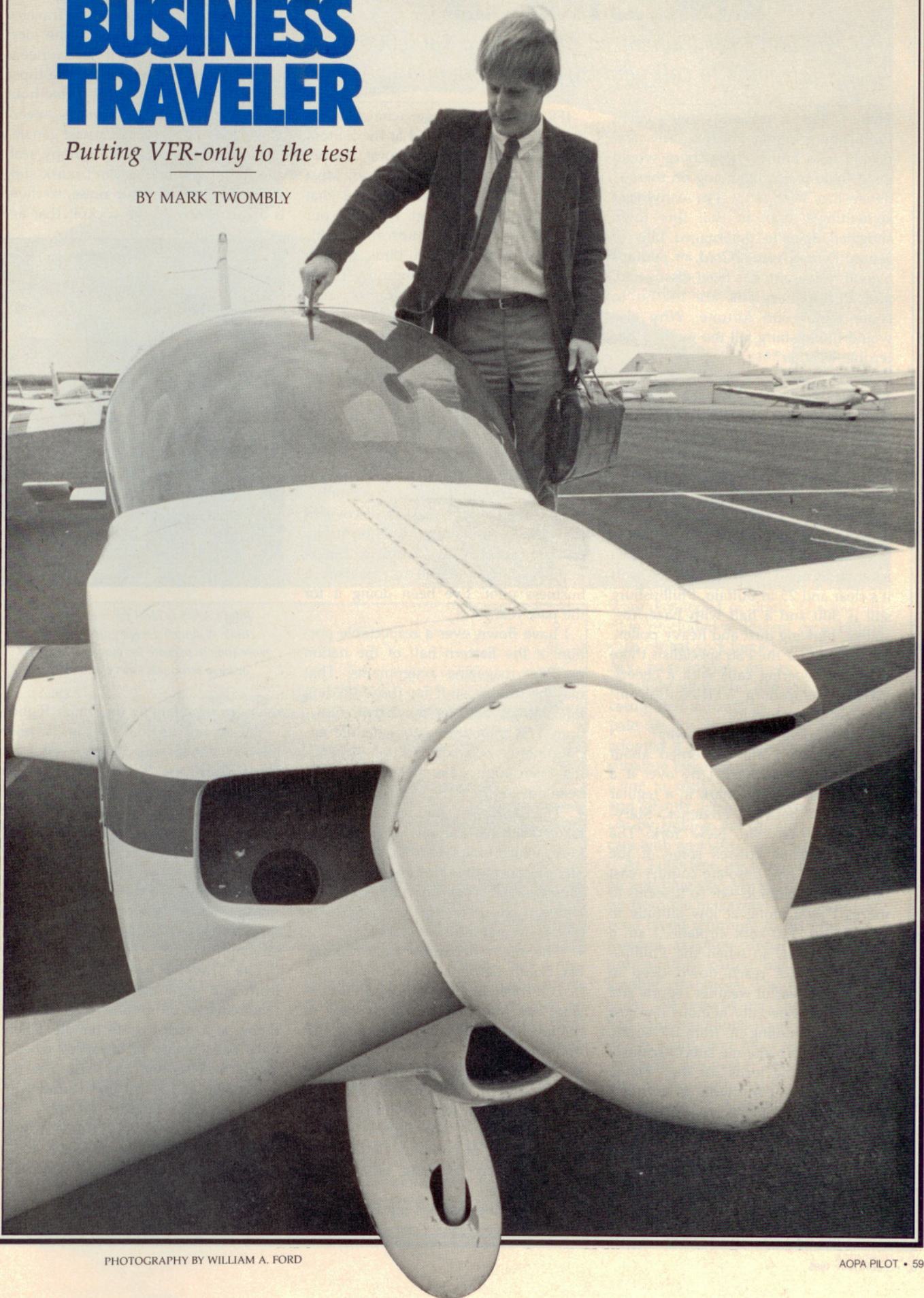


# BUSINESS TRAVELER

*Putting VFR-only to the test*

BY MARK TWOMBLY





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*You don't need advanced ratings or a \$300,000 airplane to call yourself a business pilot.*

There is something funny going on in Phillipsburg, Pennsylvania. The few people who know Phillipsburg would insist there is *nothing* going on there—never has been—but I'm convinced something's afoot in that tiny town snuggled deep in the rugged hills of central Pennsylvania. Gold, or perhaps a good restaurant, has been discovered, and Phillipsburgians are loathe to share their good fortune. Why else would Phillipsburg tell the world it has terrible weather?

