

WHO WANTS A CO-PILOT?

There are plenty of times when a third hand and a second brain can smooth the bumps of an IFR flight — here are just a few.

by Harry Kraemer

Whether it's for business, vacation or just personal travel, the flexibility of being able to hop in an airplane and fly yourself to a destination is unmatched. And it really doesn't matter whether you're flying a Cessna 172, a turboprop or a light jet.

But duty time and flight hour restrictions are quite different for those of us who operate under the rules of Part 91 as compared to 121 and 135 operators. We are given the freedom to get up early, fly to a business meeting and return home late, all in the same day. Or we can work all day, load the family into the airplane and head for our favorite weekend getaway spot, all single-pilot.

But how many times is a co-pilot considered? Perhaps not often enough. In the interest of safety, there are situations in which it would be prudent to have a co-pilot along.

To assess the need for a co-pilot, break your trip down into the four risk elements: the PIC, the aircraft (and equipment), the environment and finally the operation (or the structure of the trip in itself).

Your decision-making process should involve an evaluation of each of these individual elements along with a look at the big picture.

Pilot In Command

What is your personal health like? What is your stress level? Use the FAA's "IM SAFE" checklist to help in this area: illness, medication, stress, alco-

hol, fatigue and emotion.

Ask yourself how many long days that you've had leading up to the trip. A pilot's ability to get proper rest is an important consideration. Factor in how much rest precedes or follows a flight.

Too many consecutive long days can leave you tired and fatigued. If you are planning a long day of flying, try to factor in a rest period (approximately four hours) at one of your fuel stops.

And finally, ask yourself, "What is my ability to stay focused on this trip for the duration of this trip?"

There is no better excuse for a right-seater than pilot fatigue. When you are planning a long flight with frequent stops in IFR weather, another hand and an additional pair of eyes are invaluable.

The Aircraft

How comfortable is the cockpit? Our physical needs are the most fundamental of all human needs. Once you satisfy your physical needs you can move on to other things like paying attention and flying the aircraft.

But a cockpit that is uncomfortable, noisy, leaky, cold or cramped will affect your ability to focus on flying the aircraft. In other words, you need to satisfy your physical needs first. Excessive noise in the cockpit also can lead to fatigue.

Is the aircraft equipped with an autopilot? Even the most basic wing leveler can lighten a pilot's workload. Autopilots, wing levelers and even

keeping the aircraft well trimmed will allow more time to attend to other cockpit duties.

How high can the aircraft fly? There is a lot to be said about flying over the weather as opposed to flying through it. I would much rather be flying in sunshine looking down on the weather.

At high altitudes (above 12,500 feet) a pressurized aircraft will be more comfortable than a non-pressurized. Supplemental oxygen will be required at altitudes above 12,500 feet in a non-pressurized aircraft, and this means wearing an oxygen mask.

A proficient co-pilot can help alleviate equipment shortfalls.

The Environment

Will the trip be flown in IMC? Is it low IFR? Depending on your own comfort level with the weather, this could add stress. There is no doubt that a trip in VFR conditions is much easier than a trip flown in IMC with thunderstorms.

There also is a big difference between being IFR current and IFR proficient. One who is IFR proficient will, without a doubt, be less fatigued at the end of an IFR flight compared to a pilot who just has met the minimum requirements of the FARs.

In any case, if the weather is IMC or you have thunderstorms along your route, dividing the cockpit duties between two pilots is much more comfortable than doing it yourself.

Having been there and done that, I must say that when there is convective weather to deal with, it's nice to have a co-pilot working the radar or StormScope, giving you headings to fly and dealing with ATC while all you do is concentrate on flying the aircraft.

The Operation

At what altitude will you be flying? As altitude increases, so do the chances for hypoxia and fatigue. This is true for pressurized and non-pressurized aircraft.

While hypoxia may be less of a concern in a pressurized aircraft, you still are susceptible to fatigue. And although the aircraft is pressurized, the cabin pressure altitude is above the sea level pressure, and this rise in cabin altitude is a concern when talking about fatigue.

The AIM states that "fatigue continues to be one of the most treacherous hazards to flight safety." A person's ability to complete simple tasks like reading a checklist and an approach plate is challenged with the onset of fatigue.

What time of day is the departure? Your departure time merits consideration. First, is your departure time within your normal awake time? Or perhaps the departure time calls for you to get up earlier than you normally would or stay up later than you're used to?

Both can affect your level of alertness and also can bring on fatigue earlier than if you were within your nor-

mal awake time frame. Your body develops its own internal clock according to your daily routine, and this internal clock can be thrown off by keeping odd hours.

High-Density Help

Will the flight be operated in a high-density traffic area? Are you operating in a non-radar environment? When flying in a high-density traffic area, you can expect to receive vectors and/or climbs and descents for traffic. You also can expect to be issued SIDs and STARs.

Again, here is where the second pilot or right-seater will come in handy — someone to set up the radios, dial in the intersections and talk to ATC.

Are fuel stops required? How many cycles (takeoffs and landings) are required to complete the trip? During takeoff and landing, the PIC's workload is at the maximum.

For example, you may decide to fly

a six-hour nonstop trip between point A and B, but if you add a fuel stop with two instrument approaches to minimums, the trip looks a little more difficult to fly yourself.

But utilizing a second pilot who could perhaps fly the second leg while you tend to the radios and navigation makes the trip a little more manageable.

I'm not suggesting that single-pilot IFR is dangerous or unsafe, but there are times when a second pilot can help reduce workload and make the trip flow a lot more smoothly.

And when you feel it's necessary, inviting a second pilot or co-pilot along on a trip is not a sign of defeat, lack of confidence or incompetence — it's just good decision-making.

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