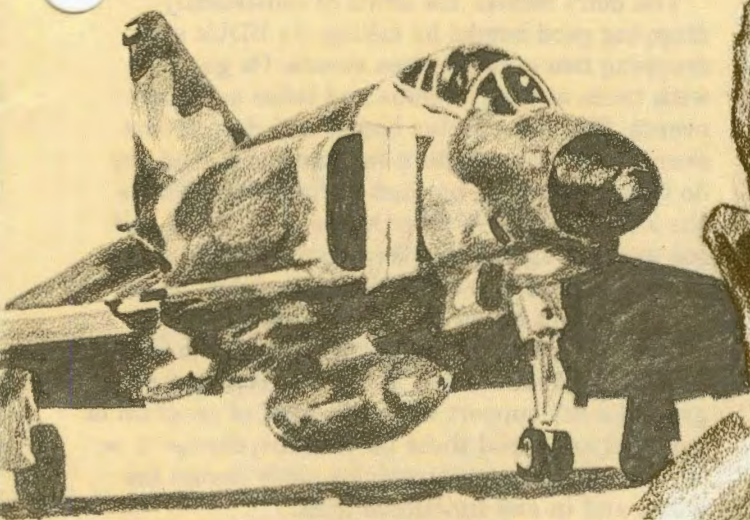
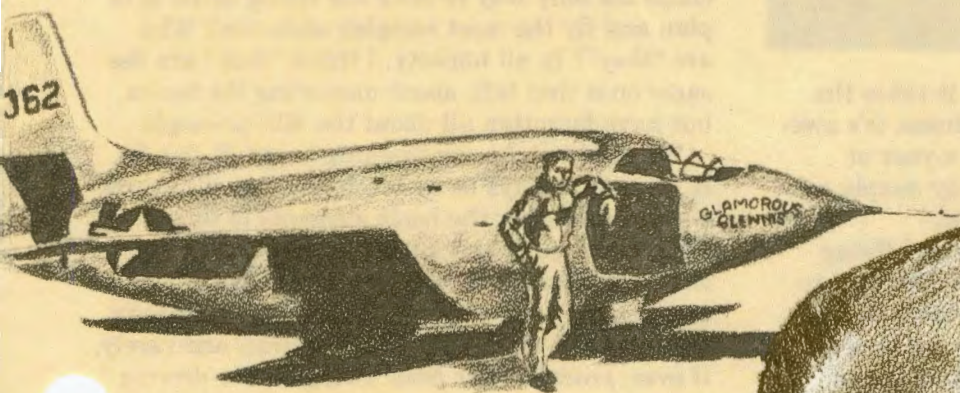


# TAC ATTACK

JANUARY 1987



## CHUCK YEAGER

Test pilot and WWII ace  
talks to TAC ATTACK  
about flying

Pg 4







# ANGLE OF ATTACK

stand what the basics really are or why they're so important.

Who are the ones that have locked the throttle in the Northwest Corner to "maximize training" and claim there is little or no time/fuel left for the more "simple" things? Who are the ones that claim the only way to hone our flying skills is to plan and fly the most complex scenarios? Who are "they"? In all honesty, I think "they" are the same ones that talk about mastering the basics, but have forgotten all about the KIS principle.

We need to take our training in small chunks. It may not always be as much fun, but it's a sure way of mastering the basic elements of flying. Remember, you don't simply master the basics once and henceforth rely on instant recall. How many golfers can drive a 3-wood 275 yards down the center of the fairway—every time, and rarely, if ever, *practice their basic swing on the driving range?*

You don't master the skills of consistently dropping good bombs by taking six BDUs and dropping two each in three events. Or go out with twice as many bombs and twice as many events. You take twelve bombs and drop in one event until you can do it in your sleep. And you do that repeatedly, not just during MQT. That's the kind of plan I'm referring to. To use the golfing analogy again, for every "controlled hook" a pro golfer practices on the driving range, he/she knocks dozens of low irons down the middle, straight as an arrow. Why get into trouble in the first place? Think about it. If your Top Gun program doesn't support the right kind of program or isn't helping build these basic skills, change it so it does. These same principles apply across the board and in any functional area.

If we want to turn this ops factor mishap rate around, the best way I know is by having, *and flying*, a plan that will master the basics. One that has not only velocity but a whole lot of rudder as well. Put some bite in your "back to basics" plan. It'll keep you out of the woods.

*Edsel J. DeVille*

EDSEL J. DE VILLE, Colonel, USAF  
Chief of Safety

**W**hen one considers the effort it takes the TAC team to maintain readiness, it's awesome. You don't fly 730,000 hours a year or nearly 2000 sorties each weekday by simply refueling the jets for the next mission.

In our business it takes working and flying smart to preserve the resources we will need to do our job should we be called. In 1986, we lost over a squadron of fighters and almost as many airmen. We can't afford those kinds of losses. And this is peacetime. Think what our losses will be in combat if we continue to make those same mistakes—the kind we've made in the heat of a training scenario.

There are methods to prevent mistakes—some are effective but only a few are long lasting. A quick fix won't hack it when you're losing jets in combat due to basic proficiency problems. One of the most effective and long lasting methods of preventing those kinds of mistakes is to *master the basics*.

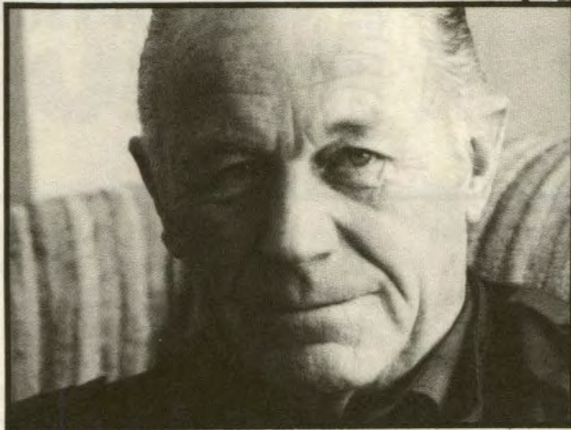
How many times have you heard the phrase "We need to get back to basics"? We say it, but are we making it happen? Mastering the basics of flying isn't always fun—it's hard work; but it can be invaluable when the mission includes getting shot at.

There's plenty of talk about flying more fingertip and instruments to build basic skills. That's what I hear, but let's not fool ourselves. Flying a required instrument approach on the wing "because it's Wednesday" doesn't constitute an all-out plan on how to regain and maintain the basic skills of airmanship. It's a reminder, a good start; but we're not dealing with another square that can be filled by accomplishing a single event. It's a philosophy and we have to work it all the time. I continually hear "No time" as the principal argument against any real growth towards flying the basics. Maybe it's just that some don't under-



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DEPARTMENT OF THE AIR FORCE



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TACRP 127-1

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## TAC ATTACK

JANUARY 1987



**CHUCK YEAGER**  
Test pilot and WWII ace  
talks to TAC ATTACK  
about flying  
Pg 4

**EDWARD C.  
ALDRIDGE, JR.**  
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# TAC ATTACK Interviews

**Editor's Note:** This is the first in a series of interviews with several noted USAF aviators, some of them fighter aces. Through these articles, we will share with today's TAC fighter pilots the experiences and insights of the men who flew and fought in World War II, Korea and Vietnam.

Brigadier General Charles E. "Chuck" Yeager (USAF, Ret.) is well known as the first man to break the sound barrier (on October 14, 1947). The general, however, considers himself, first and foremost, a fighter pilot. He has nearly 14,000 hours total flying time with 12,000 in fighters. He continues to fly actively and during the weeks prior to this interview flew the Northrop F-20, a USAF F-4E, and a Confederate Air Force P-51 with Space Shuttle pilot Joe Engle on his wing in a P-40.

General Yeager's Air Force career began in 1941 when he enlisted in the Army Air Corps. After receiving his pilot wings, Yeager distinguished himself in the skies over Europe during 1943-45 by shooting down 13 enemy aircraft, 5 on a single mission. Following the war, he entered flight test work which included not only his record-breaking flight in 1947 but also the first flight at twice the speed of sound in 1953.

In 1954, General Yeager returned to operational fighters as a squadron commander in both TAC and USAFE. Subsequent assignments included command of the Aerospace Research Pilot School at Edwards AFB, the 405 TFW at Clark AB, Philippines; and the 4 TFW, Seymour Johnson AFB, NC. During the Clark tour, he flew 127 missions in Vietnam. General Yeager also served as vice commander of 17th Air Force in USAFE and director of the Air Force Inspection and Safety Center at Norton before his retirement from the Air Force in 1975.

**Maj Don Rightmyer**  
Editor  
TAC ATTACK

**TAC ATTACK:** General Yeager, what do you think are the basic ingredients necessary to be a good fighter pilot?

**YEAGER:** The one thing that has impressed me in the best fighter pilots I've known is that they knew their airplane. That's one of the most important things that I think a guy can do. A fighter pilot has many weapon systems on his airplane and obviously he has to maintain proficiency in all of them. But in order to be proficient in a piece of equipment,



# Brigadier General Chuck Yeager

a pilot has really got to know it. One of the main priorities that I always placed upon flying an aircraft was that I understood the systems. That paid off. I know a lot of pilots have a tendency to back off from knowing their systems intimately if they can't do anything about them from the cockpit. But it's important to understand how the systems work so that you can analyze problems as they develop.

In the same way, there's a lot of emphasis placed on preflight planning and that's very important. Take mission planning for a flight of four. It's a team effort. All of the players understand what they're going to do.

