

Düsseldorf RG Airports

Note: Not for real navigation!

Düsseldorf (EDDL/DUS)

Elevation 138 ft

Effective: **12 DEC 2013**

Quelle: DFS GmbH

NAVAIDS:

DUS 115.15
ILS 05L 109.50 / 053° (IDNE)
ILS 05R 111.50 / 053° (IDSE)
ILS 23L 109.90 / 233° (IDSW)
ILS 23R 109.30 / 233° (IDNW)
DY 284.5
LI 417

Communication:

Station	Freq.
ATIS	123.77
Delivery	121.77
Ground East	121.60
Ground West	121.90
Tower	118.30
Director	128.65
Langen Radar	128.55 (Arrival), 128.50 (Departure North), 133.77 (Departure South), 135.72, 129.17 (HMMM), 135.65 (PADH), 127.62 (TAU), 129.87 (FIS North & West), 130.97 (Special)
Maastricht Radar	133.80 (Münster), 132.62 (Ruhr)

(Changes are marked yellow)

GPS / FMS RNAV Transitions

RWY 05L/05R

BIKMU 05 BIKMU-RONAD-DL513-DL514-IBIKO-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
DOMUX 05 DOMUX-DOLAV-DL502-DL503-DL504-DL505-DL510-DL550-DL555-DIKMI/NATOS
ELDAR 05 ELDAR-DL501-DL502-DL503-DL504-DL505-DL510-DL550-DL555-DIKMI/NATOS
LMA 05 LMA-IBIKO-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
TEBRO 05 TEBRO-DL512-VALSU-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
XAMOD 05 XAMOD-BOMBA-DL517-DL518-DL519-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS

RWY 23L/23R

BIKMU 23 BIKMU-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455-METMA/REGNO
DOMUX 23 DOMUX-DL402-DL403-DL404-DL405-DL406-DL407-DL408-DL409-DL410-DL450-DL452-DL454-DL455-METMA/REGNO
LMA 23 LMA-DL426-DL428-DL430-DL450-DL452-DL454-DL455-METMA/REGNO
TEBRO 23 TEBRO-AGEDA-XAMOD-DL420-DL421-DL422-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455-METMA/REGNO
XAMOD 23 XAMOD-DL420-DL421-DL422-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455-METMA/REGNO

Standard Instrument Arrival Routes

RWY 05L/05R

Route	Equipment
BIKMU 1X (BIKMU ONE X-RAY) BIKMU - RONAD	BRNAV equipment necessary
DOMUX 2X (DOMUX TWO X-RAY) DOMUX - DOLAV - LEBTI	BRNAV equipment necessary
LMA 9X (LIMA NINE X-RAY) LMA - IBIKO - GAPNU - RONAD	BRNAV equipment necessary
TEBRO 1X (TEBRO ONE X-RAY) TEBRO - VALSU - GAPNO - RONAD	BRNAV equipment necessary
XAMOD 2X (XAMOD TWO X-RAY) XAMOD - BOMBA - GAPNU - RONAD	BRNAV equipment necessary

RWY 23L/23R

Route	Equipment
BIKMU1G (BIKMU ONE GOLF) BIKMU - BOT	BRNAV equipment necessary
DOMUX 2G (DOMUX TWO GOLF) DOMUX - BAM	
LMA 8G (LIMA EIGHT GOLF) LMA - BOT	
TEBRO 1G (TEBRO ONE GOLF) TEBRO - AGEDA - XAMOD - BOT	BRNAV equipment necessary
XAMOD 2G (XAMOD TWO GOLF) XAMOD - BOT	

