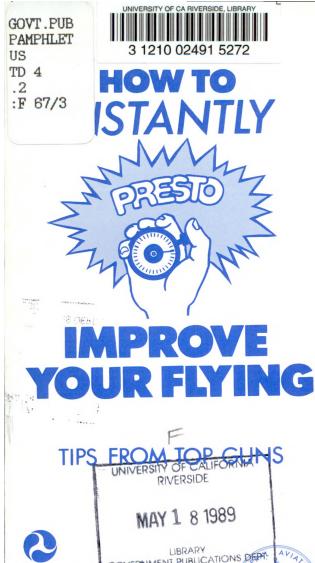
How to instantly improve your flying: tips from top guns.

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Federal Aviation Administration

Office of Aviation Safety



HOW TO INSTANTLY IMPROVE YOUR FLYING

Sounds impossible, doesn't it?

Yet if you talked to many outstanding pilots (such as those quoted in this pamphlet) and to the most experienced flight instructors, they would tell you that it is possible for pilots to instantly improve their flying. They would also testify that, in fact, their road to becoming truly professional pilots was marked by certain key moments when they changed and later were better pilots for it.

But what kind of change? And how does one go about changing oneself as a pilot? Of course one way is to listen to the outstanding pilots who will be quoted in the following pages. But another way is to begin by observing other pilots at your local airport, to ask yourself some questions about them, and then to ask some questions about yourself as a pilot. You'll be surprised at some of the new ideas and come to you.

NIVERSIDE

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Of course the other priots at the dirport aren't just pilots, nor are you. We all have a history, a job, and a general approach to life that has served us well so far. Such personal styles are often easier to note in others than in ourselves. For instance, the forceful businessman you may have met at the coffee machine, it's easy to see why he is successful.

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But successful at what? His traits sure lead to success in the business world, but how well do they fit the requirements of flying? The same questions apply to the doctor, the college student, the secretary, and the other friends you've met at the airport. Compare them with an outstanding pilot you know or with an ideal airline captain you'd gladly entrust your family to on their next vacation trip. Note the differences. Each has developed strong points from their backgrounds, but how well do their habits match the habits needed in flying? How about yours?

Let's try an example. One that is so obvious it is hard to see. I think you would agree that most Americans are highly efficient. We are masters of the short cut or fastest and easiest ways of doing things. Our history of success in industry proves that. Of course that means that most new pilots bring to the airport these habits of doing things the quick way. Now let's look around at our airports and do a little comparing. Note the pilots preparing to fly. Do you see what the professional pilot and the experienced flight instructor see?

If not, look again and then seriously consider this question. How come astronauts go through elaborate countdown procedures before launch, airline pilots are required to go through extended pre-flight procedures, and all military pilots can be seen to pre-flight their aircraft with a checklist in hand, but at the local point many pleasure pilots do hasty preparations, a quick walk around inspection, and some even skip the runup if they've flown the aircraft recently?

Before you answer, ask yourself two bottom line questions: first, would you allow your family to fly with a "shortcut" or "quick-prep" pilot? Second, would you expect such habits in a professional or ideal type pilot?

Such questions help us see what happens when a pilot applies his "quick-way" habits to flying. When he does, he's ignoring the history of aviation which has been a long relentless struggle to defeat Murphy's Law (Whatever can go wrong, will go wrong). Such quickie pre-flight habits are also exactly opposite to the advice given regularly to other pilots by the famous airshow pilot, Bob Hoover, known to all airshow fans for his masterful Shrike Commander aerobatic act:

"Know your airplane
Know it well
Know its limitations, and,
above all — Know your own
limitations."

Airshow Piot— Bob Hoover

Thus Bob not only advises us to know everything we can about our airplane, he also advises us that we'd better know our own limitations, such as those habits that serve us well in our careers but have no place in flying.

Bob's advice is also backed up by new accident data now more available because of computers. For instance, would you believe that in terms of accident causes many pilots crash **BEFORE** takeoff. Maybe they think you should get careful after you start the engine. Anyway, their lack of preparation results in takeoff accidents that add up to 20 percent of all general aviation accidents and 16 percent of all fatalities and serious

injuries. If you want further details the FAA has put out an Advisory Circular #61-84B (3/18/85) entitled "Role of Preflight Preparation," that tells the whole story and can help you counter the temptation to misapply your timesaving job habits at the airport.

