

LETTER OF AGREEMENT

between

IVAO ATC HQ
Maastricht UAC

and

IVAO Germany
Munich ACC



Effective – 1 April, 2021

1 General

1.1 Purpose

The purpose of this Letter of Agreement is to define the coordination procedures to be applied between Maastricht UAC and Munich ACC when providing ATS to General Air Traffic and Operational Air Traffic.

These procedures are supplementary to those specified in IVAO Documentation and/or Divisional website Documents.

1.2 Operational Status.

Both Divisions shall keep each other advised of any changes in the operational status of their facilities and navigational aids, which may affect the procedures specified in this Letter of Agreement.

2 Areas of Responsibility for the Provision of ATS

2.1 Areas of Responsibility

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

Note: See para 2.2 for the description of the areas where delegation of the responsibility for the provision of ATS is applicable.

2.1.1 Maastricht UAC

Lateral limits: Hannover MaastrichtUIR as published in the AIP Germany

Vertical limits: FL 245 – FL 660

ICAO airspace classification for the area of responsibility of Maastricht UAC along the common boundary of the areas of responsibility of Maastricht UAC and Munich ACC is described in Annex B to this Letter of Agreement.

2.1.2 Munich ACC

Lateral limits: Munich FIR as published in the AIP Germany

Vertical limits: GND – FL 315

ICAO airspace classification for the area of responsibility of Munich ACC along the common boundary of the areas of responsibility of Maastricht UAC and Munich ACC is described in Annex B to this Letter of Agreement.

2.2 Areas for Cross Border Provision of ATS (ATS Delegation)

The provision of ATS in respect of this LoA means the following services:

Air Traffic Control Service (ATC), Flight Information Service (FIS) for controlled flights, Alerting Service (ALRS)

2.2.1 Delegation of ATS from Maastricht UAC to Munich ACC

Within the HannoverMaastricht UIR the provision of ATS to GAT and OAT in accordance with the airspace classification is performed by Munich ACC within the following area(s):

ABGUS Low Area – See Appendix 1

Lateral Limits: N513400 E104200 – N514530 E110845 – N514823 E110838 –
N513400 E010420

Vertical limits: FL 245 – FL 315

Airspace Classification: C

2.2.2 Delegation of ATS from Munich ACC to Maastricht UAC

Not applicable.

2.2.3 Other Areas for Cross Border Provision of ATS

Areas for cross-border provision of ATS defined with other coordinating air traffic services units along the common boundary of the areas of responsibility of Maastricht UAC and Munich ACC are described in Annex B to this Letter of Agreement.

2.2.4 Alerting Service

The ATS unit responsible for the provision of ATS, by virtue of delegation, shall provide alerting service and shall notify immediately the supervisor of the delegating ATS unit. The supervisor of the delegating ATS unit shall notify the appropriate rescue coordination centre as required.

2.2.5 Territorial Matters

- Not applicable -

2.3 Special Provisions

- Not applicable -

3 Procedures

The procedures to be applied by Maastricht UAC and Munich ACC are detailed in the Annexes to this Letter of Agreement:

Annex A	Definitions and Abbreviations
Annex B	Area of Common Interest
Annex C	Exchange of Flight Data
Annex D	Procedures for Coordination
Annex E	Transfer of Control and Transfer of Communications
Annex F	ATS Surveillance Based Coordination Procedures
Annex G	Checklist of Pages

4 Revisions and Deviations.

4.1 Revision of this Letter of Agreement

The revision of the present Letter of Agreement, excluding Annexes and their Appendices, requires the mutual written consent of the signatories.

4.2 Revision of the Annexes to the Letter of Agreement.

The revision of Annexes to the present Letter of Agreement requires the mutual written consent of the representatives of the respective IVAO Divisions designated by the respective signatories, normally the ATC Operations Coordinator at the respective Division.

4.3 Temporary Deviations.

When necessary, the ATC Department of the IVAO Divisions concerned may introduce, by mutual agreement and for a specified period of time, temporary modifications to the procedures laid down in the Annexes to the present Letter of Agreement.

4.4 Incidental Deviations.

Instances may arise where incidental deviations from the procedures specified in the Annexes to this Letter of Agreement may become necessary. Under these circumstances air traffic controllers are expected to exercise their best judgement to ensure the safety and efficiency of air traffic.

5 Cancellation.

5.1 Cancellation of the present Letter of Agreement by mutual written agreement of the respective IVAO Divisions may take place at any time.