Standard Instrument Departure Routes

RWY 05L (Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)			
LMA 5Y	(LIMA FIVE YANKEE)	On R054 DUS to 6 DME DUS - LT on track 261° LMA to LMA (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[L] - DL051[L] - DL052 - LMA	1. Only for flights to EDLN. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request.
SONEB 2J	(SONEB TWO JULIETT)	On R054 DUS to 6 DME DUS - LT on track 009° to 13.5 DME DUS - LT on R169 RKN to 28.2 DME RKN - LT on track 346° to SONEB (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[L] - DL053[L] - NIKOG[L] - LUSIX[L] - SONEB	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After 28.2 DME RKN BRNAV equipment necessary.. 3. Only for Flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at FL140 or above. If unable to comply, advise DEL.
MEVEL 5J	(MEVEL FIVE JULIETT)	On R054 DUS to 6 DME DUS - LT on track 009° to 13.5 DME DUS - LT on R169 RKN to 28.2 DME RKN - RT on track 053° to MEVEL (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[L] - DL053[L] - NIKOG[L] - LUSIX[R] - MEVEL	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. Flights intending to proceed via Y850 to BASUM must be able to cross ARTER above FL245. If unable or planning below FL245, continue via L179 to OSN.
GMH 6Y	(GERMINGHAUSEN SIX YANKEE)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - RT on R096 BAM to 6.6 DME BAM - RT on R293 GMH to GMH (Δ). GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - GMH	Only for flights with RFL140 or below.
NOR 7Y	(NÖRVENICH SEVEN YANKEE)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM inbd BAM - at 3.5 DME BAM RT on R212 BAM to NOR (Δ). GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[R] - NOR	1. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU. 2. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
DODEN 4J	(DODEN FOUR JULIETT)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R135 BAM to 12.9 DME BAM - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). Cross 12.9 DME BAM at FL150 or above. Cross DODEN at FL250 or above. GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[R] - ELBOV[F150+;R] - BETZO[R] - DODEN[F250+]	1. After 12.9 DME BAM BRNAV equipment necessary. 2. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross ELBAL at FL150 or above shall advise clearance Delivery upon start-up request.
NUDGO 2J	(NUDGO TWO JULIETT)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R096 BAM to 6.6 DME BAM - RT on R293 GMH to 8.7 DME GMH - LT on track 068° to KULIX (Δ) - LT on track 062° to NUDGO (Δ). GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - MAMIB[L] - KULIX[L] - NUDGO	1. Not available for flights into upper airspace. 2. After 8.7 DME GMH BRNAV equipment necessary.
MODRU 5J	(MODRU FIVE JULIETT)	On R055 DUS to 6 DME DUS - LT on track 009° to 12.7 DME DUS - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 200° via NETEX (Δ) to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[L] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX - MODRU[F210+]	1. PDG due to airspace structure. 2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL210 or above. If unable to comply, advise DEL on startup req. 3. After 12.7 DME DUS BRNAV equipment necessary.
NETEX 2J	(NETEX TWO JULIETT)	On R054 DUS to 6 DME DUS - LT on track 009° to 12.7 DME DUS - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 200° to NETEX (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[L] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX	1. PDG due to airspace structure. 2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available). 3. After 12.7 DME DUS BRNAV equipment necessary.

