CIVIL AIR PATROL
United States Air Force Auxiliary
October 2005

PLANE TALK

THE NEWSLETTER OF SAN FERNANDO SENIOR SQUADRON 35

From The Commander

Hope for the Best, Plan for the Worst

Recent events in the Southeast United States have brought into clear focus the necessity for having a good plan in place. While it will take months, if not years, to evaluate the cause and effects of the Hurricane Katrina disaster, it is painfully obvious that many officials at all levels were not ready for what happened. The resources were there, the knowledge was there, but the coordination was sadly lacking.

I will not get into finger pointing, what I will discuss is the need to have a plan in place for responding to such situations. Because we are volunteers, this plan, of necessity, must encompass several levels, to include personal preparation, squadron preparation and training,

The first level is that of personal preparation. It is difficult, if not impossible to function as an emergency services worker if you have to worry about your family. Make sure their needs are met. No matter what the disaster, every squadron member should have at least two weeks worth of supplies available to support every member of their family. Water, food, and shelter are basic essentials and should be set aside in advance of an emergency. Such items should be transportable in the event it becomes necessary to evacuate an area.

Arrangements should be made for family members to contact a relative or friend who lives outside the disaster area. This way, you always have a way of coordinating with members of your family and ensuring they are alright, even if local communications are disrupted. If you know your family is safe, it's easier to function at all levels.

Personal preparation should also include placing a backpack with some basics like two or three days worth of water, several high-energy protein bars, a flashlight, a portable radio, spare batteries and bulbs, a really good pair of walking shoes and a couple of emergency blankets. Shank's Mare may be the only way you can get anywhere in Los Angeles following a major disaster.

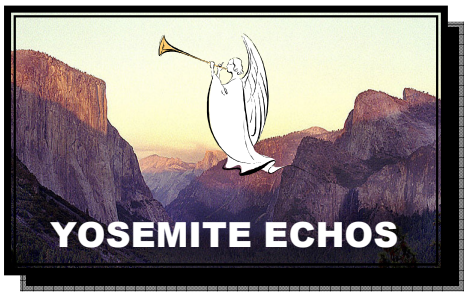
By the way, I didn't forget the idea of cell phones. Having one is a good idea. However, because they rely on a rather extensive infra-structure to operate, you may not be able to use them if the disaster area is wide-spread. If you do have a cell phone, having a portable car re-charger for the phone is also a good idea, just in case you find yourself away from home for an extended period of time. To paraphrase an old saying, "Any old cigarette lighter in a storm."

Squadron preparation should include the same basics, upgraded for a minimum of twenty people for at least ten days. Ingenuity plays an important part in this. For example: We cannot store spare gasoline at our base for the generator, but several empty jerry cans, a funnel and siphon hose might be useful items to have, should scrounging become necessary. Specifics on what we need at Gibson Base will be discussed during the next few staff meetings, and members should be willing to make recommendations and get behind such efforts for preparation.

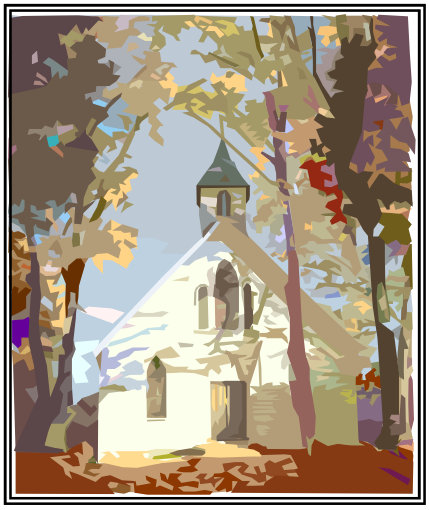
Last, and of equal importance with the above mentioned items comes training. Pilots are constantly thinking through the steps they must take when faced with an in-flight emergency. When responding to a disaster, we should engage in the same kind of mental preparation and training. This training should include First Aid/CPR training; knowing how to operate the essential systems at Gibson Base, such as communications and the generator; knowing where the essential equipment and supplies are kept and knowing where your responsibilities lie in responding to the disaster. We also need to prepare ourselves to think. Many of the things we may need during a natural disaster might not be readily available. Stopping and carefully thinking, learning how to adapt and overcome, are both a part of the mental preparation necessary to respond in an emergency.

