Madrid (LEMD) Pilot Briefing

Version 1.0

May 2022

Content

1. GENERAL

1.1. Airport Information

Name:	**MADRID/Adolfo Suárez Madrid-Barajas**
ICAO:	**LEMD**
IATA:	**MAD**
Operations Hours:	**24 Hours**
Squawks Range:	**[4400-4477]**
Elevation:	**1998ft**
Languages:	**English and Spanish**
Use for:	**IFR, AD closed to VFR operations except: ambulance, rescue, and state flights.**

1.2. Runways physical characteristics

TORA [m]									
RWY	**Material**	**Total**	**Y2**	**Y3**	**Z6**	**Z4**	**K3**	**LF**	**L1**
36R	**Asphaltic concrete**	**3500**	**3445**	**3345**	**-**	**-**	**-**	**-**	**-**
36L	**Asphaltic concrete**	**4179**	**-**	**-**	**3719**	**4013**	**-**	**-**	**-**
14R	**Asphaltic concrete**	**3988**	**-**	**-**	**-**	**-**	**3280**	**-**	**-**
14L	**Asphaltic concrete**	**3500**	**-**	**-**	**-**	**-**	**-**	**3310**	**3656**

RWY	Material	Total
18L	**Asphaltic concrete**	**3500**
18R	**Asphaltic concrete**	**4179**
32R	**Asphaltic concrete**	**3500**
32L	**Asphaltic concrete**	**3988**

Do not use Runways 18L, 18R, 32R and 32L for take-off.

1.3. Radio Navigation Information

ID	Name	Type	Frequency
BRA	Barajas	VOR DME	116.450 MHz
PDT	Perales de Tajuña	VOR DME	116.950 MHz
RBO	Robledillo	VOR DME	113.950 MHz
SIE	Somosierra	VOR DME	115.400 MHz
SSY	San Sebastián de los Reyes	VOR DME	117.850 MHz
NVS	Navas de Rey	VOR DME	114.95 MHz
TLD	Toledo	VOR DME	113.20 MHz
CNR	Colmenar viejo	VOR DME	117.30 MHz
NEA	Tabanera del Cerrato	VOR DME	116.750 MHz
BAN	Barahona	VOR DME	112.80 MHz
CJN	Castejón	VOR DME	115.60 MHz

1.4. Radio Navigation for Landing Facilities

ID	Type	Frequency	Course	Category	Glide Path	DME	RWY
MAA	LOC	109.900 MHz	323º	CAT III	333.800 MHz	36X	32L
IML	LOC	111.500 MHz	181º	CAT III	332.900 MHz	52X	18L
IMR	LOC	110.700 MHz	181º	CAT III	330.200 MHz	44X	18R
MBB	LOC	109.100 MHz	323º	CAT III	331.400 MHz	28X	32R

1.5. Approaches

In the next table, you can see the approaches that we have in use at Barcelona:

Runway	ILS	LOC	VOR DME	RNAV	GLS
32R	Yes	Yes	Yes	No	No
32L	Yes	Yes	Yes	No	No
18L	Yes	Yes	Yes	No	No
18R	Yes	Yes	Yes	No	No

By default, ILS approaches will be used. In case the pilot cannot execute it, an alternative approach type will be given in the order of the table (left to right). A specific approach, requested by the pilot, will always be approved while traffic permits.

1.6. Holdings

1.6.1. Standard Holdings for sequence

FIX	Alt Max. Alt Min.	Inbound Radial	Turns	Speeds
LULER	FL120 FL 80	261º	Left	210KT
RILKO	FL120 FL110	128º	Left	210KT
TOBEK	FL90 FL50	047º	Left	210KT
ASBIN	FL100 FL60	270º	Right	210KT
BAN	FL240 FL150	207º	Right	-
CJN	FL240 FL100	325º	Left	-
NOSKO	FL240 FL100	302º	Left	-
PRADO	FL240 FL150	300º	Right	-
TERSA	FL240 FL150	223º	Right	-
VENUX	FL240 FL120	178º	Right	-
ETUNI	FL240 FL120	069º	Left	210KT
NONTU	FL240 FL200	186º	Left	-
NVS	FL240 FL120	360º	Left	-
ORBIS	FL240 FL120	186º	Left	210KT
PODOG	FL240 FL200	105º	Left	-
RILKO	FL120 FL110	128º	Left	210KT
TLD	FL240 FL150	023º	Right	-
USATI	FL240 FL200	116º	Left	-

1.7. Preference Configuration

Except when some of the following conditions prevail or are foreseen:

- Track, dry or wet, with less than good braking action.
- Cloud ceiling less than 500ft above aerodrome elevation.
- Visibility less than 1.9 km (1 NM).
- Reported or forecast wind gradient or thunderstorms on approach or departure.
- Traffic conditions, operational needs, security situations and other weather conditions that prevent it.

