



TAC Attack contains photographs and artwork of sleek jet fighters and other tools of our trade. However, it is an unfortunate part of the prevention business to sift through piles of twisted metal that have been converted from the object of our affection to the object of our investigation. Too often investigations have shown that aircrews neglected basic airmanship in failing to maintain aircraft control while attempting to handle other chores on the range or in response to a potentially hazardous situation.

Coach Vince Lombardi built a legend by emphasizing the basics of football. On the field his teams excelled in executing basic run, pass, and kick strategy against teams statistically superior. Coach Lombardi's career record attests to the success of his back-to-the-basics approach. Whether you have a multimullion dollar aircraft strapped to your back or a pigskin tucked under your arm, there is no substitute for skillful execution of the basics. Just as the fastest handoff is worthless when a fumble follows, the fastest conversion to an opponent's six is worthless if you depart controlled flight getting there.

Back-to-basics strategy begins in our study of tech data and is continually emphasized in training and briefings, practiced during the mission, and critiqued in the debrief. Supervisors must insist on the troops mastering basics before permitting them to advance to more complicated procedures.

The first and most basic procedure in an aircrew's bag of tricks when the task saturation starts to go off the charts is "maintain aircraft control." Reacting to a fire light on final, checking weapons switches at low altitude on the range, and transitioning from a night IMC ILS to the strobes and VASIs require the basics of maintaining aircraft control. Failure to do the basics results in a failure to accomplish the advanced and, too often, also results in loss of the aircraft and lives.

I urge all of you to emphasize the basics of your activity. Training sessions, briefings, debriefings, and hangar flying in the squadron snack bar are good opportunities for coaches and players to teach and learn. The payoff for successfully executing the basics will be a string of winners for you just as it was for Lombardi.

Last December, TAC Attack reflected on the year past and pointed to the new year ahead as a time for a fresh start. A friendly rabbi pointed out that September contains the Jewish High Holy Days. The Jewish New Year is a good time for all of us to make a midcourse correction in the safety business, to include a back-to-basics philosophy and to resolve to improve our win record.

This month's feature articles are good introductions to midcourse corrections and back-tobasics discussions. Communicating is the theme of articles by Maj Martindell and Lt Mahaffey. Clearly communicating is one of the basics which deserves our attention. Lt Hartle urges us to search for the source of signals rather than be led astray by echoes. Supervisors must be especially sensitive that they are receiving the correct input, not a louder but diversionary signal.

I hope this issue of TAC Attack helps us all take a fresh look at the basics of what we're doing.

2621

ATTACK

HAROLD E. WATSON, Colonel, USAF Chief of Safety



HON VERNE ORR SECRETARY OF THE

**GEN W.L. CREECH** COMMANDER

COL HAL WATSON CHIEF OF SAFETY

**MAJ JIM MACKIN** 

**STAN HARDISON** ART EDITOR

> MARTY DILLER EDITORIAL ASSISTANT

SGT JOHN STEELE STAFF ARTIST

EDITOR

AIR FORCE

ON THE COVER THE O-2A

## SEPTEMBER 1983

DEPARTMENT OF THE AIR FORCE

Sometimes, We Should Talk	4
Aircrew of Distinction	7
Capt Mark Ronco and 1st Lt Greg Hartley.	
TAC Tips	8
Interest items, mishaps with morals, for the TAC aircrew member.	
TAC Safety Awards	11
Capt Donna L. Schmidt and TSgt Emilio Rola.	
Weapons Words	12
Working with TAC's weapons systems.	
Looking for a Cuckoo's Nest	14
Preventing mishaps is like hunting the elusive cuckoo.	
CH-3E Jolly Green	16
Stipple rendition by Sgt John Steele.	
Chock Talk	18
Incidents and incidentals with a maintenance slant.	
TAC Attack Survey	21
We need your opinions about us.	
Tell Us About It	23
GCI can help—if we keep them informed.	
The Blind Leading the Blind	24
No one knew what a "hot gun" was.	
Down to Earth	26
Items that can affect you and your family here on the ground.	20
Attitude	29
A low-cost way to improve safety.	20
Letters	30
Our turn to take flak.	00
TAC Tally	31
The flight safety scorecard	01

#### **TACRP 127-1**

TAC Attack is not directive in nature. Recommendations are intended to comply with existing directives. Opinions expressed are those of the authors and not necessarily the positions of TAC or USAF. Mishap information does not identify the persons, places, or units involved and may not be construed as incriminating under Article 31 of the UCMJ. Photos and artwork are representative and not necessarily of the people or equipment involved.

Contributions are encouraged, as are comments and criticism. We reserve the right to edit all manuscripts for readability and good taste. Write the Editor, TAC Attack, HQ TAC/SEPP, Langley AFB, VA 23665; or call AUTOVON 432-3658.

Distribution (FX) is controlled by TAC/SEPP through the PDO, based on a ratio of 1 copy per 10 persons assigned. DOD units other than USAF have no fixed ratio; requests will be considered individually.

Subscriptions for readers outside of DOD are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. All correspondence on subscription service should be directed to the superintendent, not to TAC/SEPP.

TAC Attack (ISSN 0494-3880) is published monthly by HQ TAC/SEPP, Langley AFB, VA.

POSTMASTER: Send address changes to TAC Attack, TAC/SEPP, Langley, AFB, VA 23665.

# SOMETIMES, WE <u>SHOULD</u> TALK ON THE RADIO

## exercise your privileges as the pilot of a single-seat fighter

#### By Maj. Richard L. Martindell HQ USAFE Flight Safety

"Train the way you plan to fight" has been the intro to a lot of articles in safety magazines and weapons texts lately, and rightly so. We know we fly the way we train, so our training needs to be geared to condition our responses to do the right thing at the right time. There are many old stories of how peacetime training produced less than optimum results in combat. On one of my early missions to North Vietnam as a lieutenant, I was flying as Blue 4. We had gone all the way to an airfield north of Hanoi. In the cross turn to start the egress I got out of position. I hesitated to go supersonic to catch up, thanks to my training over Death Valley where supersonic flight was a no-no. About the time the WSO was trying to find a way to hit me, the light came on: I realized that the people on the ground were already mad, and booming them didn't really matter. I learned my lesson right them, but my flight leader provided some reinforcement in the debriefing anyway.

Well, we've solved a lot of problems in the area of training for combat, but let's look at another area where we may be shooting ourselves in the foot when we train to do things "right." I'm talking about the air traffic control environment under instrument flight rules. Since pilot training, we have been taught to keep our radio transmissions to a minimum so we don't clutter up the crowded ATC frequencies. When we are in radar contact with ATC, very few calls are required; so in pilot training, anytime we started to talk too much, our IP said something to us. He was also quick to point out others on the air who were tying up the frequency when we wanted to talk.

Remember when you were in the VFR pattern shooting touch and goes with five or six other planes? All the way through UPT the pressure was on to keep your radio calls to a minimum and when you had to talk, to keep it short and sound "professional."

Next you get to TAC and you are told that you are the pilot and the responsibility of flying the airplane is yours. You'd better have a plan and a backup and be prepared for anything up to and including autonomous operations. And you hear jokes about the old wingman briefing, "you can say 'Two', 'Bingo', and 'Mayday', any questions?"



