STANDARD OPERATING PROCEDURES

FIR Langen

Langen ACC (internal)

Effective: 20.03.2025

1 General.

1.1 Purpose.

The purpose of this document is to define the coordination to be applied between sectors in Langen ACC when providing ATS to air traffic (IFR/VFR) on the VATSIM network.

All information and procedures described in this document shall not be used for real world purposes.

1.2 Operational Status.

All operational significant information and procedures contained in this document shall be distributed to all concerned controllers by appropriate means. This document itself constitutes public information.

1.3 Validity.

This document becomes effective on 20.03.2025 and supersedes any previous version of the document for EDGG.

1.4 Revision control.

Revision	Date	Author
1.2	13.07.2023	Konstantin Eierhoff
1.3	28.12.2023	Phil Hauf
1.3.1	25.01.2024	Phil Hauf
1.4	21.03.2024	Leon Kleinschmidt
1.5	16.05.2024	David Dürr
1.6	03.10.2024	David Dürr
1.7	28.11.2024	David Dürr
1.8	20.03.2025	David Dürr

2 Areas of Responsibility and Sectorization.

2.1 Areas of Responsibility.

The lateral and vertical limits of the respective areas of responsibility are as follows:

4.4.1 Langen ACC.

Lateral limits: Langen FIR as described in AIP Germany
Vertical limits: Langen FIR as described in AIP Germany

2.2 Sectorization.

For detailed information about sectorization refer to vats.im/edgg

3 Procedures for Coordination.

3.1 Definitions.

A release is an authorization for the accepting ATS unit to climb, descend and/or turn (by no more than 45°) a specific aircraft before the transfer of control point. The transferring ATS unit remains responsible for separation within its Area of Responsibility, unless otherwise agreed.

Wherever VATSIM callsigns are used to describe the terms of a certain procedure, this procedure is also applicable for all higher stations that take over the responsibilities of said station.

3.2 Abbreviations.

ACC	Area Control Center
AD	Aerodrome
ADEP	Aerodrome of Departure
ADES	Aerodrome of Destination
AoR	Area of Responsibility
APP	Approach Facility
ATS	Air Traffic Services
COP	Coordination Point
CTR	Center/Enroute Facility
FIR	Flight Information Region
FIS	Flight Information Service
FL	Flight Level
GND	Ground
GNG	Global Nav Generator (gng.aero-nav.com)
kts	Knots
LoA	document
LoR	Line of Responsibility
NM	Nautical Mile
NVFR	Night Visual Flight Rules
RFL	Requested Flight Level
Rlsd	Released
SSR	Secondary Surveillance Radar
TMA	Terminal Manoeuvring Area
UAC	Upper Area Control Center
VFR	Visual Flight Rules
WEF	With Effect From

3.3 General Conditions.

Coordination of flights shall take place via the agreed coordination points (COP).

Coordinated flights shall be handed off via a valid COP. Any deviation shall be coordinated verbally, by text or by Euroscope inter-sector coordination.

Traffic shall be handed off at the levels, defined in the regulations below. If a specified level restriction cannot be met due to a lower RFL, traffic shall be handed off at RFL, if this does not cause a conflict with any other traffic. Otherwise, traffic shall be coordinated.

If a traffic situation is not covered herein or closely matching a covered one, individual coordination between the concerned sectors shall be made.

After Transfer of communications, traffic is NOT released for climb, descent or turns until Transfer of control or otherwise specified in this document.

If a station chooses to release an aircraft via the topsky-function within euroscope, the aircraft is released for the complete AoR of the controller. This does include upper and lower airspace combined, if a station covers both. This release is only additional to releases stated in 3.4 and does not cancel them.

If not stated otherwise a release in 3.4 is only valid for the specific transferring sector.

↓FLxxx / ↑FLxxx means „descending / climbing to a specified FL“, without any further restriction. Any required crossing/speed restriction shall be added separately. At level means that the aircraft shall be in level flight on a published flight level and in accordance with east/ west odd/even policy.