5.2 Cancellation of this Letter of Agreement by either IVAO Division is possible at any time, provided that the cancelling party declares its intention in writing to cancel the Letter of Agreement with a minimum pre-notification time of 6 months before the date the cancellation is to take effect.

6 Interpretation and Settlement of Disputes.

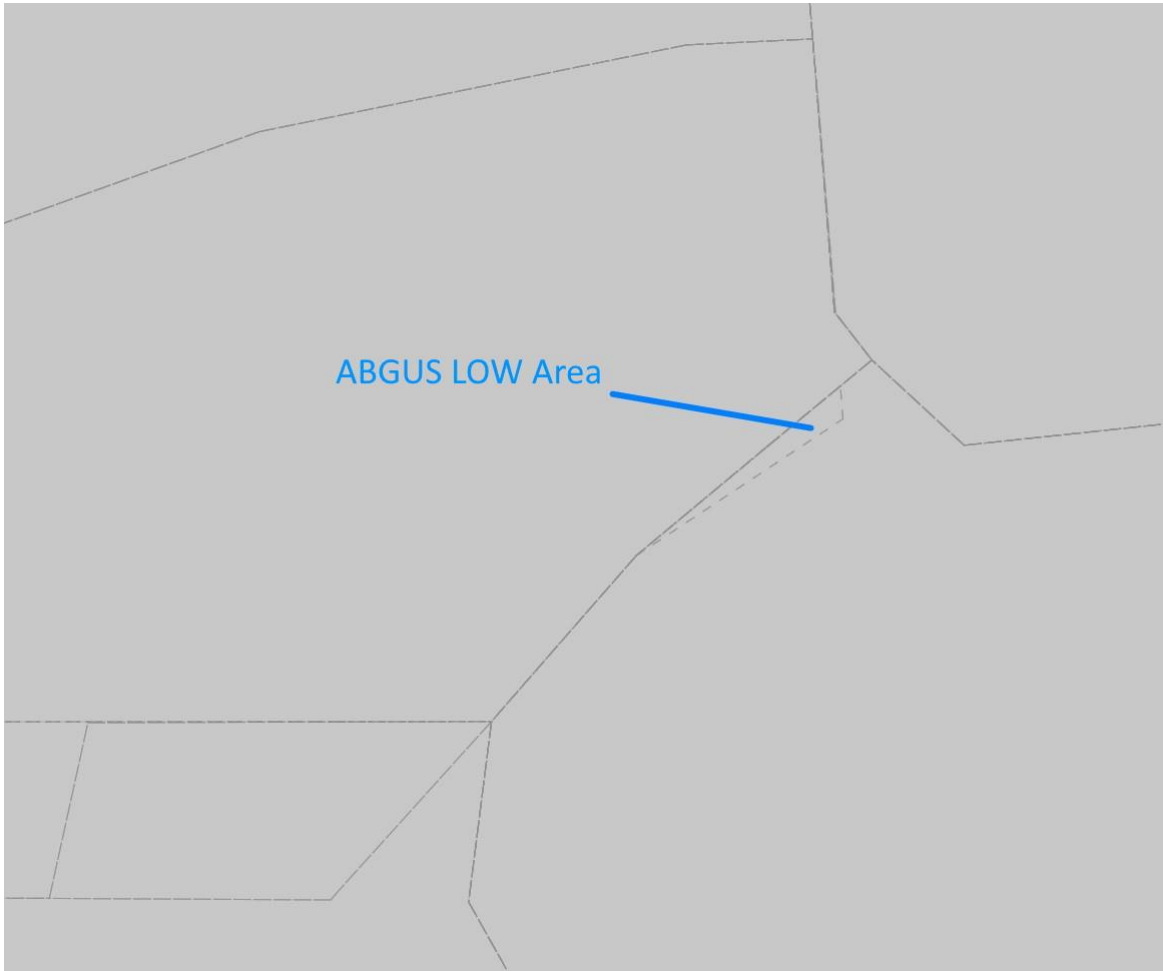
- 6.1 Should any doubt or diverging views arise regarding the interpretation of any provision of the present Letter of Agreement or in case of dispute regarding its application, the parties shall endeavor to reach a solution acceptable to both of them.
- 6.2 Should no agreement be reached, each of the parties shall refer to IVAO HQ ATC Operations Department, to which the dispute shall be submitted for settlement.

7 Validity

This LoA becomes effective 1 April, 2021 and supersedes the Letter of Agreement between Maastricht ACC and Munich ACC dated N/A.

Appendix 1

ABGUS Low Area – (see para. 2.2.1)



Annex A.

Definitions and Abbreviations

Effective: 2021-04-01

Revised: N/A

A.1 Definitions.

