

# Midairs Can Ruin A Beautiful DP

*Somewhere there's a Citation crew that doesn't know how close it came to corking a Cirrus SR22 despite Skywatch working perfectly.*

**S**ome of us feel quite comfortable with the transition from visual meteorological conditions into instrument meteorological conditions on an IFR departure. How about the transition from the remote communications outlet (RCO) to the unicom at an uncontrolled airport? It's hard to imagine that this may be the most dangerous part of your IFR flight. For this discussion I'll use the term unicom here for all CTAF variations.

As Ron Wheeler reported last month in, *File IFR Into The Boonies*, many IFR flights originate from uncontrolled satellite airports with the magic words, "You are released." And as you know, the field doesn't have to be reporting low IFR conditions to have departing IFR traffic. In most cases, the weather is severe clear with no ceiling or visibility concerns whatsoever.

## Close Call

It was a typical training flight. My student and I were doing traffic pattern work one morning in his Cirrus SR22. The weather at this uncontrolled field in Maryland was typical summer VFR; the winds were from the northwest at five or six knots favoring runway 33. The departing biz jets generally prefer runway 22 since it's 1500 feet longer. Runway 22 intersects runway 33.

We'd done five or six left-hand circuits in the pattern for runway 33, ending each landing with a touch-and-go. After calling our downwind leg, being the dirty rotten CFI that I am, I announced a simulated flap failure. In an SR22, a zero-degree flaps landing is not exactly trivial and demands a lot of attention, especially on the part of the CFI.

We were at pattern altitude and abeam the numbers of runway 33

when he reduced power for our descent. My student announced our base leg on the unicom frequency, and shortly thereafter, turned onto final. As we turned final we were approximately 200 feet lower than where we should have been. My student keyed the mic and announced being on final as he rolled wings level. I distinctly remember this call, because I was about to key the mic after him and add, "The Cirrus is on a low final." I refrained; no need to clutter up the frequency, I thought to myself.

He added power to avoid dropping any lower and leveled off for a while. Little did we know or hear, a Citation jet had just announced his

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departure on runway 22. The SR22 was about 1000 feet from the threshold, when we heard Skywatch exclaim, "TRAFFIC, TRAFFIC!" immediately followed by, "TRAFFIC, TRAFFIC!"

Based on the Skywatch-reported altitude and location, I quickly reasoned that the Skywatch was telling us about an aircraft that I could see in the run-up area of runway 33 with his transponder on. After all, each pattern had resulted in this same ubiquitous traffic alert, telling us about aircraft on the surface waiting to depart or taxiing.

It's not unusual to get back-to-back traffic calls from Skywatch while close to the ground. This doesn't imply multiple aircraft, necessarily. It's typically

due to a known multi-path phenomenon. In other words, the transponder signal from the same aircraft is received by Skywatch twice through different paths. Multi-path results in more than one traffic alert as the signal bounces off the ground or other surrounding structures. I announced to my student, "Traffic, no factor" and we continued with the zero-degree flaps approach.

A Cirrus zero-degree flaps landing requires a 10-knot higher approach speed, and consequently, a higher groundspeed and longer ground roll. We touched down firmly just beyond the runway numbers only to witness a windscreen-full of Citation jet pass just in front of us from right to left. Of course, I cannot repeat what was said in the cockpit at that very moment.

## The Aftermath

There was no time to brake, no time to maneuver, no time to panic, no time to deploy the Cirrus Airframe Parachute System (CAPS)—not much help on the ground—and certainly no time to be scared. It was over just as quick as it happened. However, I will never forget that feeling of astonishment and the sound of that Citation jet passing in front of us. Szszszsz... roarrrrrr.

We rolled through the intersection a couple of seconds after the jet passed and decided to make this landing a full stop and chat about what had just happened. Of course, I couldn't say anything until my life story which was flashing in front of my eyes reached the credits. We taxied to the FBO and grabbed an early lunch.

