

Remember the old joke, "What's worse than one pilot in a cockpit? Answer: two pilots!"

A second pilot is a resource we sometimes assume will help us out, but without clear guidelines, we may not take advantage of that resource. Here are tips from Crew Resource Management principles that can optimize a flight with two or more pilots aboard.

You don't have to be in an urgent condition to set up these operational standards, it is just good practice. However, were a situation to occur, you're all the better prepared.

CRM Basics:

- **Agree on near-term objectives**
- **Consider available options**
- **Assign task responsibilities**
- **Monitor and evaluate progress.**

"FAASTeam CFI WORKSHOP, MODULE #6"

Topic: FAASTeam CFI Workshop Module #6: Take Offs, Landings & Low Altitude Maneuvers; Aircraft Operational Limitations

On Wednesday, February 10, 2010 at 6:00 PM

Location:

TransPac Flight Academy
530 W. Deer Valley Rd
Phoenix, AZ 85027

Select Number: WP0729799

Description: This is Workshop Module #6 in a series of 8 modules. This Module will cover Take Offs/Landings/Maneuvers and Aircraft Operational Limitations. This 3 hour program will end at 9 PM. Thanks to TransPac for the use of this fine class room facility.

To view further details and registration information for this event, [click here](#).

The sponsor for this event is: **SDL
FAASTeam**

The following credit(s) are available for the WINGS/AMT Programs: KEM 1:00

Everything should be made as simple as possible, but not simpler.
-Albert Einstein

"FAASTeam CFI Workshop, Module #6"

Topic: FAASTeam CFI Workshop, Module #6: Take Offs/Landings/Maneuvers & Aircraft Operational Limitations + local subject

On Saturday, February 13, 2010 at 9:00 AM

Location:

Ryan Airport Meeting Room
9698 W. Ajo Way
Tucson, AZ 85735

Select Number: WP0729800

Description: This is CFI Workshop Module # 6 of 8 Modules. This Module will cover Take off / Landings, Low Altitude Maneuvering and Aircraft Operational Limitations.

To view further details and registration information for this event, [click here](#).

The sponsor for this event is: **SDL
FAASTeam**

The following credit(s) are available for the WINGS/AMT Programs: KEM 1.00

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When you find yourself in a hole, stop digging.
-Will Rogers

**"WINGS PROGRAM -
'WEATHER-WISE, Part 2 -
HAZARDOUS WEATHER'"**

Topic: Weather-Wise, Part 2 - Hazardous Weather

On Saturday, February 13, 2010 at 10:00 AM

Location:
NORTHWEST INDUSTRIAL AIRPARK,
Skip Rimsa's Hangar
1825 W. KNUDSEN
Phoenix, AZ 85027

Select Number: WP0729839

Description: An in-depth discussion on just what is "Hazardous Weather" in the eyes of the FAA weather Briefer and the National Weather Service, how it is classified, and how it is disseminated.

To view further details and registration information for this event, [click here](#).

The sponsor for this event is: **SDL
AWP-204 FAAS Team**

The following credit(s) are available for the WINGS/AMT Programs: KEB 1.00

**"WINGS PROGRAM -
'WEATHER-WISE, Part 2 -
HAZARDOUS WEATHER'"**

Topic: 'WEATHER-WISE, Part 2 - HAZARDOUS WEATHER'

On Saturday, February 20, 2010 at 10:00 AM

Location: WISEMAN AVIATION,
FLAGSTAFF AIRPORT
2600 SHAMRELL BLVD
Flagstaff, AZ 86001

Select Number: WP0729843

Description: Learn all about just what is considered hazardous weather by the FAA and the National Weather service, how it is classified, issues and just what it (should) mean to you, the pilot.

To view further details and registration information for this event, [click here](#).

The sponsor for this event is: **AWP-204
SDL FAAS Team**

The following credit(s) are available for the WINGS/AMT Programs: KEB 1.00



L'Bri Pure n' Natural
Skincare & Cosmetics

Julie Heinrich
Independent L'Bri Consultant

(602)705-3601 Cell
www.julieheinrich.lbri.com
julieheinrich4lbri@gmail.com



CHEF FRANK-O'S RECIPES

Super Bowl Party Food!