We need to train for the inevitability of disaster. It will happen, maybe sooner, maybe later, but it will happen. Are YOU ready…..Are WE ready?

Semper Vig
Maj. Jim Hayden, Commander Squadron 35



INSPIRATIONAL THOUGHTS



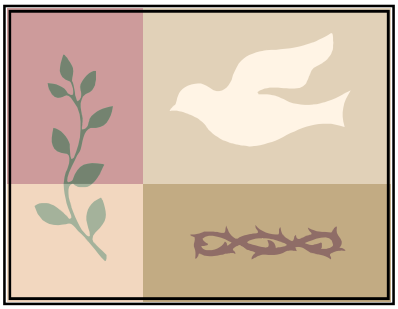
Man learns through experience, and the spiritual path is full of different kinds of experiences. He will encounter many difficulties and obstacles, and they are the very experiences he needs to encourage and complete the cleansing process.

Every society rests in the last resort on the recognition of common principles and common ideals, and if it makes no moral or spiritual appeal to the loyalty of its members, it must inevitably fall to pieces.

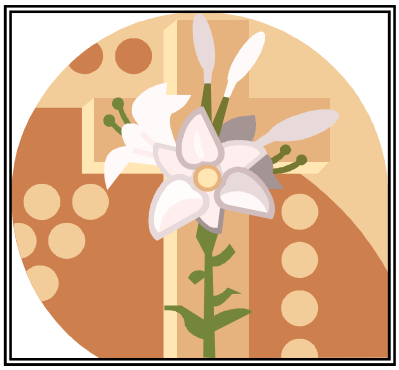
Happiness is spiritual, born of truth and love.
It is unselfish; therefore it cannot exist alone,
but requires all mankind to share it.

A Cherokee prayer blessing.
May the warm winds of heaven blow softly upon your house,
May the Great Spirit bless all who enter there,
May your moccasins make happy tracks in many snows,
And may the rainbow always touch your shoulder.

"We who lived in concentration camps can remember the men who walked through the huts comforting others, giving away their last piece of bread. They may have been ew in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of the human freedoms -- to choose one's attitude in any given set of circumstances." -- Victor Frankl



Difficult situations often bring out qualities in us that otherwise might not have risen to the surface, such as courage, faith, and our need for one another. All of our experiences can help us to grow.



"Everything has its wonders, even darkness and silence, and I learn, whatever state I may be in, therein to be content." -- Helen Keller

ON THE SAFE SIDE

HAVE YOU EVER DONE SOME "SCUD RUNNING?"

Look out the window and see a few patches of clear sky among the low cloud deck and say..."what the heck...I think I can fly around or under it." That's a pretty optimistic view of a potentially dangerous situation.
Many pilots are caught in deteriorating weather by trying to fly around or under low hanging clouds. These ragged lower clouds are commonly called "scud" (sounds like thud). Why would a experienced, well-trained, pilot make a decision like that?

Well, weather is very changeable. What looks good on the ground, may not be good in the air. That "hole" can close up. That "break" in the weather can turn suddenly vicious. Keep in mind the FAR's want you to be no lower than 500 agl in open country. The reason is when you get lower you start meeting up with towers, light poles, antennas that stick up, not to mention the occasional sharply rising terrain. Low ceiling weather harbors low visibility too. Making it extra difficult to dodge those dangerous low-level obstacles.

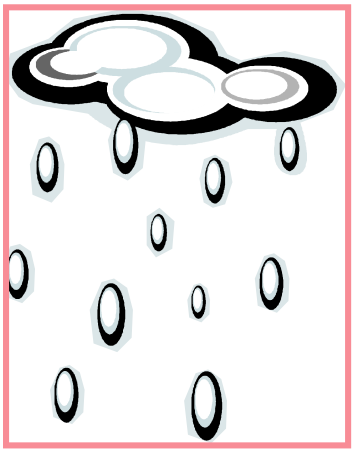
Why do pilots take the risk? Good question. Theories vary. Some think a macho attitude or sense of invulnerability is to blame. Others feel that some scud-running pilots become habituated and think that because they got through in the past, their luck will hold up. Another body of opinion holds that ignorance born of inexperience in flying in marginal VFR or IMC renders pilots unable to assess the weather around them, maintain adequate situational awareness, or preserve their wits enough to make sensible escape or avoidance decisions. Still others blame it on just plain stupidity.

