



LOCAL OPERATIONAL PROCEDURES

within

Karlsruhe UAC

Effective: [April 17, 2025 \(AIRAC2504\)](#)

1 General.

1.1 Purpose.

The purpose of these Local Operational Procedures and Orders is to define the coordination to be applied within Karlsruhe UAC 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 Validity.

The Local Operational Procedures and Orders laid out in this document become effective on [April 17, 2025 \(AIRAC2504\)](#) and supersede previous local operational procedures established within Karlsruhe UAC from [February 26, 2025](#).

1.3 Revision control.

Revision	Date	Author
1.0	30.11.2023	Hannes Altmann, Konstantin Eierhoff, Phil Hauf, Jannik Vogel
1.1	22.02.2024	Hannes Altmann, Jannik Vogel
1.2	03.10.2024	Jannik Vogel, Phil Hauf, Hannes Altmann
1.3	28.11.2024	Jannik Vogel
1.4	20.02.2025	David Dürr
1.5	17.04.2025	David Dürr, Hannes Altmann, Jannik Vogel

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:

2.1.1 Karlsruhe UAC.

Lateral limits: Rhein UIR as described in AIP Germany

Vertical limits: FL245 – FL660 (above Langen ACC)
FL285 – FL660 (above Bremen ACC)
FL315 – FL660 (above München ACC)

2.2 Sectorization.

See here: vats.im/eduu

2.3 Delegation of the Responsibility for the Provision of ATS.

The area of responsibility of Karlsruhe UAC includes the delegated airspace as laid out in the Letters of Agreement with external units.

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. E.g., procedures for an APP-stations are also applicable for the respective CTR station fulfilling the duties of said APP station.

3.2 Abbreviations.

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

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 the following local operational procedures and orders.

↓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.

FLxxxA means “climbing and above specified FL”, FLxxxB means “descending and below specified FL”.

3.4 Flights sorted by transferring sector.

3.4.1 EBG South

Targeted Flights	Transfer Condition	FROM sector	TO sector
Arr. EDDF, ETAR, ETOU, EDFZ, EDFE, EDGS, EDRK, LKKV	FL380 or below	ALP	CHI
Arr. EDDS, EDSB, EDRY, EDRY, EDFM, EDQ*, EDDN, ETSI, ETSN	FL320		
Arr. LOWL	FL330 or below		
Arr. LOWW	FL370 or below		
Arr. LKCS	FL360 or below		
Arr. LOWW	FL370 or below	ALP	ISA
Arr. EDGS, EDFQ	FL320	ALP	TGO
Arr. EDDK, EDKB, EDFH, EDDR, ELLX	FL340 or below		
Dep. LOWI	FL340 or below		
Arr. LSMD, EDDS, EDSB, EDFM, ETAR, EDTD, EDTL, EDM, EDTY, EDRY via KPT	FL320	CHI	ALP
Arr. LIPZ, LIPH, LIPX, LIPO, LIPA	FL320		
Arr. LSZH	FL340 or below		
Arr. LIMP, LIPE, LIPK, LIME	FL350 or below		
Arr. LFST, LSZB, LSMA, LSMB, LSME, LSMF, LSML, LSMM, LSMO, LSMP, LSMS, LSMU, LFSB, LFGB, LFSM	FL360 or below		
Arr. LKPR, LKPD, LKKB, LKCV, LKHK, LKMH, LKVO	FL340 or below	CHI	DON
Arr. EDDF, ETOU, EDFZ, EDFE, EDGS, EDRK via M726	FL360 or below	CHI	ISA
Arr. ETAR, LKKV	FL340 or below		
Arr. EDDF via Q863	FL360 or below		
Arr. EDDP, EDAC, EDDE, EDCD, EDFQ, EDVK via M726	FL360 or below		
Arr. LIPZ, LIPH, LIPX, LIPO, LIPA, LIPB, LSZS, LSZA, LDZA, LDRI, LJMB, LDPL, LDLO	FL360 or below	DON	CHI
Dep. LKPR	FL360 or below		
Arr. EDDC	FL360 or below	DON	ERL
Dep. LOWL, LOWS	FL360 or below		
Arr. EDFH, ELLX, ETAD	FL320	DON	WUR
Arr. LIPZ, LIPH, LIPX, LIPO, LIPA, LIPB, LSZS, LSZA, LJLJ, LOWG, LOWK, LOXZ, LOWW, LDZA, LDRI, LJMB, LDPL, LDLO	FL350 or below	ISA	CHI