A.1.1 Area of Responsibility

An airspace of defined dimensions where a sole ATS unit has responsibility for providing air traffic services.

A.1.2 Area of Common Interest

A volume of airspace as agreed between two ATS units, extending into the adjacent/subjacent Areas of Responsibility, within which airspace structure and related activities may have an impact on air traffic coordination procedures.

A.1.3 Approval Request

Request from an ATS-unit to the ATS sector concerned for an approval of:

- an aircraft not yet airborne, whenever the flying time to the transfer of control point is less than the agreed minimum prenotification time, or
- an aircraft in flight intending to operate under conditions other than those described in mutually agreed procedures.

A.1.4 Division Level.

The flight level dividing two superimposed AoR for the provision of ATS.

A.1.5 General Air Traffic.

All flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation.

A.1.6 Operational Air Traffic.

All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.

A.1.7 Reduced Vertical Separation Minimum.

A vertical separation minimum of 300 m (1 000 ft) which is applied between FL 290 and FL 410 inclusive, on the basis of regional air navigation agreements and in accordance with conditions specified therein.

A.1.7.1 RVSM Approved Aircraft

Aircraft that have received State approval for RVSM operations within the EUR RVSM airspace.

A.1.8 Release

A.1.8.1 Release for Climb

An authorization for the accepting sector to climb (a) specific aircraft before the transfer of control.

Note: The transferring sector remains responsible within its Area of Responsibility for separation between the transferred aircraft and other aircraft unknown to the accepting unit, unless otherwise agreed.

A.1.8.2 Release for Descent

An authorization for the accepting sector to descend (a) specific aircraft before the transfer of control.

Note: The transferring sector remains responsible within its Area of Responsibility for separation between the transferred aircraft and other aircraft unknown to the accepting unit, unless otherwise agreed.

A.1.8.3 Release for Turn

An authorization for the accepting sector to turn (a) specific aircraft away from the current flight path by not more than 45° before the transfer of control

Note: The transferring sector remains responsible within its Area of Responsibility for separation between the transferred aircraft and other aircraft unknown to the accepting unit, unless otherwise agreed.

A.1.9 State Aircraft

For the purposes of EUR RVSM, only aircraft used in military, customs or police services shall qualify as State aircraft.

A.2 Abbreviations.

ACC	Area Control Center	NM	Nautical Mile
ACI*	Area of Common Interest	NM	EUROCONTROL Network Management
AIP	Aeronautical Information Publication	OAT*	Operational Air Traffic
AoR*	Area of Responsibility	OLDI*	On-line Data Interchange
APP	Approach Area / Approach ATS Unit	ORCAM	Originating Region Code Assignment Method
ATC	Air Traffic Control	RTF	Radio Telephony
ATS	Air Traffic Services	RVSM	Reduced Vertical Separation Minimum
ATZ	Air Traffic Zone	SFC	Surface
CBA	Cross-Border Area	SID	Standard Instrument Departure
CDR	Conditional Route	SSR	Secondary Surveillance Radar
COP*	Coordination Point	STAR	Standard Instrument Arrival
CRC	Control and Reporting Centre	TMA	Terminal Maneuvering Area
CTA	Control Area	TRA	Temporary Reserved Area
CTR	Control / Enroute ATS Unit	TSA	Temporary Segregated Area
CTZ	Control Zone	TWR	Aerodrome Control Tower
DFL*	Division Flight Level	UAC	Upper Area Control Centre
ETO	Estimated Time Over Significant Point	UHF	Ultra High Frequency
EUR	European	UIR	Upper Flight Information Region
FIR	Flight Information Region	UNL	Unlimited
FLA*	Flight Level Allocation	UTC	Coordinated Universal Time
FIS	Flight Information Services	VCS	Voice Communication System
FL	Flight Level	VFR	Visual Flight Rules
GAT*	General Air Traffic	VHF	Very High Frequency
GND	Ground		
ICAO	International Civil Aviation Organization		
IFR	Instrument Flight Rules		
KHz	Kilohertz		
LoA*	Letter of Agreement		
MHz	Megahertz		

Note: Abbreviations marked with an * are non-ICAO abbreviations.

Annex B.

Area of Common Interest

Effective: 2021-04-01

Revised: N/A

B.1 Airspace Structure and Classification within the Area of Common Interest.

