Nur für Simulationszwecke zu verwenden !
Mit freundlicher Genehmigung der DFS
Deutsche Flugsicherung GmbH
für IVAO-DE.

STANDARD DEPARTURE ROUTES – INSTRUMENT (SID)

FRANKFURT MAIN
RWY 18
SIDs with Route Designator SIERRA

1. SIDs via **BIBOS, MARUN** and **TOBAK** with designator **SIERRA** will be assigned **by ATC only**.
2. **NON-RNAV (enroute only)** equipped aircraft shall use SIDs with designator **ZULU**.

Designator	Route	After Take-Off		Remarks
		Climb to	Contact	
1	2	3	4	5
BIBOS 6S	**BIBOS SIX SIERRA** On RWY track to 800; RT, on R223 FFM to 14.0 DME FFM; RT, on R302 RID to 16.0 DME RID; RT, on track 319° to MASIR; RT, on track 335° via RAVKI and DITAM to ABAXA; LT, on track 328° to BIBOS (△). **GPS/FMS RNAV:** [A800+] - DF197[R] - DF164[R] - DF161[R] - MASIR[R] - RAVKI - DITAM - ABAXA[L] - BIBOS.	4000 ft	Langen Radar 120.150*	1. Flights via BIBOS and UZ28/UZ29 to UK or beyond, except for flights terminating within LONDON TMA. 2. Flights via UZ29 have to cross BIBOS at FL 250 or above. If unable to comply, request routing via UZ28 crossing BIBOS at FL 210 or above. 3. Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure, flights with DEST EDDK shall proceed BIBOS - COL or BIBOS - WYP depending on RWY in use. 4. Will only be assigned when Landing Direction is 25. 5. After 16.0 DME RID BRNAV equipment necessary.
DKB 4S	**DINKELSBÜHL FOUR SIERRA** On RWY track to 800 or 12.0 DME RID, whichever is later; LT, on track 118° to KNG (△); LT, on track 103° KNG to AKONI (△); RT, on R130 FFM/R310 DKB to DKB (△). Cross R201 FFM at 2500 or above. **GPS/FMS RNAV:** [A800+] - DF158[L] - DF159[A2500+] - KNG[L] - AKONI[R] - DKB.		Langen Radar 136.125*	1. PDG 9.3% / 570ft/NM until passing 2500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via DKB 2L. 2. Only for flights terminating within EDMM FIR.
MARUN 1S	**MARUN ONE SIERRA** On RWY track to 800; RT, on R223 FFM to 14.0 DME FFM; RT, on R302 RID to 16.0 DME RID; RT, on track 023° to TABUM; LT, on track 018° to LIKSI; LT, on track 016° via LORPA to MARUN (△). **GPS/FMS RNAV:** [A800+] - DF197[R] - DF164[R] - DF161[R] - TABUM[L] - LIKSI[L] - LORPA - MARUN.		Langen Radar 120.150*	1. After 16.0 DME RID BRNAV equipment necessary. 2. Will only be assigned when Landing Direction is 25.
NOMBO 3S	**NOMBO THREE SIERRA** On RWY track to 800 or 12.0 DME RID, whichever is later; LT, on track 118° to KNG (△); LT, on track 103° KNG to AKONI (△); RT, on R130 FFM outbound FFM to HAREM (△); RT, on track 148° to LAMPU (△); LT, on track 134° to NOMBO (△). Cross R201 FFM at 2500 or above. **GPS/FMS RNAV:** [A800+] - DF158[L] - DF159[A2500+] - KNG[L] - AKONI[R] - HAREM[R] - LAMPU[L] - NOMBO.		Langen Radar 136.125*	1. PDG 9.3% / 570 ft/NM until passing 2500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via NOMBO 3L. 2. After HARAM BRNAV equipment necessary. 3. Not for flights terminating within EDDN Area or EDMM FIR. 4. Not for propeller-driven aircraft. These flights shall file SID RATIM.
RATIM 1S	**RATIM ONE SIERRA** On RWY track to 800 or 12.0 DME RID, whichever is later; LT, on track 118° to KNG (△); LT, on track 103° KNG via AKONI (△) to RATIM (△). Cross R201 FFM at 2500 or above. **GPS/FMS RNAV:** [A800+] - DF158[L] - DF159[A2500+] - KNG[L] - AKONI - RATIM.			1. PDG 9.3% / 570ft/NM until passing 2500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect ALTN Routing by ATC. 2. Only for propeller-driven aircraft (MAX RFL 230) instead of SID NOMBO. 3. Not for flights terminating within EDDN Area or EDMM FIR.
ROTEN 3S	**ROTEN THREE SIERRA** On RWY track to 800 or 12.0 DME RID, whichever is later; LT, on track 118° to KNG (△); LT, on track 103° KNG to AKONI (△); RT, on R130 FFM/R310 DKB to ROTEN (△). Cross R201 FFM at 2500 or above. **GPS/FMS RNAV:** [A800+] - DF158[L] - DF159[A2500+] - KNG[L] - AKONI[R] - ROTEN.			1. PDG 9.3% / 570 ft/NM until passing 2500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via ROTEN 1L. 2. Only for flights terminating within EDDN Area.
SOBRA 1S	**SOBRA ONE SIERRA** On RWY track to 800; RT, on R223 FFM to 20.6 DME FFM; RT, on track 283° via DONAB to SOBRA (△). **GPS/FMS RNAV:** [A800+] - DF197[R] - DF201[R] - DONAB - SOBRA.			1. Only to be used when Landing Direction is 25. 2. For flights intending to proceed at FL 250 or above via Y180/Y181. Flights have to be able to cross RUDOT at FL 240 or above. If unable to comply, flight plan shall read RUDOT FL 220 - Y180 - DIK RFL. 3. After 20.6 DME FFM BRNAV equipment