KUMIK 2J	(KUMIK TWO JULIETT)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R096 BAM to 6.6 DME BAM - RT on track 129° to DEGOM (Δ) - RT on track 142° to KUMIK (Δ). Cross DEGOM at FL150 or above. GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - DEGOM[F150+;R] - KUMIK	1. Only for flights with RFL150 or above. 2. After 6.6 DME BAM BRNAV equipment necessary. 3. Normally not available for flights above FL250 via BOMBI, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC.
COL 2J	(COLA TWO JULIETT)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM inbd BAM - at 1.6 DME BAM RT on R164 BAM to 11.4 DME BAM - LT on R328 COL to COL (Δ). Cross 11.4 BAM at FL150 or above. GPS/FMS: [A600+] - DL050[L] - DL058[R] - BAM[L] - LIPMI[F150+;L] - COL	Flights unable to cross LIPMI at FL150 or above shall advise clearance Delivery upon startup request.
RWY 05R (Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)			
LMA 9Z	(LIMA NINE ZULU)	On R054 DUS to 6 DME DUS - LT on track 261° LMA to LMA (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[R] - DL051[L] - DL052 - LMA	1. Only for flights to EDLN. 2. PDG due to airspace structure. If unable to comply, advise DEL.
SONEB 2Z	(SONEB TWO ZULU)	On R054 DUS to 6 DME DUS - LT on track 009° to 13.5 DME DUS - LT on R169 RKN to 28.8 DME RKN - LT on track 346° to SONEB (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[R] - DL053[L] - NIKOG[L] - LUSIX[L] - SONEB	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After 28.2 DME RKN BRNAV equipment necessary. 3. Only for Flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at FL140 or above. If unable to comply, advise DEL.
MEVEL 6Z	(MEVEL SIX ZULU)	On R054 DUS to 6 DME DUS - LT on track 009° to 13.5 DME DUS - LT on R169 RKN to 28.2 DME RKN - RT on track 053° to MEVEL(Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[R] - DL053[L] - NIKOG[L] - LUSIX[R] - MEVEL	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. Flights intending to proceed via Y850 to BASUM must be able to cross ARTER above FL245. If unable or planning below FL245, continue via L179 to OSN. 3. After 28.2 DME RKN BRNAV equipment necessary.
GMH 3Z	(GERMINGHAUSEN THREE ZULU)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R096 BAM to 6.6 DME BAM - RT on R293 GMH to GMH (Δ). GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - GMH	Only for flights with RFL140 or below.
NOR 3Z	(NÖRVENICH THREE ZULU)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM inbd BAM - at 3.5 DME BAM RT on R212 BAM to NOR (Δ). GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[R] - NOR	1. For Flights with RFL90 and below. Flights with RFL100 and above shall file via MODRU. 2. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
DODEN 4Z	(DODEN FOUR ZULU)	On R054 DUS to 6.4 DME DUS - on R278 BAM to BAM (Δ) - RT on R135 to 12.9 DME BAM - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). Cross 12.9 DME BAM at FL150 or above. Cross DODEN at FL250 or above. GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[R] - ELBAL[F150+] - BETZO[R] - DODEN[F250+]	1. After 12.9 DME BAM BRNAV equipment necessary. 2. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID GMH. Flights unable to cross ELBAL at FL150 or above shall advise clearance Delivery.
NUDGO2Z	(NUDGO TWO ZULU)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R096 BAM to 6.6 DME BAM - RT on R293 GMH to 8.7 DME GMH - LT on track 068° via KULIX (Δ) - LT on track 062° to NUDGO (Δ). GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - MAMIB[L] - KULIX[L] - NUDGO	1. Not available for flights into upper airspace. 2. After 8.7 DME GMH BRNAV equipment necessary.