The Airspace structure within the ACI is shown in Appendix of Annex B

B.1.1 HannoverMaastricht UIR

Area	Vertical Limits	Airspace Classification
Hannover UTA	FL 245 – FL 660	C

B.1.2 Munich FIR

Area	Vertical Limits	Airspace Classification
Rhein UTA	FL 245 – UNL	C
Bremen CTA	GND – FL 245	C (FL 100 – FL 245)

B.2 Sectorisation within the Area of Common Interest

The Sectorisation within the ACI is shown in Appendix 1 of Annex B

B.3 Special Areas within the Area of Common Interest

B.3.1 Areas for Cross/Border Provision of ATS defined with other ATS Units within the ACI.

B.3.1.1 ATS provision by Maastricht UAC – Rhein UIR

Within the Rhein UIR the provision of ATS in accordance with the airspace classification is performed by Maastricht within the following areas:

B.3.1.1.1 NOMKA Area – See Appendix 2 of Annex B

Lateral Limits: N512000 E0095610 – N512001 E0100334 – N512002 E0102315 – N512913 E0103533 – N513400 E0104200 – N512000 E0095610

Vertical limits: FL 245 – FL 660

Airspace Classification: C

B.3.1.1.2 RISOK Area – See Appendix 2 of Annex B

Lateral Limits: N514816 E0110825 – N515028 E0111230 – N515430 E0110739 – N514816
E0110825

Vertical limits: FL 285 – FL 660 from Karlsruhe UAC RISOK HIGH Area
FL 245 – FL 285 from Bremen UAC RISOK LOW Area

Airspace Classification: C

B.3.1.2 ATS provision by Karlsruhe UAC – Hannover UIR

Within the Rhein UIR the provision of ATS in accordance with the airspace classification is performed by Maastricht within the following areas:

B.3.1.2.1 ABGUS High Area – See Appendix 2 of Annex B

Lateral Limits: N513400 E0104200 – N514530 E0110845 – N514816 E0110825 – N514316
E0105905 – N513400 E0104200