* Departure frequency may deviate from the frequency published. Check ATIS for current departure frequency.

Contact LANGEN RADAR immediately after take-off!

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FRANKFURT MAIN
RWY 18
SIDs with Route Designator SIERRA

STANDARD DEPARTURE
ROUTES – INSTRUMENT
(SID)

Designator	Route	After Take-Off		Remarks
		Climb to	Contact	
1	2	3	4	5
SULUS 3S	**SULUS THREE SIERRA** On RWY track to 800 or 12.0 DME RID, whichever is later; LT, on track 118° to KNG (△); LT, on track 103° KNG via AKONI (△) to GIBSA (△); LT, on R254 WUR to WUR (△); LT, on track 054° to SULUS (△). Cross R201 FFM at 2500 or above. **GPS/FMS RNAV:** [A800+] - DF158[L] - DF159[A2500+] - KNG[L] - AKONI - GIBSA[L] - WUR[L] - SULUS.	4000 ft	Langen Radar 136.125*	1. PDG 9.3% / 570 ft/NM until passing 2500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via SULUS 4L. 2. After WUR BRNAV equipment necessary. 3. Not for flights destination EDDN.
TOBAK 2S	**TOBAK TWO SIERRA** On RWY track to 800; RT, on R223 FFM to 14.0 DME FFM; RT, on R302 RID to 16.0 DME RID; RT, on track 023° to TABUM; RT, on track 041° to TESGA; LT, on track 039° to TOBAK (△). **GPS/FMS RNAV:** [A800+] - DF197[R] - DF164[R] - DF161[R] - TABUM[R] - TESGA[L] - TOBAK.		Langen Radar 120.150*	1. After 16.0 DME RID BRNAV equipment necessary. 2. Will only be assigned when Landing Direction is 25. 3. Not for flights continuing via Z10 GIN N850 WRB.

* Departure frequency may deviate from the frequency published. Check ATIS for current departure frequency.

Contact LANGEN RADAR immediately after take-off!

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STANDARD DEPARTURE
ROUTES – INSTRUMENT
(SID)

FRANKFURT MAIN
RWY 18
SIDs with Route Designator LIMA

NON-RNAV (enroute only) equipped aircraft shall use SIDs with designator **ZULU**.

