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Revision Letter For Cycle 01-2016

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Notebook

General Information

Location: FRANKFURT/MAIN DEU
ICAO/IATA: EDDF / FRA
Lat/Long: N50° 02.00', E008° 34.23'
Elevation: 364 ft

Airport Use: Public
Daylight Savings: Observed
UTC Conversion: -1:00 = UTC
Magnetic Variation: 1.0° E

Fuel Types: Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0722 Z
Sunset: 1544 Z

Runway Information

Runway: 07C
Length x Width: 13123 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 329 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 07L
Length x Width: 9186 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 305 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 07R
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 328 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 18
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 326 ft
Lighting: Edge, Centerline

Runway: 25C
Length x Width: 13123 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 364 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 25L
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 362 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 25R
Length x Width: 9186 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 353 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS: 118.025 Arrival Service
ATIS: 118.725 Departure Service
Frankfurt Tower: 124.850
Frankfurt Delivery Tower: 121.900
Frankfurt Tower: 127.325
Frankfurt Tower: 37.835 Military
Frankfurt Tower: 136.500
Frankfurt Ground Tower: 121.800
Frankfurt Tower: 119.900
Frankfurt Tower: 118.775
Frankfurt Ground Ground: 121.800
Frankfurt Apron Ramp/Taxi: 121.750
Frankfurt Apron Ramp/Taxi: 121.850
Frankfurt Apron Ramp/Taxi: 121.950
Frankfurt De-Icing Ramp/Taxi: 135.225
Frankfurt Apron Ramp/Taxi: 121.700
Frankfurt Apron Ramp/Taxi: 121.650
Frankfurt Arrival Approach: 118.500
Langen Radar Approach: 119.025 Arrival Service
Langen Radar Approach: 136.125
Frankfurt Director Approach: 127.275
Langen Radar Approach: 126.550 Departure Service
Langen Radar Approach: 27.780 Military
Langen Radar Approach: 37.285 Military
Langen Radar Approach: 125.350
Frankfurt Director Approach: 37.545 Military
Langen Radar Approach: 120.150
Langen Radar Approach: 120.800
Frankfurt Director Direct (Approach Control Radar): 127.275

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FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN

31 MAY 13

10-1P

AIRPORT BRIEFING

1. GENERAL

1.1. ATIS

*D-ATIS Arrival 118.02
*D-ATIS Departure 118.72

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. RUNWAY USAGE

1.2.1.1. ARRIVALS

RWYs 25C/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 07C will preferably be assigned to departures into northern and eastern directions.

In case of landing direction 25:

RWY 25C 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 AND OPERATIONAL RESTRICTIONS

OUTSIDE NIGHTTIME HOURS FOR CIVIL AVIATION

- a) Landing RWY northwest (07L/25R) may only be used by airplanes up to and including code letter E in compliance with ICAO categorization. Airplanes with code letter F in compliance with categorization according to ICAO Attachment 14, jet airplanes, which cannot be classified into the airplane groups up to and including S 6.3 in compliance with the instructions for calculating noise protection zones as well as airplanes of the type MD11 may not use landing RWY northwest (07L/25R). Take-offs of ACFT are not permitted from landing RWY northwest (07L/25R).
- b) ACFT without a noise certificate in accordance with ICAO Annex 16 are not permitted to take-off from or land on the whole runway system of Frankfurt/Main APT during the entire hours of operation of Frankfurt/Main APT.
- c) ACFT that merely meet the noise certification values in accordance with ICAO Annex 16, Volume I, Part II, Chapter 2 are not permitted to take-off from or land on the whole RWY system of Frankfurt/Main APT during the entire hours of operation of Frankfurt/Main APT unless - documented by a certificate according to Article 11c, paragraph 7 of the German Aviation Regulation (LuftVO) - the Federal Aviation Office (LBA) has granted an exemption for the ACFT concerned according to Article 11 c, paragraphs 4 - 6 of the LuftVO or a Member State of the European Union has granted an exemption in accordance with Article 11c, paragraph 8 of the LuftVO.
- d) The following operational provisions apply to ACFT that are marginally compliant with ICAO Annex 16, Volume 1, Part II, Chapter 3 within the meaning of Article 48a no. 4 of the Regulation on the Certification and Licensing in Aviation (LuftVZO):

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AIRPORT BRIEFING

1. GENERAL

Take-offs and landings are not permitted on all days of the week between 2000-0800LT, unless an exemption in accordance with Article 48 f, paragraph 1 of the LuftVZO or an individual exemption in accordance with paragraph 2 of the regulation has been granted.

From the beginning of the winter 2011/2012 scheduling period, take-offs and landings are not permitted between Friday, 2000LT and Monday, 0800LT, unless they have been granted an exemption in accordance with Article 48 f, paragraph 1 of the LuftVZO or an individual exemption in accordance with paragraph 2 of the regulation.

ACFT arriving late or early whose landing is planned by the APT coordinator for a slot outside the operational restrictions up to 2000LT or from 0800LT may land until 2200LT and from 0600LT, provided that the late or early arrival was not envisaged as such in the flight plan (Article 25 LuftVO).

- e) Following the opening of the landing RWY northwest, from the first day of the new scheduling period, which - because of the added capacity of the landing RWY northwest - provides an increase in the coordinated hourly runway capacity, take-offs and landings are not permitted on the whole RWY system of Frankfurt/Main APT between 2200-0600LT on all days of the week, unless otherwise provided.

Between 2200-2300LT as well as between 0500-0600LT, only such ACFT are permitted to take off and land that - have a noise certificate or a noise certification value in accordance with ICAO Annex 16, Volume I, Part II, Chapter 4 and whose take-off or landing has been coordinated by the APT coordinator of the Federal Republic of Germany at least one day in advance.

The following regulations apply to ACFT arriving late or early:

- ACFT that are not only marginally compliant with ICAO Annex 16, Volume I, Part III, Chapter 3 within the meaning of Article 48 a of the LuftVZO, and ACFT fulfilling the provisions of ICAO Annex 16, Volume I, Part II, Chapter 4 and whose landing is planned by the APT coordinator for a slot up to 2200LT or from 0600LT, are permitted to land until 2400LT and/or from 0500LT without being counted against the quota as well as the maximum limit, provided that the late or early arrival was not envisaged as such in the flight plan (Article 25 of the LuftVO).
- ACFT fulfilling the provisions of ICAO Annex 16, Volume I, Part II, Chapter 4 and whose landing is planned by the APT coordinator for a slot between 2200-2300LT and between 0500-0600LT under the conditions set out, are permitted to land until 2400LT without being counted against the maximum limit provided that the late arrival was not envisaged as such in the flight plan (Article 25 of the LuftVO).

Early arrivals before 0500LT are not permitted.

ACFT are not permitted to use the landing RWY northwest between 2300-0500LT. At Frankfurt/Main APT, take-offs and landings of ACFT conducting flight checks of radio, radar or APT facilities are permitted between 2200-0600LT only if the ACFT meet the provisions of ICAO Annex 16, Volume I, Part II, Chapter 4 and if it is absolutely necessary to conduct these checks during this period of time.

Propeller ACFT with a maximum take-off mass of less than 9,000 kg may take-off and land between 2200-0600LT only under the restrictions outlined in sections above; instead of the mentioned noise certification values they must at least fulfil the higher sound-proofing requirements defined in Article 4 of the Airfield Noise Abatement Ordinance (Landeplatz-LaermschutzV) of 5 January 1999 (Federal Law Gazette I, page 35; German-language publication Nfl I 134/99).

- f) Delayed take-offs to be conducted in a period of restricted operations by an ACFT subject to the restrictions require individual permission by the local aviation supervision office. Permission may only be granted if the delay is due to reasons beyond the control of the air carrier concerned. Delayed take-offs are not permitted between 2400-0500LT unless they meet the approval requirements above.

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AIRPORT BRIEFING

1. GENERAL

EXCEPTIONS

Excluded from the restrictions mentioned above are:

- Landings of ACFT approaching Frankfurt Main APT as an alternate aerodrome for meteorological, technical or other safety reasons as well as take-offs and landings of ACFT rendering medical assistance or on missions in disasters, as well as evacuation flights;
- Flights conducted particularly in the public interest.

Apart from this, the approving authority may grant exemptions from the operational restrictions only upon application in cases of particular hardship. It is not a case of particular hardship if the operational restriction makes the air carrier's ACFT turn-around planning more difficult or requires arrangements for passenger transfer or accommodation. Processing of applications is subject to charges.

As a rule, the application shall be submitted in writing - in urgent cases also via telephone - to:

Hessisches Ministerium fuer Wirtschaft, Energie,
Verkehr und Landesentwicklung
Oertliche Luftaufsichtsstelle/local Aviation Supervision Office
Gebaeude (building) 514
60547 Frankfurt am Main/Germany
Tel.: 069/690-71717
Fax: 069/690-66150

The application shall contain:

- Applicant's name and, if necessary, name of the handling partner;
- Applicant's telephone and fax numbers;
- Name and address of the airline;
- Flight number;
- Registration and type of ACFT;
- Classification of the ACFT according to noise certification level (noise certificate of the aircraft according to Section 11c LuftVO);
- Planned time of departure or landing for which the exemption is requested;
- Number of passengers;
- Weight of cargo in tonnes.

The reasons for the application shall be specified; the applicant shall state, in particular, where the hardship lies.

Take-off or landing clearances granted by ATC as well as other clearances do not automatically include the necessary exemption by the approval authority.

ATC will not grant exemptions via radiotelephony.

The pilot-in-command (PIC) shall report any landing conducted during a period of restricted operations by an ACFT subject to the restriction which does not meet any of the grounds for exemption according to the provisions to the local aviation supervision office immediately after landing and specify the reasons (declaration of PIC).

1.2.3. REVERSE THRUST

Reverse thrust must not be used on the entire RWY system of Frankfurt Main APT - except for safety reasons in unavoidable cases. This does not apply to idle reverse thrust.

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10-1P3**AIRPORT BRIEFING**

1. GENERAL

1.2.4. RUN-UP TESTS

Engine run-ups with thrust settings above an idle power setting may only be conducted at the following positions:

- On the apron of hangar 5 and in the run-up enclosure in the time between 0600-2200LT;
- In the time between 2200-0600LT, engine run-ups with the thrust setting on part-load on the apron of hangar 5, whereby on the position hangar 5 west the maximum power setting may only be taken to part-load low (up to 50% N1), as well as in the run-up enclosure; engine run-ups with the thrust setting on full-load may only be conducted in the run-up enclosure.

Engine run-ups shall be conducted in such a way that their duration of exposure on the next built-up area shall not, on average, result in a continuous sound level higher than 57 dB(A) during the day and 50 dB(A) during the night.

Engine run-ups in the time between 2200-0600LT with a thrust setting above an idle power setting shall be notified to the local aviation supervision office.

Engine test runs and run-ups as well as extensive maintenance work on ACFT at the positions are not permitted. Apron control may grant exceptions in justified cases.

1.3. LOW VISIBILITY PROCEDURES

1.3.1. CAT III OPERATIONS

1.3.1.1. GENERAL

RWYs 07R/25L & 07C/25C 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 07C/25C towards TWY L and from RWY 07R/25L towards TWY M are colorcoded (yellow/green). Landing ACFT are requested to report RWY vacated at the end of the colorcoded 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 centerline.

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. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

1.4.1. OPERATION OF SSR-MODE S TRANSPONDERS

1.4.1.1. GENERAL

An Advanced Surface Movement Guidance and Control System, using Mode-S multilateration, is in operation.

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AIRPORT BRIEFING

1. GENERAL

1.4.1.2. OPERATION OF MODE S TRANSPONDERS WHEN ACFT IS ON GROUND

ACFT operators shall ensure that Mode S transponders are able to operate when ACFT is on the ground.

Pilots shall:

Select AUTO mode and assigned Mode A code. If AUTO mode is not available, select ON (e.g. XPDR) and assigned Mode A code (e.g. Mode A code = 1000 using callsign in flight).

- From request for push-back or taxi, whichever is earlier;
- After landing, continuously until ACFT is fully parked on stand;
- When fully parked on stand, select STBY.

Whenever ACFT is capable of reporting ACFT ident (i.e. callsign used in flight), ACFT ident shall also be entered from request for push-back or taxi, whichever is earlier (through FMS or transponder control panel). Aircrew must use ICAO defined format for entry of ACFT ident (e.g. DLH5MC, AFR6380, SAS589, BAW68PG).

To ensure that performance of systems based on SSR frequencies (including airborne TCAS units and SSR radars) is not compromised, TCAS shall not be activated before approaching holding point. After landing, it shall be deselected after vacating RWY.

ACFT taxiing without flight plan shall select STBY.

1.5. TAXI PROCEDURES

1.5.1. GENERAL

ACFT are permitted to taxi on the manoeuvring area between RWY 07C/25C and TWYL only with the minimum engine revolutions absolutely required.

Turns from TWY M17 to M15 and conversely not authorized.

TWYs N blue and N orange and N7 blue and N7 orange MAX wingspan 118'/36m.

TWYs N South and S25 MAX wingspan 171'/52m.

1.5.2. TAXIING ON APRON

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

Wing-tip clearance for A380 on ACFT stand taxilanes to objects is MIM 25'/7.5m, to parallel height-limited service roads is MIM 8'/2.5m.

ACFT type A380-800 will be towed with reduced obstacle clearance of 5m on TWY N11.

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.

1.6. PARKING INFORMATION

On stands A11 thru A40, A50 thru A69, B20 thru B48, C4 thru C16, D1 thru D8A, E2 thru E9A, F211 thru F238, G1 thru G16, H2 thru H12, J13, J14, J17, S501 thru S604, V92 thru V130 and V266 thru V323 push-back required.

Enter remote waiting area V135 by guidance with marshaller only.

On stands A11, A13, A14, A15, A16, A17, A18, A20, A21, A22, A24, A26, A28, A30, A34, A36, A38, A40, A50, A52, A54 thru A54B, A58 thru A58B, A62 thru A62B, A66 thru A66B, A69, B20, B22, B23, B26, B27, B28, B42 thru B48, C4, C5, C6, C8, C11, C13 thru C16, D1, D4, D5, D8, E2, E5, E6, E9, H2, H4, H6, H8 and H12 visual docking guidance system (A-VDGS) available.

1.7. OTHER INFORMATION

Glider areas in vicinity of APT.

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

Bird strike warning system for RWY 07L APCH available.

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AIRPORT BRIEFING

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

Between 2300-0500LT all inbound ACFT should expect clearances whereby final will be reached not closer to the APT than:

- approximately 18NM (RWYs 25C/L) and
- approximately 19NM (RWYs 07C/R) from THR.

These "final-interception points" correspond to the GPS/FMS waypoints DF622 (RWYs 25C/L) and DF652 (RWYs 07C/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 FL 70 only 6NM prior to reaching the above mentioned points. Pilots should adjust their speed accordingly (approximately 200-220 KT when leaving FL 70) and are urgently requested to perform their descent from FL 70 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.

Between 2300-0500LT approaching aircraft shall wait for clearances with the information that the final approach tracks can only be reached at a distance of 5.0NM (RWY 25C/25L) and 5.1NM (RWY 07C/07R) in front of the THR.

These "final approach points" correspond to the GPS/FMS waypoints RATRU (25C), TITUT (25L) as well as TIXAK (07C) and BOGVO (07R).

In addition, pilots should be prepared not to expect a descent clearance below FL 70 until 6NM prior to reaching KUGUV and/or ORVIV (25C/25L) and 6NM prior to reaching ULNOK and/or IBLUS (07C/07R). Pilots shall adjust their speed accordingly (approx. 200 - 220 KT when leaving FL 70) and are urgently requested to conduct the descent from FL 70 as continuous descent, whenever possible.

These procedures may not be applied to:

- Flights with STS/HOSP;
- Flights in meteorological conditions such as CB, TS;
- Flights in emergencies.

In the case that R-NAV (GPS) approach procedures cannot be applied due to the absence of RNAV (GPS) equipment, pilots will be issued with a clearance for an ILS approach (in compliance with the night approach procedure above).

In the case of the ILS not being available, i.e. for clearances for non-precision approaches, approach control will issue descent clearances after 4000'.

2.2. CAT II/III OPERATIONS

RWYs 07L, 07C, 07R, 25L, 25C and 25R approved for CAT II/III operations, special aircrew and ACFT certification required.

2.3. RWY OPERATIONS

2.3.1. HIGH INTENSITY RWY OPERATIONS

2.3.1.1. APPROACH

Approaching ACFT for which a parking position is designated on the Southern airport area shall advise LANGEN Radar on 120.80, 125.350.

These ACFT and propeller-driven ACFT which park in the Eastern part of the Northern apron will preferably be assigned to RWY 07R/25L.

2. ARRIVAL

2.3.1.2. APPROACHES AT A GLIDE ANGLE OF 3.2°

RWY 07L/25R is equipped with two ILS systems for each landing direction. One ILS per landing direction radiates signals for a glide angle of 3.2°, the other one for a glide angle of 3.0°.

The PAPI systems indicate the correct path down to a height of 200ft for 3.0° and 3.2°.

Regular operations will be conducted under CAT I conditions only. The approach procedure will only be assigned if no long-lasting tail wind (more than 30 MIN) is expected. If tail wind prevails or is to be expected, the provisions of Item 1.2.1.1. will be applied and an ILS approach procedure at 3.0° will be assigned for RWY 07L/25R.

If it is not possible to conduct an approach at 3.2° for safety reasons, the pilot shall mention this in the initial call to LANGEN RADAR. Such ACFT will be assigned another RWY.

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, TYPE OF APCH & RWY**.

2.3.1.3. LANDINGS

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

To reduce RWY occupancy times, pilots shall apply the following procedures:

The RWYs shall, as a rule, be vacated via the existing high-speed turn-offs.

When RWY conditions permit, pilots should prepare their landings in order to vacate the RWYs via the high-speed turn-offs listed below:

RWY	ACFT	Turn off Intersections	Dist from THR ft (m)
07C	heavy	L9	8202' (2500m)
	medium / light	L11	5906' (1800m)
07R	heavy	M13	7054' (2150m)
	medium / light	M15	5659' (1725m)
25L	heavy	M21 (except A380)	7464' (2275m)
	medium (JET)	M17	6135' (1870m)
	medium (PROP) / light	M11	3560' (1085m)
25C	heavy	L13	6742' (2055m)
	medium (JET)	L10	5577' (1700m)
	medium (PROP) / light	L8	3691' (1125m)

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 L and/or N11.

2.4. 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 07C/25C.

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

2.5. OTHER INFORMATION

Parallel independent operation may be in force.

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AIRPORT BRIEFING

3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

Notification of ACFT de-icing may be sent on frequency 122.3 or via phone 069/690-73891 by the ACFT operator or his representative.

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.

De-icing on DP1 and DP2 Center MAX wingspan less than 262'/80m.

De-icing on DP2 East and DP2 West MAX wingspan less than 118'/36m.

Pilot stop ACFT when LEFT Pilot position is ABEAM yellow stop line markings/ lights LEFT of centerline.

ACFT which were de-iced on DP1 will be guided to TWY W1 by Apron Control before handed over to ATC.

After de-icing on DP2 intersection take-off out of TWY W3 from RWY 18 required.

On the remote de-icing pads, only jet ACFT with running engines 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.

ACFT will be positioned on de-icing pad DP1 by an eyeline to the LEFT of centerline, which depicts the exact holding position to the pilot optically. This taxiing-aid is made up of 5 amber surface lights with single-sided beams. If the surface lighting or the eyeline is out of order, ACFT will be guided by a marshaller.

ACFT will be positioned on de-icing pad DP2 by an eyeline to the LEFT of the respective centerline, which enables the pilot to visualize the exact holding position. This eyeline is made up to 5 yellow surface lights which shine on one side. If centerline lighting or eyeline is out of operation, ACFT will be guided by a marshaller.

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.

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AIRPORT BRIEFING

3. DEPARTURE

3.2. START-UP & TAXI PROCEDURES

3.2.1. AIRPORT COLLABORATIVE DECISION MAKING

3.2.1.1. START-UP AND PUSH-BACK

Start-up approvals and push-back clearances are issued taking into account the TOBT and TSAT only. The sequence of the start-up request is no longer a factor. The following rules apply:

- The ACFT has to be ready for start-up and/or remote de-icing at TOBT.
- The pilot shall request start-up approval and en-route clearance within the time period of TSAT +/- 5 minutes (not DCL).
- The push-back/taxi clearance has to be requested not later than five minutes after the start-up approval has been issued.

In the case of delays, Clearance Delivery has to be informed accordingly. Otherwise the TOBT will be deleted and has to be re-entered.

3.2.1.2. REMOTE HOLDING

In case an ACFT cannot leave its parking position due to a late TSAT and the parking position is required for an incoming flight, the remote holding procedure can be applied.

When the ACFT is ready to taxi, the pilot will request start-up/pushback for remote holding from apron control.

Note: This request does not refer to start-up approval or en-route clearance.

These shall be obtained from the tower after reaching the remote position.

3.2.1.3. DATALINK CLEARANCE - DCL

For data link departure clearances (DCL), the published procedures and time parameters will remain valid. The TSAT is transmitted via CLD (departure clearance uplink message - issue of the start-up approval and en-route clearance by Clearance Delivery) ("start-up approved at TSAT -hh:mm-"). The push-back/taxi clearance shall be requested at TSAT +/- 5 minutes.

3.2.1.4. TERMS AND DEFINITIONS

TOBT (Target off-block time): The time that an ACFT operator or ground handler estimates that an ACFT will be ready, all doors closed, boarding bridge removed, push-back vehicle available and ready to start-up/push-back immediately upon reception of clearance from the Tower.

TSAT (Target start-up approval time): Target time for start-up approval according to the A-CDM procedure taking into account TOBT, CTOT and/or the traffic situation.

3.2.1.5. CONTACT

Detailed information on Airport CDM can be found at:
www.cdm.frankfurt-airport.com

3.2.2. GENERAL

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

ACFT parking on stand B10 have to contact FRANKFURT Apron, prior actual engine start-up.

COPTER on stand H322 and H323 have to contact FRANKFURT Apron prior start-up.

3.2.3. FROM 0600 - 2200LT

All ACFT up to A321 parked at positions East of TWY N3 and planned for departure from RWY 18 have to expect to taxi via TWYs S East, R East, 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.

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17 JUL 15

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10-1P9

FRANKFURT/MAIN, GERMANY
Eff 23 Jul

AIRPORT BRIEFING

3. DEPARTURE

3.3. NOISE ABATEMENT

3.3.1. DEPARTURE DESIGNATION

RWYs 07C/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** and **SUPER** 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/C:

a) Between 0700-2200LT:

- aa) - ACFT via **BIBTI, MARUN, TOBAK** shall use SIDs with designators:
 - **MIKE** for **3- and 4-engined HEAVY and SUPER** ACFT and all **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions departing RWY 25C;
 - **HOTEL** for **3- and 4-engined HEAVY and SUPER** ACFT and all **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions departing RWY 25L;
 - **JULIETT** for **2-engined HEAVY** ACFT able to comply with the climb restrictions, if unable file **GOLF**;
 - **FOXTROT** (by ATC only) for **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions;
 - **GOLF** for all ACFT unable to comply with climb restrictions.
- ab) - Traffic to all other directions shall use SIDs with designators:
 - **FOXTROT** for all **MEDIUM** and **LIGHT** ACFT;
 - **GOLF** for all **HEAVY** and **SUPER** ACFT.

b) Between 2200-0700LT:

- All 3- and 4-engined jet ACFT, except Avroliner, BAe 146, FA50 and FA90 via **BIBTI, 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.

3.3.2. MEASURES FOR NOISE ABATEMENT

3.3.2.1. NOISE RESPITE PERIODS

Based on a paper known as "alliance paper" several noise respite periods will be introduced during trial operations. Airspace users are requested to familiarise themselves with provisions laid down in the "alliance paper".

3.3.2.2. TRIAL OPERATIONS WHEN LANDING DIRECTION IS 25

0500-0600LT arrivals will be cleared for RWYs 25R/C, departures will be cleared for RWY 25L; RWYs 18 and 25C will not be used for departures, RWY 25L will not be used for landings. 2200-2300LT arrivals will be cleared for RWY 25L, departures will be cleared for RWYs 18 and 25C; RWYs 25R/C will not be used for landings, RWY 25L will not be used for departures.

The provisions concerning delayed take-offs and landings of ACFT described in Para 1.2.2. remain unchanged.

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2 OCT 15

10-1P10

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AIRPORT BRIEFING

3. DEPARTURE

Airlines that anticipate that these trials will lead, with a very high probability, to operational disruptions, shall inform aviation supervision authority (Luftaufsicht), who will then suspend the noise respite period.

3.3.2.3. EXCEPTIONS

Exempt from above regulations will be:

- Flights for which the pilot has declared an emergency or which are apparently in an emergency situation, including flights affected or threatened by unlawful interference;
- Security flights of air defense;
- Flights on search and rescue missions;
- Flights carrying sick or injured persons requiring immediate medical assistance and flights designated as LHO (Live Human Organs);
- Government flights, including flights with Head of State status in accordance with regulations laid down by the Federal Ministry of Transport and Digital Infrastructure (BMVI);
- Flights where a pilot requests a certain runway for safety reasons;
- Particularly endangered flights;
- Calibration flights;

In addition, noise respite periods will not be applied when infrastructural restrictions or poor weather conditions require them to be suspended.

3.3.3.1. DEDICATED RUNWAY OPERATIONS (DROPS)

When RWY 07 is in use, between 0500-0600LT RWY utilisation will be arranged on **odd** calendar days:

All take-offs will be handled via RWY 18, thus avoiding the utilisation of the RWYs 07C/07R for take-offs.

When using the DROps procedures and operating direction 07 for departures to the North, only SIDs with the designation "R" will be allocated by the AD control tower. ACFT unable to adhere to "Cross FFM R-200 at or above 2500'" on the SIDs with the designation "R" will only be granted start-up approval and enroute clearance after coordination has taken place with the approach control unit.

Special Features

If meteorological conditions and/or other operational conditions do not allow the use of RWY 18, another RWY will be allocated after coordination has taken place with the approach control unit. This also applies to ambulance flights and/or flights with corresponding priority of service.

On **even** weekdays, the current procedures employed and published shall apply.

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2 OCT 15

10-1P11

Eff 15 Oct

AIRPORT BRIEFING

3. DEPARTURE

3.4. RWY OPERATIONS

3.4.1. HIGH INTENSITY RWY OPERATIONS

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 Tower.

When using landing direction 07, the pilot shall advise Tower on initial contact of the earliest possible take-off intersection.

3.5. OTHER INFORMATION

3.5.1. GENERAL

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

Winds between 200° and 160° in a clockwise direction and speeds of 15 KT and more shall be expected on RWY 18. Gusts and strong windshifts up to tail wind components may occur.

3.5.2. 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 15 min prior to EOBT for unregulated flights.
25 min prior to CTOT for ATFM regulated flights.
- t_f 6 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.
- t_1 5 min.

The start-up clearance shall not be requested before it has been ascertained that ACFT engines can be started within 5 min after clearance has been issued.

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30 JAN 15

10-1R

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RADAR MINIMUM ALTITUDES

LANGEN Radar (APP)

ARRIVAL

DEPARTURE

*119.025

*120.150

North
120.8

136.125

South
*125.350

*126.550

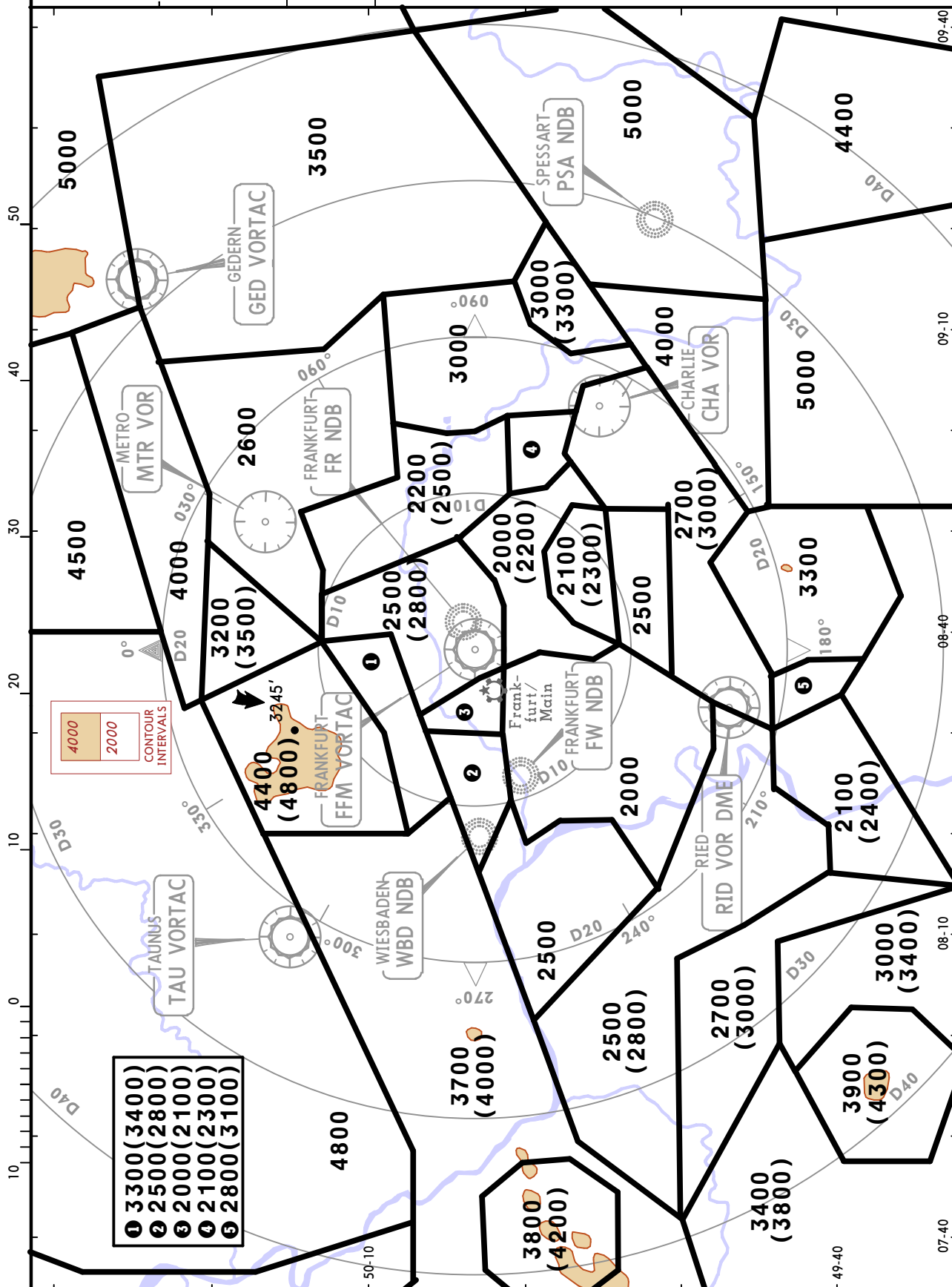
Apt Elev
364'

Alt Set: hPa (IN on request)

Trans level: By ATC Trans alt: 5000'

The MVA is the lowest altitude which may be used for 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 MVA, IFR flights will normally be cleared on published IFR procedures only.

Altitudes in brackets generally 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: Altitudes and sectors revised.

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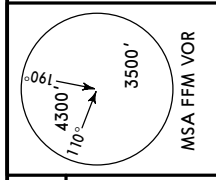
Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000'



*D-ATIS
118.025

Apt Elev
364'

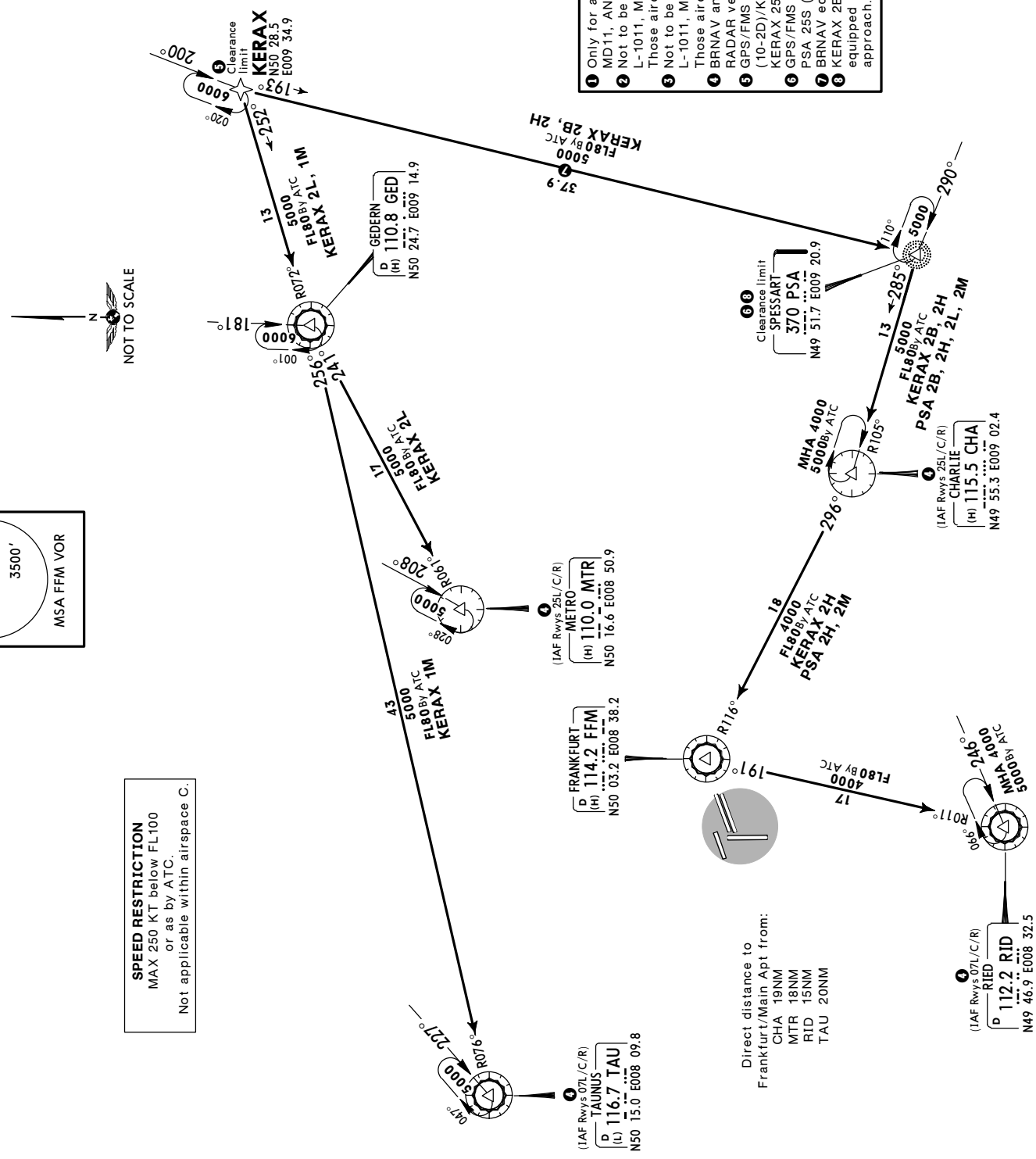
Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000'



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

KERAX TWO BRAVO
(KERAX 2B) [KERA2B] ①
KERAX TWO LIMA
(KERAX 2L) [KERA2L] ②
SPESSART TWO BRAVO (PSA 2B) ③
SPESSART TWO LIMA (PSA 2L) ④
RWYS 25L/C/R ARRIVALS

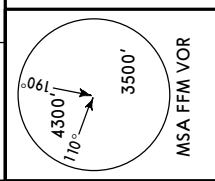
KERAX TWO HOTEL
(KERAX 2H) [KERA2H] ①
KERAX ONE MIKE
(KERAX 1M) [KERA1M] ③
SPESSART TWO HOTEL (PSA 2H) ④
SPESSART TWO MIKE (PSA 2M) ⑤
RWYS 07L/C/R ARRIVALS



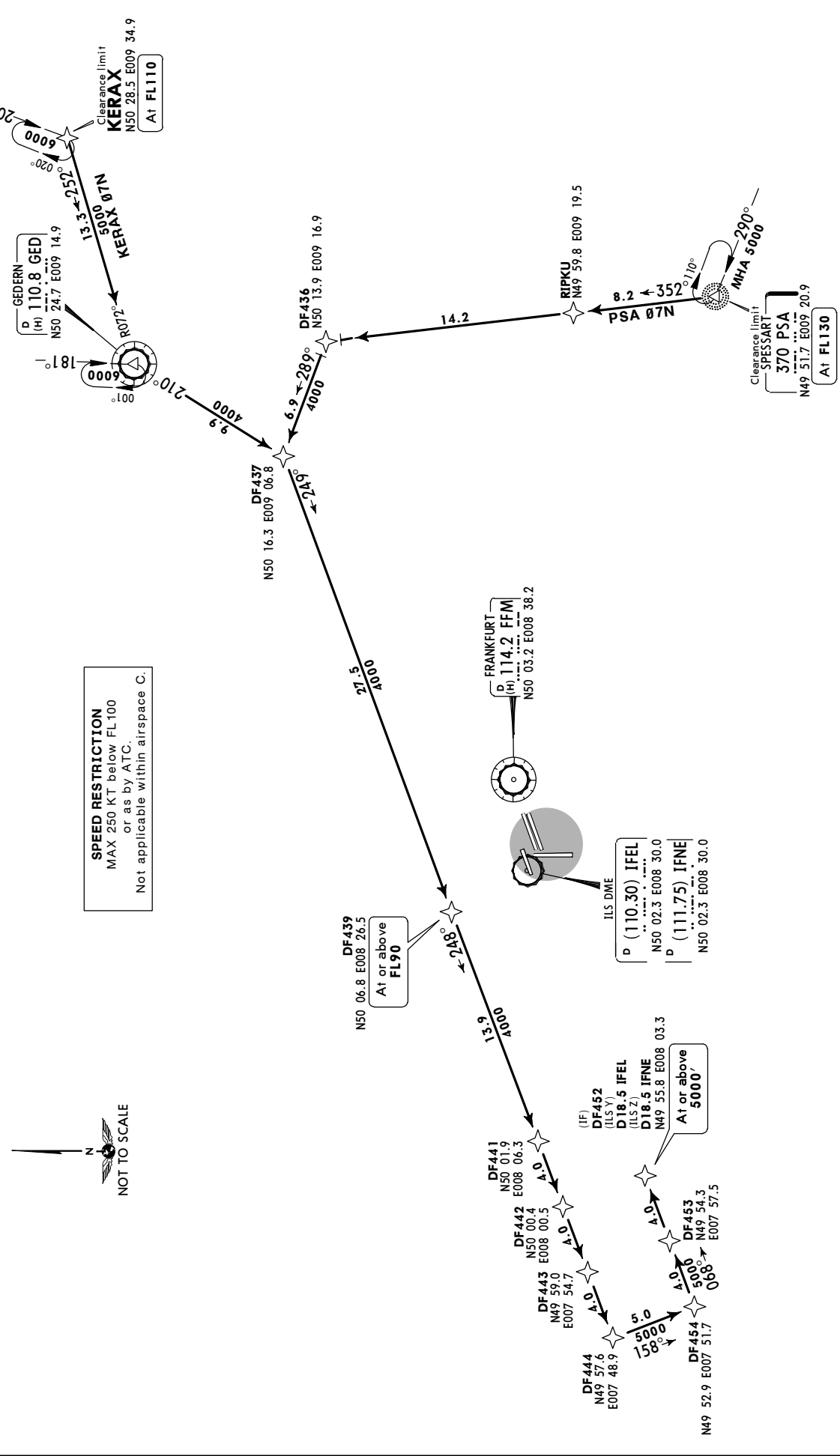
- ① Only for aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35.
- ② Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file KERAX 2B/PSA 2B instead.
- ③ Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file KERAX 2H/PSA 2H instead.
- ④ BRNAV and NON-RNAV equipped aircraft EXPECT RADAR vectors to final approach.
- ⑤ GPS/FMS equipped aircraft EXPECT KERAX 07N (10-2D)/KERAX 07S (10-2E)/KERAX 25N (10-2F)/KERAX 25S (10-2G) Transition.
- ⑥ GPS/FMS equipped aircraft EXPECT PSA 07S (10-2E)/PSA 25S (10-2G) Transition.
- ⑦ BRNAV equipment necessary.
- ⑧ KERAX 2B, 2H: After PSA BRNAV and NON-RNAV equipped aircraft EXPECT RADAR vectors to final approach.

Direct distance to
Frankfurt/Main Apt from:
CHA 19NM
MTR 18NM
RID 15NM
TAU 20NM

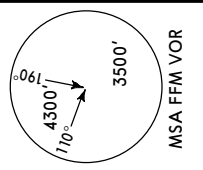
*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)	Trans level: BY ATC	Trans alt: 5000'
118.025	364'	On downwind transition EXPECT vectors to final.		
ROUTING				
KERAX 07N	KERAX (FL110) - GED - DF437 - DF439 (FL90+) - DF444 - DF454 - DF452 (5000'+).			
PSA 07N	PSA (FL130) - DF436 - DF437 - DF439 (FL90+) - DF444 - DF454 - DF452 (5000'+).			



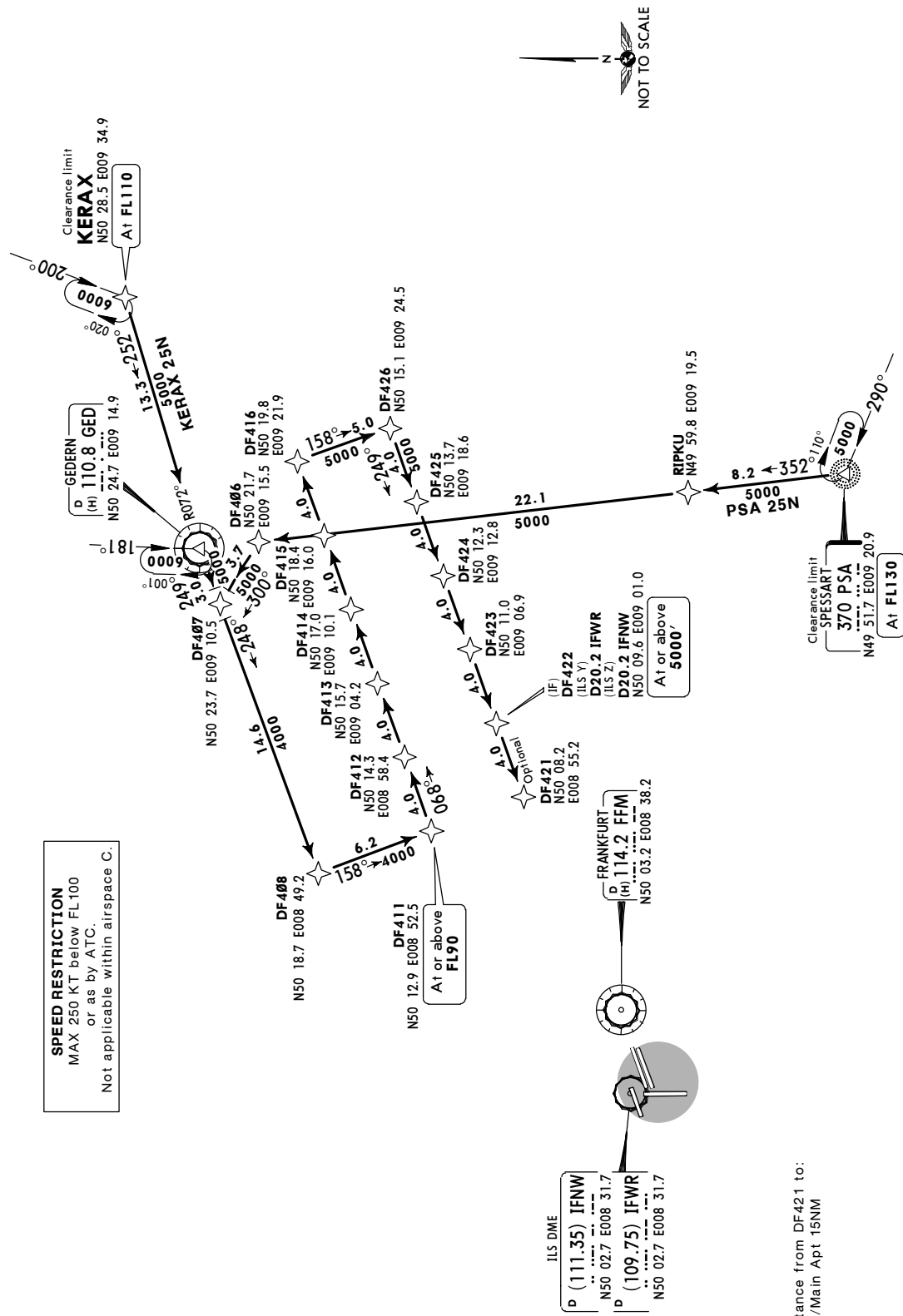
KERAX 07N [KER07N]
PSA 07N
RWY 07L RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



*D-ATIS 118.025	Apt Elev 364'	Alt Set: hPa (IN on request) On downwind transition EXPECT vectors to final.	Trans level: By ATC Trans alt: 5000'
ROUTING			
KERAX 25N	KERAX (FL110) - GED - DF407 - DF408 - DF411 (FL90+) - DF416 - DF426 - DF422 (5000'+).		
PSA 25N	PSA (FL130) - DF406 - DF407 - DF408 - DF411 (FL90+) - DF416 - DF426 - DF422 (5000'+).		



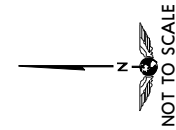
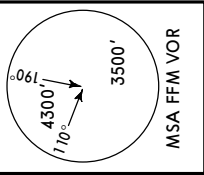
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Direct distance from DF421 to:
Frankfurt/Main Apt 15NM

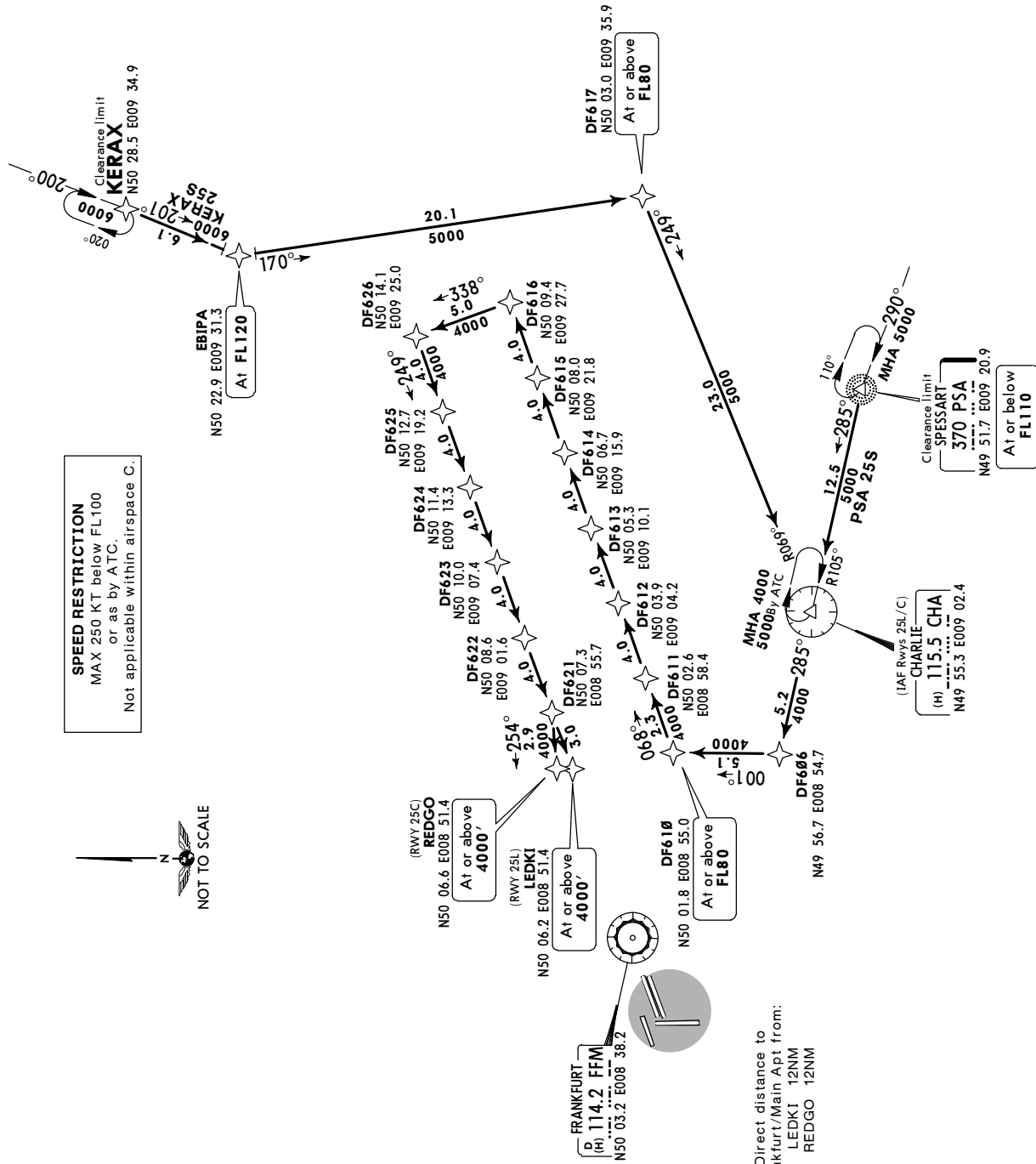
RNAV TRANSITION

*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)	Trans level: By ATC	Trans alt: 5000'
118.025	364'	On downwind transition EXPECT vectors to final.		
ROUTING				
TRANSITION	KERAX - EBIPA (FL120) - DF617 (FL80+) - CHA - DF606 - DF610 (FL80+) - DF616 - DF626 - LEDKI (4000'+).			
KERAX 25S	PSA (FL110-) - CHA - DF606 - DF610 (FL80+) - DF616 - DF626 - LEDKI (4000'+).			

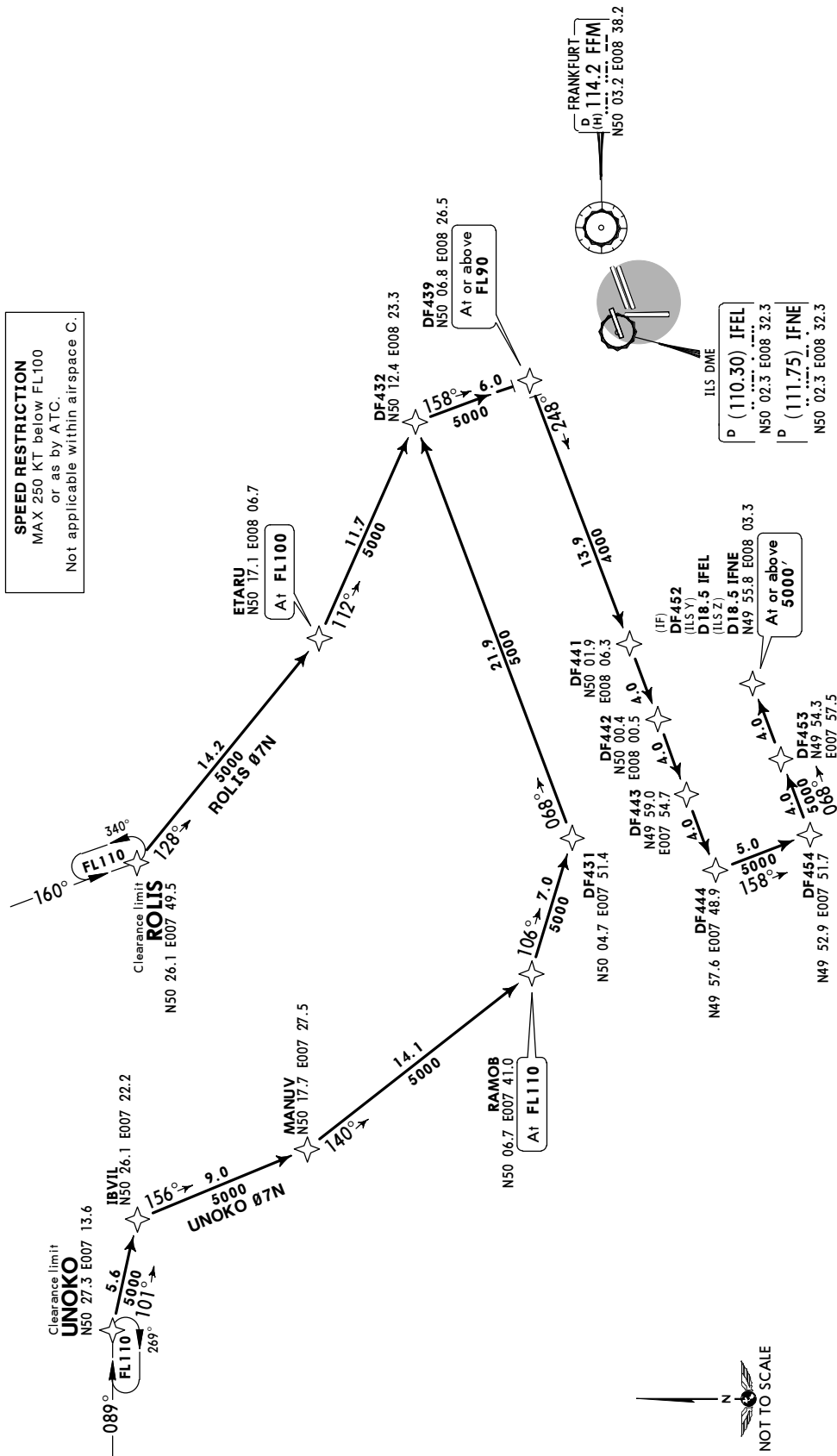
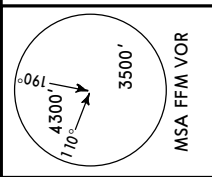


SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

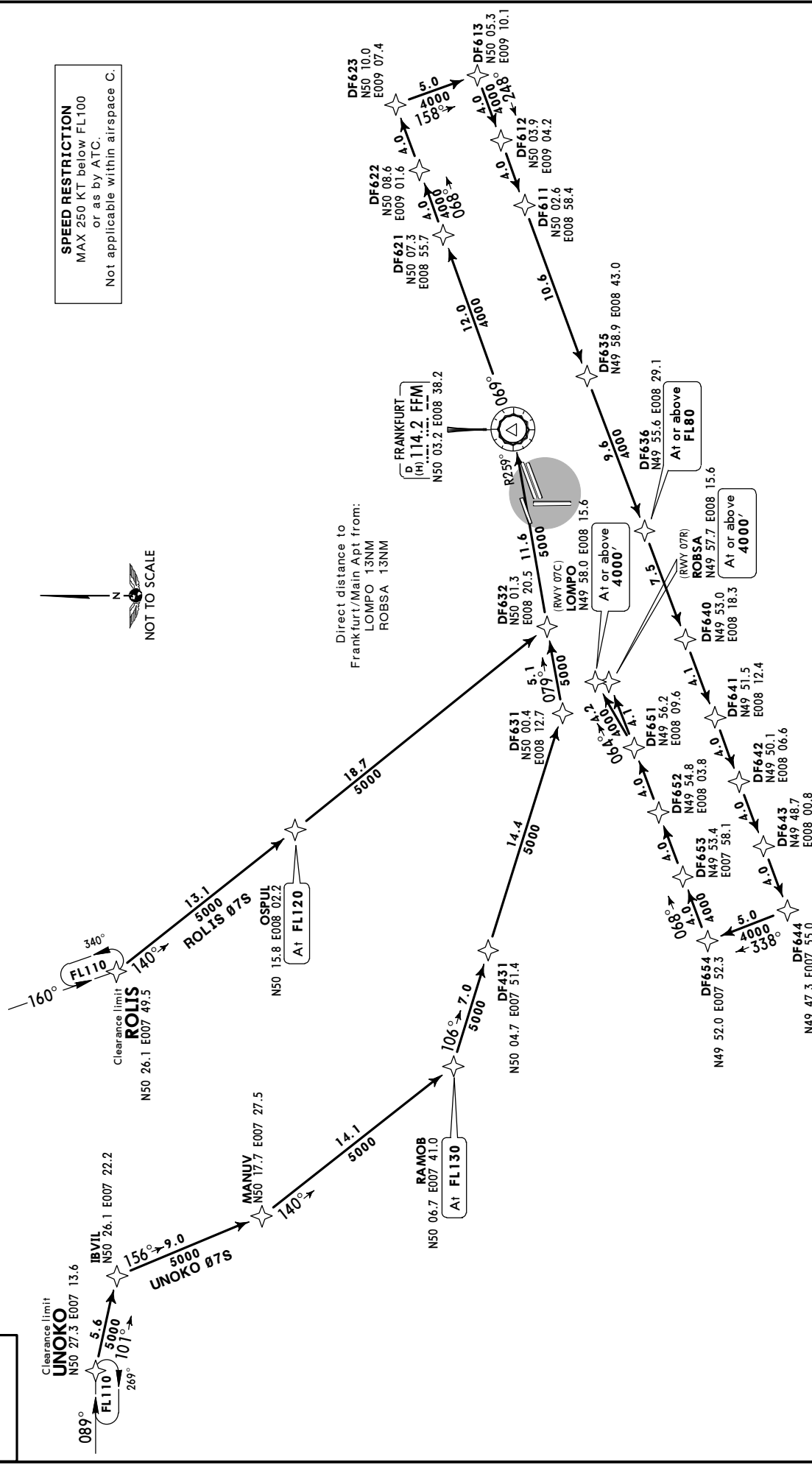
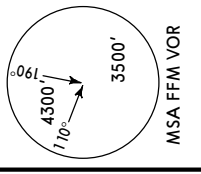
KERAX 25S [KER25S]
PSA 25S
RWYS 25L/C RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



*D-ATIS		Apt Elev	Alt Set: hPa (IN on request)	Trans level: BY ATC	Trans alt: 5000'
118.025		364'	On downwind transition EXPECT vectors to final.		
ROUTING					
ROLIS - ETARU (FL100) - DF432 - DF439 (FL90+) - DF444 - DF454 - DF452 (5000'+).					
UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF431 - DF432 - DF439 (FL90+) -					
DF444 - DF454 - DF452 (5000'+).					



*D.ATIS 118.025	Apt Elev 364'	Alt Set: hPa (IN on request) On downwind transition EXPECT vectors to final.	Trans level: By ATC	Trans alt: 5000'
ROUTING				
TRANSITION				
ROLIS Ø7S	ROLIS - OSPUL (FL120) - DF632 - FFM - DF623 - DF613 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000'+).			
UNOKO Ø7S	UNOKO - IBVIL - MANUV - RAMOB (FL130) - DF631 - FFM - DF623 - DF613 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000'+)			



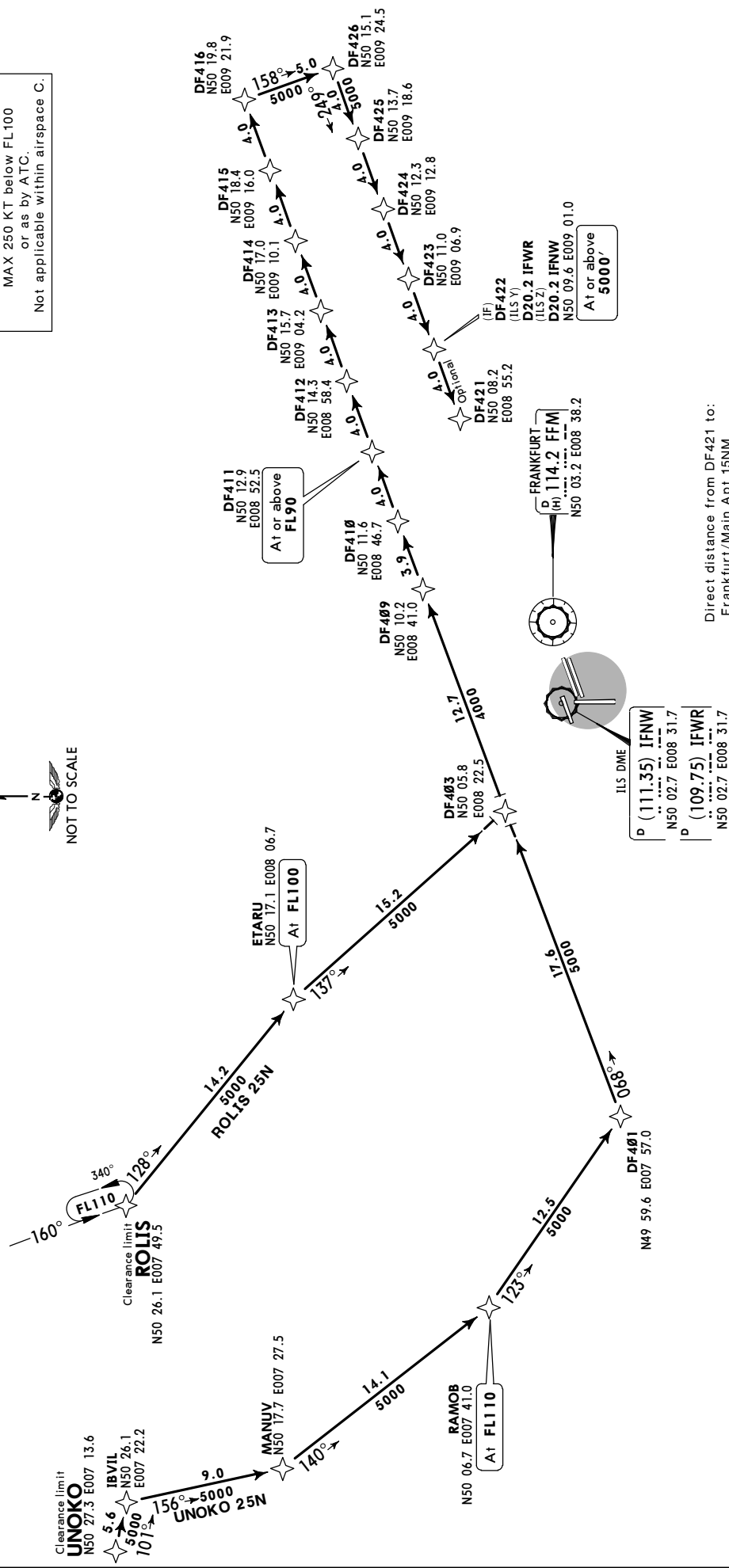
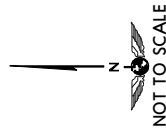
ROLIS 25N [ROL25N]
UNOKO 25N [UNO25N]
RWY 25R RNAV TRANSIT
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATIS

SPEED RESTRICTION
MAX 250 KT below FL1000
or as by ATC.