3.4 IFR flights between sectors within Langen FIR.

1.1.1 SF 01 - DLA, DLD, BOT

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDL	PISAP-Arrival	FL130	released	BOT	DLA
EDDG	DOMEG	↓FL190	released (*1)		HMM
	BAMSU	↓FL190	released (*2)		
EDLW	PADBA	↓FL70	released	DLA	PADL
EDLP	PADBA	↓FL130	released (*3)	DLD	PADL
EBBU FIR, ELLX, EBLG	NEREL	↓FL220	out of FL240, released	BOT	NOR

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDL, EDLN	ELBAL via DODEN SID	↑FL200	(*4)	DLD	SIG
	DEGOM via KUMIK SID	↑FL200	(*4)		
	LIPMI via COL SID	↑FL190	(*4)		TAU
ETNG	ELBAL	↑FL240	(*5)		SIG
EDDL	NVO RWY23	↑A050			DKA
	NVO RWY05	↑FL80			
	MAMIB via NUDGO SID	↑FL170	(*6)		PADH
	MEVEL	↑FL190	Released (*7)	BOT	HMM
	GMH	↑FL110		DLD	PADL
EDLN	NVO	↑A050	released	DLA	DKA
EDLW	BAMSU	↑FL150	released	DLD	NOR

(*1) Note: expect HMM at FL90
(*2) Note: expect HMM at FL90, BAMSU#J STAR has to be cleared by BOT if not otherwise coordinated verbally.
(*3) Note: PADBA#H STAR has to be cleared by DLD if not otherwise coordinated verbally.
(*4) Note: released for climb and turns to the south
(*5) Note: released for turns to the south
(*6) Note: Out of FL 140. In case aircraft is not able to reach FL140 at border, prior crossing approval by PADL has to be coordinated.
(*7) Note: BOT may clear traffic on MEVEL SID direct to MEVEL

Traffic handed over between sectors BOT, DLA and DLD is generally released.

1.1.2 SF 02 - BAD, LBU, MAN, NKRH, NKRL

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDFH	NOKDI	FL160	(*1)	MAN	KIR
EDDK	ASKIK	even level			TAU
ETAR	RINEX		(*2)	NKRH	PFA
EDDR, EDRZ			(*3)		
EDDS	INKAM	↓FL130	(*4)		STG
EDSB		FL120	(*5)		
EDFH	ETASA	FL240		LBU	NKRH
ETAR, EDDR	ETASA, LBU	↓FL150			
EDDF	XINLA EMPAX-Star	↓FL150	(*6)		KNG
EDDE	LAMPU	FL220			DKB
EDDN	DKB	FL190			
EDJA, EDRY, EDSB, EDTD, EDTL, EDTM		FL150			STG
EDDS	SUL	FL150	(*9)	BAD	REU
LFSB	DENEL	↓FL140			

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	BADLI	↑FL200	(*7)	NKRH	BAD
EDDS	ABGAN	↑FL240		LBU	NKRH
EDDS	DKB	↑FL200	(*8)		DKB
	GEBNO				
	OKIBA				KNG
EDFM	UMDAS, ROLSO	↑FL110		NKRL	

(*1) Note: Released passing abeam NOKDI
(*2) Note: Level subject to coordination, flight may be cleared DCT XIDOD (RWY26/27) or DCT RMS (08/09)
(*3) Note: Level subject to coordination, flight may be cleared DCT ZWN
(*4) Note: Leveled abeam INKAM, released
(*5) Note: released, NKRH may clear flights to EDSB DCT KRH, lower level can be coordinated with STG
(*6) Note: Descending via STAR
(*7) Note: Flights may be directly transferred to EDUU SLN, approved to cross BAD FL200+
(*8) Note: released, out of FL180
(*9) Note: if REU requests this traffic DCT DENEL, BAD shall descend and hand them off asap for further routing by REU.

In case NKRH and NKRL are controlled by one station, NKR may request the delegation of KNG7 sector (GND - FL215, XINLA-window, cf. ANNEX A) to enable tactical directs into EDDF when 07 is in use.

NKRH / BAD may clear flights which fly via following waypoints direct to those waypoints:
TRA, LUTIX, RILAX, WIL, DITON

EDRY and coordination with STG:
Arrivals to RWY34 and missed approaches out of RWY16 shall be coordinated with STG.

1.1.3 SF 03 - GIN, GED, HEF, SIG, TAU

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	OSPUL DIXAT#A ROLIS#A	FL100	COP at level	TAU	DFAN
	OSPUL DIXAT#B ROLIS#B	FL120			
	OSPUL DIXAT#C ROLIS#C				
	OSPUL DIXAT#D ROLIS#D	FL100			
	KERAX KERAX#A	FL110		GED	DFAS
	EBIPA KERAX#B	↓FL100			
	EBIPA KERAX#C	↓FL120			DFAN
	GED KERAX#D	↓FL130			
EDFH, ETAD	ROLIS	FL100		TAU	EIF
EDDK, EDKB	GULKO	↓FL110	COP at level (*1)		DKA
	OBOKA	FL100			
EDDK	BATEB	FL130	released	GIN	PADL
EDLW, EDLP	ARPEG	FL110			
	SODNA	FL110			

