# LETTER OF AGREEMENT

**between**

| vACC Germany | **and** | vACC Germany |
|---|---|---|
| **EDUU** | | **EDYY** |

Effective: 16.05.2024 (AIRAC2405)

## 1 General.

### 1.1 Purpose.

The purpose of this Letter of Agreement is to define the coordination to be applied between EDUU and EDYY 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 16.05.2024 and supersedes any previous version of the Letter of Agreement between EDUU and EDYY.

### 1.4 Revision control.

| Revision | Date | Author |
|---|---|---|
| 1.0 | 23.03.2023 | Konstantin Eierhoff, Hannes Altmann |
| 1.1 | 07.09.2023 | Leon Kleinschmidt |
| 2.0 | 16.05.2024 | Hannes Altmann, Jannik Vogel, Phil Hauf |

# 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) |

### 2.1.2 Maastricht UAC.

| | |
|---|---|
| Lateral limits: | Hannover UIR as described in AIP Germany |
| Vertical limits: | FL245 – FL660 |

## 2.2 Sectorization.

For detailed sectorization refer to vats.im/edyy and vats.im/eduu.

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

Not applicable.

# 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.

## 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 | Letter of Agreement |
| 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 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, except when rquired otherwise. (e.g. due to airway restrictions)

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

### 3.4 IFR flights from EDUU to EDYY.

Note: Traffic from EDUU to EDYY shall be generally transferred at even levels.

3.4.1 Arrivals.

| Arrival AD | COP | Level Allocation | Special Conditions | From Sector | To Sector |
|---|---|---|---|---|---|
| EDDL, EDDK, EDDV, EDVE, ETNW, EHTW | --- | --- | Not accepted by Maastricht UAC | FFM/FUL | --- |
| EDDW, EDWE, EDWI, ETND, EDWF | ELNAT | MAX FL320 | | FUL | SOL |
| EDDB | BERXO | MAX FL340 | | | |
| | OTMON | | | FFM | |
| EHEH, EHBD, EHBK, EHTE, EHLE | MAPOX | MAX FL320 | | | MNS |
| EHRD, EHGG | | MAX FL360 | | | |
| EDLP, EDVK, EDFQ, EDLI | BUMIL | MAX FL300 | | OSE | CEL |
| | GARLU | | | | |
| | HLZ | | | HVL | |
| EDDF | | MAX FL340 | | | |
| | POVEL | | | | SOL |
| EDLW, EDLA | HLZ | MAX FL360 | | | CEL |
| | POVEL | | | | SOL |
| | KUMER | | | SAL | |
| | ZUCKA | | | | |
| | GARLU | | | OSE | CEL |
| | BUMIL | | | | HOL |

3.4.2 Departures.

| Departure AD | COP | Level Allocation | Special Conditions | From Sector | To Sector |
|---|---|---|---|---|---|
| EDDF, EDFE, ETOU | OTMON | MAX FL280 | Released for climb to FL320 | FFM | SOL |
| EDDB | BUMIL | EVEN FLs | Released for climb to FL360 and left turns | OSE | CEL |
| | NEBUN | | | | |
| | HLZ | | | HVL | |
| | POVEL | | Released for climb to FL360 | | SOL |
| | ABGUS | | | | |

### 3.5 IFR flights from EDYY to EDUU.

Note: Traffic from EDYY to EDUU shall be generally transferred at odd levels.