Chef Frank-O WINGS

Ingredients:

- 2 1/2 lbs. chicken wing pieces
- 1/2 cup FRANK'S® REDHOT® Sauce mixed with 1/3 cup melted butter for the Wings Sauce.

Directions:

Bake wings in foil-lined pan at 500 °F on lowest oven rack for 20 to 25 minutes until crispy, turning once.

Toss wings in sauce to coat.

Halibut Fish Tacos With Guacamole Sauce

Ingredients

- 4 pieces fresh halibut, steak or filets, 6 to 8 ounces each
- Extra-virgin olive oil, for drizzling

- Salt and pepper
- 1 lime, juiced
- 3 small to medium ripe Haas avocados, pitted and scooped from skins with a large spoon
- 1 lemon, juiced
- 1/2 teaspoon cayenne pepper, eyeball it
- 1 cup plain yogurt
- 1 teaspoon coarse salt, eyeball it
- 2 plum tomatoes, seeded and chopped
- 2 scallions, thinly sliced on an angle
- 1 heart Romaine lettuce
- 12 soft (6-inch) flour tortillas

Directions

Preheat a grill pan or indoor grill to high heat or, prepare outdoor grill. Drizzle halibut with extra-virgin olive oil to keep fish from sticking to the grill pan or grill. Season fish with salt and pepper, to your taste. Roll lime on the counter top to get juices flowing. Also, any under ripe citrus may be placed in a microwave oven for 10 seconds at high setting to induce the juices to flow. Grill fish 4 to 5 minutes on each side or until opaque. Squeeze the juice of 1 lime down over the fish and remove from the grill pan or grill. Flake fish into large chunks with a fork.

While fish is cooking, in a blender or food processor, combine avocado flesh, lemon juice, cayenne pepper, yogurt and salt. Process guacamole sauce until smooth. Remove guacamole sauce to a bowl and stir in diced tomatoes and chopped scallions. Shred lettuce and reserve.

When fish comes off the grill pan or grill, blister and heat soft taco wraps. To assemble, break up fish and pile some of the meat into soft shells and slather with guacamole sauce. Top with shredded lettuce, fold tacos over and eat!

Deep Fried Asparagus

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Ingredients

- 1/2 cup cornstarch
- 3/4 cup flour
- 1 teaspoon salt
- 1 teaspoon baking powder
- 1/2 teaspoon white pepper
- 1/2 teaspoon celery salt
- 1/2 teaspoon baking soda
- 1/4 teaspoon black pepper
- 2 egg whites
- 2/3 cup cold, flat beer
- 3 pounds asparagus, raw, whole, cleaned and cut above white end
- Peanut oil, for frying

Directions

Mix all ingredients except asparagus and oil in a bowl with a wire whisk until well blended. Dip asparagus individually in the batter and deep-fry them in at least 2 inches of peanut oil for 2 minutes or until golden brown.

BFA OnLine Safety Seminar **Connection Information**

This is an updated email as I had one of the links that were incorrect. Hello, I wanted to give you an update regarding the Online Safety Seminar. The seminar will take place on Feb 6th from 8:30 am EST to 5:00 pm EST. We will have lunch scheduled around 12:15 EST however this will be a working lunch as there will be presentation during the lunch period.

There are a couple of things that you can do now to verify that the seminar should work for you on the 6th. Please go to <http://www.faaproductionstudios.com> once you are there, scroll down until you find a button that says "View Safety Seminars Live." Double click on that and wait for about 1 minute. There will be a video that starts playing. This video is the production studios

holder video to verify both the audio and video are working. After talking with the studio on the phone and doing some of my own tests, here is what I found: Windows XP, Vista, and 7 all work with IE 7 and 8. Also Firefox worked as well. Mac users- Use Firefox as Safari did not work. Also if you do not have it, you will need to install flip4mac which can be found at <http://www.telestream.net/flip4mac-wmv/overview.htm>. This is a free download and converts windows media files to quicktime.

I have not tested Google Chrome or Opera. You will NOT need to register with the production studio to view the seminar. The registration for the production studio is for those that are going to be in person at the studio during the seminar. This is to verify they have enough lunches during the program. However, if you register on the production studio site, you will be throwing off their numbers and order way too many lunches.

