1. GENERAL

1.1. ATIS

*ATIS ARRIVAL 118.02 114.2
*ATIS DEPARTURE 118.72

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. RUNWAY USAGE

1.2.1.1. ARRIVALS

RWYs 25R/L will preferably be assigned to landing ACFT, provided the tailwind component does not exceed 5 KT. The landing direction will be changed, however, even if the tailwind component is less than 5 KT when braking action on the RWYs is impaired by ice, snow, slush, etc.

1.2.1.2. DEPARTURES

In case of landing direction 07:
RWY 07L will preferably be assigned to departures into northern and eastern directions.

In case of landing direction 25:
RWY 25R will preferably be assigned to departures into northern directions.

In case of landing direction 07 or 25:
RWY 18 will generally be assigned to departures into south-eastern, southern and western directions, provided the tailwind component does not exceed 15 KT.
If the tailwind component for RWY 18 is more than 10 KT this will be announced by ATIS. Pilots-in-command who cannot accept the higher tailwind component are requested to advise ATC at the same time as the request for the start-up clearance.
Exceptions are possible if the traffic situation permits or for reasons of traffic safety.

1.2.2. NIGHT FLYING RESTRICTIONS AS WELL AS OPERATIONAL RESTRICTIONS OF CHAPTER 2 AIRCRAFT OUTSIDE NIGHTTIME FOR CIVIL AVIATION

a) ACFT which have no noise certificate in accordance with ICAO Annex 16 are not permitted to take-off or land.
b) ACFT licensed in accordance with ICAO Annex 16, Chapter 2 are not permitted to take-off or land as follows:
- 2000-0800LT on weekdays
- additionally, FRI 2000LT - MON 0800LT.
c) For ACFT licensed in accordance with ICAO Annex 16, Chapter 3 the following restrictions apply:
- Between 2200-0600LT take-offs and landings are not permitted unless they have been coordinated at least one day in advance by the Scheduling Coordinator (ad hoc charter flights, in particular individual flights for specific reasons, but of no public interest).
- Between 2300-0600LT take-offs and landings for the performance of exercise flights, check flights and training flights are not permitted.
- Between 0000-0500LT landings are not permitted for all kinds of flights.

EXCEPTIONS

Excluded from the restrictions mentioned above are:
- Landings of ACFT provably approaching Frankfurt/Main APT as alternate aerodrome for meteorological, technical or other safety reasons as well as take-offs and landings of ACFT rendering medical assistance, on missions in disasters or evacuation flights.
- Flights in the special interest of public.

Excluded from the restrictions according to paras b). and c). only:
Take-offs and landings of ACFT used for checking radio and radar as well as APT facilities.

Excluded from the restrictions according to para c) only:
ACFT of operators having proved to the approving authority that their main base and maintenance facilities are located at Frankfurt; however, such ACFT are not permitted to land between 0100-0400LT.

In justified cases the approving authority may grant exceptions on request for particular and specified flights. The application shall generally be submitted in writing to:

Hessisches Ministerium fuer Wirtschaft, Verkehr
und Landesentwicklung
- Referat VIb 3 -
Kaiser-Friedrich-Ring 75
65185 Wiesbaden/Germany
Teletex: ISDN 126119850370
Telefax: 0611/815-2226

In urgent cases the application shall be submitted in writing or verbally to:

Oertliche Luftaufsichtsstelle
Flughafen Frankfurt/Main
Gebaeude (building) 205
60547 Frankfurt am Main/Germany
Tel.: 069/690-71715, 71717
Telefax: 069/690-66150

The application shall contain:
- Name and address of ACFT operating agency and ACFT operator,
- aerodrome of departure or destination,
- radio call sign of the ACFT,
- type, year of construction and noise certificate according to paragraph 11c of the Luftverkehrs-Ordnung (LuftVO) of the ACFT,
- time of departure or landing for which the exception is requested.

The reasons for the application have to be specified; the applicant has to state, in particular, that the ACFT will be flown by a pilot who is familiar with the noise abatement procedures at Frankfurt/Main APT.
If detailed reasons cannot be given because of urgency, these reasons shall be forwarded subsequently in writing within 24 hours to 'Hessisches Ministerium fuer Wirtschaft, Verkehr und Landesentwicklung' or to the local 'Luftaufsichtsstelle Frankfurt/Main APT'.

Take-off or landing clearance granted by ATC, as well as other clearances, do not automatically include the necessary exceptional permission by the approving authority.
Exceptional permission will not be granted by ATC via radio telephony.
The pilot shall report landing outside the times permitted, which have not previously been approved, and justify this in writing to the local 'Luftaufsichtsstelle" immediately after landing.

1.2.3. REVERSE THRUST

Reverse thrust other than idle thrust shall not be used between 2200-0600LT except for safety reasons.

1.2.4. RUN-UP TESTS

Run-up tests and engine test runs as well as extensive maintenance work on ACFT at the positions are not permitted. Apron Control may grant exceptions in justified cases.

3. DEPARTURE

COB reporting ways

For entering and updating the COB the following ways are available:
- Linked internal systems of airlines or handling agents
- OBCCOS (Off-Block Calculation and Coordination System)
- SITA Address FRAAF7X
- Fax +49 (0)69 690 56701
- Tel. +49 (0)69-690 71740, Traffic Data Center

Target times for start-up and off-block

Calculation of Target Start-Up Approval Time (TSAT) and Target Off-Block Approval Time (TOAT)

Based on the reported COB, the flight will be planned into the departure sequence 45 minutes prior to the estimated end of ground handling, a TOAT will be generated. As soon as a COB is updated, a new calculation of the departure sequence and the target times will be conducted.
For this calculation the parking position, RWY, taxi time, departure routes and their separation minima and an existing CFMU slot are taken into consideration and - based on this - an optimal departure sequence is determined. Consequently, for each flight the optimal time for Start-Up (TSAT) and Off-Block (TOAT) will be determined. The TSAT is the result of the TOAT, and is defined as
TSAT = TOAT - 5 minutes.

Announcement of the Target Time TOAT

The first announcement of the TOAT is 30 minutes before COB and will be updated 20 minutes, respectively 10 minutes before TOAT.
The announcement of the TOAT is by way of the information systems FADS (Frankfurt Airport Display System), OBCCOS or linked internal systems of airlines or handling agents. For general aviation flights or flights without handling agent the TOAT can be requested at the GAT-Terminal or by calling the Traffic Data Center.

Transferring the target times to pilots

The transfer of the target times TOAT and TSAT to the pilot is in the responsibility of the airline or the assigned handling agent. For flights without handling agents the responsibility for inquiring the target times is in the hands of the pilot-in-command.

Use of the target times for start-up

Based on the new procedure, the "Pre-Departure Sequence" is no longer according to the order of start-up requests but according to the target times TOAT, respectively TSAT.
At TSAT (TOAT-5 minutes) start-up must be requested.
Start-up and enroute clearance are still possible via Data Link. For requests before TSAT only enroute clearance is possible. The start-up clearance must be requested separately at TSAT via radio.

Use of target times for push-back (Off-Block)

After reception of start-up the pilot has to request push-back not later than TOAT. The pilot will receive push-back approval from apron control depending on the traffic situation.
For ACFT in nose-out positions the request for taxi must be made at TOAT.

NON-STANDARD PROCEDURES

Re-Planning procedure / Standby status

If the TOAT is reached - without push-back or start-up request having been made the re-planning procedure goes into effect.
In the re-planning procedure the flight is set back in the departure sequence by at least five minutes. A new TOAT is generated. If the new TOAT is exceeded again, this process will be repeated. With the third exeedance of the TOAT the flight is removed from the departure sequence and placed in standby (STBY) status. The target times of that flight will be deleted. A flight in standby is not included in the departure sequence anymore.

3. DEPARTURE

After setting a new COB the flight will be put into the departure sequence again, a new TOAT will be generated.

Remote-Holding

If a flight is planned for the remote-holding procedure, the target time TOAT is the time when the flight leaves the remote-holding position. In that case, push-back approval and taxi instructions to the assigned remote-holding position is given before reaching the TOAT by apron control.
At the remote-holding position, start-up has to be requested at TSAT, taxi instructions at TOAT (same as standard procedure).

De-icing

If de-icing is required, the pilot or the airline has to request de-icing before reaching TOAT. DMAN will then calculate target times for de-icing, the TOAT will be adjusted to these times.
For both, de-icing on parking position and de-icing on a de-icing pad the TOAT is the time at which the parking position is left. In case of a position de-icing this is done before reaching the TOAT, and in case of a remote de-icing after having left the position and therefore after the TOAT.

1. GENERAL

1.3. LOW VISIBILITY PROCEDURES (LVP)

1.3.1. CAT III OPERATIONS

1.3.1.1. GENERAL

RWYs 07R/25L & 07L/25R will be announced via ATIS. Taxiing for all ACFT is restricted to TWYs with operating centerline lights. The TWY centerline lights within the ILS sensitive area from RWY 07L/25R towards TWY A and from RWY 07R/25L towards TWY C are colourcoded (yellow/green). Landing ACFT are requested to report RWY vacated at the end of the colourcoded TWY centerline lights to indicate that the ACFT has vacated the ILS sensitive area.
In order to facilitate ground movement several clearance bars and stop bars are installed.

1.3.1.2. CLEARANCE BARS

Clearance bars are operated together with the centerline lighting and consist of three unidirectional surface lights showing YELLOW in the direction of approach to the intersection, arranged at 90° to the TWY centerline and partly displaced laterally to center line.

If the traffic situation requires, ACFT may be instructed to hold at a specific clearance bar. If no such instruction is given, ACFT may taxi across the clearance bar without a specific clearance.

1.3.1.3. STOP BARS

Stop bars are operated independently of the centerline lighting and consist of unidirectional surface lights showing red in the direction of approach to a taxi-holding position/an intersection, spaced at intervals of 10'/3m across the overall width of a TWY at 90° to the TWY centerline.
Taxiing across an operating stop bar is strictly prohibited.

1.4. TAXI PROCEDURES

1.4.1. GENERAL

Taxiing on TWY B EAST permitted to ACFT with a size up to A321 (tail unit height MAX 39'/11.8m) regardless of approaches to RWY 25L/R.

To avoid crossing the apch ground lines 25L/R while another ACFT is flying over TWY B EAST, pilots can choose taxiing speed at their own discretion, or can wait at the appropriate stop point (295'/90m in front of apch ground line on TWY B EAST). Pilots can continue to taxi w/o a renewed clearance from ATC.

ACFT are permitted to taxi on the manoeuvring area between RWY 07L/25R and TWY A only with the minimum engine revolutions absolutely required.

Turns from TWY Hto to Cto & conversely not authorized.

TWY M1 MAX wingspan 113'/34.5m.
TWYs N blue, N orange and Z MAX wingspan 118'/36m.
Part of TWY K (South of TWY S) and TWY N SOUTH MAX wingspan 171'/52m.

1.4.2. TAXIING OF THE APRON

Wing-tip clearance for B747-400 on ACFT stand taxilanes is 25'/7.5m as a minimum, to parallel service roads or 10'/3m - height-limited objects, is 16'/5m as a minimum.

Heavy ACFT taxiing on apron shall apply minimum thrust only. When taxiing into parking stands, ACFT shall not stop in turns. If an ACFT comes to a stop, notify Apron Control prior to increasing engine power.
Push-backs to TWY N have to be executed facing West.

In the General Aviation Area the wing-tip clearance is MIM 15'/4.5m.
Adhere strictly to the yellow, blue and orange taxi guidance lines.

1. GENERAL

1.5. PARKING INFORMATION

On stands A10 thru A21, A23, A26 thru A42, B2, B20 thru B48, C4 thru C11, D1 thru D13, E2 thru E9A, F211 thru F240, S501 thru S504, V92 thru 119, V123, V125, V126, V128, V130 and V251 thru V270 push-back required.

1.6. OTHER INFORMATION

1.6.1. GENERAL

Glider areas in the vicinity of APT.

1.6.2. OPERATION OF SSR-MODE S TRANSPONDERS

1.6.2.1. GENERAL

An improved surface surveillance system using Mode S mulitlateration has been installed.

1.6.2.2. OPERATION OF MODE S TRANSPONDERS WHEN ACFT IS ON THE GROUND

ACFT operators shall ensure that the Mode S transponders are able to operate when the ACFT is on the ground. Therefore it is necessary that aircrews select AUTO mode or its equivalent, according to specific installation and assigned mode A code, if AUTO mode is not available select ON (e.g. XPDR) and assigned mode A code under the following conditions:
- From the request for push-back or taxi, whichever comes first.
- After landing, continuously until the ACFT is fully parked on the stand.

When fully parked on the stand, the transponder shall be switched off.

Whenever the ACFT is capable of reporting ACFT identification (i.e. call sign used in flight), the ACFT identification should also be entered from the request for push-back or taxi, whichever comes first (through the FMS or the transponder control panel). Aircrews shall use the format as defined in field 7 of the ICAO flight plan for entry of the ACFT identification (e.g. DLH123, TAP234, AFR6380,...).

To ensure that the performance of systems based on SSR frequencies (including airborne TCAS units and SSR radars) is not compromised, TCAS shall not be activated before receiving the clearance to line-up. After landing, it shall be deactivated after vacating the RWY.

2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within Airspace C.

2.2. NOISE ABATEMENT PROCEDURES

Between 2300-0500LT all inbound ACFT should expect clearances whereby final will be reached not closer to the APT than:
- approximately 18 NM (RWYs 25R/L) and
- approximately 19 NM (RWYS 07L/R) from THR.

These "final-interception points" correspond to the GPS/FMS waypoints DF022 (RWYs 25L/R) and DF052 (RWYs 07L/R). The fly-by function of these waypoints is not affected.

Pilots should subsequently expect a clearance for an ILS approach with GP interception at 5000'.

In addition pilots should expect a clearance to descend below FL70 only 6 NM prior to reaching the above mentioned points. Pilots should adjust their speed accordingly (approximately 200-220 KT when leaving FL70) and are urgently requested to perform their descent from FL70 as a continuous descent whenever possible.

In the event of technical failure of the ILS equipment, i.e. the need to fly non-precision approaches, descent clearances to 4000' will be issued.

Requests for non-precision approaches for training purposes will be denied.

The above procedures will not be applied to:
- flights with STS/HOSP
- flights in adverse weather conditions and
- flights in emergency situations.

2.3. CAT II/III OPERATIONS

RWY 07L/25R and RWY 07R/25L(except THR 26L) approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. RWY OPERATIONS

2.4.1. LANDING THR 26L

2.4.1.1. GENERAL

Second landing THR 26L established on RWY 25L in connection with the High Approach Landing System (HALS).

The HALS offers the possibility to reduce wake turbulence separation for ACFT of categories Medium or Light to the permissible Radar separation minima. For this purpose, RWY 25L is provided with a second landing THR designated as 26L.

2.4.1.2. DESCRIPTION OF THE SECOND LANDING THR 26L

Threshold 26L is only permitted for landings of ACFT with a maximum certified take-off mass of less than 136,000 kg. THR 26L is displaced by 4921'/1500m from landing THR 25L. Simultaneous operation of two THRs on one RWY is not permitted.

2.4.1.3. MARKINGS AND LIGHTING

For operation on THR 26L, special markings and lighting are installed which deviate from the 'Guidelines for the Markings and Lighting at APTs', as well as ICAO.
For detailed depiction refer to page 10-9H.
Lighting for THR 26L, including PAPI, will be kept working together with the edge and centerline lights while operations are being conducted. Approach-, THR- and TDZ lighting 25L, as well as PAPI 25L, will be turned off when THR 26L is in operation.

2. ARRIVAL

2.4.1.4. HALS OPERATION

- Approach procedure:
  An additional instrument landing system (ILS DME 26L) has been installed.

- ATIS broadcasts:
  As soon as the HALS operations begin, the ATIS broadcast will provide pilots with the pertinent information.

- Use of procedure:
  Pilots who do not wish to use the THR 26L approach procedure must explicitly inform Frankfurt Approach when establishing initial contact.

- Taxi procedure:
  Two types of standard taxi guidance procedures will be used for ACFT having landed after use of THR 26L.
  Type 1: Guidance via TWY C and intersection of RWY North.
  Type 2: Guidance via TWYs R, W and A to destinations West of TWY H.

2.4.1.5. METEOROLOGICAL AND FLIGHT OPERATIONS CONDITIONS

THR 26L will be used under the following conditions:
- Ground visibility is 2400m or more;
- Ceiling is approx. 400 ft (ceiling must be such that THR 26L is in sight at outer marker);
- No tailwind prevails;
- Braking action is good;
- All ILS DME facilities are fully serviceable;
- Lighting for use of THR 26L, including PAPI 26L, is fully serviceable.

2.4.2. HIGH INTENSITY RWY OPERATIONS (HIRO)

2.4.2.1. APPROACH

Approaching ACFT for which a parking position is designated on the Southern airport area shall advise LANGEN Radar on **120.8**.
These ACFT and propeller-driven ACFT which park in the Eastern part of the Northern apron will preferably be assigned to RWY 07R/25L.

When changing frequency from LANGEN Radar to FRANKFURT Director initial contact shall be restricted to
FRANKFURT DIRECTOR & CALLSIGN
in order to avoid frequency congestion.
When being transferred to FRANKFURT Tower initial contact shall consist of
FRANKFURT TOWER, CALLSIGN & RWY.

2. ARRIVAL

2.4.2.2. LANDINGS

Pilots are reminded that by leaving the RWY quickly, ATC will be able to guide ACFT on final using minimum radar separation.

In order to reduce RWY occupancy times, pilots shall apply the following procedures:
The RWYs shall, as a rule, be left via the existing high-speed turn-offs.
When RWY conditions permit, pilots should prepare their landings in order to leave the RWYs via the high-speed turn-offs listed below:

RWY	ACFT	Turn off intersections	Dist from THR ft (m)
07L	heavy	G	8202' (2500m)
	medium / light	Mto	5906' (1800m)
07R	heavy	Gto	7054' (2150m)
	medium / light	Cto	5577' (1700m)
25L	heavy	Jto	7546' (2300m)
	medium (JET)	Hto	6070' (1850m)
	medium (PROP) / light	G	3609' (1100m)
25R	heavy	Hto	6890' (2100m)
	medium (JET)	Ato	6070' (1850m)
	medium (PROP) / light	Gto	3773' (1150m)

Name the expected high-speed turn-off during the approach briefing to ensure a minimum RWY occupancy time.
The possibility of FRANKFURT Tower applying reduced RWY separation remains unaffected and shall continue to be observed.

The frequency change after landing from FRANKFURT Tower to FRANKFURT Apron shall only be carried out on request.
If the pilot-in-command does not receive further taxi clearance, he should stop in front of TWY A.

2.5. TAXI PROCEDURES

To maintain smooth taxiing traffic, ACFT having landed on RWY 07R/25L will be guided, if possible, to defined change-over points, depending on the assigned parking position, to cross RWY 07L/25R.

This procedure will be withdrawn during adverse weather conditions, at the latest when CAT III operation is in force.

Taxi to stands F236 thru F240 via TWY N NORTH, facing North.
Taxi to stands V119 thru V130 or V150 thru V178 via TWY N, facing South.

3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

De-icing notification shall be directed to FRANKFURT De-icing **135.22** or via phone. 069/690-73891.
Acft shall be ready at the estimated de-icing time. If this is impossible, the APT De-icing Center (ADC) shall be informed and the new "ready for de-icing time" be transmitted to the ADC.
CAUTION: If the ACFT is not ready at the estimated de-icing time (i.e. doors not closed) the de-icing vehicles will be directed to the next ACFT waiting and subject flight will have to wait until other vehicles become available for disposition.

3.1.2. ACFT STANDS

The de-icing/anti-icing of ACFT at the respective ACFT stands will take place with engines switched off, passenger bridges cast off, and the ACFT clear of handling equipment.

3.1.3. REMOTE DE-ICING PADS (DPs)

The remote de-icing pads are located West of the head of RWY 18 and fall within the responsibility of FRANKFURT Tower. When carrying out de-icing procedure, responsibility will temporarily be transferred to FRANKFURT Apron.

On the remote de-icing pads, only jet ACFT with running engines and APU switched off will be de-iced.
Propeller ACFT will not be de-iced for safety reasons.

Underwing de-icing, de-icing of undercarriage or with hot air, the control of the central engines (e.g. DC10), as well as special examinations of individual ACFT parts (e.g. hands on checks) cannot be carried out on the remote de-icing pads.

Taxiing manoeuvres may only be carried out at the indispensable minimum engine speed. On the de-icing pads ACFT shall stop in front of the clearance bar or follow the advice of the marshaller and will be advised by FRANKFURT Apron to establish radio contact with the de-icing crew teamleader on an assigned frequency.

During the de-icing proceedings, the pilot-in-command shall ensure continuous listening watch on the respective frequency of FRANKFURT Apron. After de-icing proceedings have been concluded, the pilot-in-command shall report to FRANKFURT Apron that he is ready to taxi.

3.2. START-UP & TAXI PROCEDURES

3.2.1. GENERAL

Departures from the Southern APT area shall state their position when request start-up clearance.

3.2.2. FROM 0600 - 2200LT

All ACFT up to A321 parked at positions East of TWY E and planned for departure from RWY 18 have to expect to taxi via TWYs B EAST (ATTENTION: Overflying ACFT on extended CL RWY 25L/R) and S. Departure will take place basically from position S. Pilots unable to comply with these conditions shall advise Frankfurt Apron upon initial contact.

3.3. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within Airspace C.

3. DEPARTURE

3.4. NOISE ABATEMENT

For additional depiction refer to 10-4.

3.4.1 DEPARTURE DESIGNATION

RWYs 07L/R:

a) Between 0700-2200LT:

- SIDs with designator **ECHO** may be used by all **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions;
- SIDS with designator **DELTA** shall be used by all **HEAVY** ACFT and by all ACFT unable to comply with the climb restrictions in SIDs with designator **ECHO**.

b) Between 2200-0700LT ALL ACFT shall use SIDs with designator **DELTA**.

c) NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **CHARLIE**.

RWYs 25L/R:

a) Between 0700-2200LT:

- SIDs with designator **FOXTROT** may be used by all **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions;
- SIDs with designator **JULIETT** shall be used by all **HEAVY** ACFT northbound able to comply with the climb restrictions;
- SIDs with designator **GOLF** shall be used by all ACFT unable to comply with the climb restrictions in SIDs with designators **FOXTROT** or **JULIETT** and by all **HEAVY** ACFT west-, south- and southeastbound;

EXCEPTION: ACFT via BIBOS shall use SIDs with designators **FOXTROT** for **MEDIUM** or **LIGHT** ACFT and **GOLF** for **HEAVY** ACFT.

b) Between 2200-0700LT:

- All 3- and 4-engined jet ACFT, except Avroliner and BAe 146 via BIBOS, MARUN, SOBRA and TOBAK, shall use SIDs with designator **NOVEMBER**;
- Single- and twin-engined ACFT shall use SIDs according to paragraphs a) & c) respectively.

c) SIDs with designator **PAPA** may be used by single and twin-engined propeller-driven ACFT and DASH 7 only.

d) NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **QUEBEC**.

RWY 18:
NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **CHARLIE** and **QUEBEC** respectively.

3.5. RWY OPERATIONS

3.5.1. HIGH INTENSITY RWY OPERATIONS (HIRO)

Cockpit checks should be completed prior to line-up and any checks requiring completion on the RWY should be kept to a minimum.
ACFT ready for departure should be in a position to taxi directly from hold upon receiving take-off clearance from FRANKFURT Tower.
When using landing direction 07, the pilot shall advise FRANKFURT Tower on initial contact of the earliest possible take-off intersection.

3. DEPARTURE

3.6. OTHER INFORMATION

3.6.1. GENERAL

When glider areas in vicinity of APT activated, expect higher crossing altitude by ATC for SIDs which require higher climb gradient than standard.

3.6.2. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink. The procedures have been described in an AIC.
Deviations from this, in special situations (e.g. snow), enroute clearance may be transmitted via Datalink in advance after receiving a RCD, while at the appropriate time, start-up approval will be granted on the frequency specified in the CLD.
Pilots shall maintain listening watch on this frequency and shall refrain from making enquiries about the start-up approval.

The following time parameters apply:

t_i	25 min prior to EOBT for unregulated flights. 30 min prior to CTOT for ATFM regulated flights.
t_t	11 min prior to EOBT for unregulated flights. 16 min prior to CTOT for ATFM regulated flights.
t_0	1 min
t_1	5 min
t_2	1 min

3.6.3. DEPARTURE MANAGEMENT SYSTEM

3.6.3.1 INTRODUCTION

To optimize the outbound process from the parking position to the RWY, a computerized Departure Management System (DMAN) calculating a departure sequence and generating target times for Start-Up and Off-Block, has been established. The target times TSAT (Target Start-Up Approval Time) and TOAT (Target Off-Block Approval Time) are generated. TOAT is published in the APT information systems. Start-up is to be requested at TSAT, (5 minutes before TOAT), push-back or taxi is to be requested at TOAT. Pilots should adhere to the assigned target times.
For any inquiries contact the back office landline +49 69 690 DMAN1 (+49 69 690 36261).

The basis for the calculation of the target times is the COB (Confirmed Off-Block) which is reported by the airline or the assigned handling agent. It indicates the time when all ground handling services will be completed and the ACFT is ready to leave the parking position.

3.6.3.2. PROCEDURES

All IFR flights with ATC flight plan are taken into consideration.

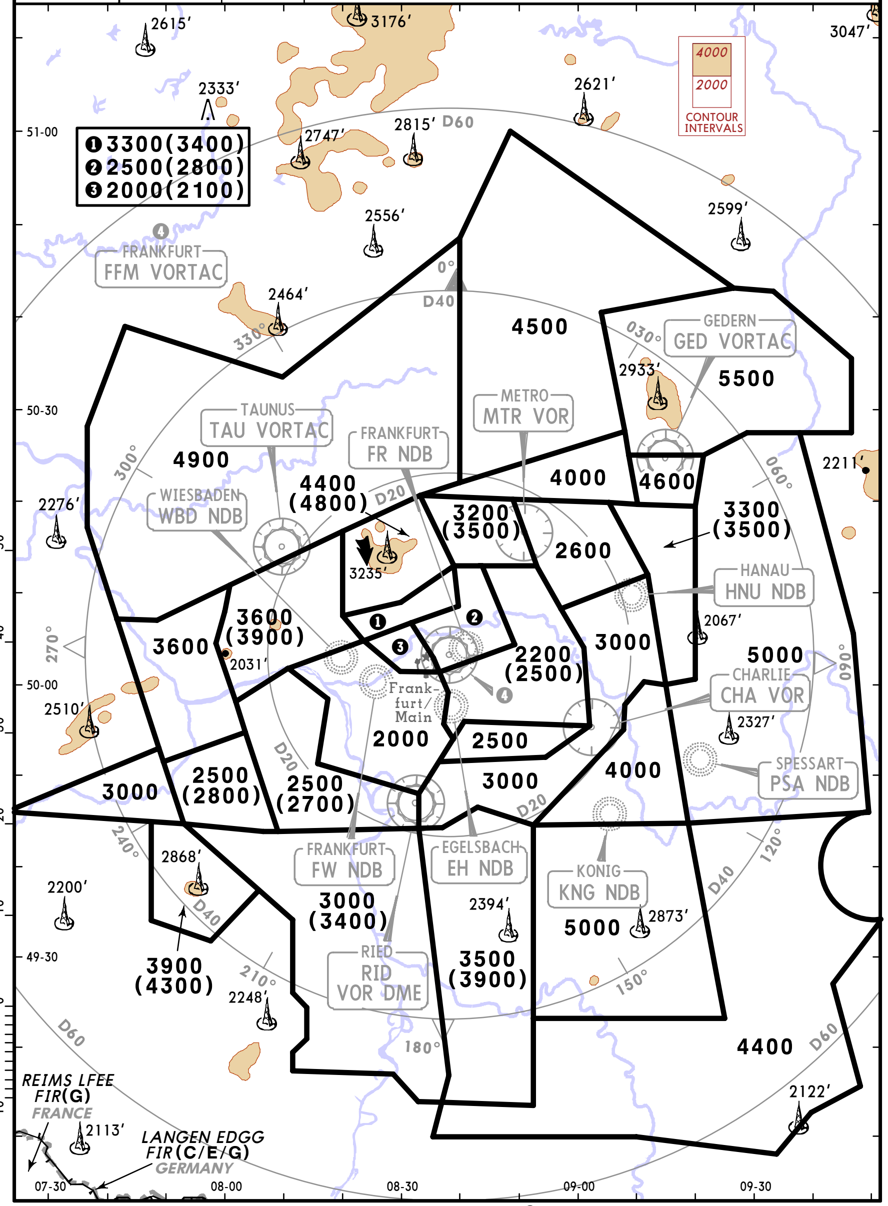
STANDARD PROCEDURES

Reporting of end of ground handling (COB)
Input and update of COB
All airlines or assigned handling agents are required to deliver a COB in time - but no later than 60 minutes prior to the completion of ground handling to the Traffic Data Center using the described ways to report. Any deviation from an already published COB must immediately be reported after having become known. This must be done continuously until the actual off-block. Changes of the COB are continuously possible, the COB must be indicated in the form of a precise minute.

Responsibility for the COB
The responsibility for entering and updating the COB is in the hands of the airline, the assigned handling agent, or the pilot-in-command for all flights without handling agent.

RADAR MINIMUM ALTITUDES

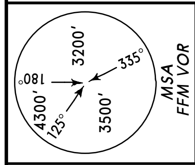
LANGEN Radar (APP)		Apt Elev	
ARRIVAL	DEPARTURE		
*119.02	*120.15	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000'
North 120.8	*136.12		The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000' above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500'). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
South *125.35	*126.55		Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sectorization.

STAR

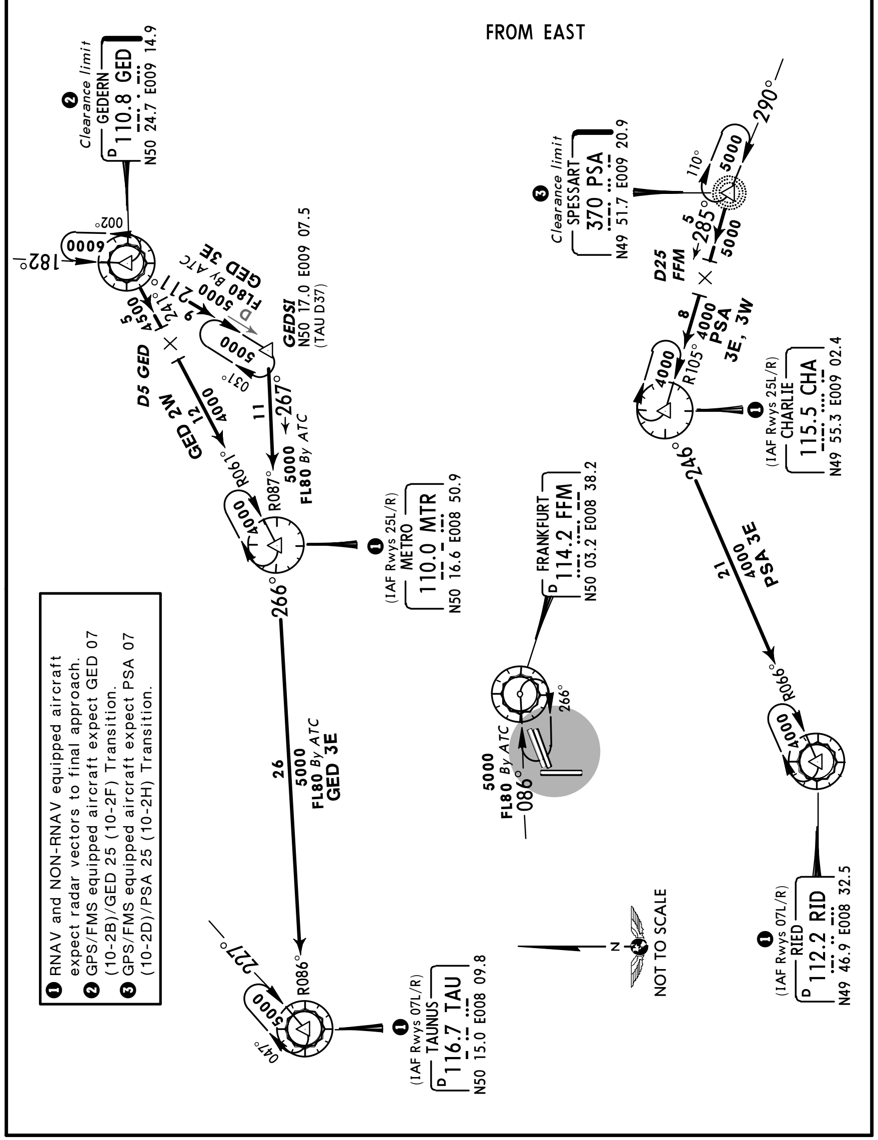
ATIS	Apt Elev	
*118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000'



GEDERN THREE ECHO (GED 3E)
SPESSART THREE ECHO (PSA 3E)
RWYS 07L/R ARRIVALS

GEDERN TWO WHISKEY (GED 2W)
SPESSART THREE WHISKEY (PSA 3W)
RWYS 25L/R ARRIVALS

FROM EAST

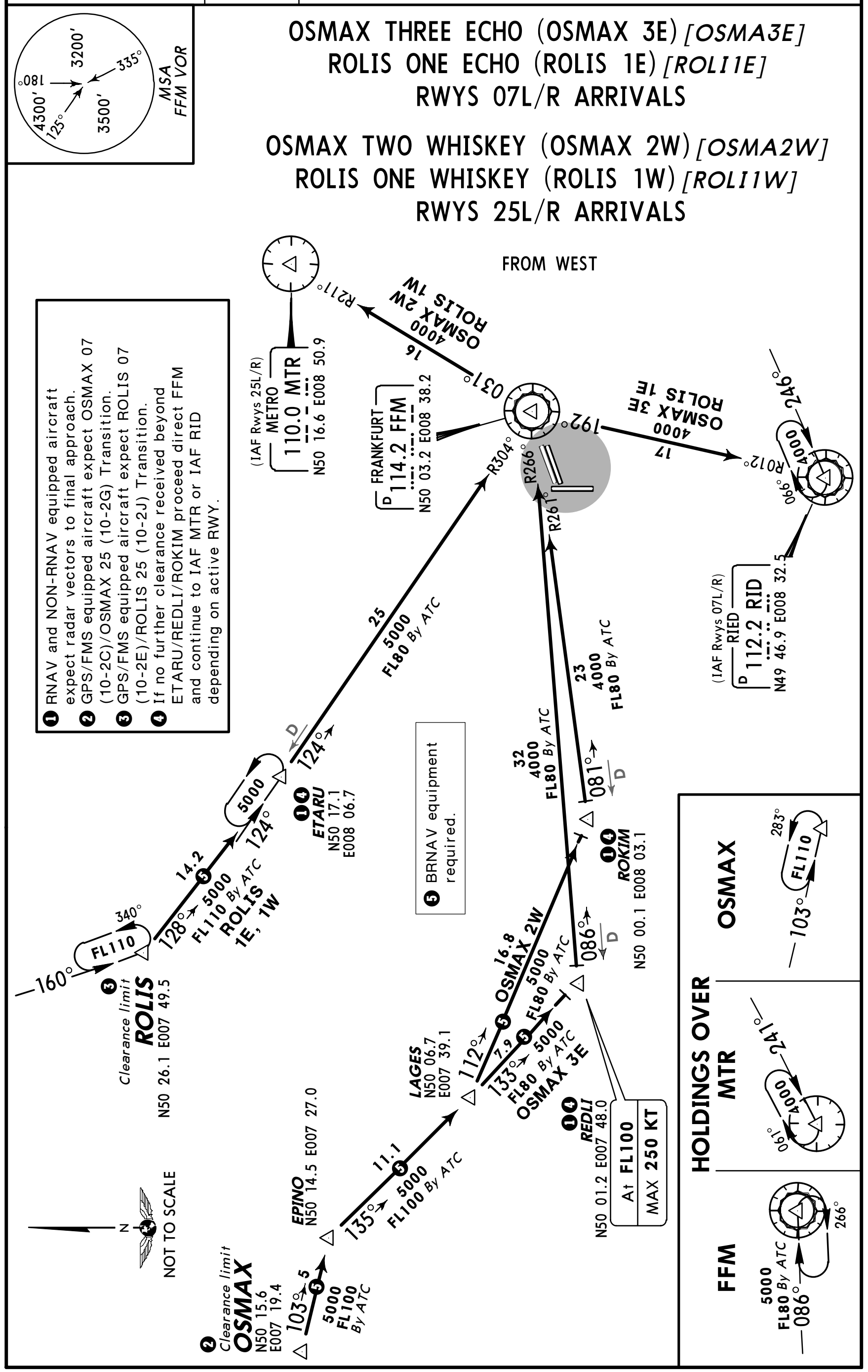


CHANGES: STARs renumbered & revised.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
17 AUG 07 (10-2A) Eff 30 Aug STAR

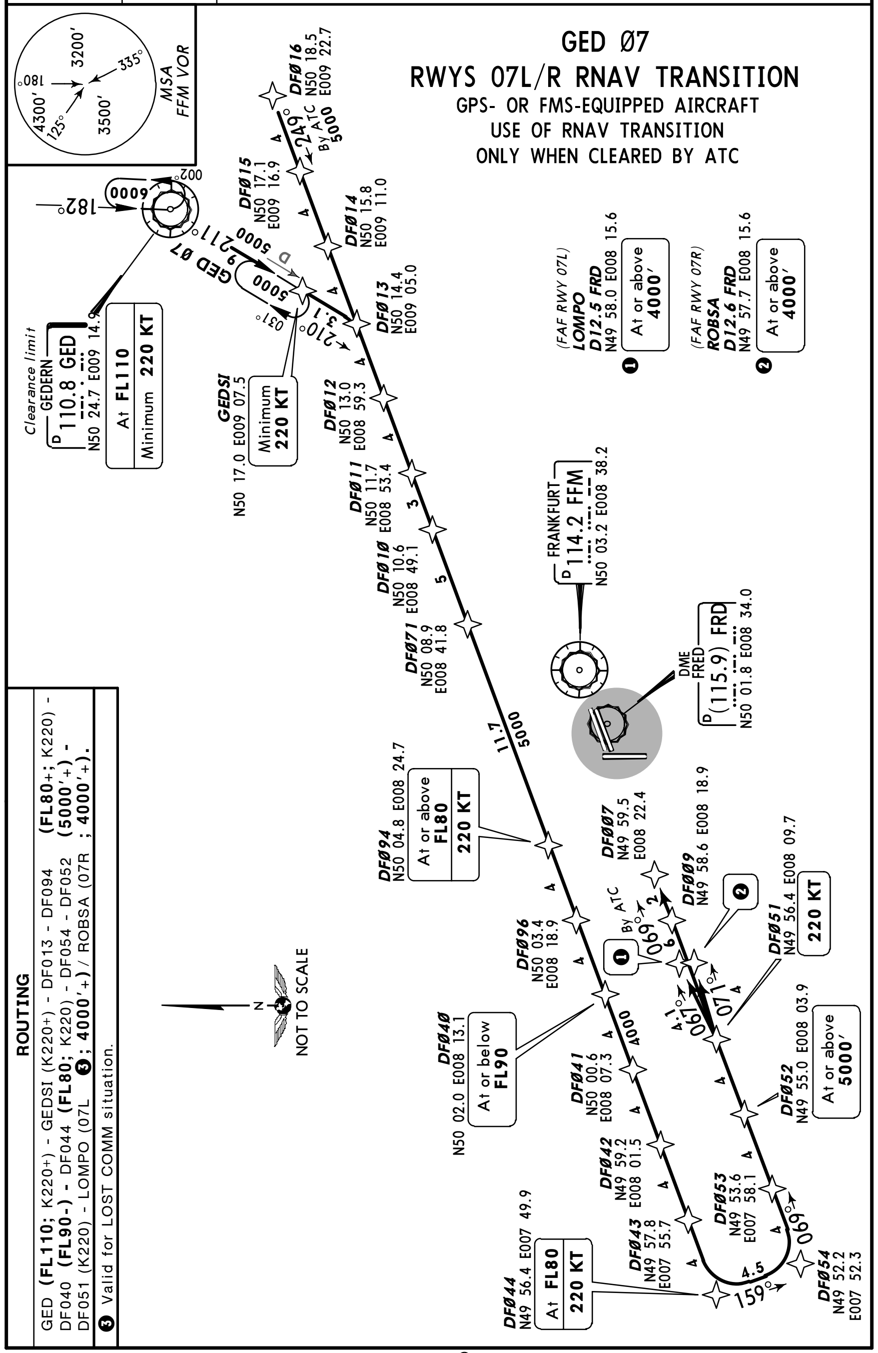
ATIS	Apt Elev	
*118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000'



EDDF/FRA
FRANKFURT/MAIN

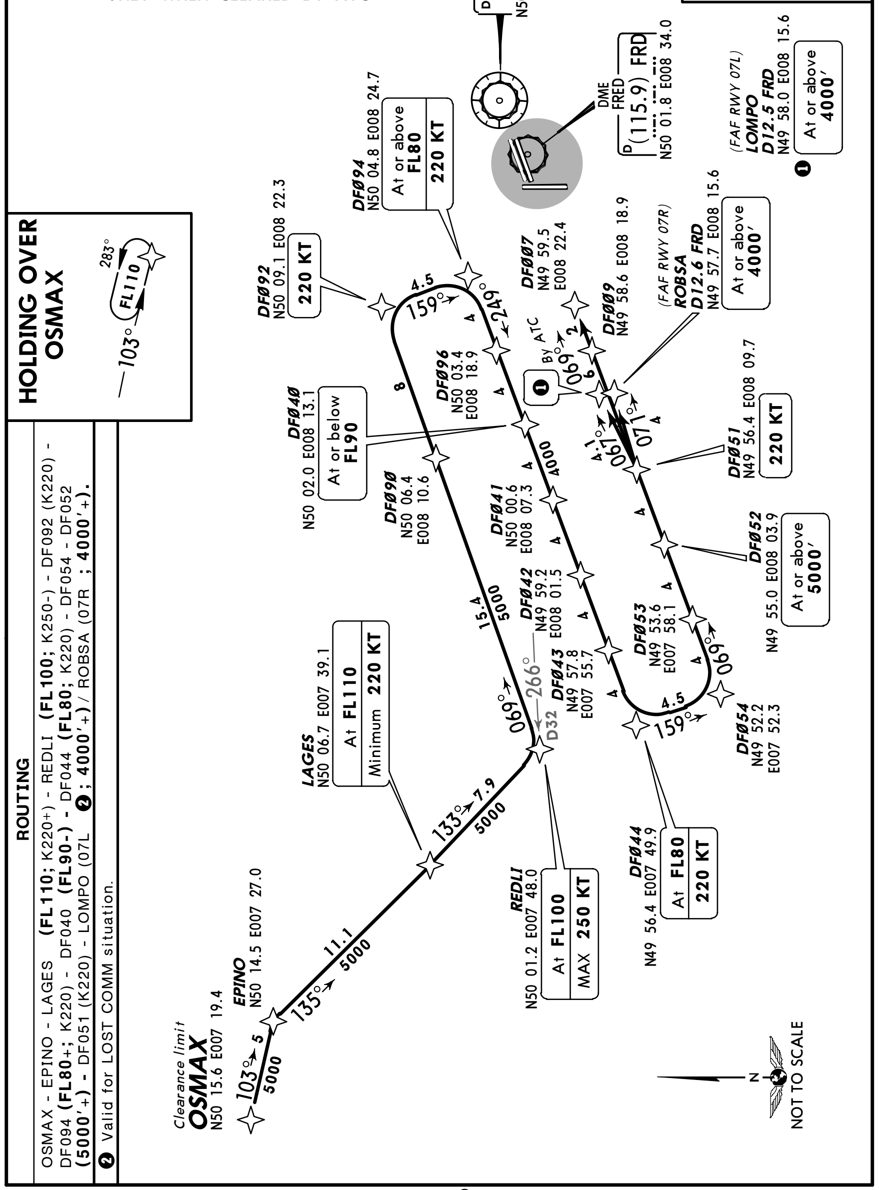
JEPPESEN FRANKFURT/MAIN, GERMANY
17 AUG 07 (10-2B) Eff 30 Aug RNAV TRANSITION

ATIS	Apt Elev	
*118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' 1. On downwind transition expect vectors to final. 2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



ATIS	Apt Elev	
*118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

OSMAX 07 [OSM07]
RWYS 07L/R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



ROUTING

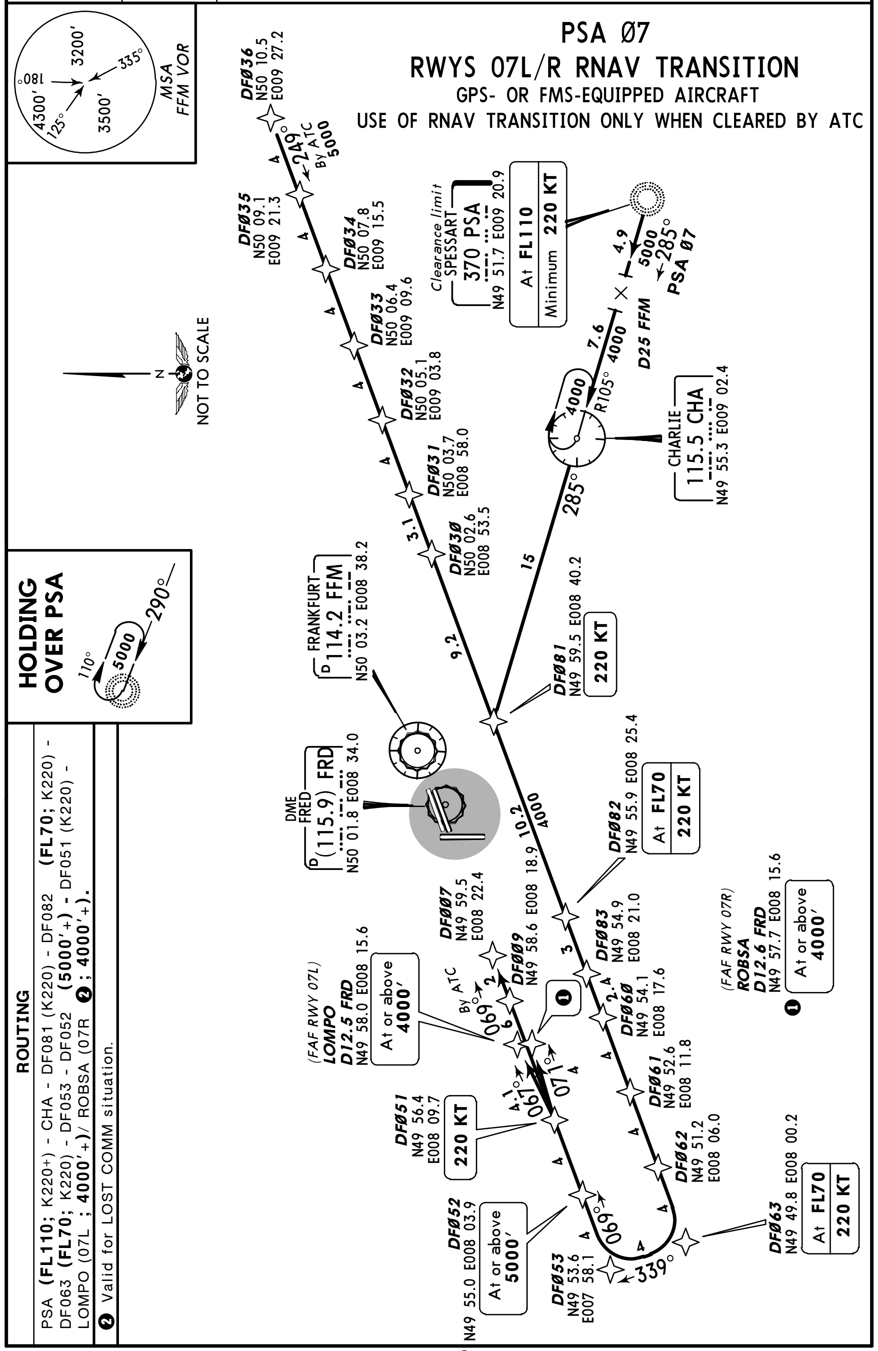
OSMAX - EPINO - LAGES **(FL110**; K220+) - REDLI **(FL100**; K250-) - DF092 (K220) - DF094 **(FL80**+; K220) - DF040 **(FL90**-) - DF044 **(FL80**; K220) - DF054 - DF052 **(5000'**+) - DF051 (K220) - LOMPO (07L ❷; **4000'**+)/ ROBSA (07R ❷; **4000'**+).

❷ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

*ATIS	Apt Elev	
118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

PSA 07
RWYS 07L/R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



ROUTING

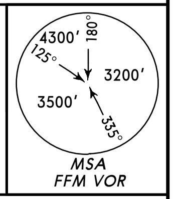
PSA **(FL110**; K220+) - CHA - DF081 (K220) - DF082 **(FL70**; K220) - DF063 **(FL70**; K220) - DF053 - DF052 **(5000'**+) - DF051 (K220) - LOMPO (07L ❷; **4000'**+)/ ROBSA (07R ❷; **4000'**+).

