

# Interceptor

FEBRUARY 1972



**GCI INTERVIEW**  
*... see page 5*





# Interceptor

FOR THE MEN RESPONSIBLE FOR AEROSPACE DEFENSE

VOL 14  
NO 2

*Aerospace Defense Command*  
**Lt Gen Thomas K. McGehee**  
*Commander*

*Published by the Chief of Safety*  
**Col John M. Vargo**

*Editor*  
**Lt Col Donald C. Windrath**

*Assistant Editor*  
**Maj David C. Hubert**

*Research Editor*  
**Capt Donald H. Hammond**

*Managing Editor*  
**Mary W. Conover**

*Art Director*  
**Craig T. Schafer**

*Contributing Cartoonist*  
**Capt James A. Kanters**

#### POLICY STATEMENT

ADCRP 127-2

Material in this magazine is nondirective in nature. All names, dates, and places used in accident stories are fictitious. Air Force units are encouraged to republish material from this publication; however, contents are not for public release. Written permission must be obtained from Headquarters, Aerospace Defense Command, before any material may be republished by other than Department of Defense organizations. Contributions of articles, photos, and items of interest are welcome, as are comments and criticism. We reserve the right to make any editorial changes in manuscripts accepted for publication which we believe will improve the material without altering the intended meaning.

Direct communication is authorized with: The Editor, INTERCEPTOR, Hq ADC (SED), Ent AFB, CO 80912. Telephone: General Autovon, 692-3186; SAGE Autovon, 321-3186; Commercial, Area Code 303, 635-8911, Ext 3186.

## SPOTLIGHT

Ego is that extraordinary state of the psyche that gives us the authority to declare we are sure of ourselves when we are not.

**Norman Mailer**

## DEPARTMENTS

<b>Memo from the Chief of Safety</b>	<b>3</b>
<b>Hot Line</b>	<b>4</b>
<b>ORI</b>	<b>10</b>
<b>Check Points</b>	<b>26</b>
<b>An Ounce of Prevention</b>	<b>28</b>
<b>The Way the Ball Bounces</b>	<b>29</b>
<b>MAD Again</b>	<b>30</b>
<b>Afterburning</b>	<b>31</b>

## SPECIAL FEATURES

<b>INTERCEPTOR Interview:</b>	
<b>GCI Weapons Controllers</b>	<b>5</b>
<b>Pacific Plunge</b>	<b>12</b>
<b>The Hughes Trophy</b>	<b>17</b>
<b>IRAN</b>	<b>20</b>

## OUR COVER

Half of the Aerospace combat team is comprised of GCI controllers. Here two Delta Darts streak over one of our remote sites during a night exercise.

*“Self-discipline must be so ingrained that the commander can count on the professionalism of his people . . . .”*



It is very disheartening to face the fact that our 1971 major aircraft accident rate was less than its best. The tally reflects twenty aircraft destroyed at a cost of \$43,304,140.27 — not to mention the irreplaceable loss of twelve aircrew members. Six losses were attributed to pilot factor, eight to materiel failure, maintenance error accounted for two, and the four remaining are undetermined. In addition, we also experienced two minor accidents to the tune of \$36,490.00.

Were I able to rationalize our lack of success in terms of the system, i.e., the deterioration of our aging resources, the hazards of flying at night and in weather, unpredictable materiel failures, and so forth, it would be a pitiful defense. Extenuating excuses will not vindicate our failures; exaggerated apologies will only magnify our frustration. I readily acknowledge that there are risks inherent to our ADC mission; however, I also know that we have overcome them in the past and we must continue to overcome them if we are to maintain the combat readiness that is essential to our air defense mission.

In reviewing the underlying issues involved in the cause factors, I find that “personal error” by aircrews and maintenance people was the major contributor to our swelling rate. While it would seem that this problem could be easily solved by

laying on more restrictions — it’s not that easy. The real solution lies in the detection and correction of the reason “why” the individual erred and therefore contributed to the cause of the accident — not simply that he caused it.

It’s often said that safety is a commander’s responsibility. This is certainly so in the truest sense. However, this responsibility is inherently shared by first line supervisors — simply by virtue of their authority to supervise. The commander cannot lead every flight or fly every mission or look over every line chief’s shoulder to make certain the Tech Order is being followed. He has to trust the people below him to do their jobs and they, in turn, must be responsive to his trust.

This delegation of responsibility is intrinsically established in our chain-of-command system of supervision. Self-discipline must be so ingrained that the commander can count on the professionalism of his people, through his operations officer and his flight commanders — through his maintenance officers and his supervisors — so that everyone does what he’s supposed to, when he’s supposed to, and in the way he’s supposed to.

The right way is the safe way . . . nothing more; nothing less.

COL JOHN M. VARGO  
Chief of Safety



# HOT LINE

**WOLF PACK REUNION.** The 8th Tac Ftr Wg will hold its annual reunion 25-26 February 1972, Sheraton Park Hotel, Washington, D.C. For further information contact Lt Colonel F. N. Markey, Hq USAF/XOXFTJ, Washington, D.C. 20330, telephone OX-76838/57545 or Lt Col R. L. Markey, 1111 19th Street/AF/SAGF, Arlington, Virginia 22209, telephone OX-48571.

**MAINTENANCE MANAGEMENT ORIENTATION.** Maintenance, to a greater extent every day, is emerging as a determining factor in how well an organization can hack its mission. Thus, it is becoming more and more important that commanders and ops types be aware of the problems the maintenance guys face. The AFIT School of Systems and Logistics has prepared a five day Maintenance Management Orientation Course (242) specifically designed to provide a meaningful maintenance orientation for senior military and civilian non-maintenance managers. It is held at Wright-Patterson AFB, Ohio, for 0-5/0-6 of all branches and civilians GS-13 through 15. This ADA sponsored course will entertain criteria waivers based upon job and need. DOD Catalog 5010.16C. Defense Management Education and Training (at your training office) has more details.

**HELP!** The INTERCEPTOR files are short of copies of the following issues: January 1970; March, April, May, August, and November of 1971. Please mail any extra copies of these magazines to ADC/SED, Ent AFB CO 80912.

**BETTER BEACON STUDY.** The Director of Materiel Management at SAAMA is conducting an in-depth engineering study on the parachute beacon. The study will cover such areas as: improving beacon retention during deployment, making it easier to remove after you've landed, and making sure it works when you want it to but *only* when you want it to.

**NONSTANDARD TERM.** Our research department has checked all official references and can find no authorization to substantiate the definition that "a non-essential D.C. buss is that vehicle used to take Pentagon Navigators out to Andrews to fly."

**3/7600 = NORDO, NOT EMERGENCY.** A recent accident investigation has revealed that many pilots still don't understand how controlling agencies can react to our Mode 3 Code 7600 transponder squawk. It's not simple, but it may save one of us sometime, so let's look at it this way: FAA and military radars can automatically alert controllers whenever they pick up a Mode 3 Code 7700 squawk. But most radars don't have this alerting ability for the Code 7600 display. When we squawk 7600 we change the ground radar display to a "slash" and eliminate what we were previously squawking. When we squawk 7600 at high altitude, there is usually no problem because the controller on the ground can easily see our "slash" and then switch control to interrogate us and verify our radio failure. However, when we're at low altitude, there are so many returns along with the "clutter," that our "slash" can easily become lost. Thus the ground controller may not see our 7600 and, of course, won't interrogate it unless he was in direct radio contact with us just prior to radio failure. The procedures for the IFF/SIF when we have a radio failure are adequate to protect us if we know how to use them and what to expect. We can review these procedures in either the FLIP or in the Emergency Procedures section of the Enroute Supplement. The important thing to remember is that 3/7600 isn't an automatic attention getter. Also if we stay on an IFR clearance under positive radar control as much as possible, we increase our chances of having our "Nordo" squawk picked up before things get too far out of hand.

**SELECT, THEN PRESS.** Although a major accident of a Recce Voo was blamed on maintenance for not properly lubricating a brake torque link pin, the investigation board brought out an interesting sidelight: Section III of the 1F-101(R)A-1 doesn't warn pilots against activating the emergency brake system with the brake pedals depressed. Neither does the "B/F Book." Release brake pedal pressure before you pull the emergency brake handle to keep from (1) depleting the hydraulic fluid in the emergency system and (2) locking up a wheel or two due to the elimination of the antiskid system.

## INTERCEPTOR INTERVIEW :

# GCI WEAPONS CONTROLLERS

*to learn what life as a controller is really like (without actually being one), we asked three career controllers*

"GCI?" Hey now, wait a minute, you guys. You don't want me. I already have a job. Get him over there. He's not doing anything. And, besides, what have I ever done to you?"

The look that those letters create on the faces of most ADC pilots and WSOs clearly resembles the advance stages of panic. The thought

of spending one's time bathed in the pale green light from one's very own radarscope causes most complexions to turn a color closely matching the aforementioned radar scope. "And a year at a remote site in Alaska? YGBSM!!!"

\*Loosely translated: "Certainly, Sir, you are making a joke with me."

Recently INTERCEPTOR ventured to USAF IWS SAGE School at Fort Lee, Virginia. (Just why a NORAD Region and an ADC Air Division Headquarters as well as an advanced Air Force radar school are located at an Army Base or Camp or whatever is still a mystery to us. But that's another story.) We figured that with the Rated Supple-



**BAKONYI:** "This is no place for the indecisive. Planes are closing at 1500 knots and, in many cases, no decision can be as bad as the wrong decision."



**WHITE:** "The training program is, in a real sense, a screening program . . . so that a student knows his capabilities and limitations before he finds that his responsibilities have surpassed them."



**GREEN:** "A good controller, then, comes out with an attitude pretty much like a fighter pilot. Like a jock, a good controller can't panic."



ment assigning many flying types to GCI, ignorance is no longer bliss and that we'd better find out what we could and share it with you.

*Although the Weapons Controller career field is maligned about as bad as any around, there is not an ADC pilot or WSO who doesn't have a bunch of MAs to his credit and maybe a save or two, strictly because of good control. Experienced ADC aircrews are quick to pick out the good controllers even over the radio and some controllers' numbers are as famous to aircrews as Unitas' 19 is to football fans.*

*At Fort Lee Air Force Station, which is actually located at the Army's Fort Lee at Petersburg, Virginia, we talked with three career controllers. Captains Laszlo J. "Skosh" Bakonyi, James S. White, and Gale F. Green have among them over 18 years of controlling experience.*

*In the following pages these three frankly discuss what this GCI business is all about.*

**INTERCEPTOR:** Is there a certain "type" of personality that is best suited to be a controller?

**GREEN:** While we have controllers from almost the entire range of educational backgrounds, it takes a certain type of personality to make a good controller. He's got to be able and willing to be three things: He's got to be aggressive. Even though he's not physically in the air battle, he's got to have that "looking for a fight" attitude. The interceptor aircrews have it, but unless the controller can aggressively commit them, they can't fight. It's like if the fighter is the best "up-the-middle fullback" in the league; if the quarterback is afraid to try him against their inside defense, he isn't going to get much yardage. A good controller has to be able to make timely decisive decisions throughout the air battle.