There have been several questions that have came in and I will address them here:

- 1) Can I get together as a group and view the seminar? Yes, you can get together as a group to view the seminar. For everyone to receive credit for the seminar, everyone must be registered with the BFA before Feb 3, 2010 as well as paid any fees that are needed. After the seminar, there will be a survey sent out to everyone's email address that has registered. They will then need to complete the survey by 11:59 EST Feb 6, 2010. If you did not receive a survey by 6:30 EST Please send me an email to this address and I will make sure you get the survey.

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- 2) Can I record the presentation live off the internet and reply later? I talked with the production studios and it has been coded to prevent recording it off the internet. Once it has been completed, the BFA office will receive copies of all of the presentations. You can call them to order a copy, however can not count as an insurance discount if you choose to play them at a later date. These videos can be ordered and be part of your normal safety seminar.
- 3) Can I ask questions during the presentation? Yes you can ask questions. We have set up an email address of safetyseminarquestions@gmail.com this email box will be monitored during the seminar and will be asked during the presentation.
- 4) What if I have problems logging in on the day of the seminar? If you have technical support questions the day of seminar, please send your questions to BFAtechsupport@gmail.com where we will have a team monitoring this email box and be able to walk you through how to log in.
- 5) Do you need volunteers to help monitor either of the mailboxes? YES we welcome anyone that would like to help out. You can send me an email directly to this email address and I can get you the details.
- 6) How do we receive handouts that are being given out at the seminar? Each presenter will email any notes that they will be handing out during the presentation to the BFA office. The BFA office will then put them on the BFA website to download. All handouts will be in PDF format. You will then need to print out the document and have it ready during the seminar.

- 7) I am not sure if I still need to pay for the seminar- how can I make sure that I am all paid? You can call the BFA office at (515)961-8809 and ask them or you can send them an email at bfaoffice@bfa.net they will be happy to help you with your question.
- 8) Will there be a password needed to view the seminar? In the original email I sent out, I was under the impression there was one needed to view the seminar, however I was incorrect. To receive credit for the seminar, you will have to register with the BFA, pay any money that is due and return the survey at the end of the seminar.

I hope to have answered all of your questions here. If you have any other questions please feel free to email me.

Have a great day!

Cory Miller

Western Region Director

Balloon Federation of America

BFA 2010 Online Safety Seminar Technical Support 5035101215

**Powder Puff Breakfast at
Deer Valley Airport**

VALENTINES DAY
SUNDAY FEBRUARY 14th
8:00 AM



For those of you who remember, Laura Scheffer will be there in memory of Captain Eddy and Carolyn.

BFA Online Safety Seminar **Schedule**

Greetings BFA members and attendees. The upcoming 3rd Annual On Line Safety Seminar is only a few weeks away and I would like to give you a brief update. We have some great presenters scheduled this year and I feel fortunate to have a great line up for you.

The schedule below is tentative and could possibly have some minor changes but the date and time will definitely remain as posted. The FAA Production Studios sets the actual agenda therefore scheduled presentation times are approximate.

This year I am fortunate to have Cory Miller, BFA Director for the

Western Region, in control of the on line portion of this seminar. This will allow me to focus more on the task at hand in Lakeland, Florida. We all should be thankful for the FAA Production Studios for giving us this opportunity to view this from anywhere in the world, LIVE! The seminar is scheduled for February 6th, 2010 and will begin at 8:30 am EST. If you haven't already signed up I would suggest going to the BFA web site and follow the instructions. See you live from Lakeland, Florida in a few weeks.
Don Edwards

| TIME | PRESENTER | BACKGROUND | TOPIC |
|-------|-----------------|--------------------------|---------------|
| 08:30 | Rob Schantz | Schantz Agency | Insurance |
| 09:30 | Cory Miller | BFA Director | BFA |
| 10:30 | Jennifer McNatt | NOAA | Weather |
| 11:30 | Jim Lynch | Aviation Consultant | FARs |
| 12:30 | Mark Roberson | HAB Designated Examiner | Flight Review |
| 13:30 | Cory Miller | BFA Director | Crew Safety |
| 14:30 | Kent Yoest | Flight Standards-Atlanta | Low Flying |
| 15:30 | Tarp Head | President: Head Balloons | Maintenance |