HOLDING OVER UNOKO



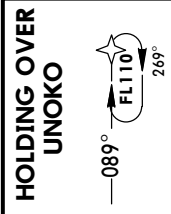
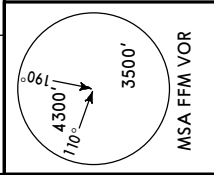
*ID-ATIS 118.025	Apt Elev 364'	Alt Set: hPa (IN on request) On downwind transition EXPECT vectors to final.	Trans level: By ATC	Trans alt: 5000'
ROUTING				
TRANSITION				
ROLIS 25N		ROLIS - ETARU (FL100) - DF403 - DF411 (FL90+) - DF416 - DF428 - DF422 (5000'+).		
UNOKO 25N		UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF401 - DF411 (FL90+) - DF416 - DF428 - DF422 (5000'+).		



Direct distance from DF421 to:
Frankfurt/Main Apt 15NM

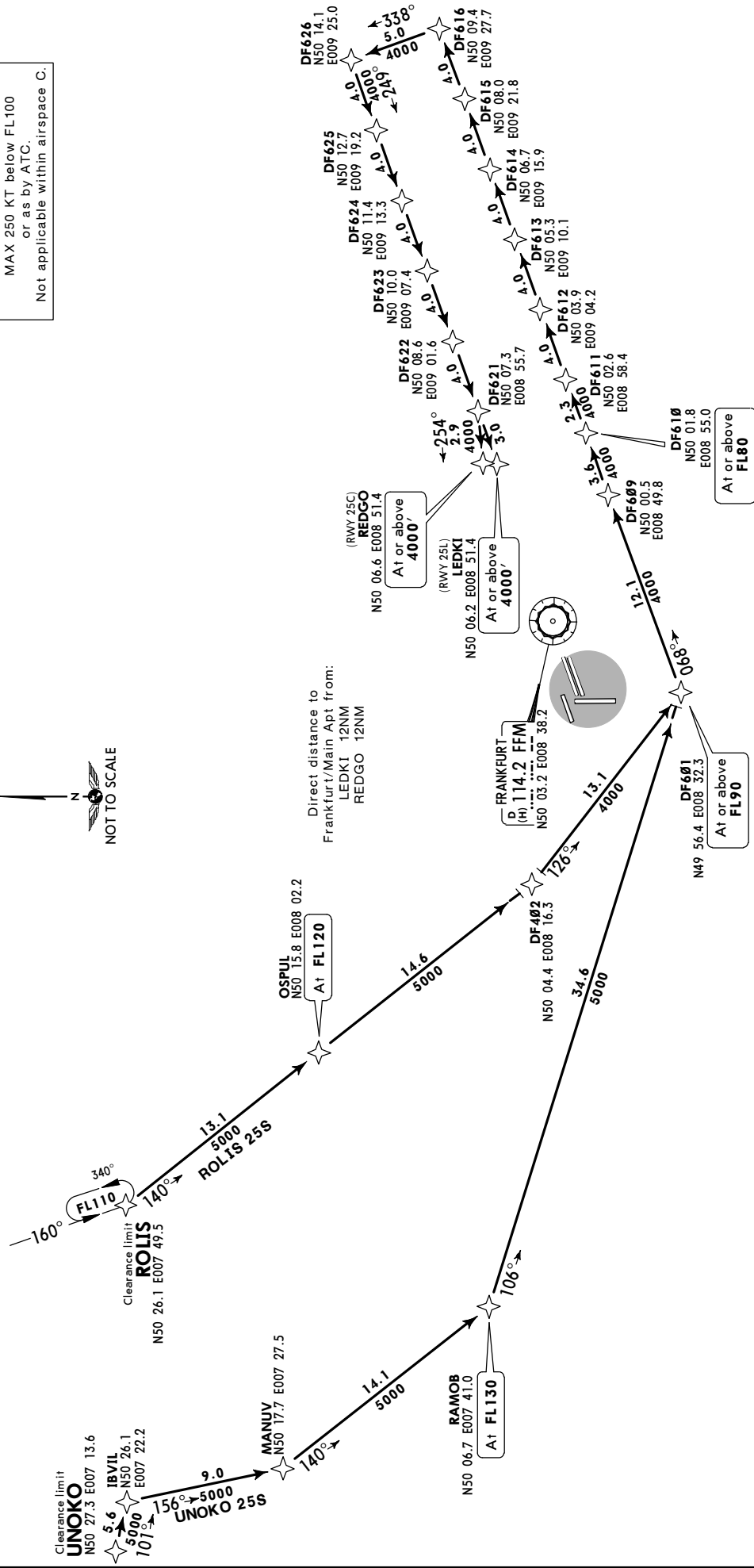
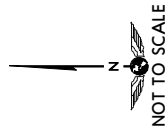
RNAV TRANSITION

*D-ATIS 118.025	Apt Elev 364'	Alt Set: hPa (IN on request) On downwind transition EXPECT vectors to final.	Trans level: BY ATC Trans alt: 5000'
ROUTING			
TRANSITION			
ROLIS 25S	ROLIS - OSPUL (FL120) - DF402 - DF601 (FL90+) - DF610 (FL80+) - DF616 - DF626 - LEDKI (4000'+).		
UNOKO 25S	UNOKO - IBVIL - MANUV - RAMOB (FL130) - DF601 (FL90+) - DF610 (FL80+) - DF616 - DF626 - LEDKI (4000'+).		



ROLIS 25S [ROL25S]
UNOKO 25S [UNO25S]
RWYS 25L/C RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

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



EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY

17 JUL 15

10-3

Eff 23 Jul

SID

SID DESIGNATION	REFER TO CHART
ANEKI 1D, 3E	10-3B
ANEKI 9F, 9G, 7L	10-3C
BIBTI 4D, 3E	10-3D
BIBTI 3F, 3G	10-3E
BIBTI 1H	10-3E1
BIBTI 3M	10-3E2
BIBTI 4N	10-3E3
BIBTI 2L, 4S	10-3E4
BIBTI 2R	10-3E5
BIBTI 2T	10-3E6
DINKELSBUHL 9D, 7E	10-3E7
DINKELSBUHL 6F, 7G	10-3E8
DINKELSBUHL 5L, 7S	10-3E9
KOMIB 2D, 1E	10-3F
MARUN 8D, 4E	10-3G
MARUN 3F, 4G, 3J	10-3G1
MARUN 1H	10-3G2
MARUN 3M	10-3G3
MARUN 5N	10-3G4
MARUN 2R	10-3G5
MARUN 4S	10-3G6
MARUN 2T	10-3G7
METRO 4C	10-3G8
NOMBO 9D, 8E	10-3G9
NOMBO 7F, 8G	10-3H
NOMBO 7L, 7S	10-3J
RATIM 5D, 5E	10-3J1
RATIM 5F, 5G	10-3J2
RATIM 4S	10-3J3
RIED 6C, 3Q	10-3J4
ROTEN 6F, 5G	10-3J5
ROTEN 4L, 6S	10-3J6
SOBRA 4D	10-3J7
SOBRA 4E	10-3K
SOBRA 4F, 4G, 5N, 3P	10-3L
FOR FURTHER SID DESIGNATION REFER TO PAGE 10-3A	

SID DESIGNATION	REFER TO CHART
SOBRA 4L, 4U	10-3L1
SULUS 9D, 6E	10-3L2
SULUS 7F, 8G	10-3L3
SULUS 7L, 7S	10-3L4
TAUNUS 4Q	10-3L5
TOBAK 8D, 7E	10-3L6
TOBAK 4F, 5G, 4J	10-3L7
TOBAK 1H	10-3L8
TOBAK 3M	10-3L9
TOBAK 7N	10-3M
TOBAK 2R	10-3N
TOBAK 6S	10-3N1
TOBAK 4T	10-3N2
ULKIG 1S, 5U	10-3N3

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FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY

17 JUL 15

10-3A1

Eff 23 Jul

RNAV SID

RNAV SID DESIGNATION	REFER TO CHART
ANEKI 1D, 3E	10-3N4
ANEKI 9F, 9G, 7L	10-3N5
BIBTI 4D, 3E	10-3N6
BIBTI 3F, 3G	10-3N7
BIBTI 1H	10-3N8
BIBTI 3M	10-3N9
BIBTI 4N	10-3P
BIBTI 2L, 4S	10-3Q
BIBTI 2R	10-3Q1
BIBTI 2T	10-3Q2
DINKELSBUHL 9D, 7E	10-3Q3
DINKELSBUHL 6F, 7G	10-3Q4
DINKELSBUHL 5L, 7S	10-3Q5
KOMIB 2D, 1E	10-3Q6
MARUN 8D, 4E	10-3Q7
MARUN 3F, 4G, 3J	10-3Q8
MARUN 1H	10-3Q9
MARUN 3M	10-3Q10
MARUN 5N	10-3S
MARUN 2R	10-3T
MARUN 4S	10-3T1
MARUN 2T	10-3T2
NOMBO 9D, 8E	10-3T3
NOMBO 7F, 8G	10-3T4
NOMBO 7L, 7S	10-3T5
RATIM 5D, 5E	10-3T6
RATIM 5F, 5G	10-3T7
RATIM 4S	10-3U
ROTEN 6F, 5G	10-3V
ROTEN 4L, 6S	10-3V1
SOBRA 4D	10-3V2
SOBRA 4E	10-3V3
SOBRA 4F, 4G, 5N, 3P	10-3V4

FOR FURTHER RNAV SID DESIGNATION REFER TO PAGE 10-3A2

RNAV SID DESIGNATION	REFER TO CHART
SOBRA 4L, 4U	10-3V5
SULUS 9D, 6E	10-3V6
SULUS 7F, 8G	10-3V7
SULUS 7L, 7S	10-3V8
TOBAK 8D, 7E	10-3W
TOBAK 4F, 5G, 4J	10-3X
TOBAK 1H	10-3X1
TOBAK 3M	10-3X2
TOBAK 7N	10-3X3
TOBAK 2R	10-3X4
TOBAK 6S	10-3X5
TOBAK 4T	10-3X6
ULKIG 1S, 5U	10-3X7

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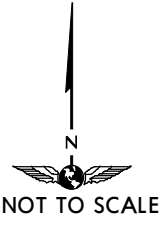
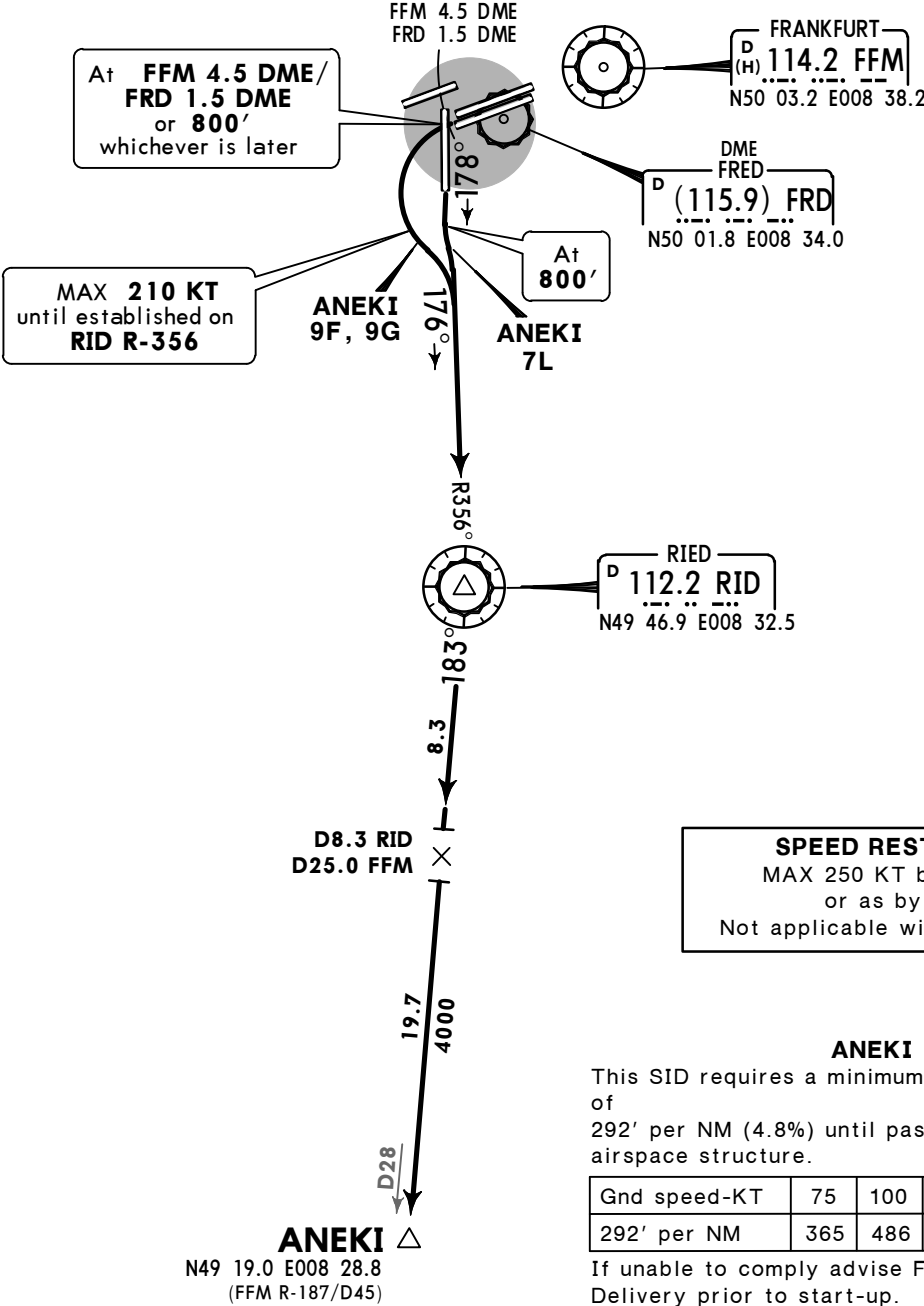
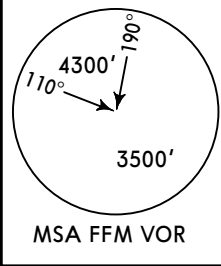
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EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3C Eff 23 Jul SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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 NINE FOXTROT (ANEKI 9F)
ANEKI NINE GOLF (ANEKI 9G)
ANEKI SEVEN LIMA (ANEKI 7L)
RWYS 25L/C, 18 DEPARTURES



ANEKI 9F, 9G: Initial climb clearance 5000'
ANEKI 7L: Initial climb clearance 4000'

SID	RWY	ROUTING
ANEKI 9F, 9G	25L/C	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, intercept RID R-356 inbound to RID, RID R-183 to ANEKI.
ANEKI 7L	18	Climb on runway track to 800', intercept RID R-356 inbound to RID, turn RIGHT, RID R-183 to ANEKI.

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

MSA FFM VOR

FRANKFURT
297 FR
N50 03.9 E008 41.0

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

SID	ROUTING
BIBTI 4D	Climb on runway track to 800', to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT IMMEDIATELY intercept MTR R-202 inbound to D13.1 FFM, turn LEFT, intercept MTR R-287 via ODAGA ① to KUSOM, turn LEFT, 251° track to GUBAX, turn RIGHT, 293° track to RAVKI, turn RIGHT, 335° track to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.
BIBTI 3E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800', whichever is later, turn LEFT, intercept FFM R-356 to ODAGA ①, turn LEFT, 287° track to KUSOM, turn LEFT, 251° track to GUBAX, turn RIGHT, 293° track to RAVKI, turn RIGHT, 335° track to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

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EDDF/FRA
FRANKFURT/MAIN

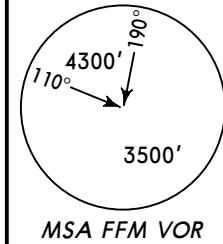
JEPPESEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3E Eff 5 Mar

SID

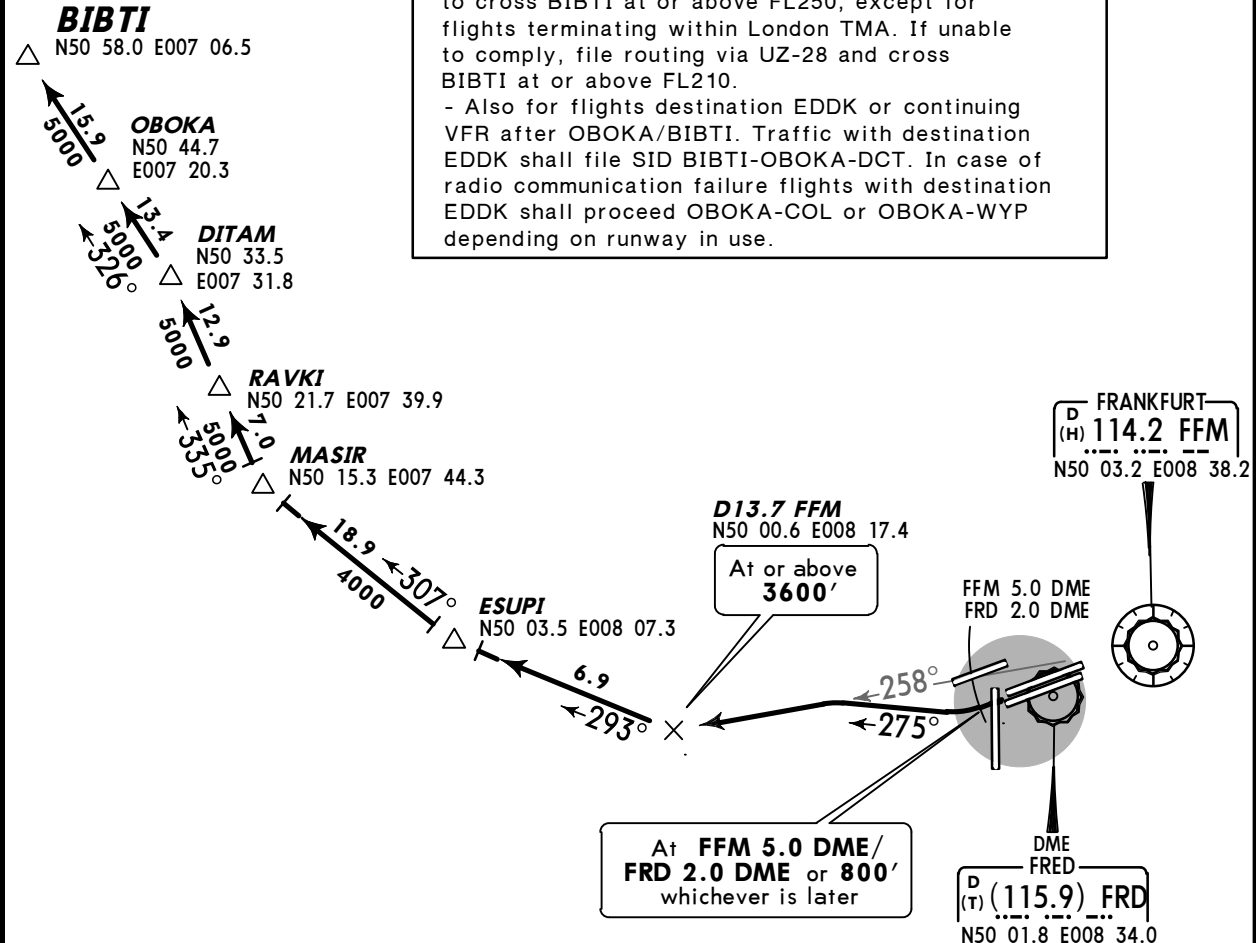
*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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BIBTI THREE FOXTROT (BIBTI 3F)
BIBTI THREE GOLF (BIBTI 3G)
RWYS 25L/C DEPARTURES

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



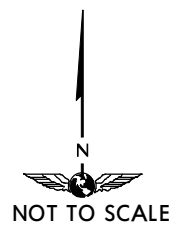
- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



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.



NOT TO SCALE

Initial climb clearance 5000'

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800', whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258 to D13.7 FFM ①, turn RIGHT, 293° track to ESUPI, turn RIGHT, 307° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

① After D13.7 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

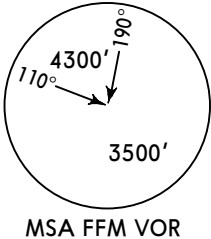
JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3E1 Eff 23 Jul

SID

*LANGEN
Radar
120.15

Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



BIBTI ONE HOTEL (BIBTI 1H) RWY 25L DEPARTURE

- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

BIBTI
N50 58.0 E007 06.5

OBOKA
N50 44.7
E007 20.3

DITAM
N50 33.5
E007 31.8

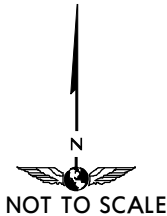
RAVKI
N50 21.7 E007 39.9

MASIR
N50 15.3 E007 44.3

At **FFM 5.1 DME/FRD 2.1 DME**
or **800'** whichever is later

MAX 185 KT until established
on **VFM R-015** inbound

FRANKFURT
D (H) **114.2 FFM**
N50 03.2 E008 38.2



SPEED RESTRICTION

MAX 250 KT below FL100
or as by ATC.

Not applicable within airspace C.

This SID requires a minimum climb gradient of
249' per NM (4.1%) until passing 2500' due
to airspace structure

Gnd speed-KT	75	100	150	200	250	300
249' per NM	311	415	623	830	1038	1246

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

Initial climb clearance **5000'**

ROUTING

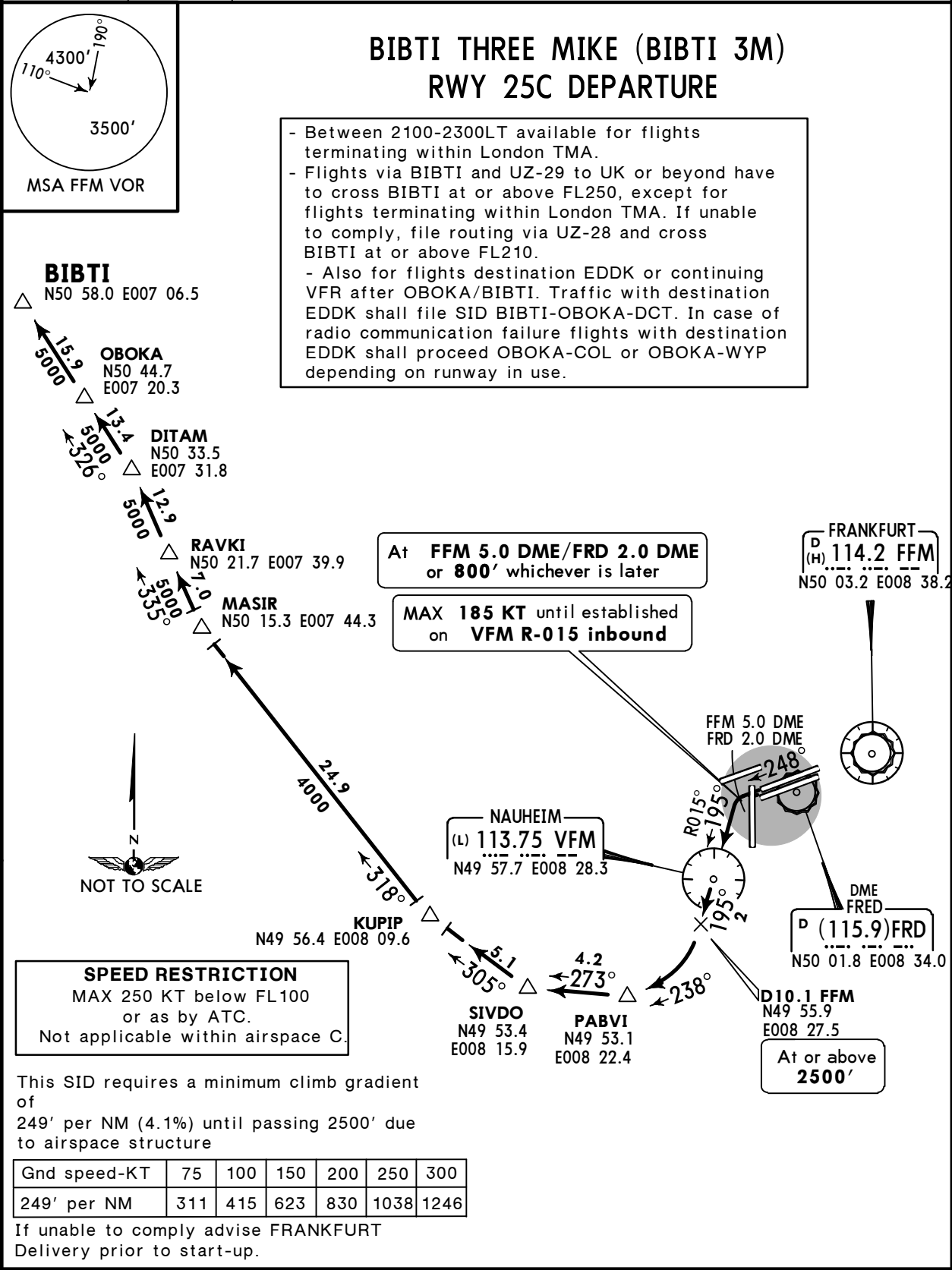
Climb on runway track to FFM 5.1 DME/FRD 2.1 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ①, turn RIGHT, 238° track to PABVI, turn RIGHT, 273° track to SIVDO, turn RIGHT, 305° track to KUPIP, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

① After D10.1 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 **10-3E2** **Eff 23 Jul** **SID**

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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Initial climb clearance		5000'
ROUTING		
Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ①, turn RIGHT, 238° track to PABVI, turn RIGHT, 273° track to SIVDO, turn RIGHT, 305° track to KUPIP, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.		
① After D10.1 FFM BRNAV equipment necessary.		

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3E3 Eff 23 Jul

SID

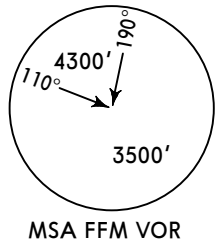
*LANGEN
Radar
120.15

Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

BIBTI FOUR NOVEMBER (BIBTI 4N)
RWYS 25L/C DEPARTURE

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



- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

BIBTI
N50 58.0 E007 06.5

OBOKA
N50 44.7
E007 20.3

DITAM
N50 33.5
E007 31.8

RAVKI
N50 21.7 E007 39.9

MASIR
N50 15.3 E007 44.3

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

At
**FFM 4.5 DME/
FRD 1.5 DME
or 800'**
whichever is later
MAX 220 KT
until established
on **184° track**

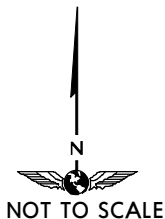
FFM 4.5 DME
FRD 1.5 DME

DME FRED
D (115.9) FRD
N50 01.8 E008 34.0

D16.0 RID
N49 55.3 E008 11.5

D14.0 FFM
N49 53.1
E008 23.2

RIED
D (L) 112.2 RID
N49 46.9 E008 32.5



Initial climb clearance **5000'**

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ①, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

① After D16.0 RID BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
17 JUL 15 **10-3E4** **Eff 23 Jul** **SID**

*LANGEN
Radar
120.15

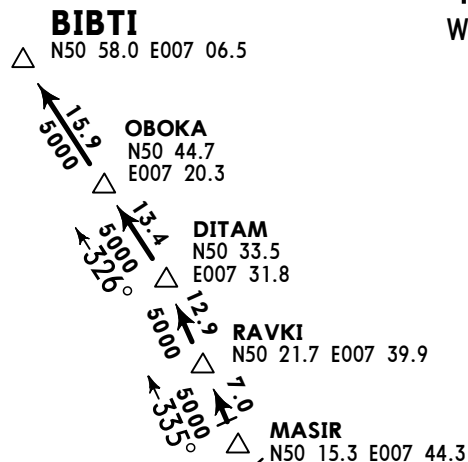
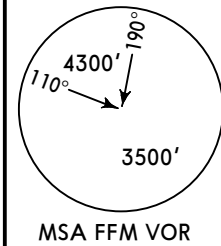
Apt Elev
364'

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.

BIBTI TWO LIMA (BIBTI 2L)
BIBTI FOUR SIERRA (BIBTI 4S)
BY ATC

RWY 18 DEPARTURES
WILL ONLY BE ASSIGNED WHEN
LANDING DIRECTION IS 25



- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

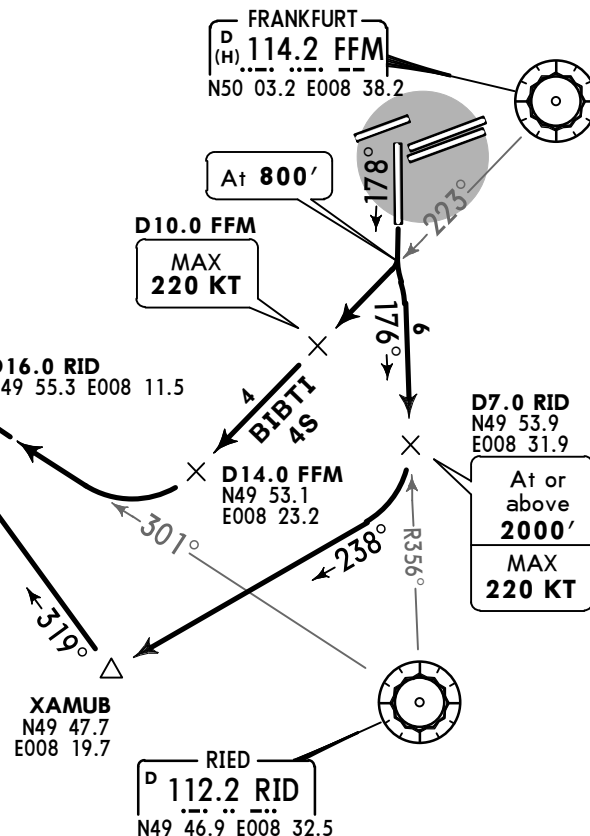
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBTI 2L

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
BIBTI 2L	Climb on runway track to 800', intercept RID R-356 inbound to D7.0 RID ①, turn RIGHT, 238° track to XAMUB, turn RIGHT, 319° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.
BIBTI 4S	Climb on runway track to 800', turn RIGHT, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ②, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

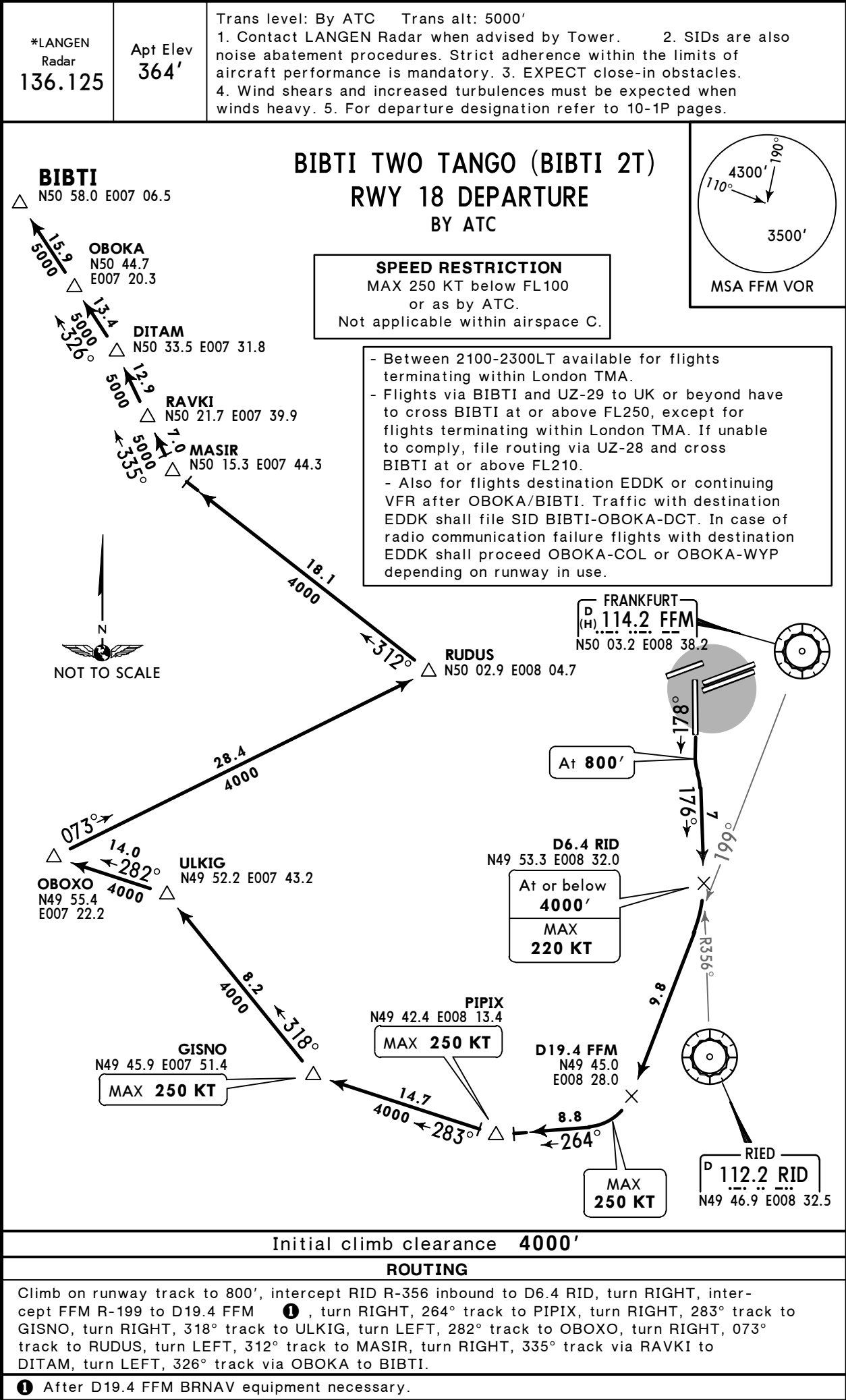
BRNAV equipment necessary after: ① D7.0 RID/ ② D16.0 RID.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3E6 Eff 15 Oct

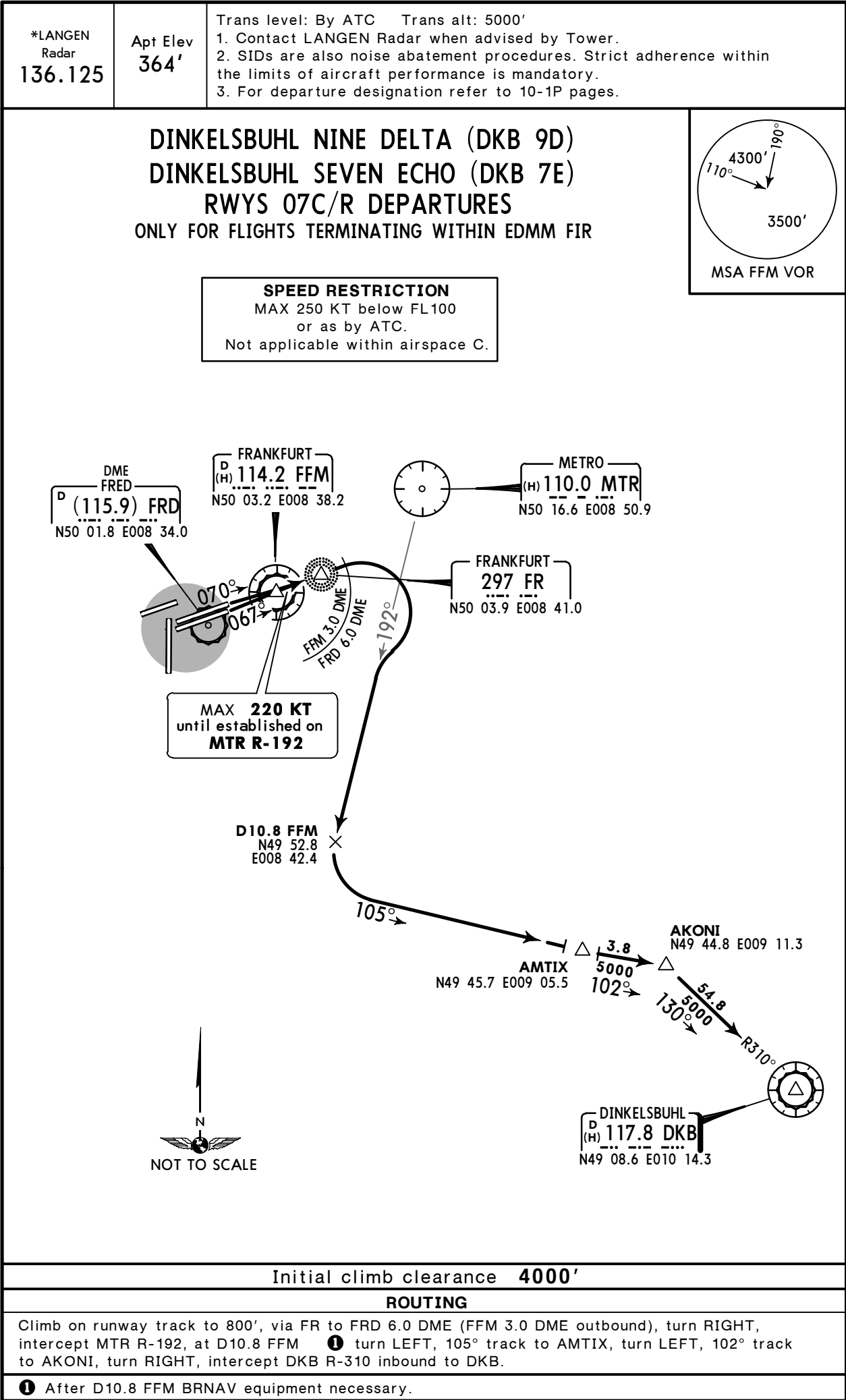
SID



EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3E7 Eff 23 Jul

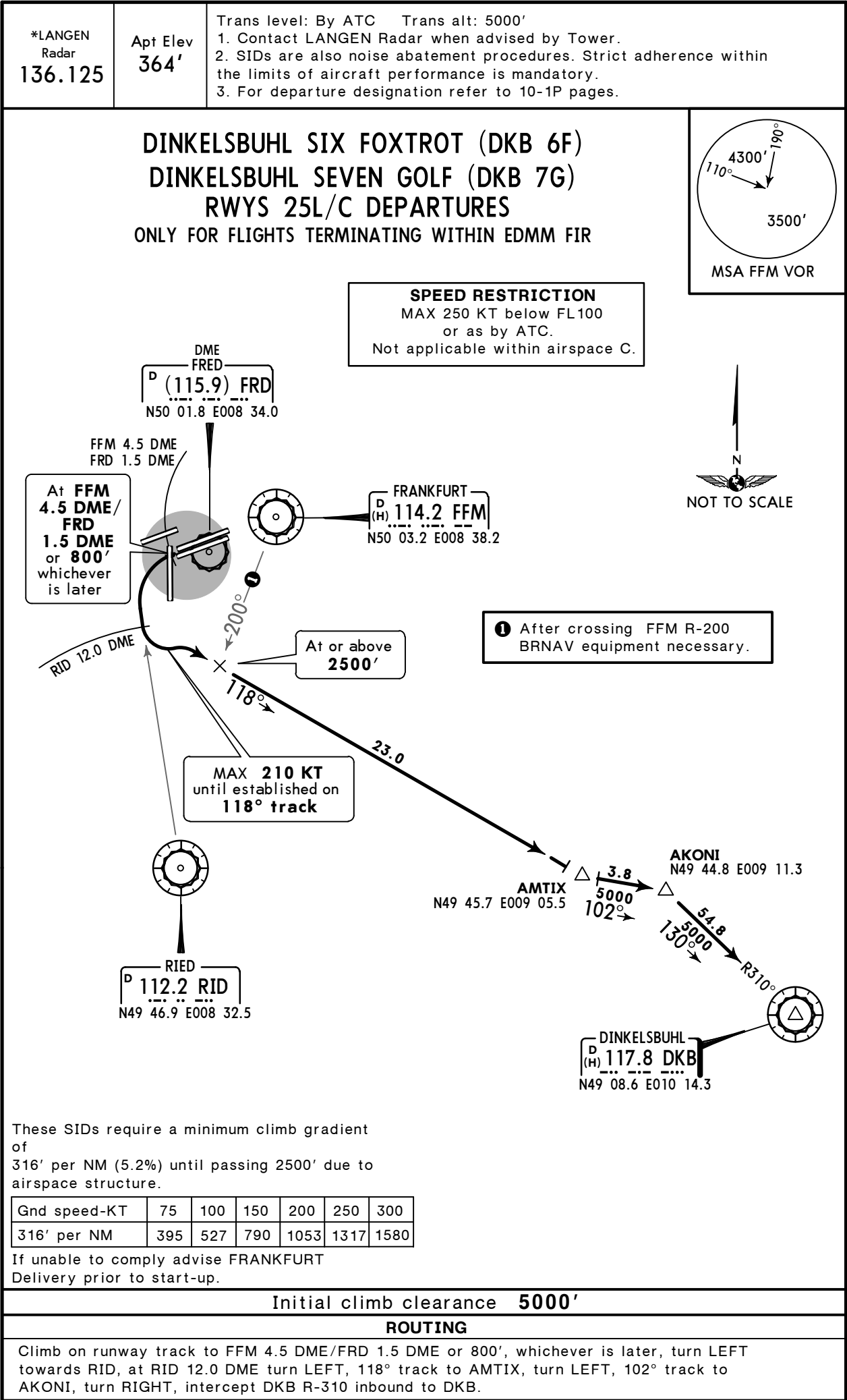
SID



EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3E8 Eff 23 Jul

SID



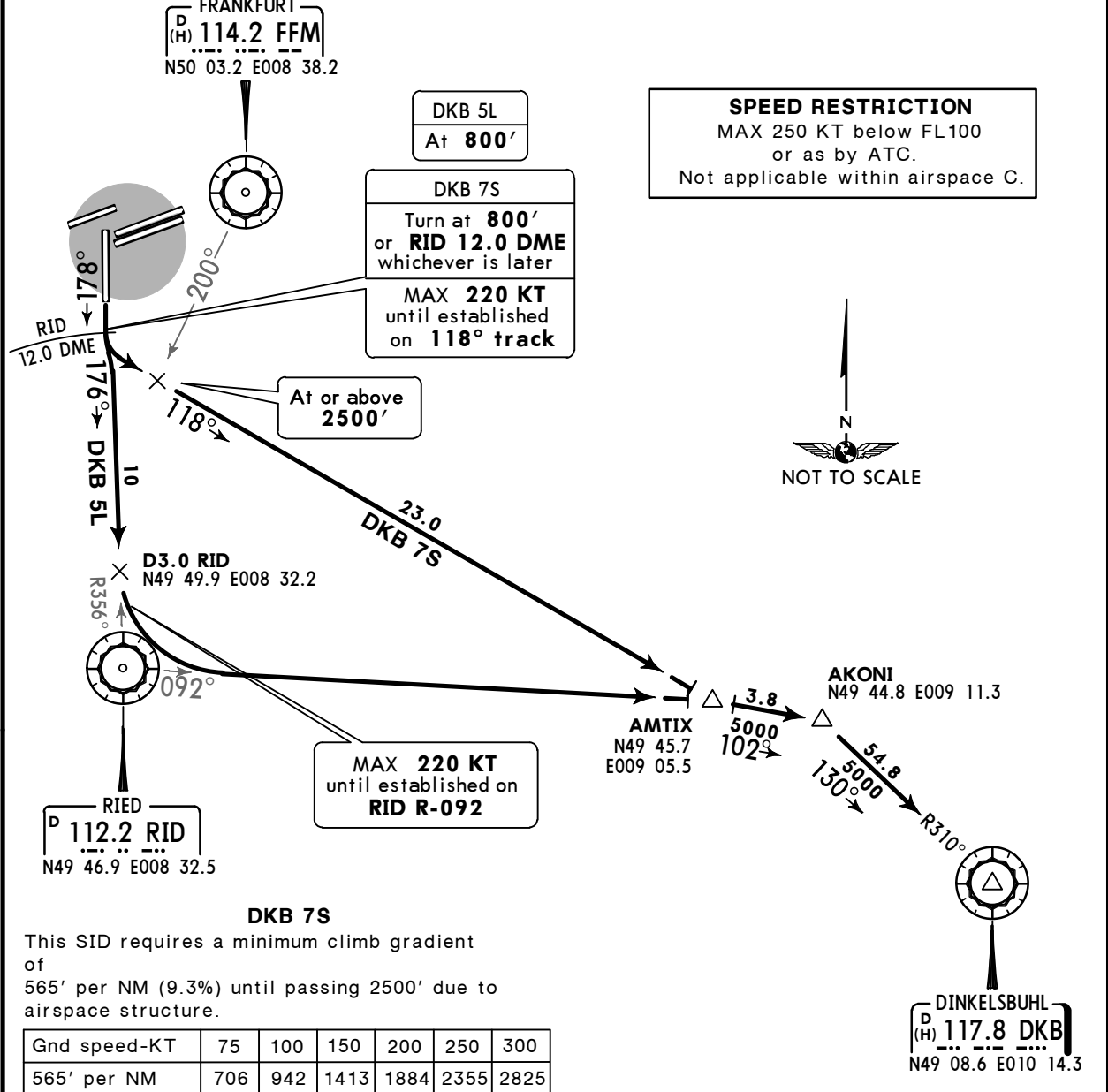
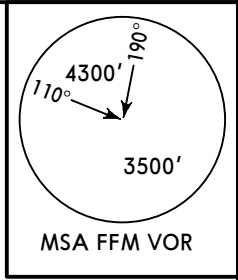
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3E9 Eff 23 Jul

SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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DINKELSBUHL FIVE LIMA (DKB 5L)
DINKELSBUHL SEVEN SIERRA (DKB 7S)
RWY 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



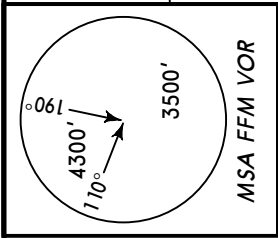
If unable to comply advise FRANKFURT
Delivery prior to start-up and EXPECT routing
via DKB 5L.

Initial climb clearance 4000'	
SID	ROUTING
DKB 5L	Climb on runway track to 800', intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ①, turn RIGHT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.
DKB 7S ②	Climb on runway track to 800' or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.
After AMTIX ① /passing FFM R-200 ② BRNAV equipment necessary.	

EDDF/FRA
FRANKFURT/MAIN

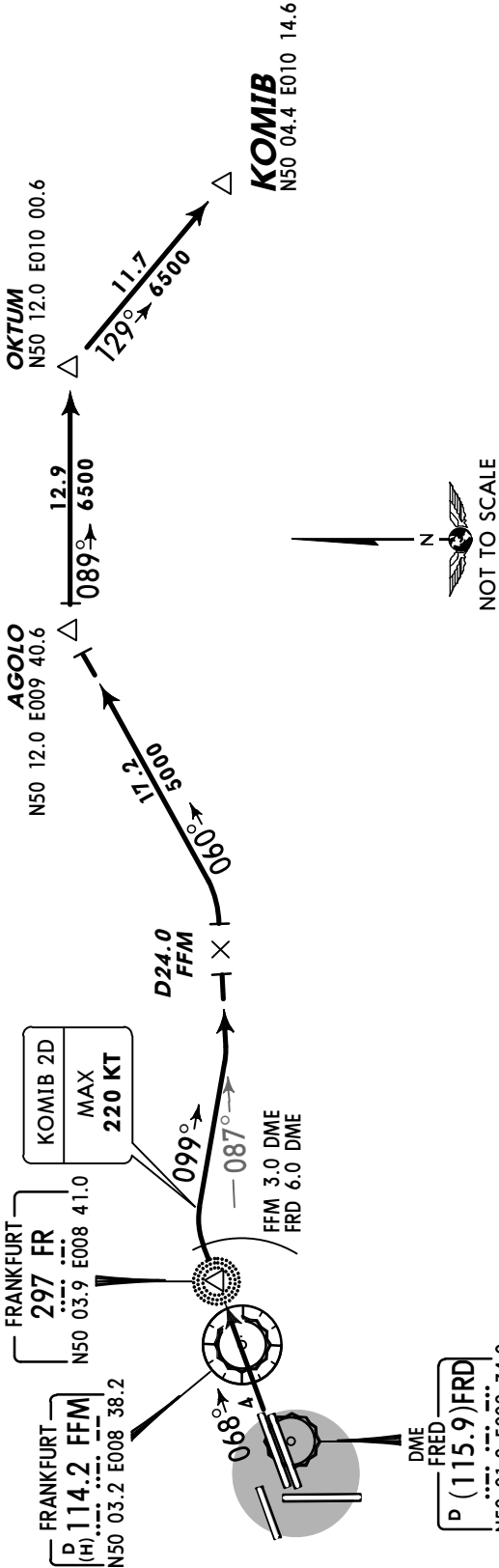
JEPPESSEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3F Eff 5 Mar SID

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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KOMIB TWO DELTA (KOMIB 2D)
KOMIB ONE ECHO (KOMIB 1E)
RWYS 07C/R DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA

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

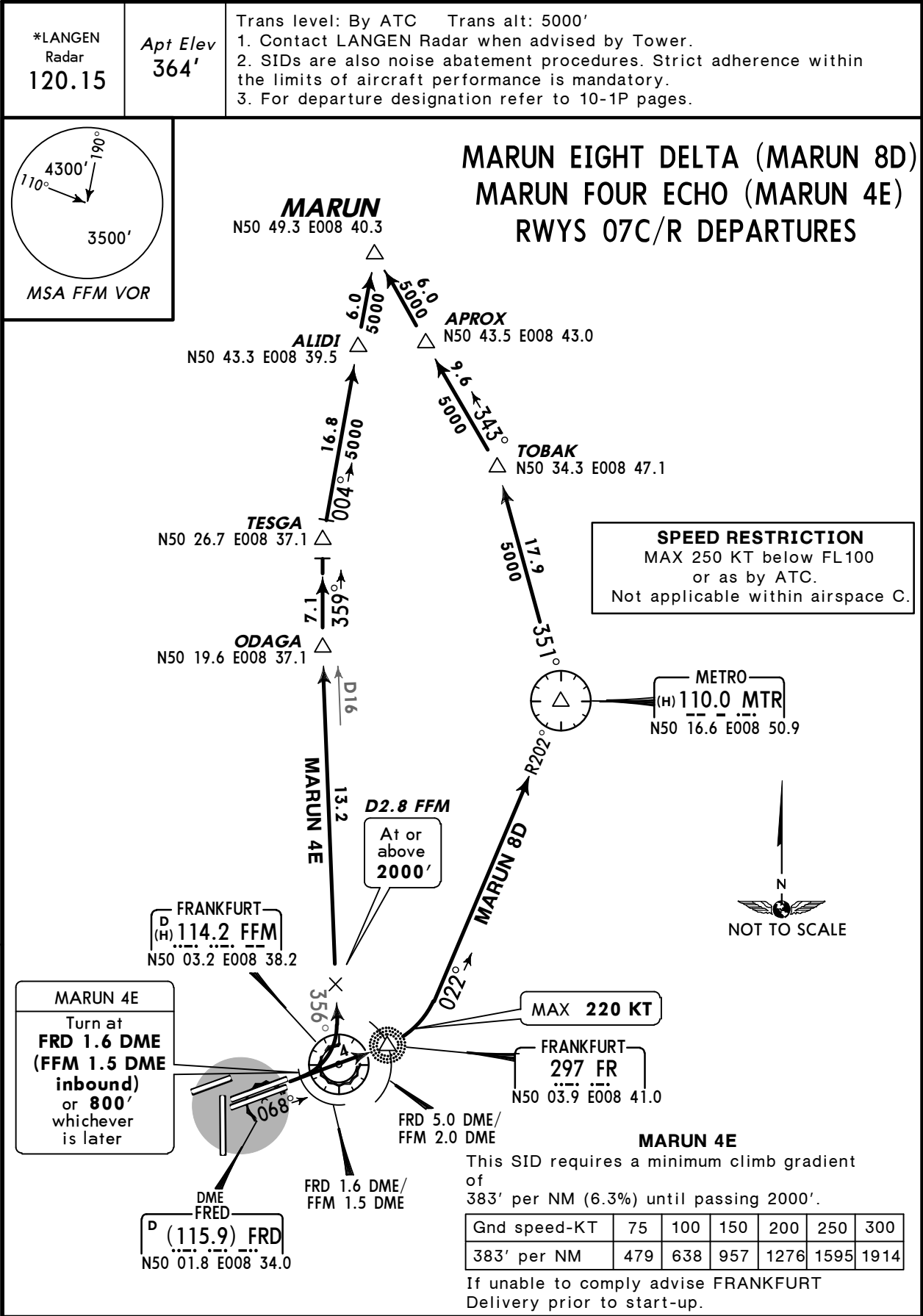


Initial climb clearance 4000'
ROUTING
Climb on runway track to 800', via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, 099° track, turn LEFT, intercept FFM R-087 to D24.0 FFM ①, turn LEFT, 060° track to AGOLO, turn RIGHT, 089° track to OKTUM, turn RIGHT, 129° track to KOMIB.
① After D24.0 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3G Eff 5 Mar

SID



SID	ROUTING
MARUN 8D	Climb on runway track to 800', to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT IMMEDIATELY, intercept MTR R-202 inbound to MTR ①, turn LEFT, MTR R-351 to TOBAK, turn LEFT, 343° track via APROX to MARUN.
MARUN 4E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800', whichever is later, turn LEFT, intercept FFM R-356 to ODAGA ②, turn RIGHT, 359° track to TEGSA, turn RIGHT, 004° track via ALIDI to MARUN.

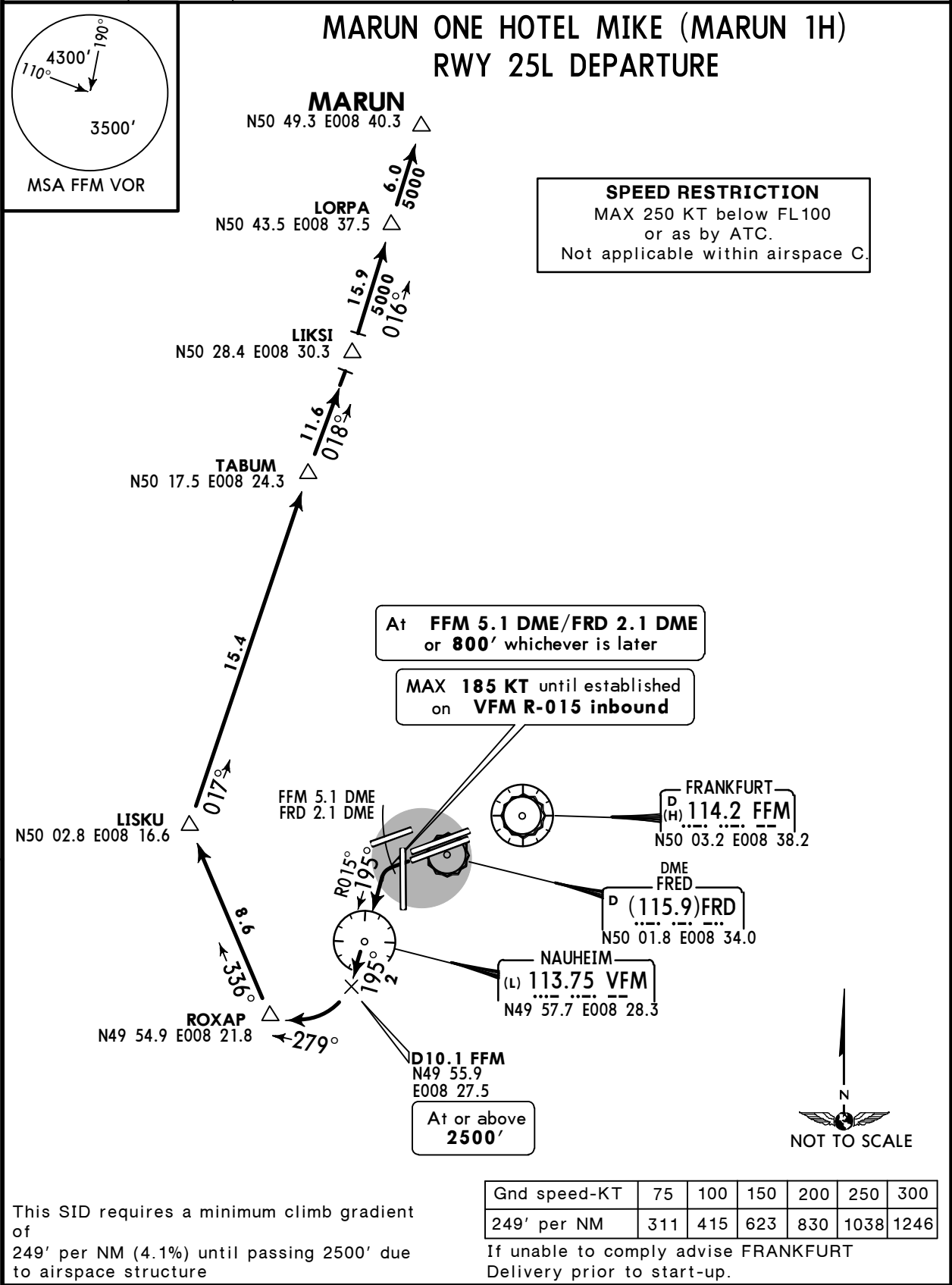
BRNAV equipment necessary after: ① MTR/ ② ODAGA.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3G2 Eff 23 Jul

SID

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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This SID requires a minimum climb gradient of 249' per NM (4.1%) until passing 2500' due to airspace structure

Initial climb clearance **5000'**

ROUTING

Climb on runway track to FFM 5.1 DME / FRD 2.1 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ①, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

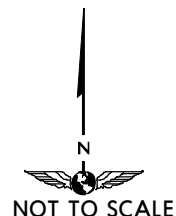
① After D10.1 FFM BRNAV equipment necessary.

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



Not applicable within airspace C.



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

Initial climb clearance **5000'**

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM **①**, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

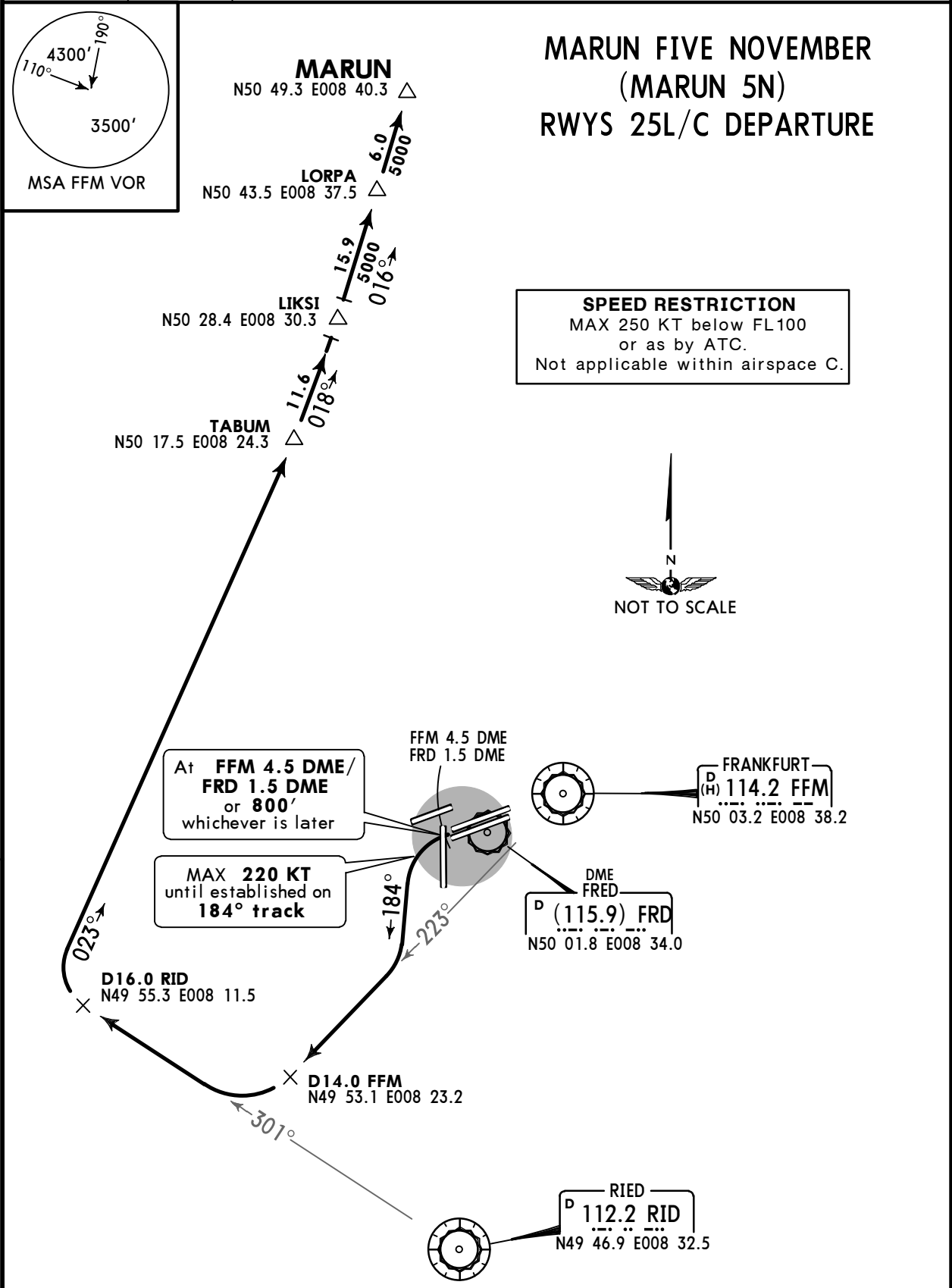
❶ After D10.1 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3G4 Eff 23 Jul

SID

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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Initial climb clearance 5000'

ROUTING
Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID, turn RIGHT, 023° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.
① After D16.0 RID BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3G5 Eff 15 Oct

SID

*LANGEN Radar 120.150	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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MARUN TWO ROMEO (MARUN 2R)
RWY 18 DEPARTURE
WILL ONLY BE ASSIGNED BETWEEN
2300-0600LT

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



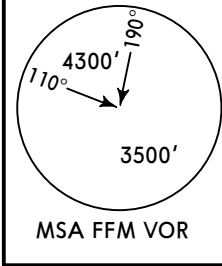
MARUN
N50 49.3 E008 40.3

APROX
N50 43.5 E008 43.0

TOBAK
N50 34.3 E008 47.1

METRO
(H) 110.0 MTR
N50 16.6 E008 50.9

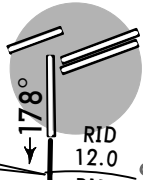
FRANKFURT
(D) 114.2 FFM
(H) N50 03.2 E008 38.2



At 800' or RID 12.0 DME
whichever is later

MAX 220 KT
until established
on 118° track

At or above
2500'



TUKRU
N49 56.4
E008 43.3

RIED
(D) 112.2 RID
N49 46.9 E008 32.5

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.