There isn't much time to ponder whether or not a move is correct. It's like a supersonic chess game. He has to be as smart as a "Bobby Fisher" but a lot quicker. Finally, a good controller has to be willing to accept an awful lot of responsibility. He must be able to accept the fact that he is responsible for millions of dollars worth of equipment, many lives, and, to a great degree, the success or failure of the air battle — or the war.

**BAKONYI:** I think that many of the traits that it takes to make a good pilot are necessary to make a good controller. Many of the subjects in the Pilot and Navigator sections of the Air Force Qualification Tests are very relevant to the controller field and could be of great value to selecting people whose personality is more suited to this business. Let's face it, we're the "eyes" of the interceptors out there and a "feel for flying" is almost as necessary to us as it is to the aircrews. And, as Gale said, this is no place for the indecisive. Planes are closing at 1500 knots and, in many cases, no decision can be as bad as the wrong decision.

**WHITE:** A good controller must have a "quarterback" personality. He's got to be able to make the right decision at the right time, usually without hesitation, and he has to be willing to continually accept the responsibility for these decisions and be ready to make some more. Anyone not able to take such responsibility won't be of much value in this game.

**INTERCEPTOR:** Do you feel a personal responsibility for the safety of the aircrews you are controlling?

**WHITE:** Definitely. I think each of us is constantly aware that we are controlling a lot of money and lives when we're at that console.

**BAKONYI:** Maybe that's why this controller field has such a high number of ulcers. When you figure you're taking a brand new second lieutenant and in four months he's controlling live airplanes, that's a lot of responsibility for a kid just out of college. Some adapt; some get ulcers; but most are very much aware of the money and lives under their control. Most of the guys who wash out of this field do so because either they can't accept this responsibility or they become so aware of it that they get nervous and can't function.

**GREEN:** It's pretty much like a pilot's responsibility. We can't erase many of our mistakes. But this is only right, of course. Someone has to take the responsibility and, since the aircrews and the controllers are the most directly connected with the mission, it's only fair that we share the responsibility. Hopefully, our training program weeds out those who can't or won't accept this responsibility.

**WHITE:** The training program is, in a real sense, a screening program. The student is evaluated at each step of his training so that he knows what his capabilities and limitations are before he finds that his responsibility has surpassed them. A guy may only be able to safely handle two on one and no more. We'd sure like to know about that before he gets caught with a live situation he can't handle.

**GREEN:** A good controller, then, comes out with an attitude pretty much like a fighter pilot. He's got that cocky, confident air that comes to a guy who knows he's got a great deal of responsibility, a very demanding job, but that he can hack it even when things get tense. Like a jock, a good controller can't panic.

**INTERCEPTOR:** You have obviously chosen controlling as a career field.

What are some of the positive aspects that have attracted you?

**WHITE:** A lot of it is an attitude thing. Things that some would list as disadvantages I would say are advantages. I like the responsibility and we have a lot of it much earlier than a lot of other nonrated career fields. I've commanded a crew of 40 some people.

**BAKONYI:** When I went remote as a Second Lieutenant, I was an SD of a crew with 20 some guys on it. This is an opportunity at responsible positions that few junior officers have and some older types never have.

**WHITE:** We've all had opportunities to fill slots which call for rank much higher than these two silver bars. We've been training officers which are in field grade slots. For example, WD is a Major's slot.

**GREEN:** I was a Senior Director of a SAGE Division. That's a Lieutenant Colonel's slot. We also have the opportunity to actually command a radar site a lot sooner than one would at most other units.

**BAKONYI:** What I like is that this field is about as close to flying as you can get without actually strapping on a parachute and for a lot of us who wanted to fly, but couldn't, that's a big thing. I can sit at any bar and talk "pilot talk" to any jock in ADC. It's probably the only nonrated career field where you are so close to flying every day. Even a missile man can't sit and talk steering dots. And if you're in the right spot, you can get some flying time. Most squadrons will give their controllers rides before any other nonrated guys. During my MAD eval last year, I got 24 hours in a 101.

**INTERCEPTOR:** How could the Weapons Controller field be made

more attractive?

**WHITE:** The biggest thing would be to increase promotion and job possibilities. We're not going to get rid of those remotes. We need people to man them and we're the people with the training and the background. It would be ridiculous to pull in someone from another field, give him a crash training program, and make him a controller at a remote site. But we would like to look forward to progressing and some day being an operations officer or a commander of one of these sites. But when other people come into the field from outside, especially when they're "11s" and "16s," that cuts down our possibilities. So the secret to keeping the qualified people in the field is to show us that we have a chance to command. One way to do that is to keep from putting in senior people from other fields who will cut down our chance for the supervisory jobs and command positions.

**INTERCEPTOR:** Could cross-training be used as a method of projecting and selling the positive aspects of the controller field?

**BAKONYI:** Not the way it's conducted in some places today. Maybe 5 guys from a fighter squadron will come down to a BUIC site. They walk in and you take them through the room for a five minute tour, give them their cross-training certificate and send them home. It works the same way with controllers going to fighter squadrons. If we could expand the cross-training program to where a crew member comes up to the site for a whole day or even two and is given a chance to sit down with a qualified instructor and really run an intercept with his own squadron. Then he'd have a chance to really see what controllers do and how

we live.

**WHITE:** We did something like that at one DC. We had a Division Dining-In and one of the fighter squadrons came up five hours early. We took each pilot and sat him down with a controller on a scope and ran a simulated mission. The pilots were the controllers and the controllers showed them which button to push and how to use the light gun. Everyone felt that this was really beneficial because, before this, only two pilots had ever seen a radar scope.

**INTERCEPTOR:** Do most controllers identify with a squadron and would it benefit a fighter squadron to try to develop a personal association with their controllers?

**GREEN:** It's only natural to try harder when you know the guys who are flying. I've found that when you know the guys, you can learn a lot more by just "shootin' the breeze" with them. A guy may tell you things at the bar that he wouldn't tell that anonymous voice on the debriefing phone.

**BAKONYI:** I feel a lot more comfortable when I'm controlling guys I know. We sort of know what each other can do and will do next. Some guys seem to be able to do more on an intercept and if I know "old Mac" or someone I know is running it, I can expect a certain performance from him.

**GREEN:** One Canadian squadron would bring a bird down to my base and take me up to their base on a ground training day. I'd give them a briefing on, say, Data Link and then we'd have a very informal "open discussion" session. There's a lot to be gained by both groups by any of these exchanges.

**INTERCEPTOR:** Describe the Command and Control of the controllers



in the DC; or, more simply, who supervises whom?

**WHITE:** It depends on what system we're talking about as to where a controller starts. An IND in SAGE is the same as a WD in BUIC. A WD in SAGE is a Weapons Director. He's in charge of a weapons team. He's got 5 scopes and 5 INDs who work for him. He's the one who scrambles and assigns targets. He's the first level battle manager. The WD is given a geographical area and the resources in that area — the fighter squadrons and the antiaircraft missiles. Above him is the Senior Weapons Director. He's up on the dais. He watches all the WDs — in time of war there could be as many as four.

**INTERCEPTOR:** Does he have four scopes?

**WHITE:** No, he has one scope. You see all the scopes can see the same thing. The only thing that varies is the expansion of each scope. The scopes can be expanded to times one, times two, times four, and times eight. Times one covers the whole region — Florida to Iceland. The Senior Weapons Director will probably be looking at times two — this is the whole big area where we're fighting. The Weapons Director will most likely be looking at time four which gives him all of his area. The IND will be on times eight — that's the biggest expansion you can get, but it's only a small area. The SWD works for the Senior Director. The SD is in charge of surveillance, ID — in charge of the whole battle. The Senior Weapons Director is concerned with the weapons and the WDs under him.

**INTERCEPTOR:** Of some concern to aircrews is the loss of Data Link sorties due to what seems to be faulty transmission. Can you explain this?

**GREEN:** If you are talking about

radio transmissions, I'd say that generally that is a true statement. A controller must decide if he wants to concentrate on a pure Data Link sortie or on killing the target. If a target slips through because the controller thought that D/L would get it and he didn't "go voice," then it's his fault. I think many controllers are guilty of too much talk, but we get involved in killing the target and when the computer doesn't seem to be keeping up, we go voice to keep from missing the target even though we know we've blown the D/L portion of the mission.

**BAKONYI:** Here again the controller is called upon to make a decision as to which is more important and this depends upon the situation. In daily training you could afford to miss a target or two in order to save a Data Link sortie. But get into an evaluation like an ORI, you'd better lean heavily toward killing the target. While they might criticize a controller for poor D/L RT, they won't flunk you on the evaluation like they will for not killing targets. Our regs say that if we have to go voice to kill a target, we're to go voice.

**WHITE:** Now if by "faulty transmissions" you mean what the aircrew receives on their cockpit presentation, there are a couple of reasons for this. Sometimes the fighters and targets operate in training areas that are actually out of D/L range. This is because some sites shut down for scheduled maintenance or other reasons. Other times, when things get busy, the frame times go way up and it looks to the aircrews like they aren't getting valid information because of the lag in frame time.

**INTERCEPTOR:** Is there anything the aircrews can do to help when they get these faulty D/L transmissions?

**GREEN:** If a crew sees that there is a great amount of change in the

target information from frame to frame, they should really monitor the D/L closely and be prepared to respond to each change as quickly as possible. When aircrews understand the system, they realize that the longer the time frame lag, the greater the changes in target info are going to be with each frame they see.

**BAKONYI:** Also, when they understand the system, they realize that the longer the frame lag, the more saturated the system, and the busier the controller. And if they understand that this high frame time still gives them valid info all the time (it's just that it's missing one sequence each time due to the high frame time), they won't be calling "Dolly 'Invalid'" every time they miss a sequence, but will be more patient until they get another valid message.

**INTERCEPTOR:** Must controllers think in three dimensions during an intercept?

**WHITE:** It's imperative that we do. Although we see only range and azimuth displayed on the scope, we have to continually consider height or attitude — the third dimension. It's important from a safety standpoint. Take a training mission. Here we operate in a reserved airspace which is just a big "chunk" out of the sky. We're the only ones allowed in there. If we stray past the ends, the sides, or the top or bottom, we're liable to run the fighters into somebody.

**BAKONYI:** Altitude, both absolute and relative, is a basic consideration to what kind of attack options we have. A large altitude differential demands certain attack options not required when the fighter is co-altitude with the target. Even if they are at the same altitude, their altitude above the ground determines what attack geometry is most



effective. Low altitude intercepts have to be set up differently from "highs."