CLASSIFIEDS

Aerostar AX-8

FOR SALE: Aerostar AX-8 (90,000 Sq. Ft.) and basket in good condition. Design is five "Shooting Stars" with words "Arizona" and "USA" on opposite sides. Included are Ball instruments, ropes, drop line, fan, helium tank, and trailer w/new tires. **READY TO FLY!!** Asking \$4,450 (reduced from \$4,850)

Steve Shluker 702-994-4849 (Las Vegas-will deliver to Phoenix)

FOR SALE: Raven gondola with two 20-gallon stainless steel tanks, double burners HP-2, tank cover with heaters, two-point uprights, and an envelope milker. \$3,500 or best offer.

Also available:

- *Four sets of two-point uprights, \$200
- *Three HP-2 double burners, \$400 each
- *Six 20-gallon lay down tanks (empty), \$250 each

Contact Jim Newnam at (602) 279-0441

Glendale Glitter & Glow



Photos by Bud Jorgensen

Twenty-one balloons graced the streets of Glendale for this year's GLitter & GLOW. IF I remember correctly, this is the first year the special shapes, the Ladybug and Joey and Lily Bee (The Little Bees) were glowing.



The weather was very calm, great for glowing. It was well attended and the people seemed to be in a uniquely good mood this year.

When a gentleman asked, Bob's answer to the question "What

does it take to get into ballooning?" is reported to be "Every weekend for the rest of your life." How true!

A lot of retired balloonists came by to visit including Fran & Judy Reynolds and Katherine Hammack, and more that were ballooning with Jess & Diane (Sorry- I forgot the names.).

There has never been a Glendale Glitter & Glow canceled, and the record (and Romaneschi luck) continue to work!

LINKS!

Kevin Knapp's Aunty Monkey Balloon Site
—Reno & ABQ Gas Races and more...
<http://hotairballoon.ning.com/profile/>

also from Kevin Knapp -
<http://hotairballoon.ning.com/photo/photo/slideshow?albumId=699743:Album:116993>

Zeppelins: <http://www.iht.com/articles/2008/07/05/business/05dirigible.php>
More Zeppelin NT: <http://www.airshipventures.com>

Airport ID & Information web site:
<http://www.navmonster.com/>

Dairy Fest in Texas:
<http://www.dairyaires.com/>

Cameron is doing Cool stuff: <http://www.cameronballoons.co.uk/cgi-bin/open.cgi?level=0&page=5>

Check out my (Bob Romaneschi's) Son Erin's Video. He made it during last weeks Glendale Glitter and Glow Block Party in Glendale AZ.:
<http://www.youtube.com/watch?v=i46xzTnDPM>

ABC member Tim Kuller stood up his balloon "Technikuller" for Parkside Community Church school's Transportation Day. The balloon was the hit of the day with preschoolers, competing with Police cars, buses, and Airstream TV, recycling truck and a few other assorted vehicles. They had a helicopter scheduled, but unfortunately it was called away in response to the shooting of the Gilbert police officer.

COMMANDER'S COLUMN

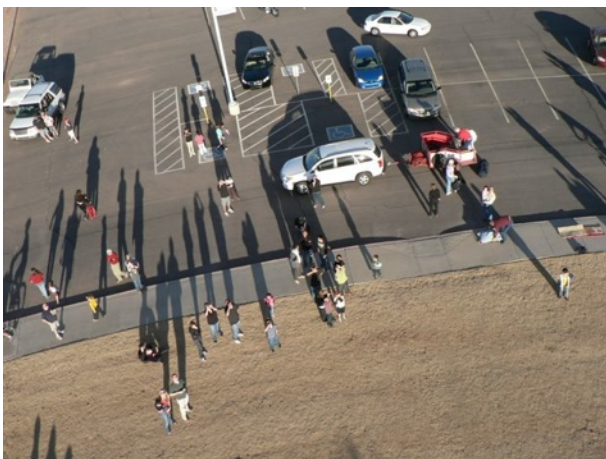
Our longest-distance member, Hubert Van Tuijl, from the Netherlands, was visiting. Judy Holt made sure he was able to get out and do some ballooning while he was here. He took the following photos while out and about...