Arr. EDDF, ETOU, EDFE, EDFZ, EDDP, EDAC, EDDE, EDCD, EDFQ, EDVK, LKPR, LKPD, LKKB, LKCV, LKHK, LKMH, LKPM , LKVO	FL320	ISA	DON
Dep. EDDF via MIQ	FL350 or below		
Arr. EDDK, EDKB, EDFH, EDDR, ELLC	FL340 or below	ISA	TGO
Arr. EDGS, EDFQ	FL320		

3.4.2 EBG East

Targeted flights	Condition	FROM Sector	TO sector
Arr. LOWS, LOWI, LOWL	FL320	ERL	DON
Arr. LOWW	FL370 or below		
Arr. EDDK, EDKB, EDKZ, EDLA, EDLE, EDLM, EDLD, EDLI, EDLP, EDLW	PILAM at FL320	ERL	FUL
Arr. EDDV, EDVE, ETNW	FL360 or below		
Arr. EDDR, EDFH, ELLX, EDSB, EDRZ, ETAD	FL320	ERL	WUR
Arr. EBLG, EBZW, EHBK, LFLJ, LFSN	FL360 or below		
Arr. EDTM, EDTD	FL340 or below		
Arr. EDDR, EDDS, EDFM, EDFV, EDJA, EDMS, EDRY, EDTL, EDTY, ETAR, ETIN, ETHN, ETOR, LKKV	FL360 or below	HVL	SAL
Arr. EDDF, EDFE, EDFQ, EDFZ, ETOU (except via DIDGI and TOPDI)	FL340 or below		
Arr. LKPR, LKPD, LKKB, LKCV, LKHK, LKMH, LKVO	FL350 or below		
Arr. LKPR, LKPD, LKKB, LKCV, LKHK, LKMH, LKVO, LKPM	FL350 or below	HVL	SPE
Arr. LKCS	FL370 or below		
Arr. EDDP via SUVAL	FL290	OSE	HVL
Arr. LOWS, LOWL	FL370 or below	SAL	ERL
Arr. LOWI	FL350 or below		
Arr. EDSB, EDTM	FL360 or below		
Arr. LKPR, LKPD, LKKB, LKCV, LKHK, LKMH, LKVO, LKCS	FL320	SAL	SPE
Arr. EDDV, EDLP, EDLI, EDVK, ETNW	FL360 or below	SPE	HVL
Arr. EDDW via KOSIX-L986-MAG	FL360 or below		
Arr. EDDF, EDFE, EDFQ, EDFZ, ETOU via TADUV	FL360 or below	SPE	SAL
Arr. EDDF, EDFE, EDFQ, EDFZ, ETOU on DCT SULED-ROBEL	FL360 or below		
Arr. EDDF via SODRO-SULUS	FL340 or below		
Arr. EDDM, EDMA, EDMO	FL350 or below		