**GREEN:** We find that teaching new controllers to see two dimensions but to think three dimensions is our most challenging task. Many controllers who wash out of this field do so because they are unable to project themselves into this third dimension. To be good at this, a controller almost has to put himself into the cockpit. He has to be able to think in terms of climbs and dives as well as turns. This is where his knowledge of both ends of the system and his ability to think in three dimensions becomes valuable. Then he won't ask a fighter to do something beyond its capability.

**INTERCEPTOR:** Most of us are aware that FAA calls the shots as to *when* exercises are flown. Just how much coordination must you complete before a fighter can launch during an exercise?

**GREEN:** Exercise coordination between Division and FAA begins weeks before the exercise. Each Division has an Exercise and Planning Branch. They plan out the target routes and the approximate times. Most of this planning is completed a month beforehand. They schedule these blocks of airspace. FAA has to know where we are going to run the exercise. We don't know where the targets are coming from, but we can eliminate certain restricted areas. At any rate all this coordination is done through the trusted agent. So FAA knows just as we do that there is going to be an exercise with a certain number of targets, so they schedule these blocks of airspace and in some places they add more people. When the battle staff and controllers are recalled, we know generally which block of airspace is going to be used. Then

at the WD/IND briefing, they are shown the airspace and altitude blocks where the targets are going to be. We have altitude reservations in these airspace blocks. We can pull these up on the scope. These airspaces are delineated over the area map presentation and in the lower left hand corner of the scope that shows the bottom and top of the altitude reservation. Now we can scramble our interceptors in this airspace. We scramble them through center to tower, then departure control, then to us.

**BAKONYI:** I've heard some comments about the fighters being given a frequency at the briefing and another frequency when he gets airborne. Of course, we try to avoid that. But maybe between the briefing and the launch, something happens to the frequency or another controller gets more targets and needs more fighters. Then we have to change. We're not purposely trying to confuse anybody.

**INTERCEPTOR:** During an exercise or an actual air battle, what coordination is required to launch the Army Air Defense Missiles?

**BAKONYI:** As odd as this may sound, it takes more coordination to *keep* the Army from launching their missiles. If this sounds like I'm degrading the Army, I'm not; let me explain further. During a real or practice air battle, the SWD assigns the region's targets to different areas. If there aren't any fighters or Air Force intercept missiles available, he assigns the targets to the Army. This is done through an Army Liaison Officer at the DC. He has direct communication with each Army Air Defense Command Post (AADCP). Although the AADCPs get the same computer "talk" as the DC, the Liaison Officer tells the sites which targets go to whom. We must remember that the Army is

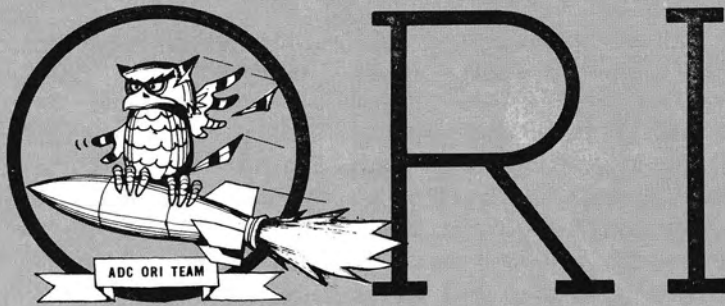
responsible for "point defense." They can't move their weapons around like our fighters can. They have specific areas that they are to defend. This area is usually the closest to the target — the "last ditch" defense. Anything that gets that far through our defenses, they must get. So, unless they know that the plane coming into their area is *not* hostile, they start blasting away. And you can pretty much count on them getting their target because they'll keep firing until they do. When the bomber gets to that point, it's like the last game of the World Series, there is no reason to save anything for tomorrow. This is where the coordination comes in.

**GREEN:** If an IND is running a fighter on a target and they're nearing the Army Air Defense ring, he'll give the Army a "hold fire" to let the fighter complete the intercept without getting shot down by our own missiles.

**WHITE:** When the Army goes "autonomous," that is when they've lost computer communication with the DC, their only choice is to shoot down everything not actually identified as friendly. That's when the Air Force really has to talk to the Army because everything not in the Safe Passage lanes at the right altitude, airspeed, heading, and squawking the right code is going to get it.

**INTERCEPTOR:** Would you recommend the GCI field as a career for a young officer?

**BAKONYI:** Yes, most definitely, but only if he has the talent, ability, and attitude which we've discussed. If he's the kind of guy who embraces responsibility, of course he'll be a success in any field. But this Weapons Controlling field really lends itself to this type personality. He will find this an extremely rewarding career field. ★



**OPERATIONAL  
READINESS  
INSPECTION TEAM  
HQ, ADC**

## **BOMARC AND THE AIR COPS**

Four different major commands provide the security support to our five BOMARC squadrons; SAC, MAC, TAC, and ADC. None of the squadrons have security forces assigned to them; consequently, tangible 11-4 agreements and close coordination between BOMARC squadron commanders and the supporting unit are essential. Security is a very important part of the BOMARC ORI/CI. "So goes security, so goes the unit," an unsatisfactory in the security functional area is an overall unsatisfactory for the BOMARC unit. This can be a "hard pill to swallow" when the security force is not directly assigned to you, especially if the rest of the inspection goes well.

Recent inspections of BOMARC units have revealed several discrepancies in security areas which require coordination and cooperation between the BOMARC unit and the security forces. First, let's take a look at some of these deficiencies and then at some of the ways that BOMARC commanders can enhance the performance of the BOMARC security force.

1. Security augmenters were not made available to the security force for training; they were not knowledgeable of their duties or responsibilities and augmenter training was either nonexistent or extremely poor at best.

2. The BOMARC commander had not participated in the base security council meetings.

3. BOMARC personnel were unfamiliar with proper escorting procedures and they failed to properly display or remove restricted area badges.

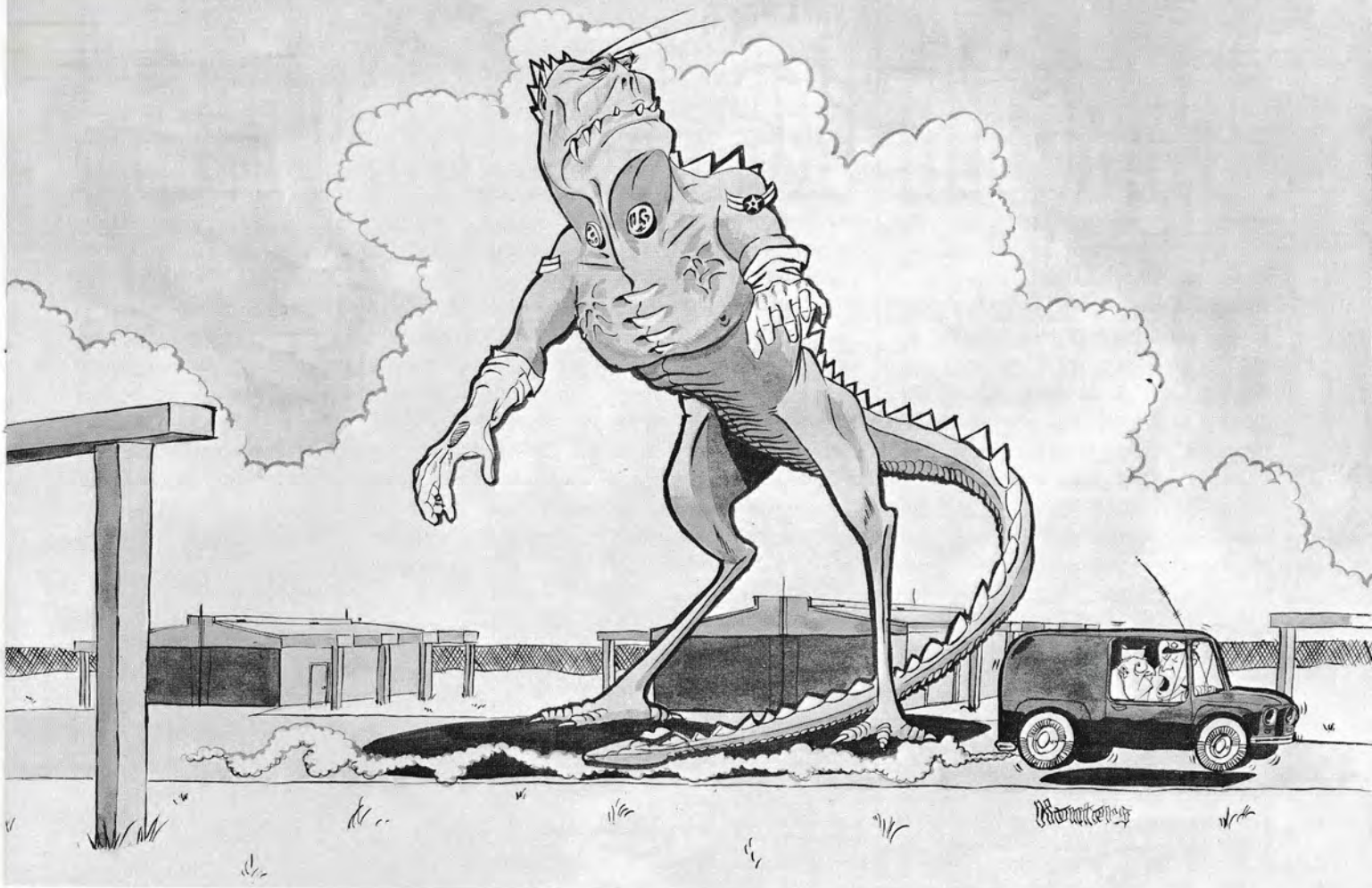
4. Up-channel reporting of HELPING HAND/COVERED WAGON reports was not properly implemented by either CSC, IMSOC, or both.

5. Key control for shelters was inadequate or procedures for control were not established and units were not complying with their own security operating instructions.

Eliminating the above discrepancies will certainly assist in preventing an unsatisfactory rating for security reasons. The question that now comes to mind is how does one eliminate the causes of these and other discrepancies not mentioned. The ADC Directorate of Operational Inspection publishes and distributes an official "gold book" to all units. These books may be used as a checklist to correct similar discrepancies. We further suggest that you get to know your security police unit and how they operate. You'll be able to solve minor problem areas before they cause you "big" problems later on. Here are some recommendations that you may find helpful:

1. Utilize the base security council to the fullest extent. This council is the approving authority for the entire base security plan. Periodically visit with the





**"Additional launch area guards are unnecessary and we've eliminated area badges completely; just act natural and don't smell sneaky. He gets three drums of Alpo a day and all the intruders he can catch."**

Chief, Security Police (CSP) and the BOMARC NCOIC in charge of security. A friendly conversation over a cup of coffee can do a lot for your security system. You might take the time to visit the security guards on post. A visit during non-duty hours is particularly helpful to gain respect and build morale.

