

■ ■ It is not unusual to read articles relating to the difficulties experienced by modern-day pilots in night-flying episodes. I am particularly surprised, and sometimes amused, by those who doubt the capabilities of single-engine aircraft. I sometimes wonder how they would have been able to wander through the darkness with their aircraft 40 years ago—as many of us did, with hardly a thought of possible inability to reach our respective destinations.

As president of the OX5 Club of America, I am well-acquainted with many of the older pilots who pushed their way through on extended flights, almost night after night, without difficulty—and without the conveniences and instruments now found in almost every modern aircraft.

It has been said that the three biggest dangers of flying at night are “weather, booze, and fuel.” For my part, I believe these three items are almost equally dangerous in flying at any time, during daylight or darkness. But I suppose that in our modern age, there is greater necessity to give credence to those failings than there was in the days when we were dependent almost entirely on ourselves.

To me—and to a great many other oldtimers in this business—flying in darkness was just another flight in which we had to use good judgment and the benefits of experience. We really had little thought or concern about the number of fans up front, as there were relatively few aircraft with more than one. Certainly there was the chance of mechanical failure, whether in day or night flying. But most of us who flew charter and were engaged in lengthy cross-country work were licensed A&Es. While most of us who could afford it had proficient mechanics tending to that phase of our work, we too were super-cognizant of the condition of our powerplants and aircraft.

I can remember when, after a long day of barnstorming at some distant point from our base, we flew even OX-5s at night, without any real fear as to our ability to make it home. I use the word “even,” although there were few barnstormers who used anything besides OX-5s in that type of work. In most of the charter flying that I did later, I was fortunate in having radial-type engines.

In the early 1930s, a great portion of my cross-country work was done for the news media and movie concerns. Based in Miami at that time, I found plenty of work available to me through such national news-gathering concerns as Associated Press, Acme News, and Paramount. The closest telephoto equipment to Miami, for still-pictures, was in Atlanta. I made many trips to Atlanta at night, with pictures which then were flashed throughout the world. For Paramount News, I transported newsreels to New York, where duplicates were made and distributed.

Obviously, such agencies depended on good flying ability and well-maintained aircraft. I tried consistently to make sure that I met those require-

It was no 'big deal' 40 years ago, under much more primitive conditions, says this veteran of night charter flying in the early 1930s

Single-Engine At Night? Why Not?

by KARL E. VOELTER
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ments in every way, and I am certain that my clients felt reasonably sure their valuable pictures would be safely delivered.

I never did any drinking to speak of, so there was no element of concern on that score.

Weather? Yes—weather was a problem to reckon with. The Weather Bureau people were wonderfully helpful to us whenever they could be, but their information was sketchy, and generally told us little more than what the forecasts were at major points we were to pass through. Forecasters were hampered by so-called segments. For instance, as I recall, the Miami aviation weather office had within its immediate operating area only the state of Florida. The Atlanta office took over from Jacksonville to some point north of Georgia, and so it went. While weather conditions at major points were usually obtainable, the en-route conditions between those points remained for us to determine as they were encountered.

From experience, we acquired the

ability to make reasonable judgments of en-route weather by the color of storm areas as we saw them ahead. But this was possible only in daytime. That deep-purple and black stuff, often seen along the southeastern coast, was something to be concerned about.

Of course, by today's standards, we flew at low levels. “Topping” the weather was far less common than going under it. In really bad weather, we flew the treetops, often with highways and railroads as our best means of guidance. At night there was a difference in this “science,” and usually we banged on through, hoping we wouldn't be in the stuff too long. In retrospect, it is difficult to understand how we got through. Many, of course, didn't live to tell about it.

Instrument flying, as such, was unknown. But, since then, I have often said we acquired the ability to fly weather without instruments, and this is partly true. Eventually I had a bank-indicator in my “big Cessna”—a 330 h.p. job that I usually used on long hops. Later I had a turn-and-bank. But beyond that, my “instrumentation” consisted of a compass, a tachometer, an altimeter, an oil-pressure gauge, a temperature gauge, a light switch, an ignition switch, and a “lunkenheimer.” The light switch controlled only the wingtip lights and the taillight—I had no others. While I knew that some “well-equipped” aircraft sported a little light on the instrument panel, I had nothing but a flashlight for that purpose. Landing lights were few and far between, although the mailplanes had them. As a matter of fact, most of our engines in those days had no generators, and our batteries (only one per aircraft) were almost overloaded when carrying the wing lights and taillights through an all-night flight.

