



## LETTER OF AGREEMENT

between

Vatsim Germany

and

VATSIM Scandinavia

Copenhagen ACC

Bremen ACC

Maastricht UAC

Karlsruhe UAC

Effective: May 15, 2025 (AIRAC 2505)

### 1 General.

### 1.1 Purpose.

The purpose of this Letter of Agreement is to define the coordination to be applied between EDWW and EKDK when providing ATS to air traffic (IFR/VFR) on the VATSIM network.

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

### 1.2 Operational Status.

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

## 1.3 Validity.

This Letter of Agreement becomes effective on May 15, 2025 (AIRAC 2505) and supersedes previous version, dated March 20, 2025, of the Letter of Agreement between Bremen ACC, Maastricht UAC, Karlsruhe UAC and Copenhagen ACC.

#### 1.4 Revision control.

| Revision | Date       | Author  |
|----------|------------|---|
| 1.0      | 25.08.2021 | Lukas Agerskov, Chris Gutierrez                 |
| 1.1      | 22.12.2021 | Lukas Agerskov, Chris Gutierrez, Hannes Altmann |
| 2.0      | 12.11.2022 | Lukas Agerskov, Hannes Altmann                  |
| 2.1      | 18.02.2023 | Lukas Agerskov, Hannes Altmann                  |
| 3.0      | 13.07.2023 | Lukas Agerskov, Hannes Altmann                  |
| 3.1      | 22.02.2024 | Lukas Agerskov, Hannes Altmann                  |
| 3.2      | 08.08.2024 | Lukas Agerskov, Hannes Altmann                  |
| 4.0      | 28.11.2024 | Lukas Agerskov, Hannes Altmann                  |
| 5.0      | 20.03.2025 | Lukas Agerskov, Hannes Altmann                  |
| 5.1      | 15.05.2025 | Lukas Agerskov, Hannes Altmann                  |

## 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 Bremen ACC.

Lateral limits: Bremen FIR and Rhein UIR as described in AIP Germany

Vertical limits: GND – FL245 (Bremen FIR) FL245 – FL285 (Rhein UIR)

#### 2.1.2 Maastricht UAC.

Lateral limits: Hannover UIR as described in AIP Germany; Amsterdam FIR as described in

AIP Netherlands

Vertical limits: FL245 – FL660

#### 2.1.3 Karlsruhe UAC.

Lateral limits: Rhein UIR as described in AIP Germany

Vertical limits: FL285 - FL660

## 2.1.4 Copenhagen ACC.

Lateral limits: Copenhagen FIR as described in AIP Denmark

Vertical limits: GND - FL660

Airspace delegations between EDWW, EDYY and EDUU are included in the published sectorization (see Appendix A).

### 2.2 Sectorization.

Sector chart: see Appendix A

For detailed coordinates and sector ownerships refer to GNG, AIP Germany or AIP Denmark. Both vACCs shall inform each other about changes on sectorization and positions.

## 2.2.1 EDWW.

| Sector              | Logon       | Frequency |
|---------------------|-------------|-----------|
| Eider (EID)         | EDWW_E_CTR  | 124.075   |
| Hamburg (HAM)       | EDDH_APP    | 120.540   |
| Heide (HEI)         | EDWW_H_CTR  | 125.855   |
| Müritz (MRZ)        | EDWW_M_CTR  | 124.175   |
| Holstein Low (YYHL) | EDYY_HL_CTR | 120.860   |
| Holstein (YYHH)     | EDYY_HH_CTR | 132.780   |
| Jever Low (YYJL)    | EDYY_JL_CTR | 136.465   |
| Jever High (YYJH)   | EDYY_JH_CTR | 129.735   |

## 2.2.2 EKDK.

| Sector  | Logon       | Frequency |
|---------|-------------|-----------|
| EKDK-A  | EKDK_A_CTR  | 135.290   |
| EKDK-B  | EKDK_B_CTR  | 119.555   |
| EKDK-C  | EKDK_C_CTR  | 128.215   |
| EKDK-D  | EKDK_D_CTR  | 133.155   |
| EKDK-I  | EKDK_I_CTR  | 121.380   |
| EKDK-N  | EKDK_N_CTR  | 134.680   |
| EKDK-UN | EKDK_UN_CTR | 136.555   |

## 2.3 Delegation of the Responsibility for the Provision of ATS.

## 2.3.1 <u>Delegation of ATS from Bremen ACC and Maastricht UAC to Copenhagen ACC.</u>

#### 2.3.1.1 Schwerin North Area.

The airspace overhead Schwerin North Area (see Appendix B) is permanently delegated from Bremen ACC and Maastricht ACC to Copenhagen ACC.