3.4.3 EBG Central

Targeted flights	Condition	FROM sector	TO sector
Arr. EDDP, EDAC, EDBC, EDBM	FL350 or below	FFM	FUL
Arr. EDDV, EDVE, ETNW	FL330 or below		
Arr. EBBR, EBMB, EBAW, EBCV, EBCI, EHEH, EHWO, EHGR, EHVK	FL320 or below	FFM	NTM
Arr. EBLG, EBZW, EHBK, LFJL, LFSN	FL300 or below		
Arr. EDTF, EDTD, LSZH, LFSB, LSZR, LSMD, EDNY, EDTM, EDJA	FL350 or below	FFM	SLN
Dep. EDDL, EDDG, EDDK, EDGS, EDKB, EDKL, EDLA, EDLE, EDLM, EDLN, EDLP, EDLW, ETNG, ETNN			
Arr. EDTL, EDTO			
Arr. EDMA, EDMO, ETSI, ETSL, EDJA, ETSN	FL270 or below	FFM	WUR
Arr. EDDM	FL350 or below		
Dep. EDDL, EDDG, EDDK, EDGS, EDKB, EDKL, EDLA, EDLE, EDLM, EDLN, EDLP, EDLW, ETNG, ETNN			
Arr. LKKV, EDMS			
Arr. EDDN, EDQC, EDQD, EDQK, EDQM, EDQT, EDTY, EDQA	FL290 or below		
Arr. EDDN, EDQC, EDQD, EDQK, EDQM, EDQT, EDTY, EDQA	FL250		
Arr. EDTF, EDTD, LSZH, LFSB, LSZR, LSMD, EDNY, EDTM, EDJA	FL390 or below	FUL	FFM
Dep. EDDV, EDVE	FL350 or below		
Arr. EDSB, LFGA, LFST	FL310 or below		
Arr. LKPR, LKKB, LKVO, LKCV, LKHK, LKMH, LKPD, LKCS	FL370 or below	FUL	ERL
Arr. EDDB	FL360 or below (Even and Odd)	FUL	SAL
Arr. EDDS, EDSB, EDTY, EDTL, EDTM, EDMA, EDMO, ETSI, ETSL, ETSN, EDJA	FL250	FUL	WUR
Arr. LKPR, LKKB, LKVO, LKCV, LKHK, LKMH, LKPD, LKCS, EDDC	FL370 or below	WUR	ERL
Arr. ETNG, EBLG, EBZW, EHBK, LFJL, LFSN	FL340 or below	WUR	FFM
Arr. EBBR, EBMB, EBAW, EBCV, EBCI, EHEH, EHWO, EHGR, EHVK	FL380 or below		
Arr. EDLA, EDLW, EDLE, EDLM, EDLD, EDKZ, EDLP, EDLI, EDVK	FL280 or below	WUR	FUL
Arr. EDDP, EDAC	FL330 or below		
Arr. EDDV, EDVE, ETNW	FL360 or below		
Arr. LOWL	FL370 or below	WUR	ISA
Arr. LSZH, LSZR, LSMD, EDNY, EDTO, EDTF, EDTL, LFJL, LFSB, LFST, LFGA	FL320 or below	WUR	TGO
Arr. EDTM, EDTD	FL280 or below		

3.4.4 EBG West

Targeted flights	Condition	FROM sector	TO sector
Arr. EDDN, EDDE, EDTY, EDQT, EDQC, EDQD, EDQM, EDQA	FL290 or below	NTM	FFM
Arr. EDMA, EDMO, ETSI, EDJA, ETSN, ETSL	FL310 or below		
Arr. LKKV, EDMS	FL330 or below		
Arr. EDDV, EDVE, ETNW	FL350 or below		
Arr. EDDM	FL390 or below		
Arr. EDTF, EDTD, EDJA, LSZH, LFSB, LSZR, LSMD, EDNY, EDTM	FL330 or below	NTM	SLN
Arr. EDTL, EDTO	FL310 or below		
Arr. EBBR, EBMB, EBAW, EBCV, EBCI, EBLG, EBZW, EHBK, EHBD, LFSN	FL320 or below	SLN	NTM
Arr. EHEH, EHWO, EHGR, EHVK	FL340 or below		
Arr. LOWI, LSZS, LSZA, LSZL, LIPB	FL350 or below	SLN	TGO
Arr. EDDM	FL310 or below		
Arr. EDDM	FL330 or below	SLN	WUR
Arr. LOWS	FL350 or below	TGO	ALP
Arr. LIMC, LIML, LIME, LIPZ, LIPH, LIPX, LIPO, LIPA	FL370 or below		
Arr. LDZA, LDRI, LJMB, LIPQ, LDPL, LDLO	FL370 or below	TGO	ISA
Arr. LSGC, LSMA, LSME, LSMP, LSZB, LSZC, LSZG, LSZM	FL250	TGO	SLN
Arr. Within LSAS except LSG*, LSM*, LSZ*	FL270 or below		
Arr. EDDK, EDKB	FL280 or below		
Arr. ELLX	FL300 or below		
Arr. LSGG, LSGS, LSZA, LSZL, LSZS, LFLB, LFLI, LFLJ, LFLP	FL310 or below		
Arr. LIMC	FL330 or below		
Arr. EDLA, EDLW, EDLE, EDLM, EDLD, EDKZ, EDLP, EDLI, EDVK	FL340 or below	TGO	WUR
Dep. LSZH			