As for that third “dangerous” element, fuel—I don't know, maybe it was fortunate that we had to check our fuel by climbing up on the wing or strut with a stick. Those of us who combined good judgment with experience always made sure that the tanks were topped off. We knew they were full because we stood there and watched them overflow. And, by the same method of observation and personal attention, we knew the caps were on tight. Of course, we knew the general hourly consumption, and we planned accordingly. I have never suffered complete fuel exhaustion—not even in an automobile.

In my 1929 J6-9 beefed-up “big Cessna,” I figured a maximum of three hours of fuel. On my northbound flights I could usually make it from Miami to Jacksonville. The latter was a relatively important stop, as someone was there all night, and there were two good cinder runways. Coffee was also available.

After Jacksonville, my next stop normally would be Raleigh, where—regardless of my time of arrival, and although they were ordinarily closed at night—either Elmer or Marie Meyers (or both) would be there with the floodlight burning in front of the hangar. They always had hot coffee ready, and

a fine piece of homemade pie or cake awaiting me. There were no lights at Raleigh—not even on the fence—but there was one red light in a tree on the airport, and by gauging it against the dark expanse of the airport itself, it was not difficult to get in. One didn't have to worry about getting on a runway—there wasn't any. But the turf was good, and closely cropped.

From Raleigh, I headed for Washington, D.C., and old Hoover Field, where they had to close a gate across a main highway spanning the field, when an airplane was landing or taking off. At night, with very little anticipated traffic, there was no one to close the gate. This made us even more careful. Eastern Air Transport (later Eastern Air Lines) had a little operations shack on the field, and in it at night was the lone caretaker of the airport. If he could be awakened, he might turn on some lights—but to get them would require one or more power-passes across and low over the field.

I recall a flight in the winter of 1933, on which I reached Washington at around 5 a.m., en route to Newark, N.J. Riding with me was a student, Willard McGahey, who was making his first night cross-country and acting as my copilot. Riding aft was my fiancée, whom I had brought up from Miami for a first visit to New York City.

The trip north had been rough. Ceilings between Raleigh and Washington were low that night, and I had been flying the treetops, bucking a terrific headwind. When I reached Washington-Hoover, which was entirely encircled with high-tension lines, I approached in a long power-glide and "gave it hell" as I crossed the little shack. Then I did it again, without success. So, after a wide sweep of the airport, I came in low (with power, of course) expecting to "feel it through" in the dark—a not-uncommon landing

technique. But just as I was leveling off—bang!—the lights came on at the far end of the runway, which was of the cinder variety. Of course we were completely blinded, but I continued the approach and, once again, luck was on my side.

When I taxied up to the shack and shut down my engine, the attendant came stumbling out—apologetically, of course, but I still had to chew him out for his carelessness. He could have turned on the lights behind me, and long before he did.

Naturally, since I was behind schedule, I was in a hurry. I told the attendant I needed gas and oil and, after an ungodly wait—some 45 minutes, as I recall, he came back with the fuel truck. When I chewed him out again, he said he "had to go down to the river and chop through the ice to get water to put in the radiator." Can you imagine that?—at the airport for our nation's capital!

He pulled up in front of the plane and we topped off the tanks. Then I asked about the oil. The three of us were shivering in the cold.

I don't remember whether it was Shell or Gulf that had just devised some unusual oil bottles—maybe 14 inches or so in length, and perhaps an inch and a half in diameter—to hold a quart of oil for use in aircraft. In the cold, the oil was thick and, when we uncapped it, it wouldn't pour. Fortunately, I had an unusually large filler-hole under the front seat for the oil. It was large enough to get the contents of three of those bottles in at one time. After all of us had wrapped our hands around the bottles and held them until they warmed a little, we were able to put in most of the three-quart total.