There is a flight service station in Phillipsburg that consistently observes and forecasts the worst weather conditions this country has seen since air mail pilots conducted precision approaches by spinning down through overcasts and recovering over the numbers. If it's 1,000 and 3 in Johnstown, it's 500 and a half over Phillipsburg with reports of moderate mixed icing and Canadian geese operations. If it's clear and 25 in Buffalo, Phillipsburg still is 500 and a half with haze, fog, smoke, blowing dust and heavy pollen. I'm waiting for the FSS specialists there to start answering calls with a cheery, "Hello, Phillipsburg 'VFR-Not-Recommended' Flight Service. . . ."

What's going on here, anyway?

The reason I am concerned about Phillipsburg is because I fly over it a lot. It is the halfway mark in a regular trip I make between Frederick, Maryland, and Wellsville, New York. The 170-nm journey crosses some of the most rugged and desolate country east of Boulder, Colorado—or so it seems to me as I plod along at low altitude in my 150-hp, 110-knot airplane. I am a VFR-only pilot, so when the Phillipsburg FSS folks reach down deep in their bag of fearful weather reports and pull out an especially heinous one just as I come trundling up from the south, it's enough to make me subconsciously start composing leads for the "Never Again" column I will write as soon as I am safely back on the ground and can swear off the unnatural act of flying.

I know I am not alone. There are about 450,000 VFR-only pilots in the United States, each haunted by his own private Phillipsburg.

IFR-rated pilots forget what life was like when they were still at the bottom of the aviation ratings ziggurat. Simply put, VFR pilots have got it bad. Most of us fly underpowered airplanes that are marginally equipped. We make our way slowly over the landscape at altitudes inhabited by large birds, tall antennas, revolving restaurants, TCAs, advertising balloons and lots of other airplanes. Worst of all, we are at the mercy of the weather. Wait, let me revise that: We are at the mercy of the weather *forecasters*; we don't say go until they say we say go.

Faced with such difficulties, it is hard to believe that VFR pilots extract much utility from aircraft other than droning around the pattern to stay proficient for the next time they practice droning around the pattern. Yet, I've discovered it is possible to have a pilot's certificate endorsed only with "Airplane Single Engine Land" and still call yourself a business pilot. I've been doing it for the past year.

I have flown over a respectable portion of the Eastern half of the nation on *Pilot* magazine assignments. That may be routine stuff for those holding IFR ratings, but, for a relatively low-time VFR pilot trying to schedule appointments between frontal systems, it's been high adventure. There has been adventure, to be sure:

- The return trip from the Experimental Aircraft Association Fly-in at Oshkosh, which took two full days and not just because the airplane was slow. The weather was miserable, shifting between adequate VFR to marginal to give-it-up-and-land conditions.
- The night departure from Columbia, South Carolina, when the air traffic controller kindly suggested I reconsider my intended course in view of the level 5 thunderstorms lying in wait off my nose.
- The labored ascent to 10,000 feet over southern Pennsylvania (Phillipsburg was not far away) with the climb rate approaching two digits, trying to clear a forest of cumulus cloud build-ups that were growing taller at an alarming rate.

The airplane that has transported me

through most of my adventures is a 1974 American Aviation AA5 Traveler. Like my VFR rating, it is not the ideal business aviation tool. It sorely needs another 30 horsepower to hurdle those building cumulus, and the three-hour range is frustrating, given its speed. The avionics are relics of a past generation. Air whistles past the canopy seal, and the thin windows can't mask slipstream and engine/prop noise, so there is a cacophony in the cockpit that ac-



*Pilot's AA-5 is ideal for the ziggurat climb. A simple design gives the pilot more time to prepare for marginal weather or busy terminals (above and right).*

celerates pilot fatigue on longer flights.