Initial climb clearance 4000'

ROUTING

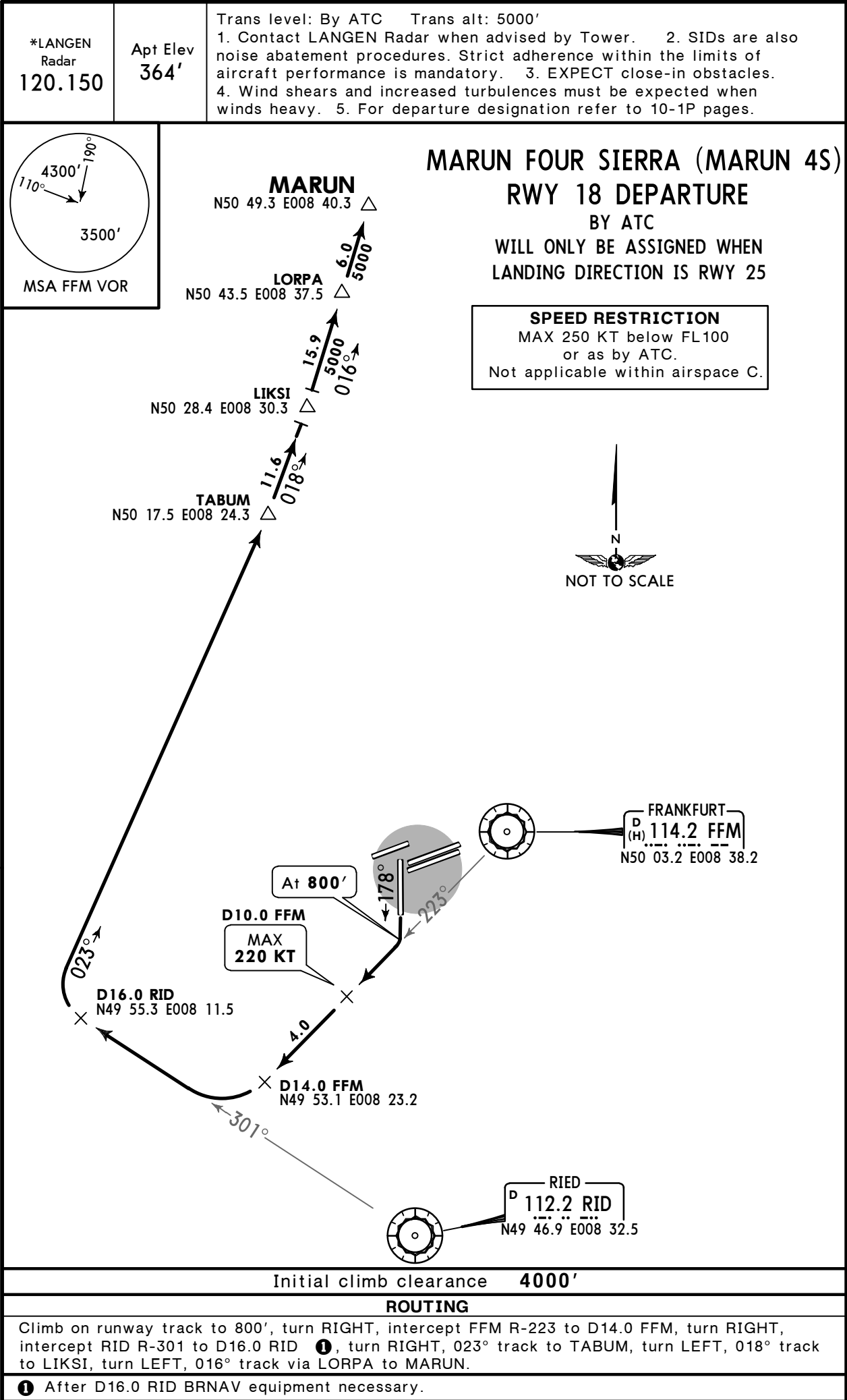
Climb on runway track to 800' or RID 12.0 DME, whichever is later, turn LEFT, 118° track,
when passing FFM R-200 ① turn LEFT, 088° track to TUKRU, turn LEFT, intercept MTR
R-192 inbound to MTR, turn LEFT, MTR R-351 to TOBAK, turn LEFT, 342° track via APROX
to MARUN.

① After FFM R-200 BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

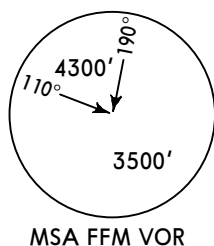
JEPPesen FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3G6 Eff 15 Oct

SID



Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.



MARUN TWO TANGO
(MARUN 2T)
RWY 18 DEPARTURE
BY ATC

Not applicable within airspace C.

N50 49.3 E008 40.3 ▲

N50 43.3 E008 39.5 $\triangle$

N50 26.7 E008 37.1

N50 17.7 E008 32.6 ^

399 WBD
N50 02.9 E008 19.7

N50 02.9 E008 04.7

At 80

N49 53.3 D6.4 RID
E008 32.0

At or below
4000'

MAX 220 KT

**[D
(H) 114.2 FFM]**
N50 03.2 E008 38.2

D 112.2 RID
N49 46.9 E008 32.5

N49 42.4 E008 13.4

MAX 250 KT

MAX
250 KT

D19.4 FFM
N49 45.0 E008 28.0

Initial climb clearance **4000'**

ROUTING

Climb on runway track to 800', intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM **①**, turn RIGHT, 264° track to PIPX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG, turn LEFT, 282° track to OBOXO, turn RIGHT, 073° track to RUDUS, turn RIGHT, intercept 088° bearing to WBD, turn LEFT, 028° bearing to MABOB, turn LEFT, 016° track to TESGA, turn LEFT, 004° track via ALIDI to MARUN.

① After D19.4 FFM BRNAV equipment necessary.

SID

SID

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3H Eff 5 Mar

SID

*LANGEN
Radar
136.125

Apt Elev
364'

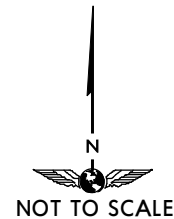
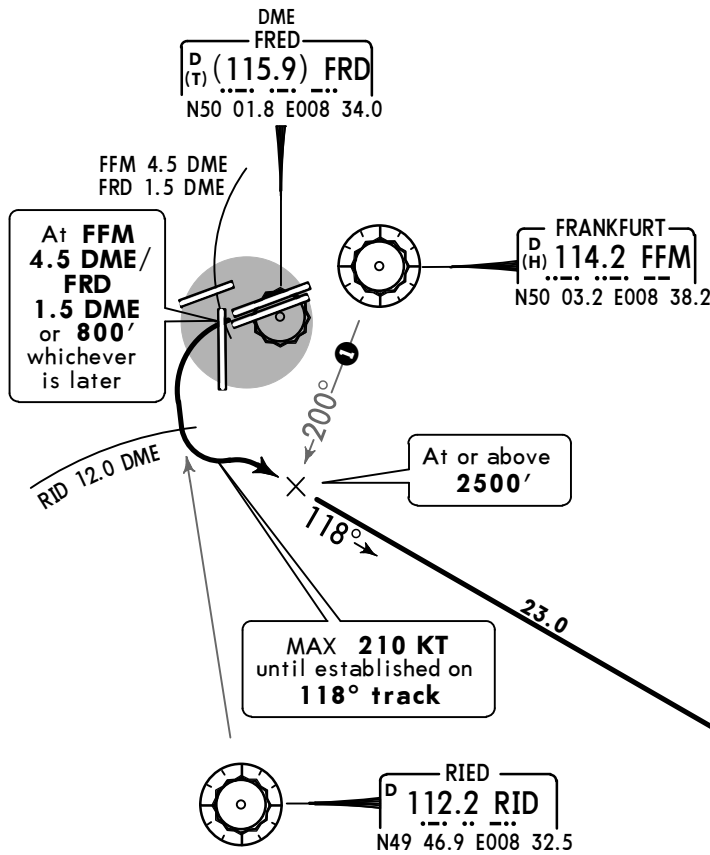
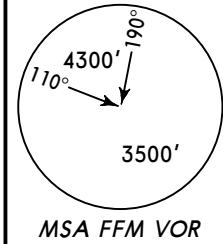
Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

NOMBO SEVEN FOXTROT (NOMBO 7F)

NOMBO EIGHT GOLF (NOMBO 8G)

RWYS 25L/C DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM 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.

① After passing FFM R-200
BRNAV equipment necessary.

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

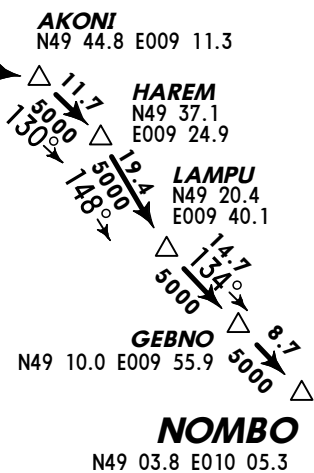
Gnd speed-KT	75	100	150	200	250	300
316' per NM	395	527	790	1053	1317	1580

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

Initial climb clearance **5000'**

ROUTING

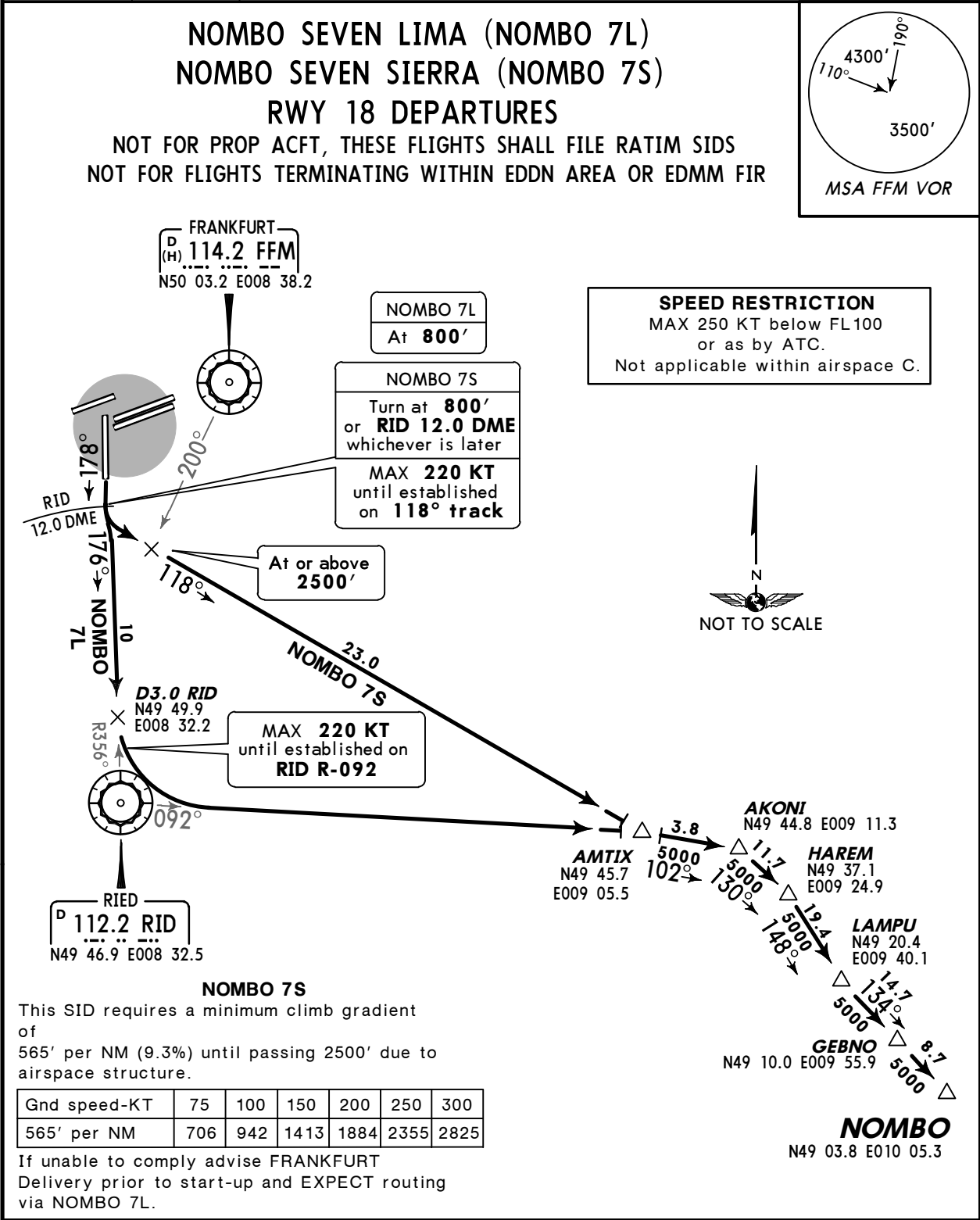
Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.



EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J Eff 5 Mar SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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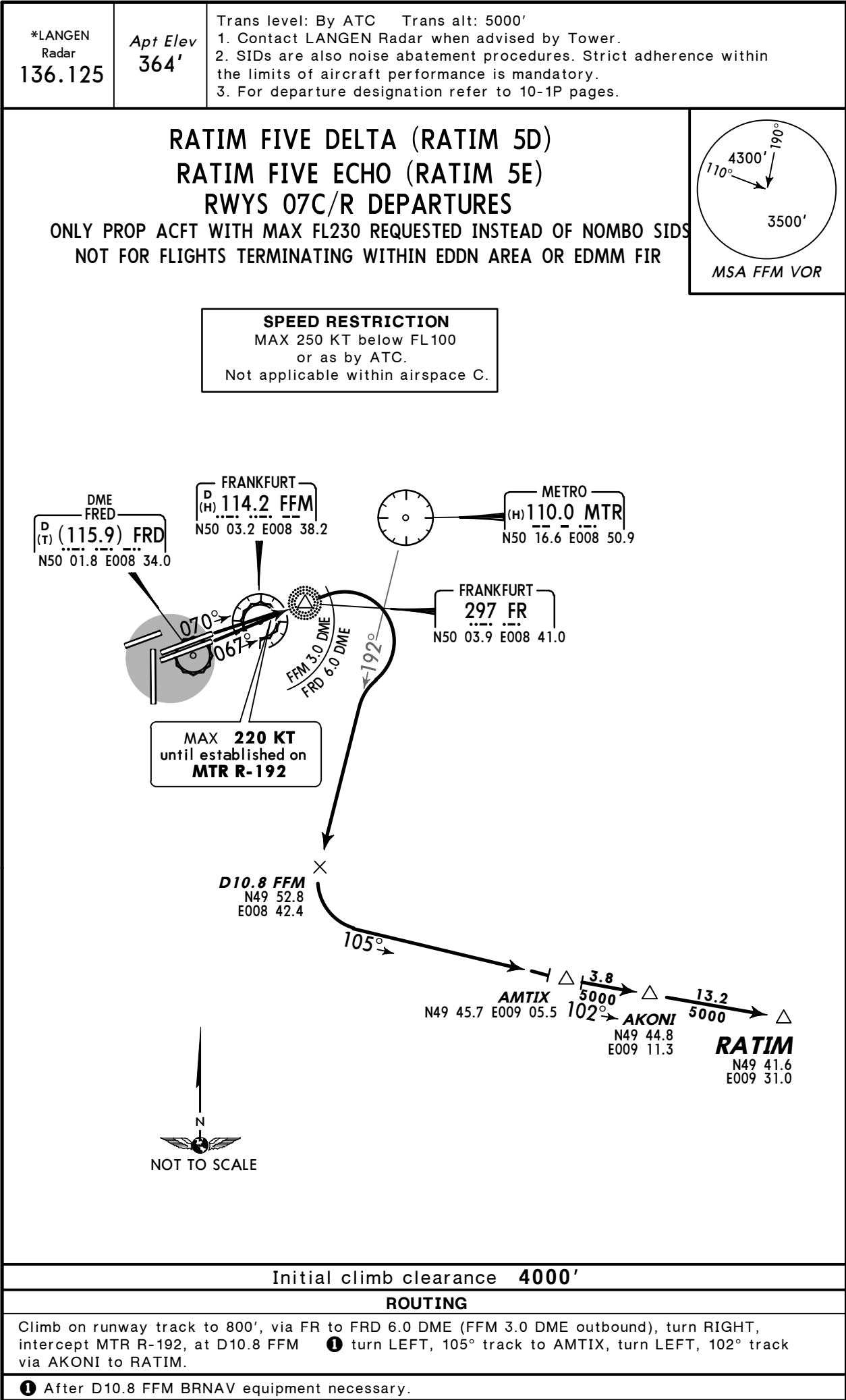


Initial climb clearance 4000'	
SID	ROUTING
NOMBO 7L	Climb on runway track to 800', intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ①, turn RIGHT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.
NOMBO 7S ②	Climb on runway track to 800', or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turns RIGHT, 130° track to HAREM, turns RIGHT, 148° track to LAMPU, turns LEFT, 134° track via GEBNO to NOMBO.
After AMTIX ① /passing FFM R-200 ② BRNAV equipment necessary.	

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J1 Eff 5 Mar

SID



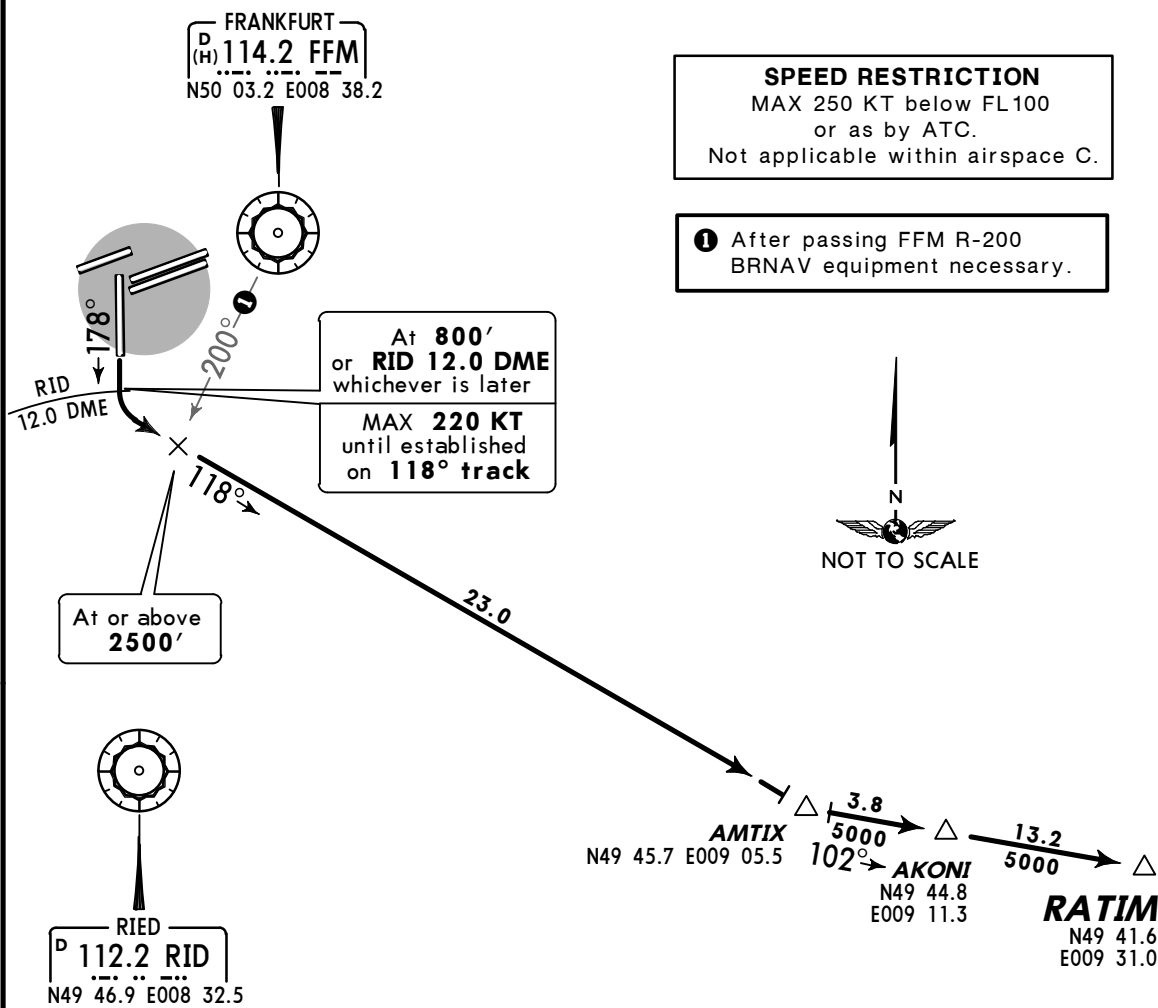
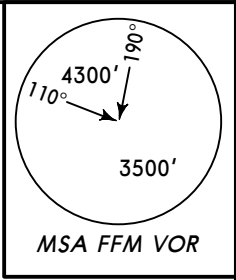
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EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J3 Eff 5 Mar SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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RATIM FOUR SIERRA (RATIM 4S)
RWY 18 DEPARTURE
ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



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
Climb on runway track to 800' or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track via AKONI to RATIM.

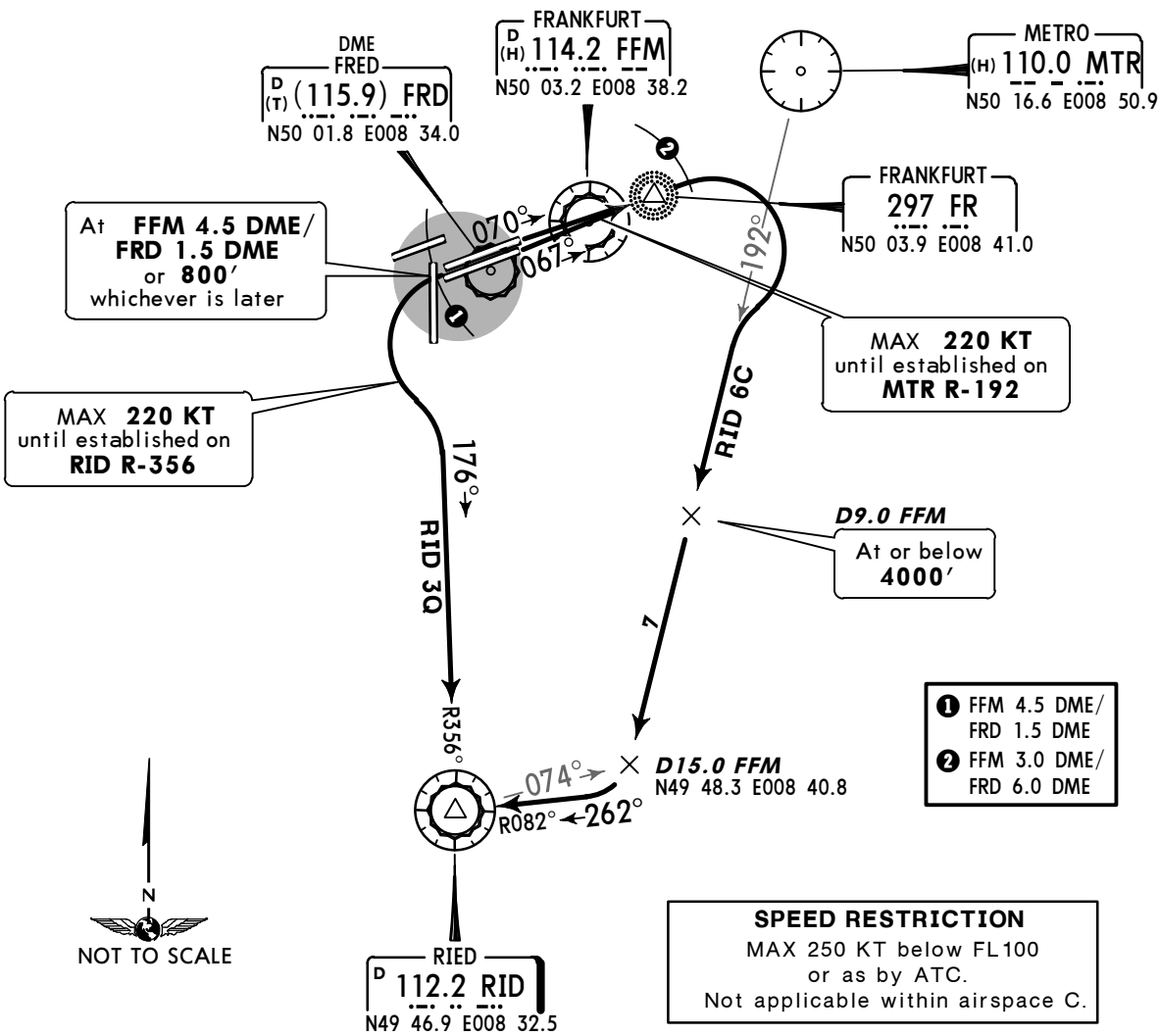
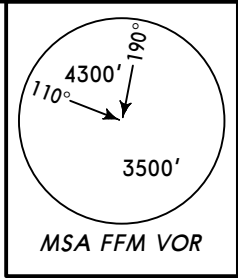
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J4 Eff 5 Mar

SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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RIED SIX CHARLIE (RID 6C)
RIED THREE QUEBEC (RID 3Q)
RWYS 07C/R, 25L/C 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
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT



RID 6C: Initial climb clearance 4000' RID 3Q: Initial climb clearance 5000'		
SID	RWY	ROUTING
RID 6C	07C/R	Climb on runway track to 800', via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D15.0 FFM turn RIGHT, intercept RID R-082 inbound to RID.
RID 3Q	25L/C	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, intercept RID R-356 inbound to RID.

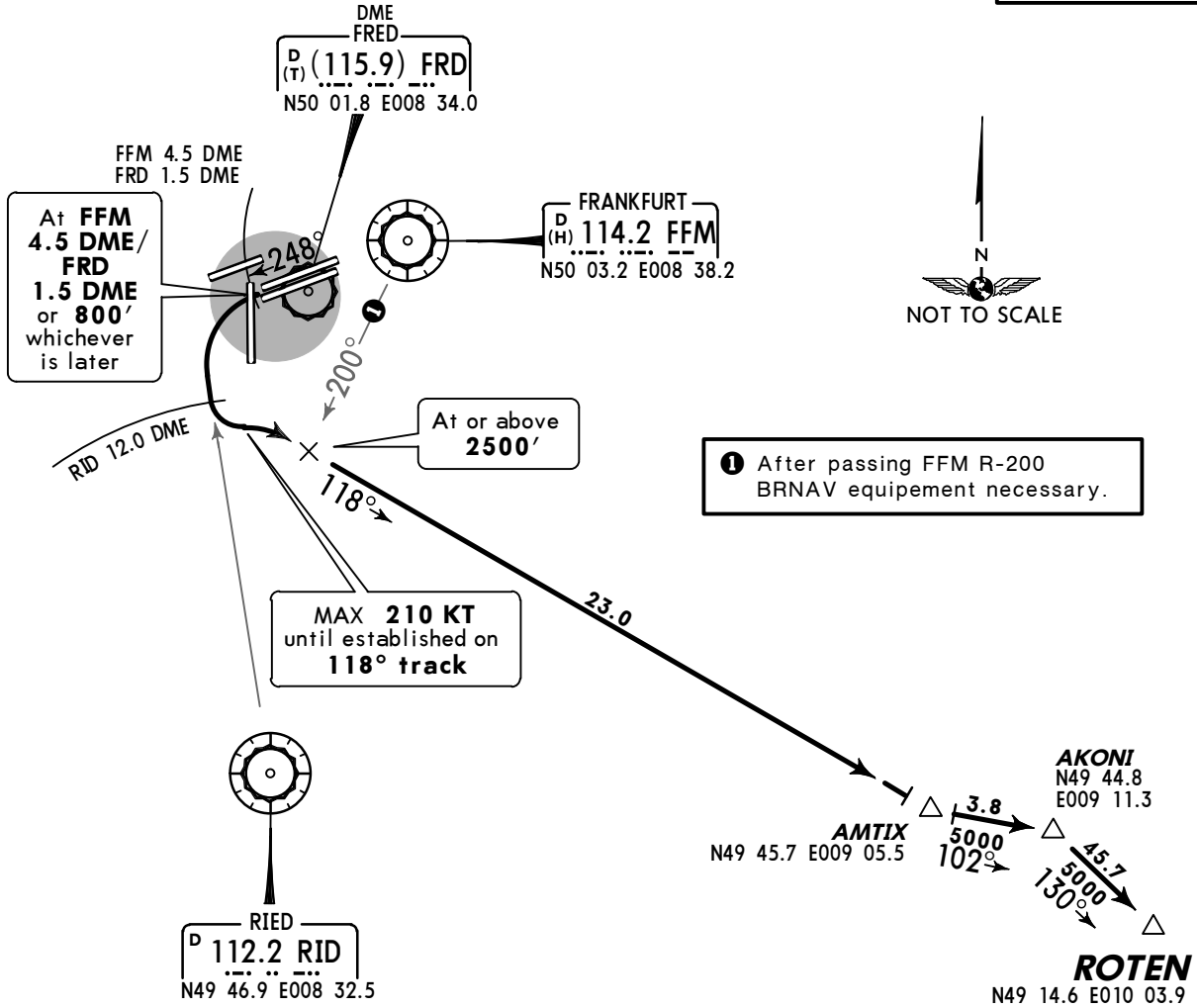
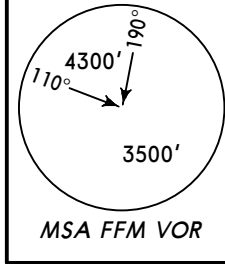
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 (10-3J5) Eff 5 Mar

SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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ROTEN SIX FOXTROT (ROTEN 6F)
ROTEN FIVE GOLF (ROTEN 5G)
RWYS 25L/C DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



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.

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

Initial climb clearance 5000'

ROUTING

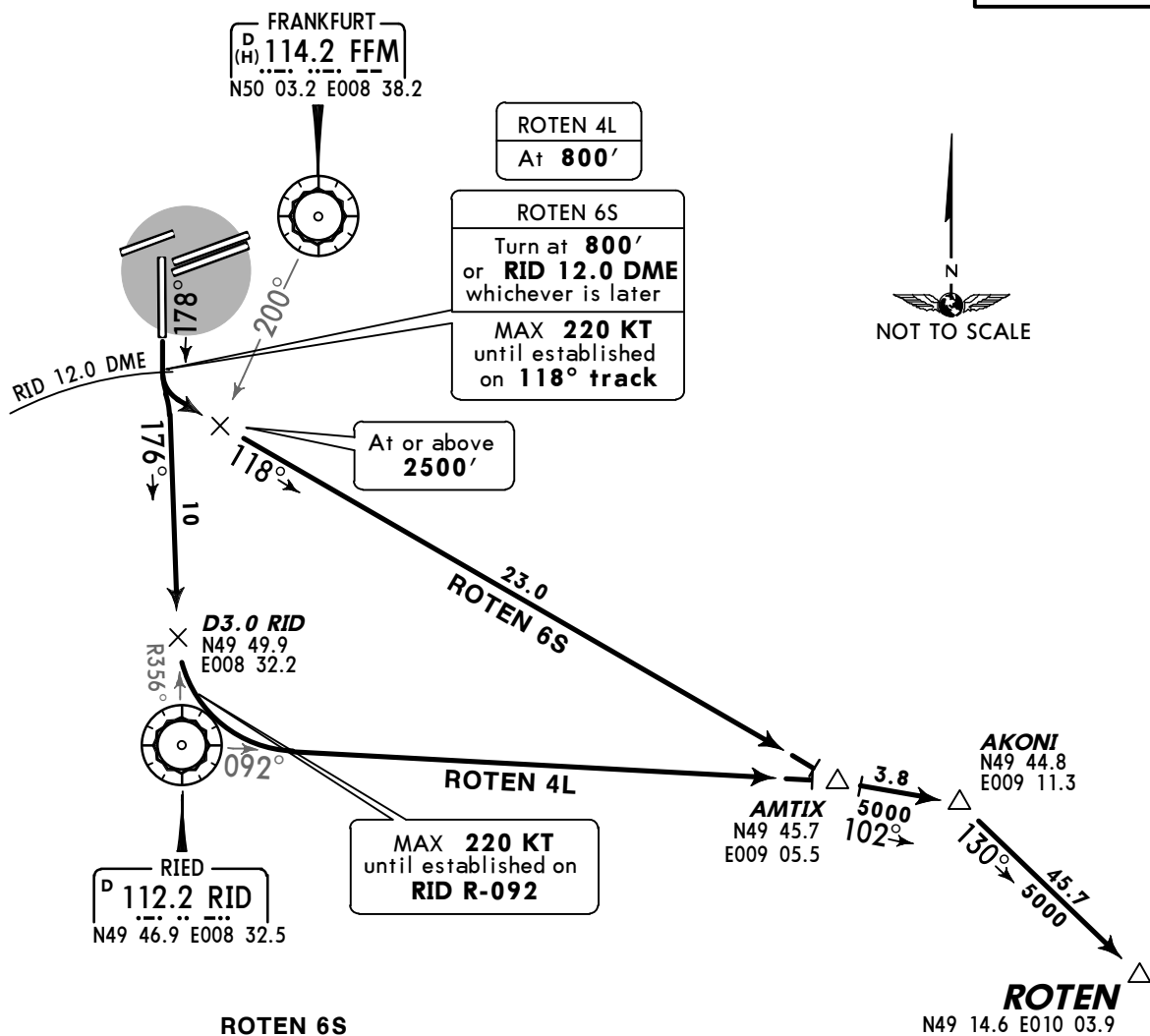
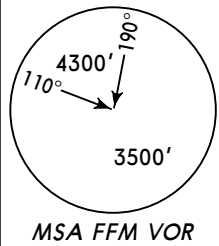
Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J6 Eff 5 Mar SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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ROTEN FOUR LIMA (ROTEN 4L)
ROTEN SIX SIERRA (ROTEN 6S)
RWY 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



ROTEN 6S
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 ROTEN 4L.

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

Initial climb clearance 4000'	
SID	ROUTING
ROTEN 4L	Climb on runway track to 800', intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ①, turn RIGHT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.
ROTEN 6S ②	Climb on runway track to 800', or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.
After AMTIX ① /passing FFM R-200 ② BRNAV equipment necessary.	

EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
27 FEB 15 10-3J7 Eff 5 Mar

SID

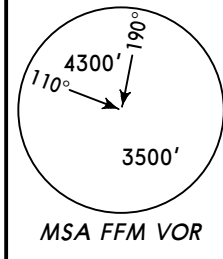
*LANGEN
Radar
136.125

Apt Elev
364'

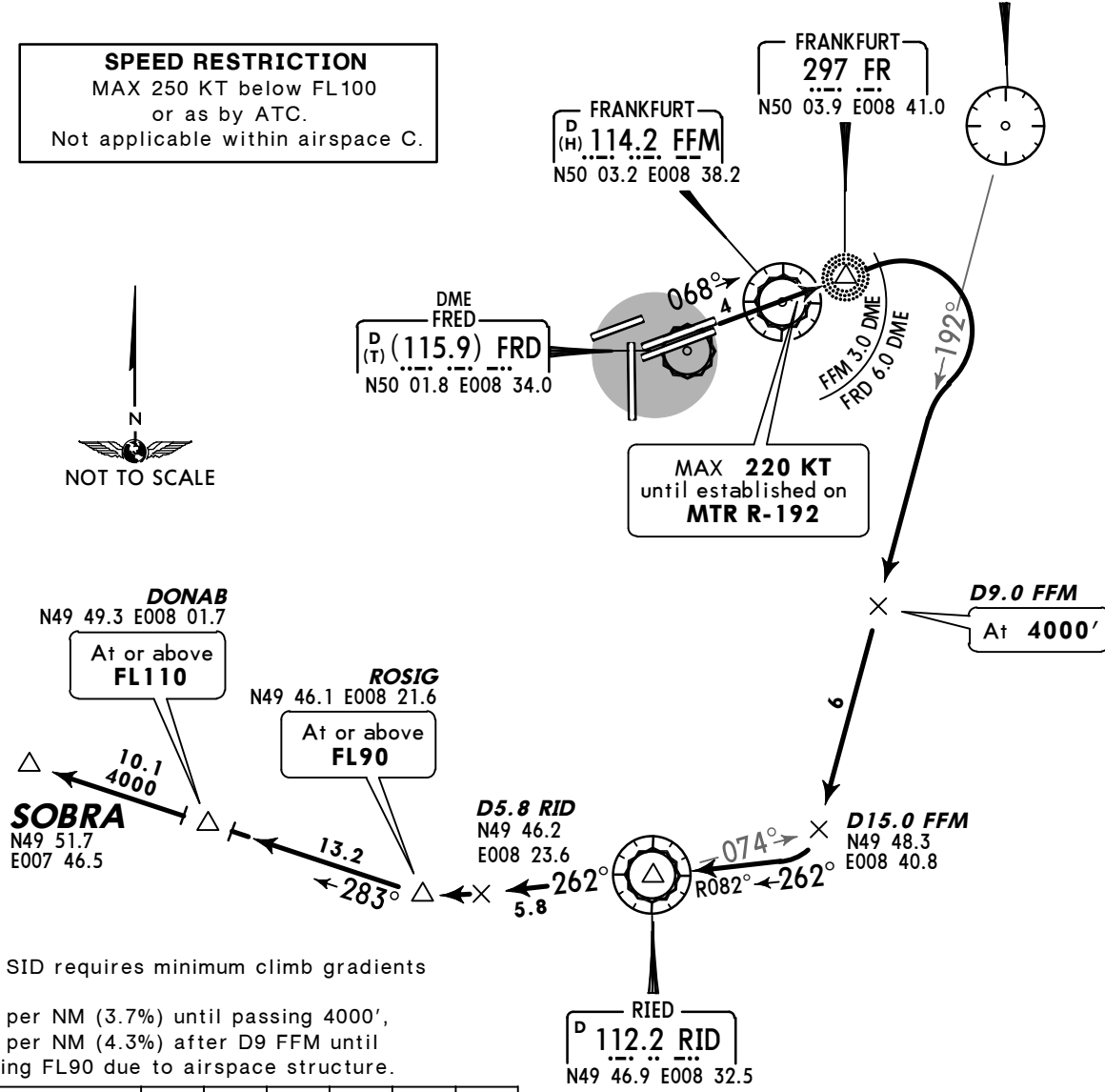
Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

**SOBRA FOUR DELTA (SOBRA 4D)
RWYS 07C/R 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



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



This SID requires minimum climb gradients of
225' per NM (3.7%) until passing 4000',
261' per NM (4.3%) after D9 FFM until
passing FL90 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
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'**

ROUTING

Climb on runway track to 800', via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192 to D15.0 FFM, turn RIGHT, intercept RID R-082 inbound to RID, RID R-262 to D5.8 RID ①, turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.

① After D5.8 RID RNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3K Eff 23 Jul

SID

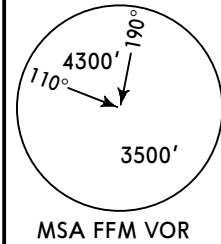
*LANGEN
Radar
136.125

Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

**SOBRA FOUR ECHO (SOBRA 4E)
RWYS 07C/R 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



SPEED RESTRICTION

MAX 250 KT below FL100
or as by ATC.

Not applicable within airspace C.

② FFM 1.5 DME/
FRD 1.6 DME

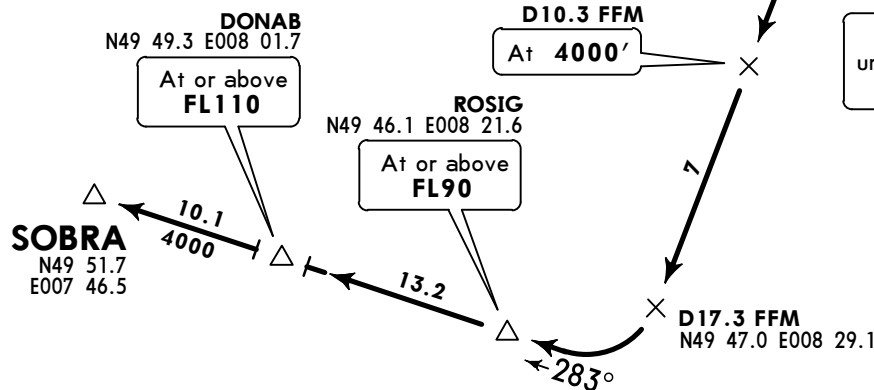
At FRD 1.6 DME
(FFM 1.5 DME inbound)
or 800' whichever is later

DME
FRED
D (115.9) FRD
N50 01.8 E008 34.0

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

At or above
2500'

MAX 220 KT
until established on
FFM R-199



This SID requires minimum climb gradients
of
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

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



Initial climb clearance 4000'

ROUTING

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 ①, turn RIGHT, 283° track via ROSIG and
DONAB to SOBRA.

① After D17.3 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3L Eff 23 Jul

SID

*LANGEN Radar
SOBRA 5N
120.15
SOBRA 4F, 4G, 3P
136.125

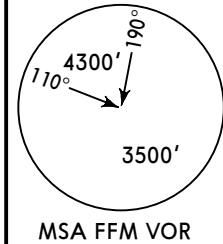
Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

SOBRA FOUR FOXTROT (SOBRA 4F)
SOBRA FOUR GOLF (SOBRA 4G)
SOBRA FIVE NOVEMBER (SOBRA 5N)
SOBRA THREE PAPA (SOBRA 3P)
RWYS 25L/C 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



- ① ← 198°
SOBRA 4F, 4G
- ② ← 184°
SOBRA 5N

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

At FFM 4.5 DME/
FRD 1.5 DME
or 800'
whichever is later

FFM 4.5 DME
FRD 1.5 DME

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2



DME
FRD
D (115.9) FRD
N50 01.8 E008 34.0

SOBRA 5N
MAX 220 KT
until established on
184° track

SOBRA
N49 51.7
E007 46.5

D26.0 FFM
N49 49.8
E008 03.8

DONAB
N49 49.3 E008 01.7

D20.6 FFM
N49 48.4 E008 16.1



Initial climb clearance 5000'

SID	ROUTING
SOBRA 4F, 4G	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, 198° track, turn RIGHT, intercept FFM R-223, at D20.6 FFM ③ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 5N	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, 184° track, intercept FFM R-223, at D20.6 FFM ③ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 3P	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT, 225° track (RWY 25L: 228° track), intercept FFM R-238, at D26.0 FFM ④ turn RIGHT, 283° track to SOBRA.
BRNAV equipment necessary after: ③ D20.6 FFM/ ④ D26.0 FFM.	

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3L1 Eff 23 Jul

SID

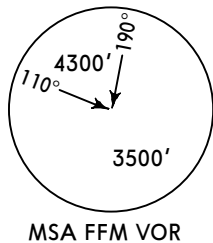
*LANGEN Radar
136.125

Apt Elev
364'

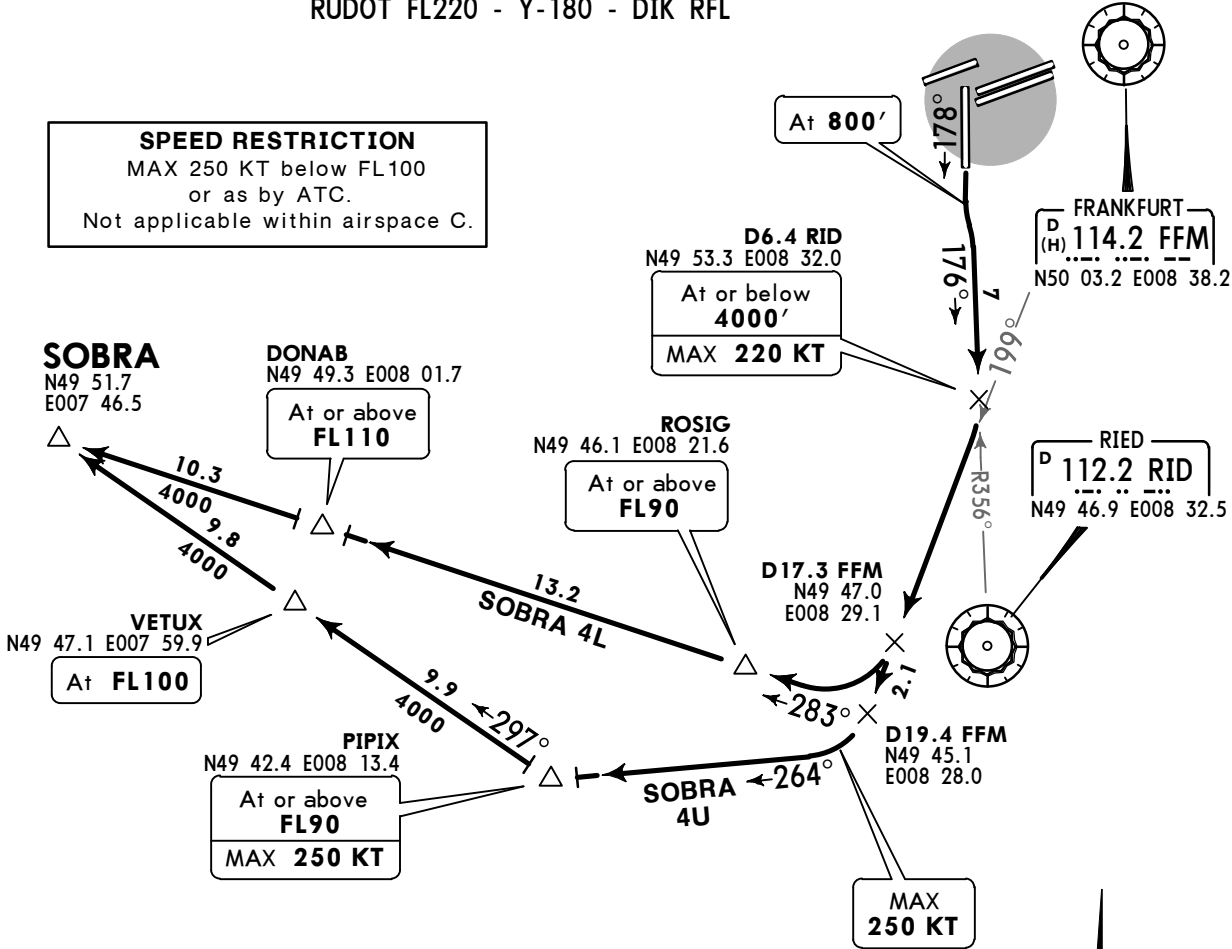
Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds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

**SOBRA FOUR LIMA (SOBRA 4L)
SOBRA FOUR UNIFORM (SOBRA 4U)
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



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



These SIDs require minimum climb gradients of
SOBRA 4L
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 4U.
SOBRA 4U
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 5U.

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'**

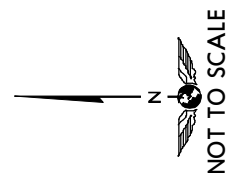
SID	ROUTING
SOBRA 4L	Climb on runway track to 800', intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D17.3 FFM ① turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.
SOBRA 4U	Climb on runway track to 800', intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ② turn RIGHT, 264° track to PIPIX, turn RIGHT, 297° track via VETUX to SOBRA.
BRNAV equipment necessary after: ① D17.3 FFM/ ② D19.4 FFM.	

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

Diagram of a circular structure with dimensions and angles:

- Radius: 3500'
- Chord length: 4300'
- Angle between radius and chord: 110°
- Angle between two radii: 106°
- Label: MSA FFM VOR



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

I After passing FFM R-200
BRNAV equipment necessary.

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.

ROUTING

Initial climb clearance **5000'**

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800', whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, 118° track to AMTIX, turn LEFT, 102° track via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR, turn LEFT, WUR R-053 to SULUS.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3L5 Eff 5 Mar

SID

*LANGEN
Radar
120.15

Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

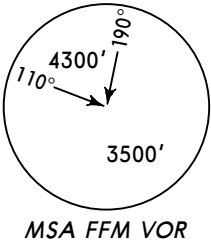
TAUNUS FOUR QUEBEC (TAU 4Q)
RWYS 25L/C DEPARTURE

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

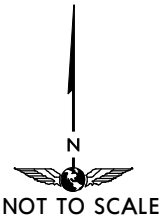
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT



TAUNUS
D(L) 116.7 TAU
N50 15.0 E008 09.8

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

FRANKFURT
D(H) 114.2 FFM
N50 03.2 E008 38.2



At 3500'

At FFM 5.0 DME
or 800'
whichever is later

Initial climb clearance 5000'

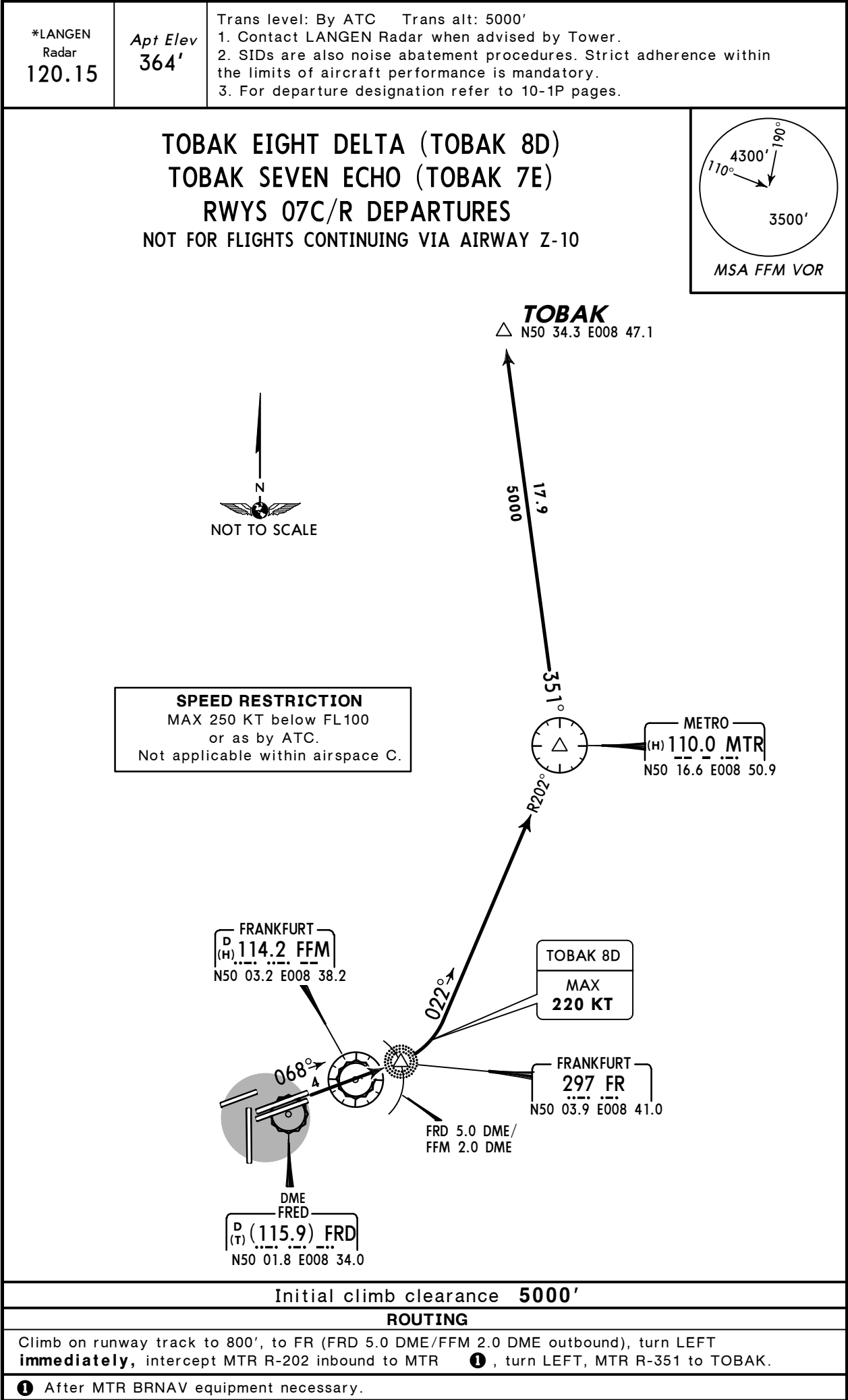
ROUTING

Climb on runway track to FFM 5.0 DME or 800', whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258, at 3500' turn RIGHT to TAU, but not before reaching FFM R-258.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3L6 Eff 5 Mar

SID



EDDF/FRA
FRANKFURT/MAIN

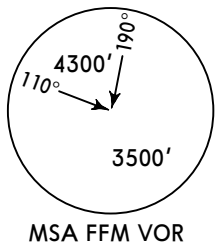
JEPPESEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3L7 Eff 23 Jul

SID

*LANGEN
Radar
120.15

Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



TOBAK FOUR FOXTROT (TOBAK 4F)
TOBAK FIVE GOLF (TOBAK 5G)
TOBAK FOUR JULIETT (TOBAK 4J)
RWYS 25L/C DEPARTURES
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

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



③ FFM 5.0 DME/
FRD 2.0 DME

D9.6 TAU
N50 06.6 E008 17.0

At or above
4400'

D9.7 FFM
N50 01.4 E008 23.5

At D9.7 FFM
or 3500'
whichever is later

D11.4 TAU
N50 06.0 E008 20.7

At or above
4400'

TOBAK 4F, 4J
At or above
3500'

FRANKFURT
D(H) 114.2 FFM
N50 03.2 E008 38.2

DME
FRED
D (115.9) FRD
N50 01.8 E008 34.0

TOBAK 4F, 4J

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

TOBAK 4J: and EXPECT routing via TOBAK 5G.

Initial climb clearance **5000'**

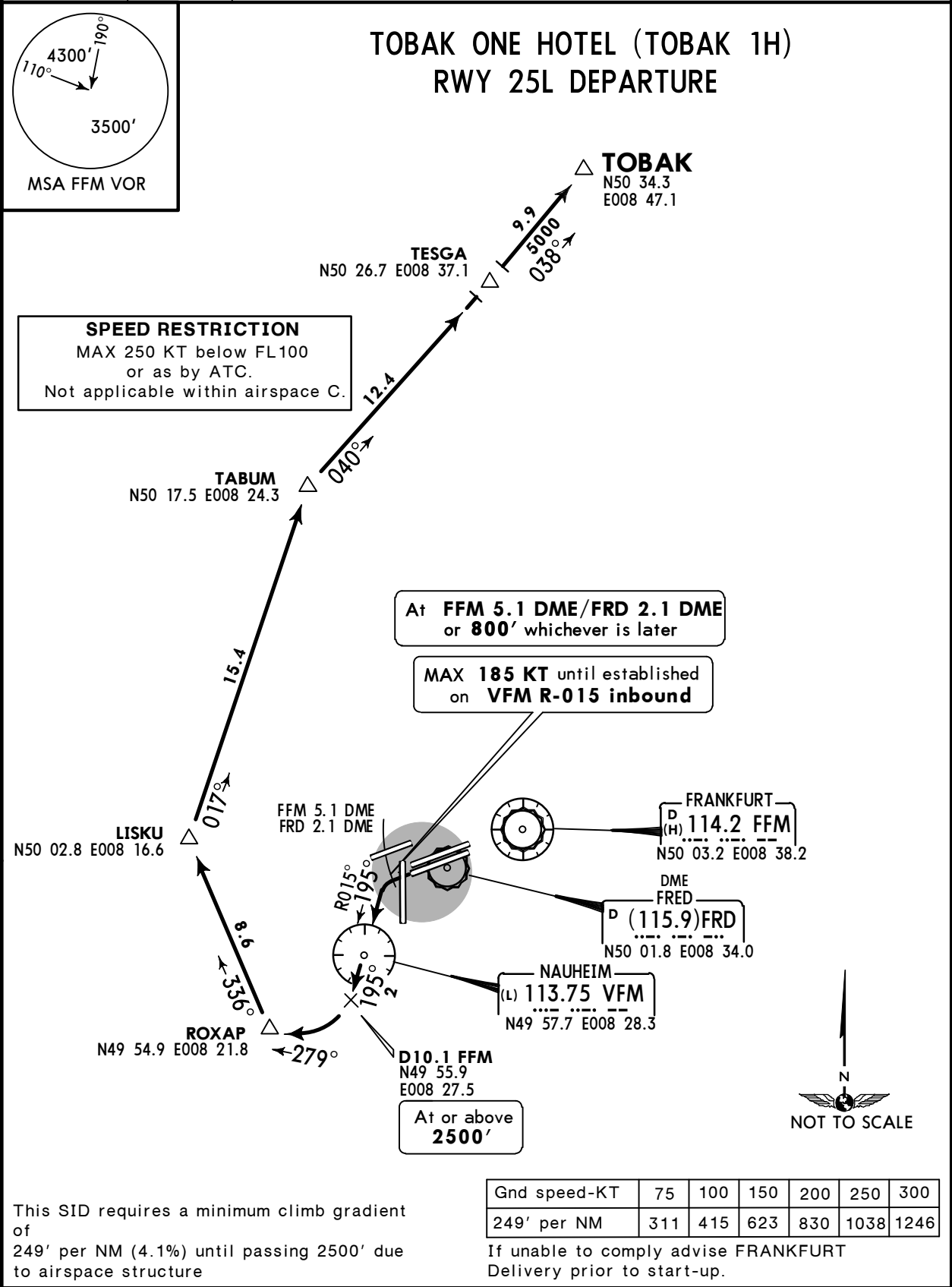
SID	ROUTING
TOBAK 4F, 4J	Climb on runway track to FFM 5.0 DME or 800', whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track) to FFM 8.4 DME, turn RIGHT, intercept TAU R-141 inbound to D11.4 TAU ①, turn RIGHT, 016° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.
TOBAK 5G	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800', whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258 to D9.7 FFM or 3500', whichever is later, turn RIGHT, intercept TAU R-150 inbound to D9.6 TAU ②, turn RIGHT, 027° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

BRNAV equipment necessary after: ① D11.4 TAU/ ② D9.6 TAU.

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3L8 Eff 23 Jul SID

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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This SID requires a minimum climb gradient of 249' per NM (4.1%) until passing 2500' due to airspace structure

ROUTING
Climb on runway track to FFM 5.1 DME/FRD 2.1 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ①, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

① After D10.1 FFM BRNAV equipment necessary.

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



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

MAX 185 KT until established
on **VFM R-015 inbound**

FRANKFURT
D
(H) 114.2 FFM
... ..
N50 03.2 E008 38.2

DME
- FRED -
15.9) FRD
1.8 E008 34.0

NAUHEIM
(L) 113.75 VFM
N49 57.7 E008 28.3

D10.1 FFM
N49 55.9
E008 27.5

At or above
2500'

Gnd speed-KT	75	100	150	200	250	300
249' per NM	311	415	623	830	1038	1246

Initial climb clearance	5000'
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ROUTING

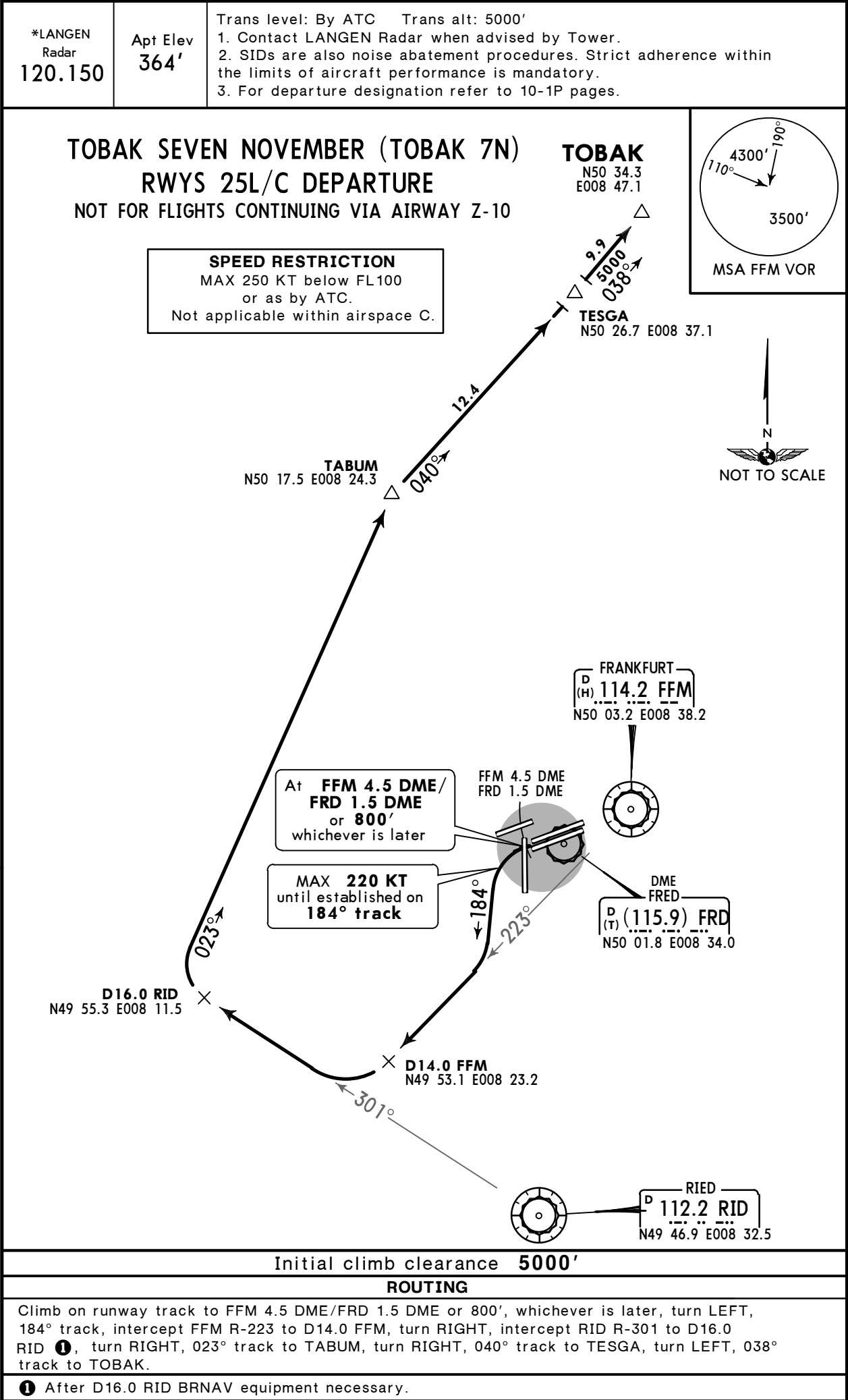
Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800', whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM **①**, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

➊ After D10.1 FFM BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3M Eff 15 Oct

SID



EDDF/FRA
FRANKFURT/MAIN

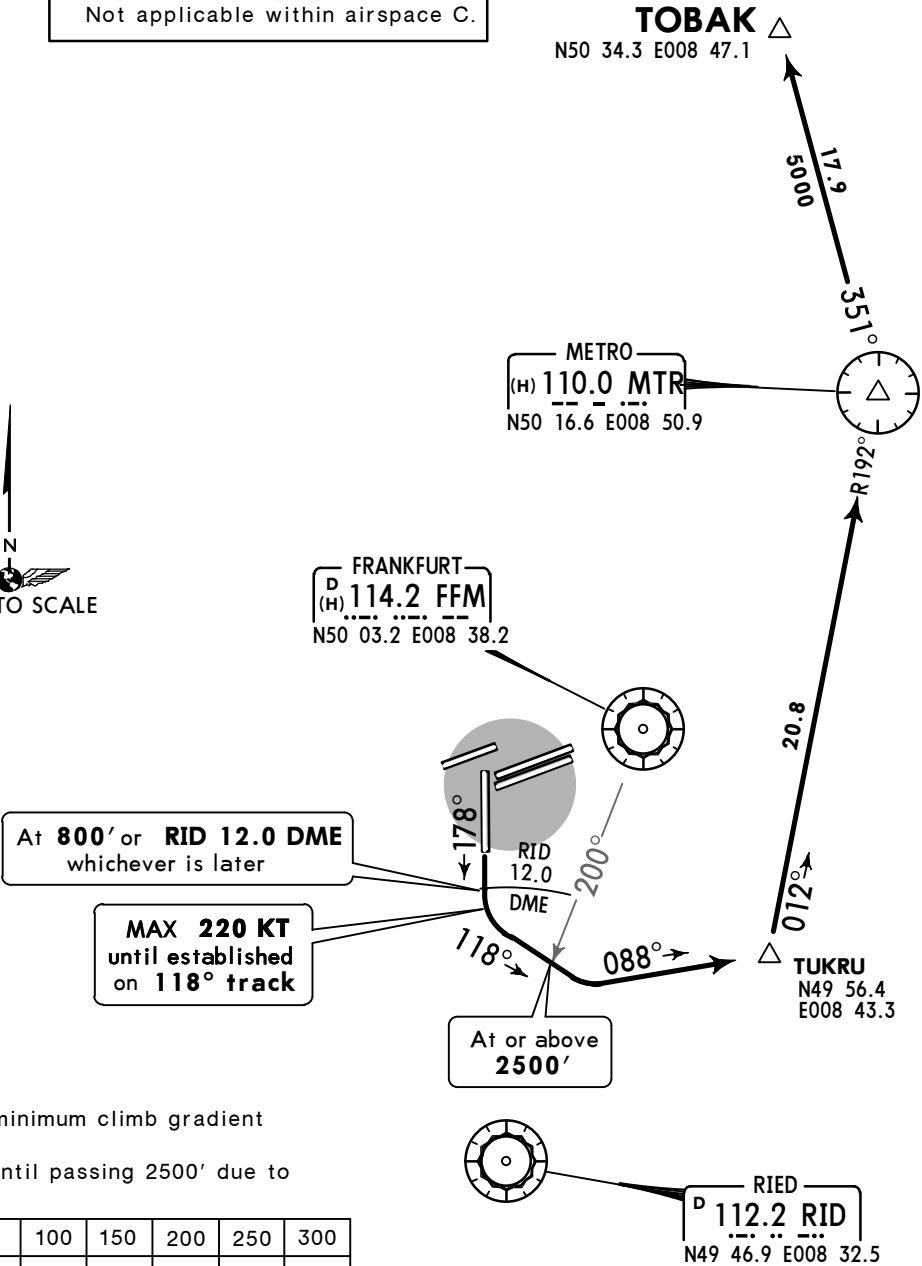
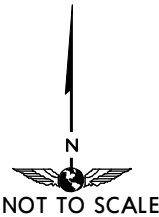
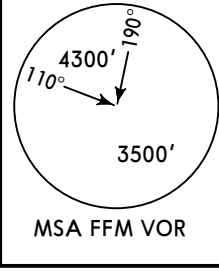
JEPPESEN FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3N Eff 15 Oct

SID

*LANGEN Radar 120.150	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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TOBAK TWO ROMEO (TOBAK 2R)
RWY 18 DEPARTURE
WILL ONLY BE ASSIGNED BETWEEN 2300-0600LT
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

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.