3.5.1 Arrivals.

<table>
<tr><th>Arrival AD</th><th>COP</th><th>Level Allocation</th><th>Special Conditions</th><th>From Sector</th><th>To Sector</th></tr>
<tr><td>EDDF, EDFH, EDFQ, EDFR, EDFC, ETAD</td><td rowspan="3">---</td><td rowspan="3">---</td><td rowspan="2">Not accepted by Karlsruhe UAC</td><td rowspan="3">---</td><td rowspan="3">---</td></tr>
<tr><td>EDDR, EDRZ, EDFM, EDFV, EDRY, EDFB</td></tr>
<tr><td>EDDB, ETNL, EDDP, EDDE, EDAC, EDDN, ETIC, EDQC, EDQK, EDQM, EDQT</td></tr>
<tr><td>EDDC, EDAB</td><td>Only accepted by Karlsruhe UAC via COP within OSE sector</td></tr>
<tr><td>LFJL, ELLX, EDQG</td><td rowspan="2">XAROL</td><td>MAX FL290</td><td></td><td rowspan="5">SOL</td><td rowspan="3">FFM</td></tr>
<tr><td>EDSB, LFST, LFGA</td><td>MAX FL330</td><td></td></tr>
<tr><td>LFST, LFGA</td><td>OTMON</td><td>MAX FL330</td><td></td></tr>
<tr><td>EDDS, EDTY, EDTM, EDTL, EDSB, EDJA, EDMA, EDMO, ETSI, ETSL, ETSN</td><td rowspan="2">BERXO</td><td rowspan="2">MAX FL350</td><td rowspan="2"></td><td rowspan="2">FUL</td></tr>
<tr><td>EDQG</td><td>MAX FL290</td></tr>
<tr><td rowspan="2">EDDN, EDMA, EDMO, EDJA, EDTY</td><td>TIVUN</td><td rowspan="2">MAX FL350</td><td></td><td rowspan="6">RHR</td><td rowspan="6">FFM</td></tr>
<tr><td>DOJOH</td><td></td></tr>
<tr><td>EDFM, EDFV, EDRY</td><td rowspan="3">TIVUN</td><td>MAX FL290</td><td>To be FL290 prior to the ARPEG Area</td></tr>
<tr><td>EDDR, EDRZ</td><td rowspan="3">MAX FL310</td><td></td></tr>
<tr><td>EDDS, EDSB, LFST, LFGA</td><td></td></tr>
<tr><td>DOJOH</td><td></td></tr>
<tr><td rowspan="3">EDAH</td><td>GARLU</td><td rowspan="3">MAX FL350</td><td></td><td>CEL</td><td rowspan="3">OSE</td></tr>
<tr><td>NEBUN</td><td></td><td rowspan="2">HOL</td></tr>
<tr><td>BUMIL</td><td></td></tr>
<tr><td>EDAH</td><td>BERIM</td><td>---</td><td>Not accepted by Karlsruhe UAC</td><td>HOL</td><td>OSE</td></tr>
</table>

3.5.2 Departures.

| Departure AD | COP | Level Allocation | Special Conditions | From Sector | To Sector |
|---|---|---|---|---|---|
| EDDV | XAROL | MAX FL270 | | SOL | FFM |
| | ELNAT | | Climbing out of FL260 | | FUL |
| EDVE | | MAX FL290 | | | |
| | XAROL | MAX FL310 | | | FFM |
| EDDW | NEBUN | MAX FL290 | | CEL | OSE |
| | POVEL | MAX FL330 | | SOL | HVL |
| | ZUCKA | MAX FL330 | | | SAL |
| | ABGUS | | | | |
| | KUMER | | | | |
| | NOMKA | | | | |
| EDDH | ZUCKA | MAX FL350 | Higher odd level after system coordination | | |
| EHEH, EHBK, EHBD, EDLV, EDLS | GMH | MAX FL310 | Climbing out of FL260 | RHR | FFM |

# 4 Special Procedures.

## 4.1 Directs from EDUU to EDYY.

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

| Waypoints | From Sector | To Sector | Special Conditions |
|---|---|---|---|
| EEL, RENEQ, LONAM | OSE | HOL | Via or north of BUMIL |
| WSN, ELSOB, ABAMI, NVO, ROBEG, DENOL, PODER, WRB | OSE/HVL | HOL/CEL/SOL | |
| NOGRO, GALSO, ABNED, NORKU, RKN, SPY | HVL | CEL/SOL | |
| ROBEG, DENOL, NORKU, RKN, ABAMI, NVO, WRB, PODER, ELSOB, RARUP, HLZ, NOGRO, ABNED, GALSO, MIMVA, KOLAG, RAVLO | SAL | SOL | North or via KATCE |
| DOMEG | SAL | SOL | Clear of FUL and FFM, only for arrivals EHEH |
| HMM, MIMVA, KOLAG, RAVLO, NORKU, RAVLO, RKN, SPY | FFM | MNS | |
| TORNU | FFM | RHR | |
| EKERN, MADOR, NORTA | FUL | SOL | Via or west of BERXO |

## 4.2 Directs from EDYY to EDUU.

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

| Waypoints | From Sector | To Sector | Special Conditions |
|---|---|---|---|
| SALLO, BAKLI, OKAGA, UNGAV, BIKRU, DETNI, BILRA, BANUB, BINKA, BODLA, ALUKA, GILAS, SUBIX, GOVEN, POZUM, LASIS, HDO | HOL/CEL/SOL | OSE/HVL | |
| POZUM, TADUV, LASIS, HDO, OMELO, LALUK, MAREM, SODRO, TABAT, AKOSI | SOL | SAL | |
| DODEN, TESGA, TABUM, NEGIX, ESAMA, SWALM, BOMBI | RHR | FFM | |
| BOMBI, SWALM | SOL | FFM | Not valid for Dep EDDV |
| OSBIT | SOL | FUL | Via or East of BERXO |
| TUSUK, UMUPU | RHR | NTM | When crossing the LNO sector on track to TUSUK or UMUPU, individual coordination with NTM sector is required. |

# 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.

The following values for silent transfer of control apply:

- If preceding aircraft is faster: 10 NM
- If succeeding aircraft is faster by 20kts / M0.05 or less: 20 NM
- If succeeding aircraft is faster by 40kts / M0.1 or less: 30 NM

## 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.

## 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.