Vertical limits: FL105 - FL660

#### 2.3.1.2 Michaelsdorf Area.

The airspace overhead Michaelsdorf Area (see Appendix B) is permanently delegated from Bremen and Maastricht UAC to Copenhagen ACC.

Vertical limits: GND - FL660

## 2.3.1.3 Alsie Area.

The airspace overhead Alsie Area (see Appendix B) is permanently delegated from Maastricht UAC to Copenhagen ACC.

Vertical limits: FL245 - FL660

## 2.3.2 Other Areas.

## 2.3.2.1 GESKA Release Line.

Lateral limits: see Appendix C

Vertical limits: FL245 - FL660

#### 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.

The use of VATSIM callsigns in this document includes any variation of said callsign. E.g., any procedure applicable for EDWW\_CTR may also be used by EDWW\_X\_CTR or EDWW 1 CTR.

#### 3.2 Abbreviations.

| ACC  | Area Control Center        | kts   | Knots               |              |
|------|----------------------------|-------|---------------------|--------------|
| AD   | Aerodrome                  | KUAC  | Karlsruhe UAC (     | EDUU)        |
| ADEP | Aerodrome of Departure     | LoA   | Letter of Agreem    | ent          |
| ADES | Aerodrome of Destination   | LoR   | Line of Respons     | ibility      |
| AoR  | Area of Responsibility     | MUAC  | Maastricht UAC      | (EDYY)       |
| APP  | Approach Facility          | NM    | Nautical Mile       |              |
| ATS  | Air Traffic Services       | NVFR  | Night Visual Flig   | ht Rules     |
| COP  | Coordination Point         | RFL   | Requested Flight    | t Level      |
| CTR  | Center/Enroute Facility    | RIsd  | Released            |              |
| FIR  | Flight Information Region  | SSR   | Secondary           | Surveillance |
| FIS  | Flight Information Service | Radar |                     |              |
| FL   | Flight Level               | TMA   | Terminal Maneu      | vering Area  |
| GND  | Ground                     | UAC   | Upper Area Conf     | trol Center  |
| GNG  | Global Nav Generator       | VFR   | Visual Flight Rules |              |
|      | (gng.aero-nav.com)         | WEF   | With Effect From    | 1            |
|      |                            |       |                     |              |

#### 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 Letter of Agreement.

↓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 IFR flights from Bremen ACC to Copenhagen ACC.

#### 3.4.1 Arrivals.

| Arrival AD          | СОР   | Level<br>Allocation | Special<br>Conditions          | From Sector | To Sector |
|---------------------|-------|---------------------|--------------------------------|-------------|-----------|
| EKCH, EKRK          | NIKDA | FL200               | /*1\                           | MRZ         | EKDK-B    |
| EKCH, EKKK          | KOSEB | FL200               | (*1)                           | IVIRZ       | EKDK-B    |
| EKBI, EKEB,<br>EKSP |       | FL170               | (*2)                           |             |           |
| EKSB                | AMRAK | FL70                | Released for descent to 3000ft | EID         | EKDK-D    |
| EKBI, EKEB,<br>EKSP | REXMI | FL170               | (*2)                           |             | EKDK-N    |

(\*1) Note: Inbounds EKCH may be cleared direct MONAK.

(\*2) Note: Inbounds to EKBI may be cleared direct LOKSA (RWY 27) or GELBA (RWY 09).

#### Special provisions for EKCH:

Inbound traffic to EKCH via NIKDA and KOSEB shall be treated as one inbound flow (at all levels). EDWW ACC sector Müritz shall establish an inbound spacing of 10 NM constant or increasing between traffic via NIKDA/KOSEB at all levels, unless otherwise coordinated.