MODRU 5Z	(MODRU FIVE ZULU)	On R045 DUS to 6 DME DUS - LT on track 009° to 12.7 DME DUS - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 200° via NETEX (Δ) to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL050[R] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX - MODRU[F210+]	<ol style="list-style-type: none"> 1. PDG due to airspace structure. 2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply, advise DEL. on startup req 3. After 12.7 DME DUS BRNAV equipment necessary.
NETEX 2Z	(NETEX TWO ZULU)	On R054 DUS to 6 DME DUS - LT on track 009° to 12.7 DME DUS - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 200° to NETEX (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: A600+ - DL050[R] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX	<ol style="list-style-type: none"> 1. PDG due to airspace structure. 2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available). 3. After 12.7 DME DUS BRNAV equipment necessary.
KUMIK 2Z	(KUMIK TWO ZULU)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM to BAM (Δ) - on R096 BAM to 6.6 DME BAM - RT on track 129° to DEGOM (Δ) - RT on track 142° to KUMIK (Δ). Cross DEGOM at FL150 or above. GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - DEGOM[F150+;R] - KUMIK	<ol style="list-style-type: none"> 1. Only for flights with RFL150 or above. 2. After 6.6 DME BAM BRNAV equipment necessary. 3. Normally not available for flights above FL250 via BOMBI, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC.
COL 2Z	(COLA TWO ZULU)	On R054 DUS to 6.4 DME DUS - RT on R278 BAM inbd BAM - at 1.6 DME BAM RT on R164 BAM to 11.4 DME BAM - LT on R328 COL to COL (Δ). Cross 11.4 BAM at FL150 or above. GPS/FMS: [A600+] - DL050[R] - DL058[R] - BAM[L] - LIPMI[F150+;L] - COL	Flights unable to cross LIPMI at FL150 or above shall advise clearance Delivery upon startup request.
RWY 23L	(Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)		
LMA 8T	(LIMA EIGHT TANGO)	On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on track 297° LMA to LMA (Δ). Cross 8 DME DUS at 4000 or above. GPS/FMS: DL236 - [A600+;R] - DL238[A4000+] - LMA	<ol style="list-style-type: none"> 1. Only for flights to EDLN. 2. PDG 6.7% (410 ft/NM) due to airspace structure. If unable to comply, advise DEL on start-up request.
SONEB 3T	(SONEB THREE TANGO)	On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on R360 NOR to 45.1 DME NOR - RT on track 005° to SONEB (Δ). GPS/FMS: <u>DL230</u> - [A600+;R] - DL235 - DL232 [K190-;L] - ERKUM[R] - SONEB	<ol style="list-style-type: none"> 1. After 45.1 DME NOR BRNAV equipment necessary. 2. Only for flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at FL140 or above. If unable to comply, advise DEL. 3. MAX IAS 190 KT until established on R360 NOR.
MEVEL 9T	(MEVEL NINE TANGO)	On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on R360 NOR to 45.1 DME NOR - RT on track 053° via LUSIX(Δ) to MEVEL(Δ). GPS/FMS: <u>DL230</u> - [A600+;R] - DL235 - DL232 [K190-;L] - ERKUM[R] - LUSIX - MEVEL	<ol style="list-style-type: none"> 1. After 45.1 DME NOR BRNAV equipment necessary. 2. Flights intending to proceed via Y850 to BASUM must be able to cross ARTER above FL245. If unable or planning below FL245, continue via L179 to OSN. 3. MAX IAS 190 KT until established on R360 NOR.
GMH 6T	(GERMINGHAUSEN SIX TANGO)	On track 233° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to GMH (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL239[L] - DL241[L] - GMH	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL140 or below.

NOR 1T	(NÖRVENICH ONE TANGO)	<p>On track 233° DY to 4.5 DME DUS - LT on R354 NOR to NOR (Δ). Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>GPS/FMS: [A600+] - DL239[L] - NOR</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU 3. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
DODEN 5T	(DODEN FIVE TANGO)	<p>On track 233° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 21.1 DME GMH - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross 21.1 DME GMH at FL150 or above. Cross DODEN at FL250 or above.</p> <p>GPS/FMS: [A600+] - DL239[L] - DL241[L] - DL242 - ELBAL[F150+;R] - BETZO[R] - DODEN[F250+]</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After 21.1 DME GMH BRNAV equipment necessary. 3. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross ELBAL at FL150 or above shall advise clearance Delivery upon start-up request.
NUDGO 2T	(NUDGO TWO TANGO)	<p>On track 233° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 18.6 DME GMH - LT on track 068° via MAMIB (Δ) to KULIX (Δ) - LT on track 062° to NUDGO(Δ). Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>GPS/FMS: [A600+] - DL239[L] - DL241[L] - DEGOM[L] - ELBAL[L] - NAMIB - KULIX[L] - NUDGO</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Not available for flights into upper airspace. 3. After 18.6 DME GMH BRNAV equipment necessary.
MODRU 8T	(MODRU EIGHT TANGO)	<p>On track 233° to 3.4 DME DUS - RT on track 321° to UBORO (Δ) - LT on track 200° via NETEX (Δ) to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>GPS/FMS: [A600+] - DL243[K210-;R] - <u>UBORO[L]</u> - NETEX[K250-] - MODRU[F210+]</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply, advise DEL on start-up request. 3. After passing 3.4 DME DUS BRNAV equipment necessary. 4. MAX IAS 210 KT until established on track 321°. 5. MAX IAS 250 KT until established on track 200°.
NETEX 2T	(NETEX TWO TANGO)	<p>On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on track 297° LMA to 13.4 DME DUS - LT on track 240° LMA to NETEX(Δ). Cross 8 DME DUS at 4000 or above.</p> <p>GPS/FMS: DL236[A600+;R] - DL238[A4000+] - LMA[L] - NETEX</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available).
KUMIK 3T	(KUMIK THREE TANGO)	<p>On track 233° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 10 DME GMH - RT on track 142° to KUMIK (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross 10 DME GMH at FL150 or above.</p> <p>GPS/FMS: [A600+] - DL239[L] - DL241[L] - ELBAL - DEGOM[F150+; R] - KUMIK</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL150 or above. 3. After 10 DME BAM BRNAV equipment necessary. 4. Normally not available for flights above FL250 via BOMBI, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC.

