

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER

*"Every American must know
the things that are in this
reprint. The sooner we know
them, the sooner we will be out
of the danger we are in."*

—Arthur Godfrey



★ A SPECIAL REPRINT ON THE STRATEGIC AIR COMMAND ★

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Reprinted from AIR FORCE Magazine, April 1956

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ARTHUR GODFREY

C.B.S. BUILDING

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Hello, folks,

Yes, this is what I've been telling you about—the story of General Curt LeMay's Strategic Air Command.

When I first mentioned it on the air I said there were a few hundred copies of the April issue of AIR FORCE Magazine available, free. Well, there were. The only catch was that more than 160,000 of you wanted to see it.

The result was that the Air Force Association, publishers of AIR FORCE Magazine, has had its staff sitting up every night opening mail.

At first they thought they might be able to reprint the whole issue—all 160 pages of it. But as the mail piled up, they took a second look at the treasury and decided they couldn't go broke.

What they did was pick out the most important parts of the April issue and reprint them for you.

Here it is, the highlights of the story of the Strategic Air Command as reprinted from the April issue of AIR FORCE.


I'm glad so many of you asked for it. I'm only sorry that more of you can't see the whole issue. Everyone interested in the safety of our country should read it. It's a fine magazine. I read it myself, every month, from cover to cover.

I get it because I'm an Associate Member of the Air Force Association.

You've showed your interest in airpower by writing to get the SAC story. You can help support the cause of airpower by joining me as a member of AFA.

There's a membership blank on the next page. The AFA, and I, are anxious to hear from you.

Sincerely,

A handwritten signature in blue ink, reading "Arthur Godfrey". The signature is fluid and cursive, with the first name "Arthur" and last name "Godfrey" clearly distinguishable.

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B-6



Flyers, planes, and skilled men to maintain the equipment—these are the main elements of SAC readiness.

SAC's Readiness Is Our Peace Insurance Policy

By Gen. Curtis E. LeMay
COMMANDER-IN-CHIEF, SAC



FOR centuries it has been the job of the general to win wars. In the nuclear air age his job must be to prevent wars. There is good reason to believe that the military solution to the problem is relatively simple—superior long-range nuclear airpower and adequate defensive airpower *in being*, combat-ready on a continuing basis. This airpower must be strong enough to win, beyond the shadow of a doubt, the decision in any global nuclear war. Without this kind of force in being we cannot expect to keep the peace. This is perhaps the most significant military fact of today.

Therefore, all training, all operations, in the Strategic Air Command add up to one simple purpose—readiness for combat on an instant's warning, anywhere in the world. If we are not ready—in terms of trained men, modern equipment, and effective organization—then SAC is wasting its time.

Military power, in any form, has always been a matter of men, and for the foreseeable future it will continue to be. The day of the pilotless long-range bomber and the guided missile is coming. As they become available they will augment the manned force and, very slowly, may even replace it.

But in SAC we can take no comfort in the prospects of being combat-ready five years from now, or one year from now, or even tomorrow. Our prime interest is in readiness today, this instant. To do so we need men of the highest caliber, trained to the peak of perfection, armed with sufficient quantities of the best equipment the nation can supply them.

Among the almost 200,000 personnel of the command, motivations naturally vary greatly from person to person, yet there is one attribute that is common to almost all SAC people. This is the satisfaction they derive from knowing that the force they have helped to build, and which they maintain in a state of constant readiness, is vital to the security of the Free World. They know that they are making a contribution toward the achievement of lasting peace. These people represent the finest in the military tradition—these who choose service to their country above all other considerations.

Building the Strategic Air Command to its present high state of readiness was, essentially, a matter of bringing the men and the aircraft together, and exercising them constantly on combat training missions, which duplicate actual war requirements. Realistic training is our greatest continuing need, and many hundreds of hours of study are required to master today's highly complicated air equipments.

Consider, for example, the fact that three men in a B-47 bomber do substantially the same jobs that eleven men did in the World War II B-29. Their training has to be broader and more technical, and the demands on each man are greater. Not only must everyone achieve high standards of proficiency in his own job—he is often cross-trained to the other jobs as well.

Ever since the Strategic Air Command was activated, it has been necessary to work on the assumption that a war might start at any time. It is a fact that hours—even minutes—might spell the difference between victory and defeat. Therefore, there has always been a certain urgency to our operations. It is essential to be ready to go—not next week, nor tomorrow, but today—now, if the need arises.

It is our responsibility to know how well the combat crewmen of SAC can do their jobs. In determining this we have had to ask—and answer—three questions. We would like to give you both questions and answers, for they bear on our conclusions.

First, can SAC combat crewmen, flying from bases here and overseas, find their targets with certainty? The answer is an unqualified yes. On celestial navigation alone, our crews can fly to within fifteen miles of any spot on earth, and from there move on their targets with precision by means of radar navigation.

Second, when they arrive over their targets, can they destroy them? Again, the answer is an unqualified yes. By means of carefully scored bombing runs, each of these crews has proved its ability on hundred of occasions. I should like to point out that their targets are not cities—they are often specific corners of buildings within military target areas. By a combination of radar and radio, we can tell with what degree of accuracy any given crew is bombing.

Third, having destroyed their targets, will these crews get back? Again, the answer is yes. In World War II, using mass formations of bombers, subject to massed attack, our percentage of losses was less than two percent. With many hundreds of jet bombers utilizing optimum tactics, in small formations or on single-plane penetrations, the odds are equally in favor of our bombers.

Today we have a combat-ready force in being—and I think there is good reason to hope it may never have to be used. The strength it poses to any potential enemy as of now is so great it is very probable that he will not risk its blows. There is no profit in aggression if it brings on self-destruction. Therefore, we may well regard the Strategic Air Command as peace insurance, and the premiums we must pay to keep it more modern than the strategic air force of any nation are not high. If we never have to use the power we have built into SAC, it will have justified its cost many times over.

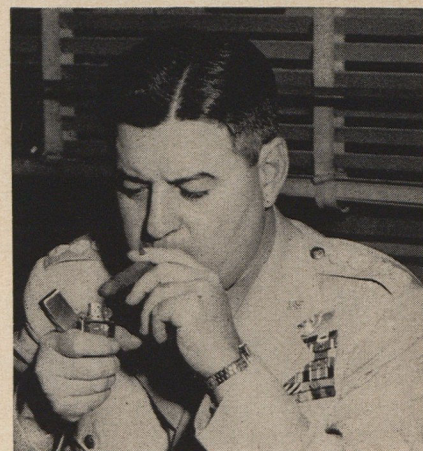
We must face squarely the fact that the United States no longer enjoys a monopoly on long-range nuclear airpower. It was inevitable, of course, that the Communists would build this most potent type of force as quickly as they could. The fact they now have such a force, however, in no way detracts from the deterrent power of our own.

It is not likely that any major attack could be made on the United States without the aggressor nation suffering disaster. As long as a potential aggressor is convinced of this, I do not think we have to worry about a major war. Our main job is to keep him convinced.

We are not a belligerent people. We prefer to devote our inventive natures and our industrial capacity to providing better lives for ourselves and for others. In the past this inclination has been mistaken for weakness, and as a result, we have been drawn into two world wars in a single generation.

I would not say to you that SAC is the ultimate of military tools. Today, it is our best and most formidable military expression, and for the foreseeable future it appears clear that the long-range bomber and the nuclear bomb will be required in sufficient numbers, and of superior quality, as a national insurance policy. We must keep it that way, at the same time pushing forward our research and development programs on advanced type aircraft and guided missiles to guarantee future leadership in the air.

The airman knows the futility of war and his job today is to help prevent war from happening. We can and must insure our security by our continuing efforts toward a peaceful solution to world problems, backed up with the type of military strength our potential enemies fear most. In such an atmosphere, with that strength behind our position of moral leadership in the world, we can look to the future with confidence.—END



The present Commander-in-Chief of SAC is General Curtis E. LeMay.

SAC . . . Men With a Mission

SHORTLY after 1900, Maj. Gen. Leonard Wood, USA, then commander of the Department of the East, was asked by a reporter if "aeroplanes such as are now in operation could be used in direct attack?"

"Hardly," General Wood replied, "for the aeroplane, wonderful as it is, has simply reached a point as yet where it is able to travel with a minimum burden, at a comparatively low elevation, and for a comparatively brief space of time. It has not yet essayed to carry more than two persons, the mental and physical activities of at least one of whom are constantly engrossed in the task of manipulation and control. The aeroplane of today must have certain definite conditions to insure a successful start and successful alighting. As a factor in warfare the aeroplane has not yet demonstrated its utility."

"Some day," the good general added, however, "the aeroplane is

likely to become a device that will have to be reckoned with."

General Wood was indeed more perceptive than another general who, years later while testifying before the Morrow Board in 1925, said, "I see no reason why the range of a military airplane should ever exceed three days' march for the infantry."

Fortunately, there were men of vision in the early years of the century, who clearly foresaw the tremendous impact strategic aviation would have on the history of the world—Douhet, the Italian strategist; Count Caproni di Taliedo, builder of the Caproni bombers of World I, who said, "No resistance is possible against the domain of the air"; and America's Brig. Gen. Billy Mitchell, who told the Congress: "Remember, gentlemen, that national defense in the next war will be measured primarily by air-power."

And nothing thus far has weakened

By Ed Mack Miller



The first Commander of SAC was Gen. George Kenney, now an AFA Director.

the reply that Mitchell made to the House Committee chairman who asked: "Do you mean to say that aircraft will dominate all arms of defense?"

Mitchell's answer—"I mean that aircraft can go straight to their destination no matter where they may be. Nothing known at present can stop them."

The dropping of the atomic bomb by a B-29 on Hiroshima offered undebatable proof of the capabilities of the strategic air arm—and in so doing vindicated the foresight of its proponents.

This devastating strike brought about the first capitulation of a major enemy homeland without full-scale invasion by ground troops, thus saving the lives of thousands of Allied soldiers, who were even then on the Japanese doorstep, poised for the traditional invasion.

Strategic bombing as a tactic of war came to fruition in World War II. One of the pioneers of the new type of warfare was Gen. Carl A. Spaatz, later to become first Chief of Staff of the USAF. General Spaatz commanded the Eighth Air Force during its formative days as a strategic bombing unit. He later became commanding general of the US Army Air Forces in Europe, heading the combined Eighth and Fifteenth AFs. This was in 1944, when Lt. Gen. James H. Doolittle, who earlier had headed the North African Strategic Air Forces, was commander of the Eighth Air Force.

After the huge and powerful air forces of the US had helped whip Hitler, General Spaatz took over command of US Strategic Air Forces in the Pacific, and from his headquarters on Guam oversaw the final devastating aerial assault on the Japanese homeland.

Here one of his top commanders, as head of the Twentieth Air Force and later Spaatz's Chief of Staff, was the man who now heads the USAF's Strategic Air Command.

Curtis E. LeMay, a native of Columbus, Ohio, and a graduate of Ohio State University with an engineering degree, received his pilot's wings in October 1929. Before becoming our top B-29 commander, he had served under Spaatz in Europe. He commanded the 305th Bomb Group, one of the First USAF bombardment units to enter European combat, and pioneered numerous strategic bombing tactics, including the straight-in bomb run and formation pattern bombing.

He initiated the lead crew system whereby all planes on strike were guided by one crew and developed a new bomber combat formation which

cut combat losses throughout World War II. General LeMay led the 1943 shuttle mission of Flying Fortresses from England to Regensburg, Germany, and in August of 1944 was given the 20th Bomber Command, where he used techniques developed over Europe to increase the number of B-29 raids in the China-Burma-India Theater. Other Pacific area assignments followed, including command of the Marianna-based Twentieth Air Force, and General Spaatz's Chief of Staff until September 1945.