The best way to build awareness of deteriorating weather is to fly in it. Pilots can go through an entire private pilot curriculum and never fly near a front or any kind of significant weather. Develop an awareness of what a three-mile visibility really looks like. It's not much. Review holding altitude, basic attitude instrument flying skills, 180-degree turns by reference to instruments, and situational awareness with regard to terrain, nearby airports, and diversions to suitable alternate airports. This extra training may not be required by the regulations, and it will cost time and money, but consider it a very worthwhile investment.

Fly enough cross-country trips and one day the weather won't turn out as forecast.
It seems that pilots often don't take the time to simply look up and try to apply their weather-related ground school learning to the sky above them. Do those clouds portend an approaching front? What can I expect after frontal passage? Will the fog burn off? Is it VFR or IFR? Why is the wind blowing from its present direction? Do I really know what I'm looking at? Answers to questions like those come only with curiosity and constant observation - two things that many pilots don't cultivate when it comes to weather. Pilots need to develop a self-generated core of learning in order to make sound weather decisions, both preflight and in flight. We're not talking here about information obtained from DUATS or flight service.

ON THE SAFE SIDE

Learning how to get a good weather briefing is another big part of avoiding a VFR-into-IMC scenario. This goes beyond knowing a set of abbreviations and some weather jargon. For FSS briefings, it means obtaining a standard weather briefing, letting the briefer have his or her say, taking good notes, and asking any questions that could clear up doubts about the weather situation or fill in any information gaps the briefer may have overlooked.
Using a weather-briefing checklist can help here.
As for a DUATS briefing, you're pretty much on your own when it comes to digesting what can be a mountain of information. This means that your interpretive skills have to be sharper. There's no briefer to hold your hand, so you have to be knowledgeable and confident enough to pull off what amounts to a self-briefing.



Do you know the difference between sigmets and airmets? Sigmets are hazardous weather warnings that apply to all aircraft, from jumbo jets to Cessna 150s. They're issued for severe icing, severe or extreme turbulence, dust storms, sand storms, and volcanic ash. Convective sigmets (*shown in graphic*) are issued for severe thunderstorms (those with surface winds of 50 knots or more, hail greater than three-quarter-inch in diameter, or tornadoes), embedded thunderstorms, lines of thunderstorms, or thunderstorms affecting 40 percent or more of an area of at least 3,000 square miles.
Airmets are aimed at light aircraft and VFR-only pilots, but, of course, all pilots should listen up when they're issued. Airmets are issued for moderate icing, moderate turbulence, sustained winds of 30 knots or more at the surface, mountain obscurement, and ceilings less than 1,000 feet and/or visibility less than three miles affecting more than 50 percent of an area at one time. Your student should know that if his or her preflight or in-flight briefing mentions a sigmet or airmet along your proposed route of flight, then reconsider your flight. Staying on the ground certainly beats flying into steadily lowering cloud bases and deteriorating visibility.

The single most powerful weapon against an inadvertent VFR-into-IMC encounter's turning into an accident is an instrument rating. Proficiency in flying on instruments makes you a more precise pilot in all weather conditions, enhances your mental discipline, lets you make full use of the air traffic control environment, and gives you a very wide range of options when dealing with a weather problem. Best of all, it makes you a safer pilot. The statistics prove that.

Your best bet is to know your abilities, gauge the changing weather, have yourself an “out” and have a good picture of the flight path before you get up in the air. Once in the air, you will have fewer options, less visibility and an engine consuming fuel from a tank that will “run out of time.”

Take the Runway Safety on line course from the AOPA: http://aopa.org/asf/runwaySafety/

ON THE SAFE SIDE

RUNWAY INCURSIONS CAN SPOIL YOUR DAY

In case you haven't been around aviation for the past 10 years, the whole subject of runway incursions has become a hot button for Congress, the FAA, the NTSB, and many pilots. The basic definition of a *runway incursion* is simple: unauthorized trespass of an active runway by an aircraft, ground vehicle, or person. Technically speaking, runway incursions occur only at towered airports -- that's the only place they're tabulated-but they cause the same hazards at nontowered facilities.