By then I really was mad, and concerned. It was nearly daybreak, and I was very late. I told the attendant to get the truck out of the way. McGahey

was ready to prop the motor, and Mary was back inside, pulling blankets around her. But the truck refused to start. All of us, including my intended, got out and pushed. Finally, we were able to push the truck to one side of the aircraft.

Once again, I poured on the coal and made a tight climbing turn, heading toward Philadelphia and Newark. But wouldn't you know? The window blew out of my side in front. I heard it hit something aft, but could only hope that the damage, if any, was slight. I kept on going. Man, was it cold, with that window gone!

We crossed Philadelphia at daybreak and saw the spires of the tall buildings downtown sticking up through the solid overcast. Soon, Newark was off the nose, and down we went through the haze, onto one of the cinder runways. The messenger from the news agency was there with his motorcycle to pick up the film we had been carrying.

A little later, we took off again and went over to New York's Roosevelt Field. While I slept during the day, Mary and McGahey were out "doing the city." We started out again late that afternoon on the flight back to Miami.

That's the way it went in those days. The pay for charter was high—I charged \$1 per mile. The course we flew from Miami to New York City was 1,252 miles, and for several years I got \$1,252 for the flight. Later, with tougher competition, I did it for \$750. I think I even made some flights for \$450.

Mechanical failure? I never had a forced landing at night, but were I still doing that type of flying, I'd be "touching wood."

Failure of the gauges? What gauges? Radio failure? We had no radios except receivers, through which occasionally we were able to hear the dit-dah, the dah-dit, or the steady hum that would tell us we were on course between certain points. Navigation at night required all the experience one could muster, but it wasn't too difficult. Even without beacons—and there were none between Miami and Richmond, except at scattered airports—we found our way. (Richmond, it seemed, always had ground fog. It marked a weatherline that we were always glad to get by. I seldom landed at Richmond at night.)

Landing "long" or "short"? We always landed short, especially at night. (Remember those slips?) Little thought was given to "lighted or unlighted airports." (There were very few of the former.) In fact, we didn't want lights, except that we found that fence lights, when they began appearing, were pretty good leveling-off indicators.

Obstructions? Yes, they were there—even automobiles sometimes parked in the middle of airports at night. (What a spot for those who sought peace and quiet!) But that too was a chance we took. When we went into Fort Bragg (Fayetteville, N.C.) in either daylight or dark, our big worry was the possibility of wild animals in our landing path, particularly deer on a runway.

Karl Voelter with his Waco 9 in 1929.



Karl Voelter today.



Later in my flying career, I spent many years in the Marine Corps as a fighter pilot, as a command pilot, and as an administrative officer, finally ending up in command of a frontline fighter base in the Pacific during World War II. Obviously, I made many night flights in single-engine aircraft during that period. On returning to civilian life, I joined the old CAA—later the FAA—where once again I flew many types of single-engine aircraft. These were both day and night flights, many times of lengthy duration.

As general aviation advisor to the Administrator, operating as liaison officer between industry and the CAA/FAA, I frequently encountered discussions of the use of single-engine equipment for night flights. I believe, as

do many others, that there is no good reason to take a thumbs-down attitude on the use of single-engine aircraft for night flying. Certainly, they must be competently flown and well-maintained at all times.

As one of the old school, qualified in all types of aircraft, including jets, I have often closed my talks to aviation groups with an old admonition, the words of which are not mine, although I have lived the creed it expresses. It goes like this: "Aviation in itself is not inherently dangerous. But, even more so than the sea, it is terribly unforgiving of any carelessness, neglect, or incompetence."

I believe that no better thought could close this discussion. □

THE AUTHOR

Karl Voelter made his first solo flight in a Curtiss JN-4D in 1917 and went on to compile an enviable aviation record as barnstormer, corporate pilot, air-race participant, airport manager, military pilot, and general aviation advisor to CAA/FAA Administrators. Now an aviation consultant living in Coral Gables, Fla., Voelter has recently been named to the OX5 Club of America's Aviation Hall of Fame. He holds a commercial pilot certificate and is still adding to his 15,000-plus hours of logged flight time.