2. Although not required by regulation, security policemen can be permanently assigned to security duties at a BOMARC site to enhance security.

3. Establish a "real" security education/motivation program. Don't just pencil whip this one — get a real program going.

4. Include the security police as a part of your organization. Why not invite them to squadron functions? This can do much to establish a good rapport. Appoint a responsible NCO to serve as a liaison officer between your unit and the security police, and insure selected augmenters meet all training requirements.

A little time spent showing an interest in a supporting unit can pay big dividends and an effective BOMARC security program is a must to insure passing an ORI/CI.

**JAMES M. THOMAS, Colonel, USAF**  
Director, Operational Inspection

# PACIFIC PLUNGE

OR

*California, here I come . . . I hope!!!*

by MAJOR RUSSELL WEBER ● 84 FIS, Hamilton AFB



*When you're a hundred miles west of the Golden Gate with a lot of fire and no hydraulics, you quickly become keenly aware that those "moments of sheer terror" don't necessarily apply to the other guy.*



I recently read in INTERCEPTOR wherein the writers described flying as "hours and hours of boredom interspersed with moments of sheer terror." How true! I've been flying the F-106 for 1400 hours and here is a story about two hours of my life that were anything but boring.

It was last October, about 1435, plus or minus a couple of minutes. This was my second flight of the day and so far the whole day was one of those standardized, routine jobs that the "boredom" advocates talk about. We were one and a half hours into this second flight and about 100 miles from the shore, over the Pacific. I had been flying as low target at 3-4000 feet for a while until we moved up to 12-14000 feet for better radar coverage.

I was on a westerly heading at 14,000 feet when the fire warning light started flashing. Of course this immediately got my attention. Up to now there had been no indications of anything unusual. I immediately called "MAYDAY" over the radio, declared an emergency, and turned towards shore while climbing for more altitude. I asked Major Bledsoe, who was running an intercept on me, to join up and check me over (he was only 3 to 4 miles in trail at the time). GCI gave an easterly vector and told me that it was 108 NM to Hamilton. So far 3 to 5 seconds had elapsed. Then the fire warning light came on steady! Still, there were no other indications of anything wrong — no smoke in the cockpit or wild engine instrument readings. Just that light!

Major Bledsoe joined up on me and said, "You are trailing light gray or white smoke." I knew then that the fire warning light was for real. Simultaneously I noticed both the primary and secondary hydraulic gauges unwinding toward zero and I said, "Great, now I have hy-

draulic failure, too."

I deployed the RAT, but that had no effect. At the same time Major Bledsoe called "You are on fire, I see heavy black smoke and flames; eject, eject!" (I estimate the elapsed time was no more than 25 seconds from the first indication of the fire warning light.) The flight controls froze and I said to myself, "Well, this is it; there is no choice." I still hadn't felt or heard any explosion or engine surges. I do distinctly remember looking at the throttle and saying to myself, "Shall I stopcock it, or leave it?" (as if it would have made any difference). Then I noticed that the engine had flamed out anyway and all the gauges were unwinding. (I was 20° nose low and 30° right bank approximately 300K at 12-14,000 feet and strictly a passenger. I wished I had my wet suit on; I knew the water was going to be cold.) So I issued an epithet, calmly got into ejection position, and pulled the handle.

The seat fired with a whoosh. I don't have the words to describe the feeling of the rocket blast. It's something like riding a bullet out of a gun barrel. I seemed to be going straight and I don't recall any spinning or tumbling. But I distinctly recall when my Rolex with a metal snap band departed my left hand. I didn't see it go, but I knew it was gone. With this, I recall my right arm flailed out and up. The next thing I saw was a fully deployed canopy over me. (The whole sequence seemed to be instantaneous from pulling the handle until the chute was deployed.) My helmet was gone and I have no idea when or how it departed. (I have a small head and wear a medium helmet with a small foam liner and have been wanting a custom helmet for years. Maybe I'll get one now!) The visor was down and locked, mask

hooked firm, nape strap tight and chin strap on comfortably tight. This was my second ejection and I lost my helmet on the first one, too. But that time I felt it roll forward over my head and I caught it . . . this time the helmet just disappeared.

When I checked the canopy I noticed a couple of things. First 6 or 7 risers were twisted about 1/3 of the way up. I thought I should try to untwist them so I used my left hand on the left riser and pulled and it worked. My right shoulder was hurting a little and I couldn't get full use of my right hand on the right riser. While looking up I noticed one shroud line on the right side broken and about 1/2 dozen small holes about the size of a quarter in one panel near the top. They looked like burn holes and I thought they might have been made by the force deployed gun. I also noticed the comm cords from my missing helmet dangling over my left shoulder. The shoulder strap or other line must have wrapped around the mask hose and comm cords somehow.

I was oscillating a little, but I saw the red tabs for the fourline cut and said, "Why not?" I tugged the red loop of the left riser with my left hand and again using my left hand because my right shoulder hurt, pulled the red loop of the right riser to complete the fourline jettison. What little oscillation there was, stopped. I could see that my seat kit had not automatically deployed. Since I ejected around 13-14,000 feet, I estimated it would take about 8-10 minutes to get down. I knew I would be in clouds the last 3 to 4,000 feet because the lower cloud tops were 3,500 feet (I had been down there earlier) so I decided to enjoy the ride down. I had always wanted to try a sport jump and since my last ejection was

low —350 feet or so — I really didn't know what the ride was like.

This time there was plenty of time to look around. I recall that the harness was not at all uncomfortable except I could not get my right hand all the way up the riser because of the pain in my right shoulder. My mouth tasted like it had sand in it. It turned out to be a broken tooth filling which I spit out as well as part of a broken tooth.

All was quiet except for the eerie sound of Bledsoe's aircraft circling me like a hawk. I kept thinking, "He is making very tight turns." By turning my head I could almost follow him all the way around and I figured that my rescue was pretty much assured because with him orbiting my position, rescue forces must have a good fix on me. The descent seemed smooth and slow. I couldn't tell if I was drifting because of the cloud cover and I didn't really care; unless I could drift a hundred miles eastward, I was going into the water.

While checking myself over, I noticed part of my oxygen hose was still hooked up to the disconnect block on the right side. About 8-10 inches of the hose was still there, but the end that goes to the mask was ripped apart. I think I unhooked it and threw it away, but I can't remember for sure. It wasn't on my harness later (said PE). I also noticed the URT 27 "Beeper" hanging over my left shoulder in front and held by the nylon cord and I thought, "Well, at least I won't have to worry about getting the beeper out of its pocket and turned off."

At about the same time, I noticed something sticky on the left side of my face near my left eye. It was blood! But it seemed to be a small cut, and I thought to myself the URT hit me. I decided it was about time to deploy the seat kit. I was still fairly well above the lower

cloud deck. I reached down with no problem and pulled. I felt it unhook and drop away, but I was still holding the kit by the handle. It had not broken away. The first doubt of the system entered my mind. I kept thinking the kit should have opened and the raft should have inflated. I was saying to myself, "If I let the handle go, the kit will drop straight to the bottom of the ocean." I thought I had had a ground egress type of deployment. So, while holding the kit with my right hand, I felt around the left "D" ring to see if the lanyard was hooked up. I was thinking I may have to hold this thing all the way down. But I found the lanyard and then let the kit go. It fell 8 or 10" and popped open. I tried looking down to see if the raft had inflated, but could catch only an occasional glimpse of the raft after twisting and turning in the harness.

My right boot laces had come loose and I thought I might lose the boot before I got into the raft.

The lower cloud deck was getting closer and it was time to think about getting my hands on the J-1 releases. I couldn't get my right arm up high enough so I made a mental note to release the left side first.

I was still watching Major Bledsoe follow me down and I knew he had a good fix on my position. Approaching the lower cloud deck (a broken cover), I saw water. So then I just looked straight ahead and kept my left hand on the left J-1 release. As I hit the water, I released the left riser. There was a light breeze and the canopy fell away behind me. Reaching over, I released the right riser with my left hand. There was no problem finding the release. I watched the canopy drift away and knew that I was not going to get fouled in those lines. I did land into the wind!

I was floating in the water and looking around when I looked down and said, "Damn if I didn't forget

my LPUs!" I wasn't having any trouble staying afloat, but I popped my left side first, then the right one. I saw the raft and noted these damn things always land upside down. While pulling the raft toward me I said I better close the J-1 covers before I start hearing those NCO voices from my training days at various survival schools. With the covers closed and the raft upright, I climbed in with no difficulty. However, I was on my knees and said, "This is dumb!" Then I saw the sea anchor and deployed it and rolled over to a sitting position, and waved at Major Bledsoe, who was still there above me.

I started pulling in the survival kit which was quite heavy and difficult to get in the raft with my left hand and only a little help from my right. Of course, it was on the right side of the raft. I finally got it in, then had a lot of trouble getting the straps off of the rubber kit. The crossed straps were tight. The buckles were a push-to-release type. I pushed and pulled and tugged, but they would only give a little. I wanted the RT-10 radio out of there. I seriously thought of getting my knife out to cut the straps when I managed to slide them open enough to reach in and pull out the RT-10. The first thing I did was select RECEIVE to check my beeper, but I did not hear it then. I double checked the URT-27 and moved the switch off and on a couple of times, pulled the manual antenna out because the long one in the risers was gone. Still no beeper so I turned it off anyway and contacted Major Bledsoe on the RT-10 and told him I was in the raft and everything was OK except for my right shoulder. He said he had to leave because of fuel, but the Rescue C-130 was on the way and said I was 3 miles north of the oil slick. I noticed the RT-10 Receiver seemed to be very weak. I sat there



waiting for the 130 to arrive and tried to decide what to do with the radio. I didn't want to lose that "jewel" so I unhooked my chest strap, ran it through the hand strap of the radio and rehooked up the chest strap. By this time I had the rubber bag out of the survival kit and hooked that line over my chest strap also. I guess I should have hooked it to the raft tie down strap, but the water wasn't rough, just light swells, and I didn't think I would get dumped out. Then I retied my right boot laces. It seemed a very short time after Major Bledsoe left that I saw a C-130 on the horizon heading right toward me at about 1,500 feet.

I pulled out a Mark 13 flare and set off the day smoke. The C-130 flew right over me and then started circling. I contacted him on the radio and said I was OK except for my shoulder. I heard him answer and say a chopper was on the way, but again noticed the receiver to be very weak. Also it was difficult to operate the radio with the hand strap hooked to my chute chest strap. I wish there had been some kind of tie down line on the RT-10 for use in a raft; I would have hated to drop it overboard. It's amazing how crowded that one man raft can get; at survival schools you don't have a full size kit. When parasailing we just had a raft and canvas bag. It might be worth looking into.