Runway incursions aren't new. In fact, as most pilots know, the worst disaster in aviation history happened on the ground, when 583 people died in the collision of two Boeing 747s on the island of Tenerife in 1977 (see "Two Aircraft, One Runway," p. 22). The tragedy happened when the captain of a KLM Boeing 747 initiated takeoff without a clearance and collided head-on with a Pan Am 747 back-taxiing on the same runway

Of course it isn't a simple matter of "getting in the way." The FAA has taken strong measures to educate the pilot about using some common safety attitudes and guidelines to help prevent us from "spoiling" somebody else's flight.

Today the FAA categorizes runway incursions as one of three types: vehicle/pedestrian deviation (VPD), when a vehicle or person causes the incursion; operational error (OE), a mistake by ATC; or pilot deviation (PD), when the pilot is at fault. Then each incursion is given a severity category:

Category A: Collision narrowly avoided by extreme action or chance;
Category B: Significant potential for collision;
Category C: Ample time and distance to avoid a potential collision; and
Category D: Little or no chance of a collision.
Had this system of categorizing incursions been in place when the accident happened in Tenerife, it would have surely been labeled a pilot deviation. In fact, that's still the problem.

Every year pilots, including airline and other non-general aviation pilots, are the main culprits when it comes to incursions. On average we cause 58 percent of the incursions, while operational errors and vehicle/pedestrian deviations are responsible for the remainder in approximately equal amounts. These numbers may vary slightly from year to year, but not much. Since October 2003, there have been nine category A or B incursions/accidents (the really bad ones). *Of those, seven were pilot deviations, and* all seven *involved a general aviation aircraft.*

ON THE SAFE SIDE

Three big factors in runway incursions are:

Environment. Pilots are more likely to have runway incursion problems at unfamiliar airports. Common sense tells us to use extra caution in unfamiliar situations. Pilots have an easily available "cheat sheet" for unfamiliar airports: the airport diagram. Diagrams for most towered airports can be downloaded free from the AOPA Air Safety Foundation Web site.

Night. If you can't see something, how can you avoid it? Extra vigilance must be used when taxiing at night.

Reduced visibility. The most serious incursion accidents usually happen when the visibility is low. Fog, rain, snow, and other weather can significantly reduce visibility.

When most pilots hear the term *situational awareness*, their thoughts immediately turn to the sky. That ability to draw a mental map, anticipate the next turn, and know exactly where the other guy is, is almost always associated with a traffic pattern, an approach, or the en route phase of a trip. Pilots are taught, rightly so, that one of the keys to flying is to always be two steps ahead of the airplane. What pilots also need to realize is that they must be two steps ahead while on the ground, too. For example, in the air, good pilots use the position reports of other pilots to draw a mental map of all traffic in the pattern. The same applies on the ground. Show students how to listen to other aircraft on the field, and locate them on the airport diagram. At first this will be a cumbersome exercise, but eventually it becomes second nature. Just as a good instructor will instill habits of safety in the air -- checklist usage, scanning for traffic, cockpit resource management -- these same habits should be instilled on the ground. Subsequent studies showed that pilot education could help solve the problem, and all pilots should learn to keep safe around runways ever since.

Take the "Runway Safety Quiz" from Sporty's on the AOPA web site (AOPA.org) on line. It's a great way to see if you're "up to speed" on runway incursions.

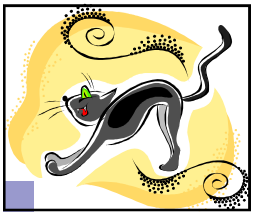
John Krogstad, CAP
Squadron Training Officer

AEROSPACE EDUCATION

Amelia Earhart

Amelia Earhart was born in Atchison, Kansas. She went to school at Columbia University and Harvard Summer School. In 1928 she was invited by Wilmer Stultz and Louis Gordon to accompany them on a transatlantic flight, which made her the first woman to cross the Atlantic by air. And, in 1932, she became the first female to cross the Atlantic Ocean alone, which she did in record time :13 hours and 30 minutes. She was awarded honors from the French and American governments for doing this. She was also the first female to fly from Hawaii to California, across the Atlantic Ocean, in 1935. In the same year she also set a speed record for flying from Mexico City to New York City in 14 hours and 19 minutes!

