

INSTRUMENT FLYING

IFR Approach Brief

A practical guide to briefing an instrument approach so you know what to fly, what to monitor, when to descend, and when to go missed.

IFR APPROACHES

APPROACH BRIEFING

INSTRUMENT CHECKRIDE

MISSED APPROACH

APPROACH MINIMUMS

ACS

Turn the Chart Into a Plan

An IFR approach brief is the pilot's last organized chance to convert a published procedure into a mental picture before workload rises near the airport. A good brief confirms the exact procedure, required equipment, course guidance, altitudes, minimums, missed approach, aircraft setup, and threats.

The goal is not to recite every printed item like a robot. The goal is to build a plan, even when flying alone, so every critical decision is made before the airplane is close to terrain, traffic, weather, and runway environment illusions.

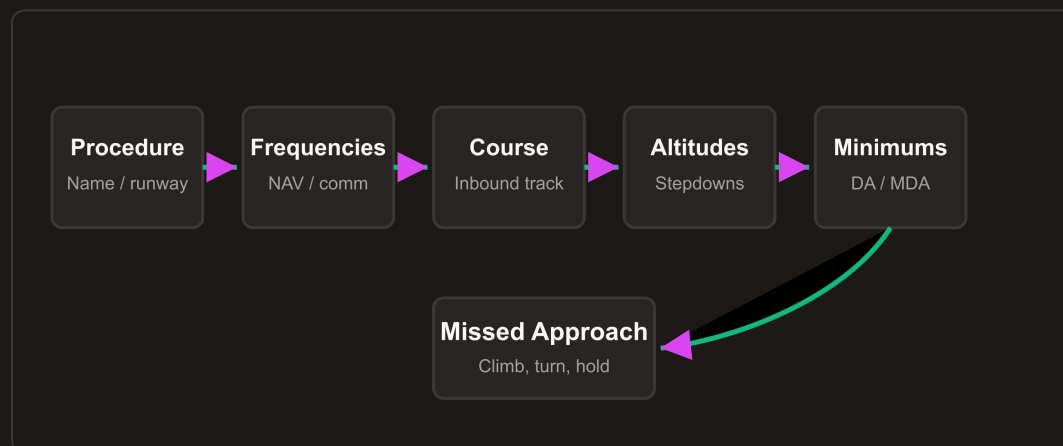
THE FIVE QUESTION BRIEF

What, Join, Low, See, Miss

What am I flying, how do I join it, how low may I go, what must I see, and what exactly happens if I miss.

Checkride Target

The examiner is listening for decision points, not theater. State what action each chart item triggers.



Brief enough to fly the approach from memory if workload rises, then verify against the chart.

Start With the Right Procedure

Read the airport name, identifier, and full approach title exactly as published or assigned. Confirm the runway and approach type match the clearance. On RNAV approaches, say whether you are planning LPV, LNAV VNAV, LNAV, LP, or circling minimums. On ILS charts with localizer minimums, confirm whether the glideslope is available and whether any component is unusable.

If ATC says cleared approach without naming a specific approach, AIM guidance authorizes any authorized instrument approach procedure for that airport, but not a visual or contact approach.

Common Mistake

A clearance for the RNAV approach does not automatically mean LPV minimums are available. The aircraft, database, procedure notes, and annunciation must support the minimums selected.

AIM 5 4 6

Understand exactly what approach clearance you have. If the clearance is ambiguous or different from the expected approach, clarify and rebrief before accepting a rushed setup.

ESSENTIAL APPROACH BRIEF ITEMS

ITEM	WHAT TO SAY	WHY IT MATTERS
Approach title	Airport and full procedure name	Prevents wrong chart and wrong runway errors
Weather	Ceiling, visibility, wind, altimeter	Confirms landing odds and minimums risk
Equipment	Required nav, avionics, lighting, services	Confirms the aircraft can fly all required segments
Entry	IAF, IF, vectors, feeder, course reversal	Prevents joining the procedure incorrectly
Altitudes	FAF, stepdowns, glide path, DA, DH, MDA	Protects obstacle clearance
Minimums	Correct line for category and equipment	Prevents descending to an unauthorized altitude or visibility
Missed	MAP, first action, route, altitude, hold	Prepares the highest workload contingency
Runway	Length, lighting, wind, exit, taxi	Prevents landing and rollout surprises

Precision	APV	Non-Precision
Lateral guidance Yes	Lateral guidance Yes	Lateral guidance Yes
Vertical guidance Yes	Vertical guidance Yes	Vertical guidance No published glidepath
Minimum type DA / DH	Minimum type DA	Minimum type MDA
Example ILS	Examples LPV, LNAV/VNAV	Examples VOR, LOC, LNAV

Always use the approach chart minimums and equipment notes for the specific procedure.