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	DITAM	↑FL240	07 DEP (*2)	TAU	NOR
		↑FL200	25/18 DEP (*2)		
	ARPEG	↑FL240	(*3)	GIN	PADH
EDFQ	KULIX	↑FL70	(*4)		PADL

(*1) Note: on request by DKA, flights may be generally cleared direct DK416 or WYP, descending FL110 out of FL150 abeam GULKO.
(*2) Note: released for left turns, traffic on OBOKA#E/#D SID may be cleared DCT DITAM or DCT OBOKA
(*3) Note: cross ARPEG FL190 or above
(*4) Note: these flights shall be coordinated with PADL before issuing departure release

Flights inbound EDDF are generally released and have to be cleared on the A- (25) or D-STAR (07).

EDGS and coordination with DKA:
Arrivals to RWY13, missed approaches out of RWY31, departures via RWY31 and NVO-SID via RWY13 shall be coordinated with DKA.

1.1.4 SF 04 - DKB, HAB, KNG, KTG, PSA

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	ADNIS EMPAX-Star SUPIX	FL100	released	PSA (KNG)	DFAS
	SPESA DEBHI-Star	↓FL110	(*1)	PSA (KTG)	
EDFM, EDRY	TOSTU	FL090		KTG	KNG
	KETEG	FL080	(*2)	KNG	NKRL
EDSB	KETEG	FL200			NKRH
EDDR, EDRZ, ETAR	KETEG	FL120			
EDDS, EDTY, EDJA, EDMA, EDMO, ETSI, ETSL, ETSN	NIKUT	FL200		HAB	DKB
EDDR	BAMTO	FL160			MAN
EDFH, EDSB, EDTL	Z93 KOSEK	FL200			
EDDS	GEBNO	FL120	released	DKB	STG
EDTY		↓FL110			

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	GIBSA SULUS-Dep	FL170	(*3)	KNG	KTG
EDDN	DKB	FL230	(*4)	DKB	LBU

(*1) Note: released SYD EMPAX; RWY25 in use: SPESA at level, RWY07 in use: CHA at level
(*2) Note: released for descent
(*3) Note: released for turns and climbs up FL190
(*4) Note: with RFL260+ traffic may skip LBU with prior approval request and go directly to EDUU

Flights inbound EDDF are generally released and have to be cleared on the B- (25) or C-STAR (07).

Flights on airway Z74 skip KNG and are instead transferred from HAB directly to DKB.

1.1.5 SF 05 - RUD, KIR, PFA, EIF

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	RAMOB northern STAR	FL110		RUD	DFAN
	RAMOB southern STAR	FL130			
EDLN	RASVO	FL200			NOR
EDDK	NIVNU	FL180			DKA
	RASVO	FL140		EIF	DKA
ETNN		↓FL100	released		
ELLX	ODVUX	↓FL160		KIR	EIF
EDDS, EDTL		FL 230			MAN
	BADLI, GEBDA	FL110	released	PFA	STG
EDFM, EDRY		FL070	released		NKRL
EDFH	OLIVI	FL100	released		EIF

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDFH	NVO	↑FL100		EIF	DKA
ETAR		↑FL140	(*1)		RUD
ETAR		↑FL200	(*2)	RUD	NOR

(*1) Note: released for climb
(*2) Note: released, may be cleared DCT NVO

Flights inbound EDDF are generally released and have to be cleared on the A- (25) or D-STAR (07).

1.1.6 SF 06 - PADH, PADL, HMM

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDLW	BADGO	FL140	COP at level	PADH	PADL
	TINSA	FL140	10 NM prior COP at level		
EDVK	ESADU, PELUN	FL140	10 NM prior COP at level		
EDDG	HMM	↓FL140	(*1)		HMM
EDDK	KOPAG	↓FL120	(*2)		DKA
EDDL	DOMUX	↓FL140	Released (*3) (*4)		DLA
	HALME	↓FL140	released	HMM	
EDLP	EXOBA	FL070			PADL
EDLW	DOMEG	FL080	(*5)		
EHEH	DOMEG SUVOX	↓FL200	released		BOT
EDDK	TUVTI	FL160			PADH
	ERNEP	FL100	COP at level	PADL	DKA