After the war he served as Deputy Chief of Air Staff for research and development. From October 1947 to October 1948 he commanded United States Air Forces in Europe, where he began the Berlin Airlift, after which he returned to the US, taking over the Strategic Air Command in October of 1948.



A vast communications system lets SAC commanders stay in touch with their planes around-the-clock, around-the-world. Above, teletypes at Offutt AFB.

LeMay, the man, is a dedicated airman who thoroughly learned the lessons taught by General Mitchell, Arnold, and Spaatz. A matter-of-fact person who does not easily tolerate small talk or small ideas; he dislikes speeches and publicity. His life is in the Air Force and SAC.

Although those men close to LeMay say that too much fiction has already been fabricated about the SAC Commander-in-Chief's cigar-in-jaw toughness (they say he is a pretty regular fellow who has the sense to know that in his world-guarding job he must be without feelings or sentiment or fear), they admit that in fulfilling his mission, Curtis LeMay has had to be as hard as the job that faced him in building the world's greatest aerial deterrent force, the Strategic Air Command.

"At our bases," he has said, "there is a certain urgency in our operations. That is because the training in this command must simulate combat con-

ditions as accurately as possible. The continuing job of all of us, whether airman or officer, is to use the resources we are provided to give the nation full value in combat capability. Our nation's air strength always must be kept great enough to maintain peace by discouraging global war—or in the event of a war, strong enough to discharge its mission effectively.

"In the event of war, the long-range bomber and the nuclear weapon enable us to carry to an enemy's heartland the greatest destructive power the world has ever known. The airplane can reach over and beyond the masses of manpower the Communist world has mobilized behind the Iron Curtain.

"It is the only means by which we can bring our full power to bear directly against his muscle and heart. As long as we maintain superior air

strength, we will probably never have to use it."

When SAC was activated in March of 1946 at Bolling Air Force Base, Washington, D. C., its first commander was Gen. George C. Kenney. Then SAC had only three jet planes—Lockheed P-80s. Its total manpower was about 37,000 persons. It had a total of 600 planes, of which 250 were obsolescent bombers. Under its command were eighteen active bases.

Now, ten years later—ten years in which the growth of SAC's power has unquestionably been the prime deterrent to Soviet aggression—the Strategic Air Command can list some proud accomplishments. It now has more than five times the number of personnel it had ten years ago (and its critical problems today are centered in long-term retention of the best). It also has five times the number of planes it had then—and most of them are jets, ranging from nuclear-bomb-carry-

(Continued on following page)

MEN WITH A MISSION

ing fighters to the world-spanning B-52. SAC now has more than thirty bases in the US and more than ten overseas operating bases, and is ready to go at any time—when, as the men of SAC say, “the whistle blows.”

General LeMay wants the world to know his boys are good but like every other sensible citizen, he doesn't want a showdown if a showdown can be averted.

The world of SAC is controlled from Offutt Air Force Base at Omaha, Nebr., where General LeMay keeps C-97 command transports in constant readiness for quick inspection trips to any part of his far-flung domain.

That domain includes three major subordinate commands and three air divisions: The Second, Eighth, and Fifteenth Air Forces in the continental US; the 3d Air Division on Guam; the 5th Air Division in North Africa; and the 7th Air Division in the United Kingdom.

The fifty-one wings in the command train constantly, with an atmosphere of wartime urgency governing all their actions. Through a vast system of global communications, SAC measures its efficiency in its ability to get in touch with a single plane flying anywhere in the world.

And if it takes longer than twenty minutes to contact him, there may be a little hell to pay.

For Commander LeMay must figure that if he can't reach all of his outfit, wherever they may be, in that length of time it may be too late.

When SAC was organized ten years ago, global capability became its primary objective, and the combined brains of American scientists, industrialists, flyers, and statesmen pushed toward it from several directions.

The first was foreign bases. As SAC moved its big planes across the oceans in the years following 1946 and found bases close to the periphery of Soviet territory from which they could operate, its dynamic character began to take shape.

The second way took a leaf from Norse mythology. The eldest son of Woden, king of the Norse gods, was Thor, a strong, brave, and kind warrior who wore iron gloves (like the one on the SAC crest) and a belt of strength around his waist. His chariot wheels made thunder as he rode through the sky, and in his strong right hand he held the strongest weapon of all—his magic hammer, which would return when thrown.

SAC's second answer then, to the problem of deterring an enemy who lived across the world, was a mighty

bomber, the B-36. It could carry enough fuel so, like Thor's hammer, it could do its work of combat and still fly back to its master.

They called the B-36 the “Peacemaker” because it was the big deterrent in America's peace policy in the years after 1947. It helped build a belt of strength around the globe and, like Thor's chariot, its sound of thunder made the men who might have toppled the world into a bath of blood think twice.

The B-36, with its six conventional and four jet engines, a range of 10,000 miles, an altitude capability of above 40,000 feet, and, at reduced range, a bomb capacity of forty tons, became a high-flying symbol of security. The B-36 will be replaced in the SAC program over the next several years by the newer all-jet B-52.

And, although it may have never dropped a bomb in anger, no one will be the sadder, for it will have accomplished its mission perfectly—as a world-spanning Peacemaker, flying its beat in protection of the rights of free men.

The third method developed to assure that SAC crews could bomb anywhere in the world and still return to home base was aerial refueling of medium bombers.

Of course, none of these advances were made without much trial and more error. But in the face of a driving necessity for a boomerang bomber force, the men of SAC have done much since 1946.

The “global mobility” aspect posed many headaches, because to move an entire combat unit, complete with everything from spare engines to spark plugs—and do it on an hour's notice—is no mean trick. But constant planning and training have given a pattern to the operation so that now SAC bosses can almost time the entire business with a stopwatch, even to the point of prescribing that the equipment be set up on arrival within a specified number of hours.

Planes and equipment are maintained in a constant state of readiness. Essential unit equipment—the minimum immediately required for short-term operation at a forward base—is packaged and ready to go at any time.

Flyaway kits, or aluminum bins on casters, are packed with critical aircraft spares for quick hoisting into bomb bays and movement to forward areas. These kits always accompany combat aircraft on foreign rotations and will support a wing for thirty days of operation.



For overseas TDY, flyaway kits carry enough spare parts for thirty days.

In addition, personnel are always ready. All medical inoculations are kept up-to-date. Those whose jobs require special tools, such as radio and radar technicians, have their own flyaway kits packed and ready to go at all times.

When the order comes, an entire wing — planes, crews, maintenance parts, and records, as well as support planes and personnel—is soon in the air, moving quickly to forward bases. Only a few items and a few people are left. Large and heavy types of maintenance equipment which combat aircraft cannot carry are handled either by SAC's own cargo airlift capability in C-124s or by MATS planes which also move critical personnel who can't be taken in the combat planes.

General LeMay says, “Moving an entire combat wing is comparable to picking up one of our major domestic airlines, moving it across an ocean, and putting it back in operation all within a matter of hours. This is now accomplished as a routine training deployment.”

Since actual experience is the most realistic form of training, each SAC combat wing conducts annual maneuvers as a unit at an advance base. This training outside the US is usually for a three-month period, and SAC crewmen quickly become familiar with the geography, customs, and operating conditions in different parts of the world.

SAC mobility is continually demonstrated as wings deploy from US fields to advance bases in foreign lands as part of normal training, often crossing each other's path of flight as the armadas switch bases. Jets and prop-driven aircraft take part in the mass flights across the oceans of the

world, and fighter aircraft, such as the speedy Republic F-84G, cover almost the same distances on their non-stop missions.

General LeMay and his commanders have tried to think of every angle in the "quick-haul, bomb-drop business." And they have found the best way to train is to consider every day M-Day and every hour Zero-Hour.

With the B-50 already long since retired and the B-36 playing out its last years of service, the SAC arsenal is moving into the pure jet field rapidly.

The workhorse of LeMay's command now is, of course, the B-47 Stratojet, that beautiful, sweptwing, tall-country tiger that has been such a good airplane that its crew chiefs say it's like maintaining a B-29 without engines (*see page 15*). Powered by six General Electric J-47 turbojet engines, the B-47 is in the 600-mph class and has established several impressive time and distance records. Its range with in-flight refueling is restricted only by the endurance of the

crew. Larger than the heavy bombers of World War II—its wings span 116 feet and its fuselage measures 106 feet and eight inches—the B-47 is manned by a crew of three. All SAC medium bombardment and reconnaissance wings are now equipped with B-47s.

SAC's "Big Bertha" is the B-52 Boeing Stratofortress. The jet-propelled B-52 possesses the greatest combat potential ever built into a US Air Force heavy bomber. Designed to cruise at over 600 mph for 6,000 miles without refueling (it can, however, refuel in the air, too), it weighs as much as 120 automobiles. It is big, with wings long enough to span the width of a football field—plus twenty-five feet. It is powerful, with eight Pratt & Whitney J-57 jet engines producing the power of thirty diesel locomotives. And it is so fast that few jet fighters can match it at altitude.

Designed to meet exacting requirements of Strategic Air Command's long-range operations, this newest heavyweight is being delivered to

SAC as rapidly as the ships are produced, which is not nearly rapidly enough. The first of the B-52s was delivered in June 1955.

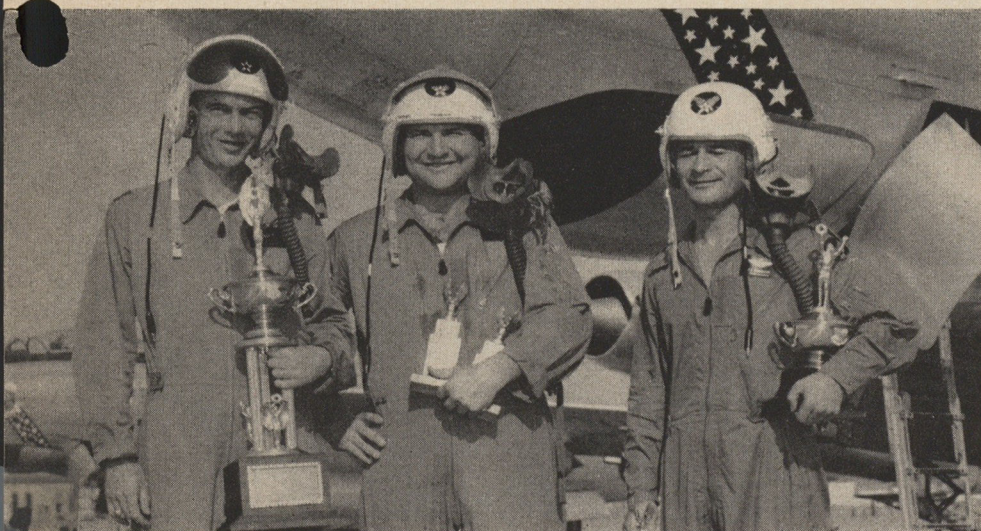
Ultimately to replace the Republic F-84F fighters will be the F-101A Voodoo, developed by the Air Force in conjunction with McDonnell Aircraft Corp., and designed to meet SAC requirements for a long-range strategic fighter. The most powerful US aircraft of its type, the Voodoo is supersonic and can be refueled in flight. It is capable of carrying nuclear weapons.

Coming along as a replacement for the workhorse Boeing KC-97 tanker is an advanced version of the Boeing 707 jet tanker-transport now in production for SAC. The Air Force has designated its first jet tanker plane the KC-135 Stratotanker. The KC-135 will be used to refuel both the B-52 and the B-47, adding greatly to the strike potential of the sleek bombers.