Yet, for all its foibles, the Traveler has functioned surprisingly well as a practical airplane. It has helped me, the lone VFR pilot at *Pilot*, discover that it doesn't require advanced ratings and an aircraft that costs six figures to gain entrance to business aviation. Those things are desirable, of course, and ultimately essential to ensure safe, efficient transportation use of airplanes, but are they absolutely necessities in the beginning? No.

The Traveler has enabled me to learn and grow comfortable with the requirements of routine cross-country flying, at a pace I could handle. There have been plenty of instances when I would have savored the extra measure of prestige and speed that comes with flying complex singles. But those are overshadowed by the times I was thankful I didn't have to worry about manifold and rpm settings, cowl flap positions and emergency gear extension procedures as I struggled with de-





teriorating weather and growing fear, or invaded busy airspace guarded by air traffic controllers speaking in rapid-fire tongue.

The biggest challenge I have had to face as a novice business pilot has been flying in marginal weather conditions. Without an IFR rating, I knew I would be grounded far too often if I refused to fly in anything but good visibility with high ceilings. I also wanted to acquire the confidence that comes from tackling questionable weather. How else could I

define my limits? It doesn't take a new pilot long to discover that flight service station briefings don't always paint an accurate picture of reality. Pilots learn to evaluate weather briefings in light of their own observations and experiences. I needed to build that experience.

The trip back from Oshkosh represented the peak of my marginal-VFR learning curve. It began when we slipped out of hazy Wittman Field just after VFR minimums were reported. Five miles from the airport we suddenly

were enveloped in cloud. The low altitude precluded a descent or a 180-degree retreat so I forged ahead, and up. My passenger, an accomplished ultralight pilot who had logged time in certificated aircraft as well, turned as pale as the morning cloud bank. He adopted a mental defense against the situation by grabbing an ultralight magazine to read. I marveled at his calm and silently wished he would surprise me by pulling out an airman's certificate with an instrument endorsement.

At 2,000 feet, we broke out into clear air and blue sky. My passenger glanced up from his magazine. I was sure I noticed blood returning to his knuckles. I listened as pilots departing Wittman immediately called back to request landing clearances. The field was IFR again. We pressed on. The FSS briefer had said conditions were more benign to the south, and he was correct. The undercast dissipated. We rounded Chicago to the south, made a fuel stop at Starke County Airport in Knox, Indiana, then proceeded east, toward more trouble.

The enroute weather reports were not good: Thunderstorms overlaid our path ahead. The haze still was thick,





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but visual meteorological conditions certainly prevailed. Overhead, the sky was densely populated with cumulus clouds that were beginning to tower. We decided to land at Fort Wayne to have a firsthand look at the flight service radar maps.

The maps were of little comfort. Thunderstorms were raging to the north and south of our course, and the hot, moist atmosphere was ripe for the formation of new storms. On the other hand, we just might sail along unaffected. It was the classic VFR dilemma. Do you play it safe and sit down to a long, long lunch, perhaps dinner and breakfast, too, or do you go up and have a look? We decided to take off for a closer look.

Twenty minutes later, the Traveler was struggling to top a crop of building

cumulus. We had elected to climb because visibility down low was getting worse and the scattered-to-broken ceiling had dropped below our cruising altitude. The airspeed hovered at 85 mph as we deviated around the taller pillars. It became obvious this was the wrong escape route, so we sought the closest haven: Van Wert Municipal in Van Wert, Ohio. We ate our long lunch at that stop.

