



# ***GCA Training***

## ***Ground controlled approach – SRA/PAR***

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07<sup>th</sup> DEC 2025, 1600 – 1900 z





## 1. Introduction

GCA stands for Ground Controlled Approach, these are SRA and PAR approaches. These are a unique type of approaches which rely on a ground radar to guide an aircraft horizontally and vertically to the runway. As these approaches are not known by many as are rather unusual, in this event we will practice them.

**IVAO Spanish Division invites VSOGs and freelancers to take part this event, departing from Zaragoza Air Base (LEZG) on 07<sup>th</sup> December 2025 at 16:00z.**

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### 3. Aircraft types

Any military or civilian aircraft may be flown. Please use and aircraft that you feel comfortable flying and that you can maneuver accurately.

### 4. Departure

#### 4.1 Airport - LEZG

Zaragoza Air Base (LEZG) will be used for this event. Foreign aircraft will park at the South Military Apron.

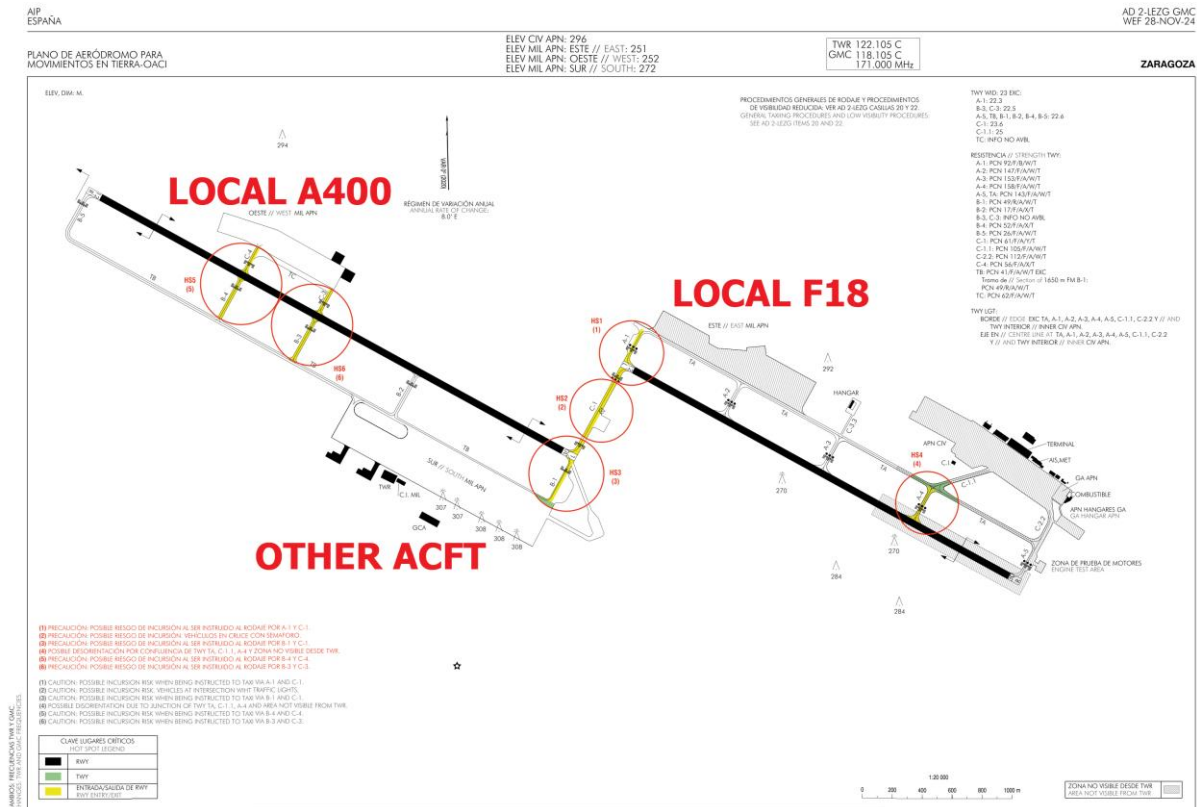


Figure 1. LEZG GMC chart\*: [AIP](#).