Chart Currency, Database, and Eligibility

Use a current FAA or approved chart source and verify that the avionics database is current for IFR use when relying on coded RNAV procedures. If the loaded procedure does not match the chart, the chart wins for what must be flown.

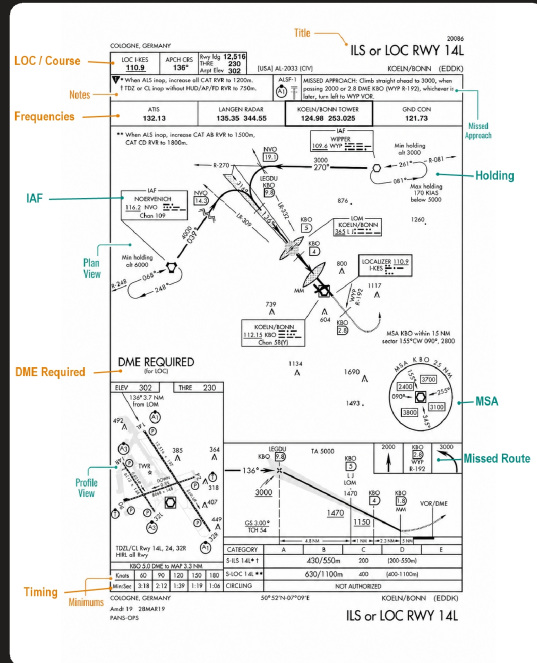
The approach title and notes tell you what equipment is required for final, transition segments, and the missed approach. A slash in an older title, such as VOR DME, means more than one system is required for the final approach. The word or in a title means either listed system may be used as published.

PRACTICAL RULE

The chart is the legal and operational procedure. The navigator is a tool to help fly it.

EXAMINER ANGLE

If asked whether GPS can substitute for DME or ADF, answer from the installed equipment, database approval, procedure notes, and current guidance.



Build the Arrival Picture Before Final

Review weather, ceiling, visibility, wind, altimeter, runway condition, NOTAMs, lighting, and likely taxi route. Minimums assume the required equipment, lighting, and altimeter sources are available. A lighting outage can increase required visibility or make the approach less practical at night.

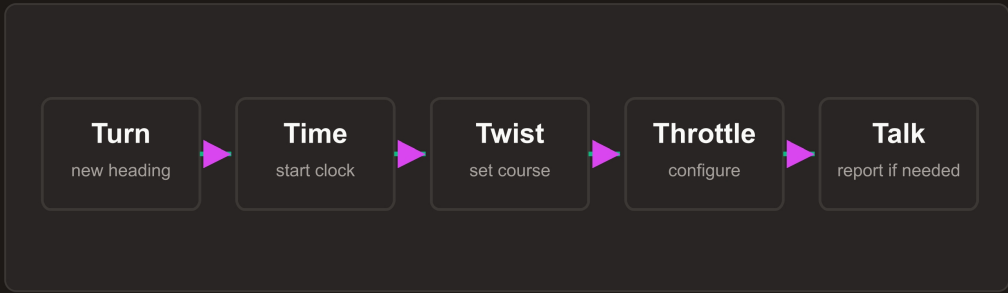
Then brief how you will join the procedure: present position, expected clearance, IAF, IF, feeder route, courses, distances, arcs, holds, and any course reversal. Look for No PT notes, radar required, DME required, procedure NA notes, terrain, obstacles, restricted airspace, and unusual airport geometry.

Course Reversal Trap

A depicted procedure turn or hold in lieu is required unless an exception applies. Do not silently skip it because it looks inefficient, and do not fly it on a No PT segment unless cleared.

Checkride Question

If established on a segment marked No PT, you do not fly the procedure turn for practice without an amended clearance.



Use after crossing a fix, entering a hold, or beginning a new instrument segment.