Initial climb clearance 4000'

ROUTING

Climb on runway track to 800' or RID 12.0 DME, whichever is later, turn LEFT, 118 degree track, when passing FFM R-200 1. Turn LEFT, 088 degree track to TUKRU, turn LEFT, intercept MTR R-192 inbound to MTR, turn LEFT, MTR R-351 to TOBAK.

1 After FFM R-200 BRNAV equipment necessary.

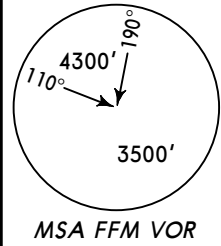
EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
27 FEB 15 (10-3N1) Eff 5 Mar

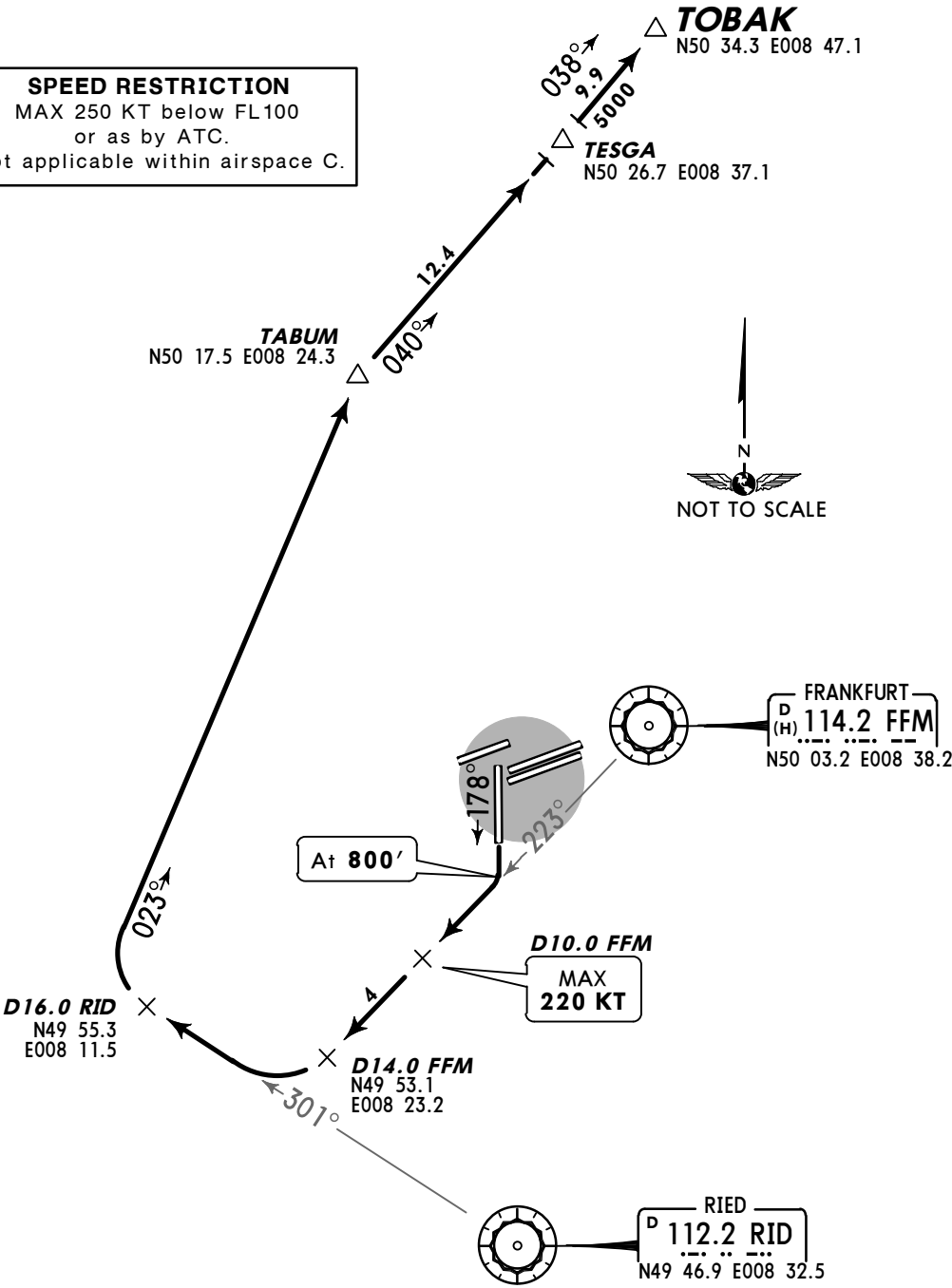
SID

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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TOBAK SIX SIERRA (TOBAK 6S)
RWY 18 DEPARTURE
BY ATC
WILL ONLY BE ASSIGNED
WHEN LANDING DIRECTION IS RWY 25
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



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 D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶, turn RIGHT, 023° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

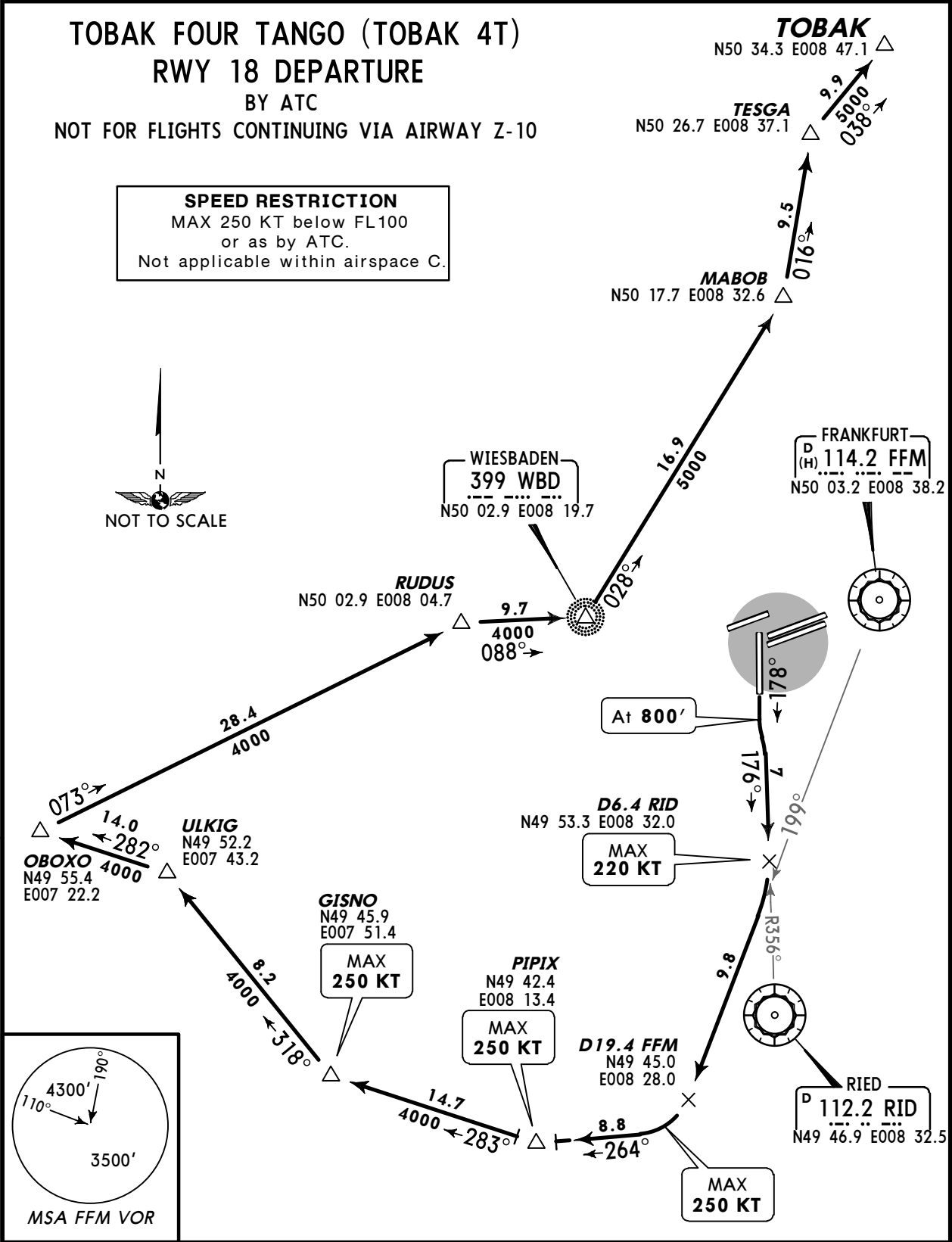
❶ After D16.0 RID BRNAV equipment necessary.

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3N2 Eff 5 Mar

SID

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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CHANGES: MSA.

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EDDF/FRA
FRANKFURT/MAIN

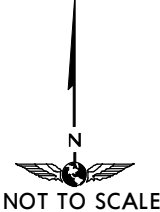
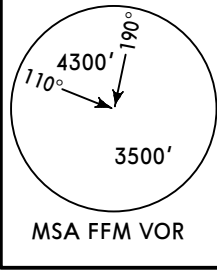
JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3N3 Eff 23 Jul

SID

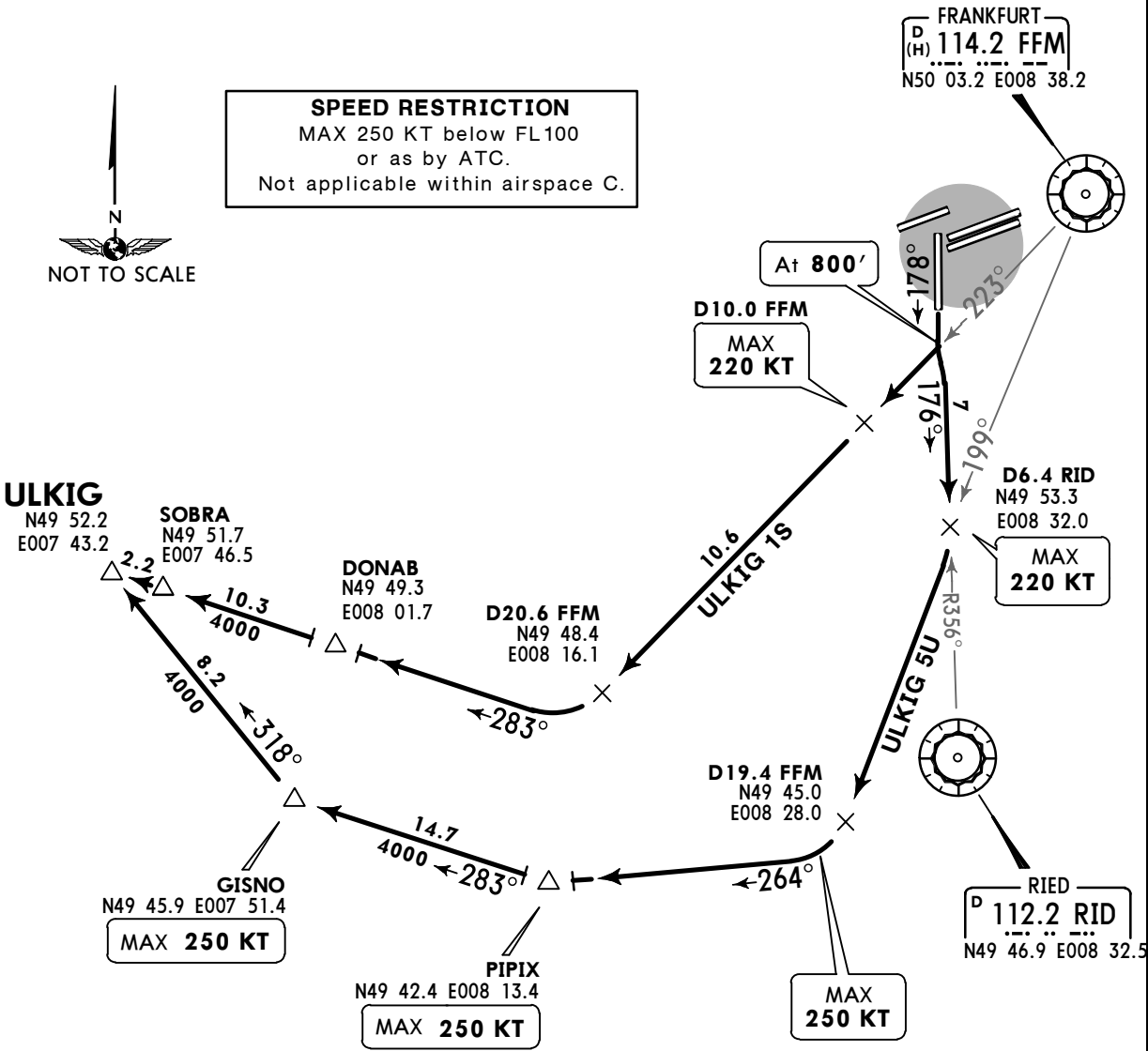
*LANGEN Radar ULKIG 1S 120.15 ULKIG 5U 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.
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ULKIG ONE SIERRA (ULKIG 1S)
ULKIG FIVE UNIFORM (ULKIG 5U)
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



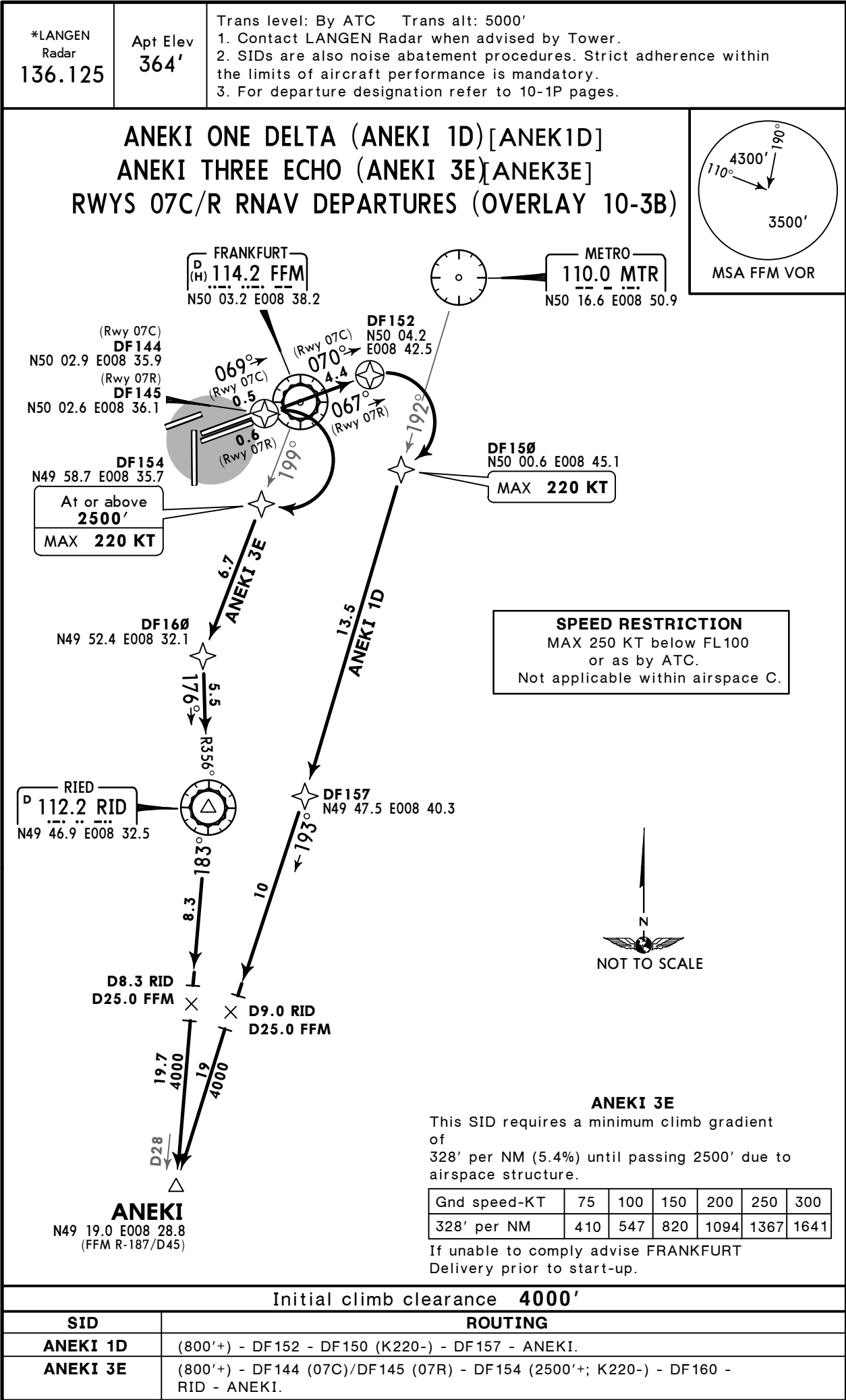
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance 4000'	
SID	ROUTING
ULKIG 1S By ATC	Climb on runway track to 800', turn RIGHT, intercept FFM R-223, at D20.6 FFM ① turn RIGHT, 283° track via DONAB and SOBRA to ULKIG.
ULKIG 5U	Climb on runway track to 800', intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ② turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG.
BRNAV equipment necessary after: ① D20.6 FFM/ ② D19.4 FFM.	

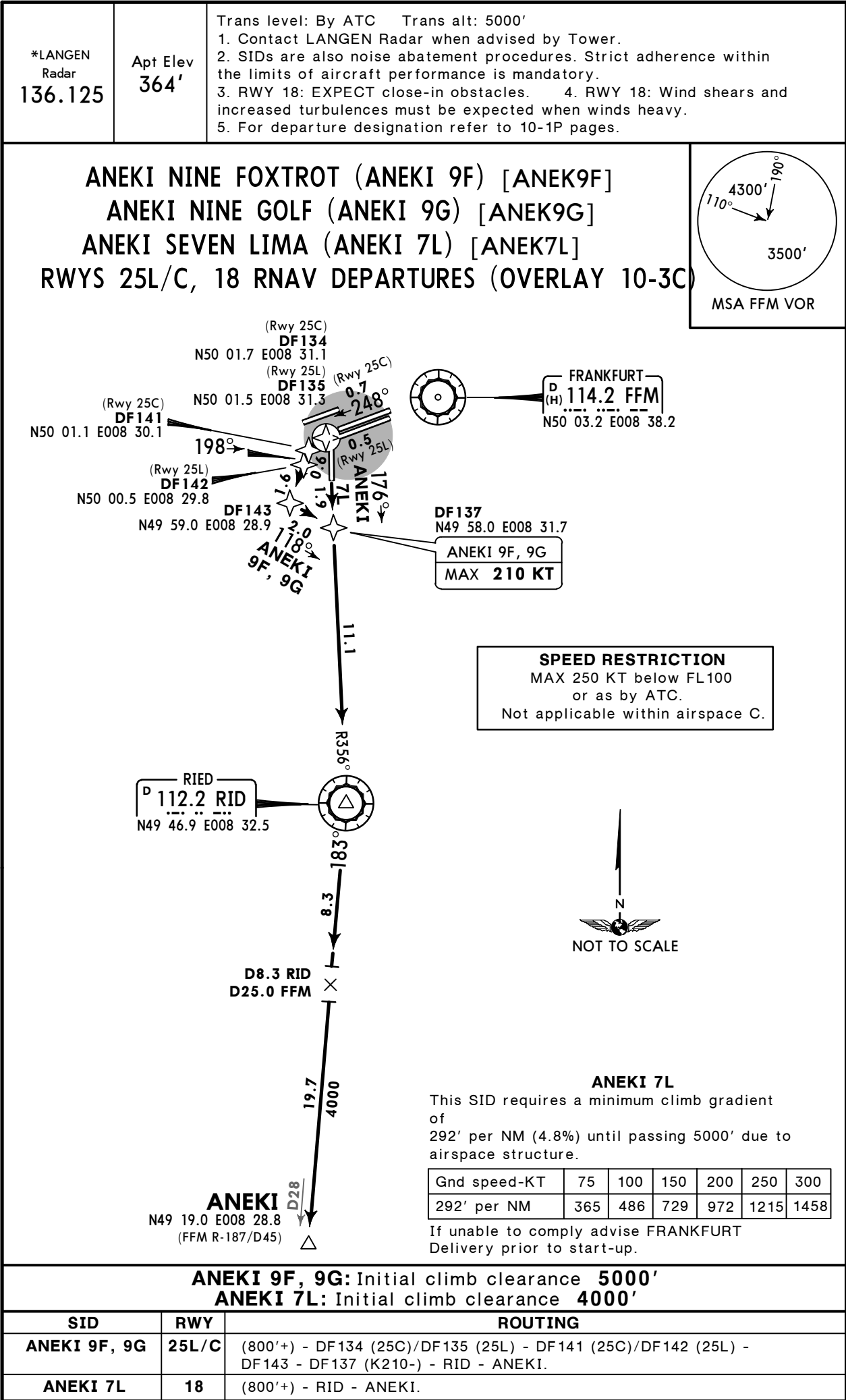
EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3N4 Eff 23 Jul RNAV SID (OVERLAY)



EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3N5 Eff 23 Jul RNAV SID (OVERLAY)



Trans level: By A/C Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

MSA FFM VOR

Not applicable within airspace C.

- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

(Rwy 07C)
DF139
N50 03.4 E008 38.2
(Rwy 07R)
DF140
N50 03.1 E008 38.2

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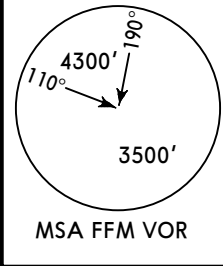
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3N8) Eff 23 Jul RNAV SID (OVERLAY)

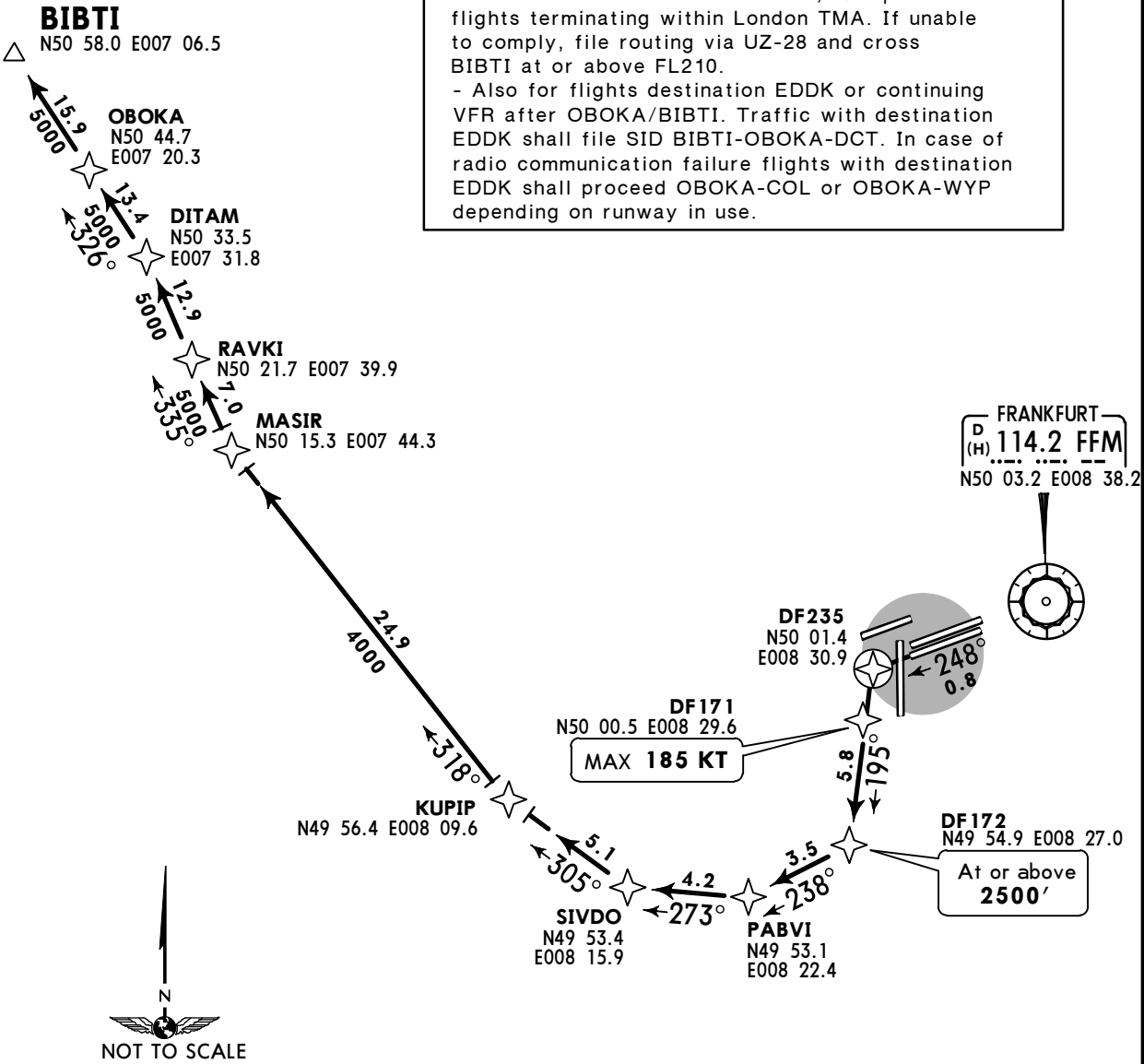
*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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BIBTI ONE HOTEL (BIBTI 1H) [BIBT1H]
RWY 25L RNAV DEPARTURE (OVERLAY 10-3E1)

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



- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



This SID requires a minimum climb gradient of 249' per NM (4.1%) until passing 2500' due to airspace structure

Gnd speed-KT	75	100	150	200	250	300
249' per NM	311	415	623	830	1038	1246

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

Initial climb clearance **5000'**

ROUTING

(800+) - DF235 - DF171 (K185-) - DF172 (2500'+) - PABVI - SIVDO - KUIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

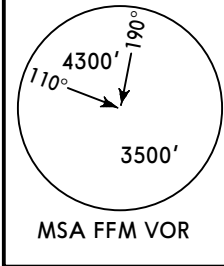
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3N9 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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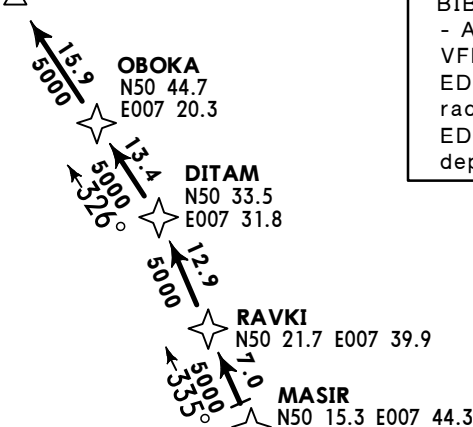
BIBTI THREE MIKE (BIBTI 3M) [BIBT3M]
RWY 25C RNAV DEPARTURE (OVERLAY 10-3E2)

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

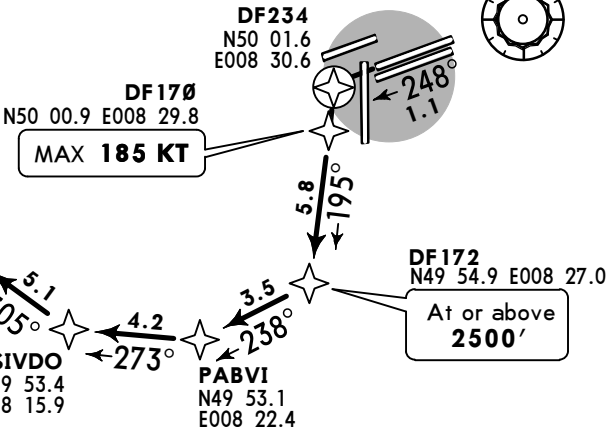


- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

BIBTI
N50 58.0 E007 06.5



FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2



This SID requires a minimum climb gradient of 249' per NM (4.1%) until passing 2500' due to airspace structure

Gnd speed-KT	75	100	150	200	250	300
249' per NM	311	415	623	830	1038	1246

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

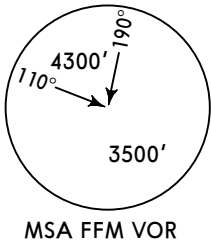
Initial climb clearance 5000'
ROUTING
(800+) - DF234 - DF170 (K185-) - DF172 (2500'+) - PABVI - SIVDO - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

EDDF/FRA
FRANKFURT/MAIN

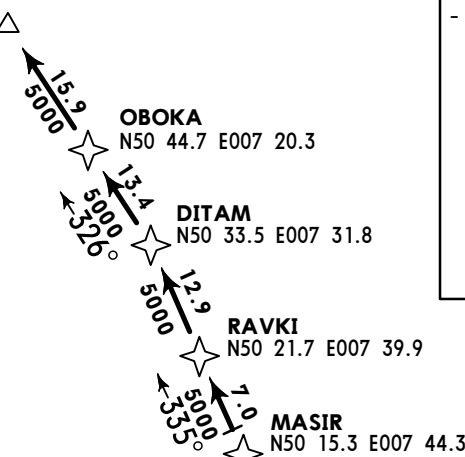
JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3P Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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BIBTI FOUR NOVEMBER (BIBTI 4N)[BIBT4N]
RWYS 25L/C RNAV DEPARTURE (OVERLAY 10-3E3)



BIBTI
N50 58.0 E007 06.5



- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

24.9
4000

(Rwy 25C)
DF134
N50 01.7 E008 31.1
MAX 220 KT

(Rwy 25L)
DF135
N50 01.5 E008 31.3
MAX 220 KT

(Rwy 25L)
DF162
N50 00.6 E008 29.8
MAX 220 KT

(Rwy 25L)
DF165
N50 00.1 E008 29.7
MAX 220 KT

(Rwy 25C)
DF134
N50 01.7 E008 31.1
(Rwy 25L)
DF135
N50 01.5 E008 31.3
(Rwy 25C)
DF136
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DF137
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DF138
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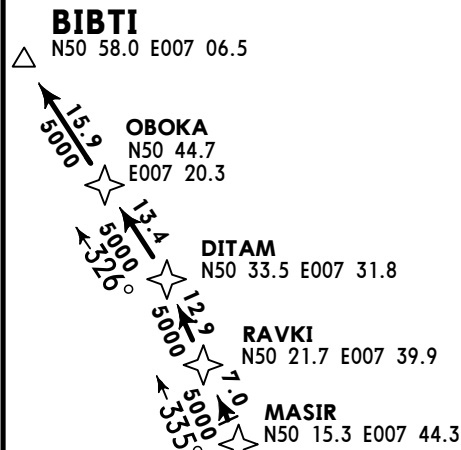
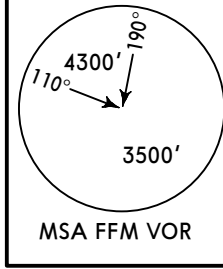
EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3Q Eff 23 Jul RNAV SID (OVERLAY)

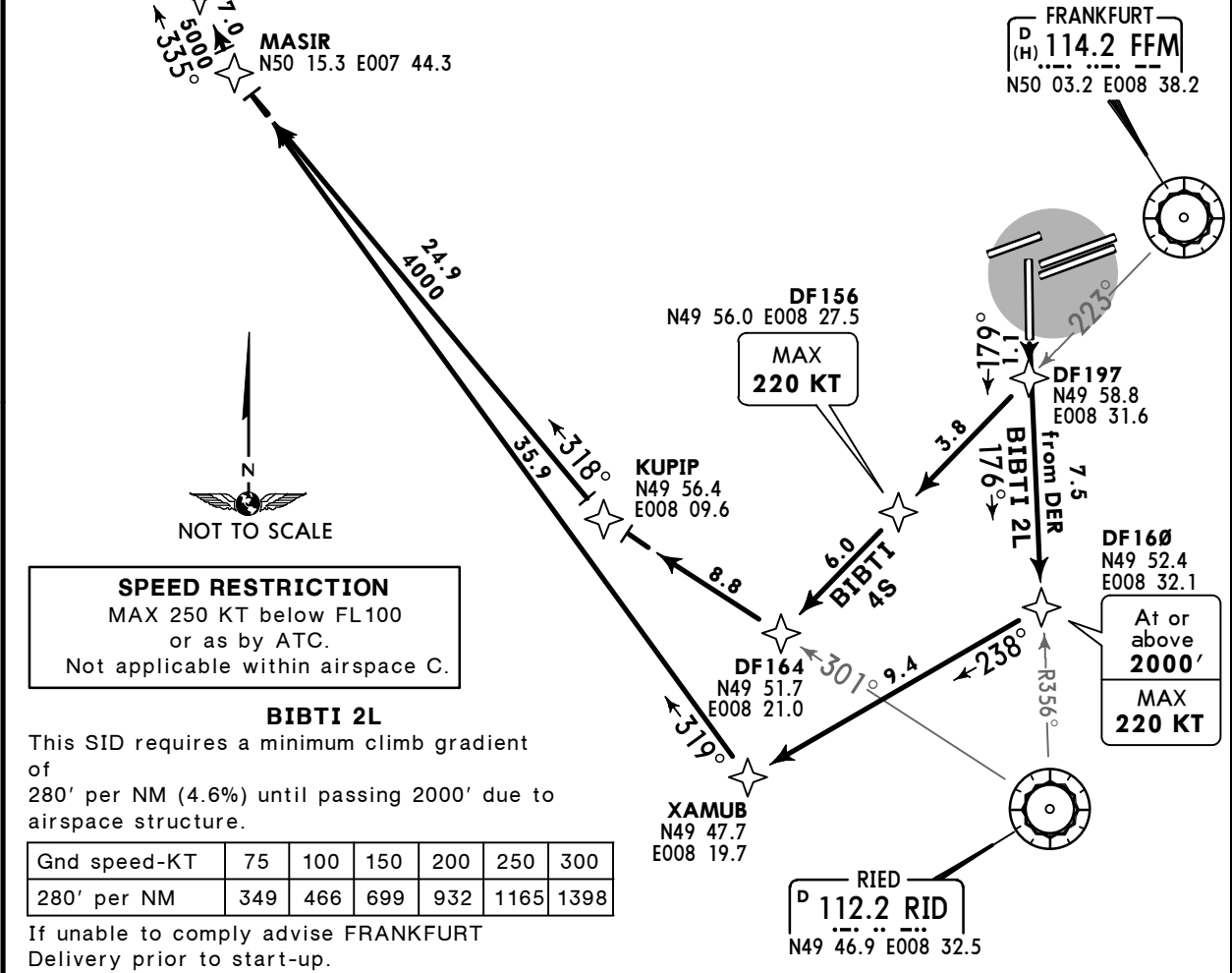
*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.
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BIBTI TWO LIMA (BIBTI 2L)[BIBT2L]
BIBTI FOUR SIERRA (BIBTI 4S)[BIBT4S]
BY ATC

RWY 18 RNAV DEPARTURES (OVERLAY 10-3E4)
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS 25



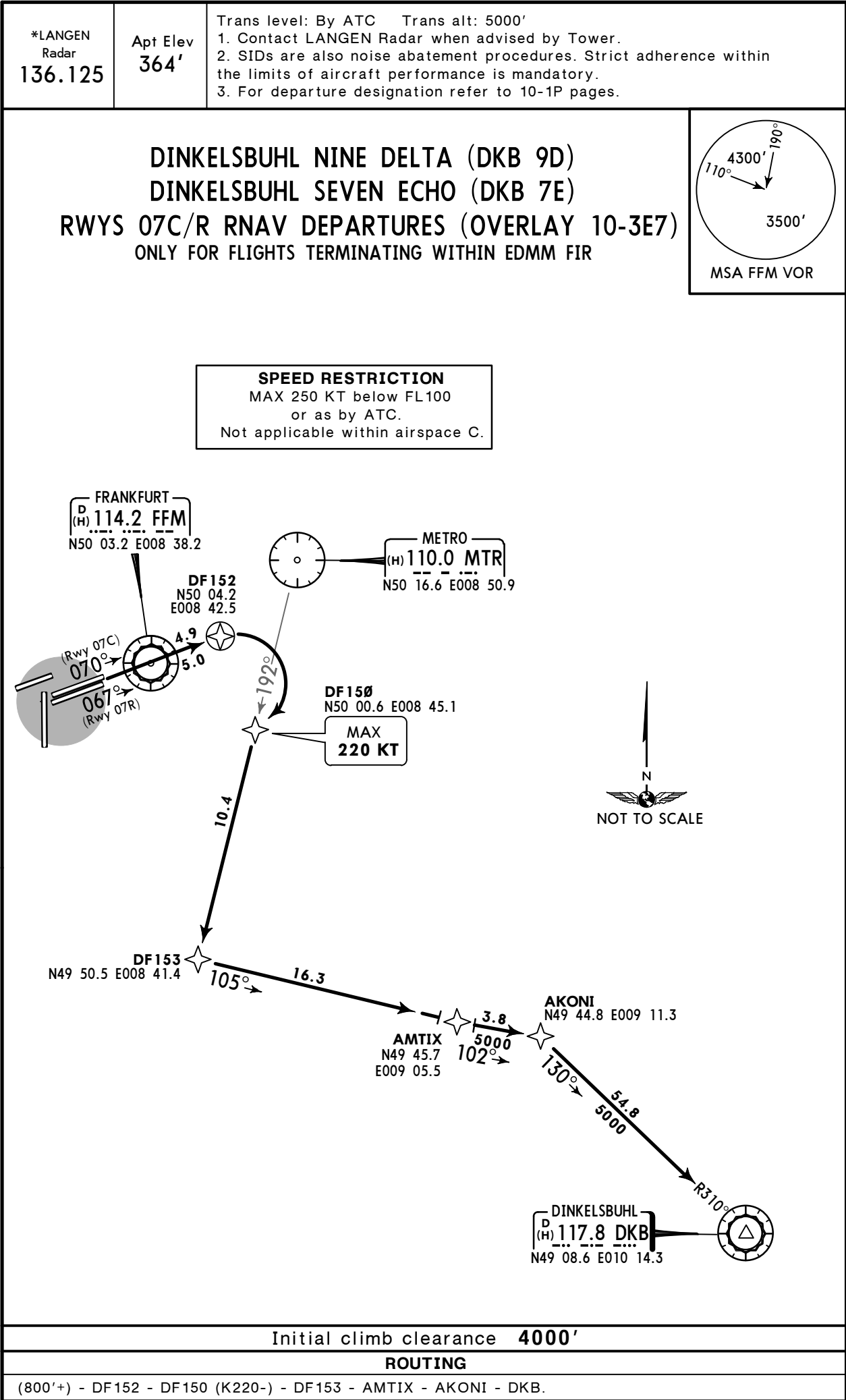
- Between 2100-2300LT available for flights terminating within London TMA.
- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, file routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



Initial climb clearance 4000'	
SID	ROUTING
BIBTI 2L	(800'+) - DF160 (2000'+; K220-) - XAMUB - MASIR - RAVKI - DITAM - OBOKA - BIBTI.
BIBTI 4S	(800'+) - DF197 - DF156 (K220-) - DF164 - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

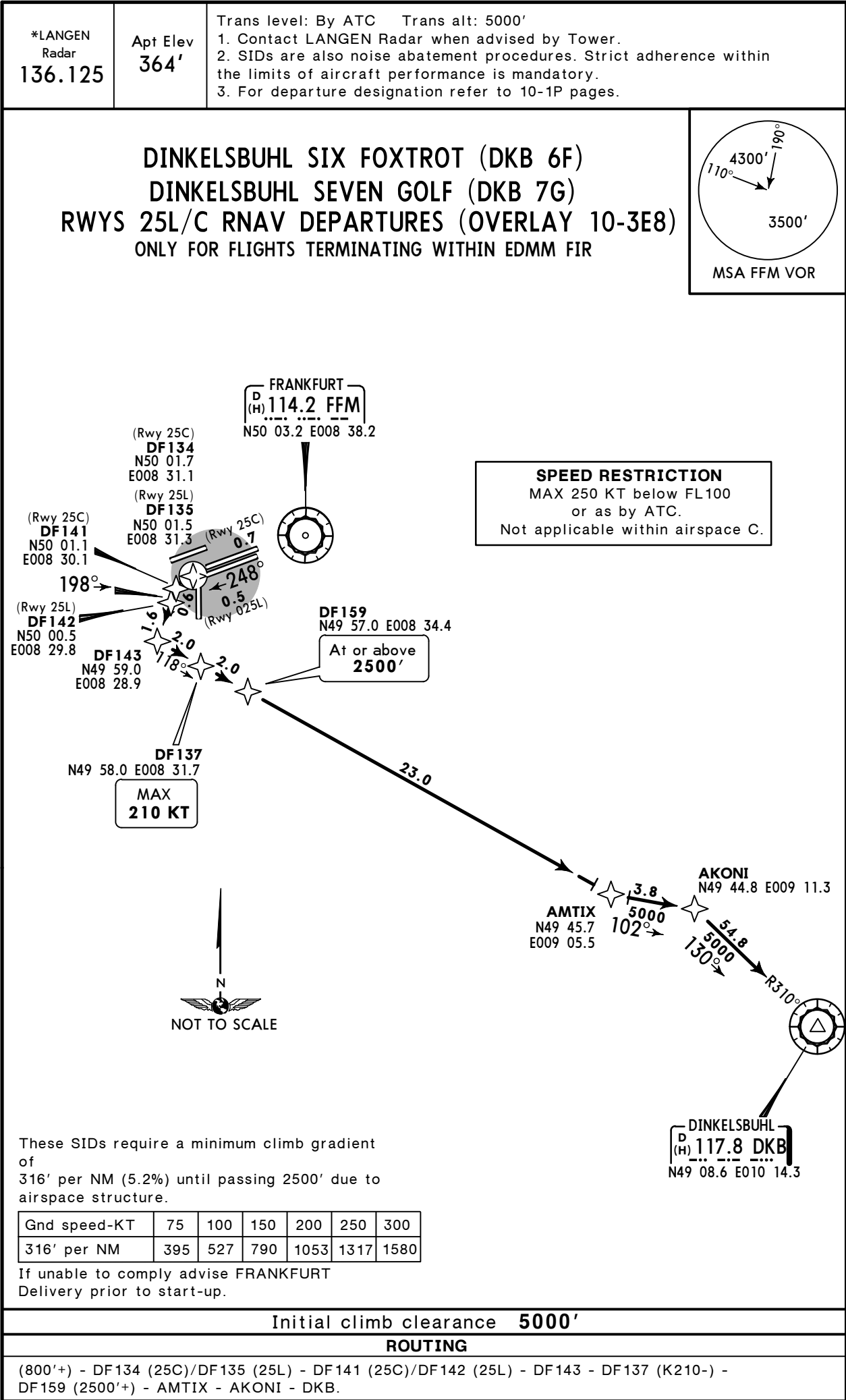
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3Q3) Eff 23 Jul RNAV SID (OVERLAY)



EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3Q4) Eff 23 Jul RNAV SID (OVERLAY)

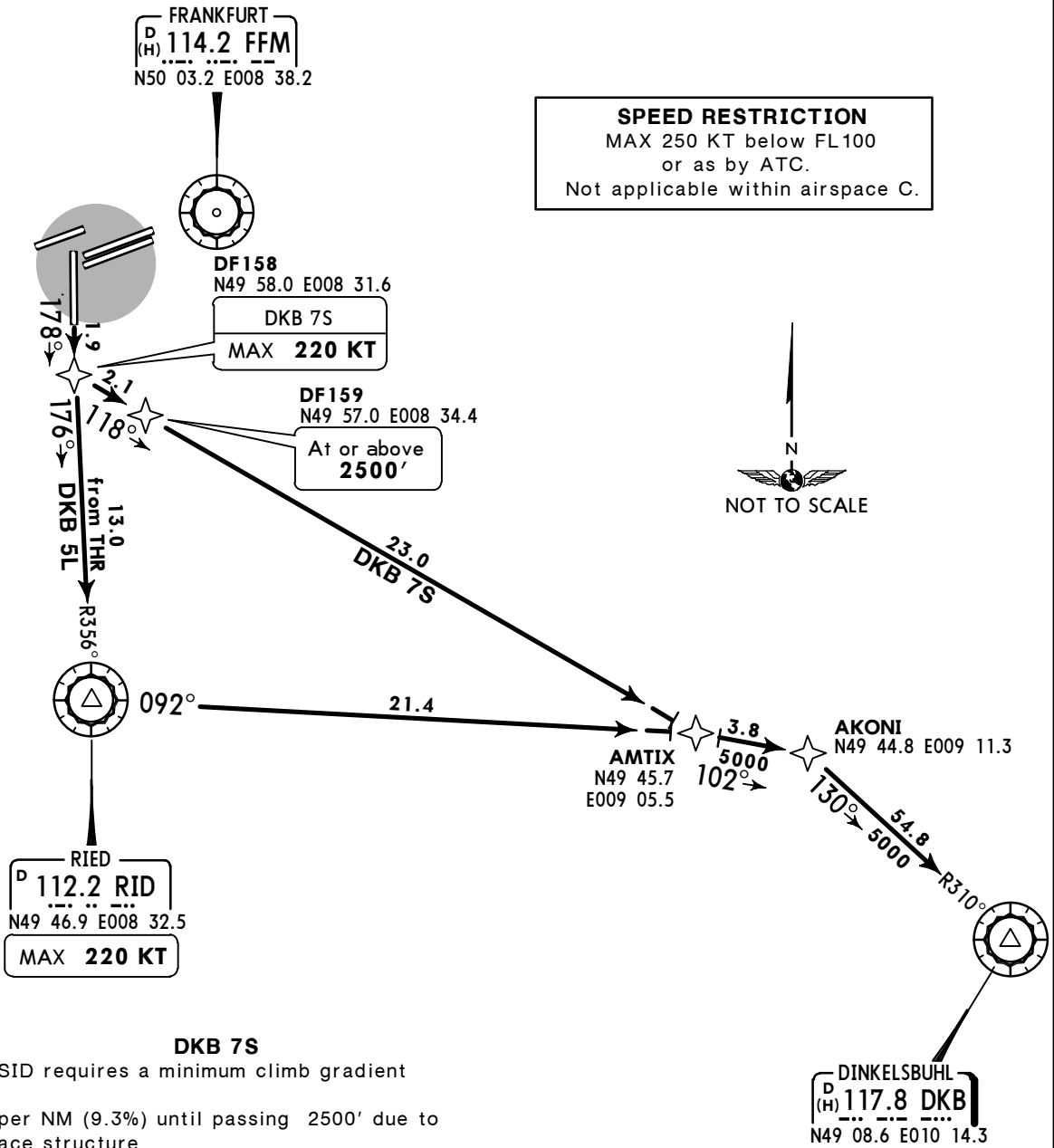
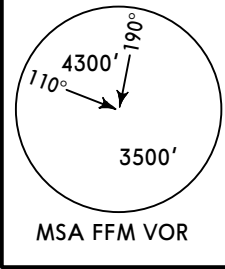


EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3Q5 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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DINKELSBUHL FIVE LIMA (DKB 5L)
DINKELSBUHL SEVEN SIERRA (DKB 7S)
RWY 18 RNAV DEPARTURES (OVERLAY 10-3E9)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



DKB 7S

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

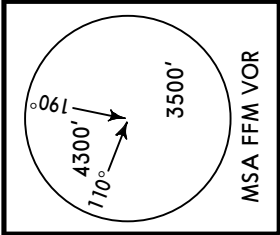
If unable to comply advise FRANKFURT
Delivery prior to start-up and EXPECT routing via DKB 5L.

Initial climb clearance 4000'	
SID	ROUTING
DKB 5L	(800'+) - RID (K220-) - AMTIX - AKONI - DKB.
DKB 7S	(800'+) - DF158 (K220-) - DF159 (2500'+) - AMTIX - AKONI - DKB.

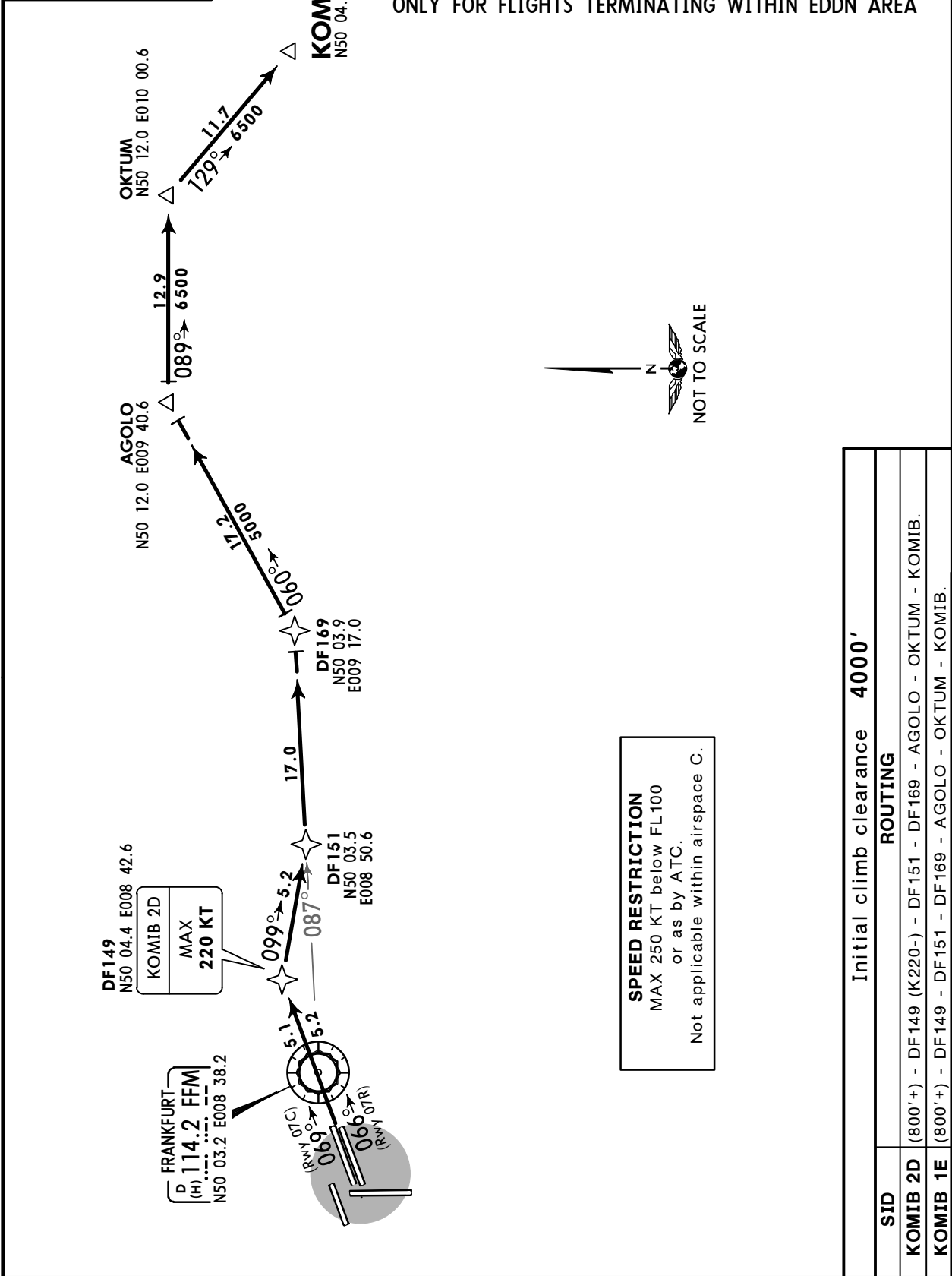
EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3Q6) Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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KOMIB TWO DELTA (KOMIB 2D) [KOMI2D]
KOMIB ONE ECHO (KOMIB 1E) [KOMI1E]
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3F)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



Trans level: By A/C Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

4300'

190°

3500'

MSA FFM VOR



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

DF149
N50 04.4 E008 42.6
MAX **220 KT**

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.

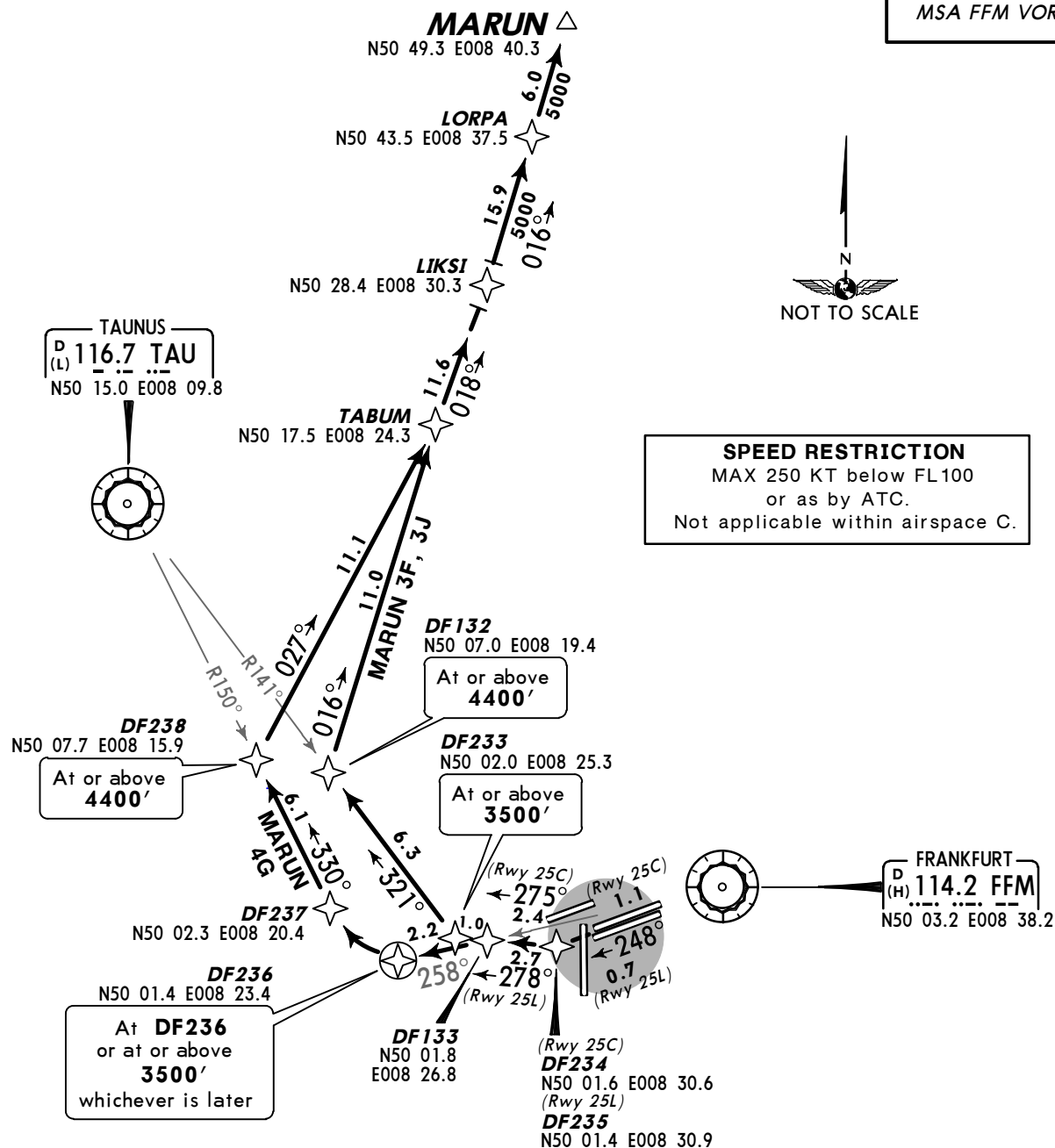
Initial climb clearance **5000'**

SID	ROUTING
MARUN 8D	(800'+) - DF149 (K220-) - MTR - TOBAK - APROX - MARUN.
MARUN 4E	(800'+) - DF139 (07C)/DF140 (07R) - DF146 (2000'+) - ODAGA - TESGA - ALIDI - MARUN.

Trans level: By A/C Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

MSA FFM VOR

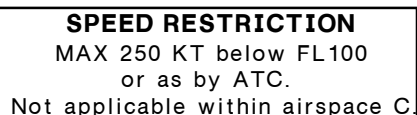


If unable to comply advise FRANKFURT
Delivery prior to start-up.
MARUN 3J: and EXPECT routing via MARUN 4G.

SID	ROUTING
MARUN 3F, 3J	(800'+) - DF234 (25C)/DF235 (25L) - DF233 (3500'+) - DF132 (4400'+) - TABUM - LIKSI - LORPA - MARUN.
MARUN 4G	(800'+) - DF234 (25C)/DF235 (25L) - DF133 - DF236 - (3500'+) - DF237 - DF238 (4400'+) - TABUM - LIKSI - LORPA - MARUN.

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

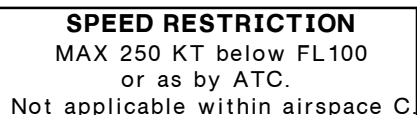


If unable to comply advise FRANKFURT
Delivery prior to start-up.

(800+) - DF235 - DF171 (K185-) - DF180 (2500'+) - ROXAP - LISKU - TABUM - LIKSI - LORPA - MARUN.

Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



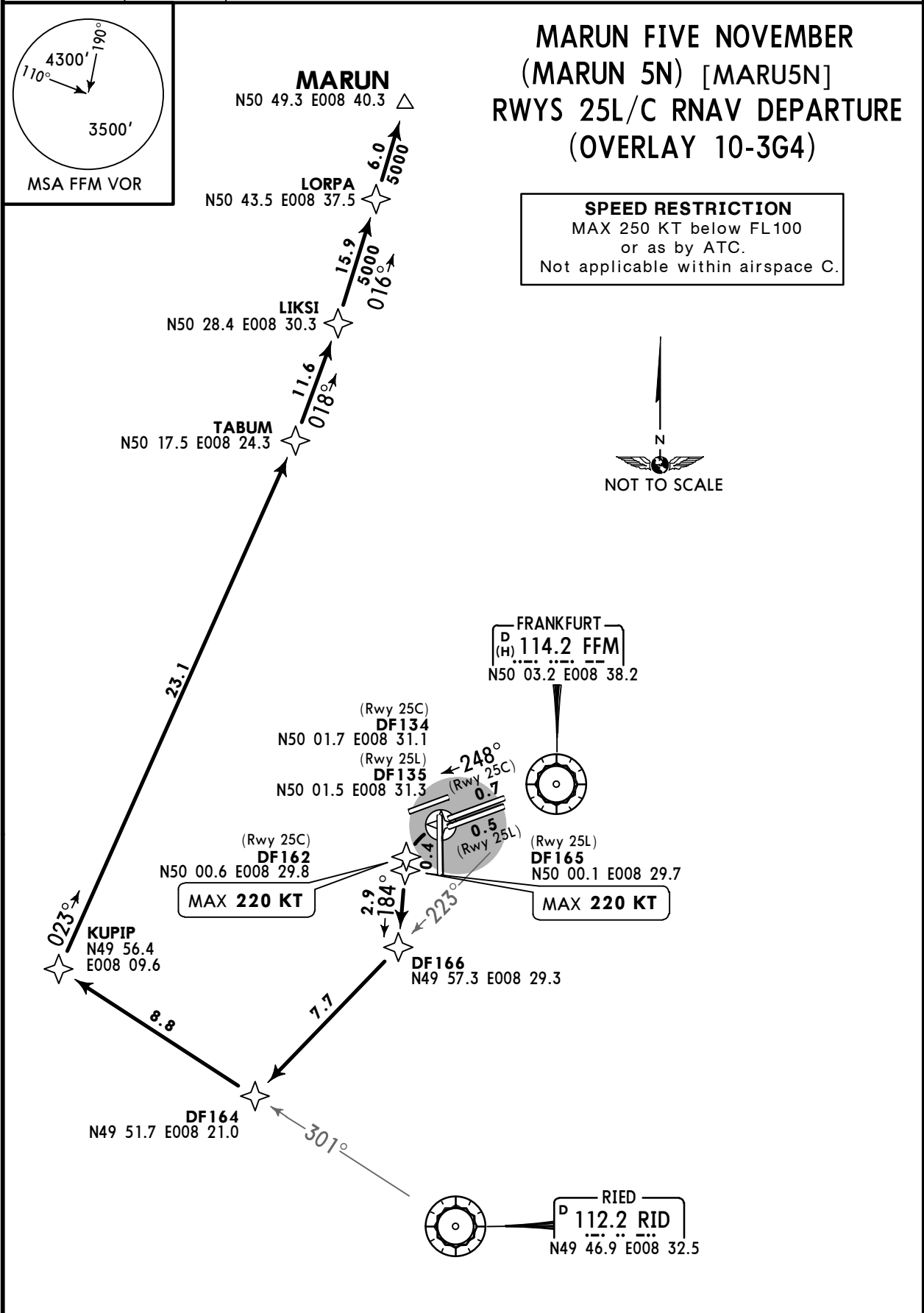
If unable to comply advise FRANKFURT
Delivery prior to start-up.