Amelia Earhart had intended to fly around the world east to west, starting in Oakland, CA. However, she decided to try another plan when her plane crashed in Hawaii. The company who made the plane, Pratt & Whitney, shipped it back to California to be repaired. Amelia Earhart and her navigator, Fred Noonan, started their journey again, this time going from west to east. They crossed Tucson, New Orleans, San Juan, Caripito, Paramarito, Fortaleza, Natal, St. Louis, Dakar, Gio, Fort Lamey, Al Fastir, Kartown, Mosstown, Assab, Garadar, Kacachi, Calcutta, Akyab, Ragoon, Bangcock, Singapore, Banoking, Surabaya, Kupang, Darwin, and Lae. On July 2, on the leg from Lae, New Guinea to Howland Island, Earhart and Noonan disappeared in the middle of the Pacific Ocean. This area has been thoroughly searched by U.S. Navy ships and planes many times, but no sign of the two flyers has ever been found.



AEROSPACE EDUCATION - STALLS

It must be emphasized that the stalling speed of a particular airplane is not a fixed value for all flight situations. However, a given airplane will always stall at the same angle of attack regardless of air-speed, weight, load factor, or density altitude. Each airplane has a particular angle of attack where the airflow separates from the upper surface of the wing and the stall occurs. This critical angle of attack varies from 16 to 20 degrees depending on the airplane's design. But each airplane has only one specific angle of attack where the stall occurs.

There are three situations in which the critical angle of attack can be exceeded - in low speed flying, in high speed flying, and in turning flight.

The airplane can be stalled in straight and level flight by flying too slowly. As the airspeed is being decreased, the angle of attack must be increased to retain the lift required for maintaining altitude. The slower the airspeed becomes the more the angle of attack must be increased. Eventually an angle of attack is reached which will result in the wing not producing enough lift to support the airplane and it will start settling. If the airspeed is reduced further the airplane will stall, since the angle of attack has exceeded the critical angle and the airflow over the wing is disrupted.

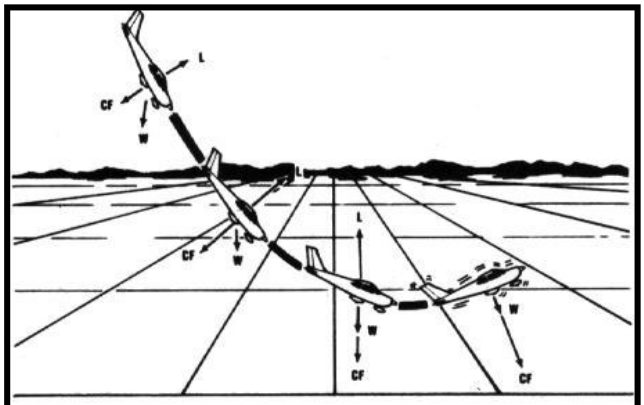
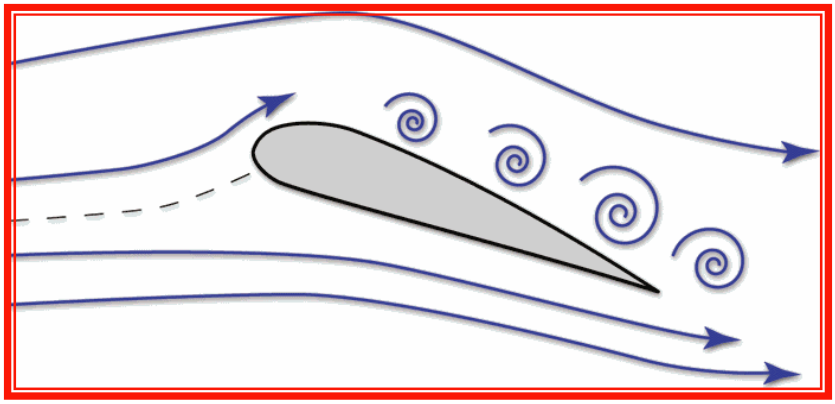


Figure 17–36 Forces Exerted When Pulling Out of a Dive

It must be reemphasized here that low speed is not necessary to produce a stall. The wing can be brought into an excessive angle of attack at any speed. For example, take the case of an airplane which is in a dive with an airspeed of 200 knots when suddenly the pilot pulls back sharply on the elevator control (Fig. 17-36). Because of gravity and centrifugal force, the airplane could not immediately alter its flight path but would merely change its angle of attack abruptly from quite low to very high. Since the flightpath of the in relation to the oncoming air determines the direction of the relative wind, the angle of attack is suddenly increased, and the airplane would quickly reach the stalling angle at a speed much greater than the normal stall speed.