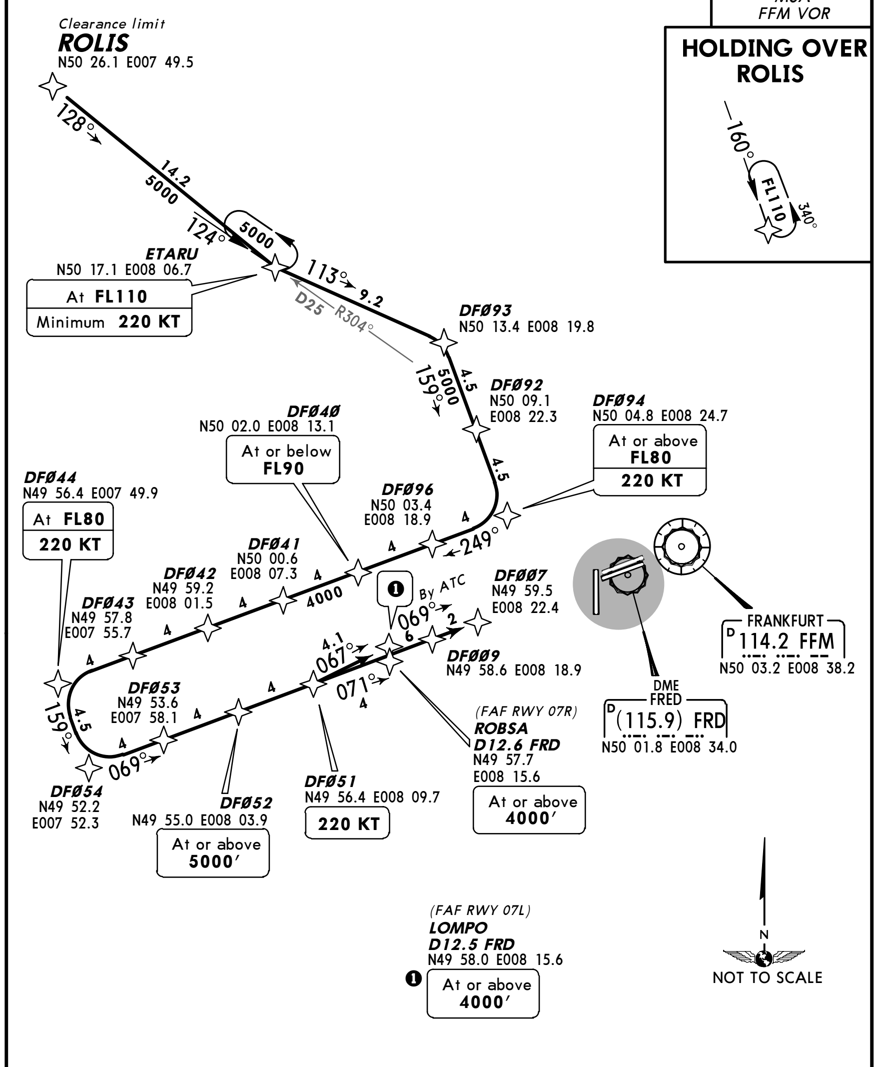
❷ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

*ATIS	Apt Elev	
118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

ROLIS Ø7 *[ROLØ7]*
RWYS 07L/R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC





ROUTING

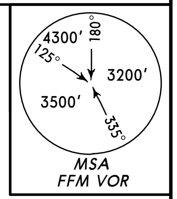
ROLIS - ETARU **(FL110;** K220+) - DF093 - DF094 **(FL80+;** K220) - DF040 **(FL90-)** - DF044 **(FL80;** K220) - DF054 - DF052 **(5000'+)** - DF051 (K220) - LOMPO (07L ❷ **; 4000'+)**/ ROBSA (07R **; 4000'+).**

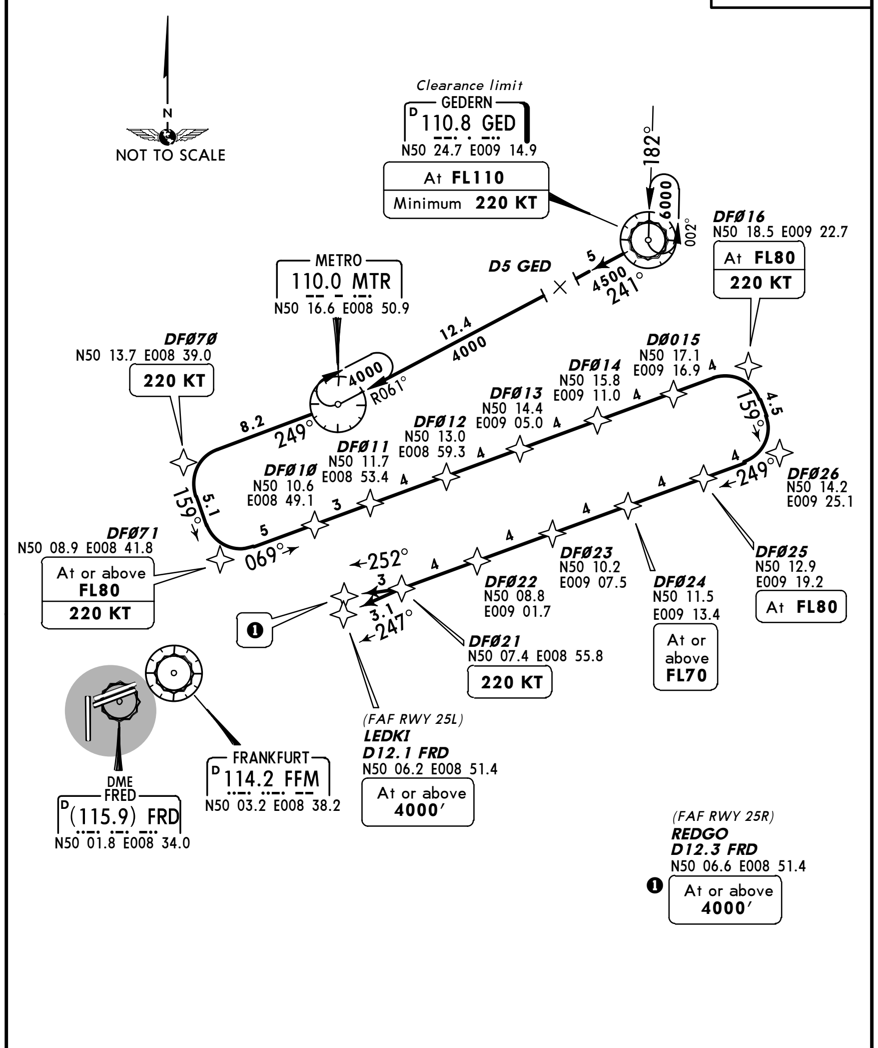
❷ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

ATIS	Apt Elev	
*118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

GED 25
RWYS 25L/R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC





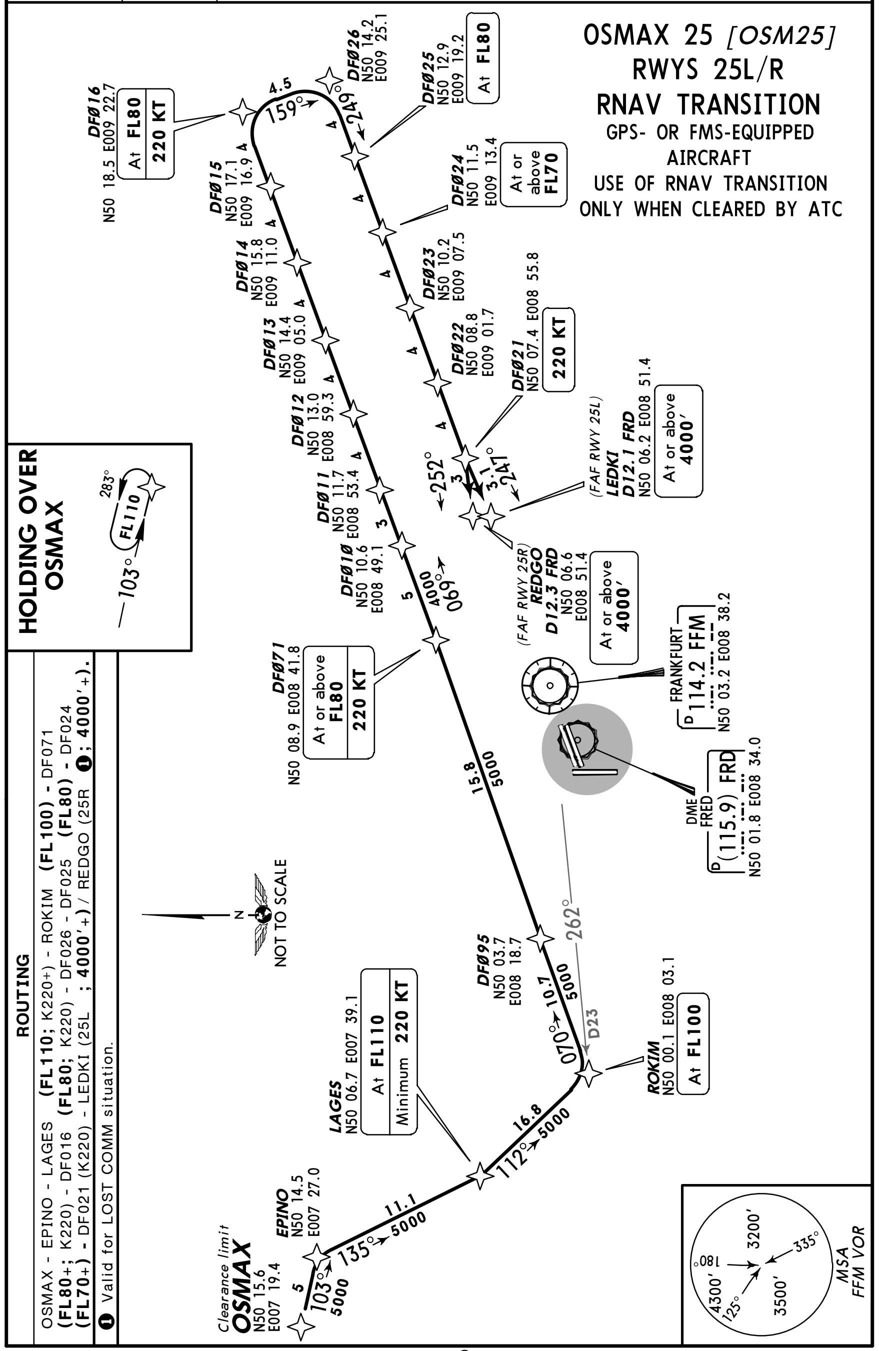
ROUTING

GED **(FL110;** K220+) - MTR - DF070 (K220) - DF071 **(FL80+;** K220) - DF016 **(FL80;** K220) - DF026 - DF025 **(FL80)** - DF024 **(FL70+)** - DF021 (K220) - LEDKI (25L **; 4000'+)** / REDGO (25R ❷**; 4000'+).**

❷ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

ATIS	Apt Elev	
*118.02 114.2	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



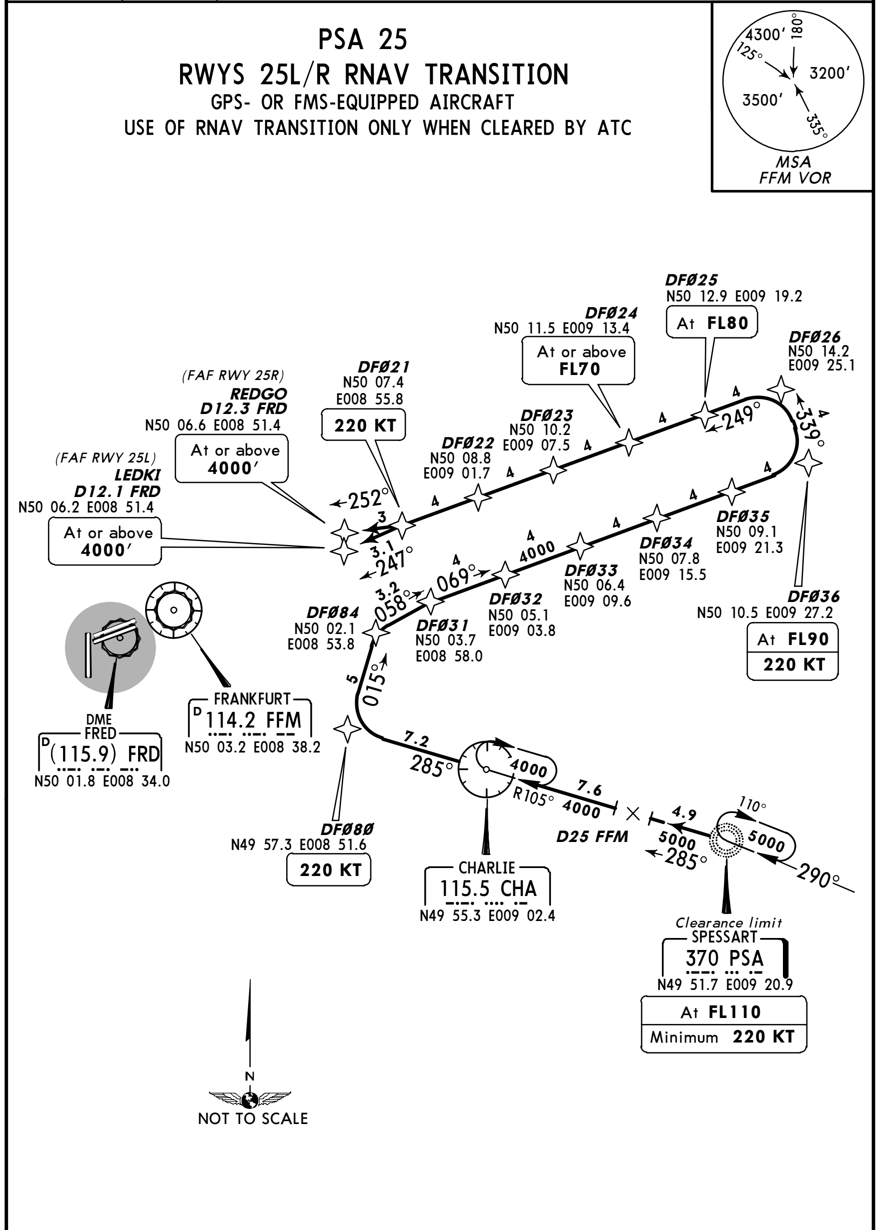
ROUTING

OSMAX - EPINO - LAGES **(FL110;** K220+) - ROKIM **(FL100)** - DF071 **(FL80+;** K220) - DF016 **(FL80;** K220) - DF025 **(FL80)** - DF026 - DF024 **(FL70+)** - DF021 (K220) - LEDKI (25L ❶; **4000′+**)/ REDGO (25R ❶; **4000′+**).

❶ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

*ATIS	Apt Elev	
118.02 114.2	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



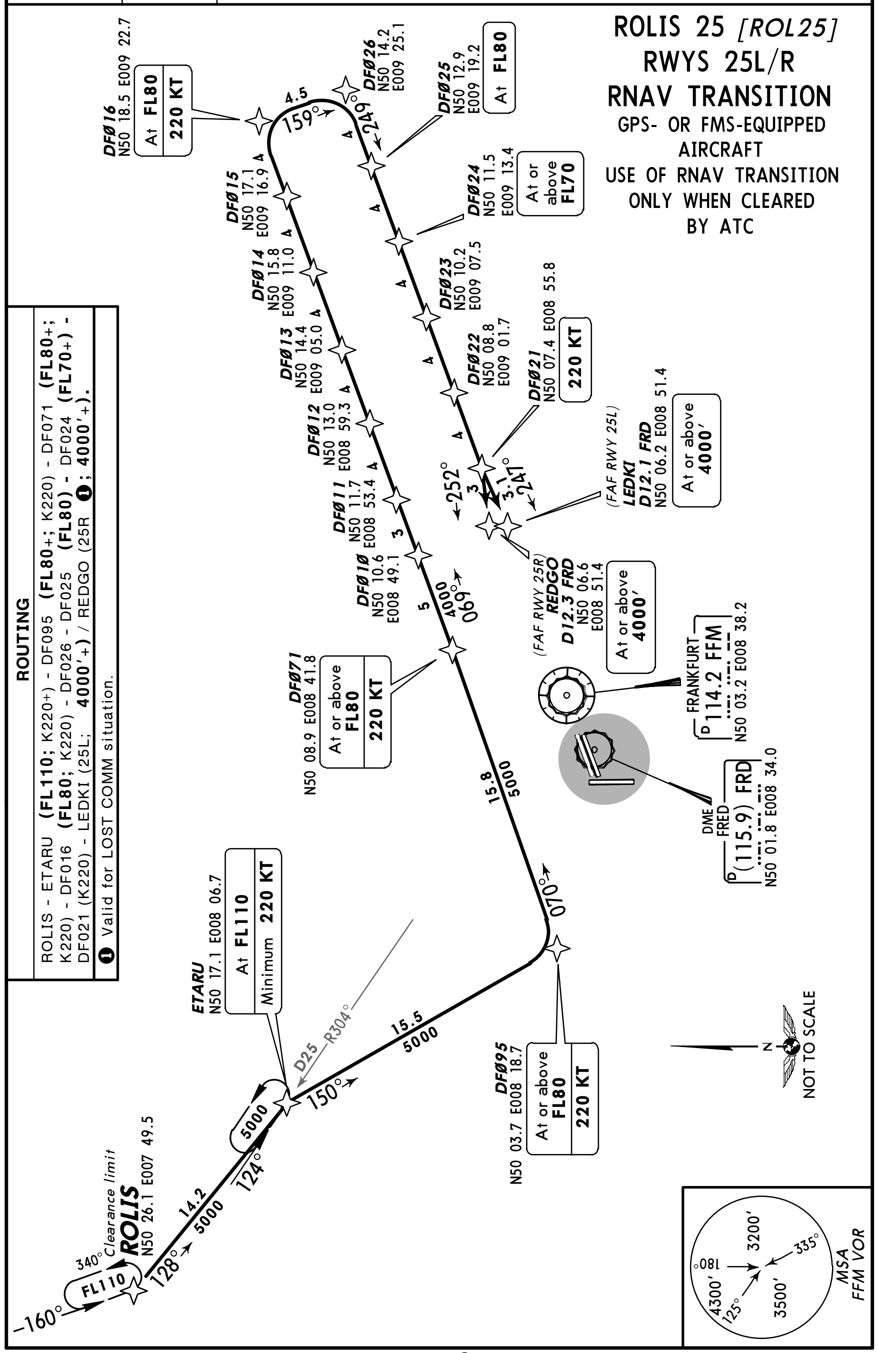
ROUTING

PSA **(FL110;** K220+) - CHA - DF080 (K220) - DF084 - DF031 - DF036 **(FL90;** K220) - DF026 - DF025 **(FL80)** - DF024 **(FL70+)** - DF021 (K220) - LEDKI (25L ❶; **4000′+**)/ REDGO (25R; **4000′+**).

❶ Valid for LOST COMM situation.

CHANGES: RNAV transition revised.

*ATIS	Apt Elev	
118.02 114.2	364'	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000' **1.** On downwind transition expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



SID DESIGNATION	REFER TO CHART
AMUGI 1D, 1E	10-3B
ANEKI 6D, 8E	10-3C
ANEKI 5F, 5G, 4L	10-3D
BIBOS 1D, 7E	10-3E
BIBOS 6F, 6G, 6N	10-3F
BIBOS 6L, 6S	10-3G
BIBOS 7T	10-3H
DKB 6D, 4E, 3F, 4G	10-3J
DKB 2L, 5S	10-3J1
KNG 4C	10-3J2
MARUN 5D, 2E	10-3J3
MARUN 1F, 1G, 1J	10-3J4
MARUN 1N	10-3J5
MARUN 1S	10-3K
MARUN 1T	10-3L
MTR 2C	10-3L1
NEKOM 2D, 2E	10-3L2
NEKOM 1F, 1G, 1L	10-3L3
NOMBO 5D, 4E, 3F, 4G	10-3L4
NOMBO 3L, 4S	10-3L5
RATIM 2D, 2E, 2F, 2G	10-3L6
RATIM 2S	10-3L7
RID 4C, 1Q	10-3L8
ROTEN 3F, 2G, 1L, 4S	10-3M
SOBRA 2D, 2E	10-3N
SOBRA 1F, 1G, 2N, 1P	10-3N1
SOBRA 2L, 1S, 2U	10-3N2
SULUS 3D, 2E, 3F, 4G	10-3N3
SULUS 4L, 4S	10-3N4
TAU 1Q	10-3N5
TOBAK 5D, 5E	10-3N6
TOBAK 2F, 2G, 2J	10-3N7
TOBAK 3N	10-3N8
TOBAK 2S, 3T	10-3P
ULKIG 3U	10-3Q

FOR RNAV SID DESIGNATION REFER TO PAGE 10-3A

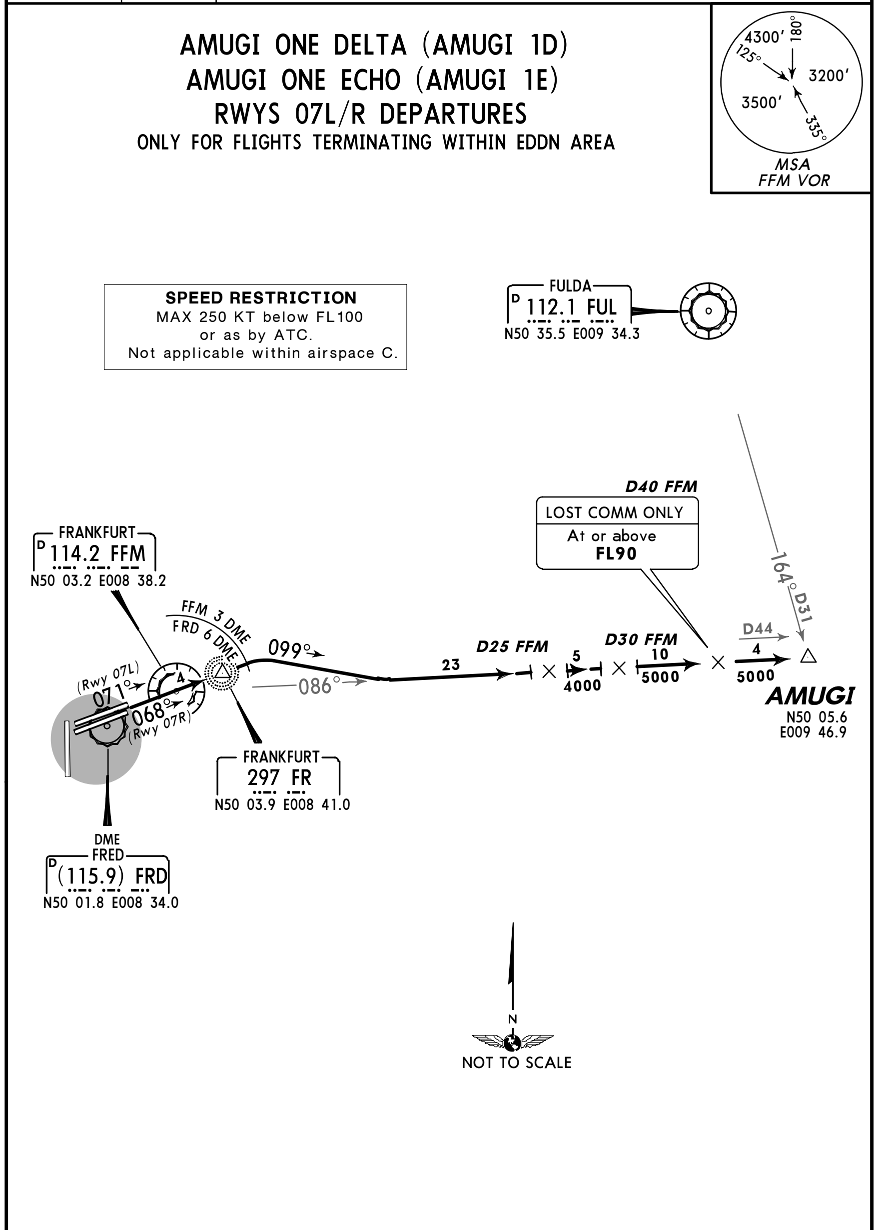
RNAV SID DESIGNATION	REFER TO CHART
AMUGI 1D, 1E	10-3Q1
ANEKI 6D, 8E	10-3Q2
ANEKI 5F, 5G, 4L	10-3Q3
BIBOS 1D, 7E	10-3Q4
BIBOS 6F, 6G, 6N	10-3Q5
BIBOS 6L, 6S	10-3Q6
BIBOS 7T	10-3Q7
DKB 6D, 4E, 3F, 4G	10-3Q8
DKB 2L, 5S	10-3S
MARUN 5D, 2E	10-3T
MARUN 1F, 1J	10-3T1
MARUN 1N	10-3T2
MARUN 1S	10-3T3
MARUN 1T	10-3T4
NEKOM 2D, 2E	10-3T5
NEKOM 1F, 1G, 1L	10-3T6
NOMBO 5D, 4E, 3F, 4G	10-3T7
NOMBO 3L, 4S	10-3T8
RATIM 2D, 2E, 2F, 2G	10-3U
RATIM 2S	10-3V
ROTEN 3F, 2G, 1L, 4S	10-3V1
SOBRA 2D, 2E	10-3V2
SOBRA 1F, 1G, 2N, 1P	10-3V3
SOBRA 2L, 1S, 2U	10-3V4
SULUS 3D, 2E, 3F, 4G	10-3V5
SULUS 4L, 4S	10-3V6
TOBAK 5D, 5E	10-3V7
TOBAK 2F, 2J	10-3V8
TOBAK 3N	10-3W
TOBAK 2S, 3T	10-3X
ULKIG 3U	10-3X1

CHANGES: RNAV SIDs renumbered.

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

AMUGI ONE DELTA (AMUGI 1D)
AMUGI ONE ECHO (AMUGI 1E)
RWYS 07L/R DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



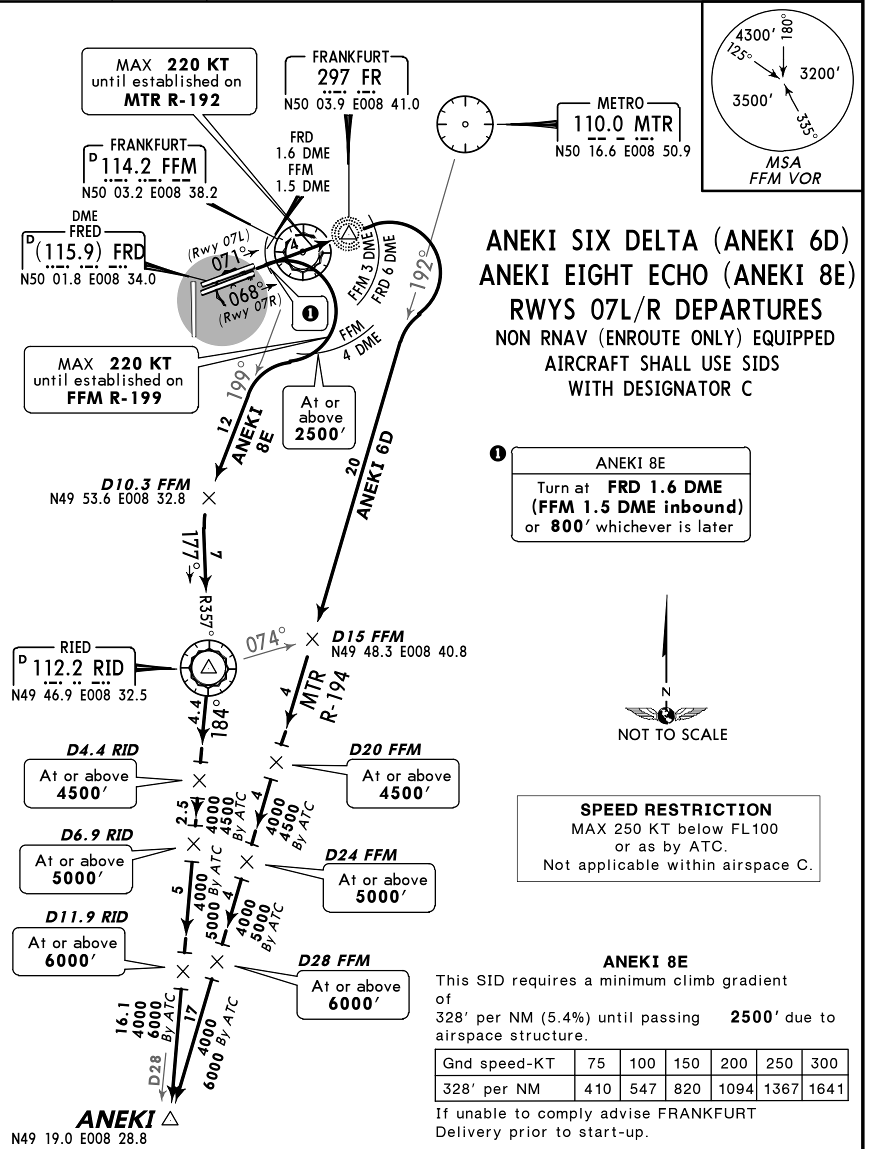
Initial climb clearance **4000′**

ROUTING

Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, 099° track, intercept FFM R-086 to AMUGI.

CHANGES: AMUGI SIDs established; ANEKI SIDs transferred.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.



ANEKI SIX DELTA (ANEKI 6D)
ANEKI EIGHT ECHO (ANEKI 8E)
RWYS 07L/R DEPARTURES

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT SHALL USE SIDS WITH DESIGNATOR C

❶ ANEKI 8E
Turn at **FRD 1.6 DME (FFM 1.5 DME inbound)** or **800′** whichever is later

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

ANEKI 8E
This SID requires a minimum climb gradient of 328′ per NM (5.4%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

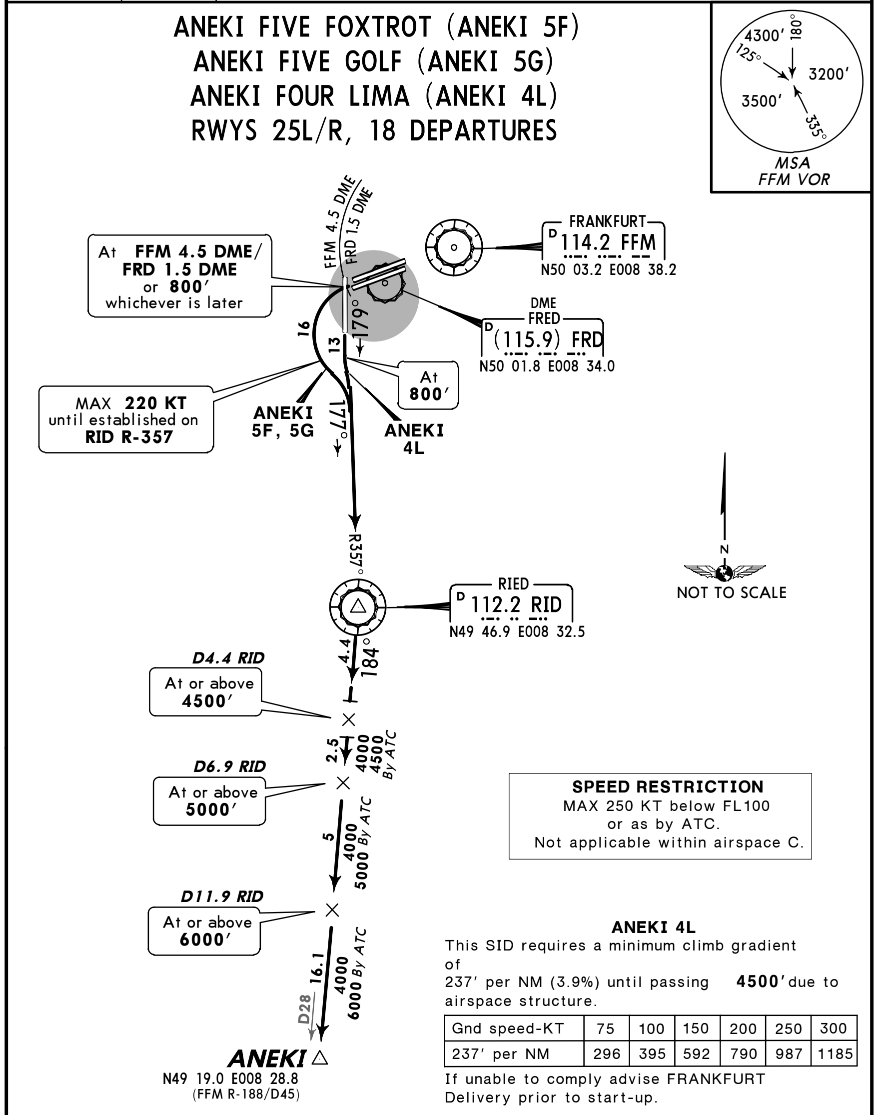
Initial climb clearance **4000′**

SID	ROUTING
ANEKI 6D	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192 to D15 FFM/RID R-074, turn RIGHT, intercept MTR R-194 to ANEKI.
ANEKI 8E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or **800′**, whichever is later, turn RIGHT, intercept FFM R-199, at D10.3 FFM turn LEFT, intercept RID R-357 inbound to RID, turn RIGHT, RID R-184 to ANEKI.

CHANGES: SIDs renumbered & revised; chart reindexed.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

ANEKI FIVE FOXTROT (ANEKI 5F)
ANEKI FIVE GOLF (ANEKI 5G)
ANEKI FOUR LIMA (ANEKI 4L)
RWYS 25L/R, 18 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

ANEKI 4L
This SID requires a minimum climb gradient of 237′ per NM (3.9%) until passing **4500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
237′ per NM	296	395	592	790	987	1185

If unable to comply advise FRANKFURT Delivery prior to start-up.

ANEKI 5F, 5G: Initial climb clearance **5000′**
ANEKI 4L: Initial climb clearance **4000′**

SID	RWY	ROUTING
ANEKI 5F, 5G	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT, intercept RID R-357 inbound to RID, RID R-184 to ANEKI.
ANEKI 4L	**18**	Climb on runway track to **800′**, intercept RID R-357 inbound to RID, turn RIGHT, RID R-184 to ANEKI.

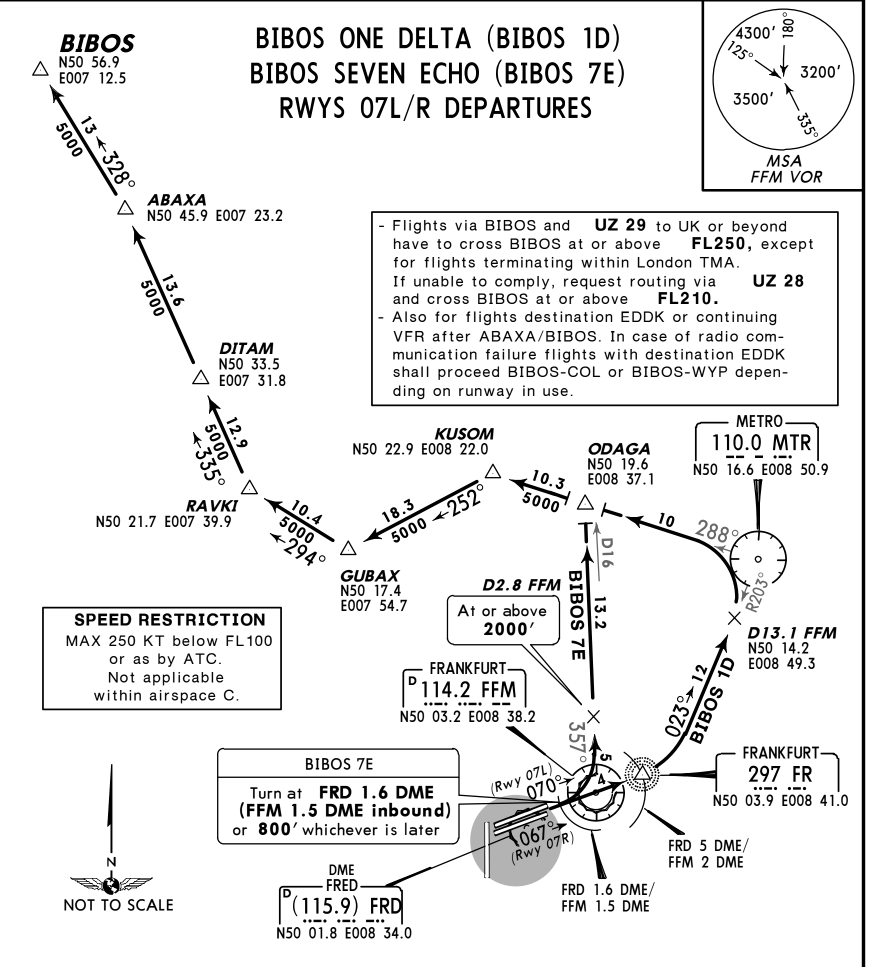
CHANGES: None.

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

BIBOS ONE DELTA (BIBOS 1D)
BIBOS SEVEN ECHO (BIBOS 7E)
RWYS 07L/R DEPARTURES

- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250,** except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable
within airspace C.



BIBOS 7E
This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing **2000′.**

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
BIBOS 1D	Climb on runway track to **800′,** to FR (FRD 5 DME/FFM 2 DME outbound), turn LEFT **immediately,** intercept MTR R-203 inbound to D13.1 FFM, turn LEFT, intercept MTR R-288 via ODAGA ❶ to KUSOM, turn LEFT, 252° track to GUBAX, turn RIGHT, 294° track to RAVKI, turn RIGHT, 335° track via DITAM to ABAXA, turn LEFT, 328° track to BIBOS.
BIBOS 7E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or **800′,** whichever is later, turn LEFT, intercept FFM R-357 to ODAGA ❶, turn LEFT, 288° track to KUSOM, turn LEFT, 252° track to GUBAX, turn RIGHT, 294° track to RAVKI, turn RIGHT, 335° track via DITAM to ABAXA, turn LEFT, 328° track to BIBOS.

❶ After ODAGA BRNAV equipment necessary.

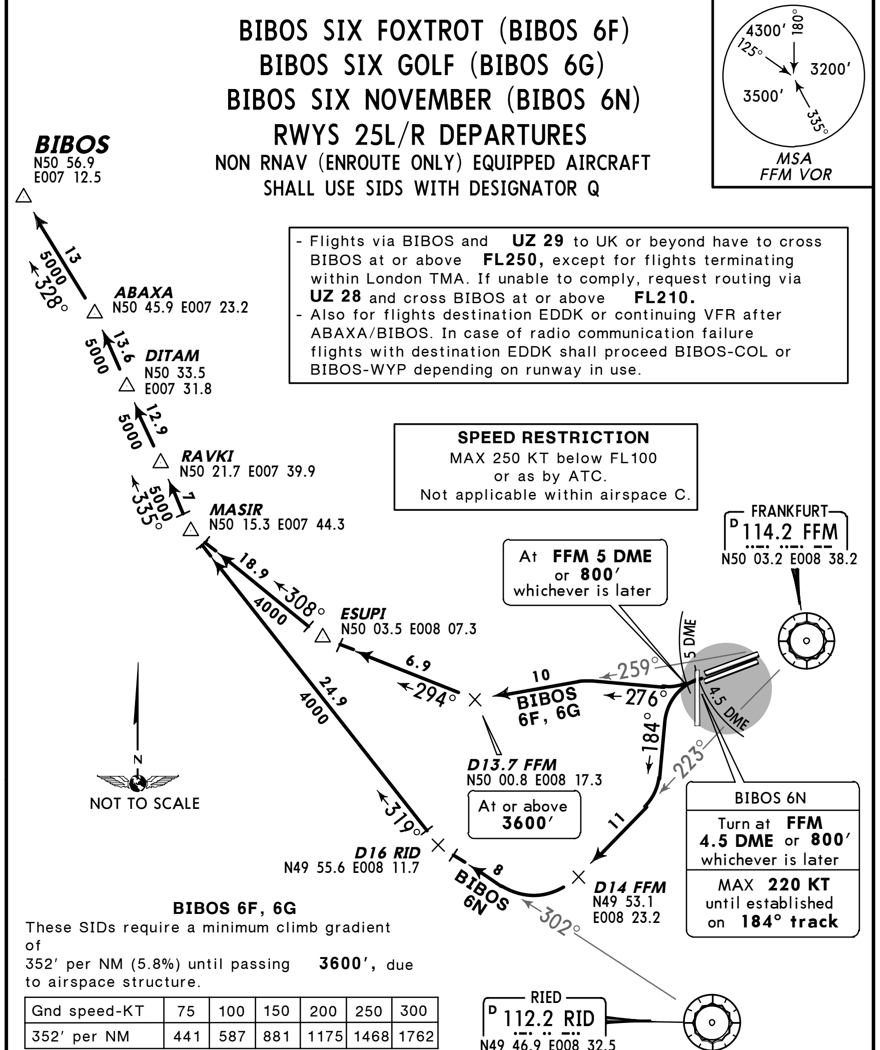
CHANGES: SID BIBOS 9D renumbered 1D & revised.

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

BIBOS SIX FOXTROT (BIBOS 6F)
BIBOS SIX GOLF (BIBOS 6G)
BIBOS SIX NOVEMBER (BIBOS 6N)
RWYS 25L/R DEPARTURES
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Q

- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250,** except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



BIBOS 6F, 6G
These SIDs require a minimum climb gradient of
352′ per NM (5.8%) until passing **3600′,** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
BIBOS 6F, 6G	Climb on runway track to FFM 5 DME or **800′,** whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track), intercept FFM R-259 to D13.7 FFM ❶, turn RIGHT, 294° track to ESUPI, turn RIGHT, 308° track to MASIR, turn RIGHT, 335° track via RAVKI and DITAM to ABAXA, turn LEFT, 328° track to BIBOS.
BIBOS 6N	Climb on runway track to FFM 4.5 DME or **800′,** whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❷, turn RIGHT, 319° track to MASIR, turn RIGHT, 335° track via RAVKI and DITAM to ABAXA, turn LEFT, 328° track to BIBOS.

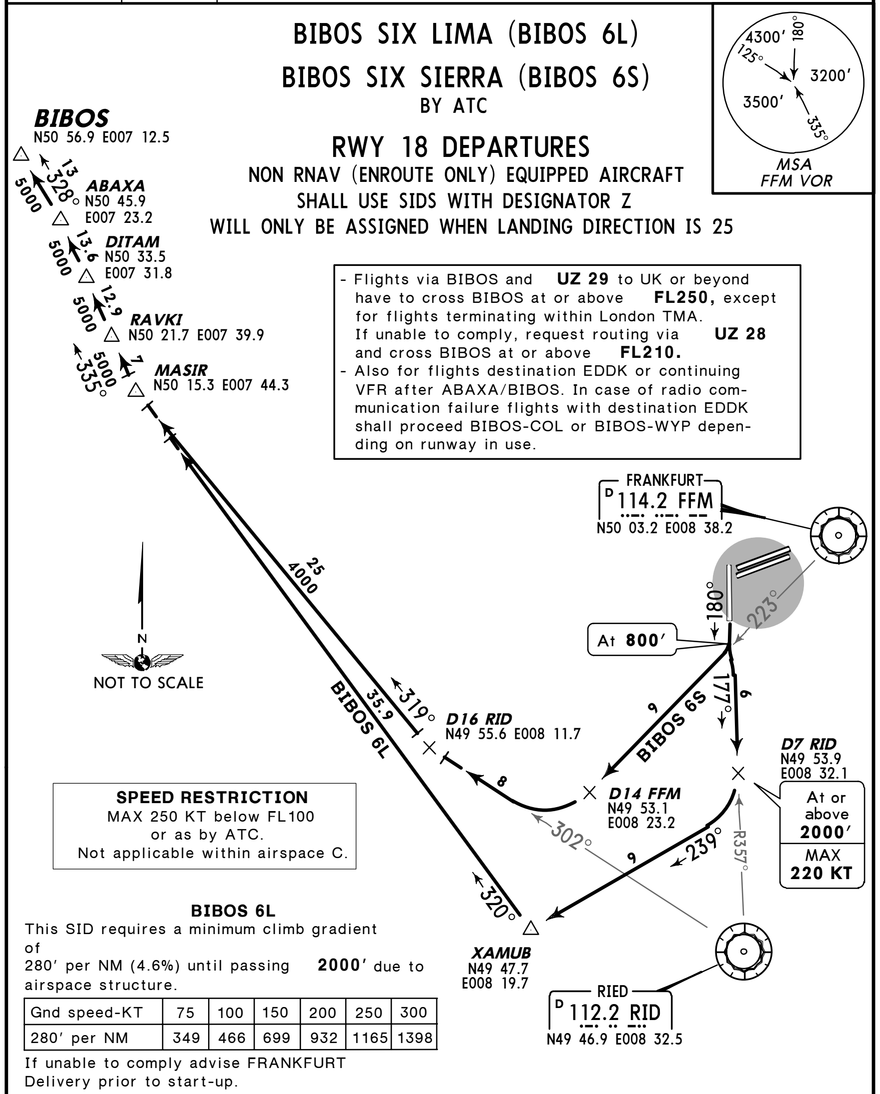
After D13.7 FFM ❶/D16 RID ❷ BRNAV equipment necessary.

CHANGES: Chart reindexed.

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

BIBOS SIX LIMA (BIBOS 6L)
BIBOS SIX SIERRA (BIBOS 6S)
BY ATC

RWY 18 DEPARTURES
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Z
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS 25



- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250**, except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBOS 6L
This SID requires a minimum climb gradient of
280′ per NM (4.6%) until passing **2000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
280′ per NM	349	466	699	932	1165	1398

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

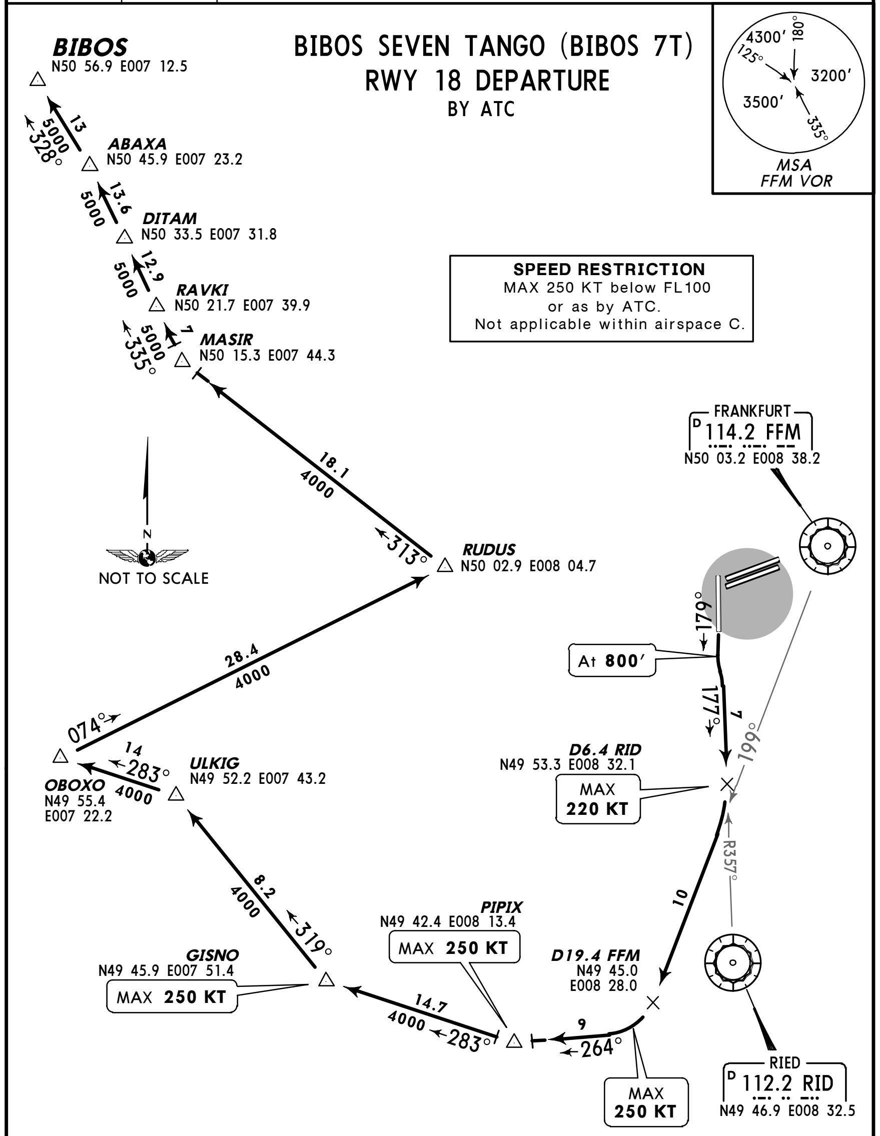
SID	ROUTING
BIBOS 6L	Climb on runway track to **800′**, intercept RID R-357 inbound to D7 RID ❶, turn RIGHT, 239° track to XAMUB, turn RIGHT, 320° track to MASIR, turn RIGHT, 335° track via RAVKI and DITAM to ABAXA, turn LEFT, 328° track to BIBOS.
BIBOS 6S	Climb on runway track to **800′**, turn RIGHT, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❷, turn RIGHT, 319° track to MASIR, turn RIGHT, 335° track via RAVKI and DITAM to ABAXA, turn LEFT, 328° track to BIBOS.

After D7 RID ❶/D16 RID ❷ BRNAV equipment necessary.

CHANGES: Chart reindexed.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

BIBOS SEVEN TANGO (BIBOS 7T)
RWY 18 DEPARTURE
BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

ROUTING

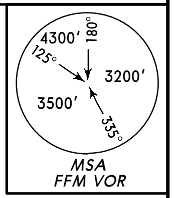
Climb on runway track to **800′**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❶, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 319° track to ULKIG, turn LEFT, 283° track to OBOXO, turn RIGHT, 074° track to RUDUS, turn LEFT, 313° track to MASIR, turn RIGHT, 335° track via RAVKI and DITAM to ABAXA, turn LEFT, 328° track to BIBOS.

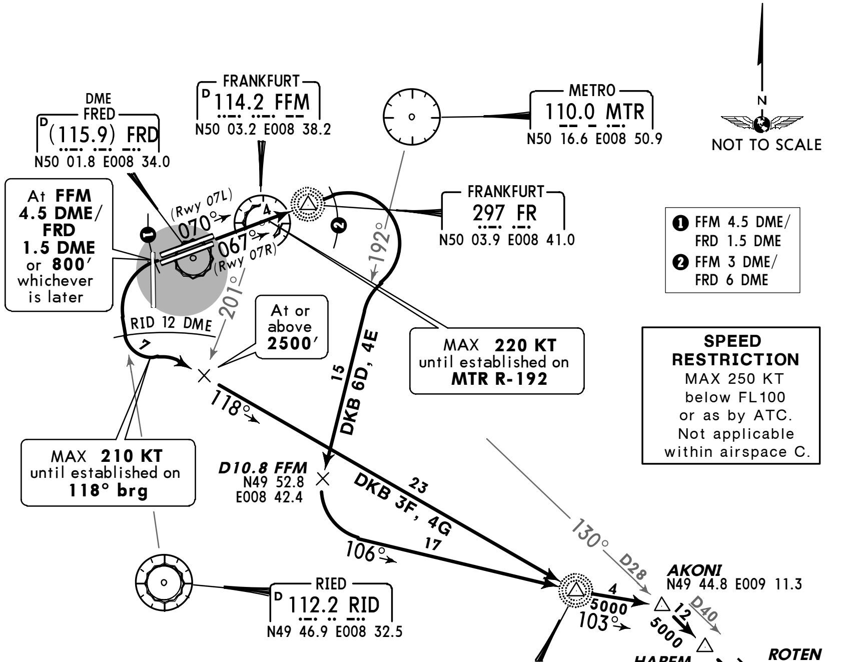
❶ After D19.4 FFM BRNAV equipment necessary.

CHANGES: None.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

DINKELSBUHL SIX DELTA (DKB 6D)
DINKELSBUHL FOUR ECHO (DKB 4E)
DINKELSBUHL THREE FOXTROT (DKB 3F)
DINKELSBUHL FOUR GOLF (DKB 4G)
RWYS 07L/R, 25L/R DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 3F, 4G
These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

DKB 6D, 4E: Initial climb clearance **4000′**
DKB 3F, 4G: Initial climb clearance **5000′**

SID	RWY	ROUTING
DKB 6D, 4E	07L/R	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 106° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.
DKB 3F, 4G	25L/R	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT towards RID, at RID 12 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.

CHANGES: DKB 2F, 3G renumbered 3F, 4G & revised.

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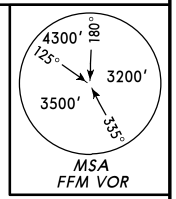
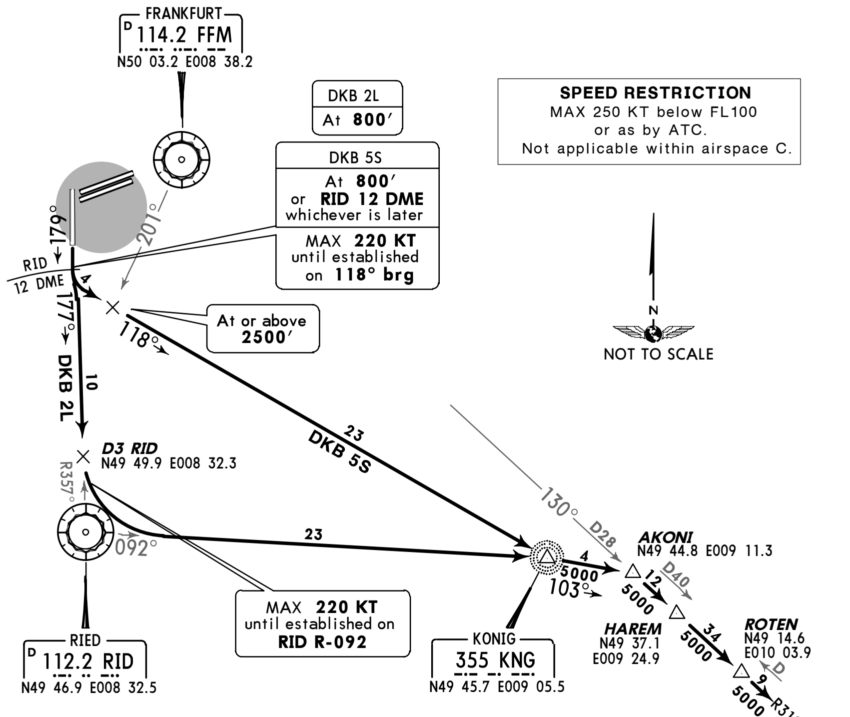
Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007
JEPPESEN
JeppView 3.5.2.0

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

DINKELSBUHL TWO LIMA (DKB 2L)
DINKELSBUHL FIVE SIERRA (DKB 5S)
RWY 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 5S
This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via DKB 2L.