### ATC

Designator	CALLSIGN	FREQUENCY
LEZG GND	Zaragoza Ground	118.100
LEZG TWR	Zaragoza Tower	122.100
LEZG APP	Zaragoza Approach	119.300
LEZG GCA APP	Zaragoza Precision (approach)	130.025





## RWY 12

After ZULU or when instructed by ATC, turn RIGHT DCT AMBEL (414615N0014252W; ZZA/281/030). Expect vectors for the SRA/PAR approach before AMBEL. Should no vectors been given before reaching AMBEL, hold at AMBEL (INBD 101°, standard: right turns, 1/1.5 minutes) at +FL110.

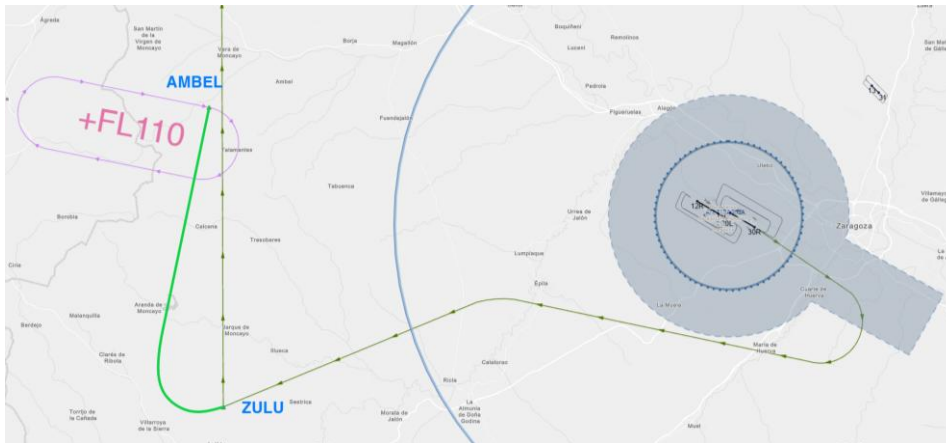


Figure 4. Departure procedure RWY 12L/R\*.

## 5. GCA approaches

As its name says, these are Ground Controlled Approaches in which the controller plays a critical role during the approach. Opposite to normal approaches, the controller is the one responsible for the horizontal guidance, and vertical guidance in PAR approaches.

In the following sections the characteristics of these approaches and the differences between them will be detailed.

### 5.1 Common characteristics

- Horizontal guidance:
  - Initially, the controller provides a 20° interception heading to the runway centerline.
  - Thereafter, relatively slight heading corrections (approximately RWY HDG  $\pm 5^\circ$ ) are provided to keep the aircraft in the runway centerline.
- Instructions during the final approach do not require a readback. The controller will say 'Do not readback further instructions unless instructed'.
- Before the approach, the pilot will be informed about:
  - The approach that will be performed (either SRA or PAR) and to which RWY.
  - The minimum descend altitude (SRA) or decision altitude (PAR).
  - The final approach glide path (usually 3°) and the estimated descend rate if the pilot provides the controller with the final approach speed.
  - The missed approach and the radio communication failure procedure; check [5.4 Missed approach / radio communication failure](#).



## 5.2 SRA - Surveillance Radar Approach

- Horizontal guidance:
  - The relative position to the runway (distance and deviation to the left/right of the centerline) will be provided every nautical mile, or each 0.5 NM when closer than 4 NM to the RWY. The pilot should not take any horizontal correction unless instructed.
- Vertical guidance:
  - No direct vertical guidance is provided in SRA approaches.
  - The pilot will be notified when approaching the final approach fix; and when reaching it, to start descending at a predetermined glide path (usually 3°).
  - Recommended altitudes will be provided every nautical mile; the pilot is responsible for adjusting the descend as needed.
- The maximum time between ATC transmissions during the final approach is 15 s.

## 5.3 PAR - Precision Radar Approach

- Horizontal guidance:
  - The relative position to the runway (distance and deviation to the left/right of the centerline) will be provided at regular intervals. The pilot should not take any horizontal correction unless instructed.
- Vertical guidance:
  - The controller will constantly inform the pilot about the vertical position of the aircraft relative to the nominal glidepath.
  - Pilots should increase/decrease their rate of descend to maintain the nominal glidepath. ATC will command a go-around if the vertical position is dangerously low.
  - ATC will inform the aircraft when it's approaching the decision height.
- The maximum time between ATC transmissions during the final approach is 5 s.

