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NOTES ON VFR CROSS-COUNTRY TOURING WITH PASSENGERS ABOARD

How fortunate to have come along at just the right time to take advantage of this amazing development, the modern light airplane, high-water mark of 19th century science and 20th century engineering! It's an astonishing marvel, not least for making it possible for the ordinary competent citizen to fly. With it, he or she can fulfill that most ancient of human dreams, to conquer time and distance, and view our home, the Earth, from the extended perspectives of a self-directed touring flight!

Should you try it? Of course! The ideal way to see the country in this last fifth of the 20th century is to hand-fly it in a good, sturdy airplane. Your use of fuel and airspace is every bit as legitimate as that of someone's aunt riding the airliner. For you, though, it will be an incredibly more rewarding experience.

First of all, it will be your very own trip. Nobody will be doing it for you, or to you. While the responsibilities are heavy, you will not be sharing them involuntarily with thousands of others in split-second encounters down on the

highway. At night, you will be spared the onrushing after-image of endless miles of interstate.

You will see fantastic things, utterly unknown to the concrete pounding souls below, or to the packed-in multitudes five miles above. You will see what our ancestors, carted out to the railheads and dumped off, were up against. You will see the problems their evident success has created. Properly flown, the trip will give you a lot of things to think about. Best of all, a properly-run trip will provide you with comfort, style, and a sense of inestimable privilege in being able to travel this way.

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It's up to the pilot, though, to make sure the passengers will see it that way too. He must take care that his passengers aren't subjected to a paralyzing, incomprehensible ordeal at the hands of a clod of a long-distance airplane driver. The overall success of the trip depends on how well you prepare yourself and your passengers.

PILOT PREPARATION: SKILLS AND EXPERIENCE

While normal private pilot experience plus common sense will get you in and out of most places, there are some things not to try until you've had instruction, practice (and a few bad scares).

Mountains

For mountain flying, a minimum of 150 hours of varied terrain experience is

strongly recommended. It's extremely important to have a good, reliable, short/rough field and crosswind technique, and be able to put it down where you want it, every time, without fail.

The Idaho State Dept. of Aeronautics puts out an excellent collection of mountain-flying material. The FAA's booklet, Terrain Flying, is helpful. Practice in and around our local hills and mountains is very useful. It doesn't take a very big ridge to produce lift, turbulence, and sink. The ride to North Adams a raw Spring day will teach you some of the things you need to know. Soaring experience is most helpful. Additional things you need to know are density altitude, terrain navigation, and how to deal with airstrips for which the word "unimproved" is a gross euphemism.

Out in the big mountains, always make local inquiry before heading into a remote area; if there are tricks involved (difficult approach, crooked runway, one-way strip, e.g.) take local instruction, and if it's really tough, like landing on saddlebacks or stream bed gravel bars, maybe you don't really want to fly yourself in there after all! Beware of sink when approaching airports perched on knobs or bluffs; and always, check density altitude, weight and balance, mixture settings, etc. There will be times when everything really does have to work just right, try as you might to avoid such situations!

A lot more is taken for granted in T.O. and landing competence out in the back country. You may make what you think was a moderately hairy cross-wind landing on the side of a slope of rocks and boulders, only to have some dude turn up a few minutes later in a DC-3 (!) and do the same thing without a ruffle.

(Of course, different parts of the country breed different types of flying competence: some of these characters wouldn't last 10 minutes in our Eastern Megalopolitan airspace. You will hear it solemnly averred that flying in the East is impossible: nothing for it but to sell the airplane, if through some hideous misfortune you had to move East).

In flying mountains, be careful with your passengers. You might be able to take rotten air, popping ears, cockeyed horizons, a climb rate like a heavily-laden latrine fly, airplane smell and the sun boring into your lap, but your passengers can't. Stay out of the mountains during the heat of the day! Stay at least 2000 feet above them if the wind is up! There's nothing like the wild ride during a mid-day descent into a place like Cody, Wyoming, as you pass through the general altitude of the surrounding mountains!