Vertical limits: FL 315 – FL 660

Airspace Classification: C

B.3.1.3 Other Areas

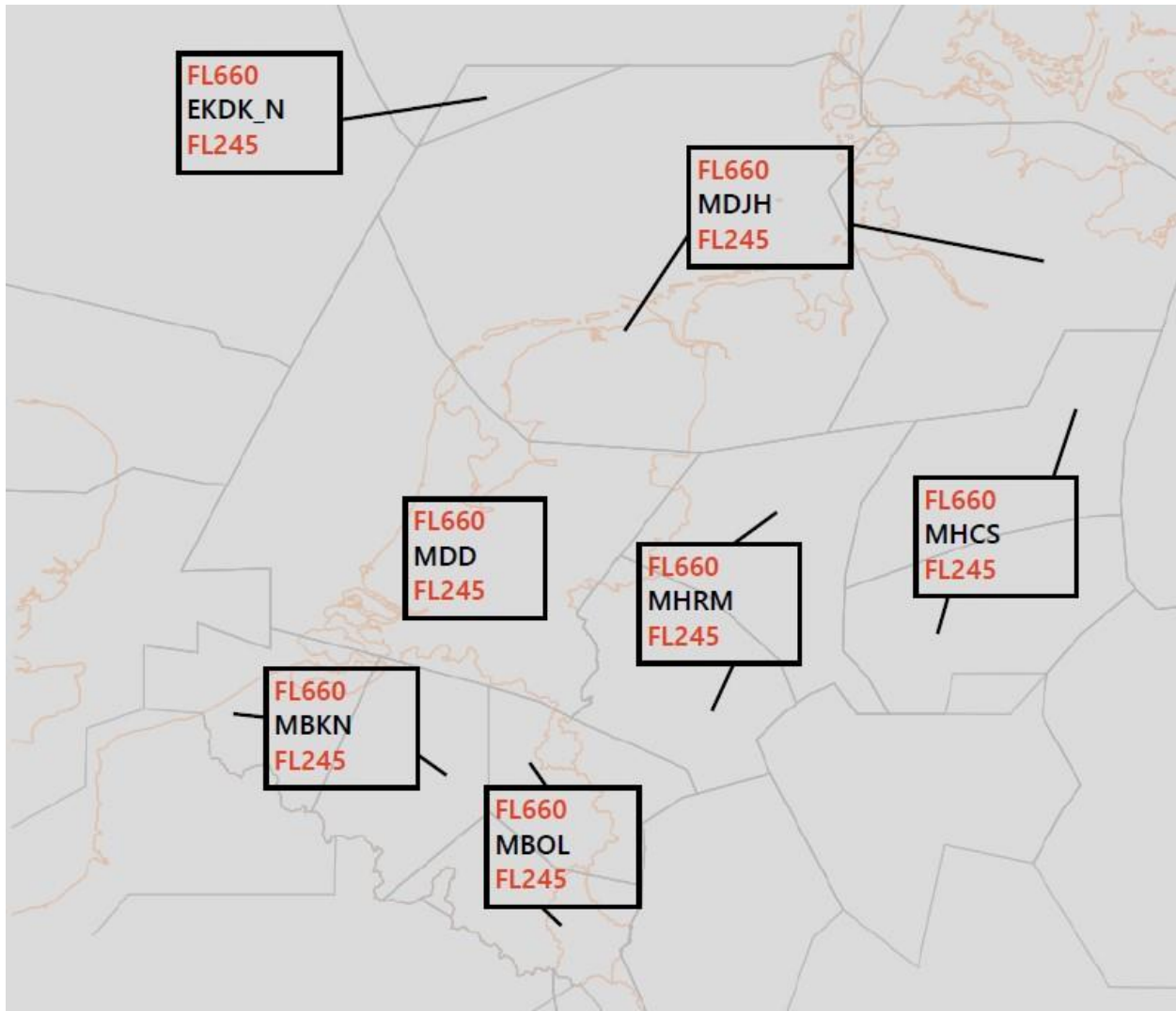
Not Applicable

B.4 Non-published Coordination Points within the Area of Common Interest.

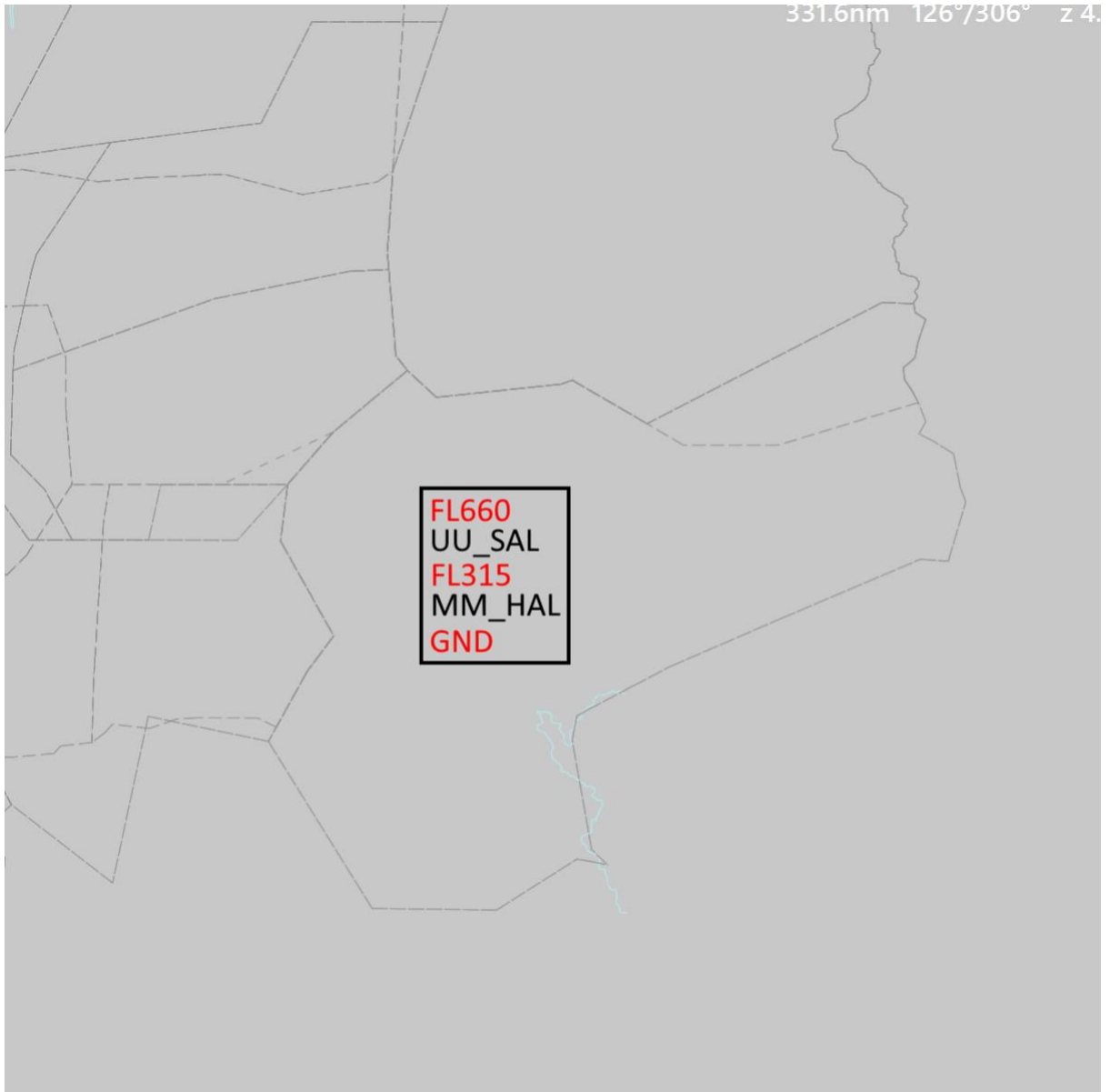
None.