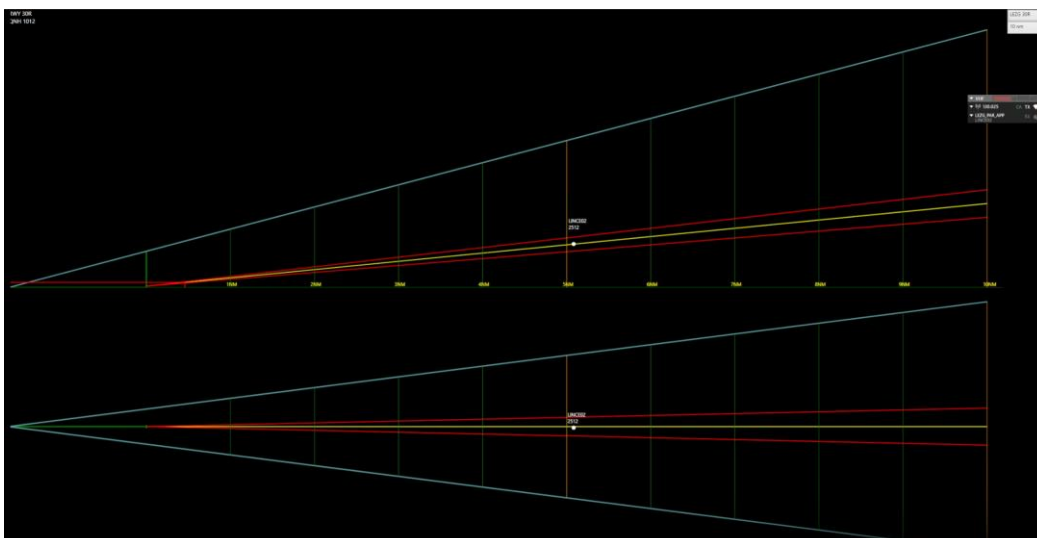


Figure 5. ATC's perspective during PAR approach.



## 5.4 Missed approach and radio communication failure

### Missed approach

These procedures will be informed by ATC before each approach, and they should be read back by the pilots.

#### RWY 30R

CLIMB on RWY HDG until reaching 5000 ft, then, turn LEFT DCT YARZU and continue CLIMB FL70. Join the published hold at YARZU at FL70.

#### RWY 12L

CLIMB on RWY HDG until reaching 5000 ft, then, turn RIGHT DCT AMBEL and continue CLIMB FL100. Join the published hold at YARZU at FL100.

### Radio communication failure

These procedures will be informed by ATC before each approach, and they should be read back by the pilots.

Should any of the following situations occur, pilots should attempt to remain VMC and contact TWR, if unable, they should go around:

- When, in the traffic pattern they don't receive any transmissions for 1 minute and are unable to contact ATC.
- When, on the final approach, they don't receive any transmissions for:
  - 15 s during SRA approaches.
  - 5 s during PAR approaches.

## 6. Phraseology

'A' Denotes ATC's transmission.

'P' Denotes a pilot's transmission.

**NOTE 1:** Pilots do not need to memorize every instruction (ATC does), as they are mostly in plain language, but we ask pilots to read the phraseology as a briefing before the event.

**NOTE 2:** The phraseology below is not in the order that is used during an approach. For an ordered phraseology example check [6.4 Full phraseology example](#).

### 6.1 SRA and PAR

#### Initial identification

- <sup>A</sup> For identification, fly heading [HDG]<sup>o</sup>.
- <sup>A</sup> For identification, Squawk IDENT.



## Approach information

- <sup>A</sup> How will you terminate the approach? // <sup>P</sup> We will perform (a T/G / full stop).
- <sup>A</sup> After the (touch and go, low approach...) (follow the missed approach procedure, climb FL70).

## Missed approach information

- <sup>A</sup> In case of go around: [procedure; check [5.4 Missed approach](#)].