Night and Overwater

Instrument competence is needed for night and overwater flying, especially the two in combination! Taking off from Provincetown or Meigs at night can put you on instruments instantly, never mind what you might see out the windows. The same goes for mountain airport departures at night. Sometimes the glare of ground lights reflects off the inside of the canopy, or condensate forms, to where you can't distinguish the horizon, or the shapes of unlighted hills. Study the instrument departures, know what you're going to do when you find you're up there in pitch-black air. Know what you're going to do, too, when you arrive on a clear night at some airport tucked in a hollow, whose runway lights suddenly disappear

just as you flare, due to a thin layer of ground fog.

Metro Airspace

Radio and instrument competence are required to hack it on the approaches to a major metro airport at 5 pm in the afternoon haze. The population of a small city may be airborne in your immediate vicinity, with most of the traffic headed toward and away from the same spot. Approach control may have its hands full. You'll have to be quick, and do things just right!

Of course you will comply with ATC requests, and try to fit yourself in. Remember though that you're flying the airplane: don't get bullied into something that's not smart. It's not unthinkable to refuse to be vectored far out to sea, or to turn down requests to keep speed up to 140 knots on final. Watch that they don't vector you toward a mountain, and then forget you. If things go sour or start to snowball, break it off! Get out of there! Tell them what you're doing when you get sorted out, but fly the airplane first!

Swamp, Desert, Ocean, Boondocks

Avoid these. Stay close to civilization. The downside risk is very small, but why gamble for such high stakes? Follow interstates, railroads, or published airways. Everyone else does, so watch for traffic. If you must go into wilderness, take appropriate survival gear (required, for example, overwater, and in the Canadian wilderness areas).

PILOT PREPARATION: MENTAL ATTITUDE

Many new pilots have a problem. Generally speaking, they haven't thought much about their purposes in using an airplane, or any ulterior motives they may have had in learning to fly. Oh sure, they have some proximal reason for beginning, but typically they become all wrapped up in their new skill, to where exercising it becomes an end in itself. They may leave the rest of humanity for an endless sojourn in a small, closed world full of the minutiae of running the equipment and getting from one place to another. Flying, for them, takes place within these shrunken horizons, and they lose sight of the point of the whole exercise.

Or even if they are aware of the larger concerns, they find them so difficult to think about or express, that their poor passengers, understanding next to nothing, would have been better off taking the Greyhound bus! Consider the astronauts, who went to the Moon (the Moon!), whose epic voyage came back to us as nuts-and-bolts conversations with ATC: Who would want to ride cross-continent with clods like that?

You owe it to your passengers, and yourself, to think about the ultimate purposes of your flying a trip. For some, indeed, it may just be playing with complex, expensive toys, or yakking with ATC. Others may think only of getting from A to B. For some, it's a big ego thing, or perhaps a response to a feeling of powerlessness in one's everyday life. For others, it's a source of aesthetic contemplation: for still others, maybe all or none of the above.) Whatever it is, you should avoid laying it on your passengers unless you're sure they're all just like yourself, and can readily understand and agree to the point of the

experience you're about to embark upon together.

Who doesn't know people badly turned off by our type of flying as the result of some unfortunate experience or other, where this understanding was lacking? The flying landscape is littered with unnecessary wreckage created by the insensitive or preoccupied among us.

Indeed, you should make an attempt to get across to family, friends, associates what we see and do up there and what we think about, in terms other than the dull jargon of professional airplane drivers, from which such communication is deliberately suppressed. The works of St. Exupery come to mind.