Appendix 1 of Annex B.

Maastricht UAC Sectorization

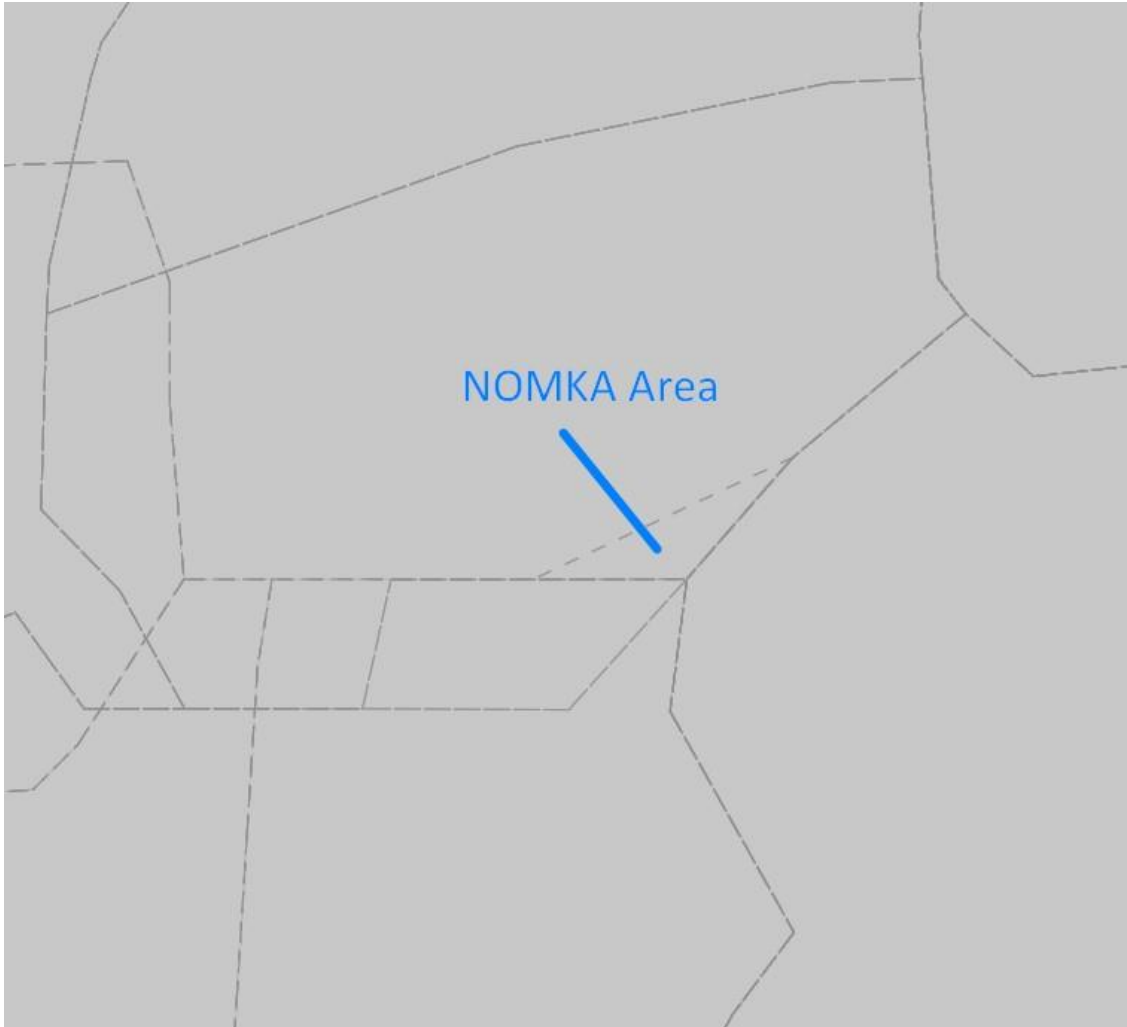


Munich ACC Sectorization



Appendix 2 of Annex B.