The controller will maintain the preferred settings, described below, up to 10kt tailwind and/or 20kt crosswind components, including gusts:

Configuration	Day 3) 5)	Night 4)
Preference	**Arrivals: 32R/L** **Departures: 36R y 36L 6)**	Arrivals: 32R Departures: 36L
No – Preference	Arrivals: 18R/L Departures: 14R y 14L 6)	Arrivals: 32R/L Departures: 36R

3) Daytime setting between 0700 and 2300 LT.

4) Night setting between 2300 and 0700 LT.

5) When traffic demand and meteorological and operational conditions allow it, the preferred nighttime configuration (north cross-runway configuration) may be extended beyond 0700 LT or brought forward before 2300 LT.

6) The use of RWY 36L or 14R is restricted to those aircraft that can justify the need for a longer runway than that available on RWY 36R or 14L, except for ambulance flights with an STS/MEDEVAC flight plan, rescue flights, State or flights that provide service for the Autonomous Communities and other Local Entities as long as they perform non-commercial public services, that request it from ATC, being mandatory to carry out a departure procedure in conventional mode.

1.8. Transition Altitude and Transition Level

The transition altitude in Barcelona is always 13000ft. The transition level depends on the local QNH.

QNH	De 942,2 a 959,4	De 959,5 a 977,1	De 977,2 a 995,0	De 995,1 a 1013,2	De 1013,3 a 1031,6	De 1031,7 a 1050,3
TL	**160**	**155**	**150**	**145**	**140**	**135**

1.9. Positions and responsibilities

1.9.1. Madrid Airport

ID	Name	Callsign	Frequency
MDD	LEMD_DEL	Barajas Clearance	130.075
MDG	LEMD_GND	Barajas Ground	121.850
MD2	LEMD_S_GND	Barajas Ground	121.700
MD3	LEMD_W_GND	Barajas Ground	123.235
MDT	LEMD_TWR	Barajas Tower	118.150
MD4	LEMD_S_TWR	Barajas Tower	118.075
MDA	LEMD_APP	Barajas Approach	118.750
MDW	LEMD_W_APP	Barajas Approach	118.400
MDAD	LEMD_D_APP	Barajas Approach	127.100
MDF	LEMD_F_APP	Barajas Approach	127.500

1.9.2. Near Airports

ID	Name	Callsign	Frequency
TOT	LETO_TWR	Torrejón Tower	122.100 MHz
	LECU_TWR	Cuatro Vientos Tower	118.700 MHz
GTT	LEGT_TWR	Getafe Tower	129.925 MHz
SAT	LESA_TWR	Salamanca Tower	118.100 MHz
VDT	LEVD_TWR	Valladolid Tower	122.200 MHz

1.10. Low Visibility Procedures (LVP)

1) Pilots will be informed by frequency of the application of LVP procedures.
2) The Low Visibility Procedures (LVP) in the maneuvering area will be activated when any of the following weather conditions occur:

PISTA DE ATERRIZAJE LANDING RUNWAY	SALIDA EXIT
32L	L2, L3, L4, L5 Preferentemente L2 & L4 para las llegadas a la T-4. L7 en caso de activación del LVP solo por techo de nubes. // Preferably L2 & L4 for arrivals to T-4. L7 in the case of activation of LVP due to cloud ceiling only.
32R	K3, K4, K5 El tráfico que prevea abandonar por K3 informará lo antes posible a ATC // Traffic intending to vacate via K3 shall report to ATC as soon as possible.
18L	Y3, Y4, Y5 El tráfico que prevea abandonar por Y3 informará lo antes posible a ATC // Traffic intending to vacate via Y3 shall report to ATC as soon as possible.
18R	Z-7, Z-8, Z-10

1.11. Standards Routes for LVP

Check the AIP of Spain at https://aip.enaire.es/AIP/

1.12. Standards Routes

Check the AIP of Spain at https://aip.enaire.es/AIP/

1.13. Procedures to guard against accidental Overshooting on the runway Centre Line

After the pilot has been given a radar vector, which converges with the assigned runway centre line at an angle of less than 70º, he/she will take the initiative to intercept the ILS localizer or any replacement approach aid unless they have previously been instructed to cross the LOC or RWY centre line by ATC.

1.14. Noise avoidment take-off procedures

- Up to 450 m (1500 ft) above aerodrome elevation:
  - Take-off power
  - Flaps for take off
  - Climb to V2 + 20 to 40 km/h (V2 + 10 to 20 kts) (or as limited by Fuselage angle).
- At 450m (1500ft):
  - Reduce power to no less than lift power.
- From 450 m (1,500 ft) to 900 m (3,000 ft):

    - Climb to V2 + 20 to 40 km/h (V2 + 10 to 20 kts).
- At 900m (3000ft):
    - Accelerate smoothly to en-route rate of climb with timed flap re-folding.