APPROACH BRIEF THREATS

THREAT	WHAT TO BRIEF	GO MISS TRIGGER
Low weather	Required visibility and visual references	No legal visual reference at DA, DH, MDA, or MAP
Tailwind	Landing distance and stable speed	Excessive groundspeed or unstable descent
Night circling	Protected area, lighting, runway orientation	Loss of visual reference or unstable maneuvering
Stepdown fixes	Fix identification and crossing altitude	Unable to identify the fix or comply with altitude
Automation confusion	Expected annunciations and CDI source	Wrong source, wrong mode, wrong sequencing
Equipment outage	Required equipment for final and missed	Required equipment unavailable
Late clearance	Time needed to brief and configure	Not briefed or not stable before intercept

Brief the Descent Like a Sequence of Gates

Name the final approach fix or final approach point. Read all crossing altitudes from the IAF through final, identify stepdown fixes, glide path intercept altitude, vertical descent angle, threshold crossing height, visual descent point when published, DA, DH, MDA, and the exact missed approach point.

Published altitudes protect against obstacles and manage descent profile. Stepdown fixes are not suggestions. The vertical descent angle on a nonprecision approach is advisory unless connected to approved vertical guidance, and it does not authorize descent below MDA before the legal requirements are met.

THREE DEGREE DESCENT RATE

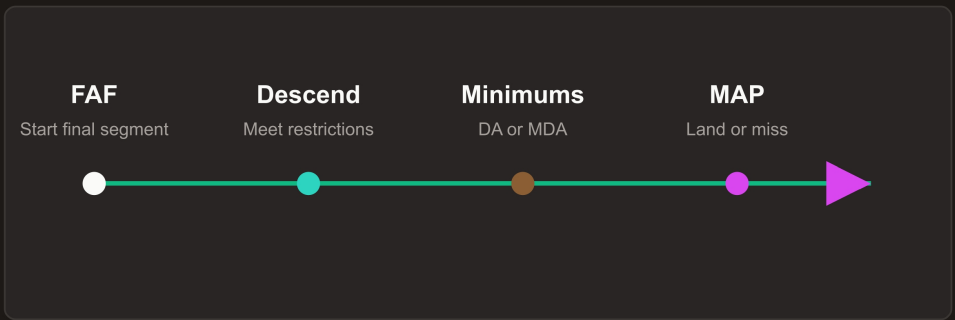
Groundspeed x 5 = fpm

At 90 knots, plan about 450 feet per minute. At 120 knots, plan about 600 feet per minute.

THREE DEGREE PATH

About 300 feet per NM

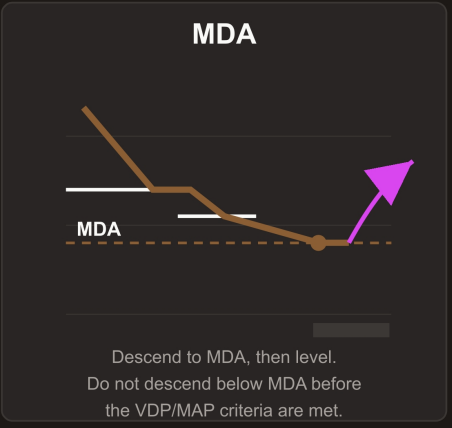
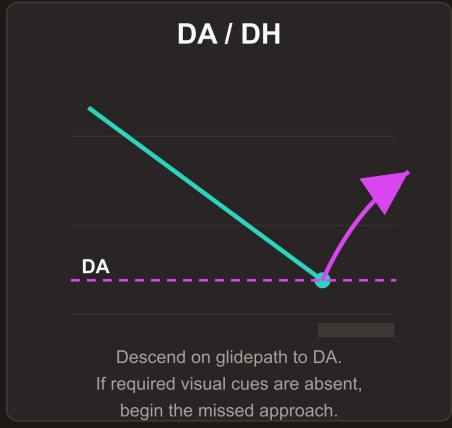
Use this to sanity check altitude loss from the FAF to the runway or MAP.



The published chart controls descent points, timing, minimums, and missed approach instructions.