4 Special Procedures.

4.1 Internal Tactical Directs.

Following tactical directs can generally be cleared provided that sector sequence and a distance to sector boundaries of 2,5 NM or greater is maintained.

4.1.1 EBG South

Available DCT	FROM Sector	TO Sector
INPUL, LASMI, AGNAV, RUDNO, TIVDA, BADVI, MAH, MEBEK, KONIN (1)	ALP	CHI
AGNAV, RUDNO, TIVDA, UMDAS, ETASA, PETIX, HAREM, ASPAT (1)	ALP	ISA
HAREM, UMDAS, ETASA, TEDGO, BANIM, IBGES, SUNEG	ALP	TGO
BERAS, LIZUM, LIKDA, OLPIX, KPT (1)	CHI	ALP
AGNAV, RUDNO, TIVDA (Change of sector sequence allowed) (1)	CHI	DON
MAH, AGNAV, RUDNO, TIVDA, LASMI, UMDAS, ETASA, ASPAT, BABEG, SUNEG (1)	CHI	ISA
LARET, MAPOX, MASEK, ABGUS, ZUCKA, ESAMA, GASKA and all waypoints within EBG East	DON	ERL
KUMOM, EBEDA	DON	CHI
LOHRE, COSJE, PETIX, ESAMA	DON	WUR
OTT, EBEDA, GOMIG, VAVOR, LATLO, RADIZ	ISA	CHI
AGNAV, RUDNO, TIVDA, PETIX, ASPAT (Change of sector sequence allowed) (1)	ISA	DON
HAREM, UMDAS, ETASA, SUNEG	ISA	TGO

(1) Transfers to EDMM shall not be cleared further than respective COP.

4.1.2 EBG East

Available DCT	FROM Sector	TO Sector
DEXIT, ALUTU, SIMBA, LAMSI, RUDNO, RUDAP, DOSEL (except Arr. LOWI, LOWS, LOWL)	ERL	DON
MAPOX, MASEK, ARNIX, AMETU, GASKA	ERL	FUL
Overflights: All waypoints within WUR TEKTU Arrivals via COSJE: COSJE	ERL	WUR
<ul style="list-style-type: none"> Overflights: all waypoints or maximum last UAC waypoint and DKB Arr. EKCH: MONAK Arr. EDDH: BUMIL, ABGUS Arr. EDDW: GURLO Arr. LKPR: HDO, LALUK Arr. EDDM: SODRO Arr. EPWR: LASIS Arr. EPPO: SUBIX 	Within EBG East	