The C-130 circled some more and dropped a big smoke flare down wind of my position and then a MA-1 kit upwind of me. It looked like a good drop. I could see those two big rafts and the floating line 100-200 yards from me, but for some strange reason, maybe the light wind or the current, it seemed to stay where it was. The smoke flare was drifting toward me and all I could think was, "Wouldn't that be great if that damn flare with its flames and smoke hit my raft and

sank me!" The MA-1 kit moved upwind.

By this time another C-130 arrived and two F-106s were circling the area. I waved at everyone. I was getting a little cool by this time and I wanted to put up the spray shield, but it was under me along with some straps. The kit was in the raft, too, and it was just too much trouble with one arm to go through all that effort. I knew the chopper was on the way.

By this time the smoke flare had drifted past me and I could smell the sulphur of the smoke as it blew over me. The thought of sharks entered my mind and I took a glance around, didn't see any, and decided it was too cold for them out there and dismissed that from my mind.

A C-130 then dropped another MA-1 kit. I heard it plop close to me and seemed to be another good drop, but it didn't get any closer to me and when I paddled with one and a-half hands, I went around in a circle. Now I had four big rafts right near me, but I could not get any of them.

About that time a big Jolly Green came into view and I talked to him on the radio saying, "I am OK, but with my hurt shoulder I don't think I can get on the penetrator by myself."

The chopper dropped a couple of smoke markers and made a couple of passes. Then the race was on, a P.J. was on the penetrator as the cable lowered toward me. Two more P.J.s parachuted to the MA-1 kits and I could see a Coast Guard helicopter on the scene. The two F-106s were still circling the area plus the two C-130s. I unhooked the rubber survival kit from my chest strap and tied it to the hand hold of the raft, released my lanyard from the "D" ring, and tied that to the raft also. I was ready to go. The downwash from the chop-

per was heavy and sent the spray flying and stinging my eyes.

The P.J. (Sgt Loud) on the cable got to me, the chopper let out some slack and backed off a little just as the other P.J.s paddled up in the big raft. I tossed my rubber survival bag in the big raft to tie us together and give me more room in my small raft. I still had the URT-27 beeper hanging over my left shoulder by a line and I asked the P.J. in the raft to cut it off. I didn't need to get slapped in the face with that on the way up. I should have kept it to see why it didn't work; we never saw it or the other survival kits again.

By now I was on the penetrator, in the water, with the spray flying and I was being dunked under water as they were trying to get the safety strap around me. There was some problem with one of the snaps on the strap. They hooked and unhooked it a couple of times before we started up. I noticed there seemed to be an excessive (I thought) amount of slack in the cable. I thought, "After all this, all I need is to drown on the way up."

The ride up to the chopper was quick and smooth and then I was inside. I slipped out of my harness, with the help of Sgt Loud who took off my boots and socks and unzipped his wet suit and stuck my feet on his belly. Warm! You ought to try it; you'll like it. They covered me with blankets which helped some, but I was still cold. Someone gave me a drag from a cigarette which sure tasted good; another stuck a Band-Aid on my head cut and gave me a drink of water. They unpacked their whole medical kit, but I refused a morphine shot, and asked what time it was. 1635 was the answer. I had been in the water two hours. No wonder I was cold.

We landed back at Hamilton approximately 1715. An ambulance crew took me on a stretcher to the Base Hospital. The surgeon cut off

my clothes, checked me all over, and took X-rays. They decided I had a broken shoulder. The Flight Surgeon followed me around asking questions for his forms, like what I did hour by hour for the last 72 hours and how much flying time in the past 24 hours, 30 days, and 90 days. (That's just what I needed!!)

All I wanted since my arrival at the hospital was a cup of coffee, but the doctor said, "Not yet." They still were not sure if they would have to operate on me that night. I was shuttled in an ambulance to Letterman Army Hospital in San Francisco. At the Letterman Emergency Room they took more X-rays (gad, that table was cold!). After some more checks and reading of X-rays, the doctors decided not to operate yet.

I finally got a cup of coffee from the Emergency Room personnel which I greatly appreciated. At 2300 hours they took me to my room and put a new Band-Aid on my head. And, since I hadn't eaten since lunch, a nurse found me a baloney sandwich, which I gobbled up. I looked into a mirror and saw my nose red and swollen, with some abrasions on my face which must have happened when my helmet departed.

The next day found me with a prognosis of four weeks in traction for a broken shoulder. I told the doctor that clean living and good scotch make bones heal fast and "Fighter pilots do it better."

"A few moments of stark terror after hours and hours of boredom."

P.S. I was out of traction after two weeks.

A couple of comments come to mind:

1. Helmet — I think each pilot should have a custom-fit helmet. The cost can't be that much.

a. For day to day use to cut down on the noise level of jet en-

gines, the regular helmet ear pieces do not hold down the noise near enough, no matter how well you adjust them.

b. If you should eject, it only stands to reason that a good fitting helmet stands a better chance to stay on and offer the protection it was designed for.

c. The cost of maintaining various sizes of liners, pack, etc., would be eliminated. A custom helmet should last a pilot years. Give each pilot his own head form and if a new helmet is required, he could send the form into the helmet maker and it could all be handled by mail. (Cost reduction item?)

2. I mentioned wet suit earlier. I was in on a test of wet suits verses antiexposure suits, at McGuire AFB, New Jersey, 1965-1966. We had custom-tailored suits, total cost \$60.00 including a vent hose, boots, gloves, and hood.

a. The wet suit has natural bouyancy.

b. You do not need to worry about leaks.

c. If it should get caught and rip during an ejection, there would be little degrading effect. Whereas a wet suit would also be warm if one were to eject over land. Our suits were one-piece with a full front zipper like a flight suit. Just slip a flight suit over it and you are ready for anything.

3. The RT-10 should have a tie line and hook attached to the hand strap so it won't be lost aboard a raft. 10-12 inches would be long enough.

4. The tie down straps holding the rubber survival kit in the firewell seat pack need new type buckles that can be easily released with one hand. More research is needed to find out where the shoulder straps go when the butt snapper operates. I feel that the shoulder strap might have wrapped around my mask hose and comm cords, because the

mask hose was cut in two and the comm cords from the helmet were hanging in the riser over my left shoulder. I could see where the wires were pulled from the head set. There is nothing to hold the other end except a phone jack and it seems to me it should have been pulled out there as it is the weakest point. Something really had to hold it tight when the helmet departed.

## LIFE SUPPORT COMMENTS

*A custom fit helmet for aircrews has been a recognized requirement for some time. The Life Support SPO at Wright-Patterson has an active endeavor on custom fit helmets, and TAC is currently running an OT&E on a "foamed-in-place" custom fitted helmet which can be made in a unit life support section. We should receive the results of the OT&E in the next few months.*

*The test of the wet-suit concept revealed that wet suits do not provide protection to aircrews if they have to survive in a cold climate on land. The new CWU-21/P "Ventile" antiexposure suit (which breathes when dry and affords aircrew protection on land) is finally in production and the 57th FIS at Keflavik will receive the first 45 suits by February 1972. Other ADC units should start receiving these suits before the end of CY 1972.*

*The tie line on the RT-10 radio sounds like a good idea and ADC/DOTSL is working with SAAMA toward having it adopted.*

*The tie-down strap problem has been forwarded to OCAMA and they are actively working on a modification.*

*So far this year, the automatic survival kit has failed to open automatically on four different ejections. ADC/DOTSL is currently working with OCAMA, SAAMA, and ASD to resolve this problem and provide a system of greater reliability.*



# 48th Wins Hughes Trophy



The results are in and the 48 Fighter Interceptor Squadron has proved what they've been telling people for sometime. "They're Number One."

The 48 Fighter Interceptor Squadron at Langley Air Force Base, Virginia, has been named winner of the 1971 Hughes Achievement Award. This award is presented each year to the outstanding USAF interceptor/tactical fighter squadron with an air defense mission. The selection is made by Headquarters USAF from the top units of ADC, PACAF, USAFE, and AAC. With this award, the 48 FIS became the third consecutive ADC squadron to take home top honors.

Competition for the Hughes Trophy is always keen and the key to success is proven outstanding performance in the air defense role. When a squadron places the massive silver cup on display, it serves as an impressive reminder to all that they



Following the traditional "wetting down" at the Airmen's Club, where the Hughes Trophy is filled with champagne, the officers and wives of the 48th gathered in a Dining-Out. Pictured here are Mr. Robert DeHaven of Hughes Aircraft, General McGehee, and Lt Col Dan Parris following the presentation.

are the best air defense unit in the Air Force.

The past year has been a very busy one for the 48th. In addition to their normal NORAD alert commitment at Langley AFB, Virginia, they have maintained an alert capability at detachments in Wilmington, North Carolina, and Homestead, Florida. From these three locations they have scrambled over 300 times, and on various targets such as lost aircraft, foreign aircraft without proper clearance, hi-jacked airliners, narcotics smugglers, and trespassing foreign fishing vessels. During the past year they were entrusted with safety of the President of the United States. F-106s from the 48th flew air patrol sorties while

President Nixon was enroute to and from Homestead AFB. These commitments seem even more demanding when you realize the difficulty of maintaining aircraft deployed over 800 miles from the main operating base, and the time and effort involved in rotating aircraft and aircrews over this distance. In spite of these challenges, the 48th has maintained a perfect record. They have responded to every alert and have intercepted every target on which they were scrambled.

Being Number One is not an unusual situation for the 48th, they've been there many times before. They became the first F-106 squadron to deploy to Europe when they were chosen to participate in the 25th

Paris International Air Show. They were awarded the USAF Outstanding Unit Award for their superior performance during the period 1968 through 1970. The squadron set an all-time safety record for active duty fighter squadrons when they logged 80 months without a major aircraft accident. Their flight surgeon, not to be outdone, was selected 1971 ADC Flight Surgeon of the Year by the Surgeon General of the Air Force. And to cap their ADC recognition, the 48th was awarded the "A" award, the highest honor bestowed by the Aerospace Defense Command. It was only natural for this unit to achieve the world-wide recognition that accompanies the Hughes Trophy. ★

The key to success in this type of competition is proven outstanding performance on a continuing basis. To achieve this, you must have the dedication and support of each man in the squadron.







The problems inherent in maintaining aircraft deployed over 800 miles from their main operating base are sometimes staggering. Yet this squadron responded to every alert and intercepted every target on which they were scrambled.



During 1971, pilots from the 48th scrambled over 300 times and on various targets such as lost aircraft, foreign aircraft without proper clearance, hi-jacked airliners, narcotics smugglers, and trespassing foreign fishing vessels.

# OPERATION



**T**oday's modern machinery is quite remarkable in that, if it is supplied with power and lubrication, it can be operated almost indefinitely. A machine does not require the time off that is common to its operators, such as coffee breaks, lunch hours, crew rest, and annual leave. But machines have their weakness — they are not self-repairing; and in spite of all our advanced technology and engineering, their parts wear out, and the machine stops. This is a known weakness and no one gets too excited if their typewriter fails or their car stalls. But when the machine you're using is designed to fly and it stops doing this in the middle of a mission, the situation becomes a little tense.

