

INSTRUMENT RATING · AIRPLANE

Instrument Quick-Review Guide

Understand the key concepts, practice the calculations and explain your decisions. Prepare with focused examples and oral questions tied to the FAA test standards.

MODE 01**5-minute scan**

Tables, tolerances and timelines. Find the number, move on.

MODE 02**30-minute review**

Work the diagrams and the worked examples. Say the answers out loud.

MODE 03**Oral prep**

Answer each DPE prompt before reading the model response.

STANDARD

FAA-S-ACS-8C, Instrument Rating — Airplane — document dated November 2023, incorporated by reference into 14 CFR effective 31 MAY 2024

REFERENCES

FAA standards, regulations and handbooks.

37 content pages plus cover: pilot and legal, preflight, clearances, departures, navigation, holding, approaches, weather, emergencies and rapid review.

How to use this guide

Read the explanation, work the example, then answer the oral question before checking the response. Apply each topic to the airplane you fly. Use its current AFM/POH for speeds, limitations and procedures, and current regulations, charts and weather for flight decisions.

IFR currency, the grace window and the IPC

Three different states, one rolling clock. Most pilots can recite “six and six” and still cannot say which state they are in today.

DIRECT ANSWER

To act as PIC under IFR — or in weather below VFR minimums — you must have performed and logged, within the **preceding 6 calendar months: six instrument approaches, holding procedures and tasks, and intercepting and tracking courses** through navigational electronic systems. All three. Six approaches alone is not currency.

“6-HIT” means six approaches, holding, and intercepting and tracking. Complete the tasks in actual or simulated instrument conditions. In VMC, use a view-limiting device and a qualified safety pilot. Approved simulators and training devices may also qualify under 61.57(c). Flying an approach visually without a hood does not count.

14 CFR 61.57(c); safety pilot requirements 14 CFR 91.109(c)

THE THREE STATES

CURRENT 6 HIT tasks logged inside the preceding 6 calendar months. Full IFR PIC privileges.

GRACE Lapsed, but ≤ 6 calendar months past. You **may not** exercise IFR PIC privileges — but you may re-establish currency yourself with a safety pilot or a qualifying device. No IPC required.

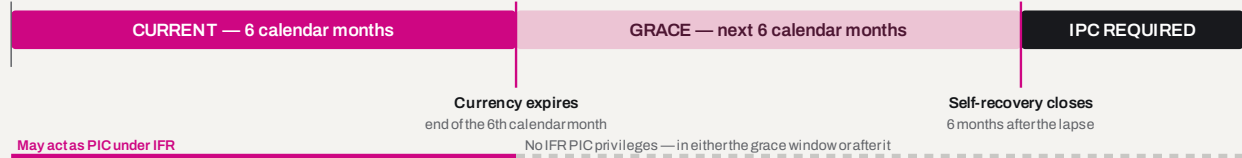
IPC OWED More than 6 calendar months past the lapse. Currency can only be restored by an instrument proficiency check.

14 CFR 61.57(c), (d)

THE ROLLING CLOCK

calendar months, not 180 days

Last 6 HIT logged



A task logged on 14 MAR counts through 30 SEP: the month of the flight is excluded, then six whole calendar months are counted back.

CHECKRIDE TRAP

“I’m out of currency, so I need an IPC.” Not necessarily — and getting this wrong costs you a flight or an unnecessary check. Inside the 6-month grace window you regain currency by flying the same 6 HIT tasks with a safety pilot; you simply may not carry the privilege while you do it. The IPC is only owed once more than six calendar months have passed since the currency lapsed.

BOUNDARY

An IPC is conducted to the tasks in the current Instrument Rating ACS by an authorized instructor, examiner or other person authorized by the Administrator. It is not the same as a flight review, and passing one does not reset the 24-calendar-month flight review clock unless the flight also meets 61.56.

14 CFR 61.57(d); 61.56

DPE ORAL

Your last six approaches, a hold and some tracking were logged 9 months ago. Can you fly this flight IFR today, and what do you need?

STRONG FIRST ANSWER

No. I am not instrument current — that lapsed at the end of the sixth calendar month. But I am still inside the grace window, so I do not need an IPC yet. I can regain currency by flying six approaches, holding, and intercepting and tracking with a safety pilot under the hood or in a qualifying device.