2. CLEARANCE (CLR)

2.1. SIDs

Aircraft equipped with RNAV will preferably be assigned RNAV SIDs.

Aircrafts	SIDs	Runway
Special Aircrafts	**BARDI3X, CCS2X, VTB2X, ZMR3X.**	**36L daytime y night**
Without Restrictions	**BARDI6L, CCS5L, SIE5L, VTB5L, ZMR6L.**	**36L daytime y night**
Wihout Restrictions (South)	**All the SIDs**	**14R/14L daytime 14L night**
Special Aircrafts (South)	**All the SIDs**	**14R/14L diurno 14L nocturno**

Changes to the procedures must not be requested before reaching 10000 ft, with the exclusion of propeller aircraft

Special Aircrafts List:

- AN72
- A124
- A340-600
- A388
- B721; B722
- B731; B732
- B741; B742; B743; B748; B744; B74D; B74R; B74S
- DC10
- DC85; DC86; DC87
- H25A
- IL62
- IL96
- L101
- MD11
- SBR1
- T134
- YK42

2.2. Contigency Departure

The contingency outputs are as follows. It will be assigned when the pilot cannot accept a conventional SID in any way.

Runway	Description	Initial Climb
14L	Heading 129º	5500ft
14R	Runway Heading	5500ft
36R	Instructions: Climb on Runway Heading to 2.9 DME SSY. Proceed R-017 of SSY, DCT to 017/5.6 SSY. Turn left to intercept and follow R-175 SIE until reaching 9000ft AMSL and expect ATC Instructions.	
36L	Instructions: Climb on Runway Heading to 2.9 DME SSY. Proceed R-017 of SSY, DCT to 017/5.6 SSY. Turn left to intercept and follow R-175 SIE until reaching 9000ft AMSL and expect ATC Instructions.	

2.3. Delays due to TSAT

To avoid congestion at the runway-holding point and inappropriate use of virtual kerosene, clearances may delay the taxi transfer so that the waiting time at the exit holding point is no more than 5 minutes under normal operating conditions.

3. GROUND (GND)

3.1. Standard Routes

As long as rolling is possible, it must respect the standard rolling routes. Check the AIP of Spain at https://aip.enaire.es/AIP/

Note that you will be required to keep short of some taxiways. Please pay attention to any communication from the controller.

4. TOWER (TWR)

4.1. Go Around

In the case of motor and air, ATC will inform you to continue the go-around as published, if you cannot do it, you will have to be informed. Next, we leave you the possible frustrated in case of not being able to carry out the one defined according to the letter:

Runway	Route	Climb
18R	**Runway Heading**	4000ft
18L	**Runway Heading**	5000ft
32L	**Runway Heading**	5000ft
32R	**Runway Heading**	6000ft

5. APPROACH (APP)

5.1. Departures

The initial altitude is 13000ft. Tower will transfer you to A

5.2. Arrivals

Madrid is made up of IAFs. If you do not have the clearance when reaching the IAF, you should start holding. Traffics coming from the East to the West, will land on Runway 32R/18L, traffics coming from the West to the East, will land on Runway 32L/18R.

Runway 32R and 32L:

- ADUXO1D
- BANEV2D
- NASOS1D
- PRADO2D
- TERSA2Z
- VILLA2D
- MORAL4C
- NONTU2C
- RIDAV3C
- SOTUK3C
- TLD2C
- ZMR4C

Runway 18R and 18L:

- ADUXO6B
- BANEV3B
- NASOS6A
- PRADO7E
- TERSA6E
- VILLA6E
- MORAL6A
- NONTU2A
- RIDAV2A
- SOTUK6A
- TLD6A
- ZMR4A

5.2.1. Initial Contact

In initial contact on arrival, you must inform the ATIS letter you have on board. In case, the pilot does not notify that letter.

5.2.2. Final Approach

Once established on the approach either ILS, LOC, VOR, etc. Pilots must report it.

5.2.3. Departures Speed Control

These are the recommended speeds:

Phase	Speed
Below 10000ft	**IAS 250 kts**

5.2.4. Speed Control

These are the recommended speeds:

RWY	PSN7	IAS	ALT
18L/18R	RILKO o posición equivalente // or equivalent position	220 kt	11000 ft
	LULER o posición equivalente // or equivalent position	220 kt	8000 ft
32L/32R	TOBEK o posición equivalente // or equivalent position	220 kt	5000 ft
	ASBIN o posición equivalente // or equivalent position	220 kt	6000 ft o superior // or above
TODAS // ALL	Al interceptar LOC // When intercepting LOC	200 kt	–
	FAP/FAF, en APCH ILS o LOC // in ILS or LOC APCH	180 kt	–