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Busy Airport Etiquette

There is much ado these days about the conflict between the airlines and general aviation. If "Ol' Will" [Shakespeare] will forgive me, it may well be "Much Ado About Nothing," because those talking are talking about a situation which is 95% nonexistent.

It is a fact that a *few* airports in this country are really busy. They are busy because people want to go there—people who have to depend on the airlines, and people who are lucky enough to be able to fly themselves or to be privately flown. Aviation—both kinds—is so successful that the problem will become more severe, not less, with the passage of time.

But what about today? Can we, who fly the smaller airplanes, do anything to expedite traffic flow at these places? I believe we can, and I'd like to offer a few operational suggestions to start the ball rolling. Maybe some pros will join the game, and we will get something moving toward practical solutions not based on parochial views.

Before going into a busy airport, I think the pilot should have enough experience to enable him to fly his airplane easily and comfortably while his attention is directed mostly toward business other than the basic mechanics of airplane control. There is no magic number of hours when this occurs, but the pilot knows when he has reached this level. His control of the airplane should require no more concentration than he expends in shifting gears or using the turn indicator on his car.

Our airplanes are pretty flexible. They have a wide range of speeds that can be very usefully employed around a busy field. Most of us can fly in the approach speed range of the jets, and we can also come to a virtual stop. A little planning can make this flexibility a real bonus for all. Even a 20-year-old 170, like the one I putter around in most of the time, has an operating range that will permit me to operate in and out of a large, busy airport with a minimum amount of trouble to an airliner or the controllers.

The pilots of large airplanes, and also the laws of physics, want any maneuvering that must be done in a big airplane to be done in a leisurely fashion. Airline operators have found their passengers are a lot more at ease if changes in the flight path-direction and altitude-are smooth and unhurried. The big airplane wants to keep going in the same direction and at the same speed. The engineers mutter something about "conservation of momentum" or "laws of inertia." Whatever it is called, it causes the big-bird drivers to prefer setting up their speed, their configuration, and their attitude way out so they can slide in home with the least possible changes. It is because these airplanes do retain their flight condition that they are actually a lot easier to fly than small ones, once a pilot has learned the airplane's characteristics. The net result of all this is that the

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transports have a halfway legitimate reason for resenting any interference with their plans on final approach—only halfway, because it is an item of convenience, *not* safety. So, if an airplane in front of them on final is generally similar, the likelihood of a traffic conflict is markedly reduced, because their relative speeds are about the same and the flow of traffic is comparatively uniform.

Herein lies our opportunity to reduce the congestion. Away from the airport we can keep out of the way by staying off the straight-in approaches. Just a few degrees will do, and the fast ones can slide right past us. How, you ask, does one tell which track to avoid? There are at least two ways. Sectional charts show runway alignments for hard-surfaced runways, and, secondly, the automatic terminal information service (ATIS), available at busy airports, will tell you well before you arrive which runway is in use. Airways are also depicted on the sectional charts. With these bits of information one can easily avoid the corridors used by the big ones. An alert ear on approach control communications will help you become aware of the location of individual airplanes. (As an aside, I'd say that the large, sterile areas around airports, as proposed by FAA, are not a practical solution. Corridors such as the military's, depicted on all charts, are much more logical. However, this is an area that will ultimately be dictated by the FAA—hopefully after seeking and heeding comments.)

Another thing to do, probably the most important, is to keep fast and high. I prefer to stay above the jets on their inbound leg. (You can hear approach control tell them the altitude to hold.) This keeps me above their tip vortices. Also, by staying high, I have altitude to burn off before I can land. As I approach the airport I use this altitude to speed up-above cruise in my 170, as an example. I try to keep around 125 m.p.h. (108 knots) or better. A DC-3 is more of a traffic problem for the controllers than I am in the 170. He's limited to 99 knots when he gets his flaps half down. Under normal conditions, even a DC-7 or a Convair 440 won't be over about 120 knots at this point. In other words, join in the flow of traffic. Just because you're driving a Volkswagen, you don't have to do 40 m.p.h. on the freeway.

Approaching an airport, we will face one of three traffic situations with which we must contend: (1) we'll have no traffic; (2) an airplane will be in front of us about to land; or (3) an airplane will be on the runway about to take off.

Should we find the unusual, and there is no other traffic, it's a simple matter to close the throttle, let the airplane slow down, and land. The old saw about touching down in the first third of the runway is hardly applicable, since the last half of the runway at the kind of airport under consideration is probably twice as long as the one for which our small airplane was designed.

If there is a large jet coming in at about the same time and we keep up our speed, we can still get down and off the runway ahead of it. The big plane then won't have to alter its standard approach. If it appears it'll be close to a tie, and we're just a bit ahead, tell the tower we can slow down and let the big one in first. Gosh, that airline captain will be so pleased he will glow. [Of course, if landing instructions already have been given, the tower may not be too happy about a switch on approach. —Ed.]

