INSTRUMENT APPROACH CHARTS

FAF Symbols

A practical guide to recognizing final approach fix symbols and using them correctly during instrument approaches.

FAF SYMBOLS | INSTRUMENT APPROACHES | MALTESE CROSS | LIGHTNING BOLT | RNAV

WHY THIS TINY SYMBOL MATTERS

Final approach fix symbols are small, but they carry big operational meaning. The FAF marks where the final approach segment begins, where descent planning becomes critical, where ATC expects you to be established, and where mistakes can quickly remove obstacle protection.

A pilot who understands the Maltese cross, the lightning bolt, final approach point logic, and RNAV final approach waypoint behavior will brief approaches more accurately, descend at the right place, and answer examiner questions with confidence instead of chart reading guesswork.

MEMORY AID

What symbol, what altitude, what action

Ask this during the brief so the FAF becomes a cockpit action point rather than chart decoration.

Instructor Standard

Treat the FAF as a workload gate. Before crossing it, know the correct minimums, missed approach, descent plan, MAP method, and first missed approach action.

The FAF Is A Segment Boundary

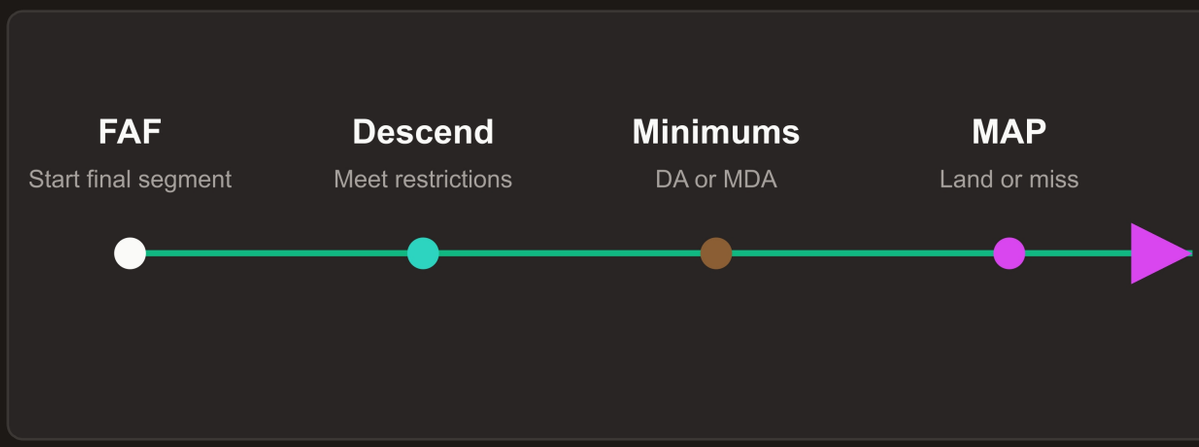
FAF stands for final approach fix. The Pilot Controller Glossary defines it as the fix from which the final approach to an airport is executed and which identifies the beginning of the final approach segment.

In plain English, the FAF is where the approach changes from getting lined up to flying the final descent portion of the procedure. On many approaches, it is where the pilot may begin final descent from the published crossing altitude.

The key idea is that the FAF is not just a fix name. It is a procedure boundary with obstacle clearance, ATC sequencing, timing, missed approach, and descent planning consequences.

WHAT CHANGES AT THE FAF

- Final segment obstacle clearance assumptions begin.
- The aircraft should already be established on final unless the procedure or ATC clearance provides otherwise.
- Descent must follow published altitudes, glide path, glideslope, or MDA rules.
- Timing, MAP identification, and missed approach readiness become immediate cockpit tasks.



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

Maltese Cross, Nonprecision FAF

The Maltese cross identifies the FAF on nonprecision approaches. It appears in the profile view and marks the beginning of the final approach segment when a specific FAF is charted.

After crossing the Maltese cross at or above the required altitude, the pilot may begin final descent if all other procedure requirements are met. This symbol is common on VOR, localizer only, LNAV, LP, NDB, LDA without glide path, and other nonprecision approaches.

Nonprecision approaches do not provide approved glide path deviation information for the final segment. The pilot must manage altitude using the chart, altimeter, distances, timing, stepdown fixes, and MDA.