STALL

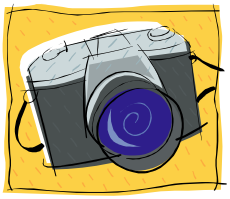
SQUADRON 35 CRM TRAINING

CRM encompasses a wide range of knowledge, skills and attitudes including communications, situational awareness, problem solving, decision making, and teamwork; together with all the attendant sub-disciplines which each of these areas entails. The elements which comprise CRM are not new but have been recognized in one form or another since aviation began, usually under more general headings such as 'Airmanship', 'Captaincy', 'Crew Co-operation', etc. In the past, however, these terms have not been defined, structured or articulated in a formal way, and CRM can be seen as an attempt to remedy this deficiency. CRM can therefore be defined as a management system which makes optimum use of all available resources - equipment, procedures and people - to promote safety and enhance the efficiency of flight operations.

CRM is concerned not so much with the technical knowledge and skills required to fly and operate an aircraft but rather with the cognitive and interpersonal skills needed to manage the flight within an organized aviation system. In this context, cognitive skills are defined as the mental processes used for gaining and maintaining situational awareness, for solving problems and for taking decisions. Interpersonal skills are regarded as communications and a range of behavioral activities associated with teamwork. In aviation, as in other walks of life, these skill areas often overlap with each other, and they also overlap with the technical skills required in an aviation context. Furthermore, they are not confined to multi-crew aircraft, but also relate to single pilot operations, which invariably need to interface with other aircraft and with various ground support agencies in order to complete their missions successfully. **2Lt Mark Beutel**

CRM IN ACTION

SQUADRON 35 - SDIS TRAINING



SATELLITE DIGITAL IMAGING SYSTEM

Squadrons 35 and Van Nuys 128 meet to be instructed on how to properly use the SDIS equipment.

The instructing was conducted by both Maj.Woody McCauley and 2Lt Bill Petersen. The technology includes Satellite-transmitted Digital Imaging Systems. Using SDIS, CAP members can capture images from the air with a digital camera, and quickly transmit the images with an onboard laptop computer via e-mail and satellite phone. The transmission can occur in near real-time, allowing emergency operations centers to better plan assistance for disaster victims and assess property damage.

For further information about SDIS, please contact your commander about training.

Setting SDIS

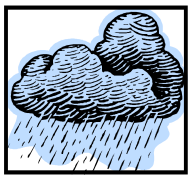
Maj. McCauley displaying the SDIS laptop.

Maj. Edwards emphasizing safety to aircrews.

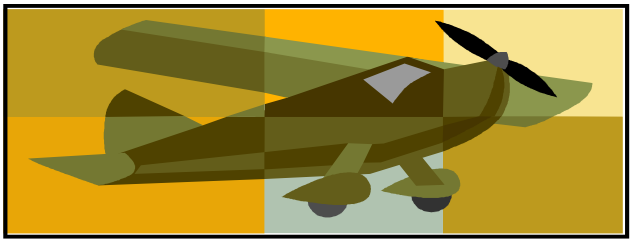
Maj. McCauley instructing.