The answer to this problem, of course, is preventive maintenance, and the United States Air Force has an extensive program of inspection and part replacement — in advance of an inflight failure. This function

of maintenance is performed at all levels, but the real key to the preventive maintenance concept is a comprehensive maintenance program called IRAN (Inspect and Repair as Necessary). INTERCEPTOR recently visited one of these IRAN facilities to see what actually happens to an aircraft during this reconditioned phase.

We chose the Sacramento Air Materiel Area (SMAMA) at McClellan AFB, California, the maintenance complex that performs IRAN for ADC's F-106s. Every three years, each F-106 in the fleet cycles through these hangars for a 70 to 80 day tour. We couldn't get permission for a 70 day TDY in Sacramento, but we did manage a few days for a very interesting and educational trip.

To anyone not familiar with the IRAN concept, it might appear that this is a good way for a fighter squadron to get rid of its "hangar queen." Simply send it there with

forms filled with "write ups," and then pick up a fully reconditioned, combat ready, "Code One" aircraft after 80 days. Unfortunately, this is NOT TRUE. There are a few people around that say it used to be that way, but if it ever was, the advent of cost-effective management and tight defense funds ended that era with a bang. Contracts are negotiated and let for only certain, clearly defined tasks. An aircraft in IRAN now, except for "Safety of Flight" malfunctions, gets inspected and repaired only as specified in the terms of the contract. All other repairs are performed more economically by "Blue-suiters" at the home unit.

## IN-PROCESSING

When an F-106 enters the incoming phase, it begins a six day disassembly process. It is dearmed, defueled, and then dismantled. The engine, vari-ramps, elevons, rudder, and all black boxes are removed.



All external paint is removed, and all access doors are opened or removed. Now, instead of a sleek, beautiful Delta Dart; a naked, gutted tube of bare metal stands with its bundles of disconnected wiring hanging loosely. In this disassembled state it is ready for inspection.

## INSPECTION

The first stage of inspection is the examination and inventory (E&I) phase. Maintenance inspection experts examine the aircraft with that proverbial "fine tooth comb" to determine what work must be done. The aircraft is checked for stress cracks, worn hinge mounts, corrosion areas, etc. An inventory is taken of modifications previously accomplished, and the modifications required under the contract. Special work requested by the squadrons, for convenience or time

compression reasons (TCTOs, etc), are programmed into the schedule. Work cards are initiated and the paper work documentation begins. The aircraft is now ready for repair.

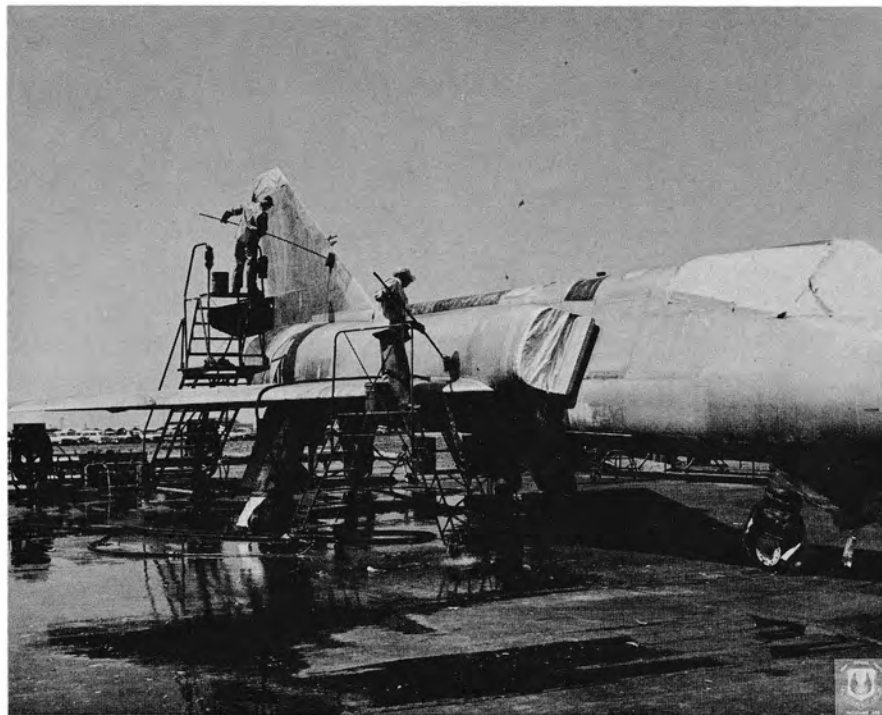
At this same time in another hanger, all the black boxes are inspected. The components that bench check good are routed for storage. Those requiring repair (and under contract) are either repaired here or, if necessary, sent to the prime depot. Boxes that have malfunctions and are not under contract are stored to be sent back, in the same condition, to the home unit. Entries are made in the aircraft forms to denote which boxes need repair at the home station. When the airframe work is completed, the boxes are reinstalled. A concerted effort is made to return the same boxes to the home unit, but this is not always possible. What is possible is to return boxes with the same TCTOs as those received. This practice did

away with the squadron maintenance officer's constant nightmare: that he was modifying the same black box over and over again.

## REPAIR

With the E&I phase completed, the repair and modification phase begins. For the next 16 days our mach 2 aircraft resembles an animal carcass from an African adventure story. Men and equipment of all descriptions crawl in, over, and round its bare bones drilling holes, riveting metal patches, sanding rough spots, and replacing wiring. The airframe is alive with people working to complete their portion of the job in the time allotted by the management flow chart. Time and physical work space become critical factors during this phase and professional ingenuity becomes the key to success.

We found one example of this



When an aircraft enters IRAN it is dearmed, defueled, dismantled, and "cleaned" of all external paint. Our beautiful Delta Dart becomes a naked, gutted tube of bare metal.

While the airframe goes through the inspection phase, the black boxes are bench-checked, repaired, and stored.



Our mach 2 aircraft resembles an animal carcass from an African adventure story. Men and equipment of all descriptions crawl in, over, and around its bare bones.







Technicians work around "bread boards" that simulate the F-106 cockpit, building new wiring harnesses out of "micro" wire. This modification does away with the old splices and repairs, and reduces the overall size of the wiring bundles.

The USM-185 checks out aircraft wiring before the electronic equipment is reinstalled. Computer tapes roll, circuits hum, and a typewriter prints out problem areas.

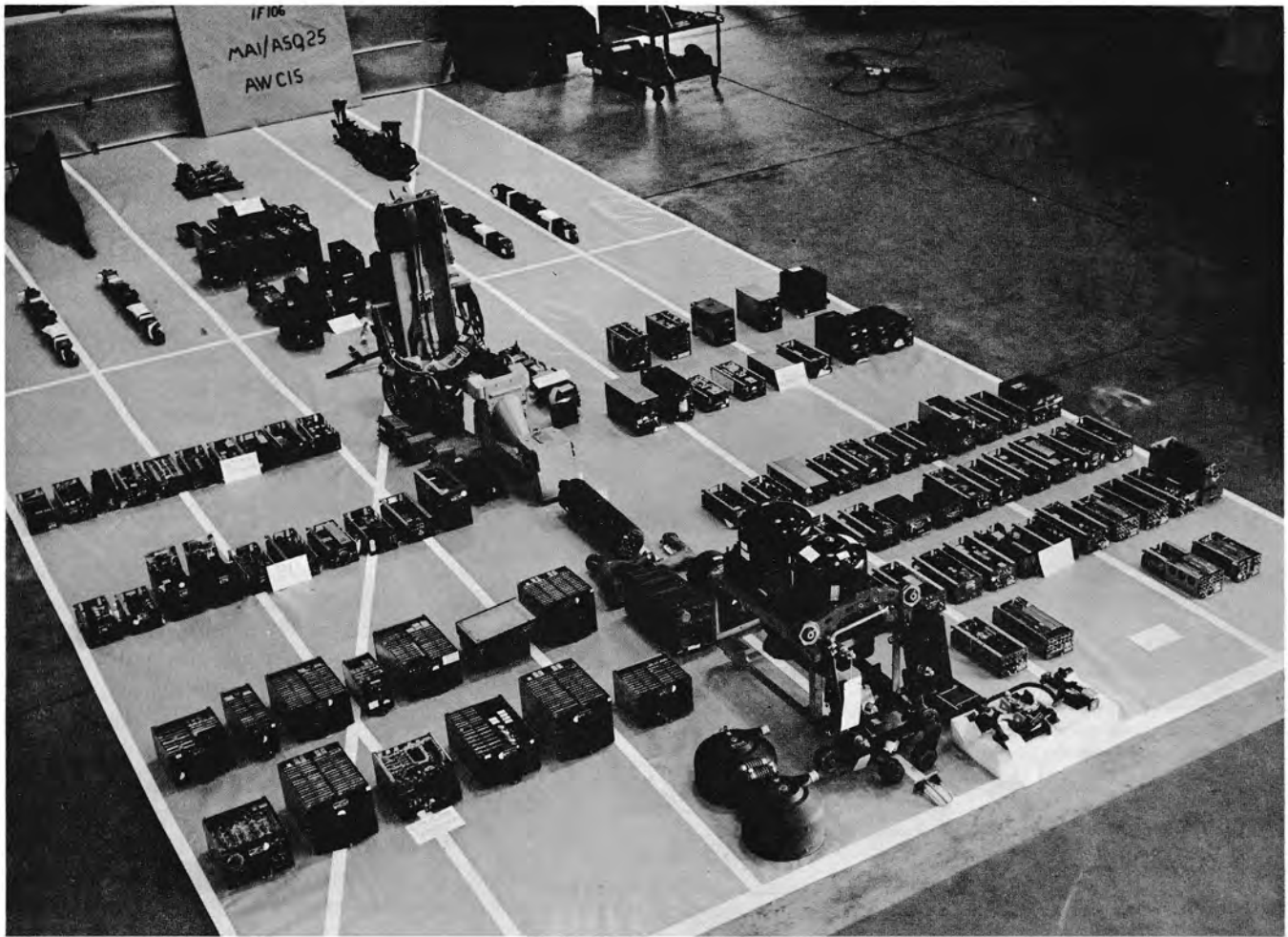


ingenuity in the wiring modification section. The F-106 has received numerous modifications since it came into the inventory, and each modification or new piece of equipment has required some new wiring. Consequently, the wiring "bundles" in the cockpit and forward electronics bays have swelled to a veritable mass of solder joints, splices, and insulation. One particular modification included in this IRAN contract calls for replacing the old wiring with new "micro" wire which will require less space and do away with the old splices and repairs. It also replaces the old type "potted" connector plugs, which caused many electrical problems, with the new soft rubber "environmental" plugs. Since cockpit wiring must necessarily be done in the cockpit and there is hardly room for one man in there, someone had to come up with a way to do the operation quickly and inexpensively. Huge "bread boards" were constructed that simulate a cockpit unfolded to a flat position. The wiring team then works at this board in relative comfort. Ninety percent of the work is completed this way and, in many cases, before the aircraft arrives at IRAN. When the aircraft is ready and the "bread board" is completed, the entire wiring "harness" is lowered into the cockpit and fastened into position.