Plus we introduce the comm-jam problem so minimum-comm and comm-out procedures are learned.

We now have a highly trained fighter pilot capable of completely independent operations without talking on the radio. Success? In lots of ways, yes. But what about those occasions out of the routine when it's time to mash the mike button and ask for help or declare an emergency?

I'd like to talk about three generalized situations and some of the "privileges" you might think about using as the pilot of a single-seat fighter. First, let's look at normal ATC handling. The ATC controllers in your local area are used to working with you. They know your capabilities and limitations. Furthermore, you know the local area and the associated procedures. But what about your cross country to a non-fighter base near a large metropolitan area? The controllers there are used to working with airliners and Air Force jets with large crews. Needless to say, your



flight planning was thorough and you have studied the approach plates. When you get in the terminal area, you request and receive an en route descent from center and are handed off to approach control. Now approach starts talking to you about STARs and it's not even night. You tell him you don't have any STAR plates in the plane, so he starts clearing you to intersections you've never heard of because they are only on the low altitude charts. Nice guy that the controller is, he then converts the intersections to radials and DMEs, which means about five pointto-points off as many TACANs to get to the ILS final. Somewhere in there you should find a way to remind the controller that you are by yourself and what you would really like is vectors to the ILS final or the visual pattern.

Next, let's talk about "little" emergencies. What's a little emergency? You know, that thing we used to call a precautionary. There's something wrong with the airplane or us, but it's not catastrophic. We had to refer to the emergency section of the checklist and are now heading home with some kind of operational limitation and have declared an emergency with ATC. There's no doubt in your military mind that you'll have no problem getting the airplane on the ground. You've got everything under control as the pilot in command and don't want to be a burden to ATC, so you elect to fly the normal recovery rather than asking to go direct.

That's very considerate of you. But you're in

#### Sometimes, We Should Talk

the jet, and the controller is on the ground. The worst that can happen to him is that he falls out of his chair. Besides, you've declared an emergency and spent your quarter—why not get your money's worth? The airplane is sick. Why not go



direct and get it on the ground as soon as possible? Sure, AFR 60-16 says you have to be prepared to explain the situation in writing if ATC asks you to do so, but you should make a record of the situation whether ATC asks or not. Besides, when was the last time you heard of ATC asking the pilot of an emergency for a written explanation.?

There is another situation pilots tend to classify as a little emergency; however, I don't agree. That's spatial disorientation on the wing. Some of us are still flying around in singleseaters with only one transmitter, and many of my students are aghast when I suggest that they should talk to me on an ATC frequency if they start to get disoriented. This problem should resolve itself as soon as we all get equipped with two radios so we can converse on a discrete tactical frequency in such a situation. In either case, spatial disorientation on the wing is a serious matter: and if you don't have anybody else in the airplane to talk to, you had better get on the radio and tell your leader so he can start helping you. Like it or not, you are very near an emergency situation. Also, in this situation, you might consider going lost wingman before you lose sight

of your leader so it can be a controlled maneuver rather than having to deal with two serious problems simultaneously.

Finally, let's look at the big emergency. If the swamp is full of alligators, the location of the drain doesn't really matter. If there is somebody to talk to that can help you on your current frequency, then that might be a good place to sort things out initially. Once you're ready to switch, it had better be to a frequency that will be good as long as you are busy solving your problems in the jet. The single emergency frequency for approach is ideal for this. You can have approach control, the tower, the SOF, and a squadron supervisor to help you. But there is also a great potential for confusion and interference on a single frequency, and the pilot is the one in control who can prevent that. Tell ATC what you are doing, and let them clear the airspace while you talk to the SOF or whomever you need. Be sure to address yourself to the person you want to talk to so the others will be quiet.

But what if there isn't time to coordinate a single frequency approach? You guessed it that's what Guard is for. Considering all the people who do their radio checks on Guard, you shouldn't feel bad about using the frequency when you need it. It is the common frequency on which you can get lots of help until a discrete single frequency can be coordinated.

In summary, I guess it's a matter of knowing who has the hammer. Most of the time ATC has the hammer, and we become conditioned to that. They can, and do, violate us when we spill out of our assigned area, miss altitude assignments, and take wrong vectors. But, that's when things are ops normal. On those occasions when things start to go wrong, we can and must do whatever is necessary to safely recover the aircraft. We can sort it out on the ground. And fear not, no matter how well you handle the situation, some armchair observers are going to have other ideas on how you could have handled it. But you were in the jet, and you got it on the ground, and now you can personally tell anybody that wants to second guess you what they can do with their ideas.

Major Martindell, an F-15 IP at Luke AFB for the last four years and wing chief of flight safety there, has recently left Luke for Germany, where he'll be the staff F-15/F-5 safety officer in the USAFE safety office.

SEPTEMBER 1983

## AIRCREW OF DISTINCTION

On 9 May 1983, CAPT MARK RONCO, aircraft commander, and 1ST LT GREG HARTLEY, weapons systems officer, were flying an RF-4C on a precision radar approach to CFB Cold Lake, Canada. When they lowered the landing gear on final approach, both main gear indicated safe; but the nose gear remained up and locked. Captain Ronco declared an emergency and advised the tower of their situation while Lieutenant Hartley assisted with the emergency checklist. They flew a low approach over the tower, and the supervisor of flying (SOF) told them that the nose gear was up and gear door was closed.

The crew informed the SOF they were switching to Maple Flag ops frequency, where they contacted their unit supervisors. The supervisors assisted the crew with the Dash One procedures for failure of the landing gear to extend with normal utility hydraulic and electrical system. The crew did all the checklist steps, but the nose gear remained up. Captain Ronco tried several more negative-G pushovers with no effect.

Their unit supervisor then directed them to try blowing down the gear, following the checklist for emergency lowering of the landing gear. The nose gear still wouldn't come down. Utility hydraulics stayed within normal limits. The crew tried two no-flap touch-and-go landings, attempting to knock the landing gear free. But both attempts were unsuccessful.



Capt Mark A. Ronco 1st Lt Paul G. Hartley 16 TRS, 363 TFW Shaw AFB, SC

As they ran low on fuel, Captain Ronco and Lieutenant Hartley realized they were out of options; they reviewed the emergency landing checklist. On final approach, Lieutenant Hartley reconfirmed all checklist items and monitored the airspeed. Captain Ronco flew the airplane to the runway and held its nose off the ground until Lieutenant Hartley called 120 knots. Then Captain Ronco smoothly flew the nose down to touchdown, deploying the drag chute after the nose was on the ground. He used gentle braking to stop the aircraft on the runway centerline. The only damage was to the nose section, and it was minimal.

Captain Ronco's flying skills and Lieutenant Hartley's crew coordination during this difficult emergency situation saved the airplane and greatly curtailed damage to it. Their professional actions have earned them the title of TAC Aircrew of Distinction.

7

TAC ATTACK

**IS** INTEREST ITEMS,

#### Lightning advisories

By Lt Col Joseph A. Zak TAC/WES Langley AFB, VA

A couple of months ago, a number of us watched a vivid display of cloud-to-ground lightning occurring within about eight miles of the runway complex. During this time, we saw several aircraft skirting the edge of the main precipitation area as they were circling the field for their landing approaches.