Designator	Route	After Take-Off		Remarks
		Climb to	Contact	
1	2	3	4	5
ANEKI 4L	**ANEKI FOUR LIMA** On RWY track to 800; on R357 RID to RID (△); RT, on R184 RID to ANEKI (△). Cross 4.4 DME RID south of RID at 4500 or above. Cross 6.9 DME RID south of RID at 5000 or above. Cross 11.9 DME RID south of RID at 6000 or above. **GPS/FMS RNAV:** [A800+] - RID[R] - ANEKI.	4000 ft	Langen Radar 136.125*	PDG 3.9% / 240 ft/NM until passing 4500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up.
BIBOS 6L	**BIBOS SIX LIMA** On RWY track to 800; on R357 RID to 7.0 DME RID (max. IAS 220 KT); RT, on track 239° to XAMUB; RT, on track 320° to MASIR; RT, on track 335° via RAVKI and DITAM to ABAXA; LT, on track 328° to BIBOS (△). Cross 7.0 DME RID north of RID at 2000 or above. **GPS/FMS RNAV:** [A800+] - DF160[K220-; A2000+; R] - XAMUB[R] - MASIR[R] - RAVKI - DITAM - ABAXA[L] - BIBOS.		Langen Radar 120.150*	1. PDG 4.6% / 280 ft/NM until passing 2000 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up. 2. Flights via BIBOS and UZ28/UZ29 to UK or beyond, except for flights terminating within LONDON TMA. 3. Flights via UZ29 have to cross BIBOS at FL 250 or above. If unable to comply, request routing via UZ28 crossing BIBOS at FL 210 or above. 4. Also for flights destination EDDK or continuing VFR after ABAXA/BIBOS. In case of radio communication failure, flights with DEST EDDK shall proceed BIBOS - COL or BIBOS - WYP depending on RWY in use. 5. After 7.0 DME RID north of RID BRNAV equipment necessary. 6. Will only be assigned by ATC when Landing Direction is 25.
DKB 2L	**DINKELSBÜHL TWO LIMA** On RWY track to 800; on R357 RID to 3.0 DME RID; LT, (max. IAS 220 KT until established on R092 RID) on R092 RID to KNG (△); RT, on track 103° KNG to AKONI (△); RT, on R130 FFM/R310 DKB to DKB (△). **GPS/FMS RNAV:** [A800+] - RID[K220-; L] - KNG[R] - AKONI[R] - DKB.		Langen Radar 136.125*	Only for flights terminating within EDMM FIR.
NEKOM 1L	**NEKOM ONE LIMA** On RWY track to 800; on R357 RID to RID (△); LT, on R164 RID to NEKOM (△). Cross 4.4 DME RID south of RID at 4500 or above. Cross 6.9 DME RID south of RID at 5000 or above. Cross 11.9 DME RID south of RID at 6000 or above. **GPS/FMS RNAV:** [A800+] - RID[L] - NEKOM.			1. PDG 3.9% / 240 ft/NM until passing 4500 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up. 2. Only for flights terminating within EDDS Area and destination LSZH, LSZR and EDNY with access to N 850 at FL 90 or below.
NOMBO 3L	**NOMBO THREE LIMA** On RWY track to 800; on R357 RID to 3.0 DME RID; LT, (max. IAS 220 KT until established on R092 RID) on R092 RID to KNG (△); RT, on track 103° KNG to AKONI (△); RT, on R130 FFM outbound FFM to HAREM (△); RT, on track 148° to LAMPU (△); LT, on track 134° to NOMBO (△). **GPS/FMS RNAV:** [A800+] - RID[K220-; L] - KNG[R] - AKONI[R] - HAREM[R] - LAMPU[L] - NOMBO.			1. After HAREM BRNAV equipment necessary. 2. Not for flights terminating within EDDN Area or EDMM FIR. 3. Not for propeller-driven aircraft. These flights shall file SID RATIM 1S.
ROTEN 1L	**ROTEN ONE LIMA** On RWY track to 800; on R357 RID to 3.0 DME RID; LT, (max. IAS 220 KT until established on R092 RID) on R092 RID to KNG (△); RT, on track 103° KNG to AKONI (△); RT, on R130 FFM/R310 DKB to ROTEN (△). **GPS/FMS RNAV:** [A800+] - RID[K220-; L] - KNG[R] - AKONI[R] - ROTEN.			Only for flights terminating within EDDN Area.