4.1.3 EBG Central

Available DCT	FROM Sector	TO Sector
MASEK, FEDZA, ROBEL, TAMEB	FFM	FUL
BUB, UMUPU, ADKUV, RUDUS	FFM	NTM
GIGET	FFM	SLN
<ul style="list-style-type: none"> Overflights: all waypoints within WUR and ERL sector Arr. EDDM: ELMOX Arr. LKPR: TONSU OKG and ENITA 	FFM	WUR
TIVUN	FUL	FFM
OKG, TONSU	FUL	ERL
SUBIX, LASTO, TAMEB	FUL	SAL
OSBIT	FUL	WUR
<ul style="list-style-type: none"> Overflights: All waypoints within ERL sector Arr. LKPR: OKG, RUDAP, ENITA, TONSU 	WUR	ERL
BUB, ESAMA, BOMBI, ADKUV, ARPEG (north of LOHRE)	WUR	FFM
<ul style="list-style-type: none"> Overflights: All waypoints within FUL sector (except MAPOX) (except Arr. EDDV): DUDCA, NORTA 	WUR	FUL
AKANU, XERUM (when entering ISA between GEBNO and DINKU)	WUR	ISA
TEDGO	WUR	TGO

4.1.4 EBG West

Available DCT	FROM Sector	TO Sector
MASEK, TAMEB, FEDZA, ROBEL, TESGA	NTM	FFM
MADEB, OTRES, TIRUL, ELMEM, MOMUK	SLN	TGO
MADEB, OTRES, TIRUL, IRBIR, ELMEM, MOMUK	TGO	ALP
HAREM, TIKNI	TGO	WUR
<ul style="list-style-type: none"> Overflights: All waypoints withing EBG West TRA, DITON, LUTIX, ROTOS, COA, DENUT, KOZUF, BUB, IDOSA, LIRSU Arr. LSZH, LSAZ, EDNY, LSMD: LAMGO Arr. EHEH: ROLIS Arr. EB**: IDOVI Arr. EDDK: UMDAS (north of KOVAN) Arr. ELLX: IBGES Arr. LFSB: KRH 	Within EBG West	

4.2 Enroute level allocations.

Generally, flights shall be handed off in accordance with Even-Odd-Rule, except otherwise specified in the table below or the procedures laid down in section 3.4 of this LOP.

FROM Sector	TO Sector	Allocation	Exceptions and Remarks
ALP	CHI	Even/Odd	• Traffic on M726 (even)
ALP	ISA		
CHI	ALP		
CHI	DON		
DON	CHI		• Departures LKAA FIR (even)
DON	ERL	Even	• Flights from ISA via SAL (even/odd)
ISA	DON	Odd	• Flights via ERL (even/odd) • Flights via AGNAV/TIVDA (even/odd) • Flights via WUR (even)
Arrivals within EBG East		Even/Odd	If flight starts its initial descent in EBG East
ERL	DON	Odd	
ERL	SAL	Even	• Flights via SPE (odd) • Flights via EPWW (even/odd)
ERL	WUR	Even	• Flights via TGO (even/odd)
HVL	OSE	Even	• Flights via EPWW (odd) • Flights via ESMM (even/odd)
HVL	SAL	Odd	• Flights via WUR sector (even/odd) • Flights via FUL sector (even/odd)
HVL	SPE	Odd	• Flights via MAREM (even/odd) • Flights via ERL sector (even/odd)
OSE	HVL	Odd	• Flights via EDYY (even) • Flights via MAREM (even/odd) • Flights via WUR sector (even/odd)
SAL	ERL	Odd	• Flights via TGO and WUR (even/odd) • Flights via WUR and FFM (even)
SAL	HVL	Even	• Flights via EPWW (odd) • Flights via ESMM (even/odd)
SAL	SPE	Odd	
SPE	HVL	Even	• Flights via EPWW (odd) • Flights via ESMM (even/odd)
SPE	SAL	Even	• Flights via ERL (even/odd)
FFM	SLN	Odd	
FUL	SAL	Odd	• Flights via ROBEL/TAMEB (even/odd)
WUR	FUL	Even	• Flights via SAL (even/odd)
WUR	TGO	Even/Odd	
TGO	WUR	Even	

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.

Radar transfer without coordination between aircraft proceeding in the same direction may be carried out provided that the minimum distance between the aircraft is never less than 10 NM within the time of transfer until 20 NM beyond the common sector boundary.

5.3 Transfer of Communications.

Transfer of Communications shall take place no later than 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.