## The Prime Directive

Whether IFR or VFR, a pilot's prime directive is to see *and* avoid. The problem with this two-part directive is that the first part must be fulfilled before the second part applies. A sobering

thought after you've been through this kind of hair-raising adventure.

At this point, it wasn't important to figure out who was in the right or in the wrong. Visions of FARs didn't dance in my head. Fault didn't really matter. It was time to take a hard look at both sides of the equation to avoid a repeat performance.

Many uncontrolled airports have a remote communications outlet (RCO) or ground communications outlet (GCO) to obtain IFR clearances or cancel IFR upon landing. It's a common practice for the pilots to call for their clearances on the ramp and then report back when they're number one for departure. Or when it isn't terribly busy, they may do this all while holding short of the runway.

Here's the dilemma. You need to go off the unicom frequency to get your clearance and your IFR release. The release is rarely open-ended; it normally has a void time that could be just a few short minutes. You may have been off frequency for several minutes, and when you hit the flip-flop key you have to recover the VFR traffic picture before pushing the throttles forward. Failure to do so could result in, well, an accident, or in my case a near collision. Not the best start to an IFR trip.

Is the problem just a lack of situational awareness or something a bit deeper? Certainly situational awareness is a major part of it. Elements such as distraction, fatigue, unfamiliar airspace, a complicated DP, age, complacency and a short IFR release time will likely play an important role.

As always, we have many choices. We hope that none of these choices represents the beginning of the accident chain. Let's examine the choices we have while on the surface of an uncontrolled field prior to an IFR departure.

### Monitor Unicom

Before moving off of the ramp, always listen to the AWOS and examine the windsock to begin to characterize the runway in use. Write it down. If possible, get a quick radio check before



departing. It eliminates two common problems. It tells you that you're on the proper frequency and that your radio appears to be working. Even though there are some aircraft without radios, most do have working radios. If you play the odds, you're more likely to tangle with a radio-equipped aircraft than a no-radio aircraft.

Next, begin to monitor the unicom, but don't try to monitor it and get the AWOS at the same time unless you have a willing and able copilot. This is a good time when two pilots—who understand how to work together—really come in handy. Remember to listen, not just hear.

Have most of your preflight checks done prior to getting your clearance. This way you won't be rushed through them if you get a short clearance void time. When you finally do call to get your IFR clearance, pull out of the way so that you're not blocking any VFR aircraft attempting to depart. This also alleviates any pressure to depart quickly. Continue to listen to unicom.

Prior to calling ATC, examine and fold your enroute charts and program the GPS ahead of time. That's right, take a guess at the route you'll receive. If you get a clearance that's significantly different than your filed route, tell ATC you'll need five or more min-

**Above:** *Your IFR clearance from an uncontrolled airport means nothing to the VFR Cessna departing the crossing runway. Yeah, the one that's just out of sight but aimed for the runway intersection. Scan outside, baby, scan.*

utes before you can depart. Your void time will reflect this accordingly. If necessary, tell ATC you'll call them back when you're number one for departure. Continue to listen to unicom.

Before ever getting airborne, remind yourself that the primary purpose of the traffic pattern is to make yourself visible to other pilots in the pattern and on the surface. But that doesn't mean that everyone subscribes to this method and, as I said, not all aircraft are required to have radios. Now comes the hard part. You must make a final choice for a departure runway and determine when it's safe to depart.

### Which Runway?

In a single-runway environment the problem becomes a bit easier, but doesn't disappear entirely. It's hoped that if there's a prevailing wind, landing or departing pilots will normally choose the runway that's favoring the

wind. When the winds are calm or a direct crosswind exists, the direction of traffic could change with each aircraft landing or departing.

If you opt to depart on the non-active runway—and at an uncontrolled airport one could argue that there is no such thing—then pilot beware. You will likely surprise somebody with your presence.

Not to belabor the issue, but remember that not all aircraft have radios and even if they do, they may not be using the right frequency or may not announce their position or intentions.