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Contact LANGEN RADAR immediately after take-off!

FRANKFURT MAIN
RWY 18
SIDs with Route Designator LIMA / UNIFORM

STANDARD DEPARTURE
ROUTES – INSTRUMENT
(SID)

NON-RNAV (enroute only) equipped aircraft shall use SIDs with designator **ZULU**.

Designator	Route	After Take-Off		Remarks
		Climb to	Contact	
1	2	3	4	5
SOBRA 2L	**SOBRA TWO LIMA** On RWY track to 800; on R357 RID to 6.4 DME RID, (max. 220 KIAS); RT, on R199 outbound FFM to 17.3 DME FFM; RT, on track 283° via ROSIG and DONAB to SOBRA (△). Cross 6.4 DME RID north of RID max. 4000. Cross ROSIG at FL90 or above. Cross DONAB at FL110 or above. **GPS/FMS RNAV:** [A800+] - DF160[K220-; A4000-; R] - DF198[R] - ROSIG[F090+] - DONAB[FL110+] - SOBRA.	4000 ft	Langen Radar 136.125*	1. PDG 7.5% / 455 ft/NM until passing FL90 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via SOBRA 2U. 2. Will be assigned when Landing Direction is 07. 3. For flights intending to proceed at FL 250 or above via Y180/Y181. Flights have to be able to cross RUDOT at FL 240 or above. If unable to comply, flight plan shall read RUDOT FL 220 - Y180 - DIK RFL. 4. After 17.3 DME FFM BRNAV equipment necessary.
SOBRA 2U	**SOBRA TWO UNIFORM** On RWY track to 800; on R357 RID to 6.4 DME RID, (max. 220 KIAS); RT, on R199 outbound FFM to 19.4 DME FFM; RT, (max. 250 KIAS during turn) on track 264° to PIPIX; RT, (max. 250 KIAS during turn) on track 297° via VETUX to SOBRA (△). Cross 6.4 DME RID north of RID max. 4000. Cross PIPIX at FL90 or above. Cross VETUX at FL100. **GPS/FMS RNAV:** [A800+] - DF160[K220-; A4000-; R] - DF200[K250-; R] - PIPIX[K250-; F090+; R] - VETUX[F100] - SOBRA.			1. PDG 5.4% / 330 ft/NM until passing FL90 due to airspace structure. If unable to comply, advise EDDF DELIVERY prior to start-up and expect routing via ULKIG 3U. 2. For flights intending to proceed at FL 250 or above via Y180/Y181. Flights have to be able to cross RUDOT at FL 240 or above. If unable to comply, flight plan shall read RUDOT FL 220 - Y180 - DIK RFL. 3. After 19.4 DME FFM BRNAV equipment necessary.
SULUS 4L	**SULUS FOUR LIMA** On RWY track to 800; on R357 RID to 3.0 DME RID; LT, (max. IAS 220 KT until established on R092 RID)on R092 RID to KNG (△); RT, on track 103° to KNG via AKONI (△) to GIBSA (△); LT, on R254 WUR to WUR (△); LT, on track 054° to SULUS (△). **GPS/FMS RNAV:** [A800+] - RID[K220-; L] - KNG[R] - AKONI - GIBSA[L] - WUR[L] - SULUS.			After WUR BRNAV equipment necessary.
ULKIG 3U	**ULKIG THREE UNIFORM** On RWY track to 800; on R357 RID to 6.4 DME RID, (max. 220 KIAS); RT, on R199 outbound FFM to 19.4 DME FFM; RT, (max. 250 KIAS during turn) on track 264° to PIPIX; RT, (max. 250 KIAS during turn) on track 283° to GISNO; RT, (max. 250 KIAS during turn) on track 319° to ULKIG (△). **GPS/FMS RNAV:** [A800+] - DF160[K220-; R] - DF200[K250-; R] - PIPIX[K250-; R] - GISNO[K250-; R] - ULKIG.			1. For flights intending to proceed at FL 250 or above via Y180/Y181. Flights have to be able to cross RUDOT at FL 240 or above. If unable to comply, flight plan shall read RUDOT FL 220 - Y180 - DIK RFL. 2. After 19.4 DME FFM BRNAV equipment necessary.