Think of it, that alone could be a 20 percent improvement in your flying. You can have that improvement by resolving to avoid all "quickie preflights" and "shortcut habits" and by adopting Bob Hoover's advice instead. Best of all, you can make that improvement right now — this instant!

By Your Attitudes You Are Known

Would you believe that an experienced instructor can tell about how well you will fly before you ever take off on a checkout with him or her? Indeed they can, and it's not due to magic or intuition. In fact — you tell them.

You know how it's done. We've all telephoned a company or store and could tell right off if the person we talked to was trying to be helpful or was trying to push us off on some other department. We can tell without even seeing the person.

It's their attitude, isn't it? Well, we also bring our attitudes to the airport and we wear them for all to see just as clearly as our flight jackets or flight caps. As an example, you've probably met an instructor who isn't really interested in teaching or helping you with your flying. Obvious isn't it?

But how about the other pilots? How about the one who requests a checkout and then, after meeting his instructor, begins by telling him what

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an experienced and skillful pilot he is who really doesn't need a checkout at all, or, at the very most, three guick takeoffs and landings. How would you describe this guy's attitudes? First, consider his attitude toward safety and the need for periodic checkouts which all the airlines and military services require, even of their most outstanding pilots. Second, consider his attitude toward the instructor's role and responsibilities. Finally, consider his attitude toward himself and the passengers he may fly later on. All of these considerations seem to be ignored. Instead, this pilot seems to approach a checkout as if it is an insult to his image as a pilot, and that's an example of a common attitude that's all wrong. It isn't even realistic, for it also reveals a lack of knowledge about how our flying skills change when we don't fly for a while.

Of course we all tend to think of ourselves at our best. Ask anyone what his or her bowling average is and you'll probably get an estimate from that person's best year of bowling. That's only natural and it's no different with pilots. But it still reveals a common error. It indicates that we think our skills are permanent, or that they don't change much, or that at most a brief warmup or practice session will bring them back quickly. Not so! A recent study of private pilots indicates that skills deteriorated rapidly and seriously 8, 16, and 24 months after certification. Proficiency on some maneuvers, such as the 180 degree turn on instruments that we all need to escape from weather if we're ever trapped by it, fell off so badly that only 52 percent of private pilots could successfully execute this vital maneuver 24 months after they received their ticket.

That brings up the critical point. We don't have just one overall pilot ability that can be checked-out or brushed-up quickly by a few turns around the pattern. That might have been possible in the days of 65 horsepower aircraft, but it's totally out of date today. What we do have is proficiency on various tasks. In short, your landings may be great, but your stall recoveries, your instrument proficiency, or your traffic and radio work may be in the pits. So let's get to the bottom line, do you really want a quick checkout? Would you allow your family to fly with a pilot who has had only a few takeoffs and landings in the last year — including yourself?

That also brings up another situation you might have observed at your local airport. Have you noticed the amount of pilots who are looking for an instructor who will give them a "quickie" Biennial Flight Review (BFR)? How about their attitude? Airline pilots are required to take checkrides far more often. As a result, such professional pilots rarely complain about a thorough checkout when renting an aircraft at a fixed-base operation. Many demand more than is required. Compare that with the "quickies" who seem determined to get the least possible safety for their money. After all, a BFR is required only once every two years. Don't we all need a checkride at least that often to be sure we're safe?

Probably the best overall attitude a pilot can readily adopt is the one offered by the famous Lockheed Test Pilot who has tested some of our military's finest aircraft extending from the P-38 to the F-104. Tony LeVier advises us to go well beyond

the minimum levels of proficiency and to be prepared for possible emergencies as well:

"We're all accident prone
Flying does present hazards
If your emergency training is up to date,
You can survive an emergency."

Test Pilot— Tony LeVier

So just imagine, a changed attitude that leads to a thorough checkout or BFR that might just also enable us to escape an emergency that some other pilot might fail to survive.

That's some improvement, and you can adopt Tony LeVier's attitude right now — instantly!

Other New Attitudes, or How the Pros See It

Well, now that we've seen how a changed attitude can instantly improve one's flying, how do you go about identifying your own attitudes? One way is to note your own self-talking. You know, that silent conversation that goes on inside us, especially when we're making a decision. For example, suppose you planned an enjoyable flight for the weekend but, when you get to the airport, the Flight Service Station tells you that the weather enroute is marginal and your destination has only VFR minimums.