EKDK ACC sector B may request EDWW ACC sector Müritz to increase the inbound spacing with a 10-minute prior notification. The requested inbound spacing shall not exceed 25 NM.

During times of holding at OLPIB, if at any time spacing is less than the requested spacing from ACC Copenhagen, ACC Sector Müritz shall ensure altitude separation on handover by clearing to a higher level than FL200, however no higher than FL240. ACC Sector Müritz may employ speed control down to minimum clean speed to achieve the requested separation.

In case ACC Sector Müritz clears flights higher than FL200, subsequent handovers shall not take place until such flights are descended to maximum FL200 by ACC Copenhagen, or after coordination between ACC Sector Müritz and ACC Copenhagen.

In case EKDK ACC sector B requests enroute holdings, EDWW ACC sector shall establish holdings at lowest FL200. In this case traffic is subject to individual release.

#### 3.4.2 Departures.

| Departure AD                       | СОР   | Level<br>Allocation | Special<br>Conditions                  | From Sector | To Sector |
|------------------------------------|-------|---------------------|--|-------------|-----------|
| EDXW, EDXF,<br>EDHK, ETNS,<br>ETNH | ATTUS | FL60                | Maximum<br>FL240 after<br>coordination | EID         | EKDK-D    |
|                                    | DOSUR |                     |  |             |           |
|                                    | AMRAK |                     |  |             |           |
| EDHL, ETMN                         | MEGAR | FL240               |  | HEI         |           |
| ETNL, EDBH,<br>EDBN                | NEDIK | FL140               |  | MRZ         | EKDK-B    |

## 3.5 IFR flights from Copenhagen ACC to Bremen ACC.

## 3.5.1 Arrivals.

| Arrival AD          | СОР   | Level<br>Allocation | Special Conditions | From Sector | To Sector |
|---------------------|-------|---------------------|--------------------|-------------|-----------|
| EDDH, EDHI,<br>EDHL | ALASA |                     | (*2) (*2)          | EKDK-D      | EID       |
| EDDH, EDHI,<br>EDHL | ATTUS | FL230               | (*2) (*3)          | EKDK-N      |           |
| EDDH, EDHI          | MICOS |                     | (*4) (*2) (*2)     | EKDK-I      | HEI       |
| EDHL                | MICOS | FL160               | (*1) (*2) (*3)     | LNDN-I      | HEI       |
| EDXW, EDXF,         | ATTUS |                     |                    |             |           |
| EDHK, ETNS,         | DOSUR | FL80                | -                  | EKDK-D      | EID       |
| ETNH                | ALASA |                     |                    |             |           |
| ETNL, EDBN          | NEDIK | FL150               | -                  | EKDK B      | MD7       |
| EDBH                | NEDIK | FL70                |                    | EKDK-B      | MRZ       |

(\*1) Note: Unless otherwise coordinated, traffic may be routed direct MICOS provided traffic

passes AoR boundary west for the MICOS-OLPIB track.

(\*2) Note: Controller must ensure that flights cross the boundary to Bremen at FL245 or below to

avoid MUAC sector Holstein.

(\*3) Note: Inbounds to EDDH, EDHI and EDHL are released for turn, descent to FL180 and

change of speed.

## 3.5.2 <u>Departures.</u>

| Departure AD | СОР   | Level<br>Allocation | Special<br>Conditions | From Sector | To Sector |
|--------------|-------|---------------------|-----------------------|-------------|-----------|
| EKCH, EKRK   | SONAL | FL190               | -                     | EKDK-B      | MRZ       |

## 3.6 IFR flights from Maastricht UAC to Copenhagen ACC.

## 3.6.1 Arrivals.

| Arrival AD          | СОР   | Level<br>Allocation | Special<br>Conditions | From Sector | To Sector |
|---------------------|-------|---------------------|-----------------------|-------------|-----------|
| EKCH, EKRK,<br>ESMS | GESKA | FL280               | (*1)                  | YYHL        | EKDK-B    |
| EKBI                | ОМІМА | FL260               | -                     | YYJL        | EKDK-N    |

(\*1) Note: This traffic is generally released for descent to FL250 after crossing the GESKA Release Line (see Appendix C).