COL2T	(COLA TWO TANGO)	<p>On track 233° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 32 DME GMH - RT on R104 MHV to 20.3 DME DUS - RT on R328 COL to COL (Δ).</p> <p>Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>Cross 20.3 DME DUS at FL150 or above</p> <p>GPS/FMS: [A600+] - DL239[L] - DL241[L] - DL244[R] - LIPMI[F150+; R] - COL</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Flights unable to LIPMI at FL150 or above shall advise ATC.
RWY 23R	(Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)		
LMA 4L	(LIMA FOUR LIMA)	<p>On Rwy track to 1.1 DME DUS or 600 ft, whichever is later - RT on track 297° LMA to LMA (Δ).</p> <p>Cross 8 DME DUS at 4000 or above.</p> <p>GPS/FMS: DL237 - [A600+;R] - DL238[A4000+] - LMA</p>	<ol style="list-style-type: none"> 1. Only for flights to EDLN. 2. PDG 6.7% (410 ft/NM) due to airspace structure. If unable to comply, advise DEL on start-up request.
SONEB 3L	(SONEB THREE LIMA)	<p>On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on R360 NOR to 45.1 DME NOR - RT on track 005° to SONEB (Δ).</p> <p>GPS/FMS: <u>DL231</u> - [A600+;R] - DL234 - DL233[K190-;L] - ERKUM[R] - SONEB</p>	<ol style="list-style-type: none"> 1. After 45.1 DME NOR BRNAV equipment necessary.. 2. Only for Flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at FL140 or above. If unable to comply, advise DEL. 3. MAX IAS 190 KT until established on R360 NOR.
MEVEL 8L	(MEVEL EIGHT LIMA)	<p>On Rwy track to 1 DME DUS or 600 ft, whichever is later - RT on R360 NOR to 45.1 DME NOR - RT on track 053° via LUSIX (Δ) to MEVEL(Δ).</p> <p>Max. IAS 190kt until established on R360 NOR.</p> <p>GPS/FMS: <u>DL231</u> - [A600+;R] - DL234 - DL233[K190-;L] - ERKUM[R] - LUSIX - MEVEL</p>	<ol style="list-style-type: none"> 1. After 45.1 DME NOR BRNAV equipment necessary. 2. Flights intending to proceed via Y850 to BASUM must be able to cross ARTER above FL245. If unable or planning below FL245, continue via L179 to OSN. 3. MAX IAS 190 KT until established on R360 NOR.
GMH 6L	(GERMINGHAUSEN SIX LIMA)	<p>On track 230° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to GMH (Δ).</p> <p>Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>GPS/FMS: [A600+] - DL240[L] - DL241[L] - GMH</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL140 or below.
NOR 5U	(NÖRVENICH FIVE UNIFORM)	<p>On track 230° DY to 4.5 DME DUS - LT on R354 NOR to NOR (Δ).</p> <p>Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>GPS/FMS: [A600+] - DL240[L] - NOR</p>	<ol style="list-style-type: none"> 1. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 3. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
DODEN 5L	(DODEN FIVE LIMA)	<p>On track 230° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 21.1 DME GMH - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ).</p> <p>Climb with 7% (425 ft/NM) or more until passing 3000.</p> <p>Cross 21.1 DME GMH at FL150 or above.</p> <p>Cross DODEN at FL250 or above.</p> <p>GPS/FMS: [A600+] - DL240[L] - DL241[L] - DL242 - ELBAL[F150+;R] - BETZO[R] - DODEN[F250+]</p>	<ol style="list-style-type: none"> 1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After 21.1 DME GMH BRNAV equipment necessary. 3. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross ELBAL at FL150 or above shall advise clearance Delivery upon start-up request.