The airplanes were well under the cirrus shield of the CBs and probably not more than five miles from the precipitation. Apparently, the flying supervisors were not aware that, the lightning was occurring ahead of the precipitation area (towards the runway) and most likely in the area of strong updrafts.

A lightning advisory for observed lightning within 3 miles of the base had not yet been



PHOTO COURTESY OF DR. W. DAVID RUST

issued. This advisory is usually based on very crude estimates of lightning distance, providing, of course, that the observer is constantly watching the sky and that he or she can see the area in the first place. It is also based on the radar, which doesn't see lightning at all.

Until such time as we have reliable lightning detection and location equipment, unobstructed view of the airfield, and time to continuously watch the sky—not likely in the near future—it is important that aircrews, airfield managers, supervisors of flying, and all operations personnel are aware of the lightning threat near a thunderstorm. That threat can extend out to 20 miles or more for a large storm. It's also important that you understand the base weather station's limitations in observing lightning and that you all help the weather folks extend their eyes and ears on the flight line.

In addition, check that your notification distance of lightning advisories takes into account your airfield area. For example, the leading edge of the precipitation area shown by your base weather radar may be eight miles from the antenna, but the airfield extends out three miles in the direction of the precipitation, so the effective distance is five miles. If the cirrus blow off or the updraft energy source is on your side of the echoes, then lightning could be occurring on the airfield.

#### The egg roll was rancid

The pilot of a single-seat fighter was returning to his base at the end of a mission. He'd just begun an instrument approach when he announced that he wasn't feeling good and was

#### MISHAPS WITH MORALS, FOR THE TAC AIRCREWMANI

breaking off the approach to head directly for the field. His wingman flew chase for the recovery, and the flight declared an emergency. The pilot was sluggish in following instructions, but he landed safely.

After landing, the pilot was taken to the clinic for treatment. On the way there, he experienced a convulsion and passed out for a few seconds. About an hour later, after being treated with 100 percent oxygen and intravenous fluid, he again convulsed and passed out briefly. After the second episode, he was hospitalized. The problem cleared up with no further complications.

The night before, the pilot had eaten Chinese food—leftovers that had been kept in a refrigerator that wasn't working right. On the day of the flight, the pilot had suffered stomach cramps before he flew; but he didn't report the problem to anyone.

Just think what could have happened if the convulsion had occurred a few minutes earlier. Is flying any sortie worth that risk? After all, being sick takes all the fun out of flying, so why not wait for a better day to fly that mission?

## F-16 crunches in wake turbulence

The four-ship of F-16s split up into two twoships for landing. Three and Four flew down initial in fingertip and pitched out for an overhead pattern. Tower called the winds calm. For a change, the approach-end BAK-14 was lowered, so they wouldn't have to land past the barrier. The pilot of number 4 reminded himself to adjust his touchdown point to land in the first 500 feet of runway.

On final, Four had about 4,000 feet of spacing on his element lead. He concentrated on his aim point and didn't notice where his leader had landed. As he flared, he pulled the throttle back to idle. Just then he hit the wake turbulence from his element leader's airplane. He felt the airplane roll left. He put in right stick and pushed the throttle up into full afterburner, trying to go around. But the airplane touched down on its left main landing gear, still in a 30-degree left bank despite full right stick.



The pilot got airborne again and had one of his flight members from the other element join on him and look him over. The other pilot reported that he had a damaged left main gear. On the hard touchdown, the shock strut on the gear had failed. The only abnormal indication in Four's cockpit was an antiskid caution light.

#### TAC TIPS

Keeping his empty fuel tanks and weapons racks, the pilot made an arrested landing with 1,000 pounds of fuel remaining. After landing, the airplane drifted left but came to a stop at the left edge of the runway. Very little additional damage took place during the arrested landing. The pilot shut down the engine and climbed out uninjured.

The F-16 is very susceptible to a sink rate when it encounters wake turbulence during the landing phase. When the airplane is configured for landing, the flaperons are extended 20 degrees down. Roll control is achieved by raising the appropriate flaperon, which reduces the lift on that wing and, of course, also reduces total lift. If the roll rate gyros sense the left wing drop due to wake turbulence, the flight control computer will reduce the roll rate by raising the right flaperon and dumping lift on the high wing. If the pilot reacts with right stick pressure at the same time, his inputs will be added to the computer's input. Since the flaperons can only dump lift to roll the wings in the landing configuration, large roll rates in turbulent air can increase the sink rate.

If the pilot reacts to the sink rate by first pulling back on the stick instead of adding thrust, the sink rate will increase because of the induced drag. Now the airplane will be in the infamous "sink hole," and even full afterburner may not stop the loss of altitude in time. That's why the Dash One says "use thrust rather than back stick to control undesirable sink rates." In turbulent air, the best pilot response is to add thrust without making large, rapid control inputs.

An even better plan is to use every technique available to avoid flying into the wake turbulence of your leader. Simply touching down at or past the point where the leader landed should eliminate the problem. And there's no rule that says we can't increase the spacing in calm winds.

Learn the best techniques for handling wake turbulence in your airplane, but also learn the best ways to stay out of wake turbulence. An ounce of prevention is still worth more than a pound of cure.

#### "Hot pants" G-suit

By Maj Bill Meeker TAC Flight Safety

While preflighting his jet during a stopover, a pilot from another command experienced a unique problem with his G-suit: it blew up! (Kablam, not pf-f-f-f-t). The pilot had just pulled his G-suit out of the cockpit when he heard a mild explosion and saw that his speed jeans were on



fire. The flaming garment was jettisoned on the ramp, where the fire burned itself out.

Seems he had put together a personal survival kit, including a matchbox containing strike-anywhere matches; they did, right inside his G-suit pocket. The  $P_k$  (probability of kindling ignition) was improved by packing the matches with the strike-anywhere end against the self-contained striker cap inside the match container. Hmmmm.

Being prepared for a survival situation is great, but any items you carry on your own need to be checked by the experts—your local life support personnel. This story could have been a lot more interesting if those matches had torched off 30 or 40 minutes later, say around FL 390 or so.

#### GROUND SAFETY AWARD OF THE QUARTER

**C**APT DONNA L. SCHMIDT is the recipient of the Tactical Air Command Ground Safety Award of the Quarter for the second quarter of 1983. She is a pediatric nurse practitioner at the USAF Hospital, George Air Force Base, California.

Recent changes in California law require that children under 40 pounds must be placed in a restraint seat in automobiles. Although pleased with the new law, Captain Schmidt was concerned that financial burdens on younger airmen might force them to ignore the law despite the inherent danger to their children. So, with the active support of the base safety office, Captain Schmidt raised funds to buy approved car seats and loan them, primarily to E-5s and below.

She contacted organizations for contributions and sought the support of the base family services office to administer the loan program. She performed physicals for a local football league and, while refusing personal compensation, welcomed. a voluntary contribution to the car seat program. As a result of her efforts, 24 car seats



Capt Donna L. Schmidt

were bought through her fund raising; 10 more were provided by MWR. Captain Schmidt also arranged the loan of a car seat from the base exchange for display and teaching in the pediatric clinic and for her presentation to prenatal classes.