Let's say the pilot of a big plane is going to land first. I recommended staying high and fast; that will keep us at a safe altitude and still close in. Now, he'll touch down in the first third of the runway, and once his nosewheel is on the runway he'll no longer be generating high-energy vortices. So, landing far down the runway is really safer in this instance because it will allow me to keep the interval small and still avoid the atmosphere he has stirred up. Keeping up with the flow of traffic is usually the problem, but the speed is, of course, adjusted to keep the interval to a safe minimum. When the time comes to reduce speed, close the throttles and hold the nose level. As soon as the speed decreases to partial flap speed, put them down-still holding level flight. The speed will quickly drop to where we can put down full flaps and the gear, if the gear is the type that tucks up for crosscountry. If you know your airplane well,

you can slow below best glide speed and settle even faster if it is necessary. There is no need to land fast by trying to push a tri-gear airplane onto the runway. The airplane will slow quicker if the nose is held up. If it is desirable to stop shorter, the flaps should be retracted at touchdown to increase brake effectiveness.

I try to plan the touchdown short of a taxiway intersection at a point that will allow me to be slow enough to turn off safely at the intersection. Using this procedure I have often followed a jet in, touched down just after he's turned off the active, turned off the runway myself, and, as a consequence, been on the taxiway leading the jet back toward the terminal or service area.

If there is a jet about to take off while I'm on final, I slow up and attempt to touch down very early. This is to get on the ground before reaching the point on the runway where he has rotated. Short of that point, the wing is producing little lift and correspondingly little vortices. When operating in the vicinity of jets, I use the exhaust trail as an indicator of the area to avoid.

The departure can also be planned so that the small airplane is a very brief traffic item. The first thing to do is to tune in the ATIS and let it play through enough times so you have all its information understood. Then call for taxi instructions. When you have completed your runup, and you are 100% ready, call for takeoff clearance. Ask for a right or left departure at this time, even if your destination is straight out. When the tower gives you your clearance, get out there and keep rolling!

As soon as you are airborne, climb at a speed no faster than the best-rate-ofclimb speed. As soon as you can, say at 400 feet or more, start your turn. If instead of going straight out, you turn about 45°, you will thereby quickly clear the takeoff path for a large one that may be waiting. I hold the best rate of climb until I get well above the altitude of the inbound traffic, and I sure stay out of the jet climb corridor. This type of departure will result in your occupying the runway a shorter period of time. Too, if you'll go to the end of the runway, rather than ask for an intersection takeoff, you can get off and be up and over the vortex of a departing airplane. Caution must also be exercised against taking off too close behind a landing jet. In essence, what we really must do is avoid getting into those areas through which a large airplane has recently flown at low speeds.

It is my good fortune on occasion to use faster equipment than my 170. Unless it is a transport category airplane, I operate it at a busy airport just as I do the 170, except I fly even faster getting up to the airport. I hold 150 or better, which is close to the 135 knots the "kerosene queens" use on approach. In a Cessna 310 you can drop partial flaps at 160, and in the Cessna 411 at 180, so there is no problem getting this type of airplane down, either. Of course, if you're in a *Learjet*, you will be the one waiting for the airliner to get out of the way. Oh, the joy that comes when the shoe is on the other foot!

It might be mentioned that in IFR operations in smaller airplanes, we can also reduce congestion if we practice and use a higher approach speed. With a gear speed of 140 m.p.h., I don't see any reason not to fly an approach at that speed. It also gives a margin for missed approaches or unexpected trouble.

To sum it all up, we who fly low and slow—where the real pleasure is should set a courteous example at big airports; do our utmost to know the procedures used there; listen a great deal on our radios and speak infrequently and correctly; come in high; get down fast; keep off the straight-in final used by the big birds; be ready to go when given the use of the active runway; and, once airborne on departure, turn away from the departure path used by the faster airplanes. This brings us up to what the FAA could do.

The biggest hurdle is to get the FAA to really believe that all of aviation is important. Once the agency does this, it can equitably resolve the few areas where conflicts are real.

It seems, for instance, that at busy airports, traffic waiting to take off very often misses using an available time interval because the tower cannot release the next one up because there is someone calling in, 10 miles out, wanting landing instructions. By the time that message is completed, an airplane on final is too close to permit releasing the waiting aircraft. It may cause a few snickers, but what would be wrong with a traffic light at the end of the runway, visible only from the taxiway-a light that the tower could change from red to green by pushing and holding a button. He could release traffic while talking to others. A small point, but traffic delays are caused by lost seconds.

The taxiways at most large airports would more than serve as a runway for the vast majority of general aviation aircraft. Surely, every major airport can put in such a strip somewhere on their vast acreages, especially if the FAA were to use its financial powers to "persuade" those airports to provide such facilities.

The FAA should turn loose some of its brains—and they do have some really good ones—on the small airplane terminal procedures. Like most things on traffic control, general aviation has been forced to tag along with what has been decided as being optimum for the airlines. Once the FAA has done some firstclass planning, it should then expend its major efforts on education instead of enforcement.

It may be well for the FAA to remember that in every form of transportation yet devised, the private segment has become the dominant factor. It was Santayana who said, "Those who forget history are doomed to repeat its mistakes." Let's hope the FAA will take another look at its charter and at general aviation and wisely conclude that when this sleeping giant really gets awakened, it will have been a very fortunate thing to have befriended it.