NUDGO 2L (NUDGO TWO LIMA)	On track 230° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 18.6 DME GMH - LT on track 068° via NAMIB (Δ) to KULIX (Δ) - LT on track 062° to NUDGO (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL240[L] - DL241[L] - ELBAL[L] - NAMIB - KULIX[L] - NUDGO	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Not available for flights into upper airspace. 3. After 18.6 DME GMH BRNAV equipment necessary.
MODRU 8L (MODRU EIGHT LIMA)	On track 230° to 3.3 DME DUS - RT on track 321° to UBORO (Δ) - LT on track 200° via NETEX (Δ) to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. GPS/FMS: [A600+] - DL247[K210-;R] - <u>UBORO[L]</u> - NETEX[K250-] - MODRU[F210+]	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply, advise DEL on start-up request. 3. After passing 3.3 DME DUS BRNAV equipment necessary. 4. MAX IAS 210 KT until established on track 321°. 5. MAX IAS 250 KT until established on track 200°.
NETEX 2L (NETEX TWO LIMA)	On Rwy track to 1.1 DME DUS or 600 ft, whichever is later - RT on track 297° LMA to 13.4 DME DUS - LT on track 240° LMA to NETEX(Δ). Cross 8 DME DUS at 4000 or above. GPS/FMS: DL237[A600+;R] - DL238[A4000+] - LMA[L] - NETEX	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available).
KUMIK 3L (KUMIK THREE LMA)	On track 230° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 10 DME GMH - RT on track 142° to KUMIK (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross 10 DME GMH at FL150 or above GPS/FMS: [A600+] - DL240[L] - DL241[L] - ELBAL - DEGOM[F150+; R] - KUMIK	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL150 or above. 3. After 10 DME BAM BRNAV equipment necessary. 4. Normally not available for flights above FL250 via BOMBI, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC.
COL2L (COLA TWO LIMA)	On track 230° DY to 4.5 DME DUS - LT on R354 NOR to 20.6 DME NOR - LT on R266 GMH to 32 DME GMH - RT on R104 MHV to 20.3 DME DUS - RT on R328 COL to COL (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross 20.3 DME DUS at FL150 or above GPS/FMS: [A600+] - DL240[L] - DL241[L] - DL244[R] - LIPMI[F150+; R] - COL Remark: Underlined RNAV-Waypoints are fly-over waypoints (Δ)	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Flights unable to LIPMI at FL150 or above shall advise ATC.

VFR Entry / Exit Points

NOVEMBER	north of airport	MAX 2500 MSL - track 175° to / track 355° from airport	(N 51° 24,3' E006° 44,8')
ECHO	east of airport	MAX 2500 MSL - track 315° to / track 135° from airport	(N 51° 11,4' E006° 56,5')
SIERRA	south of airport	MAX 2500 MSL - track 335°→030° to / track 210°→155° from airport	(N 51° 08,4' E006° 47,2')