## Initial approach

- <sup>A</sup> Fly heading [HDG]<sup>o</sup>, xx miles for touchdown, approaching the centerline from the [left/right].
- <sup>A</sup> Turn [L/R] [HDG]<sup>o</sup>, xx miles for touchdown, approaching final descend.
- <sup>A</sup> ... approaching final descend.
- <sup>A</sup> ... begin the descend now to maintain a 3<sup>o</sup> glidepath, check your minima.

## Final approach

Final approach transmissions are composed of:

- SRA and PAR:
  - *Distance:* <sup>A</sup> ... xx miles from touchdown...
  - Horizontal position relative to the centerline:
    - <sup>A</sup> ... deviating (left/right) of centerline...
    - <sup>A</sup> ... (slightly/well/deviating) (left/right) of centerline...
    - <sup>A</sup> ... correcting (slowly/quickly)...
    - <sup>A</sup> ... on centerline...
  - Heading instructions (if needed)
    - <sup>A</sup> ... fly heading [HDG]<sup>o</sup>...
- **SRA-only**, additionally:
  - Recommended altitudes every nautical mile:
    - <sup>A</sup> ... altitude should be [ALT] ft...
- **PAR-only**, additionally:
  - Vertical position relative to the nominal glidepath:
    - <sup>A</sup> ... on glidepath...
    - <sup>A</sup> ... (slightly/well/deviating) (above/below) glidepath...
    - <sup>A</sup> ... correcting (slowly/quickly)...
    - <sup>A</sup> ... too (low/high), adjust rate of descend...



## Other

- <sup>A</sup> Perform initial cockpit checks. {Gear up, moderate speed, flaps partially down}.
- <sup>A</sup> Perform landing checks. {Gear down, final approach speed, landing flaps}.
- <sup>A</sup> Runway [RWY], cleared (to land), wind [wind]. Check gear down.
- <sup>A</sup> Do not acknowledge further transmissions unless instructed.

## 6.2 SRA-specific

- <sup>A</sup> This will be a Surveillance Radar Approach RWY xx, terminating at 1 NM from touchdown. Recommended altitudes will be provided for each mile on final to MDA. Minimum Descend Altitude is xxxx ft. Missed approach point at 1 NM from touchdown.
- <sup>A</sup> Approaching missed approach point, report runway in sight.
- <sup>A</sup> Approach terminated.

## 6.3 PAR-specific

- <sup>A</sup> This will be a Precision Radar Approach RWY xx, terminating at 0.5 NM from touchdown. Decision Altitude is xxxx ft. In case of go around: [procedure; check [5.4 Missed approach](#)].
- <sup>A</sup> ... begin descend now to maintain a 3° glidepath; check your minima.

## 6.4 Full phraseology example

**NOTE 3:** Some of the pilot's readbacks are omitted, they are simply readbacks of the instructions.

## SRA

- <sup>A</sup> For identification fly heading 090°.
- <sup>A</sup> Identified on the R-132 13 NM from Zaragoza TACAN. This will be a Surveillance Radar Approach. RWY 30R, terminating at 1 NM from touchdown. Recommended altitudes will be provided for each mile on final until MDA. Minimum Descend Altitude is 1490 ft. Missed approach point at 1 NM from touchdown.
- <sup>A</sup> [Heading instructions are provided in the meantime when needed].
- <sup>A</sup> In case of go around: CLIMB on RWY HDG until reaching 5000 ft, then, turn LEFT DCT YARZU and continue CLIMB FL70. Join the published hold at YARZU at FL70.
- <sup>A</sup> How will you terminate the approach?
- <sup>P</sup> We will perform a touch and go.
- <sup>P</sup> Roger, after the T/G, follow the missed approach procedure, climb FL70.



- **A** If you don't receive any transmissions for 1 minute in the pattern or 15 seconds on final, attempt to contact TWR on frequency 122.105 and remain in VMC; if unable to remain in VMC, perform the missed approach procedure.
- **A** Turn left heading 320°, final vector, 12 miles from touchdown, approaching from the left. Perform initial cockpit checks.
- **A** Fly heading 300°, 10 miles from touchdown, descend 2900 ft. Perform landing checks.
- **A** On centerline, 7 miles from touchdown, prepare for final descend in 1 NM. Do not acknowledge further instructions.
- **A** On centerline, 6 miles from touchdown, begin descending now to maintain a 3° glidepath.
- **A** Deviating slightly right of centerline, fly heading 297, 5 miles, altitude should be 2510ft.
- **A** [...]
- **A** ... runway 30R, cleared to land, acknowledge.
- **P** Cleared to land runway 30R.
- **A** [...]
- **A** On centerline, 2 NM from touchdown, altitude should be 1540ft. Approaching missed approach point, report RWY in sight.
- **P** Runway in sight.
- **A** Approach terminated.