(800+) - DF234 - DF170 (K185-) - DF180 (2500'+) - ROXAP - LISKU - TABUM - LIKSI -
LORPA - MARUN.

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3S Eff 15 Oct RNAV SID (OVERLAY)

*LANGEN Radar 120.150	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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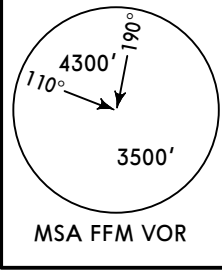
Initial climb clearance 5000'
ROUTING
(800'+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF164 - KUPIP - TABUM - LIKSI - LORPA - MARUN.

EDDF/FRA
FRANKFURT/MAIN

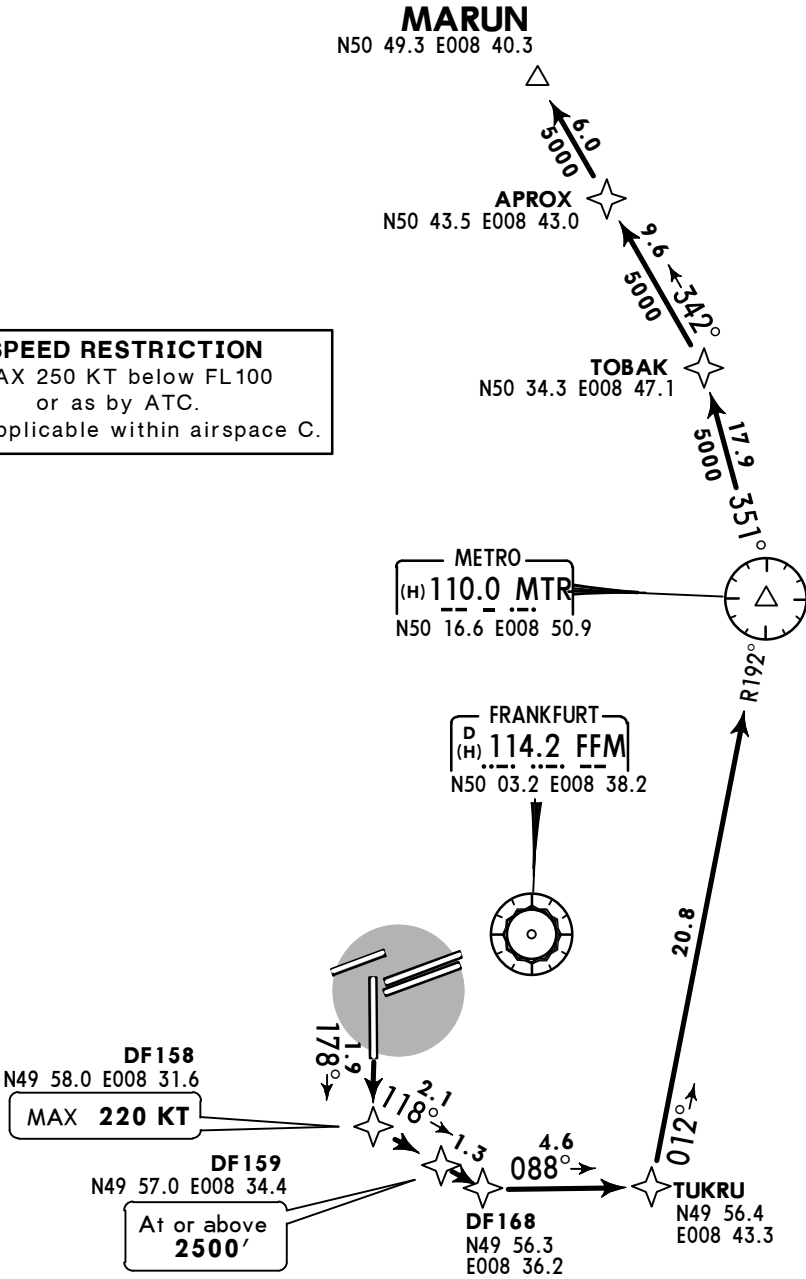
JEPPesenFRANKFURT/MAIN, GERMANY
2 OCT 15 10-3T Eff 15 Oct RNAV SID (OVERLAY)

*LANGEN Radar 120.150	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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MARUN TWO ROMEO (MARUN 2R)[MARU2R]
RWY 18 RNAV DEPARTURE (OVERLAY 10-3G5)
WILL ONLY BE ASSIGNED BETWEEN 2300-0600LT



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

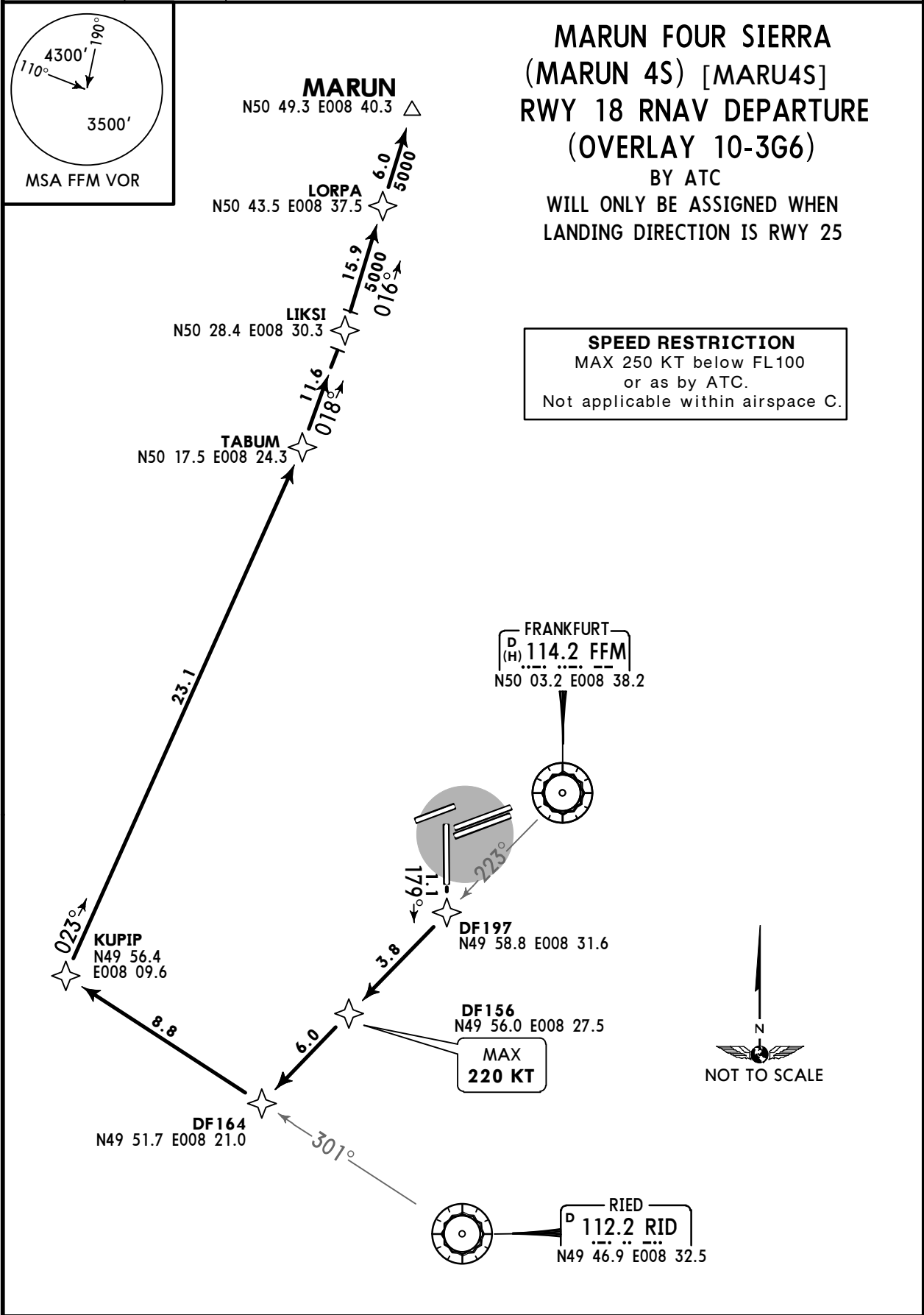
If unable to comply advise FRANKFURT
Delivery prior to start-up.

Initial climb clearance 4000'	
ROUTING	
(800+) - DF158 (K220-) - DF159 (2500'+) - DF168 - TUKRU - MTR - TOBAK - APROX - MARUN.	

EDDF/FRA
FRANKFURT/MAIN

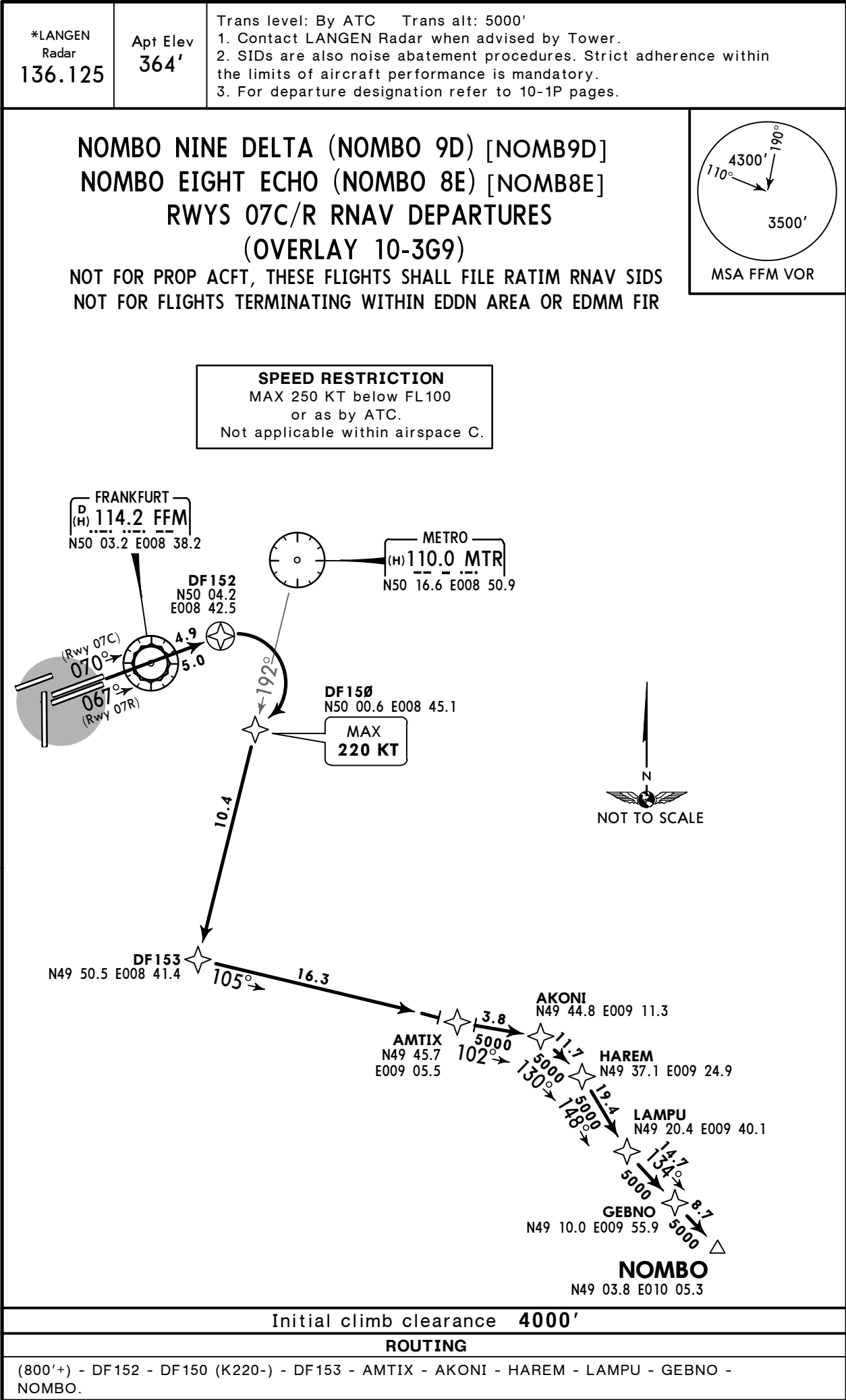
JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3T1 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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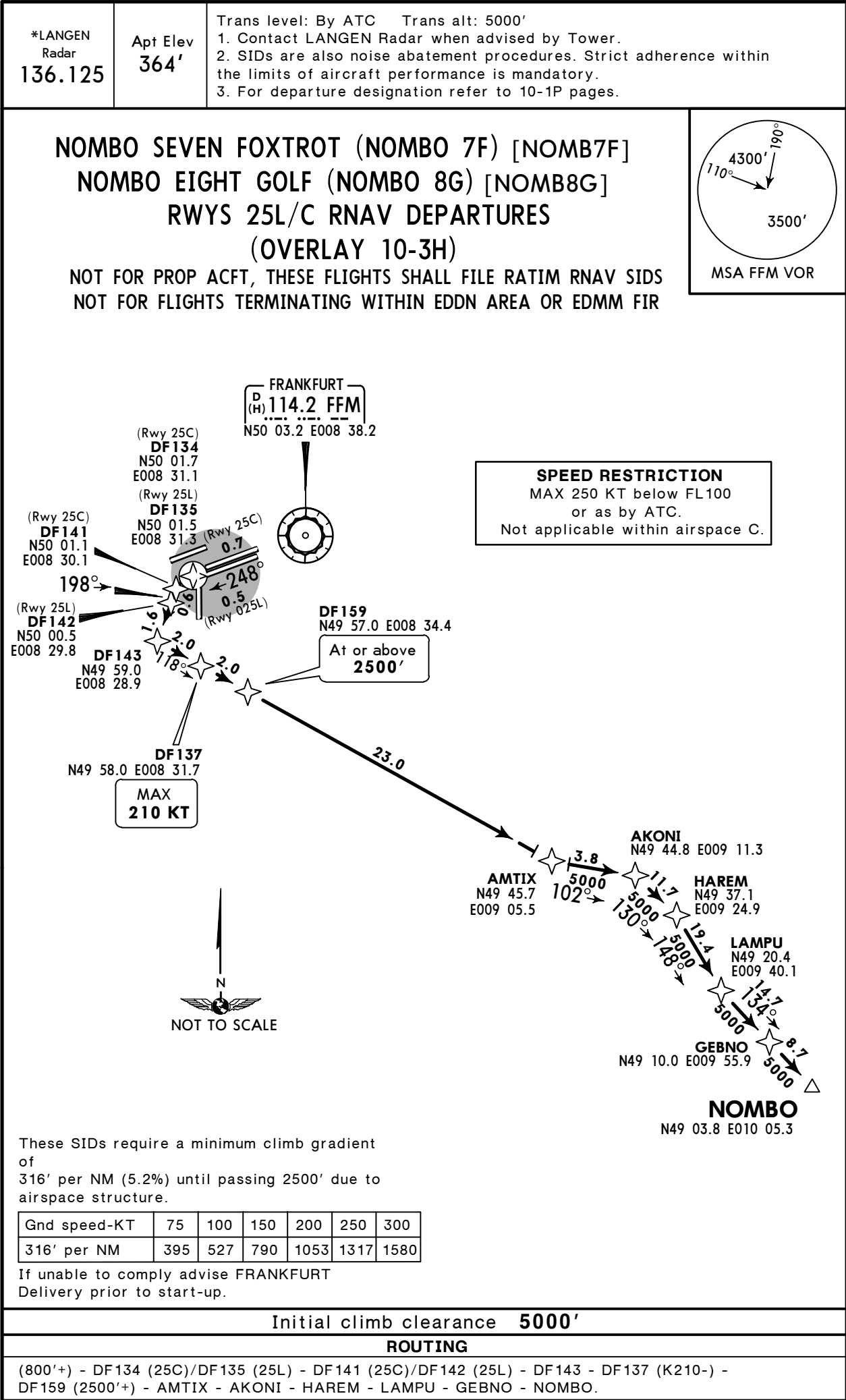
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3T3 Eff 23 Jul RNAV SID (OVERLAY)



EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3T4 Eff 23 Jul RNAV SID (OVERLAY)



EDDF/FRA
FRANKFURT/MAIN

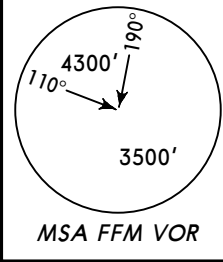
JEPPESEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3T6 Eff 5 Mar RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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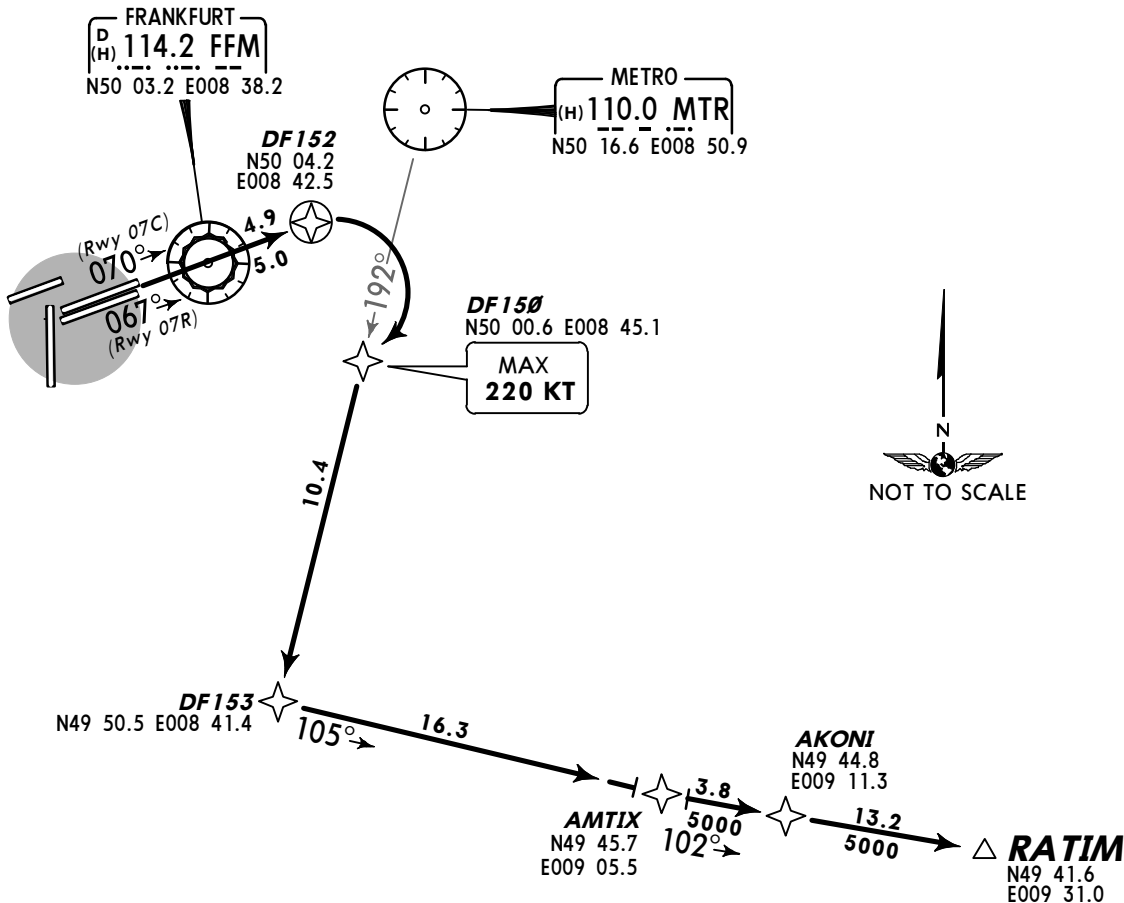
RATIM FIVE DELTA (RATIM 5D) [RAT15D]
RATIM FIVE ECHO (RATIM 5E) [RAT15E]
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3J1)

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.



Initial climb clearance 4000'
ROUTING
(800'+) - DF152 - DF150 (K220-) - DF153 - AMTIX - AKONI - RATIM.

EDDF/FRA
FRANKFURT/MAIN

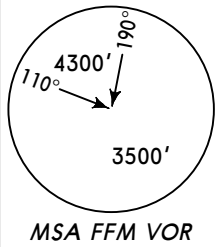
JEPPesenFRANKFURT/MAIN, GERMANY
27 FEB 15 10-3T7 Eff 5 Mar RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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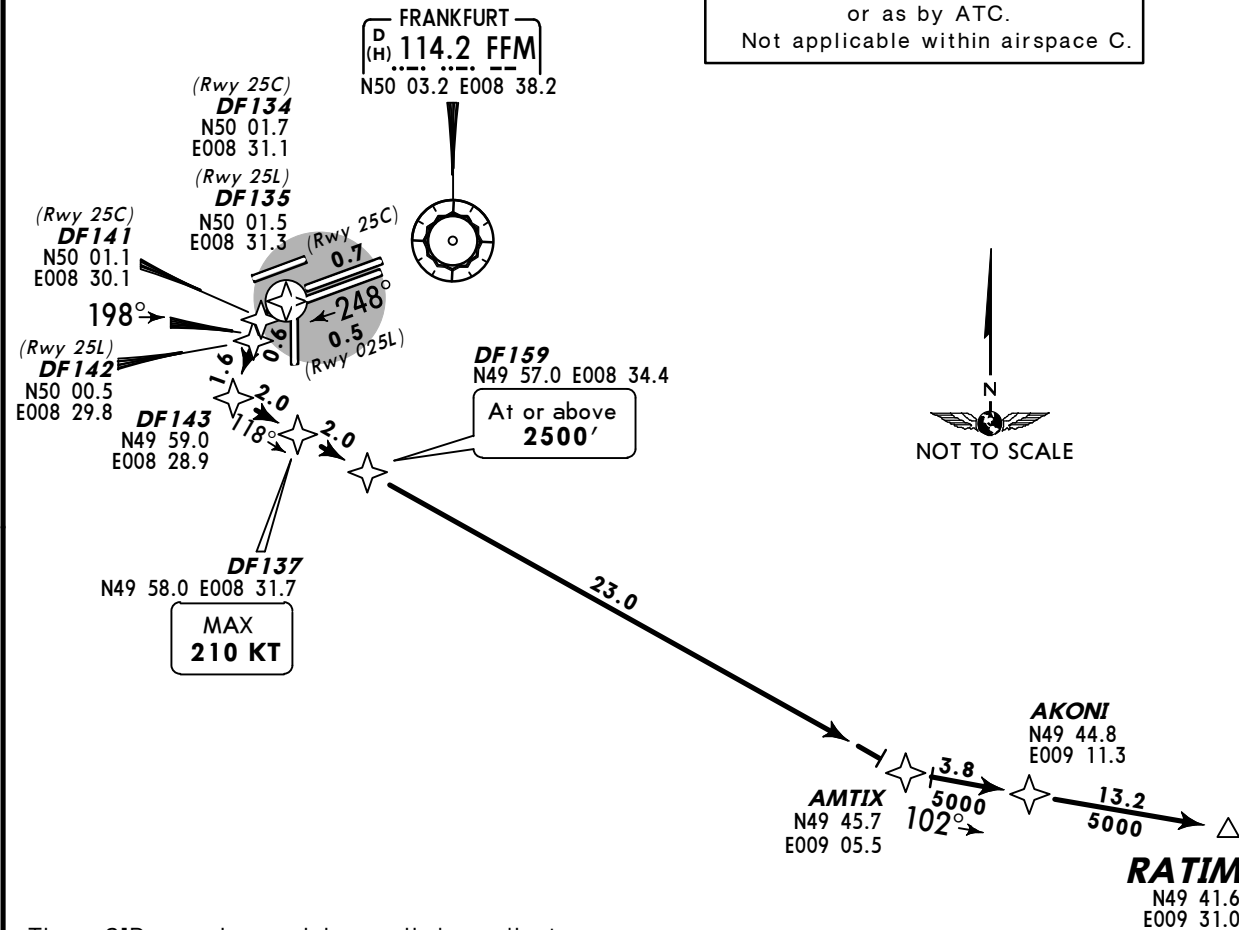
RATIM FIVE FOXTROT (RATIM 5F) [RAT15F]
RATIM FIVE GOLF (RATIM 5G) [RAT15G]
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J2)

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.



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.

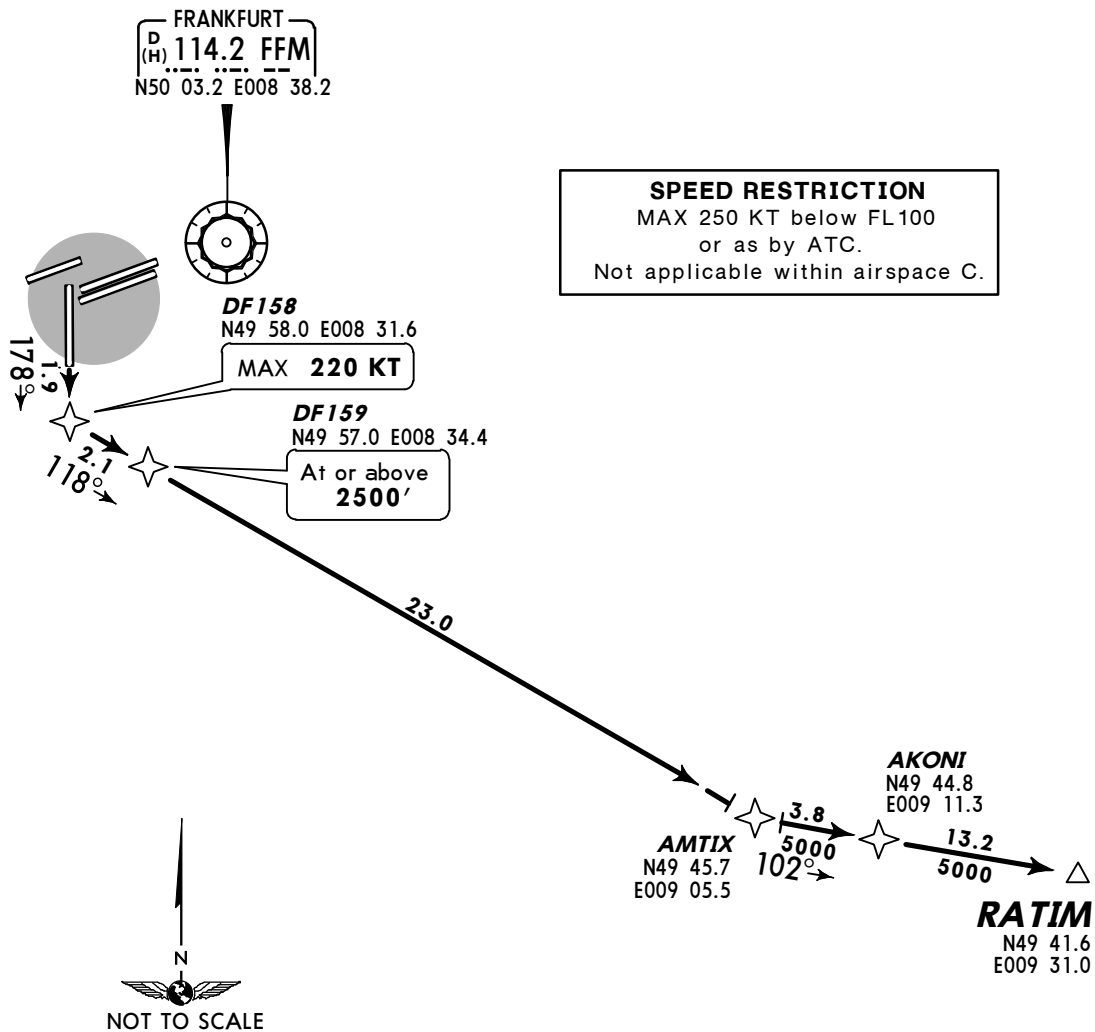
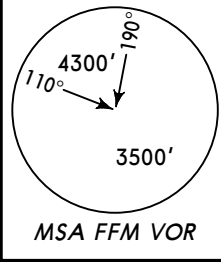
Initial climb clearance 5000'
ROUTING
(800'+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500'+) - AMTIX - AKONI - RATIM.

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3U Eff 5 Mar RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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RATIM FOUR SIERRA (RATIM 4S) [RATI4S]
RWY 18 RNAV DEPARTURE (OVERLAY 10-3J3)
ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



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.

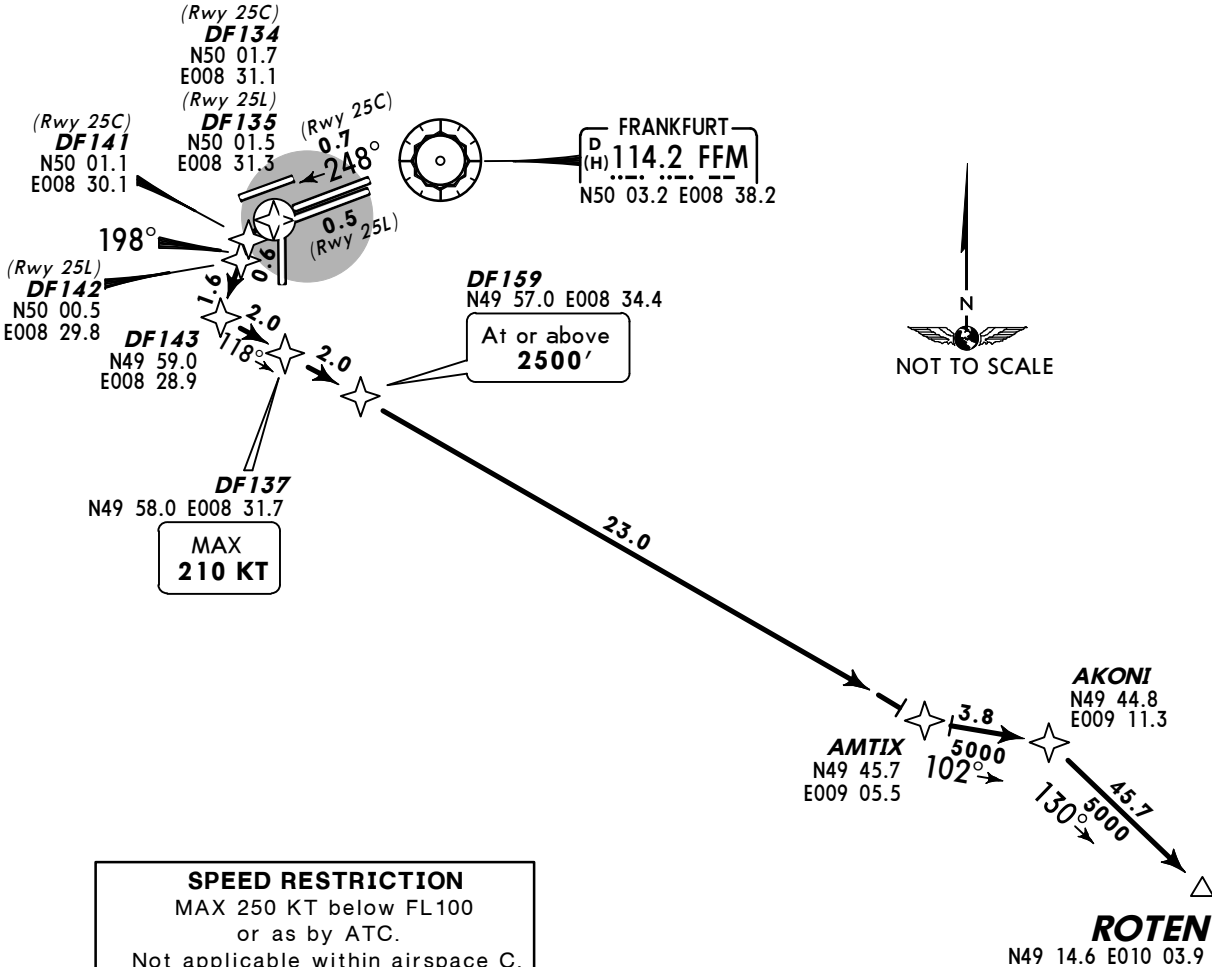
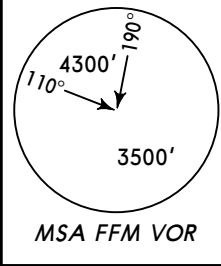
Initial climb clearance 4000'
ROUTING
(800'+) - DF158 (K220-) - DF159 (2500'+) - AMTIX - AKONI - RATIM.

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
27 FEB 15 10-3V Eff 5 Mar RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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ROTEN SIX FOXTROT (ROTEN 6F) [ROTE6F]
ROTEN FIVE GOLF (ROTEN 5G) [ROTE5G]
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J5)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



These SIDs require minimum climb gradients of 316' per NM (5.2%) until passing 2500' due to airspace structure.

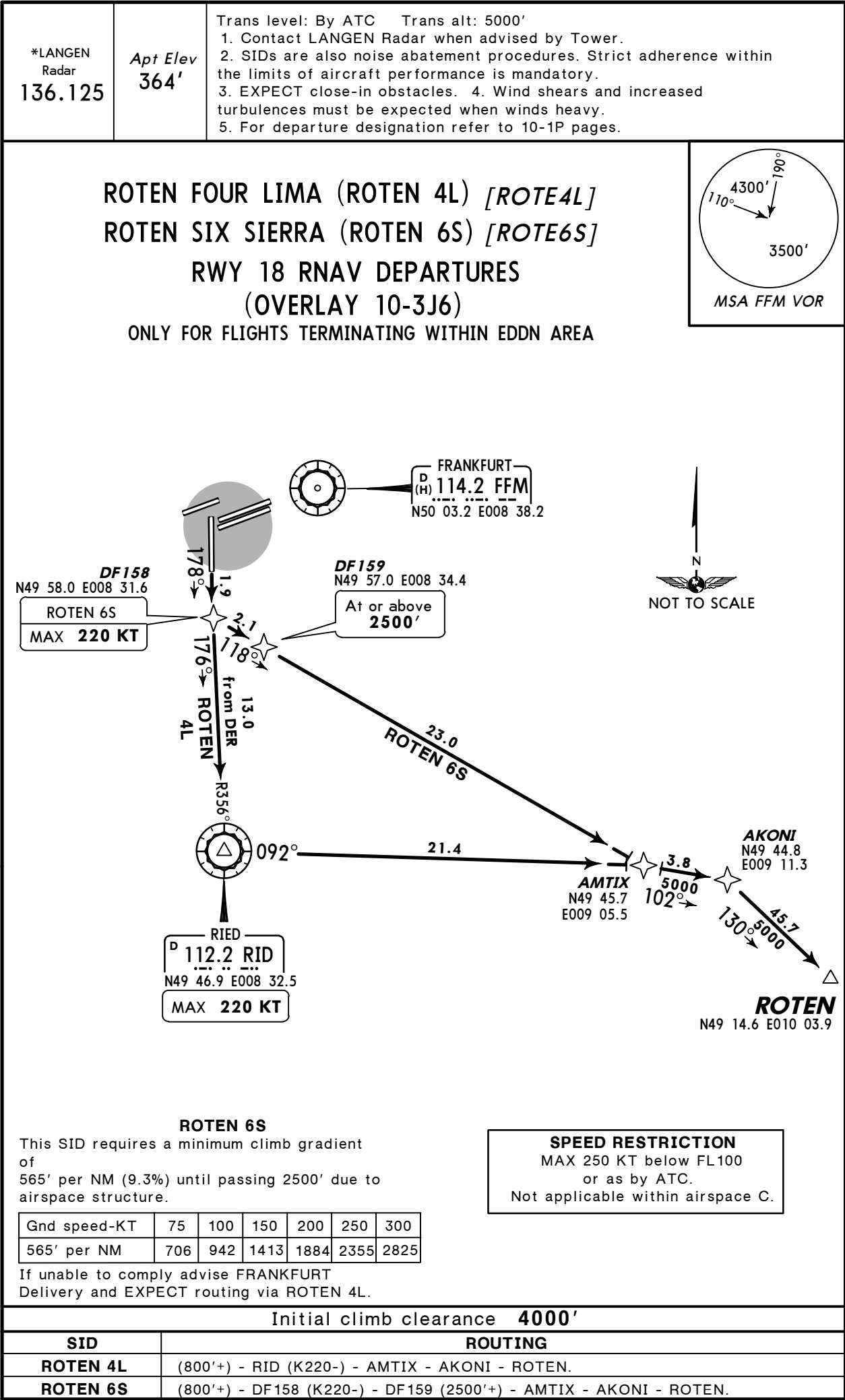
Gnd speed-KT	75	100	150	200	250	300
316' per NM	395	527	790	1053	1317	1580

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

Initial climb clearance 5000'	
ROUTING	
(800'+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500'+) - AMTIX - AKONI - ROTEN.	

EDDF/FRA
FRANKFURT/MAIN

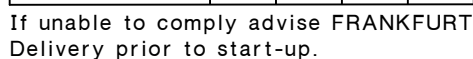
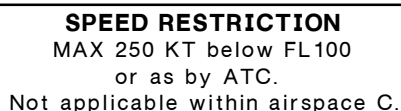
JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 (10-3V1) Eff 5 Mar RNAV SID (OVERLAY)



Trans level: By A/C Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

RUDOT FL220 - Y-180 - DIK RFL



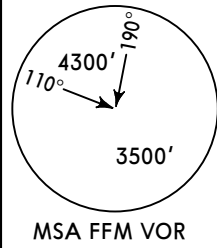
(800'+) - DF152 - DF150 (K220-) - DF155 (4000') - DF157 - RID - ROSIG (FL90+) - DONAB
(FL110+) - SOBRA.

EDDF/FRA
FRANKFURT/MAIN

JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3V4 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar SOBRA 5N 120.15 SOBRA 4F, 4G, 3P 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.
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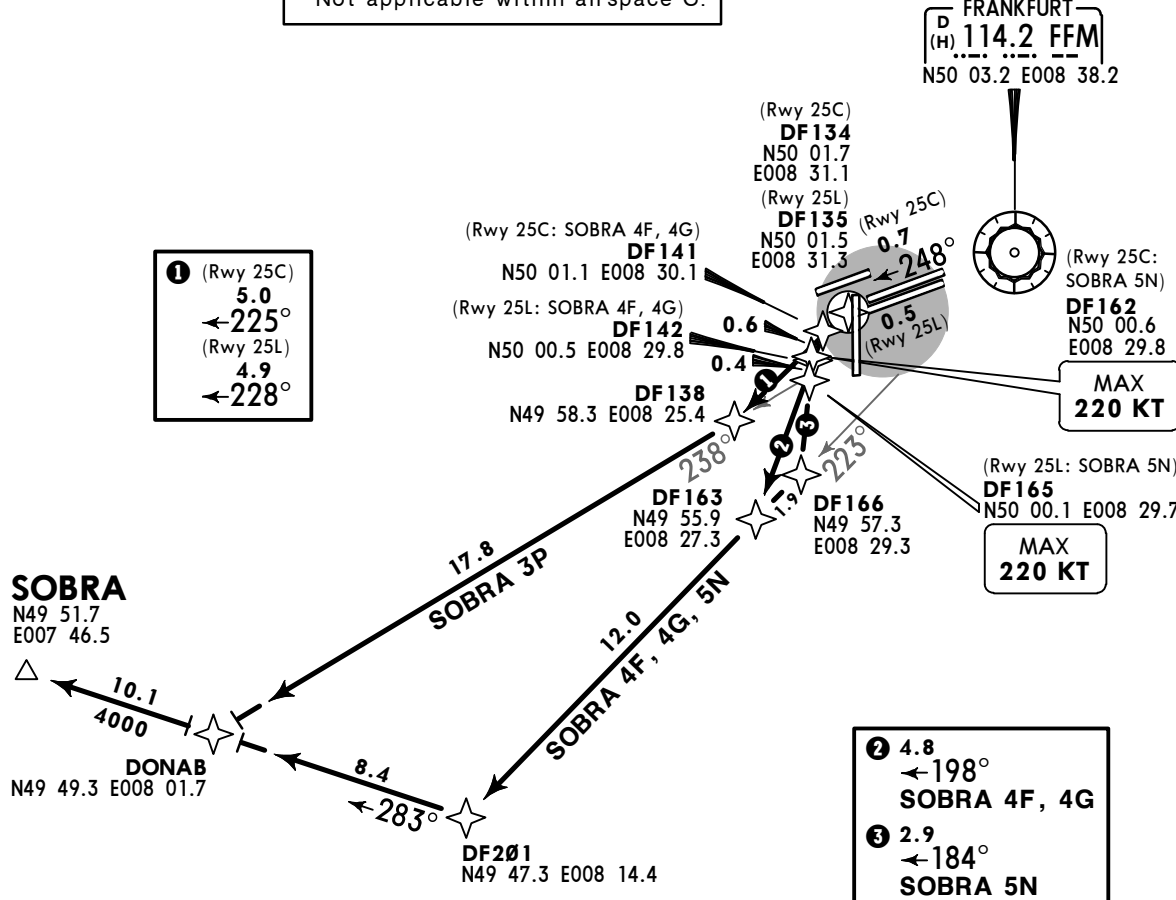
SOBRA FOUR FOXTROT (SOBRA 4F) [SOBR4F]
SOBRA FOUR GOLF (SOBRA 4G) [SOBR4G]
SOBRA FIVE NOVEMBER (SOBRA 5N) [SOBR5N]
SOBRA THREE PAPA (SOBRA 3P) [SOBR3P]
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3L)



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



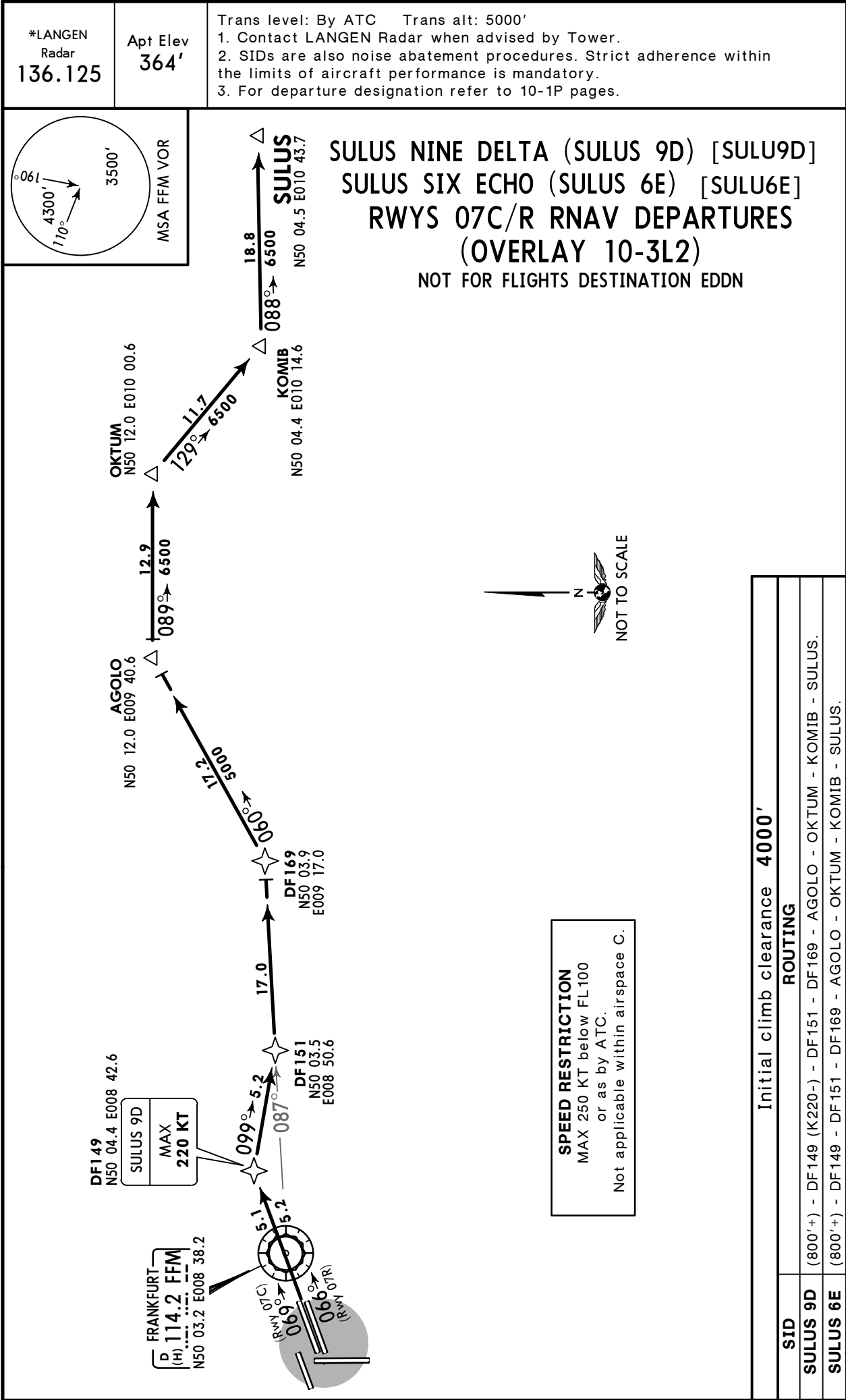
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance 5000'	
SID	ROUTING
SOBRA 4F, 4G	(800'+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF163 - DF201 - DONAB - SOBRA.
SOBRA 5N	(800'+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF201 - DONAB - SOBRA.
SOBRA 3P	(800'+) - DF134 (25C)/DF135 (25L) - DF138 - DONAB - SOBRA.

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3V6) Eff 23 Jul RNAV SID (OVERLAY)



Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.

Diagram illustrating a circular sector with a radius of 3500' and a central angle of 110°. The arc length is labeled as 6100'.

NOT TO SCALE

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

(800'+) - DF134 (25C)/DF137 (K210-) - DF159 (250

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.
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Initial climb clearance **5000'**

ROUTING

- (800'+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 -
 - (K210-) - DF159 (2500'+) - AMTIX - AKONI - GIBSA - WUR - SULUS.

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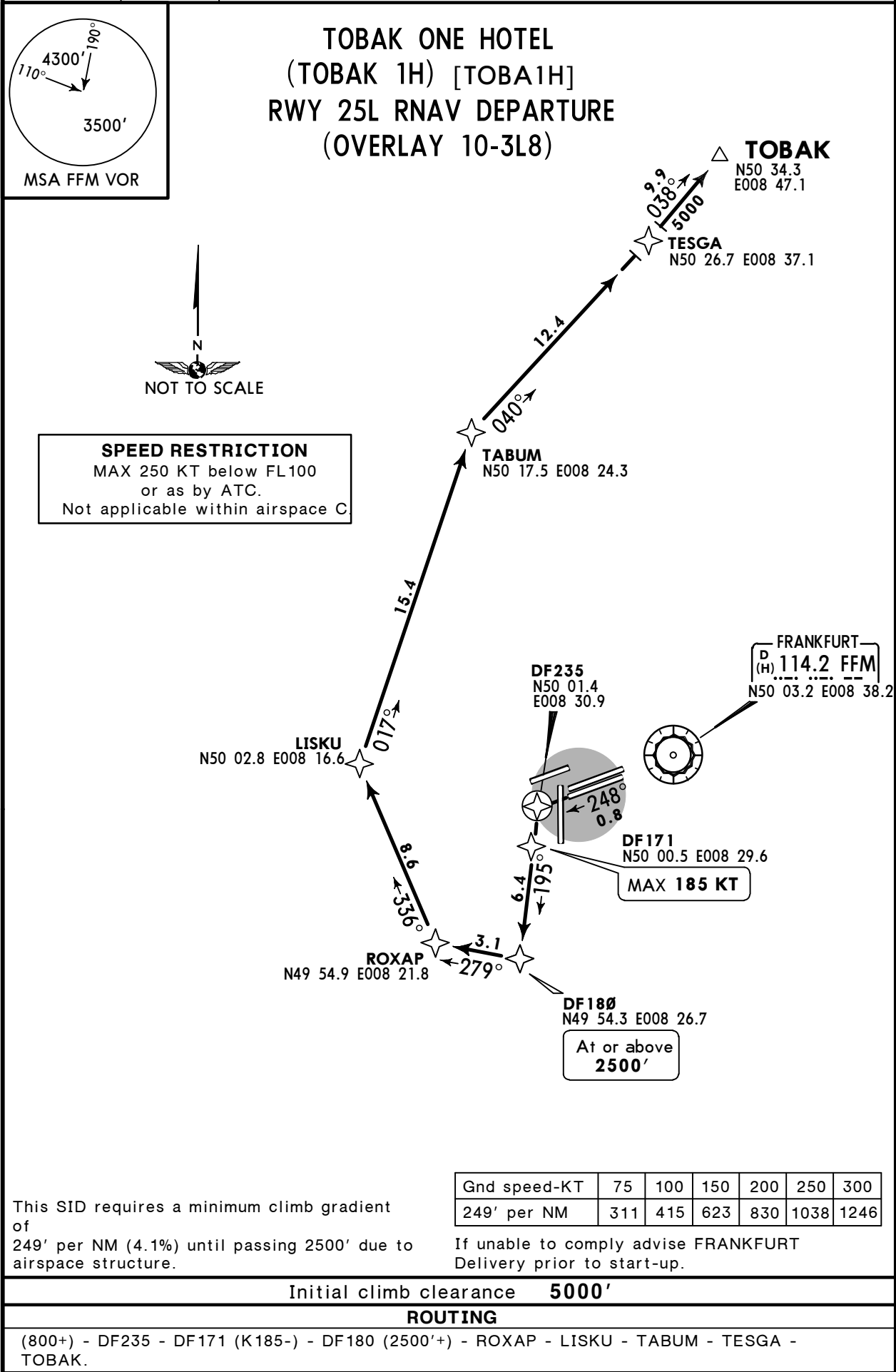
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 10-3X1 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN
Radar
120.15

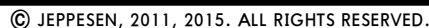
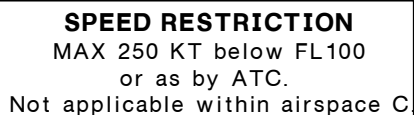
Apt Elev
364'

Trans level: By ATC Trans alt: 5000'
1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



Trans level: By ATC Trans alt: 5000'

1. Contact LANGEN Radar when advised by Tower.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. For departure designation refer to 10-1P pages.



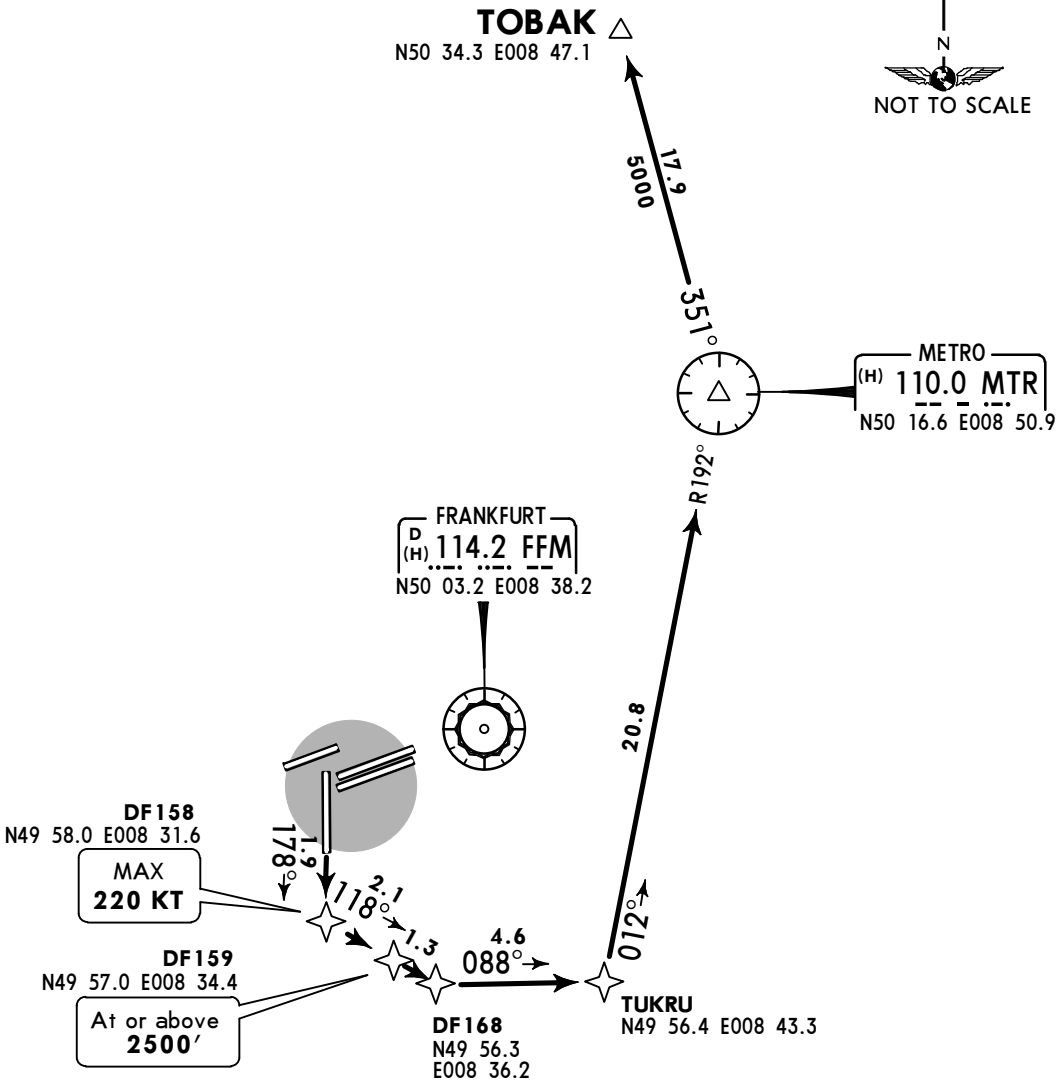
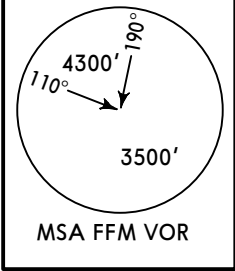
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FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
2 OCT 15 10-3X4 Eff 15 Oct RNAV SID (OVERLAY)

*LANGEN Radar 120.150	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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TOBAK TWO ROMEO (TOBAK 2R) [TOBA2R]
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N)
WILL ONLY BE ASSIGNED BETWEEN 2300-0600LT
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

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.

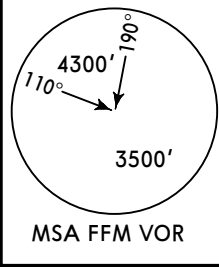
Initial climb clearance	4000'
ROUTING	
(800+) - DF158 (K220-) - DF159 (2500'+) - DF168 - TUKRU - MTR - TOBAK.	

EDDF/FRA
FRANKFURT/MAIN

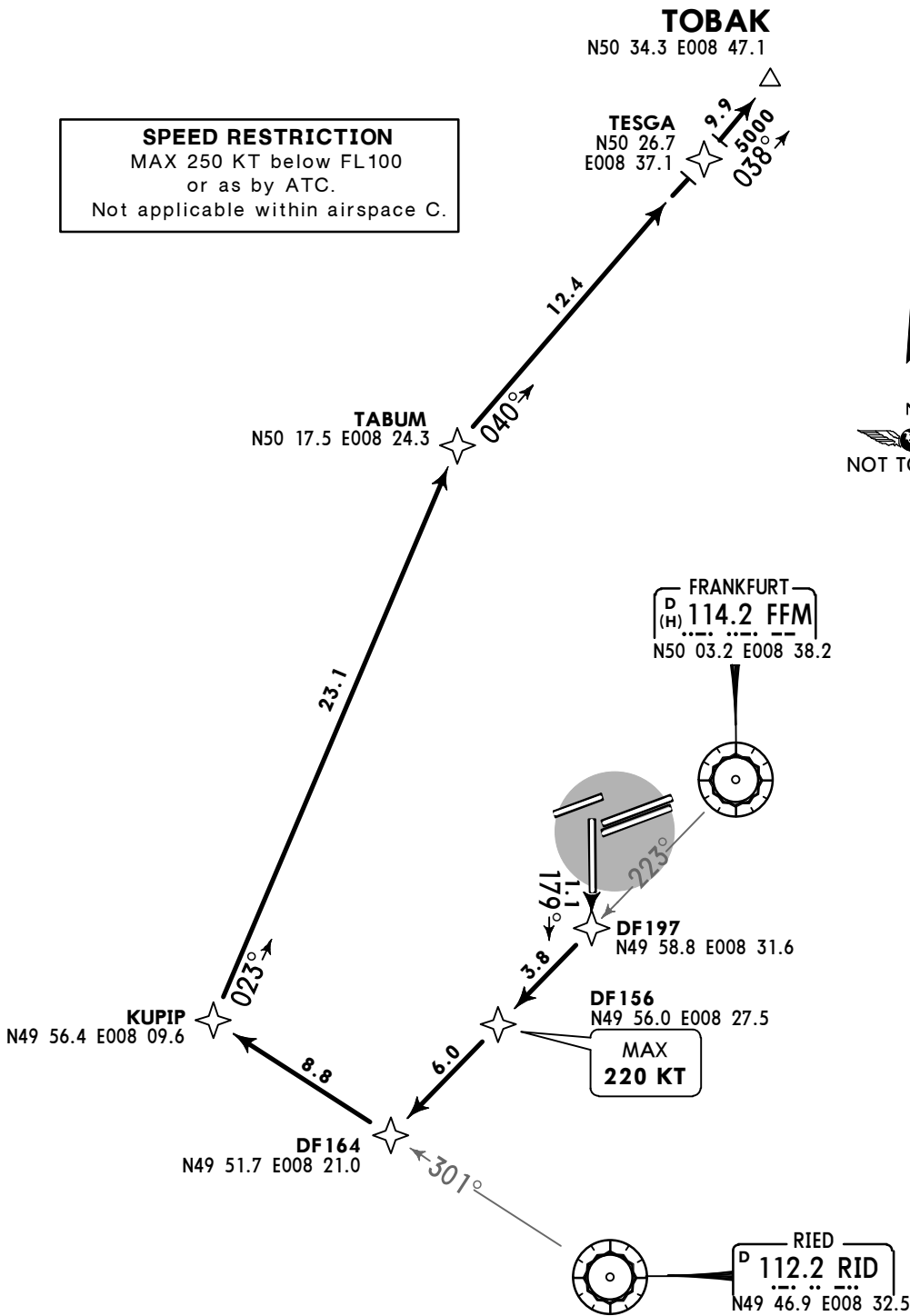
JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 (10-3X5) Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar 120.15	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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TOBAK SIX SIERRA (TOBAK 6S) [TOBA6S]
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N1)
BY ATC
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



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



Initial climb clearance 4000'

ROUTING

(800'+) - DF197 - DF156 (K220-) - DF164 - KUPIP - TABUM - TESGA - TOBAK.