You're disappointed, of course, and a little uneasy about flying in questionable weather. Still, you want to go. As you try to resolve your feelings, stop for a minute and note or even write down some of the the things you are now saying to yourself. Some of them can sound pretty reasonable when you're strongly motivated to get on with a trip. But they also look pretty foolish when you look at them more closely, or especially when said aloud by some poor fellow who just departed on what could prove to be his last flight.

The problem is that some of the sentences we say to ourselves have a grain of truth to them. That's a problem because they cover only part of the whole picture, the part we'd like to believe so we can get on to our destination.

But let's look at a few such sentences now when we aren't planning to fly and therefore don't have to make a **GO** or **NO GO** decision. See how they look now:

"Oh, Flight Service Stations are always pessimistic. The weather will probably be beautiful."

"We've got minimums haven't we? It's legal, so it must be safe."

"The airlines are flying, aren't they?"

"Everything in life is a risk. You wouldn't go anywhere if you waited for perfect weather."

"I've flown in worse."

Some of these are even humorous when nobody gets hurt as a result, and we can all add to the list of such self-kidding sentences. Try exchanging them with your friends at the airport. Each time you learn one of these you become quicker at recognizing your own attitudes and less likely to kid yourself when you have an important flight planning decision to make.

That brings up another way of learning to spot your attitudes. If you are open with your friends at the airport, they'll be able to tell you when you are beginning to show unsafe attitudes. Incidentally, would you believe that some major airlines are introducing communications training for their flight crews? They are, because they found that when crew members can't talk openly to each other, misunderstandings and accidents can result. So if you're used to being boss at work or an employee that prefers to be quiet on the job, leave those traits at home if you're going to the local airport. You'll want to talk freely with the office staff, the mechanics, the line personnel, and especially with your instructors. You'll be surprised how much helpful information aviation professionals can pass on to you, including feedback about your safety attitudes. Of course you have to be kind of easy going and willing to accept criticism. If not or if you're abrupt and oversensitive with airport people, you may notice that they're usually too busy to talk to you or that they may often be walking the other way when you approach.

Finally, you can also spot your attitudes by comparing them with those of the most outstanding pilots in our nation. For example, let's compare

some of the traits and attitudes already mentioned with the attitude of one of the most famous airshow pilots in the nation. Recall that we have already discussed the American trait of efficiency that unfortunately too often results in shortcuts in preflight operations.

We've also reviewed the attitudes that lead to wanting "quickie" checkouts or BFRs. Contrast these approaches to safety with that of the late Art Scholl, the Hollywood stunt pilot and airshow performer revered by all who attended his airshows. When asked about flying safely, Art Scholl said:

"Complacency is one of the major causes of accidents. No matter how well things are going, something can always go wrong."

> Hollywood and Airshow Performer— Art Scholl

Thus instead of a "short-cut" or "easy-way" attitude, Art Scholl recommended that we anticipate problems and resist any tendencies toward complacency. How do you do that? Well, watching yourself self-talking is one way, but a foolproof way that never fails in the air was recommended by one of the nation's most distinguished test pilots. Try his recommendation if you find yourself getting lazy and sluggish at the controls or saying things to

yourself like — "Guess there isn't much traffic today":

"Stay up on the edge of your seat."

Test Pilot— Scott Crossfield

That simple change in behavior will instantly increase your alertness. Try it the next time you feel yourself become complacent — it works!

Such are the safety attitudes and self-talking sentences of some of the nation's most outstanding professional pilots. And just think, you can adopt their attitudes and their self-talking sentences as your very own. Best of all, you can decide to begin practicing them right now — this instant!

Learning to Fly On the Ground

Have you noticed that nearly all the changes and improvements we've talked about have been made on the ground?...Surprised?

Some of the most experienced professional pilots would go even further. They would hold that not only are the most important flying lessons learned on the ground, but that some of the most important professional pilot habits are practiced and developed there.

That's where top pilots have the time to criticize their last flight, to correct their errors and to plan their next flight. And that brings up one of the most important safety tips on flying you'll ever receive. It was offered by a man whose name is recognized throughout the world. When asked for his advice on flying safely, Brigadier General Charles E. "Chuck" Yeager, the Air Force's distinguished test pilot featured in the book "The Right Stuff" and in the movie of the same title, advised all pilots to:

"Always leave yourself a way out."