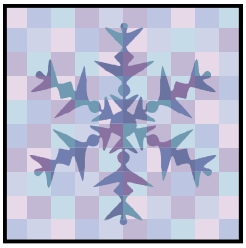
FAA REGULATIONS - 91.527

Operating In Icing Conditions



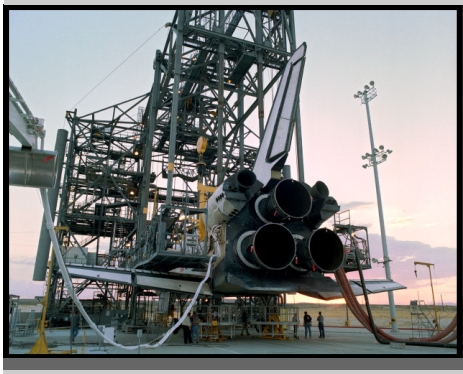
(a) No pilot may take off an airplane that has--
(1) Frost, snow, or ice adhering to any propeller, windshield, or powerplant installation or to an airspeed, altimeter, rate of climb, or flight attitude instrument system;
(2) Snow or ice adhering to the wings or stabilizing or control surfaces; or
(3) Any frost adhering to the wings or stabilizing or control surfaces, unless that frost has been polished to make it smooth.
(b) Except for an airplane that has ice protection provisions that meet the requirements in section 34 of Special Federal Aviation Regulation No. 23, or those for transport category airplane type certification, no pilot may fly--
(1) Under IFR into known or forecast moderate icing conditions; or
(2) Under VFR into known light or moderate icing conditions unless the aircraft has functioning de-icing or anti-icing equipment protecting each propeller, windshield, wing, stabilizing or control surface, and each airspeed, altimeter, rate of climb, or flight attitude instrument system.
(c) Except for an airplane that has ice protection provisions that meet the requirements in section 34 of Special Federal Aviation Regulation No. 23, or those for transport category airplane type certification, no pilot may fly an airplane into known or forecast severe icing conditions.
(d) If current weather reports and briefing information relied upon by the pilot in command indicate that the forecast icing conditions that would otherwise prohibit the flight will not be encountered during the flight because of changed weather conditions since the forecast, the restrictions in paragraphs (b) and (c) of this section based on forecast conditions do not apply.





Rule one: No matter what else happens, fly the airplane!!

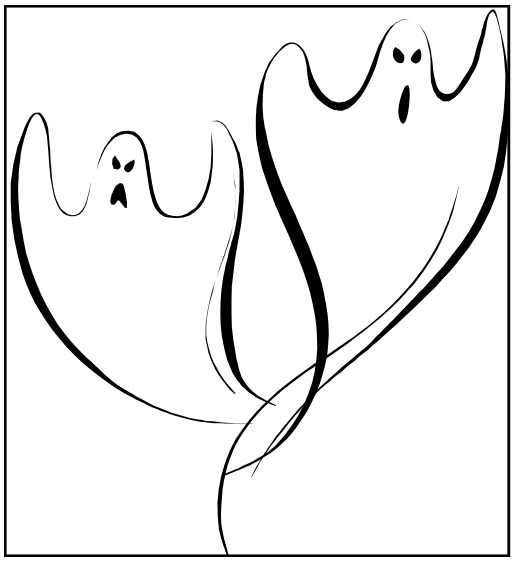
STS-114 "DISCOVERY" - Welcome Home!



MYSTERIOUS TRIANGLE

The Bermuda Triangle

The Bermuda Triangle is said to be a place of mystery. Another name for the Bermuda Triangle, is the Devil's Triangle. The Bermuda Triangle is off the southeastern coast of Florida, where many ships have disappeared. However many airplanes have disappeared too. Many people believe that the planes have been abducted, and others believe that they were pulled to the bottom of the ocean, never to be seen again. Only a few pilots radioed distress messages. Searchers have searched everywhere and found bodies that they thought might be survivors from several planes that had sunk years before. There are some scientists that think that the violent unexpected storms might have destroyed the planes. Others believe that downward air currents were the problem. The Bermuda Triangle is an imaginary line, that goes from a point at Melbourne Florida, to Bermuda, to Puerto Rica and then back to Florida. All together the Bermuda Triangle cover 440,000 square miles. The first recorded disappearance of a US ship was on March 1981, and was called the U.S.S. Cyclops. On December 1945, a squadron of 5 US bombers diapered. Then a seaplane vanished while it was trying to find the aircraft. We don't know why sometimes planes and ships disappear when they go into the Bermuda Triangle. When this mystery will be solved we do not know. All we can do until that time is sit and wait.