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17 JUL 15

10-3X6

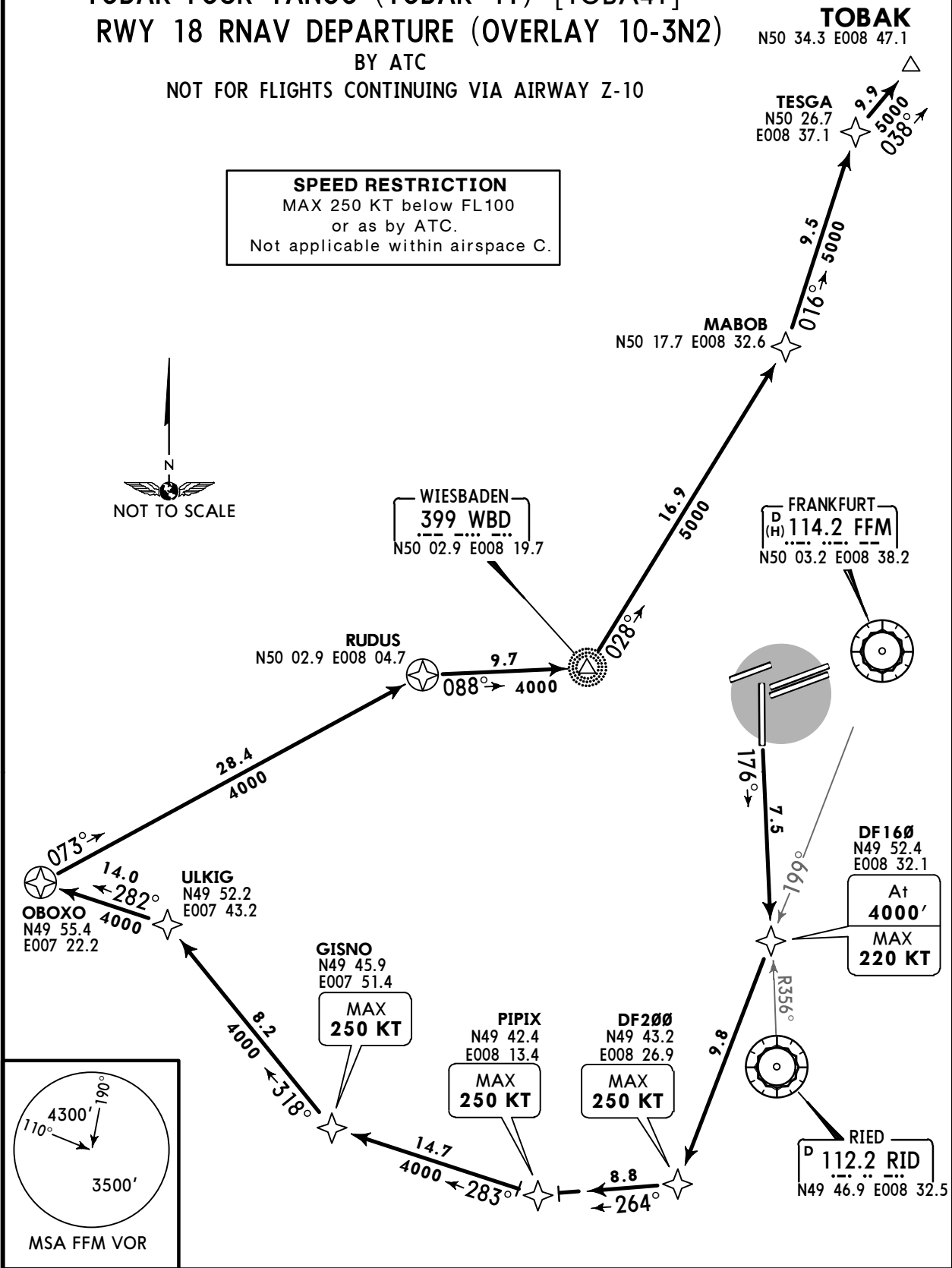
Eff 23 Jul

RNAV SID (OVERLAY)

*LANGEN Radar 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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 FOUR TANGO (TOBAK 4T) [TOBA4T]
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N2)
BY ATC
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

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

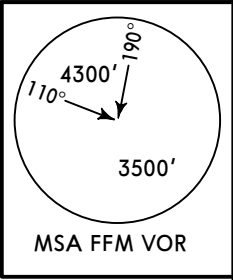


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FRANKFURT/MAIN

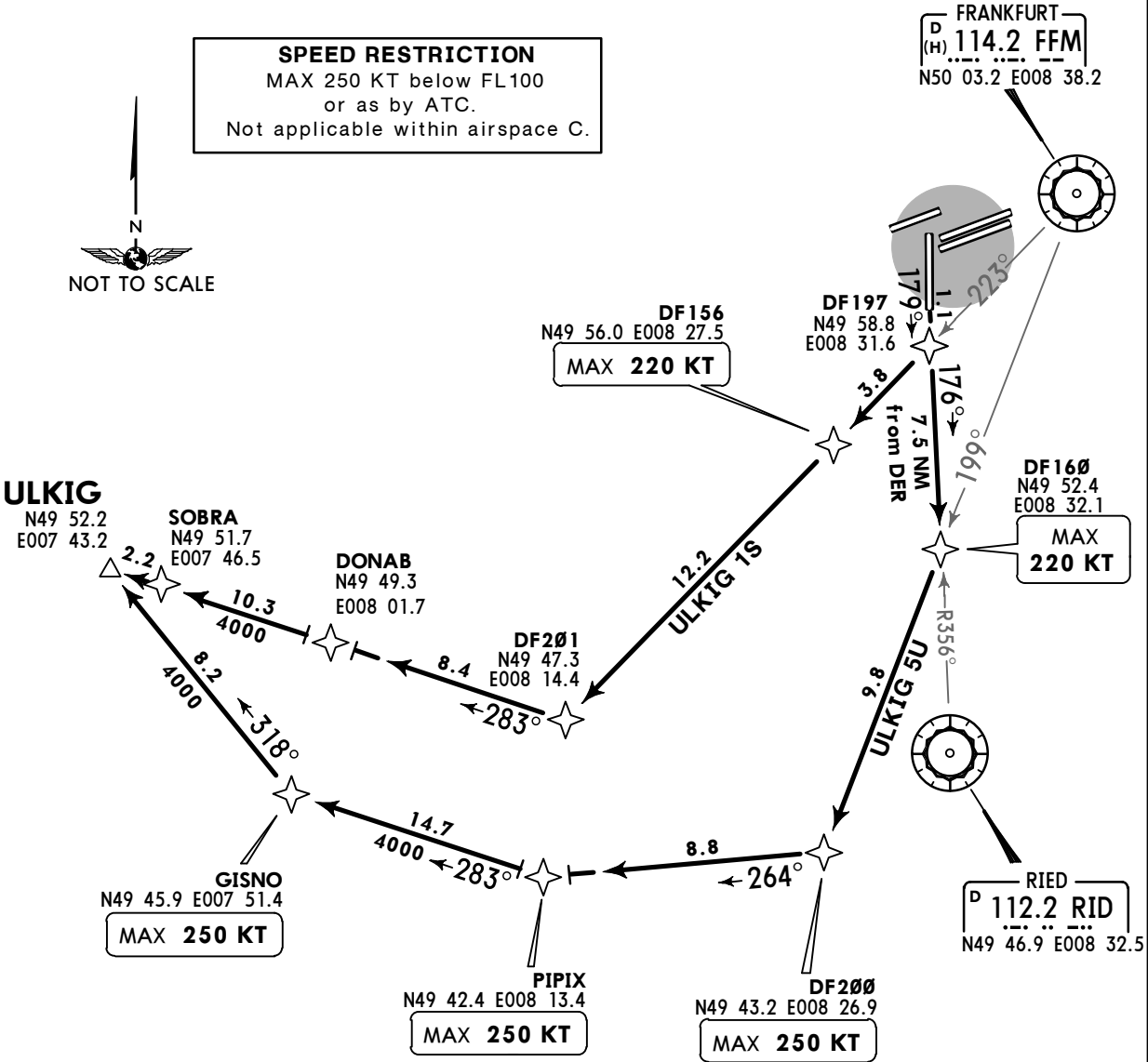
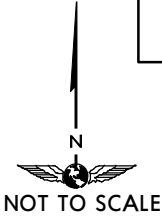
JEPPesenFRANKFURT/MAIN, GERMANY
17 JUL 15 10-3X7 Eff 23 Jul RNAV SID (OVERLAY)

*LANGEN Radar ULKIG 1S 120.15 ULKIG 5U 136.125	Apt Elev 364'	Trans level: By ATC Trans alt: 5000' 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures. 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.
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ULKIG ONE SIERRA (ULKIG 1S) [ULKI1S]
ULKIG FIVE UNIFORM (ULKIG 5U) [ULKI5U]
RWY 18 RNAV DEPARTURES (OVERLAY 10-3N3)
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



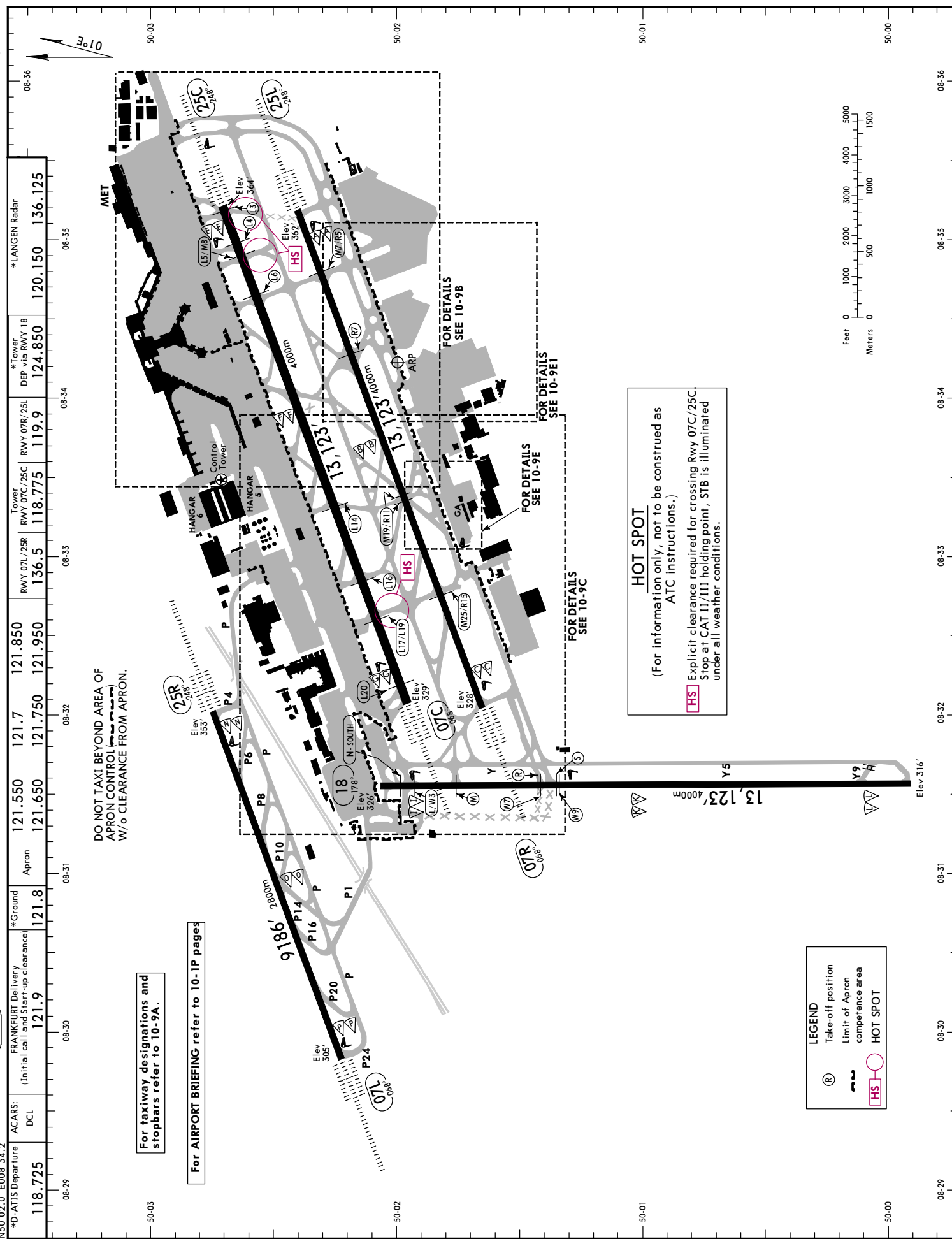
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



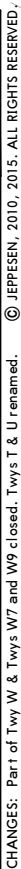
Initial climb clearance 4000'	
SID	ROUTING
ULKIG 1S By ATC	(800'+) - DF197 - DF156 (K220-) - DF201 - DONAB - SOBRA - ULKIG.
ULKIG 5U	(800'+) - DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG.

FRANKFURT/MAIN, GERMANY
FRANKFURT/MAIN

EDDF/FRA
Apt Elev 364'
N50 02.0 E008 34.2
20 NOV 15 10-9



CHANGES: Part of Twy W & Twys W7 and W9 closed.



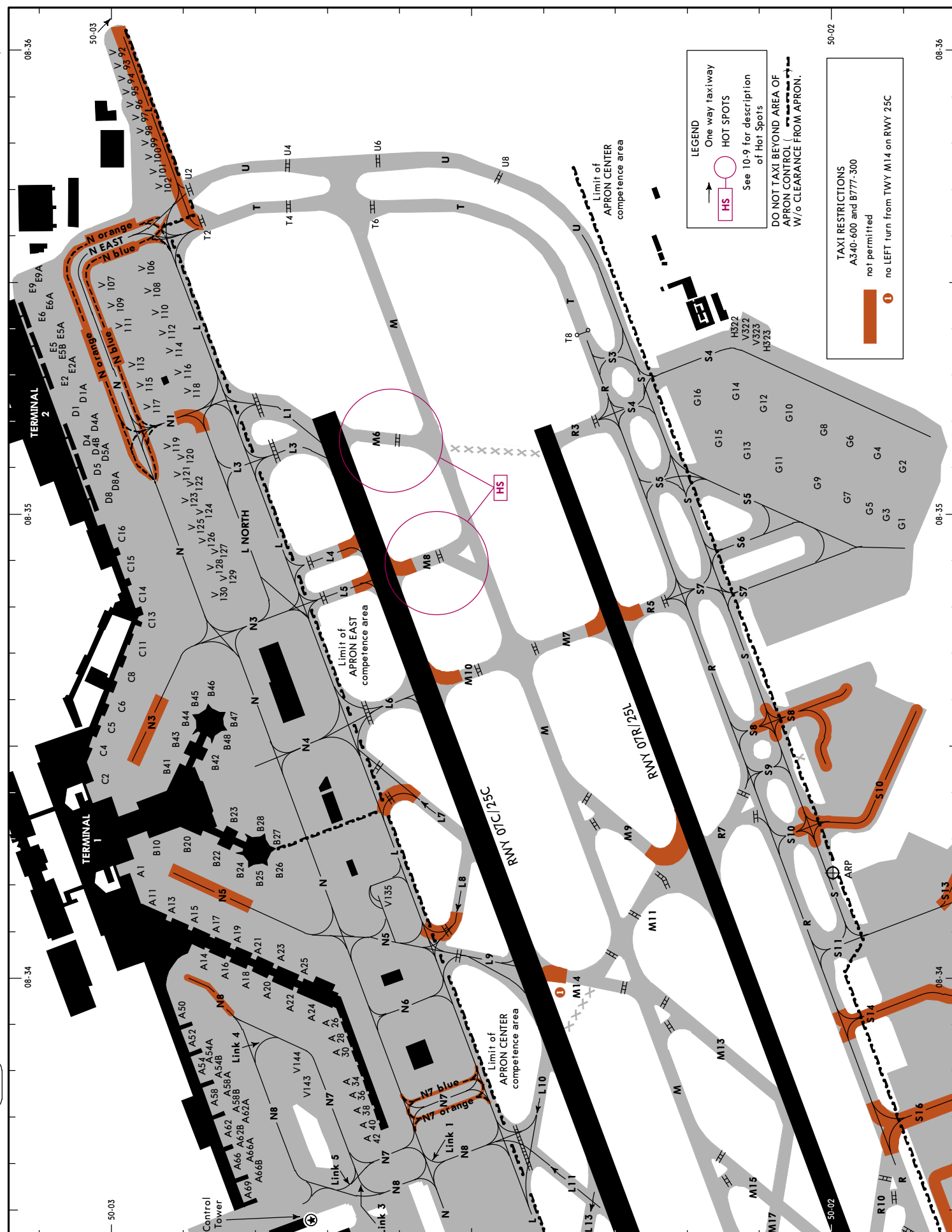
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 **JEPPESSEN FRANKFURT/MAIN, GERMANY**
20 NOV 15 **(10-9A1)** **FRANKFURT/MAIN**

ADDITIONAL RUNWAY INFORMATION						
RWY		USABLE LENGTHS		TAKE-OFF	WIDTH	
		— LANDING BEYOND —				
07L	HIRL ❶ CL ❷ ALSF-II TDZ REIL PAPI-L (3.0°) RVR		8214' 2504m	NA	148' 45m	
25R	HIRL ❶ CL ❷ ALSF-II TDZ REIL PAPI-R (3.2°) RVR		7971' 2430m			
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.						
07C	HIRL ❸ CL ❹ ALSF-II TDZ REIL PAPI-L (3.0°) ❺ RVR		11,968' 3648m	❷	197' 60m	
25C	HIRL ❸ CL ❹ ALSF-II TDZ REIL PAPI-L (3.0°) ❻ 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. ❸ spacing 60m. ❹ spacing 15m. ❺ HST-L11 & L7 ❻ HST-L8, L10, L13 & L15 ❼ TAKE-OFF RUN AVAILABLE RWY 07C: From rwy head 13,123'(4000m) position L20 12,927'(3940m) position L17/L19/M30 10,866'(3312m) position L16/M28 9882'(3012m) position L14/M24 7913'(2412m) RWY 25C: From rwy head 13,123'(4000m) position L3 13,031'(3972m) position L4 12,090'(3685m) position L5/M8 11,745'(3580m) position L6/M10 10,689'(3258m)						
07R	HIRL ❸ CL ❹ ALSF-II TDZ REIL PAPI-L (3.0°) ❿ RVR		12,090' 3685m	❿	148' 45m	
25L	HIRL ❸ CL ❹ ALSF-II TDZ REIL PAPI-L (3.0°) ⓫ RVR		11,909' 3630m			
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. ❸ spacing 60m. ❹ spacing 15m. ❿ HST-M15, M13, M9 & R10 ⓫ HST-M17, M21, M23, M27 & R13 ⓬ TAKE-OFF RUN AVAILABLE RWY 07R: From rwy head 13,123'(4000m) position M25/R15 10,105'(3080m) position M19/R11 7644'(2330m) RWY 25L: From rwy head 13,123'(4000m) position M7/R5 11,450'(3490m) position R7 9350'(2850m) position M19 5607'(1709m)						
18	HIRL (60m) CL (15m)	RVR	NA	⓭	148' 45m	
⓭ TAKE-OFF RUN AVAILABLE RWY 18: From rwy head 13,025'(3970m) position N-SOUTH 12,746'(3885m) position L/W3 12,467'(3800m) position M 11,319'(3450m) position R 9268'(2825m) position W7 9262'(2823m) position S 8973'(2735m) position W9 8944'(2726m)						
Standard TAKE-OFF ❶						
Rwys 07C/R, 18, 25L/C 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	125m	150m	200m	250m	500m	
C				400m		
D	150m	200m	250m	300m		
❶ Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.						

FRANKFURT / MAIN, GERMANY
FRANKFURT / MAIN

EDDF / FRA
20 NOV 15
10-9B



LEGEND

One way taxiway
HOT SPOTS
See 10-9 for description of Hot Spots

HS

DO NOT TAXI BEYOND AREA OF APRON CONTROL () W/o CLEARANCE FROM APRON.

TAXI RESTRICTIONS
A340-600 and B777-300
not permitted
no LEFT turn from TWY M14 on RWY 25C



EDDF/FRA

 **JEPPesen** **FRANKFURT/MAIN, GERMANY**

17 APR 15

(10-9D)

FRANKFURT/MAIN

INS COORDINATES			
STAND No.	COORDINATES	STAND No.	COORDINATES
A1	N50 03.0 E008 34.3	G5	N50 01.9 E008 35.0
A11	N50 03.0 E008 34.2	G6, G7	N50 02.0 E008 35.1
A13	N50 02.9 E008 34.2	G8	N50 02.0 E008 35.2
A14, A15	N50 02.9 E008 34.1	G9	N50 02.0 E008 35.1
A16	N50 02.8 E008 34.1	G10 thru G13	N50 02.1 E008 35.2
A17	N50 02.9 E008 34.1	G14	N50 02.1 E008 35.3
A18, A19	N50 02.8 E008 34.1	G15, G16	N50 02.2 E008 35.2
A20	N50 02.8 E008 34.0	H2	N50 01.9 E008 34.9
A21	N50 02.8 E008 34.1	H4	N50 01.9 E008 34.8
A22	N50 02.7 E008 34.0	H6, H8	N50 02.0 E008 34.8
A23	N50 02.8 E008 34.0	H12	N50 02.1 E008 34.8
A24, A25	N50 02.7 E008 34.0	H322, H323	N50 02.1 E008 35.4
A26 thru A30	N50 02.7 E008 33.9	J2, J4	N50 02.0 E008 34.6
A34	N50 02.7 E008 33.8	J6 thru J10	N50 02.0 E008 34.5
A36	N50 02.6 E008 33.8	J12	N50 02.0 E008 34.4
A38 thru A42	N50 02.6 E008 33.7	J13	N50 01.9 E008 34.3
A50, A52	N50 02.9 E008 33.9	J15, J17	N50 01.9 E008 34.2
A54 thru A58B	N50 02.9 E008 33.8	K2, K4, K6	N50 01.7 E008 34.3
A62 thru A62B	N50 02.8 E008 33.7	S/H401, S/H402	N50 01.8 E008 33.4
A66 thru A69	N50 02.8 E008 33.6	S403	N50 01.8 E008 33.5
B10, B20	N50 02.9 E008 34.3	S404	N50 01.8 E008 33.4
B22 thru B28	N50 02.8 E008 34.3	S405	N50 01.8 E008 33.5
B41 thru B43	N50 02.9 E008 34.5	S406	N50 01.8 E008 33.3
B44 thru B46	N50 02.9 E008 34.6	S407	N50 01.8 E008 33.5
B47	N50 02.8 E008 34.6	S408	N50 01.8 E008 33.3
B48	N50 02.9 E008 34.5	S409	N50 01.8 E008 33.6
C2, C4	N50 03.0 E008 34.5	S410	N50 01.8 E008 33.3
C5, C6	N50 03.0 E008 34.6	S411	N50 01.8 E008 33.6
C8, C11	N50 03.0 E008 34.7	S412	N50 01.8 E008 33.3
C13, C14	N50 03.0 E008 34.8	S413	N50 01.8 E008 33.6
C15	N50 03.0 E008 34.9	S414	N50 01.8 E008 33.2
C16	N50 03.0 E008 35.0	S416 thru S420	N50 01.7 E008 33.2
D1 thru D4B	N50 03.1 E008 35.2	S501, S503	N50 01.8 E008 33.9
D5 thru D8A	N50 03.0 E008 35.1	S504	N50 01.8 E008 33.7
E2, E2A	N50 03.1 E008 35.3	S505	N50 01.9 E008 33.8
E5 thru E6A	N50 03.1 E008 35.4	S506	N50 01.8 E008 33.6
E9, E9A	N50 03.1 E008 35.5	S507	N50 01.9 E008 33.8
F211	N50 02.4 E008 32.7	S508	N50 01.9 E008 33.6
F212	N50 02.4 E008 32.6	S601	N50 01.9 E008 34.1
F213, F214	N50 02.4 E008 32.7	S602	N50 01.9 E008 33.9
F215	N50 02.4 E008 32.9	S603	N50 01.9 E008 34.1
F216	N50 02.5 E008 32.9	S604	N50 01.9 E008 33.9
F219, F220	N50 02.5 E008 33.0		
F221 thru F223	N50 02.3 E008 32.5		
F224, F225	N50 02.4 E008 32.4		
F231	N50 02.3 E008 32.1		
F232, F232A	N50 02.3 E008 32.0		
F233, F233A, F234	N50 02.3 E008 31.9		
F235	N50 02.2 E008 31.8		
F237	N50 02.3 E008 31.7		
F238	N50 02.2 E008 31.6		
G1	N50 01.9 E008 35.0		
G2	N50 01.9 E008 35.1		
G3	N50 01.9 E008 35.0		
G4	N50 01.9 E008 35.1		

EDDF/FRA

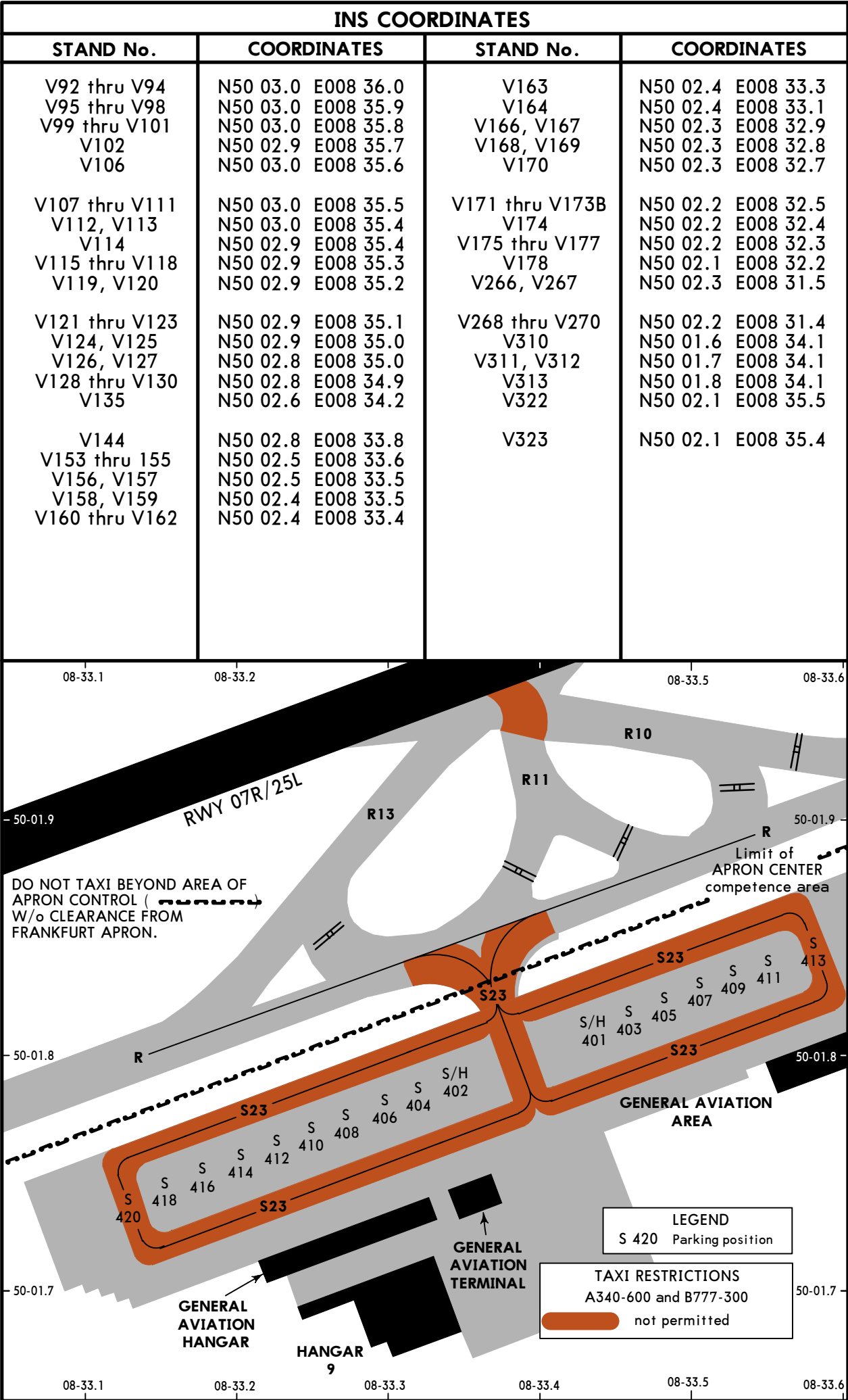


JEPPESSEN FRANKFURT/MAIN, GERMANY

17 APR 15

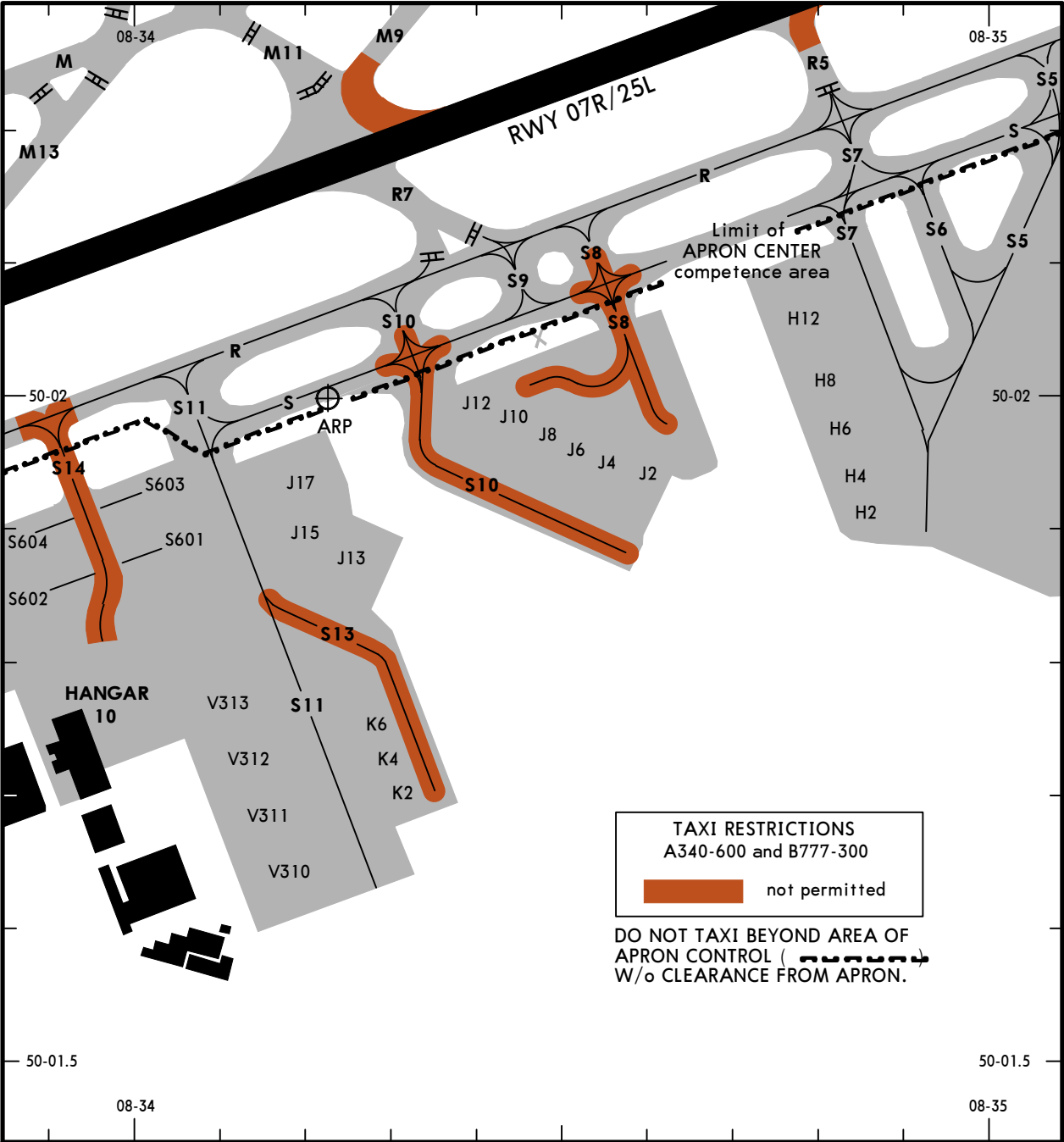
10-9E

FRANKFURT/MAIN



EDDF/FRA

JEPPesen **FRANKFURT/MAIN, GERMANY**
17 APR 15 (10-9E1) **FRANKFURT/MAIN**



ADVANCED VISUAL DOCKING GUIDANCE SYSTEM (A-VDGS)

1. GENERAL

The following procedures take place during taxi-in and are displayed on the position's panel:

1.1. Start of Docking

The system is started by activating the button with the scheduled aircraft type on the remote control unit. "Wait" is displayed until the docking surface is checked.

1.2. Capture

Aircraft type is displayed on the panel. An arrow pointing upwards shows the screening of the aircraft.

1.3. Tracking

As soon as the laser has captured the aircraft, the arrow is replaced by a vertical yellow line (centerline indicator). A flashing red arrow shows the required steering direction. The vertical yellow arrow shows the aircraft's position in comparison to the centerline and the azimuth guidance.

1.4. Closing Rate

During the closing rate the panel shows the remaining distance between the aircraft's current position and the stop position, commencing at a distance determined by the system (i. e. 98'/30m). The centerline indicator reduces digit by digit with the aircraft approaching the stop position. Having reached the final digit the panel will show "STOP".

1.5. Decrease Speed "SLOW"

If the aircraft is approaching faster than the acceptable speed, the panel will display "SLOW".

1.6. Azimuth Guidance

The aircraft is as far from stop position as displayed on the panel. The vertical yellow arrow shows the aircraft's position in comparison to the centerline, a flashing red arrow (deviation indicator) shows the required steering direction.

1.7. Stop-Position Reached

As soon as the aircraft has reached the correct stop position, the panel will display "STOP".

1.8. Docking Completed

As soon as the aircraft is parked the panel will display "OK".

1.9. Overshoot

If the aircraft has overshoot the stop position, the panel will display "TOO FAR".

1.10. Interruption of Guidance During Tracking

Should clear view to the aircraft be interrupted by any object or the detected aircraft lost during docking close to the stop position, the panel will display "WAIT". In that case pilots shall interrupt docking until display "WAIT" is extinguished.

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JEPPESEN FRANKFURT/MAIN, GERMANY
23 SEP 11 (10-9G) FRANKFURT/MAIN

2. FURTHER DISPLAYS

2.1. SLOW

Is displayed in bad weather conditions or poor view and when capture of aircraft is interrupted.

2.2. STOP and ID FAIL

Should capture of aircraft fail up to 39'/12m ahead of stop position, taxiing shall be aborted. In this case, aircraft may not continue taxiing without the aid of apron supervision.

2.3. WAIT and GATE BLOCK

If the panel displays this message, the aircraft may not continue taxiing without the aid of apron supervision.

2.4. WAIT and VIEW BLOCK

If the view to the approaching aircraft is hindered, for instance due to contaminated laser lens or other objects reaching into the position, the aircraft may not continue taxiing without the aid of apron supervision.

2.5. STOP

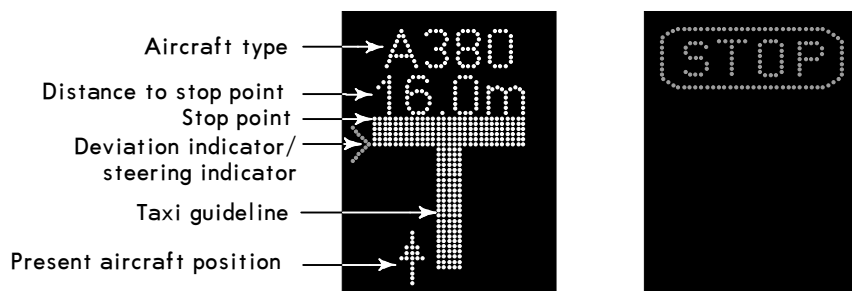
In case of emergency, an emergency button provided at the aircraft stand can be pushed by either apron supervision or any other authorized personnel. In this case "STOP" will be displayed on the panel and aircraft may not continue taxiing without the aid of apron supervision.

2.6. IRREGULARITIES

Should power outage or system shutdown or other irregularities occur, display will be extinguished or the panel will display figures determined by the system.

3. DISPLAY OF IMAGES AND FUNCTIONS ON THE PANEL

3.1. Examples:

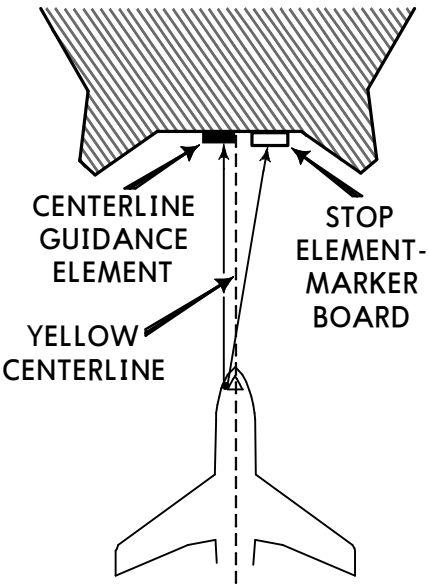


Depending on the system type, displays can be slightly different or additional.

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JEPPesen FRANKFURT/MAIN, GERMANY
23 SEP 11 (10-9H) FRANKFURT/MAIN

AIRCRAFT GUIDANCE FOR NOSE-IN STANDS (AGNIS)



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

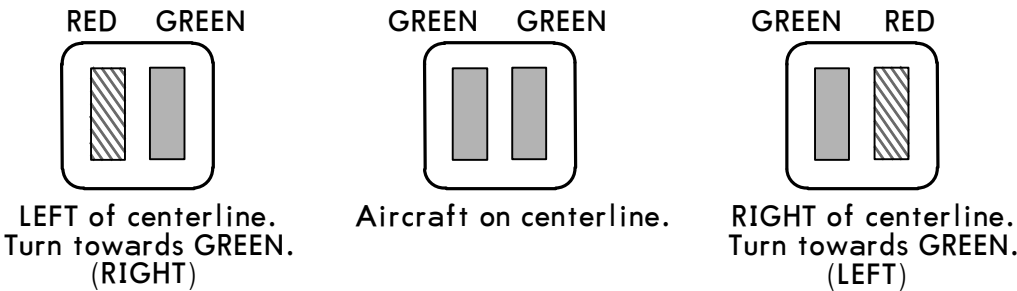
CAUTION

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.



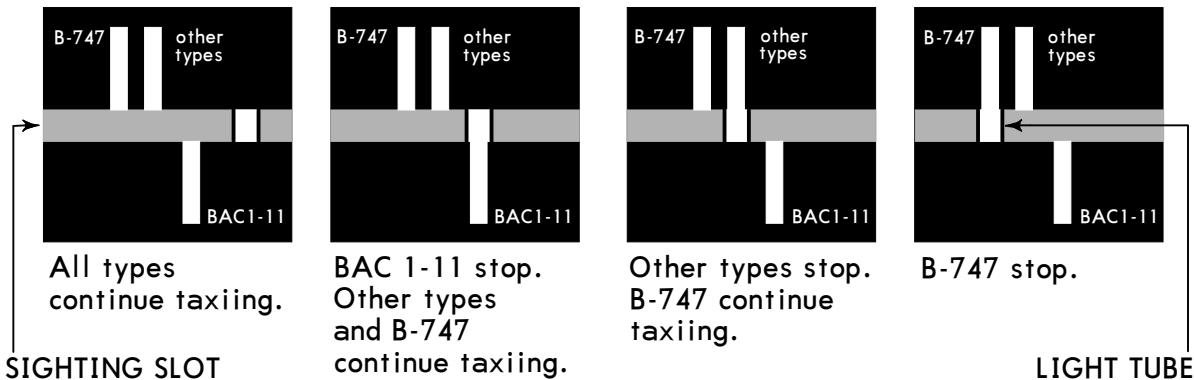
STOP ELEMENT - MARKER BOARD

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

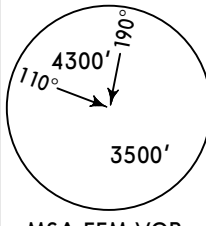


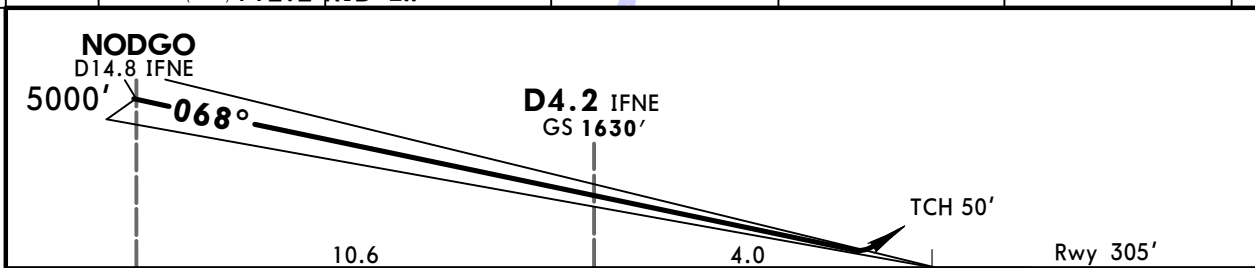
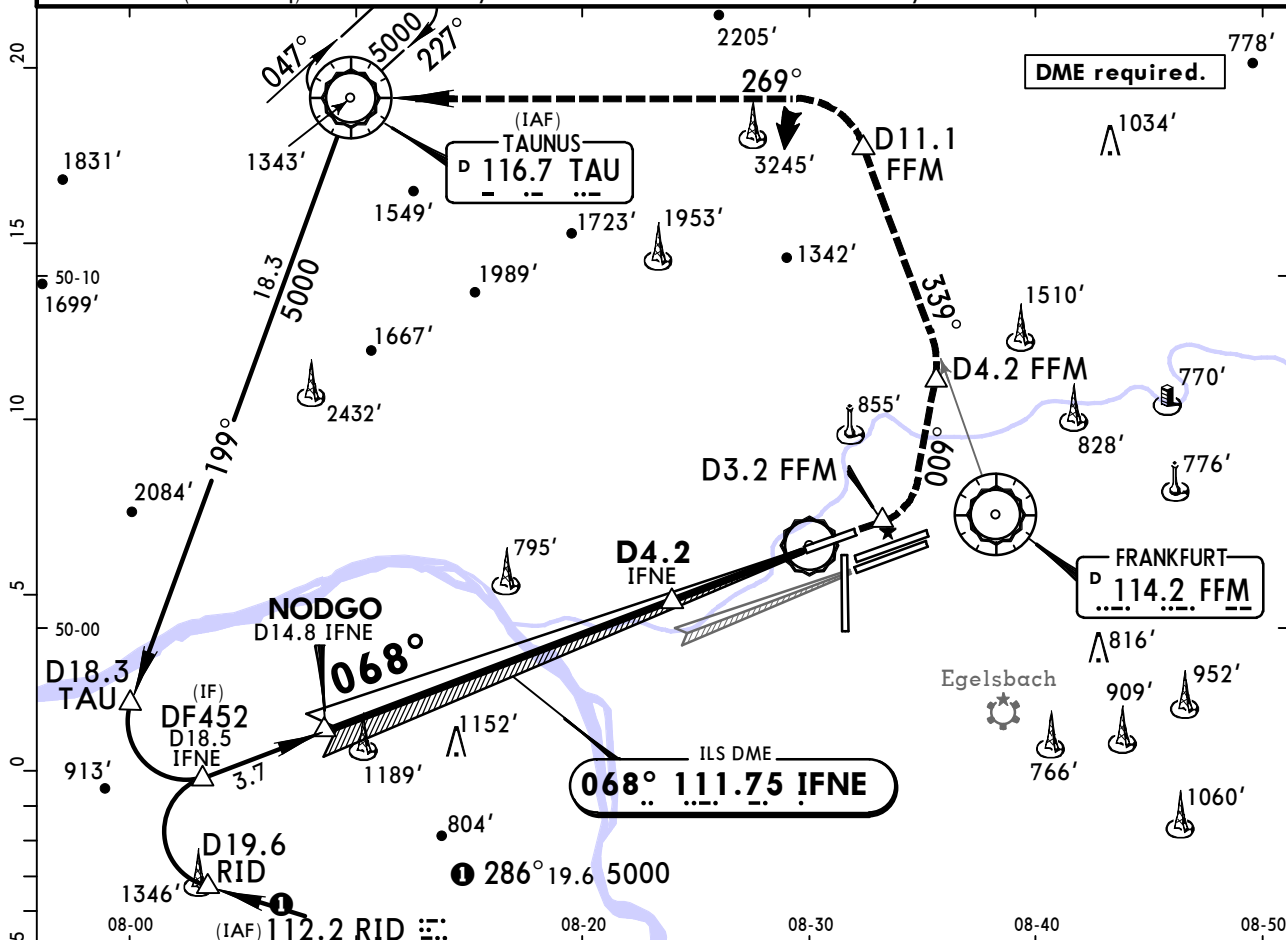
EDDF/FRA
FRANKFURT/MAIN

8 MAY 15 **(11-1)**

JEPPESSEN FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB
GRAD MIM 4.6% **ILS Z Rwy 07L**

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP) North South		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	136.5	121.8
LOC IFNE 111.75	Final Apch Crs 068°	GS D4.2 IFNE 1630' (1325')	ILS DA(H) Refer to Minimums	Apt Elev 364' Rwy 305'	 MSA FFM VOR	
MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000'. In case of Missed apch inform ATC immediately.						
Alt Set: hPa(IN on req)		Rwy Elev: 11 hPa		Trans level: By ATC		Trans alt: 5000'



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	Inform	D3.2 FFM	009°	D4.2 FFM
GS	3.00°	372	478	531	637	743	REIL PAPI	ATC	↑	LT	

Standard		STRAIGHT-IN LANDING RWY 07L		
Missed apch climb gradient mim 4.6% up to 3500'				
		ABC: 505' (200')		
		DA(H) D: 513' (208')		
FULL		Limited		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	
B				
C				
D				

EDDF/FRA
FRANKFURT/MAIN

8 MAY 15

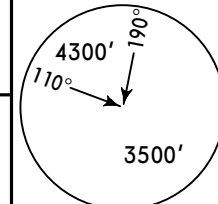
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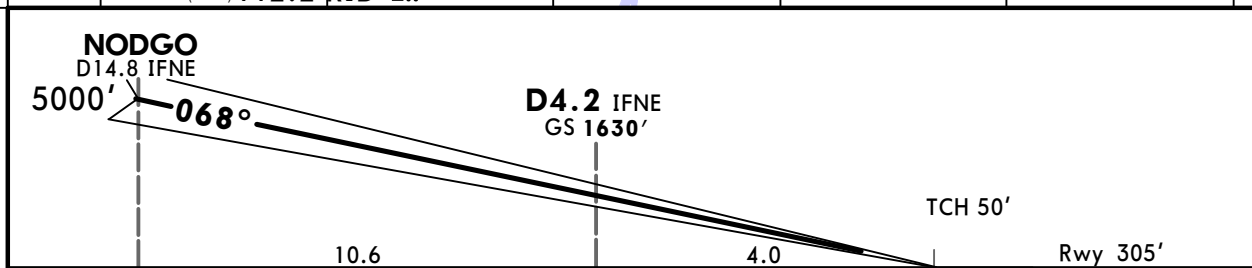
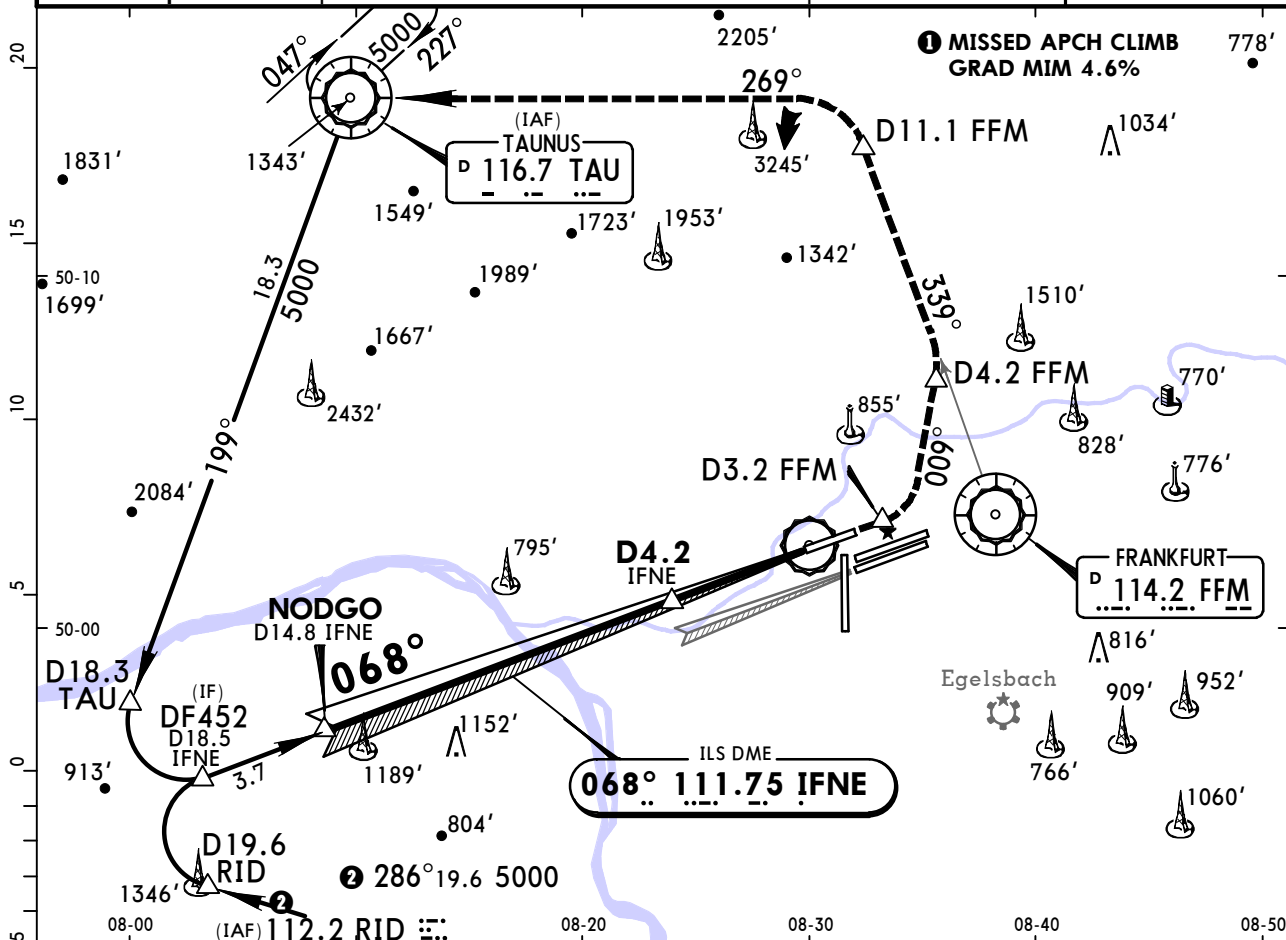
11-1A

FRANKFURT/MAIN, GERMANY

● CAT II/III ILS Z Rwy 07L

BRIEFING STRIP

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.350	127.275	118.5	136.5	121.8
LOC IFNE 111.75	Final Apch Crs 068°	GS D4.2 IFNE 1630' (1325')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364' Rwy 305'	 MSA FFM VOR	
MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000'. In case of Missed apch inform ATC immediately.						
Alt Set: hPa(IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000' 1. DME required. 2. Special Aircrew & Aircraft Certification Required.						



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	Inform ATC	D3.2 FFM	009°	D4.2 FFM
GS	3.00°	372	478	531	637	743	849	REIL PAPI	↑	LT	

Standard STRAIGHT-IN LANDING RWY 07L Missed apch climb gradient mim 4.6% up to 3500'			CAT II ILS A: RA 99' DA(H) 405' (100') B: RA 106' DA(H) 412' (107') C: RA 119' DA(H) 425' (120')			D: RA 132' DA(H) 438' (133')		
CAT IIIA ILS DH 50'								
RVR 200m			RVR 300m			RVR 400m		

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

CHANGES: Missed apch climb gradient.

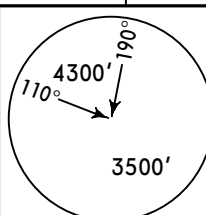
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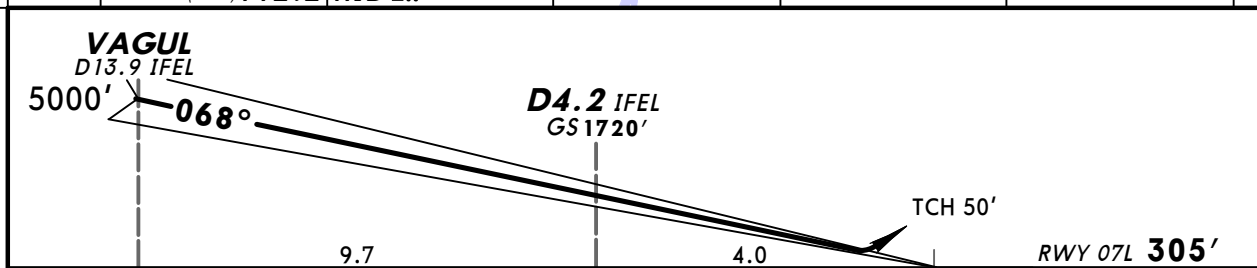
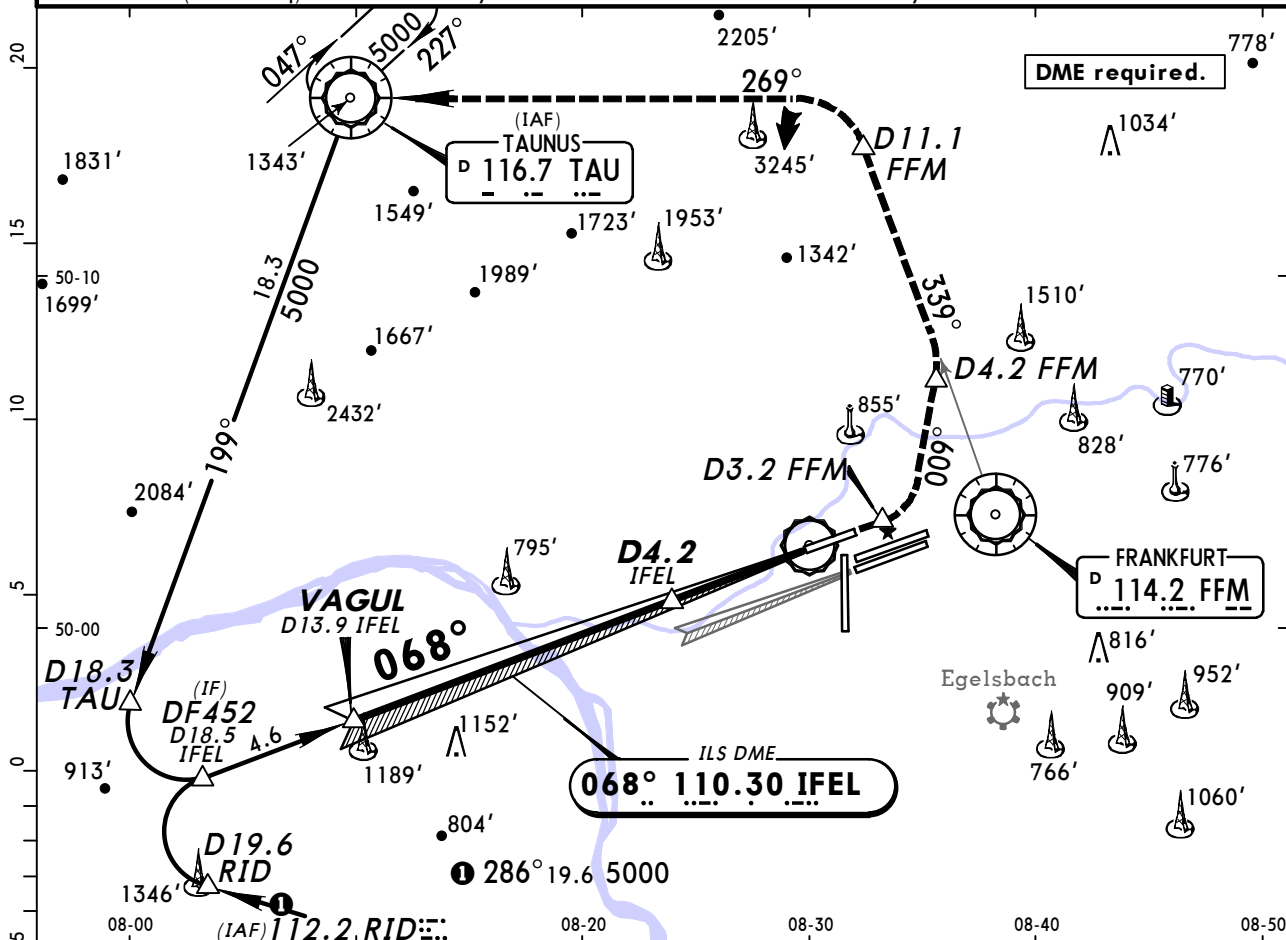
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FRANKFURT/MAIN

27 FEB 15
Eff 5 Mar **(11-2)**

JEPPesen FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB
GRAD MIM 4.6% **ILS Y Rwy 07L**

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	136.5	121.8
LOC IFEL 110.30	Final Apch Crs 068°	GS D4.2 IFEL 1720' (1415')	ILS DA(H) Refer to Minimums	Apt Elev 364' RWY 305'		
MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000'. In case of Missed apch inform ATC immediately.						MSA FFM VOR
Alt Set: hPa(IN on req)		Rwy Elev: 11 hPa		Trans level: By ATC		Trans alt: 5000'



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	Inform	D3.2	009°	D4.2
GS	3.20°	396	510	566	679	793	906	ATC	FFM	LT	FFM

Standard			STRAIGHT-IN LANDING RWY 07L		
			Missed apch climb gradient mim 4.6% up to 3500'		
			ABC: 505' (200') D: 513' (208')		
FULL		Limited		ALS out	
A	RVR 550m		RVR 750m		RVR 1200m
B					
C					
D					

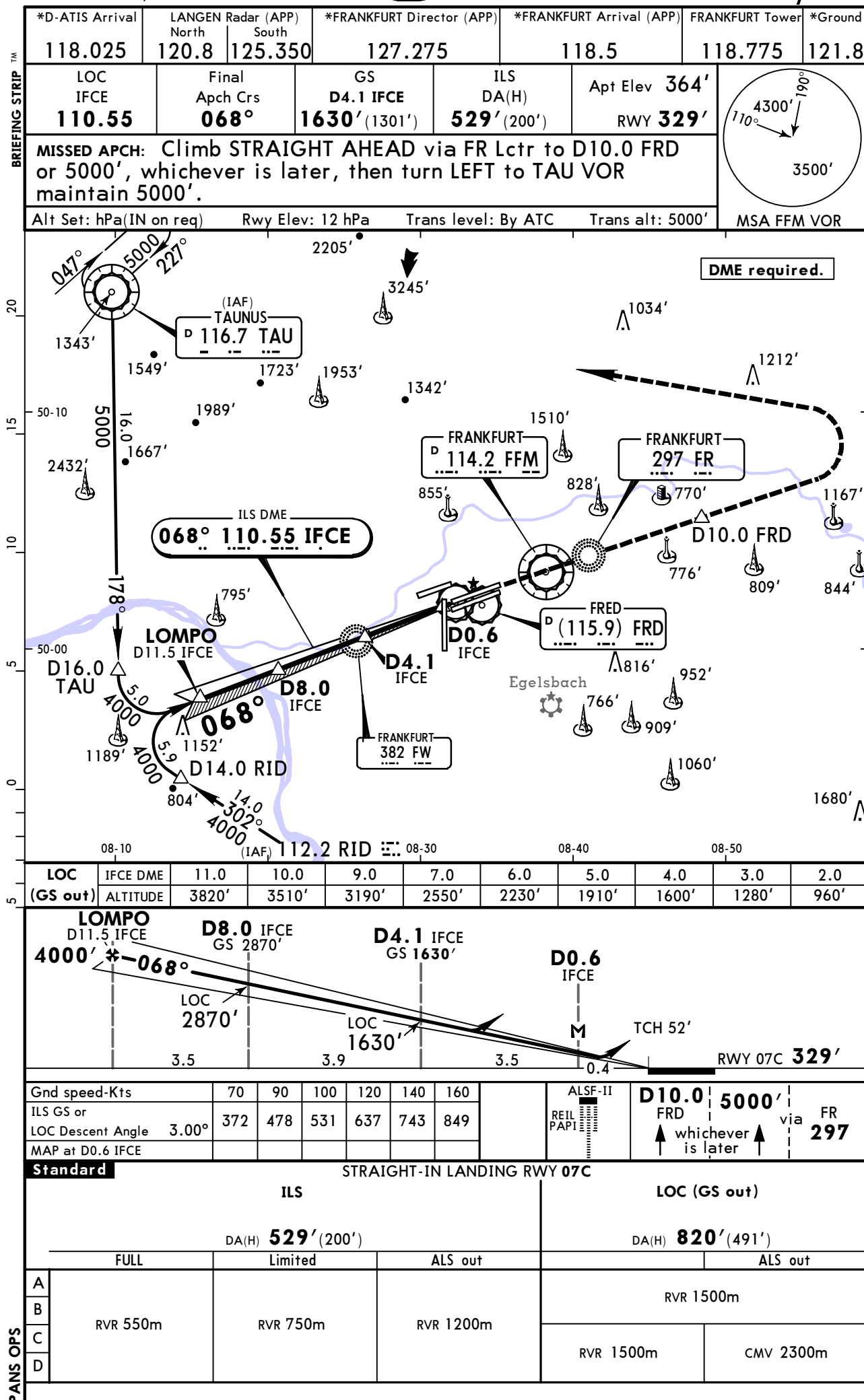
CHANGES: MSA.