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**The hour or so dedicated to mission planning before a flight is a very important area.**

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They're alert and ready. Mission planning gives you confidence because you know what you're going to do and what systems you're going to use on your airplane. I think the hour or so dedicated to mission planning before a flight is a very important area. It can mean the difference between a safe flight or a totally dangerous one.

Last, but not least, is knowing your egress systems. That's

one of the most important things that I credit for the fact that I'm still here. I knew my egress systems to the point where I could operate them even in a semiconscious state because a lot of times you are put in that position, whether it's in combat or in the test arena.

**TAC ATTACK:** Can you offer any comments from both your combat and peacetime experience as a fighter pilot about what we can do to prevent midairs?

**YEAGER:** The one thing in my opinion that leads to a midair or possibility of midair collision today is complacency. A guy sits on the wing and he's been briefed "We're going to break left"; so he moves to the right wing and the flight leader ends up breaking right. The guy's sitting there fat, dumb and happy and the next thing you know he's looking at a canopy full of airplane. The same way with pressing in on an enemy kill—you really don't know what the guy in front of you is going to do. If you're pressing in at a high overtake speed and the guy pitches up and you've also started to pitch up, you've got a problem. This means that you have to stay ever alert whether you're flying the wing or the lead. I keep one eye on my wingman anytime I've got a formation of aircraft.







# TAC ATTACK Interviews Brigadier General

It's just like defensive driving; you've got to keep your eyes open. Complacency will kill you, especially in formation. You just can't relax in an airplane, regardless of what you're doing.

**TAC ATTACK:** The driving factor in our mishap rate is operator error, the kinds of accidents that we could potentially avoid. Some of the things we've seen are midairs during lead change, guys colliding with the ground following a minor distraction in the cockpit or pilots simply getting engrossed in other things that they forget to fly the jet.

**YEAGER:** Divided attention is a necessity to fly a fighter. This

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**You can't concentrate on just one thing in a fighter aircraft. If you do, you're in trouble.**

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is true whether the guy's a wingman, a flight leader or an element leader. You can't concentrate on just one thing in a fighter aircraft. If you do, you're in trouble. The guy who's flying the wing is concentrating on watching his leader, but he should also have the capability of dividing his attention between cross-checking the systems in his airplane. The same thing goes

for the leader. You may be on a low altitude mission. Obviously you have to divide your time between maintaining ground clearance and crosschecking your systems. If you're involved in operating one of your weapons management systems, such as CCIP or offset bomb, you must have the capability of divided attention whether it's half in the cockpit, half out, another half on watching your wingman and another half on listening to the radio. That's the mark of your more successful fighter pilots—the capability of maintaining divided attention and not relaxing in any one area. You've got to play the whole regime and stay alert.

**TAC ATTACK:** We don't seem to have a problem doing the demanding parts of the mission like low levels, weapons delivery and that sort of thing. We often get ourselves into trouble during the routine parts of the mission: going to and from training areas and ranges, takeoffs and landings. Would you agree that no matter how cosmic the airplane becomes, the basics of flying good instruments and maintaining aircraft control are still the essentials to accident prevention?

**YEAGER:** Yes. From start to finish, complacency will kill you. It's that simple. Complacency in the pattern because you've done it a hundred times





# Chuck Yeager

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**You don't learn anything from an accident because it wipes you out.**

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before, no sweat. Man, you smoke around and hit the ground. You don't get a second chance in a fighter normally and you sure don't learn anything from an accident because it wipes you out. So you're not impressing anybody. That includes flying the jet into the ground. Only half the people I turn around and look at the smoking hole because they've seen it so many times before. That word complacency is very important. Sure, you concentrate and you're very alert in the harder parts of the mission because you *think* that's the hardest part. But when you get caught by complacency, it's a complete surprise. That's what causes a lot of accidents—sitting there fat, dumb and happy and not paying attention to what's going on. You've got to continually ask yourself "What's going on around me?" and that includes a lot of things.

**TAC ATTACK:** G-induced loss of consciousness is a problem for us, particularly in the F-16. How have you coped with that problem in your flying?

**YEAGER:** I've been doing some 9-G work recently in the

F-20. I think it goes back to a great depth of experience in airplanes. A young pilot doesn't have the experience with unusual situations that an older pilot does. He must practice and practice and practice. It's that simple. There's no such thing as a natural born fighter pilot. You're fooling with a piece of machinery and the more experience you get in it, the better you are. Consequently the only thing that a guy can recommend is "Don't get complacent and always think about what you're going to do when you find yourself in an unusual position." Lots of times you're going to be caught in that role and that includes the high-G arena.

**TAC ATTACK:** How important is being in good physical condition to flying fighters?

**YEAGER:** It's not only a knowledge of your aircraft, your egress systems and your weapon systems that is important. There's also the physical capability that pilots must have—the stamina to operate those things. A tired pilot will become complacent more than an alert pilot. That's one of the important things about staying healthy when you fly these airplanes. Sure the body's a very forgiving thing, but on the other hand, it pays to keep your body tuned up just like machinery. The better shape a guy is in, the better G tol-



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**The better shape a pilot is in, the better G tolerance he has.**

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erance he has. To do sustained high-G work—it hurts. Man, you've got to be able to bear the pain because in the end, you're the guy that's going to win. So it definitely pays to stay in good shape.





# TAC ATTACK Interviews Brigadier General

**TAC ATTACK:** How do you personally deal with problems like spatial disorientation?

**YEAGER:** Number one—you've got to believe your instruments and not your inner ear. It's that simple. That fact has been there ever since the Wright brothers flew—the inability of the inner ear to tell you the truth. So consequently it takes self-discipline. The instruments are most likely to be the most reliable reference you've got, so believe them and use them unless you have some valid reason not to. They're the best thing you have. For example, when you're flying on the wing and transitioning from outside references to say a HUD, you've got to crosscheck and believe your instruments.

**TAC ATTACK:** Let's turn for a moment to your perspectives on pilot abilities. What were the qualities in instructor pilots and flight leaders that you feel helped you most as a young pilot?

**YEAGER:** It goes back to the ability to know everything that's going on. You've got to think about your whole flight continuously. When you're a flight leader, you're flying your whole flight. What you do, everybody does. So you have to measure the capabilities of all your flight participants, your wingmen. The point is—don't ever get your guys in trouble.

Never ask them to do more than they're capable of doing. Know the limitations of all your guys and the limitations of your airplane.

Some of the best flight leaders I've ever seen would never put me in a position where I couldn't hack it. You know, low altitude, high-G loads, gunnery, the whole nine yards. They always kept me where I could perform at the maximum yet never get myself into trouble. That's the secret of a good flight leader. He knows his whole flight and he's on top of everything.

**TAC ATTACK:** As a leader, what did you try to teach your wingman?

**YEAGER:** The main thing was my experience. The more experience you have in an airplane, the better you are. You can teach a wingman a lot through your experiences that would take him years to learn. That's the duty of a flight leader or element leader—to teach everything he knows to his wingman. Don't hide anything from him just to surprise him. On the other hand, don't ever get him in a position that is be-

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**Don't ever get your wingman in a position that is beyond his capability.**

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Capt. Chuck Yeager and "Glamorous Glennis," the X-1 in which he broke the sound barrier.



# Chuck Yeager

yond his capability. You've got to bring him up one step at a time. That's your job.

One thing I noticed after spending time in a squadron during combat was that we became very close-knit. You could just look at an airplane and tell who was flying it. Then I spent some nine years in flight test which was highly competitive and there was very little teamwork. When I got back into operational flying as a squadron commander, the one thing I had missed so much was the teamwork among the whole unit. You start out with elements, then flight integrity, squadron integrity and wing integrity. It's very important in order to mold your unit into a real professional outfit.

**TAC ATTACK:** What sort of relationship did you have with the crew chiefs and other folks that maintained your airplane?

**YEAGER:** I always felt there was no such thing as an outstanding area in a wing. It's not just a bunch of pilots and airplanes flying. One group is as important as the others. It's been my experience that both the ops and maintenance types can do a lot for each other. A wing is a big outfit and its capability is dependent upon all the areas and all the disciplines.

**TAC ATTACK:** How will aircraft change in the future?

**TAC ATTACK**

**YEAGER:** As far as flying the airplane is concerned, airplanes are becoming easier and easier to fly. The systems are more complex, but because of computer technology and the ability to apply artificial intelligence and robotics to these airplanes, it's really making the job of flying a lot easier for the pilot. He's also becoming much more effective as a result. So consequently we're going to get a lot more for our money out of hardware in the future. That's very important. As far as maintenance, one thing I've noticed coming out of all this new technology is that the meantime-between-failures on all of the systems is getting longer and longer—up to 1500 to 2000 hours. Also, these systems are getting easier to maintain. It takes a lot less maintenance manhours versus flying hours to operate these airplanes. There again, when you start looking at 20-year-life-cycle costs of new systems, you're looking at systems that have a much greater capability than we have in today's systems yet it will cost us much less to operate and maintain.