Test Pilot— Chuck Yeager

There's a world of experience and wisdom in that one safety tip. Consider what it means for your practices and habits as a pilot. It means constantly looking ahead, anticipating problems (there's old Murphy's Law again), and making absolutely certain that you can escape from any possible troubles you identify. Do most pilots do this? Do we as pilots make an ironclad habit of applying Chuck Yeager's advice — "Always leave yourself a way out!" Let's see.

Did you know that approximately 40 percent of all fatal general aviation accidents are caused by or related to weather, and that about 20 percent are caused by pilots flying VFR into adverse weather? Not a very good record, is it? But if pilots would adopt Chuck Yeager's advice, most of these accidents could be prevented. As an example,

many professional pilots do just as Chuck Yeager advises. They don't just plan one alternate airport for their trips. They have alternate airports (plural) constantly in mind throughout their trips, so that if their destination or any alternate airport's weather begins to deteriorate, they already have other alternate airports in mind that are well within the range of their aircraft's fuel supply. That's leaving yourself a way out — always!

By contrast, many **non**-professional pilots don't even plan for one alternate airport for their flights. Many don't even plan for the possible need to do a 180 degree turn and return to their last departure airport. Some seem to think that if you have minimum ceiling and visibility, it's ok to takeoff for a distant destination. Some scudrun enroute hoping the weather will improve. The record is clear about what results from such poor planning and taking such foolish risks, instead of **always** leaving yourself a way out.

A final way to learn to fly on the ground is one that is practiced by most of the top pros. It's a game they play called "What if." They play it by picturing possible emergencies or tight situations they've been in before or have read about, and for which they can rehearse corrective actions in case such situations occur again in the future. Of course all professionals are regularly exposed to procedure trainers, simulators, chalk talks and continuous ground training. But the best of them go even further. They're continually reading accident reports, pilot magazines, and applying the safety lessons therein by playing "What if." They really know how to learn flying on the ground. They

thereby show their agreement with Chuck Yeager; they plan to always have a way out. You too can learn to play "What if" and to always have a way out.

That brings up another important point. If you can, get to know a professional pilot or two. You'll be surprised. They rarely tell long flying stories nor do they wish to listen to them. They usually come right to the point and summarize their experiences in short examples or in brief statements that often seem quite simple. But those simple statements reflect years of flying experience. It's the same with proverbs in aviation. For instance, the proverb "the two most useless things to a pilot are the altitude above him and the runway behind him" is a general rule for altitude and runway selection that was learned from decades of flying experience and that is still valid today.

So, if you are ever tempted to violate one of aviation's proverbs or one of those short summary statements the pros frequently offer, think again! Remember, they reflect aviation's history and the hard lessons learned by the very best of pilots.

You might even consider writing down such brief flying tips and proverbs. You can then practice such statements from time to time and thereby make sure that your self-talking includes lessons from the thousands of hours of experience logged by the very best of our nation's pilots. Where else can you learn such valuable safety lessons and learn them free, on the ground, and at your convenience, too. Best of all, you can decide to begin practicing these lifesaving rules right now — This instant!

Ratings Versus Proficiency

We Aren't Always What We Think We Are

Want to have some fun and save some money at the same time? Try this: take a fellow pilot out to an airplane you're both familiar with and, while you go through the **procedures only** for pre-flight and runup without a checklist, have your friend monitor the checklist and your performance (you don't have to actually start the aircraft). Then do a blindfold cockpit check. That is, cover your eyes and touch any instrument, switch or control your friend names and asks you to locate.

How did you do? Now, discuss your performance with your friend and agree on a grade for your current proficiency on these pilot tasks. Unless you performed flawlessly, you've just learned the difference between ratings and proficiency. You need have missed only one item on the preflight for serious problems to follow, and a pilot who has to search the cockpit for instruments and controls is not going to have sufficient time to perform other important cockpit duties without trouble. In short, you don't have to actually fly an aircraft to learn that you're out of practice. And it's far safer to learn that on the ground.