Visiting Frank and Molly... aah, the GRILL!



Its so early



Flying in Chandler- the view from above



Its more fun when there are others flying, too

Like a lot of people, I am trying to figure out the BFA Safety Seminar on line connection. Be sure to test ahead of time!

I am working on an application to get back on State Trust Land. It is going to require a GPS track of the roads we want to use, and we have to get an individual permit to get that done. Anyone interested in helping? If so, give me a call. We also have to submit a dust-abatement plan (trying to keep that as simple as possible) and wait 3-6 months for review. Will keep you posted as step are taken toward that end.

Frank heard from Laura Scheffer, and we hope you can take the time on Sunday, Feb. 14th to meet at Deer Valley Airport for a Powder Puff breakfast in remembrance of Captain Eddy and Carolyn Scheffer. Let Frank Karlovec know so he can reserve sufficient space.

PILOTS- if you haven't already, you need to get the new plastic pilot's license by March 31st, or you can't fly with the old paper one after that! The Website is looking good- go to www.arizona.balloonclub.org and take a look!

Soft Landings,

Sally

Glendale Glitter & Giso

Monthly Item

The FAA updated the **Balloon Flying Handbook** in 2008. Small excerpts are included each month.

Chapter 2, continued

AIRCRAFT DOCUMENTS

Airworthiness Certificate

An Airworthiness Certificate is issued by a representative of the FAA after the balloon has been inspected, is found to meet the requirements of 14 CFR part 31, and is in condition for safe operation. The Airworthiness Certificate must be displayed in the aircraft so it is legible to the passengers and crew whenever it is operated. The Airworthiness Certificate is transferred with the aircraft except when it is sold to a foreign purchaser.

A Standard Airworthiness Certificate is issued for aircraft type certificated in the normal category for manned free balloons. A Standard Airworthiness Certificate remains in effect as long as the aircraft receives the required maintenance and is properly registered in the United States. Flight safety relies, in part, on the condition of the aircraft, which is determined by inspections performed by mechanics, approved repair stations, or manufacturers who meet specific requirements. A Special Airworthiness Certificate is issued for all aircraft certificated in other than the Standard classifications, such as Experimental or Restricted. When purchasing an aircraft classified as other than Standard, it is recommended that the local FAA Flight Standards District Office (FSDO) be contacted for an explanation of the pertinent airworthiness requirements and the limitations of such a certificate.

Certificate of Aircraft Registration

Before an aircraft can be flown legally, it must be registered with the FAA Civil Aviation

Registry. The Certificate of Aircraft Registration, which is issued to the owner as evidence of registration, must be carried in the aircraft at all times. The Certificate of Aircraft Registration cannot be used for operations when:

- The aircraft is registered under the laws of a foreign country.
- The aircraft's registration is canceled at the written request of the holder of the certificate.
- The aircraft is totally destroyed or scrapped.
- The ownership of the aircraft is transferred.
- The holder of the certificate loses United States citizenship.

When one of the events in 14 CFR part 47, section 47.41 occurs, the previous owner must notify the FAA by filling in the back of the Certificate of Aircraft Registration, and mailing it to:

Federal Aviation Administration
Civil Aviation Registry, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125

After compliance with 14 CFR part 47, section 47.41, the pink copy of the application for a Certificate of Aircraft Registration is authorization to operate an unregistered aircraft for a period of 90 days. Since the aircraft is unregistered, it cannot be operated outside the United States until a permanent Certificate of Aircraft Registration is received and placed in the aircraft.

NOTE: For additional information concerning the Aircraft Registration Application or the Aircraft Bill of Sale, contact the nearest FSDO.

Aircraft Owner/Operator Responsibilities

The registered owner/operator of an aircraft is responsible for certain items, such as:

continued on page

- Having a current Airworthiness Certificate and a Certificate of Registration in the aircraft.
- Maintaining the aircraft in an airworthy condition, including compliance with all applicable Airworthiness Directives.
- Assuring that maintenance is properly recorded.
- Keeping abreast of current regulations concerning the operating and maintenance of the aircraft.
- Notifying the FAA Civil Aviation Registry immediately of any change of permanent mailing address, or the sale or export of the aircraft, or the loss of the eligibility to register an aircraft. (Refer to 14 CFR part 47, section 47.41).