The concern, initiative, and perserverance of Captain Schmidt have enhanced the safety consciousness and capabilities of the parents on George Air Force Base. She has earned the Ground Safety Award of the Quarter.

## INDIVIDUAL SAFETY AWARD

**T**SGT EMILIO J. ROLA, Georgia Air National Guard, is this month's winner of the Tactical Air Command Individual Safety Award. He is an aircraft environmental systems supervisor with the 116th Consolidated Aircraft Maintenance Squadron, 116th Tactical Fighter Wing, Dobbins Air Force Base, Georgia.

Since the conversion to the F-4D aircraft began, Sergeant Rola has discovered two discrepancies that could have contributed to the loss of an aircraft and loss of life.

First he discovered that the safety pin was being improperly installed in the emergency oxygen bottle causing excessive wear and puncture of the rubber oxygen supply hose. In the event that the aircrew member needed emergency oxygen at altitude or upon ejection, the oxygen would have leaked out the holes and the individual would not have received sufficient oxygen. After inspecting all F-4 aircraft in the unit, he found that this problem was widespread, and so he immediately reported his findings. The development of a new safety pin is now being considered by ALC.

Sergeant Rola also found a problem with several liquid oxygen (LOX) converter vent lines on



TSgt Emilio J. Rola

the F-4. He discovered several vent lines had cracked inside the fuselage where the line connected to the vent port. Thirteen of nineteen aircraft checked had broken lines. This condition could allow LOX to leak inside the fuselage during venting/servicing and could have caused a fire if the LOX had contacted oil or chaffed wiring. This problem was also reported and immediate corrective action was taken.

Sergeant Rola's safety awareness and his desire to detect, report, and correct safety problems have earned him the Individual Safety Award.

## WEAPONS WORDS

#### Our testy tempers

An F-106 returned from an intercept training mission and entered the overhead traffic pattern for landing. Because of conflicting traffic, the tower told the pilot to break at the departure end of the runway. The pilot did. Then after he lowered the gear on dc wnwind, the tower told him to discontinue his approach and reenter initial.

The pilot retracted his gear and quit the approach. But then as he was abeam the approach end of the runway, planning to reenter initial, the tower cleared him for landing. He lowered the landing gear again and began a turn to final approach. After he'd turned about 20 or 30 degrees, the tower called again, this time telling him to abandon the approach and break right.

The pilot began to go around, made a hard right turn, and raised the landing gear. Just then, the external fuel tanks dropped off of the airplane.



Investigation after the F-106 landed showed that the drop tank cartridges had fired electrically, jettisoning the fuel tanks. The maintenance investigators checked the cockpit and found the plastic filament cover broken on the drop tank jettison button. A check of the electrical jettison system showed it was working the way it was designed to. Apparently the pilot unintentionally hit the drop tank jettison button when he raised the landing gear.

That's all we really know about what happened, but we can't resist some idle speculation probably based more on our own weaknesses than on this incident. If we'd been flying when the tower ran us through this routine, our tempers might have slipped out of control about the time the tower told us to go around again. Nothing dramatic, maybe we'd just have grabbed the gear handle a little roughly because of our frustration. That roughness could have caused us to hit the jettison button.

Well, that's probably not what happened in this case. But if we were flying, it could have happened. In a high stress situation, frustration can quickly lead to a temper flareup. We can't stop the frustration, so we have to remember to control the flareup. Do you suppose anyone else has the same problem?

#### Dart damage

A two-ship of F-4Es flew a dart mission. The leader made one firing pass on the dart and then repositioned himself for a second try. After ma-



neuvering, he was at a point about 1,200 feet behind the dart with five to ten degrees angle off. The pilot opened fire at about 1,100 feet from the dart, and he let go of the trigger just as the WSO called cease fire at 1,000 feet. At the same time, the dart disintegrated.

The airplane was struck by debris. The TISEO lens was cracked, and its head was damaged. Pieces of the dart were found in both engines after the airplane landed.

A check of the gun camera film showed that after firing the pilot had hesitated slightly. He hadn't immediately begun a 3- to 4-G pull out of the plane of the dart. When the dart disintegrated explosively, the pilot saw the debris coming and tried to avoid it, but he didn't have time to maneuver away from the debris.

At the speeds involved in firing on the dart and especially when we're at minimum range, we don't have much time to spare. If we wait until after we've fired to think about what to do next, we're bound to hesitate. So before we open fire we'd better know exactly what we're going to do at cease fire. Otherwise, we might find ourselves proving the truth of the saying "He who hesitates is lost."

#### **Rushing the turn**

An integrated combat turn is designed to be done in a hurry. That's the idea—to get the airplane back into the air on another mission as quickly as we can. But when we're trying to be fast, we're most likely to make a mistake. That's

TAC ATTACK

why a combat turn requires us to be especially on our guard.

An A-10 was going through a combat turn in which it had an additional 575 rounds loaded into the gun. After the rounds were loaded, the automatic loader was disconnected, and the access unit door was quickly closed. Then the gun system was activated to reposition the ammo for firing. Several of the rounds twisted, jamming



the gun's fixed chute and its flex chute. The fixed chute, three ammo chutes, eight conveyor elements, and nine rounds of live ammo were damaged, resulting in a repair bill of over \$3,000.

The load crew had failed to position the rounds properly when closing the access unit door. It would have taken only a few seconds to check that the rounds were positioned properly, but in the rush those seconds weren't taken. So we ended up with a \$3,000 repair bill. On top of that, the airplane couldn't make its sortie. It was taken out of service. That kind of combat turn isn't going to help win battles.

# LOOKING FOR A CUCKOO'S



#### By 1st Lt Gary L. Hartle USAFTAWC/TXMG Eglin AFB, Florida

Have you ever looked for a cuckoo? The elusive whitebottomed bird can project its call over wide ranges and mask its true hiding place by nesting in hijacked homes of other birds, outlaw style. So, although you may identify a cuckoo's voice and search the treetops, chances are you will only see its long grey form if you diligently home on each signal and cautiously approach.

Supervisors and safety folks in the military and industry spend their time homing on signals being emanated from a source just as elusive as a cuckoo. Take, for instance, the crew chief who shortcuts on every possible occasion. Is that not a distinctive tolling that we can home in on? Or the supervisor

SEPTEMBER 1983

# NEST

who assumes his people are fully qualified for assigned tasks. Add to these two "sounds" the third of timecrunching, and you start getting close to potential cuckoos. The three signals are illustrated in the following account:

The sun had already descended below the heavy stand of pines. The aircraft shadows disappeared as the daylight waned. Load crews were poised, awaiting the download orders which were to signal the end of another successful exercise. Convoy participants were ready with empty trailers in their designated standby position.

As word to reconfigure the aircraft and stand down was received, reactions were swift and precise. Crews, made up of whoever was available, almost galloped to relieve themselves of the responsibility for the



As with most exercises, the final surge had been with simulated nuclear shapes (BDU-12s). Strict enforcement of nuclear safety rules had applied. The only possible hazard was a parachute initiator that could be fired by a strong pull on the arming lanyard. The order was received to download the BDUs and bring them back as concrete—no security police, no signatures, and no hassle.