A 707 prototype already has demonstrated its ability to refuel the B-52 at high speeds and altitude, which means that the fast jet bombers won't have to drop to low altitude and low airspeed to refuel, as is the case with the KC-97 "flying gas station." In flight tests conducted by Boeing the aircraft has frequently cruised at altitudes higher than 42,000 feet and at speeds greater than 500 miles per hour.

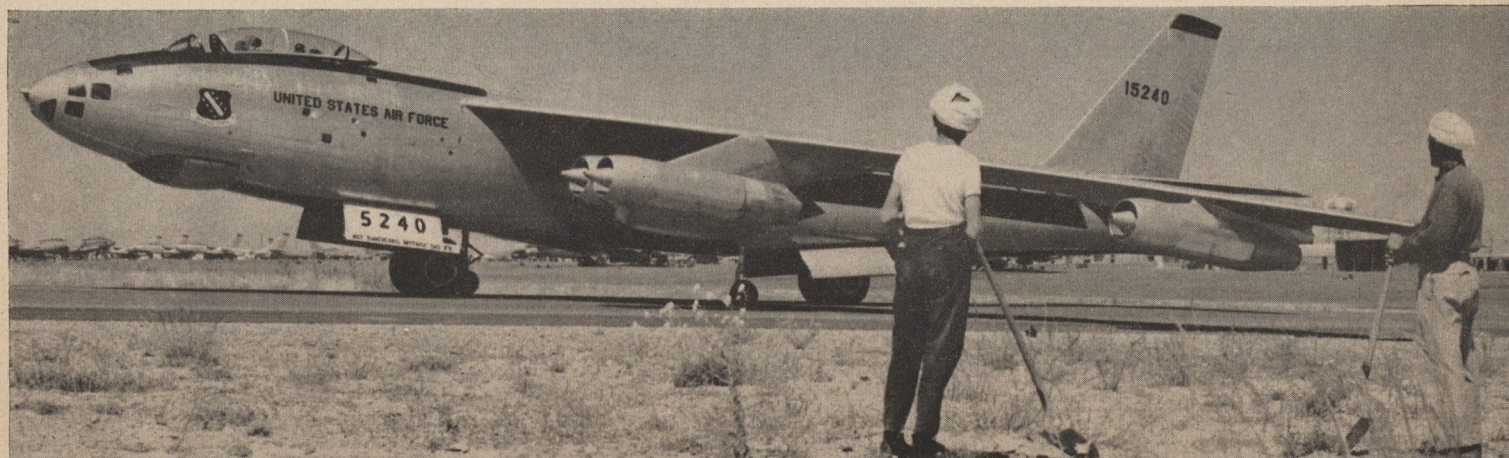
The big baby in the hauling department remains the Douglas C-124 Globemaster II, largest production transport in the Air Force. It is used by SAC to perform a variety of long-range cargo missions all over the world. The heavy-duty carriers are capable of speeds around 250 mph and have a range of up to 4,000 miles. They make up the strategic support squadrons which give global logistic back-up to SAC combat elements.

The improvement of aircraft types
(Continued on following page)



Last year for the first time a B-47 won the spirited competition of the "SAC World Series." The top crew included Lt. Cols. Traylor, Speiser, and Holguin.

Today, it's routine for SAC to transfer a whole wing to an overseas base. Here's a B-47 landing in North Africa.



MEN WITH A MISSION

will, of course, make SAC less dependent on foreign bases when newer and bigger planes, truly intercontinental bombers like the B-52, become available in really adequate numbers.

This is not to say that SAC should give up any of its advance bases. Although die-hard isolationists shout that it is the logical thing to do, common sense dictates that fighting a war from US bases with medium bombers should be the last resort.

SAC is in the hauling business, and a short haul is always more efficient than a long one. The turn-around time is doubled or more, and so, in a given period of time, less destructive force is placed on the targets.

Another advantage in substantial numbers of foreign bases is that, in addition to complicating his problem of effective action against the US, it gives the free nations greater flexibility in that they know that the Communist is going to be able to get a relatively much smaller portion of bases—so that we, therefore, have many more to operate out of, which gives us many different approaches to the target area.

The problem of defense posed to the Soviets, then, is tremendous. They know that jet bombers can come from all directions; so they have the problem of moving their fighter force, and setting up their static defenses, their missiles, and their flak so that they can defend themselves efficiently. Obviously, they would be spread quite thin if the US has a vast number of advanced bases. Of course, there is little intelligence available on the enemy defensive force. It is known that they have good fighters in abundance, and that their force is improving rapidly in quantity and quality. Their radar may be good, too—but, as General Mitchell said: "You cannot stop a determined bombing attack once it has started." You can punish it severely, however, and attrition is another SAC headache.

The men of SAC are the best bombardroppers in the world. Their test missions are deadly serious. On the ground, every bomb run is accurately charted with electronic devices by a radar bomb-scoring detachment so that accuracy can be proved—and improved. Planes from SAC bases are in the air each day, each night, week after week—roaring along at better than 600 miles per hour as crews go through all the procedures they would use on an actual bombing mission in war.

Weather makes little difference. In actual combat, planes and crews would



SAC figures tough, realistic training prepares its men for emergencies when they do happen. Above, crew members at AF Survival School, Stead AFB, Nev.

fly their missions regardless of weather conditions. So SAC continues its missions in rain, fog, snow, windstorms, and clouded visibility, day and night, for with radar bombing equipment, it's not necessary to see the target to bomb with accuracy—and war might occur in any weather.

Flying at altitudes of eight miles or higher, each bomber heads in on an American city. Then an observer presses a bomb release button. Another target is theoretically destroyed and a SAC crew has carried out a bombing mission realistically similar to one it might someday have to fly against an enemy. For the crews, this is routine.

Each year industrial targets in almost every American city with a population of more than 25,000 are theoretically destroyed by SAC planes. San Francisco alone has been the target for 495 attacks during one month.

Once each year, top bomb-teams are tested in the annual Bombing and Navigation competition, a tense week-long duel which crews have dubbed the "SAC World Series."

The main concern of bombing and navigation training—and the annual meet—has been to step up accuracy. Every year has seen an increase in over-all accuracy until today SAC planes can bomb with precision well within the limits of their weapons from high altitudes.

The competitions have generated a great deal of interest, have aided in development of new techniques, and have served as provinggrounds for planes, men, and equipment.

The coming-of-age of the B-47 is a good example. Up to 1955, piston-engine planes like the B-36, had taken most of the honors. Some critics or skeptics doubted that a high-speed jet could match the accuracy of the big, more stable platform.

But their case was smashed in '55 as medium bomber crews from B-47 wings swept the competition. Their victories formed a definite cleavage separating the jet-bombing age from the World War II era. With giant B-52 long-range jet bombers now coming into the command, the world can expect strategic air to rely on jets completely in the near future.

In 1952, Strategic Air Command also inaugurated the annual SAC Reconnaissance and Navigation Competition as a means of promoting competitive spirit and determining the capabilities of reconnaissance wings and crews.

Every reconnaissance wing is represented in the yearly six-day meet. Each crew runs day and night celestial navigation missions, radar target photography, aerial target and photo-flash photography.

At present Strategic Air Command uses the RB-36, the RB-47, and RF-84Fs as its reconnaissance planes. The first two are stripped-down versions of bombers with the same numerical designation, while the latter is a reconnaissance counterpart of the F-84 fighter.

The combat crews in SAC are about the best in the business. The average officer on a select or lead crew is thirty-three years old, and the average airman, twenty-seven. SAC has a

fairly unique system in the selection of leaders. Crews are rated as "Select," "Lead," or "Combat-ready." Select and lead crews have demonstrated a capability higher than their colleagues, and represent the cream of the force. Naturally, they draw the most difficult and the most important targets.

To become a select crew, a flight team must meet certain standards in training. When it does, everybody on the crew gets a spot promotion—everybody goes up one rank. They hold that spot promotion just so long as they retain their efficiency. If performance drops below the standard, they immediately go on probation, and within a matter of three or four months, they are given rigid tests in all phases. If they do not measure up to select crew standards, everyone loses his promotion.

Lead crews actually are usually as good as the select crews. However, there are only so many promotions, and SAC can't promote everybody. If a select crew falls below the standard, then a lead crew will move up to replace it, and assume the new designation of select crew.

The combat-ready crews, which make up the majority of the force are usually not far below the bombing capability of the two top categories. All can bomb well within the limits of the weapons they are using.

Select, lead, or combat-ready, they're the finest airmen in the world.

Recently Mr. Rex Madeira, sales manager of the Spartan School of Aeronautics in Tulsa, Okla., told this writer: "The Strategic Air Command constantly amazes me. It has one of the best systems of business practices I have ever seen inside or outside the military."

The compliment had its base in fact. When Curtis LeMay took over SAC, he appointed a committee of officers to investigate the business methods of major US civilian businesses. From each he took the best practices he could find and shaped them to fit SAC's operation.

The command's Management Improvement Program is considered a model of its type, as is the famed "SAC Rating System," which is so thorough that IBM cards are kept on every man in the command. Every individual performance shows up for what it is.

Management boards give instant visual checks on the "in-commission" status of SAC's arsenal of aircraft—and if the readiness graph dips below the acceptable combat potential line,

things really start buzzing until the trouble is remedied.

Another objective of the management program is the education of workers, supervisors, and executives in sound operating principles. This is accomplished by seminars, base management indoctrination courses at every installation, NCO Academies, commanders' financial management courses, and other special training.

SAC fully exploits industrial methods in work measurement, production control systems, human relations research, and the best thinking of the universities in assisting it in many ways.

Top management officers consistently apply modern techniques to command problems. Command representatives attend meetings of the Society for the Advancement of Management and other professional groups to assure that no new development is overlooked.

The problems of the Strategic Air Command are, of course, many and complex. Its biggest headache is the continuing loss of trained manpower to industry—this is the weakest link in an otherwise strong chain (*see page 10*). There are community relations problems always nagging at the commanders. The jet noise problem is always a thorny one, and the increasing speeds of SAC planes has brought on burdensome high-altitude traffic control problems in weather. On any one of a hundred fronts, running a global "hauling" business is no picnic; but then the hard core of men of SAC are no ordinary men, either.

Neither is working for Curtis LeMay & Company an easy job. The grumblers and the goldbricks in SAC are soon sharpened up. But that is not to say that the good soldiers do not grouse. They do, many of them. Some would like to get out of SAC, they say. It's too hard on their families, their being away so much. The pay isn't commensurate with the danger of flying fast jet bombers and fighters. "It'd sure be nice to just have to put in forty hours a week and then settle down to a little golf and gardening" is a phrase some SAC men have been heard to mumble. In fact, you always get the worst from a SAC airman first. Then slowly, the good comes out. And pretty soon you are getting the business that is known as being "SAC-indoctrinated." You find out that these men, under their curtain of callousness, are pretty proud of everything about the job SAC does.

Looking into SAC's future, the next step in the natural progression of our

weapon spectrum would be fully intercontinental-type bombers, completely independent of air refueling or forward bases. Following the intercontinental bomber SAC will probably gradually phase into missiles, but only when the Intercontinental Ballistic Missile can meet the accuracy, yield, and reliability of the long-range nuclear bomber.

But along with the development of the ICBM, bomber leaders warn that the intercontinental bomber development must not be relaxed—until it is certain that the ICBM can do as good or better a job. These experts are worried that present preoccupation with "push-button" warfare might delude many people into letting our present force in being deteriorate before an adequate substitute is tested, poised, and ready. This, they say, could be a serious threat to our continent and the Free World.

Not that SAC is in any way opposed to a crash program for the development of the ICBM. It is a strong supporter of such a program. SAC men say with emphatic sincerity, that they'll be only too glad to get an instrument that will help do the job without their getting shot at. And who can fight that kind of reasoning?