AIRCRAFT MAINTENANCE

Maintenance is defined as the preservation, inspection, overhaul, and repair of an aircraft, including the replacement of parts. A properly maintained aircraft is a safe aircraft. In addition, regular and proper maintenance ensures that an aircraft meets an acceptable standard of airworthiness throughout its operational life. Although maintenance requirements vary for different types of aircraft, experience shows that aircraft need some type of preventative maintenance every 25 hours of flying time or less, and minor maintenance at least every 100 hours. This is influenced by the kind of operation, climatic conditions, storage facilities, age, and construction of the aircraft. Manufacturers provide maintenance manuals, parts catalogs, and other service information that should be used in maintaining the aircraft.

Balloon Inspections

14 CFR part 91 places the primary responsibility on the owner or operator for maintaining a balloon in an airworthy condition. Certain inspections must be performed on the balloon, and the owner must maintain the airworthiness of the balloon during the time between required inspections by having any defects corrected. This typically means that fabric damage outside the maximum allowable damage limits specified by the manufacturer must be repaired before the

envelope can be deemed airworthy and returned to service.

Annual Inspection

Any balloon flown for business or pleasure and not flown for compensation of hire is required to be inspected at least annually. The inspection must be performed by a certificated and appropriately rated repair station, by the manufacturer, or by a certificated airframe and powerplant (A&P) mechanic who holds an Inspection Authorization (IA). The aircraft may not be operated unless the annual inspection has been performed within the preceding 12 calendar months. A period of 12 calendar months extends from any day of a month to the last day of the same month the following year.

100-Hour Inspections

All balloons used to carry passengers for hire must have received a 100-hour inspection within the preceding 100 hours of time in service and have been approved for return to service. Additionally, an aircraft used for flight instruction for hire, when provided by the person giving the flight instruction, must also have received a 100-hour inspection. This inspection must be performed by an appropriately rated FAA certificated repair station, the aircraft manufacturer, or by an FAA certificated A&P mechanic. An annual inspection, or an inspection for the issuance of an Airworthiness Certificate, may be substituted for a required 100-hour inspection.

Preflight Inspections

The preflight inspection is a thorough and systematic means by which a pilot determines if the aircraft is airworthy and in condition for safe operation. The balloon's Flight Manual contains a section devoted to a systematic method of performing a preflight inspection. For balloons, this inspection is usually part of the layout and inflation process, and is greatly aided by the use of a checklist. Again, the pilot must also be aware of maximum damage limitations as published by the manufacturer.

continued on page

Preventative Maintenance

Preventative maintenance is considered to be simple or minor preservation operations and the replacement of small standard parts, not involving complex assembly operations. Certificated pilots may perform preventative maintenance on any balloon that is owned or operated by them. According to 14 CFR part 43, Appendix A, preventative maintenance may be performed by the owner/operator of an aircraft who holds at least an FAA Private Pilot Certificate with a balloon rating.

The following is a partial list of preventative maintenance that may be performed by the owner/operator of a balloon:

- Replacing defective safety wiring or cotter pins.
- Lubrication not requiring disassembly.
- The making of small fabric repairs to envelopes (as defined in, and in accordance with, the balloon manufacturers' instructions) not requiring load tape repair or replacement.
- Refinishing decorative coating of the basket when removal or disassembly of any primary structure or operating system is not required.
- Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices.
- Repairing upholstery and decorative furnishings of the balloon basket interior when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system of affect primary structure of the aircraft.
- Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system.
- Replacing prefabricated fuel lines.
- Replacing and servicing batteries.
- Cleaning of balloon burner pilots and main nozzles in accordance with balloon manufacturers' instructions.

- Replacement or adjustment of nonstructural standard fasteners incidental to operations.
- The interchange of balloon baskets and burners on envelopes when the basket or burner is designated as interchangeable in the balloon Type Certificate Data Sheet (TCDS), and the baskets and burners are specifically designed for quick removal and installation.

