

# IFR

*The Magazine for the Accomplished Pilot*



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# HOW TO ACE AN IPC

*If winter meant little flying due to frosty clouds, then it's time to review what the hell you're supposed to be doing up there.*

by Scott C. Dennstaedt

An Instrument Proficiency Check (IPC) isn't just for pilots that blew through the first and second six-month periods without meeting the requirements of FAR 61.57(c). Similar to going to the dentist every six months, a few of my students have set up an informal six-month schedule to stay legally current through the magic of an IPC. It's not a bad idea.

A recent update to the instrument practical test standards (PTS) defined what must be accomplished to pass an IPC. (It's just called a PC in the PTS.)

Required are at least three approaches (four in a multi-engine airplane). A circling approach is also required; at least one approach must end in a landing. Once these and the other tasks have been satisfactorily completed, and the logbook is properly endorsed, the currency clock resets for another six calendar months.

## Hit the Books

In addition to reviewing the instrument requirements in Parts 61 and 91 and the AIM, read up on Part 1. It has some important definitions. Also review the PTS, with special attention to that PC column rating task table.

Bring the aircraft's logbooks. I often have a pilot show me the pitot-static system and transponder entries within the last 24 calendar months. If a VOR check hasn't been

done in the last 30 days, record one for the aircraft prior to the IPC — or be ready to do one before takeoff.

At a minimum, look up your departure, destination, and alternate airports in the Airport/Facilities Directory (A/FD) and search for any Navaid outages, labeled OTS. It's unlikely you'll get these from your briefing. After 56 days, the outage is transferred to the A/FD. Also review any handy rules or memory aids such as the "time, turn, twist, throttle, talk" mantra that might help you during the IPC.

## Ready, Set, Go

If you filed IFR, get your ATC clearance as soon as possible; but before requesting it, take a stab at the clearance limit, altitude, and departure frequency. For example, if you filed 7000 feet as your final altitude, write down "70 10 MIN AFT" and leave a space in front to write any initial altitude. Most likely you will be assigned a lower initial altitude followed by "expect seven thousand one-zero minutes after departure."

If your guess is wrong, just cross out your guess and write in the altitude provided by ATC. Being ahead of the controller just might give you a chance to catch it all on the first

transmission. If not, confess and get the controller to read it to you again.

At an airport with a clearance delivery frequency, obtain your ATC clearance using your handheld transceiver before you head out to the aircraft. If you don't have a handheld radio, you may have a NAV/COM bypass button on your panel to allow you to switch on a single radio to get the clearance before you even turn the crank. This gives you a relaxed opportunity to review the route and make a final check of weather at the FBO before you depart.

## Getting Going

On taxi, explain your check of the turn coordinator, attitude indicator (AI), and heading indicator. Don't forget that magnetic compass, since you'll probably fly a partial-panel approach. If you have a current altimeter setting from the automated weather, verify that your altimeter is within 75 feet of field elevation as prescribed in the AIM (7-2-3).

Before calling ATC and showing the throttle to the firewall, get everything organized. Have all of your en route charts and sectionals folded to the right spot, including approaches for your departure airport for an emergency return. Review any obstacle or assigned departure procedures.

Have your frequencies tuned and waypoints entered in any GPS boxes. Set the OBS or HSI for the appropriate outbound or inbound course if you'll be intercepting something on the way out. Use those heading, alti-

*Right: Let your avionics combat the paper shuffle by calling frequencies from the database. It saves time and hassle.*



## FEEL LIKE FLYING TO MINIMUMS TODAY?

You'll need that IPC if you haven't "performed and logged under actual or simulated instrument conditions" the approaches required by FAR 61.57 (c). But the question always comes up: How much actual IMC is required for the approach to count?

Back in 1982, the FAA's Flight Forum said "... the approaches must be carried at least through the so-called critical elements ... approach to a landing, to the minimum altitude and/or missed approach point, or through the approved missed approach procedure." In 1990 they clarified it, saying, "Once you have been cleared for and have initiated an instrument approach in IMC, you may log that approach for instrument currency, regardless of the altitude at which you break out of the clouds." But they added that flying to DH or MDA would "maximize the training benefit."