All the airplanes were now being denuded in the artificial light of sparsely placed lite-alls and roaming line trucks. One crew in particular was hurrying between aircraft parked on the apron. The crew's jammer honcho was grinding the gears of the MJ-1 trying to summon more speed from his already taxed machine. With the precision of a sharp-shooter, he placed the jammer table directly beneath a white BDU. The remainder of the crew arrived and repeated steps necessary to release the BDU. Torquing from the sway braces was eased, ejection cartridges safed, and the bomb rack opened to release the lugs.

The crew chief was known to have a great propensity for speed when pressure mounted and time was critical. Shortcuts were his forte. He mentally reviewed the familiar checklist. which was stowed under tools in his certified tool kit, and signalled the jammer to lower the table. At that instant the crew chief's stomach went taut and sickened as the rear portion of the BDU shot toward the jammer driver. Not with a loud bang, more of a whooshthen silence.

The arms of the MJ-1 boom had captured the ejecting tail section with its ragged chute and saved the driver from being picked off like a perched pigeon. Now free, the lanyard danced in the shadows of the ashen-faced crew, mocking their trembling hands. A tragedy had been avoided, but only just.

Perhaps listening to prior signals could have eliminated this incident altogether.

Attitude is another tipoff "sound" for which searchers should be alert because it can be a direct line to the nesting place of accidents. A disgruntled crew member or preoccupied technician can quickly gain notoriety if they damage or destroy equipment under their charge.

Looking down in discouragement will never yield a view of the cuckoo. If your safety record seems alarming and your shop plagued with problems, then start looking up. Clean shops and neatly dressed personnel are like the echoes of the cuckoo bouncing off the trees around you and can divert you away from finding the hiding places each organization has—somewhere.

Know your quarry. Being familiar with the habits of the cuckoo will aid immeasurably in your quest for the nesting place. Whether your objective is the cuckoo's nest or a safe work place, patience counts, and so does intense listening. Good hunting!

Lieutenant Hartle, a munitions project officer for guided munitions, had 12 years enlisted experience before being commissioned. His 16 years in the Air Force have all been in munitions and safety.





# Debriefing

#### requires communicating

By Capt Thomas A. Shimchock 405 EMS/MAEB Luke AFB, Arizona

Effective communication—these are two watch words for all of us from the chief of staff down to the newest airman basic arriving for basic military training at Lackland AFB, Texas. Effectively communicating is especially important in the aircrew-maintenance debriefing after each flight. Direct and succinct communication about in-flight discrepancies between aircrew members and aircraft maintenance debriefers is a must so that both sides of the operations-maintenance team know what each other is talking about. Without it, valuable information about aircraft status during and after flight may be lost to the maintenance technicians.

The responsibility is not only with the aircrew member to write up everything he knows is wrong on a particular aircraft system. It is just as critical for the maintenance debriefer to ask

## INCIDENTS AND

the right questions of the aircrew member about the discrepancies. These right questions are the crux of the debriefing concept. This is particularly true for the F-15 and F-16 weapons systems, in which fault isolation codes to troubleshoot and pinpoint corrective actions to aircrewreported discrepancies are developed during aircrew-maintenance debriefing.

If properly developed by the debriefer using fault reporting manuals, questions posed to the aircrew will transform a discrepancy to a fault isolation code, which will then save technicians critical troubleshooting time by pinpointing the system fault location. This, in turn, will reduce aircraft down time for maintenance, which equates to higher fully mission capable rates and thus increased readiness. If the fault isolation codes are not properly developed, valuable information about the discrepancies may be lost. This results in more troubleshooting time expended with a higher probability that the discrepancy will be cleared with the entry "cannot duplicate (CND) malfunction." This is particularly true for intermittent discrepancies, where a system may function properly, experience various anomalies, and then return to normal, all in the same flight



#### INCIDENTALS WITH A MAINTENANCE SLANTI

or during subsequent flights. Moreover, many faults occur only during flight and cannot be duplicated on the ground. A thorough aircrewmaintenance debriefing of all discrepancies is essential so the system can be properly troubleshot and repaired.

Granted, the debriefing system isn't perfect. It takes good, properly trained technicians, preferably seven-level staff or technical sergeants who understand the intricacies of the weapon system, to properly debrief aircrew members. To make the system work better for you, your wing should have an ongoing training program for debriefers. Moreover, for the F-15 and F-16 weapons systems, the fault reporting manuals should be reviewed periodically to suggest changes to improve both their clarity and system-wide troubleshooting techniques.

The bottom line in the entire debriefing concept is communication. With it the operationsmaintenance team is further ahead and working closer together towards their common goal maximum readiness.

#### Short-cutting engine maintenance

A two-ship of F-4's taxied onto the runway. Shortly afterwards, they began their formation takeoff. Just before the leader lifted the nose of his aircraft off the ground, the wingman noticed that the rpm on his right engine was only 90 percent. The takeoff was too far along to abort, so the wingman continued. As long as the engines were in afterburner, he was able to keep up with his leader; but as soon as the flight came out of afterburner, he began to fall behind.

The wingman gained some altitude and then checked the right engine. He pulled the throttle back to reduce thrust, then pushed it back up. The right engine compressor stalled three or four times as the throttle passed through 85 percent rpm. The pilot pulled the throttle back to idle and left it there while he flew a successful singleengine approach and landing.



Engine maintenance workers took the airplane out to the sound suppressor and ran the right engine, duplicating the problem. Troubleshooting turned up a bad compressor inlet temperature sensor on the right engine that was causing bad scheduling of the inlet guide vanes and the wrong fuel flow in the main fuel control. That's why the engine couldn't obtain more than 90 percent rpm and would compressor stall during accelerations and decelerations.

A look at the aircraft forms showed that on the flight just before this one, the airplane's right engine had been written up for an rpm hangup at 90 percent. You'd think that the problem would

#### CHOCK TALK

have been found when that writeup was investigated. However, to save time in clearing that writeup, maintenance supervisors had decided against taking the airplane out to the sound suppressor and running it. Instead they had an engine technician run the engine on the ramp and make a short throttle burst to military power. On that run the engine could not accelerate above 91 percent at the military thrust setting. Instrument technicians checked the tachometers and found them okay, so they decided to change the tachometer generator.

After the tach generator was changed, the aircraft crew chief ran the engine on the ramp and made another short check of rpm at military power. The rpm showed 98 percent on that quick run, so the airplane was released for flight.

By trying to save time, these maintenance supervisors actually made their troops work the same problem twice. And in between the temporary fix and the real fix, they launched an aircrew in an airplane with a bad engine.

Maybe that's why the Air Force builds sound suppressors. So we can use them to check out an engine with problems—before we fly it.

#### Drain caps missing on F-4

While taking off, an F-4 aircrew noticed that their indicated airspeed was increasing at a slower rate than normal. As they broke ground, their altimeters began to fluctuate plus or minus 400 feet in both standby and reset modes the airspeed dropped to zero. Their wingman joined up on them beneath an overcast cloud deck. They stayed in formation, burned down fuel, and landed safely.