**TAC ATTACK:** Do you have any closing thoughts that you want to share?

**YEAGER:** To sum it up, being a good commander is no easy job. The more you know about every discipline of your outfit, the better commander you're



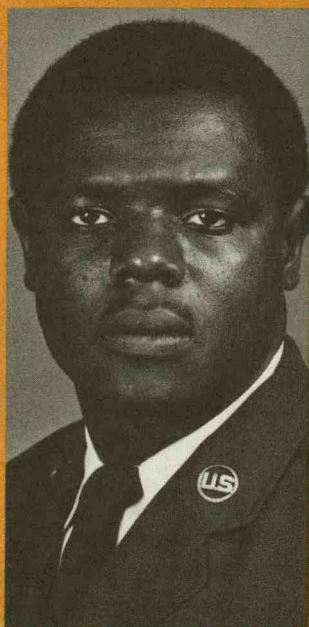
**Capt. Chuck Yeager in Europe during WWII.**

going to be. That makes for a good emphasis on flying safety and supports the whole flying safety program. But, it's not the wing commander's job to run a good safety program. It's not the wing safety officer's or the squadron safety officer's. It's everybody's job: maintenance, operations and the whole nine yards. The end result boils down in most cases to the pilot. You've got to know your systems, all of them, in order to survive. The point is—you can't be complacent. Because, man, the final word is "Complacency will kill you" and it's that simple. ➤



# TAC Distinguished Ground Safety Achievement Award

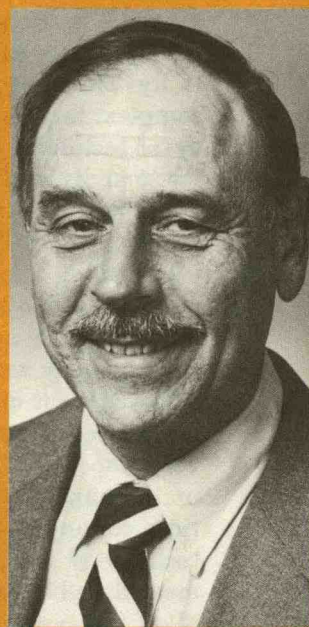
This award honors a ground safety member who has made a significant contribution to an established unit, intermediate headquarters, TAC or USAF safety program.



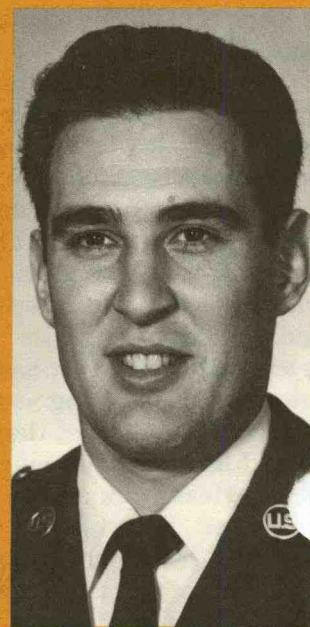
**TSgt Ruben Raysor**  
31 TFW  
Homestead AFB,  
Florida



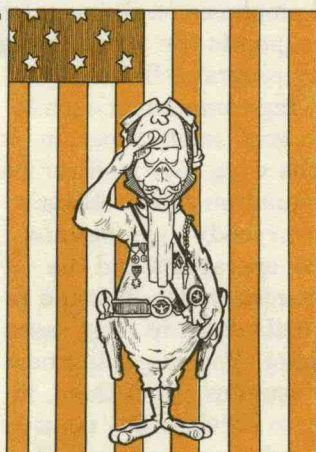
**TSgt Mary M. Sims**  
1 TFW  
Langley AFB,  
Virginia



**Mr. Edward Palumbo**  
HQ 9 AF  
Shaw AFB,  
South Carolina



**TSgt Michael Ballard**  
27 TFW  
Cannon AFB,  
New Mexico



## FLEAGLE SALUTES

**MSgt Johnnie Walker, TSgt Cynthia Maggard and SSgt Thomas Fodaro**, 2025 CS, Tyndall AFB, Fla., played a crucial role in helping Capt James Thompson recover his flamed-out F-106 (see opposite, January Aircrew of Distinction). When Jacksonville Center lost radar contact with the crippled F-106 and was unable to complete a handoff, SSgt Fodaro advised Center to have the pilot contact them on a local emergency frequency while MSgt Walker worked to pick up a primary aircraft return on his radar. Finally de-

tecting the aircraft about 12 miles from the field, Capt Thompson was given a vector which directed him towards Tyndall AFB and allowed him to pick it up visually.

Due to the urgency of the emergency, SSgt Fodaro coordinated to have the emergency aircraft land opposite direction while TSgt Maggard directed all traffic away from the crippled jet and cleared it for a visual approach. Capt Thompson credited the actions of these three individuals as instrumental in the successful recovery of his disabled aircraft.



# AIRCREW OF DISTINCTION

**C**aptain James D. Thompson was about 200 miles west of his home base, Jacksonville, Florida, when the engine of his F-106 flamed out. An immediate airstart was attempted but was unsuccessful. Captain Thompson took an approximate heading towards the nearest suitable landing area which was Tyndall AFB, Florida, and set up his glide attitude. All of his primary flight instruments and navigational equipment were inoperative, so the only available aid to navigation was his standby compass. Several other airstart attempts were made during the descent as the aircraft glided 42 miles. The UHF radio was intermittent, but he was able to contact Tyndall Approach Control and received a vector at about 12 miles which helped him to visually acquire the airfield. He touched down in the first 2000 feet of the runway and engaged the departure-end cable to stop the aircraft.

Captain Thompson's outstanding airmanship and skillful handling of this extremely complex emergency saved a valuable aircraft.



**Capt James D. Thompson**  
**159 FIS, 125 FIG (ANG)**  
**Jacksonville IAP, Florida**





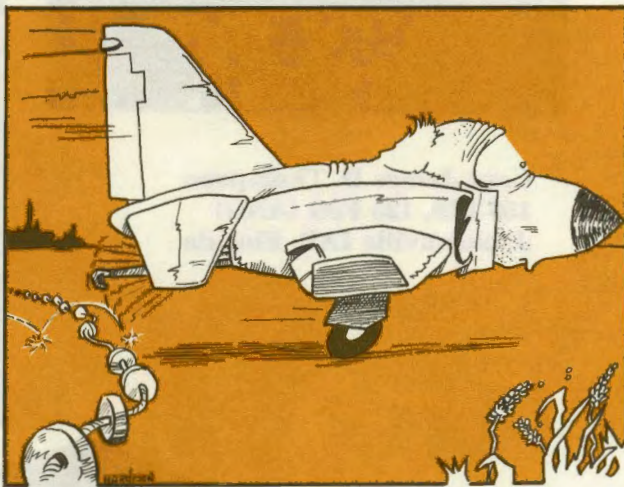
# CHOCK TALK

chock talk

## Incidents and Incidentals with a Maintenance Slant

### Why wait until later?

**B**ecause of a heavy afternoon flying schedule, the barrier maintenance folks at one of our bases weren't allowed into the barrier pits to pretension the BAK-12 barrier system. Some time later in the day, barrier maintenance was notified by radio that an inflight emergency was inbound and just two minutes from landing. At that point, there wasn't sufficient time to perform the necessary steps to get the cable ready. The emergency aircraft landed and the hook skipped on the first arrestment attempt.



After the aircraft made a go-around, the tower authorized barrier maintenance to go onto the runway and do the necessary pretensioning. The cable was adjusted and the aircraft made a successful engagement on the second try.

What if the emergency aircraft had a serious problem that wouldn't allow a go-around or second try for the cable? If the necessary effort to prepare the barrier between arrestment attempts permitted a successful engagement, that same

effort should have been made hours earlier in preparation for the day's flying schedule. Don't put off until later what you can do now (and may need with only a few minutes notice).

### Don't get carried away

**T**wo A-10s, each loaded with six live MK-82 were cleared for takeoff during the dark, early morning hours of a local exercise. Passing 1000 feet on takeoff roll at about 85 knots, the lead A-10 noticed flashing lights on the runway. At the same time, tower transmitted on both Guard and approach control frequencies, canceling the takeoff clearance because of a vehicle on the runway. The A-10 pilot immediately aborted his takeoff roll and came to a full stop about 20 yards short of security police vehicles positioned at midfield on the active runway.

This near catastrophe occurred when a security police ramp patrol questioned aircraft movement on the ramp. Communications between the patrol, the SP desk sergeant and the maintenance operations center didn't clear up the situation. The desk sergeant issued a "Stop Alert" and security police vehicles pulled into position on the active runway.

The local "Stop Alert" plan stated that blocking vehicles could travel on runways with tower approval but no vehicles were to be positioned on a runway. The plan also stated that "no attempt will be made to block the runway proper."

Quick reactions at the last possible moment averted a disaster. There is no substitute for understanding and using the established procedures.





## the future with direction

**SSgt Steven J. Schultz**  
**COMPAS Manager**  
**TAC Safety**

In the May 1986 issue of *TAC ATTACK*, we told you about the Combat Oriented Mishap Prevention Analysis System (COMPAS) which is a set of analytic tools that will give commanders, functional managers and supervisors a formal assessment of the overall operation of their unit, to include such items as aircraft or mission conversion, deployments, information flow and operational readiness. COMPAS can also be used to show commanders, managers and supervisors undesired results from any changes in equipment, personnel or procedures and to determine how well workers understand the unit mission, how their duties tie in with that mission and any misconceptions of the two that workers might have.

How do you get the system? TAC is about to begin the Phase One Start-up period. Three bases have been selected as the first fully COMPAS-operational bases: Myrtle Beach AFB, South Carolina; Holloman AFB, New Mexico; and Hill AFB, Utah. While the use of COMPAS is certainly not limited to these three start-up bases, their applications will help us to see the benefits of COMPAS and also those areas requiring changes and further

refinement to better complement our TAC mission.

Working with the Department of Energy and a civilian contractor, we have developed a COMPAS users' course tailored to Air Force operations. We plan to initially conduct three courses for mid-level managers and functional specialists starting in February 1987. This course covers the COMPAS elements of change and task analysis, operational readiness, maintaining readiness and what you do when something goes wrong. Operational readiness simply means getting the right people in the right place at the right time working with the right equipment according to the right procedures and management controls. It is a technique we will be using on new and existing processes to better consider the equipment-people-procedures interface. COMPAS will be used to ensure we minimize the unknown or unanalyzed obstacles (oversights or omissions) to mission accomplishment, whatever the mission.