Then the FAA legal counsel messed with this in 1992: "For currency purposes ... unless the instrument approach procedure must be abandoned for safety reasons, we believe the pilot must follow the instrument approach procedure to minimum descent altitude or decision height."

So now it's minimums, baby, or it doesn't count — unless you want to argue that following the procedure could be done in IMC or not.

For five years the issue simmered until Part 61 was revised in 1997. There was a proposal to specifically say that approaches had to be flown to MDA or DA to count. They got a lot of comments, most invoking the rule of reason that virtually no one could keep current without specifically going out and practicing approaches to minimums. While that might actually be a good thing for some among us, it's impractical for many others.

The FAA decided against the new requirement, which is invoked by many as the proof that you don't need to sweat it all the way to minimums in the soup for IMC approaches to count.

So how low do you need to go in IMC to log the approach? I think aviation author Bob Gardner nailed it: "You are the best judge of whether an approach has made you a more proficient instrument pilot or has just allowed you to fill a gap in your log."  
— Jeff Van West



titude Flight Watch frequency listed on the inside back cover. Your instructor will be impressed that you knew about the other frequency, but even more impressed that you have a current A/FD. See "Got PIREP?" (October 2004 *IFR*) for more information on filing that pilot report. Beware, however; asking a pilot to contact Flight Watch just before things get busy is a great trick in the CFI "realistic distractions" bag.

Be ready for some impromptu holding instructions from your CFI either while en route or at the outer marker. Get an "expect further clearance" time. Otherwise, you have no legitimate way out of the penalty box if you lose communications.

### Putting it Together

Expect and prepare to make full-stop landings with each approach. It is one thing to do low approaches, but it's another to be in a position to make a normal descent to land, circling or straight-in, from a close-in MAP.

If your instructor is playing air traffic controller, respond as if you were actually talking to ATC. (But don't actually press the PTT switch; it's a bit embarrassing. You'd be surprised at how many of my students actually push the switch at least once.) If your instructor has not authorized you to intercept the localizer, don't do so until you query the controller — I mean, your instructor.

If the instructor remains silent, you might have a communications failure (or your instructor is ignoring you). Fly the airplane first; then "simulate" a 7600 squawk and transmit in the blind while following the lost communication rules found in FAR 91.185. Even though lost communication procedures are not called out in the PTS as a required

tude and VSI bugs if you've got 'em. They make the IFR memory game much easier.

Even if you are /G equipped, don't slack on using the VOR. There's nothing like being able to cross-check what you fat-fingered into the GPS. It's easy to "follow the line" even when it is the wrong line. When mountains lurk below, following the wrong line can be a "costly" mistake (see "GPS Flubs," January 2004 *IFR*).

If you're navigating via an airway or direct to a VOR, identify the VOR. This is the most common mistake I see on IPCs. The only positive method of identifying a VOR is by

its Morse code identification. If you don't hear the identifier, you might have the wrong frequency, it may be out of service, or you may simply have the volume turned down.

The instructor may also ask you to file a pilot report or get weather updates with the Enroute Flight Advisory Service (better known as Flight Watch). If you are talking to ATC, ask to change frequencies, switch to 122.0 MHz and call Flight Watch. When you call, be sure to give Flight Watch your approximate location in reference to an airport or, even better, a VOR. If you can't get Flight Watch on 122.0 MHz, whip out your A/FD and try the high al-

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AWAD51H

many Garmin units as described in "Waypoints Go AWOL," December 2005 *IFR*.

On most approaches, this is a non-issue, but the winds of TERPS occasionally blow an oddball design our way. No cardinal sin if you turned inbound a bit early, just a tongue-lashing from ATC. But next time it won't catch you off-guard.

*Jeff Van West is Editor of IFR.*

## HOW TO ACE AN IPC

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IPC element, they are still fair game on an IPC.