## ASSEMBLY

As each section of the aircraft is completed, the assembly and "selling" phase begins. The carcass begins to "flesh-out" and move as the vari-ramps, elevons, rudder, and inspection plates are reinstalled. Technicians reassemble each system, check it, and then "sell" it to the maintenance inspectors by demonstrating its proper operation.

During this time period, a special system analyzer, called the USM-



**"Buy your weapons system in kit form and save! Simple enough for a child to assemble. (If that child has an advanced engineering degree and a few years' experience.)"**

**Women seem more suited for painting inside the cockpit. The detail and confinement of this job drive the less patient men painters to frustration.**



18  
air  
eq  
he  
sa  
pi  
co  
at  
se  
ro  
pr  
cu  
in  
ag  
ac  
ta  
wi  
ca  
  
ou  
sy  
sy  
ch  
ai  
m  
m  
pa  
  
SN  
ci  
pr

F



185, checks out the wiring on the aircraft — before the electrical equipment is reinstalled. (People here speak of the “185” in about the same grateful tones that a fighter pilot reserves for air rescue helicopters.) A technician (appropriately dressed in white) presses a series of buttons, computer tapes roll, circuits hum, and a typewriter prints out problem areas. The circuits are checked for shorts, opens, incorrect resistance, induced voltage, etc. The work this machine accomplishes in three days would take a team of electricians, equipped with multimeters, weeks to duplicate. (I say this very reverently.)

Following the electrical check-out, the pneumatic and hydraulic systems receive their checks. Each system is filled, operated, leak checked, and signed off. Now our aircraft again resembles a flying machine, but it's still only a bare metal frame. The next step is the paint shop.

The building that houses SMAMA's “corrosion control” facility is a painter's dream, but most probably a civil engineer's night-

mare. Four huge intake fans and 16 exhaust fans move 465,000 cubic feet of air through the work area each minute — yet you scarcely feel a breeze. Fresh air is pumped in through the ceiling, exhausted through the floor, filtered of all pollutants, and then vented to the outside. Painters work around the clock in this inclosed area, free of face masks and the inherent dangers of paint fumes.

In three days our F-106 receives a new paint job inside and out. (We were a little surprised to find women painting inside the cockpits — an area that drives the less patient men painters to frustration.) When SMAMA first received the contract to paint the “six,” they asked the prime F-106 “AMA” at San Antonio for the paint blueprints. San Antonio told them that there were no blueprints, but they had a suggestion: “Park one of the incoming aircraft in the paint shop, then paint all the outgoing birds to match it.” What will those efficiency experts think of next?

Out of the paint shop rolls a bright, sparkling, new-looking F-106

with its black, yellow, and red markings glittering on the silver-gray background. The IRAN function has been completed, and during the next 15 days the aircraft is prepared for flight. The engine is reinstalled, the black boxes are replaced, and all the systems are serviced and preflighted. When the aircraft is ready, pilots from the flight test branch “test-hop” it and clear it for the return flight home.

## DELIVERY

The F-106 that the delivery pilot picks up after IRAN is not a new aircraft, it's not a fully reconditioned aircraft, and it may even have more write-ups now than when it came in. However, the aircraft has received a tremendous amount of inspection and repair that is beyond the normal capability of the home unit. The malfunctions that still exist have been isolated and documented, and will be cleared by unit maintenance personnel at the home squadron. The machine will soon be ready for another three years of service. Just add fuel and stand back! ★

When the aircraft is ready, pilots from the flight test branch “test hop” and clear it for delivery. The aircraft is not new, or even fully reconditioned, but it has received a tremendous amount of work that is beyond the normal capability of the home squadron.





# ✓ POINTS

We would sincerely appreciate your inputs mailed directly to:  
The Editor, INTERCEPTOR, Hq ADC (SED), Ent AFB, CO 80912

✓ We reprint this article for our FOD project officers: "While casually recovering from a power-on stall in a local T-41, a green 18-inch long, one-half inch in diameter snake slithered from the upper right airconditioning vent to avoid the cold and took up residence in the warmth of the IP's lap. A complete survey of type and size of snake was accomplished in approximately .01 second. The IP and student formed a committee of two to apprehend and confine the snake as it was in violation of current directives (not on flying status, not manifested, not medically cleared, no dog tags, and not enrolled in a formal training course). Subject snake was captured and confined to a sick sack for the remainder of the flight. Upon return to the flight room, subject snake was chastised for his willful violation of flying regulations and utter disregard for safety of flight. Damage to the aircraft was confined to minor seat cushion deformity. Ingenuity by pilots has changed many would-be accidents to good war stories. This story points out that ingenuity still exists and the opportunity to use it occasionally appears." (ATC Flight Safety)

✓ You may have noticed another "new" lap belt in the T-33 lately. No, not the HBU/2B. That was the other "new lap belt." Now life support personnel are putting the old belt (MA-5/6) back in. Pilots had overcome the gold key "fall out" problem and the old "move the release with the survival vest" problem. But the problem that ended the HBU/2B, for a while anyway, was that when most pilots don their winter flight gear and adjust the lap belt, the belt adjusters interfere with the ejection handles. In this configuration, pilots cannot fully rotate the handles for a complete ejection sequence. So, until there's a new "fix," T-Bird pilots will be using the old, wide, hard to adjust, noninterfering MA-5/6. (SED)

✓ An F-102 squadron recently received a mild shock when they found three aircraft with canopy jettison handles (located at the forward end of the left armrest) out of the detent (safe) position. This jettison switch incorporates a safety latch which is released by pressing a button on the handle. With this button depressed, the handle can be raised and the canopy jettisoned.



tioned. Pilots preflight this handle by checking it in the detent position with the button out. However, each of the unsafe handles found were out of the detent position with the button popped out again. At a quick glance these handles appear safe, but a slight tug or bump from a bulky flight suit could launch the canopy. Maintenance experts are working now to find out how these three failures occurred; but, in the meantime, all "deuce" pilots should closely check the canopy jettison handle safe before they climb into the cockpit. (SED)

✓ An ADC jock recently trudged out to his aircraft to change parachutes. To avoid multiple trips up that long ladder, he placed his chute on the top before removing the previous pilot's equipment. As he lifted the old chute out over his and lowered it down to the waiting crew chief, the release fired. The lanyard had caught on something in the cockpit. Our pilot had saved a trip up the ladder, but cost the Air Force \$153.00 for the re-

lease mechanism and, most probably, the crew chief a laundry bill. Pilots coming on alert in the future can avoid this loss by leaving their equipment on the ground while removing the last guy's. In this case, two trips are cheaper than one. (SED)

✓ A T-33 pilot was preparing for takeoff when sparks and smoke erupted from behind the front instrument panel. The fire went out after he shut down the engine and turned off all the electrical equipment. Maintenance people found that the rudder control horn had chafed through the insulation on a wire bundle for the communication equipment. By now, all of the T-33s in the fleet should have been inspected for this particular problem, but this incident points out the need for increased pilot awareness during ground checks. If the flight controls do not move "freely" throughout the full range of travel, shut down and have the bird checked. You may be chafing the next guy into "the time of his life." (SED)

---

## SAGAS SING THEIR SAD SATIRE

### RUGGED FLIGHT

It seems this Navy pilot bounced his jet fighter, landing on the Essex. Instead of going into the barriers, he tried to fly off again and picked up the nylon tape from the Davis barrier on his hook, clogging it. On the way up the deck he hit another plane with a pilot in it, knocking off the canopy and doing other damage, but he was still flying when he hit the end of the deck. He skimmed the water, the nylon barrier tape dragging in the jet exhaust's churning wake. Before his next time around, the Essex cleared the deck and installed a line of tractors behind the barrier to stop him. With one flap and the port wheel gone — knocked off on the first pass — he came in. He missed the wires because his hook was jammed so he poured on the coal. This time he sheared off his other two wheels on the tractors, skidded up the deck on his belly, knocking off the remaining flap and damaging the wing tanks and fuselage. Thus torn up, the plane soared off again while the ship tried to figure out what to do next. About this time, the pilot radiod the understatement of the century. He said, "This is becoming a rather rugged flight." He was ordered to the beach for a belly landing, but ran out of gas and ditched successfully 20 miles out.

# *an ounce of* PREVENTION

## **UNSUNG HERO AWARD**

We don't have a "We Point with Pride" for the wrenchbenders, chockpullers, and such, but every once in a while we hear of an outstanding effort in the field that deserves some recognition. Our most recent unsung hero comes from Richards-Gebaur and the 4650 Combat Support Squadron. It seems that the unit was experiencing a high failure rate on C-119 engines although they had very little time on them since overhaul. Major Anthony G. Weiss took over the squadron Chief of Maintenance job and this problem really bothered him. But he had 3,000 hours in the C-119 and previous experience as a maintenance officer and knew many problems could be eliminated if aircrews and the maintenance people got together in a mutual effort to come up with a fix. With this rationale, Major Weiss organized the first of several face to face brainstorming sessions. Ideas were exchanged and out of the proceedings a number of new procedures were implemented, with the concurrence of ADC.

Among the more important were additional engine conditioning of recently overhauled engines prior to mounting them on the aircraft and mandatory decowling of all engines for a visual inspection every 50 flying hours. These procedures resulted in a system that revealed numerous malfunctions on the ground and eliminated most engine failures in flight. Since last March the squadron has had only one in-flight engine failure — and that's a lot of progress. The man behind it was Major Weiss and his dedicated interest and success in improving the C-119 engine reliability has made a substantial contribution to the 4650's accident-free flying safety record.

## **TOTAL PREVENTABLE CATEGORY**

A T-33 of another command was lost because the pilot could not get all the landing gear to extend. One (a main gear) out of three is not the recommended landing configuration. During gear extension, a screwdriver became mechanically involved with the nose gear. Things got bent and broken, etc, and the result was two ejections. Scratch one T-bird. Who owned the screwdriver? Not me. I have all of mine in my tool box.

In another case, two F-101s lost fuselage panels. Panel 213L was lost on takeoff after maintenance had been performed in that area. The maintenance crews, the crew chief, the aircrew, and the end of runway crew failed to detect the open panel. An aircrew of another unit was most fortunate when door 200R stayed on until after touchdown. How? We will never know. Same story, not properly fastened! Here three ounces would have been worth many pounds of ego and many dollars worth of equipment. If we make sure our birds are all fastened together when they go to fly, more of them will return in one piece.