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JEPPESSEN
20 MAR 15 **(11-3)**

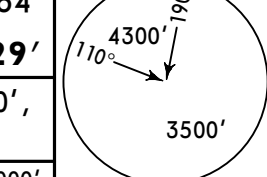
FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 07C

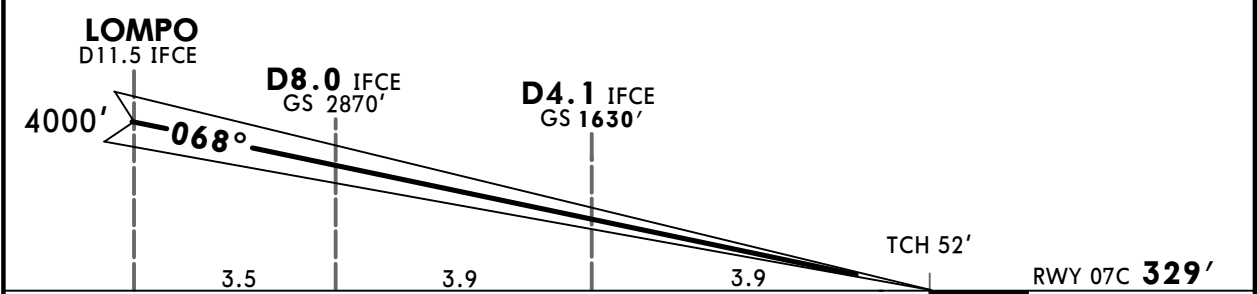
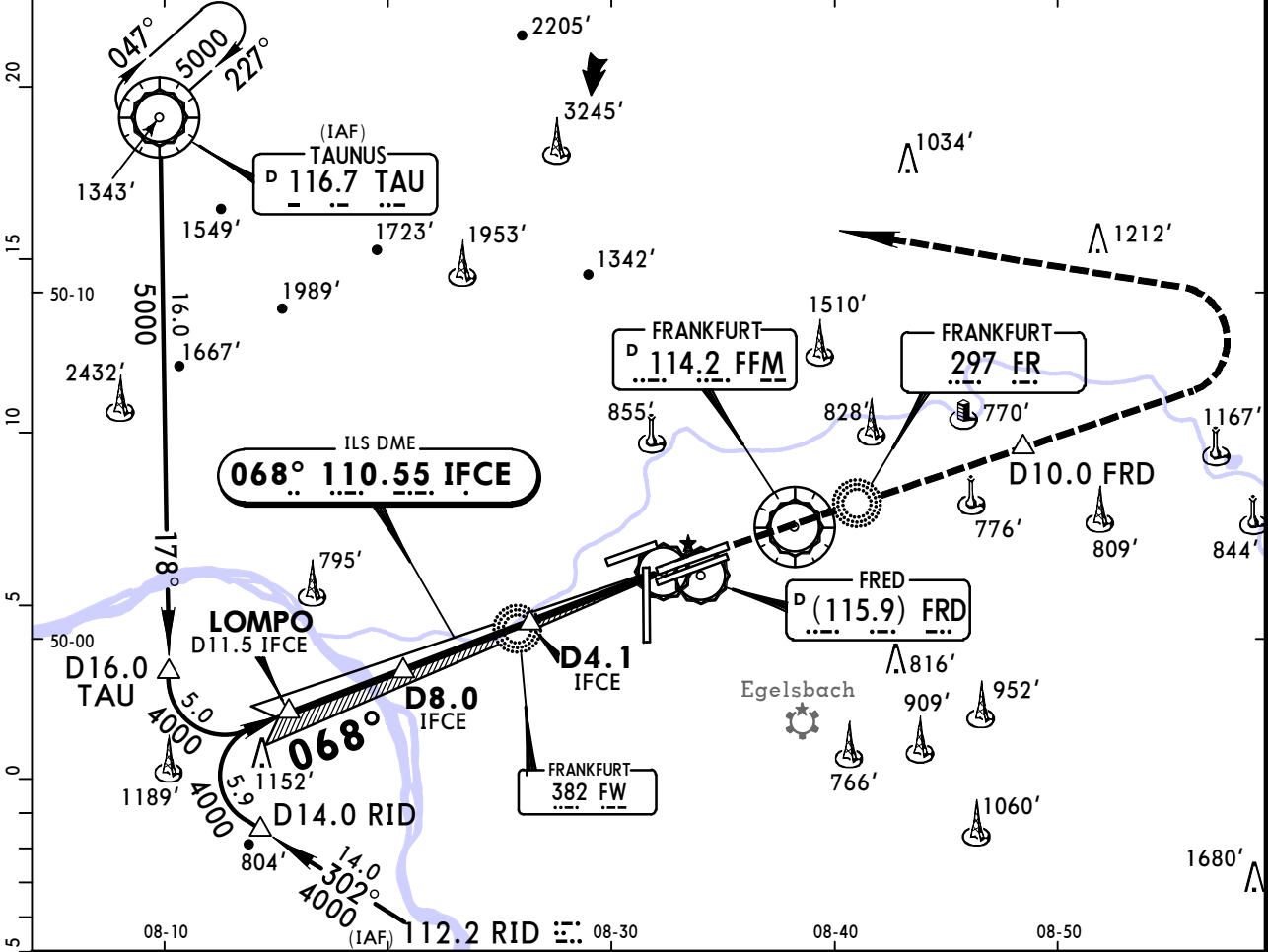


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FRANKFURT/MAIN

20 MAR 15
(11-3A)

JEPPESSEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07C

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
	North	South				
118.025	120.8	125.350	127.275	118.5	118.775	121.8
LOC IFCE 110.55	Final Apch Crs 068°	GS D4.1 IFCE 1630' (1301')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 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'						
1. DME required. 2. Special Aircrew & Aircraft Certification Required.					MSA FFM VOR	



Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II REIL PAPI	D10.0 FRD ↑ whichever is later ↑	5000' via FR 297
GS 3.00°	372	478	531	637	743	849			

Standard		STRAIGHT-IN LANDING RWY 07C	
CAT IIIA ILS		CAT II ILS	
DH 50'		RA 102' DA(H) 429' (100')	
RVR 200m		RVR 300m	

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

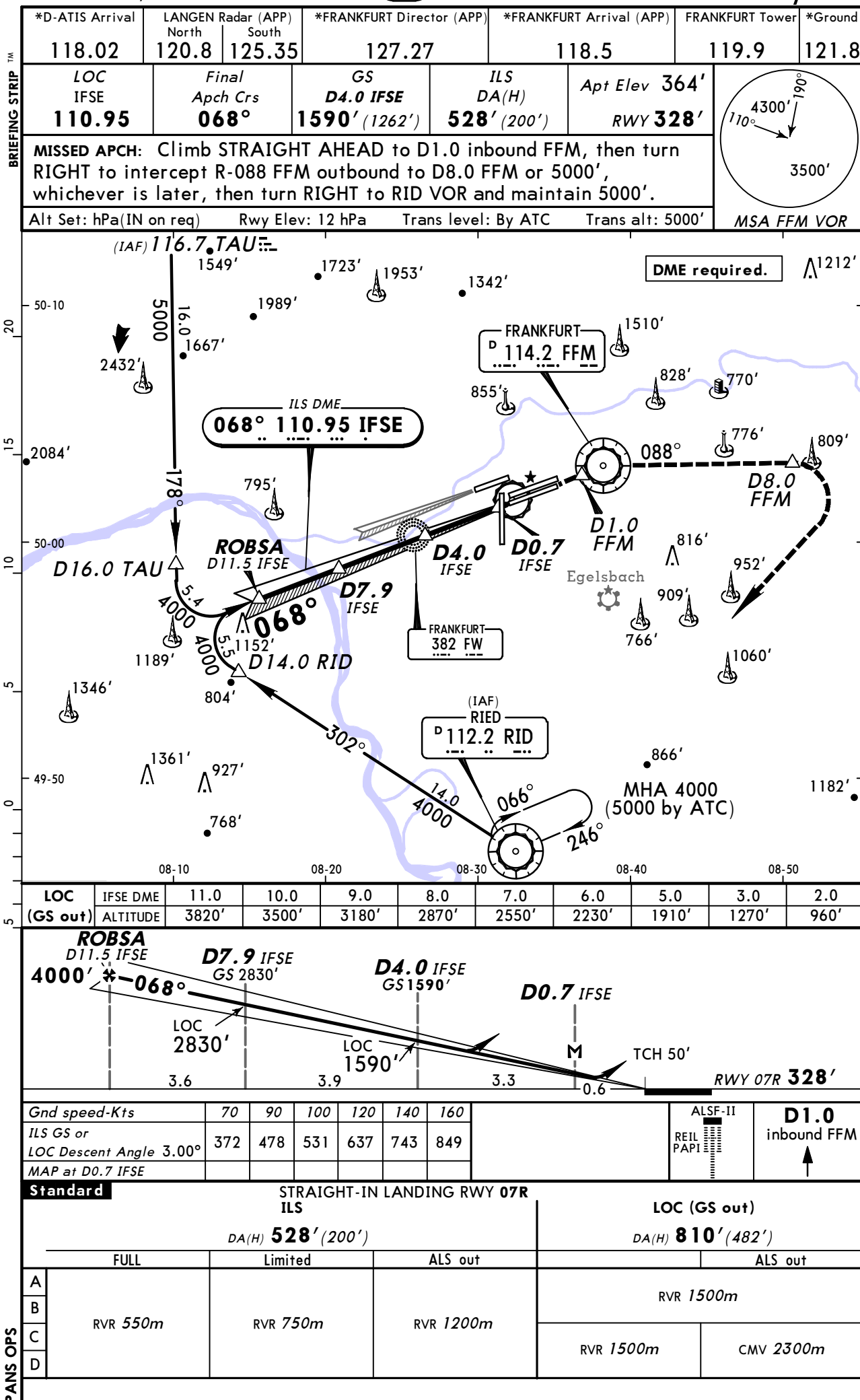
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FRANKFURT/MAIN

20 FEB 15

11-4

Eff 5 Mar

JEPPesen FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 07R



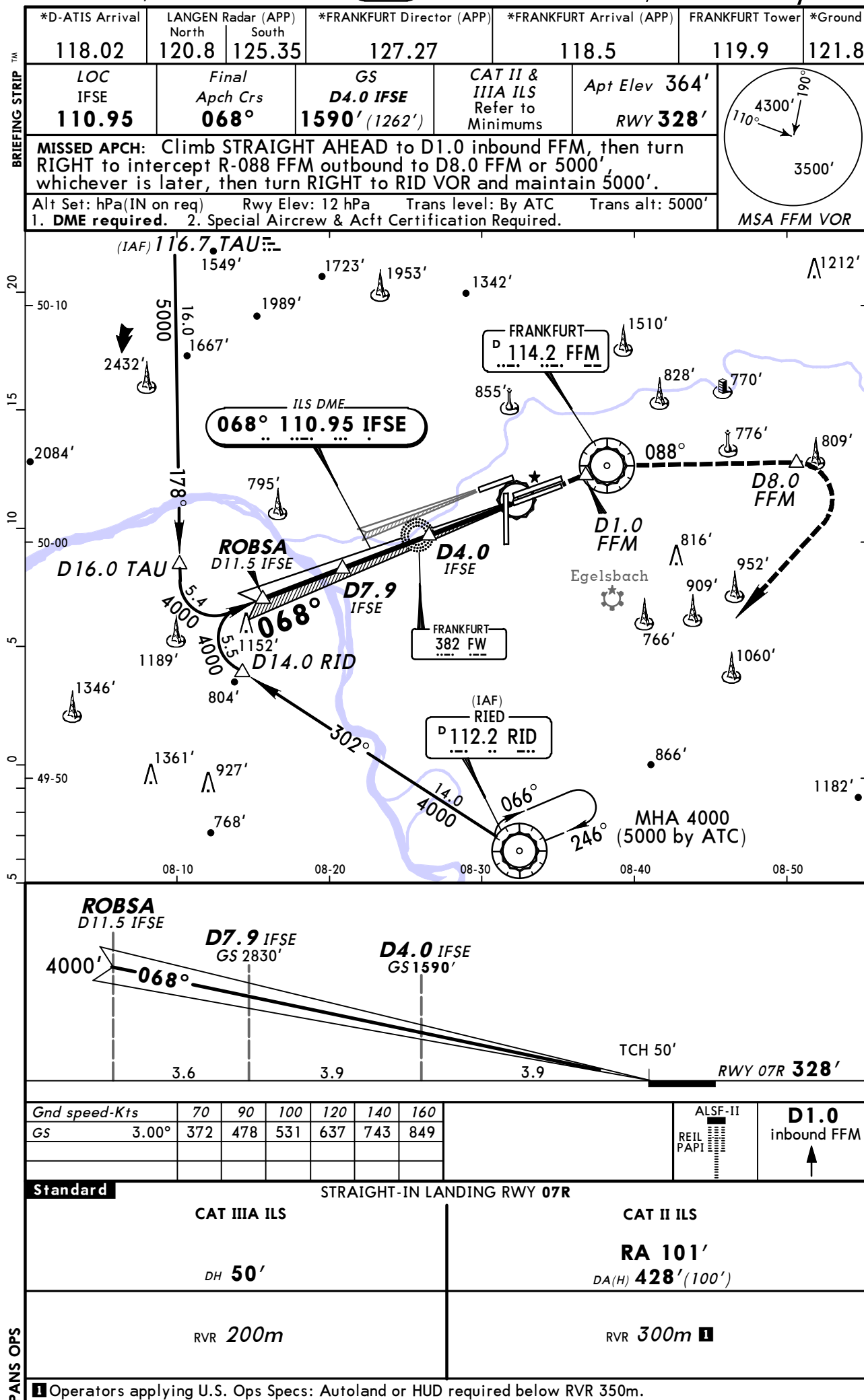
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FRANKFURT/MAIN

20 FEB 15

(11-4A)

Eff 5 Mar

JEPPesen FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07R



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FRANKFURT/MAIN

20 FEB 15

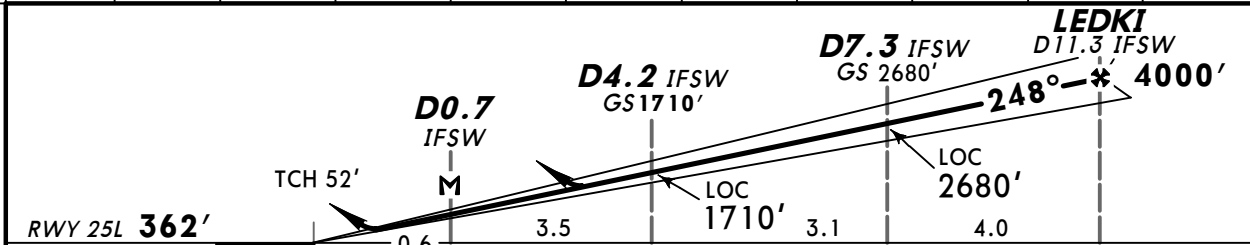
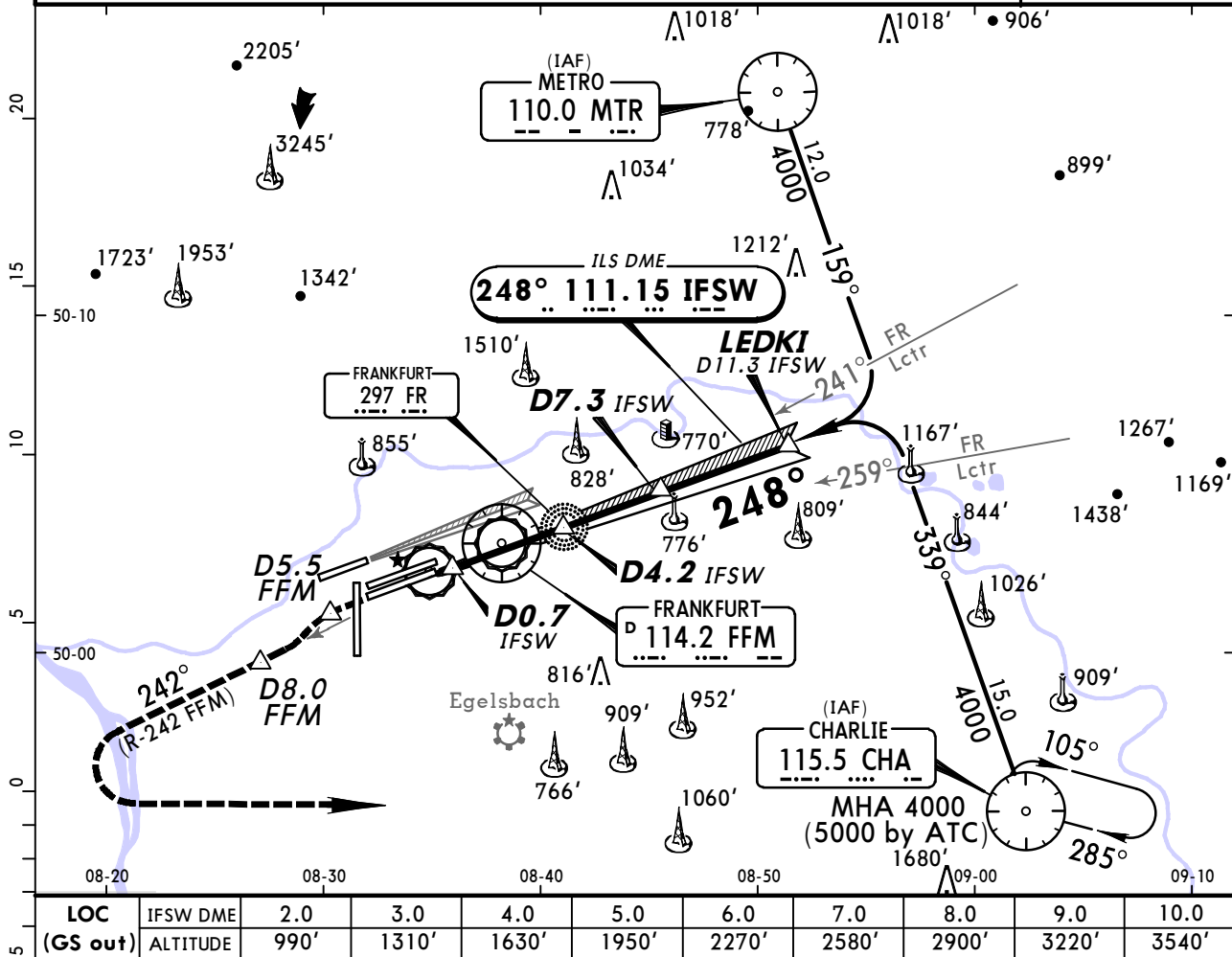
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Eff 5 Mar

JEPPESSEN FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 25L

BRIEFING STRIP

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	North 120.8	South 125.35	127.27	118.5	119.9	121.8
LOC IFSW 111.15	Final Apch Crs 248°		GS D4.2 IFSW 1710' (1348')	ILS DA(H) 562' (200')	Apt Elev 364' RWY 362'	MSA FFM VOR
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 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. DME required. 2. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final.						



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	D5.5 FFM
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849	REIL PAPI	
MAP at D0.7 IFSW								

STRAIGHT-IN LANDING RWY 25L				LOC (GS out)	
ILS				DA(H) 820' (458')	
DA(H) 562' (200')				DA(H) 820' (458')	
FULL		Limited	ALS out	ALS out	
A				RVR 1500m	
B					
C	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	
D				CMV 2100m	

CHANGES: MSA. Minimums.

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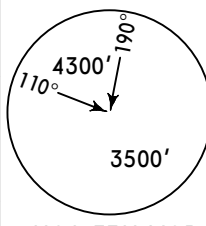
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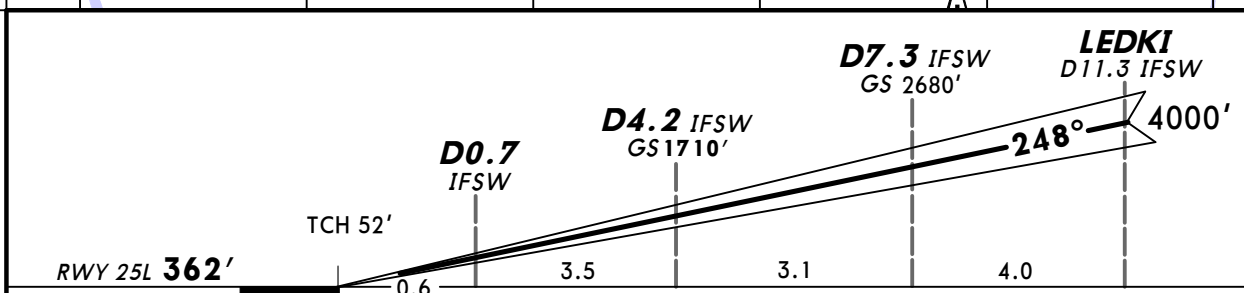
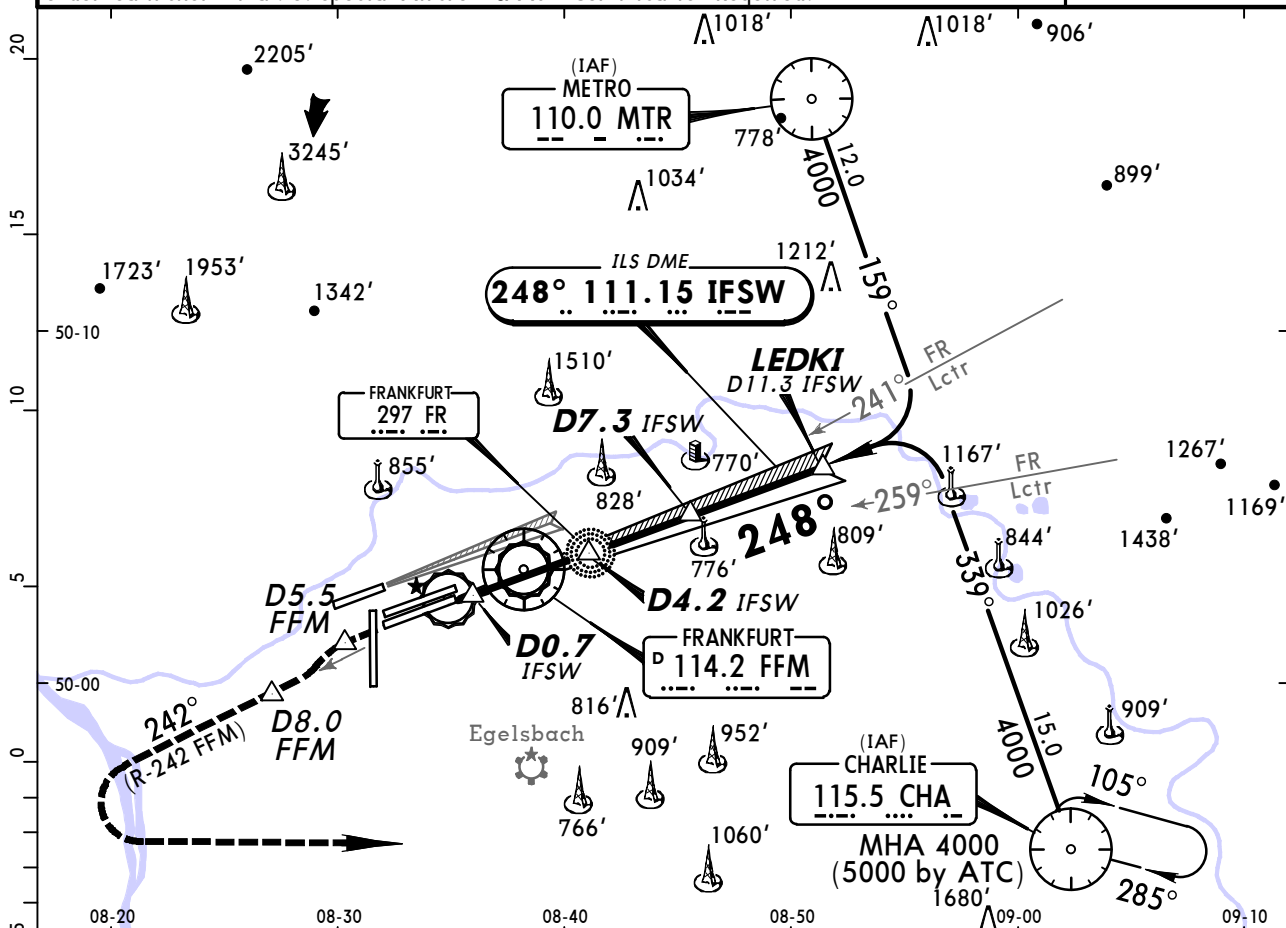
Eff 5 Mar

JEPPesen FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 25L

BRIEFING STRIP

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	North 120.8	South 125.35	127.27	118.5	119.9	121.8
LOC IFSW 111.15	Final Apch Crs 248°		GS D4.2 IFSW 1710' (1348')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364' RWY 362'	
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 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. DME required. 2. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final. 3. Special Aircrew & Acft Certification Required.						

MSA FFM VOR



Gnd speed-Kts	70	90	100	120	140	160
GS	3.00°	372	478	531	637	743

ALSF-II	D5.5
REIL PAPI	FFM

Standard		STRAIGHT-IN LANDING RWY 25L	
CAT IIIA ILS		CAT II ILS	
DH 50'		RA 95'	
		DA(H) 462'(100')	
RVR 200m		RVR 300m	

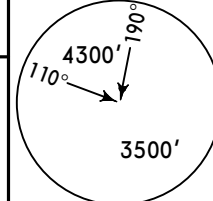
Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

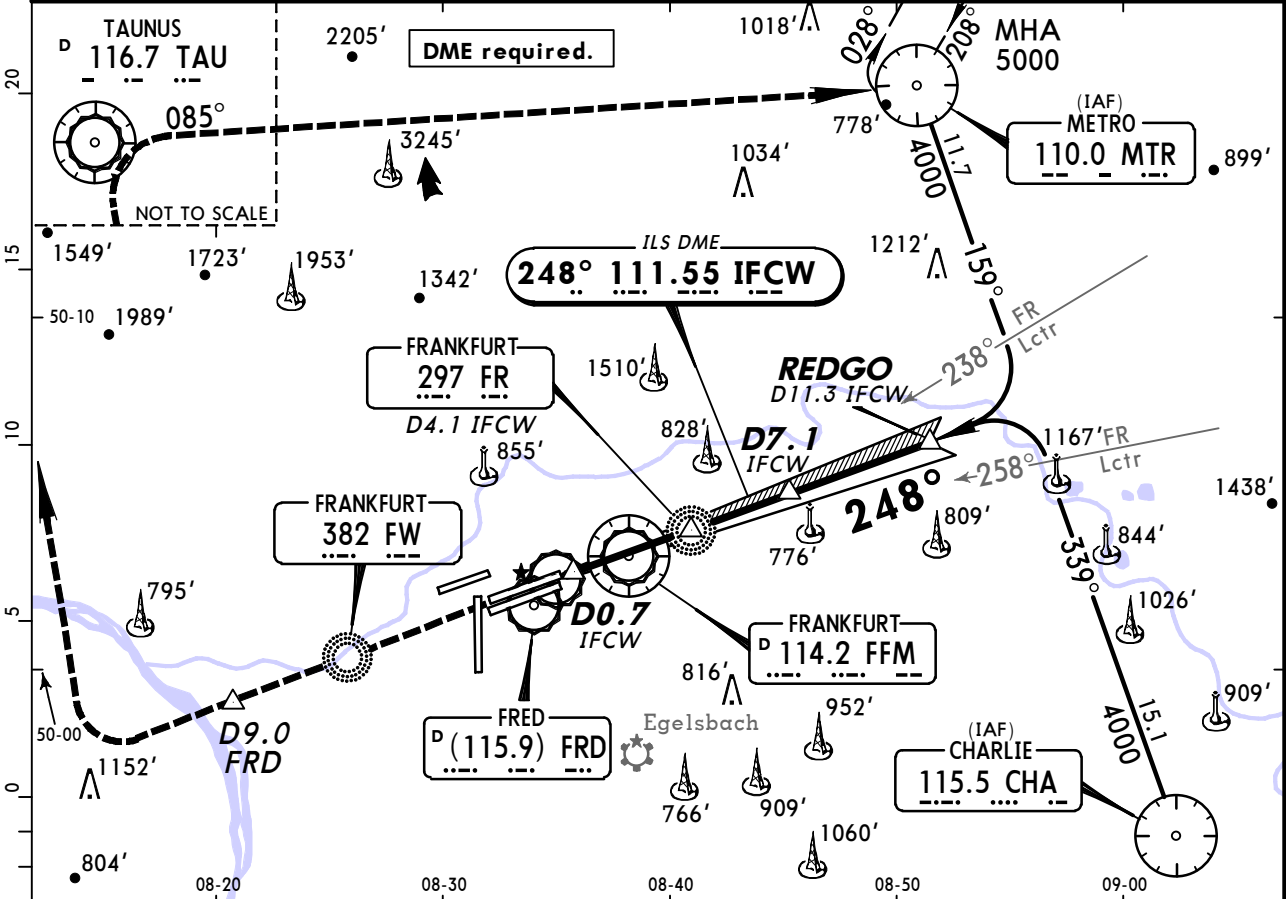
CHANGES: MSA.

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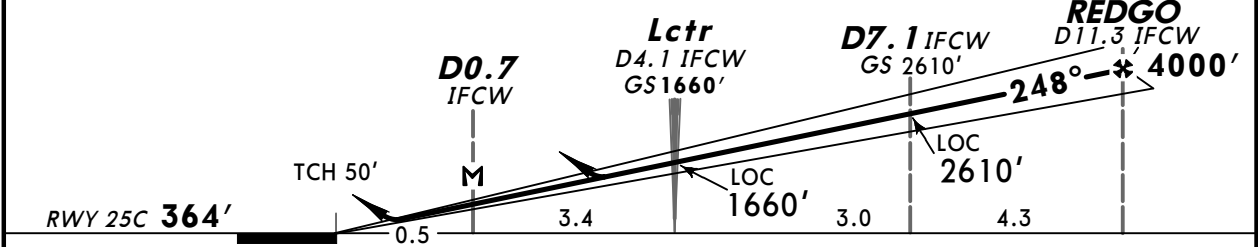
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FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
27 FEB 15 11-6 Eff 5 Mar ILS or LOC Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North South		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	118.775	121.8
LOC IFCW 111.55	Final Apch Crs 248°	GS Lctr 1660' (1296')	ILS DA(H) 564' (200')	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 to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound 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 R- and S-EAST underneath short final.						



LOC (GS out)	IFCW DME	2.0	3.0	4.0	5.0	6.0	8.0	9.0	10.0	11.0
	ALTITUDE	990'	1310'	1630'	1950'	2270'	2900'	3220'	3540'	3860'



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II REIL PAPI	Inform ATC	D9.0 FRD ↑	5000' ↑
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849				
MAP at D0.7 IFCW										

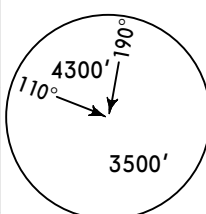
Standard STRAIGHT-IN LANDING RWY 25C					LOC (GS out)	
ILS DA(H) 564' (200')			LOC (GS out) DA(H) 810' (446')			
FULL		Limited	ALS out	ALS out		
A	RVR 550m		RVR 1200m	RVR 1400m		RVR 1500m
B						
C						
D						CMV 2100m

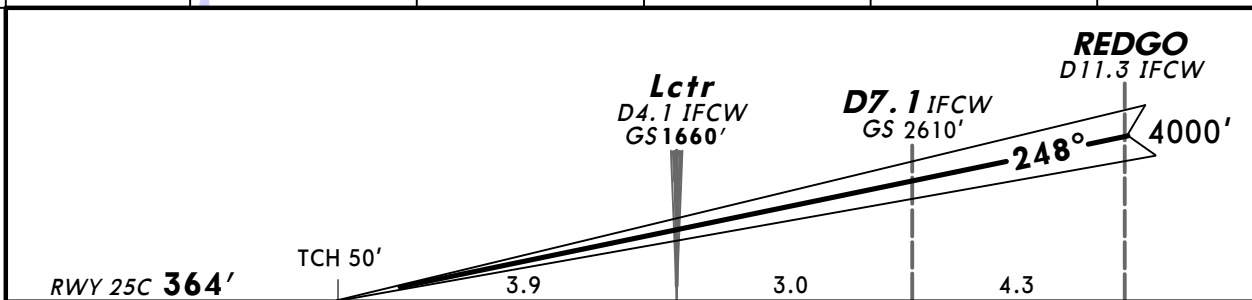
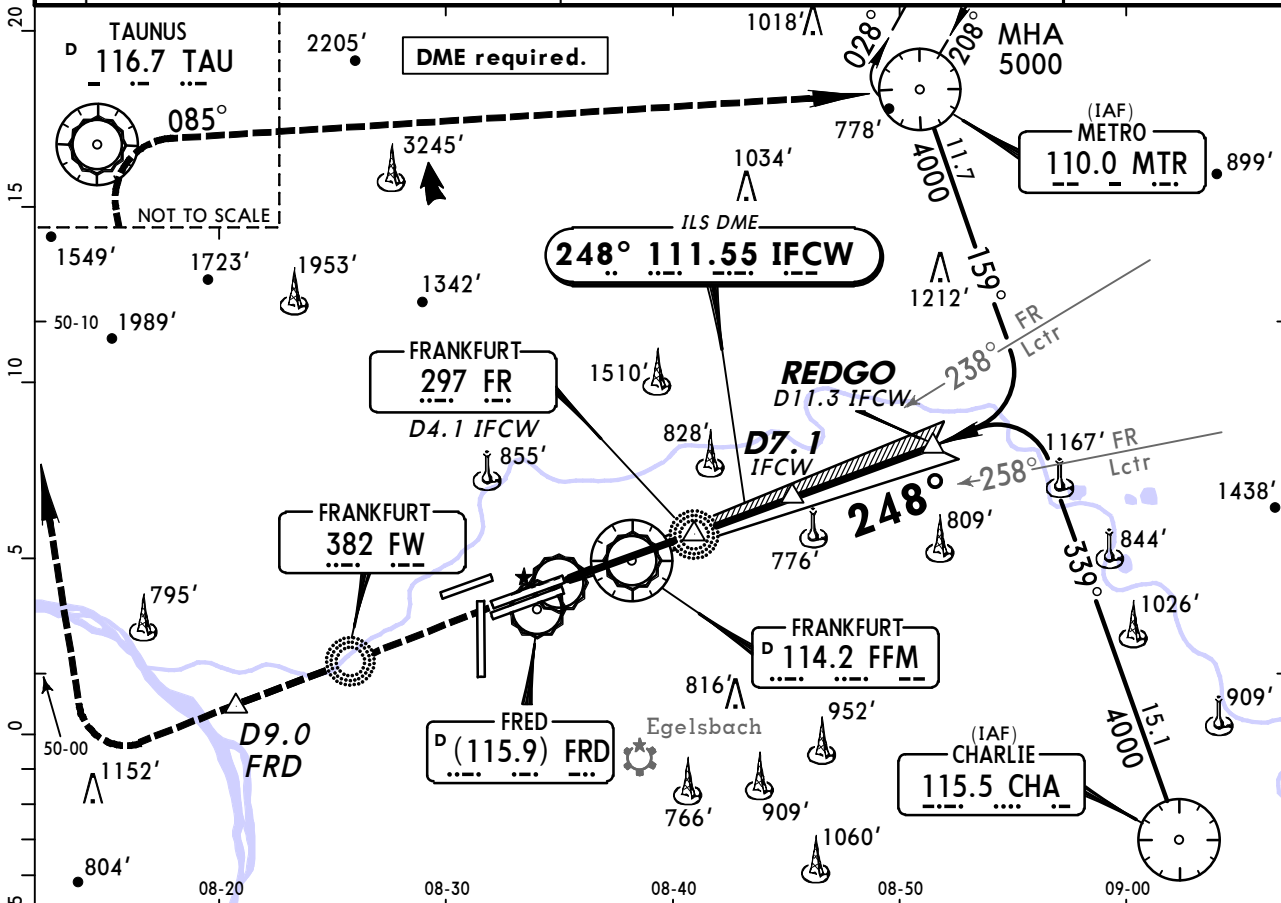
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FRANKFURT/MAIN

27 FEB 15

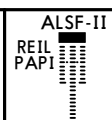
JEPPesen FRANKFURT/MAIN, GERMANY
11-6A Eff 5 Mar CAT II/III ILS Rwy 25C

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.350	127.275	118.5	118.775	121.8
LOC IFCW 111.55	Final Apch Crs 248°	GS Lctr 1660' (1296')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364' RWY 364'		 MSA FFM VOR
MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000', whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound 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 R- and S-EAST underneath short final. 2. Special Aircrew & Aircraft Certification Required.						



Gnd speed-Kts	70	90	100	120	140	160
GS	3.00°	372	478	531	637	849



Inform
ATC

D9.0
FRD
↑
5000'
↑
whichever later

Standard		STRAIGHT-IN LANDING RWY 25C	
CAT IIIA ILS		CAT II ILS	
DH 50'		RA 98' DA(H) 464' (100')	
RVR 200m		RVR 300m ■	

■ Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

CHANGES: MSA.

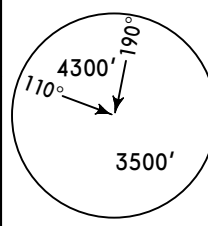
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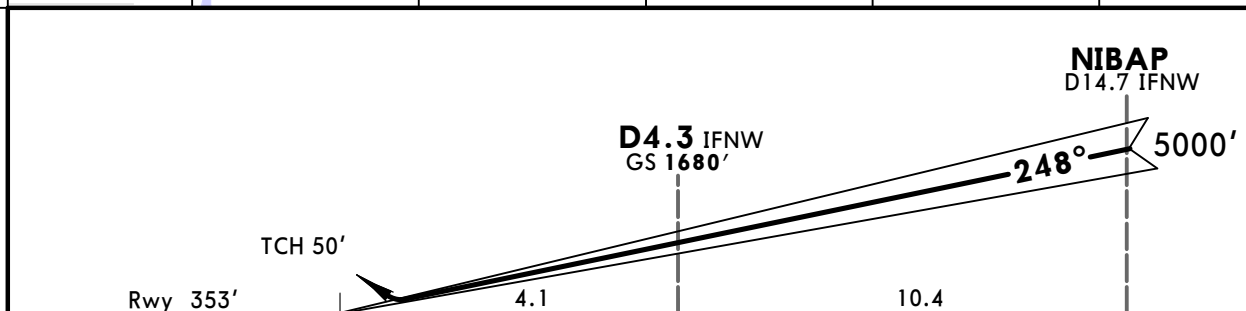
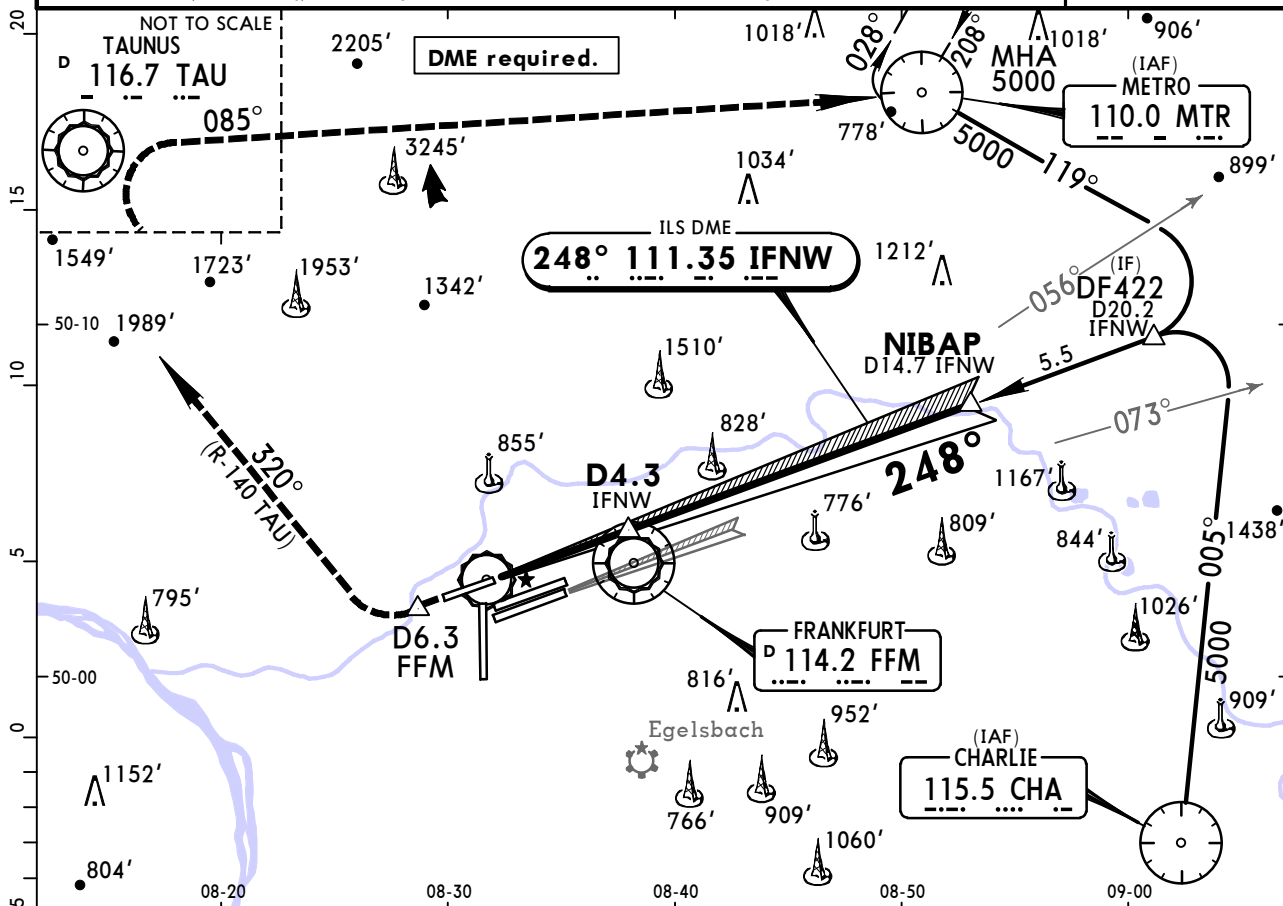
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JEPPESSEN
8 MAY 15 (11-7)

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB
GRAD MIM 5.0%
ILS Z Rwy 25R

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP) North South		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	136.5	121.8
LOC IFNW 111.35	Final Apch Crs 248°	GS D4.3 IFNW 1680' (1327')	ILS DA(H) Refer to Minimums	Apt Elev 364' Rwy 353'	 MSA FFM VOR	
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800' or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 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'		



Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II REIL PAPI	Inform ATC	MIM 800'	at D6.3 FFM
GS	3.00°	372	478	531	637	743				

Standard

STRAIGHT-IN LANDING RWY 25R

Missed apch climb gradient mim 5.0% up to 2000'

ABC: **553'** (200')
DA(H) D: **559'** (206')

	FULL	Limited	ALS out
A			
B			
C	RVR 550m	RVR 750m	RVR 1200m
D			

CHANGES: None.

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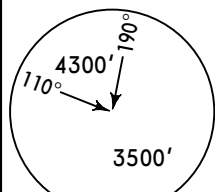
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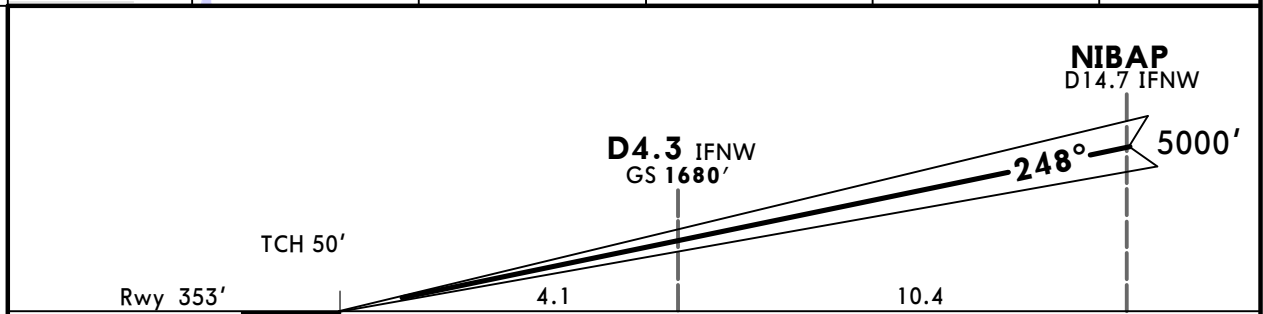
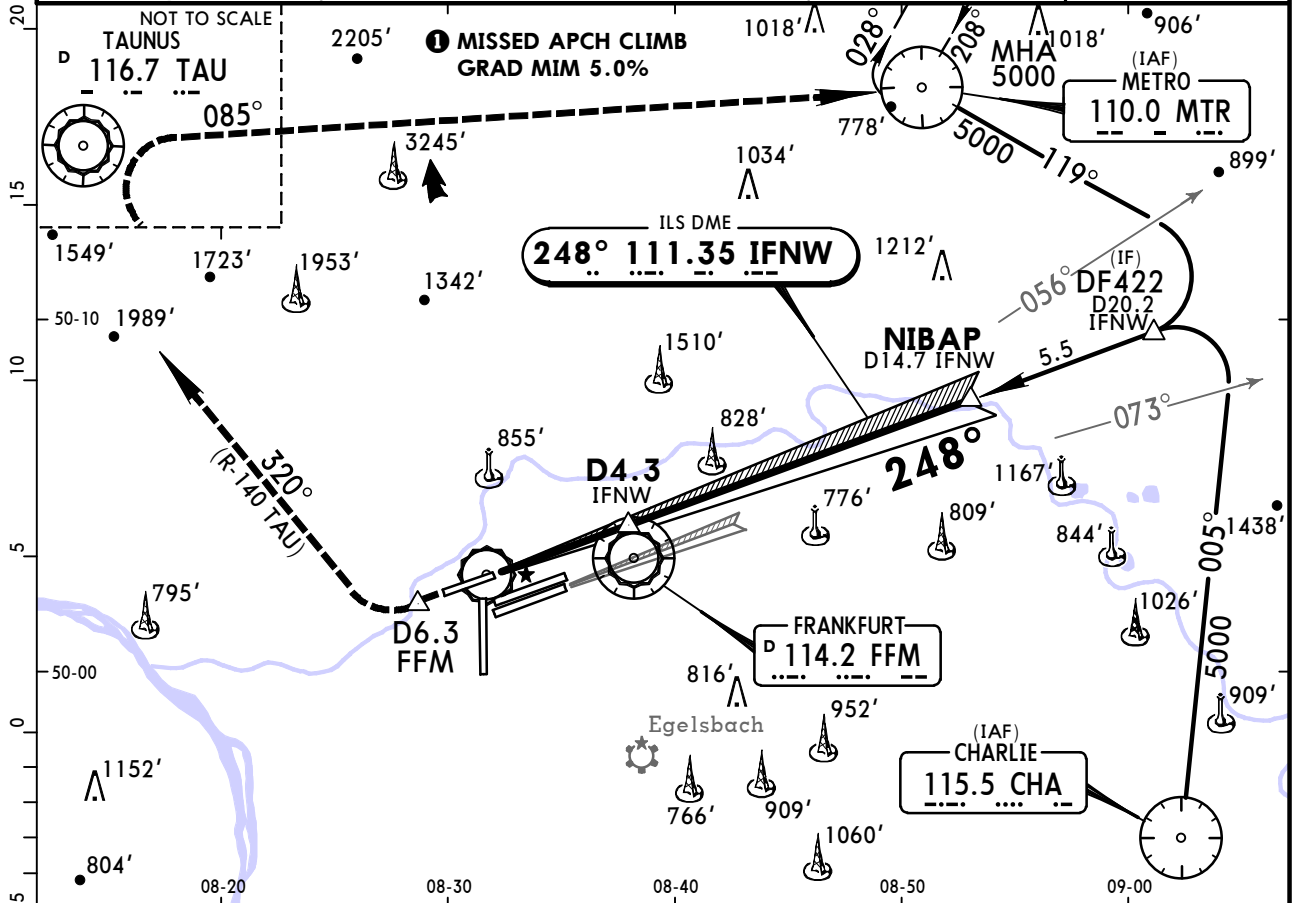
11-7A

JEPPESSEN

FRANKFURT/MAIN, GERMANY
● CAT II/III ILS Z Rwy 25R

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.350	127.275	118.5	136.5	121.8
LOC IFNW 111.35	Final Aptch Crs 248°	GS D4.3 IFNW 1680' (1327')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364' Rwy 353'		
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800' or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 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. DME required. 2. Special Aircrew & Aircraft Certification Required.						



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	Inform	MIM	D6.3
GS	3.00°	372	478	531	637	743	REIL	ATC	800'	FFM

Standard			STRAIGHT-IN LANDING RWY 25R		
CAT IIIA ILS			CAT II ILS		
DH 50'			A: RA 103' DA(H) 453' (100')		
			B: RA 106' DA(H) 457' (104')		
			C: RA 122' DA(H) 471' (118')		
D: RA 144' DA(H) 484' (131')					
RVR 200m		RVR 300m		RVR 400m	

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

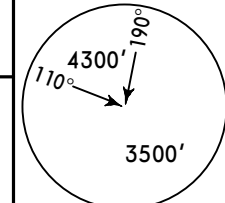
CHANGES: Missed approach climb gradient.

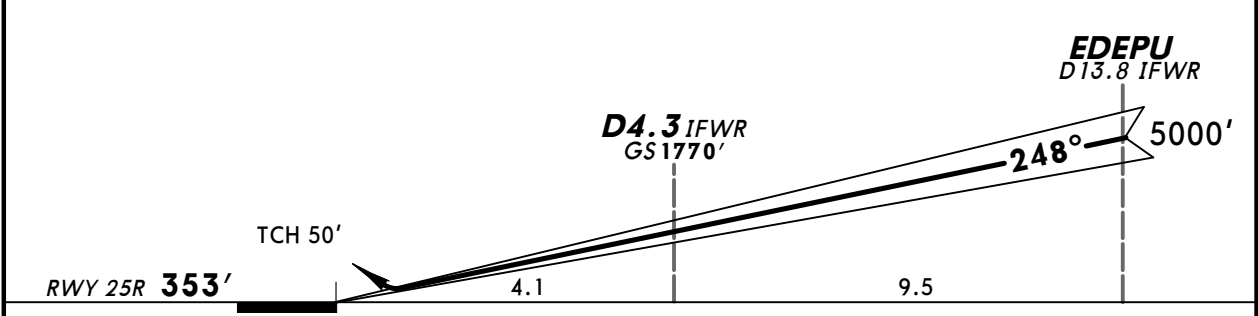
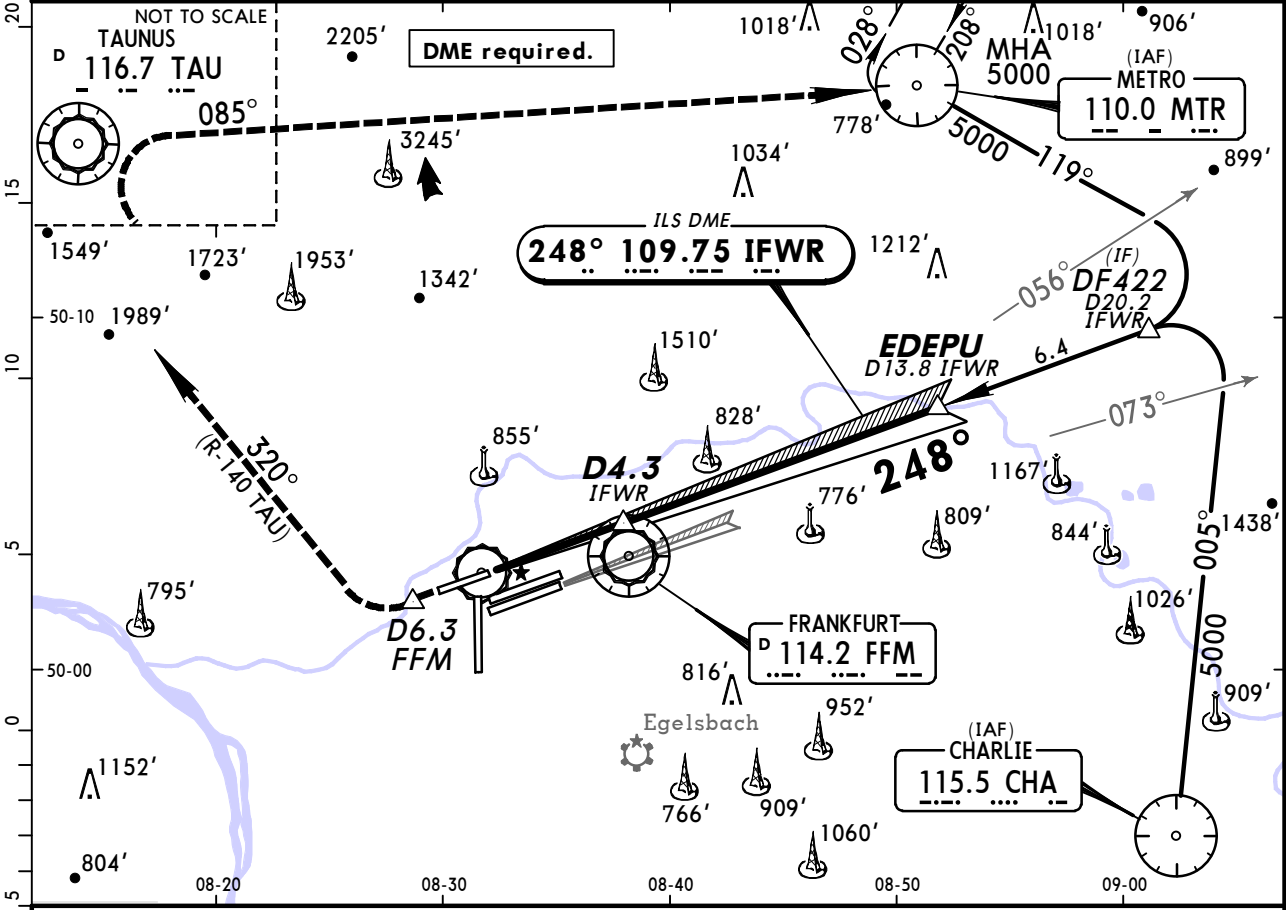
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EDDF/FRA
FRANKFURT/MAIN

JEPPesen
27 FEB 15
Eff 5 Mar (11-8)

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB
GRAD MIM 5.0%
ILS Y Rwy 25R

*D-ATIS Arrival		LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025		North 120.8	South 125.350	127.275	118.5	136.5	121.8
LOC IFWR 109.75	Final Apch Crs 248°	GS D4.3 IFWR 1770' (1417')	ILS DA(H) Refer to Minimums	Apt Elev 364' RWY 353'		 MSA FFM VOR	
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800' or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 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'			



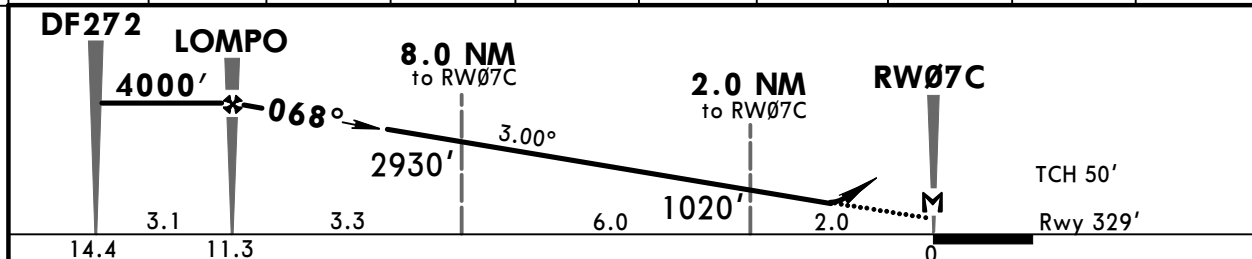
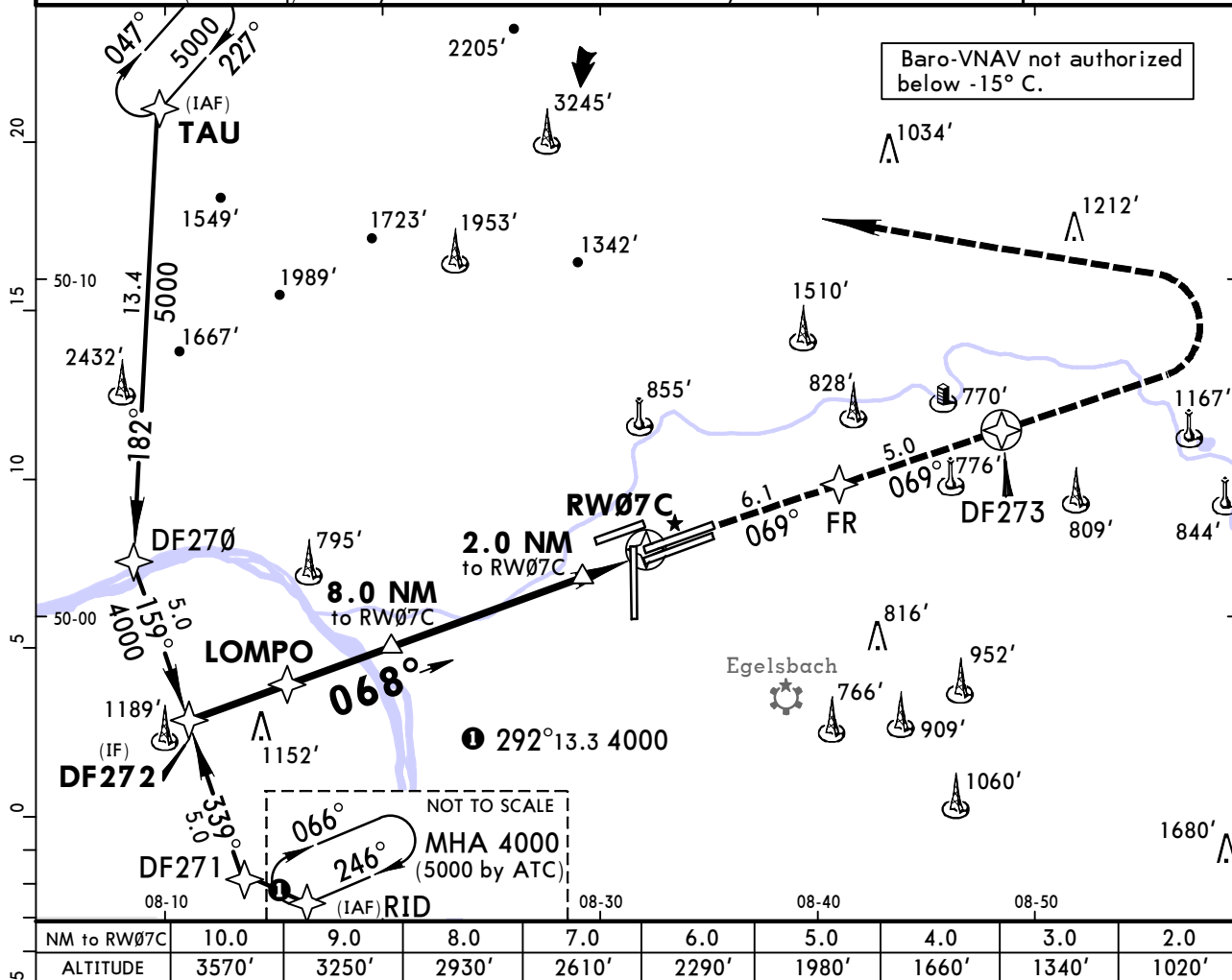
Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II REIL PAPI	Inform ATC	MIM 800' ↑	at D6.3 FFM
GS	3.20°	396	510	566	679	793				

Standard		STRAIGHT-IN LANDING RWY 25R		
Missed apch climb gradient mim 5.0% up to 2000'				
DA(H) ABC: 553' (200')				
D: 559' (206')				
FULL		Limited		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	
B				
C				
D				

EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 **(12-1)** **Eff 23 Jul** **RNAV (GPS) Z Rwy 07C**

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.350	127.275	118.5	118.775	121.8
RNAV	Final Apch Crs	Minimum Alt LOMPO	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev	364'	
	068°	4000' (3671')		Rwy	329'	
MISSED APCH: Climb on track 069° via FR to DF273 or 5000', whichever is later, then turn LEFT to TAU maintain 5000'.						4300'
Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000'						MSA ARP



Gnd speed-Kts	70	90	100	120	140	160		ALSF-II	DF273 5000'	FR
Descent Angle 3.00°	372	478	531	637	743	849		REIL PAPI	↑ whichever is later ↑	
MAP at RW07C										

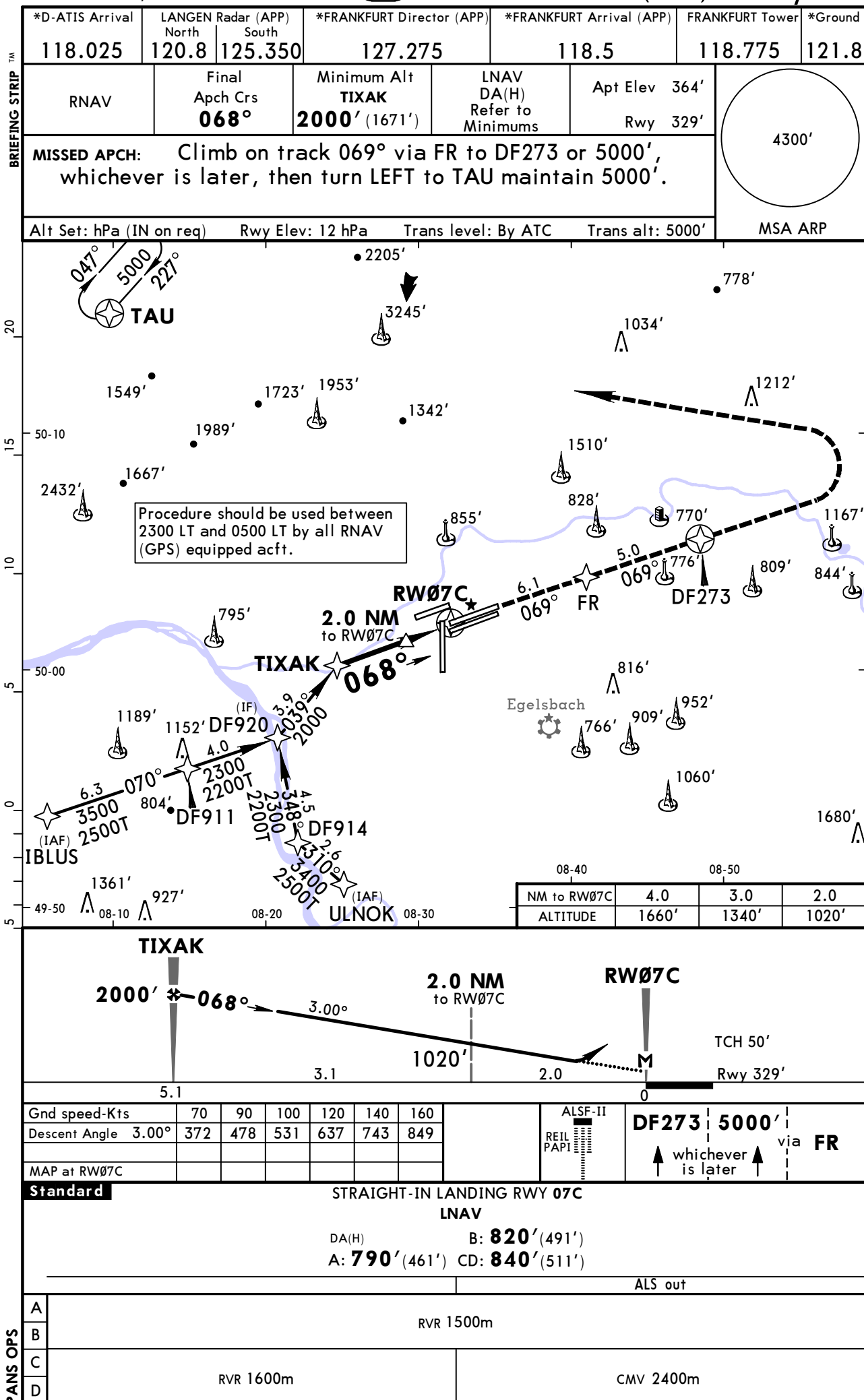
STRAIGHT-IN LANDING RWY 07C			
LNAV/VNAV		LNAV	
DA(H) ABC: 680' (351') D: 720' (391')		DA(H) B: 820' (491') A: 790' (461') CD: 840' (511')	
ALS out		ALS out	
A		RVR 1500m	
B	RVR 900m	RVR 1500m	
C		RVR 1600m	
D	RVR 1100m	RVR 1600m	CMV 2400m

CHANGES: Non-RNAV missed apch withdrawn.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 (12-2) Eff 23 Jul RNAV (GPS) Y Rwy 07C



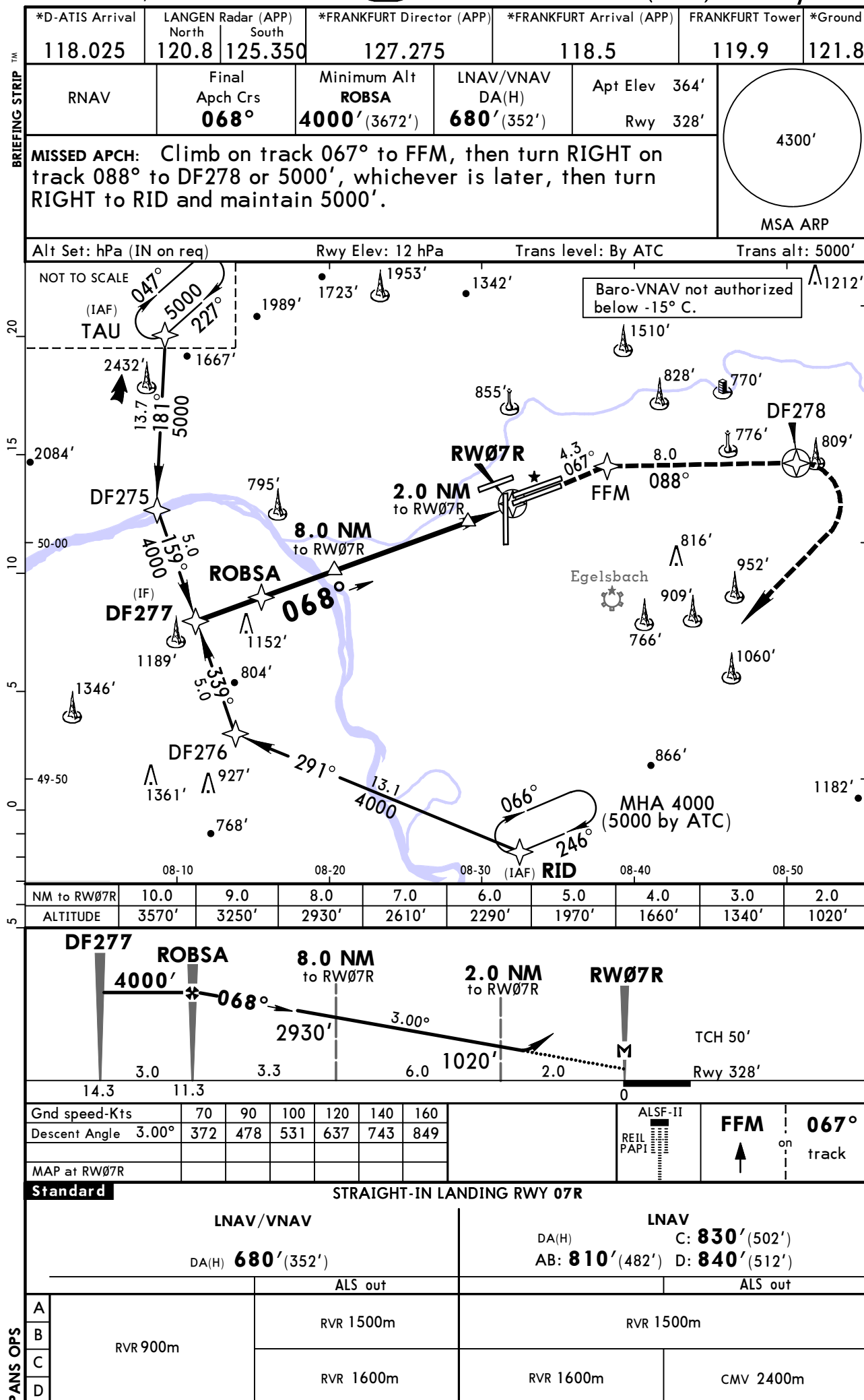
EDDF/FRA
FRANKFURT/MAIN

17 JUL 15

(12-3)

Eff 23 Jul

JEPPESSEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Z Rwy 07R

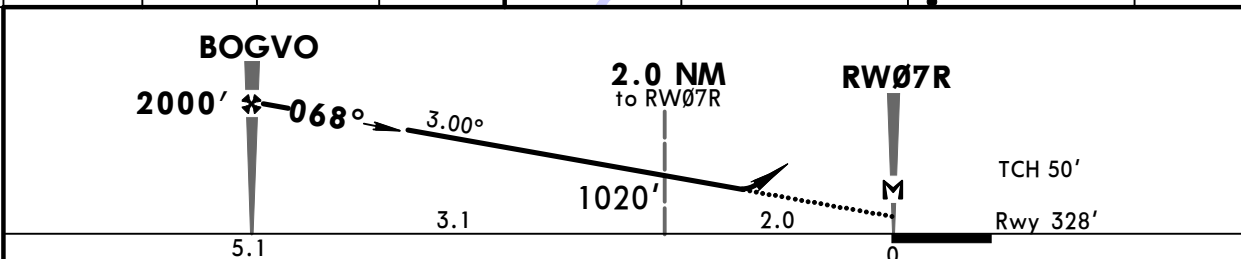
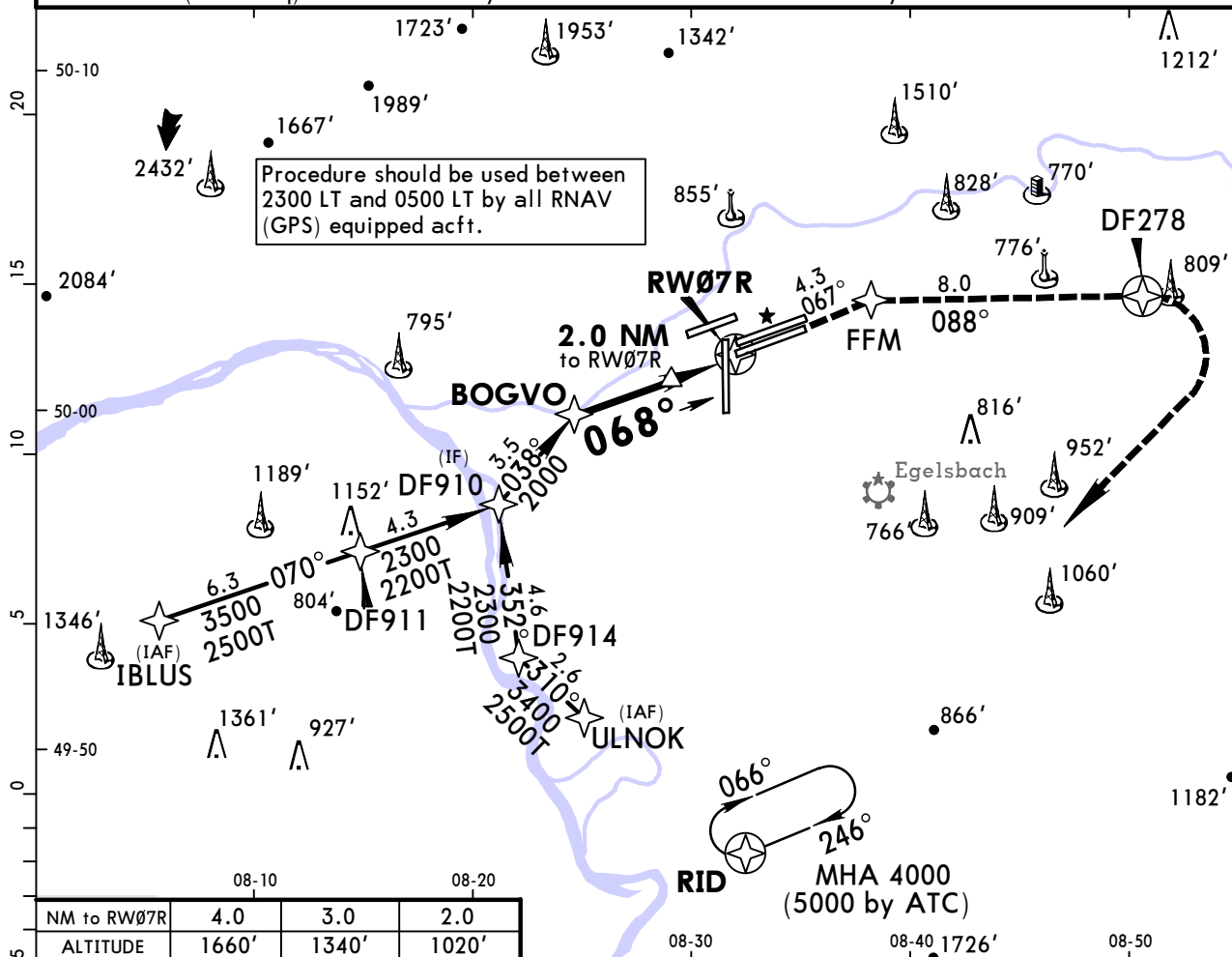


EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 **(12-4)** **Eff 23 Jul** **RNAV (GPS) Y Rwy 07R**

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North	South	127.275	118.5	119.9	121.8
RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H) Refer to Minimums	Apt Elev	364'	4300'
	068°	2000' (1672')		Rwy	328'	
MISSED APCH: Climb on track 067° to FFM, then turn RIGHT on track 088° to DF278 or 5000', whichever is later, then turn RIGHT to RID and maintain 5000'.						MSA ARP

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



Gnd speed-Kts	70	90	100	120	140	160	REIL PAPI FFM ↑ on track
Descent Angle 3.00°	372	478	531	637	743	849	
MAP at RW07R							

Standard		STRAIGHT-IN LANDING RWY 07R	
LNAV		ALS out	
DA(H)		C: 830' (502')	
AB: 810' (482')		D: 840' (512')	

A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

CHANGES: Non-RNAV missed apch withdrawn.