PASSENGER PREPARATION

Consider this letter, written by the third person, ever, to actually fly. Professor Charles (of Charles's Law, and the hydrogen balloon) describes his first flight, Dec. 2, 1783, made with his mechanic:

"Nothing in my life will ever equal my joyful sensation as I rose from the earth. It was not pleasure but true happiness. Fleeing the fearful torments of hatred and calumny, I felt that I had put all my enemies to shame by rising above them. This moral feeling was followed by another, keener one: it was the hitherto unseen majestic painting of all nature spread before us in its endlessness. Below us, the throng of 300,000 onlookers stretched out like a field; above us, the cheerful vault of heaven, unmarred by any cloud; and in the distance, the most delightful of views. 'Mon ami,' I said to Monsieur Robert, 'how great is our

happiness. I don't know how the earth feels about us, but isn't heaven in our favor? What serenity, what a breath-taking scene! If only those who mocked us were here, so that I might say: "This is what you lose, you wretched beings, when you impede the progress of science.""

Something like Professor Charles's ^{apotheosis} ~~epiphany~~ is of course what your touring passengers hope for upon setting foot in your airplane. How disappointing, then, when what they experience instead is deafening noise, fear, gut-shaking vibration, spatial disorientation, sloshing of their innards --- and find themselves having to endure prolonged exposure to Airplane Smell, that powerful compendium of plastic vapors and bygone upchuckings, of which not even API aircraft are entirely innocent!

There are some passengers, visually oriented, and used to organizing their worlds from instruments or direct observation, who take to flying instantly. Then there are those unfortunates, typically spouses and children, in whom flying produces an overload of urgent sensory messages from their bodies which soon overrides their weak understanding of what's actually going on. A lot of unhappiness can be avoided by carefully preparing these susceptible types.

Pleasure flying can't be counted on as adequate preparation for a touring trip: the focus is too much on the ^e_^ ~~d~~stination, or on getting home.

In extended touring, the airplane becomes home, and many, many hours will be spent in it. Unless they're trained to enjoy it and all that goes with it, the passengers would indeed be better off on the bus. Until they're trained, they

almost literally see nothing! Once the immediate novelty wears off, they succumb to boredom and airsickness.

Training the Mind's Eye

Training the mind's eye comes first. Some of the following works should be obtained and left out for bedtime reading:

Wolfgang Langewiesche, "The USA from the Air", Harpers Magazine Centennial Collection. A classic description (circa 1950) of what cross-country touring is all about.

Hanns Reich, The World From Above, Hill and Wang, N.Y. 1966. A set of 88 spectacular aerial photos, some utterly baffling until you check their captions. Good for showing to children.

John S. Shelton, Geology Illustrated, W. H. Freeman, San Francisco, 1966. A readable text, very clear diagrams, supplemented by pictures shot by the author from his Bonanza. A gratifying skill: to be able to read what you see in even the dullest of landscapes!

M. Minnaert, The Nature of Light and Color in the Open Air, Dover (reprint) 1954, paperback. A Dutch astronomer's classic explanation of many curious and subtle atmospheric optical phenomena often seen from the air.

Bernard Rudofsky, Architecture without Architects, Museum of Modern Art (N.Y.);

Doubleday, Garden City NY 1964. Curious things and places, resembling in their unconscious, or un-self-conscious qualities, many man-made things seen from the air. Several aerial photos.

(There may be many other works useful for pre-trip reading to add to the list. Of course, it's useful to read up ahead of time on the history, terrain, crops, etc. of the area you're going to explore. Old National Geographics in the public library can be a big help.)

[Updated bibliog. needed]
Many new titles under "aerial photographs"
at amazon.com

Attitude Toward Flying

It helps a lot if passengers have some appreciation for what it means to be able to fly. Like other marvels, lightplane flying is taken for granted, and perhaps gets compared unfavorably to the more familiar ride in airliners and motorcars. Developing an appreciation for it is worth some thought and effort.

Something of the operation and navigation of the aircraft should be taught in a careful way. Even people who have no interest in being co-pilot will respond to being able to figure out what's going on. Flying an airplane, or riding in one, is done mostly inside the head: once the passengers can see it as a complex and dynamic intellectual game, at which they too have some competence, they cheerfully put up with distressing side effects, the delays, the failed arrangements, and all the rest of it.