The course directs efforts toward the kinds of techniques that will help every manager and supervisor feel more confident in their job performance and feedback system. It provides tools to measure system performance, to conduct a self-evaluation of organizational effectiveness and methods for planning changes and tracking

project status. Functional unit and shop workers are the right people to analyze the mission impact of a deployment or new task process. COMPAS will help supervisors and managers achieve that extra margin of success and put the odds in their favor. It will also result in a smoother transition during periods of change. The mission will progress more easily if we can weed out potential oversights or errors at the start.

We will also conduct a short seminar for commanders and other key base personnel. The seminar will familiarize them with COMPAS and permit a free exchange of information. Naturally, the three COMPAS-operational bases will be the first to receive this seminar.

We've come a long way with COMPAS since 1982 (the old name was MORT) and have a longer way to go to optimize its potential. We expect great success from the start-up bases in terms of more indepth mission planning and identification and correction of oversights and omissions. Our goal is to expand the use of COMPAS to all TAC units, but first we need to walk before we run. We know where we are now and where we want to go—to get there the smart way, we'll be using the TAC COMPAS. ➤

For more information, you may contact Sergeant Schultz at AUTOVON 574-2611.



# TAC Annual Unit Ground Safety Award

This award honors units with an effective mishap prevention program.



**Category I—Host Unit**  
 836 AD  
 Davis-Monthan AFB, Arizona



**Category II—Tenant Unit**  
 388 TFW  
 Hill AFB, Utah

# TAC Annual Unit Weapons Safety Award

This award honors units with an effective program to prevent weapons mishaps.



**Category I—Host Unit**  
 USAFTFWC  
 Nellis AFB, Nevada



**Category II—Tenant Unit**  
 Air Forces Iceland  
 Keflavik, Iceland



# TAC Traffic Safety Award

This award honors units with effective traffic safety programs for operators of privately owned vehicles, Air Force motor vehicles and special purpose vehicles.

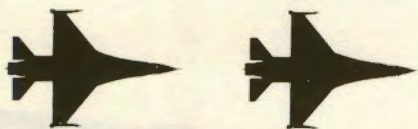


Category I—Host Unit  
833 AD  
Holloman AFB, New Mexico



Category II—Tenant Unit  
823 CES (Heavy Repair)  
Hurlburt Field, Florida

## HEADS UP



The page we wish  
were blank.



Next month, in the  
**FEBRUARY**

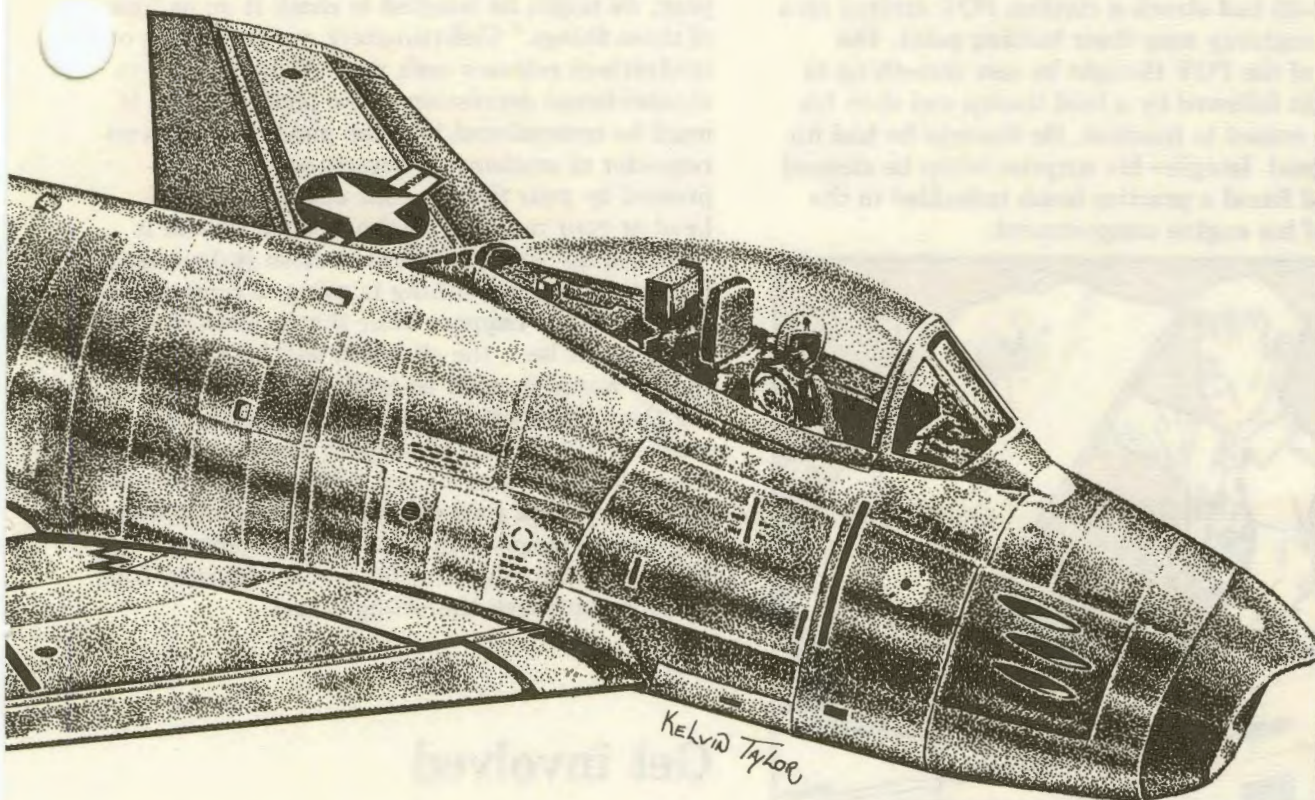
issue of *TAC Attack*,  
our TAC and TAC-gained  
units' losses in the air  
will be **IN THE  
CENTER.**



# F-86 SABRE









# TAC tips

INTERESTING ITEMS,  
MISHAPS WITH MORALS,  
FOR THE TAC AIRCREWMAN

## Bullseye

**F**our A-10s were working high threat tactics in support of an Army exercise. Everything seemed standard—the FAC brief, hold at the IP, run-in, bombs on target and head for home. Mission successful with no glitches. Right? Well, that's what the pilots thought until they landed and were informed by Army military police that a BDU-33 had struck a civilian POV driving on a public highway near their holding point. The driver of the POV thought he saw something to his right followed by a loud thump and then his engine ceased to function. He thought he had hit an animal. Imagine his surprise when he stepped out and found a practice bomb imbedded in the front of his engine compartment.



How did the practice bomb come off and find its way into the front end of a POV? All of the pilots clearly knew the target area, so target mis-

identification was not a factor. After careful analysis and review of both the weapon systems and HUD film, it was determined that a valid pickle pulse had been sent to the TER, releasing the bomb. The most likely cause was an inadvertent depression of the pickle button.

If this was the only incident of its type this year, we might be tempted to chalk it up as "one of those things." Unfortunately, we see dozens of inadvertent releases each year. Many are due to unintentional depression of the pickle button. It must be remembered that the pickle button is no respecter of anatomy. It doesn't care if it's depressed by your thumb, your elbow, your forehead or your map bag. If the weapon system is "greened up" and the release button is depressed, for any reason, something is going to come off the aircraft. What happens after that is strictly up to Murphy. At best, the situation will be embarrassing; at worst, it could be fatal. So how about giving the pickle button the respect it's due. Consider an inch or two of airspace above and around the pickle button as sacred. Nothing enters that airspace, except your thumb, and then only when the correct target is in sight and the pipper's tracking. That way you can prevent Murphy from helping *you* shack the wrong target.

## Get involved

**T**here once was a farmer in Texas who used to go out to his fields the day before plowing and kill every rattlesnake he could find. When



asked if it wasn't a dangerous thing to do, he replied: "I reckon so. But if I don't kill 'em today when I'm lookin', they might git me tomorrow when I ain't."

If safety is simply the preservation of assets, then to preserve human and material resources, hazard detection and elimination must be our top priorities. Unfortunately, all too many hazards come to light as the result of a major mishap. Being aware of an unsafe condition or practice and doing nothing to correct it reveals a lack of professionalism. It shows a lack of pride in one's command and profession.

Do you—

know an aviator whose skills are a little weak and who always needs a nudge to get his act together?

- know someone who is self-medicating?
- promote the "I can hack it attitude" and fly an aircraft that is not OK?
- selectively disregard standard operating procedures in order to meet operational commitments?
- believe that crew rest is for wimps, not for hackers?
- know someone who routinely takes risks with an aircraft in the name of "exploring the edge of the envelope"?
- pass over a hydraulic leak on preflight because "it's only a small one and I'm sure a troubleshooter has already looked at it"?
- walk by, ignoring maintenance troops using unsafe procedures to work on an aircraft?
- emulate the Sierra Hotel pilot that always hits the ramp with his sleeves rolled up, helmet in hand, shades on, eating a candy bar?
- allow shortcuts in maintenance to get an aircraft "up"?
- forget about proper hearing protection in noise hazard areas?