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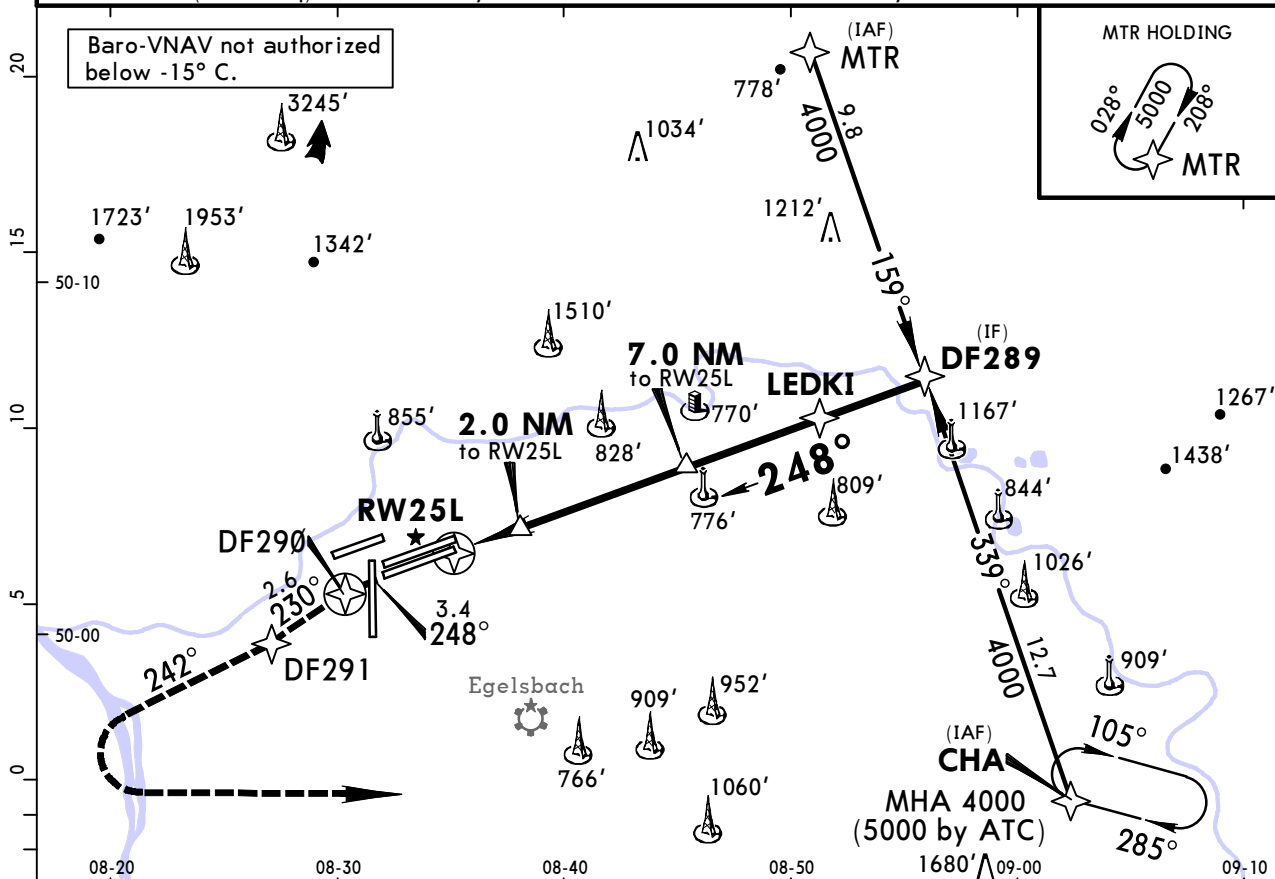
EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 **12-5** **Eff 23 Jul** **RNAV (GPS) Z Rwy 25L**

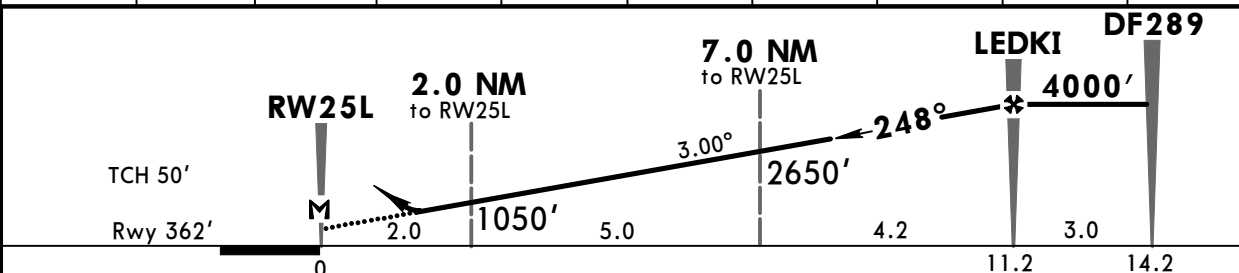
BRIEFING STRIP

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.350	127.275	118.5	119.9	121.8
RNAV	Final Apch Crs 248°		Minimum Alt LEDKI 4000' (3638')	LNAV/VNAV DA(H) 770' (408')	Apt Elev 364' Rwy 362'	4300' MSA ARP
MISSED APCH: Climb on track 248° to DF290, then turn LEFT on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000', then turn LEFT to CHA 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	DF290 248° on track
Descent Angle 3.00°	372	478	531	637	743	849	
MAP at RW25L							

Standard STRAIGHT-IN LANDING RWY 25L

LNAV/VNAV		LNAV	
DA(H) 770' (408')		BC: 820' (458') A: 770' (408') D: 830' (468')	
ALS out		ALS out	
PANS OPS	A	RVR 1200m	RVR 1200m
	B	RVR 1500m	RVR 1500m
	C	RVR 1900m	CMV 2100m
	D	RVR 1500m	CMV 2200m

CHANGES: Non-RNAV missed apch withdrawn.

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EDDF/FRA
FRANKFURT/MAIN

17 JUL 15

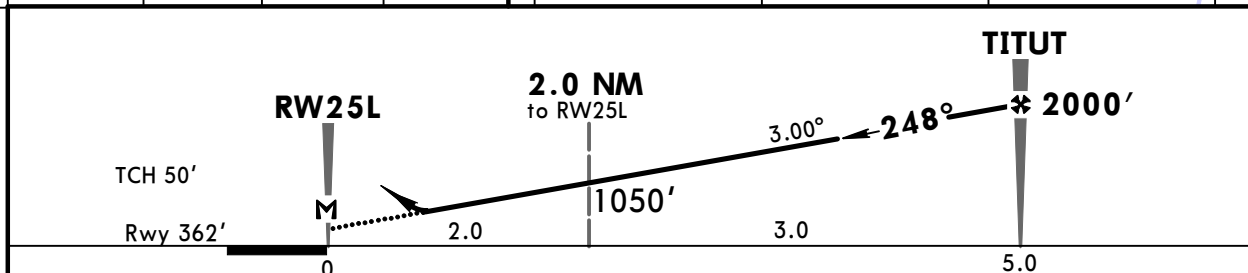
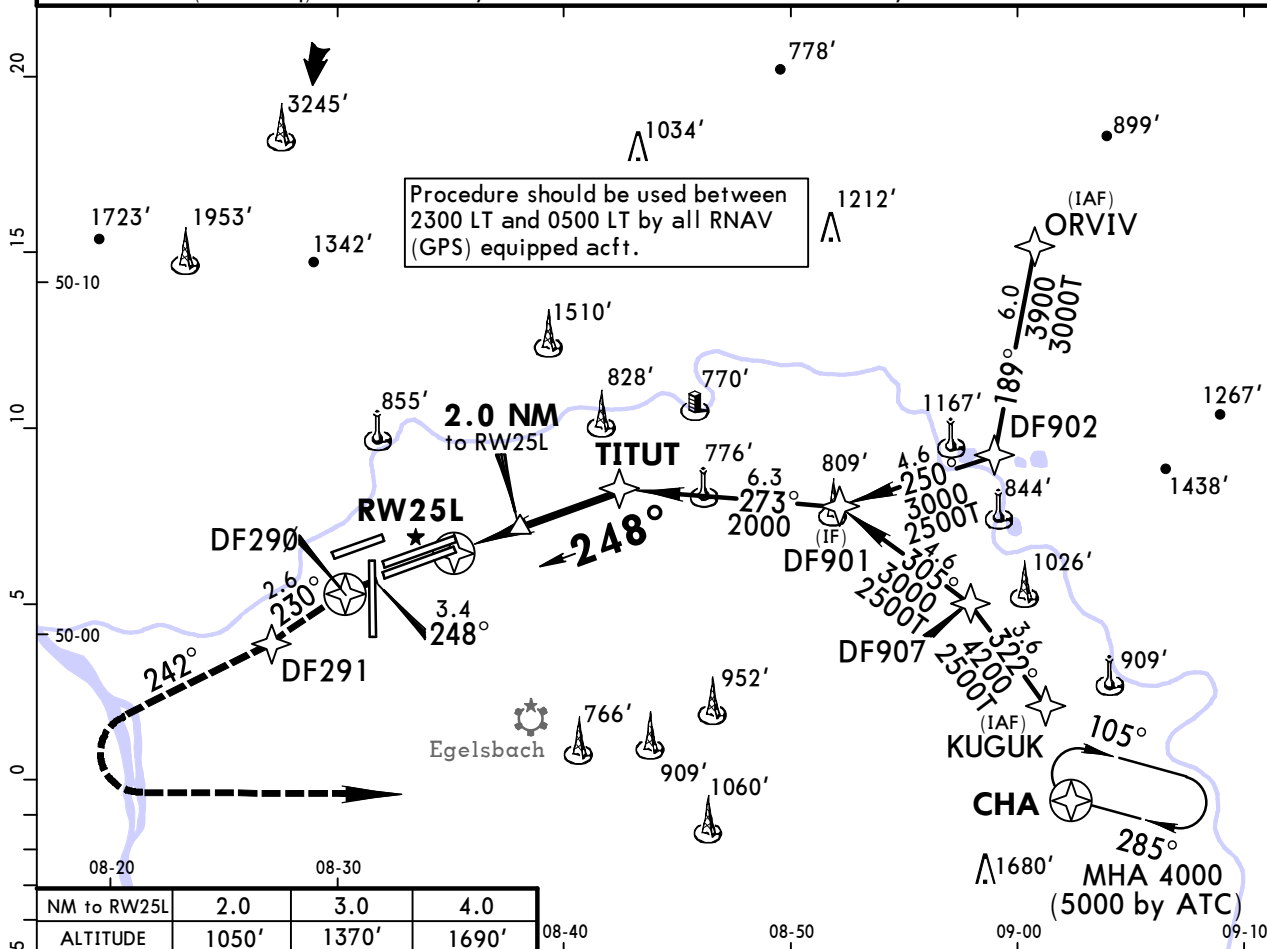
(12-6)

Eff 23 Jul

JEPPESSEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 25L

BRIEFING STRIP™

*D-ATIS Arrival	LANGEN Radar (APP) North South		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	119.9	121.8
RNAV	Final Apch Crs 248°		Minimum Alt TITUT 2000' (1638')	LNAV DA(H) Refer to Minimums	Apt Elev 364' Rwy 362'	4300' MSA ARP
MISSED APCH: Climb on track 248° to DF290, then turn LEFT on on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000', then turn LEFT to CHA and maintain 5000'.						
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000'						



Standard	STRAIGHT-IN LANDING RWY 25L						ALSF-II	DF290
	LNAV						REIL PAPI	
	DA(H) BC: 820' (458')							
	A: 770' (408') D: 830' (468')							

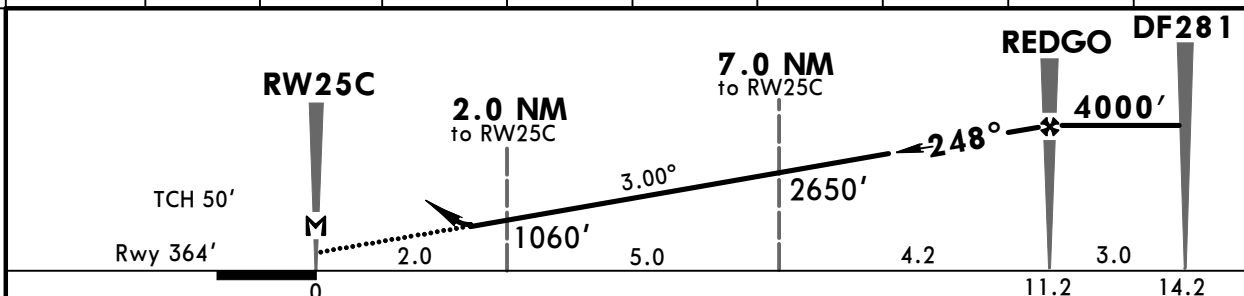
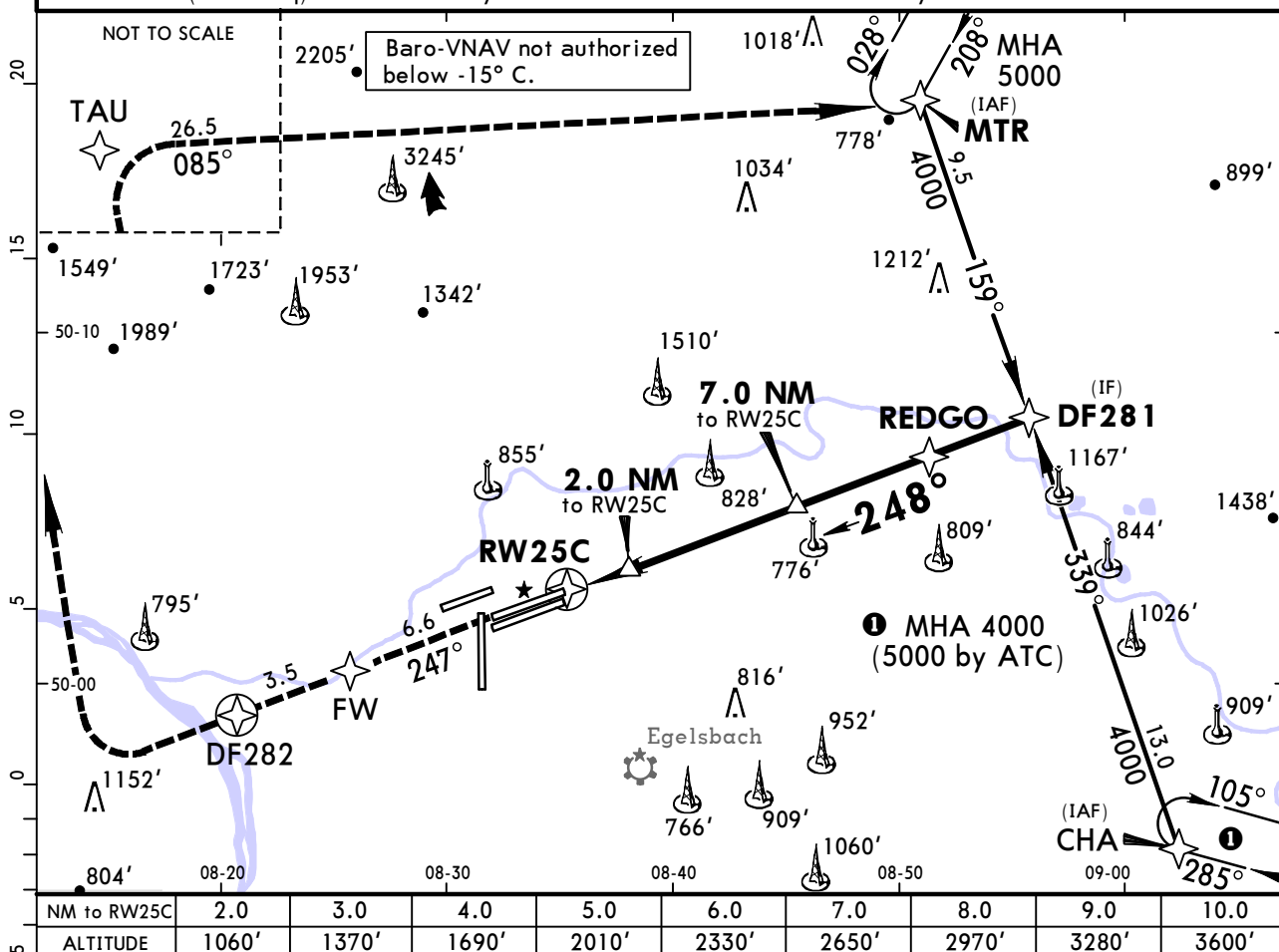
PANS OPS	A	RVR 1200m	ALS out
	B	RVR 1400m	RVR 1500m
	C		CMV 2100m
	D	RVR 1500m	CMV 2200m

EDDF/FRA
FRANKFURT/MAIN

JEPPESSEN FRANKFURT/MAIN, GERMANY
17 JUL 15 **(12-7)** **Eff 23 Jul** **RNAV (GPS) Z Rwy 25C**

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North	South	127.275	118.5	118.775	121.8
RNAV	Final Apch Crs	Minimum Alt REDGO	LNAV/VNAV DA(H)	Apt Elev	4300'	
	248°	4000' (3636')	800' (436')	Rwy 364'		
MISSED APCH: Climb on track 247° via FW to DF282 or 5000', whichever is later, then turn RIGHT to TAU. Turn RIGHT on 085° to MTR and maintain 5000'.						MSA ARP

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



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II REIL PAPI	DF282		5000'	via FW
Descent Angle 3.00°	372	478	531	637	743	849		which ever later			
MAP at RW25C											

Standard **STRAIGHT-IN LANDING RWY 25C**

LNAV/VNAV		LNAV	
DA(H) 800' (436')		DA(H) AB: 800' (436') CD: 840' (476')	
ALS out		ALS out	
PANS OPS	A	RVR 1500m	RVR 1500m
	B	RVR 1300m	RVR 1500m
	C	RVR 2000m	RVR 1500m
	D		CMV 2200m

CHANGES: Non-RNAV missed apch withdrawn.

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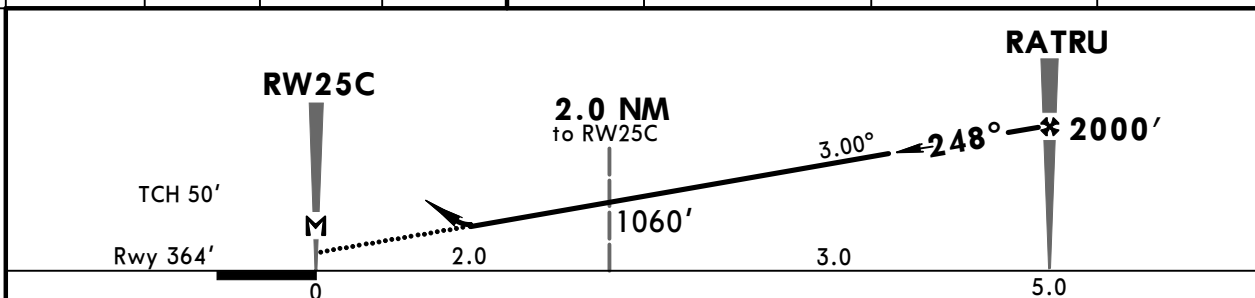
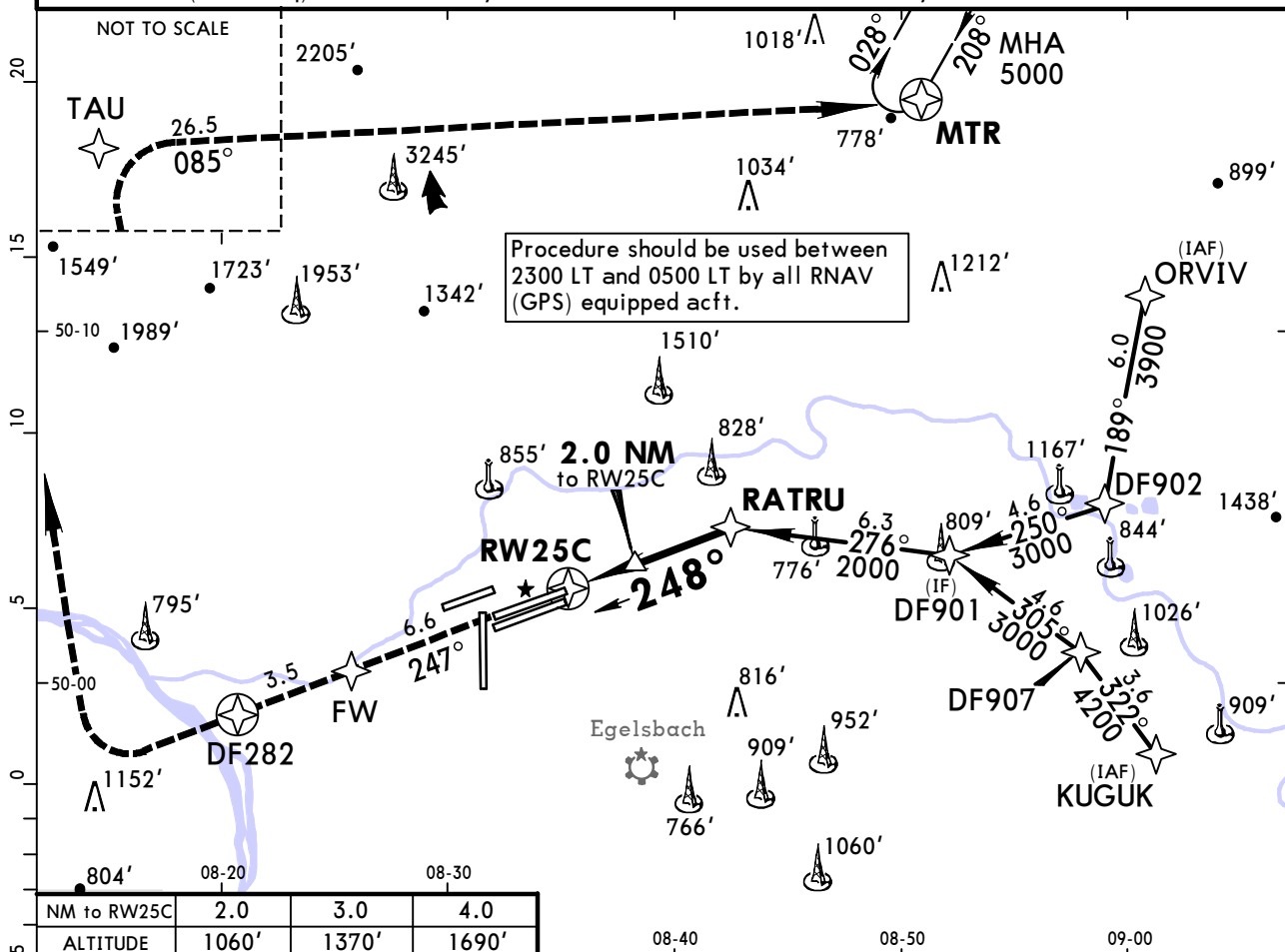
EDDF/FRA
FRANKFURT/MAIN

JEPPesen FRANKFURT/MAIN, GERMANY
17 JUL 15 (12-8) Eff 23 Jul RNAV (GPS) Y Rwy 25C

BRIEFING STRIP

*D-ATIS Arrival	LANGEN Radar (APP) North South		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	120.8	125.350	127.275	118.5	118.775	121.8
RNAV	Final Apch Crs 248°	Minimum Alt RATRU 2000' (1636')	LNAV DA(H) Refer to Minimums	Apt Elev 364' Rwy 364'	4300' MSA ARP	
MISSED APCH: Climb on track 247° via FW to DF282 or 5000', whichever is later, then turn RIGHT to TAU. Turn RIGHT on 085° to MTR and maintain 5000'.						

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



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II REIL PAPI
---------------	----	----	-----	-----	-----	-----	--

Standard										
STRAIGHT-IN LANDING RWY 25C										
LNAV										
DA(H) AB: 800' (436') CD: 840' (476')										
ALS out										
A	RVR 1300m					RVR 1500m				
B										
C	RVR 1500m					CMV 2200m				
D										

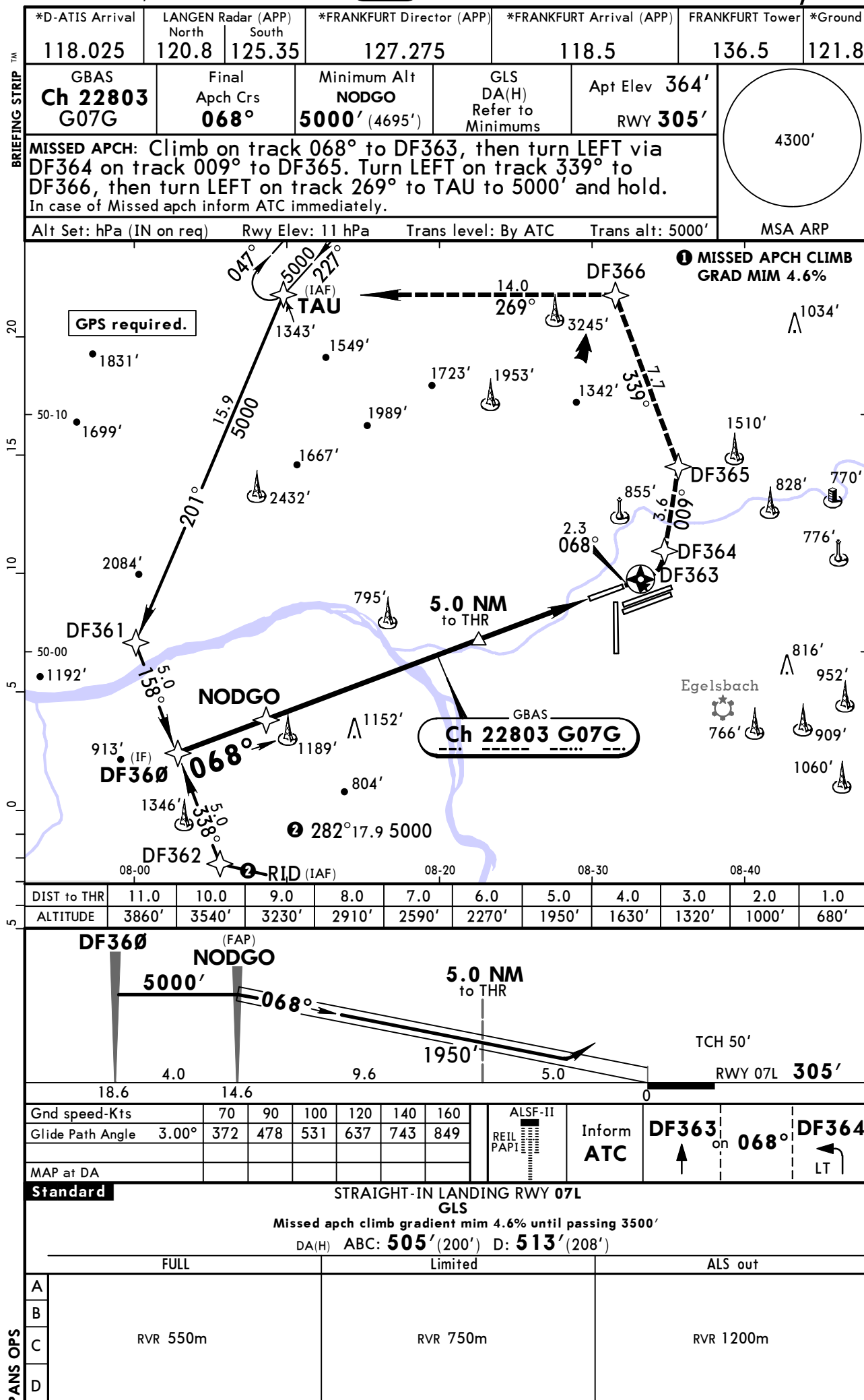
CHANGES: Non-RNAV missed apch withdrawn.

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EDDF/FRA
FRANKFURT/MAIN

20 MAR 15 **(12-40)**

JEPPesen FRANKFURT/MAIN, GERMANY
GLS Z Rwy 07L



CHANGES: None.

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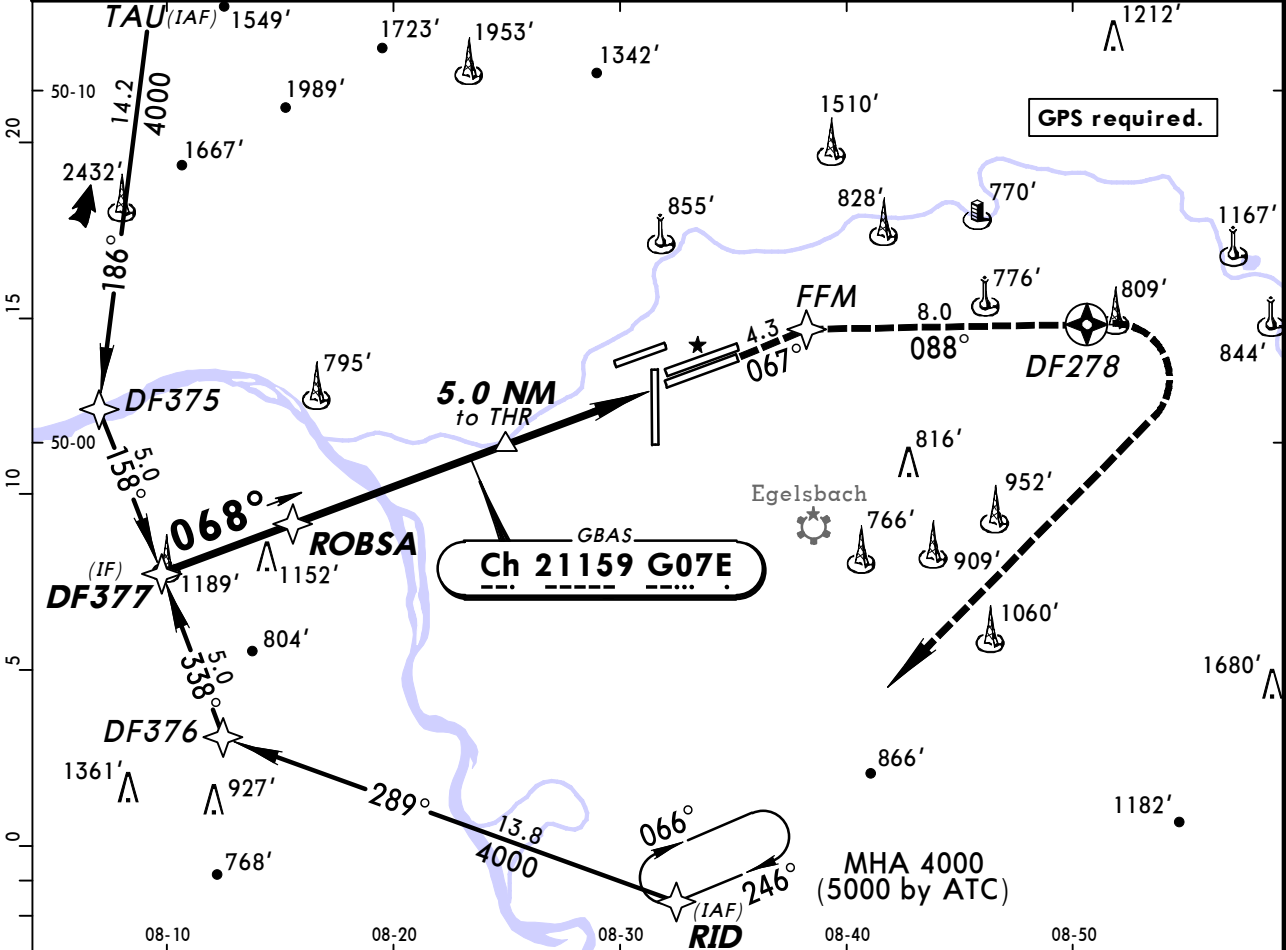
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FRANKFURT/MAIN

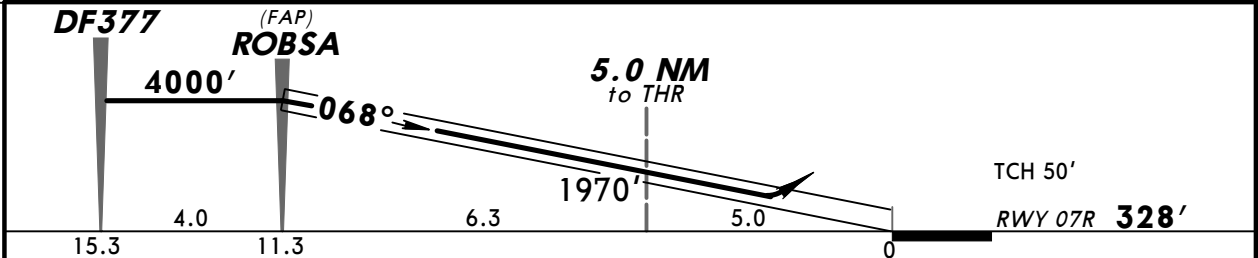
8 AUG 14 (12-42) Eff 21 Aug

JEPPesen FRANKFURT/MAIN, GERMANY
GLS Z Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP)		*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.025	North 120.8	South 125.35	127.275	118.5	136.5	121.8
GBAS Ch 21159 G07E	Final Apch Crs 068°	Minimum Alt ROBSA 4000' (3672')	GLS DA(H) 528' (200')	Apt Elev 364' RWY 328'	4300'	
MISSED APCH: Climb on track 067° to FFM, then turn RIGHT on track 088° to DF278 or 5000' whichever is later. Turn RIGHT to RID, maintain 5000'.						
Alt Set: hPa (IN on req)		Rwy Elev: 12 hPa	Trans level: By ATC	Trans alt: 5000'		



DIST to THR	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	3890'	3570'	3250'	2930'	2610'	2290'	1970'	1660'	1340'	1020'	700'



Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II REIL PAPI	FFM on 067°
Glide Path Angle 3.00°	372	478	531	637	743	849		
MAP at DA								

Standard			STRAIGHT-IN LANDING RWY 07R		
FULL			Limited		
GLS DA(H) 528' (200')			ALS out		
A	RVR 550m		RVR 750m		RVR 1200m
B					
C					
D					

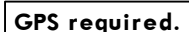
CHANGES: New procedure.

BRIEFING STRIP™

4300'

MSA ARP

Trans alt: 5000'



Attention: Acft taxiing
independently on Twy S-East
underneath short final.

5RWY 25L **362'**

ALSF-
REIL
PAPI

DF290

Standard

STRAIGHT-IN LANDING RWY 25L

GLS
DA(H) **562'** (200')

PANS OPS

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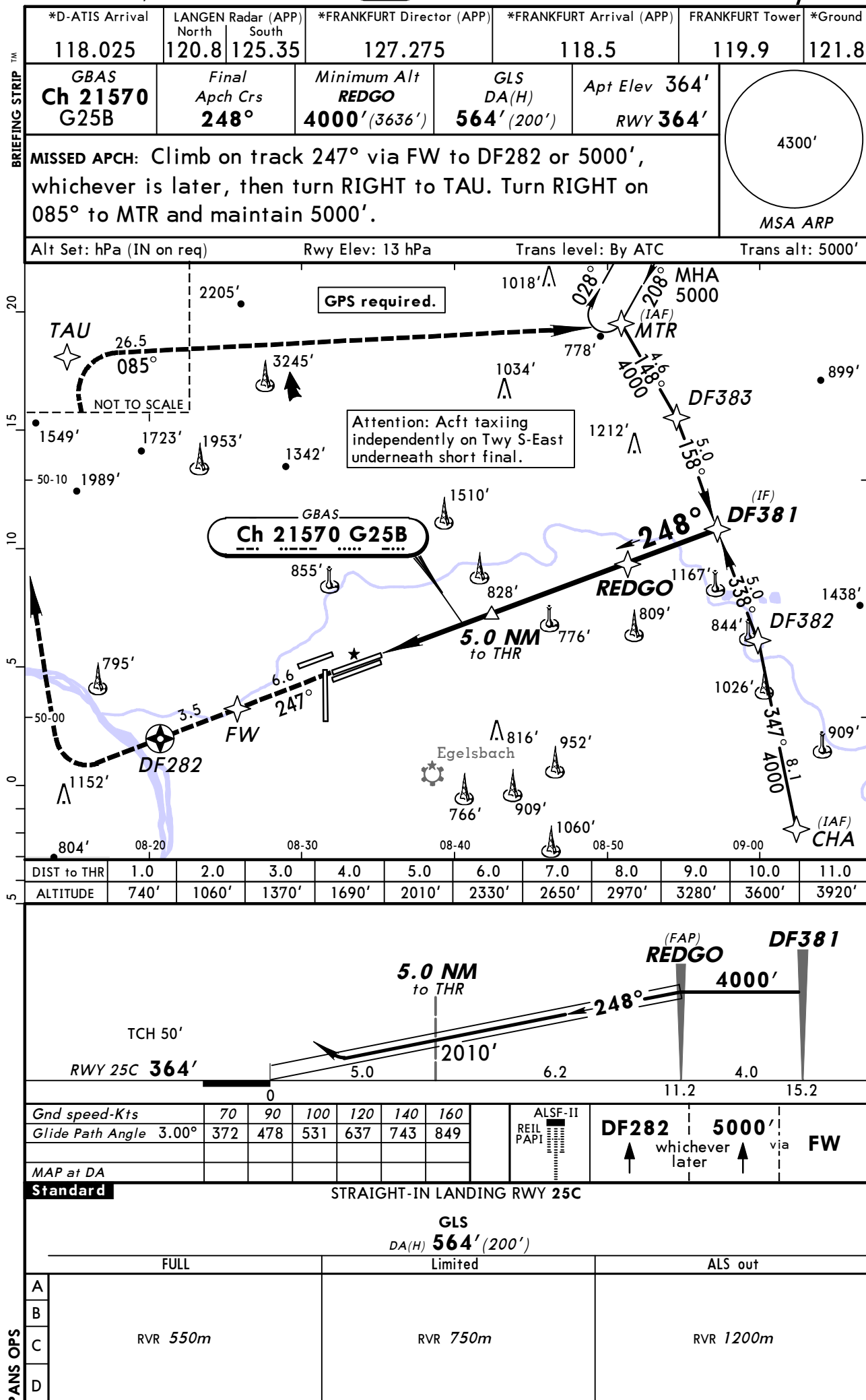
EDDF/FRA
FRANKFURT/MAIN

8 AUG 14

(12-44)

Eff 21 Aug

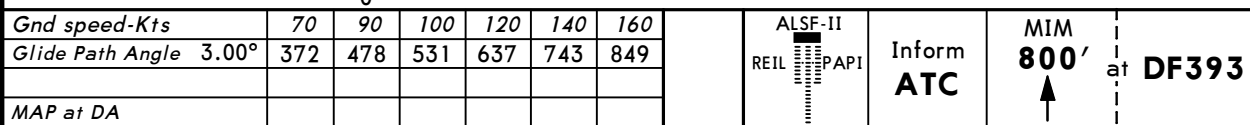
JEPPesen FRANKFURT/MAIN, GERMANY
GLS Z Rwy 25C



BRIEFING STRIP™

MSA ARP

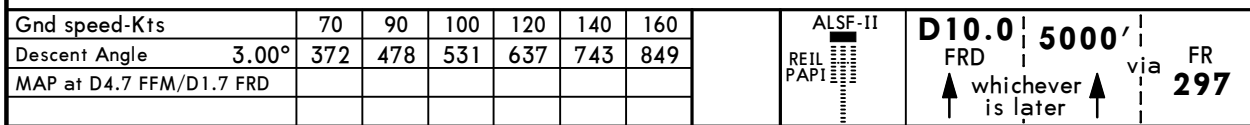
Trans alt: 5000'



DA(H) ABC: **553'** (200') D: **559'** (206')

PLANS OPS

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PANS OPS

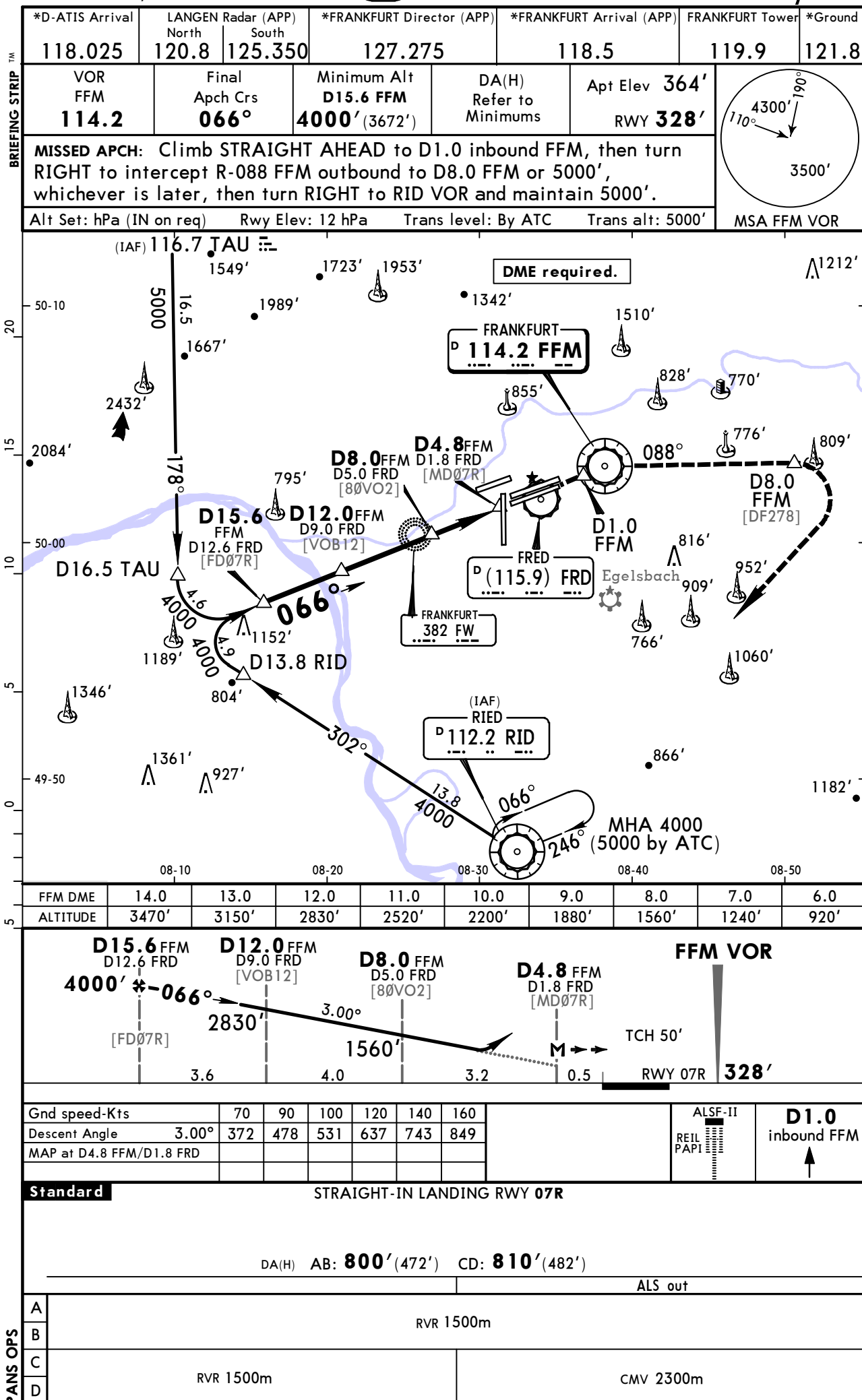
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EDDF/FRA
FRANKFURT/MAIN

20 MAR 15

(13-2)

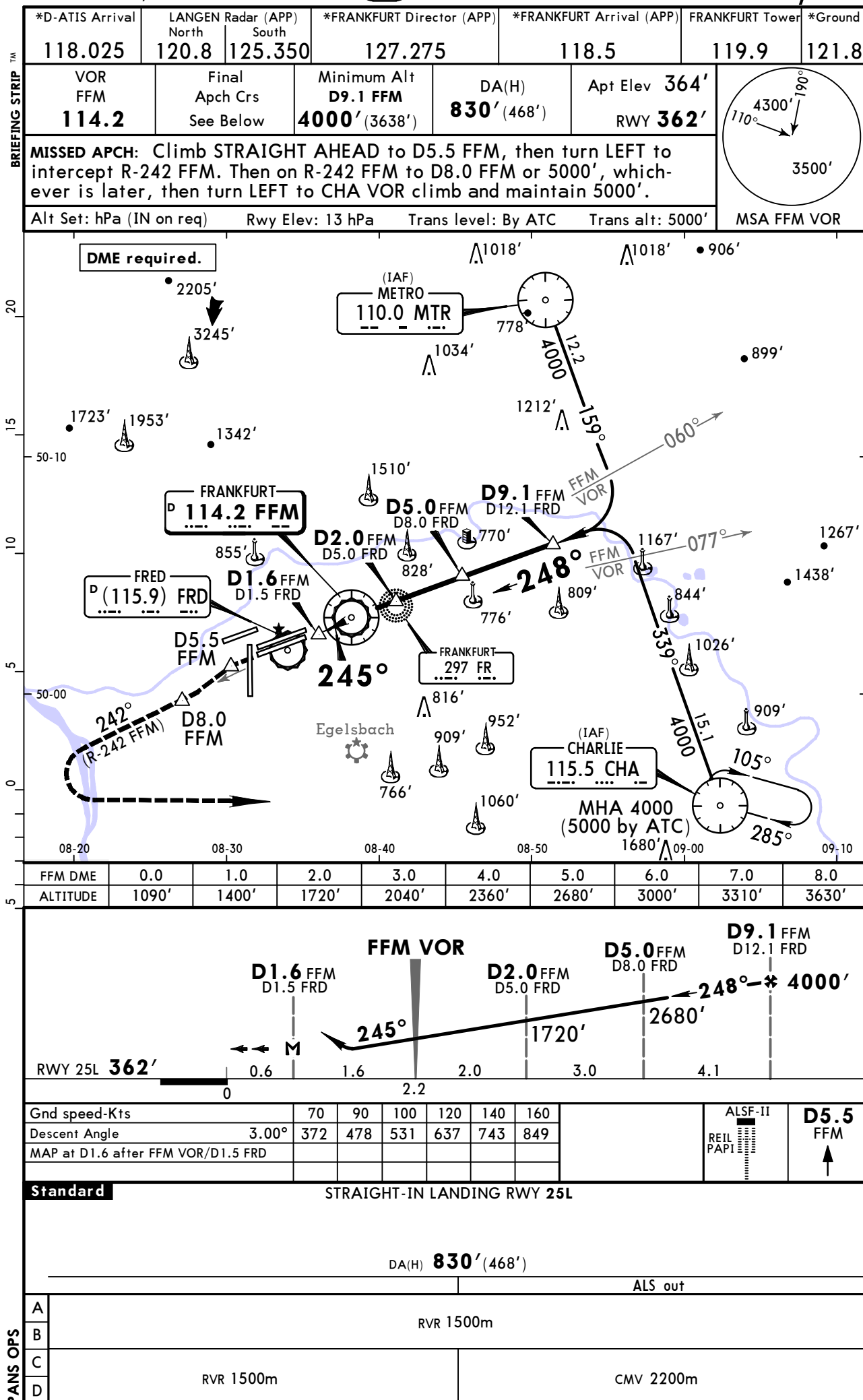
JEPPESSEN FRANKFURT/MAIN, GERMANY
VOR Rwy 07R



EDDF/FRA
FRANKFURT/MAIN

20 MAR 15 **(13-3)**

JEPPESSEN FRANKFURT/MAIN, GERMANY
VOR Rwy 25L



EDDF/FRA
FRANKFURT/MAIN

20 MAR 15 **(13-4)**

JEPPESSEN FRANKFURT/MAIN, GERMANY
VOR Rwy 25C

118.025

LANGEN Radar (APP)
North

120.8

South

125.350

*FRANKFURT Director (APP)

127.275

*FRANKFURT Arrival (APP)

118.5

FRANKFURT Tower

118.775

*Ground

121.8

VOR
FFM
114.2

Final
Apch Crs
See Below

Minimum Alt
D9.2 FFM
4000' (3636')

DA(H)
840' (476')

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 to TAU VOR. Turn RIGHT to
intercept R-085 TAU/R-265 inbound MTR 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.

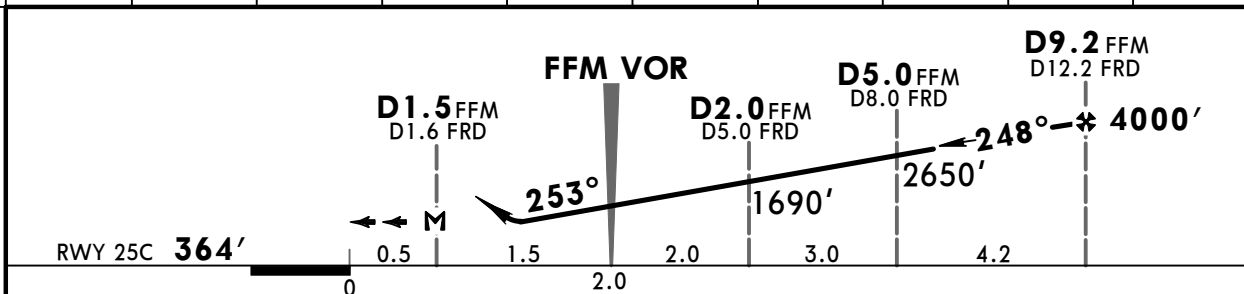
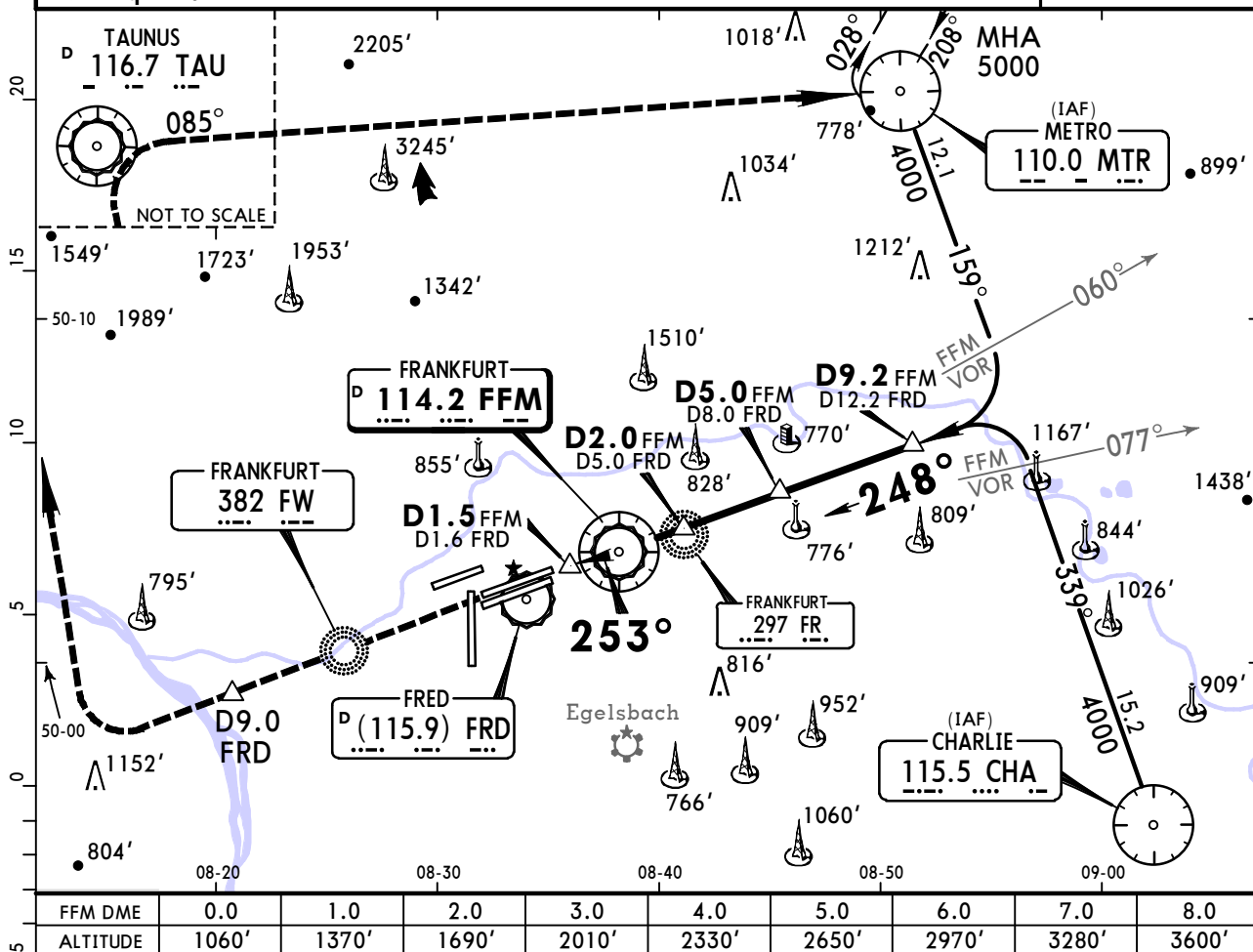
4300'

170°

190°

3500'

MSA FFM VOR



Gnd speed-Kts	70	90	100	120	140	160		D9.0	5000'
Descent Angle	3.00°	372	478	531	637	743		FRD	whichever later
MAP at D1.5 after FFM VOR/D1.6 FRD									

Standard

STRAIGHT-IN LANDING RWY 25C

DA(H) **840'** (476')

ALS out

A	RVR 1500m	
B		
C	RVR 1500m	CMV 2200m
D		

CHANGES: Minimums.

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FRANKFURT/MAIN, (FRANKFURT/MAIN - EDDF)

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport EDDF

Type: Terminal

Effectivity: Permanent

Begin Date: 20140711

End Date: No end date

(SIDs) Text note 2, reference to 10-4 to be ignored.

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

For CDO, report ATIS received when contacting arrival sector; ACFT will be vectored to reach the intermediate approach level on the LOC course with about 1 NM of level flight left until intercepting GS, the purpose of this intermediate approach segment is to reduce speed; assumed descent angle 3°; CDO avbl btn passing clearance limit KERAX, PSA, ROLIS and UNOKO until reaching final approach alt 5000' or 4000' at the latest; participants are invited to send regular feedback on CDO performance to cdo-feedback@dfs.de.