## Special provisions for EKCH:

Inbound traffic to EKCH via MEGAR, KOKOR and MAKEL to GESKA shall be treated as one inbound flow (at all levels). MUAC sector Holstein shall establish an inbound spacing of 10 NM constant or increasing between traffic via GESKA at all levels, unless otherwise coordinated.

MUAC sector Jever shall establish an inbound spacing of 10 NM between all levels for inbound traffic to EKCH.

EKDK ACC may request MUAC to increase the inbound spacing with a 10-minute prior notification via GESKA or TUDLO. The requested inbound spacing shall not exceed 25 NM.

For arrivals via GESKA, during times of holding at OLPIB, if at any spacing is less than the requested spacing from ACC Copenhagen, MUAC shall ensure altitude separation on handover by clearing to a lower level than FL280, however no lower than FL260.

MUAC may employ speed control down to minimum clean speed to achieve the requested separation.

To relieve other sectors and holding stacks, EKDK ACC may request MUAC sector Jever and Holstein to clear inbound traffic to EKCH Via TUDLO or TESPI. This should preferably be done via the RTI function of Euroscope.

### 3.6.2 Departures.

| Departure AD        | СОР            | Level<br>Allocation | Special<br>Conditions | From Sector | To Sector |
|---------------------|----------------|---------------------|-----------------------|-------------|-----------|
| EDDH, EDHI          | MEGAR          | ↑FL270              | (*1)                  | YYHL        | EKDK-B    |
| EDDH, EDHI,<br>EDHL | AMRAK<br>ATTUS | ↑FL270              | -                     |             | EKDK-D    |

(\*1) Note: This traffic is generally released for climb after crossing the GESKA Release Line (see Appendix C).

#### 3.7 IFR flights from Copenhagen ACC to Maastricht UAC.

#### 3.7.1 Arrivals.

| Arrival AD          | СОР            | Level<br>Allocation | Special<br>Conditions | From Sector | To Sector |
|---------------------|----------------|---------------------|-----------------------|-------------|-----------|
| EDDW, EDDV,<br>EDVE | ALASA<br>ATTUS | FL340               | -                     | EKDK-C      | YYHL      |
|                     | MICOS          |                     |                       | EKDK-A      |           |

#### 3.7.2 Departures.

| Departure AD        | СОР   | Level<br>Allocation | Special Conditions | From Sector | To Sector |
|---------------------|-------|---------------------|--------------------|-------------|-----------|
| EKCH, EKRK,<br>ESMS | MICOS | FL340               |                    | EKDK-A      | YYHL      |
|                     | ALASA |                     | _                  | EKDK-D      |           |
| EKBI                | ISPUB | FL280               |                    | EKDK-N      | YYJL      |
|                     | OMIMA |                     |                    | EVDV-II     | TTJL      |

## 3.8 VFR flights from EDWW FIR to EKDK FIR.

For controlled VFR flights and NVFR flights above 2500 feet GND coordination, transfer of control and transfer of communication shall take place as for IFR flights. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact. If online, EKDK\_I\_CTR (Copenhagen Information), 127.075, shall be the primary sector for uncontrolled VFR flights.

## 3.9 VFR flights from EKDK FIR to EDWW FIR.

For controlled VFR flights and NVFR flights above 2500 feet GND coordination, transfer of control and transfer of communication shall take place as for IFR flights. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact. If online, EDXX\_WW\_CTR (Langen Information), 119.525, shall be the primary sector for uncontrolled VFR flights. If EDXX\_WW\_CTR is offline, EDXX\_FIS\_CTR (Langen Information), 128.950, will cover this area.