That's also why you should ground-check yourself every so often. It's free and it's a great game you can play with other pilots on bad weather days at the airport. You can do the same for written exams. Check a few questions from the latest written test guide. You might also try a slow read-through of a few sections of FAR Part #91 — The Operating Rules. Look familiar? If not, you've

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just learned free of charge that your pilot and safety knowledge has slipped. Some pilots dismiss the regulations as just so many legal requirements, but ask any pro, especially the gray-haired airline captains; they've seen the regulations evolve over the years. They know that they are the safety rules of flying that we must all observe if we're to fly safely. That's why the pros gladly comply with the regulations. That's also why they expect you to do likewise. So try reading the regs as safety rules. When you do, you'll be amazed how instantly they take on a completely different character. You'll also begin seeing them as the pros do, and wondering with the pros why other pilots don't see them the same way.

So far we've accomplished a pretty good proficiency check and we haven't even flown or mentioned what certificate or ratings we hold.

Now we're all proud of our ratings. That's only natural. The trick is not to be fooled by them. So we all have to keep reminding ourselves that ratings indicate that we had a certain level of proficiency on the day we passed our checkrides. They say absolutely nothing about our proficiency today. Sounds basic doesn't it? Maybe that's why so many pilots seem to forget it.

They also seem to forget it when it comes time for checkouts and BFRs as discussed earlier. For many pilots a checkout or BFR results in immediate "checkitis." But they can change that by changing their self-talking. Once a pilot stops telling himself that a checkout or BFR is a re-check on his certificate and ratings or a criticism of the competence he or she has developed over the years, a checkride takes on a whole new flavor. Checkrides

are designed to assess only your current proficiency, not your flying talent or overall abilities. Checkrides tell you what you're out of practice on and what you need to work on; that's all — no more! Seen that way a checkout is something all of us should seek out so we can retain the proficiency we were so proud of when we obtained our ratings. It's all in our attitudes, and we can change them anytime we want — instantly!

That brings up another point about our attitudes. Some pilots have developed what they think are ways around keeping their knowledge and proficiency up to date. They want to fly and to be a good pilot, but they prefer to do their flying by rough "rules of thumb." You know, the fellow who skips weight and balance and takeoff distance calculations, and weather forecasts, too. He's the fellow who explains, "Oh, if you can get it into my aircraft, my plane will get it off the ground," or, "That pilot I just had coffee with said the weather down south is pretty good."

Aside from the obvious errors, this type of pilot is expressing one of the most common and most dangerous attitudes in flying. He's saying you can fly safely with a minimum of information. He uses mental shortcuts just like the other pilots we discussed earlier used shortcuts in procedures. Both are lethal.

If by any chance you think this fellow's attitude might be partially right, let's turn the situation around and see how it appears when you are on the receiving end of such attitudes. Suppose the airport mechanic told you that he checked out your complaint about an aircraft's engine, and remarked "it doesn't seem too bad," or, "I've heard of other pilots who flew quite a while on an engine like that." How do rough rules of thumb look now? What do you think about this mechanic's attitude? How does it feel to think about flying on minimum levels of information and safety?

Such an attitude is opposite to the whole history of aviation safety; extra engines, backup radios, scheduled maintenance, test flights, and checkouts, are all designed to assure safe flight even when things go wrong (there's Murphy's Law again). But the shortcut and rules of thumb attitudes still seem to be around.

Of course any of us can avoid the dangers of such attitudes by changing ours. Anytime we want we can reflect on the need for complete information, current knowledge, and proficiency. The proper attitude for these was summed up by the famous test pilot and astronaut who was the first man to walk on the moon. When asked for his favorite safety tip, he replied:

"Keep your brain a couple of steps ahead of your airplane."

Astronaut— Neil Armstrong

You can adopt Neil Armstrong's attitude anytime you want, like right now — instantly!

Things Not Worth Proving

Every pilot is proud of his ratings and achievements in flying. He or she has a right to be. However, some pilots seem to want to go beyond that. Here again, they apply typical American virtues to the wrong task. For instance, we Americans are competitive and we certainly admire winners. That has its place in sports and in business, but it can actually be a fault in some phases of flying. Probably you've met the pilot who talks about how early he soloed. That's ok as long as he doesn't think that it necessarily proves anything. Any flight instructor can tell you of many cases in which a student soloed quite early but did not continue to advance as rapidly after solo. So being competitive about soloing before your friends is the wrong goal while learning to fly. Your objective should be to learn to fly competently and safely. If you make a habit of these goals, they'll serve you well throughout the years after soloing. As we all know, we can switch goals.