Initial climb clearance **4000′**

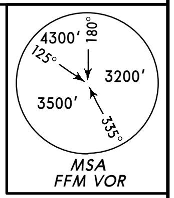
SID	ROUTING
DKB 2L	Climb on runway track to **800′**, intercept RID R-357 inbound to D3 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.
DKB 5S	Climb on runway track to **800′** or RID 12 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.

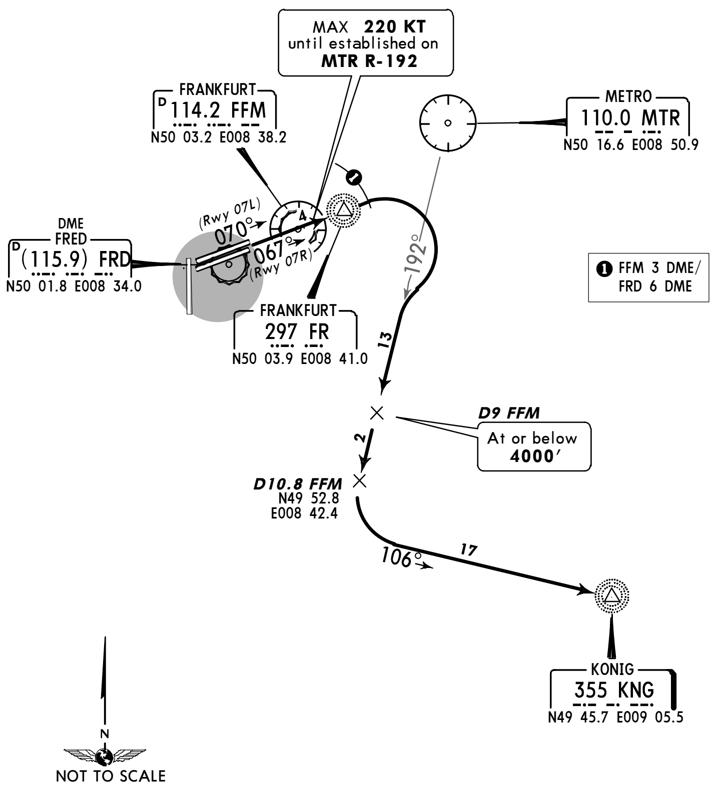
CHANGES: SID DKB 4S renumbered 5S & revised.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

KOENIG FOUR CHARLIE (KNG 4C)
RWYS 07L/R DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90 IN GERMAN AIRSPACE
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT
SPEED: MAX 250 KT IN GERMAN AIRSPACE





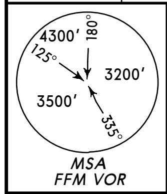
Initial climb clearance **4000′**

ROUTING

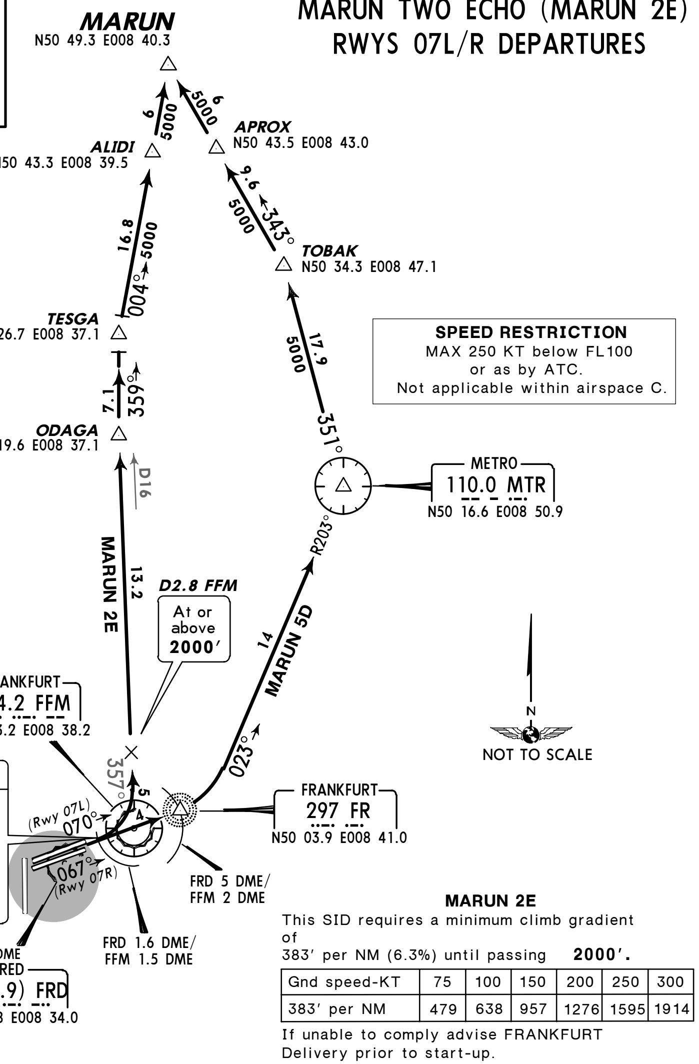
Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 106° bearing to KNG.

CHANGES: None.

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.



MARUN FIVE DELTA (MARUN 5D)
MARUN TWO ECHO (MARUN 2E)
RWYS 07L/R DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MARUN 2E
This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing **2000′**.

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
MARUN 5D	Climb on runway track to **800′**, to FR (FRD 5 DME/FFM 2 DME outbound), turn LEFT **immediately**, intercept MTR R-203 inbound to MTR **1**, turn LEFT, MTR R-351 to TOBAK, turn LEFT, 343° track via APROX to MARUN.
MARUN 2E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or **800′**, whichever is later, turn LEFT, intercept FFM R-357 to ODAGA **2**, turn RIGHT, 359° track to TESGA, turn RIGHT, 004° track via ALIDI to MARUN.

After MTR **1** /ODAGA **2** BRNAV equipment necessary.

CHANGES: SID MARUN 4D renumbered 5D & revised.

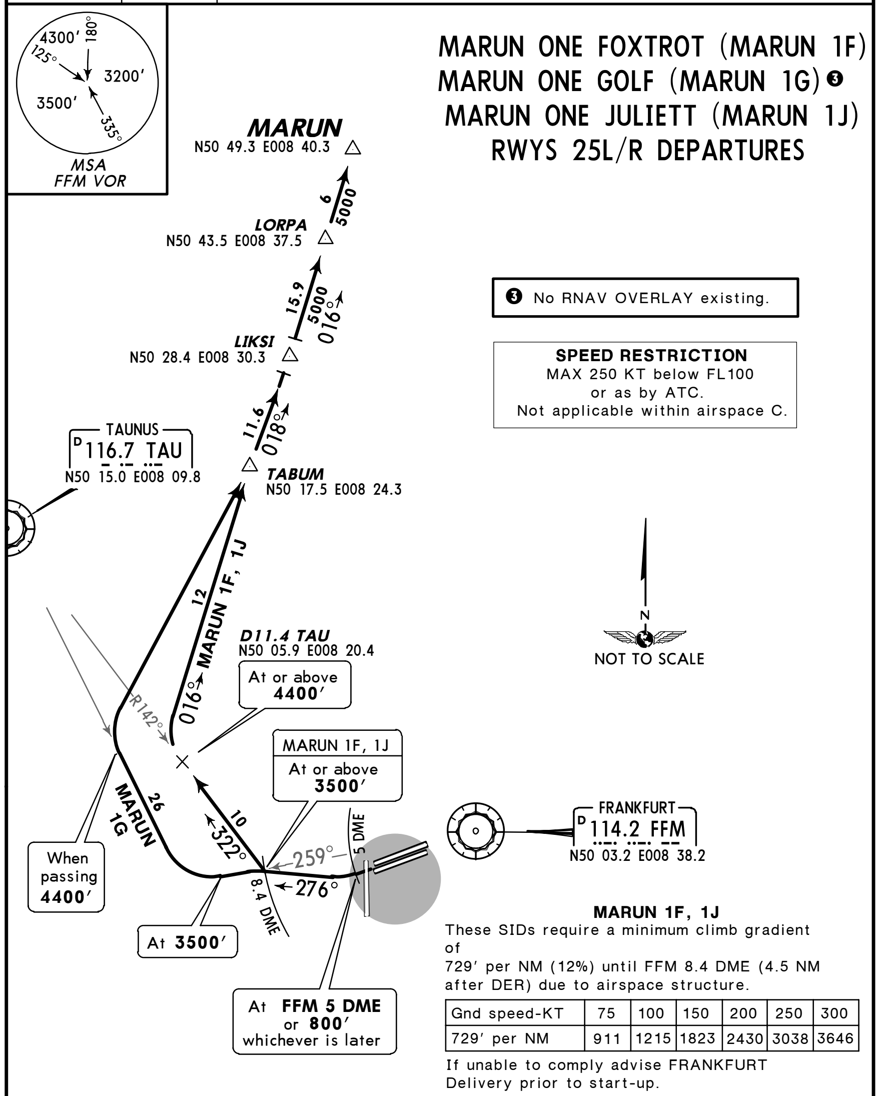
EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 07 (10-3J4) **Eff 25 Oct** **SID**

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

MARUN ONE FOXTROT (MARUN 1F)
MARUN ONE GOLF (MARUN 1G) ❸
MARUN ONE JULIETT (MARUN 1J)
RWYS 25L/R DEPARTURES



❸ No RNAV OVERLAY existing.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MARUN 1F, 1J
These SIDs require a minimum climb gradient of
729′ per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
MARUN 1F, 1J	Climb on runway track to FFM 5 DME or **800′,** whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track) to FFM 8.4 DME, turn RIGHT, intercept TAU R-142 inbound to D11.4 TAU ❶, turn RIGHT, 016° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.
MARUN 1G	Climb on runway track to FFM 5 DME or **800′,** whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track), intercept FFM R-259, at **3500′** turn RIGHT towards TAU, but not before reaching FFM R-259, when passing **4400′** ❷ turn RIGHT to TABUM, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

After D11.4 TAU ❶ /passing **4400′** ❷ BRNAV equipment necessary.

CHANGES: SID MARUN 1G routing text.

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Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007 JeppView 3.5.2.0

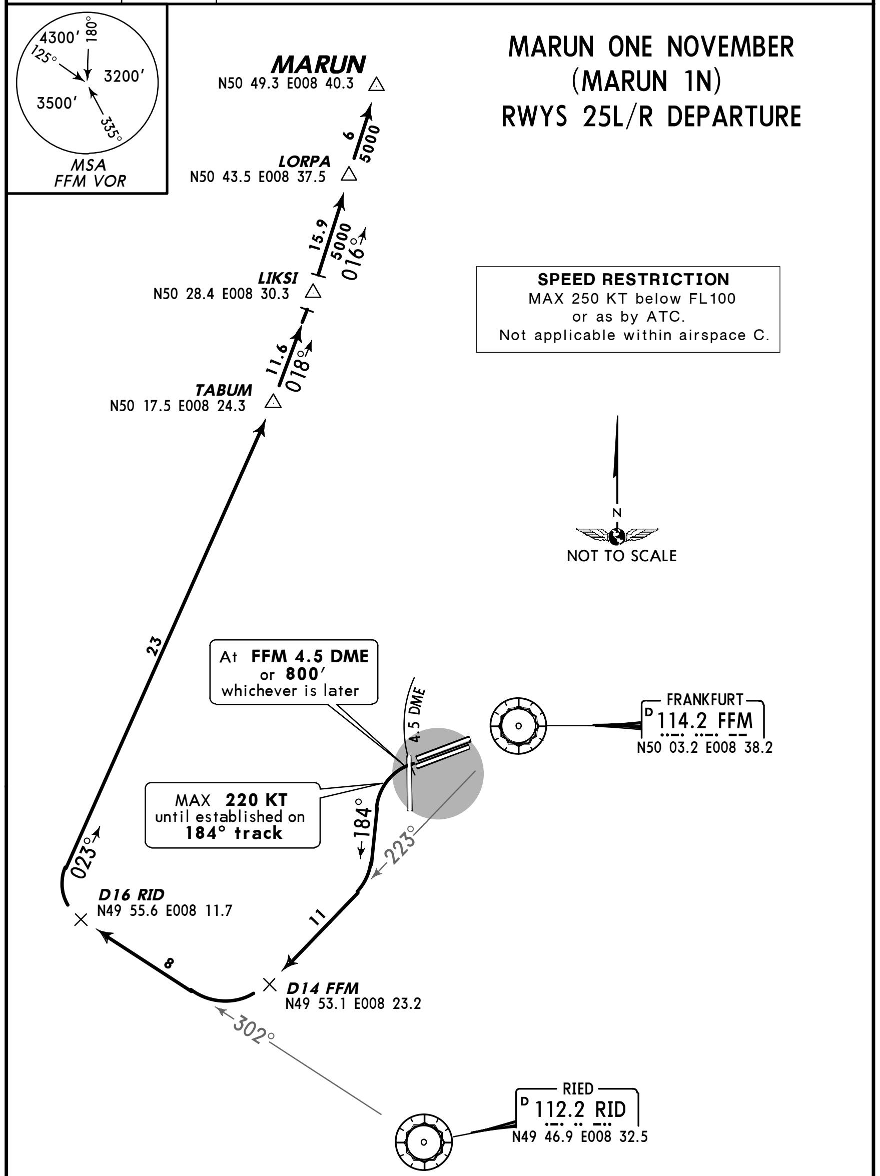
EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

8 JUN 07 (10-3J5) **SID**

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

MARUN ONE NOVEMBER (MARUN 1N)
RWYS 25L/R DEPARTURE



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 4.5 DME or **800′,** whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❶, turn RIGHT, 023° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

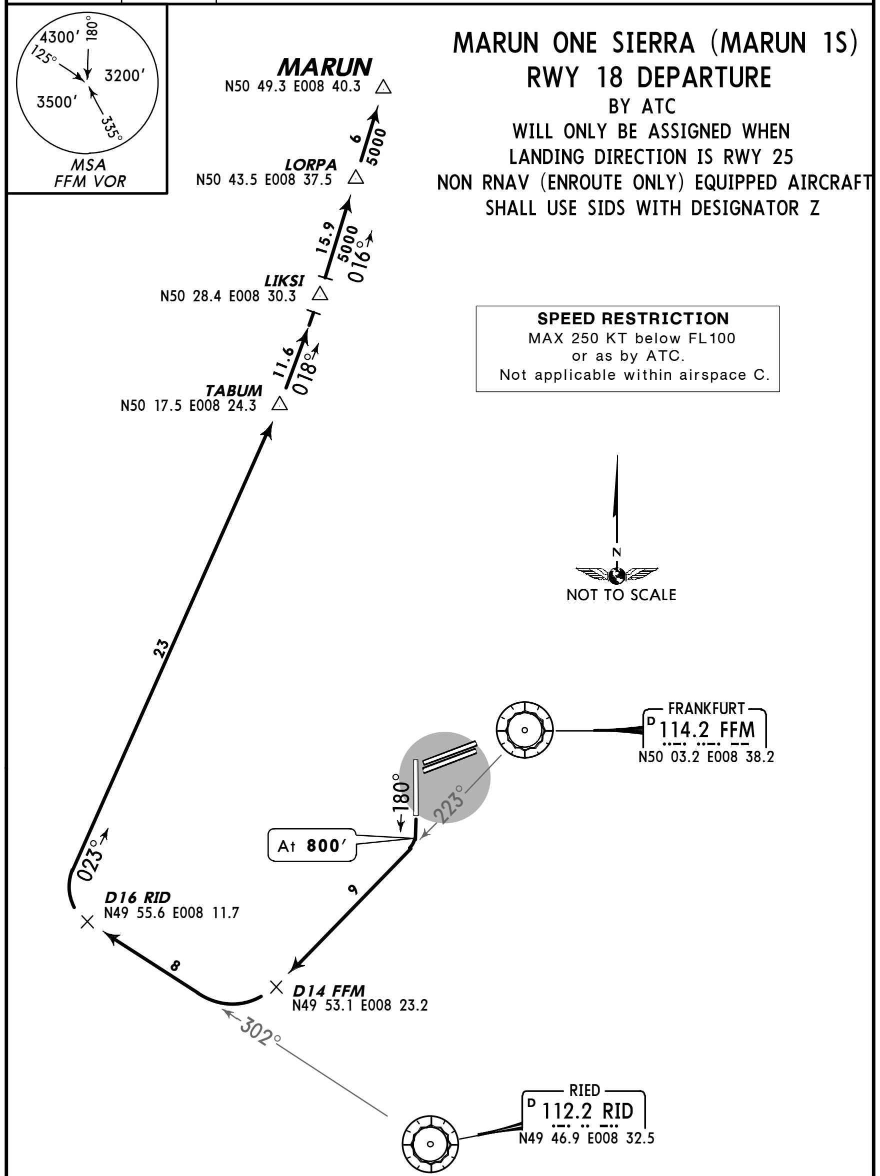
❶ After D16 RID BRNAV equipment necessary.

CHANGES: Chart reindexed.

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

MARUN ONE SIERRA (MARUN 1S)
RWY 18 DEPARTURE
BY ATC
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT SHALL USE SIDS WITH DESIGNATOR Z

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to **800′**, turn RIGHT, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❶, turn RIGHT, 023° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

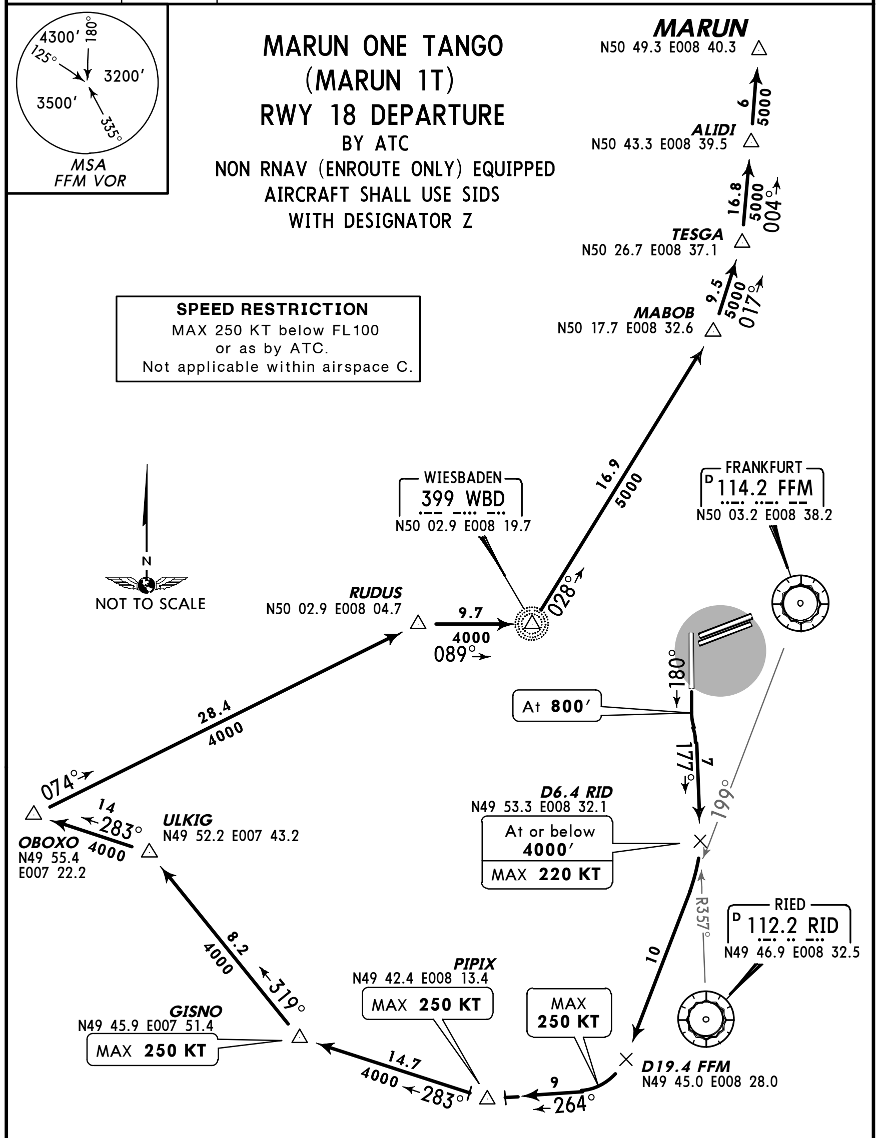
❶ After D16 RID BRNAV equipment necessary.

CHANGES: SIDs transferred & established; MSA; communications.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

MARUN ONE TANGO (MARUN 1T)
RWY 18 DEPARTURE
BY ATC
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT SHALL USE SIDS WITH DESIGNATOR Z

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

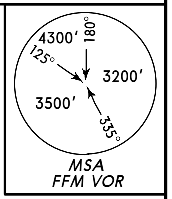
ROUTING

Climb on runway track to **800′**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❶, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 319° track to ULKIG, turn LEFT, 283° track to OBOXO, turn RIGHT, 074° track to RUDUS, turn RIGHT, intercept 089° bearing to WBD, turn LEFT, 028° bearing to MABOB, turn LEFT, 017° track to TESGA, turn LEFT, 004° track via ALIDI to MARUN.

❶ After D19.4 FFM BRNAV equipment necessary.

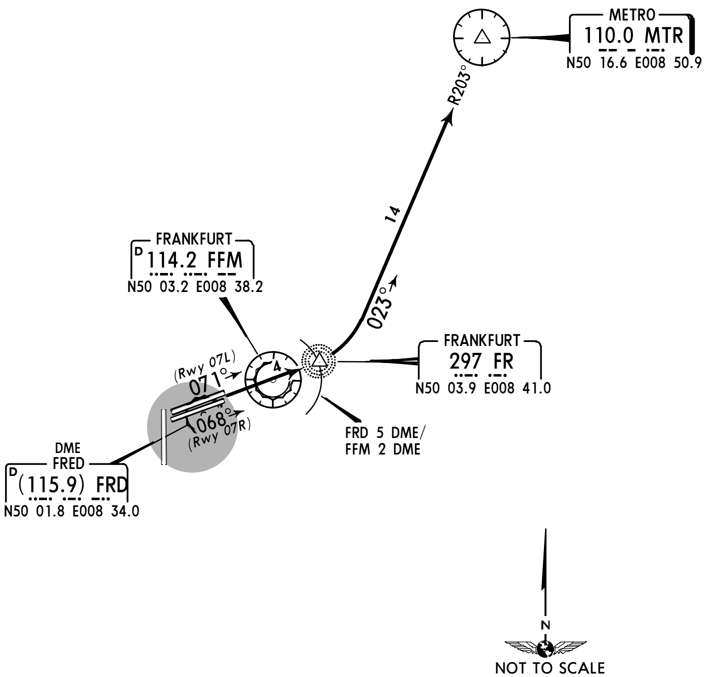
CHANGES: SIDs transferred & established; MSA; communications.

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.



METRO TWO CHARLIE (MTR 2C)
RWYS 07L/R DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90 IN GERMAN AIRSPACE
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT
***SPEED:* MAX 250 KT IN GERMAN AIRSPACE**



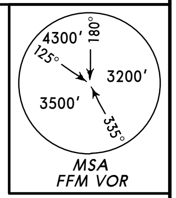
Initial climb clearance **5000′**

ROUTING

Climb on runway track to **800′**, to FR (FRD 5 DME/FFM 2 DME outbound), turn LEFT **immediately**, intercept MTR R-203 inbound to MTR.

CHANGES: Restrictions established.

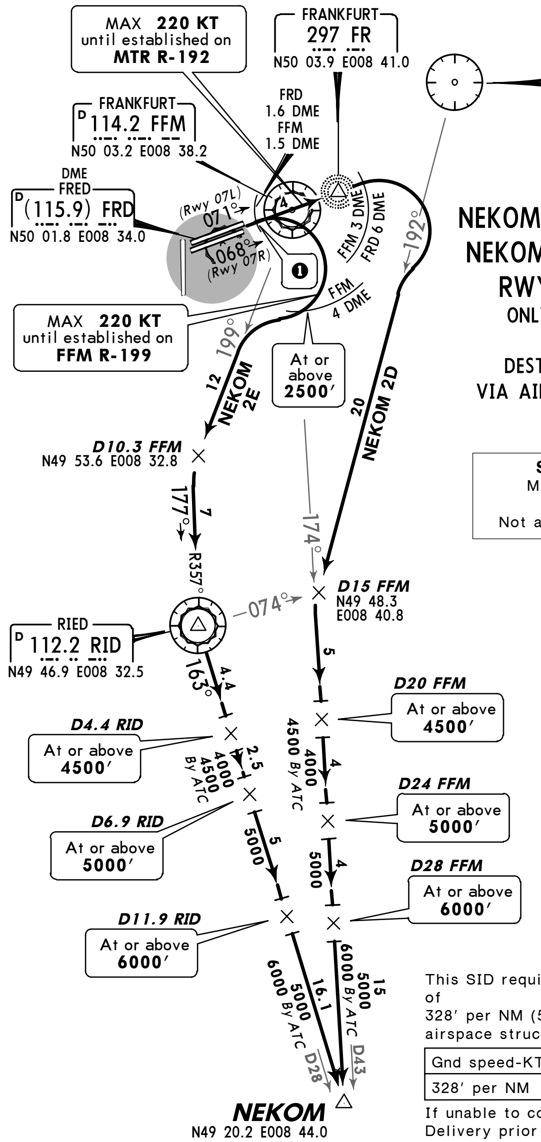
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.



NEKOM TWO DELTA (NEKOM 2D)
NEKOM TWO ECHO (NEKOM 2E)
RWYS 07L/R DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDDS AREA AND DESTINATION LSZH, LSZR & EDNY VIA AIRWAY N 850 AT OR BELOW FL90

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



❶ NEKOM 2E
Turn at **FRD 1.6 DME (FFM 1.5 DME inbound)** or **800′** whichever is later

NEKOM 2E
This SID requires a minimum climb gradient of 328′ per NM (5.4%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

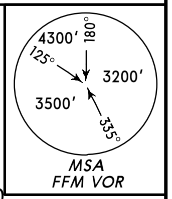
SID	ROUTING
NEKOM 2D	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192 to D15 FFM, turn LEFT, intercept FFM R-174 to NEKOM.
NEKOM 2E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or **800′**, whichever is later, turn RIGHT, intercept FFM R-199, at D10.3 FFM turn LEFT, intercept RID R-357 inbound to RID, turn LEFT, RID R-163 to NEKOM.

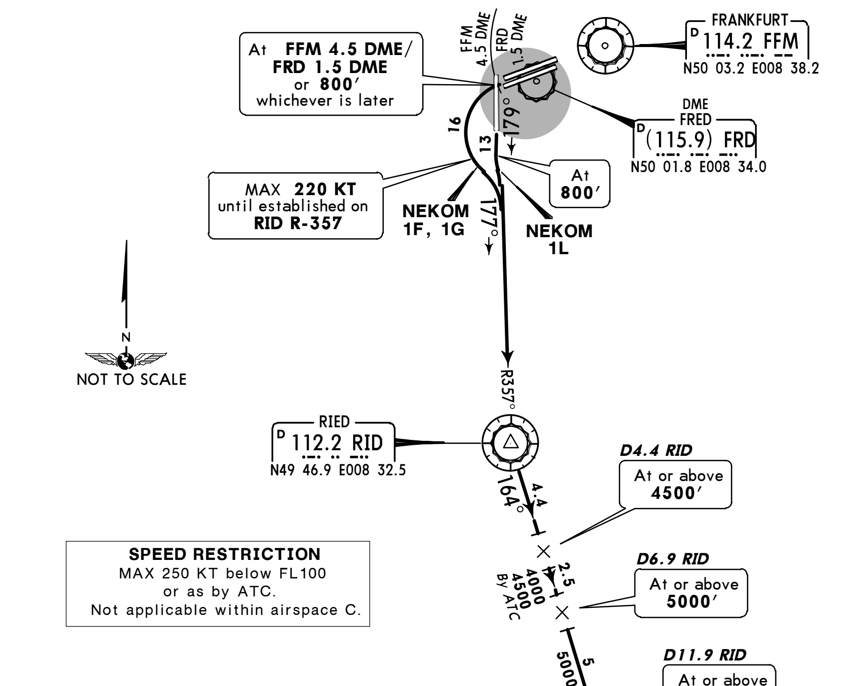
CHANGES: None.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

NEKOM ONE FOXTROT (NEKOM 1F)
NEKOM ONE GOLF (NEKOM 1G)
NEKOM ONE LIMA (NEKOM 1L)
RWYS 25L/R, 18 DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDDS AREA AND DESTINATION LSZH, LSZR & EDNY VIA AIRWAY N 850 AT OR BELOW FL90





NEKOM 1L

This SID requires a minimum climb gradient of 237′ per NM (3.9%) until passing **4500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
237′ per NM	296	395	592	790	987	1185

If unable to comply advise FRANKFURT Delivery prior to start-up.

NEKOM 1F, 1G: Initial climb clearance **5000′**
NEKOM 1L: Initial climb clearance **4000′**

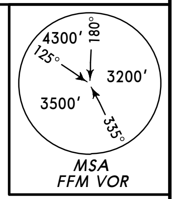
SID	RWY	ROUTING
NEKOM 1F, 1G	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT, intercept RID R-357 inbound to RID, turn LEFT, RID R-164 to NEKOM.
NEKOM 1L	**18**	Climb on runway track to **800′**, intercept RID R-357 inbound to RID, turn LEFT, RID R-164 to NEKOM.

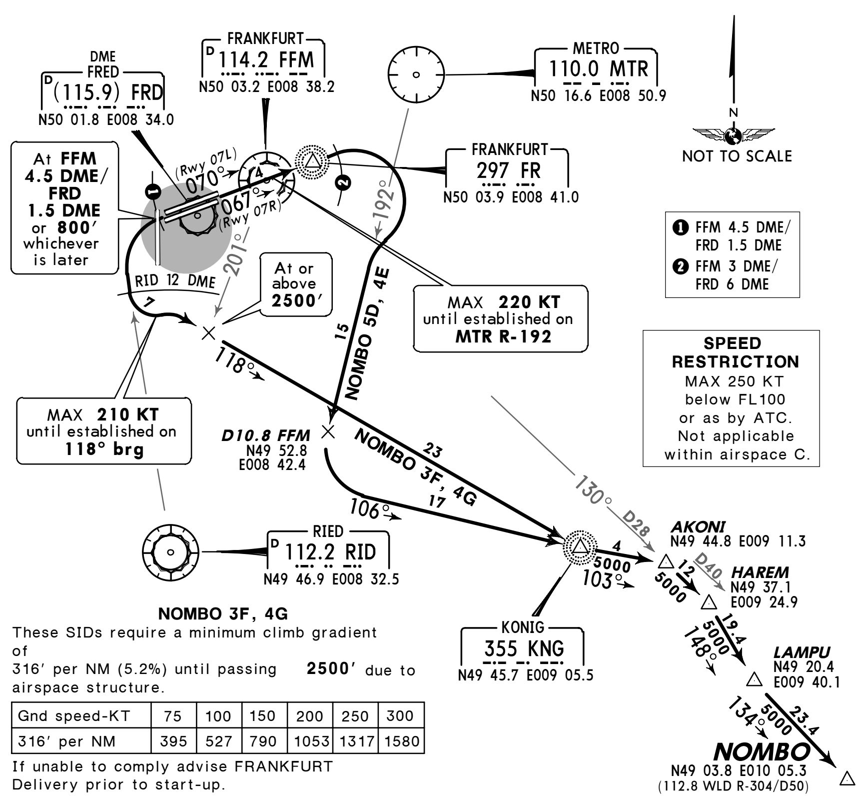
CHANGES: None.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

NOMBO FIVE DELTA (NOMBO 5D)
NOMBO FOUR ECHO (NOMBO 4E)
NOMBO THREE FOXTROT (NOMBO 3F)
NOMBO FOUR GOLF (NOMBO 4G)
RWYS 07L/R, 25L/R DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 3F, 4G

These SIDs require a minimum climb gradient of 316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

NOMBO 5D, 4E: Initial climb clearance **4000′**
NOMBO 3F, 4G: Initial climb clearance **5000′**

SID	RWY	ROUTING
NOMBO 5D, 4E	**07L/R**	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 106° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❸, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track to NOMBO.
NOMBO 3F, 4G	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT towards RID, at RID 12 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❸, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track to NOMBO.

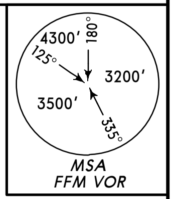
❸ After HAREM BRNAV equipment necessary.

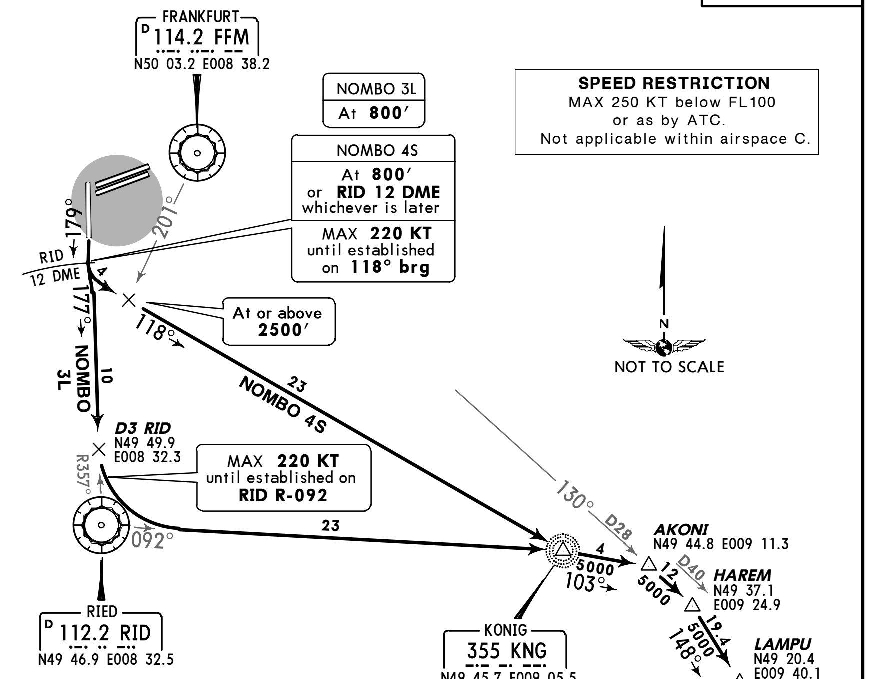
CHANGES: SIDs NOMBO 2F, 3G renumbered 3F, 4G & revised.

*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

NOMBO THREE LIMA (NOMBO 3L)
NOMBO FOUR SIERRA (NOMBO 4S)
RWY 18 DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 4S
This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via NOMBO 3L.

Initial climb clearance **4000′**

SID	ROUTING
NOMBO 3L	Climb on runway track to **800′**, intercept RID R-357 inbound to D3 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track to NOMBO.
NOMBO 4S	Climb on runway track to **800′** or RID 12 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track to NOMBO.

❶ After HAREM BRNAV equipment necessary.

CHANGES: SID NOMBO 3S renumbered 4S & revised.

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JEPPESEN
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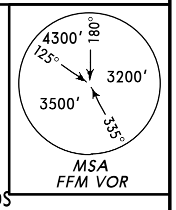
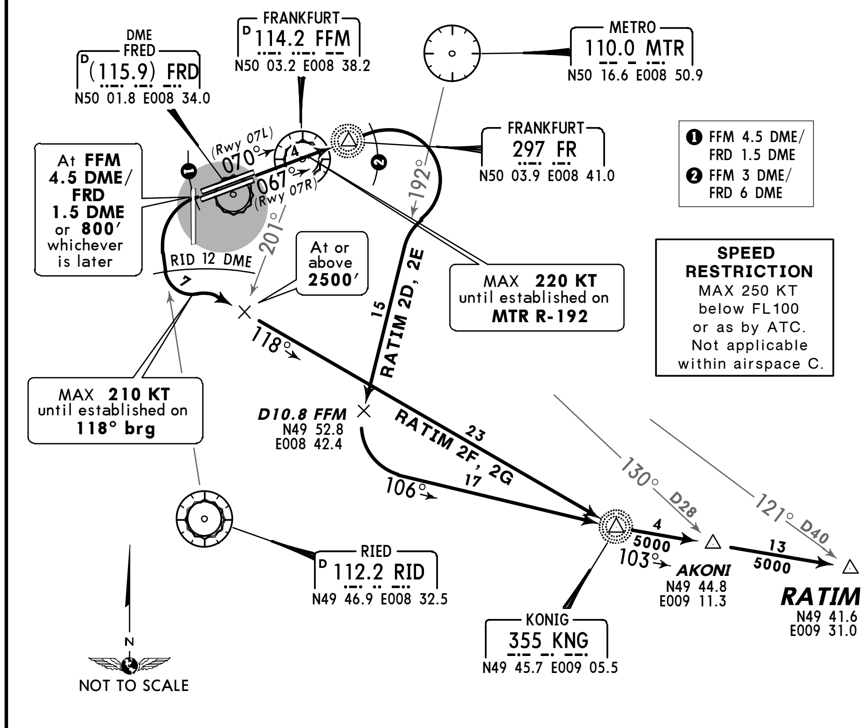
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

RATIM TWO DELTA (RATIM 2D)
RATIM TWO ECHO (RATIM 2E)
RATIM TWO FOXTROT (RATIM 2F)
RATIM TWO GOLF (RATIM 2G)
RWYS 07L/R, 25L/R DEPARTURES

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





RATIM 2F, 2G
These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

RATIM 2D, 2E: Initial climb clearance **4000′**
RATIM 2F, 2G: Initial climb clearance **5000′**

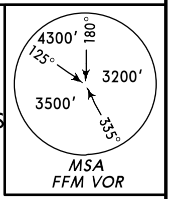
SID	RWY	ROUTING
RATIM 2D, 2E	**07L/R**	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 106° bearing to KNG, turn LEFT, 103° bearing via AKONI to RATIM.
RATIM 2F, 2G	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT towards RID, at RID 12 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing via AKONI to RATIM.

CHANGES: SIDs RATIM 1F, 1G renumbered 2F, 2G & revised.

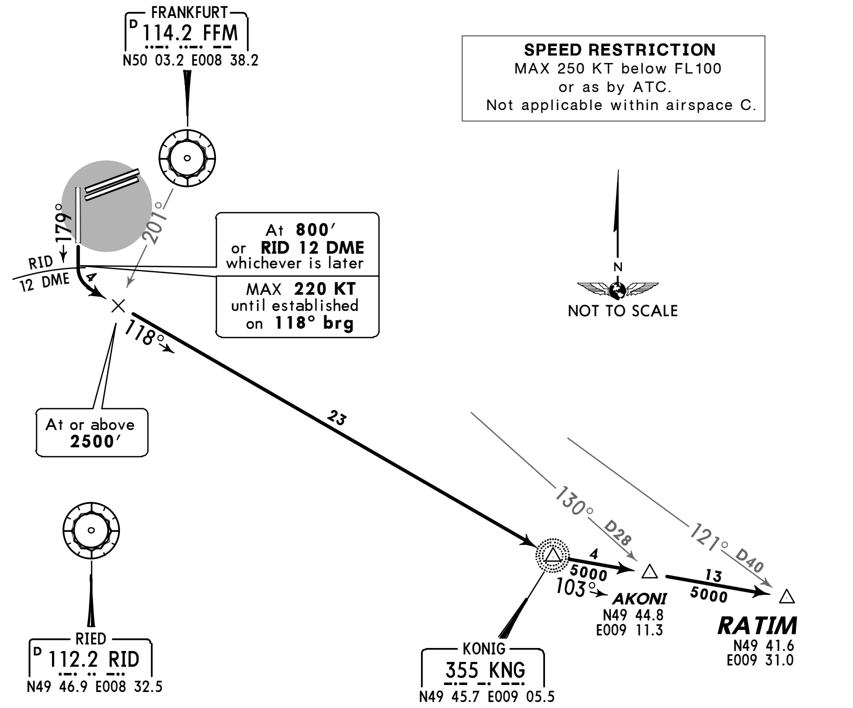
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

RATIM TWO SIERRA (RATIM 2S)
RWY 18 DEPARTURE

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

This SID requires a minimum climb gradient of 565′ per NM (9.3%) until passing **2500′** due to airspace structure.

If unable to comply advise FRANKFURT Delivery prior to start-up and expect alternate routing by ATC.

Initial climb clearance **4000′**

ROUTING

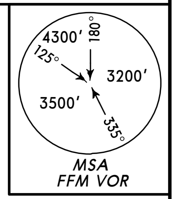
Climb on runway track to **800′** or RID 12 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing via AKONI to RATIM.

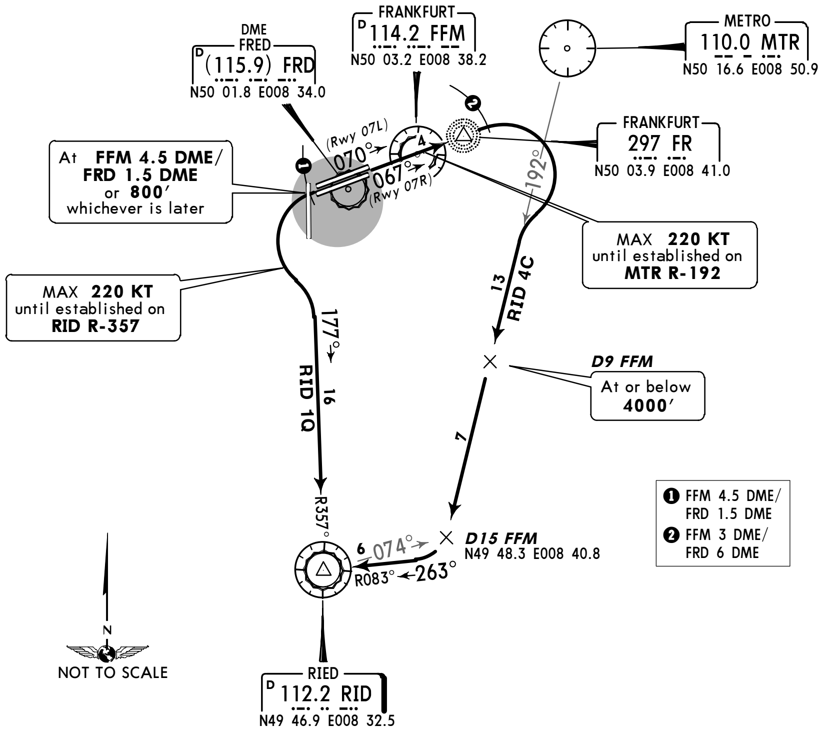
CHANGES: SID renumbered & revised.

*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

RIED FOUR CHARLIE (RID 4C)
RIED ONE QUEBEC (RID 1Q)
RWYS 07L/R, 25 L/R DEPARTURES

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90 IN GERMAN AIRSPACE
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT
SPEED: MAX 250 KT IN GERMAN AIRSPACE





RID 4C: Initial climb clearance **4000′**
RID 1Q: Initial climb clearance **5000′**

SID	RWY	ROUTING
RID 4C	**07L/R**	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192, at D15 FFM turn RIGHT, intercept RID R-083 inbound to RID.
RID 1Q	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT, intercept RID R-357 inbound to RID.

CHANGES: None.

EDDF/FRA
FRANKFURT/MAIN

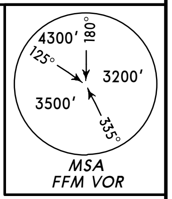
JEPPESEN FRANKFURT/MAIN, GERMANY

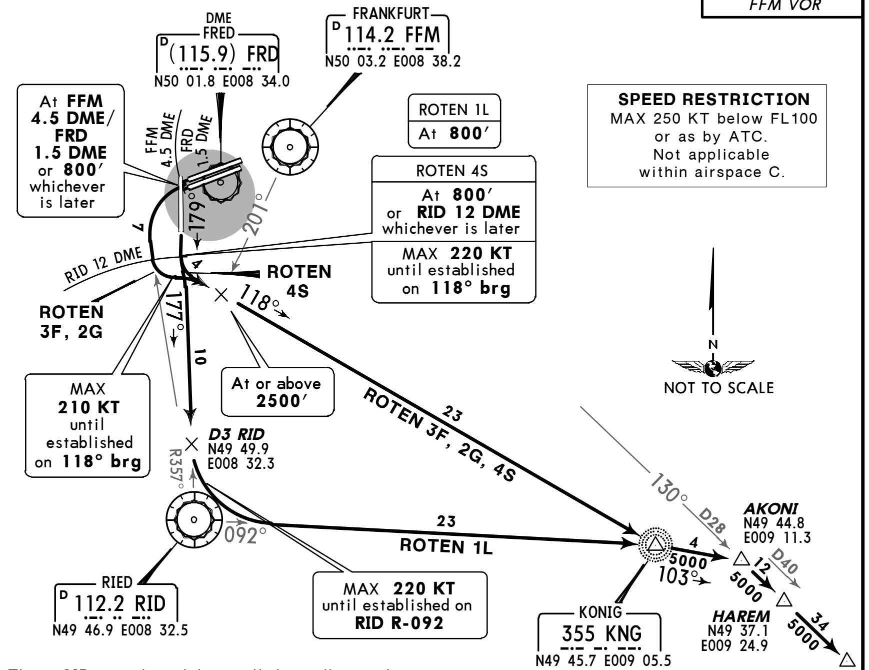
12 OCT 07 (10-3M) Eff 25 Oct

SID

*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

ROTEN THREE FOXTROT (ROTEN 3F)
ROTEN TWO GOLF (ROTEN 2G)
ROTEN ONE LIMA (ROTEN 1L)
ROTEN FOUR SIERRA (ROTEN 4S)
RWYS 25L/R, 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





These SIDs require minimum climb gradients of
ROTEN 3F, 2G
316′ per NM (5.2%) until passing **2500′** due to airspace structure.
ROTEN 4S
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.
ROTEN 4S: And expect routing via ROTEN 1L.

ROTEN 3F, 2G: Initial climb clearance **5000′**
ROTEN 1L, 4S: Initial climb clearance **4000′**

SID	RWY	ROUTING
ROTEN 3F, 2G	**25L/R**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT towards RID, at RID 12 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.
ROTEN 1L	**18**	Climb on runway track to **800′**, intercept RID R-357 inbound to D3 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.
ROTEN 4S		Climb on runway track to **800′** or RID 12 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.

CHANGES: ROTEN 2F, 1G, 3S renumbered 3F, 2G, 4S & revised.

EDDF/FRA
FRANKFURT/MAIN

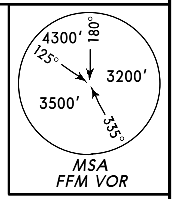
JEPPESEN FRANKFURT/MAIN, GERMANY

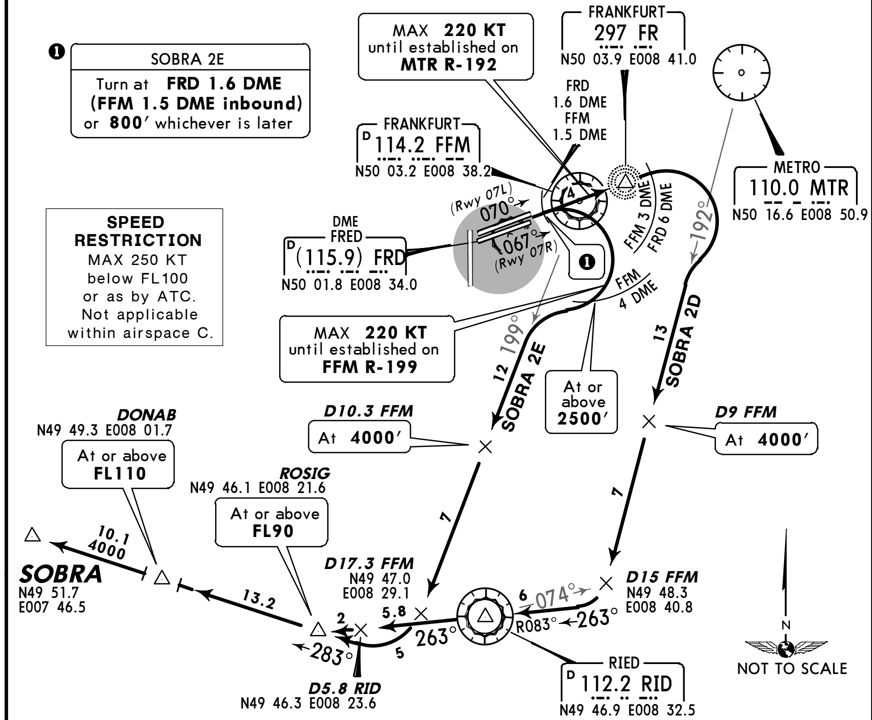
12 OCT 07 (10-3N) Eff 25 Oct

SID

*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

SOBRA TWO DELTA (SOBRA 2D)
SOBRA TWO ECHO (SOBRA 2E)
RWYS 07L/R DEPARTURES
FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250 VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL





These SIDs require minimum climb gradients of
SOBRA 2D
225′ per NM (3.7%) until passing **4000′**,
261′ per NM (4.3%) after D9 FFM until passing **FL90** due to airspace structure.
SOBRA 2E
383′ per NM (6.3%) until passing **2500′**,
401′ per NM (6.6%) after D10.3 FFM until passing **FL90** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
383′ per NM	479	638	957	1276	1595	1914
261′ per NM	327	435	653	871	1089	1306
225′ per NM	281	375	562	749	937	1124

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

SID	ROUTING
SOBRA 2D	Climb on runway track to **800′**, via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, intercept MTR R-192 to D15 FFM, turn RIGHT, intercept RID R-083 inbound to RID, RID R-263 to D5.8 RID **2**, turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.
SOBRA 2E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or **800′**, whichever is later, turn RIGHT, intercept FFM R-199, at D17.3 FFM **3** turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.

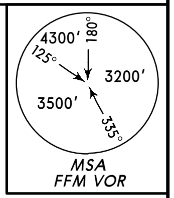
After D5.8 RID **2** /D17.3 FFM **3** BRNAV equipment necessary.

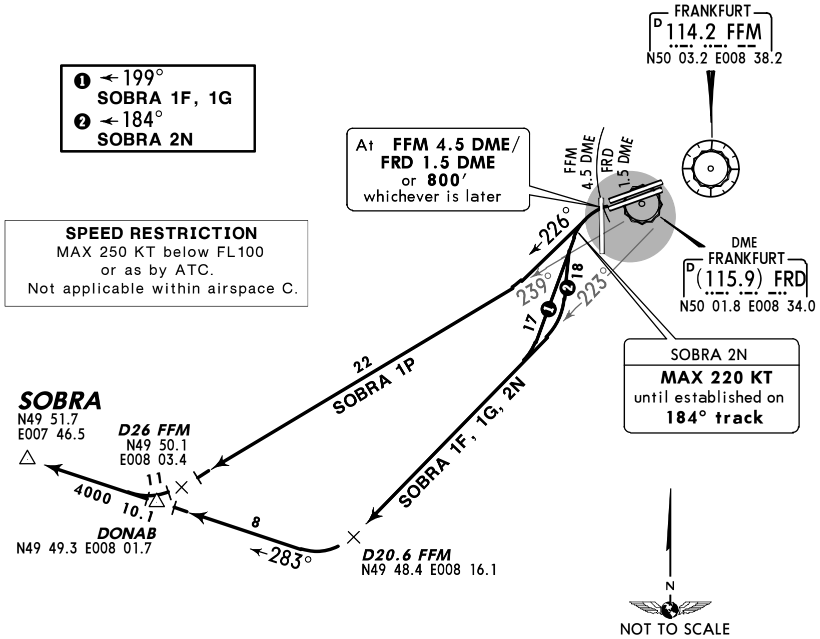
CHANGES: None.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to page 10-4.