# THE WAY THE BALL

# Bounces

## ACCIDENT RATE

	ADC	ANG
1 Jan - 31 Dec 1971	5.1	9.7

MAJOR ALL AIRCRAFT

## ON TOP OF THE HEAP

MO	ADC	MO	ADC	MO	ANG
51	49 FIS Griffiss	34	4713 DSES Otis	105	112 Ftr Gp Greater Pitt
45	57 FIS Keflavik	33	5 FIS Minot	60	169 Ftr Gp McEntire
40	4650 CSS Richards/ Gebaur	27	2 Fis Wurtsmith	58	142 Ftr Gp Portland
39	552 AEW&C McClellan	23	95 FIS Dover	55	124 Ftr Gp Boise

## ACCIDENT FREE

## CUMULATIVE RATE

ACCIDENTS FOR DEC	CUM TOTAL
-------------------	-----------

## BOX SCORE

UNITS DIRECTLY UNDER HQ ADC

	ADC	ANG	20 AD	21 AD	23 AD	24 AD	25 AD	26 AD	ADWC	552	4600	4650	4677	4713	ANG
JET	6.0	10.5													
CONV	3.0	0.0													
F-101	14.4	15.5							1 1						1 3
F-102	0	11.6													1 6
F-106	10.1		1				1	3	2						
T-33	0	0													
B-57	12.7													2	
EC-121	0														
CONV	4.6	0									2				

RATE = MAJOR ACCIDENTS PER 100,000 FLYING HOURS ALL RATES ESTIMATED

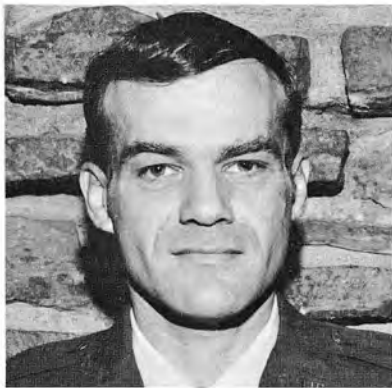
MINOR ACCIDENTS THIS PERIOD - 0

MINOR ACCIDENTS CUMULATIVE - 2

# MAD **again**

**T**he title Master of Air Defense signifies the ultimate achievement in performing the aerospace defense mission. This award is presented only to those who have demonstrated superior knowledge and skill in both the aircrew **and** the weapons controller phases of the air-

borne intercept. Recently Lieutenant General Thomas K. McGehee, Commander of Aerospace Defense Command, presented the blue blazer and emblem of Master of Air Defense to our four newest recipients.



**Major David L. Ladd** commands the 134 Fighter Interceptor Squadron (ANG) at Burlington, Vermont. A graduate of Interceptor Weapons School, he has served as Group Stan/Eval Officer and Assistant Operations Officer.



**Captain David R. Votaw** is an instructor at the SAGE Weapons Controller School at Fort Lee, Virginia, and previously instructed at IWS at both Gunter AFB, Alabama, and Tyndall AFB, Florida.

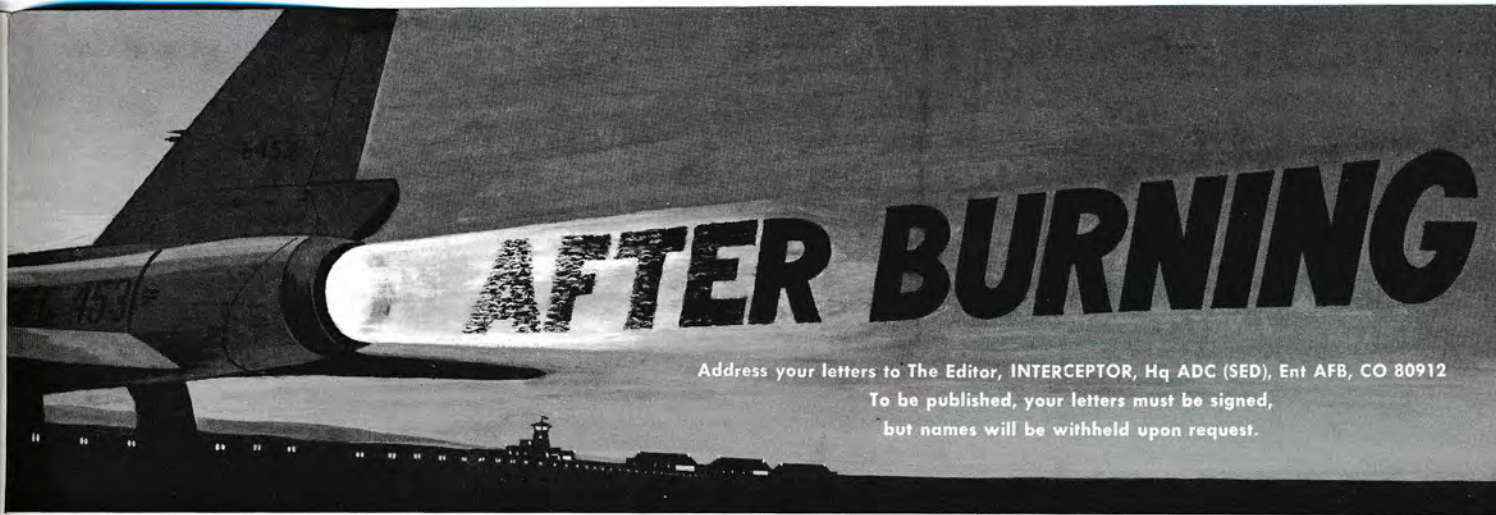


**Captain Michael R. Denton** has recently been assigned to the Evaluation and Training Division at ADC Headquarters. He is a graduate of the Interceptor Weapons School and flew F-106s with the 2 Fighter Interceptor Squadron at Wurtsmith AFB, Michigan.



**Captain Richard R. Sevits** is presently a Weapons Controller at Othello Air Force Station, Washington. He previously served at 21 Air Division at Hancock Field, New York, and Udorn, Thailand.





Address your letters to The Editor, INTERCEPTOR, Hq ADC (SED), Ent AFB, CO 80912

To be published, your letters must be signed,  
but names will be withheld upon request.

#### SAFETY VIOLATION

Since safety is so vitally important to all of us, I must criticize an otherwise outstanding photo. On your December cover, you show the beautiful Carolyn Moen perched precariously on the side of the cockpit, with no ladder or stand in sight. It would be a shame to break those pretty legs! Also no canopy jack has been installed. Someone in maintenance was obviously dazzled by the young lady.

Otherwise, it was a typically fine issue. My compliments on your excellent publication, keep up the good work.

Capt Robert W. Hawk  
Chief, Avionics Br  
25 Air Div/LGMWA  
McChord AFB, Washington

**\*You got us on two counts. On the first, we assure you that numerous willing volunteers were waiting to catch Carolyn if she slipped (and from a tremendous vantage point); on the second, we've been watching transient F-106s come into Pete for a long time and weren't aware canopy jacks were a required item.**

#### NEW CANOPY JACK

The safety officers at the Air Defense Weapons Center have noted with interest the new canopy jack shown on the F-106 on the cover of the December issue of the INTERCEPTOR.

Request the FSN of this item for procurement for the entire fleet here at the Weapons Center.

Major Donald J. Holtz  
Chief of Safety  
ADWC/SE  
Tyndall AFB, Florida

**\*We are sorry, this is a one-of-a-kind item that is now out of production. However, reliable sources report that there may be a suitable replacement out soon: her younger sister. Expert observers say she bears a**

strong family resemblance.

**We are glad that your safety officers have shown an interest. This particular canopy jack is a replacement for the item used by most transient crews: the pilot.**

#### WHODUNIT?

Some person or persons unknown have absconded with my September issue of INTERCEPTOR. If possible, request 3 copies of the September issue be sent to me.

Several investigators are interested in one of the articles and I am not able to help since I don't have my copy.

Thank you.

Maj Albert J. Norway, Sr. (USAF Ret)  
Air Safety Investigator  
NTSB, DOT  
Washington, DC

**\*A little in-house investigation to prevent "accidental loss" of your copies may be in order. When you catch 'em, hang 'em.**

#### ACCIDENT PREVENTION, FAA

I have just recently become familiar with your publication, INTERCEPTOR. The Federal Aviation Administration implemented the Accident Prevention Program on a national basis over a year ago. I have been assigned to this program in the Des Moines General Aviation District. It takes considerable research to come up with an interesting program and I find that your publication has many aviation safety editorials that are extremely valuable in the conduct of the Accident Prevention Program.

It would be greatly appreciated if I could be included in your distribution of this fine publication.

Murry Witherby  
General Aviation Dis Office #4  
204 Admin Bldg, Muni Aprt  
Des Moines, Iowa

**\*Welcome aboard. You're on for two a month.**

#### AVIONICS AND OPERATIONS

We are involved in the design and manufacture of avionics for Air Force aircraft, and are desirous of being placed on the distribution list for your fine publication. Regular reading of your magazine will enable us to gain further insight into the operational problems involved in the ADC mission.

If there is no charge for receipt of your magazine, please start our distribution immediately and, if possible, forward us the last six issues. If there is a subscription charge, please forward complete information on subscription procedures, cost, etc.

Sundstrand Data Control, Inc.  
John F. Hotchkiss, Product Mgr  
Overlake Industrial Park  
Redmond, Washington

**\*Back issues are on the way and you're on for two per month.**

#### TWO TYPES OF BEAUTY

The December 1971 INTERCEPTOR cover was a real shock. For many years a winter scene from Colorado's "Garden of the Gods" graced the cover and cast a pleasant, Christmas-y spell (something about visions of sugar plums).

Suggest that M.I.'s (Miss INTERCEPTORS) messages be of the highest **safety orientation** as you can bet your "bootees" or "mukluks" that what she has to say is going to be read first. (Hope the Chief doesn't mind being number two.)

Keep up the progressive and useful work that you so diligently strive to accomplish.

Major Raymond H. Armstrong  
AF Senior Advisor  
Vermont ANG/AFSA  
Burlington Muni Aprt, Vermont

**\*Thanks, Ray. As a former research editor on the INTERCEPTOR staff, you must be aware of the in-depth attention we gave Carolyn. Too bad you missed the action.**





*You know we've been talking about FOD for years — especially cockpit FOD because it frequently jams up the works. Well, the other day one of my favorite F-106 drivers found his throttle stuck at 93%. Fortunately he was an old FOD trouble-shooter, so he rolled the airplane inverted, bounced it a few times, got the throttle loose, and landed okay. The crew chief found a small flashlight in the throttle quadrant which he gave to the pilot who, in turn, presented it with appropriate ceremony to its rightful owner.*

*I know you like to give gifts to each other, but . . . .”*

*-Carolyn*