Unfortunately, some pilots don't. Even after soloing and after obtaining their certificate and maybe some other ratings, they still carry on as if they are trying to prove something. That would be ok if it didn't lead to accidents, but it frequently does. Some pilots seem to think that the real challenge of flying is to prove that one is daring. It never seems to occur to them to look around at the airport — the professionals don't feel that way. In fact, if you talk to the pros, you'd soon learn that they think fast taxiing, steep pullups after takeoffs,

and hot low passes over the hangar or the girlfriend's house are all signs that an amateur pilot is at the controls. It's kind of like the old flight instructor said, "The only thing anyone has to prove is that which is in doubt." Top pilots don't doubt their abilities, so they don't have to go around proving themselves all the time.

That brings up a critical point. Most new pilots have a completely wrong impression of outstanding pilots. That's not all their fault, for the media has long glorified the adventure of flying while paying little attention to safety. But any famous pilot will tell you that safety is what makes all successful adventures possible, and the best of fighter pilots will tell you that you can't fight in a poorly maintained aircraft or fight for very long if you become careless. Sure there are pilots who have taken risks to advance aviation or to win wars, but read about any one of them and you'll find that they are anything but careless. Competent? . . .Yes! Foolish? . . . No! Careless? Absolutely not, just the opposite, in fact.

That brings us back to attitudes again. If you notice that you're saying to yourself that "I have to prove I'm daring," or, "If I buzz the airport, the pilots will really think I'm a hot pilot," or, "If that other guy can get through that weather so can I," then you are caught up in the "I must prove myself game." Better think that game through on the ground or discuss it with a highly experienced flight instructor. It's a dangerous game that usually proves the opposite of what you are really striving for. That's the core of it. We all want to be competent top pilots or as close as we can get. Great! But do it by learning from the best of them. Read about

them and you'll find that throughout the history of aviation, safety has always preceded successful accomplishment.

As an example, have you ever watched the pretakeoff procedures performed by an airline crew? Did any of it look like a careless or carefree operation to you? Does anyone really believe that irresponsible or scatterbrained people are chosen as airline pilots? It's just the opposite, isn't it? Knowledge, precision, care, proedures, and safety—these are the charateristics of competent airline pilots.

Of course, the pros know all this. It's the media and the amateurs who think that just a little daring or a little showing-off will prove that they are top pilots. Ask any pro. He'll tell you — it proves just the opposite.

For instance, we've all heard of Frank Borman, the former astronaut who later became the President of Eastern Airlines. When he was asked for his favorite safety quote, he offered this one:

"A superior pilot uses his superior judgment to avoid those situations which require the use of his superior skill."

Astronaut— Frank Borman

Well, which kind of pilot do you want to be; an amateurish "I must prove myself" pilot or a superior pilot like Astronaut and Airline President Frank Borman?

You can decide that — this instant!

Social Situations to Avoid

That brings up the subject of decisions. We all like to think we are rational and that we are capable of making objective decisions even in tough situations. This is partially true, but only partially.

If you observe yourself at work, at home, at church and in various social situations, you'll notice clear differences. In short, we're all affected by other people and by circumstances. For example, we've learned not to make important long term decisions when we're emotionally worked up. We've learned to sleep on such decisions because the situation often looks different the next morning. Well, what could be more important than your life and the lives of your family? Yet some pilots tend to put themselves in situations where calm deliberate decisions concerning the welfare of their family are all but impossible. The far too frequent accidents that result prove that.

As an example, many pilots dream of a winter or spring vacation for the family in far away places such as Florida. Such trips frequently measure over 1500 miles. Now there's an old saying that you can hardly ever fly over 500 miles without a change in weather. So, if the pilot is not instrument rated, or current on instrument flying, or is flying an aircraft with inadequate equipment, then the plot of the story has already begun to thicken. The probable tight situations that will follow are becoming clear. Anyone think the coming decisions will be any easier?

Now let's look even further ahead. Suppose the weather is great enroute to Florida. But what

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about the return trip a week or two later? What does a pilot do when the weather is marginal but he has to be back to work in two days? Don't forget, the wife may also have a job and the kids have to go back to school. If the plane is rented, it can cost a bundle if it's not returned on time. Feel the pressures mount? Such is the power of situations.