SOBRA ONE FOXTROT (SOBRA 1F)
SOBRA ONE GOLF (SOBRA 1G)
SOBRA TWO NOVEMBER (SOBRA 2N)
SOBRA ONE PAPA (SOBRA 1P)
RWYS 25L/R DEPARTURES

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Q





Initial climb clearance 5000′

SID	ROUTING
SOBRA 1F, 1G	Climb on runway track to FFM 4.5 DME or **800′**, whichever is later, turn LEFT, 199° track, turn RIGHT, intercept FFM R-223, at D20.6 FFM ❸ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 2N	Climb on runway track to FFM 4.5 DME or **800′**, whichever is later, turn LEFT, 184° track, intercept FFM R-223, at D20.6 FFM ❸ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 1P	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or **800′**, whichever is later, turn LEFT, 226° track (RWY 25L: 229° track), intercept FFM R-239, at D26 FFM ❹ turn RIGHT, 283° track to SOBRA.

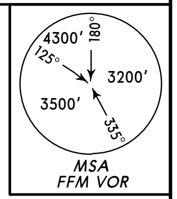
After D20.6 FFM ❸/D26 FFM ❹ BRNAV equipment necessary.

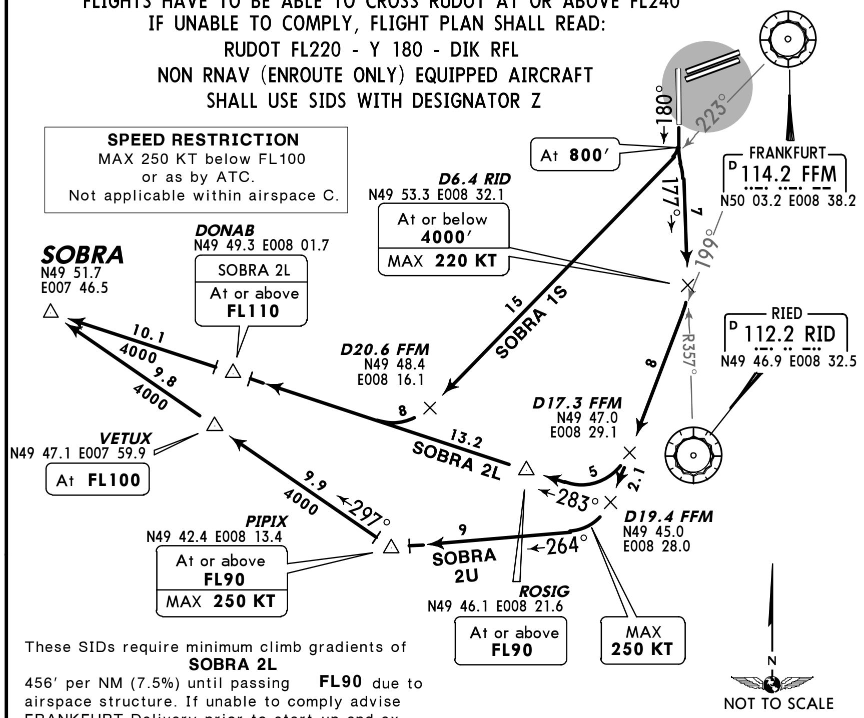
CHANGES: Restrictions.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

SOBRA TWO LIMA (SOBRA 2L)
SOBRA ONE SIERRA (SOBRA 1S)
SOBRA TWO UNIFORM (SOBRA 2U)
RWY 18 DEPARTURES

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Z





These SIDs require minimum climb gradients of
SOBRA 2L
456′ per NM (7.5%) until passing **FL90** due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SOBRA 2U.
SOBRA 2U
328′ per NM (5.4%) until passing **FL90** due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via ULKIG 3U.

Gnd speed-KT	75	100	150	200	250	300
456′ per NM	570	760	1139	1519	1899	2279
328′ per NM	410	547	820	1094	1367	1641

Initial climb clearance 4000′

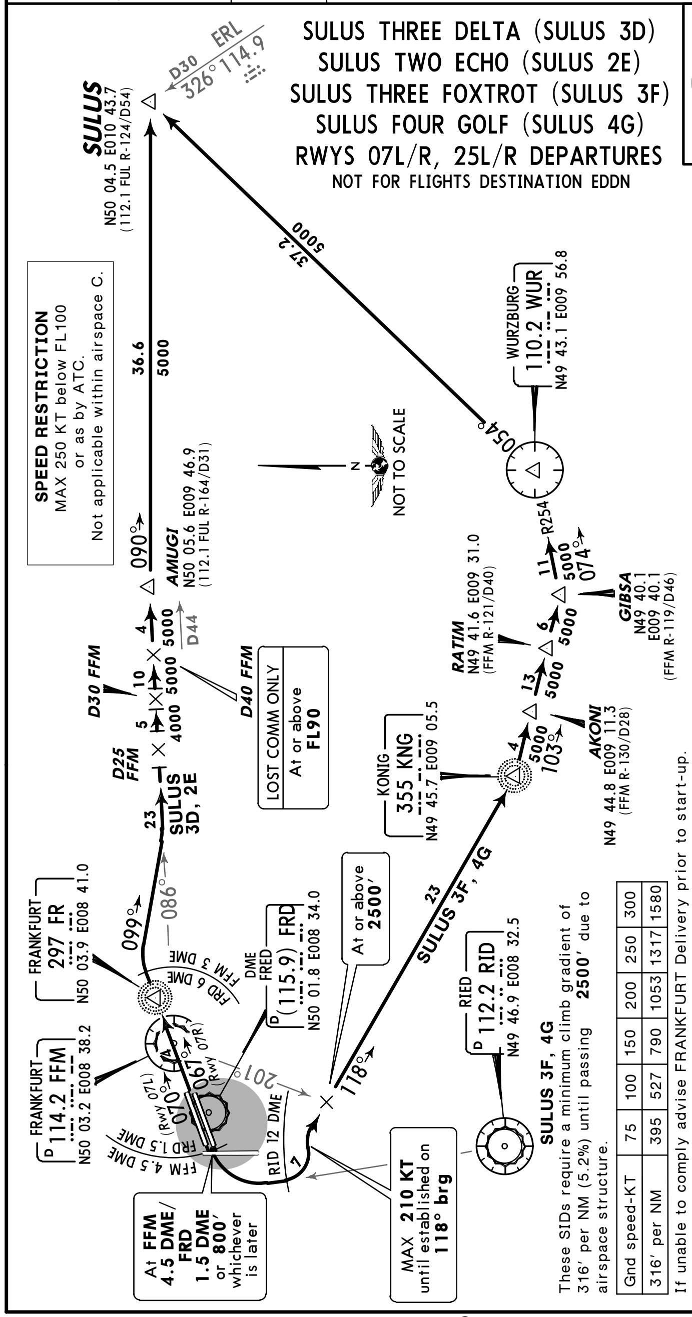
SID	ROUTING
SOBRA 2L Will be assigned when landing direction is 07	Climb on runway track to **800′**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D17.3 FFM ❶ turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.
SOBRA 1S Only to be used when landing direction is 25	Climb on runway track to **800′**, turn RIGHT, intercept FFM R-223, at D20.6 FFM ❷ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 2U	Climb on runway track to **800′**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ❸ turn RIGHT, 264° track to PIPIX, turn RIGHT, 297° track via VETUX to SOBRA.

After D17.3 FFM ❶/D20.6 FFM ❷/D19.4 FFM ❸ BRNAV equipment necessary.

CHANGES: None.

*LANGEN Radar		Apt Elev	
SULUS 3D, 2E 120.15	SULUS 3F, 4G 136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

SULUS THREE DELTA (SULUS 3D)
SULUS TWO ECHO (SULUS 2E)
SULUS THREE FOXTROT (SULUS 3F)
SULUS FOUR GOLF (SULUS 4G)
RWYS 07L/R, 25L/R DEPARTURES
NOT FOR FLIGHTS DESTINATION EDDN



SULUS 3F, 4G
These SIDs require a minimum climb gradient of 316' per NM (5.2%) until passing 2500' due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316' per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

SULUS 3D, 2E: Initial climb clearance **4000'** **SULUS 3F, 4G:** Initial climb clearance **5000'**

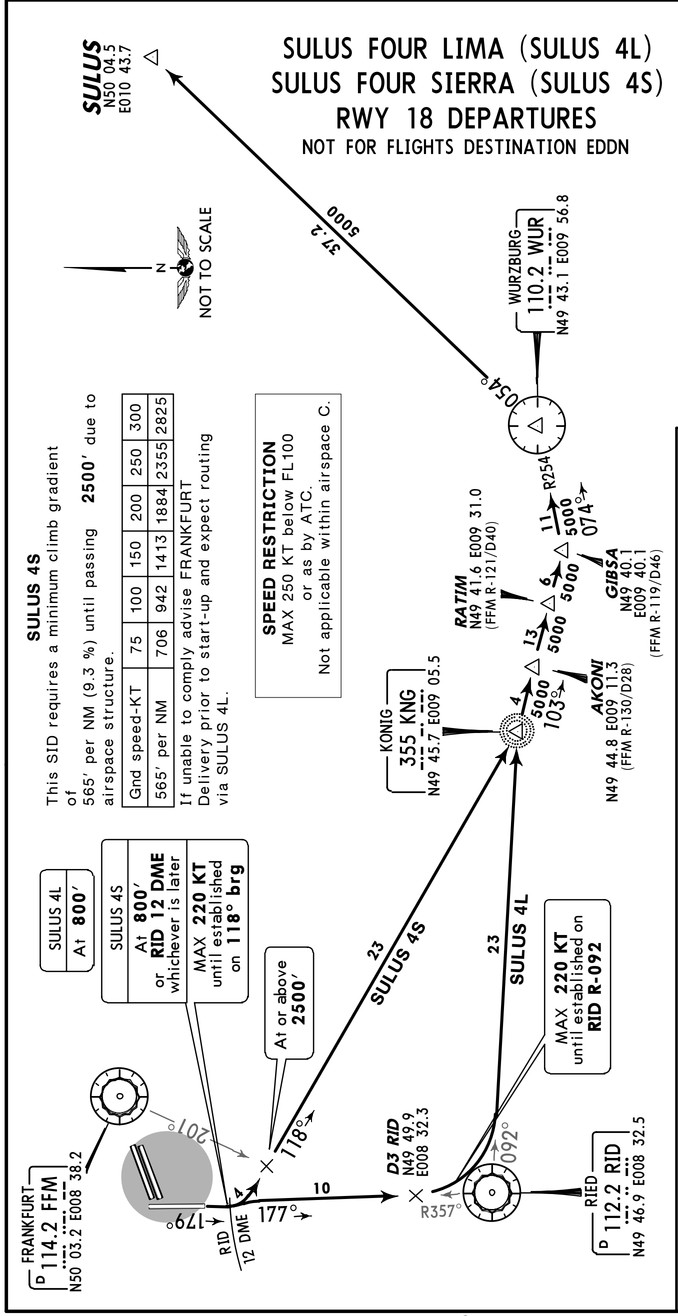
SID	RWY	ROUTING
SULUS 3D, 2E	07L/R	Climb on runway track to 800', via FR to FRD 6 DME (FFM 3 DME outbound), turn RIGHT, 099° track, intercept FFM R-086 to AMUGI ❶, turn RIGHT, 090° track to SULUS.
SULUS 3F, 4G	25L/R	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT towards RID, at RID 12 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-254 inbound to WUR ❷, turn LEFT, WUR R-054 to SULUS.

After AMUGI ❶ /WUR ❷ BRNAV equipment necessary.

CHANGES: SIDs SULUS 2F, 3G renumbered 3F, 4G & revised.

*LANGEN Radar	Apt Elev	
136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

SULUS FOUR LIMA (SULUS 4L)
SULUS FOUR SIERRA (SULUS 4S)
RWY 18 DEPARTURES
NOT FOR FLIGHTS DESTINATION EDDN



SULUS 4S
This SID requires a minimum climb gradient of 565' per NM (9.3 %) until passing 2500' due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565' per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SULUS 4L.

Initial climb clearance **4000'**

SID	ROUTING
SULUS 4L	Climb on runway track to 800', intercept RID R-357 inbound to D3 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 103° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-254 inbound to WUR ❶, turn LEFT, WUR R-054 to SULUS.
SULUS 4S	Climb on runway track to 800' or RID 12 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 103° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-254 inbound to WUR ❶, turn LEFT, WUR R-054 to SULUS.

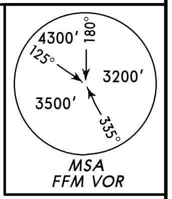
❶ After WUR BRNAV equipment necessary.

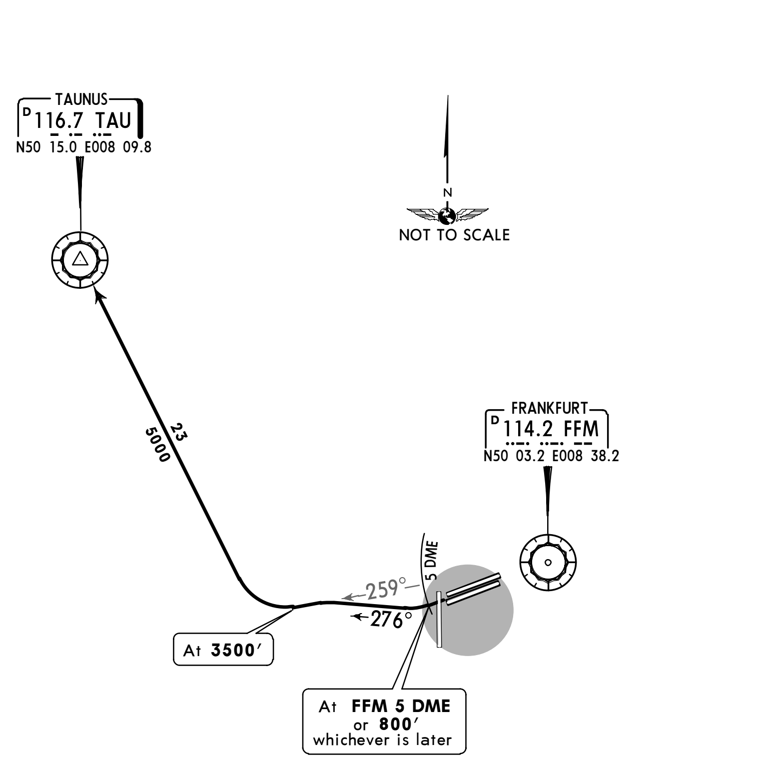
CHANGES: SID SULUS 3S renumbered 4S & revised.

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

TAUNUS ONE QUEBEC (TAU 1Q)
RWYS 25L/R DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90 IN GERMAN AIRSPACE
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT
***SPEED:* MAX 250 KT IN GERMAN AIRSPACE**





Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 5 DME or **800′**, whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track), intercept FFM R-259, at **3500′** turn RIGHT to TAU, but not before reaching FFM R-259.

CHANGES: Routing text.

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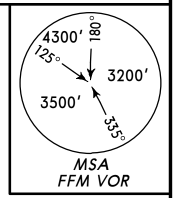
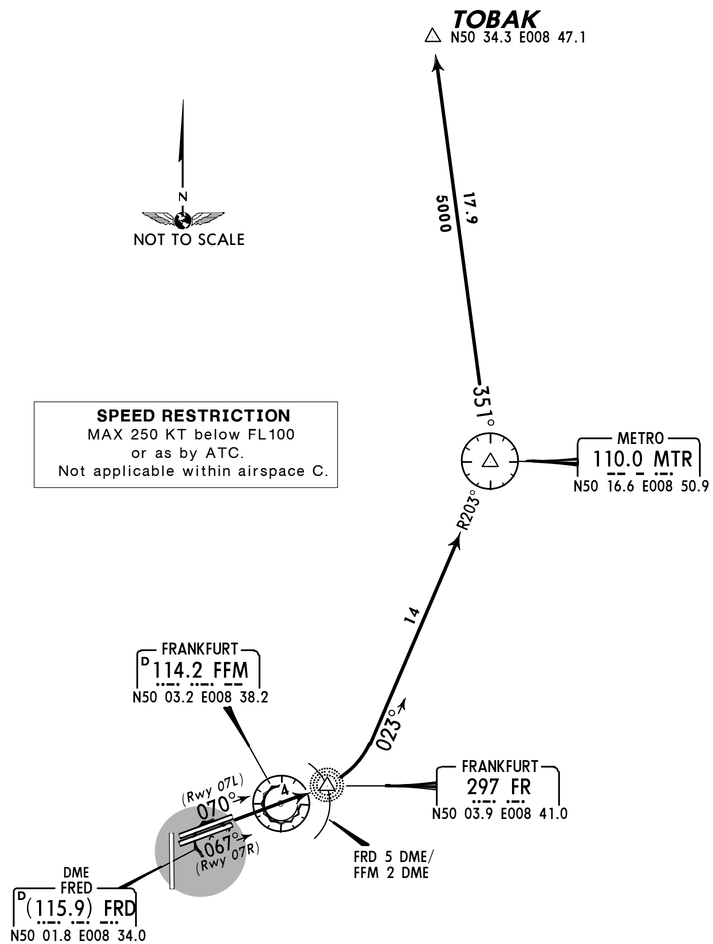
Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

TOBAK FIVE DELTA (TOBAK 5D)
TOBAK FIVE ECHO (TOBAK 5E)
RWYS 07L/R DEPARTURES

NOT FOR FLIGHTS CONTINUING VIA
AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB





Initial climb clearance **5000′**

ROUTING

Climb on runway track to **800′**, to FR (FRD 5 DME/FFM 2 DME outbound), turn LEFT **immediately**, intercept MTR R-203 inbound to MTR ❶, turn LEFT, MTR R-351 to TOBAK.

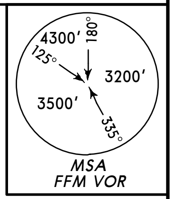
❶ After MTR BRNAV equipment necessary.

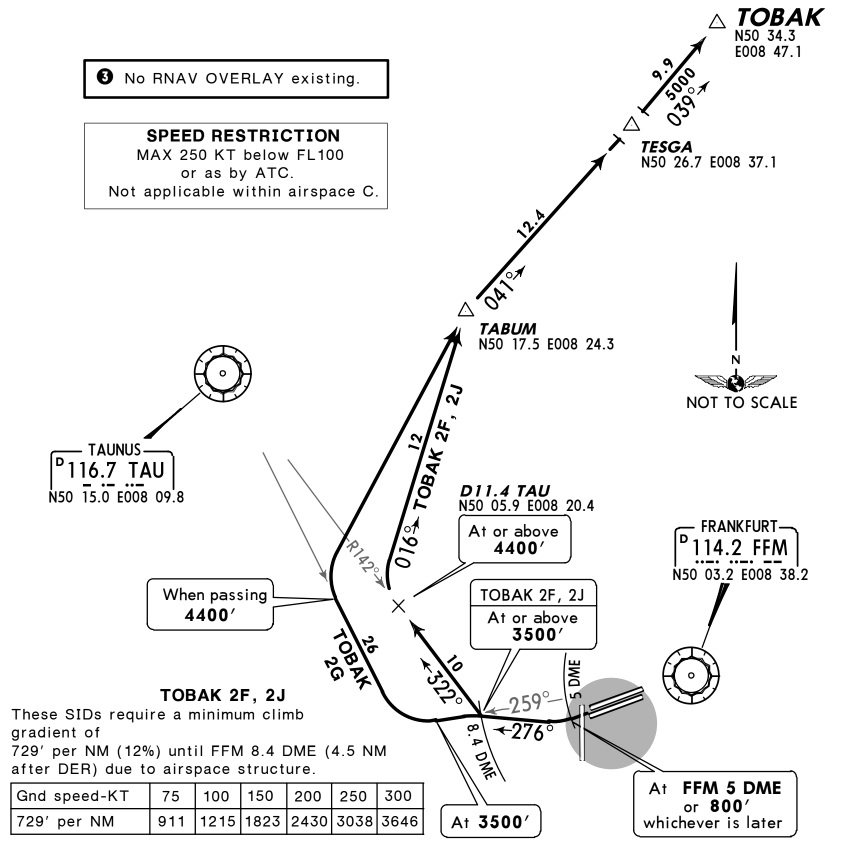
CHANGES: SIDs renumbered & revised.

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK TWO FOXTROT (TOBAK 2F)
TOBAK TWO GOLF (TOBAK 2G) ❸
TOBAK TWO JULIETT (TOBAK 2J)
RWYS 25L/R DEPARTURES

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB





TOBAK 2F, 2J

These SIDs require a minimum climb gradient of 729' per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729' per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000'**

SID	ROUTING
TOBAK 2F, 2J	Climb on runway track to FFM 5 DME or **800'**, whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track) to FFM 8.4 DME, turn RIGHT, intercept TAU R-142 inbound to D11.4 TAU ❶, turn RIGHT, 016° track to TABUM, turn RIGHT, 041° track to TESGA, turn LEFT, 039° track to TOBAK.
TOBAK 2G	Climb on runway track to FFM 5 DME or **800'**, whichever is later, turn RIGHT, 276° track (RWY 25L: 279° track), intercept FFM R-259, at **3500'** turn RIGHT towards TAU, but not before reaching FFM R-259, when passing **4400'** ❷ turn RIGHT to TABUM, 041° track to TESGA, turn LEFT, 039° track to TOBAK.

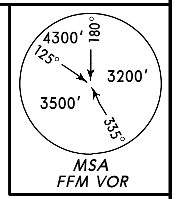
After D11.4 TAU ❶ /passing **4400'** ❷ BRNAV equipment necessary.

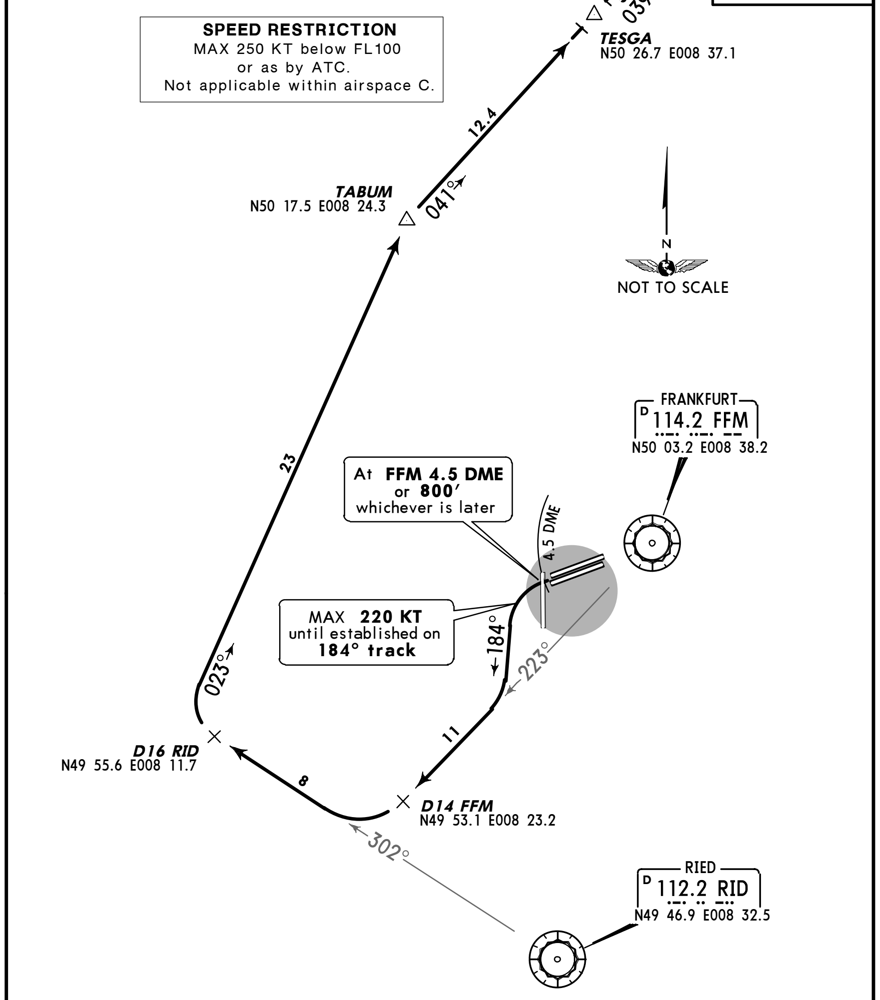
CHANGES: SID TOBAK 2G routing text.

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK THREE NOVEMBER (TOBAK 3N)
RWYS 25L/R DEPARTURE

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB





Initial climb clearance **5000'**

ROUTING

Climb on runway track to FFM 4.5 DME or **800'**, whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❶, turn RIGHT, 023° track to TABUM, turn RIGHT, 041° track to TESGA, turn LEFT, 039° track to TOBAK.

❶ After D16 RID BRNAV equipment necessary.

CHANGES: None.

*LANGEN Radar		Apt Elev	
TOBAK 2S 120.15	TOBAK 3T 136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** For departure designation refer to 10-1P pages.

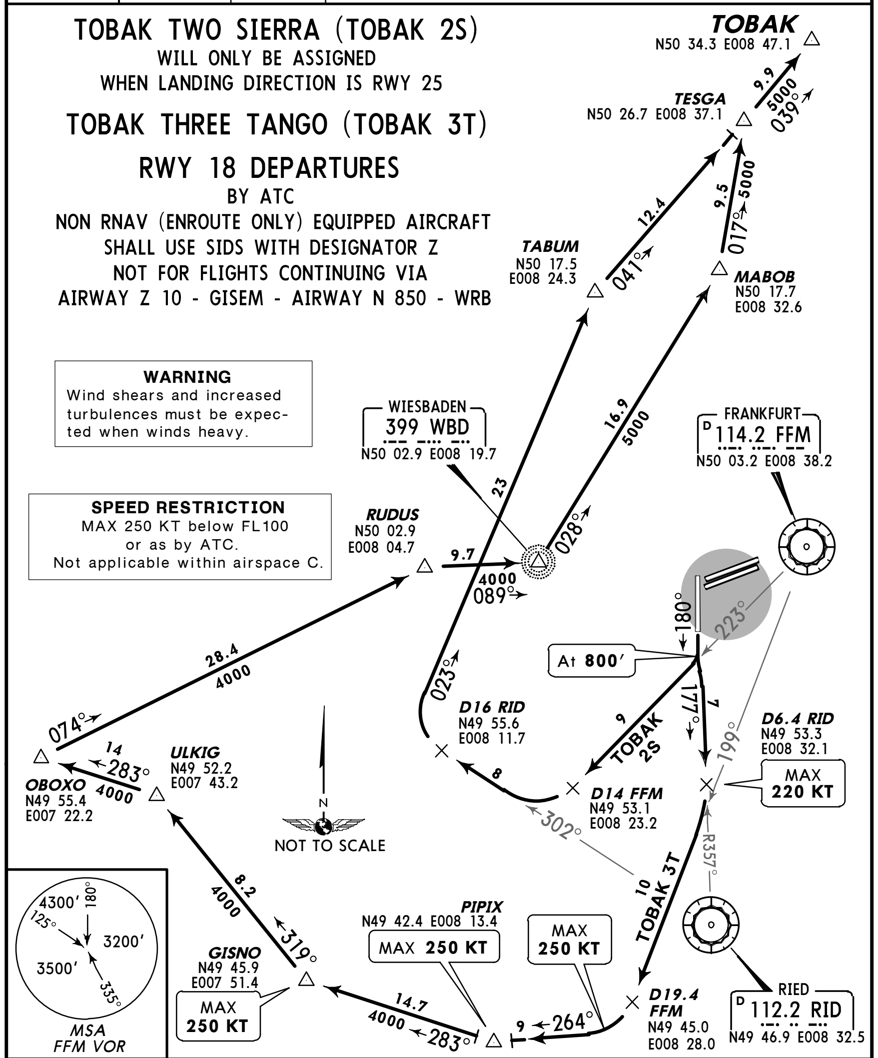
TOBAK TWO SIERRA (TOBAK 2S)
WILL ONLY BE ASSIGNED
WHEN LANDING DIRECTION IS RWY 25

TOBAK THREE TANGO (TOBAK 3T)

RWY 18 DEPARTURES
BY ATC
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Z
NOT FOR FLIGHTS CONTINUING VIA
AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB

WARNING
Wind shears and increased turbulences must be expected when winds heavy.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000'**

SID	ROUTING
TOBAK 2S	Climb on runway track to **800'**, turn RIGHT, intercept FFM R-223 to D14 FFM, turn RIGHT, intercept RID R-302 to D16 RID ❶, turn RIGHT, 023° track to TABUM, turn RIGHT, 041° track to TESGA, turn LEFT, 039° track to TOBAK.
TOBAK 3T	Climb on runway track to **800'**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❷, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 319° track to ULKIG, turn LEFT, 283° track to OBOXO, turn RIGHT, 074° track to RUDUS, turn RIGHT, intercept 089° bearing to WBD, turn LEFT, 028° bearing to MABOB, turn LEFT, 017° track to TESGA, turn RIGHT, 039° track to TOBAK.

After D16 RID ❶/D19.4 FFM ❷ BRNAV equipment necessary.

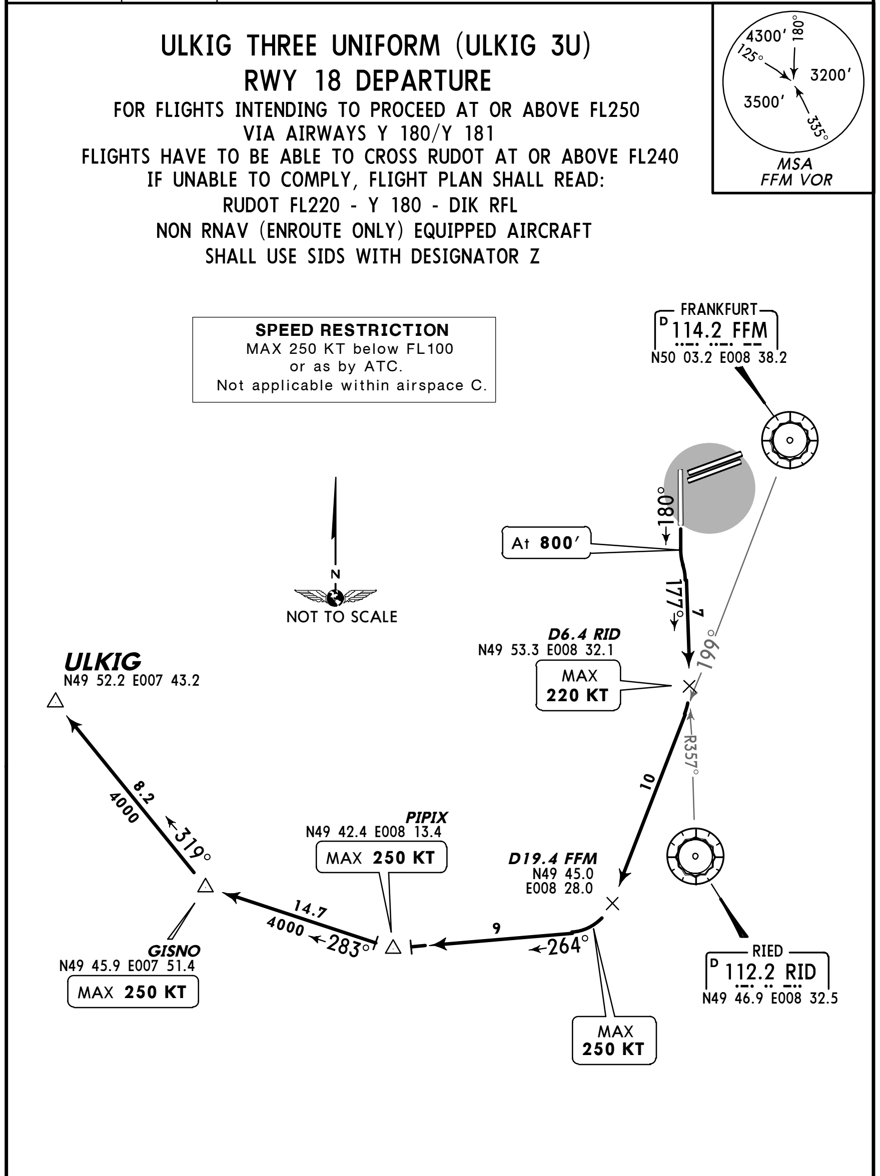
CHANGES: Restriction in chart heading revised.

*LANGEN Radar	Apt Elev	
136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

ULKIG THREE UNIFORM (ULKIG 3U)

RWY 18 DEPARTURE
FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL
NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT
SHALL USE SIDS WITH DESIGNATOR Z

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000'**

ROUTING

Climb on runway track to **800'**, intercept RID R-357 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ❶ turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 319° track to ULKIG.

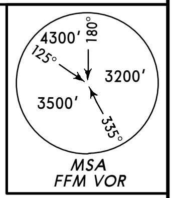
❶ After D19.4 FFM BRNAV equipment necessary.

CHANGES: None.

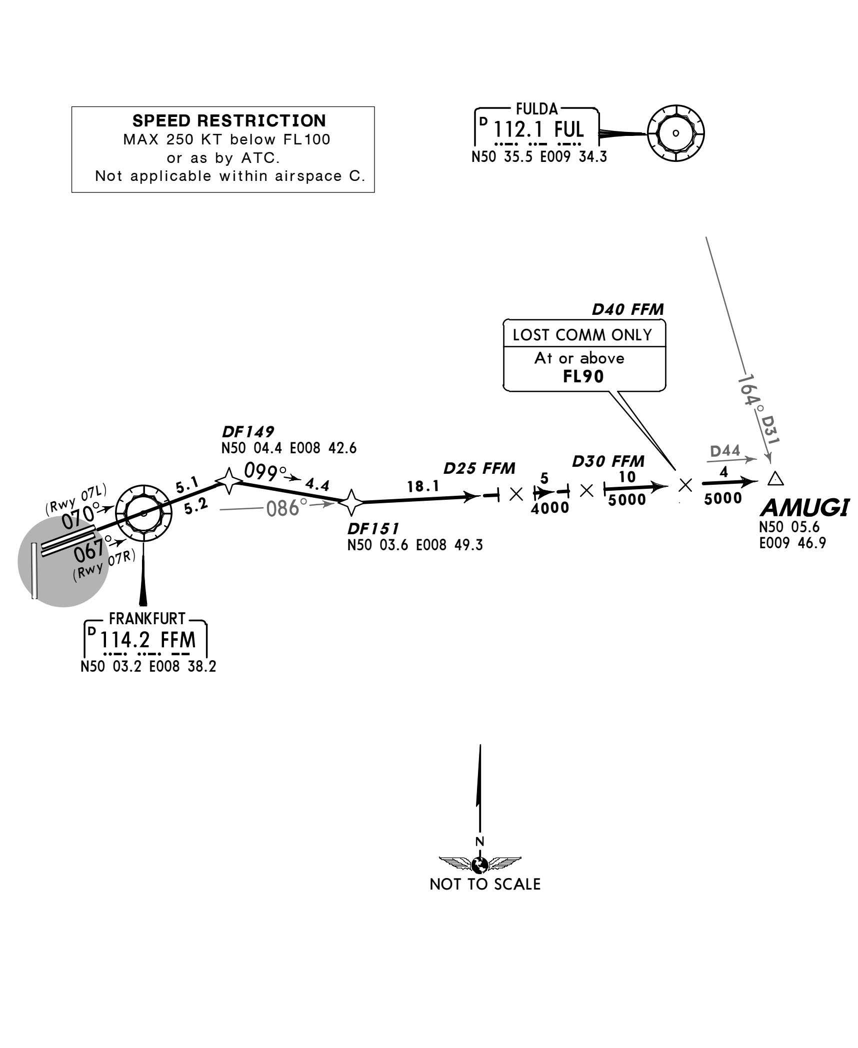
LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

AMUGI ONE DELTA (AMUGI 1D) [AMUG1D]
AMUGI ONE ECHO (AMUGI 1E) [AMUG1E]
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3B)

ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

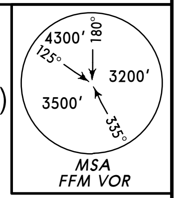
ROUTING

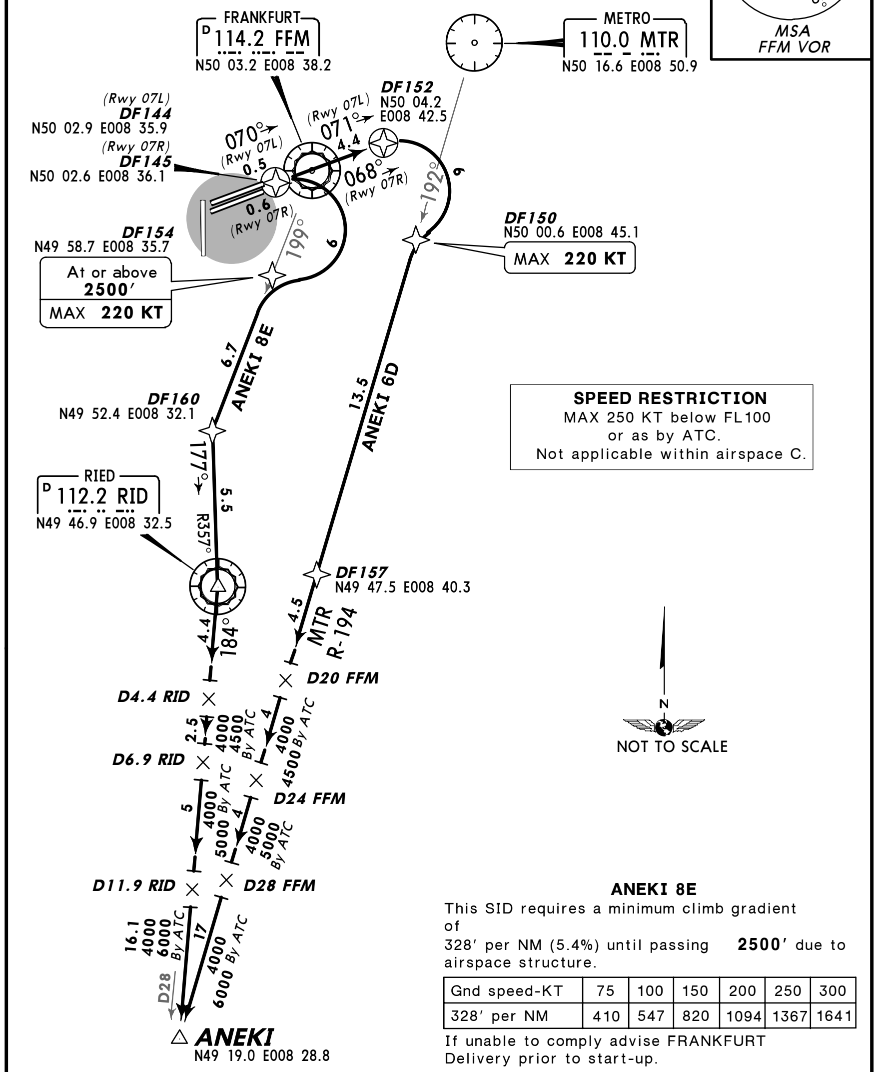
(800′+) - DF149 - DF151 - AMUGI.

CHANGES: AMUGI SIDs established; ANEKI SIDs transferred.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

ANEKI SIX DELTA (ANEKI 6D)[ANEK6D]
ANEKI EIGHT ECHO (ANEKI 8E)[ANEK8E]
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3C)





ANEKI 8E
This SID requires a minimum climb gradient of
328′ per NM (5.4%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

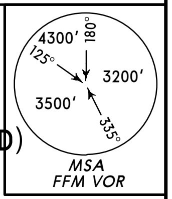
Initial climb clearance **4000′**

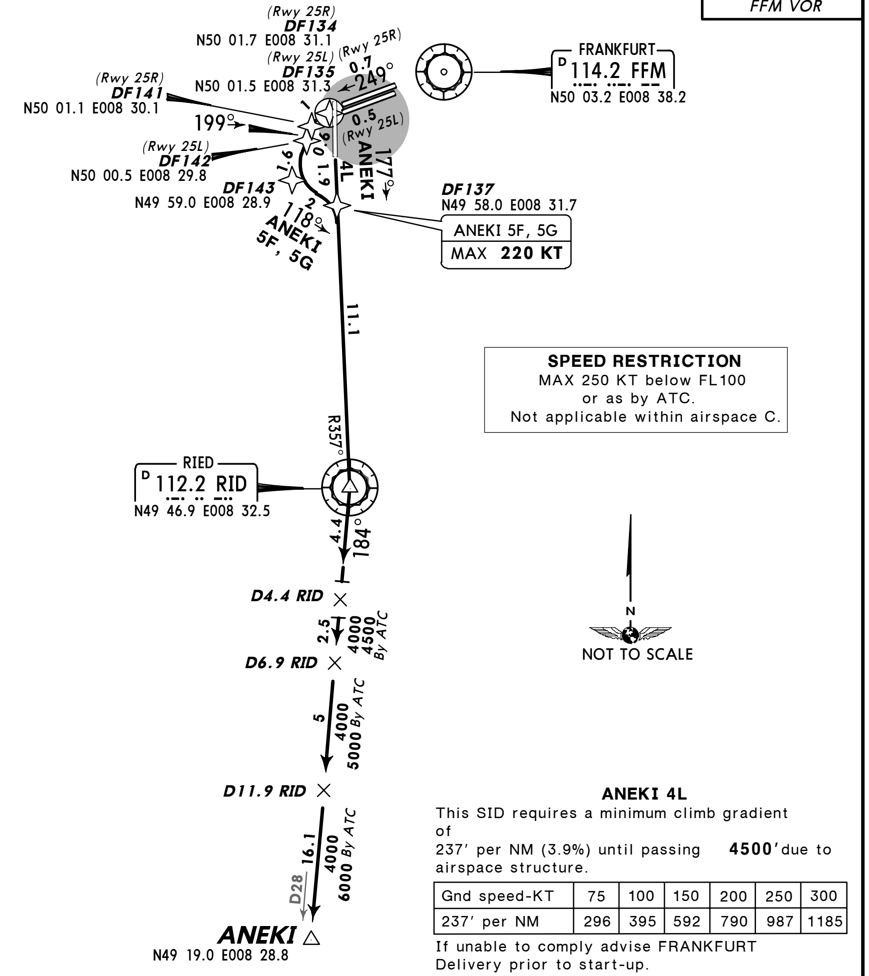
SID	ROUTING
ANEKI 6D	**(800′+) -** DF152 - DF150 (K220-) - DF157 - ANEKI.
ANEKI 8E	**(800′+)** - DF144 (07L)/DF145 (07R) - DF154 **(2500′+;** K220-) - DF160 - RID - ANEKI.

CHANGES: RNAV SIDs renumbered; chart reindexed.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

ANEKI FIVE FOXTROT (ANEKI 5F) *[ANEK5F]*
ANEKI FIVE GOLF (ANEKI 5G) *[ANEK5G]*
ANEKI FOUR LIMA (ANEKI 4L) *[ANEK4L]*
RWYS 25L/R, 18 RNAV DEPARTURES (OVERLAY 10-3D)





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ANEKI 4L
This SID requires a minimum climb gradient of
237′ per NM (3.9%) until passing **4500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
237′ per NM	296	395	592	790	987	1185

If unable to comply advise FRANKFURT Delivery prior to start-up.

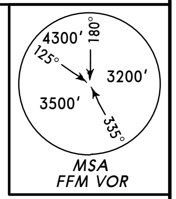
ANEKI 5F, 5G: Initial climb clearance **5000′**
ANEKI 4L: Initial climb clearance **4000′**

SID	RWY	ROUTING
ANEKI 5F, 5G	**25L/R**	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K220-) - RID - ANEKI.
ANEKI 4L	**18**	**(800′+) -** RID - ANEKI.

CHANGES: None.

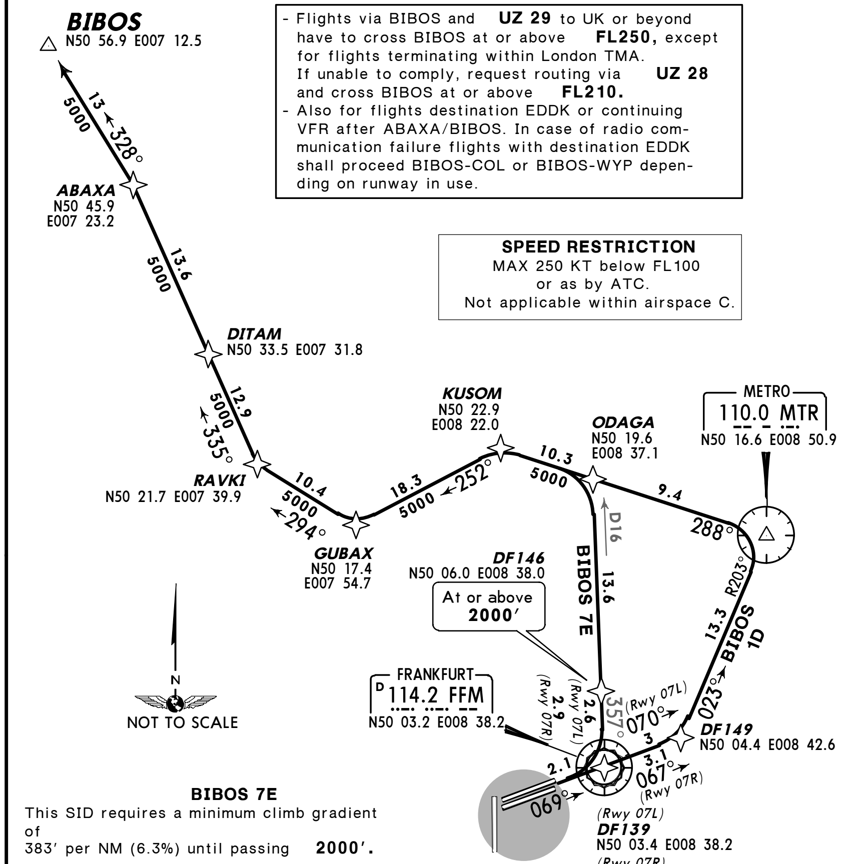
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

BIBOS ONE DELTA (BIBOS 1D) *[BIBO1D]*
BIBOS SEVEN ECHO (BIBOS 7E) *[BIBO7E]*
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3E)



- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250,** except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



BIBOS 7E
This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing **2000′.**

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

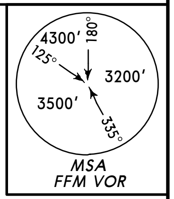
SID	ROUTING
BIBOS 1D	**(800′+) -** DF149 - MTR - ODAGA - KUSOM - GUBAX - RAVKI - DITAM - ABAXA - BIBOS.
BIBOS 7E	**(800′+) -** DF139 (07L)/DF140 (07R) - DF146 **(2000′+) -** ODAGA - KUSOM - GUBAX - RAVKI - DITAM - ABAXA - BIBOS.

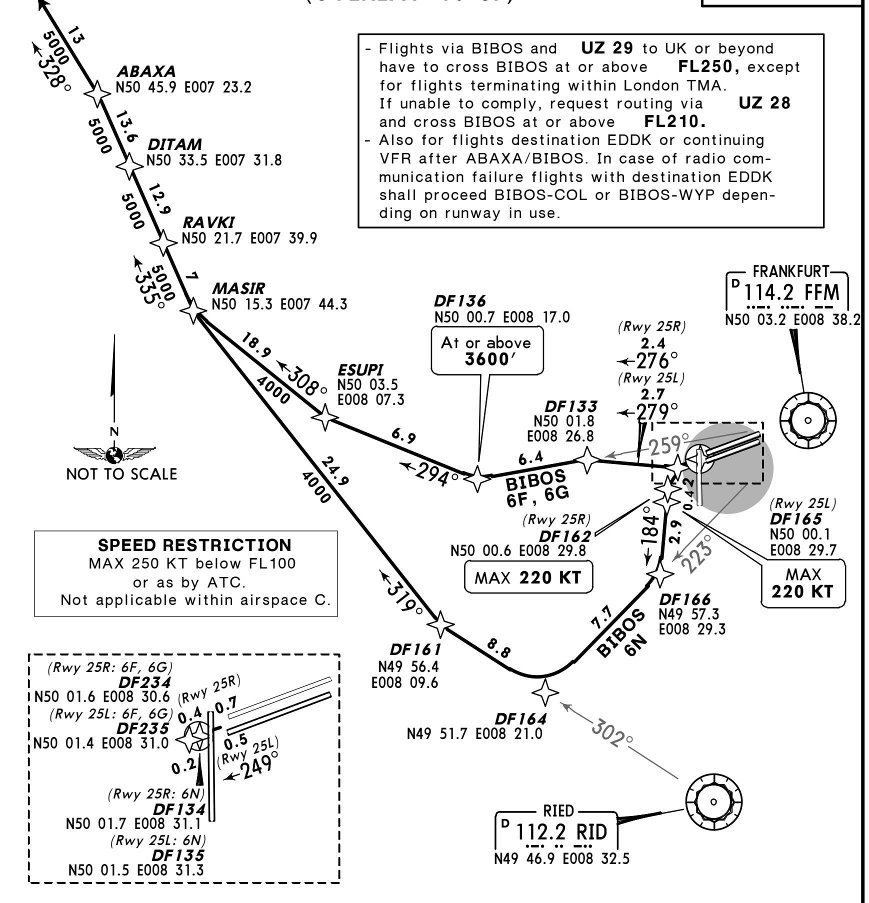
CHANGES: RNAV SID BIBOS 9D renumbered 1D.

EDDF/FRA
FRANKFURT/MAIN
JEPPESEN FRANKFURT/MAIN, GERMANY
2 FEB 07 10-3Q5 Eff 15 Feb
RNAV SID (OVERLAY)

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

BIBOS SIX FOXTROT (BIBOS 6F) *[BIBO6F]*
BIBOS SIX GOLF (BIBOS 6G) *[BIBO6G]*
BIBOS SIX NOVEMBER (BIBOS 6N) *[BIBO6N]*
RWYS 25L/R RNAV DEPARTURES
(OVERLAY 10-3F)





- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250,** except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBOS 6F, 6G
These SIDs require a minimum climb gradient of
352′ per NM (5.8%) until passing **3600′,** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

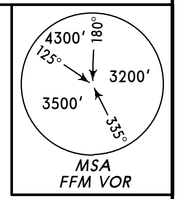
SID	ROUTING
BIBOS 6F, 6G	**(800′+) -** DF234 (25R)/DF235 (25L) - DF133 - DF136 **(3600′+) -** ESUPI - MASIR - RAVKI - DITAM - ABAXA - BIBOS.
BIBOS 6N	**(800′+) -** DF134 (25R)/DF135 (25L) - DF162 (25R; K220-)/DF165 (25L; K220-) - DF166 - DF164 - DF161 - MASIR - RAVKI - DITAM - ABAXA - BIBOS.