Repairs and Alterations

Repairs and alterations are classified as either major or minor. 14 CFR part 43, appendix A, describes the alterations and repairs considered major. Major repairs or alterations shall be approved for return to service on FAA Form 337, Major Repair and Alteration, by an appropriately rated certificated repair station, an FAA certificated A&P mechanic holding an Inspection Authorization, or a representative of the Administrator. Minor repairs and minor alterations may be approved for return to service with a proper entry in the maintenance records by an appropriately certificated repair station or FAA certificated A&P mechanic.

For modifications of experimental aircraft, refer to the operating limitations issued to that aircraft. Modifications in accordance with FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products, may require the notification of the issuing authority.

AIRWORTHINESS DIRECTIVES

A primary safety function of the FAA is to require correction of unsafe conditions found in an aircraft, aircraft engine, propeller, or the appliance when such conditions exist and are likely to exist or develop in other products of the same design. The unsafe condition may exist because of a design defect, maintenance, or other causes. 14 CFR part 39, Airworthiness Directives (ADs), define the authority and responsibility of the Administrator for requiring the necessary corrective action. ADs are the means used to notify aircraft owners and other interested persons of unsafe conditions and to

continued on page

specify the conditions under which the product may continue to be operated. ADs may be divided into two categories:

1. Those of an emergency nature requiring immediate compliance prior to further flight.
2. Those of a less urgent nature requiring compliance within a specified period of time.

ADs are regulatory and shall be complied with unless a specific exemption is granted. It is the aircraft owner or operator's responsibility to ensure compliance with all pertinent ADs. 14 CFR part 91, section 91.417 requires a record to be maintained that shows the current status of applicable ADs, including the method of compliance; the AD number and revision date, if recurring; the time and date when due again; the signature; kind of certificate; and certificate number of the repair station or mechanic who performed the work. For ready reference, many aircraft owners have a chronological listing of pertinent ADs in the back of their aircraft maintenance records.

GLOSSARY

Limitations. Restrictions placed on a balloon by its manufacturer. Examples are maximum envelope temperature and maximum gross weight.

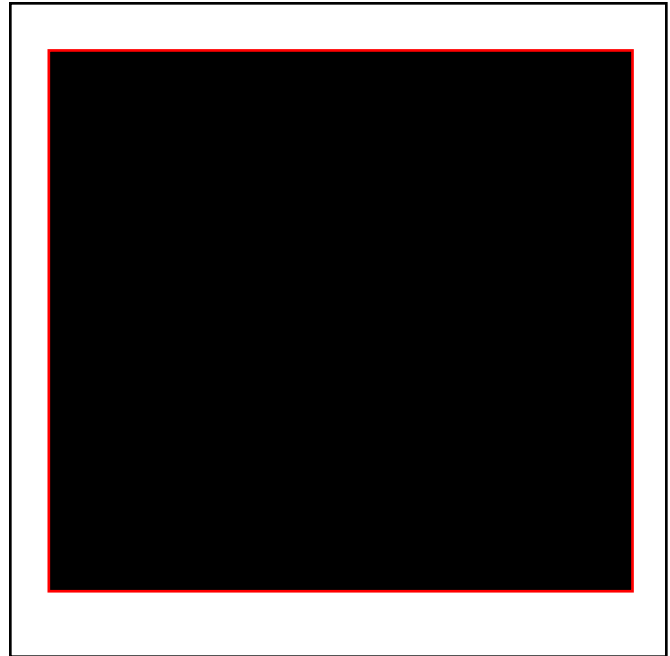
Log. A record of activities: flight, instruction, inspection, and maintenance.

LTA. Lighter-Than-Air

Maintenance. The upkeep of equipment, including preservation, repair, overhaul, and the replacement of parts.

Maintenance Manual. A set of detailed instructions issued by the manufacturer of an aircraft, engine, or component that describes the way maintenance should be performed.