DA, DH, MDA, AND MAP

TERM	MEANING	PILOT ACTION
DA	Decision altitude in MSL	Decide at that altitude whether to continue or miss
DH	Decision height above a specified reference	Decide at that height whether to continue or miss
MDA	Minimum descent altitude in MSL	Do not descend below until 91.175 conditions are met
MAP	Missed approach point	Begin missed if landing requirements are not met

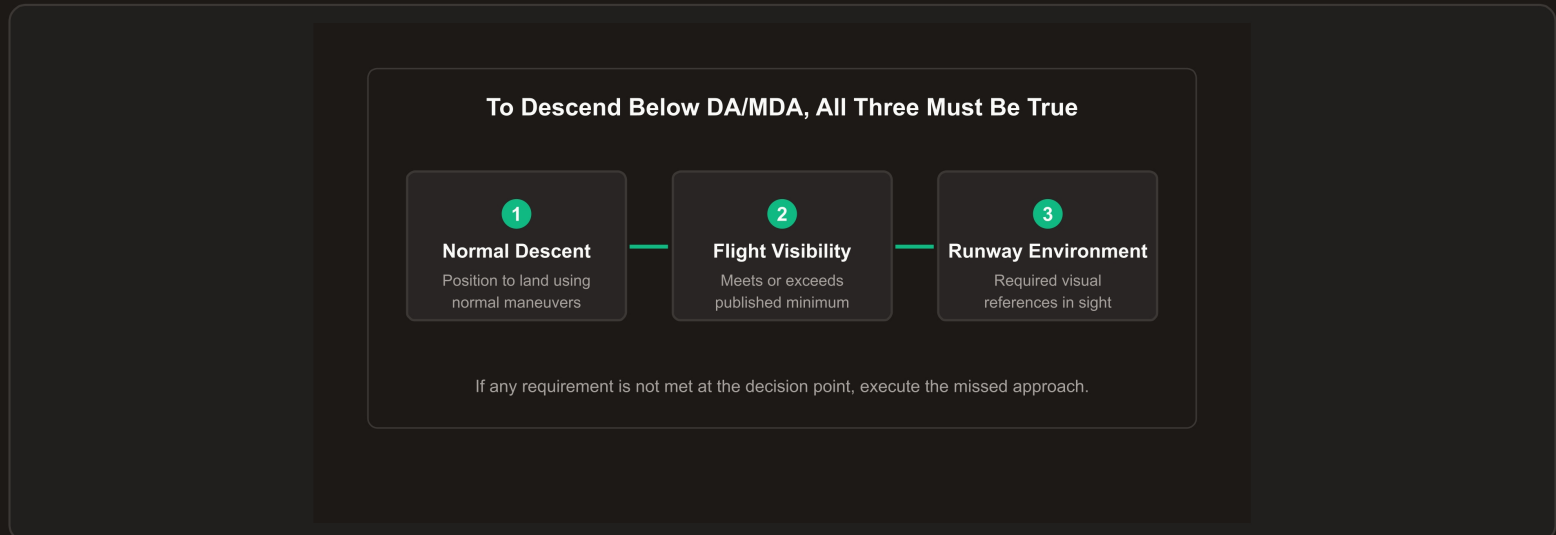


DA is a decision point on descent; MDA is a floor you must not descend below without required visual references.

Minimums Are a Legal Decision, Not a Guess

Choose the correct line of minimums for approach type, aircraft category, equipment, weather, and planned landing. Aircraft category is based on VREF at maximum certified landing weight, or 1.3 VSO if VREF is not specified. If you maneuver faster than the upper limit of your category, use the higher category minimums.

Use straight in minimums only when landing the associated runway and meeting the procedure requirements. Use circling minimums when the procedure or landing plan requires circling. Apply increased minimums required by notes, inoperative components, alternate minimums, or equipment limitations.



91.175 LANDING TEST

Position, Visibility, Reference

Normal landing position, required flight visibility, and one approved visual reference must all be present.

Approach Light Exception

If approach lights are the only visual reference, do not descend below 100 feet above touchdown zone elevation unless the red terminating bars or red side row bars are also visible and identifiable.

91.175 VISUAL REFERENCES

REFERENCE	CAN SUPPORT DESCENT	IMPORTANT LIMITATION
Approach light system	Yes	Alone, only to 100 feet above touchdown zone elevation unless red bars are visible
Threshold, markings, or lights	Yes	Must identify the intended runway
REIL, VASI, or PAPI	Yes	Still need normal position and required visibility
Touchdown zone, markings, or lights	Yes	Must be distinctly visible and identifiable
Runway, markings, or lights	Yes	Must be the intended runway environment

Runway In Sight Is Not Enough

If you break out at MDA but are high and close, 91.175 still requires a normal descent using normal maneuvers. If that is not true, go missed.

14 CFR 91.175

The authorized DA, DH, or MDA is the highest applicable value from the procedure, pilot authorization, and aircraft equipment.