On the ground, the pitot-static drain caps in the nosewheel well were found disconnected. The day before, the drain caps had been removed for a check of the pitot-static system because of an aircrew writeup of the rear cockpit altimeter. Removal of the drain caps calls for an entry in the



Form 781, but the instrument specialist who did the check didn't make the entry in the forms. Then the specialist either installed the caps wrong or didn't install them at all.

Since there are other ways of doing the check that don't require removal of the drain caps and since the forms weren't annotated, the production supervisor didn't check the drain caps for proper installation. The crew chief's checklist tells him to check that the caps are installed but doesn't mention checking that they are on securely. Whether they were installed wrong or not at all, the crew chief didn't catch it. Neither did the aircrew. Their checklist doesn't refer specifically to the drain caps at all, although many F-4 aircrew members habitually check the drain caps. This crew didn't, so the mistake wasn't found until after the flight.

Since this incident, the unit has recommended changes to the crew chief's and aircrew's preflight checklists to make sure they check that the caps are installed securely. That's probably a good idea. But the real problem here was the instrument specialist's failure to comply with tech data that was already clear and specific. He didn't install the caps correctly, and he didn't make his required entry in the forms as he should have. Maybe the crew chief or the aircrew could have caught his error, but they shouldn't have had to.

But come to think of it, most of the steps in the preflight checklists are there to make sure that what's supposed to have been done has been done. If everyone followed their tech data all the time, we could cut way down on the crew chief's and aircrew's checklists. Unfortunately, the trend is in the other direction. We're finding that we have to keep adding items to be checked—not because most of us aren't doing our jobs by the tech data, but because *a few* of us aren't.

# TELL US About it



#### By 1st Lt John L. Mahaffey 728 TCS, Eglin AFB, FL

GCI (ground controlled intercept) has been called the "invisible wingman." Would you have an emergency and not tell your wingman? When you have an emergency while you're on GCI's frequency, don't forget to tell the GCI controller about it.

During a recent exercise, two Eagles were transiting a controlling agency's airspace on their way home. The Eagles were handed off successfully from another service's control with a minimum of communication, and the return to base progressed normally. The controller informed the Eagles of a DACT engagement in the southern area of the airspace and vectored them on a northern arc around the flight. The home base RAPCON was notified of the Eagles' RTB. Up to this point the RTB was normal. The controller then overheard the Eagle wingman discussing an engine fire light with his leader. The conversation turned more serious as the flight lead discussed the wingman's possible ejection. At this point the controller asked the flight if they had declared an emergency. The flight lead answered affirmative and relayed that he had declared the emergency while under the control of another controlling agency. The controller then responded with a snap vector to home base and notified the home base RAPCON of the emergency. The home base took an immediate radar handoff, and the Eagles returned home safely.

Afterwards, the controller asked the other service's controlling agency if they knew of the emergency; they responded with a resounding "Negative." So why wasn't either controlling agency aware of the emergency, and why wasn't Eagle flight squawking emergency mode 3 7700?

What we have here is a failure to communicate. This failure to communicate caused a delay in the RTB of an aircraft that needed to be on the ground as soon as possible.

The problem is that GCI can only tell position, heading, altitude, and speed from a radar blip. The rest of the information must come from the aircrew either by voice or by transponder. The same holds true for controllers as well: listen to what the aircrew is telling you. Situational awareness is the name of the game, whether it's

during an engagement or during a simple RTB. Problems happen quickly. Controllers must listen as closely as they watch.

Both aircrews and GCI controllers, *tell us about it!* Don't simply assume that one controlling agency will know of an emergency just because the first agency was notified. Aircrews, squawk emergency mode 3 and confirm your emergency status with all controlling agencies. Controllers, confirm that the next agency to control your aircraft knows about the emergency and make sure the airplanes are squawking the correct emergency codes on mode 3.

Remember to *tell us about it* and your emergency will be a much less confusing experience on both sides of the radio.

Lieutenant Mahaffey is a weapons controller, air surveillance officer, interface coordinating officer (ICO), electronic countermeasures officer, and unit intelligence officer with the 728th TCS.

# THE BLIND LEADING THE

During a local surge exercise, a weapons load crew was performing an integrated combat turn (ICT) on an A-10. The load crew chief had difficulty positioning the live rounds in the system for loading. He reversed direction; a piece of 30-mm round casing fell to the ground. So the load crew chief stopped the ICT and notified the AMU production supervisor that he had a gun problem with foreign object damage (FOD) in the system.

The airplane was moved to an inactive parking row while another airplane was substituted for the exercise. At 1900 hours the shifts changed. The weapons maintenance shift supervisor told a weapons maintenance crew chief about the jammed and fodded gun system. The crew chief reviewed the jammed gun procedures in the tech order, assembled his crew, and went out to the airplane. When he tried to rotate the system, it moved about six rounds and then stopped. He noticed a damaged round casing in the fixed chute assembly, and he decided that the gun system would have to be removed to the gun shop for a complete FOD inspection.

The airplane was next towed to a maintenance hangar for system removal. The crew removed the drum, and it was taken to the armament systems shop. Then the crew removed the gun. They tried to clear the live rounds by rotating the gun by hand, but the gun wouldn't turn. So they sent the gun to the gun shop with live rounds in the barrels—a violation of their operating instructions.

The gun arrived at the armament systems shop at about two in the morning while two armament systems technicians were already working on the drum. After they finished removing the live rounds from the drum, one of the technicians, who was the midnight shift supervisor, directed the other to begin taking the gun apart to clear it of live rounds. The second technician began by removing an accessible live round from the exit side of the gun. Next, because the gun still wouldn't turn, he began removing the safing pin and the hinge pin on the safing cam. When the hinge pin was removed, the spring tension on the arming solenoid pushed the safing cam out. The round in the firing position fired.

The projectile hit the top of a maintenance table that held parts from the drum. It ricocheted upward and passed through a stack of wooden crates containing LAU-117 missile launchers. Then the round blasted through the wall and headed off into the night. It was never found.

## BLIND



Originally, the gun problem had occurred during firing when a round burned through the casing, got out of control in the turnaround unit, and was damaged by the sprocket assembly. Fragments from the damaged casing jammed the gun assembly during the combat turn when the weapons load crew chief tried to position the ammo in the system for loading.

After the gun jammed during ICT, the load crew chief didn't tell the production supervisor that the gun was unsafe, so the production supervisor didn't recognize the hazards involved. The weapons maintenance crew chief who removed the gun considered it safe because the safing pin was installed. He had been trained on safing and clearing the GAU-8 at another base that had a gun bunker at the gun shop, so he thought it was routine to take a jammed gun to the shop for clearing. He wasn't aware of the local requirement to work on hot guns only at the gun pit.

The armament systems shop had three technicians trained to respond to hot guns. One of them was on leave, and the other two were on day shift to respond to gun emergencies in flight during the surge exercise. The midnight shift supervisor did not know what could or couldn't be done in the shop. He was recently assigned, and was not yet trained in GAU-8 disassembly or safing and clearing procedures. Nor was he aware of the requirement to work on hot guns only at the gun pit. The armament systems technician who actually worked on the gun had entered training on GAU-8 disassembly but hadn't completed it. He used the wrong checklist-the one for periodic maintenance that didn't include gun safing and clearing procedures. He also was not aware that disassembly of a hot gun could be done only at the gun pit.