NOMKA Area



RISOK Area



ABGUS High Area



Annex C.

Exchange of Flight Data

Effective: 2021-04-01

Revised: N/A

C.1 General

C.1.1 Basic Flight Plans

Basic Flight plan data should normally be available at both ATS Units.

C.1.2 Current Flight Plan Data

Messages, including current flight plan data, shall be forwarded by the transferring ATS unit to the accepting ATS unit either by automatic data exchange or by private text to the appropriate sector/position.

C.1.3 Revisions

Any significant revisions to the flight data are to be transmitted to the accepting ATS Unit.

Changes to the coordinated levels within 5 minutes of the ETO for the transfer of control point are subject to an Approval Request.

C.2 Means of Communications and their Use

C.2.1 Verbal Coordination

Not applicable due to current software limitations.

C.2.2 Written Communication

When required, communication can be performed by private text between the relevant sectors or using semi-automatic systems depending on software capability.

Annex D.

Procedures for Coordination

Effective: 2021-04-01

Revised: N/A

D.1 General Conditions for Acceptance of Flights

- D.1.1 Coordination of flights shall take place by reference to the COP for the relevant route and in accordance with the appropriate flight levels specified for the relevant route (see para D.2 and D.3).
- D.1.2 Flights shall be considered to be maintaining the coordinated level at the transfer of control point unless climb or descent conditions have been clearly stated by use of written coordination, except if otherwise described in paragraphs D.2 or D.3.
- D.1.3 If the accepting ATS Unit cannot accept a flight offered in accordance with the conditions specified above it shall clearly indicate its inability and specify the conditions under which the flight will be accepted.
- D.1.4 For any proposed deviation from the conditions specified in this Annex (e.g. COP, route or level) the transferring Unit shall initiate an Approval Request.
- D.1.5 The accepting ATS Unit shall not notify the transferring ATS Unit that it has established ground-air communications with the transferred aircraft unless specifically requested to do so. The accepting Unit shall notify the transferring Unit in the event that communication with the aircraft is not established as expected.

D.2 ATS Routes, Coordination Points and Flight Level Allocation

Available (ATS) routes, COPs to be used and flight allocation to be applied, unless otherwise described in paragraph D.3, are described in the tables below.

D.2.1 Flights from Maastricht UAC to Munich ACC

D.2.1.1 Flights from Solling Sector to Munich ACC

Overflights

ATS Route	COP	Receiving Sector	FLA	Special Conditions
DCT	NOMKA	HAL	Odd	
DCT	ABGUS			
DENIX – DCT	LARET			Note 1

Note 1 – Only available for EDDH group departures.

Arrivals

Destination	Routing	COP	Receiving Sector	FLA	Special Conditions
EDAC, EDDC, EDAB, EDDN, EDQM, EDQC, EDQD, EDQK, EDQT, EDQG	DCT	NOMKA	HAL	FL 250	
EDDN, EDQM, EDQC, EDQD, EDQK, EDQT, EDQG	DCT	ABGUS			

D.2.2 Flights from Munich ACC to Maastricht UAC

D.2.2.1 Flights from HAL to Hannover Sectors

Overflights

ATS Route	COP	Receiving Sector	FLA	Special Conditions
BAMKI – DCT	KUMER	Solling	Even	
M852	BIRKA			Note 1

Note 1 – Arrivals to EDDW and EDDV via the M852 are not accepted by Maastricht UAC

Departures

Departure	Routing	COP	Receiving Sector	FLA	Special Conditions
EDDP	ORTAG – Q230	KUMER	Solling	Climbing FL280 out of FL250	Note 1

Note 1 – Flights are released from HAL to SOL after transfer of communications.

Arrivals

Destination	Routing	COP	Receiving Sector	FLA	Special Conditions
EDDH Group, EKCH/RK, ESMS	DCT	ABGUS	Solling	Even	

D.3 Special Procedures

D.3.1 Tactical Directs

D.3.1.1 Maastricht UAC

Maastricht UAC may turn/clear flights direct to the following waypoints without coordination

Waypoint	Sector	Special Conditions
OMELO	Solling	-
LALUK		-
TABAT		-
SODRO		-
BAMKI		-

D.3.1.2 Munich ACC

Munich UAC may turn/clear flights direct to the following waypoints without coordination

Waypoint	Sector	Special Conditions
RARUP	HAL	Clear of Bremen Sectors, for EDDH inbounds only.
NORKU		For EHAM inbounds Only
RKN		-
PAM		-

Annex E.

