

GIBRALTAR (GIB/LXGB)

Elevation 12ft

CATEGORY B

AV brief availability

REGULATION

- Captain only landing

GENERAL

- The airfield is located at the N end of the Gibraltar peninsula adjacent to the Spanish border
- High levels of situational awareness are required, especially in IMC due to terrain, airspace restrictions and non-standard approach procedures
- Aircraft performance for take-off may provide challenges given the short runway and high summer temperatures.

Threats**CFIT**

- The Rock extends approximately 2nm N-S and reaches nearly 1500ft asl. 200m N of the Rwy 27 threshold there is a 280ft asl mast.
- La Linea is the Spanish town immediately N of the Spain/Gibraltar border. At night the lights of the pier at La Linea can be mistaken for Rwy 09.
- The terrain of Gibraltar necessitates radar patterns involving a late turn on to finals for Rwy 09 and a large turn during the missed approach for Rwy 27
- Use of the TERRAIN display on at least one ND is highly recommended
- Basic GPWS modes may not trigger warnings due to the vertical nature of the Rock.

Runway Incursion

- Several instances of holding point confusion and runway infringement by civil operators
- Arrestor cables are fitted to Rwy 09/27. The published landing distances assume that these are removed from the runway (de-rigged).

Runway Excursion

WARNING: To ensure a safe stop, touchdown must occur prior to passing the penultimate TDZ marker. Otherwise a rejected landing is mandatory.

CAUTION: *There have been a number of instances of undesirably high groundspeed close to the runway stop end at GIB. To reduce runway excursion risk maintain appropriate braking until a safe stop is assured.*

- Due to the short runway and turbulence/WINDSHEAR associated with the Rock itself, the possibility of rejected landings and go arounds is greater at Gibraltar than at other destinations (5% of approaches in to Gibraltar have resulted in a go-around, primarily due to WINDSHEAR and unstable approaches.
- It may be possible to utilise a **10% IFLD factor** by using the procedure detailed in the 'Stopping' section later in this brief.

Loss of Control

WARNING 1: Wind speeds on the Wind Effect chart are to be treated as limits

WARNING 2: If ATC report “waterspouts on the approach” crews are to delay making an approach until conditions improve

CAUTION: Windshear and turbulence can be severe. Refer to charts and Landing and Takeoff notes.

- Considerable track shortening can be anticipated
- Bird strike risk – see ATC Bird Strike Policy below

Mid Air Collision

- Gibraltar has no MATZ or ATZ and offers traffic information or deconfliction service to aircraft that contact them
- ATC is provided by VATSIM-UK and the majority of controllers are British
- Helicopter routes in the Bay of Gibraltar conflict laterally with the Rwy 09 approach and Rwy 27 departure and missed approach paths

Special Considerations

- Met Vis/Ceiling of 5 km/1000ft are required to commence an approach into GIB (this is denoted by the ‘C’ on the Lido chart meaning ‘ceiling required to commence the approach’).
- Wind limitations stated on the chart are maximum mandatory limitations.
- Approaches must not be commenced if the TDZ wind exceeds the published maximum, and are to be broken off if the wind increases above limits during the approach at any point until touchdown. Gusts must be taken into account.
- The METAR is normally only updated every half hour and is the wind recorded at the meteorological observation post. This post is situated near the runway mid-point. “Top of the Rock” wind may also be included if significant.
- Due to Gibraltar’s unique microclimate, the METAR wind can often bear little resemblance to the TDZ/MID/END runway winds
- The wind limitations displayed on the chart must be applied to the reported TDZ wind, which is an instantaneous value, and not that of the METAR.
- Malaga is the preferred commercial alternate. On occasions the operation may be planned to operate to Malaga due to adverse weather in Gibraltar.
- At least 90 minutes notice is required for engineering assistance at GIB as this is provided from Malaga.

ATC Bird Strike Policy

- Gibraltar is a staging point for birds migrating between Africa and Northern Europe, resulting in heavy bird concentrations around the Rock during the spring/early summer and autumn seasons. Accordingly, Gibraltar ATC has an active and effective bird control policy with the following bird threat classifications:

BIRD THREAT – NORMAL/MODERATE/HEAVY

When a significant bird strike threat exists the following phraseology will be used:
“SERIOUS BIRD STRIKE RISK ATC.”