USAF NEWS - "GLOBAL HAWK"

8/25/2005 - **BEALE AIR FORCE BASE, Calif. (AFPN)** -- Airman with the 12th Reconnaissance Squadron here are part of the Air Force's only operational Global Hawk Unmanned Aerial Vehicle unit.The $35-million Global Hawk is used to provide Air Force and joint battlefield commanders near real-time, high-resolution intelligence, surveillance and reconnaissance imagery. Cruising at higher than 65,000 feet, the Global Hawk can survey large geographic areas with pinpoint accuracy, to give military decision makers the most current information about enemy location, resources and personnel. "It's kind of awe inspiring," said Lt. Col. Mark Corley, 12th RS commander, who has flown the plane from a mission control element here. "It's the cusp of a new technology and it performed exactly the way it was controlled." The Global Hawk recently reached 4,000 combat flight hours during an operational mission supporting the war on terrorism. This milestone has reinforced the value of the UAV and its effectiveness in fighting the war on terrorism, officials said. "Reaching 4,000 combat hours is continued proof of the system's reliability and its value to our men and women in combat," said George Guerra, director of Northrop Grumman's Air Force Global Hawk program. The plane already has been used operationally despite being in its early stages of development, flying missions in Afghanistan since 2001 and Iraq since 2003. Its operational successes have paved the way for its continued participation in the war on terror, officials said. By 2008, officials expect to have 21 Global Hawks and 51 by 2012. We save lives on a daily basis," said Col. Larry Wells, 9th Reconnaissance Wing commander. "We consider this plane priceless."

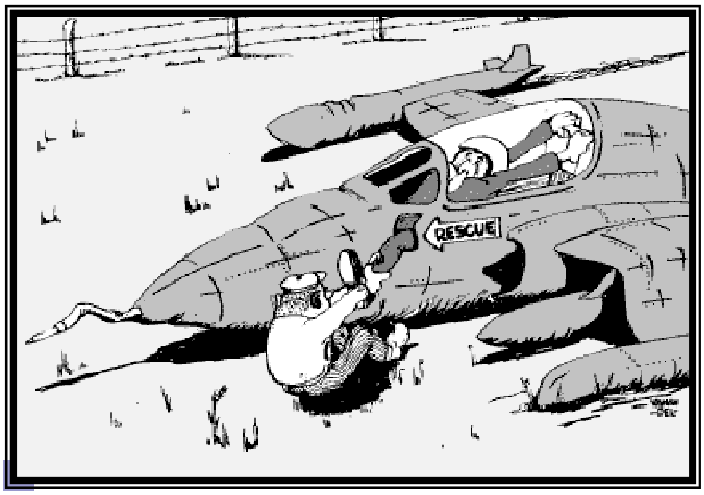
(Master Sgt. Tim Helton and Airman 1st Class Candace Romano from the 9th Reconnaissance Wing Public Affairs office contributed to this story)

JUST KIDDING

The traffic was heavy, and the weary local controller had apparently heard all the "blocked" and "stepped on" responses he could take when he made this transmission:
"How come every time I key my mic, some idiot starts talkin'?"

On my first solo cross country, I was flying north through the San Fernando valley and trying to keep track of traffic callouts. Apparently there was a controller with a similar problem.
He had managed to confuse a commercial jet on approach to Burbank with a private plane that was transitioning south across the valley. For a period of about 90 seconds he was calling out instructions to them that weren't quite what they wanted ... and finally the commercial jet pilot enquired as to where he was being sent.
There was a brief exchange about intentions, followed by an "oops" and 30 seconds of silence.
The next voice I heard on that frequency said:
"Attention all aircraft. Previous controller no longer a factor."

Why does the **Pope** kiss the ground each time that he lands?
Did you ever fly with **Alitalia**?



Squadron 35 Calendar

October 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5 Meeting	6	7	8 SARCITY
9 SARCITY	10	11	12 Meeting	13	14	15
16	17	18	19 Meeting	20	21	22
23	24	25	26 FAA Seminar	27	28	29
30	31					

Plane Talk is published 6 times per year by Senior Squadron 35, Charter number CA 080. Squadron 35 address is 12653 Osborne Street, Pacoima, CA 91331. Squadron Commander is Major James Hayden.

Squadron 35 meets every Wednesday at 1930 hours. Meetings are held at Squadron Headquarters, Whiteman Airport, 12653 Osborne Street, Pacoima, CA 91331.

At each meeting, CAP topics are considered and discussed. Visitors and members of other CAP groups are welcome to attend.

Please email comments to Maj Brian Stover or
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2Lt Mark Beutel: wingman5@comcast.net

THANK YOU!