A trip to the National Air and Space Museum in D.C. will help get across the idea that self-directed flight by the ordinary person is a consummate wonder, to be

undertaken in the most refined and elegant machinery most of us will ever get to handle. Passengers who can concretely see themselves as fulfilling this most ancient of mankind's aspirations tend to remain enthusiastic.

PHYSICAL PREPARATIONS

If a choice exists, pick an aircraft with room, visibility, and short-field capabilities. Speed is nice, but not essential. The 172 is a fine touring aircraft; so is the 210. Get to know the aircraft well, ahead of time.

Travel light. If you need a lot of stuff, airfreight it ahead, or rent or buy it locally. Mail back all rocks, socks, and souvenirs. Rip up directories and guidebooks to save weight. Get your passengers used to doing well on very little.

Exactly what to take is best left up to individual taste and the limitations of weight and balance. A presentable set of clothes all around is nice to have. Give some thought to the terrain and climate you'll be crossing. Most emergency considerations can be sidestepped by staying close to civilization, but reasonable shoes, hats, a tiny bottle of bug repellent, and adequate clothing should be carried. Pack one bag with everything needed for an overnight stay, so that leaving the aircraft at the end of the day is easy.

Food and drink should be non messy. Candy and marshmallows can create a hideous mess in an aircraft parked in the blazing sun! Same for carbonated drinks. Be careful when opening carbonated or very hot drinks at altitude. There have been

cases of people getting zorched by an exploding cloud of brown steam!

Don't neglect ear protection for everyone. A continuing dose of airplane roar can cause permanent hearing loss. Good sunglasses are important too. A UV-absorbing haze filter for the camera will help make the pictures come out better.

*unlikely
at ordinary altitude*

Other useful gear: empty canvas bag, screw-top jar, sick bags, wash-cloth soap and water, spare flashlight.

You'll see people carrying folding chairs, tents, bicycles, scooters, matched luggage. They are obviously not headed for the mountains. Pack your stuff in canvas or paper bags. Don't take one more pound than you can help!

The pilot will want to take fairly complete kit, as light and miniaturized as possible. Rip up an AOPA guide for FSS/WB phone numbers, Customs, and airport information for your intended route. Besides VFR sectionals, you will need a handy list of approach control frequencies, such as the one on the L-charts, a set of road maps, and a dime-store map of the US. Besides the usual clutch of gas, bank, and T&E cards, you'll need a phone card and a big supply of ~~times~~ ^{quarters}. Watch the total weight: you can easily run up 15 pounds of useless junk unless you're careful.

Plastic polish and a cloth will be helpful in summer, a snow brush in winter. An extra can of oil, chocks, and tie-down ropes may come in handy. Again, buy, rent, store, ship, or abandon anything you can get along without!

FLIGHT PLANNING

There's really nothing special about a long trip (it's merely a bunch of short hops of the usual sort strung together in a line). You do whatever you normally do each time you fly, and work your way that way across the country. There are a few particular considerations, however.

It's not a good idea to lay out a preconceived set of destinations, tourist sights, etc., ahead of time in any more than a general way. You may not make it because of weather, and then, too, the results are apt to be anticlimactic. In touring by air, it's much more rewarding to follow your own interests and leads turned up by local inquiry. The most amazing ground sights from the air aren't catalogued anywhere; spectacular weather is where you find it. Interesting local people and unique ground experiences are where you find them, too. Leave yourself the option of staying in a place you like, or cutting short a visit that turns out to be dull. Avoid most fixed commitments like paid-up reservations, theater tickets, family obligations. If these are the main purpose of the trip, or otherwise unavoidable, back yourself up with alternate transportation arrangements, or else warn everybody that you're not an airline, that you'll get there when you get there, and no one is to wait dinner or get bent out of shape if you don't appear! Expect to plan incrementally, leg by leg, as the trip unfolds. If tornadoes are predicted in the south, go north. Don't get locked in!

