UNOFFICIAL LAY-FLAT IFR EDITION | ACS-8C ALIGNED

Instrument Rating FAA-S-ACS-8C & IFR Procedure Lay-Flat Desk Reference

IFR Clearances, Holding Entries, Approach Minima, Lost Comms & Oral Checkride Workbook

Imprint: STILL HUMAN AVIATION PRESS
Format: 8.5 x 11 in. 360-Degree Lay-Flat Coil Study & Field Workbook
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Educational & Examination Notice: Independent Instrument Rating study companion aligned to public FAA-S-ACS-8C standards. Not affiliated with or endorsed by the FAA. Always brief current FAA/Jeppesen charts, Aircraft Flight Manual (AFM) supplements, and your CFII prior to instrument flight.

Instrument Rating Rapid-Recall Reference (66-HIT / CRAFT / AVE-F)

Topic / Rule	Specification / Threshold	Reference
IFR Currency	66-HIT: 6 approaches, Holding, Intercepting & Tracking within 6 calendar months (+6 mo grace)	14 CFR 61.57(c)
Clearance Shorthand	CRAFT: Clearance limit, Route, Altitude, Frequency, Transponder	AIM 5-2-3
Alternate Fuel Rule	Destination + Alternate + 45 min at normal cruise; 1-2-3 rule (1 hr +/-, 2,000 ft ceiling, 3 SM vis)	14 CFR 91.167 / 91.169
Lost Comms Route	AVE-F: Assigned, Vectored, Expected, Filed (highest of MEA/Expected/Assigned altitude)	14 CFR 91.185
Standard Holding	1 min legs <=14,000 ft MSL, 1.5 min legs >14,000 ft; right turns standard; Direct/Teardrop/Parallel	AIM 5-3-8
Descend Below DA/MDA	Continuous normal descent, flight visibility >= prescribed, and >=1 visual runway reference	14 CFR 91.175

How to Use This Lay-Flat Workbook:

1. Fold the plastic coil 360 degrees flat on your desk, kneeboard, or clinical station.
2. Work each Worked Scenario before reading the step-by-step solution.
3. Complete the Module Drill Questions without peeking at the Answer Key & Distractor Rationales.
4. Log missed topics in the Self-Audit Grid at the end of each module and drill them again 48 hours later.

Module 1: IFR Regulations, Currency, Filing & Alternate Minima

Module 1 focuses on Instrument Flight Rules regulations, currency requirements, flight planning procedures, alternate airport minima standards, and handling equipment malfunctions during instrument operations. Pilots must maintain currency under FAR 61.57(c), which requires six instrument approaches, holding patterns, and intercepting and tracking courses within six calendar months. Alternatively, pilots may complete an Instrument Proficiency Check (IPC) anytime to regain currency. Flight operations under FAR 91.169 require pilots to meet recent instrument experience requirements, often summarized as the '1-2-3 Rule' - one precision approach, two holding operations, and three instrument approaches within six months.

Learning Objectives

- Understand currency requirements under FAR 61.57(c) and IPC.
- Apply FAR 91.169 requirements including the '1-2-3 Rule'.
- Differentiate between standard alternate minima and non-standard alternate minima.
- Evaluate operational impacts of inoperative IFR equipment using Minimum Equipment List (MEL).

High-Yield Reference Matrix

Concept / Rule	Threshold / Value	Practical Application
FAR 61.57(c) Currency	6 calendar months	Must complete six instrument approaches, holding patterns, intercepts, or an IPC
IPC Requirement	No time limit	Restores currency anytime
FAR 91.169 Rule	1 precision approach, 2 holds, 3 instrument approaches	Required within six months prior to IFR flight
Standard Alternate Minima	Precision approach: 600-2 visibility	Used when no specific alternate minima published
Non-standard Alternate Minima	Non-precision approach: 800-2 visibility	Published alternate minima override standard
MEL/Inoperative Equipment	Per MEL or FAR 91.213	Must ensure remaining equipment supports safe flight