Now, let's suppose a pilot makes it half way back but is now weathered in. As delays at airports, taxis, hotel counters, and restaurants mount, nerves become frayed. The family wants to get home — now! As the wife pleads and the kids cry, it doesn't help to hear your son say, "Those other pilots at the airport took-off ok. They weren't afraid of a little rain." Now what are the chances of making a sound flying decision in such a situation, especially if the weather improves a little and the family's hopes soar. Such are the pressures of social situations.

The cure? Prevention! An experienced pilot knows that safe flying is a result of a good match of pilot, aircraft, and environment. His rule? If they don't match — **Don't go!** If you do, sooner or later you'll get into a situation where the social pressures will lead to bad flying decisions which, in turn, often lead to accidents. That's why experienced pilots also plan all trips from start to finish, to and from. If they spot potential problems that will create social conflicts and pressures that could then lead to unsafe decisions, they simply don't fly the trip. In the case of long family vacation trips that pose potential social-safety problems if flown in pleasure aircraft, they often schedule such trips on the airlines. They do so because they are committed to safety as their first priority.

So, experienced pilots know how to avoid disasters. As the sages throughout history have advised, "know thyself." If you do, you already know that we humans are all influenced by various types of social pressures, and, if you are a pilot, you'd better apply that knowledge if you plan to fly safely through the years.

But what happens if you do get in a tough social situation? Here, the late Art Scholl, the Stellar air show pilot quoted before, had some advice that is invaluable for both emergency situations in the air and social pressure situations on the ground. Art advised:

"Stay Calm. Don't just start doing things. Reason things through before you act."

> Airshow Pilot— Art Scholl

Such advice can be applied in simulated emergencies in the air with your instructor, and, for actual social pressure situations on the ground. It can best be applied by removing yourself from the pressure situation until you are confident you are making a calm reasoned decision. For instance; take a walk, discuss your situation with weather bureau personnel, or talk things over with an experienced flight instructor or professional pilot. Calmly discuss and evaluate your decision until it feels safe in your guts. When it does, you'll know you're deciding correctly. Safe decisions lead to feelings of safety. Stick to them! Unsafe decisions usually cause butterflies, sweaty palms and dry throats. Watch out!

Pay attention to such reactions. Body language sends clear messages if you listen to them. That's you you're listening to; your total experience, your gut level assessment of the whole situation. Respect those messages. Other pilots may make other decisions, but that's on the basis of their experience, their currency, and their equipment, not yours. Professional pilots have learned from long experience to trust their body signals, their intuitions, and their gut level feelings when making tough safety decisions. You can learn to do the same, to trust your feelings for safety, and to make that a habit. Finally, you can test all your decisions by a rule recommended by the U.S. Air Force crack Air demonstration team — The Thunderbirds. Their advice is to ask a final question about any decision you make:

"Does it pass the common sense test?"

U.S. Air Force— Thunderbirds

Of course, you can apply any and all of these professional tests to all of your decisions. Any time. Instantly.

How Not to Become Progressively Careless

Those last points may sound a little stuffy. "Know thyself," "Trust your gut feelings"; that doesn't sound like flying talk at all. That's right, it doesn't. But it isn't because the pros don't use such safety tips, they do. The problem is that, to date, very few such tips have been included in most of our flying books. Oh, flight instructors and aviation authors pass on some of this knowledge, but not in a systematic way. That's beginning to change now, and that's for the good.

Why? Because new safety data is improving our understanding of how many types of accidents develop. Did you know that the National Transportation Safety Board reports that approximately 80 percent of all general aviation accidents are caused by or related to pilot error? It's humbling to admit, but we, the pilots, are the most dangerous component in an airplane. That's right — you, me — not just the other pilots.

Safety data also tells us that pilots keep making the same basic mistakes year after year, and they're not all flying technique errors either. Many of them are thinking errors, decision errors, and attitude errors. One study revealed that 68 percent of accidents were caused by carelessness and recklessness. Even the U.S. Army has found that about 45 percent of its accidents involve breaches in self-discipline.

That brings us back to where we started. We discussed the problem of bringing our job traits to the airport where many of them can lead to

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problems. We also discussed the American tendency to take shortcuts, and how our attitudes run counter to the safety knowledge that has been learned through decades of aviation history. It boils down to what Pogo once said —

"We have met the enemy. . . And it is us."

Pilot Advisor— Pogo

The pros learn this over the years. They know and feel in their bones the one major lesson that thousands of hours of flying always teaches and that the accident data also testifies to — A PILOT DOESN'T JUST CONTROL AN **AIRPLANE**, HE HAS TO CONTROL **HIMSELF**, TOO.