Just as long as we continue our development program so that the SAC arsenal can fly faster, higher, can carry bigger bombs than Soviet aircraft, there will be peace. Even if the day comes when the Soviet force and the US force are equal in capability—providing that the US force is continually modernized and dispersed, SAC will still be an effective deterrent, and seems to be the best if not only means of preventing war.

This, of course, involves the "force in being" concept, the concept whereby men and machines are poised and ready to go at any time. It is entirely possible that from now throughout the course of civilization it may be necessary to maintain a deterrent force on this status. No one likes to live that way—no one likes to pay the bill, but it will be a necessity unless some means of guaranteeing a lasting peace other than the deterrent force is hit upon.

That is why it is said of SAC that its greatest victory will come if war never occurs between the two great powers in the world today—Communist Russia and the United States of America.—END.

Ed Mack Miller is a free-lance writer and a captain in the Colorado wing of the Air National Guard.



Trained Technicians

SAC's Achilles Heel

By John G. Norris

PINECASTLE AFB, Fla.—Dawn is breaking as your B-47 leaves the runway. As the airplane levels off upstairs, you get out of your parachute harness, hook on an oxygen bottle, and crawl to the bombardier-navigator's post in the nose.

1st Lt. Glenn F. Morgan, Jr., gestures at the radar scope. The instrument is the main element of the airplane's "K-system"—the "magic black box" that makes it possible to bomb individual buildings accurately from above 40,000 feet through darkness or clouds. Both of you fasten your oxygen masks so that you can talk on the intercom.

The thirty-two-year-old bombardier-navigator-radar operator—misnamed an "observer"—explains that the B-47 is turning to start its visual bombing run. From the pre-flight briefings, you know that this seven-and-one-half-hour training mission simulates an actual nuclear attack on an enemy target thousands of miles across the world.

That includes flying a precision point-to-point course back and forth over the Southeastern states, navigating by the stars; a rendezvous with a tanker plane for in-flight refueling; actual visual bomb drops of 500-pound conventional bombs to make sure the release mechanism works; and—the climax—the radar bomb run on the main target.

At lunch the day before, Col. Michael N. W. McCoy had introduced you to the bomber crew. He told you that it cost the government \$616,000 to qualify one B-47 pilot. You believe it.

Capt. Edward J. Albers, 34, the co-pilot saw extensive World War II service, like Morgan. Both were re-

called when the Korean war broke out. The aircraft commander, Capt. John W. Rosenbalm, 27, had served in the Air Force continuously since becoming an air cadet after the war. A typical B-47 crew has an average age just over thirty, each is married and has a child.

You wonder what keeps the three top-flight men—still Reservists without assurance of an Air Force career—on the job. Then you recall what General LeMay had said about his "dedicated" people.

Rosenbalm asks if you'd like to fly the airplane and gingerly you take Albers's seat. The bomber handles like your Buick. Then comes the approach to the target. Not Moscow, but Charlotte, N. C., where there is a radar bomb-scoring squadron, able to tell just where the B-47's load would land.

Morgan starts his bomb run, eyes glued to the radar scope. Countless hours of study of aerial photographs, he hopes, will enable him to pick out the obscure target through the clouds.

Morgan's major problem is target identification. His target is unidentifiable on the scope, so he aims for some oil tanks a known distance away. He sets the "black box" for such "offset" bombing and adjusts for wind, speed, altitude, etc. The electronic brain should do the rest.

But the "black box" fails. Only one of the many instruments goes out—the true speed indicator—but it is enough. Morgan squeezes past you and checks his equipment. Finally he fixes it. But it is too late. The mission is an "abort."

Some green airman mechanic had failed to adjust a set-screw properly

and an overworked sergeant-supervisor had missed it. So the combined skills and efforts of the men who built the plane and base, planned the mission, readied the plane for flight, and then flew it well, all came to naught.

You begin to appreciate what had been stressed so strongly during the briefings here and at SAC Headquarters in Omaha—the grave shortage of skilled mechanics and the exceptionally high turnover of newly trained technicians. Too many B-47s are temporarily out of operation each day because of mechanical difficulties. Too many training missions cannot be completed satisfactorily because something goes wrong in the air.

What was it General LeMay had said?

"The situation is critical and is our chief worry today. We still can carry out our mission, but at a high cost in efficiency and effort."

Already, the manpower problem has seriously lowered the combat readiness of the Air Force's long-range nuclear striking arm. It represents an ominous weakness in the nation's defenses today. For if one small but vital element of SAC's vast, complex, fighting machine breaks down, the end result could be catastrophic.

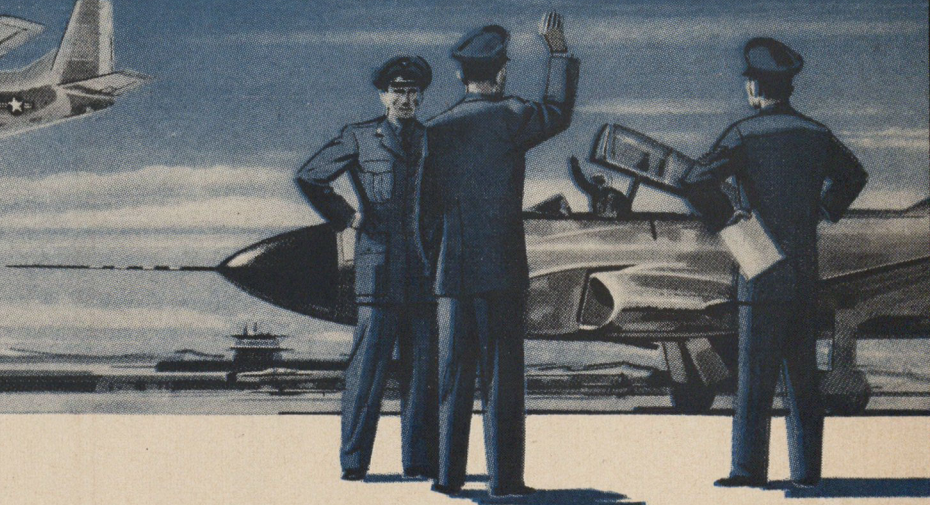
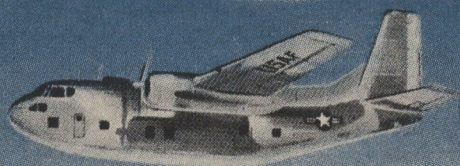
For the most part, SAC combat crews today still are experienced and fully qualified to do their job. But the experience and skill level among SAC maintenance crews is low. Ninety-one percent of all SAC enlisted airmen have been in the command less than four years. One day, a wing at one base had nearly a

(Continued on page 12)

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SAC'S ACHILLES HEEL

third of its B-47s out of service due to K-system maintenance because of a lack of skilled technicians.

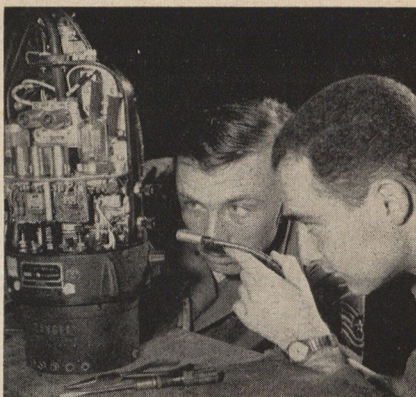
This is terribly costly both in dollars and in efficiency. SAC represents a tremendous investment—\$8 billion worth of planes, bases, and other property alone. It costs \$1 billion a year to operate, plus several additional billions for new planes and bases. The nation has \$724 million dollars invested in each B-47 air division—counting trained personnel, planes, bases, and equipment.

During the last fiscal year, 1,900 SAC officers and 35,800 airmen left the service. SAC figures it had \$777 million invested in them. That represents the cost of replacing them in their various specialties, including recruiting, training, paying, and supporting new people to bring them to the proper skill levels to do their jobs.

Foreseeing this loss, the Air Force last year had to start pumping in new people to replace them. The Air Training Command provided SAC with 12,000 basic airmen at a cost of nearly \$20 million, 12,600 apprentice mechanics at a cost of \$31.5 million, and 4,500 technicians, returned to schools for advanced training at a cost of \$24 million.

In addition, SAC itself had to conduct on-the-job training to up-grade 67,000 airmen to fill the vacant specialties. SAC estimates that this cost \$52 million, because scarce supervisors and skilled technicians had to be pulled away from their regular work to train them, and the trainees were unproductive during this period.

The initial cost last year to start replacing the 35,800 sergeants and airmen who left the service during that period, therefore, totaled an additional \$127 million.



SAC is hurting most today for more skilled maintenance men like these.

But the money aspect is relatively unimportant, as a detailed comparison of four B-47 wings shows. It was made to determine the precise effect of inadequately trained ground crews on the operational capability of combat units. All four were "combat-ready," and 100 percent manned.

Two of the wings were SAC's best-staffed units, being eighty-five percent "effectively manned" in the airmen technical skills. The other two were at the bottom, from a ground-crew standpoint, being only sixty-six percent effectively manned in "hard-core" skills.

The poorest-manned units were able to keep their B-47s in the air only eighty percent of the time they were supposed to. They completed eighty-seven percent of their training missions, only seventy-five percent of them satisfactorily.

On the other hand, the two best-manned units flew ninety-nine percent of their prescribed flying hours, completed ninety-eight percent of their training minimums, and ninety-one percent of these were acceptable to LeMay's rigid standards.

It cost the two poorest-manned wings \$468 per flying hour to operate, and the two best, \$415.

But the real payoff came in the vital quarterly "Unit Simulated Combat Mission." The two poorest-manned wings were twenty percent less effective in this big test of combat capability than the two units with the best ground crews.

"In other words," said a SAC officer, "under wartime conditions, scratch twenty percent of the targets assigned to the two wings with the less skilled ground crews."

Why is the Air Force so pressed by the lack of a relatively small number of technicians? Take the "black box," for example. In the first place, it takes a man with a fairly high IQ to be accepted for the K-system basic training school. Yet the Air Force has to take all sorts. It takes about two years of school and on-the-job training to advance such a man from apprentice to mechanic rating. During their fourth year, after advanced schooling, some gain the skill for upgrading to technician level and promotion to staff sergeant. By the end of the four-year enlistment, the Air Force will have spent \$22,500 on such a mechanic in training, pay, and allowances. It will have received eighteen months' productive service from him, and given him two-and-one-half years of highly marketable training.

If he reenlists, it costs the government \$20,500 only for his pay and other maintenance for the next four years, and SAC gets full value received—ninety-two percent of his time in productive effort.

But only twenty percent of the "black box" men are signing up for a second enlistment.

Why do they leave?

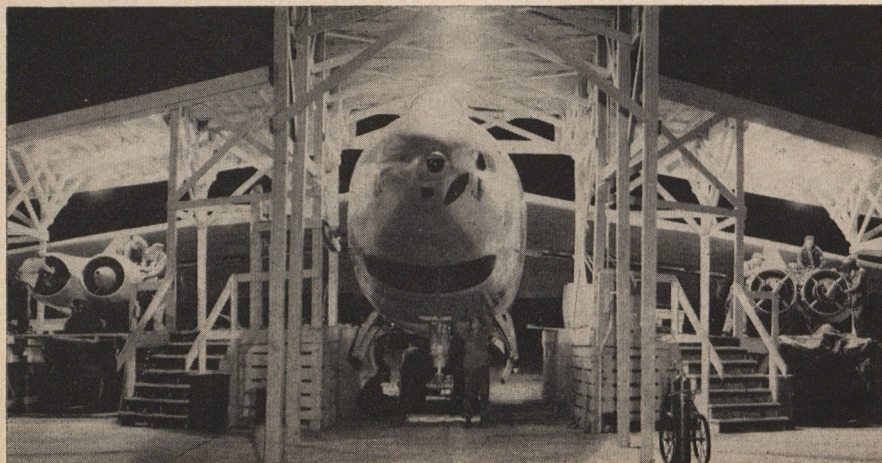
An airman first class says he wants to go back to college when his four-year enlistment expires.