Don't try to use the airplane to make distance, like some sort of super automobile. It goes so fast that grinding along is hardly necessary. Use it

to make time instead. Properly done, a touring flight resembles a leisurely stroll, with plenty of time to see everything, and enough movement to keep it interesting. Never be in so much of a hurry that you can't stop in Peebles, Ohio to look at the Great Serpent Mound, or Edmonton, Alberta to take in Klondike days, if that's where you are and you're so minded. Use the time you've made to explore this fabulous country on the ground, or for just plain loafing. Local inquiry or a walk near the airport will always turn up something interesting to do. "Ground-validation" of what you've just flown over is extremely important, especially for children. Everyone will be much happier if you plan to put in only two or three hours of flying, only once or at most twice per day.

Sometimes distance must be made, or you have to keep going to outrun weather, but this should be an infrequent exception. If you really want to make distance, take the airliner.

Weather, of course will be the big uncertainty. Gather all the information you can, but make your own decisions; don't let the briefers intimidate you. In many cases, it doesn't hurt a bit to go have a look: many times the bad stuff fails to develop, or it turns out to be quite flyable. On the other hand, don't push on into deteriorating weather. The weather that's important to you is what you see out the canopy! Have several gold-plated, sure-fire alternatives, and enough fuel.

How the trip is flown is immensely important. The pilot must choose wisely between on-airways or off, sightseeing altitudes or higher, over the weather or under, and so on, carefully matching technique to terrain and weather for the purposes of the trip. If he doesn't do this, if he just pulls out the L-chart, sets the autopilot, and flies Victor airways, relying on ATC and some black boxes to get him there, he's letting gadgets and other people do his job, which is never very smart. He and his passengers will miss a lot of worthwhile experience. On the other hand, if he doesn't plan, doesn't make his route intentions known, and attempts to fly thumb-on-map into deteriorating weather and darkness, he's also being irresponsible and dumb. The right way to fly is by pilotage, with the radio gear used for checking, and dead reckoning used for backup, according to a considered plan (which last is communicated to or left with others.) That way, the pilot is flying the airplane and gaining valuable competence of his own, while still making use of the services that help make it safe.

Sightseeing altitudes must be chosen with care and discretion. Legal may not be prudent for obvious reasons. Low altitude flying calls for undivided attention to obstacle avoidance and airplane management. Let others gape at the scenery and take the pictures: you fly the airplane. Don't fly low toward the sun; don't fool around with mountains and TV towers in low visibility; watch out for cables between bluffs along rivers and canyons. Don't try to sightsee when it's rough: you will only make the passengers sick.

Never crowd range! Two hours of fuel left is about the minimum comfortable reserve for most operations. Less than that, and you're beginning to close off options. With only one hour left (that you're not too sure of, perhaps) things

get much too critical. Soon you're committed. And suppose the pumps are closed, or the airport isn't plowed, or it goes IFR, gets hit by a T-storm, gets closed by an accident?

Two hours of flying is all you and the passengers should be exposed to at one time, anyway. The third hour becomes unbearable, as kidneys fill the little tanks faster than the engine empties the big ones. Noise and strain get to the pilot during the third hour and turn his brains to spaghetti.

Getting locally lost isn't smart, especially in the mountains. It can happen easily there, or out on the plains, where distances are immense, signals weak, and where one town looks much like another. At night, oil-well burnoffs pulsate convincingly, just like airport beacons. Follow the highways and railroads, use the ADF, and you won't have any trouble. Of course, you can be forever swooping down to read the town names on the grain elevators or the route signs on the interstates, but this is inelegant, and won't do at night.

Whenever fatigue sets in, land! Spend some time walking around on the ground, picking berries or wading if there's nothing else to do, or just sitting under the wing. Watch out when you get back in, however, that you haven't taken some livestock aboard. Wasps are an obvious problem, and even a horsefly zipping across one's peripheral vision can be a real heart-stopper.

Emergencies are much talked about in the books and flying mags, and of course, some thought must be given to them. They're not at all the main problem in extended XC flying though. The usual emergency gets declared in the airport

cafeteria, when you decide to abandon the tasteless glop set before you and go eat crackers in the plane. Flight plan filing is recommended, of course. Always leave word of route intentions, sign airport registers. If nothing else, send postcards home with the latest route changes. Don't let relatives or colleagues panic (which can happen all too easily).