So, when you see pilots at your local airport skip a preflight, ignore weight and balance or weather briefings, and try to fly by shortcuts and rules of thumb, you are looking at undisciplined and amateurish pilots (regardless of how many hours they claim). You're also looking at potential accidents. Such pilots reveal an ignorance of the history of aviation, of current safety data, and of themselves as the most dangerous part of flying.

Professionals know better. They sometimes make errors, too. But overall they are highly disciplined. They have learned what professionals in all fields learn — you can't be a professional parttime or occasionally. To be a true professional you must make it a way of life. You must groove your habits just like a golfer grooves a golf swing or a

great athlete molds his body and mind. The professional also knows that skipping over a few items today, or taking a shortcut here and there, or deciding important matters by rules of thumb will eventually lead to problems. In flying, those problems are called accidents.

Naval Aviator, Test Pilot, and former FAA Administrator, Donald D. Engen has summed up the core of professionalism. When asked for his counsel on safety and professionalism, he replied:

"...it will help all pilots to remember that professionalism is the key to overcoming all obstacles to safety. We begin with the proper attitude, sustain efforts toward excellence throughout each flight, and strive for the highest possible human performance at all times. That is not only the key to achievement in aviation, it is the mark of a professional in every field."

Former FAA Administrator— Donald D. Engen

Post Flight

It's time to post-flight ourselves now.

Actually, it's a good idea to post-flight yourself every so often when you have some leisure time. Have your airport and flying habits been getting a little sloppy lately? Been tempted to imitate some pilots who seem so confident as they breeze

through pre-flight preparations? Have you begun thinking that checkouts and BFRs aren't really necessary, just a waste of time and money? If so, the accident data clearly shows that such pilot attitudes and habits of thought can eventually pay off in predictable results, just as safe, disciplined habits and attitudes pay off in safe flying.

If you post-flight yourself honestly every so often, you can then quickly pre-flight yourself before you take off. That's right, **Pre-flight yourself.** After all, you're the most unreliable component of the airplane. The data proves that year after year.

Such a pre-flight doesn't take long. In fact, you've probably seen the first part in the Airman's Information Manual. The second part is a summary of this pamphlet and all the advice quoted from some of the nation's top pilots.

It's all in the form of a checklist on this pamphlet's back cover pages. You can make copies of it for your fellow pilots and all of you can use it as bookmarks for your airplane operating manuals and for your aviation books.

You can also use it as a safety poster at your airport. Best of all, you can have it laminated and keep it in your airplane or in your flight kit. Imagine — that's like taking ten of the most famous pilots in the world along with you as your advisors on each of your flights. Think of it — you can consult them in various situations when you need advice from the very best on safe flying and safe decisions.

And, you can decide to do that time and time again, in fact. . .

Anytime you want — Instantly!

Pre-Flight of ME -- The Pilot

I'm Safe = Illness Stress

Medication Alcohol

Fatigue Emotion

Usual Career — Left at Home

Habits

Shortcuts — OFF — None

Pre-flight - "Know your airplane, Know it well"

(Bob Hoover)

Attitudes — Safety — ON, "We're all accident

prone." (Tony LeVier)

Complacency — OFF (The late Art

Scholl)

"Get up on the edge of your seat."

(S. Crossfield)

Learning — "Always leave yourself a way out."

(Chuck Yeager)

Planning — "What if" — **PLAY** (As the Pros Do) on the Ground

Ratings vs. — Only proficiency — COUNTS

Proficiency — Ground Games — PLAY (As the Pros

Do)

FARs — Read as **Safety** Rules "Keep your brain (knowledge) ahead of your

airplane." (Neil Armstrong)

Things Not Worth Proving "The only thing you have to prove is that which is in doubt." (An old flight instructor)
 "A superior pilot avoids situations that

"A superior pilot avoids situations that require his superior skills." (F. Borman)

Social Pressure Situations PREVENT by planning, or MOVE away from and REFLECT "Stay calm." (The Late Art Scholl)

"Does it pass the common sense test"
(Air Force Thunderbirds)

How Not to -Become Careless "We have met the enemy and it is us."
(Pilot Advisor — Pogo)

Pilot Professionalism ON — "Strive for the highest possible human performance at all times." (Former FAA Administrator — D. Engen)