Aircraft will be advised of the hazard as follows:

“BAWXXX, serious risk of bird strike on landing, request your intentions”
or
“BAWXXX, serious risk of bird strike on take-off, request your intentions”

This warning will be given in sufficient time for the aircraft to break off the approach or cancel take-off.

In extreme circumstances, ATC may instruct a go around if a multiple bird strike is inevitable.

ARRIVAL

Diversion Airports

MALAGA	AGP/LEMG	051 nm/053°T	CAT B
SEVILLE/SAN PABLO	SVQ/LEZL	081 nm/341°T	CAT A
JEREZ	XRY/LEJR	050 nm/316°T	CAT A
ALMERIA	LEI/LEAM	150 nm/074°T	CAT B

Contact GIB approach by at 50 nm inbound at the very latest. It is recommended by Gibraltar ATC to contact Approach on VHF2 prior to top of descent.

During this initial contact:

- The latest METAR will be passed.
- Provide the number of persons on board (including crew) and the squawk code.

You can request ATC to give SRA instructions in TRACKS or HEADINGS.

Fuel figures for departure can be passed to the handling agent via VHF or ACARS.

Approach

- One of the following approaches can be offered by Gibraltar ATC:
 - Surveillance Radar Approach
 - RNAV VPT
 - Procedural Approach (only when Gibraltar Radar unserviceable)
 - Visual
- In good weather conditions, it is recommended to use the RNAV VPT approaches as the visual picture to both runways at GIB is hard to assess.
- In conditions which preclude the use of the RNAV VPT approach, the SRA is the only instrument approach available.

Surveillance Radar Approach – Rwy 09/27

Crews will be offered radar instructions as TRACKS or HEADINGS.

If instructions as TRACKS are accepted, the following phrase will be used:

“All instructions passed will be TRACKS, but terminology remains HEADING”.

Therefore, when passed an instruction it is to be interpreted by crews as a track even though the phraseology will remain “heading”.

The “Talkdown” Approach Controller provides the crew with precise vectoring using either TRK or HDG adjustments and prescribing final descent from 1500' at 5 nm Radar Range with a 3° vertical path to a Visual Decision Point (VDP).

Note: Distance to touchdown is based on a radar range, not the GBR DME.

- It is recommended that SRA approaches at Gibraltar be flown in TRK-FPA on the Airbus as this will reduce workload and ensures the FPV is ON for the subsequent Visual Approach.
- A fully stabilised, automatic approach from the 5 nm radar fix to the VDP will establish the aircraft on the correct 3° profile for landing.
- The vertical profile is difficult to judge purely visually, even in excellent conditions.
- Workload on the short instrument portion of the approach may be very high.
- There can be as many as five RT exchanges as well as the assessment of the stable approach criteria during 60 seconds of instrument approach.
- Radar's objective is to place the aircraft at the VDP, within an envelope, both vertically and horizontally from the runway, from which the crews are able to continue visually on a 3° VISUAL APPROACH to the runway. This envelope is defined by the minimum weather conditions required to commence an approach; i.e. Visibility 5 km or 5 km in the direction of the approach path and a cloud ceiling of 1000ft aal. (Denoted by a C on the approach chart minima box.)
- For civilian operators, the Visual Decision Point (VDP) is defined as "X-RAY" on SRA Rwy 09 and "YANKEE" on SRA Rwy 27.
- Due to the unique terrain and operating environment at Gibraltar SRA Approaches do not conform to PANS-OPS or APATC-1 approach standards, and as such Conventional DA, DH(HAT) and RVR minima is not applicable.
- All Civil Aircraft are informed by Gibraltar Approach that Approach Minima is 920ft QNH. This is confirmed by the approach plate state minima.
- Therefore, Minimum Height at the Visual Decision Point (Pt X/Y) is 920ft QNH, and this value should be treated as an MDA as far as vertical profile is concerned.
- Regulations state:
 - "Crews not in visual contact with the threshold at the 3 nm VDP are to initiate a Missed Approach as directed by ATC".
 - Thus, the VDP should be treated as the Missed Approach Point geographically.
- The 90° turn from the 09 VDP (X-RAY) may require up to 25° of bank if there is a southerly wind.