An airman second class says he plans to marry and get an engineering degree under the GI Bill.

Service newspapers are full of ads reading, "Leaving the service? See us."

Turnover in other key aircraft maintenance fields is as critical as among men servicing the black boxes. Lt. Col. Edwin J. Caudill, 813th Air Division personnel director, is concerned about his mechanics. His questionnaires show that 121 of 306 plane mechanics are eligible for discharge in June and July and only sixteen say they will reenlist.

Pinecastle AFB has only sixty per-



Maintenance in SAC must not only be top-notch; it must go on round-the-clock.



SAC uses many means to boost the morale of its people. A spot of deep-sea fishing in Florida is always popular.

SAC flying clubs have played an important part in a sizeable hobby program. At left, one group of enthusiasts plans a cross-country weekend flight.

cent of its authorized instrument maintenance men. By mid-April, this will drop to fifty percent. Of an authorized fourteen men to maintain its IBM machines, a vital factor in mission planning, only ten are assigned and but three of these are "effectives." Only one out of the four comptometer repairmen allowed is "on board."

The Air Force makes a strong effort to sell airmen on reenlisting. All airmen are interviewed on their future plans. Armed with full data about the cost of living, wage scales, etc., in the airman's home town, the interviewing officer stresses the advantages of an Air Force career.

Fifty to sixty percent of those who leave say they are going into industry. Some have a job already lined up. Ten percent declare they are quitting for "family reasons," and the rest say they are going back to school.

All the evidence indicates these factors are pulling airmen back into civilian life just as they become most valuable to SAC:

- Competition from industry.
- The GI education bill.
- Housing shortages at most bases.
- Periodic movement of servicemen, interfering with family life.
- General dislike of military service.

• The generally low esteem and prestige accorded an enlisted career by the American public.

SAC has a broad plan of action designed to cope with the problem. Some proposals require congressional or top Pentagon action.

One phase calls for less complicated, easier to maintain equipment. "We can get geniuses to design them but can't have an Air Force of geniuses to service them," said a SAC officer.

Another proposal is to let the Air

Force raise its recruiting standards. Department of Defense regulations now force it to take a proportionate share of lower IQ men. SAC says many of the men it receives are "untrainable."

Other recommendations are aimed at making life in SAC more attractive. Last year's pay raise and increase in reenlistment allowance helped, boosting the SAC reenlistment rate from twenty-six to thirty-five percent.

But the trouble is that the percentage varies widely in various specialties. Sixty percent of SAC cooks are signing up for another term when their enlistments expire, while only ten percent of the Command's skilled radarmen are reenlisting!

"By civilian standards we are overpaying some people and underpaying others," said a SAC personnel officer. "Surveys show that the wage scale for cooks on the outside is \$1.80 an hour or less, while an electronics supervisor gets \$2.60 per hour."

"But the top pay of an Air Force cook and an Air Force electronics supervisor, both master sergeants, is the same—\$2.35 an hour based on a forty-hour week. We have 239 job specialties and only seven pay grades."

The plan, not yet in final form, would apply to officers as well as airmen. Personnel officers stressed that SAC aircraft commanders make only \$500 to \$700 a month, while a commercial airline pilot makes from \$15,000 to \$20,000 a year—more than SAC's top generals.

Other proposals urged to improve career attractiveness include:

- More family and military housing.
- Medical care for all dependents.
- Expansion of commissaries and BXs, and cancellation of the present

restrictions on the goods they can carry and prices charged.

• Amendment of the GI educational act, so that men who remain in service can go to school in off-duty hours at government expense.

• Correction of a present situation that is causing much bitterness among many airmen. Officers receive a subsistence allowance on a monthly basis, enlisted men on a daily basis. When individuals or units leave their permanent base on temporary duty at schools or other stations—and this is frequent in SAC—the airmen lose their allowance and the officers don't.

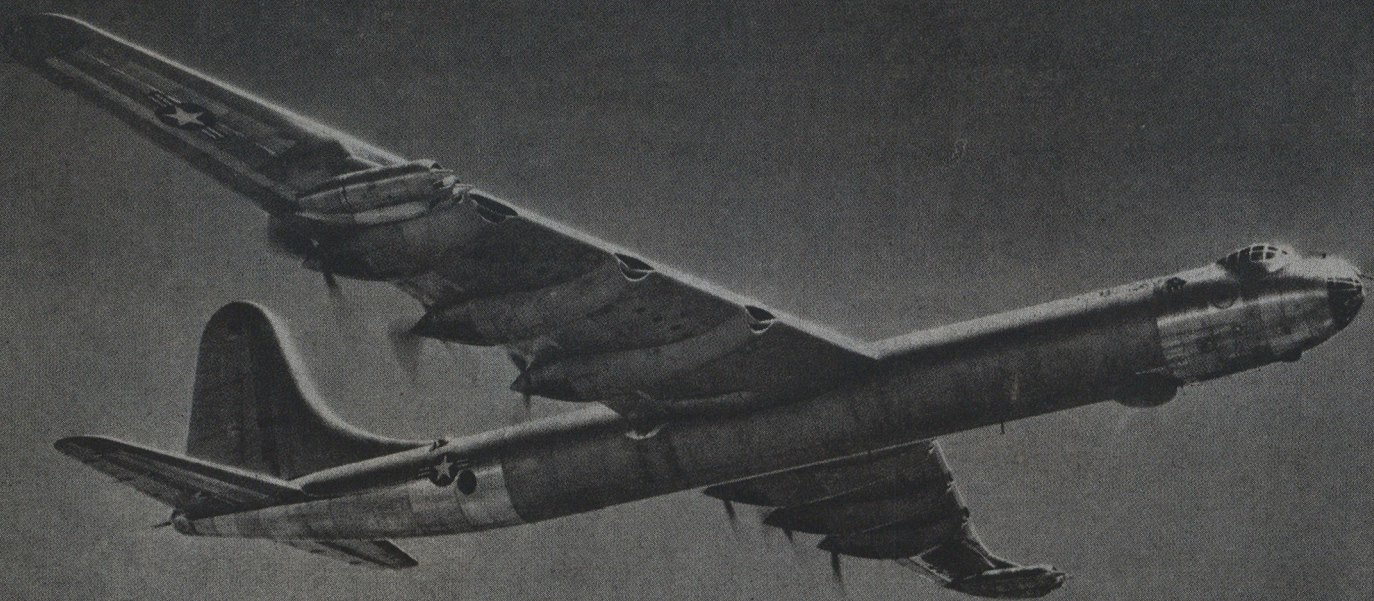
• Additional allowance to ease rough spots, such as extension of quarters allowances for airmen with dependents, per diem payments while on maneuvers, and raising rental and subsistence allowances in high-cost-of-living areas.

Much has been done during recent years to make life more attractive to servicemen and to boost reenlistment rates. Congress has raised pay and allowances. The Defense Department and Air Force Headquarters have taken other action. General LeMay has established hobby shops, designed new and more livable barracks, set up SAC flying clubs and dependents' assistance programs, and taken many other morale-building moves.

All these things help. But SAC needs assistance to solve its critical manpower problem. It must have sympathetic and prompt attention to its proposals by top-level Pentagon officials and Congress. And public understanding and support.

For too much rides on SAC's combat readiness in the world today to let correctible weaknesses continue. Survival is everyone's business.—END

The author, John G. Norris, is a staff reporter for the Washington, D.C., Post & Times Herald. The above material, which has been adapted by the author for this magazine, appeared originally as a four-part series in Mr. Norris's paper March 11-14. Our use of the material is with special permission of the paper.—The Editors.



Never has the Convair B-36 dropped a bomb in anger—but its poised might has been a big enough deterrent to help prevent a major war for the past decade.

B-36

Deterrent for a Decade

THE IDEA of a B-36 type aircraft was born before Pearl Harbor—when it looked for a while as if the US might have to contend with the Nazi war machine almost single-handed—without European bases. The Army Air Corps asked American engineers to build a bomber that could carry a 10,000-pound bomb load to a target 5,000 miles away and return non-stop; haul 72,000 pounds of bombs at reduced range; travel 300-400 mph; and take off and land on a 5,000-foot runway.

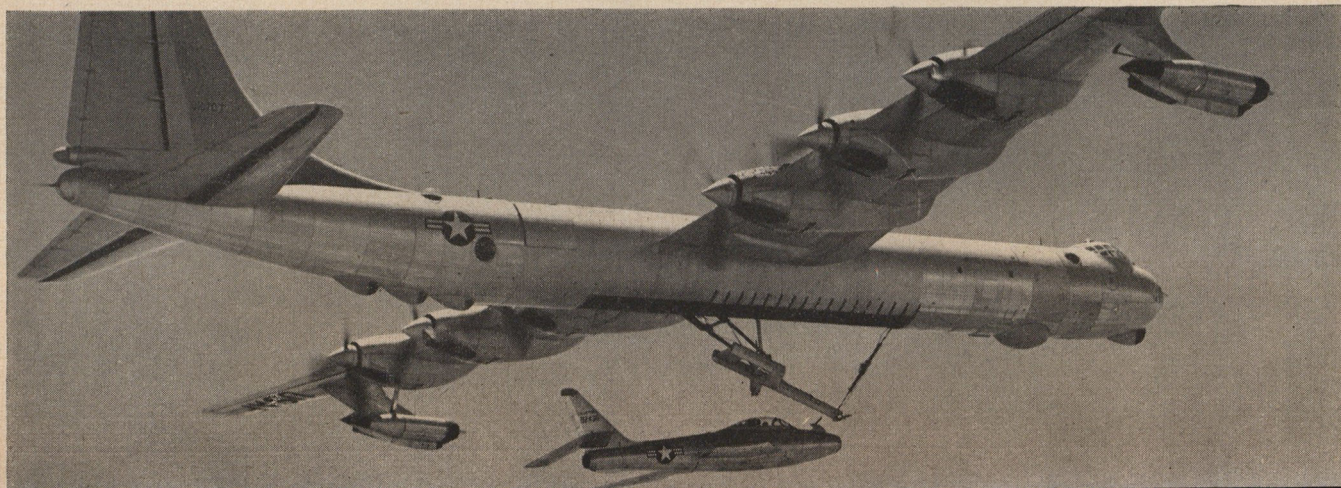
The Consolidated Vultee (now

Convair) XB-36 roared into the air on its maiden flight on August 8, 1946. The plane that helped us to live for ten years free from a world war exceeded early expectations and was to become an even more potent weapon by such improvements as the addition of four jet engines outboard of the six piston engines. The J model—last of the B-36 family—has four General Electric J-47 jet engines and six 3,800-hp. pusher-type reciprocating engines. Its maximum speed is more than 435 mph and its service ceiling above 45,000 feet. The giant bomber

weighs 400,000 pounds, has a wing span of 230 feet, a length of 162 feet and is nearly forty-seven feet high.

On August 14, 1954, the last B-36 was delivered to the Air Force, and it will eventually be replaced by the newer, all-jet B-52. While it has cast a shadow on aggression for nearly a decade now, the B-36 has never dropped a bomb in anger. Its poised might has given—and still gives—a sound basis for the Free World to hope for continued “peace through strength.”—END

A jet fighter can be launched and retrieved by one version of the B-36—the GRB-36. Here an RF-84 makes contact.