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDLW	BAMSU	FL080	EDDL RWY 05	PADL	DLD
		A050	EDDL RWY 23		DLA
	GMH	↑FL110	(*6)		PADH
	NUDGO	↑FL130			
	OSN	↑FL070			HMM
EDLW, EDLP	DOMEG		(*7)		
	HMM				
EDLP	TINSA	↑FL120			PADH
EDVK	TINSA, RUNER	FL130			
EDLP	GISDI	↑FL130	out of FL100		GIN
EDDL, EDLN	GMH	FL110	RFL 140 or less		SIG
EDLW	GMH	↑FL190	out of FL180	PADH	
EDDG	HMM, DOMEG		(*8)	HMM	PADH
EDDG, EDLP	DOMEG	↑FL180			DLA/BOT

(*1) Note: expect FL090 HMM at level
(*2) Note: PADH may clear traffic DCT KOPAG; DKA may request KOPAG arrival for runway 24 with FL090 at KOPAG, after KOPAG DCT WYP for arrival runway 13, or after KOPAG DCT COL for arrival runway 31
(*3) Note: Released by PADL for turn and descend to FL100
(*4) Note: PADH may clear traffic DCT DOMUX as long as new track remains Northeast of PADBA

(*5) Note: DOMEG#A star has to be cleared if not otherwise coordinated verbally.
(*6) Note: released for climb
(*7) Note: If ED-R inactive, PADL may coordinate higher level with HMM
(*8) Note: flights via HMM and DOMEG into PADH are subject to coordination

1.1.7 SF 07 - DKA, NOR

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDFH	NVO	FL140	released	DKA	EIF
EDLN	NVO	↓FL070	released		DLA
EDDL	BIKMU	↓FL130	released (*1)	NOR	
EDDL	ELDAR	FL080	(*2)		
EDLP, EDLW	BAMSU	↓FL160	released		DLD
EDLV	NAZAF	↓FL120	(*3)		BOT
EDDG	QATJA	↓FL230	released		
EDDR, EDRZ, ETAR	RASVO	FL210			RUD
ETNN	NVO	A050	released	DKA	TNNA
	IZWOK	FL070	released		

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDK	NVO (06/14)	↑FL140	released	DKA	NOR
	NVO (24/32)	↑FL100	released		NOR
	COL	↑FL130	(*4)		TAU
	KUMIK	↑FL140	(*5)		SIG
	PODIP	↑FL140	released		PADH
	WYP	↑FL090	released		DLD

(*1) Note: released for turns not further east then BAM, released for descent to FL070
(*2) Note: COP at level, released for turns and descent to FL070
(*3) Note: out of FL180, released
(*4) Note: released for climb
(*5) Note: released for climb and turns to the south

DKA may request flights from TAU via GULKO to be generally cleared direct DK416 or WYP, descending FL110 out of FL150 abeam GULKO.

1.1.8 SF 08 - STG/REU

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDS	ETASA	FL140	(*1)	STG	KNG
	OKIBA		(*2)		LBU
	VESID		released		
	TAGIK				
	KRH				PFA
	DKB				25: LBU 07: DKB
	GEBNO				
EDTY	DKB	↑FL100	released		DKB
	LAMPU		out of FL70		
	ETASA	FL140	(*3)		KNG
	GUPIN				LBU
	LBU				
EDDS	DENEL	FL140		REU	BAD
EDDS, EDSB, EDTL	NATOR				
EDSB, EDTL, EDTM	SUL				
EDSB	UBASI				
EDTM	ESULI				

(*1) Note: released, STG may clear flights DCT SPESA
(*2) Note: released, STG may clear flights DCT ROLSO when RWY 07 is in use
(*3) Note: flights via Z724 shall be transferred to NKRH instead, crossing at FL140 released by KNG

All EDDS departures from RWY 07 are generally considered climbing, departures from RWY 25 have to be at level.

1.1.9 SF 10 - DFAN, DFAS

Arrival AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	DF601	↓FL090	(*1)	DFAN	DFAS
	FFM IMCOM#C RASVO#C	FL130	(*2)		
	FFM DIXAT#C ROLIS#C	FL120			

Departure AD	COP	Level Allocation	Special Conditions	From Sector	To Sector
EDDF	KUSOM	↑FL130	(*5)	DFDN	TAU
	OBOKA	↑FL130			
	MARUN, TOBAK	↑FL130			GIN
	ANEKI	↑FL130	(*3)	DFDS	NKRH
	SULUS (07), KOMIB	↑FL130			HAB
	SOBRA, ULKIG	↑FL130			KIR
	AMTIX	↑FL110	COP at level		KNG
EDFE	AMTIX	↑FL080	(*4)		

(*1) Note: released, transfer before DF601
(*2) Note: released, transfer before FFM
(*3) Note: speed restriction 220kts until DF101 may be canceled by DFDS and NKRH individually without prior coordination.
(*4) Note: released SYD arrivals
(*5) Note: KUSOM at or above FL110

Departures out of EDDF are generally released upon transfer of communications SYD all departures and arrivals.