Worked Scenarios & Field Calculations

Module 1 Practice Drill Questions

1. Under FAR 61.57(c), how often must pilots maintain instrument currency?

A. Every six calendar months
B. Every twelve calendar months
C. Every three calendar months
D. Every month

2. What is required under FAR 91.169?

A. One precision approach
B. Two holding patterns
C. Three instrument approaches
D. All of the above

3. What visibility requirement applies to non-standard alternate minima?

A. 600 feet ceiling
B. 800 feet ceiling
C. 4 miles visibility
D. 2 miles visibility

4. What is required visibility under standard alternate minima?

A. 4 miles visibility
B. 2 miles visibility
C. 3 miles visibility
D. 1 mile visibility

5. What is the ceiling requirement under standard alternate minima?

A. 600 feet
B. 800 feet
C. 1,000 feet
D. 1,200 feet

6. What is required visibility under non-standard alternate minima?

A. 4 miles visibility
B. 2 miles visibility
C. 3 miles visibility
D. 1 mile visibility

Module 3: Holding Patterns, Approach Plates & Precision vs Non-Precision Minima

Holding patterns are essential procedures used in instrument flight rules (IFR) flying to delay arrival at a destination airport until traffic or weather clears. There are three primary types of hold entries - teardrop, parallel, and direct - each requiring pilots to assess their position relative to the holding fix and adjust their entry accordingly. Holding procedures involve specific timing rules, typically based on groundspeed adjustments to maintain the correct leg duration.

Learning Objectives

- Identify the correct hold entry type based on aircraft position relative to the holding fix.
- Understand precision approach procedures such as ILS and LPV versus non-precision procedures like LNAV/VNAV and VOR.
- Apply circling minima rules during instrument approaches.
- Recognize runway environment visual cues required under FAR 91.175.

High-Yield Reference Matrix

Concept / Rule	Threshold / Value	Practical Application
Teardrop Entry	Aircraft approaching holding fix from within a 110-degree angle	Used when approaching fix from behind
Parallel Entry	Aircraft approaching holding fix from within a 90-degree angle	Used when approaching fix perpendicular
Direct Entry	Aircraft approaching holding fix from within a 90-degree angle	Used when approaching fix straight ahead
ILS (Instrument Landing System)	Precision approach	Provides glidepath guidance
LPV (Localizer Performance with Vertical guidance)	Non-precision approach with vertical guidance	Requires WAAS-capable equipment
Circling Minima	MVA based on aircraft category	Used after reaching MDA/H to maneuver visually
FAR 91.175 Visual Cues	Runway environment visible	Must see runway environment before descending below DA/MAP
LNAV/VNAV	Non-precision approach with vertical guidance	Used commonly on RNAV approaches
VOR Approach	Non-precision approach	Provides lateral guidance only
Timing for Holding Legs	1 minute at or below 14,000 ft	Adjust timing based on groundspeed

Worked Scenarios & Field Calculations

12. What is the correct way to handle lost communications during an approach?

A. Continue approach
B. Divert to alternate airport
C. Land at nearest suitable airport
D. All of the above

13. When cleared for an approach, the pilot must:

A. Fly direct
B. Fly published approach procedure
C. Fly alternate route
D. Fly holding pattern

14. What is the correct holding pattern entry procedure arriving at a fix at a 95-degree angle?

A. Direct entry
B. Parallel entry
C. Teardrop entry
D. No entry required

15. What is the minimum visibility required for a Category II ILS approach?

A. ½ mile
B. ¾ mile
C. ½ mile or less
D. Ceiling not applicable

16. When receiving a clearance containing 'via the XYZ STAR,' the pilot must:

A. Deviate from STAR
B. Fly published XYZ STAR procedure
C. Contact ATC immediately
D. Ignore clearance

17. What is the correct way to respond to ATC clearance if unsure?

A. Read back clearance
B. Ask ATC for clarification
C. Accept clearance
D. Fly direct

ADDITIONAL WORKSPACE & CLASSROOM NOTES