B-47

BEAUTIFUL AIRPLANE, DEADLY MISSION

THE STRATEGIC Air Command started getting Boeing B-47 Stratojets in 1952 as a replacement for the propeller-driven World War II B-29 and B-50 Superfortresses, and in July 1955 the last B-50 was retired from service. Often called one of the most beautiful combat aircraft ever built, the Stratojet was conceived on the drawing boards a little more than ten years ago. Its beauty is functional—the thirty-five-degree sweptback wings and streamlined jet engines carry it at 600 mph to altitudes above 40,000 feet, and its slim fuselage is packed with electronic devices capable of finding targets in any weather, day or night.

With in-flight refueling, the B-47 can cross the oceans nonstop. Early in 1954, for example, the entire 22d Bomb Wing flew direct from England to its home station at March AFB, Calif., a distance of 5,860 miles.

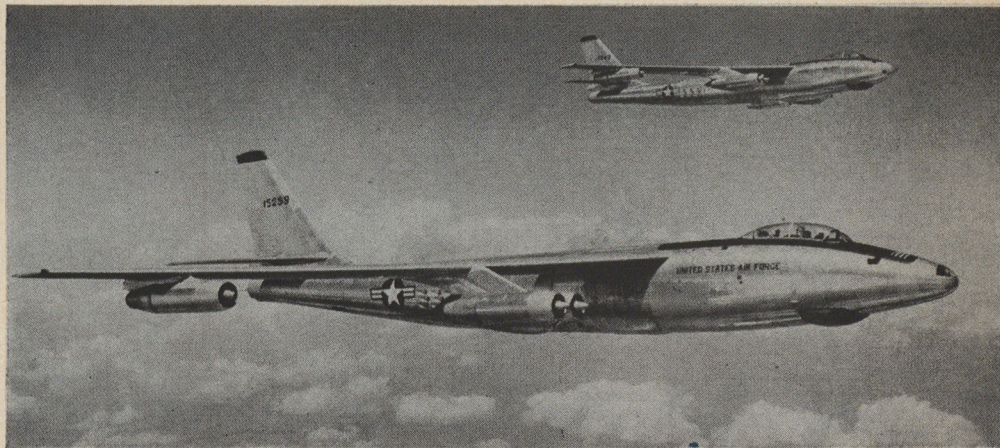
The plane turned out to be a crew chief's dream. Some of SAC's men claim that a B-47 is as easy to maintain as a B-29 without engines. (One Pinecastle AFB, Fla., B-47 flew 1,000 hours—equivalent to more than twenty times around the world—without an engine change or overhaul.)

The Stratojet carries a three-man crew—aircraft commander (pilot), copilot, and navigator-bombardier. The plane is 106 feet, eight inches long, twenty-seven feet, eleven inches high, and has a wing span of 116 feet. Maximum gross takeoff weight is 185,000 pounds. Powered by six General Electric J-47-23 turbojet engines rated at 5,800 pounds thrust each, the B-47 gets additional power from eighteen JATO (jet-assisted takeoff) units which provide 18,000 pounds of auxiliary thrust when needed. The bomber can carry a bomb load of more than 20,000 pounds for more than 3,000 miles—and its range can be extended indefinitely by in-flight refueling.—END

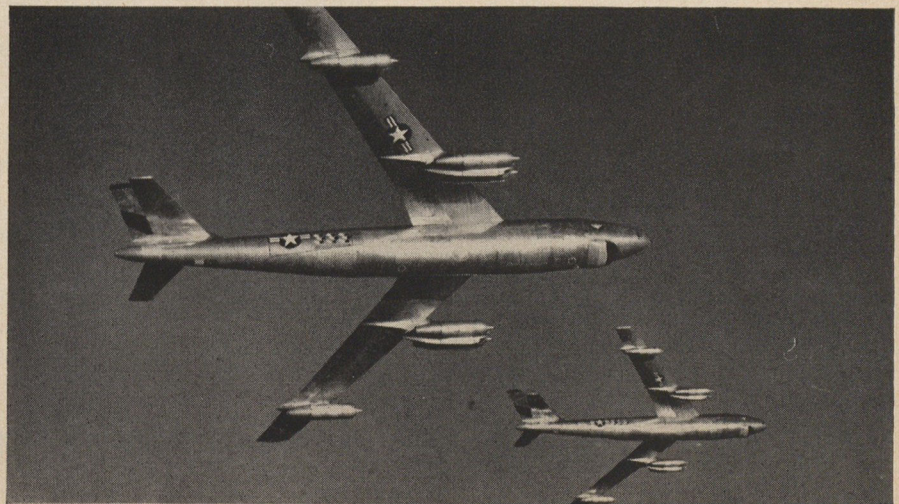
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Top view shows clean lines of beautifully formed Boeing B-47 Stratojet.



Two SAC weapons—reconnaissance RB-47E (foreground) and B-47E bomber.



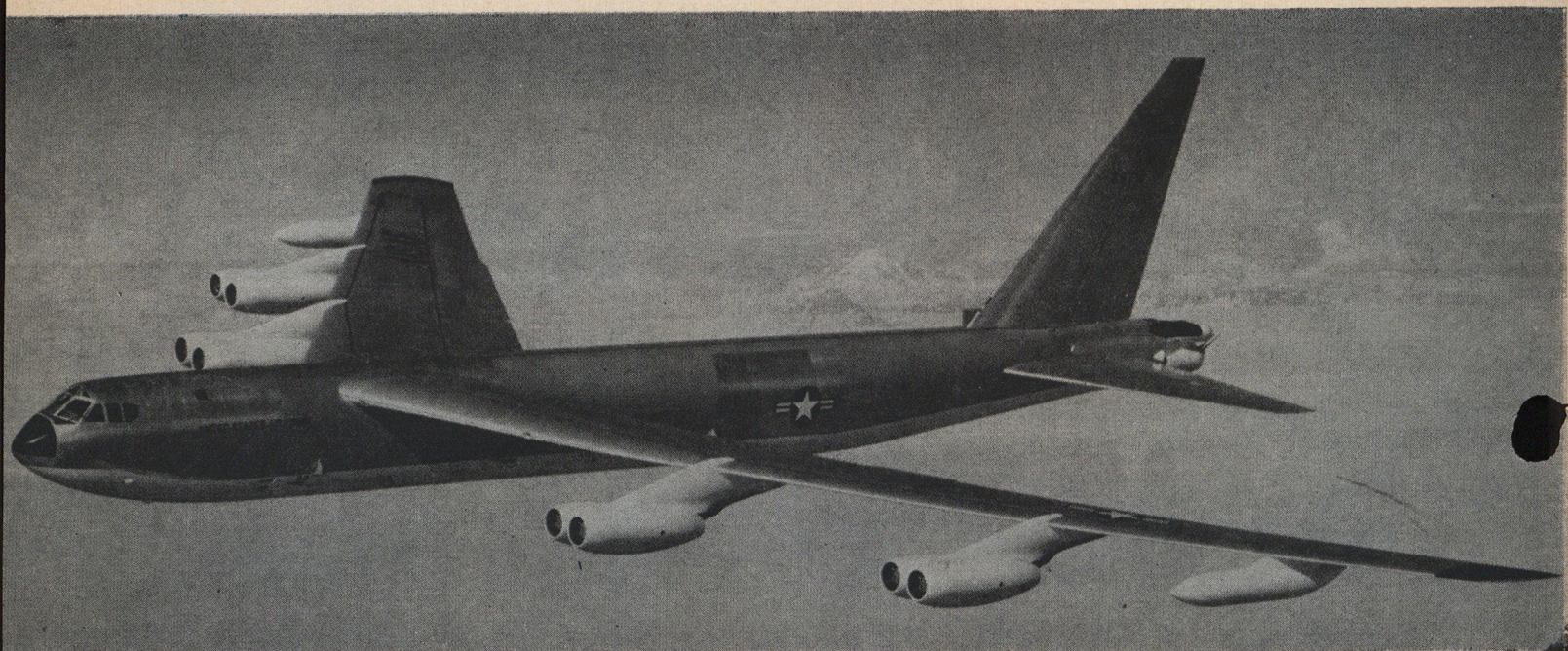
Two B-47s go into a vertical bank. They are as fast as most jet fighters.

B-52

The 'Long Rifle' of the Air Force

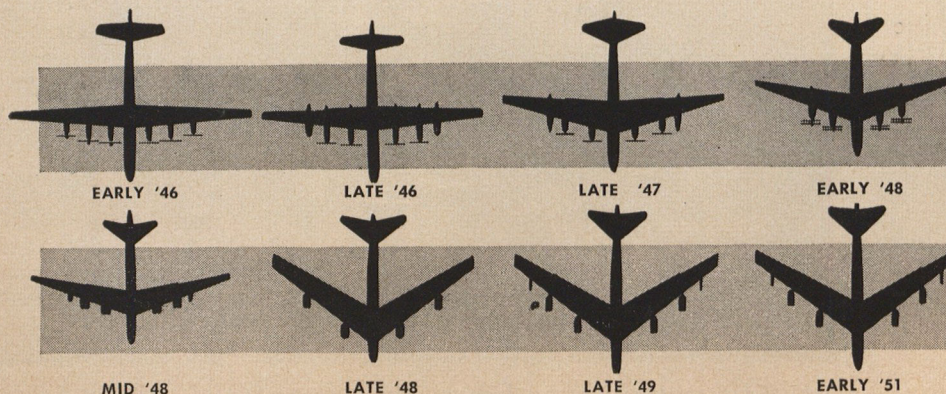
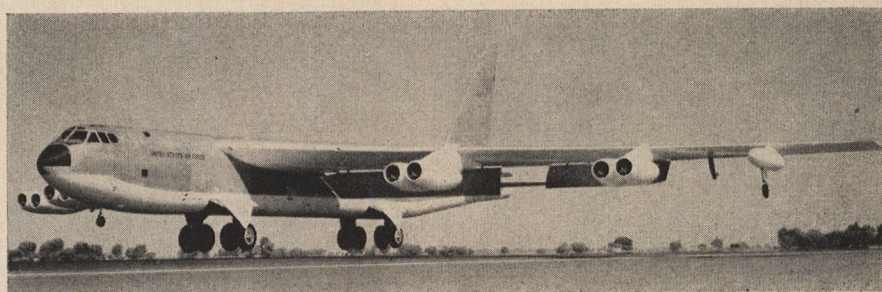
NOW THAT the first B-52 wing is equipped and operational, SAC's combat capability has received a significant boost. The first Stratofortress—eventually to replace the B-36—was delivered to SAC's 93d Bombardment Wing at Castle AFB, Calif., in June 1955. It had taken a long time getting there.

The general requirements for an intercontinental bomber were established in 1941—and the B-36 grew out of these. But it later became evident that an intercontinental bomber



The B-52 has a combat range of more than 6,000 miles, flies at more than 600 mph at altitudes exceeding 50,000 feet.

A Stratofort returns at the end of a mission. With in-flight refueling, crew endurance is only limit to its range.



The evolution of the B-52 is graphically illustrated as it grew on the drawing board from the first straight-wing model with six turboprop engines to the aircraft as it was finally built with a thirty-five degree sweepback and eight J-57 jet engines.

must have more range, speed, and altitude performance than the B-36. So in January 1946, the AF released a new set of heavy bomber requirements—even before the plane incorporating the original set of requirements had flown. That same summer, Boeing was awarded a development contract.

The plane was first designed around turboprop engines—but development troubles forced a complete change in plans. In the fall of 1948, the AF asked Boeing for an entirely new air-

plane to be powered by a new high pressure-ratio turbojet engine—the XJ-57 proposed by Pratt & Whitney. Today's B-52 has relatively few major changes from the new plans the engineers submitted.