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STANDARD DEPARTURE
ROUTES – INSTRUMENT
(SID)

FRANKFURT MAIN
RWY 18
SIDs with Route Designator TANGO

1. SIDs with designator **TANGO** (Contingency SIDs) will be assigned **by ATC only** under special circumstances, e.g. closure of one of the parallel runways when Landing Direction is 07.
2. **NON-RNAV (enroute only)** equipped aircraft shall use SIDs with designator **ZULU**.

Designator	Route	After Take-Off		Remarks
		Climb to	Contact	
1	2	3	4	5
BIBOS 7T	**BIBOS SEVEN TANGO** On RWY track to 800; on R357 RID to 6.4 DME RID north of RID (max. 220 KIAS); RT, on R199 FFM to 19.4 DME FFM; RT, (max. 250 KIAS during turn) on track 264° to PIPIX; RT, (max. 250 KIAS during turn) on track 283° to GISNO; RT, (max. 250 KIAS during turn) on track 319° to ULKIG(△); LT, on track 283° to OBOXO(△); RT, on track 074° to RUDUS(△); LT, on track 313° to MASIR; RT, on track 335° via RAVKI and DITAM to ABAXA; LT, on track 328° to BIBOS(△). **GPS/FMS RNAV:** [A800+] - DF160[K220-; R] - DF200[K250-; R] - PIPIX[K250-; R] - GISNO[K250-; R] - ULKIG[L] - OBOXO[R] - RUDUS[L] - MASIR[R] - RAVKI - DITAM - ABAXA[L] - BIBOS.	4000 ft	Langen Radar 136.125*	After 19.4 DME FFM BRNAV equipment necessary.
MARUN 1T	**MARUN ONE TANGO** On RWY track to 800; on R357 RID to 6.4 DME RID (max. 220 KIAS); RT, on R199 FFM to 19.4 DME FFM; RT, (max. 250 KIAS during turn) on track 264° to PIPIX(△); RT, (max. 250 KIAS during turn) on track 283° to GISNO(△); RT, (max. 250 KIAS during turn) on track 319° to ULKIG(△); LT, on track 283° to OBOXO(△); RT, on track 074° to RUDUS(△); RT, on track 089° to WBD (△); LT, on track 028° to MABOB; LT, on track 017° to TESGA; LT, on track 004° via ALIDI to MARUN (△). Cross 6.4 DME RID max. 4000. **GPS/FMS RNAV:** [A800+] - DF160[K220-; A4000-; R] - DF200[K250-; R] - PIPIX[K250-; R] - GISNO[K250-; R] - ULKIG[L] - OBOXO[R] - RUDUS[R] - WBD[L] - MABOB[L] - TESGA[L] - ALIDI - MARUN.			
TOBAK 3T	**TOBAK THREE TANGO** On RWY track to 800; on R357 RID to 6.4 DME RID north of RID (max. 220 KIAS); RT, on R199 FFM to 19.4 DME FFM; RT, (max. 250 KIAS during turn) on track 264° to PIPIX(△); RT, (max. 250 KIAS during turn) on track 283° to GISNO(△); RT, (max. 250 KIAS during turn) on track 319° to ULKIG(△); LT, on track 283° to OBOXO(△); RT, on track 074° to RUDUS(△); RT, on track 089° to WBD (△); LT, on track 028° to MABOB; LT, on track 017° to TESGA; RT, on track 039° to TOBAK (△). **GPS/FMS RNAV:** [A800+] - DF160[K220-; R] - DF200[K250-; R] - PIPIX[K250-; R] - GISNO[K250-; R] - ULKIG[L] - OBOXO[R] - RUDUS[R] - WBD[L] - MABOB[L] - TESGA[R] - TOBAK.			1. After 19.4 DME FFM BRNAV equipment necessary. 2. Not for flights continuing via Z10 GIN N850 WRB.

(Sample: OBOXO fly-over way point)

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