Missed Approach Is Part of the Approach

Brief the missed every time, even when you expect vectors or a visual landing. Read the first action out loud, including climb direction, turn direction, altitude before turning if specified, final holding fix, holding entry, and required nav aids. Verify the missed is loaded or available in the avionics.

An approach clearance normally includes clearance to fly the published missed approach unless ATC gives different instructions. Published obstacle clearance assumes the missed begins at or above the MAP and meets the required climb gradient, normally 200 feet per NM unless a higher gradient is published.

MISSED FIRST ACTIONS

Power, Pitch, Positive Rate

Then navigate and communicate. Establish climb before becoming absorbed in radios or avionics.

Early Miss on Nonprecision

If you go missed before the MAP, continue along the lateral final approach path to the MAP before flying published missed approach turns unless ATC instructs otherwise.

Circling and Balked Landing Judgment

Use circling minimums if you will not land straight in on the runway associated with the straight in minimums, or if the procedure is circling only. Confirm circling is authorized for your runway, category, time of day, and notes. Maintain visual reference with the runway environment.

If visual reference is lost while circling, begin a climbing turn toward the landing runway and continue to join the published missed approach unless ATC has assigned a different procedure. If going missed after the MAP or below minimums, obstacle clearance may not be assured in the same way, so preplan climb out options.

Glideslope Fails Outside the FAF

Confirm localizer minimums are authorized, advise ATC if needed, then rebrief MDA, stepdowns, MAP, timing if required, and the missed. If not ready, request vectors, another approach, or a hold.

AIM 5 4 21

The published missed approach is protected when flown from the proper point with the required climb performance. Late missed or balked landing cases need judgment.

COMMON EXAMINER TRAPS

TRAP	CORRECT RESPONSE	KEY IDEA
Cleared approach means visual	No, it authorizes an authorized IAP	AIM approach clearance guidance
Runway in sight means land	Only if all 91.175 requirements are met	Position, visibility, visual reference
LPV always available on RNAV	Only with proper equipment and annunciation	Chart and avionics capability
Procedure turn optional when depicted	Required unless an exception applies	AIM procedure turn guidance
Missed approach begins with a turn now	Follow charted path and MAP logic	AIM missed approach guidance
MDA can be treated like DA casually	MDA is a floor unless using an authorized technique	91.175 minimum altitude discipline

Automation and Single Pilot Technique

State what the autopilot will do and when you will disconnect it. Confirm the approach is loaded, activated at the correct time, and sequencing properly. Verify the correct CDI source, sensitivity, and inbound course. For an ILS or localizer, confirm frequency, identifier, and front course. For RNAV, confirm integrity, approach mode, and expected annunciations such as LPV, LNAV VNAV, or LNAV.

Brief early, then refresh the must know items before the final approach fix: approach title, course, altitudes, minimums, missed approach, and runway plan. Speak critical items aloud, point to the chart, and set bugs and avionics as part of the brief.

Automation Mode Confusion

The airplane may be following exactly what you told it, even when that is not what you meant. A good brief includes the annunciations you expect to see.

Moving Map Covered

The moving map is not the procedure. Continue only if you still have required navigation, the chart, situational awareness, and the ability to identify fixes, courses, and altitudes.

CREW STYLE FLOW FOR SINGLE PILOT USE

STEP	BRIEF IT OUT LOUD
Airport and title	Exact airport, runway, and approach name
Weather and threats	Ceiling, visibility, wind, runway condition, lighting, NOTAMs
Navigation setup	Required equipment, source, frequency, identifier, database, annunciation
Entry and course	IAF, IF, vectors, feeder, course reversal, inbound course
Vertical plan	Crossing altitudes, FAF, stepdowns, glide path, MDA, DA, DH
Landing decision	Minimums, required visual references, stable gate, runway plan
Missed approach	First action, route, altitude, hold, communication plan

M C A M BRIEF

Method, Course, Altitudes, Missed

A compact high workload flow that captures the minimum information needed to fly and abandon the approach.

STABLE GATE

Path, Speed, Config, Checklist

If not stable by the planned gate, go missed or go around before pressure builds.

Instructor Standard

A student should brief the approach without burying their head in the chart. They should point to each critical item, explain what it means, and state what action it triggers. The instructor should interrupt with realistic changes, such as glideslope out, circling required, weather at minimums, or missed approach before the MAP.

A weak brief asks, what does the chart say. A strong brief asks, what will I do at each decision point. That difference is what examiners are listening for, and it is also what keeps you out of trouble in real IMC.