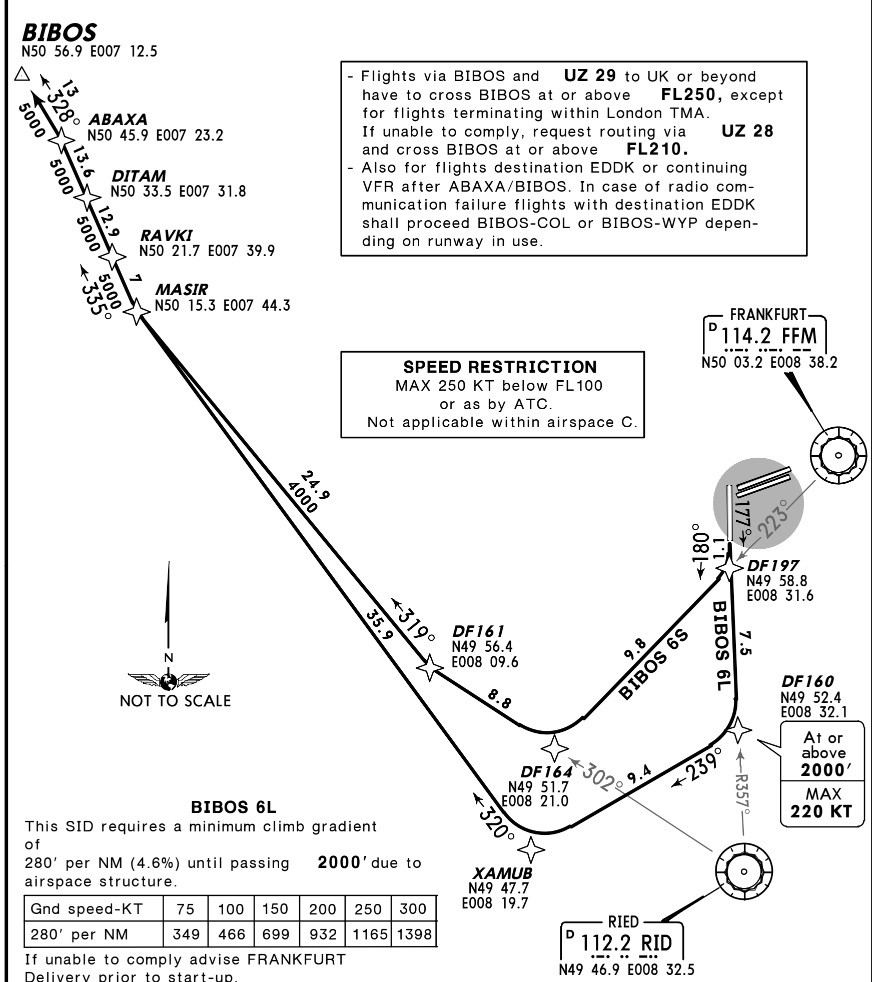
CHANGES: Chart reindexed.

EDDF/FRA
FRANKFURT/MAIN
JEPPESEN FRANKFURT/MAIN, GERMANY
2 FEB 07 10-3Q6 Eff 15 Feb
RNAV SID (OVERLAY)

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

BIBOS SIX LIMA (BIBOS 6L) *[BIBO6L]*
BIBOS SIX SIERRA (BIBOS 6S) *[BIBO6S]*
BY ATC
RWY 18 RNAV DEPARTURES (OVERLAY 10-3G)
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS 25





- Flights via BIBOS and **UZ 29** to UK or beyond have to cross BIBOS at or above **FL250,** except for flights terminating within London TMA. If unable to comply, request routing via **UZ 28** and cross BIBOS at or above **FL210.**
- Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure flights with destination EDDK shall proceed BIBOS-COL or BIBOS-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBOS 6L
This SID requires a minimum climb gradient of
280′ per NM (4.6%) until passing **2000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
280′ per NM	349	466	699	932	1165	1398

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

SID	ROUTING
BIBOS 6L	**(800′+) -** DF160 **(2000′+;** K220-) - XAMUB - MASIR - RAVKI - DITAM - ABAXA - BIBOS.
BIBOS 6S	**(800′+) -** DF197 - DF164 - DF161 - MASIR - RAVKI - DITAM - ABAXA - BIBOS.

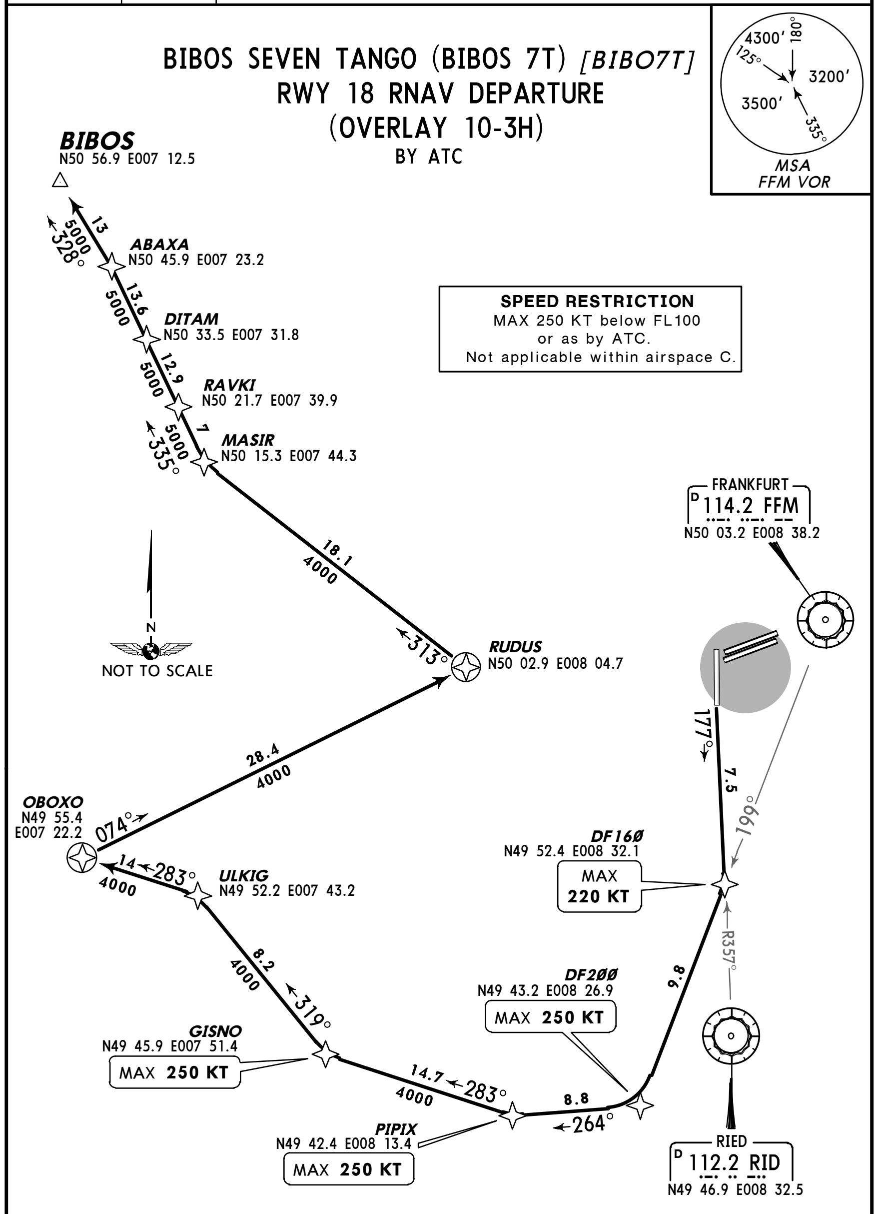
CHANGES: Chart reindexed.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
12 OCT 07 (10-3Q7) Eff 25 Oct
RNAV SID (OVERLAY)

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

BIBOS SEVEN TANGO (BIBOS 7T) [BIBO7T]
RWY 18 RNAV DEPARTURE
(OVERLAY 10-3H)
BY ATC



Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - MASIR - RAVKI - DITAM - ABAXA - BIBOS.

CHANGES: None.

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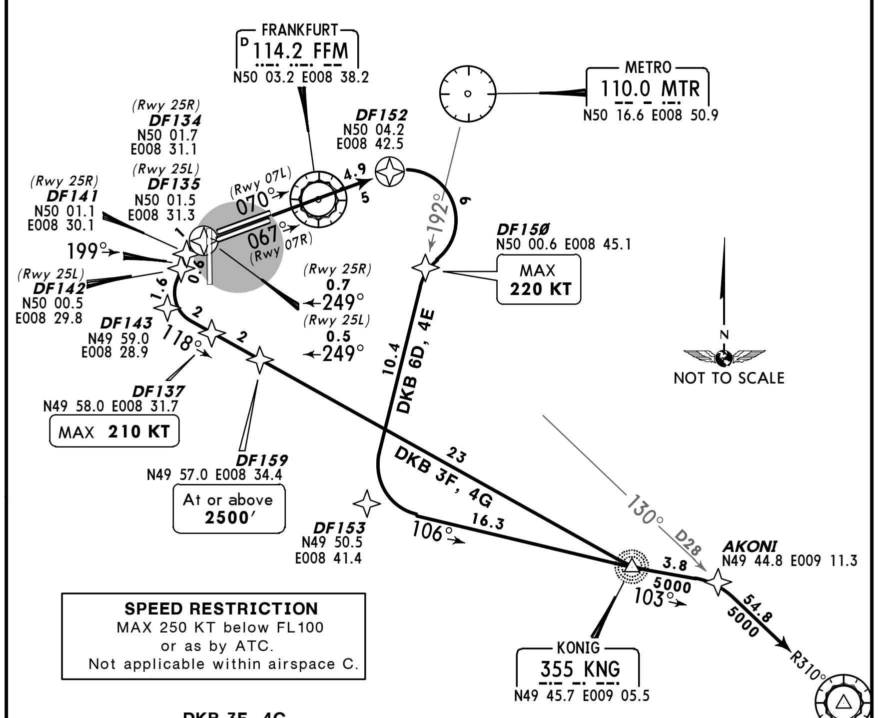
Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007
JEPPESEN
JeppView 3.5.2.0

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
12 OCT 07 (10-3Q8) Eff 25 Oct
RNAV SID (OVERLAY)

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

DINKELSBUHL SIX DELTA (DKB 6D)
DINKELSBUHL FOUR ECHO (DKB 4E)
DINKELSBUHL THREE FOXTROT (DKB 3F)
DINKELSBUHL FOUR GOLF (DKB 4G)
RWYS 07L/R, 25L/R RNAV DEPARTURES
(OVERLAY 10-3J)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



DKB 3F, 4G

These SIDs require a minimum climb gradient of 316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

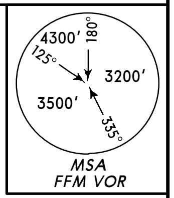
DKB 6D, 4E: Initial climb clearance **4000′**
DKB 3F, 4G: Initial climb clearance **5000′**

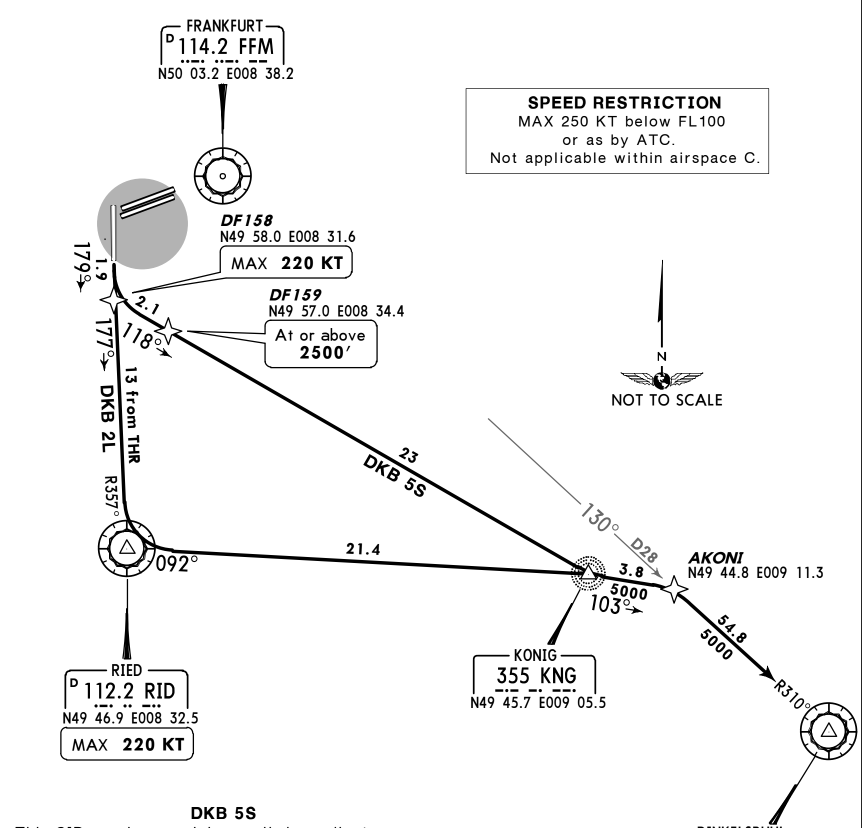
SID	RWY	ROUTING
DKB 6D, 4E	07L/R	**(800′+) -** DF152 - DF150 (K220-) - DF153 - KNG - AKONI - DKB.
DKB 3F, 4G	25L/R	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 **(2500′+) -** KNG - AKONI - DKB.

CHANGES: RNAV SIDs DKB 2F, 3G renumbered 3F, 4G & revised.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

DINKELSBUHL TWO LIMA (DKB 2L)
DINKELSBUHL FIVE SIERRA (DKB 5S)
RWY 18 RNAV DEPARTURES (OVERLAY 10-3J1)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 5S
This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via DKB 2L.

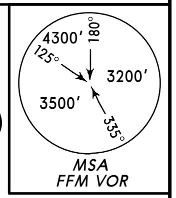
Initial climb clearance **4000′**

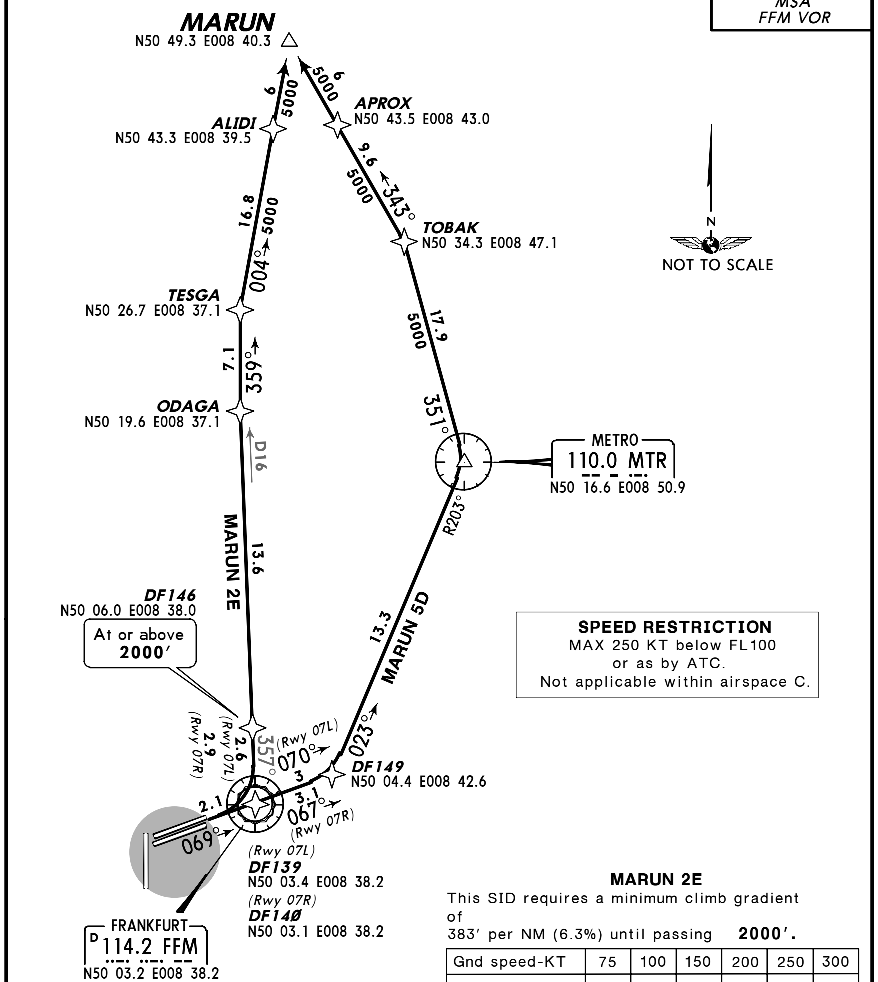
SID	ROUTING
DKB 2L	**(800′+) -** RID (K220-) - KNG - AKONI - DKB.
DKB 5S	**(800′+) -** DF158 (K220-) - DF159 **(2500′+) -** KNG - AKONI - DKB.

CHANGES: RNAV SID DKB 4S renumbered 5S & revised.

*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

MARUN FIVE DELTA (MARUN 5D) *[MARU5D]*
MARUN TWO ECHO (MARUN 2E) *[MARU2E]*
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3J3)





MARUN 2E
This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing **2000′.**

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

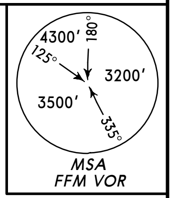
Initial climb clearance **5000′**

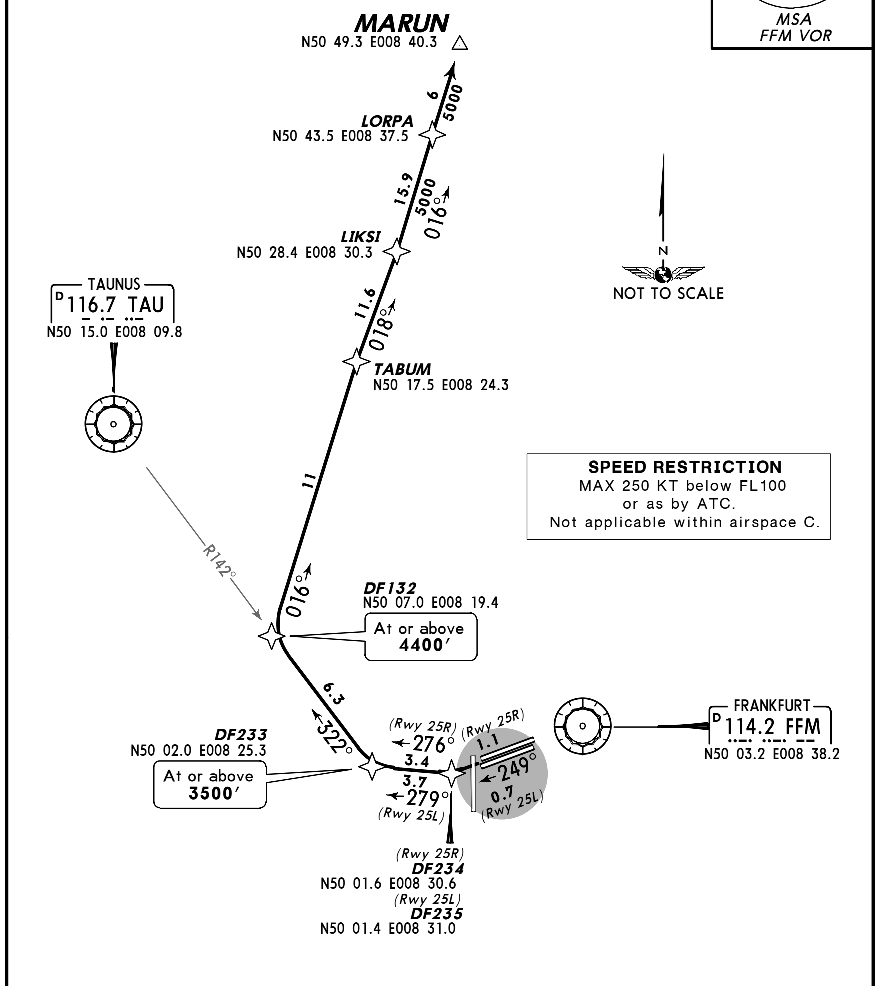
SID	ROUTING
MARUN 5D	**(800′+) -** DF149 - MTR - TOBAK - APROX - MARUN.
MARUN 2E	**(800′+) -** DF139 (07L)/DF140 (07R) - DF146 **(2000′+) -** ODAGA - TESGA - ALIDI - MARUN.

CHANGES: RNAV SID MARUN 4D renumbered 5D.

*LANGEN Radar	Apt Elev	
120.15	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

MARUN ONE FOXTROT (MARUN 1F) *[MARU1F]*
MARUN ONE JULIETT (MARUN 1J) *[MARU1J]*
RWYS 25L/R RNAV DEPARTURES (OVERLAY 10-3J4)





These SIDs require a minimum climb gradient of
729' per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729' per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up.

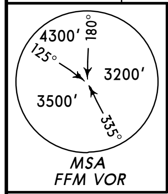
Initial climb clearance **5000'**

ROUTING

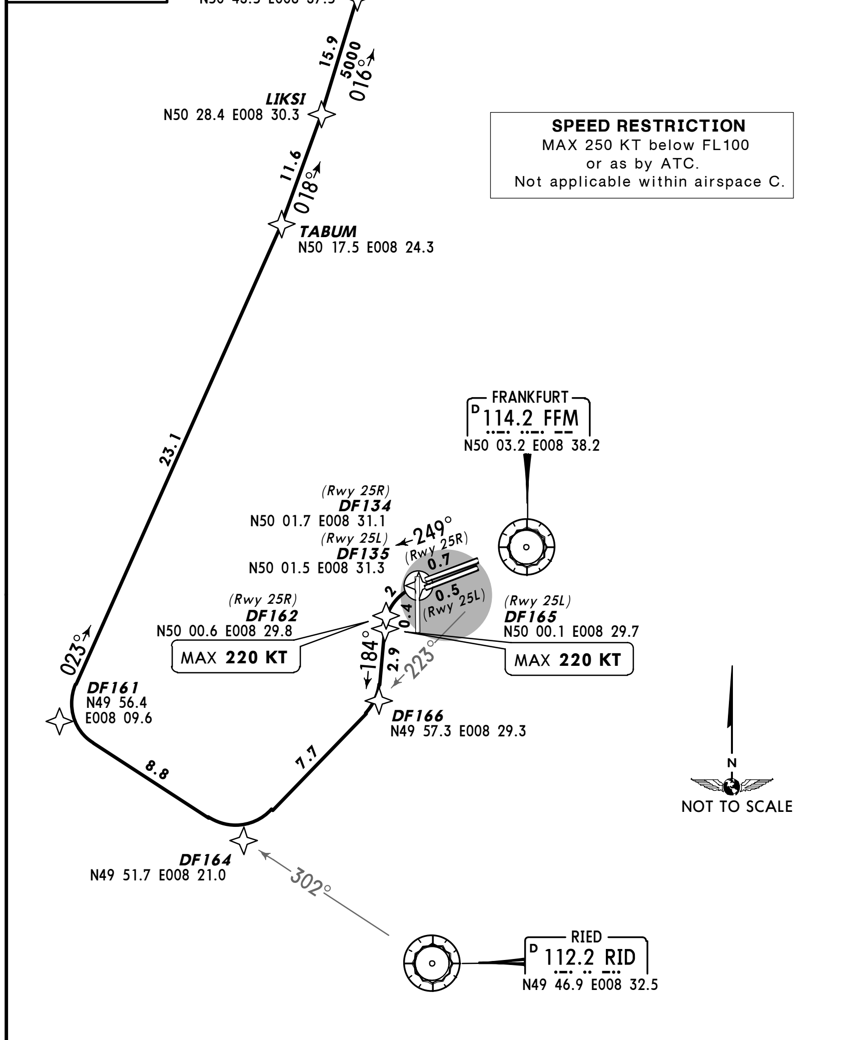
(800'+) - DF234 (25R)/DF235 (25L) - DF233 **(3500'+) -** DF132 **(4400'+) -** TABUM - LIKSI - LORPA - MARUN.

CHANGES: Chart reference in heading.

*LANGEN Radar	Apt Elev	
120.15	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.



MARUN ONE NOVEMBER
(MARUN 1N) *[MARU1N]*
RWYS 25L/R RNAV DEPARTURE
(OVERLAY 10-3J5)



Initial climb clearance **5000'**

ROUTING

(800'+) - DF134 (25R)/DF135 (25L) - DF162 (25R; K220-)/DF165 (25L; K220-) - DF166 - DF164 - DF161 - TABUM - LIKSI - LORPA - MARUN.

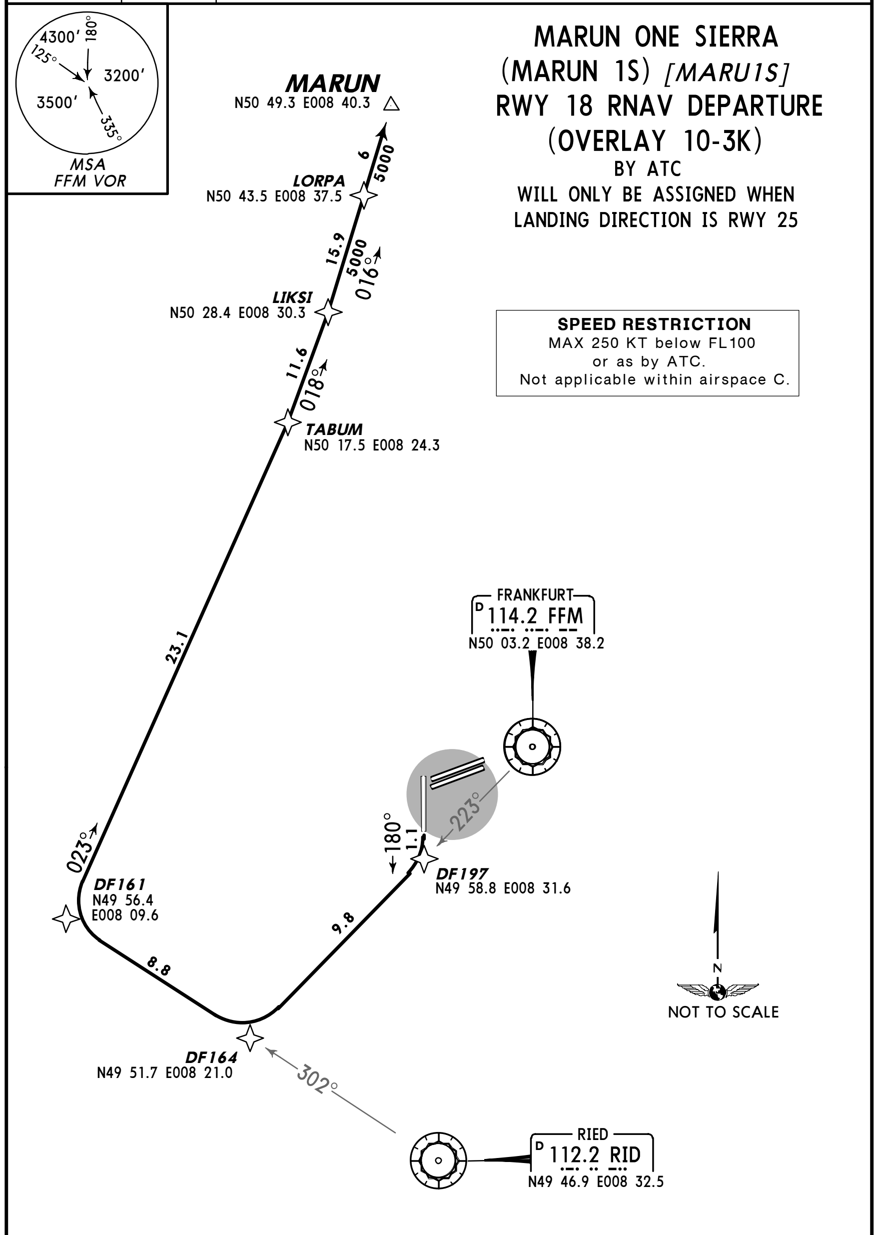
CHANGES: Chart reference in heading.

LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

MARUN ONE SIERRA (MARUN 1S) [MARU1S] RWY 18 RNAV DEPARTURE (OVERLAY 10-3K)

BY ATC
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

(800′+) - DF197 - DF164 - DF161 - TABUM - LIKSI - LORPA - MARUN.

CHANGES: SIDs transferred & established; MSA; communications.

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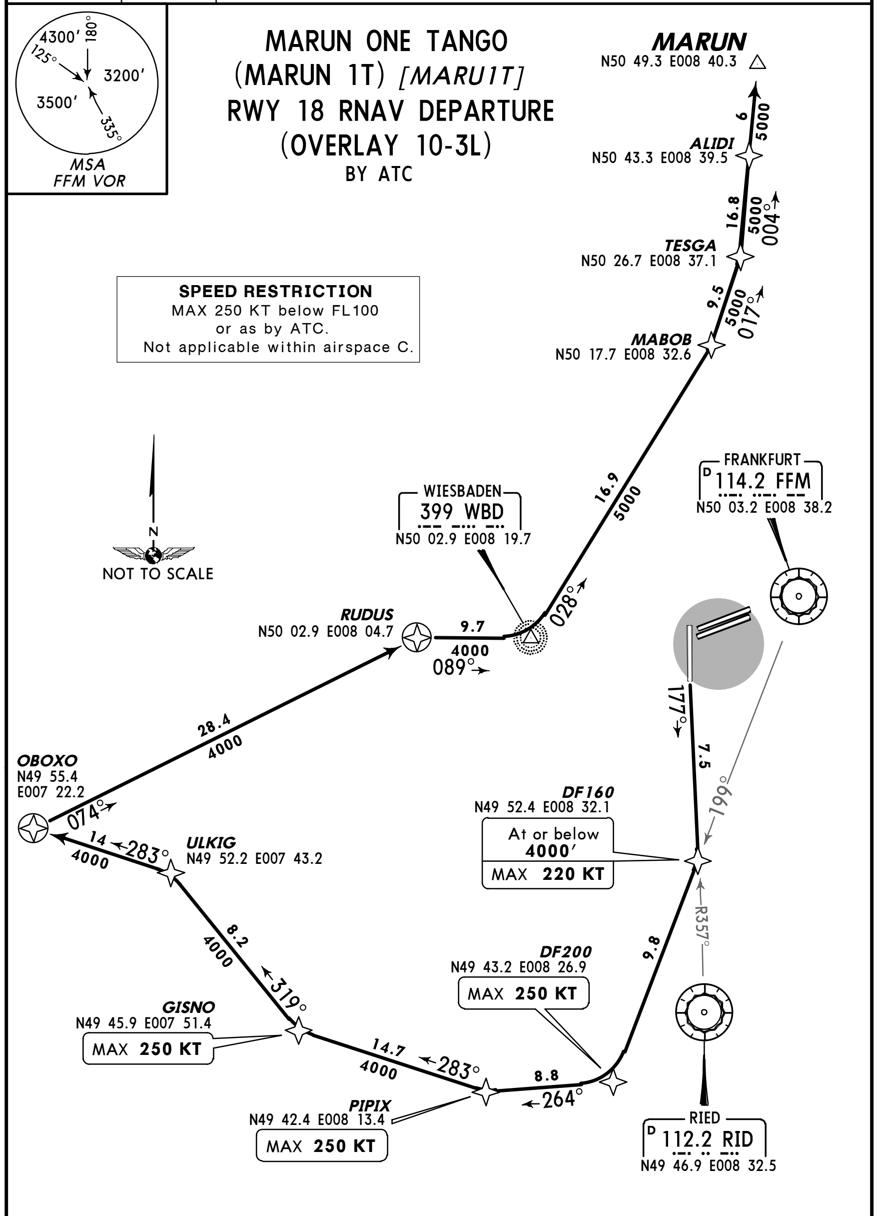
Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

MARUN ONE TANGO (MARUN 1T) [MARU1T] RWY 18 RNAV DEPARTURE (OVERLAY 10-3L)

BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 **(4000′-;** K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - WBD - MABOB - TESGA - ALIDI - MARUN.

CHANGES: SIDs transferred & established; MSA; communications.

EDDF/FRA FRANKFURT/MAIN

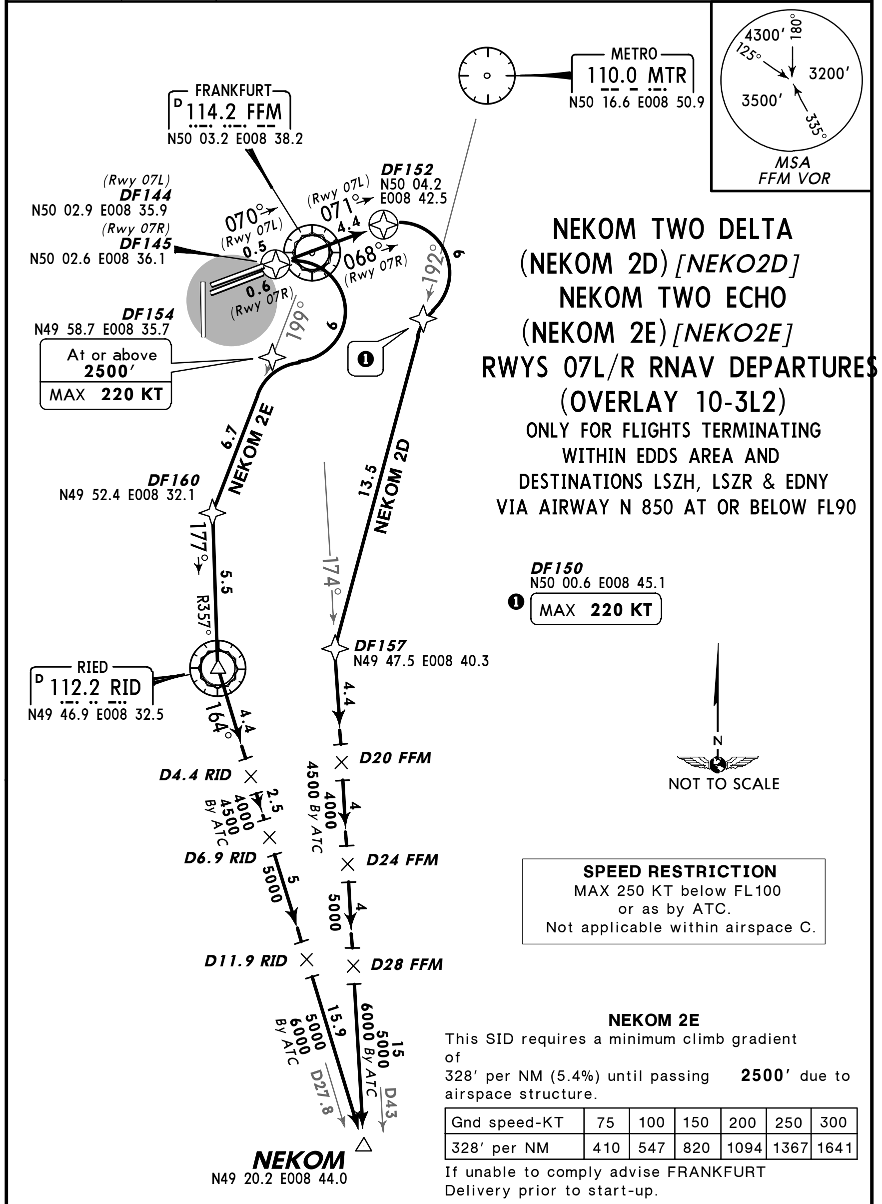
JEPPESEN FRANKFURT/MAIN, GERMANY

2 FEB 07 10-3T5 Eff 15 Feb **RNAV SID (OVERLAY)**

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

NEKOM TWO DELTA (NEKOM 2D) [NEKO2D] NEKOM TWO ECHO (NEKOM 2E) [NEKO2E] RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3L2)

ONLY FOR FLIGHTS TERMINATING WITHIN EDDS AREA AND DESTINATIONS LSZH, LSZR & EDNY VIA AIRWAY N 850 AT OR BELOW FL90



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NEKOM 2E

This SID requires a minimum climb gradient of 328′ per NM (5.4%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

SID	ROUTING
NEKOM 2D	**(800′+) -** DF152 - DF150 (K220-) - DF157 - NEKOM.
NEKOM 2E	**(800′+)** - DF144 (07L)/DF145 (07R) - DF154 **(2500′+;** K220-) - DF160 - RID - NEKOM.

CHANGES: RNAV SIDs renumbered.

EDDF/FRA FRANKFURT/MAIN

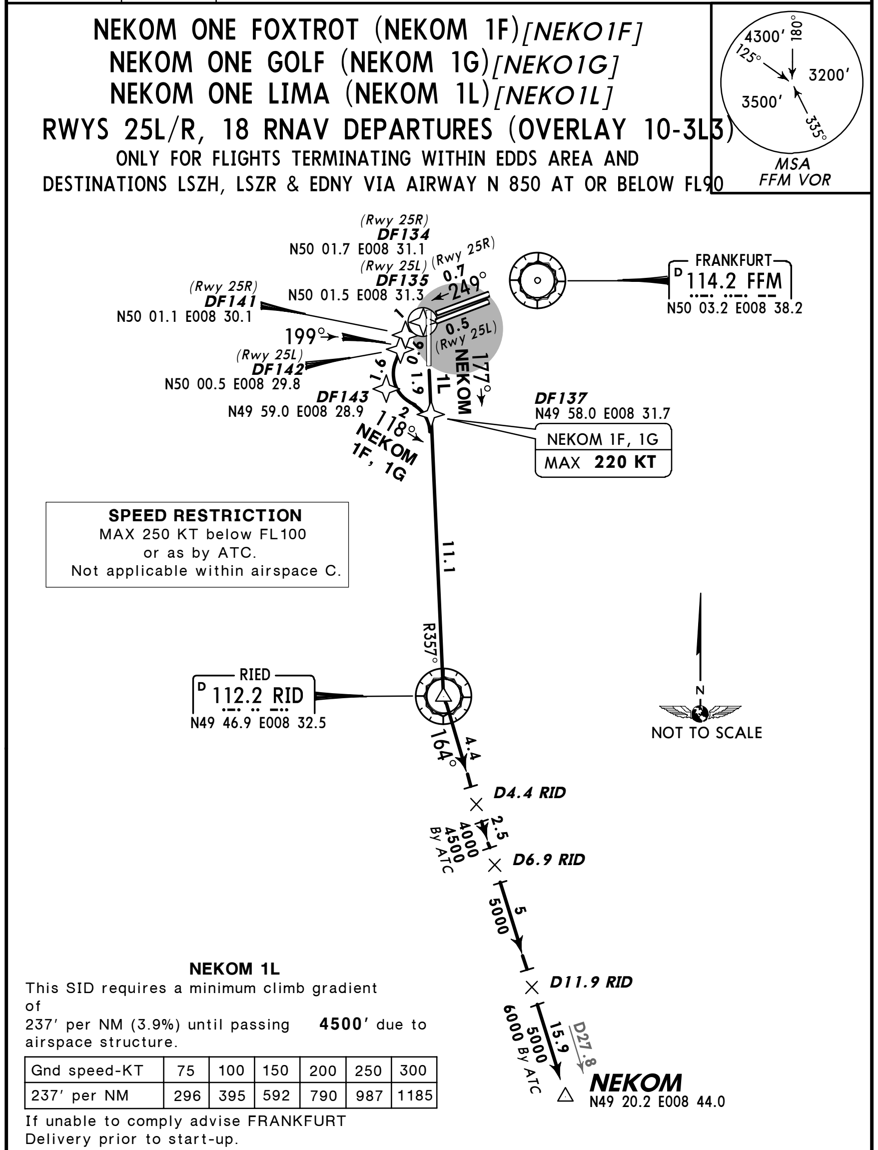
JEPPESEN FRANKFURT/MAIN, GERMANY

2 FEB 07 10-3T6 Eff 15 Feb **RNAV SID (OVERLAY)**

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

NEKOM ONE FOXTROT (NEKOM 1F) [NEKO1F] NEKOM ONE GOLF (NEKOM 1G) [NEKO1G] NEKOM ONE LIMA (NEKOM 1L) [NEKO1L] RWYS 25L/R, 18 RNAV DEPARTURES (OVERLAY 10-3L3)

ONLY FOR FLIGHTS TERMINATING WITHIN EDDS AREA AND DESTINATIONS LSZH, LSZR & EDNY VIA AIRWAY N 850 AT OR BELOW FL90



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NEKOM 1L

This SID requires a minimum climb gradient of 237′ per NM (3.9%) until passing **4500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
237′ per NM	296	395	592	790	987	1185

If unable to comply advise FRANKFURT Delivery prior to start-up.

NEKOM 1F, 1G: Initial climb clearance **5000′**
NEKOM 1L: Initial climb clearance **4000′**

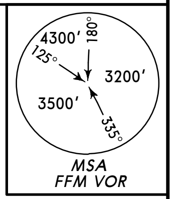
SID	RWY	ROUTING
NEKOM 1F, 1G	**25L/R**	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K220-) - RID - NEKOM.
NEKOM 1L	**18**	**(800′+) -** RID - NEKOM.

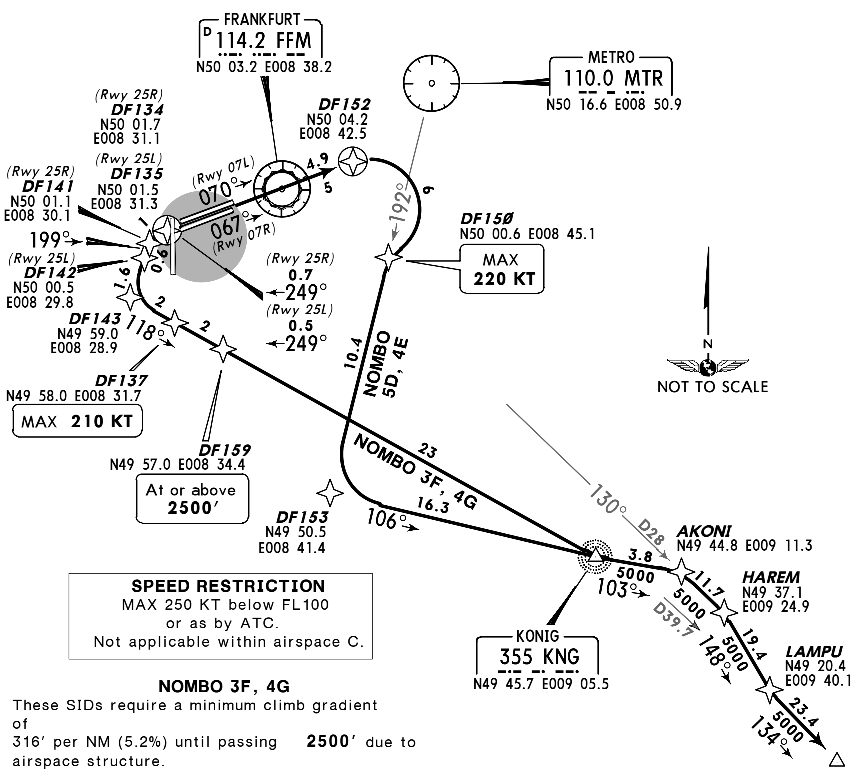
CHANGES: None.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

NOMBO FIVE DELTA (NOMBO 5D) *[NOMB5D]*
NOMBO FOUR ECHO (NOMBO 4E) *[NOMB4E]*
NOMBO THREE FOXTROT (NOMBO 3F) *[NOMB3F]*
NOMBO FOUR GOLF (NOMBO 4G) *[NOMB4G]*
RWYS 07L/R, 25L/R RNAV DEPARTURES (OVERLAY 10-3L4)

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 3F, 4G
These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

NOMBO 5D, 4E: Initial climb clearance **4000′**
NOMBO 3F, 4G: Initial climb clearance **5000′**

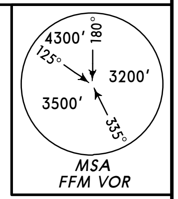
SID	RWY	ROUTING
NOMBO 5D, 4E	07L/R	**(800′+) -** DF152 - DF150 (K220-) - DF153 - KNG - AKONI - HAREM - LAMPU - NOMBO.
NOMBO 3F, 4G	25L/R	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 **(2500′+) -** KNG - AKONI - HAREM - LAMPU - NOMBO.

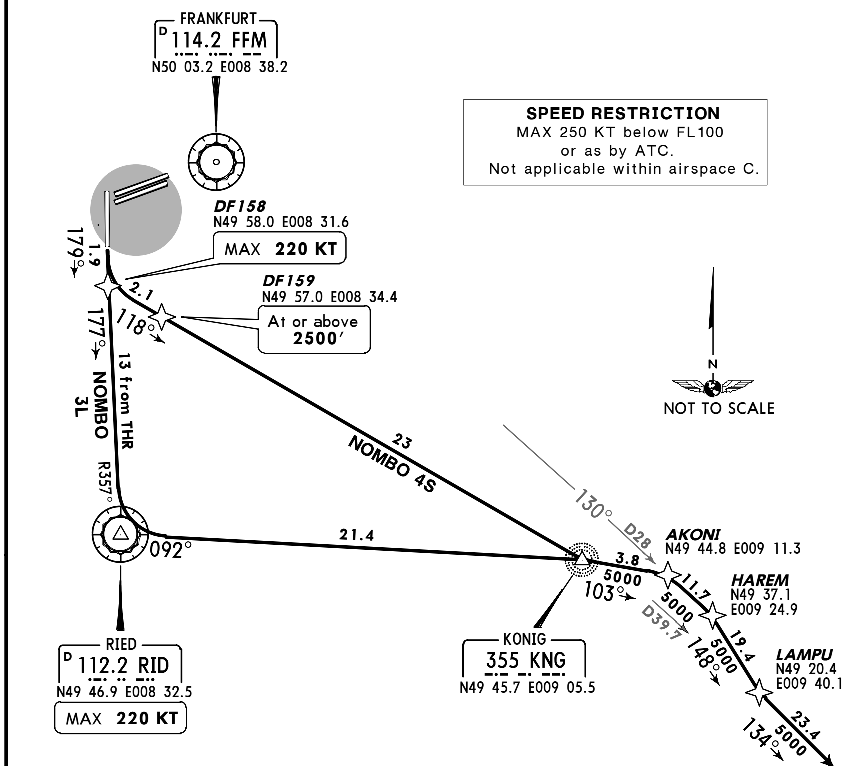
CHANGES: SIDs NOMBO 2F, 3G renumbered 3F, 4G & revised.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

NOMBO THREE LIMA (NOMBO 3L) *[NOMB3L]*
NOMBO FOUR SIERRA (NOMBO 4S) *[NOMB4S]*
RWY 18 RNAV DEPARTURES (OVERLAY 10-3L5)

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 4S
This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via NOMBO 3L.

Initial climb clearance **4000′**

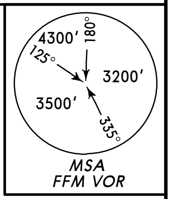
SID	ROUTING
NOMBO 3L	**(800′+) -** RID (K220-) - KNG - AKONI - HAREM - LAMPU - NOMBO.
NOMBO 4S	**(800′+) -** DF158 (K220-) - DF159 **(2500′+) -** KNG - AKONI - HAREM - LAMPU - NOMBO.

CHANGES: RNAV SID NOMBO 3S renumbered 4S & revised.

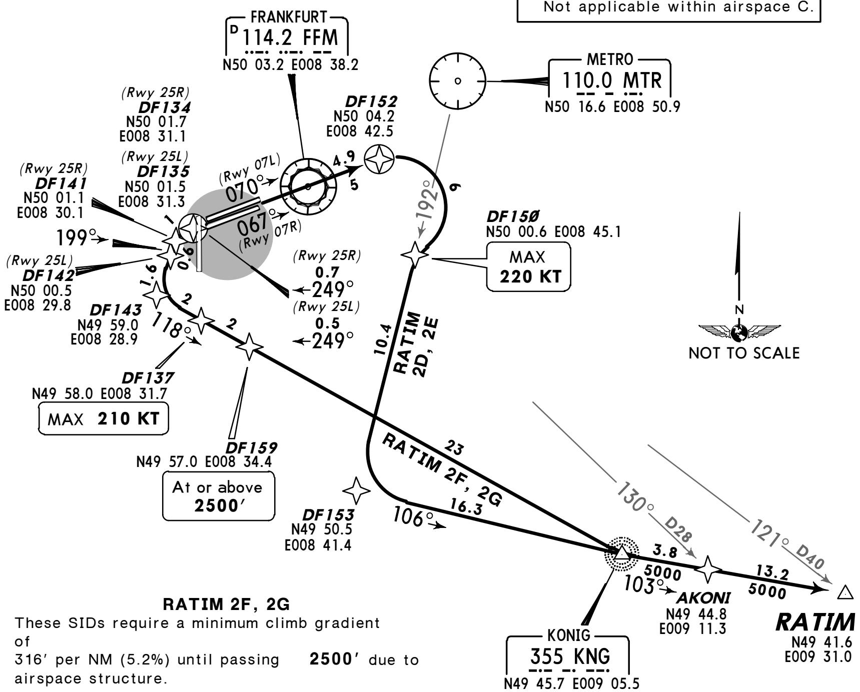
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

RATIM TWO DELTA (RATIM 2D) *[RATI2D]*
RATIM TWO ECHO (RATIM 2E) *[RATI2E]*
RATIM TWO FOXTROT (RATIM 2F) *[RATI2F]*
RATIM TWO GOLF (RATIM 2G) *[RATI2G]*
RWYS 07L/R, 25L/R RNAV DEPARTURES (OVERLAY 10-3L6)

ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



RATIM 2F, 2G
These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

RATIM 2D, 2E: Initial climb clearance **4000′**
RATIM 2F, 2G: Initial climb clearance **5000′**

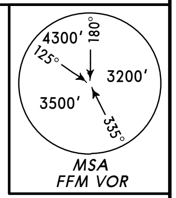
SID	RWY	ROUTING
RATIM 2D, 2E	07L/R	**(800′+) -** DF152 - DF150 (K220-) - DF153 - KNG - AKONI - RATIM.
RATIM 2F, 2G	25L/R	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 **(2500′+) -** KNG - AKONI - RATIM.

CHANGES: SIDs RATIM 1F, 1G renumbered 2F, 2G & revised.

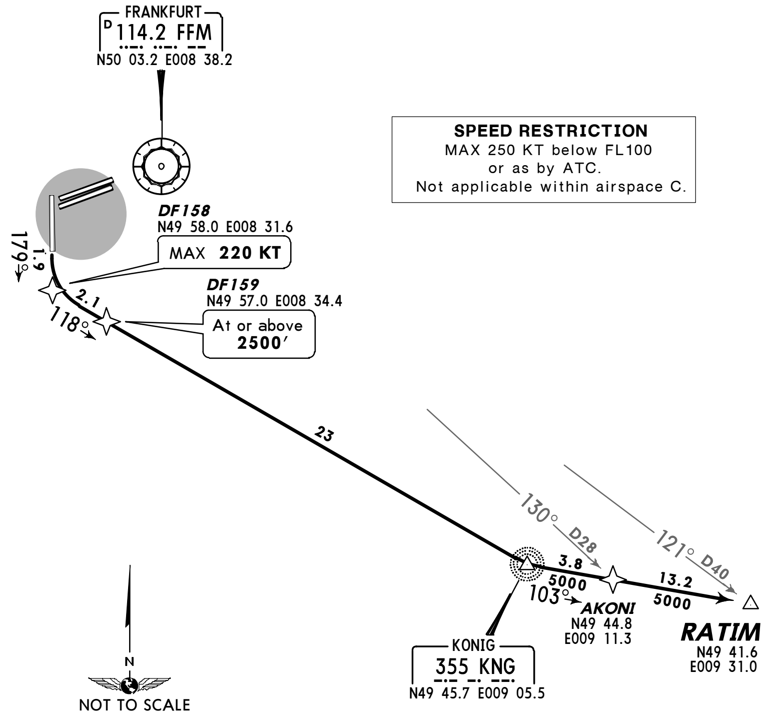
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

RATIM TWO SIERRA (RATIM 2S) *[RATI2S]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3L7)

ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect alternate routing by ATC.