The next leg would turn out to be our last for the day. We departed Van Wert in passable conditions, but we knew that it could deteriorate. Slogging along at low altitude made it difficult to raise flight service stations for weather updates, but what I managed to hear was not encouraging. Thunderstorms continued to block our course about an hour ahead. There was no

hope of completing the trip by early evening, so we resolved to get as far east as possible. As we passed north of Hardin County Airport in Kenton, Ohio, wisps of cloud were beginning to collect just over the terrain. We landed at Hardin, telephoned flight service, and took off on one last, brave attempt to put a few more miles behind us. Five minutes after departing, I turned back, landed and tied down for the night. I had lost all fight.

The Traveler had covered 165 miles between the first fuel stop of the day and Hardin County. My passenger and I commiserated with a couple who had left Oshkosh a day earlier in a de Havilland Tiger Moth. They found Hardin County Airport by following the main road south of town.

The fog lifted the next day at 11 a.m.





An hour after takeoff, we ran into rainshowers and retreated to the southwest and Coshocton, Ohio. The pattern was getting monotonous: Fly for an hour until the weather got the upper hand, land to refuel and check weather, vacillate over continuing, but, in the end, decide to press on, and an hour later, land again. Sure enough it went fine the first hour out of Coshocton—best weather of the trip—but then the cloud bases began to dip toward the mountain peaks that loomed in the haze east of Morgantown, West Virginia. I elected to continue. My passenger was on his third reading of the ultralight magazine.

With my finger carefully tracing our progress on the sectional, we threaded our way between the overcast and the rugged hilltops. Fortunately, we were

able to follow Route 40 up and over the tallest hill and into Cumberland, Maryland. East of Cumberland, the haze got very thick—we were at VFR visibility minimums—but reduced visibility was a minor annoyance at this stage of the flight. We landed at Frederick exhausted, but seasoned.

The Traveler has been my partner in discovering weather flying, but I also have learned much about the dollars-and-cents side of aviation. One of the pleasant aspects about operating an airplane the size and simplicity of the Traveler is the low cost. Following is a breakdown of the expenses of operating N5414L during 10 months in 1984.

- Total hours flown: 171
- Fuel @ \$18 an hour: \$3,078 (\$18 an hour for 150 hp? See below.)
- Engine overhaul reserve @ \$4 an hour: \$684 (2,000-hour TBO; \$6,000 estimate for the overhaul, plus a \$2,000 cushion)
- Tie-down @ \$54 a month: \$540 (Not bad by some standards—\$100 a month for the cheapest single-engine space at Westchester County Airport, and you may have to wait in line.)
- Insurance: \$1,000 (annual premium)
- Oil changes and an oil analysis: \$72 (Cheap, but I did the work.)
- Total fixed and direct operating costs for the 10 months: \$5,374, or slightly more than \$31 an hour

The \$18/nine gallons an hour fuel budget may seem high for a 150-hp engine, but it is realistic. The Traveler has exhibited poor fuel economy despite careful leaning. Frustration over the sub-par fuel efficiency led to our most expensive unscheduled trip to the maintenance hangar.

Several months ago, we learned that the Marvel-Schebler carburetor on the Traveler's Lycoming O-320—and on an estimated 120,000 aircraft engines—is subject to float problems. The composite foam-type float can soak up gasoline, which affects its buoyancy and causes carburetor flooding. The Federal Aviation Administration claims that serious flooding could result in an in-flight fire or engine stoppage. Indeed, the FAA has issued a notice of proposed rulemaking calling for replacement of the composite float with a brass pontoon float kit.

We elected to have the Traveler's composite float replaced, even though it is not yet mandatory. (The comment period on the NPRM ended November



*Twombly returns to FDK (left) after a trip for Pilot. This one was by pilotage—both nav radios went belly-up.*

30, and, at press time, an airworthiness directive had not been issued.) However, our repair bill did not match the FAA's estimate of \$197. The replacement kit cost \$85; the FAA estimated \$57. Additional parts, including a new float needle valve and seat, came to \$57.65; the FAA said no additional parts would be necessary. We were charged \$288 for labor—twice as much as the FAA's estimate.