It turned out that most of the weapons workers and supervisors were unsure of what a hot gun actually was. Many of them considered a pinned gun to be safe. But the unit's operating instructions require that a gun be pinned and that the barrels be clear of live rounds for it to be considered safe. All unsafe guns are supposed to be taken to the gun pit.

Seems like a reasonable procedure, but it's useless if most of the people involved aren't aware of it. That's a training problem. And having a midnight shift full of untrained people is also a training problem. But when the untrained supervise the untrained, that's a management failure.

Could any of this happen in your shops? >>

TAC ATTACK

# **DOWN TO EARTH**

#### Living the rest of your life knowing

By Maj Andrew F. Reish Staff Judge Advocate, 1100 ABW Bolling, AFB, DC

After an exhausting day in court, I returned to my office to pick up my car. But as I entered the receptionist area, I heard the sound of sobbing. The receptionist told me that the police officer sitting beside my office door was waiting for me to see the crying client.

The receptionist explained that the client had just run over a 4-year-old child and was suspected of driving while intoxicated.

The police officer said that the client had had a one-car accident on Union Avenue, which involved running over a child. The client had been given a blood alcohol test (BAT). He also said that the seriously injured child had been taken to the hospital.

Entering my office, I recognized the client as someone whom I had known for years. He was a middle-level manager with a bright future.

As I entered the room, he began to sob even more. Giving him time to compose himself, I began to explain the seriousness of the situation. There were possible repercussions both in criminal prosecution and civil suit. In the criminal area, the BAT results could very well mean charges of DWI as well as vehicular assault. He also could be sued for the injuries to the child. I explained that the situation would be even more serious if the child died. With that he began to cry again. He didn't say a word but only shook his head.



I phoned the hospital to check on the child. After I identified myself, the emergency room technician explained that the child was paralyzed but was in stable condition.

Hanging up the phone, I relayed the information to the client. He screamed out, "Oh, Lord, what have I done!" He then collapsed. Suspecting that he may have been injured in the accident, the police officer and I immediately took him to he hospital. I told my receptionist to phone the



client's wife and to have her meet us at the hospital.

After leaving my client in the emergency room, I walked to the waiting area. My client's wife was there crying. Hoping to comfort her, I told her that everything was all right and that medical care was being provided.

I told her that I was glad that my receptionist had been able to contact her. She looked at me with surprise. She said that she had been there for 30 minutes, ever since the police had found her at a neighbor's house. Realizing that how she found out about her husband was unimportant, I said her husband would be all right. Again she looked at me strangely. In anger she cried out that she was there because some drunken driver had run down her daughter on Union Avenue.

The story doesn't end there. While my client was convicted of DWI, no further prosecution action was taken. His career was shattered. But most importantly, and most devastatingly, my client must live the rest of his life knowing that he caused his daughter's paralysis.

-Air Force News Service

#### **Back to school**

Motor vehicle accidents are the leading cause of death for school-age children, according to the 1981 edition of Accident Facts, published by the National Safety Council. With schools due to open soon, now is the time to talk to your children about safe pedestrian and cycling habits.

Teach kids to cross only at corners, and not to dash out between parked cars. They're safer if they cross at signalled crossings, or corners where a crossing guard is stationed.

Children are also generally safe if they walk to and from school in groups. Discourage your children from walking alone, or taking short cuts through strange neighborhoods.

If your children ride buses, teach them not to roughhouse while boarding or alighting. If possible, meet them at the bus stop and walk home with them.

Make sure that your children understand the rules of the road for bicycles. Check your child's cycling skills before letting him or her cycle home.

Dress kids in light- or bright-colored clothes on gray days. If they must be out after dark, look into purchasing reflective clothing or tape. Supply each child with a flashlight.

Here are a few other tips for safety on the streets for children:

Emphasize that kids shouldn't talk to strangers on the street. Make sure that they know to report to you any person who approaches them on the street.

Cute though they may be, clothes with the child's name on the outside are not a good idea. Too many children respond trustingly to adults who call them by name.

Make sure your children know their complete names, address, and phone number.

If your child carries his own house key, don't mark it with your name and address. If it's lost, the finder has all the information needed to enter your house at will.

Your local police department may have a safety training program for children. Why not see if a session could be held at your child's school?

-Courtesy of the National Safety Council

#### DOWN TO EARTH

#### What to do in a hotel or motel fire

Drop to the floor. Grab the key and a flashlight if you have one. Go to the door. If it's hot, don't open it, stay in your room. If it's not hot, open it and check the hallway, but be prepared to shut the door if the hall is filled with smoke. Remember that smoke is the killer. Don't take chances.

If you decide to leave the room, take the key with you and close the door behind you. Crawl toward the exit and stay close to the wall. Never use an elevator.

When you reach the stairway, go down and hang on to the handrail. If you run into smoke, go back up. Decide whether to go back to your room, if you can, or all the way to the top. If you go to the roof, prop open the door to vent the smoke. If the roof door won't open, stay there. That's a safer place to be than going back down.

If you don't leave your room or if you decide to return to your room, open a window to vent the smoke. Don't break the window. If there's fire or smoke outside, you may have to close it. Call the fire department. Turn off the heater or air conditioner and cover the vents. Turn on the bathroom vent and fill the tub with water. Wet towels and sheets and put them around the cracks of the door. Throw water on the door and wallseverything. Keep everything wet and cool. Put a wet towel around your nose and mouth as a filter and swing a wet sheet around the room to help remove some of the smoke. Put a distress signal out, like a towel, so firefighters will know they need to get to you. If there is a fire outside the window, pull down the curtains and anything else that will burn and start throwing water on the window.

No one is completely safe from fire. But being prepared for what to do and what to expect will certainly increase your chances if you should encounter one.



**Chemical Drain Openers.** Never use a plunger after putting a chemical drain opener down a sink. The chemicals could be splashed back into your face.

Seat Belts and Expectant Mothers. Expecting a baby is no excuse for not wearing your seat belt. Sit tall and place the lap belt as low as possible on your hips under the baby. And wear the shoulder harness. It gives you and the baby added protection.

School's Open. Watch for kids as you drive to work. The school zones that have been inactive all summer will be coming to life. Don't absentmindedly speed through them.

**Portable Kerosene Heaters.** Is it legal to use one in your state? Maybe not. Massachusetts and Wisconsin prohibit residential use of kerosene heaters; California and New Hampshire prohibit sale for residential use. Fire marshals in Colorado, Indiana, Oregon, Utah, and Washington interpret the Uniform Mechanical Code to prohibit residential use of modern portable kerosene heaters.

Sobering Facts. Teenagers die in automobile crashes at a rate more than double the death rate for any other age group. Eight thousand teenagers are killed and 40,000 injured each year in alcohol-related accidents, the leading cause of death in this age group. More than 44 percent of all nighttime alcohol-related fatalities are caused by drivers in the 16 to 24 age group, although they represent only 22 percent of the licensed drivers in the country. But in the 14 states that have upped the drinking age since 1976, traffic deaths in that age group have dropped 28 percent.