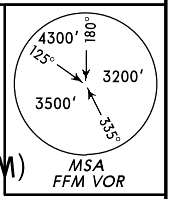
Initial climb clearance **4000′**

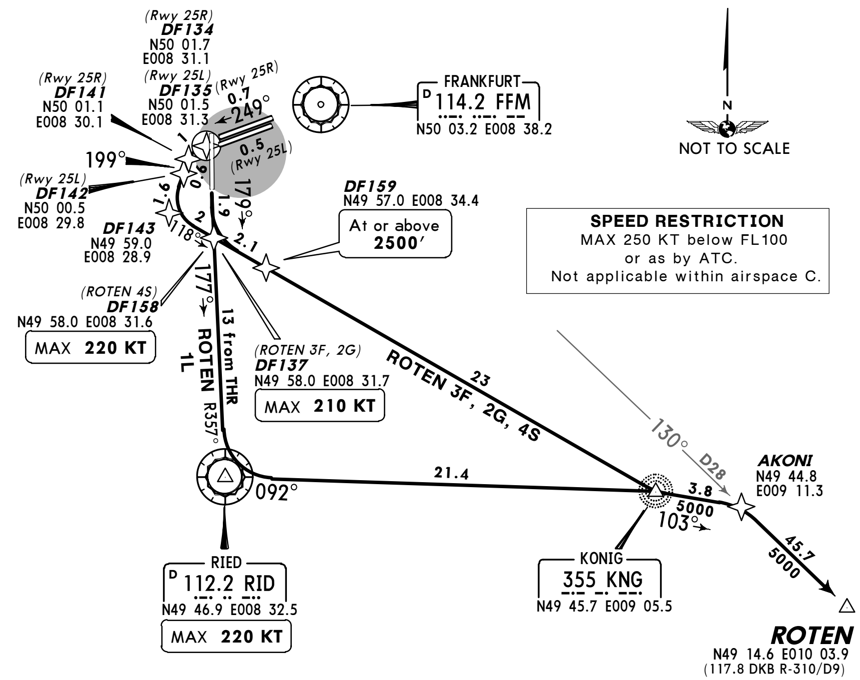
ROUTING
(800′+) - DF158 (K220-) - DF159 **(2500′+) -** KNG - AKONI - RATIM.

CHANGES: RNAV SID renumbered & revised.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 18: EXPECT close-in obstacles. **4.** RWY 18: Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

ROTEN THREE FOXTROT (ROTEN 3F) [ROTE3F]
ROTEN TWO GOLF (ROTEN 2G) [ROTE2G]
ROTEN ONE LIMA (ROTEN 1L) [ROTE1L]
ROTEN FOUR SIERRA (ROTEN 4S) [ROTE4S]
RWYS 25L/R, 18 RNAV DEPARTURES (OVERLAY 10-3M)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





These SIDs require minimum climb gradients of

ROTEN 3F, 2G
316′ per NM (5.2%) until passing **2500′** due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up.

ROTEN 4S
565′ per NM (9.3%) until passing **2500′** due to airspace structure. If unable to comply advise FRANKFURT Delivery and expect routing via ROTEN 1L.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580
565′ per NM	706	942	1413	1884	2355	2825

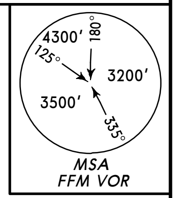
ROTEN 3F, 2G: Initial climb clearance **5000′**
ROTEN 1L, 4S: Initial climb clearance **4000′**

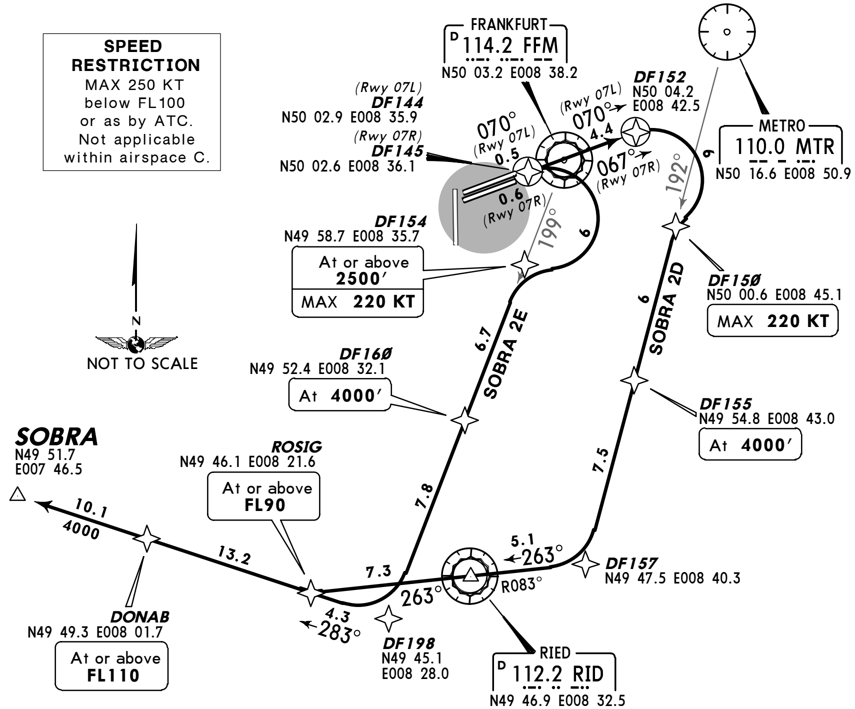
SID	RWY	ROUTING
ROTEN 3F, 2G	25L/R	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 **(2500′+) -** KNG - AKONI - ROTEN.
ROTEN 1L	18	**(800′+) -** RID (K220-) - KNG - AKONI - ROTEN.
ROTEN 4S		**(800′+) -** DF158 (K220-) - DF159 **(2500′+) -** KNG - AKONI - ROTEN.

CHANGES: ROTEN 2F, 1G, 3S renumbered 3F, 2G, 4S & revised.

*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

SOBRA TWO DELTA (SOBRA 2D) [SOBR2D]
SOBRA TWO ECHO (SOBRA 2E) [SOBR2E]
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3N)
FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL





These SIDs require minimum climb gradients of

SOBRA 2D
225′ per NM (3.7%) until passing **4000′**, 261′ per NM (4.3%) after DF155 until passing **FL90** due to airspace structure.

SOBRA 2E
383′ per NM (6.3%) until passing **2500′**, 401′ per NM (6.6%) after DF160 until passing **FL90** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
383′ per NM	479	638	957	1276	1595	1914
261′ per NM	327	435	653	871	1089	1306
225′ per NM	281	375	562	749	937	1124

If unable to comply advise FRANKFURT Delivery prior to start-up.

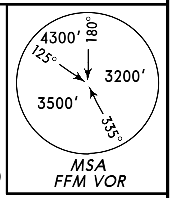
Initial climb clearance **4000′**

SID	ROUTING
SOBRA 2D	**(800′+) -** DF152 - DF150 (K220-) - DF155 **(4000′) -** DF157 - RID - ROSIG **(FL90+) -** DONAB **(FL110+) -** SOBRA.
SOBRA 2E	**(800′+) -** DF144 (07L)/DF145 (07R) - DF154 **(2500′+;** K220-**) -** DF160 **(4000′) -** DF198 - ROSIG **(FL90+) -** DONAB **(FL110+) -** SOBRA.

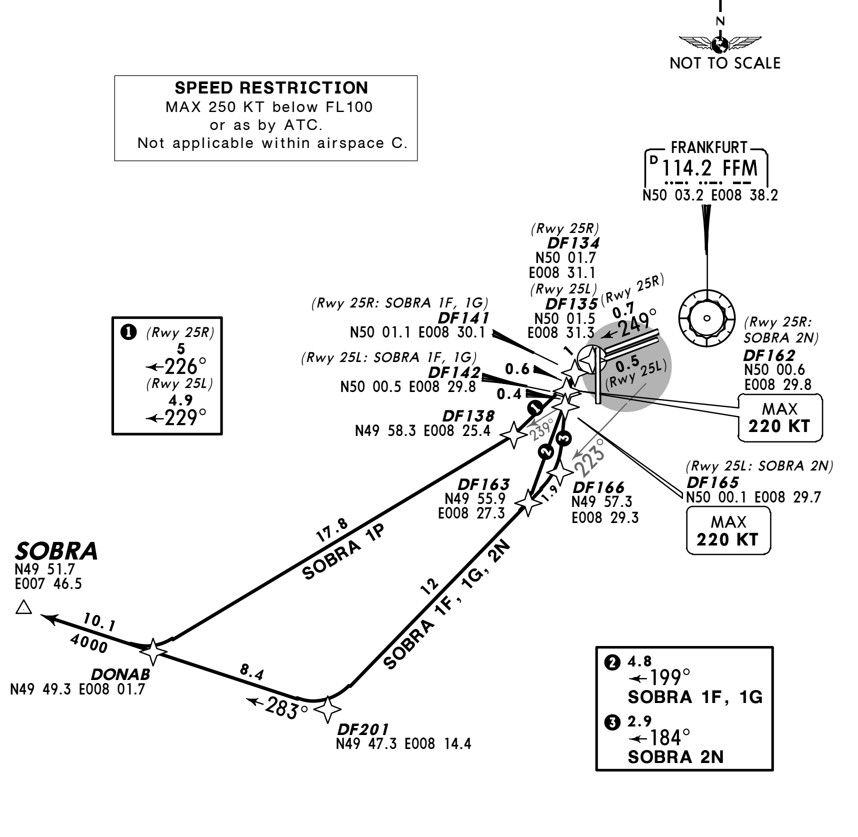
CHANGES: None.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to page 10-4.

SOBRA ONE FOXTROT (SOBRA 1F) *[SOBR1F]*
SOBRA ONE GOLF (SOBRA 1G) *[SOBR1G]*
SOBRA TWO NOVEMBER (SOBRA 2N) *[SOBR2N]*
SOBRA ONE PAPA (SOBRA 1P) *[SOBR1P]*
RWYS 25L/R RNAV DEPARTURES (OVERLAY 10-3N1)



FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL



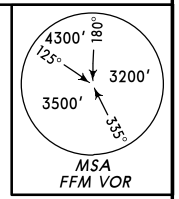
Initial climb clearance **5000′**

SID	ROUTING
SOBRA 1F, 1G	**(800′+) -** DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF163 - DF201 - DONAB - SOBRA.
SOBRA 2N	**(800′+) -** DF134 (25R)/DF135 (25L) - DF162 (25R; K220-)/DF165 (25L; K220-) - DF166 - DF201 - DONAB - SOBRA.
SOBRA 1P	**(800′+) -** DF134 (25R)/DF135 (25L) - DF138 - DONAB - SOBRA.

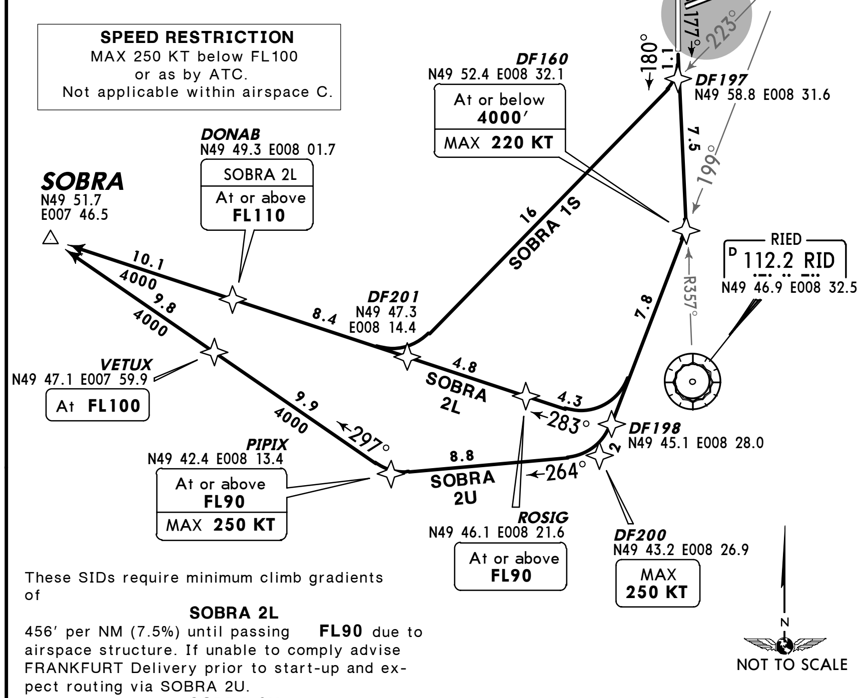
CHANGES: Restrictions.

LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

SOBRA TWO LIMA (SOBRA 2L) *[SOBR2L]*
SOBRA ONE SIERRA (SOBRA 1S) *[SOBR1S]*
SOBRA TWO UNIFORM (SOBRA 2U) *[SOBR2U]*
RWY 18 RNAV DEPARTURES (OVERLAY 10-3N2)



FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS
RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL



These SIDs require minimum climb gradients of

SOBRA 2L

456′ per NM (7.5%) until passing **FL90** due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SOBRA 2U.

SOBRA 2U

328′ per NM (5.4%) until passing **FL90** due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via ULKIG 3U.

Gnd speed-KT	75	100	150	200	250	300
456′ per NM	570	760	1139	1519	1899	2279
328′ per NM	410	547	820	1094	1367	1641

Initial climb clearance **4000′**

SID	ROUTING
SOBRA 2L Will be assigned when landing direction is 07	**(800′+) -** DF160 **(4000′-;** K220-) - DF198 - ROSIG **(FL90+) -** DONAB **(FL110+) -** SOBRA.
SOBRA 1S Only to be used when landing direction is 25	**(800′+) -** DF197 - DF201 - DONAB - SOBRA.
SOBRA 2U	**(800′+) -** DF160 **(4000′-;** K220-) - DF200 (K250-) - PIPIX **(FL90+;** K250-) - VETUX **(FL100) -** SOBRA.

CHANGES: None.

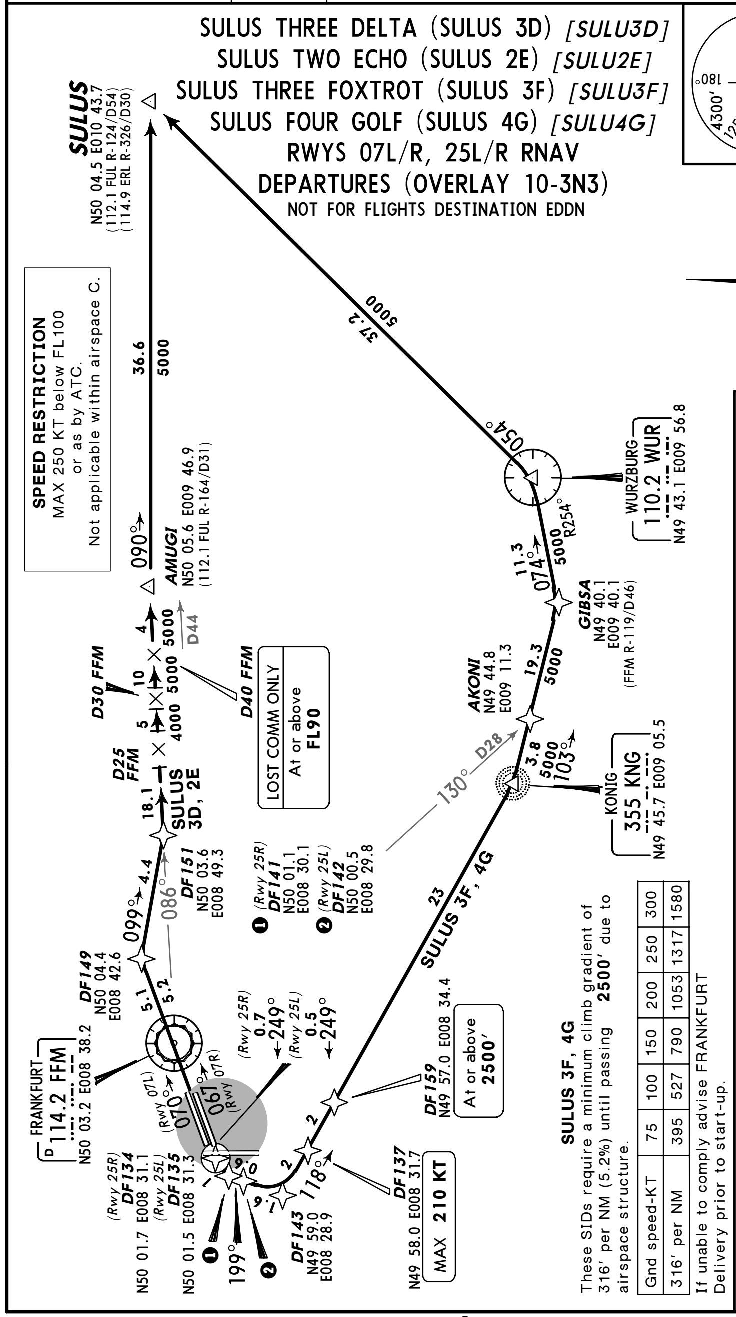
EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 07 (10-3V5) Eff 25 Oct **RNAV SID (OVERLAY)**

*LANGEN Radar	Apt Elev	
SULUS 3D, 2E: 120.15 / SULUS 3F, 4G: 136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

SULUS THREE DELTA (SULUS 3D) [SULU3D]
SULUS TWO ECHO (SULUS 2E) [SULU2E]
SULUS THREE FOXTROT (SULUS 3F) [SULU3F]
SULUS FOUR GOLF (SULUS 4G) [SULU4G]
RWYS 07L/R, 25L/R RNAV DEPARTURES (OVERLAY 10-3N3)
NOT FOR FLIGHTS DESTINATION EDDN



SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

LOST COMM ONLY
At or above **FL90**

SULUS 3F, 4G
These SIDs require a minimum climb gradient of 316' per NM (5.2%) until passing **2500'** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316' per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

SULUS 3D, 2E: Initial climb clearance **4000'**
SULUS 3F, 4G: Initial climb clearance **5000'**

SID	RWY	ROUTING
SULUS 3D, 2E	07L/R	(800'+) - DF149 - DF151 - AMUGI - SULUS.
SULUS 3F, 4G	25L/R	(800'+) - DF134 (25R)/DF135 (25L) - DF141 (25R)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500'+) - KNG - AKONI - GIBSA - WUR - SULUS.

CHANGES: RNAV SIDs SULUS 2F, 3G renumbered 3F, 4G & revised.

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Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007 JeppView 3.5.2.0

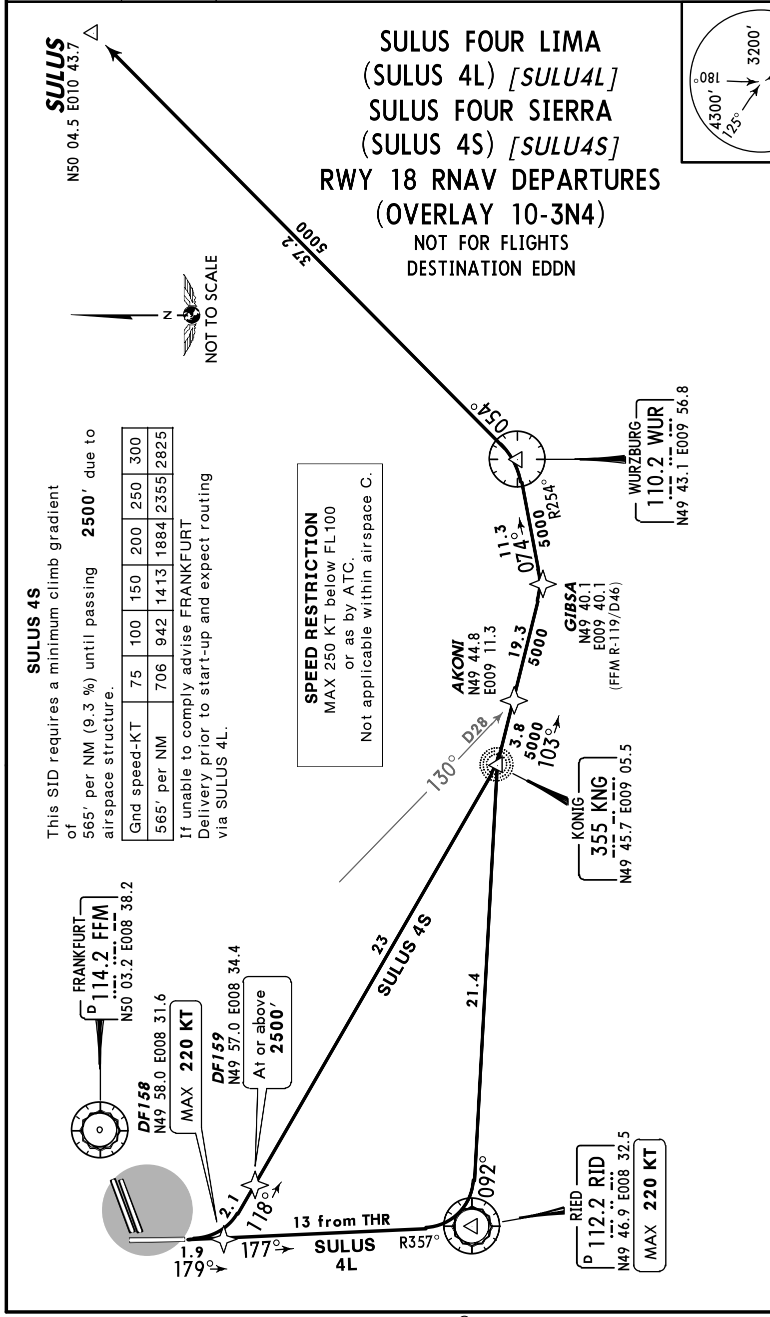
EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 07 (10-3V6) Eff 25 Oct **RNAV SID (OVERLAY)**

*LANGEN Radar	Apt Elev	
136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

SULUS FOUR LIMA (SULUS 4L) [SULU4L]
SULUS FOUR SIERRA (SULUS 4S) [SULU4S]
RWY 18 RNAV DEPARTURES (OVERLAY 10-3N4)
NOT FOR FLIGHTS DESTINATION EDDN



SULUS 4S
This SID requires a minimum climb gradient of 565' per NM (9.3 %) until passing **2500'** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565' per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SULUS 4L.

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000'**

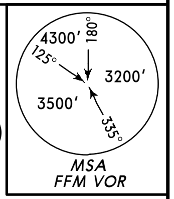
SID	ROUTING
SULUS 4L	(800'+) - RID (K220-) - KNG - AKONI - GIBSA - WUR - SULUS.
SULUS 4S	(800'+) - DF158 (K220-) - DF159 (2500'+) - KNG - AKONI - GIBSA - WUR - SULUS.

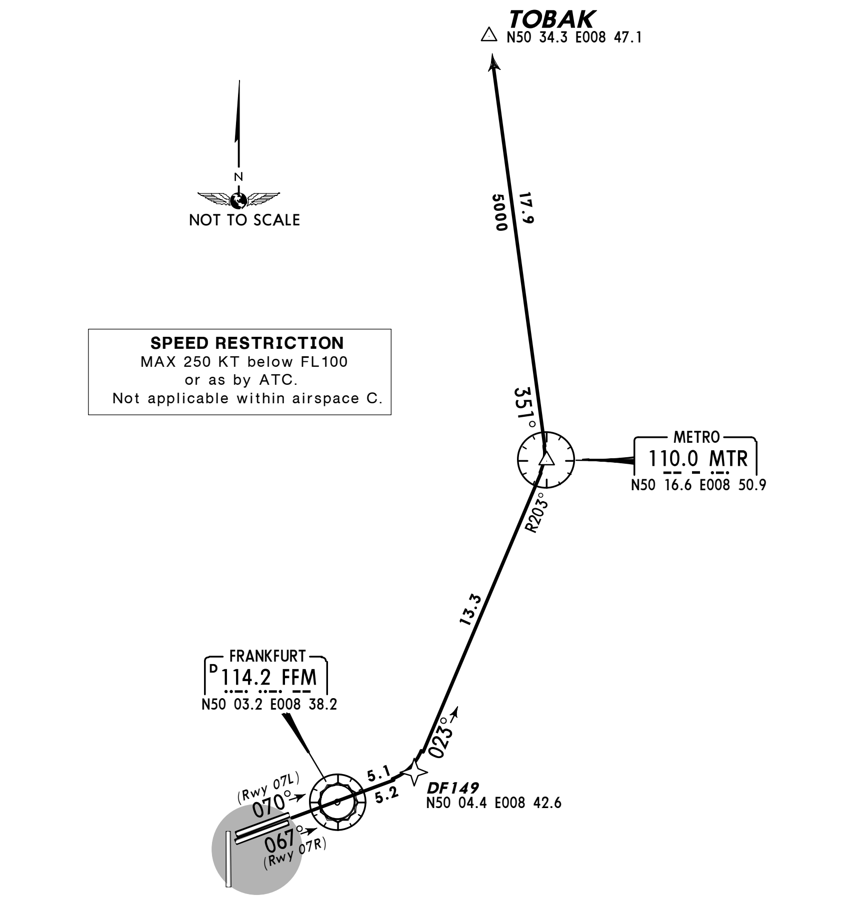
CHANGES: RNAV SID SULUS 3S renumbered 4S & revised.

*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

TOBAK FIVE DELTA (TOBAK 5D) *[TOBA5D]*
TOBAK FIVE ECHO (TOBAK 5E) *[TOBA5E]*
RWYS 07L/R RNAV DEPARTURES (OVERLAY 10-3N6)

NOT FOR FLIGHTS CONTINUING VIA
AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

ROUTING

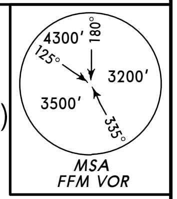
(800′+) - DF149 - MTR - TOBAK.

CHANGES: RNAV SIDs renumbered.

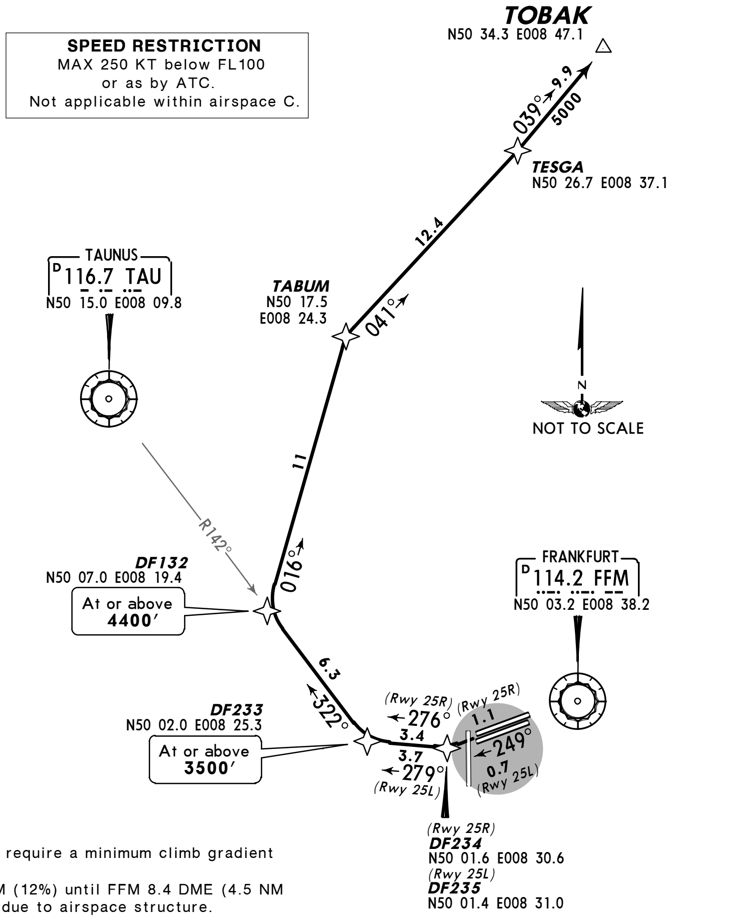
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

TOBAK TWO FOXTROT (TOBAK 2F) *[TOBA2F]*
TOBAK TWO JULIETT (TOBAK 2J) *[TOBA2J]*
RWYS 25L/R RNAV DEPARTURES (OVERLAY 10-3N7)

NOT FOR FLIGHTS CONTINUING VIA
AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
729′ per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

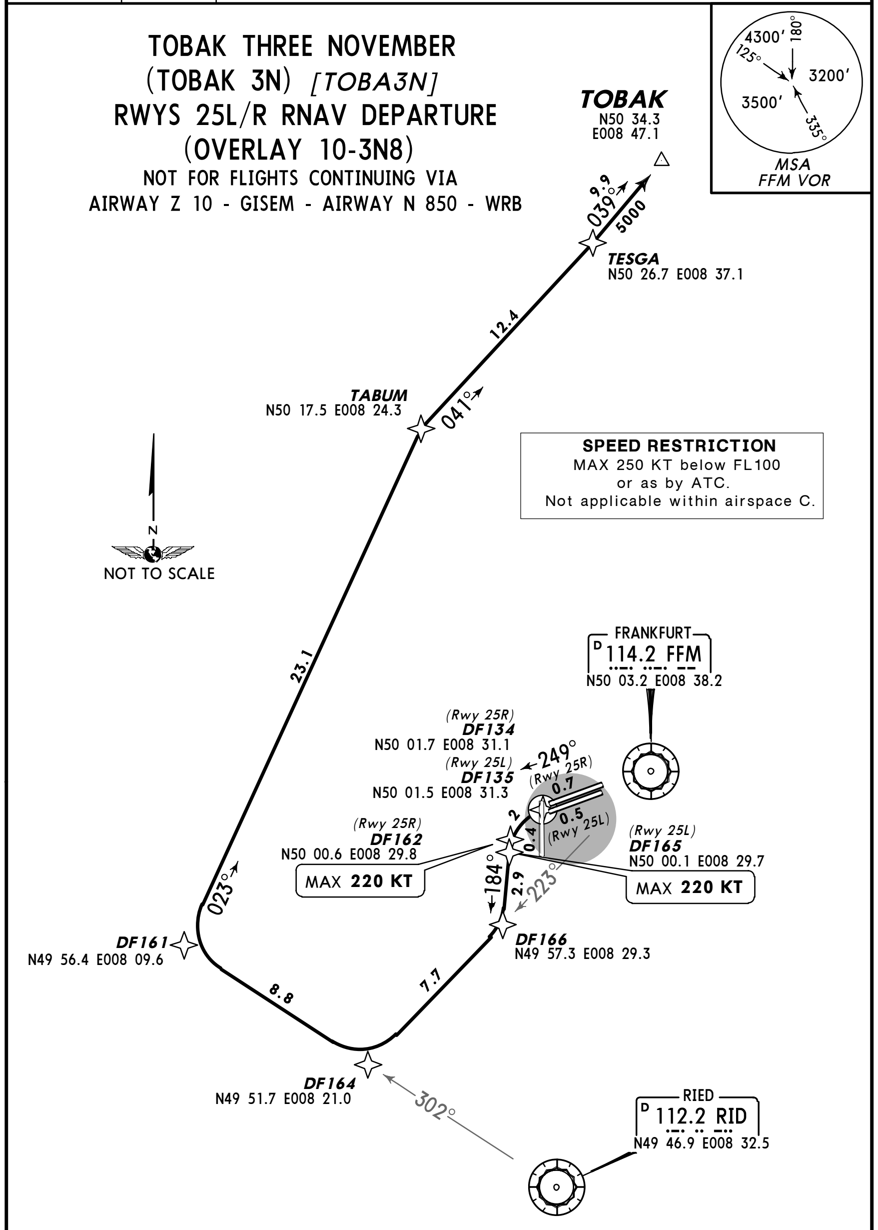
(800′+) - DF234 (25R)/DF235 (25L) - DF233 **(3500′+)** - DF132 **(4400′+)** - TABUM - TESGA-TOBAK.

CHANGES: None.

*LANGEN Radar	Apt Elev	
120.15	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** For departure designation refer to 10-1P pages.

TOBAK THREE NOVEMBER (TOBAK 3N) [TOBA3N] RWYS 25L/R RNAV DEPARTURE (OVERLAY 10-3N8)

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB



Initial climb clearance **5000'**

ROUTING

(800'+) - DF134 (25R)/DF135 (25L) - DF162 (25R; K220-)/DF165 (25L; K220-) - DF166 - DF164 - DF161 - TABUM - TESGA - TOBAK.

CHANGES: Restriction in chart heading revised.

*LANGEN Radar		Apt Elev	
TOBAK 2S 120.15	TOBAK 3T 136.12	364'	Trans level: By ATC Trans alt: 5000' **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to 10-1P pages.

TOBAK TWO SIERRA (TOBAK 2S) [TOBA2S]

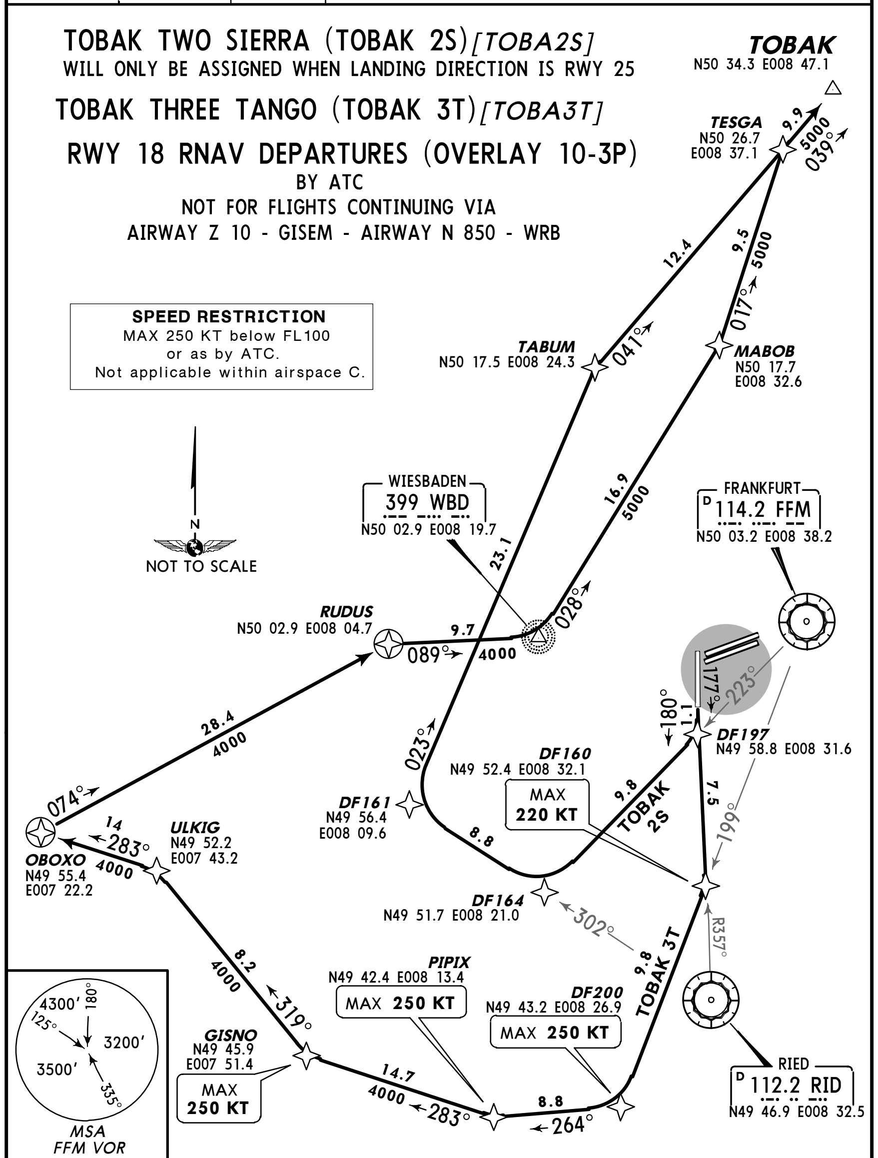
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25

TOBAK THREE TANGO (TOBAK 3T) [TOBA3T]

RWY 18 RNAV DEPARTURES (OVERLAY 10-3P)

BY ATC

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z 10 - GISEM - AIRWAY N 850 - WRB



Initial climb clearance **4000'**

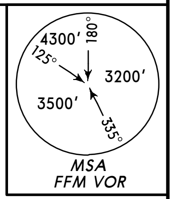
SID	ROUTING
TOBAK 2S	**(800'+) -** DF197 - DF164 - DF161 - TABUM - TESGA - TOBAK.
TOBAK 3T	**(800'+) -** DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - WBD - MABOB - TESGA - TOBAK.

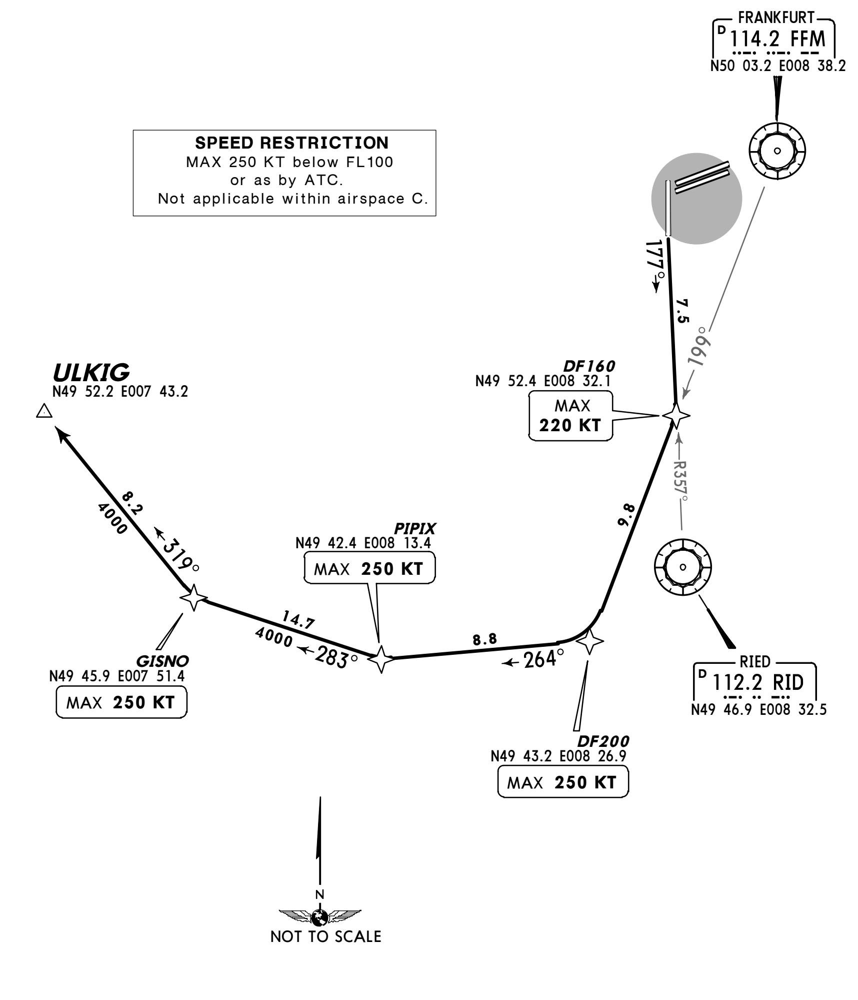
CHANGES: Restriction in chart heading revised.

LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4C). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles. **4.** Wind shears and increased turbulences must be expected when winds heavy. **5.** For departure designation refer to page 10-4.

ULKIG THREE UNIFORM (ULKIG 3U) *[ULKI3U]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3Q)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y 180/Y 181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y 180 - DIK RFL





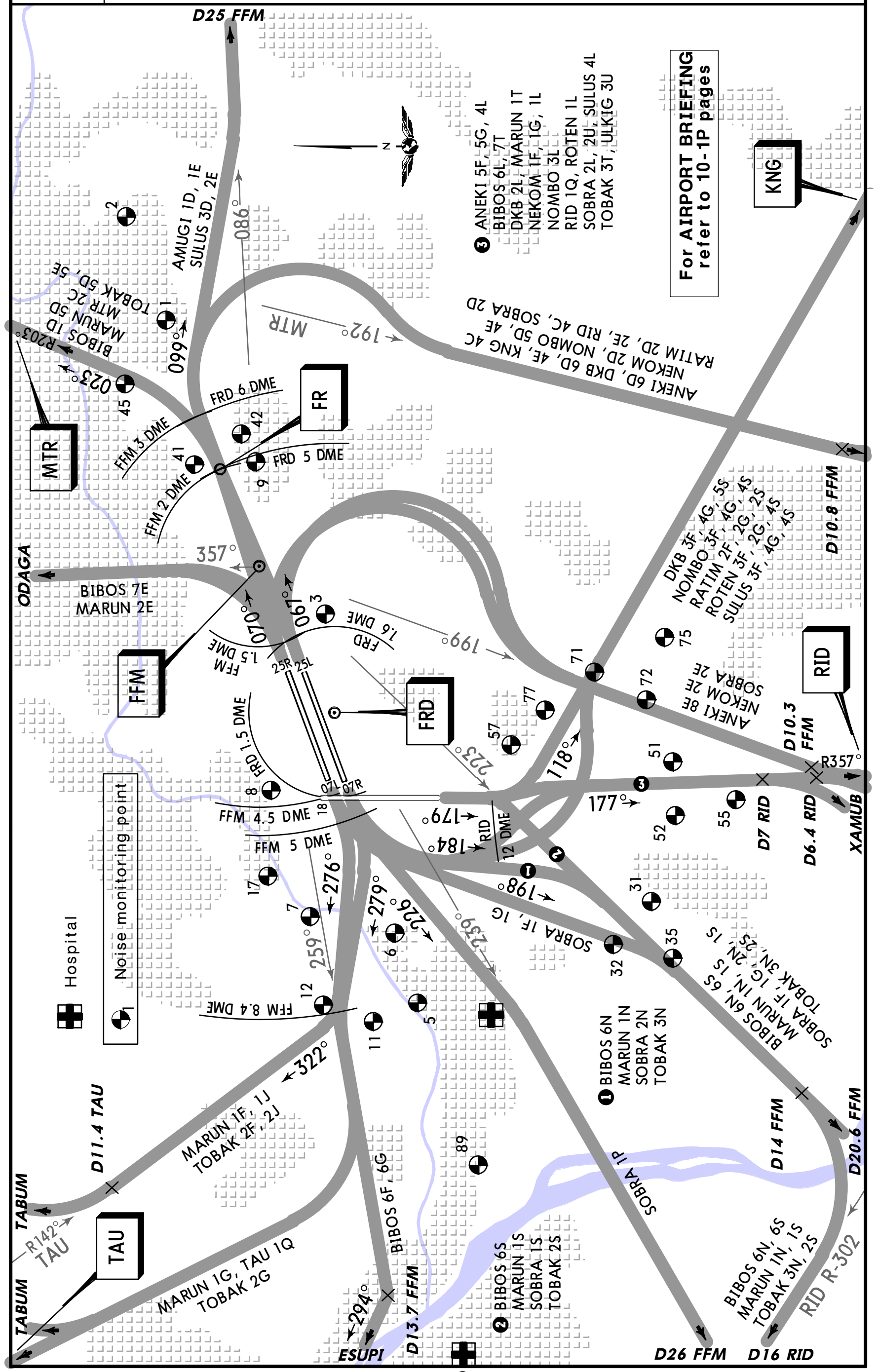
Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG.

CHANGES: SID renumb; MSA; communications; chart reindexed.

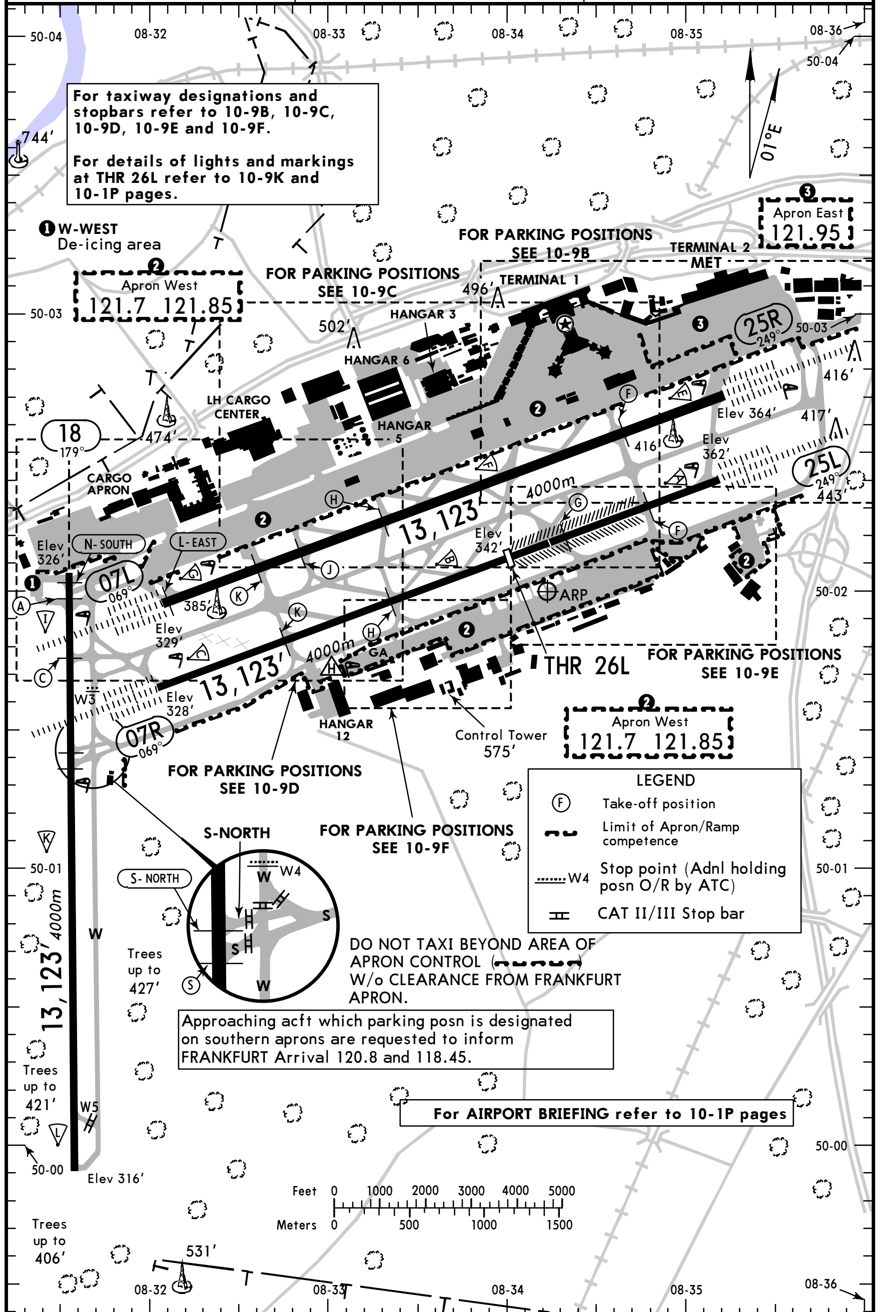
Apt Elev 364′	NOISE ABATEMENT



CHANGES: SIDs renumbered.

*ATIS Departure	ACARS:	FRANKFURT Delivery (Initial call and Start-up clearance)	*Ground	Apron	West		East
118.72	DCL	121.9	121.8		121.7	121.85	121.95

Tower	*Tower DEP via RWY 18	FRANKFURT Departure
119.9	124.85	120.15 136.12



ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07L	HIRL ❶CL ❷ALSF-II TDZ REIL PAPI-L (3.0°) ❸	RVR		11,975' *3650m*	❺	197' *60m*
25R	HIRL ❶CL ❷ALSF-II TDZ REIL PAPI-L (3.0°) ❹	RVR				

PAPI systems: For all acft on ILS CAT I approaches PAPI is only usable up to a height of 200' referring to the respective threshold.

❶ spacing 60m. ❷ spacing 15m.
❸ HST-Mto & HST-Fto
❹ HST-Gto, HST-Ato, HST-Hto, HST-Jto
❺ TAKE-OFF RUN AVAILABLE

RWY 07L:

From rwy head	13,123'(4000m)
position L-EAST	12,927'(3940m)
position K	10,866'(3312m)
position J	9882'(3012m)
position H	7913'(2412m)

RWY 25R:

From rwy head	13,123'(4000m)
position F	10,689'(3258m)

RWY			Threshold	Glide Slope	TAKE-OFF	WIDTH
07R	HIRL ❼CL ❽ALSF-II TDZ REIL PAPI-L (3.0°) ❾	RVR		11,975' *3650m*	⓫	148' *45m*
❻25L	HIRL ❼CL ❽ALSF-II TDZ REIL PAPI-L (3.0°) ❿	RVR		12,021' *3664m*		
THR 26L	HIRL ❼CL ❽HIALS SFL TDZ PAPI-L (3.0°)	RVR	8202' *2500m*	7143' *2177m*	NA	

PAPI systems: For all acft on ILS CAT I approaches PAPI is only usable up to a height of 200' referring to the respective threshold.

❻ TDZ Rwy 25L grooved.
❼ spacing 60m. ❽ spacing 15m.
❾ HST-Cto, HST-Gto & HST-Fto
❿ HST-Hto, HST-Jto, HST-Kto & HST-Rto
⓫ TAKE-OFF RUN AVAILABLE

RWY 07R:

From rwy head	13,123'(4000m)
position K	10,105'(3080m)
position H	7644'(2330m)

RWY 25L:

From rwy head	13,123'(4000m)
position F	11,450'(3490m)
position G	9350'(2850m)
position H	5607'(1709m)

RWY			Threshold	Glide Slope	TAKE-OFF	WIDTH
18	HIRL *(60m)* CL *(15m)*	RVR	NA		⓬	148' *45m*

CAUTION: In cases of strong winds, wind shears and increased turbulence can be expected on rwy 18.