NONPRECISION FAF CALLOUT

- Fix name and crossing altitude.
- Timer started if timing is required or useful.
- Final approach course confirmed.
- Next altitude, stepdown, MDA, and MAP method stated.

CROSS MEANS CONTROL

Maltese cross, control your own descent

The segment now depends on altitude restrictions, stepdown fixes, timing, and MDA discipline.

Common Mistake

Crossing the Maltese cross does not mean descend without limits. It means final descent may begin only within the published profile and any stepdown restrictions.

Lightning Bolt, Precision Final Approach Fix

WHAT THE BOLT MEANS

- The lightning bolt identifies the precision final approach fix, often called the PFAF.
- It represents the glideslope or glide path intercept point at the published altitude.
- It is a vertical path joining point, not a dive marker.
- Obstacle clearance assumes the aircraft joins the approved vertical path from the proper altitude and location.

In an ILS example, the precision final approach fix is normally the point where the aircraft intercepts the glideslope at the published glideslope intercept altitude. Government charts use the lightning bolt to show this point.

If ATC assigns an altitude lower than the published glideslope or glide path intercept altitude, the actual intercept point may become the operative point for final approach segment purposes. That does not give the pilot permission to ignore published restrictions unless the instruction and procedure design support the intercept safely.

Capturing a false glideslope or descending on a glide path too early can violate intermediate segment altitude restrictions.

BOLT MEANS VERTICAL PATH

Lightning bolt, intercept vertical guidance here

Use the published intercept altitude and location unless a valid clearance changes the operation.

Examiner Angle

If asked where the FAF is on an ILS, say the precision FAF is the glideslope intercept point shown by the lightning bolt and associated altitude. If localizer only minimums are published, the same chart may also show a Maltese cross for the LOC FAF.

SYMBOL OR TERM	WHERE USED	MEANING
Maltese cross	Nonprecision profile view	Final approach fix and beginning of final segment
Lightning bolt	Precision profile view	Precision final approach fix and vertical path intercept point
Final approach point	Nonprecision approach with no depicted FAF	Established inbound point where final descent may begin
Final approach waypoint	RNAV approach operations	Waypoint associated with final approach segment entry

LOCALIZER ONLY RESET

If the glideslope is gone, brief MDA, stepdowns, MAP, and timing. Localizer only is nonprecision and does not use ILS DA logic.

CHART TITLE TRAP

A chart may publish ILS, LOC, circling, and other minimums. The symbol that matters depends on the actual operation and minimums line.

Final Approach Point When No FAF Is Depicted

FAP means final approach point. It applies only to a nonprecision approach with no depicted FAF. A common example is an on airport VOR approach.

The FAP is the point where the aircraft is established inbound on the final approach course from the procedure turn and where final descent may begin. It serves as the FAF and identifies the beginning of the final approach segment.

No Maltese cross does not mean no final segment. It means the pilot must identify the final approach point by procedure logic rather than a depicted fix.

Checkride Scenario

On a VOR approach with no Maltese cross, explain that final descent begins at the final approach point, when established inbound on the final approach course from the procedure turn, while still complying with all published altitudes and MDA.

Precision, APV, And Nonprecision Logic

The symbol only makes sense when tied to the type of approach and line of minimums being flown. ILS precision logic uses a vertical path and DA or DH. LPV and LNAV or VNAV provide approved vertical guidance with DA. LOC, VOR, LNAV, LP, and similar nonprecision operations use MDA logic unless a specific procedure says otherwise.

Precision

Lateral guidance
Yes

Vertical guidance
Yes

Minimum type
DA / DH

Example
ILS

APV

Lateral guidance
Yes

Vertical guidance
Yes

Minimum type
DA

Examples
LPV, LNAV/VNAV

Nonprecision

Lateral guidance
Yes

Vertical guidance
No published glidepath

Minimum type
MDA

Examples
VOR, LOC, LNAV

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

Stepdown Fixes, VDP, And MAP Are Different Jobs

ITEM	PURPOSE	STUDENT ERROR
FAF	Starts final approach segment	Confused with MAP
PFAF	Precision final approach fix at vertical intercept	Treated like a Maltese cross descent point
FAP	FAF function when no FAF is depicted	Missed entirely
Stepdown fix	Allows or requires lower altitude after crossing	Mistaken for FAF
VDP	Normal visual descent planning point	Treated as descent permission
MAP	Point where missed approach is required if landing conditions are not met	Not identified before the FAF

RNAV Final Approach Waypoint

Traditional approaches may identify the FAF with a needle, DME, crossing radial, marker, or timing. RNAV approaches use waypoints in the navigation database, and the final approach waypoint is often the database version of the FAF.