## PAR

- **A** This will be a Precision Radar Approach RWY 30R, terminating at 0.5 NM from touchdown. Decision Altitude is 1023 ft. In case of go around: CLIMB on RWY HDG until 5000 ft, then, turn LEFT DCT YARZU, and continue CLIMB FL70. Join the published hold at YARZU at FL70.
- **A** If you don't receive any transmissions for 1 minute in the pattern or 5 seconds on final, attempt to contact TWR on frequency 122.105 and remain in VMC; if unable to remain in VMC, perform the missed approach procedure.
- **A** [This part, until the final descend, is the same as for SRA approaches].
- **A** On centerline, 11 miles from touchdown, prepare for final descend in 1 NM. Do not acknowledge further instructions.
- **A** On centerline, 10 miles from touchdown, begin descending now to maintain a 3° glidepath.
- **A** 9 miles from touchdown, on centerline, on glidepath.
- **A** 8.5 miles from touchdown, on centerline, going above glidepath.
- **A** 8 miles from touchdown, slightly left of centerline, fly heading 302, slightly above glidepath and correcting slowly.



- **A** 7.5 miles from touchdown, on centerline, fly heading 301, on glidepath.
- [...]
- **A** ... runway 30R, cleared to land, acknowledge.
- **P** Cleared to land runway 30R.
- [...]
- **A** 1 NM from touchdown, on centerline, on glidepath. Approaching decision height, report runway in sight.
- **P** Runway in sight.
- **A** Terminated.

## 7. Charts and sceneries

### 7.1 CHARTS

- Spanish AIP – LEZG: <https://aip.enaire.es/AIP/#LEZG>
- Insignia (digital charts): <https://insignia.enaire.es/>
- As a reference and an aid, pilots may use the following SRA/PAR charts:
  - RWY 30R: <https://files.es.ivao.aero/SOD/documentacion/AIP%20IVAO/LEZG%20PAR30R.pdf>
  - RWY 12L: <https://files.es.ivao.aero/SOD/documentacion/AIP%20IVAO/LEZG%20PAR12L.pdf>

### 7.2 SCENERY - LEZG:

- MSFS: <https://flightsim.to/file/5044/lezc-zaragoza>
- X-Plane: <https://forums.x-plane.org/files/file/69308-zaragoza-international-airport-lezc/>
- FSX/P3D: <https://airhispania.com/moddoc01.php?tCod=20121101120945>  
<https://www.airhispania.com/phpBB3/viewtopic.php?f=45&t=3089>

## 8. Other information:

- The briefing will be performed on **[IVAO Family Discord server](#)** at 15:30z (30 minutes before the event).
- Contact: Should you have any questions, please send an email to **[specops@ivao.es](mailto:specops@ivao.es)** (feel free to ask any questions about the event).
- Make sure you have MTLs updated; possibly, **[Join FS](#)** might be used on **global server** (due to the type of event, this is not critical, but just in case it is needed).

Special thanks to Borna Cesarec for developing the software **[AuroraPAR](#)**, allowing PAR approaches with IVAO's Aurora software.



## 9. Sources

- Banner: Sergio Acosta (ES-SOC). Modified by ES PR staff. Author's consent.
- Figures 1 and 2: ENAIRE\*. [AIP-ESPAÑA](#), modified. Accessed on 01<sup>st</sup> November 2025.
- Figures 3 and 4: ENAIRE\*, Instituto Geográfico Nacional, Esri, TomTom, Garmin, METI/NASA, USGS. [Insignia](#), modified. Accessed on 07<sup>th</sup> November 2025. IGN WMTS: CC BY 4.0 [ign.es](#).
- Figure 5: Borna Cesarec. (2025). [AuroraPAR](#). Github repository. MIT License.

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