⓬ TAKE-OFF RUN AVAILABLE

RWY 18:

From rwy head	13,025'(3970m)
position N-SOUTH	12,746'(3885m)
position A	12,467'(3800m)
position C	11,319'(3450m)
position S-NORTH	9203'(2805m)
position S	8973'(2735m)

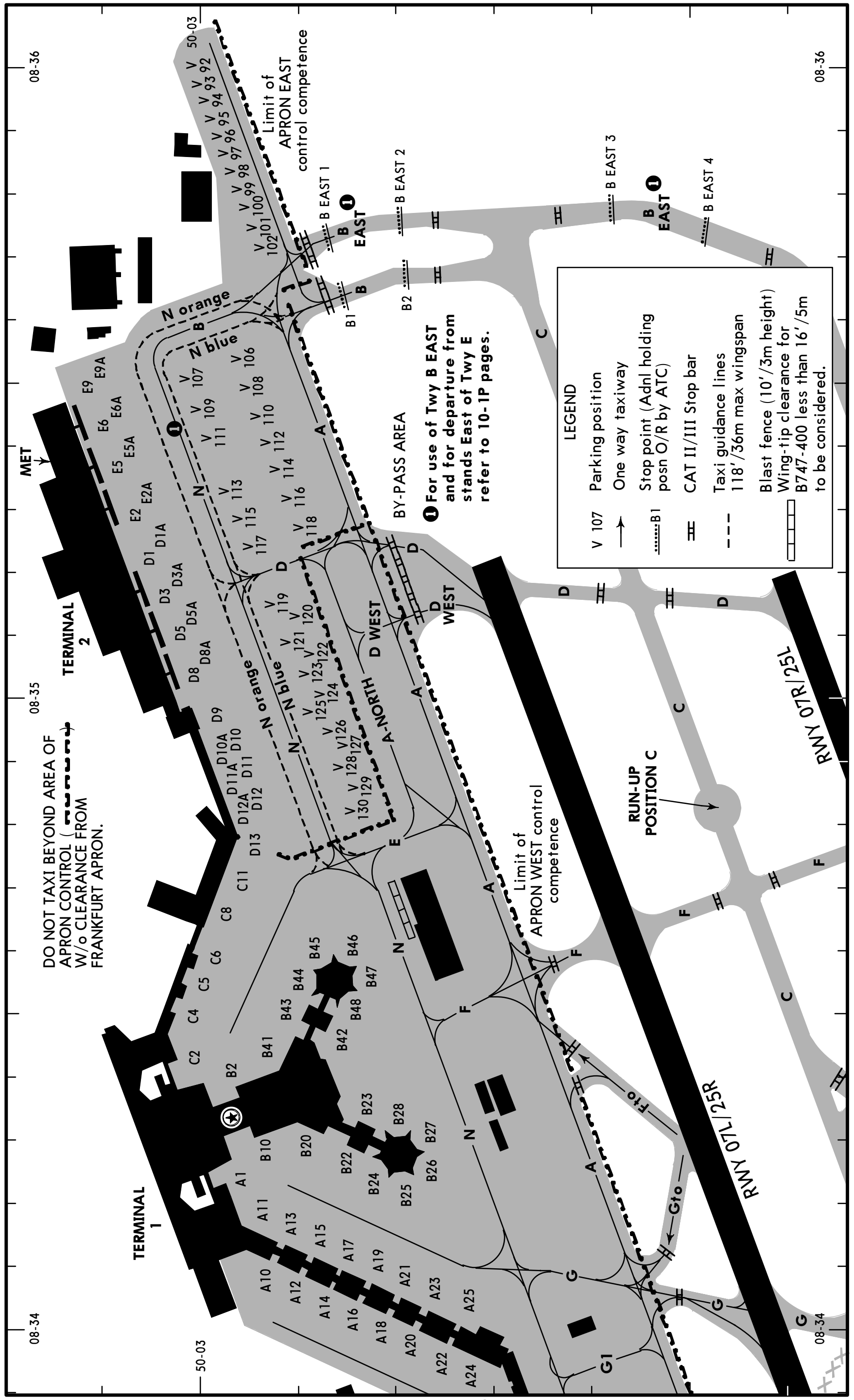
JAR-OPS

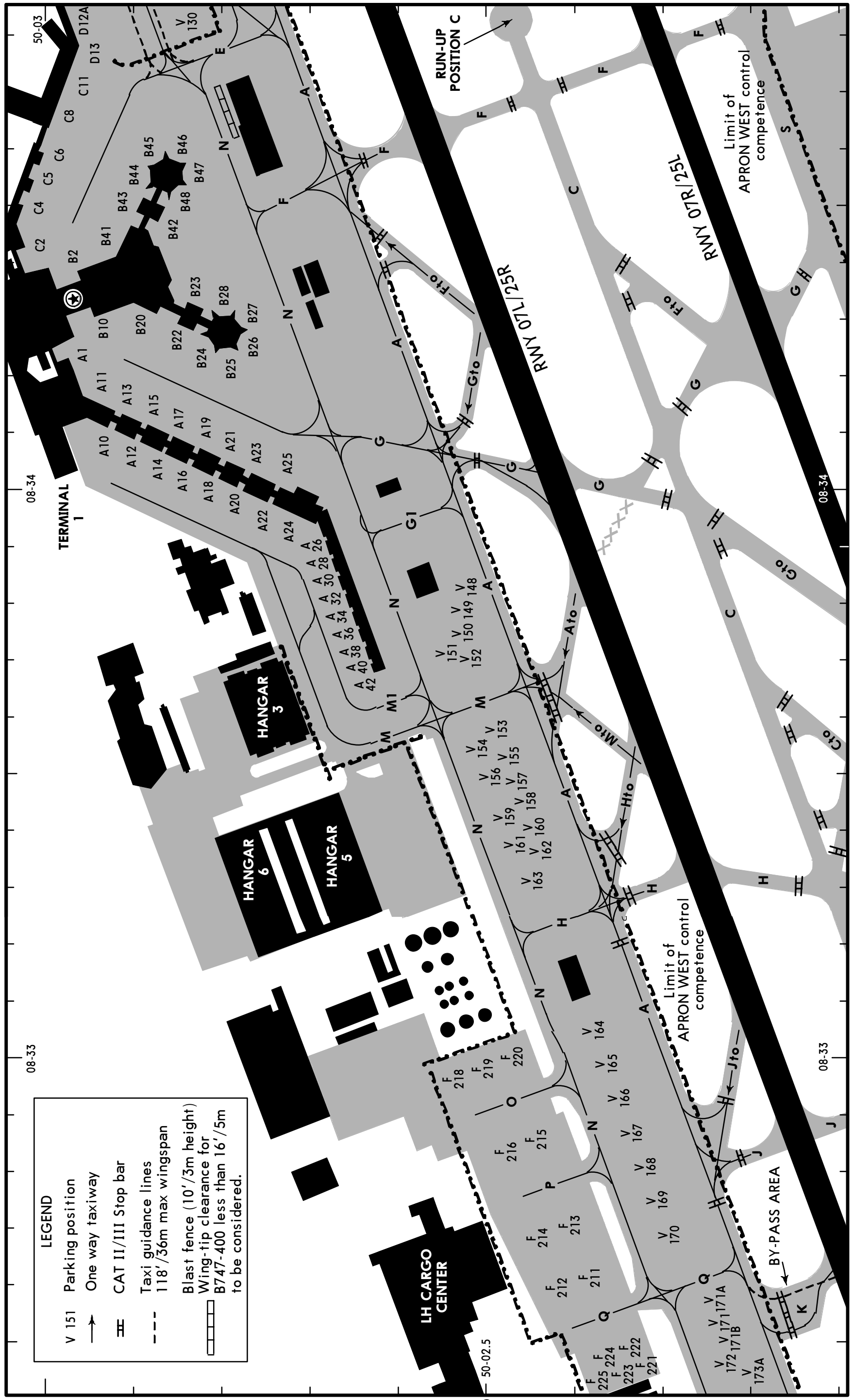
TAKE-OFF 1

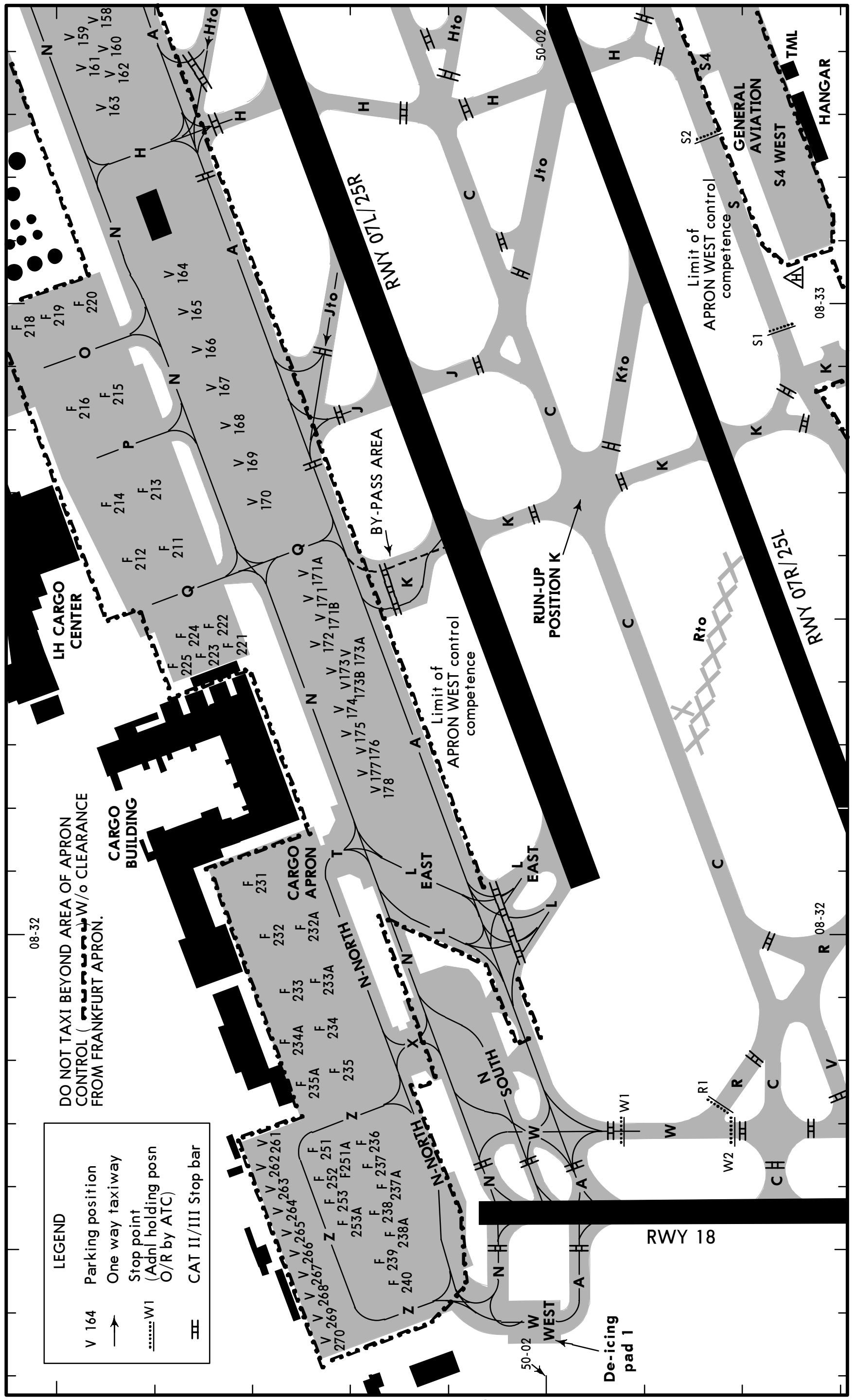
Rwys 07L/25R, 07R/25L, 18

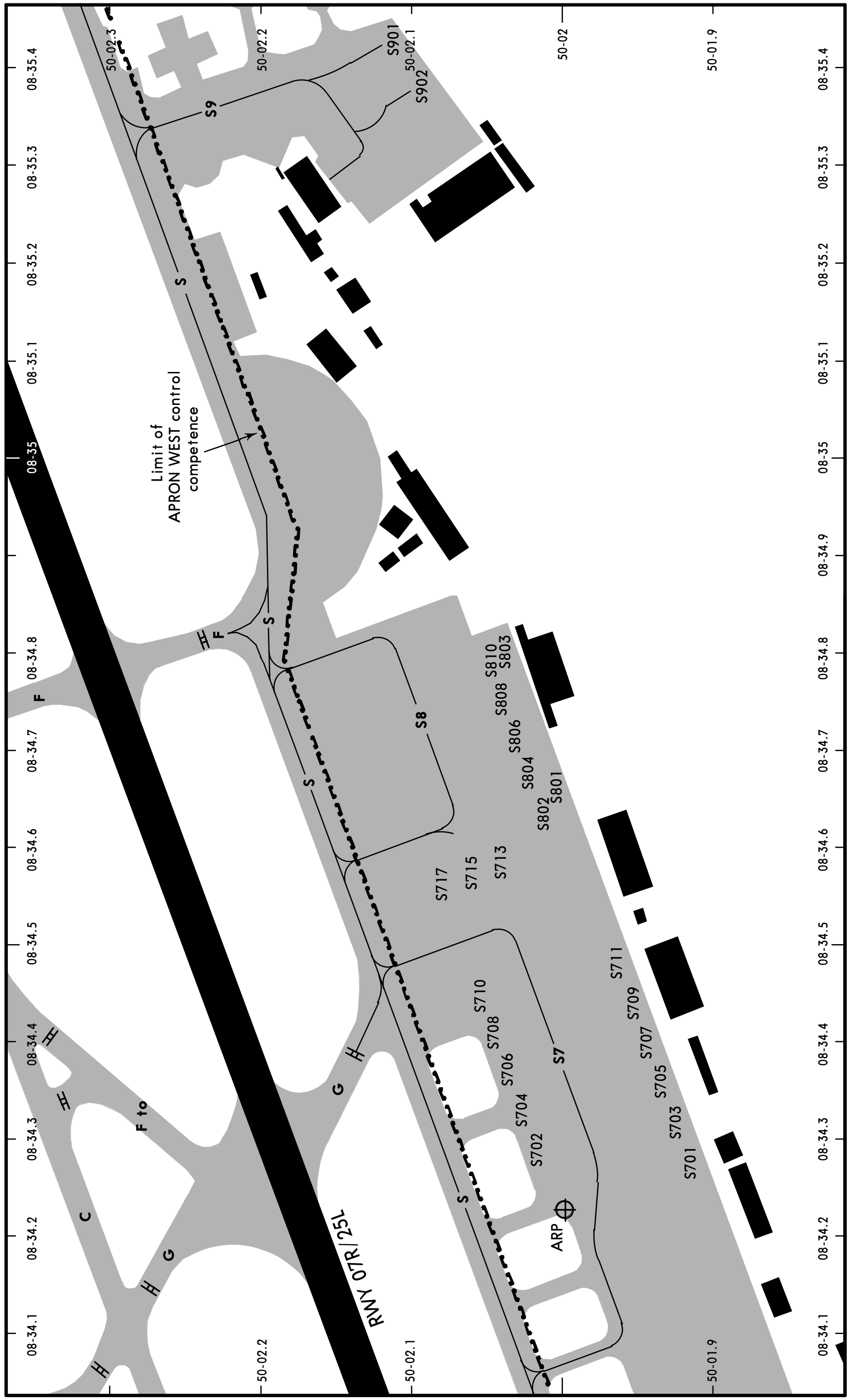
	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

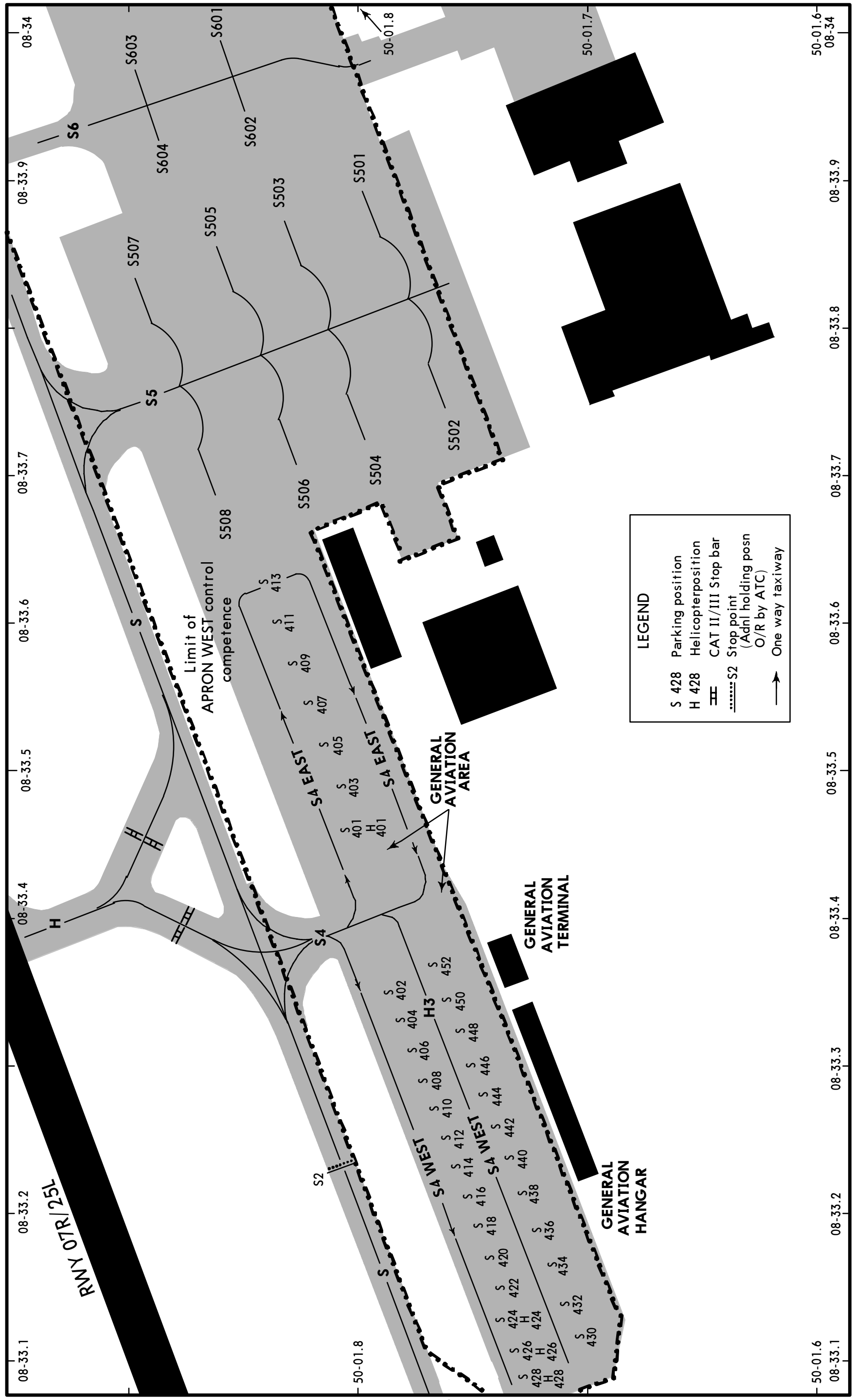
1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.


LEGEND
V 107 Parking position
One way taxiway
B1 Stop point (Adnl holding posn O/R by ATC)
CAT II/III Stop bar
Taxi guidance lines 118'/36m max wingspan
Blast fence (10'/3m height) Wing-tip clearance for B747-400 less than 16'/5m to be considered.
1 For use of Twy B EAST and for departure from stands East of Twy E refer to 10-1P pages.
BY-PASS AREA
DO NOT TAXI BEYOND AREA OF APRON CONTROL W/o CLEARANCE FROM FRANKFURT APRON.
Limit of APRON EAST control competence
Limit of APRON WEST control competence
RUN-UP POSITION C
TERMINAL 1
TERMINAL 2
MET
RWY 07R/25L
RWY 07L/25R
N orange
N blue
A-NORTH
D WEST
B EAST
B EAST 2
B EAST 3
B EAST 4


LEGEND
V 151 Parking position
One way taxiway
CAT II/III Stop bar
Taxi guidance lines 118'/36m max wingspan
Blast fence (10'/3m height) Wing-tip clearance for B747-400 less than 16'/5m to be considered.
RUN-UP POSITION C
Limit of APRON WEST control competence
BY-PASS AREA
TERMINAL 1
HANGAR 3
HANGAR 5
HANGAR 6
LH CARGO CENTER
RWY 07R/25L
RWY 07L/25R


RWY 07L/25R
RWY 07R/25L
RWY 18
BY-PASS AREA
RUN-UP POSITION K
Limit of APRON WEST control competence
GENERAL AVIATION
S4 WEST
HANGAR
TML
LH CARGO CENTER
CARGO BUILDING
CARGO APRON
N-NORTH
N SOUTH
L EAST
W WEST
De-icing pad 1
DO NOT TAXI BEYOND AREA OF APRON CONTROL W/o CLEARANCE FROM FRANKFURT APRON.
LEGEND
V 164 Parking position
One way taxiway
W1 Stop point (Adnl holding posn O/R by ATC)
CAT II/III Stop bar


RWY 07R/25L
Limit of APRON WEST control competence
ARP
S9
S8
S7
S901
S902



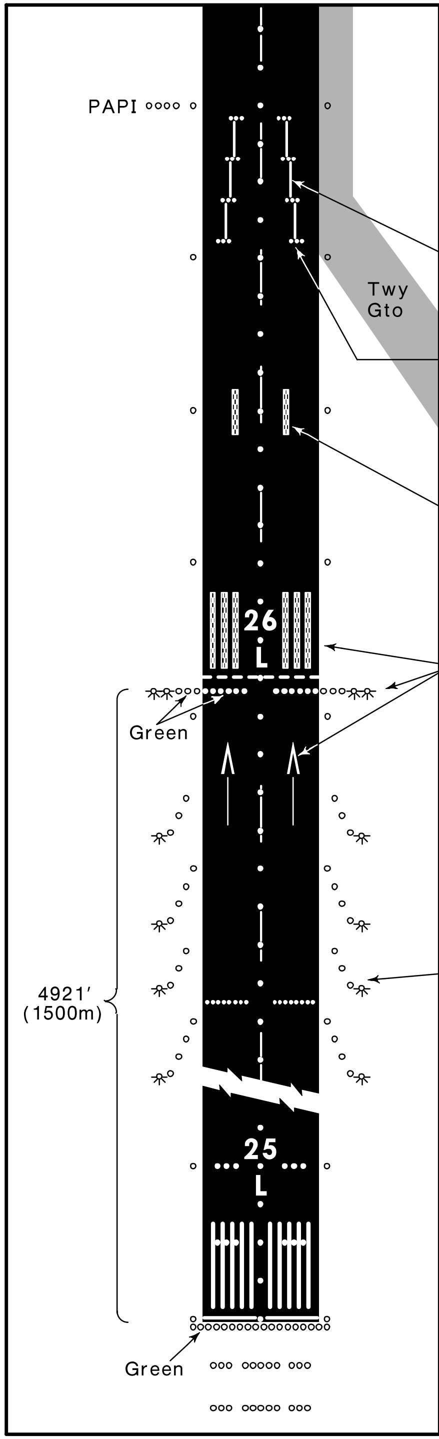
INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A1	N50 03.0 E008 34.3	S401, S402	N50 01.8 E008 33.4
A10	N50 02.9 E008 34.1	S403	N50 01.8 E008 33.5
A11	N50 03.0 E008 34.2	S404	N50 01.8 E008 33.4
A12	N50 02.9 E008 34.1	S405	N50 01.8 E008 33.5
A13	N50 02.9 E008 34.2	S406	N50 01.8 E008 33.3
A14, A15	N50 02.9 E008 34.1	S407	N50 01.8 E008 33.5
A16	N50 02.8 E008 34.1	S408	N50 01.8 E008 33.3
A17	N50 02.9 E008 34.1	S409	N50 01.8 E008 33.6
A18, A19	N50 02.8 E008 34.1	S410	N50 01.8 E008 33.3
A20	N50 02.8 E008 34.0	S411	N50 01.8 E008 33.6
A21	N50 02.8 E008 34.1	S412	N50 01.8 E008 33.3
A22	N50 02.7 E008 34.0	S413	N50 01.8 E008 33.6
A23	N50 02.8 E008 34.0	S414	N50 01.8 E008 33.3
A24, A25	N50 02.7 E008 34.0	S416 thru S420	N50 01.8 E008 33.2
A26 thru A30	N50 02.7 E008 33.9	S422, S424	N50 01.7 E008 33.2
A32, A34	N50 02.7 E008 33.8	S426 thru S432	N50 01.7 E008 33.1
A36	N50 02.6 E008 33.8	S434 thru S440	N50 01.7 E008 33.2
A38 thru A42	N50 02.6 E008 33.7	S442 thru S448	N50 01.8 E008 33.3
B2	N50 03.0 E008 34.4	S450, S452	N50 01.8 E008 33.4
B10, B20	N50 02.9 E008 34.3	S501	N50 01.8 E008 33.9
B22 thru B28	N50 02.8 E008 34.3	S502	N50 01.8 E008 33.7
B41 thru B43	N50 02.9 E008 34.5	S503	N50 01.8 E008 33.9
B44 thru B46	N50 02.9 E008 34.6	S504	N50 01.8 E008 33.7
B47	N50 02.8 E008 34.6	S505	N50 01.9 E008 33.8
B48	N50 02.9 E008 34.5	S506	N50 01.8 E008 33.6
C2, C4	N50 03.0 E008 34.5	S507	N50 01.9 E008 33.8
C5, C6	N50 03.0 E008 34.6	S508	N50 01.9 E008 33.6
C8, C11	N50 03.0 E008 34.7	S601	N50 01.9 E008 34.0
D1 thru D3A	N50 03.1 E008 35.2	S602	N50 01.9 E008 33.9
D5 thru D8A	N50 03.0 E008 35.1	S603	N50 01.9 E008 34.0
D9	N50 03.0 E008 35.0	S604	N50 01.9 E008 33.9
D10 thru D11A	N50 03.0 E008 34.9	S701	N50 01.9 E008 34.3
D12, D12A, D13	N50 03.0 E008 34.8	S702	N50 02.0 E008 34.3
E2, E2A	N50 03.1 E008 35.3	S703	N50 01.9 E008 34.3
E5 thru E6A	N50 03.1 E008 35.4	S704	N50 02.0 E008 34.3
E9, E9A	N50 03.1 E008 35.5	S705	N50 01.9 E008 34.4
F211	N50 02.4 E008 32.7	S706	N50 02.0 E008 34.4
F212	N50 02.4 E008 32.6	S707	N50 01.9 E008 34.4
F213, F214	N50 02.4 E008 32.7	S708	N50 02.0 E008 34.4
F215	N50 02.4 E008 32.9	S709	N50 01.9 E008 34.4
F216	N50 02.5 E008 32.8	S710	N50 02.1 E008 34.4
F218 thru F220	N50 02.5 E008 33.0	S711	N50 01.9 E008 34.5
F221 thru F223	N50 02.3 E008 32.5	S713	N50 02.0 E008 34.6
F224, F225	N50 02.4 E008 32.4	S715, S717	N50 02.1 E008 34.6
F231	N50 02.3 E008 32.1	S801	N50 02.0 E008 34.7
F232, F232A	N50 02.3 E008 32.0	S802	N50 02.0 E008 34.6
F233, F233A, F234	N50 02.3 E008 31.9	S803	N50 02.0 E008 34.8
F234A	N50 02.3 E008 31.8	S804	N50 02.0 E008 34.7
F235	N50 02.2 E008 31.8	S806, S808, S810	N50 02.0 E008 34.8
F235A, F236	N50 02.3 E008 31.8	S901, S902	N50 02.1 E008 35.4
F237, F237A, F238	N50 02.2 E008 31.6		
F238A thru F240	N50 02.2 E008 31.5		
H401	N50 01.8 E008 33.4		
H424	N50 01.7 E008 33.2		
H426, H428	N50 01.7 E008 33.1		

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
V92 thru V94	N50 03.0 E008 36.0	V160 thru V162	N50 02.4 E008 33.4
V95 thru V98	N50 03.0 E008 35.9	V163	N50 02.4 E008 33.3
V99 thru V101	N50 03.0 E008 35.8	V164	N50 02.4 E008 33.1
V102	N50 02.9 E008 35.7	V165	N50 02.3 E008 33.0
V106	N50 03.0 E008 35.6	V166, V167	N50 02.3 E008 32.9
V107 thru V111	N50 03.0 E008 35.5	V168, V169	N50 02.3 E008 32.8
V112, V113	N50 03.0 E008 35.4	V170	N50 02.3 E008 32.7
V114	N50 02.9 E008 35.4	V171 thru V173B	N50 02.2 E008 32.5
V115 thru V118	N50 02.9 E008 35.3	V174	N50 02.2 E008 32.4
V119, V120	N50 02.9 E008 35.2	V175 thru V177	N50 02.2 E008 32.3
V121 thru V123	N50 02.9 E008 35.1	V178	N50 02.1 E008 32.2
V124, V125	N50 02.9 E008 35.0	V251, V251A	N50 02.2 E008 31.7
V126, V127	N50 02.8 E008 35.0	V252, V253, V253A	N50 02.2 E008 31.6
V128 thru V130	N50 02.8 E008 34.9	V261	N50 02.3 E008 31.7
V148, V149	N50 02.5 E008 33.8	V262 thru V264	N50 02.3 E008 31.6
V150	N50 02.5 E008 33.8	V265 thru V267	N50 02.3 E008 31.5
V151, 152	N50 02.5 E008 33.7	V268 thru V270	N50 02.2 E008 31.4
V153 thru 155	N50 02.5 E008 33.6		
V156, V157	N50 02.5 E008 33.5		
V158, V159	N50 02.4 E008 33.5		

CHANGES: V148 & V149 added.



HALS marking and lighting elements
In addition to the existing lighting and marking elements on rwy 25L the airport had to develop rwy lighting and markings for the second threshold that could be clearly differentiated from the existing ones. To achieve this requirement, the second threshold had to be deviated from present international standards. Only the 300m bar and the PAPI will remain unchanged.

Touchdown Point Marking
A pair of three single white stripes which are located one behind the other and arranged in steps towards the rwy axis.

Touchdown Zone Lighting
The lighting is installed in the area of the Touchdown Point Marking and will emphazise their shape. Three high intensity white lights are located at the outer ends of each individual element of the Touchdown Point Marking.

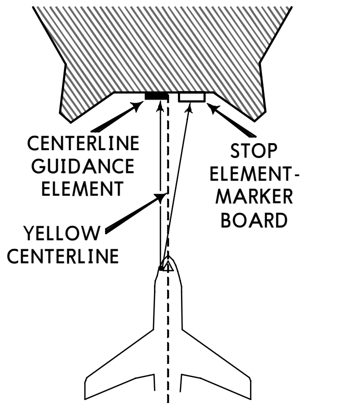
Touchdown Zone Marking
A pair of rectangular markings which are similar to a checker pattern and appear as unbroken white areas from a greater distance.

Threshold Lighting and Marking
Row of high-intensity green surface lights. In the central portion a gate is formed not exceeding 40% of the rwy width. A clear differentation from the first threshold will be achieved through an extension of the light bars beyond the rwy edge. Two additional alternating flashing lights are installed at the light bars outer edges.
The rectangular markings show the same checker board structure as the threshold marking. The gap within the markings will carry the designator 26L.
Threshold 26L is marked by two parallel arrows located in front of the transverse stripe.

Approach Lighting System
HIALS provided on either side of the rwy over a distance of 900m from THR 26L. It consists of white light rows which are arranged in a staggered pattern in the direction of approach. Sequenced flashing lights are installed in the outer portion of the HIALS.

CHANGES: Chart reindexed.

NOSE-IN PARKING PROCEDURES



GENERAL

The visual guidance system for nose-in parking positions AGNIS (Aircraft Guidance for Nose-In Stands) consists of the following elements:

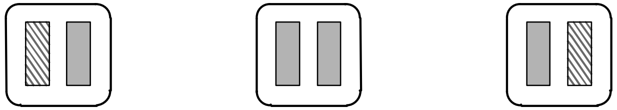
1. CENTERLINE GUIDANCE ELEMENT
2. YELLOW CENTERLINE
3. STOP ELEMENT - MARKER BOARD

CAUTION
The system is aligned with the LEFT hand pilot seat only. In case of AGNIS failure, nose-in positioning will be guided by marshaller.

NOTE: Nose-in parking aircraft (on push-back position) have to use towing truck when leaving parking position.

CENTERLINE GUIDANCE ELEMENT

Approach the parking position along the yellow centerline so that both vertical slots in the Centerline Guidance Element show GREEN. Adjustments to the left or right shall always be made towards the GREEN.



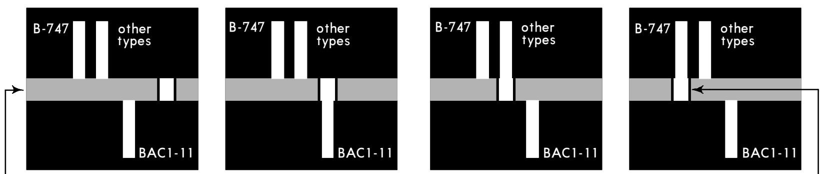
LEFT of centerline. Turn towards GREEN. (RIGHT)
Aircraft on centerline.
RIGHT of centerline. Turn towards GREEN. (LEFT)

STOP ELEMENT - MARKER BOARD

The aircraft is stopped at the correct position by means of the Stop Element. When the tubular light, visible through the horizontal slot in the marker board, registers in line with the appropriate vertical reference mark, the aircraft has reached the correct stopping position.

CAUTION
Be sure to select the correct vertical reference mark corresponding to your type of aircraft. Marker board layouts are different for the various nose-in parking positions.

AGNIS CENTRE LINE GUIDANCE STOP ELEMENT - MARKER BOARD



All types continue taxiing.
BAC 1-11 stop. Other types and B-747 continue taxiing.
Other types stop. B-747 continue taxiing.
B-747 stop.

SIGHTING SLOT
LIGHT TUBE

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Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007
JEPPESEN
JeppView 3.5.2.0

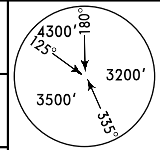
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	119.9	121.8

LOC IFNE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev / RWY
110.1	069°	1620′ (1291′)	529′ (200′)	Apt Elev 364′ RWY 329′

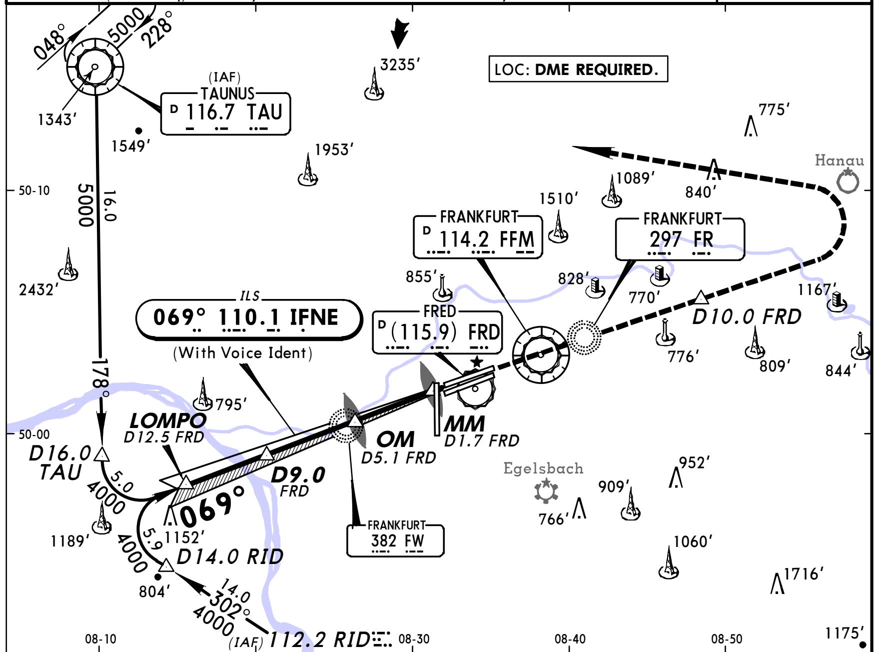
BRIEFING STRIP ™

MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

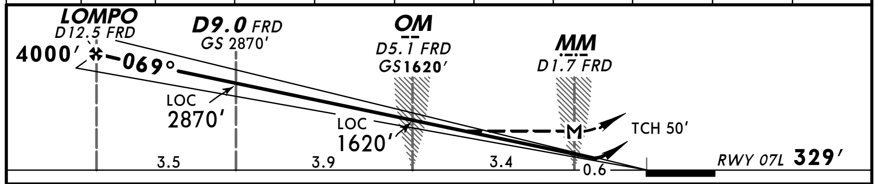
Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



MSA FFM VOR



LOC (GS out)	FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3500′	3190′	2870′	2550′	2230′	1910′	1590′	1270′	960′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00° or LOC Descent Gradient 5.2%	377	485	539	647	755	862
MAP at MM/D1.7 FRD						

ALSF-II REIL PAPI

D10.0 FRD ↑ 5000′ ↑ whichever is later, via FR 297

JAR-OPS STRAIGHT-IN LANDING RWY 07L

	ILS DA(H) 529′ (200′) FULL	ILS ALS out	LOC (GS out) MDA(H) 800′ (471′) FULL	LOC (GS out) ALS out
A	RVR 550m	RVR 1000m	RVR 1000m	RVR 1500m
B	RVR 550m	RVR 1000m	RVR 1200m	RVR 1500m
C	RVR 550m	RVR 1000m	RVR 1200m	RVR 2000m
D	RVR 550m	RVR 1000m	RVR 1600m	RVR 2000m

PANS OPS 4

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY

20 APR 07 (11-1A) **CAT II ILS Rwy 07L**

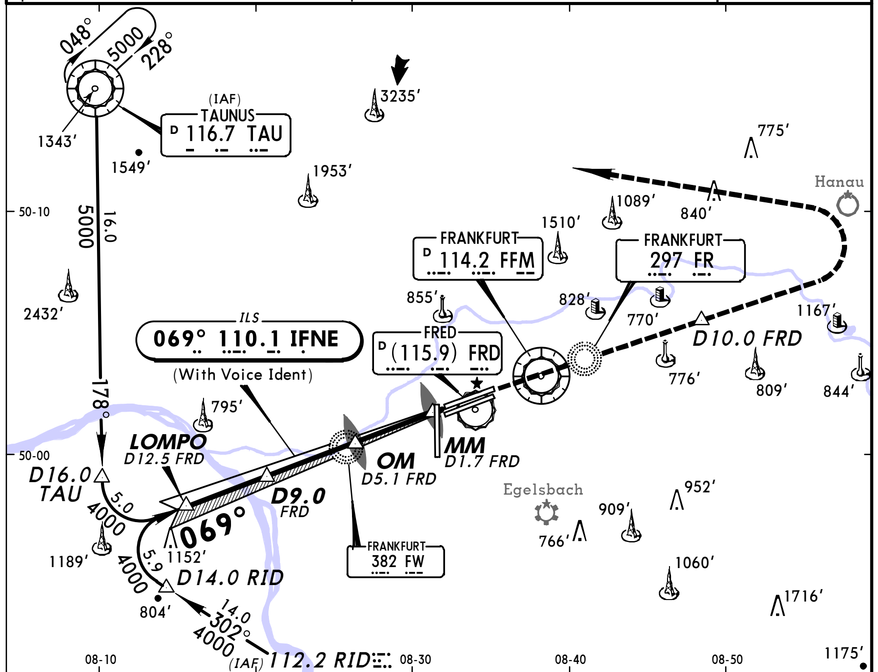
BRIEFING STRIP ™

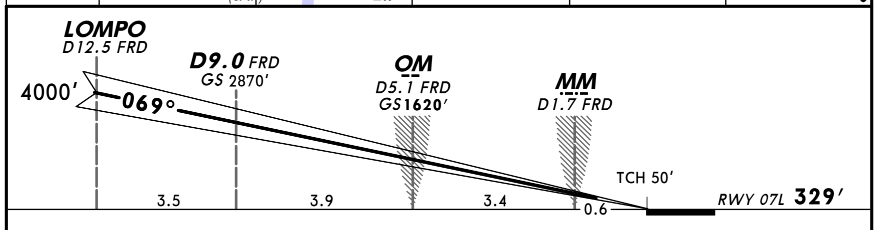
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	119.9	121.8

LOC IFNE	Final Apch Crs	GS OM	CAT II ILS RA DA(H)	Apt Elev	MSA FFM VOR
110.1	069°	1620′ (1291′)	RA 100′ 429′ (100′)	364′ RWY 329′	180° 4300′, 125° 3500′, 335° 3200′

MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Aircraft Certification Required.





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II REIL PAPI

D10.0 FRD | 5000′ whichever is later | via FR 297

JAR-OPS STRAIGHT-IN LANDING RWY **07L**

CAT II ILS
ABCD
RA 100′
DA(H) **429′** (100′)

RVR 300m **1**

1 Operators applying U.S. Ops Specs: Autoland or HGS required below RVR 350m.

PANS OPS 4

CHANGES: Communications.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY

12 OCT 07 (11-2) **Eff 25 Oct** **ILS or LOC Rwy 07R**

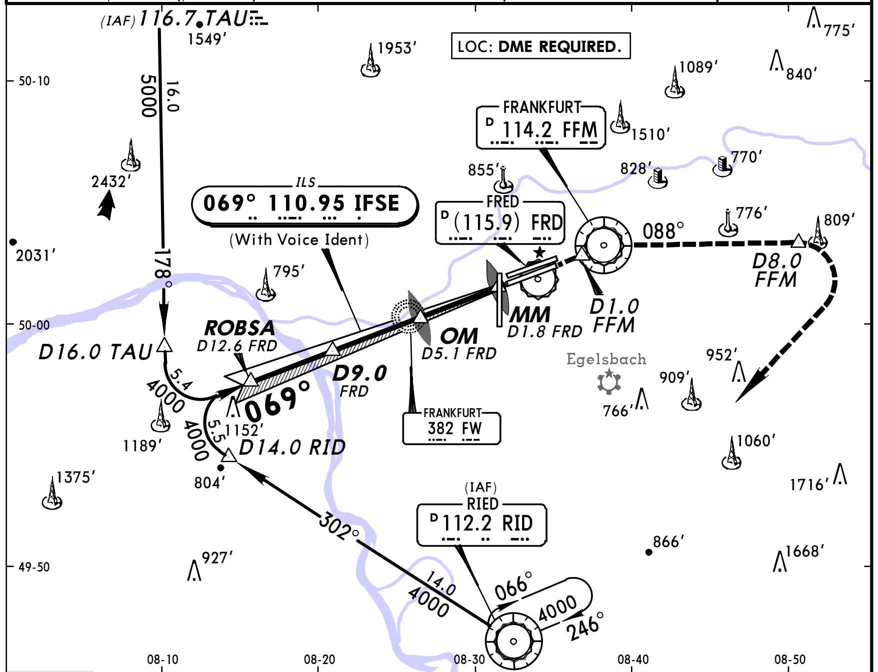
BRIEFING STRIP ™

*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

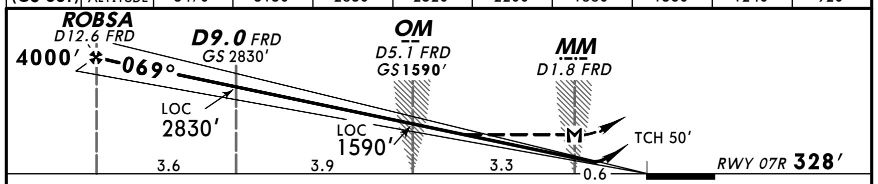
LOC IFSE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev	MSA FFM VOR
110.95	069°	1590′ (1262′)	528′ (200′)	364′ RWY 328′	180° 4300′, 125° 3500′, 335° 3200′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00° or LOC Descent Gradient 5.2%	377	485	539	647	755	862
MAP at MM/D1.8 FRD						

ALSF-II REIL PAPI

D1.0 inbound FFM

JAR-OPS STRAIGHT-IN LANDING RWY **07R**

	ILS DA(H) 528′ (200′) FULL	ILS ALS out	LOC (GS out) MDA(H) 790′ (462′) FULL	LOC (GS out) ALS out
A	RVR 550m	RVR 1000m	RVR 1000m	RVR 1500m
B	RVR 550m	RVR 1000m	RVR 1200m	RVR 1500m
C	RVR 550m	RVR 1000m	RVR 1200m	RVR 2000m
D	RVR 550m	RVR 1000m	RVR 1600m	RVR 2000m

PANS OPS 4

CHANGES: Communications. Missed approach.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 07 (11-2A) Eff 25 Oct

CAT II ILS Rwy 07R

*ATIS Arrival		LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

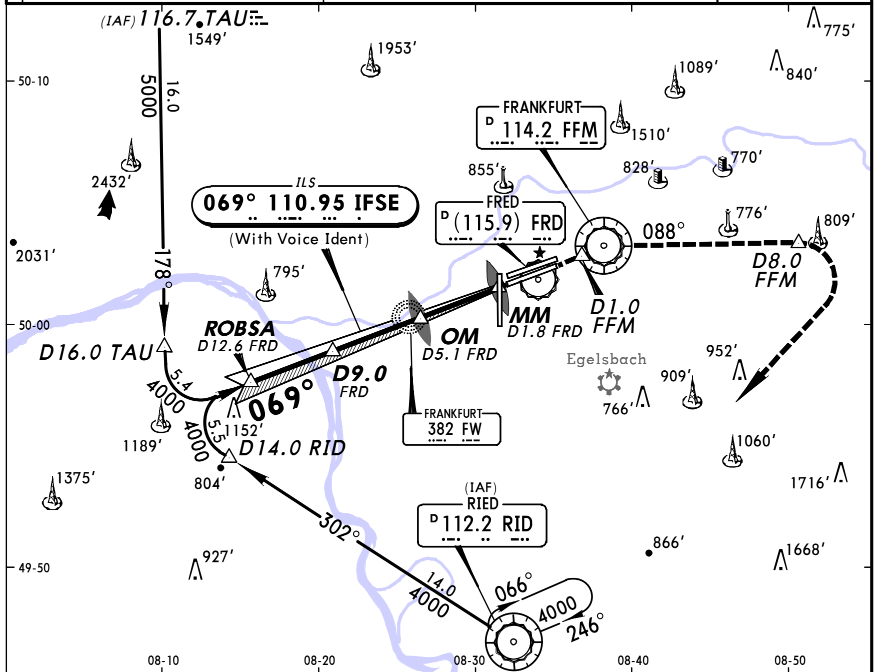
BRIEFING STRIP ™

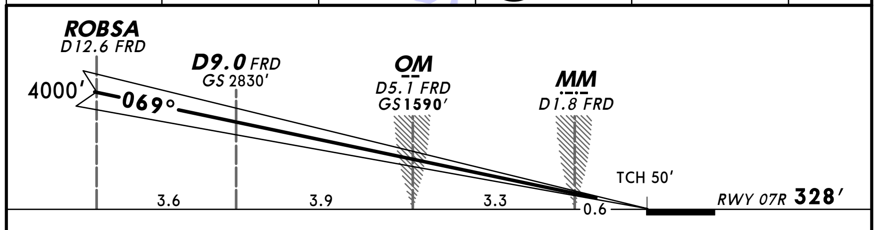
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev
IFSE 110.95	069°	OM 1590′ (1262′)	RA 101′ DA(H) 428′ (100′)	364′ RWY 328′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

MSA FFM VOR: 4300′, 3200′, 3500′ (180°, 125°, 335°)





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II, REIL, PAPI — D1.0 inbound FFM

JAR-OPS STRAIGHT-IN LANDING RWY 07R
CAT II ILS
ABCD
RA 101′
DA(H) 428′ (100′)

RVR 300m [1]

PANS OPS 4

[1] Operators applying U.S. Ops Specs: Autoland or HGS required below RVR 350m.

CHANGES: Communications. Missed approach.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 07 (11-3) Eff 25 Oct

ILS or LOC Rwy 25L

*ATIS Arrival		LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

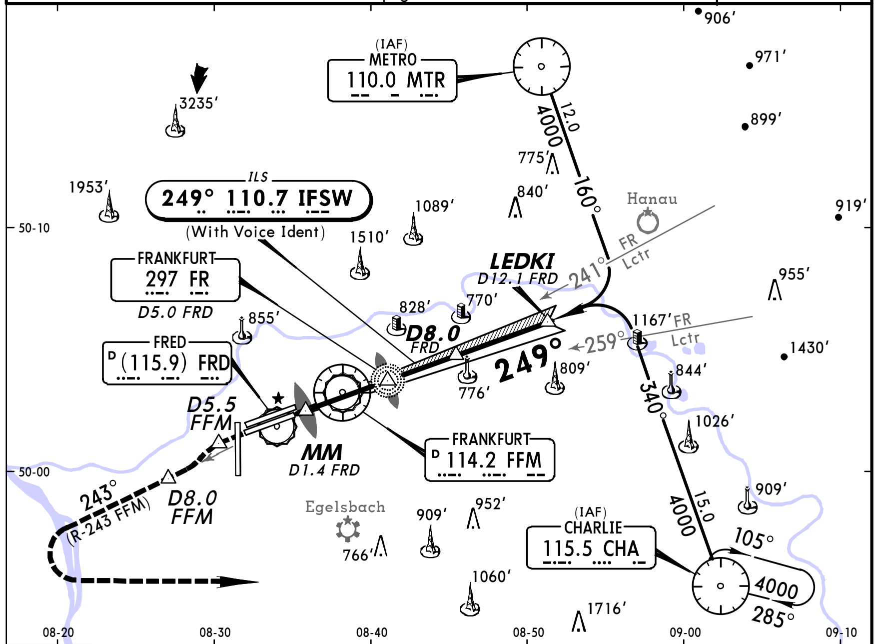
BRIEFING STRIP ™

LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev
IFSW 110.7	249°	LOM 1720′ (1358′)	Refer to Minimums	364′ RWY 362′

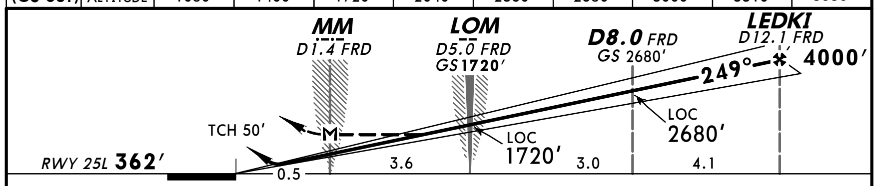
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-243 FFM. Then on R-243 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
1. LOC: **DME REQUIRED.** 2. CAUTION: Independent taxiing acft on Twy B-EAST underneath short final. 3. LACFT: See ATC State pages.

MSA FFM VOR: 4300′, 3200′, 3500′ (180°, 125°, 335°)



LOC (GS out)	FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	1080′	1400′	1720′	2040′	2360′	2680′	3000′	3310′	3630′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00° or LOC Descent Gradient 5.2%	377	485	539	647	755	862
MAP at MM/D1.4 FRD						

ALSF-II, REIL, PAPI — D5.5 FFM

JAR-OPS STRAIGHT-IN LANDING RWY 25L

	ILS [1] DA(H) AB: 562′ (200′) C: 568′ (206′) D: 578′ (216′)		LOC (GS out) MDA(H) 810′ (448′)	
	FULL	ALS out		ALS out
A	RVR 550m	RVR 1000m	RVR 900m	RVR 1500m
B	RVR 550m	RVR 1000m	RVR 1000m	RVR 1500m
C	RVR 600m	RVR 1000m	RVR 1000m	RVR 1800m
D	RVR 600m	RVR 1000m	RVR 1400m	RVR 2000m

PANS OPS 4

[1] LACFT: DA(H) 580′ (218′), FULL: RVR 600m, ALS out: RVR 1000m.

CHANGES: Communications. Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN

JEPPESEN 12 OCT 07 (11-3A) Eff 25 Oct

FRANKFURT/MAIN, GERMANY CAT II ILS Rwy 25L

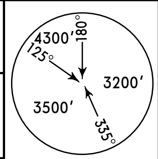
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

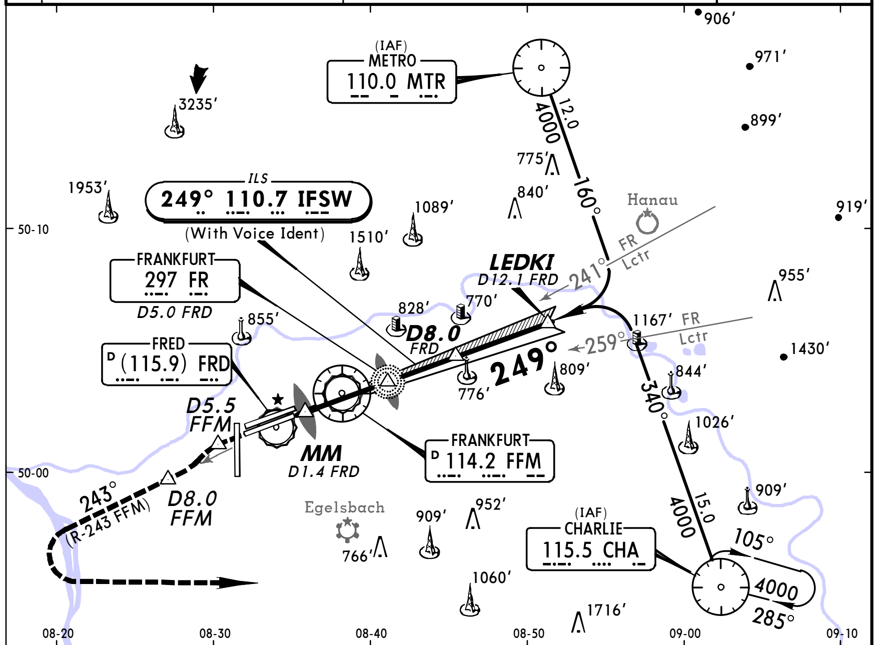
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev
IFSW 110.7	249°	LOM 1720′ (1358′)	RA 94′ DA(H) 462′ (100′)	364′ RWY 362′

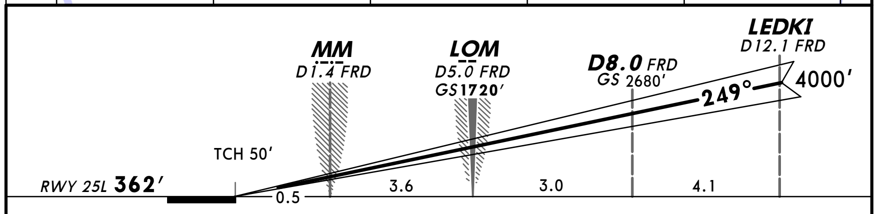
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-243 FFM. Then on R-243 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
1. CAUTION: Independent taxiing acft on Twy B-EAST underneath short final.
2. Special Aircrew & Acft Certification Required.