ADD IF ASKED

The safety pilot has to hold at least a private certificate with the category and class ratings for the airplane, occupy the other control seat, and have adequate vision forward and to each side; the aircraft needs functioning dual controls. Until those tasks are logged I cannot act as PIC under IFR or in less than VFR weather.

COMMON WRONG ANSWER

“Any lapse means I need an IPC.” You may restore currency without an IPC during the next six calendar months. After more than six calendar months out of currency, an IPC is required.

FOLLOW-UP TO EXPECT

“Where exactly does your grace period end, by date?” Be ready to count calendar months out loud from your own logbook.

VOR, RNAV and what “RNP” actually adds

One legal check, one geometry problem, and one vocabulary problem that examiners use to separate memorizers from pilots.

DIRECT ANSWER – THE 30-DAY CHECK

You may not operate IFR using the VOR system unless the VOR equipment is maintained under an approved procedure, or has been operationally checked within the preceding 30 days and found within tolerance.

METHOD	MAX BEARING ERROR
VOT, or a repair-station test signal	± 4°
Designated ground checkpoint	± 4°
Dual VOR receivers cross-checked against each other	4° between them
Designated airborne checkpoint	± 6°
Airway centerline over a prominent ground point, preferably > 20 NM from the station	6°

Log the date, place, bearing error and your signature in the aircraft log or other record. If you file IFR but navigate entirely by an approved GPS and never use VOR for navigation, the 30-day VOR check is not what makes that flight legal — but the equipment's own approval basis still is.

14 CFR 91.171(a)–(d)

CHECKRIDE TRAP

“A centered needle means I’m on course.” A centered CDI happens on two courses 180° apart. The OBS setting, the needle and the TO/FROM flag have to be read together — and the flag tells you which side of the station you are on, not which way to turn.

READ ALL THREE, ALWAYS

OBS 090 • needle centered • TO

The 090 course will take the aircraft to the station.
The aircraft is west of the VOR, on the 270 radial.
Radials always extend FROM the station, whatever your heading.

The diagram illustrates a VOR station with two radials: a solid magenta line for the 270 radial and a dashed line for the 090 radial. An aircraft is positioned on the 270 radial, pointing towards the station. Below the station, a circular CDI indicator shows a vertical needle centered on the 090 course line, with a 'TO' flag to its right. Labels include '270 radial', 'aircraft', 'VOR', '090', 'TO', and 'CDI centered'.

PBN VOCABULARY

say these precisely

RNAV	Area navigation: the ability to fly any desired path within the coverage of the navigation sources, rather than only station-to-station.
RNP	RNAV plus on-board performance monitoring and alerting. That alerting requirement is the entire difference. “RNP 1” means the system must stay within 1 NM at least 95% of the flight time and tell the crew when it cannot.
RAIM	Receiver autonomous integrity monitoring — the receiver's own check that its satellite solution is trustworthy. Fault detection needs redundant satellites in view; without it, the receiver cannot warn you that it is wrong.
WAAS	A satellite-based augmentation system providing corrections and integrity, which is what makes vertically guided LPV minimums possible.

Boundary: whether your specific installation is approved for a given PBN operation is stated in its AFM supplement and operating handbook — not inferred from the box on the panel.

CDI SENSITIVITY – THE TRAP THAT BITES ON THE APPROACH

A VOR CDI is **angular**: full-scale deflection is a fixed number of degrees, so the width of a dot in nautical miles grows as you fly away from the station and shrinks as you approach it. A GPS CDI in en route mode is typically **linear** — a fixed distance per dot — and then changes scale automatically in terminal and approach modes.

The consequence: the same needle deflection means something different depending on the source and the mode. Before you chase a needle, confirm **which source is driving it, what mode it is in, and what the active leg is**.

DPE ORAL

You're cleared direct to a fix. The magenta line looks right. What do you verify before you trust it?

STRONG FIRST ANSWER

The database is current, the active waypoint is the one I was actually cleared to, the CDI source is the one I'm looking at, the mode and scaling are what I expect, and there's no integrity annunciation. Then I cross-check the track against the chart.

COMMON WRONG ANSWER

“It's a WAAS box, so it's accurate.” Accuracy is not the failure mode — the wrong active waypoint and the wrong CDI source are.