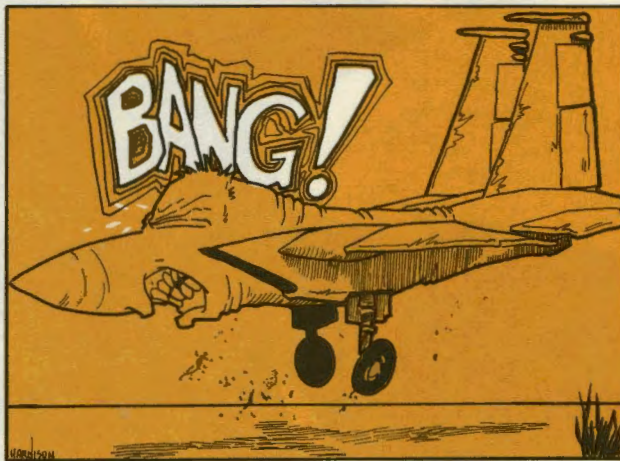
The majority of our safety requirements have been written in blood. The farmer recognized that

he was exposed to a hazard and took positive steps to eliminate it. How about you? Get involved.

*Adapted from the Navy Weekly Summary of Aircraft Mishaps*

## It got caught

An F-15 pilot strapped into his cockpit and was waiting for his wingman. When a delay with his wingman's jet occurred, the pilot unstrapped from his harness and left it connected to the seat while he got out of the aircraft. When he strapped in again with the assistance of the crew chief, both men failed to notice that the pilot's harness was caught in the restraint emergency release handle. The pilot's movements while strapping in caused a leg buckle to pull on the release handle enough to fire the interdictor initiator. There was a loud bang and the cockpit

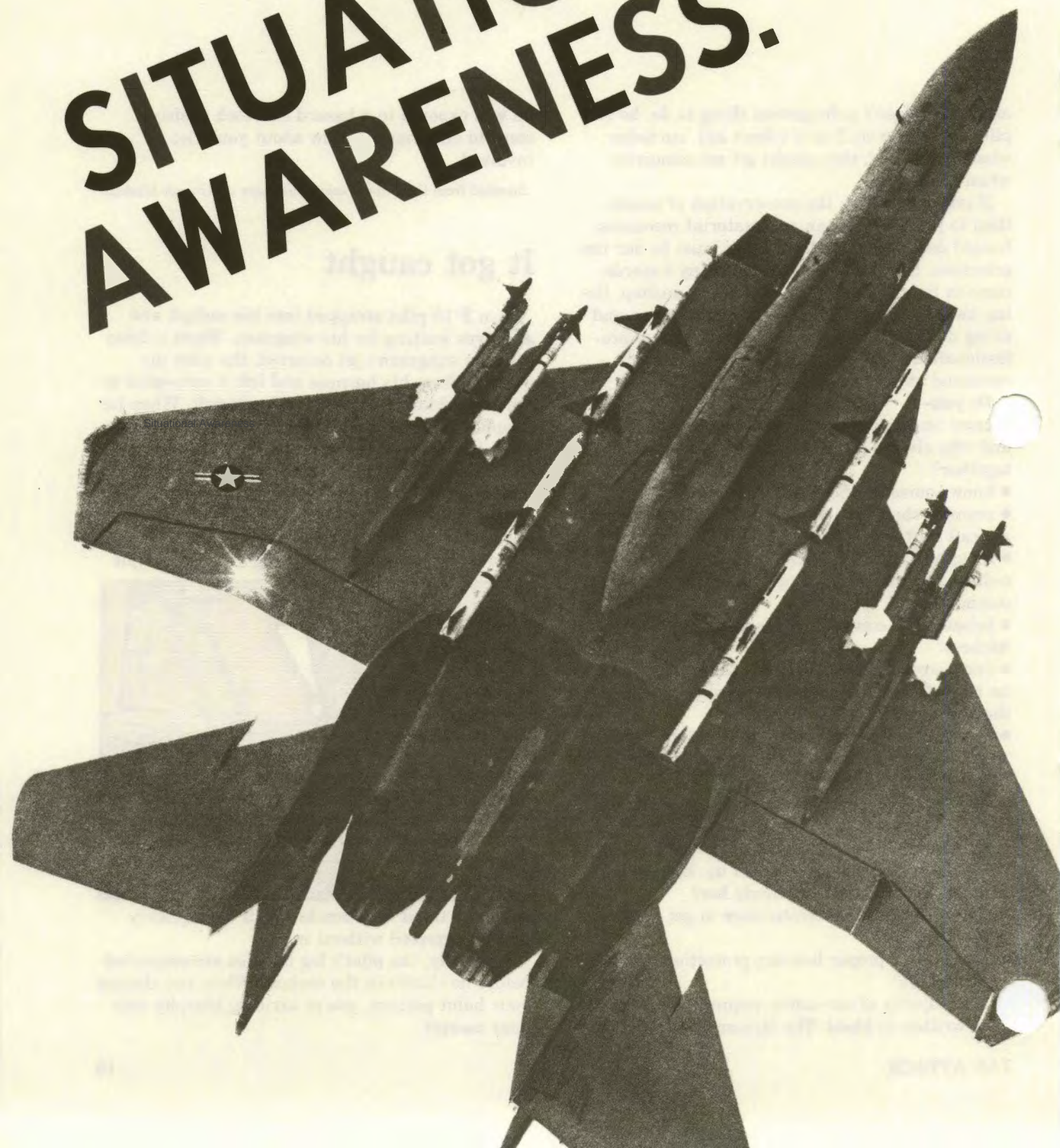


suddenly filled with smoke. Both men quickly ground egressed without injury.

Normally, the pilot's leg buckles are connected before he climbs in the cockpit. When you change your habit pattern, you're inviting Murphy into your cockpit.



# SITUATIONAL AWARENESS:





# GETTING IT, KEEPING IT

**Maj Richard A. Kirkpatrick**  
**1 TFW/SEF**  
**Langley AFB, Virginia**

**S**ituational awareness (SA) is an essential element to the success or failure of a fighter pilot. Gaining SA is vital to premerge planning and maintaining SA is crucial to winning a visual engagement. Losing SA is tantamount to losing the fight and quite often mean losing your life. The way in which we initially learn to gain and maintain SA is extremely important to our ability to employ soundly and safely in complex scenarios, be they training or actual combat. The ability of a flight lead to design the scenario to challenge his flight's capabilities and limitations, to pace the information flow and maintain his flight's SA throughout the battle is a basic element to winning the engagement.

Situational awareness is learned in a number of ways. The first and least desired method is trial and error resulting from exposure to a variety of fairly dangerous situations. Most air-to-air pilots have experienced the situation where two flight members unwittingly attack the same target. Belly checks, visual lookout or a third person may prevent disaster, but did the debrief determine *who* lost SA and *why*? And what did the flight lead do to prevent recurrence?

The second method of learning SA relies on the building block approach used in the local 51-50 upgrade program. In RTU, a fledgling fighter pilot gains only a very basic knowledge of how to achieve and maintain SA. During the initial sorties of the unit checkout program, the new guy's ability to accomplish lvl BFM or drop bombs on target is not all we should evaluate. It is also essential that we evaluate his ability to maintain awareness of the physical environment in terms of bug-out direction, minimum altitudes, maneuvering envelope and threat capability. These are the essential building blocks for later, more complicated scenarios. If he can't determine the proper direction to separate from a BFM engagement, he will be totally lost in larger composite force exercises. As the checkout progresses and the scenario complexity increases, his ability to process information from many sources, to know where he is, what his responsibilities are and what the game plan is at that point in time are indicators of his growing ability.

Another element to SA is the

ability to maintain an awareness of the location, altitude and maneuvers of other aircraft involved in a visual fight. Let the new guy debrief an engagement occasionally. What he does or doesn't know about the fight may surprise you and may help fill in your "fuzzy" areas. This program should continue past the checkout and build in complexity until he is ready for full-blown composite force exercises. The key element to this approach lies in the flight lead's ability to analyze SA breakdowns and determine where the problem is.

The flight with the highest level of SA prior to the merge will normally be the victor in any given engagement. A good flight lead is one who will not commit his assets to an engagement without all flight members knowing *who* they are to engage, *how* they are to engage and *what* their specific responsibilities are in all phases of the fight. The level of SA begins long before the flight brief and requires that each flight member have a knowledge of the others' capabilities, limitations and currencies. It takes detailed discussion of game plans, options and "what







# SITUATIONAL AWARENESS

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**The basic rule is that the leader and wingman must function as an integrated whole and the loss of one member of that whole will cost more than half the effectiveness.**

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if-ing" your plan. A thorough knowledge of tactics manuals is required to gain full use of the available assets such as AWACS and GCI. Each flight member's ACT currency should be evaluated prior to constructing the scenario, and the scenario adapted to meet the flight's capability on that particular day. The briefing then becomes a process of adapting the game plan and options to the current scenario and threats. Once airborne, the knowledge gained will reduce the questions, doubts, delays and hesitation that reduce SA. The basic rule is that the leader and wingman must function as an integrated whole and the loss of one member of that whole will cost more than half the effectiveness.

Information processing is the essence of premerge SA. If the flight lead allows too much information to flow in too short a time, he will saturate his wingman. If not enough information is exchanged, he'll be just as bad off. A balance is required—a balance that gives everyone a chance to make inputs that will add to overall awareness or a chance to confess a lack of awareness in hopes of gaining some. Pacing the radio chatter becomes essential and a weapons controller that won't shut up can totally disrupt flight SA, as can a wingman who can't or won't confess to a lack of SA. A flight lead who commits to an engagement under those circumstances is inviting disaster.

During debrief, examine the flow of information. Make sure all team members (wingman, GCI, AWACS, etc.) are making timely and useful inputs.

In a visual engagement, situational awareness equates to survival. Loss of SA can be insidious and is often not even realized until a blur flashes by or, worse yet, when a collision occurs. Turning with "tally one" at the merge, knowing that two aircraft are in the area is tactically unsound and an admission of a breakdown in SA. Breakdown of awareness during an engagement is also indicated by a lack of knowledge of the wingman's position or status. "Lose sight, lose fight" doesn't apply to the one bandit you're maneuvering against. If you're not sure where all the players are, you've lost or are losing SA and it's time for a separation or a knock-it-off.