Night operations can make it dif-

ficult to see aircraft in the pattern but particularly on the ground. Visual clues are few. While you were trying to get ATC's attention, did you catch that twin Cessna taxiing to the other end of the runway?

At night, winds are usually light or calm. This makes any runway the *active* runway. Even though there may be a preferred calm-wind runway, don't count on that either.

Reduced visibility and/or low ceilings may scare off most of the VFR traffic out there but once again, don't count on this. Even though fixed wings may be grounded, rotorcraft

might be lingering beneath the scud. As Joe Allan points out on page 18, copters don't need much vis to remain VFR.

The radio isn't the only way to get your IFR clearance these days. Cellphones are just as useful if you know the facility's phone number or are getting your clearance through a flight service station. A cellphone creates a perfect example where it's tough to monitor the unicom frequency as well as chat with ATC.

It's obvious that the biz jet didn't get the complete picture in my case. I'm not placing blame either; it takes two to midair tango—or mid-runway for that matter.. He probably didn't hear our traffic call and since we were low, he didn't see us either. It's also possible that we announced final at the same time he announced his departure (his departure call was heard by the unicom operator). I wasn't in the cockpit of the Citation, so I can't say for sure how diligent these pilots were and how attuned they were to the current traffic at the airport.

The final guidance I have is simple: Slow down. If ATC gives you an unreasonable void time, refuse it. Missing a void time is no big deal. Void times are just like birthdays; if you miss one, you'll have another chance real soon. If you go beyond your void time, just call ATC back and try again. Sure you might have to wait a bit longer, but you'll eventually be served.

Another suggestion is to negotiate with ATC to depart VFR when conditions and airspace permit. When departing from an uncontrolled field, controllers can't offer much radar help to you anyway until you're at a safe altitude, in radar contact, and in radio contact. Remember, IFR doesn't mean that you're a higher priority, even though sometimes we wish that were the case.

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## ATC's Not Looking At You, Kid

You must remember this: A release is just a release. This is a theme, which at the risk of being redundant, is worth driving home.

When the air traffic controller formulates your IFR departure clearance it blocks a swath of airspace along your route at least as far as the first fix inside the controller's sector. It's assumed that you will sooner-or-later be in radio and eventually radar contact. Although the controller must protect for the possibility of gaining neither, the system gambles to some extent that things will work as planned.

The IFR release is simply your pass into the system. Whether you hear, "You are released," or, "Released before (void time)," the controller only guarantees that no other IFR participant will be in your way. An IFR release from an uncontrolled airport does not come with much ATC service beyond that until you reach an enroute segment.

If you request a VFR climb to an IFR altitude, you get absolutely no traffic separation service inside class G or E airspace until you reach an assigned IFR altitude: "Climb VFR and maintain 6000," means good luck reaching 6000 feet when ATC separation takes over.

Obstacle clearance is *always* the pilot's responsibility. That said,

ATC shares some responsibility when formulating a clearance. The assigned route and altitudes—whether via a DP or the pilot's own nav—must allow the IFR pilot to reach a safe altitude via a safe route. But it's the pilot who eats dirt in the event of an error, so the IFR pilot must review and miss terrain/obstacle threats. That's where a sectional chart in the briefing room comes in handy. Sigh all you want if ATC goofs, but a sigh is just a waste of your last breath if you don't analyze your clearance.

Even with good radar coverage air traffic controllers rely upon the pilots to meet all published and common-sense climb restrictions. Controllers should know of any non-standard climb gradient requirements, such as, say, a 440-foot per nautical-mile climb requirement to clear a ridge. Trouble is, controllers have lots of stuff to remember and can't be expected to know your aircraft's capabilities especially given changes in density altitude.

Good controllers will question an obvious accident waiting to happen, but good controllers, like good pilots, aren't always on duty. In short, the fundamental things still apply—you gotta know the territory and aircraft. And that won't change as time goes by. —PB