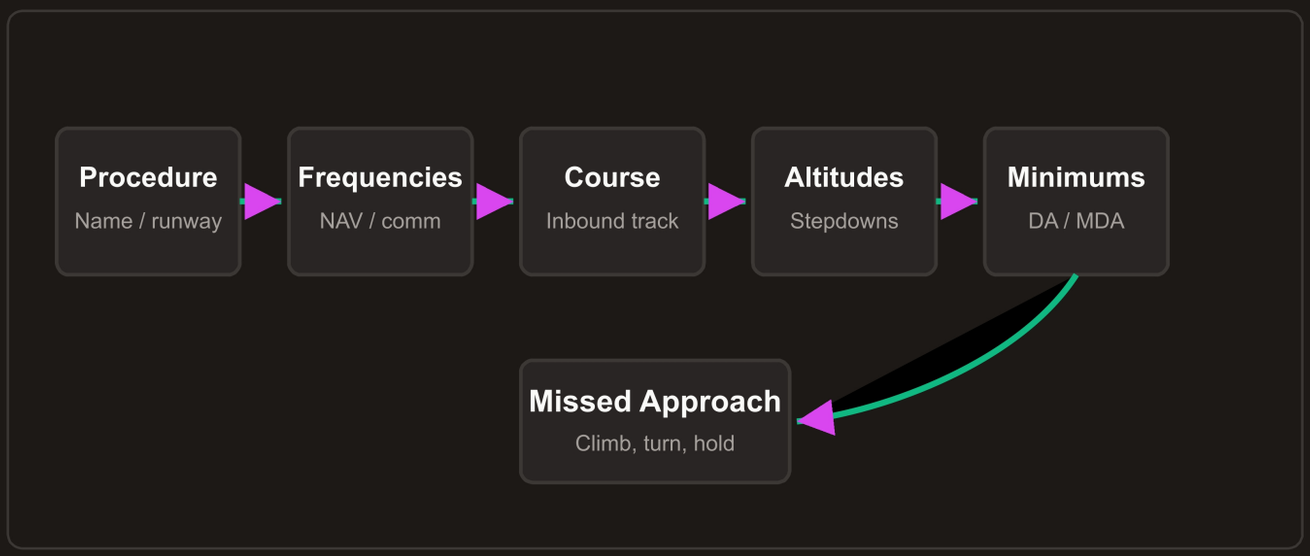
Before crossing the FAWP, verify the active waypoint sequence, final course, altitude, CDI source, approach mode, receiver annunciation, minimums line, navigation integrity, and missed approach setup. For WAAS approaches, the displayed level of service must match the minimums being used.

If GPS integrity fails before the FAWP, the approach should not be completed using that GPS guidance. Before that gate, there is still time to request vectors, hold, or choose another approach.

RNAV FAWP CHECK

- Waypoint and active leg match the chart.
- Annunciation supports LPV, LNAV or VNAV, LNAV, or LP as briefed.
- Minimums, DA or MDA, and missed approach are set.
- Integrity and required navigation performance are acceptable.

Brief The FAF Before Workload Rises



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

ATC, Direct Routing, And Course Reversal Logic

ATC normally vectors aircraft so they can become established on the final approach course before reaching the FAF. If already inbound, the approach clearance should be issued before reaching the FAF.

RNAV aircraft may sometimes be cleared direct to a FAF that is also charted as an IAF. If that fix has a procedure turn or hold in lieu function, direct to the fix does not automatically mean straight inbound and descend. The pilot must determine whether the course reversal is required, whether No PT applies, or whether ATC issued an appropriate straight in clearance or vectors.