Transfer of Control and Transfer of Communications

Effective: 2021-04-01

Revised: N/A

E.1 Transfer of Control

E.1.1 Transfer of control shall take place at the AoR boundary, unless otherwise specified in paragraph E.3.

E.2 Transfer of Communication

E.2.1 Transfer of communication shall take place not later than the transfer of control, unless otherwise coordinated.

Transfer of CPDLC shall commence concurrently with transfer of voice communications.

E.2.2 Frequency allocation and sector arrangement of Maastricht UAC

E.2.2.1 Maastricht UAC Hannover Sectors

Receiving Sector	Vertical Limits	VHF
Solling	FL 245 – FL 660	131.380 MHz

E.2.3 Frequency allocation and sector arrangement of Munich ACC

E.2.3.1 Munich ACC Sectors

Receiving Sector	Vertical Limits	VHF
HAL	FL 195 – FL 315	118.255 MHz

E.3 Specific Points for Transfer of Control and Transfer of Communications

Not applicable.

Annex F.

ATS Surveillance Based Coordination Procedures

Effective: 2021-04-01

Revised: N/A

F.1 General

- F.1.1 Transfer of identification and transfer of control between Maastricht UAC and Munich ACC will be subject to the serviceability of the respective surveillance systems.
- F.1.2 In case of any doubt about the identity of an aircraft, nothing in the provisions of this Annex, prevents the use of other methods for the identification of an aircraft.

F.2 Transfer of Aircraft Identification

- F.2.1 Transfer of aircraft identification between Maastricht UAC and Munich ACC is normally performed by:
- notification of A1000, indicating that the Mode S aircraft identification feature transmitted by the transponder has been verified; or
 - if the aircraft identification is not correct or has not been verified, or if the aircraft is not Mode S equipped: by notification of the aircraft discrete SSR code.
- F.2.2 When discrete SSR codes are used for transfer of identification, they shall be assigned in accordance with ORCAM.
- F.2.3 Any change of SSR code by the accepting ATS Unit may only take place after the transfer of control point.
- F.2.4 The accepting ATS Unit shall be notified of any observed irregularity in the operation of SSR transponders or ADS-B transmitters.
- F.2.5 In the event that the accepting ATS unit is unable to process code A1000, it shall immediately advise the transferring ATS unit. Thereafter, unless otherwise coordinated, the transferring ATS unit shall change relevant instances of A1000 to a discrete SSR code determined in accordance with ORCAM.

F.3 Transfer of Control

- F.3.1 Radar Separation minimum shall be **5** NM.
- F.3.2 A minimum distance of **2.5** NM to the boundary line of responsibility shall be observed when vectoring aircraft, except when a transfer of radar control has previously been coordinated.

F.3.3 Transfer of Control without systematic use of direct communication (Silent Transfer of Control)

Transfer of control may be effected without systematic use of bi-directional speech facilities provided the minimum distance between successive aircraft about to be transferred is **10 NM** and constant or increasing.

F.3.3.1 The transferring controller shall inform the accepting controller of any level, speed or vectoring instructions given to aircraft prior to its transfer and which modify its anticipated flight progress at the point of transfer.

Note: When using Mach-number speed control, pilots concerned shall be instructed to report their assigned mach-number to the accepting ATS Unit upon initial contact.

F.3.3.2 The accepting controller may terminate the silent transfer of control at any time, normally with an advance notice of **10 minutes**.

F.3.4 Transfer of Control with use of direct communication

Transfer of control may be effected with the use of bi-directional speech facilities, provided the minimum distance between the aircraft does not reduce to less than **5 NM**, and:

- identification has been transferred to or has been established directly by the accepting controller;
- the accepting controller is informed of any level, speed or vectoring instructions applicable to the aircraft at the point of transfer;
- communication with the aircraft is retained by the transferring controller until the accepting controller has agreed to assume responsibility for providing ATS surveillance service to the aircraft. Thereafter, the aircraft should be instructed to change over to the appropriate frequency and from that point is the responsibility of the accepting controller.

Annex G.

Checklist of Pages

Effective: 2021-04-01

Revised: N/A

Part of LoA	Page	Date
LoA		2021-04-01
Appendix 1		2021-04-01
Appendix 2		2021-04-01
Annex A	A1	N/A
Annex B	B1	N/A
Annex C	C1	N/A
Annex D	D1	N/A
Annex E	E1	N/A
Annex F	F1	N/A
Annex G	G1	N/A