The new parts and an idle mixture adjustment cut the Traveler's fuel economy by about a gallon an hour. At typical cruise power settings, it now burns eight gallons an hour, still in excess of the AA5 Handbook assurances of 6 to 7 gallons an hour. The carburetor repair bill came to \$439. I figure it will take about 220 hours of flying before our investment in a metal float begins to pay off.

There has been one other expensive repair session that was unanticipated. The vacuum pump failed. Fortunately, it happened on an engine start and not in the clouds. The replacement pump was defective and had to be replaced as well.

The only other engine/airframe squawk was a busted lock atop the sliding canopy. It succumbed to a staff pilot who was a member of his college wrestling team. So, the 10-month tally for unscheduled engine/airframe maintenance is as follows:

- Replace carburetor float: \$439 (marginal improvement in fuel burn)
- Replace vacuum pump: \$337 (vast improvement to the airplane—the artificial horizon works again)
- Replace mangled canopy lock: \$43

*continued*



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*Pilot's year with N5414L included 171 slow—but inexpensive—hours.*



(Shop installed new lock backward. We should have reversed charges.)

• Total unscheduled maintenance: \$819. If that amount is added to the fixed and direct operating expenses, the total hourly cost of flying the Traveler during the ten-month period amounts to \$36.22. The only cost not accounted for in this budget is the annual inspection. The last annual was expensive—\$1,079.61—but included an overhauled propeller and a lot of fiberglass repair work. If the next annual costs \$500, it would increase hourly operating costs to \$39.14. Unless more unscheduled maintenance is required, the hourly operating costs will diminish, the more hours the aircraft is flown.

The final bone of contention between myself and N5414L, and its most significant shortcoming as a business airplane, is the avionics. They are old and unreliable. The Narco 11A nav radio was victimized by the ex-wrestler. An internal rubber belt that tunes VOR frequencies had to be replaced. But even after a factory repair, the radio works only about seven percent of the time. Every so often, the course deviation indicator needle will bounce off its resting place and swing wildly to the left or right. The "OFF" flag will disappear, and, for a couple of minutes, I get a

positive reading. Then, just as suddenly and mysteriously as the CDI came to life, the unit drops off into a coma.

With the Narco off-line, all VOR navigation duties pass to the King KX 145. It worked just fine until recently, when it, too, went belly up. A trip to the shop is imminent. Fortunately, the Traveler has served as the test-bed for a Nelco VFR Loran C under evaluation by the *Pilot* staff. It seems more than a little incongruous to have a winking, blinking Loran C display spewing out all kinds of useful information—direct course, groundspeed, time and distance to go—next to a couple of old and tired VOR radios, but I am sure happy the unit is there.

The two communications radios are adequate, although I've been told several times by controllers my voice was unreadable or very weak. The transponder—negative Mode C—has gotten me into the inner sanctum of the Washington, D.C., Group I terminal control area and Washington National Airport. The automatic direction finder is erratic, and the Marker Beacon has never worked.

Thus is the state of my business aviation transportation. It's a little embarrassing to be flying such humble equipment while my staff peers spend

idle moments comparing notes on horizontal situation indicators, approaches to minimums and Beta mode, but I suppose the Traveler is well-suited to my own neophyte qualifications. Besides, it's not *my* airplane.

In defense of N5414L, the Lycoming starts in any weather after two revolutions of the prop, and it has been silky smooth in flight. The cockpit has excellent visibility, and the rear bench seat-back folds flat for loading bulky cargo. Precise handling makes the Traveler an enjoyable airplane to fly. Perhaps because of its sliding canopy, castering nosewheel and reputation as a good performer, people at fuel stops ask questions about the Traveler and show an interest that I'm sure wouldn't be there if I climbed out of a more familiar brand of airplane.

When all is said and done, only the bottom line remains. That has been the Traveler's best line. The 171 hours may have passed slowly and in some discomfort and consternation, but, at the same time, they have been relatively inexpensive hours.

Rewarding, too; I have learned much from my travels with the Traveler. Now, if I can just schedule a check-out in that Turbo Arrow parked down the ramp. . . . □