Standard Talkdown Controller Phraseology for SRA Rwy 09/27:

Range (NM) to Touchdown	ALT	ATC Phraseology
20-15	↓	“SPEEDBIRD XXX IDENTIFIED, READ BACK QNH”
		“VECTORED FOR AN SRA Rwy 09/27, TERMINATING AT Pt X/Y, APPROACH MINIMA 920ft”
<12	↓	“VECTORED FOR AN SRA Rwy 09/27, TERMINATING AT Pt X/Y, APPROACH MINIMA 920ft”
6	1500	<i>Following consultation with Gibraltar ATC and experience from pilots, it is highly recommended that the aircraft is configured and landing checks completed prior to this point.</i>
		<i>Performing a Continuous Descent Approach to the 5 nm SRA DESCENT POINT, particularly in the case of SRA Rwy 09 is not recommended. With the aircraft flown level at 1500' SRA Platform Altitude, crews are assured maximum capacity to adhere to radar instructions as accurately as possible.</i>
5.5	1500	“APPROACHING DESCENT POINT”
5	1500	“BEGIN DESCENT NOW FOR A 3° GLIDEPATH”
		ATC will pass Radar Range and Check Altitudes as per standard SRA protocols.
4.5	1350	“CHECK GEAR, ACKNOWLEDGE”
		<i>ATC will not clear aircraft to land unless they receive confirmation of gear down.</i>
4	1200	LANDING CLEARANCE
		<i>Given regardless of whether crew visual with runway or still IMC. No requirement to read back this clearance.</i>
3.5	1050	
3	920	Pt X/Y: “ARE YOU VISUAL WITH THE THRESHOLD?”
		<i>As stated on the Aerosoft/Lido IAC, pilots not in visual contact with the threshold at the 3nm VDP are to initiate a Missed Approach “AS DIRECTED BY ATC”. It is vital that the aircraft is flown as per ATC instructions to ensure terrain clearance is maintained.</i>

In limiting conditions crews can expect to remain with “talk down” until after landing. Handover to tower frequency will take place on the runway.

RNAV VPT Approach

The RNAV VPT to Rwy 09/27 are visual approaches with prescribed tracks which are coded in the Navigation Database. The FMGC provides lateral and Vertical AP/FD guidance which must be utilised.

For FS purposes, these approaches can be considered as ‘overlays’ of the RNAV (RNP) approaches for Rwy 09 and Rwy 27 and it is these approaches which should be loaded and flown provided the weather is above VFR minima (5000m visibility). BAV are not authorised to fly the RNAV (RNP) approach below VFR minima.

The following recommendations will assist in preparing one for the peculiarities of each approach.

Approach Preparation

- Review FCOM Approach Guidance – RNAV Visual.

Note: The BARO/MDA field on the PERF APPR Page is left empty.

- Review FCTM for RF Leg flying techniques.

The approach is approved for Day and Night and the aircraft must be achieving a minimum of RNP1.

Rwy 09 Specific Procedures

The RNAV VPT Rwy 09 includes two RF legs, one which is a tight arc which aligns the aircraft with the runway centreline and creates an odd visual perspective on the final turn.

It is not unusual to see at least 3 whites on the PAPI's from 1000-400ft as the aircraft is following a curved approach path (PAPI's are calibrated for a straight in approach only). Resist the urge to disconnect the AP and fly more “usual” visual approach. As the aircraft aligns with the centreline 2 reds/whites will be shown.

Energy Management

The FL90/240kt restriction should give sufficient track miles to achieve the platform altitude by the “Visual Point” (VP) which is **GB092**.

Aim to be level at the platform altitude by at least the VP (GB092).

Configuration Management

Good Weather:

- Aim for at least intermediate configuration by the VP (GB092) e.g. Flap 2/180 kt (max).
- Achieve final approach speed and configuration prior to the FAF (GB09F) to assure a smooth RF leg.

Marginal Weather:

- Aim for Flap 3/F Speed by the VP (GB092) to improve chances of visual references acquisition.