During the debrief, look for those areas where SA breakdown occurred and find out why. Was the training adequate? Did you engage without SA? Were you and your wingman capable and current enough for the complexity of the scenario? If someone got shot, was it due to a breakdown in SA? Most importantly, adhere to ROE. If you commit your flight to a fight only to find someone is tumbleweed, then knock-it-off and regroup. Give some thought to how you would handle that situation in combat. If you engage, you may lose more than the fight. ➤



# I Walked Away From This Accident

**I**t was 6 a.m. and I knew it was time to do what a hundred million other people were doing—hit the snooze bar. When I finally got out of bed, I realized that it was just another Friday. How little did I know.

My workday was relatively uneventful—just another day in the life of a medical services specialist. At 5 p.m. I left the hospital. When I reached the dorm, I changed into a shirt and shorts, then relaxed and watched some TV before going to the evening meal.

At 7 p.m. I called to tell my girlfriend that everything was set for our trip to San Antonio the next day. At 7:30 p.m. I decided to gas up my pickup that wasn't even a year old.

As I entered the 8-lane divided highway in front of the base, I got snagged in heavy traffic, which meant it took a little longer than usual to get up to speed. As I approached the 55 mph speed limit, I spotted a car ahead and to the right preparing to pull into my lane. As I let off the accelerator, the driver pulled out directly in front of me without looking. After two quick maneuvers, I realized I was going to hit him. I braced one hand at the top of the wheel, the other on the door handle and applied brakes in hopes of lessening the severity of the impact. When I hit the other car's front fender, it sounded like an ex-

plosion. The next thing I knew, the sky was below me and the ground above. The truck rolled one more time and came to rest upside down in the median.

I refused to allow anyone to move me until I was sure I had feeling and movement. Only then did I release the seat belt and crawl to the passenger side to be pulled to safety. I was taken to the base hospital for observation.

The next morning I got out of bed and started walking out the aches and pains. Sunday morning I was released, and Monday morning I went back to work. My injuries consisted of cuts on my right arm and left hand from flying glass, bruised ribs and a severe contusion to my right hip from the steering wheel when it collapsed into my lap. I was later told by my friends that when they drove by, they didn't even recognize my truck and they were sure the driver couldn't have survived the wreck.

At the estimated 5 Gs I encountered during the impact, I would have weighed 750 pounds. Since I know I can't lift that much, something else had to have helped me survive that accident—my seat belt.

I not only survived the accident, I walked away from it. While I work in the hospital, I hope I never have to respond to an accident such as mine. If I do, I hope the driver was wearing a seat belt.

Courtesy 67 TRW/PA



A1C David Gibbons walked away from a collision that resulted in this mangled mass of wreckage because he wore his seat belt (U.S. Air Force photo).





## WEAPONS WORDS

### Look out!

**T**hree security policemen were cleaning .38 caliber pistols in the security police armory during midshift. The armorer had already cleaned 20 weapons and then proceeded to clean his own weapon. He removed the cartridges from his weapon and properly cleaned it. He accomplished the required maintenance and cleaned the weapon according to established procedures.

After the cleaning was complete, he reloaded



the pistol, closed the cylinder and the weapon fired. The bullet hit the floor about ten feet away where it ricocheted and went through a 4½-inch thick Sheetrock wall, hit a chair in the confinement facility and ricocheted to another wall where it finally stopped.

What caused this incident? The security policeman had been doing a repetitious task of cleaning several weapons and may have become complacent, causing him to leave the hammer in the cocked position during reloading. After closing the cylinder, he noticed the hammer was still cocked. When he released it, it slipped off of his thumb causing the weapon to discharge.

Check yourself. Complacency is insidious and always sneaks up on you when you least suspect it.

## Fire extinguishers and class/division 1.3 munitions

**Lt Col Arthur D. Eiff**  
Chief, Weapons Safety Division  
USAFE

**S**ome class/division 1.3 munitions contain violently flammable incendiary mixtures. They're so flammable that using water as an extinguishing agent can be very dangerous—they may explode. That's why you almost always see an "apply no water" hazard symbol posted with a fire symbol 3.

Table 3-2 in AFR 127-100 provides some fire fighting information for munitions and recommends dry sand or dry powder agents for some 1.3 items. What it doesn't tell you is that a *dry powder* agent isn't the same as a *dry chemical* agent. Using a dry chemical extinguisher (Class B type) when you need a dry powder extinguisher (Class D type) could be hazardous. AFOSH Standard 127-56 tells you to consult with your fire chief when selecting a dry powder extinguisher. Make sure your fire extinguishers are matched to the hazard. We recommend using dry sand when it's recommended in the regulation, especially for small amounts at licensed locations. But check with your fire department to make sure it's OK.

If you have unusual fire extinguisher needs or need several different types, make sure your



training program thoroughly covers the hazards and the required extinguisher. If you're not prepared for an emergency, a controllable situation could literally blow up in your face.

## He went too far

**A**munitions maintenance crew was performing an inventory of BDU-38 practice bombs. The bombs were stored in a five high configuration with approximately 10- to 12-inch spacing between stacks. While attempting to reposition a stack with two bombs, the lift driver al-

lowed the tines of the fork lift to protrude under the five high stack directly behind it. During the lifting operation, movement of the back stack was noticed. The driver lowered the forks; but the resulting movement caused the back stack to rock further, causing the top three crates to tumble onto the fork lift.

Spotters were being used during this operation, but they weren't in a position where they could detect any problems. Just having a spotter to "fill the square" doesn't get it. You're there to help the driver cover his blind spots and to be an extension of his eyes where he's unable to see. Don't take that responsibility lightly. Remember, next time you could be the guy in the fork lift.

## TAC Distinguished Weapons Achievement Safety Award

This award honors a weapons safety member who made a significant contribution to an established unit, intermediate headquarters, TAC or USAF weapons safety program.



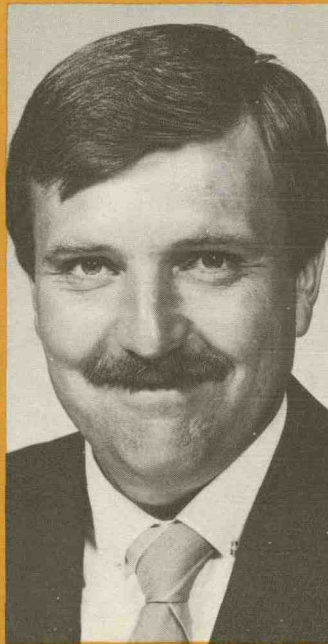
**SMSgt William Sizemore**  
23 TFW  
Holloman AFB,  
New Mexico



**MSgt Carl E. Fitzgerald**  
836 AD  
Davis-Monthan AFB,  
Arizona

## TAC Distinguished Ground Safety Newcomer Award

This award honors a ground safety member who is new to the ground safety career field and has demonstrated above-average performance.