LANDING AND TIEDOWN

Finding airports can be difficult if the surfacing is the same as the surrounding terrain. Magnetic deviation will affect the way Western airports appear to pilots coming from the East. You may find yourself unconsciously lining up wrong for a Runway 29 in Western Canada. Where no runway can be seen, look for airplane tire-prints, which have a characteristic shape and distribution. Soon, you'll see them everywhere.

Watch out for the ignorant and sloppy traffic pattern behavior of the locals. They're apt to come diving down from any angle and scare the wits out of you.

Be very careful when taxiing. Local pilots know about pavement drop-offs, ditches, or iron stakes hidden in the weeds, but you don't. Shut down and explore on foot if there's the least doubt.

While something can always be found to tie down to, ropes are apt to be frowzy or missing. Always tie down, chock the wheels, install the gust-lock, etc. Keep in mind the recommended procedures for protecting the plane from a sudden squall or windstorm. At bigger places where they might want to move it, leave the brake

off.

FINDING EN-ROUTE LODGING

There are a few flying motels around, but they're apt to be a bit raucous. The usual thing is to land somewhere at a reasonable hour and have a motel send a courtesy car for you. Motel owners are quite accustomed to seeing glassy-eyed tourists, clutching paper bags and other miscellany, arrive on their doorsteps without a car or other sign of their provenance. Often you can spot likely places from the pattern as you land, or there will be a list tacked up by the airport phone.

While it's generally possible to find a room almost anywhere, be sure to have some alternative to finding yourself high on a windy knob, far from anywhere, the night filled with thunderstorms, an exhausted family to take care of, and no vacancy within 40 miles.

AIRPORTS, AND THE PEOPLE YOU WILL MEET

There's no reason, other than those already given, not to go to an area's giant metropolitan airport if that would be most convenient. Your arrival and departure will be handled expeditiously, and on the ground, you will often be met by a truck and given the royal treatment. Avoid the peak traffic hours, though. Waiting in the elephant-line is pretty tedious, and the kerosene smoke from idling jet engines causes rapid wear of your engine (never mind your lungs).

Medium sized airports with recently acquired towers and radar service can be a pain. The controllers are up tight, and pesky security restrictions make it difficult to go in and get a sandwich. The taxi ride to town is a "gotcha" that will cost a fortune.

Little airports are generally friendly places. Some are rural slums, others are spit and polish. Some have terrific terminal buildings built by the WPA back in the '30's, preserved because progress passed the airport by.

Deserted airstrips frequently turn out to make the most interesting stops.

Their vicinities are inhabited by unhomogenized local people pursuing their own versions of the American Dream. Their life styles and artifacts, frequently on view, are quite distinctive. You never know what you're going to find.

Stonington (ME), now much improved, used to be a horror, right next to the town dump, with ramp and tiedown area full of broken pavement and junk, a real contrast to, say, Mackinac Is. (MI) all landscaped and lined with zinnia beds. Friendly people turn up in both places, however. Sometimes you discover something quite unusual, like the enormous goose (in a sentry-box-like goose house) who for many years guarded the property of an abutter to the Schroon Lake (NY) airport.

Often, at these deserted places, if people see you circling, they'll leave the tractor running in the field and turn up to welcome you, pump a little gas, hear about your trip, admire your airplane, and pass on advice about the route ahead, all through a shared love of flying. Often they'll take you where you want to go, or lend you an old heap (which you refill with gas when you're through), or

offer you a spontaneous tour of whatever it is that makes their place special. Cross-country touring by automobile must have been like this at one time: perhaps hitch-hiking is like it now; but it is hard to think of another way that you're really going to meet the more active and interesting people in a given locality just in the course of passing through.

Indeed, when you reflect on all that happens during a long touring trip, it's hard to know how to repay the friendship and many kindnesses you will receive from people on the ground and from your fellow pilots. The least you can do is pass it on in your own flying.