Guidance Management

- DIR TO GB092 (VP) or subsequent points is not permitted to avoid overshoot on RF Leg. BUGOV is the last permitted DIR TO point.
- FINAL APP should be armed prior to the VP. It is best armed once level at platform altitude to prevent unexpected descent path adjustments.
- AP must be used (when available) and disconnected by the minimum disconnect height.

VP Decision Making

- With the limiting visual conditions required for the approach (5 km) it is possible that at the VP one would not be visible with the rock and only have sea visible. If the reported visibility is still sufficient it is acceptable to continue following the prescribed tracks otherwise a Missed Approach is required.
- Sufficient visual references to categorically determine your position e.g. Gibraltar, Rwy, Rock and/or Spanish coast must be visible prior to descent at the FAF.

Note: This assumes one is visual with any large shipping on approach and can decide if clearance is sufficient.

RF Leg

- The final RF leg flies a very tight turn aligning with the Rwy extended centreline at only 1 nm.
- The perspective is very strange as we seldom would visually fly and approach such as this. Thus monitor the guidance carefully and “trust the kit”.
- Whenever possible use the AP to the minimum AP disconnect height to reduce PF workload on short final.

Note: The approach chart includes an Altitude vs distance table. To use this correctly one must consider the curved approach track not the direct distance to the THR, as such a distance to the THR on the PROG page CANNOT be used.

Use the distance to GB096 shown on the ND. As GB096 is 1 nm from the THR, subtract 1 nm from the distance from THR row, see below:

Dist from THR (on Chart)	4	3	2	1
Dist from GB096 (on ND)	3	2	1	0
Altitude	1340	1020	700	380

Failures

Aircraft failures resulting in less than that required in the FCOM section on RNAV Visual Approaches and/or RNP degradation to > 1 nm require mitigation.

Prior to the FAF:

- It may be possible to continue the approach visually as long as:
 - This possibility has been thoroughly briefed
 - Visual approach criteria are met
 - The Aircraft can be manoeuvred to a more usual visual final position. Descent from the platform must not be started until the safety of the remainder of the approach is assured.
 - Full visibility of rock and LDG THR is assured.
 - If any doubt – Go Around.

At or after the FAF:

- It is unlikely to be able to visually execute the final turn safely with no guidance due to the descent position. Thus, a Go Around is required.
- Follow the VPT track to the MAPt then through to the MAP track. Separation from the rock is guaranteed due to the visual conditions.

Rwy 27 Specific Procedures

The approach to Rwy 27 is more straightforward than the approach to Rwy 09, however energy management is key to a successful approach.

Energy Management

- There are approx. 21 nm between PIMOS (FL90/240 kt) and the FAF (BG27F) to lose 7500ft and reach the landing configuration. This is difficult to achieve clean at 240 kts.
- It is suggested to use at least Flap 1 and speedbrake to assure stability.
- Caution is required for any direct routing towards KUXOX as extra drag will be required.
- Aim to be level at the platform altitude by at least the VP (**GB276**).

Configuration Management

- Aim to achieve at least F speed – Flap 3 with GR DOWN prior to the FAF (**GB27F**) due to the low platform altitude.

Guidance Management

- GB276 is the last permitted DIR TO point.
- FINAL APP should be armed prior to the VP. It is best armed once level at platform altitude to prevent unexpected descent path adjustments.
- AP must be used (when available) and disconnected by the minimum disconnect height

VP Decision Making

With the limiting visual conditions required for the approach (5 km) it is possible that at the VP one would not be visible with the Rwy and only have sea visible. If the reported visibility is still sufficient it is acceptable to continue following the prescribed tracks otherwise a Missed Approach is required.

- Sufficient visual references to categorically determine your position e.g. Gibraltar, Rwy, Rock and/or Spanish coast must be visible prior to descent at the FAF.

Failures

Aircraft failures resulting in an less than that required in the RNAV Visual section of the FCOM and/or RNP degradation to > 1 nm require mitigation.

- It may be possible to continue the approach visually as long as:
 - This possibility has been thoroughly briefed
 - Visual approach criteria are met
 - Full visibility of rock and LDG THR is assured.
 - If any doubt – Go Around.