The Stratofortress is big, with a 185-foot wing span, 156-foot length, and a forty-eight-foot vertical stabilizer. The eight Pratt & Whitney J-57 turbojets provide 80,000 pounds of thrust. The B-52 flies at more than 600 mph at altitudes above 50,000 feet. And with a built-in combat range of more

than 6,000 miles, it can fly a bomb load to targets on the other side of the world and return. Air refueling has increased the B-52's range to as long and as far as the physical endurance of its crew will permit.

The B-52 is truly the "long rifle" of our armed forces today. Never before in history has so much striking power been concentrated in one weapon. The Stratofortress represents a big investment in money, but if it buys the peace with honor we all desire, it is well worth the cost.—END

Col. Pat Fleming



The first crash of a B-52 in February took the life of Col. Patrick J. Fleming, one of the most dedicated of SAC's dedicated airmen. His good friend, Beirne Lay, Jr., the well-known screen writer, wrote this tribute to him and sent it to us. Fleming, Lay told us, was an airman who "sought and found complete mastery of his trade. He was a pro. All this is in the record. What will not appear in the record, unless I set it down here, are the events of three Sunday mornings. . . ."—The Editors.

THE BARE facts of the official record in war and peacetime of Col. Pat Fleming, Deputy Commander of the 93d Bombardment Wing, Castle AFB, Calif., who met his death in the first crash of a B-52, add up to a portrait of a dedicated professional perfectionist.

A naval aviator and fighter ace in the Pacific before transferring to the Air Force after World War II, a test pilot, and finally a specialist in the B-47 and the B-52, he couldn't bear the thought that there was any airplane around that he hadn't flown. So he flew them all.

After seven years of marriage, Pat had never found time for his honeymoon with Neville until General LeMay was persuaded to lend him to Paramount Pictures for two weeks as a tech advisor on "Strategic Air Command," while the script was being prepared in 1954. Pat and Neville arrived in balmy Hollywood on a Sunday morning, looking forward to a rest by comparison with Pat's Air Force grind. He needed a rest. He was thin and grey with fatigue. He hadn't had a day's leave since the end of the war. The phone rang. It was Washington. They wanted him to hustle on up to Seattle for consultations on the first air refueling tests with the new Boeing jet tanker. Pat hadn't even unpacked his bag.

He shoved off at once, borrowing a B-26 from nearby March AFB, and flew himself to Seattle, arriving half-frozen and still more tired. The heaters had quit on him and he'd had to remain at high altitude because of stiff headwinds lower down. He switched immediately from

his B-26 to a B-47 and took off at dusk to rendezvous with the jet tanker, flying until after midnight and completing twenty-three refueling contacts. Then he climbed back into his B-26, without sleep, and flew back to Los Angeles. He walked into my office at Paramount.

"What are you doing here?" I asked. I hadn't expected him back for two or three days.

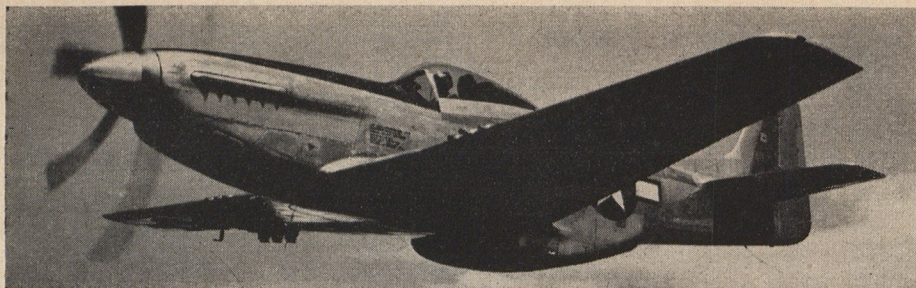
"It's Monday morning, isn't it?" he said. "I'm supposed to be working for Paramount."

A year later, on a Sunday morning, Pat and Neville pulled into my driveway with their three little girls and the family car piled high with vacation gear. They were on their way to Laguna Beach for two weeks' leave. Two weeks later, I arrived at Castle AFB at the tail end of a fifteen-day tour of active duty in my Reserve assignment with SAC. Pat was the first guy I ran into. It developed that he just couldn't stay away from those B-52s. After a few days at the beach, he cut his vacation short. He'd been flying five nights in a row, checking on the new crews in training. Each sortie meant a seven- or eight-hour mission, beginning with Stations at 0300. I went on one of these missions the next morning with Pat. It was a rugged seven-and-a-half hours at altitude. Once a week would be often enough to suit most pilots just fine. At one point on the flight, I crumpled an empty cigarette package and, seeing no container handy, tossed it on the flight deck. Pat was on the interphone immediately.

"Put it in your knee pocket," he said. "The crew chief on this aircraft's got enough to do." But the rebuke didn't sting. He was so right. And it was typical of him. But what I remember best about that flight was the way Pat was all over that airplane, knowing every man's job cold. Each crew member was a sharp, picked veteran of the B-47 program, but Pat's probing eyes and questions kept them sweating. "What do you do if you lose electrical power?" he'd ask. The man had better know the answer.

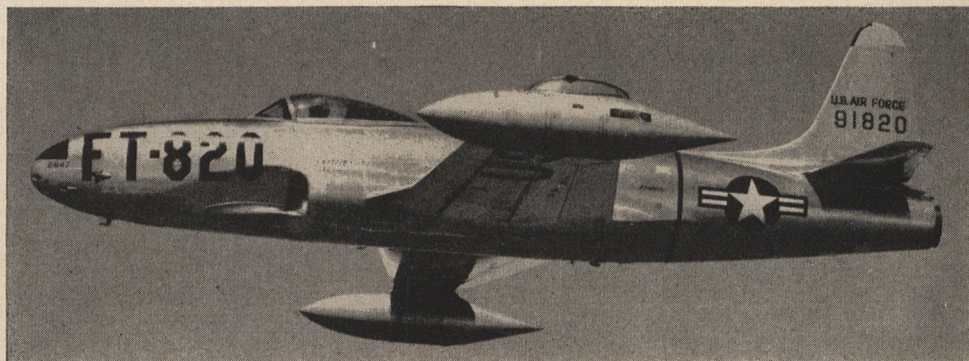
And then there was a Sunday morning in February. Pat had been one of the four listed as missing since the explosion of a B-52. When they found him his chute was missing, apparently burned off, after he remained in the cockpit too long, applying emergency procedures, helping the others get out.

My friend on the phone added a tragic footnote. Pat was scheduled to leave in less than two weeks for a desk job at SAC Headquarters as Director of Requirements. He had already compiled hundreds of hours of B-52 pilot time, flying far in excess of the normal requirement of his job. But instead of easing off during those final two weeks, he was squeezing in every possible hour in the air. He wanted, when he reached that desk in Omaha, to speak from the vantage point of his own, inner conception of a real "pro."—END



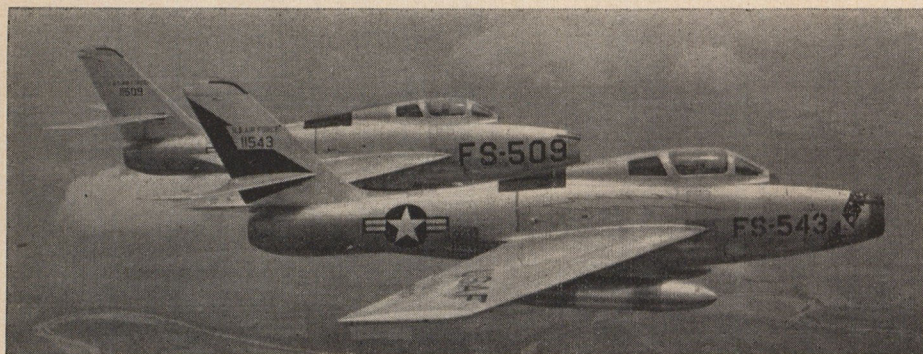
North American F-51s were used by SAC in 1946 as escort fighters when SAC was organized and given global responsibilities.

SAC FIGHTERS

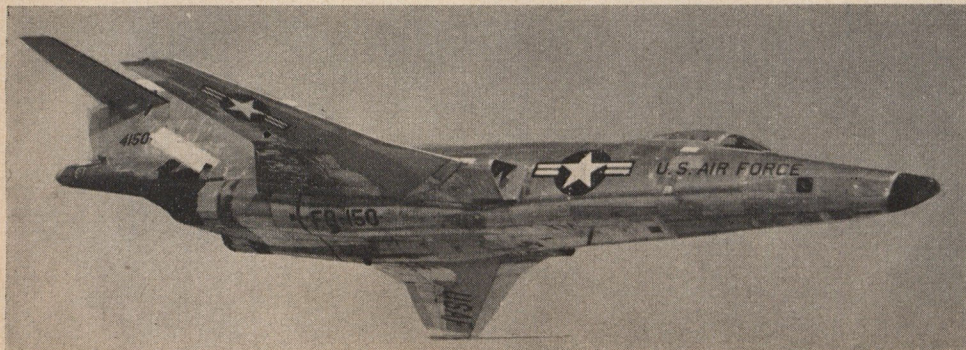


SAC's first jet fighter, Lockheed's F-80, replaced propeller-type fighters in 1948.

Part of SAC's Power Comes in Small Packages



SAC now uses Republic F-84s. Equipped with nuclear weapons, fighters are powerful striking forces which may be used independently of bomber forces.



Still veiled in secrecy—the high-performance McDonnell F-101 Voodoo. This new fighter (recon version shown) will vastly improve SAC's fighter potential.

EXCEPT for one thing, the fighter as an arm of SAC might perhaps have gone the way of the pack mule. That factor has been the rapid development of fighter-type aircraft which, in ten years, has brought the fighter to its present-day long-range strategic capability.

When SAC was organized in 1946, the North American F-51 and Republic F-47 fighters were assigned the mission for which they had been designed—fighter escort. There was little else they could do. But with each delivery of a new improved fighter plane, the mission of SAC's fighters grew in importance. The changes began in 1948 with the introduction of the North American F-82 Twin Mustang and the Lockheed F-80 Shooting Star—SAC's first jet fighter. And now that SAC's fighter wings are equipped with the Republic F-84F and will soon get the supersonic McDonnell F-101 Voodoo, their primary mission is the delivery of nuclear weapons in support of the strategic offensive. Equipped with nuclear weapons, they are powerful striking forces which may be strategically used independently of bomber forces. Greatly increased integral range, plus an in-flight refueling capability, give today's fighters the mobility they need to cross oceans in hours rather than days and to deploy from one side of the globe to the other.

SAC's main mission is strategic bombing but the command has been a leader in the development of the fighter potential as an effective weapon in modern strategy.—END

Boeing 707 and a B-52 making a test hook-up.

REFUELING

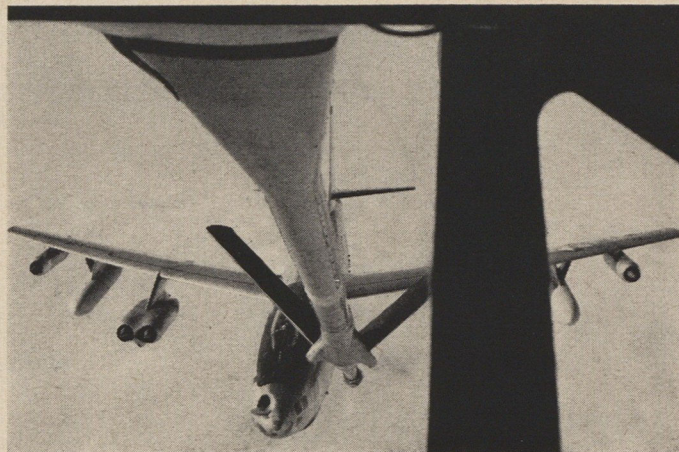
SAC's Flying Gas Stations

AERIAL REFUELING, which has brought the entire world within the range of SAC's atom-bomb-carrying airplanes, was first tried successfully in June 1923 (*see cut*). But only in the past five years has it become a practical, everyday technique.