Ask Before The Fix

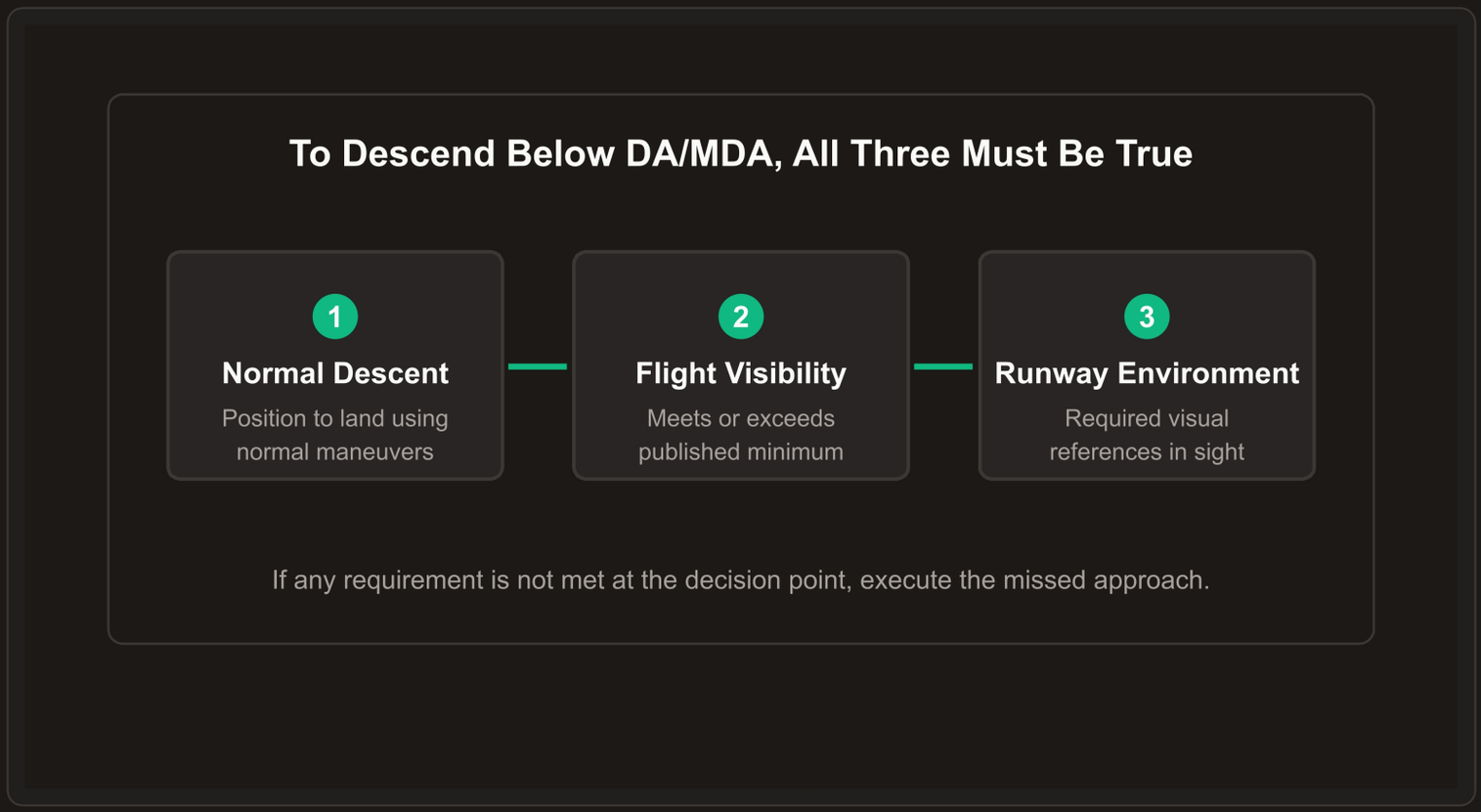
A late clearance, bad vector, or confusing direct to fix clearance should be questioned before the aircraft is forced into a rushed final segment.

BEFORE FAF CHECK
Clearance, course, altitude, source, minimums, and missed. This quick gate catches wrong procedure, wrong CDI source, wrong minimums, and late missed approach confusion.