MSA FFM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II REIL PAPI

D5.5 FFM

JAR-OPS

STRAIGHT-IN LANDING RWY 25L
CAT II ILS
ABCD
RA 94′
DA(H) 462′ (100′)

RVR 300m 1

1 Operators applying U.S. Ops Specs: Autoland or HGS required below RVR 350m.

PANS OPS 4

CHANGES: Communications. Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN

JEPPESEN 10 AUG 07 (11-4)

FRANKFURT/MAIN, GERMANY ILS or LOC Rwy 25R

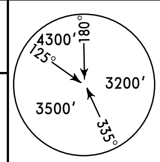
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

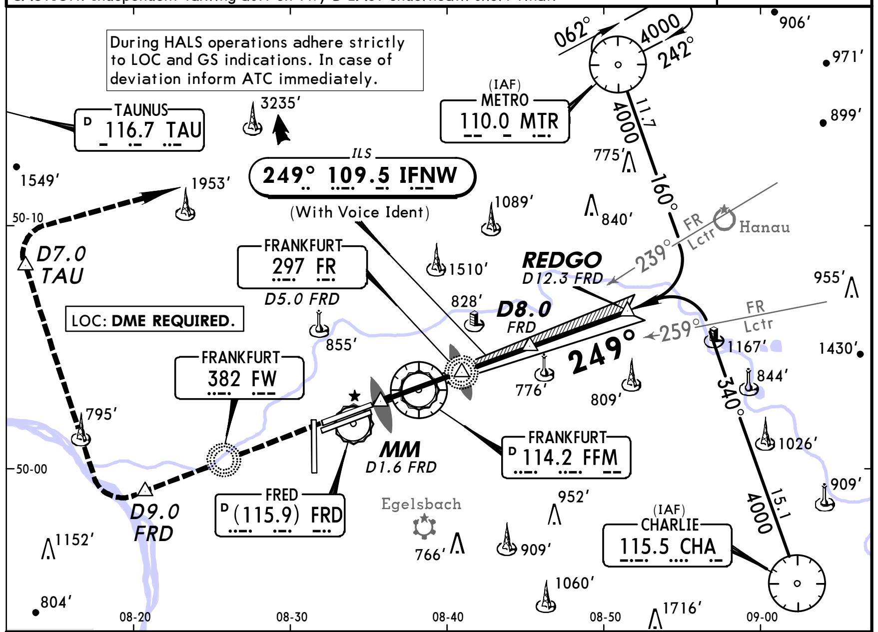
LOC	Final Apch Crs	GS	ILS	Apt Elev
IFNW 109.5	249°	LOM 1660′ (1296′)	DA(H) 564′ (200′)	364′ RWY 364′

MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. At D7.0 TAU turn RIGHT to MTR VOR and maintain 5000′.
In case of Missed apch inform ATC immediately.

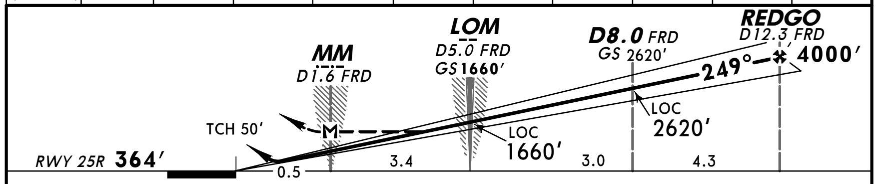
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
CAUTION: Independent taxiing acft on Twy B-EAST underneath short final.



MSA FFM VOR



LOC (GS out)	FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	1020′	1340′	1660′	1980′	2300′	2620′	2930′	3250′	3570′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00° or LOC Descent Gradient 5.2%	377	485	539	647	755	862
MAP at MM/D1.6 FRD						

ALSF-II REIL PAPI

Inform ATC

D9.0 FRD whichever later 5000′

JAR-OPS

STRAIGHT-IN LANDING RWY 25R

	ILS DA(H) 564′ (200′) FULL	ILS ALS out	LOC (GS out) MDA(H) 790′ (426′)	LOC (GS out) ALS out
A	RVR 550m	RVR 1000m	RVR 900m	RVR 1500m
B			RVR 1000m	
C				RVR 1800m
D			RVR 1400m	RVR 2000m

PANS OPS 4

CHANGES: Communications. Missed approach.

JEPPESEN
JeppView 3.5.2.0

EDDF/FRA FRANKFURT/MAIN

10 AUG 07 (11-4A) JEPPESEN

FRANKFURT/MAIN, GERMANY CAT II ILS Rwy 25R

*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

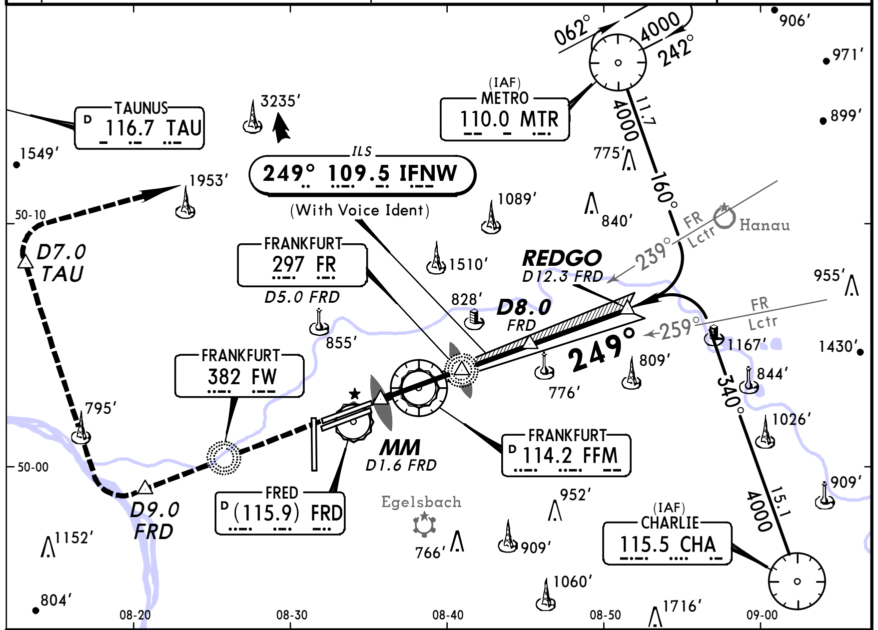
BRIEFING STRIP ™

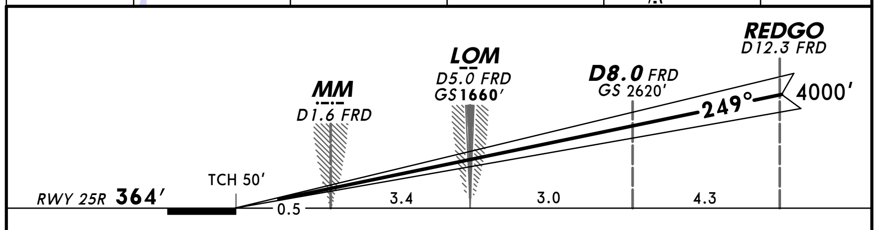
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev
IFNW 109.5	249°	LOM 1660′ (1296′)	RA 98′ DA(H) 464′ (100′)	364′ RWY 364′

MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. At D7.0 TAU turn RIGHT to MTR VOR and maintain 5000′.
In case of Missed apch inform ATC immediately.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
1. CAUTION: Independent taxiing acft on Twy B-EAST underneath short final.
2. Special Aircrew & Aircraft Certification Required.

MSA FFM VOR: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II REIL PAPI — Inform ATC — D9.0 FRD whichever later 5000′

JAR-OPS

STRAIGHT-IN LANDING RWY 25R
CAT II ILS
ABCD
RA 98′
DA(H) 464′(100′)

PANS OPS 4

RVR 300m 1

1 Operators applying U.S. Ops Specs: Autoland or HGS required below RVR 350m.

CHANGES: Communications. Missed approach.

JEPPESEN
JeppView 3.5.2.0

EDDF/FRA FRANKFURT/MAIN

20 APR 07 (11-5) JEPPESEN

FRANKFURT/MAIN, GERMANY ILS Rwy 26L

*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	119.9	121.8

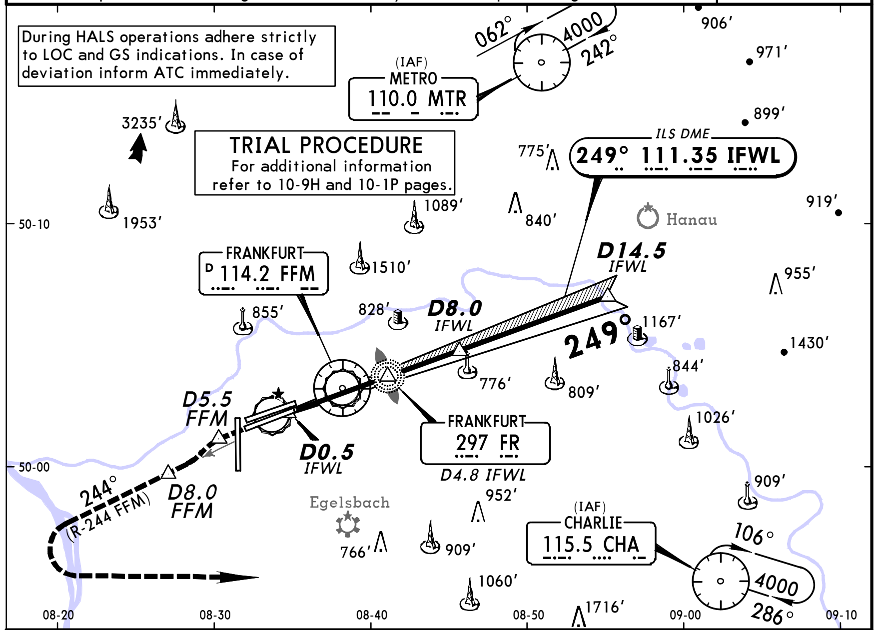
BRIEFING STRIP ™

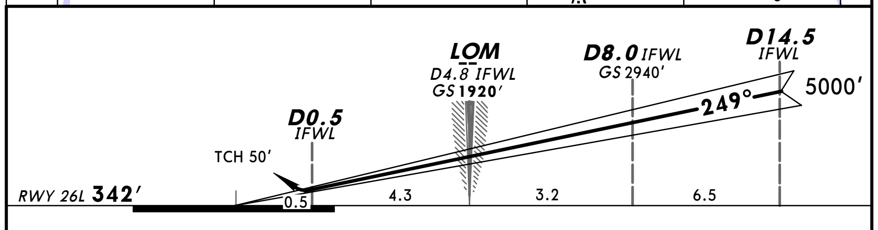
LOC	Final Apch Crs	GS	ILS	Apt Elev
IFWL 111.35	249°	LOM 1920′ (1578′)	DA(H) 542′ (200′)	364′ RWY 342′

MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-244 FFM. Then on R-244 FFM to D8.0 FFM or 4000′, whichever is later, then turn LEFT to CHA VOR climb and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′
1. **DME REQUIRED.** 2. Radar vectoring will be provided onto final approach track.
3. Ignore MM indications. 4. ILS DME reads zero at rwy 26L threshold. 5. ILS GS utilization permitted at an angle of 6° horizontally centerline up to a range of 15 NM.

MSA FFM VOR: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

HIALS PAPI — D5.5 FFM

JAR-OPS — CEILING REQUIRED

STRAIGHT-IN LANDING RWY 26L

	ILS	LOC (GS out)
	DA(H) 542′(200′) FULL	
A B C D	400′- 2400m	NOT AUTHORIZED

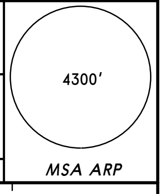
PANS OPS 4

CHANGES: Communications.

*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

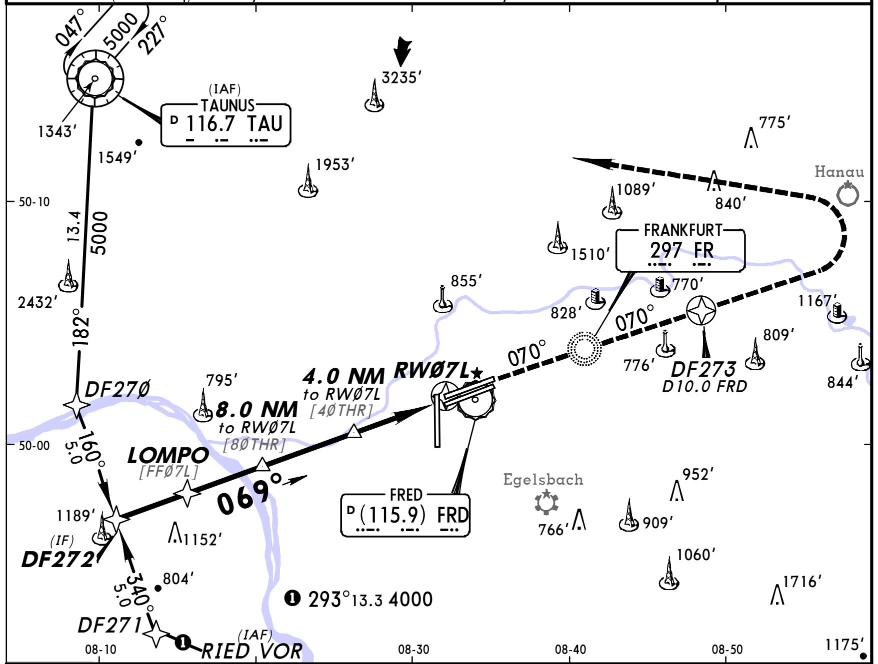
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt LOMPO	MDA(H)	Apt Elev
	069°	4000′ (3671′)	830′ (501′)	364′ RWY 329′

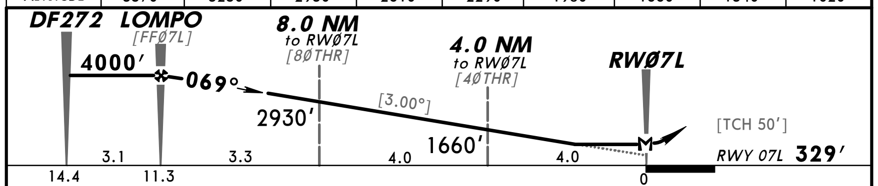


MISSED APCH RNAV: Climb on track 070° via FR Lctr to DF273 or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.
NON-RNAV: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



NM to RW07L	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3570′	3250′	2930′	2610′	2290′	1980′	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at RW07L						

ALSF-II REIL PAPI

DF273 D10.0 FRD | 5000′ whichever is later | via FR 297

JAR-OPS STRAIGHT-IN LANDING RWY 07L

MDA(H) 830′ (501′)

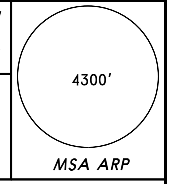
PANS OPS 4		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

CHANGES: Communications. Procedure.

*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

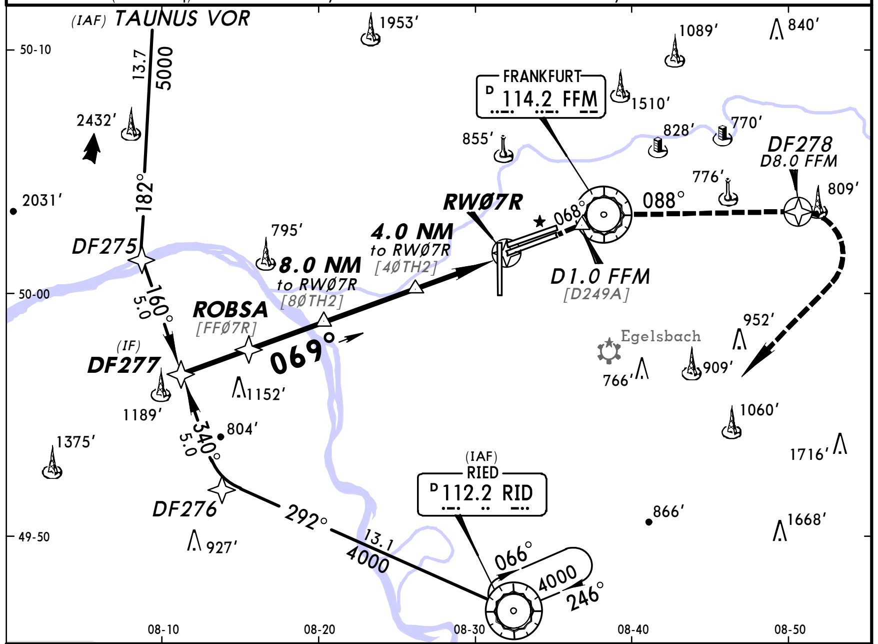
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt ROBSA	MDA(H)	Apt Elev
	069°	4000′ (3672′)	830′ (502′)	364′ RWY 328′

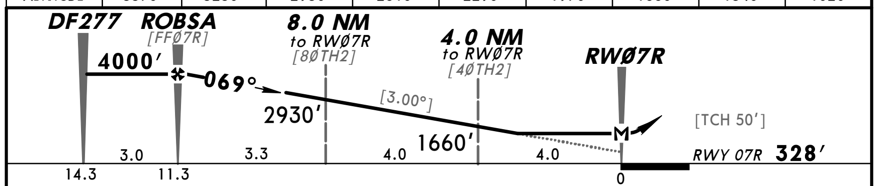


MISSED APCH RNAV: Climb on track 068° to FFM VOR, then turn RIGHT on track 088° to DF278 or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D1.0 inbound FFM. Turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later. Turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



NM to RW07R	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3570′	3250′	2930′	2610′	2290′	1970′	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at RW07R						

ALSF-II REIL PAPI

Refer to Missed apch above

JAR-OPS STRAIGHT-IN LANDING RWY 07R

MDA(H) 830′ (502′)

PANS OPS 4		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

CHANGES: Communications. Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY

12 OCT 07 (12-3) Eff 25 Oct

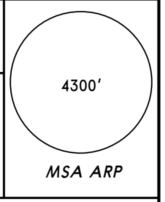
RNAV (GPS) Rwy 25L

*ATIS Arrival		LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

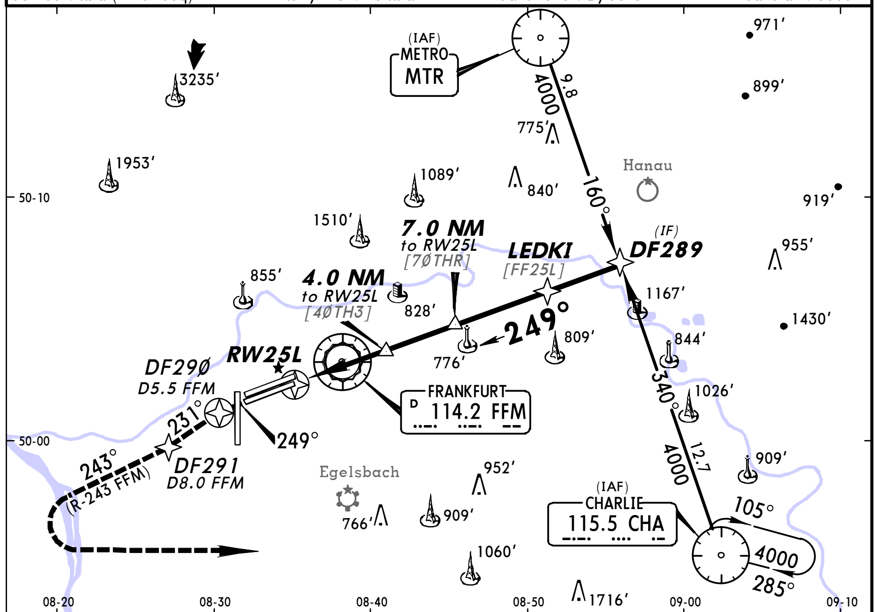
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt LEDKI	MDA(H)	Apt Elev 364′
	249°	4000′ (3638′)	830′ (468′)	RWY 362′

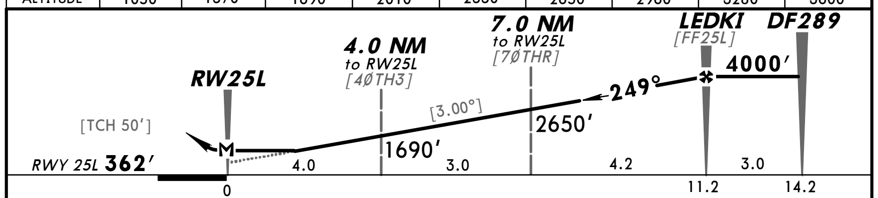
MISSED APCH RNAV: Climb on track 249° to DF290, then turn LEFT on track 231° to DF291. Then turn RIGHT on track 243° climb to 5000′, then turn LEFT to CHA VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-244 FFM. Then on R-244 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.



Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′



NM to RW25L	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1050′	1370′	1690′	2010′	2330′	2650′	2960′	3280′	3600′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at RW25L						

ALSF-II REIL PAPI — DF29Ø D5.5 FFM

JAR-OPS — STRAIGHT-IN LANDING RWY 25L

MDA(H) 830′ (468′)

PANS OPS 4		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

CHANGES: Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY

12 OCT 07 (12-4) Eff 25 Oct

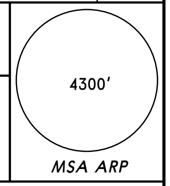
RNAV (GPS) Rwy 25R

*ATIS Arrival		LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

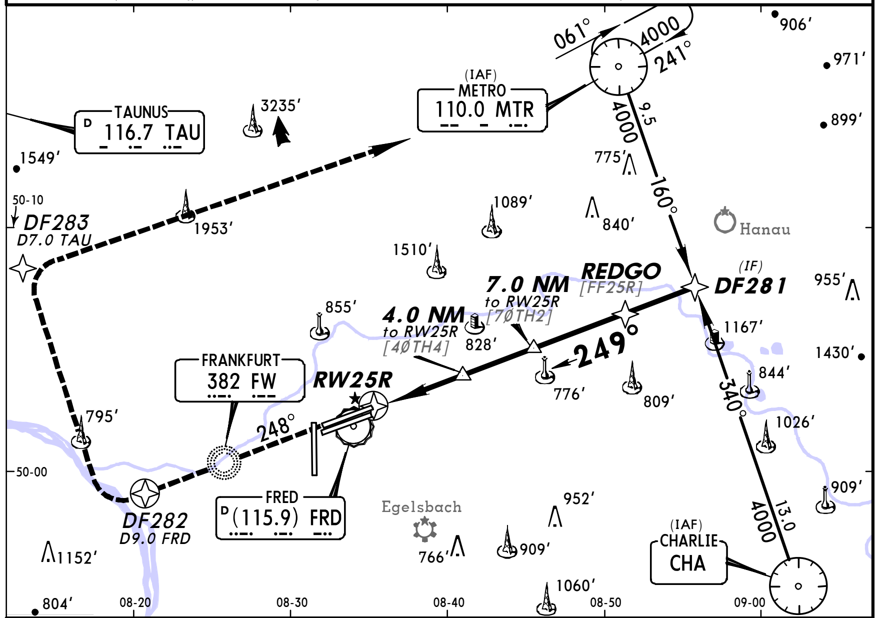
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt REDGO	MDA(H)	Apt Elev 364′
	249°	4000′ (3636′)	830′ (466′)	RWY 364′

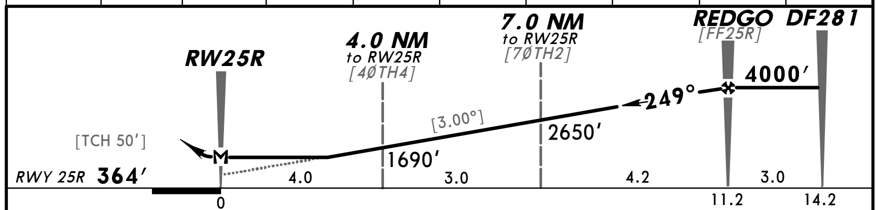
MISSED APCH RNAV: Climb on track 248° via FW Lctr to DF282 or 5000′, whichever is later, then turn RIGHT to DF283. At DF283 turn RIGHT to MTR VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT inbound to TAU VOR. At D7.0 TAU turn RIGHT to MTR VOR and maintain 5000′.



Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′



NM to RW25R	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1060′	1370′	1690′	2010′	2330′	2650′	2970′	3280′	3600′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at RW25R						

ALSF-II REIL PAPI — DF282 D9.0 FRD whichever later 5000′

JAR-OPS — STRAIGHT-IN LANDING RWY 25R

MDA(H) 830′ (466′)

PANS OPS 4		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

CHANGES: Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN

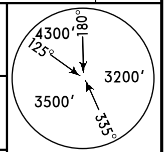
JEPPESEN 12 OCT 07 (13-1) Eff 25 Oct

FRANKFURT/MAIN, GERMANY VOR Rwy 07L

*ATIS Arrival		LANGEN Radar (APP) North	South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

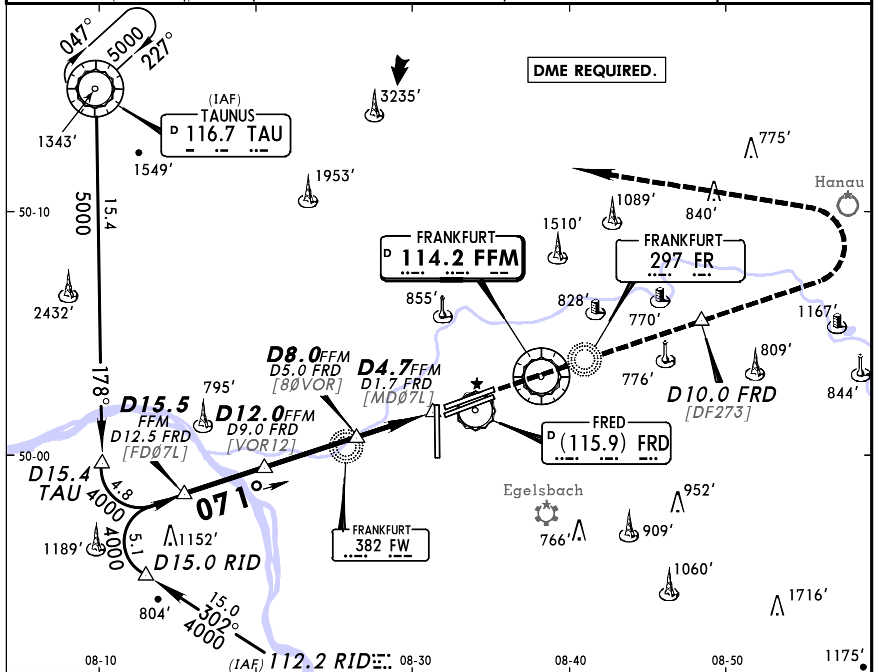
BRIEFING STRIP ™

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
FFM 114.2	071°	D15.5 FFM 4000′ (3671′)	830′ (501′)	364′ RWY 329′

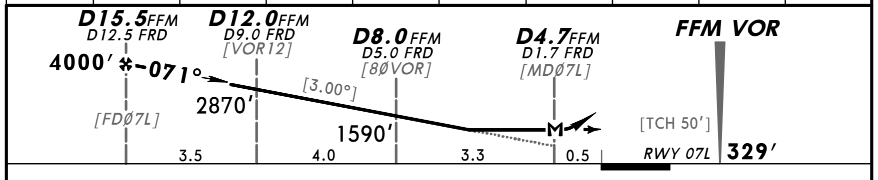


MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



FFM DME	14.0	13.0	12.0	11.0	10.0	9.0	8.0	7.0	6.0
ALTITUDE	3500′	3190′	2870′	2550′	2230′	1910′	1590′	1280′	960′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.24% or Descent angle [3.00°]	372	478	531	637	743	849
MAP at D4.7 FFM/D1.7 FRD						

ALSF-II REIL PAPI

D10.0 FRD | 5000′ whichever is later | via FR 297

JAR-OPS

STRAIGHT-IN LANDING RWY **07L**

MDA(H) **830′** (501′)

	ALS out	
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

PANS OPS 4

CHANGES: Communications. Procedure.

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Notice: After 11 Feb 2008 0901Z, this chart may no longer be valid. Disc 23-2007
JEPPESEN
JeppView 3.5.2.0

EDDF/FRA FRANKFURT/MAIN

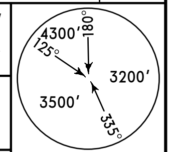
JEPPESEN 12 OCT 07 (13-2) Eff 25 Oct

FRANKFURT/MAIN, GERMANY VOR Rwy 07R

*ATIS Arrival		LANGEN Radar (APP) North	South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

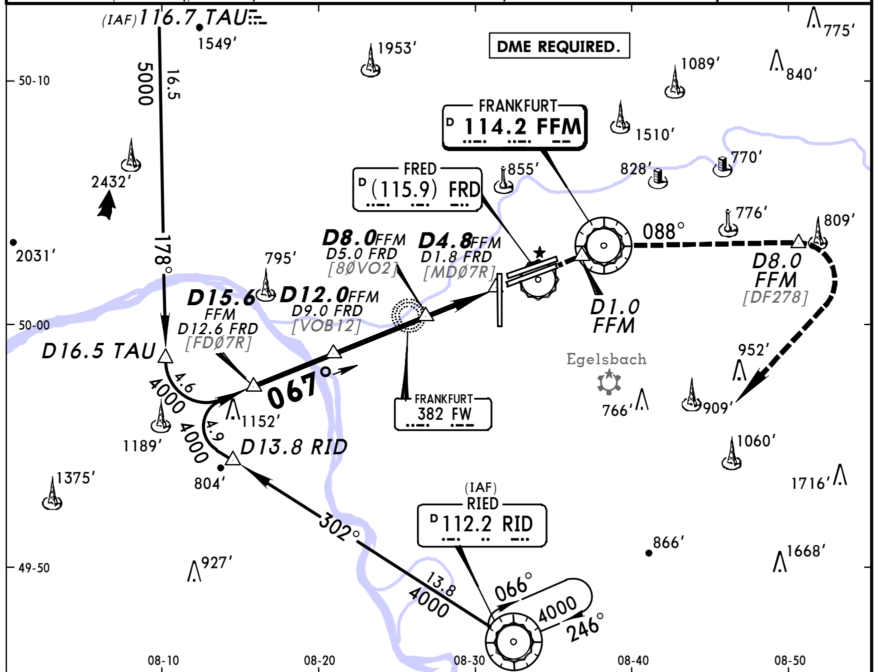
BRIEFING STRIP ™

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
FFM 114.2	067°	D15.6 FFM 4000′ (3672′)	830′ (502′)	364′ RWY 328′

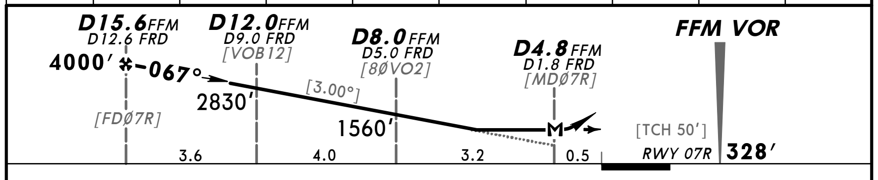


MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



FFM DME	14.0	13.0	12.0	11.0	10.0	9.0	8.0	7.0	6.0
ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.24% or Descent angle [3.00°]	372	478	531	637	743	849
MAP at D4.8 FFM/D1.8 FRD						

ALSF-II REIL PAPI

D1.0 inbound FFM

JAR-OPS

STRAIGHT-IN LANDING RWY **07R**

MDA(H) **830′** (502′)

	ALS out	
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

PANS OPS 4

CHANGES: Communications. Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN — FRANKFURT/MAIN, GERMANY — VOR Rwy 25L

JEPPESEN 12 OCT 07 (13-3) Eff 25 Oct

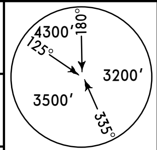
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

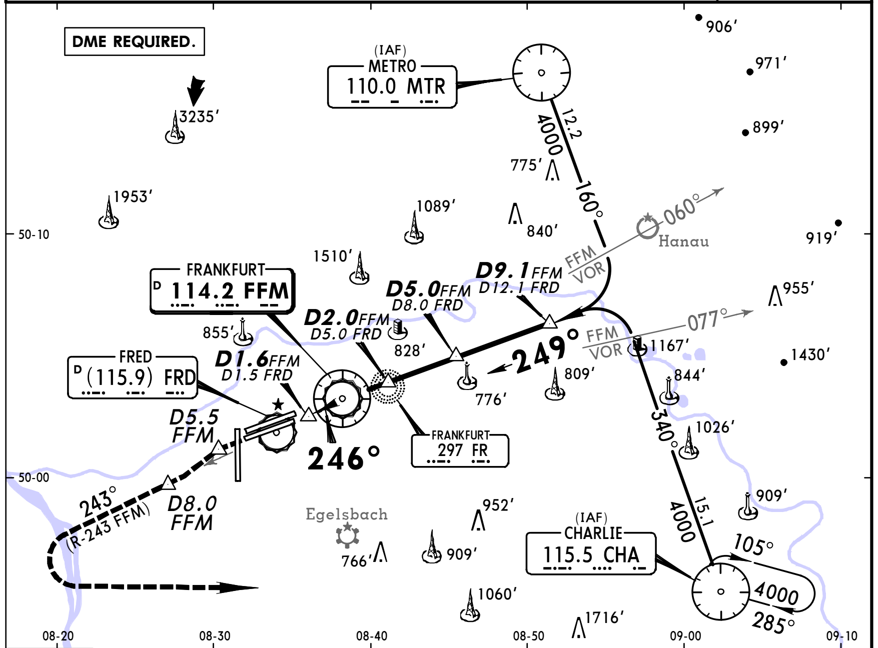
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
FFM 114.2	See Below	D9.1 FFM 4000′ (3638′)	840′ (478′)	364′ RWY 362′

MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-243 FFM. Then on R-243 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR climb and maintain 5000′.

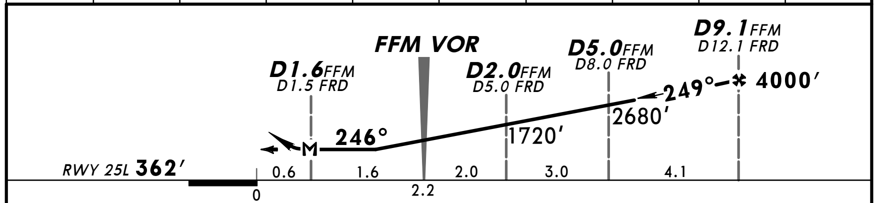
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′



MSA FFM VOR



FFM DME	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1090′	1400′	1720′	2040′	2360′	2680′	3000′	3310′	3630′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.6 after FFM VOR/D1.5 FRD						

ALSF-II REIL PAPI — D5.5 FFM

JAR-OPS STRAIGHT-IN LANDING RWY **25L**

MDA(H) **840′** (478′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

PANS OPS 4

CHANGES: Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN — FRANKFURT/MAIN, GERMANY — VOR Rwy 25R

JEPPESEN 12 OCT 07 (13-4) Eff 25 Oct

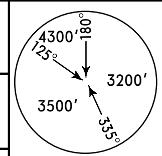
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

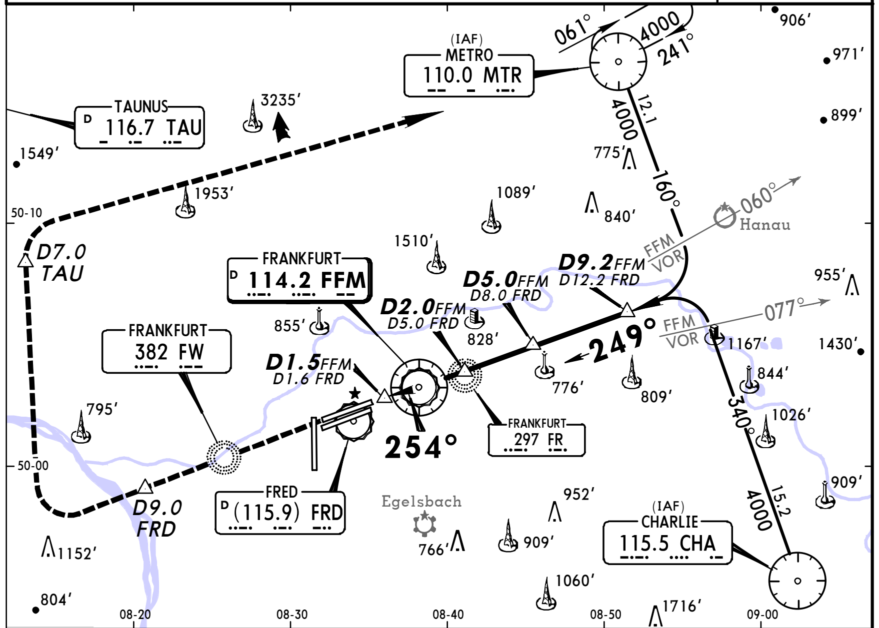
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
FFM 114.2	See Below	D9.2 FFM 4000′ (3636′)	820′ (456′)	364′ RWY 364′

MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. At D7.0 TAU turn RIGHT to MTR VOR and maintain 5000′.

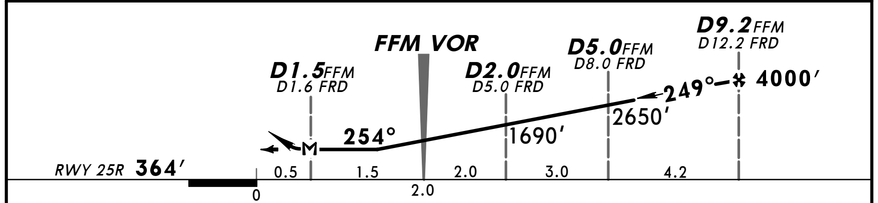
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
DME REQUIRED.



MSA FFM VOR



FFM DME	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1060′	1370′	1690′	2010′	2330′	2650′	2970′	3280′	3600′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.5 after FFM VOR/D1.6 FRD						

ALSF-II REIL PAPI — D9.0 FRD whichever later 5000′

JAR-OPS STRAIGHT-IN LANDING RWY **25R**

MDA(H) **820′** (456′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

PANS OPS 4

CHANGES: Procedure.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY — NDB Rwy 07L

12 OCT 07 (16-1) Eff 25 Oct

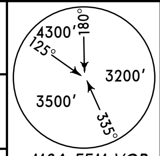
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

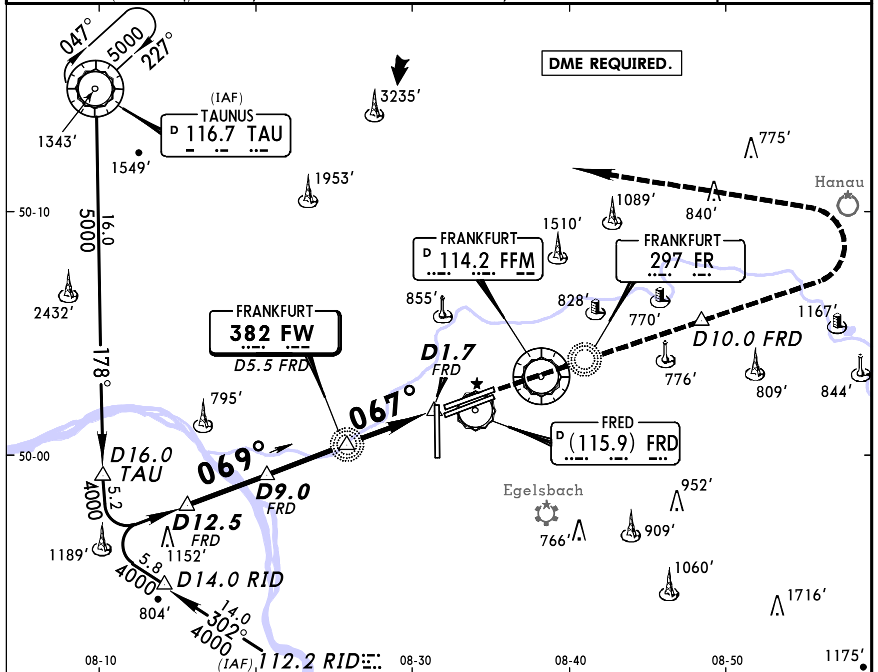
BRIEFING STRIP ™

Lctr FW	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
382	See Below	D12.5 FRD 4000′ (3671′)	830′ (501′)	364′ RWY 329′

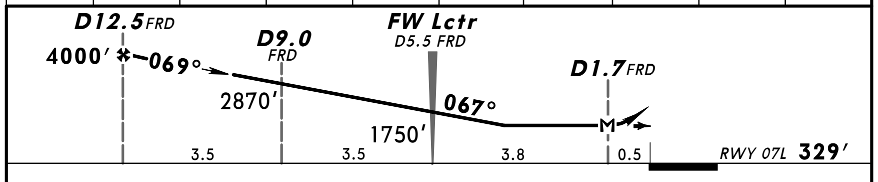
MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′





FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3500′	3190′	2870′	2550′	2230′	1910′	1590′	1280′	960′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.7 FRD						

ALSF-II REIL PAPI

D10.0 FRD | 5000′ | whichever is later | via FR 297

JAR-OPS

STRAIGHT-IN LANDING RWY **07L**

MDA(H) **830′** (501′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

PANS OPS 4

CHANGES: Communications. Procedure.

EDDF/FRA FRANKFURT/MAIN — JEPPESEN — FRANKFURT/MAIN, GERMANY — NDB Rwy 07R

12 OCT 07 (16-2) Eff 25 Oct

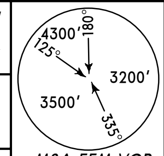
*ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02 114.2	120.8	125.35	127.27	118.5	119.9	121.8

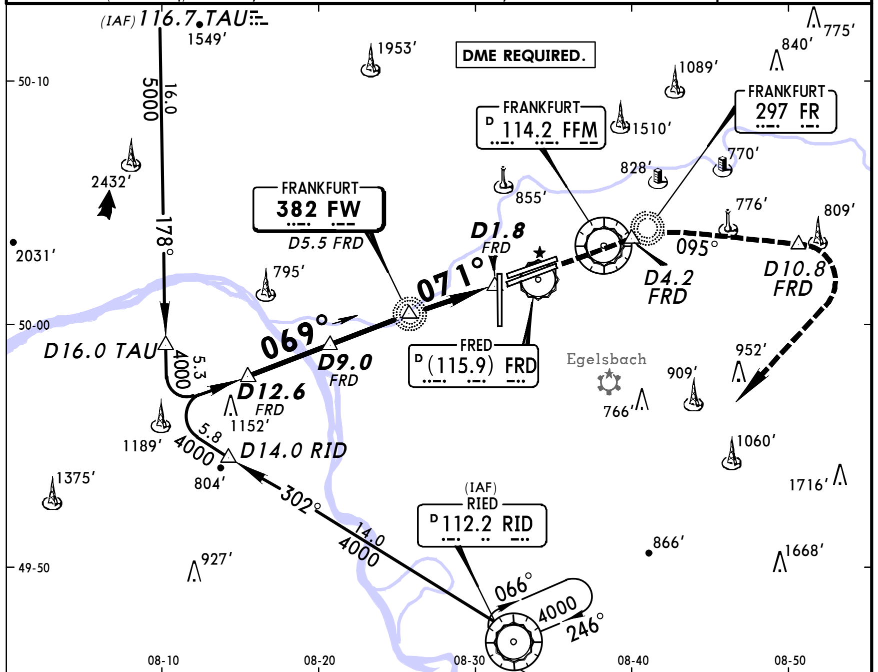
BRIEFING STRIP ™

Lctr FW	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
382	See Below	D12.6 FRD 4000′ (3672′)	830′ (502′)	364′ RWY 328′

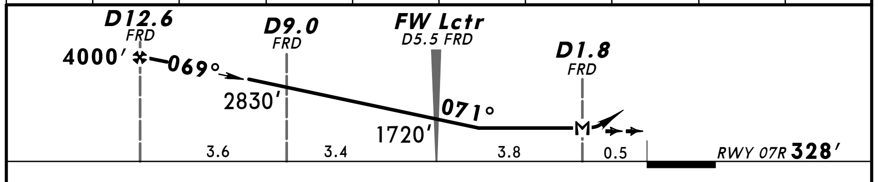
MISSED APCH: Climb inbound FR NDB to D4.2 FRD, then turn RIGHT on 095° outbound FR NDB to D10.8 FRD or 5000′, whichever is later, then turn RIGHT to RID VOR, climb and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′





FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.8 FRD						

ALSF-II REIL PAPI

D4.2 FRD

JAR-OPS

STRAIGHT-IN LANDING RWY **07R**

MDA(H) **830′** (502′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	RVR 1500m
C	RVR 1200m	RVR 2000m
D	RVR 1600m	RVR 2000m

PANS OPS 4

CHANGES: Communications. Missed approach.

EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

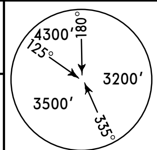
12 OCT 07 (16-3) Eff 25 Oct

NDB Rwy 25L

*ATIS Arrival		LANGEN Radar (APP) North	South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

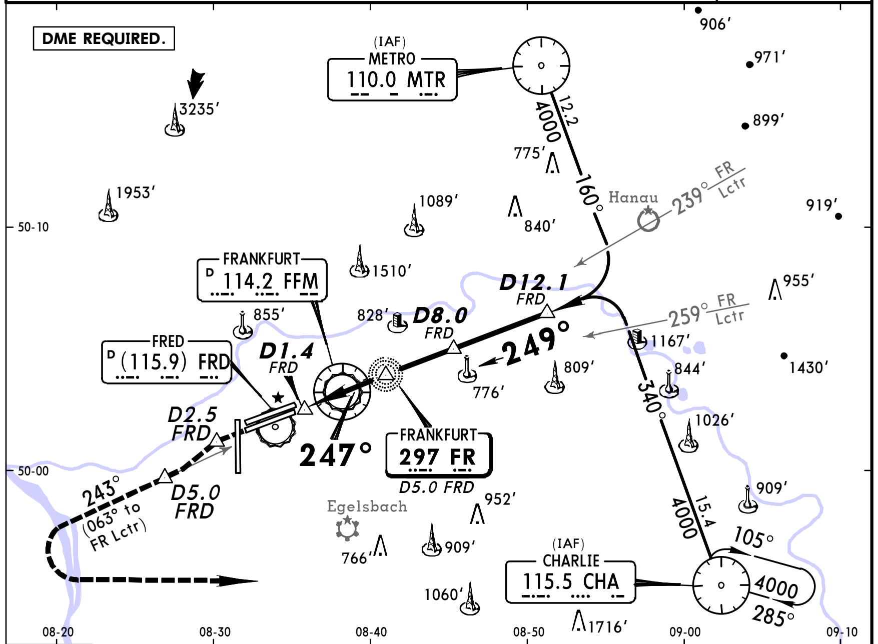
Lctr FR 297	Final Apch Crs See Below	Minimum Alt D12.1 FRD 4000′ (3638′)	MDA(H) 820′ (458′)	Apt Elev 364′ RWY 362′



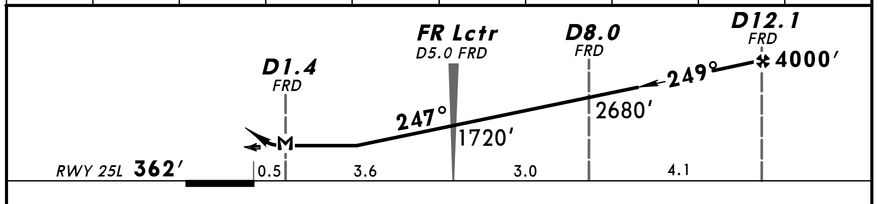
MISSED APCH: Climb STRAIGHT AHEAD to D2.5 FRD, then turn LEFT on track 243° outbound FR NDB to D5.0 FRD or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR



FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1090′	1400′	1720′	2040′	2360′	2680′	3000′	3310′	3630′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.4 FRD						

ALSF-II REIL PAPI

D2.5 FRD

JAR-OPS

STRAIGHT-IN LANDING RWY 25L

MDA(H) 820′ (458′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

PANS OPS 4

CHANGES: Missed approach. Procedure.

EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

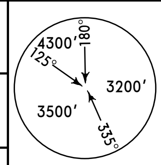
12 OCT 07 (16-4) Eff 25 Oct

NDB Rwy 25R

*ATIS Arrival		LANGEN Radar (APP) North	South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	114.2	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

Lctr FR 297	Final Apch Crs See Below	Minimum Alt D12.3 FRD 4000′ (3636′)	MDA(H) 820′ (456′)	Apt Elev 364′ RWY 364′

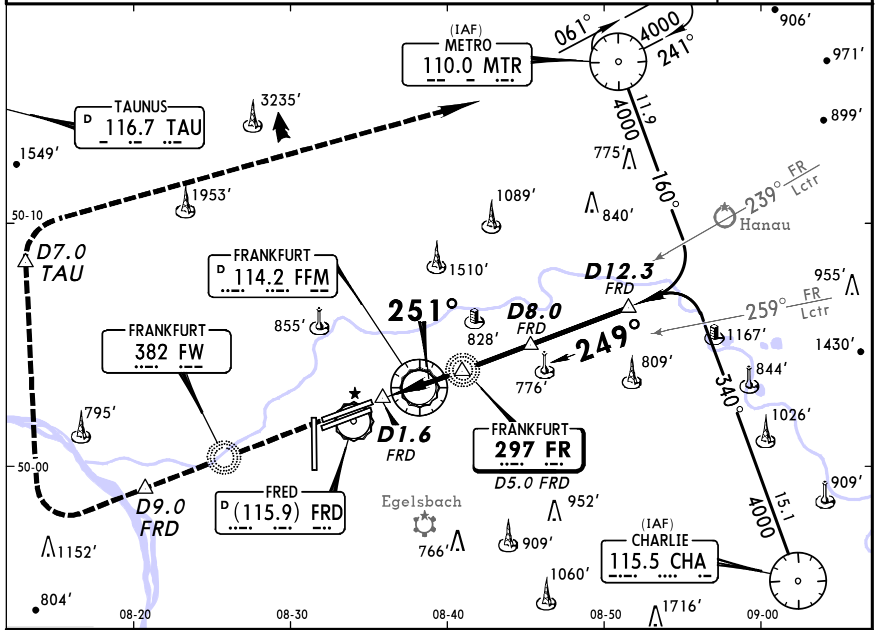


MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT inbound to TAU VOR. At D7.0 TAU turn RIGHT to MTR VOR and maintain 5000′.

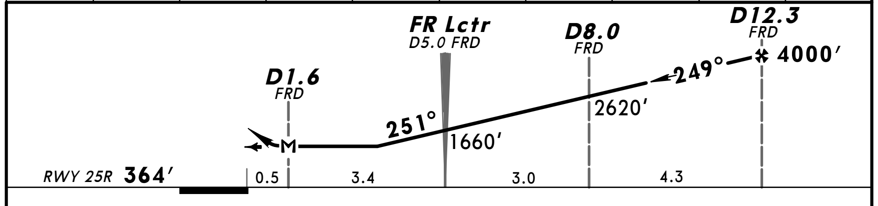
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

DME REQUIRED.

MSA FFM VOR



FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1020′	1340′	1660′	1980′	2300′	2620′	2930′	3250′	3570′



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2%	369	474	527	632	737	843
MAP at D1.6 FRD						

ALSF-II REIL PAPI

D9.0 FRD whichever later 5000′

JAR-OPS

STRAIGHT-IN LANDING RWY 25R

MDA(H) 820′ (456′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

PANS OPS 4

CHANGES: Missed approach. Procedure.