## 4 Special Procedures.

## 4.1 Tactical Directs from EDWW, EDYY, EDUU to EKDK.

Note:

The mentioned sectors may turn/clear flights direct to the following waypoints without coordination, if the sector sequence remains unchanged:

| Waypoint   | From Sector                  | Special Conditions                          |
|--|------------------------------|---|
| KARLI, MITSI, DANKO,<br>RADIS, BAVTA, DEKIK,<br>GOTEX, AMTOT, OLPIB,<br>AAL, ODDON, SABAK,<br>DETSO, PIPEX | EDYY (MUAC)                  | Above FL285                                 |
| GELBA, LOKSA   | EDYY (MUAC)<br>EDWW (Bremen) | EKBI Arrivals                               |
| GESKA  | EDYY (MUAC)<br>EDWW (Bremen) | FL285 or below at FIR border                |
| MONAK  | EDWW (Bremen)                | Only for EKCH arrivals via<br>KOSEB & NIKDA |
| TUDLO  | EDYY (MUAC)                  | Only for EKCH arrivals                      |
| OLPIB, AAL, ODDON,<br>LOKSA  | EDUU (KUAC)                  | Above FL285                                 |

## 4.2 Tactical Directs from EKDK to EDWW, EDYY, EDUU.

Note:

The mentioned sectors may turn/clear flights direct to the following waypoints without coordination, if the sector sequence remains unchanged:

| Waypoint  | From Sector | Special Conditions   |
|---|-------------|--|
| HLZ, MASEK, NEBUN,<br>RIMET, POVEL, PIROT,<br>KEGAB, BKD, SAS,BUMIL,<br>BERXO, WERRA, XAROL,<br>BLUFA | EKDK        | FL285 or above<br>Via EDYY (MUAC) only                                       |
| EEL   | EKDK        | Not for EHGG and EHLE<br>arrivals.<br>FL285 or above<br>Via EDYY (MUAC) only |
| BINKA   | EKDK        | above FL285 at FIR border<br>Via EDUU (KUAC) only                            |

#### 4.3 Enroute level allocations.

Traffic from EDUU UAC to EKDK ACC may generally be transferred at even levels. Traffic from EKDK ACC to EDUU UAC may generally be transferred at odd levels.

#### 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.

For successive traffic on the same route and at the same flight level, the transferring controller shall establish lateral separation of 10 NM or more, remaining constant or increasing.

#### 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:

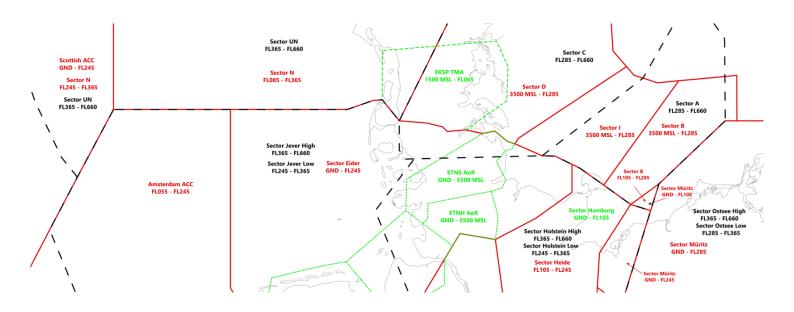
- The upstream sector sends the aircraft to the frequency of the downstream sector by voice or text.
- 2. The upstream sector initiates a transfer via the appropriate function of the radar client.
- Upon initial call the downstream sector assumes the flight via the appropriate function of the radar client.

## 5.5 SSR Code Assignment.

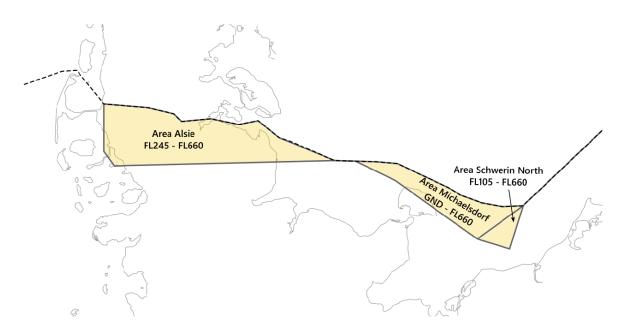
Both ATS units shall transfer flights on verified discrete SSR codes. Any change of SSR code by the accepting ATS unit may only take place after the transfer of control point.

ACC Copenhagen does not accept Mode-S SSR 1000. All IFR flights via EKDK FIR must be on a discrete SSR code!

## Appendix A



# Appendix B



# Appendix C