Final Approach

- The short runway has very wide concrete shoulders presenting an unusual aspect. PAPIs for both runways are set with an eye height at threshold of 31 feet (below the Airbus MEHT limitation of 45') and should not be used.
- Use of "Bird"/FPV and all other aids to assess height v distance to the threshold is recommended. Stable approach criteria must be maintained to touchdown. The harbour wall to the south of runway 09 extends 500 m west of the landing threshold making identification harder in low visibility. Shipping is uncontrolled except for prohibited areas at the runway ends and can be a distraction.
- There are no approach or centreline lights. There are edge lights and strobes at the runway thresholds. The double flashing buoys shown on Aerodrome plate are difficult to see at night. Both landing thresholds are slightly displaced. The touchdown zones for both runways are shorter than standard at 330 m/1000ft due to the short runway.

Note: Rwy 27 has an 8ft dip in the first 305m; standing water is possible. Rwy 09/27 is grooved to aid braking and drainage. There is an ATC mandatory requirement to advise aircraft if the arrester gear is rigged, assume it is de-rigged unless advised otherwise.

Stopping

At Gibraltar ONLY, the in-flight landing distance factor may be reduced to 10% provided:

- Runway surface condition is DRY or DAMP or WET runway only; and
- Autobrake MED is selected and remains engaged until a safe stop is assured; and
- PF is prepared to apply Maximum Manual braking if additional retardation is necessary to ensure a safe stop is achieved.

GROUND

- The only road into Gibraltar runs across the centre of the runway and is closed prior to all aircraft movements (a tunnel beneath the 27 threshold is under construction).
- The airfield is entirely paved but only the taxiways, runway and turning shoulders are designated for aircraft manoeuvring.
- Lighting at night is good.
- The airfield signage and holding point information is of RAF specification and as such there are no red stop bars or wigwags.
- Aircraft are marshalled nose-in onto the civil apron.

DEPARTURE

- Standard departure routes are as follows:

Rwy 09	Direct to PIMOS
Rwy 27	Either: <ul style="list-style-type: none"> • Left turn visually around Gibraltar on track to PIMOS, or • Radar heading after departure of 180° until the radar controller can permit a direct routing to PIMOS

WEATHER

- Due to its geographic location between the waters of the Mediterranean and Atlantic Gibraltar's weather conditions can be difficult to forecast accurately.
- The wind most favourable for fog is a light Northeasterly. The Met Office state that it is hard to forecast the onset of fog but easier to predict its clearance.

Summer

- During the summer months, thick air mass fog moving at more than 15 kts can appear at short notice and linger for several days.
- Hazy visibility of around 6 km and thunderstorms are also common in summer.
- Average summer temperatures reach 30°C, occasionally 35°C.

Winter

- Strong winds are most common in the months of October to April.
- Northerly winds are rare, and Easterly or Westerly directions present few problems.
- However, any wind direction with a Southerly component can cause severe turbulence and WINDSHEAR due to the location of The Rock; hence the published wind limitations. With Southerly winds, tailwinds at both end of the runway, and crosswinds in excess of 25 kts at the centre are not uncommon.

GIB TAF – Special Turbulence Code/Decode

- A six-figure code is often added to the end of the TAF because variable air turbulence phenomena affect GIB.
- This code provides information on the expected intensity of turbulence in the area, and the 'depth' of the turbulence layer.

Example: 520021

5	INDICATOR that this is a turbulence code message		
2	TYPE/INTENSITY of turbulence		
0	None		
1	LIGHT		
2	MODERATE	In clear air	Infrequent
3	MODERATE	In clear air	Frequent
4	MODERATE	In cloud	Infrequent
5	MODERATE	In cloud	Frequent
6	SEVERE	In clear air	Infrequent
7	SEVERE	In clear air	Frequent
8	SEVERE	In cloud	Infrequent
9	SEVERE	In cloud	Frequent
002	Height of LOWEST level of turbulence in HUNDREDS of feet		
1	Depth of turbulent layer in THOUSANDS of feet		

Decode: Moderate, infrequent clear air turbulence. Base of turbulence layer at 200ft, 1000ft thick.

OPERATIONAL INFORMATION

Handling Agent	Gibair Handling
Handling Agent VHF	131.675
Potable Water	Uplift not permitted

IF ONLY Electrical Power is required	Use APU
If BOTH electrical power and air conditioning is required:	Use APU (ACU equipment not available)