**Mr. Jerry P. McDermott**  
833 AD  
Holloman AFB,  
New Mexico

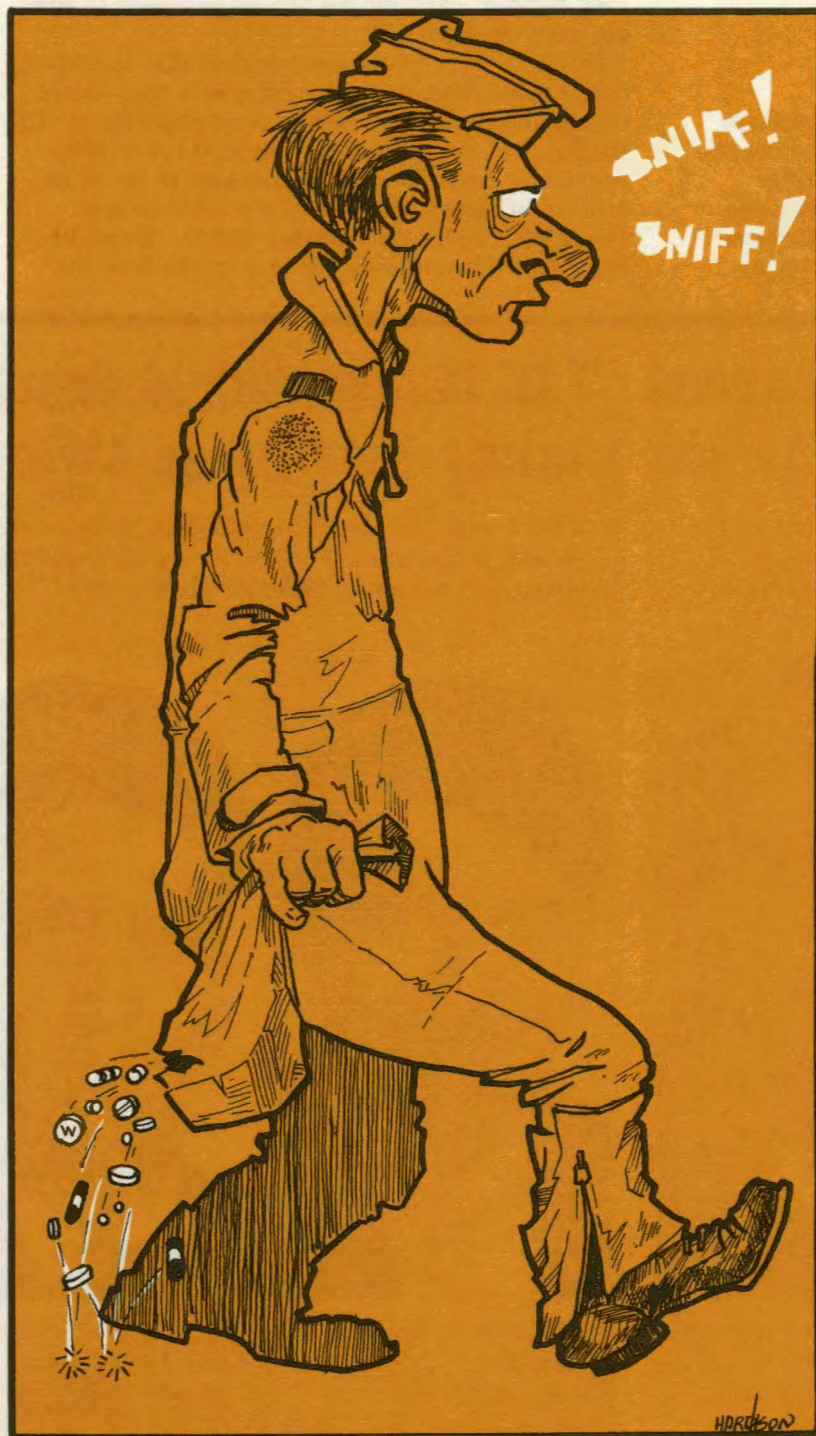


**Sgt Ronald W. Fuller**  
354 TFW  
Myrtle Beach AFB,  
South Carolina



# SELF-MEDICATION DON'T

self-medication



**Capt Tom Koritz, MC/FS**  
**USAF Hospital**  
**Langley AFB, Virginia**

**Y**ou're deployed, taking part in a Quick Thrust exercise. Today you'll be number three in a four-ship DACT mission. Winter weather is approaching and, predictably, you've started to catch a cold. You were out a little late the last two nights taking in the local sights; but you have the midmorning go, so you don't think getting enough sleep will be a problem. There's no way you want to miss such a high value sortie; so to perform to your max, you want to clear your head congestion. Rather than report to the flight surgeon and get grounded, you stop at the local 7-11 and pick up some decongestant tablets. After all, only one can't hurt; and if you take it six hours before takeoff, all the adverse side effects will have passed. Right? Wrong! A true story. . . Read on.

You depart your deployed location in a formation takeoff behind the lead element. Passing 4000 feet in a 30-degree bank turn, you turn your head to watch your wingman cross under from right to left. Upon bringing your head forward, you experience *tumbling vision* and *uncontrollable rapid eye movement*. Despite your incapacitation, you think quickly enough to go 100-percent oxygen, set the autopilot until the symptoms pass, declare an emergency and make an uneventful recovery and landing. The flight surgeon's physical exam reveals ear blocks in both



# DO IT

ears. It's his opinion that the tumbling sensation was likely the end result of the ear blocks, the upper respiratory infection and the self-medication.

You may think you're a hero by saving a multi-million dollar asset when others in past similar situations either jumped out or died trying to recover. Unfortunately, you get the hook ("Unsat") for judgement in trying to fly in the first place.

Let's take a look at some side effects of common over-the-counter medications and other "drugs" that we may not think of as having side effects. The most important thing to understand is that there are no absolutely safe drugs. There is always some risk, no matter how small, of an adverse reaction. Seldom is the outcome so dramatic as in our situation above, but then who would have thought one cold pill would contribute to such a predicament.

Over-the-counter and prescribed cold medications are usually combinations of antihistamines, decongestants and occasionally aspirin or caffeine. Antihistamines combat the itching and stuffiness associated with the cold. The most well-known problem associated with antihistamines is *drowsiness*. In fact, antihistamines are so effective in producing sleep that they are the major ingredients in sleeping pills. To counter these effects, most over-the-counter cold pills contain a decongestant, frequently phenylpropanolamine. In addition to clearing the congestion associated with a cold, this in-



redient is a stimulant and is also a primary ingredient in many diet pills and stimulants. Excessive amounts of phenylpropanolamine can cause decreased coordination, severe headache, disorientation, nausea, blurred vision, shakiness and even seizures. Think how much fun all that could be while you're flying.

What about other commonly used medications such as aspirin or Vitamin C? Did you know that aspirin in therapeutic doses can cause peptic ulcers and ringing in the ears (tinnitus) or, in higher doses, vertigo as well as partial or total hearing loss? The Vitamin C that some people take in megadose quantities, mistakenly thinking it leads to better health, slows the rate of excretion of aspirin from the body. If taken together, what might be a normal therapeutic dose of aspirin for a headache may become a toxic dose. In other words, combining various over-the-counter drugs may lead to serious and sometimes permanent toxic reactions.

What about "non-drugs" such as tobacco and alcohol? In addition to all the consequences of tobacco that we already know of such as cancer, emphysema and heart disease, there are also aeromedical aspects to this drug. Heavy smokers have been shown to suffer "tobacco amblyopia," or dimness of vision. The resulting effects are obvious for high altitude or night flying. Regarding alcohol, a recent study demonstrated excessive omission error rates during aircraft preflight in a group of pilots who had only two to three drinks fourteen hours previously. These pilots were compared to those who had not had any alcohol in the last two to three days. In other words, residual effects of minimal alcohol intake probably last longer than the twelve hour "bottle to throttle" rule might indicate.

So what? Well, imagine the crusty old major who is a heavy smoker, normally has two to three beers with the boys on occasion, takes vitamins to stay "healthy" instead of exercising and takes aspirin frequently for minor headaches. Now throw in the beginnings of a cold and pressure from the scheduling desk since he is the only IP available today. That's not an unrealistic scenario. Imagine the possibilities. Don't self-medicate and fly. Losing a sortie is better than losing a life. ➤

Bio: Dr. Tom Koritz is a USAF flight surgeon who actively flies the F-15 Eagle, in which he has over 900 hours.





# DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU  
AND YOUR FAMILY HERE ON  
THE GROUND

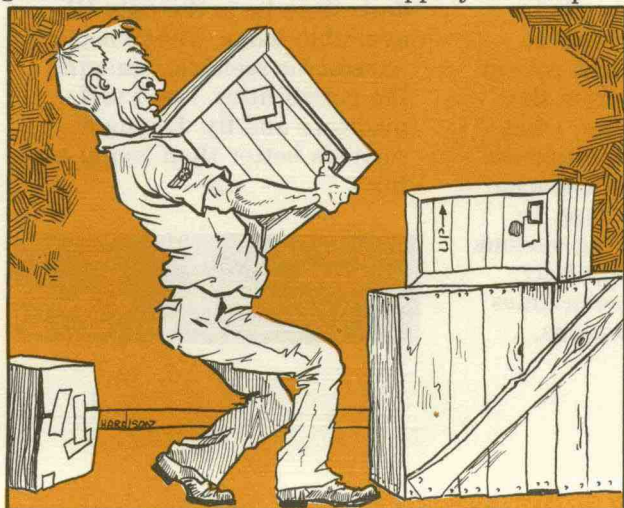
## Save your spine—lift loads correctly

**U**se spine-saving methods whenever there are things to be hoisted and handled. Get the answers to these questions before you take action to lift something:

What kind of load is it? How heavy? How awkward?

Is it *smart* to get help? Can it be done with available mechanical equipment? Is it in a good position? Can I get close to it?

Are there any protruding nails, splinters, oil, grease or moisture to make it slippery or sharp



edges? Do I need gloves or other protection?

Where will I put the load? Is a spot cleared for it? Any stumbling blocks in my path?

Can I walk with the load and see clearly where I'm going?

Now here's how to lift that object.

1. Footing is as important in lifting as it is in the batter's box. Your feet should be close to the object, but far enough apart for good balance (about shoulder-width). One foot slightly ahead of the other seems best for many.

2. Bend your knees and go down to a crouch, but not a full squat. It takes double the effort to straighten up from a full squat as it does from a crouch.

3. Keep your back as straight as possible; don't arch it.

4. Get a good, firm grip; don't lift until your hold is strong and slip-proof.

5. Lift object by straightening your legs, keeping the load close to you as you come up.

6. If you have to change direction, don't twist your body. Lift the object to carrying position, then turn your whole body by changing position of your feet.

7. In setting down the load, go down to a crouch with your back straight and your knees bent.

Beware when you've been away from work. Even if you're a rugged, seasoned lifter, muscles quickly get out of shape during vacation or illness. Be doubly careful those first few days back on the job; ease into it gradually. Whenever conveyors, hand and lift trucks or other mechanical-handling equipment can do the job, let them take the strain and spare your spine.

Courtesy ATC

## Why's the Air Force in the Smokebusting business?

**Capt Joe Mazzola**

**Fitness Office**

**Air Force Military Personnel Center**

**Randolph AFB, Texas**

**Y**ou may have recently heard some talk about the Air Force's antismoking program. Well, it's out there. What we're trying to do is reduce the number of smokers in the force.

A lot of people are probably scratching their heads wondering just why the Air Force is now in the "smokebuster" business. It could be any of

January 1987



umber of reasons. Maybe it's because—  
—approximately 40 percent of 60,000 active-duty Air Force people smoke.

—smoking is one of the major risk factors in heart attacks. Others include high blood pressure, obesity and high blood cholesterol. Smokers have 70 percent more heart attacks than non-smokers and an abnormally higher number of strokes.

—the incidence of mouth cancer, larynx cancer, urinary bladder cancer and pancreatic cancer is dramatically increased when a person smokes.

—direct health care costs for smoking-related illnesses in the United States are about \$13 billion every year, and lost productivity and wages due to these illnesses account for an additional \$25 billion in yearly losses.