SEPTEMBER 1983

# ATTITUDE we can prevent some air force mishaps at no cost

#### By Maj. J. L. Nelson Det 1, 507 TAIRCW Fort Bragg, NC

Today, state-of-the-art risk management in the Air Force is the result of an enormous amount of flight technology gathered from the sciences of engineering, human factors, communication, and navigation, just to name a few. We hear of the high costs of technology almost every day. But whatever the cost of state-ofthe-art technology, it is of no value without aircrew judgment. Mature and objective judgment for making decisions in flight is an essential element of airmanship.

What controls aircrew judgment? *Attitude*. This article offers specific examples of attitude control (no-cost safety) we aviators can understand. Investigations of thousands of military and civilian mishaps, caused by aircrews of all experience levels, have identified three deadly areas of attitude deterioration and subsequent aircrew vulnerability. Recognizing these factors may save your life. loss of discipline during flight operations. Examples of loss of discipline, commonly called complacency, are disregarding tech orders, ROE, and regulations or just having a general apathetic attitude when it comes to the business of flying. Loss of discipline occurs in all areas of human endeavor from bull riding to the practice of medicine. Seldom, however, is lack of discipline as deadly as in flight operations. How do we maintain the discipline required for flight? Some ways to maintain discipline are controlling thoughts (selfdiscipline), relying on precise flight planning, using the tech data, and conducting intensive self-study of flight rules and regulations. This preparation makes decision making easier when a critical flight situation develops. The second factor affecting

The first attitude killer is the

The second factor affecting attitude is *psychological stress*. All aircrew members deal with the pressures of making decisions. Some of us do not realize the impact of peer or supervisor pressure on our flight decisions. The best way we can deal with this psychological stress is to set our own operational minimums. While on the ground, we can try to imagine every critical situation we might face before or during flight and the best response to that situation. Then pressure from others can be handled through that strength of character known as backbone. This means knowing our limitations while standing up for our convictions.

The third attitude factor in mishaps is *emotional* instability. A short-term condition can produce an unstable mental condition in an otherwise solid individual. Facing promotion, divorce, a new child, a lengthy TDY or PCS move can cause emotional instability. Most of these major life events cannot be avoided by any of us. So when we begin to feel the pressures of these events, we should communicate with someone who can help. Talking to a supervisor, peer, flight surgeon, chaplain, our family, or just a good friend may help.

The wise aviator realizes that these attitude factors of discipline, stress, and emotional instability can have a disastrous effect on our decision making in flight. Just as we aircrews are dependent on sophisticated technology in today's aircraft, flight safety is dependent on our attitude. Although attitude costs nothing, it's worth a lot when it comes to preventing mishaps.

Major Nelson is an air liaison officer with the 82nd Airborne Division at Fort Bragg, North Carolina. He spent eight years in the Navy before coming to the Air Force and has flown the F-4 and the F-14.

# LETTERS

#### **Dear Editor**

First, thanks for one fine safety pub. I've been reading your offerings for many years when I could get copies. I've been in ground safety as an additional duty for over 10 years and still find I can't get the word to some folks-while Fleagle can with a touch of humor. It's also amazing how we seldom invent new ways of killing ourselves-just old ones with a slight new twist. (June Fleagle-read Pope AFB OOM pool, closed for evening, being drained to facilitate maintenance/cleaning on Sunday. Two airmen snuck in after a long night at Airmen's Mess. One killed, one injured.)

On "A Tight Squeeze," page 26. June 1983 issue. I seem to recall something—AFR 127-101(?)-that hangar doors would not be left open less than 10 feet (for this very reason); and if they were, then saw horses, timbers, etc., would be placed in tracks to impede doors or give warning of their closing. Perhaps it's not my faulty memory-perhaps it was the work of a sharp old safetyminded maintenance chief at one of the bases where I once worked. But it is a good idea, and I've always insisted on itif only courtesy of "AFR 6-4": "I've got 6, and you got 4, and I still think it's a good idea!"

Mind you, AFR 6-4 is a dangerous frame of mind if you are using it to justify something you are doing in the face of the better common sense of your subordinates. So you've gotta keep an open mind—and be honest. Sincerely, MSgt Dave Loomis, USAF 509 AMS Pease AFB, NH

#### Dear Sergeant Loomis

Your figure of 10 feet is a good one, but the AFR 127-101 reference is outdated. Our TAC ground safety experts tell us that AFOSH Standard 127-66 now covers the situation. It states:

Under no condition will hangar doors that are left standing open be opened to a width less than 10 feet. Directional arrows will be placed adjacent to operating switches on both sides of horizontal sliding doors to indicate the direction of travel for each corresponding switch. No mention of sawhorses; that may have been a local rule. ED



**Dear Editor** 

I have just read your June 1983 issue.

On page 26 of this issue is a woman wearing tight pants and a low cut blouse.

Being a female member of the "Total Force," I find this objectionable. Would a scantily dressed male be less eyecatching?

I am not a prude and I am not against humor, but I find the above in very poor taste. MSgt Gloria P. Narvaiz New Mexico ANG

#### Dear Sergeant Narvaiz

We're sorry that you found our drawing offensive. The purpose was to make fun of the femme fatale or Mata Hari stereotype, not to arouse anyone's lust. The character is a woman because a woman, Ms. Marty Diller, writes the column. Our "scantily dressed male" is on the facing page, wearing swimming trunks.

We do take your objection seriously. If our readers' survey shows that others are also offended by the art, we will change it. ED

SEPTEMBER 1983

THE AND		
TAC ANG AFR JUL THRU JUL JUL THRU JUL JUL THRU JUL JUL THRU JUL JUL JUL JUL JUL JUL JUL JUL JUL JU	L	
CLASS A MISHAPS 5 19 21 2 8 5 1 1 0   AIRCREW FATALITIES 2 6 12 2 6 2 1 1 0   TOTAL EJECTIONS 9 20 20 2 7 5 0 0 0   SUCCESSFUL EJECTIONS 7 17 17 17 2 4 4 0 0		
TAC FTR/RECCEClass A mishap-free months4355 TTW23363 TFW2358 TTW164 TFW & 355 TFW1337 TFW		
TAC-GAINED FTR/RECCEclass A mishap-free months135188 TFG (ANG)127138 TFG (ANG)126917 TFG (AFR)123116 TFW (ANG)104114 TFW & 174 TFW (ANG)	Units onths G) G) NG)	
CLASS A MISHAP COMPARISON RATE (BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)		
TA   1983   6.9   5.3   3.4   3.8   4.0   3.8   4.5     1982   7.8   5.7   5.9   5.2   5.9   5.7   5.1		
A <sub>N</sub> 1983 9.1 7.0 4.4 4.3 3.4 4.2 4.8		
G 1982 0.0 2.7 3.2 3.4 3.6 2.9 3.1   Ar 1983 0.0 0.0 0.0 0.0 0.0 3.6		
R 1982 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	V DEC	

US GOVERNMENT PRINTING OFFICE: 1983-639-023/3