AUTOMATION TRAP
Vectors to final may remove fixes outside the FAF from the loaded sequence. If the box no longer matches the chart, stop and resolve the mismatch before continuing.

Minimums Still Control Below The FAF

The FAF begins or supports final descent, but it does not authorize descent below DA, DH, or MDA. Under 14 CFR 91.175, descent below minimums requires the aircraft to be in a normal position to land, flight visibility to meet or exceed the published requirement, and the required visual references to be distinctly visible and identifiable.



VDP Versus FAF
The visual descent point is not a FAF. It is a planning point from which a normal descent from MDA to the runway may begin if the required visual references are available.

Early Missed Approach
If going missed before the MAP on a nonprecision approach, begin climb and configuration actions, but normally continue along the final approach course to the MAP before flying charted missed approach turns unless ATC instructs otherwise.

Practical Callouts

SITUATION	CALLOUT SHOULD INCLUDE	WHY
Nonprecision FAF	Fix, altitude, timer, descent, next restriction	Manages final descent and MAP awareness
Precision PFAF	Intercept point, altitude, vertical guidance, DA	Confirms proper glide path capture
RNAV FAWP	Active waypoint, mode, annunciation, minimums	Prevents wrong minimums and mode errors
LOC only	FAF, MDA, stepdowns, MAP, timing	Replaces ILS style vertical path thinking

EXAMPLE NONPRECISION

FAF, cross JEVED at or above two thousand, timer started, descend to one thousand three hundred until SEVEN, then MDA nine hundred eighty.

EXAMPLE PRECISION

Lightning bolt, glideslope intercept altitude two thousand, localizer centered, glideslope captured, DA seven hundred eighty, missed approach briefed.

EXAMPLE RNAV

FAWP, LPV annunciated, DA eight hundred twenty, glide path captured, missed approach armed.

TIMING REMINDER

If timing is published, brief it before the FAF. A forgotten timer may remove a backup method for identifying the MAP if other distance information is unavailable.

FAA Reference Logic

PILOT CONTROLLER GLOSSARY, FAF

The FAF is the fix from which the final approach is executed and which identifies the beginning of the final approach segment. Government charts use the Maltese cross for nonprecision FAFs and the lightning bolt for the precision final approach fix.

PILOT CONTROLLER GLOSSARY, FAP

The final approach point applies only to a nonprecision approach with no depicted FAF. It occurs when established inbound from the procedure turn and where final descent may begin.

AIM 5 4 5

Instrument approach charts must be read as a complete system of plan view, profile view, minimums, notes, vertical descent information, and missed approach instructions.

AIM 5 4 6

ATC normally vectors aircraft to become established before the FAF. After passing the FAF, pilots are expected to continue inbound and complete the approach or execute the published missed approach.

AIM 5 4 9

A procedure turn or hold in lieu is required when depicted unless an exception applies, such as vectors, No PT routing, timed approach procedures, or a proper straight in clearance.

AIM 1 1 17 AND 1 1 18

RNAV and GPS approach operation depends on correct database loading, waypoint sequencing, integrity monitoring, and matching receiver annunciations to the intended minimums.

Checkride Symbol Traps

TRAP	CORRECT ANSWER	WHY IT MATTERS
Maltese cross on every approach	No, the lightning bolt marks the precision final approach fix	Different symbols mean different descent logic
Glideslope alive means descend	No, comply with published intercept altitude	Prevents early descent
No Maltese cross means no FAF function	No, use final approach point logic	Final segment still exists
VDP equals FAF	No, VDP is visual descent planning point	Prevents descent below MDA too early
LOC on ILS chart uses DA	No, LOC only usually uses MDA	Localizer only is nonprecision
GPS sequence always matches briefing	Verify against the chart	Prevents automation traps

Strong Oral Exam Answer

MODEL RESPONSE

- The Maltese cross shows the nonprecision FAF, where the final segment begins and final descent may start if I meet the charted altitude and procedure requirements.
- The lightning bolt shows the precision final approach fix, where I intercept the glideslope or glide path at the published altitude.
- If no FAF is depicted on a nonprecision approach, I use the final approach point, where I am established inbound from the procedure turn and final descent may begin.
- I still comply with stepdown fixes, MDA or DA, 91.175, and the missed approach instructions.