Don't be surprised if the instructor gives you a descent below the minimum IFR altitude. This could be permitted if the MVA or MIA is lower, but have a current sectional ready to examine the terrain and ob-

structions in the area. If the altitude doesn't make sense, don't descend and query the controller or instructor. You never have to accept a clearance you don't believe is safe.

It is important to be familiar with the autopilot operation and any multi-function displays. Often, instructors will ask you to demonstrate an approach or demonstrate an intercept to an airway using the autopilot. Understand any autopilot preflight checks and perform them for the instructor before you depart.

Also, note any autopilot limitations, such as airspeed, flaps, or altitudes that may apply during an approach. Many pilots are surprised that their autopilot has to be disconnected to legally fly the missed approach.

Conduct a thorough briefing of the approaches at your destination airport(s) before you depart. Pay special attention to notes such as, "Circling east of Runway 2/20 not authorized" or "DME required." Your

CFI has noted them and may scheme to make them an issue.

Again, the biggest error I see during an IPC is forgetting to identify navigation aids, such as VOR, DME, or ADF. Failure to identify a navaid is extremely dangerous during an instrument approach. Imagine the case where you have forgotten to hit the flip-flop button when you are attempting to intercept the localizer and still have the last (and close) VOR frequency tuned in. That could be a deadly mistake.

## Falling Apart

According to the PTS, "The FAA is concerned about numerous fatal aircraft accidents involving spatial disorientation of instrument-rated pilots who have attempted to control and maneuver their aircraft in clouds with inoperative primary flight instruments (gyroscopic heading and/or attitude indicators) or loss of the primary electronic flight instruments display."

While it's nearly impossible to simulate an actual instrument failure in an aircraft without the pilot knowing it, there's still value practicing with a less-than-perfect panel. This includes partial panel during an instrument approach and recovery from unusual attitudes.

With an IPC, it doesn't matter how many approaches you actually complete. All that matters is that your instructor feels that you have met the guidelines found in the instrument practical test standards. At the end of the IPC, assuming you have passed, your instructor

will sign your logbook with an endorsement.

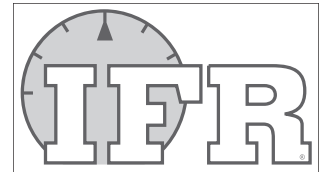
Don't end your conversation right then. Instead, get yourself on the instructor's schedule for your next six-month checkup. With this method, you will never be out of currency and your trusted instrument instructor will make sure you are not slipping into any bad habits.

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## QUIZ ANSWERS *(questions on page 12)*

1. **d.** You got problems, or at least you will fairly soon. You've entered the missed hold and turned outbound, however; you'll pretty soon be outside the protected hold space. Better start thinking about turning to the inbound leg.
2. **d.** Time to turn back onto the inbound hold leg.
3. **a.** Relax, there's nothing wrong with the electrical system. You chose D? You're joking, right?
4. **c.** Based on past Killer Quizzes, we understand your paranoia but like we said, relax, there's no equipment failure here.
5. **b.** You're supposed to be in the missed hold and would have cleaned the aircraft up in the climb to the missed.
6. **d.** The PLASI shows a pulsating white light if you're too high, a steady white on glide path, a steady red if you're slightly below, and a flashing red if you're about to mow the grass.
7. **e.** None of these are IAFs for this procedure.
8. **False.** Without any instructions from ATC, there is no allowance to remain on the D14.7 arc, as this will place the aircraft inside a restricted zone.
9. **e.** D is incorrect: The R-108 radial off BAL, not ADW, defines the hold fix.
10. **d.** You had it set to show a distance and bearing to KMTN during the approach and never changed it after going missed.
11. **c.** You can't use GPS in lieu of DME for lateral guidance, but you could use it to identify D11 from BWI for the missed.
12. **b.** If Jeppesen knows the kind of obstacle and has an icon for it, they draw it in the detailed view. If it's some unidentified, man-made obstruction, or it's an odd shape, then it shows as an inverted V.
13. **False.** The stars are aeronautical beacons or lights.



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