4 Special Procedures.

4.1 EDDF Holdings

In case of holdings ADES EDDF the holding-area over following points will be delegated.

4.4.1 SPESA.

SPESA (FL105-FL135) is delegated to the appropriate ACC-station without prior coordination. In case KNG and KTG are controlled by different stations, KTG is responsible.

4.4.2 KERAX.

KERAX (FL105-FL135) is delegated to the appropriate ACC-station without prior coordination.

4.2 Spacing within Langen ACC

Generally traffic shall be transferred with a spacing of 5 NM as described in 5.2. Following exceptions are made for traffic on same level and on same or converging routes.

4.4.1 Frankfurt TMA.

Traffic transferred from Langen ACC to Frankfurt APP shall be transferred with a mileage of 8 NM constant or increasing. This may also be achieved on average after verbal coordination.

4.4.2 Düsseldorf TMA.

Traffic transferred to DLA/BOT with destination in TMA shall be transferred with 10 NM constant or increasing.

4.4.3 Stuttgart TMA.

Traffic transferred to STG/REU with destination in TMA shall be transferred with 10 NM constant or increasing.

4.3 Releases within Langen ACC

4.4.1 Frankfurt APP.

Traffic transferred from Langen ACC to Frankfurt APP and from Frankfurt APP to Langen ACC is released. The transferring ATS unit remains responsible for separation within its AoR. If speed control is used by APP, he will become responsible for separation to succeeding flights.

4.4.2 Düsseldorf TMA.

Traffic transferred between DLA, BOT, DLAT and DLD is generally released.

4.4 Distance to sector border

If not described otherwise in this document a station has to maintain half the horizontal separation to the boundary of his AoR. This separation does also apply for boundaries with external sectors; if higher minimas are described in those letters, the higher minimas shall be used.

4.4.1 Spangdahlem AoR

Langen ACC shall maintain full vertical separation to the boundary of Spangdahlem AoR. Spangdahlem GCA may use the AoR up to and including the vertical boundary.

4.4.2 Ramstein AoR

Langen ACC shall maintain full vertical and horizontal separation to the boundary of Ramstein AoR. Ramstein GCA may use the AoR up to and including the vertical and horizontal boundary. This does not apply to the horizontal boundary with NKRL.

4.4.3 Nörvenich AoR

Langen ACC shall maintain full horizontal separation to the boundary of Nörvenich AoR. Nörvenich Radar may use the AoR up to and including the horizontal boundary.

4.4.4 Büchel AoR

Langen ACC shall maintain full vertical separation to the boundary of Büchel AoR. Büchel Radar may use the AoR up to and including the vertical boundary.

5 Transfer of Control and Transfer of Communication.

5.1 Transfer of Control.

Transfer of Control shall take place at the AoR boundary.

If the downstream sector in EuroScope is set to >.break<, the procedure 5.4 is suspended and transfer of communication can only take place after the downstream sector has assumed the flight via the appropriate function of the radar client.

If it becomes necessary to reduce or suspend transfers, a 5-minute prior notification is required.

When transfers are suspended, the hand-off procedure (5.4) is suspended.

5.2 Silent transfer of control.

Provided that no spacing for adjacent sectors is specified in this document, controllers may use 5nm of spacing within Langen FIR for silent transfer of control for aircraft on same level and with same or converging routes.

The controller has to make sure that this spacing is never below described spacing for at least 20nm in the adjacent sector.

If possible, these minima should also be met for flights with same destination at different levels enabling a constant flow of traffic.

This mileage may also be achieved on average with prior coordination. Separation has to be ensured and maintained by transferring sector.

5.3 Transfer of Communications.

Transfer of Communications shall take place before Transfer of Control.

5.4 Hand-Off procedure.

Unless otherwise agreed between stations online, the following hand-off procedure shall apply:

1. The upstream sector sends the aircraft to the frequency of the downstream sector by voice or text.
2. The upstream sector initiates a transfer via the appropriate function of the radar client.
3. Upon initial call the downstream sector assumes the flight via the appropriate function of the radar client.

5.5 SSR Code Assignment.

Both ATS units shall transfer flights on verified discrete SSR codes. Any change of SSR code by the accepting ATS unit may only take place after the transfer of control point.

Appendix A
Area of Common Interest (ACI)

XINLA-Window