Maintenance Release. A release, signed by an authorized inspector, repairman, mechanic, or



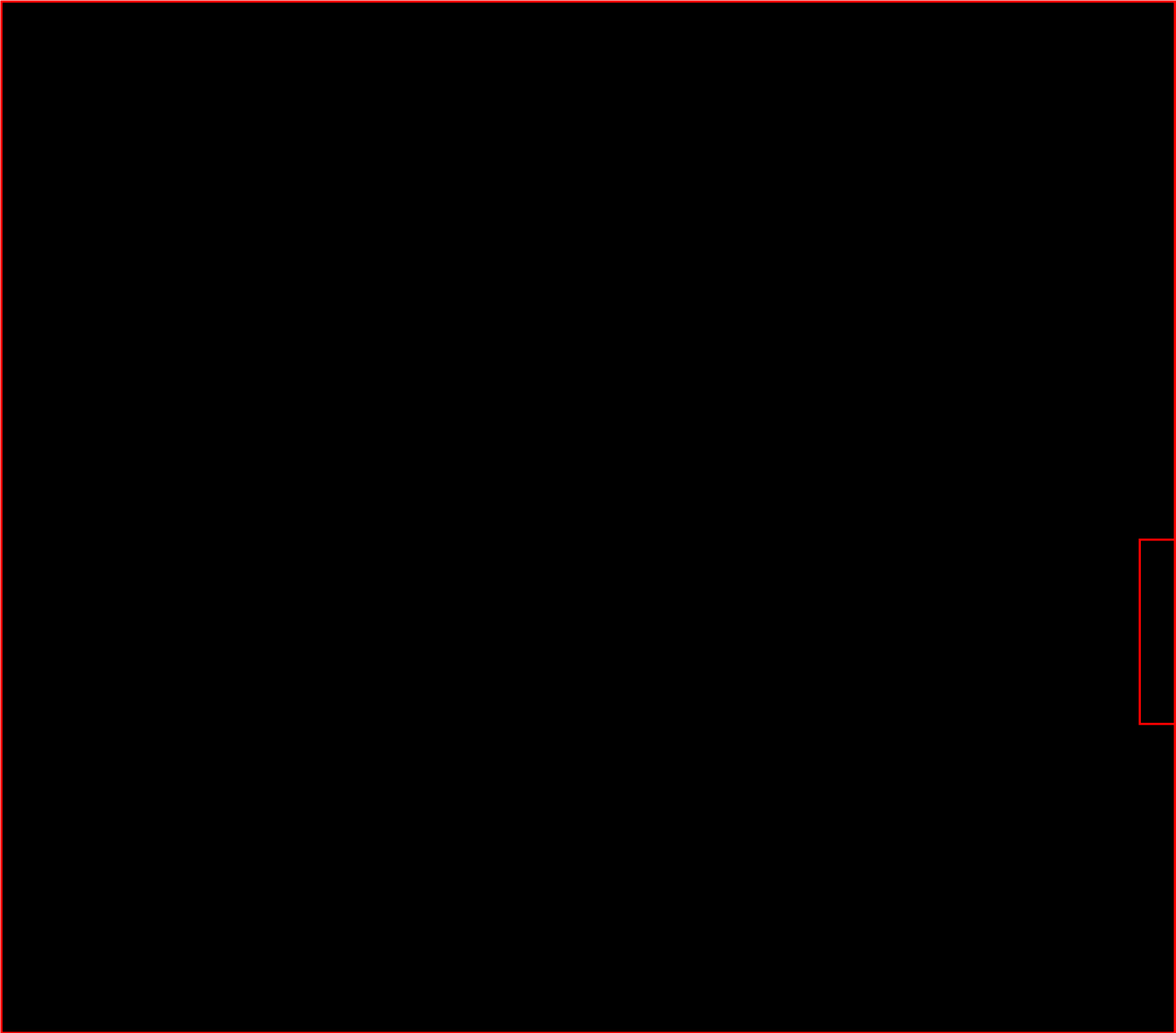
pilot after work has been performed, stating that an aircraft or aircraft part has been approved for return to service. The person releasing the aircraft must have the authority appropriate to the work being signed off.

Master Tank. The propane tank, usually tank number one, that offers all appropriate services, such as liquid, vapor, and backup system.

Maximum allowable gross lift. The maximum amount of weight that a balloon may lift under standard conditions. Usually a part of the balloon's design criteria, and may be found on the type Certificate Data Sheet for that particular balloon.

METAR. In weather, an acronym for Aviation Routine Weather Report, which is an observation of current surface reported in the standard international format. Routine METARs are transmitted hourly; there is a special report (as indicated by the acronym "SPECT") that may be issued at any time for rapidly changing weather conditions.

Metering Valve. A valve on a balloon heater that can be set to allow propane to pass through at a specific rate.



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