—cigarettes are the No. 1 cause of fire in the

home.

—studies show that nine out of ten smokers are concerned about their habit and say they'd quit if they could find a way that works.

—60 percent of the Air Force doesn't smoke, yet many of these people work in environments where they must breathe second-hand smoke.

—you begin to reap immediate health benefits when you stop smoking, unless irreversible disease has begun.

—cigarette smoking could seriously impair your ability to meet mission demands quickly and efficiently in a crisis situation.

If you smoke, consider quitting. Contact your base health promotion coordinator and look into a smoking cessation program. Make 1987 the year you quit smoking.

*Adapted from Air Force News Service*

## TAC Exceptional Performance in Ground Safety Award

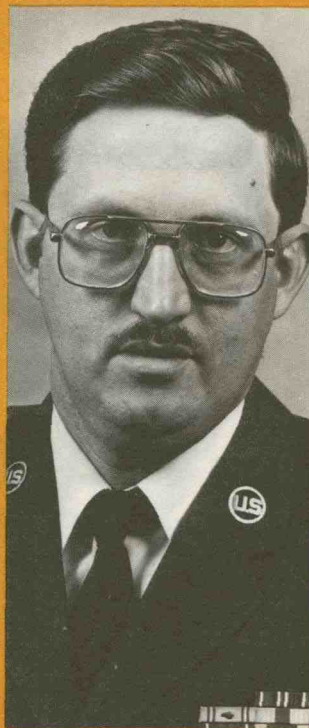
This award honors ground safety members who have made meaningful contributions to their unit's mishap prevention program.



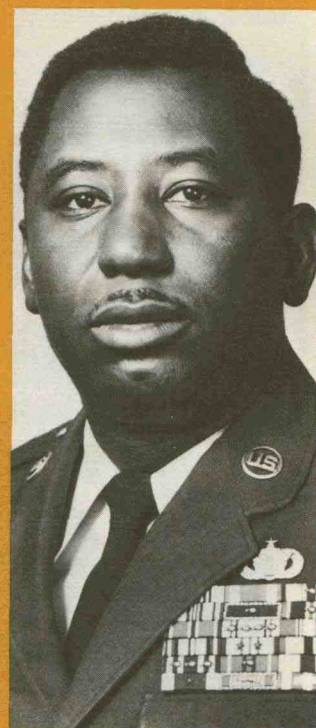
**SSgt Ricky A. Abell**  
24 COMPW  
Howard AFB,  
Panama



**MSgt Roger L. Britt**  
4 TFW  
Seymour Johnson AFB,  
North Carolina



**SSgt Earl W. Matthews**  
23 TFW  
England AFB,  
Louisiana



**SMSgt George Foreman**  
HQ 9 AF  
Shaw AFB,  
South Carolina





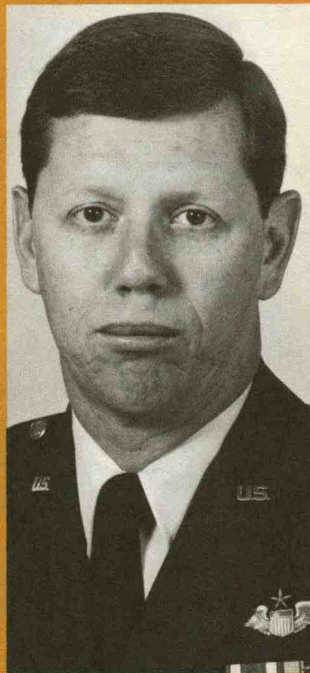
**Hanging upside down** (inverted exercise position, causes eye pressure to nearly double—serious trouble for people with glaucoma or certain other eye diseases. In a recent study conducted by ophthalmologists, 40 subjects developed increased eye and retinal artery pressure following the inverted exercises and also experienced visual field losses. The ophthalmologists also noted that it took several minutes for eye pressure to return to normal after regaining the upright position. What's recommended? Don't turn upside down for more than 10 minutes at a time with 2-minute breaks in an upright position between exercises. People with glaucoma or retinal vascular diseases should avoid this type exercise.

## TAC Distinguished Flight Safety Award

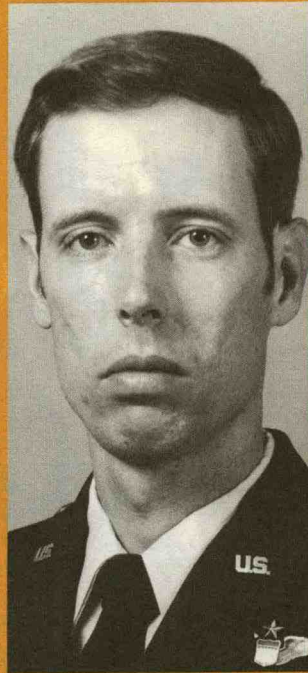
This award honors a person who has made significant contributions to an established unit, intermediate headquarters, TAC or USAF flight safety program.



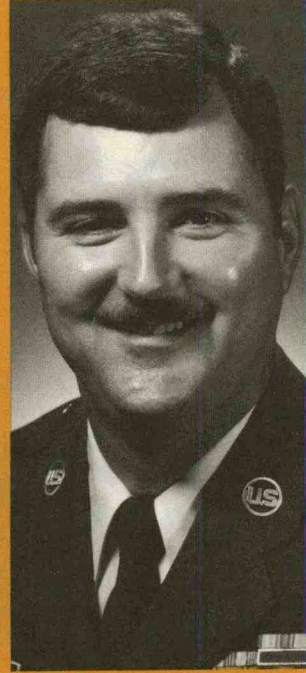
**Maj Steven Henderson**  
57 FWW, USAFTFWC  
Nellis AFB,  
Nevada



**Maj Steven W. Duke**  
425 TFTS, 405 TTW  
Williams AFB,  
Arizona



**Capt Robert Sarnoski**  
72 TFTS, 56 TTW  
MacDill AFB,  
Florida



**TSgt Joseph Chambers**  
33 TFW  
Eglin AFB,  
Florida





# TAC TALLY

CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC		
NOV	THRU	NOV
	1986	1985
2	26	15
1	11	10
2	21	14
2	20	10

ANG		
NOV	THRU	NOV
	1986	1985
2	8	12
0	1	7
2	11	8
2	10	8

AFR		
NOV	THRU	NOV
	1986	1985
0	2	1
0	0	1
0	2	0
0	2	0

## TAC'S TOP 5 thru NOV 1986

1st AF	
class A mishap-free months	
180	84 FITS
75	318 FIS
25	49 FIS
21	325 TTW
10	57 FIS/5 FIS

9th AF	
class A mishap-free months	
45	33 TFW
18	507 TAIRCW
17	23 TFW
16	56 TTW
15	1 TFW

12th AF	
class A mishap-free months	
43	366 TFW
27	355 TTW
25	479 TTW
25	27 TFW
21	58 TFW

ANG	
class A mishap-free months	
208	182 TASG
192	110 TASG
167	138 TFG
149	177 FIG
144	114 TFG

AFR	
class A mishap-free months	
75	482 TFW
74	301 TFW
65	924 TFG
53	906 TFG
49	442 TFW

DRU's	
class A mishap-free months	
188	USAFTAWC
122	28 AD
67	24 COMPW

## CLASS A MISHAP COMPARISON RATE

(CUM. RATE BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)

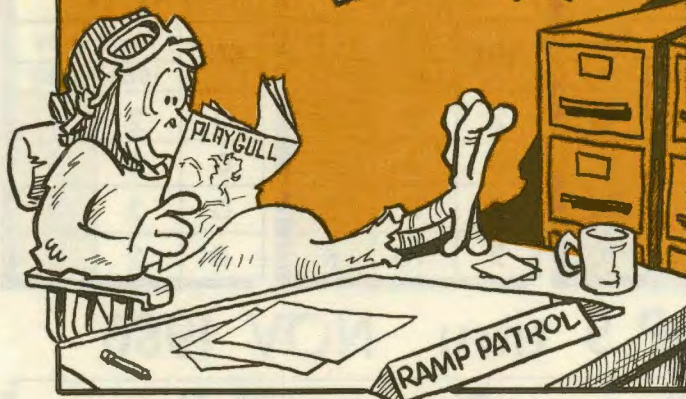
TAC	1986	4.8	6.8	5.4	4.4	4.1	3.7	3.6	3.2	3.4	3.9	3.9	
	1985	3.2	3.4	2.7	2.4	2.9	2.7	2.5	2.6	2.5	2.3	2.2	
ANG	1986	4.3	2.4	3.1	2.3	2.7	3.0	2.5	2.2	2.5	2.6	3.2	
	1985	4.8	4.8	3.0	4.3	4.2	4.9	5.4	5.2	5.1	5.0	4.6	
AFR	1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	4.5	4.2	
	1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.4	2.2	

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



FLEAGLE

ATTENTION  
RAMP PATROL.



AIRCRAFT MAKING  
UNAUTHORIZED TAKE OFF  
ON RUNWAY 3. THIS  
IS A "STOP ALERT"



HARRISON

AIN'T GOT TIME TO  
CALL TH' TOWER.



WE WAA WEE WA  
WE WAA



© STEVE HARRISON 1987

HALT, RAMP PATROL!



THAT SUCKER  
AIN'T STOPPING?



"BLOCKING VEHICLES MAY  
TRAVEL ON RUNWAYS WITH  
TOWER APPROVAL, BUT NO  
VEHICLES WILL BE PLACED  
INTO POSITION ON A RUNWAY".  
AND, "NO ATTEMPT WILL BE MADE  
TO BLOCK THE RUNWAY PROPER."