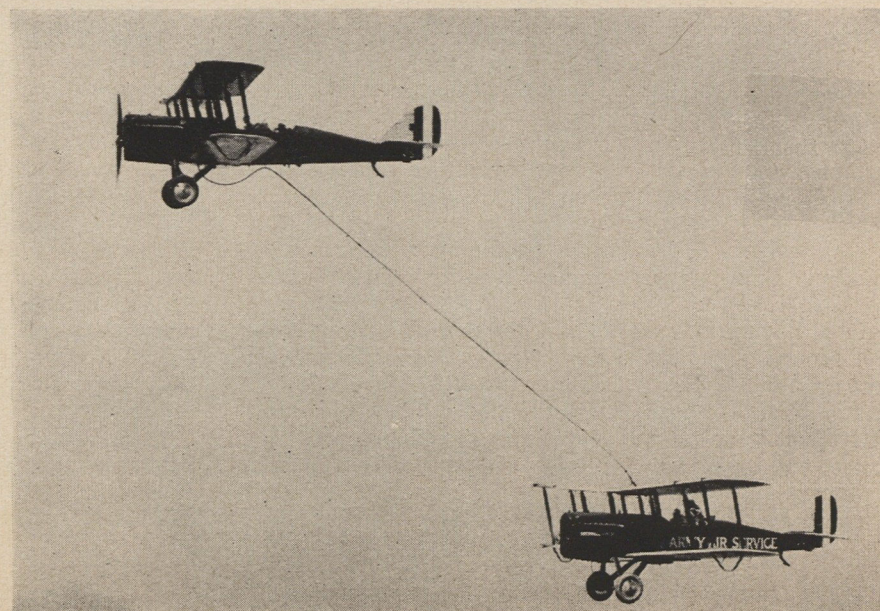
Work on refueling technique began in earnest after World War II—with B-50 bombers and a modified refueling system developed by the British. But the British gravity-flow system proved too slow, so US technicians added pressure to it, making it possible to pump more than 500 gallons of fuel per minute. The boom replaced the hose, and it brought "Clancy"—the crewman who operates the boom—into the picture.

As fighters and bombers fly faster and higher, there has been a pressing need for a jet tanker, and SAC's combat potential will be tremendously increased when the KC-135 jet tanker, now in production, replaces the KC-97s in general use today. The new Boeing tanker will refuel planes at speeds above 500 miles an hour and altitudes higher than 35,000 feet.

The high degree of skill of SAC's tanker units enables them—as standard operating procedure—to refuel formations of bombers at night with visibility as low as one mile. And it is now common to schedule a B-47 to fly three times its maximum range with air refuelings. These operations add up to almost 3,000 refueling contacts a week for SAC crews—or one refueling every three and one-half minutes around the clock—END



"Fill'er-up." A B-47 about to hook up to a Boeing KC-97A tanker. Boom is guided by "ruddevator" control surfaces.



Over San Diego in 1923, Capt. Lowell H. Smith and Lt. John P. Richter, using a makeshift hose and funnel rig, accomplished first successful air refueling.

What About THE

THIS month we are devoting the major portion of our magazine to the story of the Strategic Air Command. The occasion is the tenth anniversary, on March 21, not only of SAC but of Air Defense Command and Tactical Air Command as well. We will treat of ADC and TAC in subsequent issues.

"A decade of Security Through Airpower," the new slogan of the Air Force, is really more than a slogan. It represents a vast achievement. But it marks, not so much the attaining of a goal, as a pause at a crossroads, so to speak.

To quote SAC's Commander-in-Chief, Gen. Curtis E. LeMay: "Building a modern air force is something you cannot do overnight. It takes a period of time and it takes a lot of money. It's a matter of establishing a program and then sticking to it, and eventually you reach your goal. By that time the first part of the force is obsolete and you start over again; so it really is a never-ending chore."

"This 'never-ending chore' of maintaining a continuously superior military force-in-being—as a deterrent to all-out war—is relatively new. Thus far we have been successful.

How long that position will obtain is another matter. For the first time in recent years it is being seriously threatened. As we look back on a "decade of security," we face the decade before us with the prospect of frightening insecurity.

We have already conceded to the enemy in terms of quantity. We could be handing him the edge in quality of aircraft as well. This situation has gone beyond the calculated risk stage and is fast becoming what one expert has called "A special form of national suicide, in which we do not need to indulge."

The quantity race was lost in deadly sequence—first in fighters, then in long-range bombers. Tomorrow it could be the Intermediate Range Ballistic Missile or the nuclear-powered bomber. Eventually it would be the Intercontinental Ballistic Missile. If this trend continues we will inevitably wind up with the world's Number Two air force—Number Two in all respects. This could mean ultimate defeat.

Yet some of our leaders are beginning to hint that we somehow can maintain adequate security with a second-best air force. Such rationalization stems from a reluctance to face the fact that maintaining the world's best air force will require a radical rise in Air Force spending. Price tags on airpower are going up. The B-29 cost \$650,000 apiece. The B-36 costs more than \$3 million; the B-47, \$2 million; the B-52 will run around \$6 million each. And it, too, will have to be replaced and the price of security will go up and up.

There are no short-cuts. The ferment of technological

progress permits no lagging. We must effectively pursue *every* avenue to air supremacy and without knowing what precisely lies at the end of each road.

Successors to the B-52 are already in the works. Will it be a chemically-powered bomber, using so-called "exotic," i.e., non-petroleum, fuel? Or a nuclear-powered aircraft of almost unlimited range and endurance? The Intercontinental Ballistic Missile would be a valuable supplement to our manned bomber force, and might eventually replace it in large part. But the present state of the art, and the overriding need for *continuous* air supremacy do not permit us, at this point, to choose which of these should be pursued at the expense of the others. Who can say, today, which can be neglected without running the risk of a radical shift in the world balance of power?

In a recent address, Secretary of Defense Charles E. Wilson said, "There are some who believe that the United States alone should match potential enemies plane for plane, man for man, ship for ship or in all these categories, regardless of the effect on the total security effort or the many other complexities in defense planning. This can easily lead to error. . . . Since our problems are quite different, our defense needs must be governed by more than Soviet statistics."

The achieving and maintaining of qualitative and quantitative superiority is not necessarily a matter of matching plane for plane, man for man, ship for ship.

All the men on the ground and all the ships at sea are second-line instruments in the air-atomic age. Such forces cannot exert true military power unless and until men of the air and weapons of the air have achieved military superiority in their medium.

To say that we need not worry about whether we or the Soviets possess the world's Number One air force at any given time would represent a significant shift in national policy. For it would mean, in effect, that we are lowering our standard of what constitutes an adequate deterrent force. For deterrence through strength it would substitute the idea of deterrence through hope.

Are we to believe that the Soviet Union has abandoned its dream of world conquest and world subjugation? Are we to swallow the current propaganda line that the dead Stalin is the sole Soviet villain and that the new collective dictatorship represents a bunch of nice guys trying to get along? Are we now to believe that the new set of gangsters in the Kremlin have suddenly acquired a regard for the sanctity of human life?

If the Kremlin's ultimate aims are unchanged—and who is bold enough to say they are not—we can only counter these designs with a decisive deterrent threat. And the entire concept of deterrence has always been based on

NEXT TEN YEARS?

By John F. Loosbrock

MANAGING EDITOR,
AIR FORCE MAGAZINE

overwhelming—not marginal—strength. If this does not obtain, if our deterrent strength is only marginal, then peripheral wars could be used to apply the knife of attrition to this slender margin. History has already taught us an object lesson in this regard. It was because our strategic deterrent was merely marginal in 1950 that General Vandenberg counseled against extending the Korean air war beyond the Yalu (AIR FORCE, July 1951).

To say that our own defense needs should not be governed by Russian strength is as dangerous as it is fallacious. Who would deny that the first crucial task of a war with Russia would be the defeat of the Soviet Air Force? Unless this were done, we would lose the decision. And the faster we win the air battle, the less devastation to our United States.

Because the task is so huge and complex, there is a temptation to look for easy and relatively inexpensive choices between weapons systems. But there are no easy choices, and we cannot settle for a little bit of each. We cannot neglect any of these avenues.

The Reds control the timetable. They can select their weapons systems and lay on "crash programs" to achieve them. The danger is that they can do this in areas that could be decisive. That's what we must guard against.

This brings us once more to the Strategic Air Command—its mission and its tools. Let us turn once again to the words of its commander, who cites these three cardinal facts.

"1. *The real threat* to our national security lies in a global nuclear war;

"2. The way to prevent global nuclear war is to be *undeniably and convincingly ready to win it without question*;

"3. The way to be convincingly ready to win a global nuclear war is to put our military money into the *right amount of the right kind of equipment and people*."

The right kind of people, a major SAC concern, is discussed in detail beginning on page 10. It is the equipment which concerns us here.

We are told that we now have one operational wing of B-52s and it has been revealed that no more than four B-52s are being produced each month.

We do not know what Soviet Bison production was during this same period, but we do know that official statements have admitted they began equipping combat units with the Bison a full year before we began to "trickle" B-52s into our first wing.

Only last summer our present B-52 production plans were hailed as an "accelerated program." This "step-up" was reported in percentages, rather than in the more understandable and revealing terms of numbers of aircraft.

When it became known that a paltry four per month was the "peak rate" at the moment, and seventeen per month the so-called "accelerated rate" hoped for in two years, any claims to production banners were pressed no further.

No one, in the military, in civil authority, or in industry, has said we couldn't step up B-52 production to a level that would assure us a renewed lead. We hope this will be done.

But we also hope that it will not be done at the expense of other vital elements of our airpower—or without assuring a growing effectiveness throughout the Air Force structure. It would be foolish to turn out more planes unless we had the skilled men to keep them flying. It would be inviting disaster to cram them onto a base system already jammed with billion-dollar invitations to a target party.

Accelerating B-52 production would magnify and aggravate another question. What will replace it as Soviet defenses continue to improve? The greater the step-up, the faster answers to this must be decided.

Will the B-52's successor be a supersonic jet? A chemically-fueled bomber? The nuclear bomber? How much of a substitute will the ICBM be? We do not suggest the answer. Indeed it may well be a combination of these. We only hope that by the time hordes of supersonic bombers appear over Red Square we will already have the answers.

Our future requirements must also be weighed against great advances the Reds are making in another category of power—air defense. There are no reasons why their ability to turn out thousands of new fighters will lessen. There are no reasons why this same ability cannot be translated into other modern defensive weapons that will never appear in a May-Day fly-by.

There is another real worry in all this. Eventually the news of Soviet advances will begin to seep into the minds of our combat crews. No one knows better than they the perils of attack against ever-improving weapons. They study these facts day after day. They watch the enemy's growth in size and efficiency in terms of their very lives. As our delivery systems slip behind, they will be the first to know. The assurance that they are on a winning team is not something the nation should fritter away by inaction. SAC's combat crews have accepted ever-increasing dangers, but how long will they continue to accept them if they see the nation letting their weapons performance advantages go down the drain—one by one?

As we said earlier, the problems of the force in being are not confined to SAC. They face the whole Air Force. It is a safe bet that the next decade of security through airpower will be more difficult to attain than the past ten years have been.—END

From

AIR FORCE ASSOCIATION

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